LMCT-100
Digital Configuration Tool

The LMCT-100 Wireless IR Configuration Tool is a handheld tool for setup and testing of WattStopper Digital Lighting Management (DLM) devices. It provides wireless access to occupancy and daylighting sensors for setup and parameter changes, WattStopper Push n' Learn™ (PnL) technology for load configuration, switch and dimmer assignment and operating parameter changes. The LMCT-100's display shows menus and prompts to lead you through each process. The navigation pad provides a familiar way to navigate through the customization fields. The LMCT-100 allows modification of the system without requiring ladders or tools; simply with a touch of a few buttons.

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OPERATION

The LMCT-100's IR transceiver allows bidirectional communication between DLM devices and the LMCT-100. Simple menu screens let you see the current status of the system and make changes. It can change any of the DLM occupancy sensor parameters such as sensitivity, time delay and more. With the LMCT-100 you can also change load configurations, without any new wiring. For systems including the LMLS-305 daylighting sensor the LMCT-100 can also set or change the daylight level parameters. The LMCT-100 can change dimming system options such as scene assignments, fade rates and other options not available through the standard user interface.

BATTERIES

The LMCT-100 operates on three standard 1.5V AAA Alkaline batteries or three rechargeable AAA NiMH batteries.
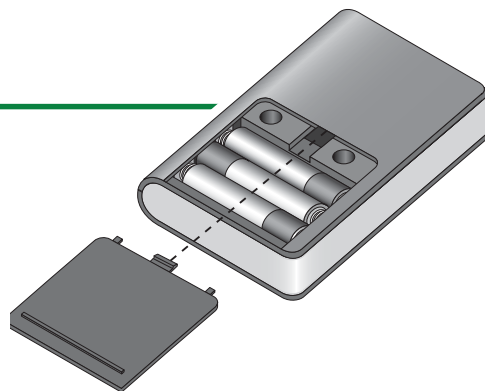
The battery status displays in the upper right corner of the display. Three bars next to **BAT=** indicates a full battery charge. A warning appears on the display when the battery level falls below a minimum acceptable level.

To conserve battery power, the LMCT-100 automatically shuts off 10 minutes after the last key press.

NAVIGATION

You navigate from one field to another using ▲ (up) or ▼ (down) arrow keys. The active field is indicated by flashing (alternates between yellow text on black background and black text on yellow background).
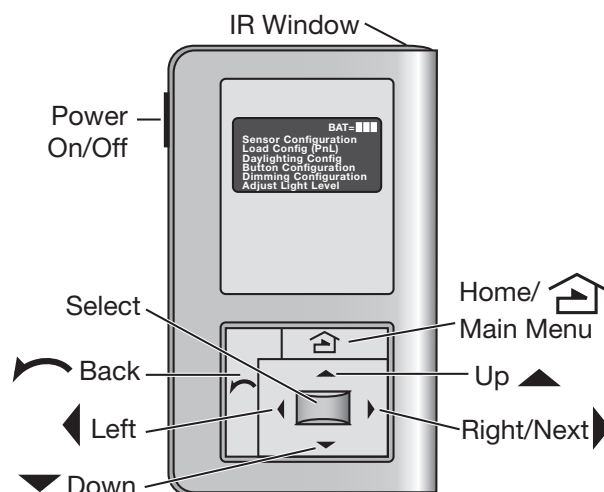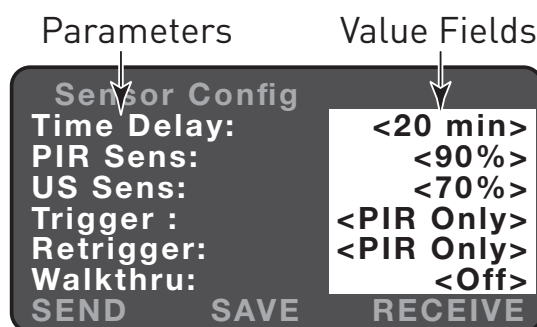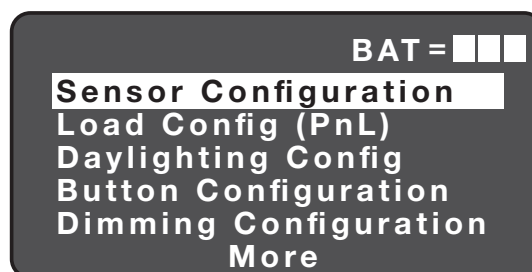
Once active, use the **Select button** to move to a menu or function within the active field.

Function Fields (on Home Menu)

```
                    BAT = ■■■
Sensor Configuration
Load Config (PnL)
Daylighting Config
Button Configuration
Dimming Configuration
        More
```

Value fields are used to adjust parameter settings. They are shown in "less-than/greater-than" symbols: <value>. Once active, change them using ◀ (left) and ▶ (right) arrow keys. In general the ▶ key increments and the ◀ key

Parameters   Value Fields

```
   Sensor Config
Time Delay:        <20 min>
PIR Sens:           <90%>
US Sens:            <70%>
Trigger :         <PIR Only>
Retrigger:        <PIR Only>
Walkthru:           <Off>
SEND       SAVE     RECEIVE
```

decrements a value. Selections wrap-around if you continue to press the key beyond maximum or minimum values. Moving away from the value field (using ▲/▼ keys) overwrites the original value.

The ⌂ button takes you to the main menu.

The ↶ button can be thought of as an un-do function. It takes you back one screen. Changes that were in process prior to pressing the ↶ key are lost.
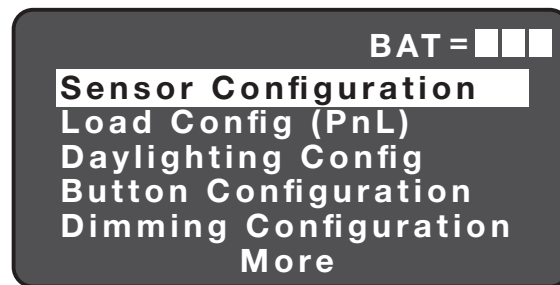
IR Window

Power On/Off

```
                BAT=■■■
Sensor Configuration
Load Config (PnL)
Daylighting Config
Button Configuration
Dimming Configuration
Adjust Light Level
```

Select

Home/⌂ Main Menu

Back

Up ▲

Left

Right/Next ▶

Down

Home Menu

The Home (or Main) menu displays after the power-up process completes. It contains information on the battery status and six menu choices.

```
                      BAT = ■■■
Sensor Configuration
Load Config (PnL)
Daylighting Config
Button Configuration
Dimming Configuration
        More
```

Up or Down Button

Select Button

Press ▲/▼ to locate the desired function then press **Select**.

SENSOR CONFIGURATION - CURRENT SETTINGS

```
                   BAT = ■■■
Sensor Configuration
Load Config (PnL)
Daylighting Config
Button Configuration
Dimming Configuration
        More
```

```
Sensor Configuration

Current Settings
Test Mode
Saved Configurations
```

Press Select

Press Select

```
Point to desired
Occupancy Sensor

Press 'Select'
```
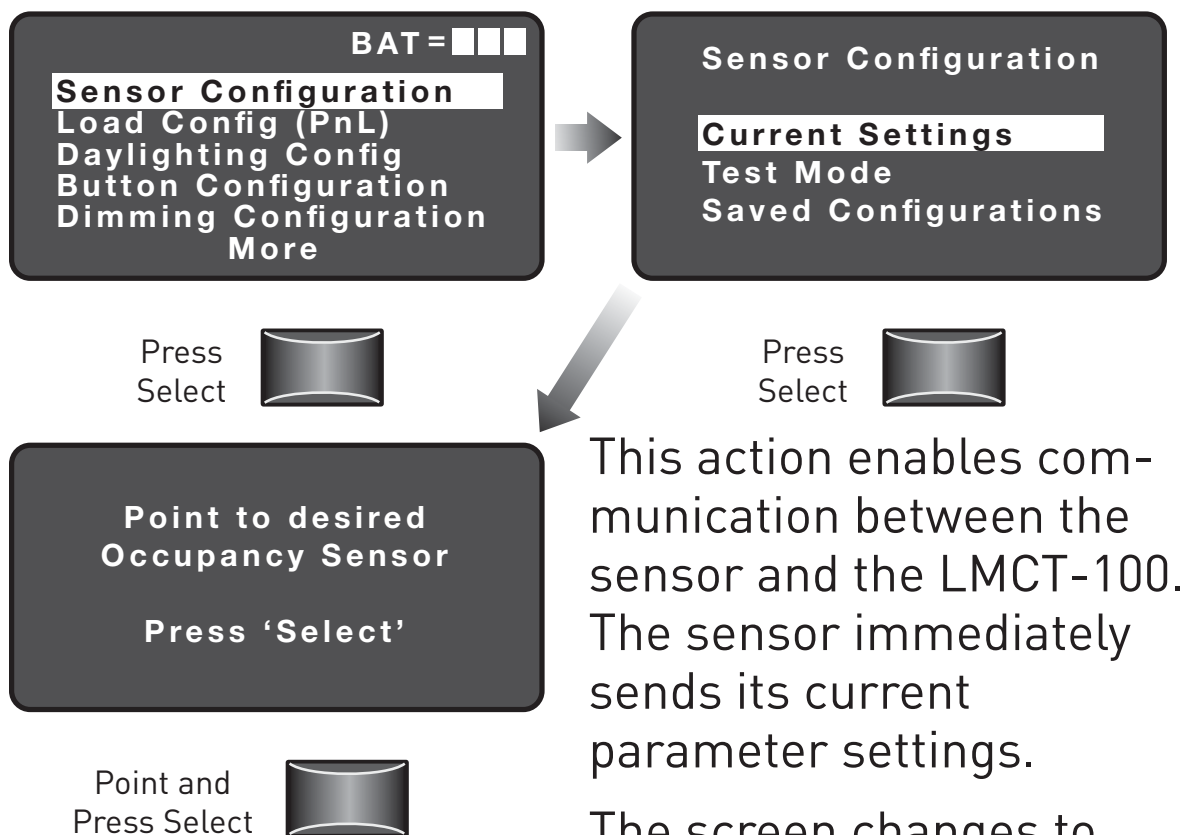
This action enables communication between the sensor and the LMCT-100. The sensor immediately sends its current parameter settings.

Point and Press Select

The screen changes to show the current sensor settings where you can adjust sensor parameters. "AH" next to Sensor Config indicates that the sensor is currently in After Hours mode. Changes made while AH is displayed only affect After Hours operation.

ADJUSTING SENSOR PARAMETERS

Using Current Settings, you can view all parameters applicable to the type of sensor that is currently communicating with the LMCT-100. You can modify settings, send them to the sensor, and/or store them in the LMCT-100.

Time Delay

```
  Sensor Config
Time Delay:          <20 min>
PIR Sens:               <90%>
US Sens:                <70%>
Trigger :           <PIR Only>
Retrigger:          <PIR Only>
Walkthru:               <Off>
SEND      SAVE      RECEIVE
```

Adjust
Time Delay
Minutes

Step 1: push ◀ or ▶ to adjust the value.
Options: <1 to 30 minutes>, and <Override> to disable the sensor.
Step 2: push ▼ to activate the next field.

Detection Sensitivity

```
  Sensor Config
Time Delay:          <20 min>
PIR Sens:               <90%>
US Sens:                <70%>
Trigger :           <PIR Only>
Retrigger:          <PIR Only>
Walkthru:               <Off>
SEND      SAVE      RECEIVE
```

```
  Sensor Config
Time Delay:          <20 min>
PIR Sens:               <90%>
US Sens:                <70%>
Trigger :           <PIR Only>
Retrigger:          <PIR Only>
Walkthru:               <Off>
SEND      SAVE      RECEIVE
```

Adjust PIR Sensitivity

Press the Down Arrow for Ultrasonic

Adjust Ultrasonic Sensitivity

Step 1: push ◀ or ▶ to adjust the value. PIR and Ultrasonic sensitivities vary from 0% to 100% in 10% increments.

Note: Only sensitivity of technology that is present can be changed.

Step 2: push ▼ to activate the next field.

Trigger/Retrigger Mode (Dual Tech Sensors only)

```
Sensor Config
Time Delay:          <20 min>
PIR Sens:               <90%>
US Sens:                <70%>
Trigger :           <PIR Only>
Retrigger:          <PIR Only>
Walkthru:               <Off>
SEND      SAVE      RECEIVE
```

```
Sensor Config
Time Delay:          <20 min>
PIR Sens:               <90%>
US Sens:                <70%>
Trigger :           <PIR Only>
Retrigger:          <PIR Only>
Walkthru:               <Off>
SEND      SAVE      RECEIVE
```

Adjust Trigger Mode ◀▶

Press the Down Arrow ▼ for Retrigger

Adjust Retrigger Mode ◀▶

Step 1: push ◀ or ▶ to cycle through selections of technology(ies) for the initial occupancy trigger:

PIR Only ▶ US (ultrasonic) Only ▶ PIR or US ▶ PIR & US ▶

Step 2: push ▼ to activate the next field.

Step 3: push ◀ or ▶ to cycle through technology activations required to keep the load ON after the initial occupancy is triggered.

Walk Through Mode

```
Sensor Config
Time Delay:          <20 min>
PIR Sens:               <90%>
US Sens:                <70%>
Trigger :           <PIR Only>
Retrigger:          <PIR Only>
Walkthru:               <Off>
SEND      SAVE      RECEIVE
```

Walk Through Mode On or Off ◀▶

Press the down arrow to choose Send, Save or Receive ▼

Walk-through mode turns the load off three minutes after the area is initially occupied if no motion is detected after the first 30 seconds. If motion continues beyond the first 30 seconds, the selected time delay applies.

Send

```
   Sensor Config
Time Delay:          <20 min>
PIR Sens:              <90%>
US Sens:               <70%>
Trigger :          <PIR Only>
Retrigger:         <PIR Only>
Walkthru:               <Off>
 SEND      SAVE      RECEIVE
```
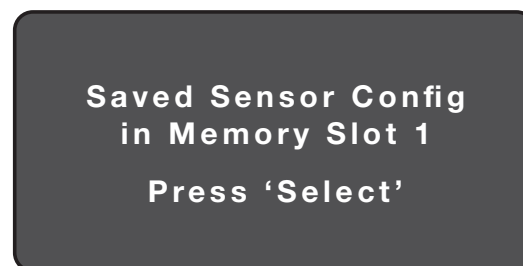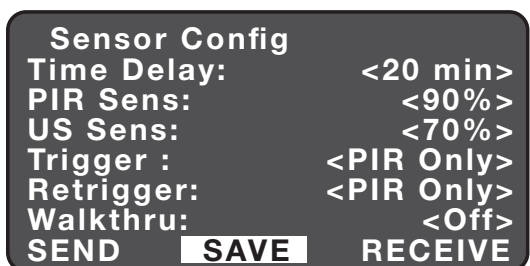
```
     Point to desired
    Occupancy Sensor

     Press 'Select'
```

Press Select

Point and Press Select

Configuration Sent
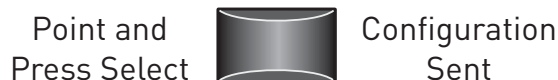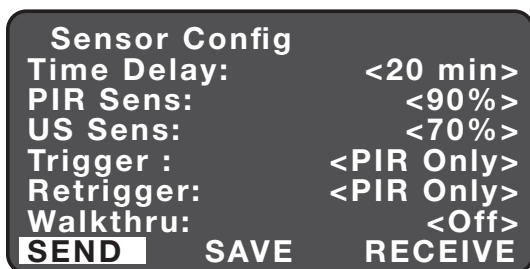
This sends the settings to the sensor.

The LEDs on the sensor blink to confirm the message has been sent. To double-check that the new settings were sent to the sensor, see "Receive."

Save

```
   Sensor Config
Time Delay:          <20 min>
PIR Sens:              <90%>
US Sens:               <70%>
Trigger :          <PIR Only>
Retrigger:         <PIR Only>
Walkthru:               <Off>
 SEND      SAVE      RECEIVE
```

```
  Saved Sensor Config
   in Memory Slot 1

    Press 'Select'
```

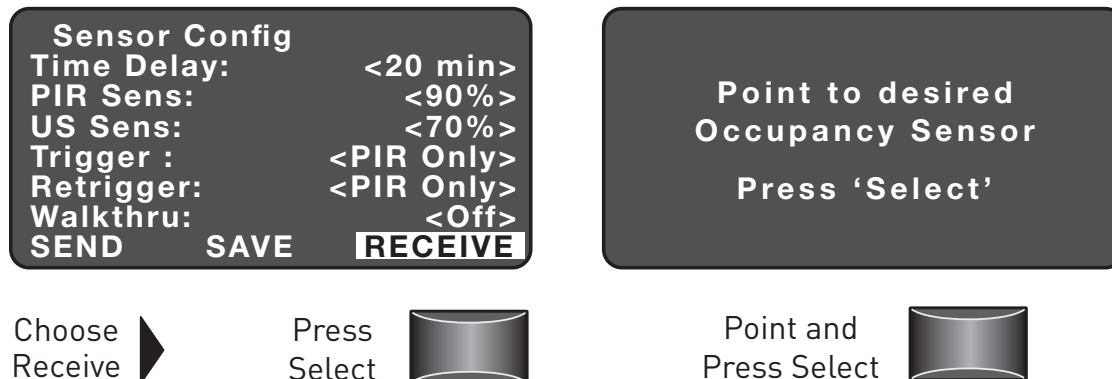Choose Save

Press Select

Point and Press Select

This saves the settings in the LMCT-100 "Saved Configurations" menu function for future use. Each time you save a configuration the "Memory Slot" number increases. You can save up to 9 configurations. Saved configurations are listed in the LMCT-100's "Saved Configurations" function in the Sensor Configuration menu (for more details, see page 12).
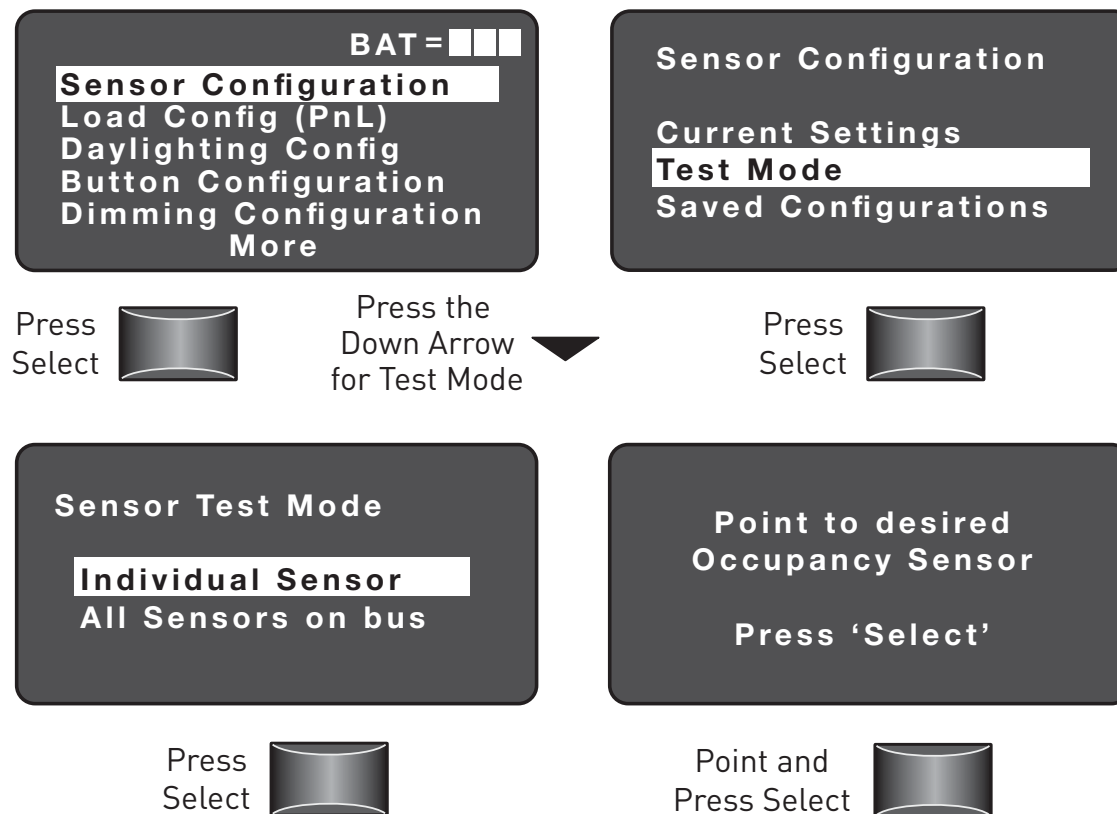
Receive

Important: Selecting Receive before sending new settings to the sensor or saving them to LMCT-100 memory clears any value changes that you made.

```
 Sensor Config
Time Delay:        <20 min>
PIR Sens:             <90%>
US Sens:              <70%>
Trigger :        <PIR Only>
Retrigger:       <PIR Only>
Walkthru:             <Off>
SEND      SAVE     RECEIVE
```

```
   Point to desired
   Occupancy Sensor

    Press 'Select'
```

Choose ▶ Receive   Press Select   Point and Press Select

This retrieves the current settings from the sensor.

SENSOR CONFIGURATION - TEST MODE

Sensor Testing - Individual Sensor

```
                    BAT = ■■■
Sensor Configuration
Load Config (PnL)
Daylighting Config
Button Configuration
Dimming Configuration
       More
```

```
Sensor Configuration

Current Settings
Test Mode
Saved Configurations
```

Press Select   Press the Down Arrow for Test Mode ▼   Press Select

```
Sensor Test Mode

 Individual Sensor
 All Sensors on bus
```

```
   Point to desired
   Occupancy Sensor

    Press 'Select'
```
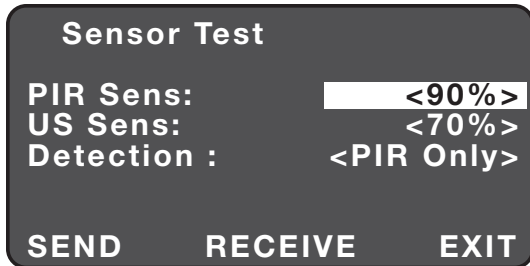
Press Select   Point and Press Select

The individual sensor goes into test mode.

Adjusting Sensitivity during Test

For dual technology sensors, both technologies appear on the screen, otherwise the screen only presents the applicable technology.

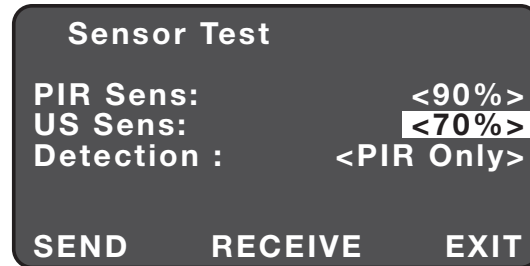PIR Sens = passive infrared sensitivity
US Sens = ultrasonic sensitivity

```
  Sensor Test

PIR Sens:          <90%>
US Sens:           <70%>
Detection :     <PIR Only>


 SEND      RECEIVE      EXIT
```

```
  Sensor Test

PIR Sens:          <90%>
US Sens:           <70%>
Detection :     <PIR Only>


 SEND      RECEIVE      EXIT
```

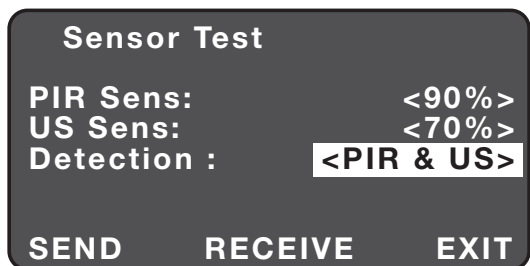Adjust PIR Sensitivity ◀▶   Press down arrow for Ultrasonic ▼

Adjust Ultrasonic Sensitivity ◀▶

You can adjust sensitivity values while inside the Test Mode. Values are 0 to 100%, in 10% increments.

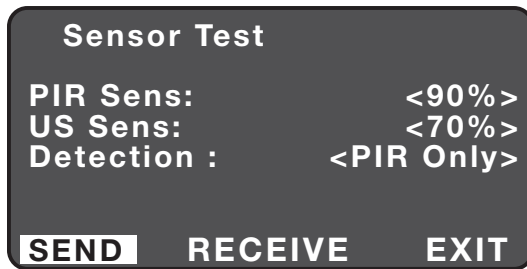## Detection Criteria (Dual Technology Sensors only)

```
  Sensor Test

PIR Sens:          <90%>
US Sens:           <70%>
Detection :     <PIR & US>


 SEND      RECEIVE      EXIT
```

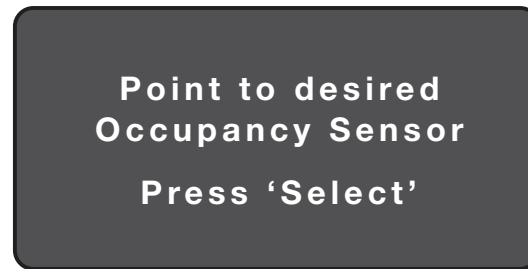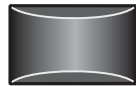You can select to test one or the other technology, or both technologies together. Selections cycle through:

Press down arrow for Detection ▼   Select Detection technology ◀▶
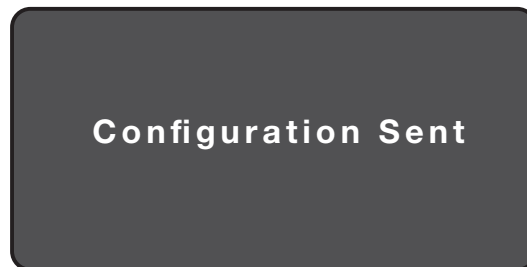
PIR ▶ US ▶ PIR **or** US ▶ PIR **&** US

Send

```
Sensor Test

PIR Sens:              <90%>
US Sens:               <70%>
Detection :         <PIR Only>

 SEND     RECEIVE       EXIT
```

```
Point to desired
Occupancy Sensor

Press 'Select'
```

Press Select

Point and Press Select

```
Configuration Sent
```
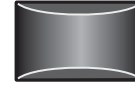
Test Mode starts using the settings you sent.

Receive

```
Sensor Test

PIR Sens:              <90%>
US Sens:               <70%>
Detection :         <PIR Only>

 SEND     RECEIVE       EXIT
```

```
Point to desired
Occupancy Sensor

Press 'Select'
```
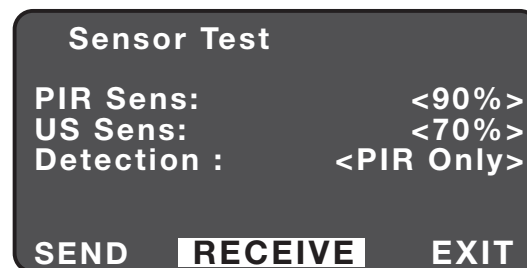
Choose Receive
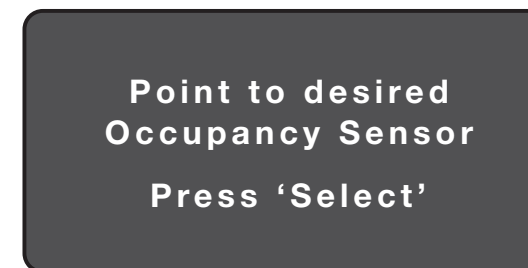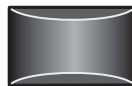
Press Select

Point and Press Select

Retrieves settings from the sensor so you can view or modify them for further testing.

Exit Test Mode

```
   Sensor Test

PIR Sens:            <90%>
US Sens:             <70%>
Detection :       <PIR Only>


 SEND    RECEIVE    EXIT
```

```
     To Exit Test Mode
          Point to
     Occupancy Sensor

       Press 'Select'
```
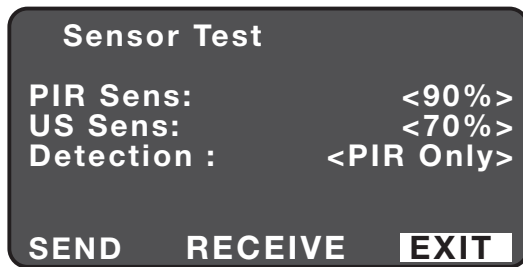
Choose
Exit ◀▶

Press
Select

Point and
Press Select
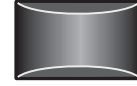
Sensor Testing - All Sensors on Bus

```
Sensor Test Mode

  Individual Sensor
  All Sensors on bus
```

```
      Point to any
    Occupancy Sensor

     Press 'Select'
```
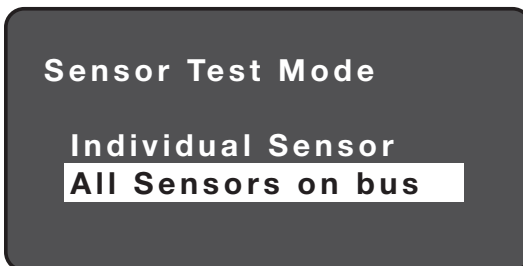
Press
Select

Point and
Press Select

When you select "All Sensors on bus", you can test the selected sensor along with other sensors on the DLM Local Network (bus) to understand the coverage in the entire room.

SAVED CONFIGURATIONS

```
                    BAT = ▇▇▇
Sensor Configuration
Load Config (PnL)
Daylighting Config
Button Configuration
Dimming Configuration
        More
```

Press
Select

```
Sensor Configuration

Current Settings
Test Mode
Saved Configurations
```

Press the
Down Arrow for ▼
Saved Configurations

Press
Select

```
Point to desired Type
of Occupancy Sensor
to retrieve saved
configurations for
that sensor type

Press 'Select'
```

```
Saved Sensor Configs

Pick DT Saved Config
<1    20/90/70/W      >

RECALL        DELETE
```
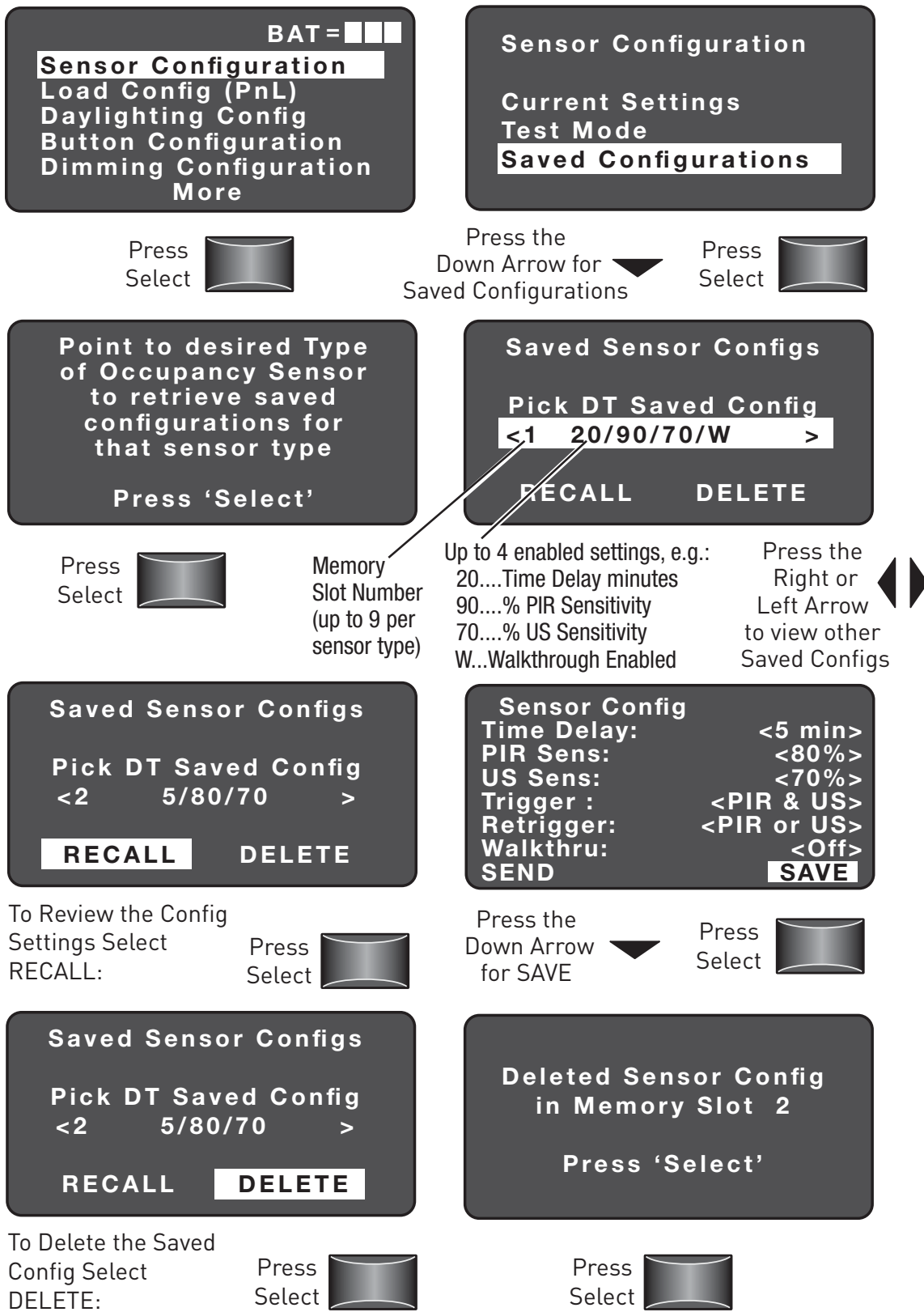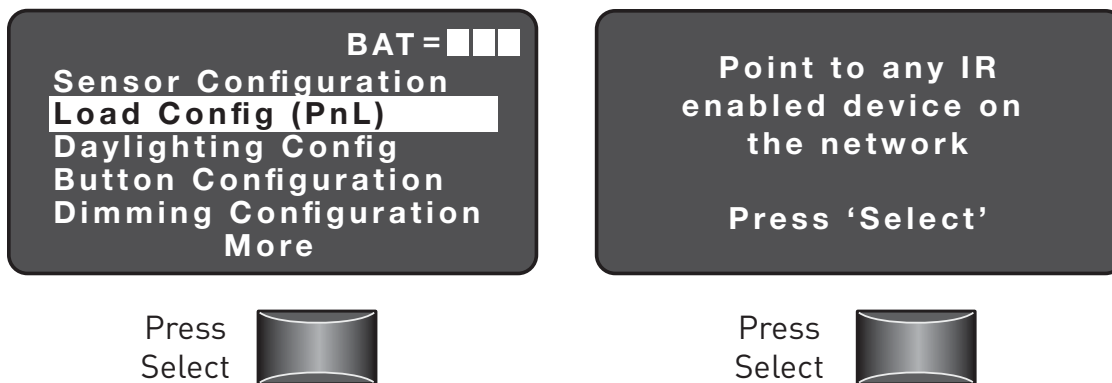
Press
Select

Memory
Slot Number
(up to 9 per
sensor type)

Up to 4 enabled settings, e.g.:
20....Time Delay minutes
90....% PIR Sensitivity
70....% US Sensitivity
W...Walkthrough Enabled

Press the
Right or
Left Arrow ◀▶
to view other
Saved Configs

```
Saved Sensor Configs

Pick DT Saved Config
<2      5/80/70       >

 RECALL    DELETE
```

To Review the Config
Settings Select
RECALL:

Press
Select

```
Sensor Config
Time Delay:            <5 min>
PIR Sens:              <80%>
US Sens:               <70%>
Trigger :            <PIR & US>
Retrigger:           <PIR or US>
Walkthru:               <Off>
SEND                    SAVE
```

Press the
Down Arrow ▼
for SAVE

Press
Select

```
Saved Sensor Configs

Pick DT Saved Config
<2      5/80/70       >

 RECALL    DELETE
```

To Delete the Saved
Config Select
DELETE:

Press
Select

```
Deleted Sensor Config
 in Memory Slot  2

   Press 'Select'
```

Press
Select

Note: If no saved configurations exist, you will see:
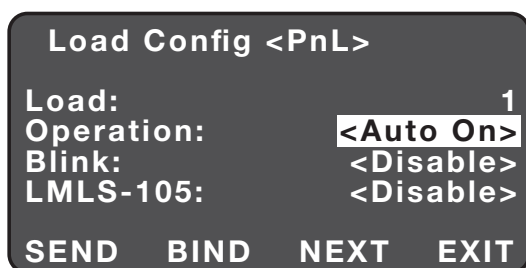**No Sensor Configurations exist, Press 'Select'.**

LOAD CONFIGURATION (PnL)

Use the Load Configuration function to identify load numbers, view and change load parameters and load bindings to sensors. You initiate Load Configuration (PnL) also known as Push n' Learn™ by pointing the LMCT-100 at any IR enabled DLM Local Network device when prompted.

Important: To configure load binding from the LMCT-100, it must be initiated by the LMCT-100. After entering PnL you must exit before using the system.

```
                        BAT = ▮▮▯
Sensor Configuration
Load Config (PnL)
Daylighting Config
Button Configuration
Dimming Configuration
        More
```

```
        Point to any IR
      enabled device on
         the network

      Press 'Select'
```

Press Select

Press Select

When the device receives the signal from the LMCT-100, the DLM Local Network goes into PnL mode; the red LED on all communicating devices starts blinking at 2x/second and all loads turn OFF except Load 1 turns ON.

```
  Load Config <PnL>

Load:                    1
Operation:        <Auto On>
Blink:            <Disable>
LMLS-105:         <Disable>

 SEND    BIND    NEXT    EXIT
```

Right arrow to change setting for load 1 ▶

Down arrow to highlight NEXT then SELECT to go to next load ▼
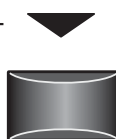
Load Selection

Settings for load 1 appear first.

Push ▼ to highlight NEXT and push the SELECT button to turn ON the next load and view its settings.

Operation Mode

```
Load Config <PnL>

Load:                        1
Operation:          <Auto On>
Blink:              <Disable>
LMLS-105:           <Disable>

SEND    BIND    NEXT    EXIT
```

Operation Mode
<Manual On>
or <Auto On> ◀▶

The operation mode determines if the load can be turned on automatically by a sensor, or only manually by a switch. Push ◀ or ▶ to adjust the Operation mode. Options are 'Auto On' and 'Manual On'.

Blink Warning

The Blink Warning flashes the load OFF then ON one minute prior to the sensor automatically turning the load OFF when the time delay expires.

```
Load Config <PnL>

Load:                        1
Operation:          <Auto On>
Blink:              <Disable>
LMLS-105:           <Disable>

SEND    BIND    NEXT    EXIT
```

Blink Warning
<Disable>
or <Enable> ◀▶

Push ◀ or ▶ to adjust the Blink Warning. Options are 'Disable' and 'Enable'.

LMLS-105

This function enables and disables an LMLS-105 daylighting sensor to control the selected load.

```
Load Config <PnL>

Load:                        1
Operation:          <Auto On>
Blink:              <Disable>
LMLS-105:           <Disable>

SEND    BIND    NEXT    EXIT
```

Daylighting
<Disable>
or <Enable> ◀▶

Send

```
Load Config <PnL>

Load:                        1
Operation:         <Auto On>
Blink:             <Disable>
LMLS-105:          <Disable>
SEND   BIND   NEXT   EXIT
```

Press
Select

```
Point to any IR
enabled device on
the network

Press 'Select'
```

Point and
Press Select

```
Configuration Sent

Press <SELECT> to
Continue
or <HOME> to exit PnL
```

New settings have been sent to the selected load. Wait 5-6 seconds for the message to clear. Select another function (bind, next, exit). To instantly end load configuration press the HOME key.

Bind

```
Load Config <PnL>

Load:                        1
Operation:         <Auto On>
Blink:             <Disable>
LMLS-105:          <Disable>
SEND   BIND   NEXT   EXIT
```

Choose
Bind

Press
Select

```
Point to desired
Occupancy Sensor to
bind to Load

Press 'Select'
```
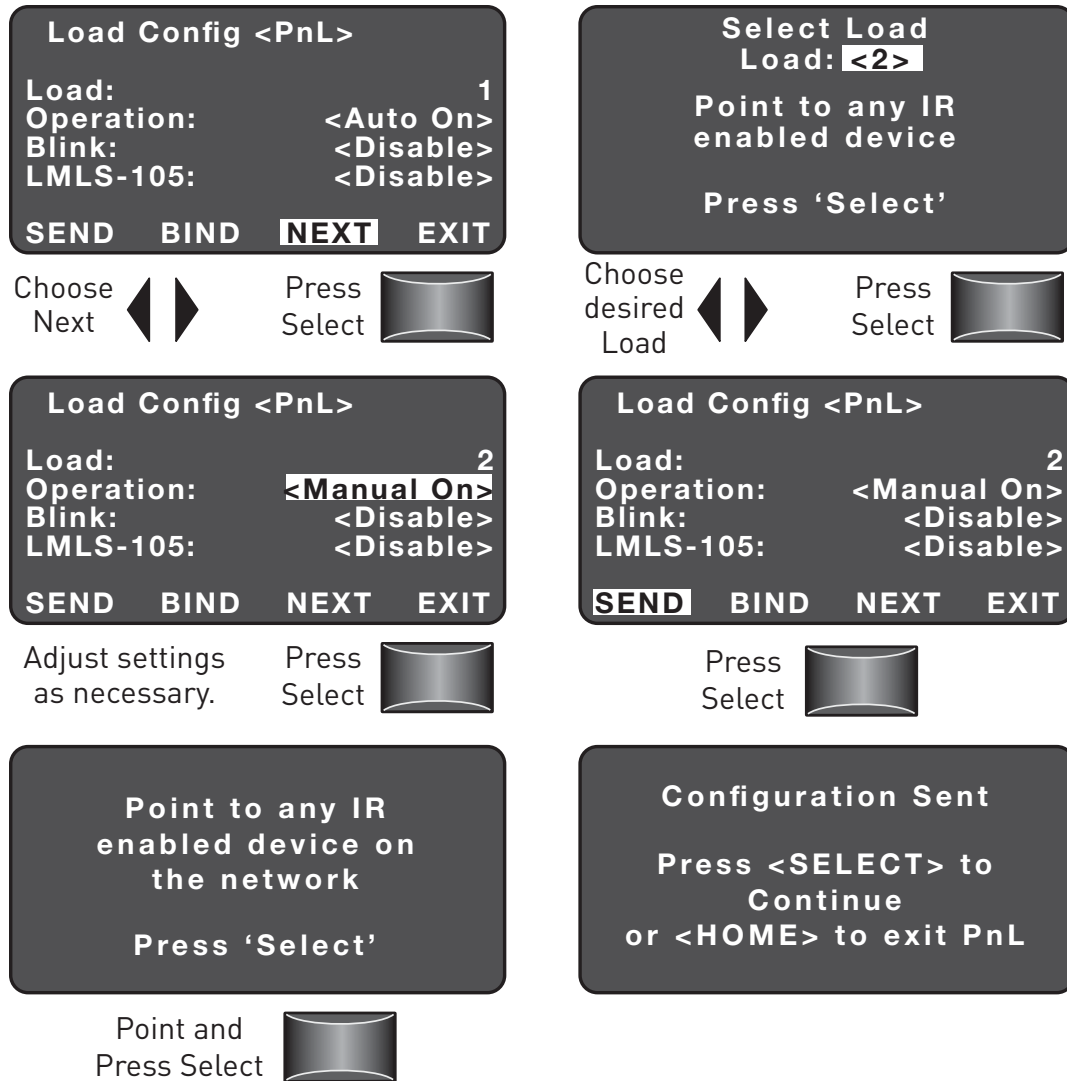
Point and
Press Select

Binds the occupancy sensor to the selected load.

Next

Select another load. When NEXT is selected, Load 1 turns OFF and Load 2 turns ON.

```
Load Config <PnL>

Load:                        1
Operation:        <Auto On>
Blink:            <Disable>
LMLS-105:         <Disable>

SEND    BIND    NEXT    EXIT
```

Choose Next ◀ ▶   Press Select

```
Select Load
Load: <2>

Point to any IR
enabled device

Press 'Select'
```

Choose desired Load ◀ ▶   Press Select

```
Load Config <PnL>

Load:                        2
Operation:       <Manual On>
Blink:            <Disable>
LMLS-105:         <Disable>

SEND    BIND    NEXT    EXIT
```

Adjust settings as necessary.   Press Select

```
Load Config <PnL>

Load:                        2
Operation:       <Manual On>
Blink:            <Disable>
LMLS-105:         <Disable>

SEND    BIND    NEXT    EXIT
```

Press Select

```
Point to any IR
enabled device on
the network

Press 'Select'
```

Point and Press Select

```
Configuration Sent

Press <SELECT> to
Continue
or <HOME> to exit PnL
```

Exit

This ends the configuration function and exits PnL.

```
Load Config <PnL>

Load:                        1
Operation:        <Auto On>
Blink:            <Disable>
LMLS-105:         <Disable>

SEND    BIND    NEXT    EXIT
```

Choose Exit ◀ ▶   Press Select

```
Point to any IR
enabled device on
the network

Press 'Select'
```
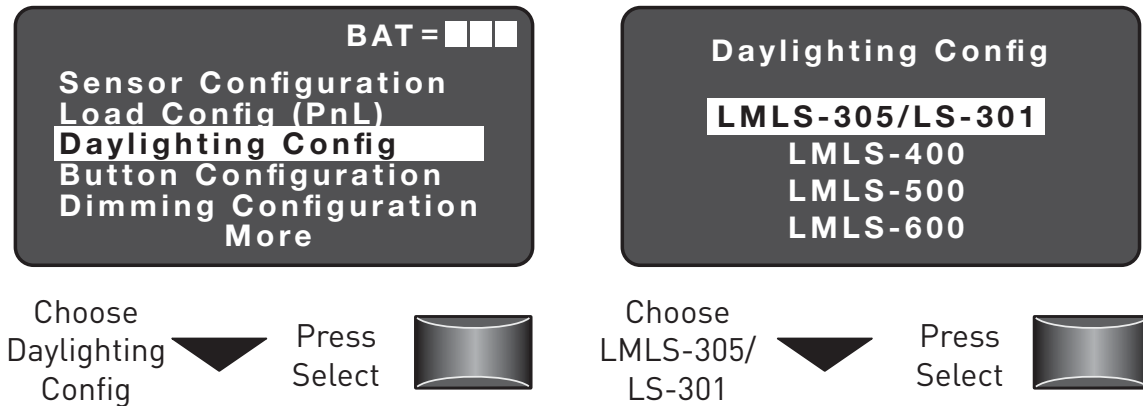
Point and Press Select
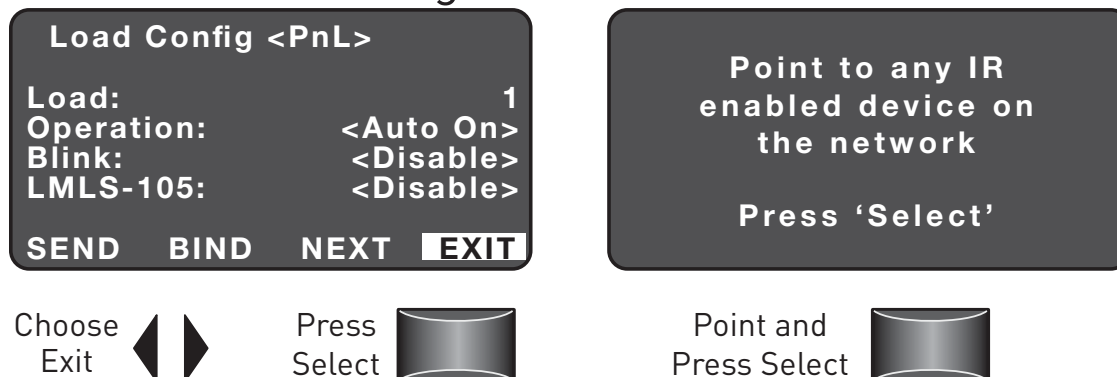
DAYLIGHTING CONFIGURATION

Daylighting Config allows you to setup daylighting and operation parameters specific to the type of sensor that is communicating with the LMCT-100. Different menu options are displayed depending upon the device. To configure daylighting for the LMLS-400, LMLS-500 or LMLS-600 refer to page 21.

Note regarding IR communication with the LMLS-600: Because of the great mounting heights of skylight sensors in high-bay applications, it is important to stand directly underneath the photosensor, with the LMCT held in a vertical orientation pointed at the bottom of the sensor.

In some cases, direct communications between the LMCT and the LMLS-600 may be difficult to achieve due to interference from very high ambient light when looking up, from direct sunlight, high intensity fluorescent fixtures (e.g.,T5HO) mounted close to the sensor, as well as some other intense light sources. In these cases, communications can be established with the photosensor by aiming the LMCT at another DLM product on the network (e.g., a wall swtich or occupancy sensor).
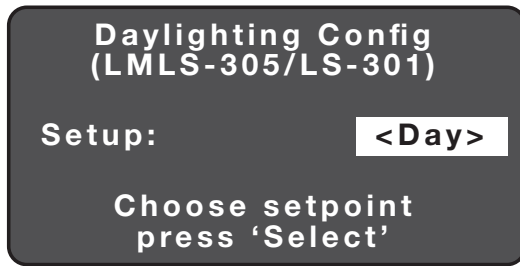
Daylighting Config (LMLS-305/LS-301 only)

```
                          BAT=▮▮▮
Sensor Configuration
Load Config (PnL)
Daylighting Config
Button Configuration
Dimming Configuration
        More
```

```
       Daylighting Config

     LMLS-305/LS-301
         LMLS-400
         LMLS-500
         LMLS-600
```

Choose
Daylighting ▼   Press
Config   Select

Choose
LMLS-305/ ▼   Press
LS-301   Select

Refer to the LMLS-305 installation instructions for details about daylighting setup and operation.

Day Setpoint

```
       Daylighting Config

     LMLS-305/LS-301
         LMLS-400
         LMLS-500
         LMLS-600
```

```
       Daylighting Config
       (LMLS-305/LS-301)

Setup:              <Day>

        Choose setpoint
        press 'Select'
```

Choose
LMLS-305/ ▼   Press
LS-301   Select

Press
Select

```
       Daylighting Config
       (LMLS-305/LS-301)

         Day Setup

   Use the Up/Down Keys
      to set the desired
      Day light level
```

```
       Daylighting Config
       (LMLS-305/LS-301)

         Day Setup

     Decrementing the
        Light level
```

Press Up or Down arrow   ▲
to adjust light level   ▼

▲ Increment (raise)
▼ Decrement (lower)

```
       Daylighting Config
       (LMLS-305/LS-301)

         Day Setup

   When done adjusting
       press Select
```

```
       Daylighting Config
       (LMLS-305/LS-301)

         Day Setup

    Day Setpoint Saved
```

Press
Select

Night Setpoint

Daylighting Config
(LMLS-305/LS-301)

Setup: **<Day>**

Choose setpoint
press 'Select'

Press Left/Right
arrow to scroll to
Night Setpoint

Daylighting Config
(LMLS-305/LS-301)

Setup: **<Night>**

Choose setpoint
press 'Select'

Press
Select

Daylighting Config
(LMLS-305/LS-301)

Night Setup

Use the Up/Down Keys
to set the desired
Night light level
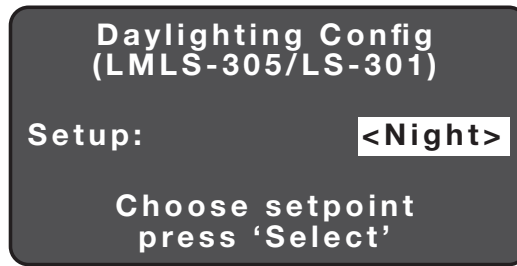
Press Up/Down
arrow to adjust
light level

Daylighting Config
(LMLS-305/LS-301)

Night Setup

Decrementing the
Light level

Press
Up/Down
arrow

Increment (raise)

Decrement (lower)

Daylighting Config
(LMLS-305/LS-301)

Night Setup

When done adjusting
press Select

Press
Select

Daylighting Config
(LMLS-305/LS-301)

Night Setup

Night Setpoint Saved
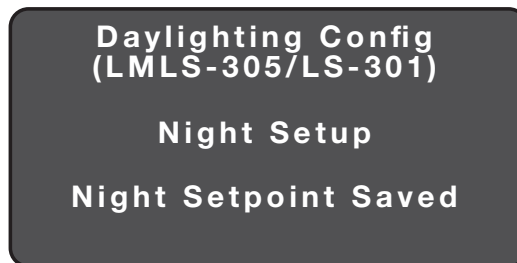
Auto Setpoint

This function allows the LMLS-305 to automatically begin electric light adjustment.

```
Daylighting Config
(LMLS-305/LS-301)

Setup:              <Day>

      Choose setpoint
      press 'Select'
```
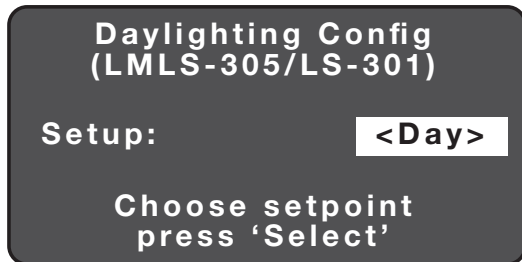
Press Left/Right arrow to scroll to Auto Setpoint

◀ ▶

```
Daylighting Config
(LMLS-305/LS-301)

Setup:              <Auto>

      Choose setpoint
      press 'Select'
```

Press Select

```
Daylighting Config
(LMLS-305/LS-301)

      Automatic Mode
      Enabled
```
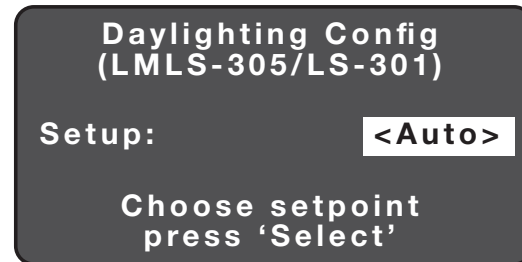
Press the Home Button to return to the Home Page.

```
Daylighting Config
(LMLS-305/LS-301)

Setup:              <Auto>

      Choose setpoint
      press 'Select'
```

Press Home

```
                           BAT=▮▮▮
Sensor Configuration
Load Config (PnL)
Daylighting Config
Button Configuration
Dimming Configuration
      More
```
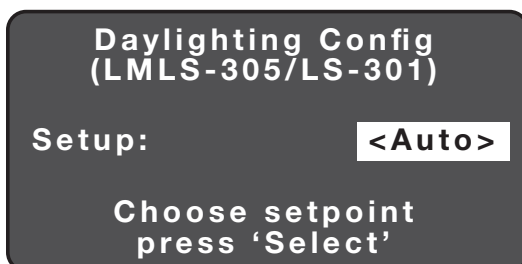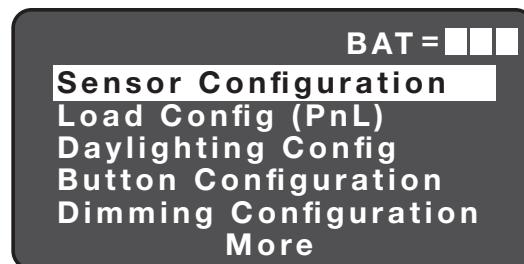
DAYLIGHTING CONFIG (LMLS-400/ LMLS-500/LMLS-600)

Refer to the specific LMLS installation instructions for details about daylighting setup and operation of each of the models listed below.
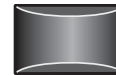
```
                          BAT=▮▮▮
   Sensor Configuration
   Load Config (PnL)
   Daylighting Config
   Button Configuration
   Dimming Configuration
            More
```

```
           Daylighting Config

         LMLS-305/LS-301
            LMLS-400
            LMLS-500
            LMLS-600
```

Choose ▼ Press
Daylighting Select
Config

Choose ▼ Press
LMLS-400 Select

Specific Photosensor

```
   Daylighting    LMLS-400

    Specific Photosensor

    Search Photosensors
```

```
   Point to the desired
      Photosensor and
       press 'Select'
```

Press Select

Point and Press Select

```
   LMLS-400    0293724909
    Zone Setup
    Calibration
    Zone Settings
    Advanced Settings
    Control Mode
```
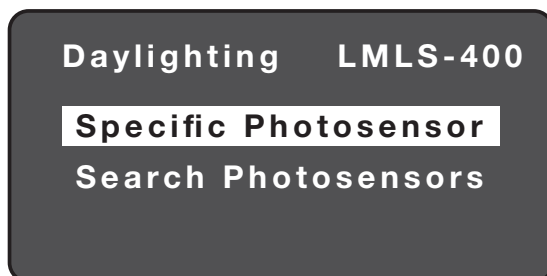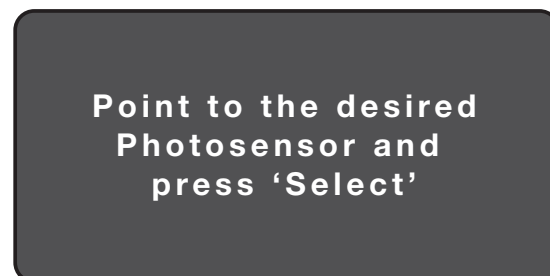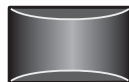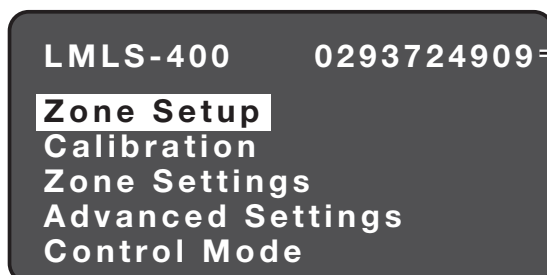
Serial number will be different for each LMLS-400

Search Photosensor

The Search Photosensor function allows you to identify which LMLS device will be commissioned. After enabling and pointing the LMCT-100 to any DLM device, a list of all photosensors in the DLM Local Network appears on the screen. Each DLM device has its own serial number.

```
Daylighting    LMLS-400

   Specific Photosensor
   Search Photosensors
```

Choose
Search   Press
Photsensors   Select

```
        Point to Any IR
      enabled device on
         the network

        Press 'Select'
```

Point and
Press Select

```
Daylighting    LMLS-400
   'Select' a device ID
      0293724909
```

Choose
Desired   Press
Photsensor   Select

```
        Point to Any IR
      enabled device on
         the network

        Press 'Select'
```

Point and
Press Select

```
LMLS-400      0293724909
   Zone Setup
   Calibration
   Zone Settings
   Advanced Settings
   Control Mode
```
Serial number will be different for each LMLS-400

LMLS-400 Daylighting Menu

ZONE SETUP (LMLS-400/LMLS-600 ONLY)

Selecting the Operation Mode (LMLS-400 and LMLS-600 only)

Zone Setup allows you to select and change the Operation Mode of a zone, specify if a selected load is to be controlled by Daylighting and to bind loads to the device. To configure zones for the LMLS-500 refer to "Zone Setup (LMLS-500 Only)" on page 31.

```
LMLS-400        0293611935
Zone Setup
Calibration
Zone Settings
Advanced Settings
Control Mode
```

Press
Select

```
Zone Setup    LMLS-400

Operation        <Dimmed>



        CONTINUE
```

Press Left/Right arrow to scroll
to the desired operation mode:
◀ ▶   <Switched>, <Bi-Level>,
        <Tri-Level> or <Dimmed>

```
Zone Setup    LMLS-400

Operation       <Switched>



        CONTINUE
```

Choose   Press
CONTINUE   Select

```
Point to any IR
enabled device on
the Network

Press 'Select'
```

Point and
Press Select

After choosing Zone Setup and pressing Select, the current operation mode is displayed. This can be changed to Switched, Bi-Level, Tri-Level, or Dimmed.

Switched

Switched mode provides ON/OFF switching within the daylighting zone controlled by the photosensor.

Load 1 - OFF 0%

Load 1 - ON 100%

Bi-Level

Bi-level mode provides three light levels within the daylighting zone controlled by the photosensor by using 2 load circuits.
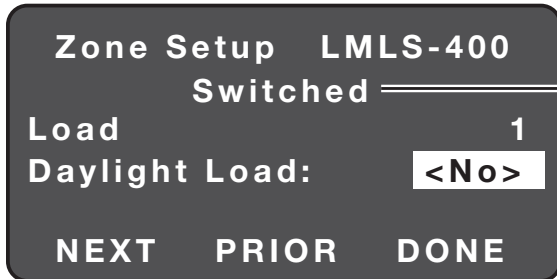
Off = 0%
Load 1 - OFF
Load 2 - OFF

Med = 50%
Load 1 - ON
Load 2 - OFF

Max = 100%
Load 1 - ON
Load 2 - ON

Tri-Level

Tri-level mode provides four light levels within the daylighting zone controlled by the photosensor by using 2 load circuits.

Off = 0%   Load 1 - OFF
            Load 2 - OFF

Low = 33%   Load 1 - OFF
            Load 2 - ON

High = 66% Load 1 - ON
            Load 2 - OFF

Max = 100% Load 1 - ON
            Load 2 - ON

Dimmed

Dimmed mode provides continuous dimming within the daylight zone controlled by the photosensor.

Load 1 - ON 1%   1%.
                                   .
                                   .
                                   .
                                   .
Load 1 - ON 100%   100%

Switched and Dimmed Load Assignment

The load binding process for Switched loads and Dimmed loads is the same.

```
Zone Setup   LMLS-400
        Switched
Load                    1
Daylight Load:     <No>


NEXT    PRIOR    DONE
```

Depending on the Operation Mode, the screen display will be Switched or Dimmed

Load 1: Press Left/Right arrow to choose <Yes> or <No>

To do load binding the load needs to be assigned as a Daylight Load by selecting <Yes>.

```
Zone Setup   LMLS-400
        Switched
Load                    1
Daylight Load:    <Yes>


NEXT    PRIOR    DONE
```

Next

To continue to assign Daylight Load binding to load 2, choose NEXT.

```
Zone Setup   LMLS-400
        Switched
Load                    1
Daylight Load:      <Yes>

 NEXT    PRIOR    DONE
```
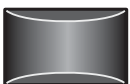
```
    Point to an IR
enabled device on
    the Network

   Press 'Select'
```

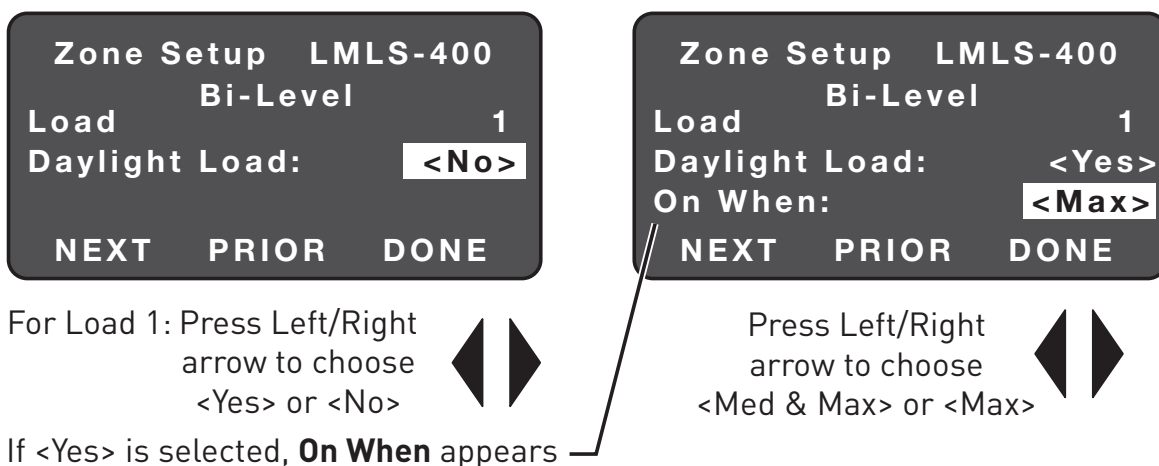Choose NEXT ▼ Press Select

Point and Press Select

```
Zone Setup   LMLS-400
        Switched
Load                    2  — Zone settings for the
Daylight Load:      <No>      next load is diplayed.

 NEXT    PRIOR    DONE
```

Prior

To continue to assign Daylight Load binding to the previous load, choose PRIOR. This function behaves the same for all Operation Modes.
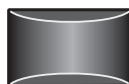
```
Zone Setup   LMLS-400
        Switched
Load                    2
Daylight Load:       <No>

  NEXT    PRIOR    DONE
```

```
Point to any IR
enabled device on
   the Network

 Press 'Select'
```

Choose   Press
PRIOR   Select

Point and
Press Select

```
Zone Setup   LMLS-400
        Switched
Load                    1
Daylight Load:      <Yes>

  NEXT    PRIOR    DONE
```
— Zone settings for the prior load is now displayed.

Done

When you have completed all load bindings, choose DONE. This function behaves the same for all Operation Modes.

```
Zone Setup   LMLS-400
        Switched
Load                    1
Daylight Load:       <No>

  NEXT    PRIOR    DONE
```

```
Point to any IR
enabled device on
   the Network

 Press 'Select'
```

Choose   Press
DONE   Select

Point and
Press Select

```
LMLS-400      0293611935

 Zone Setup
 Calibration
 Zone Settings
 Advanced Settings
 Control Mode
```

Zone Setup settings have been saved. The screen returns to the Daylighting Parameters menu.

Bi-Level Load Assignment

```
Zone Setup   LMLS-400
         Bi-Level
Load                    1
Daylight Load:      <No>

   NEXT    PRIOR    DONE
```

```
Zone Setup   LMLS-400
         Bi-Level
Load                    1
Daylight Load:      <Yes>
On When:            <Max>
   NEXT    PRIOR    DONE
```

For Load 1: Press Left/Right arrow to choose <Yes> or <No>

If <Yes> is selected, **On When** appears

Press Left/Right arrow to choose <Med & Max> or <Max>

To do load binding the load needs to be assigned as a Daylight Load by selecting <Yes>.

Next, Prior and Done process is the same as Switched and Dimmed.

Tri-Level Load Assignment
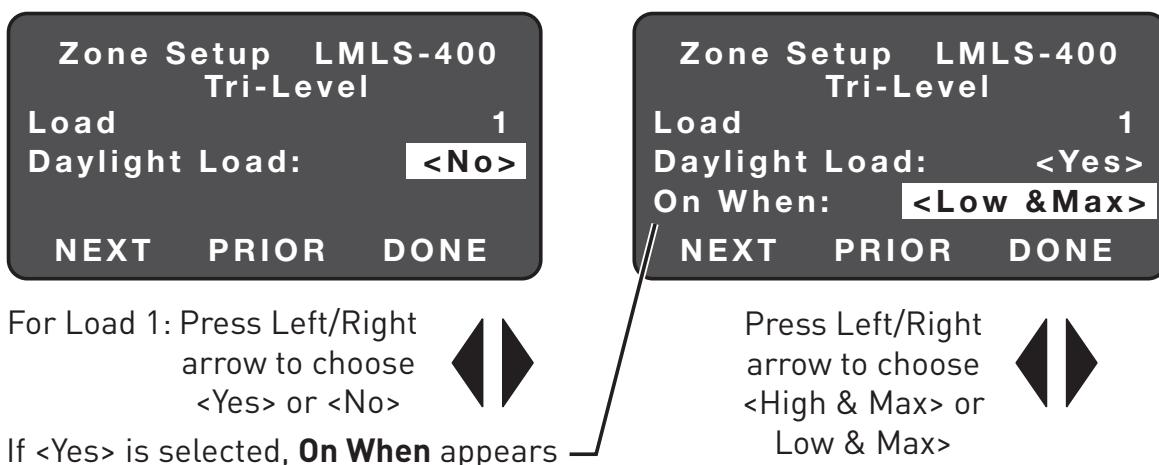
```
Zone Setup   LMLS-400
         Tri-Level
Load                    1
Daylight Load:      <No>

   NEXT    PRIOR    DONE
```

```
Zone Setup   LMLS-400
         Tri-Level
Load                    1
Daylight Load:      <Yes>
On When:        <Low &Max>
   NEXT    PRIOR    DONE
```

For Load 1: Press Left/Right arrow to choose <Yes> or <No>

If <Yes> is selected, **On When** appears

Press Left/Right arrow to choose <High & Max> or Low & Max>

To do load binding the load needs to be assigned as a Daylight Load by selecting <Yes>

Next, Prior and Done process is the same as Switched and Dimmed.

```
Zone Setup    LMLS-400
        Switched
Load                    1
Daylight Load:        <No>

   NEXT    PRIOR    DONE
```

Choose   Press
DONE   Select

```
Point to any IR
enabled device on
   the Network


Press 'Select'
```

Point and
Press Select

```
LMLS-400      0293611935

Zone Setup
Calibration
Zone Settings
Advanced Settings
Control Mode
```
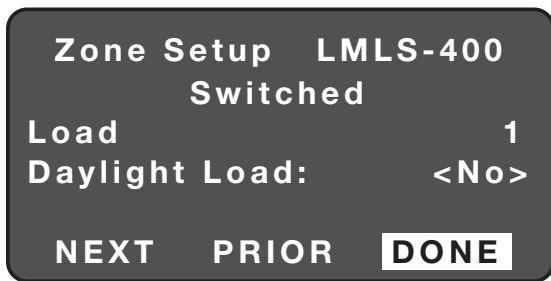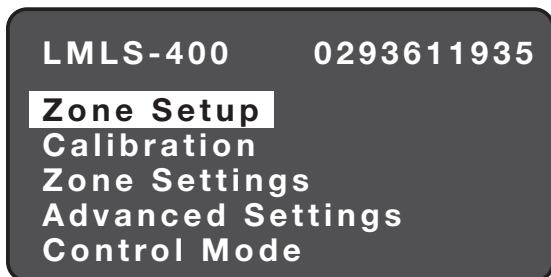
Zone Setup settings have been saved. The screen returns to the Daylighting Parameters menu.

ZONE SETUP (LMLS-500 ONLY)

Selecting the Operation Mode (LMLS-500 Only)

Zone Setup allows you to select the number of zones, change the operation mode of a zone, specify if a selected load is to be controlled by Daylighting and to bind loads to the LMLS-500.

```
LMLS-500          0293724909
 Zone Setup
 Calibration
 Zone Settings
 Advanced Settings
 Control Mode
```

Press
Select

```
Zone Setup        LMLS-500
Number of Zones        <3>
   Choose the number of
     Daylighting Zones

         CONTINUE
```
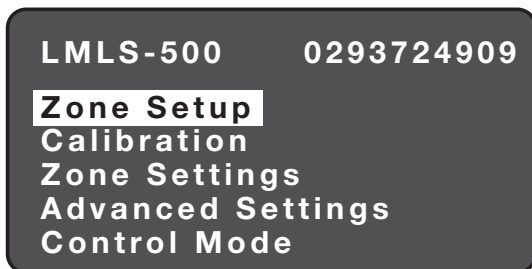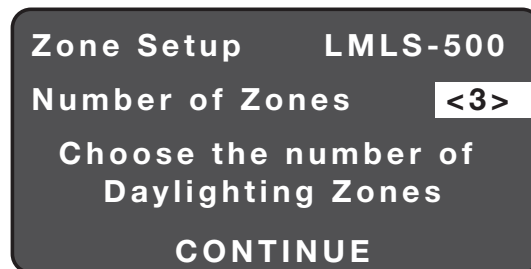
Press Left/Right arrow to
select the number of Zones
(1, 2, or 3)

```
Zone Setup        LMLS-500
Number of Zones        <3>
   Choose the number of
     Daylighting Zones
         CONTINUE
```

Choose   Press
CONTINUE   Select

```
      Point to Any IR
    enabled device on
        the network

      Press 'Select'
```

Point and
Press Select

```
Zone Setup        LMLS-500
Zone 1:          <Bi-Level>
Zone 2:          <Switched>
Zone 3:          <Tri-Level>
     Pick a control type
       for ALL Zones
         CONTINUE
```
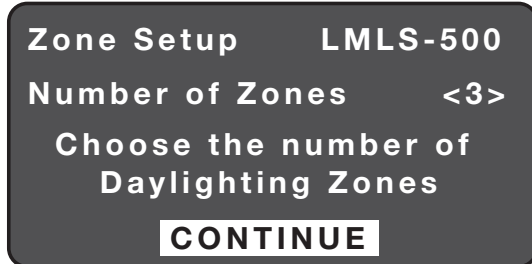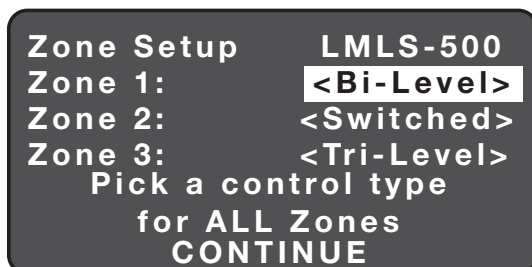
Press Left/Right arrow to choose the
desired operation mode for each Zone:
          <Switched>, <Bi-Level>,
          <Tri-Level> or <Dimmed>

```
      Point to any IR
    enabled device on
        the Network

      Press 'Select'
```

Point and
Press Select

After choosing Zone Setup and pressing Select, the current operation mode is displayed. This can be changed to Switched, Bi-Level, Tri-Level, or Dimmed.

Switched

Switched mode provides ON/OFF switching within the daylighting zone controlled by the photosensor.

Load 1 - OFF 0%

Load 1 - ON 100%

Bi-Level

Bi-level mode provides three light levels within the daylighting zone controlled by the photosensor by using 2 load circuits.
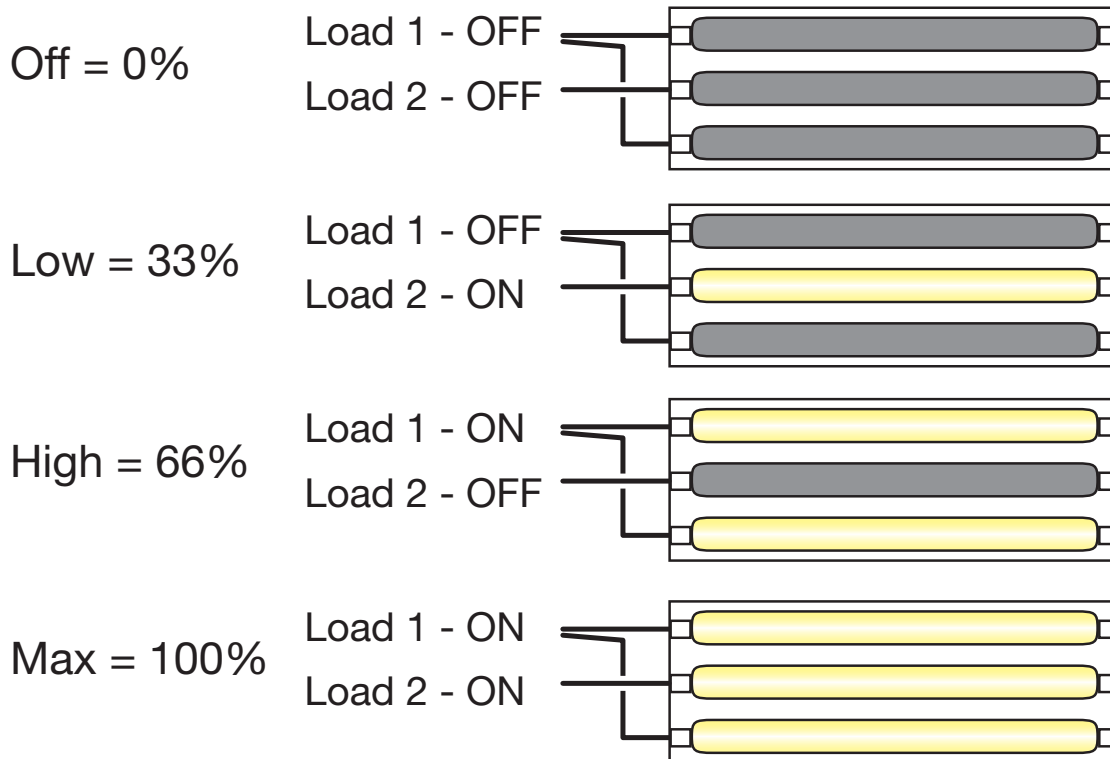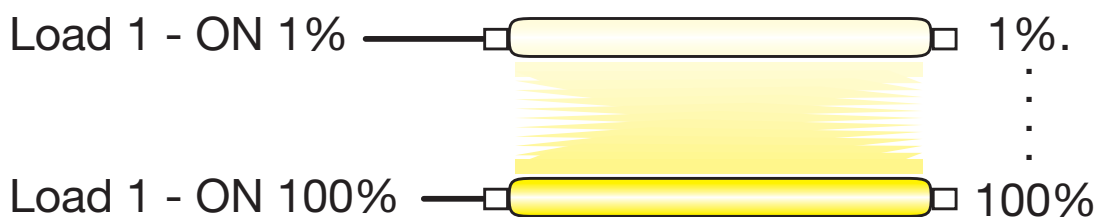
Off = 0%   Load 1 - OFF
            Load 2 - OFF

Med = 50%   Load 1 - ON
            Load 2 - OFF

Max = 100% Load 1 - ON
            Load 2 - ON

Tri-Level

Tri-level mode provides four light levels within the daylighting zone controlled by the photosensor by using 2 load circuits.
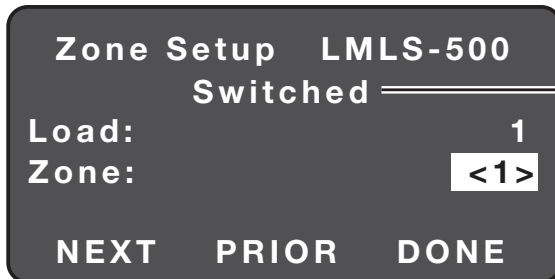
Off = 0% Load 1 - OFF
          Load 2 - OFF

Low = 33% Load 1 - OFF
           Load 2 - ON

High = 66% Load 1 - ON
            Load 2 - OFF

Max = 100% Load 1 - ON
            Load 2 - ON

Dimmed

Dimmed mode provides continuous dimming within the daylight zone controlled by the photosensor.

Load 1 - ON 1%   1%.
                                    .
                                    .
                                    .
Load 1 - ON 100%   100%

Switched and Dimmed Load Assignment

The load binding process for Switched loads and Dimmed loads is the same.

```
Zone Setup    LMLS-500
        Switched
Load:                 1
Zone:               <1>


   NEXT    PRIOR    DONE
```

Depending on the Operation Mode, the screen display will be Switched or Dimmed

Load 1: Press Left/Right arrow to select the Zone

Next

To continue to assign Daylight Load binding to load 2, choose NEXT.

```
Zone Setup    LMLS-500
        Switched
Load:                 1
Zone:               <1>

   NEXT   PRIOR    DONE
```

```
Point to an IR
enabled device on
the Network

Press 'Select'
```
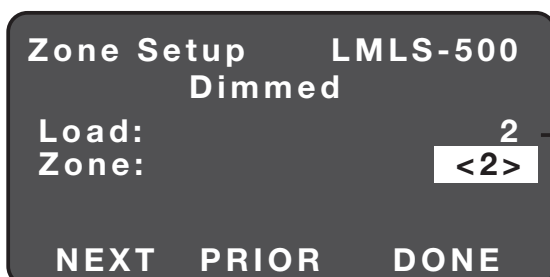
Choose NEXT   Press Select
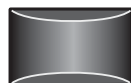
Point and Press Select

```
Zone Setup    LMLS-500
        Dimmed
Load:                 2
Zone:               <2>


   NEXT    PRIOR    DONE
```
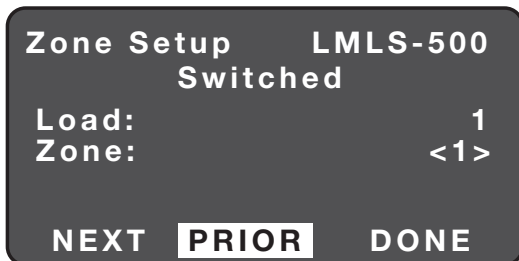
Zone settings for the next load is diplayed.

Load 2: Press Left/Right arrow to select the Zone

Prior

To continue to assign Daylight Load binding to the previous load, choose PRIOR. This function behaves the same for all Operation Modes.
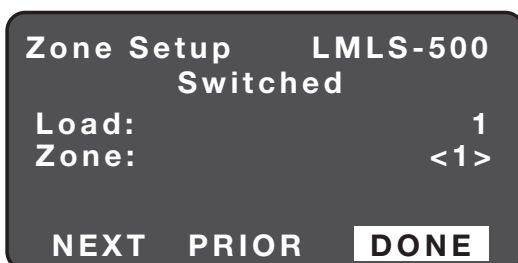
```
Zone Setup       LMLS-500
        Switched
Load:                   1
Zone:                 <1>

   NEXT   PRIOR    DONE
```

```
        Point to an IR
     enabled device on
        the Network

        Press 'Select'
```

Choose   Press
PRIOR   Select

Point and
Press Select

Done

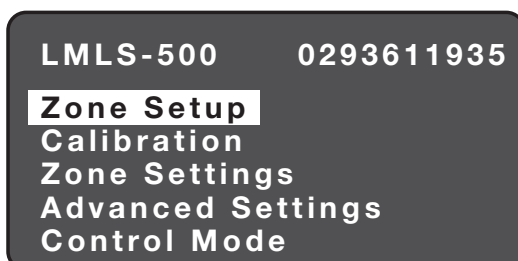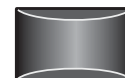When you have completed all load bindings, choose DONE. This function behaves the same for all Operation Modes.

```
Zone Setup       LMLS-500
        Switched
Load:                   1
Zone:                 <1>

   NEXT   PRIOR    DONE
```

```
        Point to any IR
     enabled device on
        the Network

        Press 'Select'
```

Choose   Press
DONE   Select

Point and
Press Select

```
LMLS-500      0293611935
  Zone Setup
  Calibration
  Zone Settings
  Advanced Settings
  Control Mode
```

Zone Setup settings have been saved. The screen returns to the Daylighting Parameters menu.

Bi-Level and Tri-Level Load Assignments

To do load binding the load needs to be assigned.

```
Zone Setup      LMLS-500
        Bi-Level
Load:              1
Zone:             <1>
On When:         <Max>

  NEXT   PRIOR    DONE
```

Depending on the Operation Mode, the screen display will be Bi-Level, Tri-Level, Switched or Dimmed

Load 1: Press Left/Right arrow to select the Zone

For Bi-level and Tri-level only, press the Down arrow for On When to appear.

```
Zone Setup      LMLS-500
        Bi-Level
Load:                1
Zone:               <1>
On When:    <Med & Max>

  NEXT   PRIOR    DONE
```

```
Zone Setup      LMLS-500
        Bi-Level
Load:                1
Zone:               <1>
On When:    <Med & Max>

  NEXT   PRIOR    DONE
```

Bi-level and Tri-Level only:
Press the Down arrow for
'On When' to appear

Press Left/Right arrow:
For Bi-Level select
    Med & Max or Max
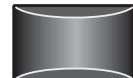For Tri-Level select
    Low & Max or High & Max

Choose
NEXT

Press
Select

Next

To continue to assign Daylight Load binding to load 2, choose NEXT.

```
Zone Setup      LMLS-500
          Bi-Level
Load:                  1
Zone:                <1>
On When:   <Med &Max>
 NEXT   PRIOR    DONE
```

```
Point to an IR
enabled device on
the Network

Press 'Select'
```

Choose NEXT ▼ Press Select

Point and Press Select

```
Zone Setup      LMLS-500
          Tri-Level
Load:                  2
Zone:                <2>
On When:    <Low & Max>
 NEXT   PRIOR    DONE
```

— Zone settings for the next load is diplayed.

Bi-level and Tri-Level only:
Press the Down arrow for
'On When' to appear ▼

Press Left/Right arrow: ◀▶
For Bi-Level select
    Med & Max or Max
For Tri-Level select
    Low & Max or High & Max

Prior

To continue to assign Daylight Load binding to the previous load, choose PRIOR. This function behaves the same for all Operation Modes.

```
Zone Setup     LMLS-500
        Bi-Level
Load:                    1
Zone:                  <1>
On When:             <Max>
   NEXT   PRIOR     DONE
```

Choose PRIOR ▼ Press Select

```
    Point to an IR
 enabled device on
    the Network

    Press 'Select'
```

Point and Press Select

Done

When you have completed all load bindings, choose DONE. This function behaves the same for all Operation Modes.

```
Zone Setup     LMLS-500
        Bi-Level
Load:                    2
Zone:                  <1>
On When:             <Max>
   NEXT   PRIOR    DONE
```
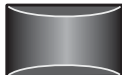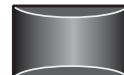
Choose DONE ▼ Press Select

```
    Point to any IR
 enabled device on
    the Network

    Press 'Select'
```

Point and Press Select

```
LMLS-500      0293611935

  Zone Setup
  Calibration
  Zone Settings
  Advanced Settings
  Control Mode
```

Zone Setup settings have been saved. The screen returns to the Daylighting Parameters menu.
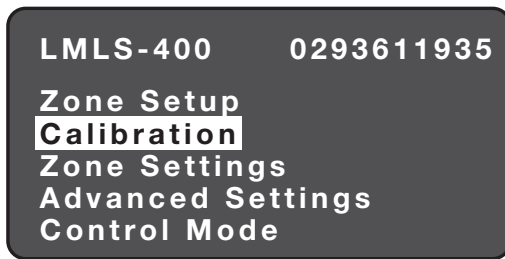
CALIBRATION (LMLS-400 ONLY)

Calibration establishes a relationship between the workplane illuminance and the light level measured by the sensor. This can be done Automatically or Manually.
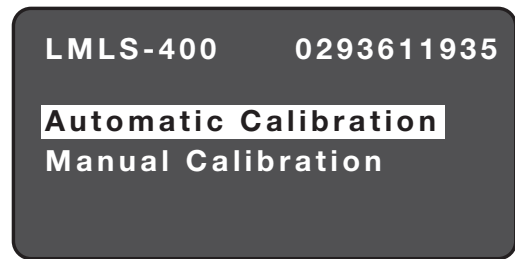
Automatic Calibration

Automatic Calibration can be started by the LMCT-100, or by pressing and holding the user pushbutton located in the sensor head.

1. Complete all wiring and turn power on to the connected room controller.
2. Press and hold the user button for at least 2 seconds then release, or activate automatic calibration from the LMCT-100.
3. Blue LED will start flashing once every 4 sec.
4. Daylighting controlled loads will automatically turn ON for 2 minutes to allow controlled lamps to warm up and reach a stable full output.
5. Remove any objects that may affect the LMLS-400 light level reading (ladder or temporary objects).
6. Lights will cycle eight times for automatic setpoint selection.
7. The photosensor is in Test Mode when the blue LED starts flashing once per second. For the next 5 minutes the sensor will be in Test Mode.
8. Verify the setpoints automatically selected by the photo sensor with the LMCT-100. If the automatic selected setpoints are not acceptable, proceed to manual calibration.
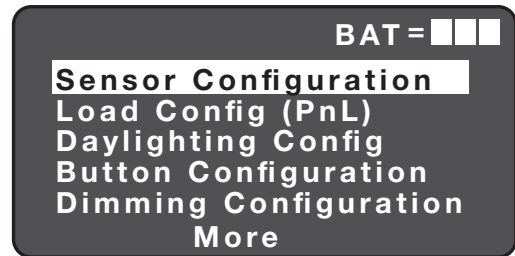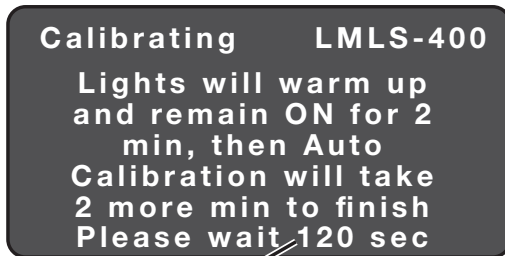
```
LMLS-400      0293611935
Zone Setup
Calibration
Zone Settings
Advanced Settings
Control Mode
```

```
LMLS-400      0293611935

Automatic Calibration
Manual Calibration
```

Choose ▼ Calibration   Press Select ▭

Press Select ▭

```
Calibrating    LMLS-400
Lights will warm up
and remain ON for 2
min, then Auto
Calibration will take
2 more min to finish
Please wait 120 sec
```

```
BAT=▮▮▮
Sensor Configuration
Load Config (PnL)
Daylighting Config
Button Configuration
Dimming Configuration
More
```
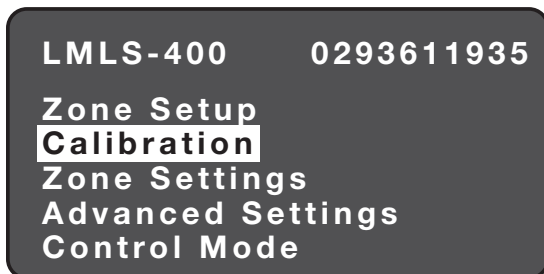
Counts down from 120 seconds
then returns to the Main Menu; the Automatic
Calibration process continues for 2 minutes,
with the controlled loads switching ON and OFF,
then the sensor enters Test Mode for 5 minutes.

Main Menu

Manual Calibration

```
LMLS-400      0293611935
Zone Setup
Calibration
Zone Settings
Advanced Settings
Control Mode
```

```
LMLS-400      0293611935

Automatic Calibration
Manual Calibration
```
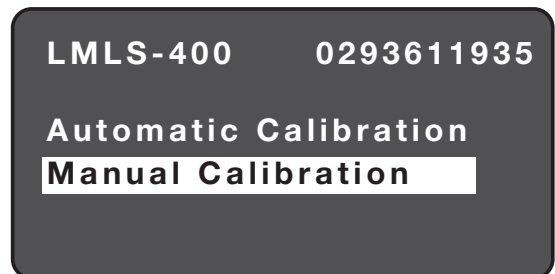
Choose ▼ Calibration   Press Select ▭

Choose Manual ▼ Calibration   Press Select ▭

Switched, Bi-Level and Tri-Level

Choose a reference location within the daylighting zone that is most likely to have the lowest light level when daylit and is located farthest from the window.

```
Calibrating        LMLS-400

Desired Light Level
at the workplane: <50fc>

Actual Light Level at
at the workplane: <35fc>
            SEND
```

```
Point to any IR
enabled device on
the network

Press Select
```

Press
Select

To set the On and Off Setpoints automatically to best match a designed light level for the workplane, enter the desired level, along with the present measured level (from a light meter), and then press SEND.

Dimmed

```
Daylighting Config
(LMLS-400)

Setup:              <Day>

Choose setpoint
press 'Select'
```

```
Point to any IR
enabled device on
the Network

Press 'Select'
```

Press Left/Right
arrow to choose
<Day> or <Night>

Press
Select

Point and
Press Select

Day Setup

Make this adjustment when there is enough daylight to provide 40% to 90% of the target light level. For example, if the target is 40 footcandles, make this adjustment when the daylight contribution is between 16 and 36 footcandles.

1. Press the Day button.
2. Using a light meter at the task surface, press the Up and Down LMCT-100 arrows to adjust light levels.
3. Once the target level has been reached, press the Select button to hold the value.
4. When Day and Night adjustments are complete, press HOME to terminate the calibration process and return to normal operation.

To set the desired light level, point to the LMLS-400 and continue pointing to it while pressing the ▲ / ▼ keys. The ▲ key increments and the ▼ key decrements the light level.

**Daylighting Config
(LMLS-400)**

Day Setup

**Use the Up/Down Keys
to set the desired
Day light level**

**Daylighting Config
(LMLS-400)**

Day Setup

**Incrementing the
Light level**

Press
Up/Down
arrow

Increment (raise)

Decrement (lower)

Continue adjusting pressing the
Up or Down arrow until
desired Light Level is achieved

**Daylighting Config
(LMLS-400)**

Day Setup

**When done adjusting
press Select**

**Daylighting Config
(LMLS-400)**

Day Setup

Day Setpoint Saved

Press
Select

Night Setup

To set the desired light level, point to the LMLS-400 and continue pointing to it while pressing the ▲ / ▼ keys. The ▲ key increments and the ▼ key decrements the light level.

```
Daylighting Config
(LMLS-400)

Night Setup

Use the Up/Down Keys
to set the desired
Day light level
```

```
Daylighting Config
(LMLS-400)

Night Setup

Incrementing the
Light level
```

Press
Up/Down
arrow

▲ Increment (raise)

▼ Decrement (lower)

Continue adjusting pressing the
Up or Down arrow until
desired Light Level is achieved ▲▼

```
Daylighting Config
(LMLS-400)

Night Setup

When done adjusting
press Select
```

```
Daylighting Config
(LMLS-400)

Night Setup

Night Setpoint Saved
```

Press
Select

When Day and Night adjustments are complete,
press the HOME key to terminate Manual Calibration
and return to normal operation.

CALIBRATION (LMLS-500 ONLY)

Calibration allows you to establish a relationship between the workplane illuminance and the measured daylight at the photocell.
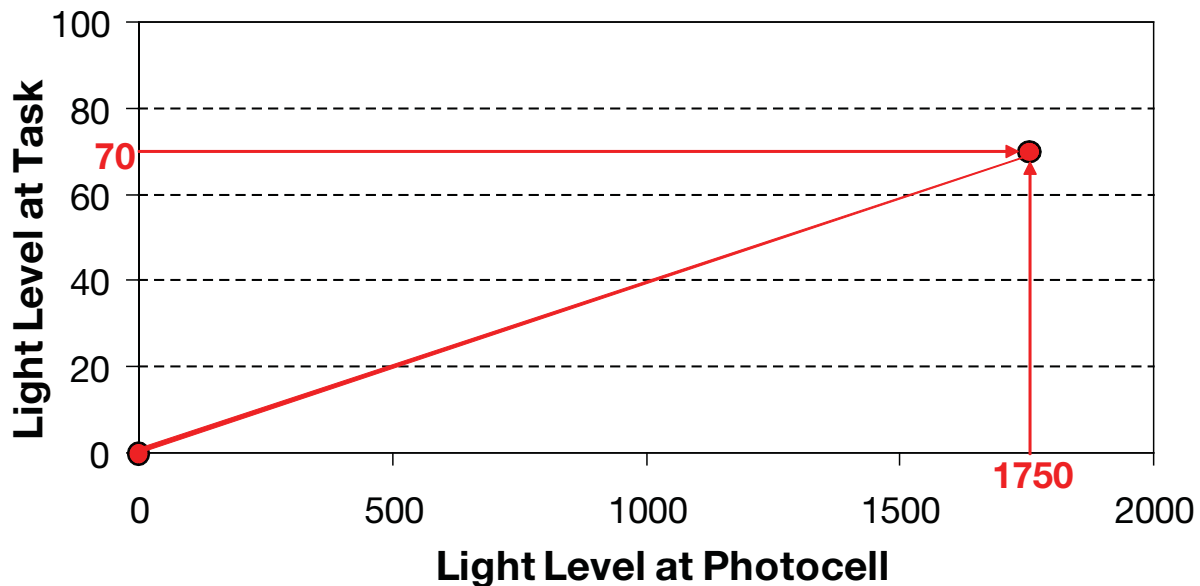
Use the LMCT-100 for the Calibration process.

1. Complete all wiring and turn power ON to the connected room controllers.
2. Select the LMLS-500 to be calibrated using the LMCT-100.
3. Select Calibration. For each Zone, choose a reference location that is most likely to have the lowest light level when daylit for each zone.

```
LMLS-500      0293724909
  Zone Setup
  Calibration
  Zone Settings
  Advanced Settings
  Control Mode
```

```
    Point to Any IR
   enabled device on
      the network

     Press 'Select'
```

Choose Calibration → Press Select

Point and Press Select

```
Calibrating      LMLS-500

  Lights will warm up
   and remain ON for
      two minutes

  Please wait 120 sec.
```
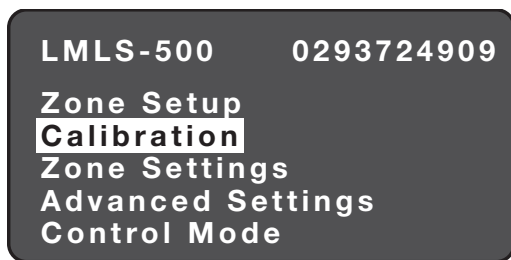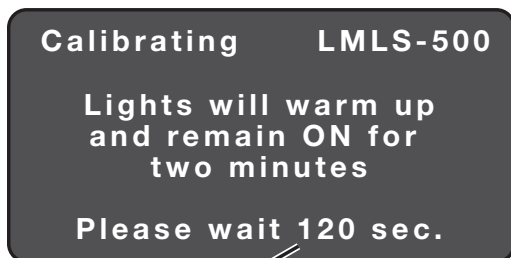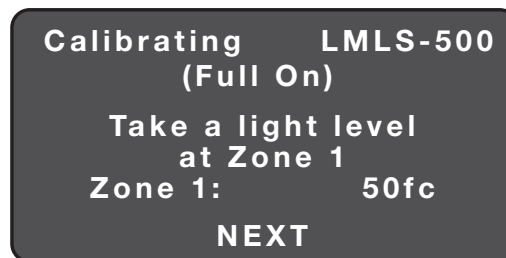
```
Calibrating      LMLS-500
         (Full On)
    Take a light level
       at Zone 1
  Zone 1:          50fc

         NEXT
```

Counts down from 120 seconds
then returns to the Main Menu

Enter light level for
ALL zones

```
Calibrating      LMLS-500
         (Full On)
    Take a light level
       at Zone 1
  Zone 3:          50fc
         NEXT
```
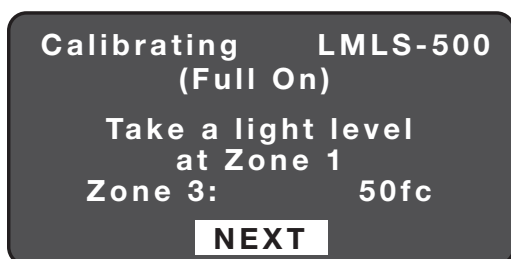
Choose NEXT → Press Select

4. With the electric lights ON, use a light meter to measure the light level in each zone.
5. Enter the measured light level at the task surface per zone, in the LMCT-100.
6. Daylighting controlled loads will turn OFF.
7 Use a light meter to measure the light level in each zone.
8. Enter the measured light level at the task surface per zone in the LMCT-100.
9. Select the Send button to establish communication with the LMLS-500.

CALIBRATION (LMLS-600 ONLY)

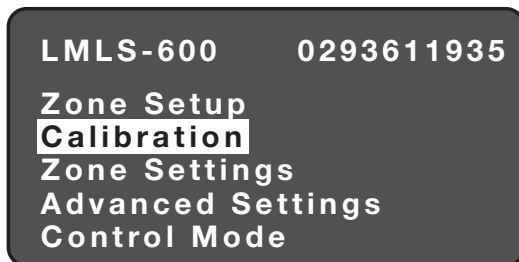The role of the calibration process is to establish, for the controlled zone, the appropriate setpoint for operation, to learn the dimming curves of the controlled loads, and to create an initial daylight ratio for closed-loop versus open-loop sensors. This can be done Automatically or Manually.

Automatic Calibration

Automatic Calibration can be started by the LMCT-100, a similar menu in LMCS, or by pressing and holding the user pushbutton (located on the bottom of the sensor, farthest from the RJ45 connection) for three seconds.

```
LMLS-600        0293611935
  Zone Setup
  Calibration
  Zone Settings
  Advanced Settings
  Control Mode
```

```
Daylighting      LMLS-600

  Automatic Calibration
  Manual Calibration
```

Choose Calibration ▼   Press Select

Press Select

```
Calibrating      LMLS-600
  Please leave the area
  and return after the
  Blue LED stops
  blinking
  Press 'Select' to
  continue or 'Home' to
  cancel Auto Calibrate
```

```
                    BAT=■■■
  Sensor Configuration
  Load Config (PnL)
  Daylighting Config
  Button Configuration
  Dimming Configuration
        More
```

PLEASE NOTE

It is critical that, during the Automatic Calibration process, the area under the sensor, as well as the skylight area, remain free of any obstructions, and that no changes occur (including human foot traffic) within the cone-of-view of the closed loop sensor. Please clear the area before starting the Automatic Calibration, and wait for the calibration completion (when the blue LED stops flashing once every 4 seconds) before reentering the area.

The Calibration process consists of:

- Pausing for 15 seconds to allow the user to vacate the area under the sensor.
- Turning off all configured loads, for about 10 seconds, to compute an initial daylight ratio.
- Warming up the controlled loads, at maximum level, until they reach full output (typically, this requires several minutes).
- Switching or Fading the level of the controlled loads from maximum to minimum level very slowly (over approximately two minutes) while observing both sensors, to determine the ballast curve.
- Turning the controlled loads off completely, and observing both sensors for several seconds, to calculate daylight ratios..
- Validating the data collected, and marking the sensor as calibrated (and active) if a good calibration has been established. If the calibration should fail, the LEDs will revert to showing an "Awaiting Calibration" state and the process must be repeated.

Manual Calibration

Manual Calibration allows you to refine the setpoint for the controlled zone.

NOTE: Even if you wish to refine the setpoints using the Manual Calibration feature, you MUST first complete an Automatic Calibration to establish the other critical installation parameters.
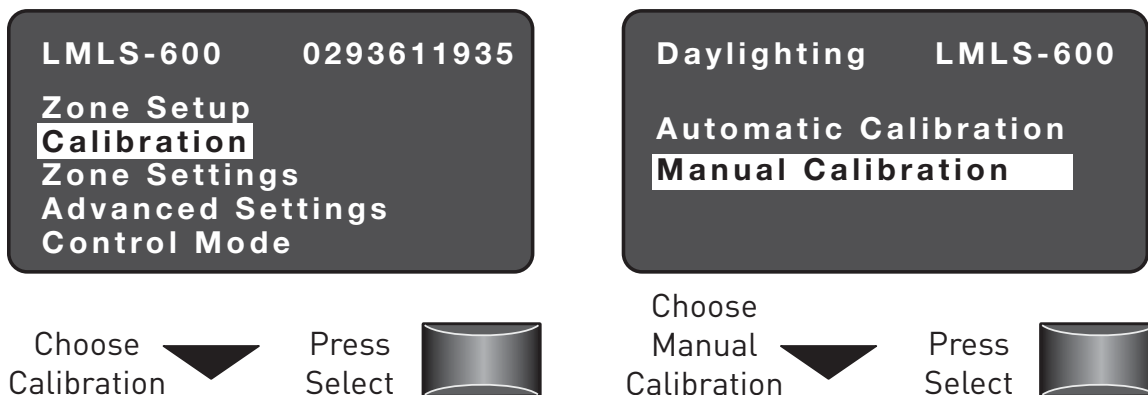
```
LMLS-600        0293611935
Zone Setup
Calibration
Zone Settings
Advanced Settings
Control Mode
```

```
Daylighting      LMLS-600

Automatic Calibration
Manual Calibration
```

Choose
Calibration ▼ Press Select

Choose
Manual ▼ Press
Calibration   Select

Choose a reference location within the daylighting zone that is most likely to have the lowest light level when daylit and is located farthest from the window.

```
Calibrating      LMLS-600

Desired Light Level
at the workplane: <50fc>

Actual Light Level at
at the workplane: <35fc>
            SEND
```

```
Point to any IR
enabled device on
the network

Press Select
```
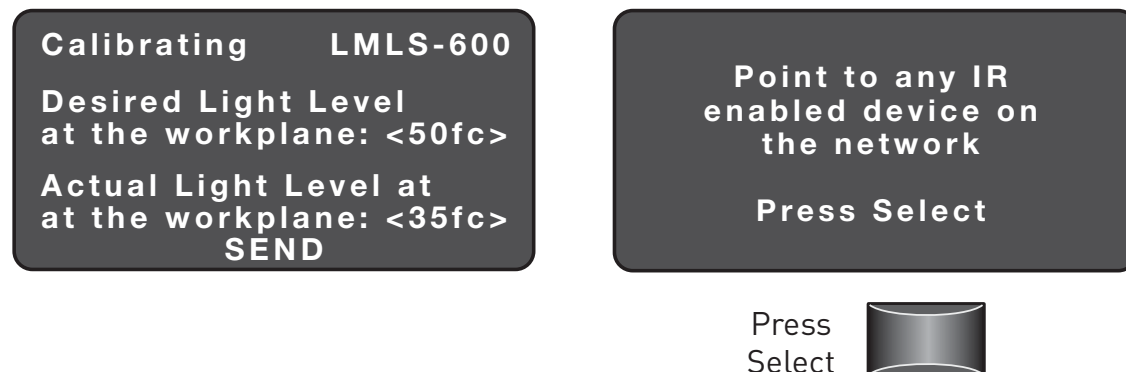
Press
Select

To set the Dimming and On and Off Setpoints automatically to best match a designed light level for the workplane, enter the desired level, along with the present measured level (from a light meter), and then press SEND.

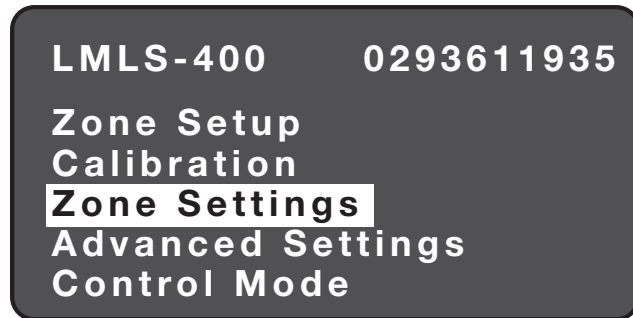# ZONE SETTINGS (LMLS-400 ONLY)

Zone Settings allows you to modify the photosensor Daylighting Setpoints, Time Delays and Ramp Rates.

To configure Zone Settings for the LMLS-500 refer to "Zone Setup (LMLS-500 Only)" on page 31.

```
LMLS-400      0293611935
Zone Setup
Calibration
Zone Settings
Advanced Settings
Control Mode
```

Choose
Zone Settings ▼   Press
Select

When Zone Settings is selected, one of two screens is displayed depending on the Operation Mode of the device (Switched, Bi-Level, or Tri-Level) or (Dimmed):

Switched, Bi-Level, or Tri-Level

ON Setpoint

The target illuminance level at the sensor, below which the photosensor turns the lights ON.

This heading differs depending on Operation Mode

```
Daylighting    LMLS-400
         Bi-Level
ON Setpoint:      <7.5fc>
OFF Setpoint:     <11fc>
ON Time Delay:   <20sec>
OFF Time Delay: <10min>
         SEND
```

Press Left/Right arrow
to raise or lower
ON Setpoint footcandles

The ON Setpoint values available for manual adjustment are: 1.0, 1.2, 1.5, 1.8, 2.2, 2.7, 3.3, 4.0, 5.0, 6.0, 7.5, 9.0, 11, 13, 16, 20, 25, 30, 35, 45, 60, 90, 125, 180, 250, 325, 400, 475, 550, 625, 700, 775 and 850 footcandles; note that calibration can automatically select a value not in this list.

OFF Setpoint

The target illuminance level at the sensor, above which the photosensor turns the lights OFF.

```
Daylighting      LMLS-400
         Bi-Level
ON Setpoint:        <7.5fc>
OFF Setpoint:       <11fc>
ON Time Delay:   <20sec>
OFF Time Delay: <10min>
            SEND
```

Press Left/Right arrow
to raise or lower
OFF Setpoint footcandles

The OFF Setpoint corresponds to the ON Setpoint multiplied by 1.25, 1.50, 1.75 or 2.0. This ensures that the OFF Setpoint is always higher than the On Setpoint.

ON Time Delay

The time interval that must elapse, with the measured level below the ON Setpoint, before the controlled lights turn on.

```
Daylighting      LMLS-400
         Bi-Level
ON Setpoint:        <7.5fc>
OFF Setpoint:       <11fc>
ON Time Delay:   <20sec>
OFF Time Delay: <10min>
            SEND
```

Press Left/Right arrow
to raise or lower
ON Time Delay <1sec - 60sec>

Range: 1 sec to 60 sec.

OFF Time Delay

The time interval that must elapse, with the measured level above the OFF Setpoint, before the controlled lights turn OFF.

Range: 3 min to 30 min.

```
Daylighting    LMLS-400
         Bi-Level
ON Setpoint:        <7.5fc>
OFF Setpoint:        <11fc>
ON Time Delay:    <20sec>
OFF Time Delay: <10min>
         SEND
```

Press Left/Right arrow
to raise or lower
OFF Time Delay <3min - 30min>

Send

```
Daylighting    LMLS-400
         Bi-Level
ON Setpoint:        <7.5fc>
OFF Setpoint:        <11fc>
ON Time Delay:    <20sec>
OFF Time Delay: <10min>
         SEND
```

Press the Down Arrow
to choose SEND

```
Point to any IR
enabled device on
  the Network

Press 'Select'
```

Point and
Press Select

```
LMLS-400       0293611935

Zone Setup
Calibration
Zone Settings
Advanced Settings
Control Mode
```

LMLS-400 Daylighting Menu

Zone Settings have been saved.
The screen returns to the Daylighting
Parameters menu.

Dimmed

Day Setpoint

The desired light level at the sensor during daytime. To determine the correct dimming level for any given photocell reading, it calculates the level based on the slope between the day and the night setpoint.

Range: 1 fc to 255 fc.

```
Daylighting    LMLS-400
        Dimmed
Day Setpoint:        <50fc>
Night Setpoint:      <10fc>
Ramp Up:          <20%/sec>
Ramp Down:         <2%/sec>
Cut Off Delay      <10min>
           SEND
```

Press Left/Right arrows to increase or decrease footcandles

Night Setpoint

The desired light level at the sensor during nighttime. To determine the correct dimming level for any given photocell reading, it calculates the level based on the slope between the day and the night setpoint.

Range: 1 fc to 255 fc.

```
Daylighting    LMLS-400
        Dimmed
Day Setpoint:        <50fc>
Night Setpoint:      <10fc>
Ramp Up:          <20%/sec>
Ramp Down:         <2%/sec>
Cut Off Delay      <10min>
           SEND
```

Press Left/Right arrows to increase or decrease footcandles

Note: The Day Setpoint must always be greater than the Night Setpoint.

Ramp Up

Determines the speed (or rate) at which the light level of bound loads increases. The default is 20% per second because the end user needs light quickly.

Range: 1% per second to 100% per second.

```
Daylighting    LMLS-400
        Dimmed
Day Setpoint:         <50fc>
Night Setpoint:       <10fc>
Ramp Up:          <20%/sec>
Ramp Down:        <2%/sec>
Cut Off Delay      <10min>
        SEND
```

Press Left/Right arrows to increase or decrease Fade Up time (5sec - 60sec)

Ramp Down

Determines the speed (or rate) at which the light level of bound loads decreases. The default is 2% per second because a slow ramp down will help the eye adapt to the new light level.

Range: 1% per second to 100% per second.

```
Daylighting    LMLS-400
        Dimmed
Day Setpoint:         <50fc>
Night Setpoint:       <10fc>
Ramp Up:          <20%/sec>
Ramp Down:        <2%/sec>
Cut Off Delay      <10min>
        SEND
```
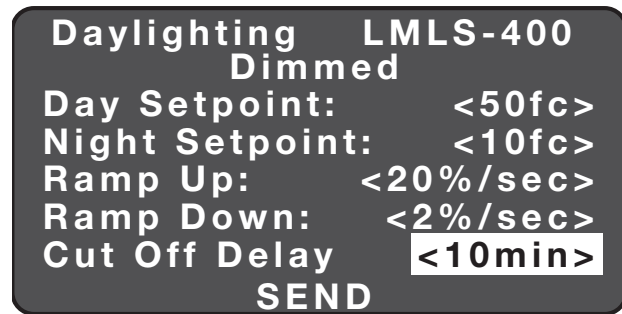
Press Left/Right arrows to increase or decrease

Cut Off Delay

The time that the controlled lighting will remain at a minimum dimmed level, even with high daylight contribution, before the lights will be switched OFF.
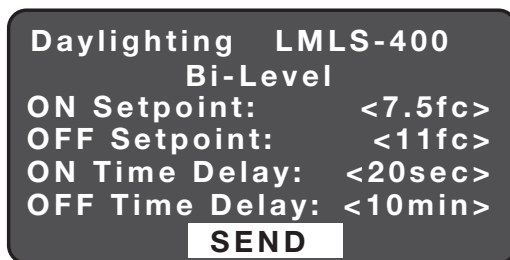
Range: Never to 30 min.

```
Daylighting   LMLS-400
         Dimmed
Day Setpoint:      <50fc>
Night Setpoint:    <10fc>
Ramp Up:        <20%/sec>
Ramp Down:       <2%/sec>
Cut Off Delay    <10min>
          SEND
```

Press Left/Right arrows
to increase or decrease
Cut Off Delay (Never - 30 min)

Send
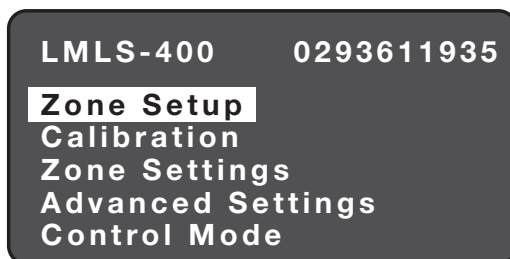
```
Daylighting   LMLS-400
         Bi-Level
ON Setpoint:       <7.5fc>
OFF Setpoint:      <11fc>
ON Time Delay:   <20sec>
OFF Time Delay: <10min>
          SEND
```

Press the Down Arrow
to choose SEND

```
     Point to any IR
   enabled device on
      the Network

      Press 'Select'
```

Point and
Press Select

```
LMLS-400      0293611935

 Zone Setup
 Calibration
 Zone Settings
 Advanced Settings
 Control Mode
```
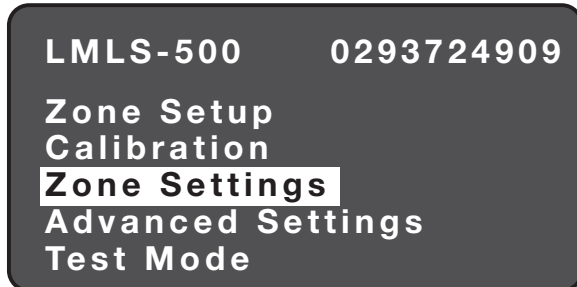
LMLS-400 Daylighting Menu

Zone Settings have been saved.
The screen returns to the Daylighting
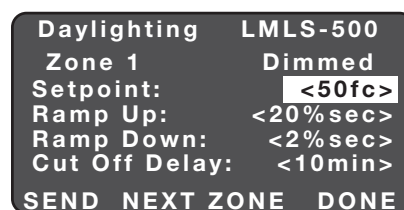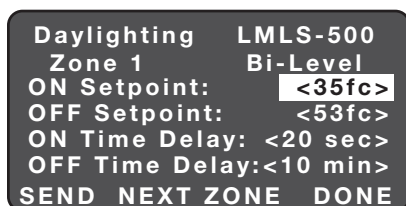Parameters menu.

ZONE SETTINGS (LMLS-500 ONLY)

Zone Settings allows you to modify the photosensor Daylighting Setpoints, Time Delays and Ramp Rates.

```
LMLS-500        0293724909
Zone Setup
Calibration
Zone Settings
Advanced Settings
Test Mode
```

Choose Zone Settings ▼ Press Select

When Zone Settings is selected, one of two screens is displayed depending on the Operation Mode of the Zone (Switched) or (Dimming, Bi-Level or Tri-Level):

Switched, Bi-Level or Tri-Level   Dimmed

```
Daylighting     LMLS-500
  Zone 1        Bi-Level
ON Setpoint:       <35fc>
OFF Setpoint:     <53fc>
ON Time Delay: <20 sec>
OFF Time Delay:<10 min>
SEND  NEXT ZONE   DONE
```

```
Daylighting     LMLS-500
  Zone 1         Dimmed
Setpoint:          <50fc>
Ramp Up:        <20%sec>
Ramp Down:       <2%sec>
Cut Off Delay:    <10min>
SEND  NEXT ZONE   DONE
```

Switched, Bi-Level, or Tri-Level

ON Setpoint

The target illuminance level below which the LMLS-500 turns the lights ON.

```
Daylighting     LMLS-500
  Zone 1        Bi-Level
ON Setpoint:       <35fc>
OFF Setpoint:     <53fc>
ON Time Delay: <20 sec>
OFF Time Delay:<10 min>
SEND  NEXT ZONE   DONE
```

Press Left/Right arrow
to raise or lower
ON Setpoint footcandles

Range: 5 to 150 fc.

OFF Setpoint

The target illuminance level above which the LMLS-500 turns the lights OFF.

The OFF Setpoint corresponds to the ON Setpoint multiplied by 1.25, 1.50, 1.75 or 2.0.
This ensures that the OFF Setpoint is always higher than the ON Setpoint.

```
 Daylighting      LMLS-500
    Zone 1         Bi-Level
 ON Setpoint:           <35fc>
 OFF Setpoint:          <53fc>
 ON Time Delay: <20 sec>
 OFF Time Delay:<10 min>
 SEND   NEXT ZONE   DONE
```

Press Left/Right arrow
to raise or lower
OFF Setpoint footcandles

ON Time Delay

The time interval that must elapse, with the measured level below the ON Setpoint, before the controlled lights turn ON.

Range: 1 sec to 60 sec.

```
 Daylighting      LMLS-500
    Zone 1         Bi-Level
 ON Setpoint:           <35fc>
 OFF Setpoint:          <53fc>
 ON Time Delay: <20 sec>
 OFF Time Delay:<10 min>
 SEND   NEXT ZONE   DONE
```

Press Left/Right arrow
to raise or lower
ON Time Delay <1sec - 60sec>

OFF Time Delay

The time interval that must elapse, with the measured level above the OFF Setpoint, before the controlled lights turn OFF.
Range: 3 min to 30 min.

```
 Daylighting      LMLS-500
    Zone 1         Bi-Level
 O Setpoint:           <7.5fc>
 OFF Setpoint:          <11fc>
 ON Time Delay: <20 sec>
 OFF Time Delay:<10 min>
 SEND   NEXT ZONE   DONE
```

Press Left/Right arrow
to raise or lower
OFF Time Delay <3min - 30min>

Send

```
Daylighting    LMLS-500
 Zone 1         Bi-Level
 O Setpoint:        <7.5fc>
 OFF Setpoint:      <11fc>
 ON Time Delay: <20 sec>
 OFF Time Delay:<10 min>
 SEND  NEXT ZONE   DONE
```

Press the Down Arrow
to choose SEND

```
Point to Any IR
enabled device on
the network


Press 'Select'
```

Point and
Press Select

```
LMLS-500      0293724909

Zone Setup
Calibration
Zone Settings
Advanced Settings
Control Mode
```

LMLS-500 Daylighting Menu

Zone Settings have been saved.
The screen returns back to the
previous menu.

Dimmed

Setpoint

The desired light level at the
task per zone. To determine
the correct dimming level for
any given photocell reading,
it calculates the level based
on the slope between the
daylight contribution at the sensor and the setpoint.

```
Daylighting    LMLS-500
 Zone 1         Dimmed
 Setpoint:          <50fc>
 Ramp Up:       <20%sec>
 Ramp Down:      <2%sec>
 Cut Off Delay:   <10min>
 SEND  NEXT ZONE   DONE
```

Range: 5 to 200 fc.

Ramp Up

Determines the speed (or rate) at which the light level of bound loads increases. The default is 20% per second because the end user needs light quickly.

```
Daylighting      LMLS-500
 Zone 1          Dimmed
Setpoint:           <50fc>
Ramp Up:         <20%sec>
Ramp Down:        <2%sec>
Cut Off Delay:   <10min>
SEND  NEXT ZONE   DONE
```

Range: 1% per second to 100% per second.

Ramp Down

Determines the speed (or rate) at which the light level of bound loads decreases. The default is 2% per second because a slow ramp down will help the eye adapt to the new light level.

```
Daylighting      LMLS-500
 Zone 1          Dimmed
Setpoint:           <50fc>
Ramp Up:         <20%sec>
Ramp Down:        <2%sec>
Cut Off Delay:   <10min>
SEND  NEXT ZONE   DONE
```

Range: 1% per second to 100% per second.

Cut Off Delay

The time that the controlled lighting will remain at a minimum dimmed level, even with high daylight contribution, before the lights will be switched OFF.
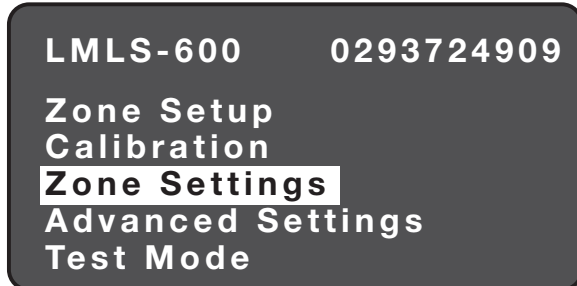
Range: Never to 30 min.

Send

Press the SEND button to save the new settings.

ZONE SETTINGS (LMLS-600 ONLY)

Zone Settings allows you to modify the photosensor Daylighting Setpoints, Time Delays and Ramp Rates.

```
LMLS-600        0293724909
Zone Setup
Calibration
Zone Settings
Advanced Settings
Test Mode
```
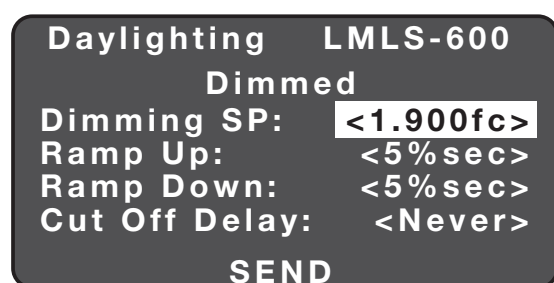
Choose Zone Settings → Press Select

When Zone Settings is selected, one of two screens is displayed depending on the Operation Mode of the Zone (Switched) or (Dimming, Bi-Level or Tri-Level):

Switched, Bi-Level or Tri-Level   **Dimmed**

```
Daylighting     LMLS-600
        Switched
ON Setpt:        <2.199fc>
OFF Setpt:       <4.398fc>
ON Time Delay: <20 sec>
OFF Time Delay:<10 min>
        SEND
```

```
Daylighting     LMLS-600
        Dimmed
Dimming SP:      <1.900fc>
Ramp Up:         <5%sec>
Ramp Down:       <5%sec>
Cut Off Delay:   <Never>
        SEND
```

Switched, Bi-Level, or Tri-Level

ON Setpoint

The target illuminance level below which the LMLS-600 turns the lights ON.

Range: minimum of 1 fc; maximum of 32 fc (for Switched) or 48 fc (for Bi-Level or Tri-Level).

OFF Setpoint

The target illuminance level above which the LMLS-600 turns the lights OFF.

The OFF Setpoint corresponds to the ON Setpoint multiplied by 1.25, 1.50, 1.75 or 2.0. This ensures that the OFF Setpoint is always higher than the ON Setpoint.

```
Daylighting    LMLS-600
         Bi-Level
ON Setpt:          <0.300fc>
OFF Setpt:         <0.525fc>
ON Time Delay: <20 sec>
OFF Time Delay:<10 min>
         SEND
```

Press Left/Right arrow
to raise or lower
OFF Setpoint footcandles

ON Time Delay

The time interval that must elapse, with the measured level below the ON Setpoint, before the controlled lights turn ON.

Range: 15 sec to 60 sec.

```
Daylighting    LMLS-600
         Bi-Level
ON Setpt:          <0.300fc>
OFF Setpt:         <0.525fc>
ON Time Delay: <20 sec>
OFF Time Delay:<10 min>
         SEND
```

Press Left/Right arrow
to raise or lower
ON Time Delay <15 sec - 60 sec>

OFF Time Delay

The time interval that must elapse, with the measured level above the OFF Setpoint, before the controlled lights turn OFF.
Range: 3 min to 30 min.

```
Daylighting    LMLS-600
         Bi-Level
ON Setpt:          <0.300fc>
OFF Setpt:         <0.525fc>
ON Time Delay: <20 sec>
OFF Time Delay:<10 min>
         SEND
```
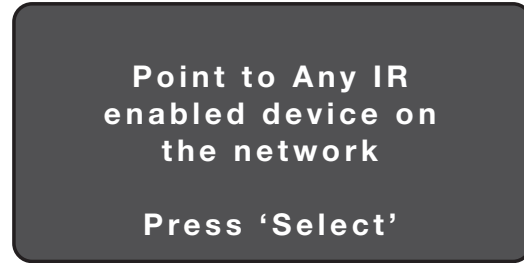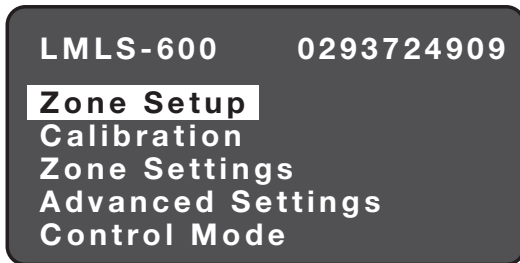
Press Left/Right arrow
to raise or lower
OFF Time Delay <3min - 30min>

Send

```
Daylighting      LMLS-600
          Bi-Level
ON Setpt:         <0.300fc>
OFF Setpt:        <0.525fc>
ON Time Delay:    <20sec>
OFF Time Delay:  <10min>
            Send
```

Press the Down Arrow
to choose SEND

```
Point to Any IR
enabled device on
the network

Press 'Select'
```

Point and
Press Select

```
LMLS-600        0293724909

 Zone Setup
 Calibration
 Zone Settings
 Advanced Settings
 Control Mode
```

LMLS-600 Daylighting Menu

Zone Settings have been saved.
The screen returns back to the
previous menu.
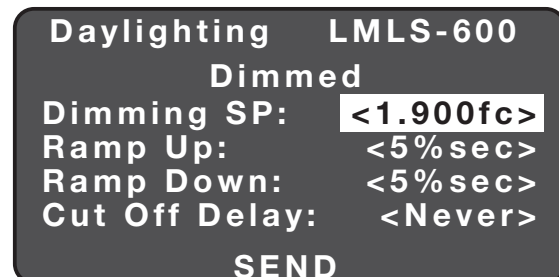
Dimmed

Dimming Setpoint

The desired light
level is maintained by
daylighting control, as
measured by the down-
looking sensor. When
the present measured

```
Daylighting     LMLS-600
         Dimmed
Dimming SP:      <1.900fc>
Ramp Up:         <5%sec>
Ramp Down:       <5%sec>
Cut Off Delay:   <Never>
            SEND
```

light level differs from this setpoint by more than
approximately 7%, the sensor will attempt to adjust
the electric lighting to compensate.

Range: 0 to 65 fc

Ramp Up

Determines the speed (or rate) at which the light level of bound loads increases. The default is 5% per second.

Range: 1% per second to 100% per second.

```
Daylighting     LMLS-600
        Dimmed
Dimming SP:     <1.900fc>
Ramp Up:        <20%sec>
Ramp Down:      <5%sec>
Cut Off Delay:  <Never>
        SEND
```

Ramp Down

Determines the speed (or rate) at which the light level of bound loads decreases. The default is 5% per second.

Range: 1% per second to 100% per second.

```
Daylighting     LMLS-600
        Dimmed
Dimming SP:     <1.900fc>
Ramp Up:        <20%sec>
Ramp Down:      <2%sec>
Cut Off Delay:  <Never>
        SEND
```

Cut Off Delay

The time that the controlled lighting will remain at a minimum dimmed level, even with high daylight contribution, before the lights will be switched OFF.

Range: Never to 60 min.

```
Daylighting     LMLS-600
        Dimmed
Dimming SP:     <1.900fc>
Ramp Up:        <20%sec>
Ramp Down:      <2%sec>
Cut Off Delay:  <10min>
        SEND
```

ADVANCED SETTINGS (LMLS-400/ LMLS-500)

Advanced Settings allows you to see the light level at the photocell, adjust the override mode, the override time delay, hold off, scene switch and after hours interaction.

```
LMLS-400        0293611935
Zone Setup
Calibration
Zone Settings
Advanced Settings
Control Mode
```

Choose ▼ Press
Advanced Settings   Select

Light Level

Present light level measured at the DLM photosensor.

```
Daylighting       LMLS-400
Light Level:           10 fc
Allow Override:       <Yes>
Override Time:      <Infin>
Hold Off:              <No>
Scenes Stop DL:       <No>
Ignore Aft Hrs:       <No>
          SEND
```

Allow Override

Determines if overriding the photosensor is permitted or not.

Available choices: Yes or No.

```
Daylighting       LMLS-400
Light Level:          10 fc
Allow Override:      <Yes>
Override Time:     <Infin>
Hold Off:             <No>
Scenes Stop DL:      <No>
Ignore Aft Hrs:      <No>
          SEND
```

Override Time

Override Time selects the delay, after daylighting control has been disabled due to an observed external user or system action, before automatic control resumes.

```
Daylighting       LMLS-400
Light Level:          10 fc
Allow Override:      <Yes>
Override Time:     <Infin>
Hold Off:             <No>
Scenes Stop DL:      <No>
Ignore Aft Hrs:      <No>
          SEND
```

Range: Infinity or 1 to 24 hours.

Hold Off

The Hold Off setting selects the behavior of daylighting loads when they are turned ON, by a switch or occupancy sensor.

```
Daylighting        LMLS-400
Light Level:           10 fc
Allow Override:        <Yes>
Override Time:         <Infin>
Hold Off:              <No>
Scenes Stop DL:        <No>
Ignore Aft Hrs:        <No>
            SEND
```

If Hold Off = <No> (default), the loads can always be turned on to their previous level, and then will begin to adjust based upon daylight.

If Hold Off = <Yes>, the sensor will limit the loads to the level presently allowed by daylight contribution. This means that the loads may not initially turn ON (if the ambient light level is high – above the ON or Dimming Setpoint), but will become active for daylighting control, and will turn ON or dim up as daylight contribution drops."

Scenes Stop DL

```
Daylighting        LMLS-400
Light Level:          300 fc
Allow Override:        <Yes>
Override Time:         <Infin>
Hold Off:              <No>
Scenes Stop DL:        <No>
Ignore Aft Hrs:        <No>
            SEND
```

When set to No, the sensor allows daylighting to adjust light levels, up to the level recorded in the Scene, even though a scene is active. When set to Yes, daylighting control is disabled for any loads on which a scene is recalled until a change is manually made to the level of a load in the zone, or until the next cycle of occupancy.

Ignore After Hours

When set to Yes, the photosensor will ignore After Hours and will continue to operate as normal.

```
Daylighting      LMLS-400
Light Level:          300 fc
Allow Override:       <Yes>
Override Time:        <Infin>
Hold Off:             <No>
Scenes Stop DL:       <No>
Ignore Aft Hrs:       <No>
               SEND
```

When set to No, the daylighting controlled loads that are set to After Hours mode will be temporarily removed from daylighting control while in the After Hours state.

Send

Press the SEND button to save the new settings.

```
Daylighting      LMLS-400
Light Level:          70 fc
Allow Override:       <Yes>
Override Time:        <Infin>
Hold Off:             <No>
Scenes Stop DL:       <No>
Ignore Aft Hrs:       <No>
               SEND
```

Choose SEND
then Press 'Select'

```
Point to any IR
enabled device on
the Network

Press 'Select'
```

Point and
Press Select

```
LMLS-400      0293611935

Zone Setup
Calibration
Zone Settings
Advanced Settings
Control Mode
```
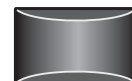
LMLS-400 Daylighting Menu

Ignore After Hours have been saved. The screen returns to the Daylighting Parameters menu.

ADVANCED SETTINGS (LMLS-600)

Advanced settings allows you to see the light level at the photocell and to adjust the override mode and the override time delay.

```
LMLS-600          0293611935
Zone Setup
Calibration
Zone Settings
Advanced Settings
Control Mode
```

Choose ▼ dvanced Settings   Press Select

Up and Down Light Levels:

Present light level measured at the up and down looking photodiode.

Up looking range: 0 to 6500 fc

```
Daylighting        LMLS-600
        2.0fc /  3.990fc
Allow Override:       <Yes>
Override Time:       <Infin>
Hold Off:             <No>
Scenes Stop DL:      <No>
Ignore Aft Hrs:      <No>
      SEND          NEXT
```

Down looking range: 0 to 65 fc

Allow Override

Determines if override mode is permited, while daylighting control is active.
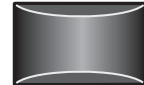
Available choices: Yes or No

```
Daylighting        LMLS-600
        2.0fc /  3.990fc
Allow Override:       <Yes>
Override Time:       <Infin>
Hold Off:             <No>
Scenes Stop DL:      <No>
Ignore Aft Hrs:      <No>
      SEND          NEXT
```

Override Time

Override Time selects the time delay, after daylighting control has been disabled due to an observed external user or system action, before automatic control resumes.

```
Daylighting        LMLS-600
       2.0fc /  3.990fc
Allow Override:       <Yes>
Override Time:       <Infin>
Hold Off:             <No>
Scenes Stop DL:       <No>
Ignore Aft Hrs:       <No>
    SEND            NEXT
```

Range: Infinity or 1 to 24 hours.

Hold OFF

The Hold Off setting selects the behavior of daylighting loads when they are turned ON, by a switch or occupancy sensor.

```
Daylighting        LMLS-600
       2.0fc /  3.990fc
Allow Override:       <Yes>
Override Time:       <Infin>
Hold Off:             <No>
Scenes Stop DL:       <No>
Ignore Aft Hrs:       <No>
    SEND            NEXT
```

If Hold Off = <**No**> (default), the loads can always be turned on to their previous level, and then will begin to adjust based upon daylight.

If Hold Off = <**Yes**>, the sensor will limit the loads to the level presently allowed by daylight contribution. This means that the loads may not initially turn ON (if the ambient light level is high – above the ON or Dimming Setpoint), but will become active for daylighting control, and will turn ON or dim up as daylight contribution drops.

Scenes Stop DL

When set to No the sensor adjusts levels, up to that recorded in the scene, even though a scene is active. When set to Yes, daylighting control is disabled for any

```
 Daylighting      LMLS-600
       2.0fc /  3.990fc
 Allow Override:      <Yes>
 Override Time:     <Infin>
 Hold Off:             <No>
 Scenes Stop DL:    | <No> |
 Ignore Aft Hrs:       <No>
     SEND          NEXT
```

loads on which a scene is recalled until a change is manually made to the level of the load, or until the

next cycle of occupancy.

Ignore After Hours

When set to **Yes**, the photosensor will ignore After Hours and will continue to operate as normal.

```
 Daylighting      LMLS-600
       2.0fc /  3.990fc
 Allow Override:      <Yes>
 Override Time:     <Infin>
 Hold Off:             <No>
 Scenes Stop DL:       <No>
 Ignore Aft Hrs:    | <No> |
     SEND          NEXT
```

When set to No, the daylighting controlled loads that are set to After Hours are removed from daylighting control for the duration of the After Hours period.

Send

Choose SEND to save the new settings.

```
Daylighting      LMLS-600
     2.0fc /  3.990fc
Allow Override:      <Yes>
Override Time:      <Infin>
Hold Off:           <No>
Scenes Stop DL:     <No>
Ignore Aft Hrs:     <No>
   SEND          NEXT
```

```
Point to Any IR
enabled device on
   the network

Press 'Select'
```

Choose SEND ▼ Press Select

Point and Press Select

```
LMLS-600      0293725909

Zone Setup
Calibration
Zone Settings
Advanced Settings
Control Mode
```

Settings have been saved.
The screen returns back to the
previous menu.

Next

To set the Recommissioning Threshold and
Recommissioning Delay, choose NEXT.

```
Daylighting      LMLS-600

Max EL Light:       1.833fc
Daylight Ratio:     0.0762
Force Open Loop:    <No>
Recomm Thresh:      <2fc>
Recomm Delay:       <0min>
Enab Diag Msgs      <All>
    NEXT  SEND
```
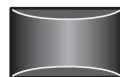
```
Point to Any IR
enabled device on
   the network

Press 'Select'
```

Choose NEXT ▼ Press Select

Point and Press Select

```
LMLS-600      0293725909

Zone Setup
Calibration
Zone Settings
Advanced Settings
Control Mode
```

Settings have been saved.
The screen returns back to the
previous menu.

Maimum Electric Light:

Maximum Electric Light shows the maximum output of all of the controlled electric lights, as seen in the closed-loop (down-looking) sensor.

```
Daylighting        LMLS-600

Max EL Light:        1.833fc  ─── Maximum Electric Light
Daylight Ratio:      0.0762       shown in footcandles.
Force Open Loop:      <No>
Recomm Thresh:        <2fc>
Recomm Delay:        <0min>
Enab Diag Msgs        <All>
      NEXT         SEND
```

Daylight Ratio:

Shows the latest average ratio between the daylight contribution seen in the closed-loop (down-looking) sensor and that measured by the open-loop (up-looking) sensor.

```
Daylighting        LMLS-600

Max EL Light:        1.833fc   Average Daylight Ratio of the
Daylight Ratio:      0.0762    closed-loop daylight only and
Force Open Loop:      <No>     the open loop.
Recomm Thresh:        <2fc>
Recomm Delay:        <0min>
Enab Diag Msgs        <All>
      NEXT         SEND
```

Force Open Loop:

When set to "Yes", this parameter causes the sensor to always reference the Open-Loop sensor during control operations, and use the Closed-Loop sensor only for Automatic Calibration process. For true dual-loop control, this parameter must be set to "No".

```
Daylighting        LMLS-600
Max EL Light:         1.833fc
Daylight Ratio:       0.0762
Force Open Loop:      <Yes>
Recomm Thresh:        <2fc>
Recomm Delay:         <0min>
Enab Diag Msgs        <All>
      NEXT          SEND
```

Press Left/Right arrow to choose Yes or No

Available choices: Yes or No

Recomm Thresh

The open-loop light level below which the LMLS-600 enters recommissioning mode. If this parameter is set to 0, automatic daily recommissioning is disabled.

```
Daylighting        LMLS-600
Max EL Light:         1.833fc
Daylight Ratio:       0.0762
Force Open Loop:      <Yes>
Recomm Thresh:        <10fc>
Recomm Delay:         <0min>
Enab Diag Msgs        <All>
      NEXT          SEND
```

Press Left/Right arrow to raise or lower Recomm Thresh footcandles

Range: 0 to 255

Recomm Delay

The time that must elapse, with the open-loop light level remaining below the Recommissioning Threshold, before Recommissioning starts.

Range: 0 to 240 min

```
Daylighting        LMLS-600
Max EL Light:           1.833fc
Daylight Ratio:         0.0762
Force Open Loop:        <Yes>
Recomm Thresh:          <10fc>
Recomm Delay:           <20min>
Enab Diag Msgs          <All>
     NEXT            SEND
```

Press Left/Right arrow
to raise or lower
Recomm Time Delay
<0min - 240min>

Enable Diagnostic Messages:

Controls reporting of diagnostic information, visually and over the DLM IRB. Select "LED" (default) to enable the red LED flash pattern indicating Occupant Interference. Choose "None" to disable the red LED indication and all other messages. Select "All" only if so directed by WattStopper technicians.

```
Daylighting        LMLS-600
Max EL Light:           1.833fc
Daylight Ratio:         0.0762
Force Open Loop:        <Yes>
Recomm Thresh:          <10fc>
Recomm Delay:           <20min>
Enab Diag Msgs          <All>
     NEXT            SEND
```

Press Left/Right arrow
to choose

Send

When you have completed adjusting the settings, choose SEND.

```
Daylighting        LMLS-600

Max EL Light:        1.833fc
Daylight Ratio:      0.0762
Force Open Loop:     <No>
Recomm Thresh:       <10fc>
Recomm Delay:        <20min>
Enab Diag Msgs       <All>
      NEXT          SEND
```
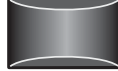
```
Point to Any IR
enabled device on
the network

Press 'Select'
```

Choose ▼ Press
SEND   Select

Point and
Press Select

```
LMLS-600        0293725909

Zone Setup
Calibration
Zone Settings
Advanced Settings
Control Mode
```

Settings have been saved.
The screen returns back to the
previous menu.

CONTROL MODE

Control Mode allows you to select the control
behavior of the photosensor. After choosing Control
Mode and pressing Select, point to the LMLS device
and press Select. The current control mode is
displayed. This can be changed to Normal, Test,
Demo, or Disable.

```
LMLS-400        0293611935

Zone Setup
Calibration
Zone Settings
Advanced Settings
Control Mode
```

```
Daylighting       LMLS-400
        Control Mode

Control Mode <Normal>


      SEND        CANCEL
```

Choose ▼ Press
ontrol Mode Select

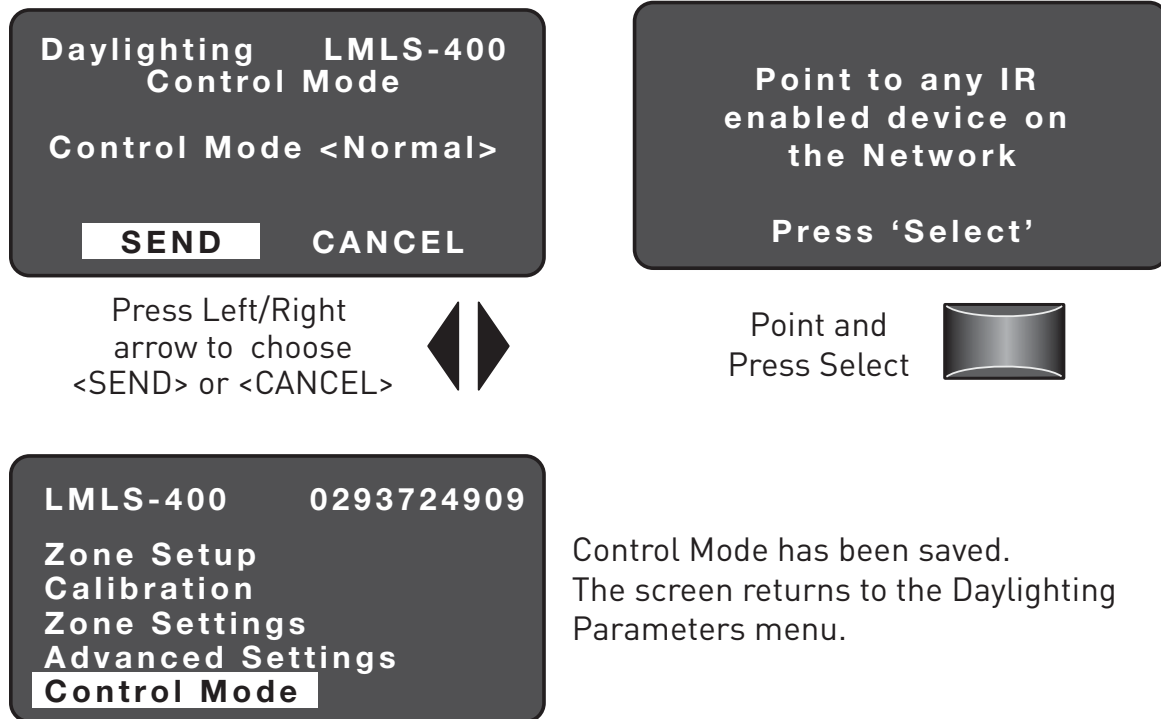Press Left/Right arrow
to scroll to the desired
control mode
<Normal> <Test>
<Demo> or <Disable>
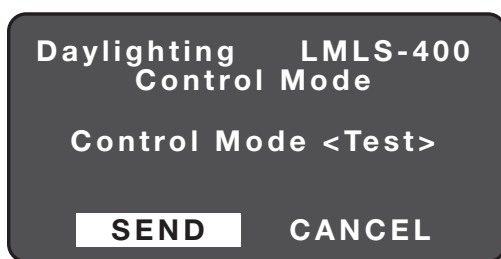
Press the left/right arrow to scroll through the
options.

Normal:

Normal mode allows the photosensor to take control of the daylighting loads.

```
Daylighting      LMLS-400
        Control Mode

Control Mode <Normal>


    SEND       CANCEL
```

Press Left/Right
arrow to choose
<SEND> or <CANCEL>

```
Point to any IR
enabled device on
   the Network


  Press 'Select'
```

Point and
Press Select

```
LMLS-400        0293724909

Zone Setup
Calibration
Zone Settings
Advanced Settings
Control Mode
```

Control Mode has been saved.
The screen returns to the Daylighting
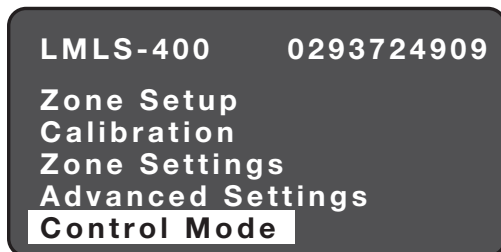Parameters menu.

Test:

Test Mode shortens timeouts for switching operation, and speeds ramp rates for dimming operation, to allow quick verification. Test Mode cancels automatically after 5 minutes.

```
Daylighting     LMLS-400
       Control Mode

   Control Mode <Test>


     SEND     CANCEL
```

Press Left/Right
arrow to choose
<SEND> or <CANCEL>

```
Point to any IR
enabled device on
   the Network


   Press 'Select'
```

Point and
Press Select

```
LMLS-400      0293724909

Zone Setup
Calibration
Zone Settings
Advanced Settings
Control Mode
```
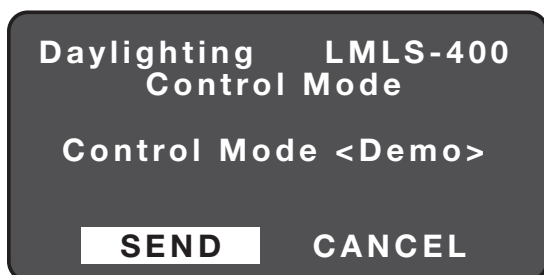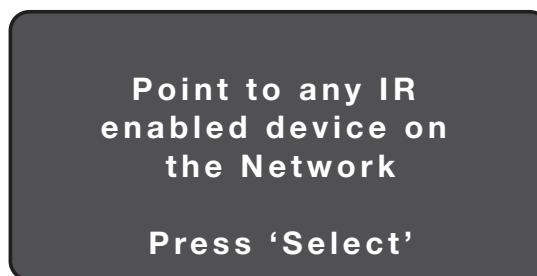
Control Mode has been saved.
The screen returns to the Daylighting
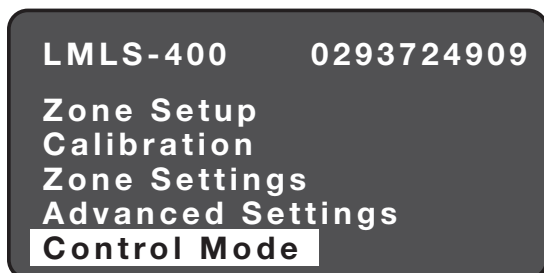Parameters menu.

Demo:

Demo mode will allow the photosensor to select a set of preset parameters. This mode should only be selected when demonstrating the functionality of the unit is desired.

```
Daylighting     LMLS-400
       Control Mode

   Control Mode <Demo>


     SEND     CANCEL
```

Press Left/Right
arrow to choose
<SEND> or <CANCEL>

```
Point to any IR
enabled device on
   the Network


   Press 'Select'
```

Point and
Press Select

```
LMLS-400      0293724909

Zone Setup
Calibration
Zone Settings
Advanced Settings
Control Mode
```
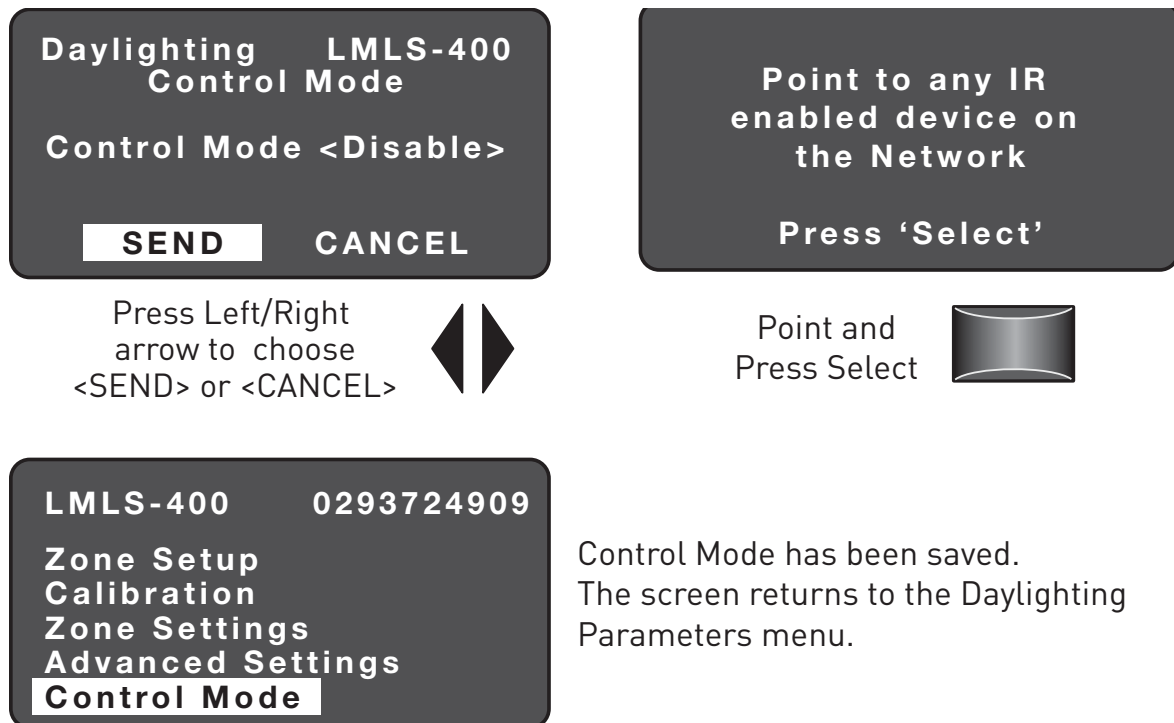
Control Mode has been saved.
The screen returns to the Daylighting
Parameters menu.

Disable:

Disable mode allows you to temporarily prevent the photosensor from controlling its assigned loads. While in this mode, the sensor will continue to report light levels, but will not adjust any loads. This parameter is mostly used for troubleshooting purposes.

```
Daylighting     LMLS-400
        Control Mode

Control Mode <Disable>


      SEND      CANCEL
```

Press Left/Right arrow to choose <SEND> or <CANCEL>

```
   Point to any IR
 enabled device on
    the Network


  Press 'Select'
```

Point and Press Select

```
LMLS-400       0293724909

Zone Setup
Calibration
Zone Settings
Advanced Settings
Control Mode
```

Control Mode has been saved. The screen returns to the Daylighting Parameters menu.

BUTTON CONFIGURATION

Refer to the DLM Dimming System Addendum for further information and system requirements.

Button Configuration enables communication between the load, its assigned switch and the LMCT-100. Use the Button Configuration function to change Type, Mode and Fade Times of a switch button and to lock scene buttons.

```
                                   BAT=▮▮▮
       Sensor Configuration
       Load Config (PnL)
       Daylighting Config
       Button Configuration
       Dimming Configuration
              More
```
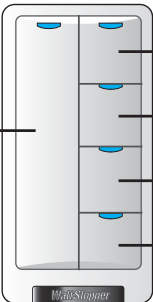
```
          Point at switch and
             Press 'Select'

          Continue pointing to
             the switch, then
          press the button you
             wish to configure
```

Press Select

Point at Switch, Press Select, All Blue LEDs on Switch Blink

Continue Pointing at Switch, Press Button, The Button's LED Blinks

Based on whether the button pressed is a Scene Button, Load Button or Rocker Button, one of the following screens is presented.

Button Type Example:

Rocker

Scene 1
Scene 2
Scene 3
Load

Scene Button

```
        Scene Button Config

   Type:                 <Scene 1>
   Mode:            <Recall Scene>
   Lock Button             <No>
   Fade On:         <Use Load's>
   Fade Off:        <Use Load's>
      SEND       NEXT BUTTON
```

Load Button

```
        Load Button Config

   Type:                  <Load>
   Mode:              <Toggle>
   Fade On:        <Use Load's>
   Fade Off:       <Use Load's>

      SEND       NEXT BUTTON
```

Rocker Button

```
        Rocker Button Config

   Fade On:         <Use Load's>
   Fade Off:        <Use Load's>
   Ramp Rate:          <17%/sec>


      SEND       NEXT BUTTON
```

Scene Button Parameters

Type

You may change the button type by scrolling through the values for Type. The options are Scene 1 through Scene 16 or Load. If you select Load and press ▼, a new screen appears containing adjustments particular to Load buttons (see Load Button Parameters on page 72).

```
          Scene Button Config

Type:                    <Scene 1>
Mode:             <Recall Scene>
Lock Button:                 <No>
Fade On:           <Use Load's>
Fade Off:          <Use Load's>
   SEND        NEXT BUTTON
```

Choose <Scene 0-16>
or <Load>   ◀▶

Mode

Mode options for Scene buttons are:

```
          Scene Button Config

Type:                    <Scene 1>
Mode:             <Recall Scene>
Lock Button                  <No>
Fade On:           <Use Load's>
Fade Off:          <Use Load's>
   SEND        NEXT BUTTON
```

Choose <Recall Scene>,
< Scene Off> or <Recall/Off>   ◀▶

- **Recall Scene** (default). Each time the button is pressed turns ON the scene.
- **Scene Off**. Each time the button is pressed turns OFF the scene. Note: when Scene Off mode is set, the blue LED on the button is never lit.
- **Recall/OFF** is similar to a toggle function, pressing the button once when the scene is not active recalls the scene; a subsequent button press while the scene is active turns OFF all members of the scene.

Lock Button

Lock Button options are
Yes and No. Selecting Yes
limits the button function to
executing the scene per the
Mode setting; light levels
for the assigned scene can not be recorded from this
scene button. A user can record the scene light level
from this button if Lock Button is No.

```
        Scene Button Config

Type:                    <Scene 1>
Mode:                <Recall Scene>
Lock Button                 <Yes>
Fade On:             <Use Load's>
Fade Off:            <Use Load's>
   SEND         NEXT BUTTON
```

Choose <Yes> or <No>   ◀▶

Fade On, Fade Off

Fade On and Fade Off
determines how much
time it takes for the loads
to reach their target levels
when this button is pressed.

```
        Scene Button Config

Type:                    <Scene 1>
Mode:                <Recall Scene>
Lock Button                 <Yes>
Fade On:                 <20 sec>
Fade Off:            <Use Load's>
   SEND         NEXT BUTTON
```

Choose <Use Load's> or   ◀▶
<None up to 18 hours>

The fade time defaults are
Use Load's. By default, all
loads in a scene carry a two
second ON and OFF fade
time. Each button can be
set for different fade times
independently for the same
scene. Application: This
feature allows the user to
recall a scene quickly from
one button, but from another button the scene recall
is much slower and gradual.

```
        Scene Button Config

Type:                    <Scene 1>
Mode:                <Recall Scene>
Lock Button                 <Yes>
Fade On:                 <20 sec>
Fade Off:                 <3 min>
   SEND         NEXT BUTTON
```
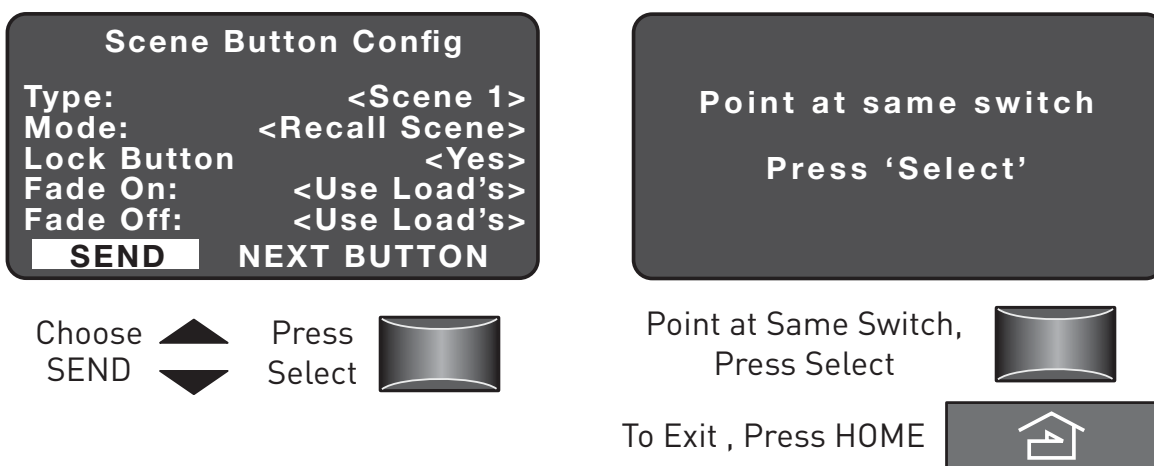
Choose <Use Load's> or   ◀▶
<None up to 18 hours>

Fade time value options are from None (immediate)
to 18 hours in duration. As you scroll through the
values, the units of measure change from seconds
to minutes to hours.

Send

Choosing SEND and pressing Select saves the new settings to this button. After pressing select, the "Point at Switch" screen is presented. From this screen you can either configure another button or exit Button Configuration.

```
        Scene Button Config

Type:               <Scene 1>
Mode:          <Recall Scene>
Lock Button            <Yes>
Fade On:        <Use Load's>
Fade Off:       <Use Load's>
    SEND      NEXT BUTTON
```

```
     Point at same switch

        Press 'Select'
```

Choose SEND — Press Select

Point at Same Switch, Press Select

To Exit , Press HOME

Next Button

Important: After configuring a button, always choose SEND before going to the next button. New settings are not saved until sent to the button.

To configure another button, press ▲ once to go directly to NEXT BUTTON, or press ▼ to scroll down to NEXT BUTTON. Press Select to bring up the screen instructing you to "Point at switch and Press 'Select'. Follow the instructions on this screen.
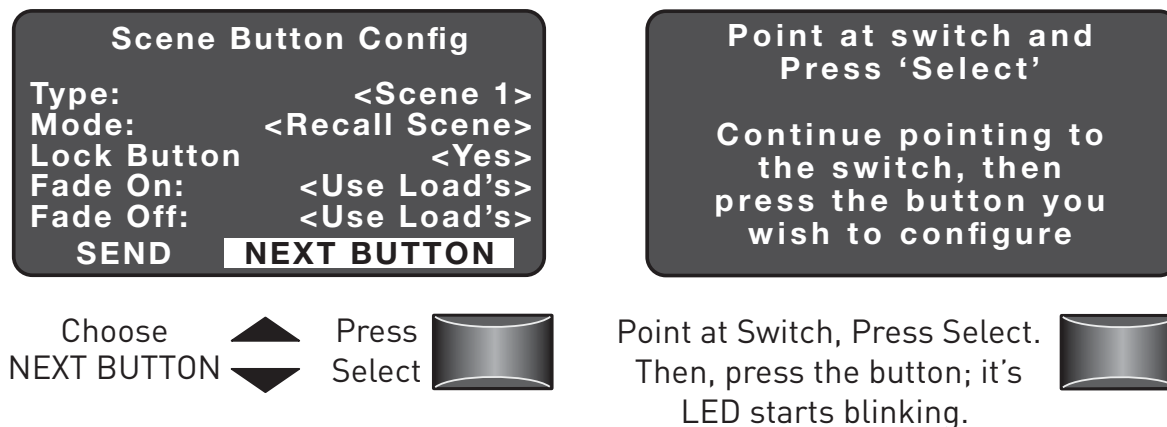
```
        Scene Button Config

Type:               <Scene 1>
Mode:          <Recall Scene>
Lock Button            <Yes>
Fade On:        <Use Load's>
Fade Off:       <Use Load's>
    SEND      NEXT BUTTON
```

```
    Point at switch and
        Press 'Select'

   Continue pointing to
      the switch, then
   press the button you
     wish to configure
```

Choose NEXT BUTTON — Press Select

Point at Switch, Press Select. Then, press the button; it's LED starts blinking.

Load Button Parameters

Type

You may change the button type by scrolling through the values for Type. The options are Scene 1 through Scene 16 or Load. If you select Scene 1 through 16 and press ▼ , a new screen

```
        Load Button Config

Type:                    <Load>
Mode:                 <Toggle>
Fade On:          <Use Load's>
Fade Off:         <Use Load's>

    SEND      NEXT BUTTON
```

Choose <Scene 1-16>
or <Load> ◀▶

appears containing adjustments particular to Scene buttons (see Scene Button Parameters on page 69).

Mode

Mode options for Load buttons are Toggle (default), On Only and Off Only.

In On Only or Off Only mode, each button press only causes the associated action.

```
        Load Button Config

Type:                    <Load>
Mode:                 <Toggle>
Fade On:          <Use Load's>
Fade Off:         <Use Load's>

    SEND      NEXT BUTTON
```

Choose <Toggle>,
<On Only> or <Off Only> ◀▶

In Toggle mode, if there are multiple loads bound to a button and any load is ON, the LED will be lit. Pressing the button turns OFF all loads and the LED on the button turns OFF. Pressing the button again turns ON all loads bound to the button.
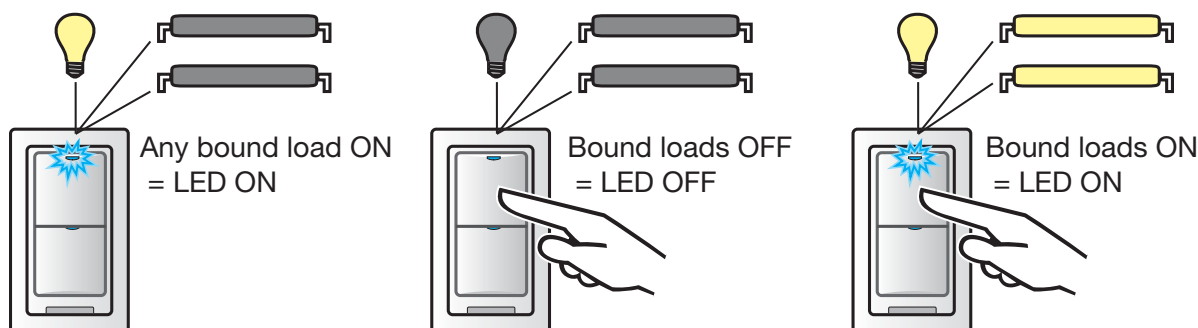
Any bound load ON
= LED ON

Bound loads OFF
= LED OFF

Bound loads ON
= LED ON

Fade On, Fade Off

Fade On and Fade Off determines the time that it takes for loads bound to this button to reach the target level.

```
     Load Button Config

Type:                    <Load>
Mode:                    <Toggle>
Fade On:                 <10 sec>
Fade Off:                <Use Load's>

    SEND        NEXT BUTTON
```

Choose <Use Load's> or
<None up to 18 hours> ◀▶

The fade time defaults are Use Load's. By default, all loads carry a two second ON and OFF fade time. Each button can be set for different fade times independently for the same loads, allowing fast or slow load fade, depending on the button pressed.

```
     Load Button Config

Type:                    <Load>
Mode:                    <Toggle>
Fade On:                 <Use Load's>
Fade Off:                <4 min>

    SEND        NEXT BUTTON
```

Choose <Use Load's> or
<None up to 18 hours> ◀▶

Fade time value options are from None (immediate) to 18 hours in duration. As you scroll through the values, the units of measure change from seconds to minutes to hours.

Send, Next Button

These selections are described on page 71.

Rocker Button Parameters

A rocker button, or paddle, is a type of load button. It cannot be changed to be a scene button. Parameter options are Fade On, Fade Off, and Ramp Rate.

```
    Rocker Button Config

Fade On:        <Use Load's>
Fade Off:       <Use Load's>
Ramp Rate:       <17%/sec>


    SEND        NEXT BUTTON
```

Fade On, Fade Off

Fade On and Fade Off determines the time that it takes for loads bound to this rocker to reach the target level.

```
Rocker Button Config
Fade On:            <40 sec>
Fade Off:        <Use Load's>
Ramp Rate:         <17%/sec>

     SEND      NEXT BUTTON
```
Choose <Use Load's> or
<None up to 18 hours>

The fade time defaults are Use Load's. By default, all loads carry a two second ON and OFF fade time. Each rocker and button can be set for a different fade time independently for the same loads, allowing fast or slow

```
Rocker Button Config
Fade On:         <Use Load's>
Fade Off:           <5 min>
Ramp Rate:         <17%/sec>

     SEND      NEXT BUTTON
```
Choose <Use Load's> or
<None up to 18 hours>

load fade depending on the button or rocker used.

Fade time value options are from None (immediate) to 18 hours in duration. As you scroll through the values, the units of measure change from seconds to minutes to hours.

Ramp Rate

Ramp Rate determines the speed (or rate) at which the light level of bound loads increases or decreases when the top or bottom

```
Rocker Button Config
Fade On:         <Use Load's>
Fade Off:        <Use Load's>
Ramp Rate:         <17%/sec>

     SEND      NEXT BUTTON
```

of the rocker is **pressed and held**. The default value is 17%/second which means that it takes approximately 6 seconds to ramp from 0-100%.
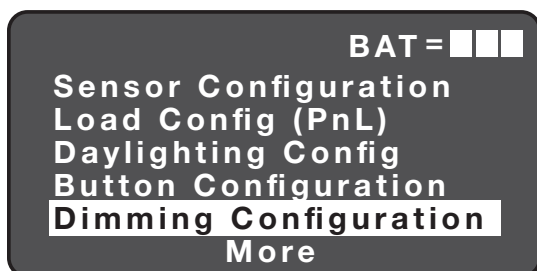
Send, Next Button

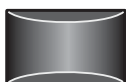These selections are described on page 59.

DIMMING CONFIGURATION

Dimming Configuration enables communication between the load and the LMCT-100. Use this function to change dimming parameters.
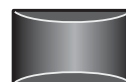
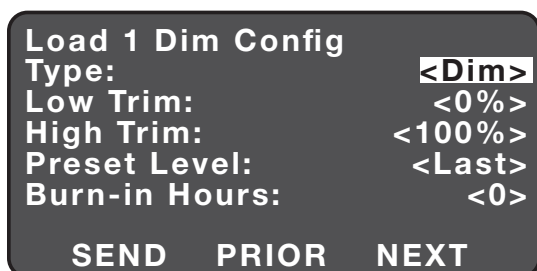Refer to the DLM Dimming System Addendum for further information and system requirements.

```
                              BAT=■■■
   Sensor Configuration
   Load Config (PnL)
   Daylighting Config
   Button Configuration
   Dimming Configuration
              More
```

Press Select

```
        Point to any IR
      enabled device on
         the network

        Press 'Select'
```

Press Select

Load 1 quickly turns ON and OFF (or OFF and ON depending on its original state).

Based on the room controller type (Dim or Switch) one of the following screens is presented for load 1.
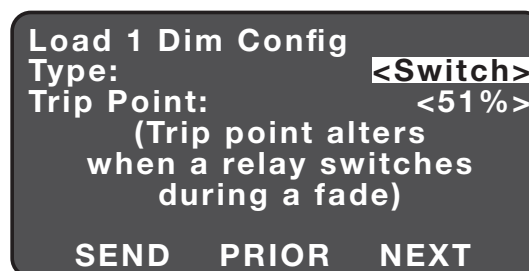
Type: Dimming

```
Load 1 Dim Config
Type:                <Dim>
Low Trim:             <0%>
High Trim:          <100%>
Preset Level:       <Last>
Burn-in Hours:         <0>

   SEND   PRIOR   NEXT
```

Choose Load Type: Dim or Switch

Press ▼

Type: ON/OFF Switch

```
Load 1 Dim Config
Type:             <Switch>
Trip Point:         <51%>
      (Trip point alters
    when a relay switches
        during a fade)

   SEND    PRIOR   NEXT
```

Choose Load Type: Dim or Switch

Press ▼

Important: All loads connected to dimming capable room controllers default to Load Type <Dim>. Be sure to select the appropriate load type because these room controllers can control either type of load. Default settings are based on the load type selected.

Dimming Load Parameters

Refer to the DLM Dimming System Addendum for further information and system requirements.

Low Trim

Entering a Low Trim value limits how low a load is allowed to dim. This overrides any other light level settings. The value options are 0-99% in 1% increments.

```
Load 1 Dim Config
Type:                 <Dim>
Low Trim:             <0%>
High Trim:            <100%>
Preset Level:         <Last>
Burn-in Hours:        <0>

    SEND    PRIOR    NEXT
```

Choose Low Trim:
<Last> or <0-99%>

High Trim

Entering a High Trim value limits how high a load is allowed to dim. This overrides any other light level settings. The value options are 1-100% in 1% increments.

```
Load 1 Dim Config
Type:                 <Dim>
Low Trim:             <0%>
High Trim:            <80%>
Preset Level:         <Last>
Burn-in Hours:        <0>

    SEND    PRIOR    NEXT
```

Choose High Trim:
<Last> or <1-100%>

Preset

Entering a Preset value causes the lights to go to this light level each time they are turned on. By default, the value is set to Last, which turns the load on to its last used level. The value options are Last or 1-100% in 1% increments.

```
Load 1 Dim Config
Type:                 <Dim>
Low Trim:             <0%>
High Trim:            <100%>
Preset Level:         <35%>
Burn-in Hours:        <0>

    SEND    PRIOR    NEXT
```

Choose Preset Light Level:
<Last> or <1-100%>

Burn-in

This feature allows the user to burn-in, or season, all of the lamps associated with the load. This is most often done to fluorescent lamps to insure stabilization of the lamp and/or dimming compatibility.

```
Load 1 Dim Config
Type:                <Dim>
Low Trim:            <0%>
High Trim:           <100%>
Preset Level:        <Last>
Burn-in Hours:       <100>

     SEND    PRIOR    NEXT
```

Choose Burn-in Hours
<0, 12 or 100>

The value options are 0, 12 or 100 hours. If 12 or 100 hours is entered, then the associated lights remain at 100% light level at any time they are turned ON until the number of hours have elapsed. The light may be turned ON or OFF as desired, however they do not respond to dimming during this time.

Send

Choosing Send and pressing Select saves the new settings to load 1. After pressing select, the "Point to any IR enabled device" screen is presented. From this screen you can either configure another load or exit Dimming Configuration by pressing the HOME or BACK buttons.

```
Load 1 Dim Config
Type:                <Dim>
Low Trim:            <0%>
High Trim:           <100%>
Preset Level:        <Last>
Burn-in Hours:       <100>

     SEND    PRIOR    NEXT
```

Choose
SEND

Press
Select

```
Point to any IR
enabled device on
the network

Press 'Select'
```

To Configure Next Load
Point at Device, Press Select

To Exit , Press HOME

Next

Important: After configuring a load, always choose SEND before going to the next load. New settings are not saved until sent to the load.

To advance to the next load, press ▲ once to go directly to NEXT, or press ▼ to scroll down to NEXT. Press select.

```
Load 1 Dim Config
Type:                    <Dim>
Low Trim:                <0%>
High Trim:               <100%>
Preset Level:            <Last>
Burn-in Hours:           <100>

      SEND    PRIOR   NEXT
```

Choose NEXT ▲▼   Press Select

```
Point to any IR
enabled device on
the network

Press 'Select'
```

To Configure Next Load
Point at Device, Press Select

Prior

To go to the prior load, press ▲ or ▼ to scroll to PRIOR. Press select.

```
Load 2 Dim Config
Type:                    <Dim>
Low Trim:                <0%>
High Trim:               <100%>
Preset Level:            <Last>
Burn-in Hours:           <100>

      SEND   PRIOR   NEXT
```

Choose PRIOR ▲▼   Press Select

```
Point to any IR
enabled device on
the network

Press 'Select'
```

To Configure Prior Load
Point at Device, Press Select

Switched Load Parameters

For a Switched load, the only parameter that is adjustable is the Trip Point. The Trip Point determines at what point in a ramp or fade the load turns ON or OFF. The value options are 1%, 25%, 75%, 51% or 100%. The default is 51%.

```
Load 2 Dim Config
Type:                    <Dim>
Low Trim:                <0%>
High Trim:               <100%>
Preset Level:            <Last>
Burn-in Hours:           <100>

    SEND    PRIOR    NEXT
```

Choose Switch ▶

```
Load 1 Dim Config
Type:                  <Switch>
Trip Point:             <51%>
       (Trip point alters
     when a relay switches
         during a fade)

    SEND    PRIOR    NEXT
```

Choose Desired Trip Point
<1%, 25%, 51%, 75% or 100%> ◀▶

Send, Next, Prior

These selections are described on pages 65-66.
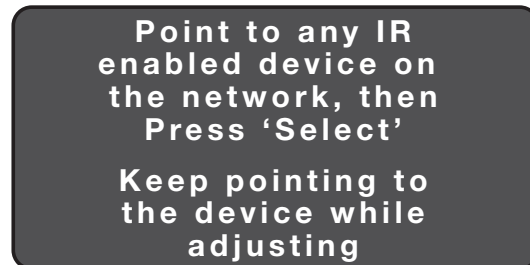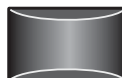
ADJUST LIGHT LEVEL

Adjust Light Level enables communication between the load and the LMCT-100. This feature allows a user to manually adjust the light level of a load without the need for a dimming switch or load button. This is particularly useful for setting scenes.
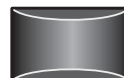
```
                          BAT=■■■
Sensor Configuration
Load Config (PnL)
Daylighting Config
Button Configuration
Dimming Configuration
          More
```

Press
Select

```
                          BAT=■■■
Adjust Light Level
Network Settings
Utilities


          More
```

Press
Select
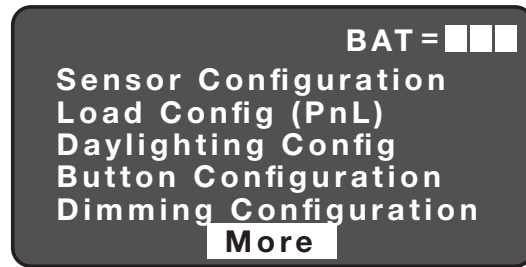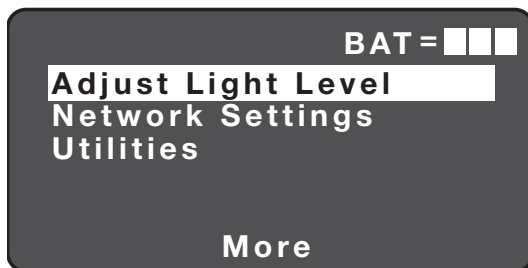
```
Point to any IR
enabled device on
the network, then
Press 'Select'

Keep pointing to
the device while
adjusting
```

Press
Select

```
Adjust Light Level

Load <1>

LEFT/RIGHT picks load
UP/DOWN adjusts level

Press HOME when done
```

To Exit

Press HOME when done

Keep pointing to the device while adjusting

Press the right or left arrow to select load. The selected load quickly turns ON and OFF.
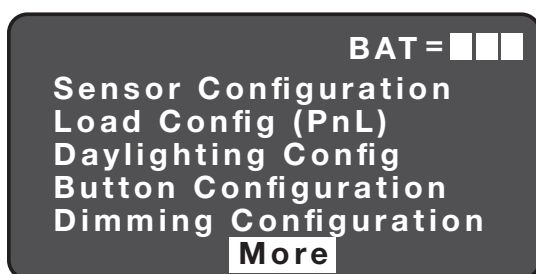
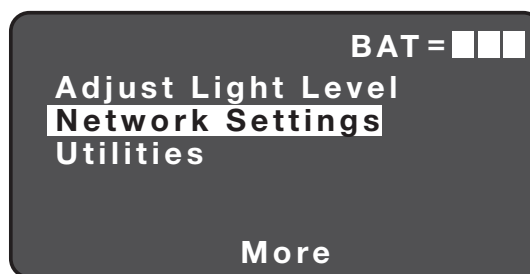Press the up or down arrow to adjust light level

A quick tap on ▲ turns ON the selected load, a quick tap on ▼ turns OFF the load. Pressing and holding ▲ ramps the light level up, pressing and holding ▼ fades the light level down.
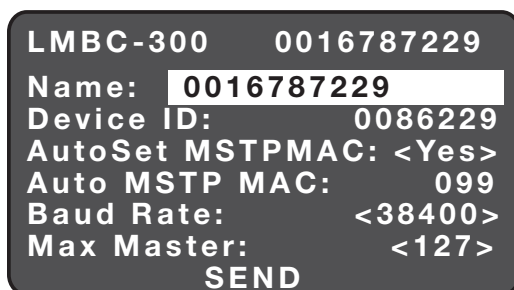
NETWORK SETTINGS

Network Settings allows viewing and changing settings in the LMBC-300 Network Bridge Module necessary for communication with the LMSM-201/603 Segment Manager or a BACnet-based Building Automation System (BAS) network. It can be used to query the DLM Local Network bridge (LMBC-300 or LMRC-3xx room controller) for device information and adjustment of network communication parameters.

```
                          BAT=■■■
  Sensor Configuration
  Load Config (PnL)
  Daylighting Config
  Button Configuration
  Dimming Configuration
           More
```

Press Select

```
                          BAT=■■■
  Adjust Light Level
  Network Settings
  Utilities


           More
```

Press Select

```
  LMBC-300      0016787229

  Name:    0016787229
  Device ID:        0086229
  AutoSet MSTPMAC: <Yes>
  Auto MSTP MAC:        099
  Baud Rate:        <38400>
  Max Master:         <127>
           SEND
```
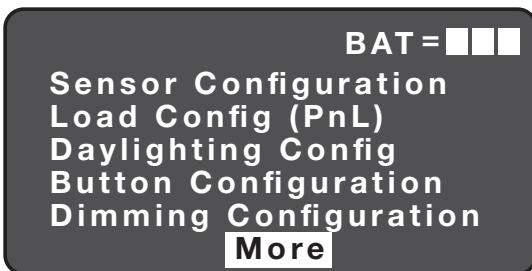
Press Select

The Segment Manager communicates with the DLM local networks and panels over a BACnet-compatible digital segment network. The LMSM-201 supports one segment network while the LMSM-603 supports three segment networks.
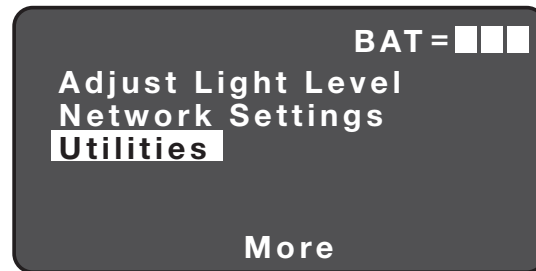
BACnet MS/TP, baud rate 9600, 19200, 38400, 76800 or 115200 selectable

UTILITIES

Utilities provides access to several advanced features of DLM. The Smartwire process allows binding buttons and sensors to relays in a lighting control panel. Identify Devices is a means to extract service information from room devices. Forcing PnG restores the room to its original plug and go state. Room Mode allows the room to be forced into the after hours or normal hours mode for testing.

```
                          BAT=▮▮▮
   Sensor Configuration
   Load Config (PnL)
   Daylighting Config
   Button Configuration
   Dimming Configuration
             More
```

Press
Select

```
                          BAT=▮▮▮
   Adjust Light Level
   Network Settings
   Utilities


             More
```

Press
Select

Smart Wire

The Smartwire feature is used to configure LMSW buttons and DLM occupancy sensors to control relays in the LILM series Lighting Integrator panel.

```
       Utilities Menu
   SmartWire
   Identify Devices
   Force System into PnG
   Room Mode

          Done
```

Press
Select

```
       SmartWire Menu
   Start SmartWire
   Stop SmartWire



          Done
```
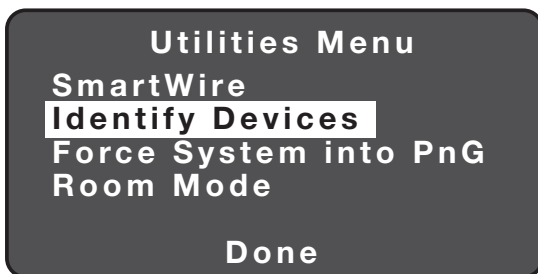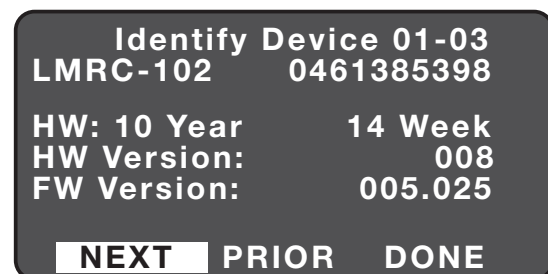
Press
Select

With Start Smartwire selected, point the LMCT at the switch or sensor to be programmed and press **Select** to enter the Smartwire mode. Select **Stop Smartwire** and point at the device to exit the Smartwire mode.
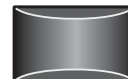
Identify Devices

Identify Devices provides access to service information for individual DLM devices in the room. Note that this feature only works with DLM room devices shipped after January 2012.

```
        Utilities Menu
 SmartWire
 Identify Devices
 Force System into PnG
 Room Mode

          Done
```

Press
Select

```
      Identify Device 01-03
 LMRC-102      0461385398

 HW: 10 Year        14 Week
 HW Version:            008
 FW Version:        005.025

   NEXT   PRIOR   DONE
```
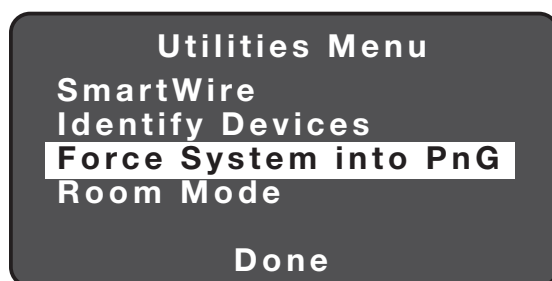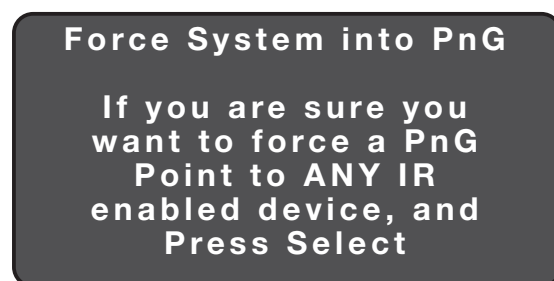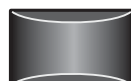
Press
Select

Force System into PnG

Forcing a PnG will reset the room devices back to their original Plug and Go states and the room will immediately initiate a fresh Plug and Go sequence.

```
        Utilities Menu
 SmartWire
 Identify Devices
 Force System into PnG
 Room Mode

          Done
```

Press
Select

```
   Force System into PnG

    If you are sure you
   want to force a PnG
     Point to ANY IR
   enabled device, and
      Press Select
```
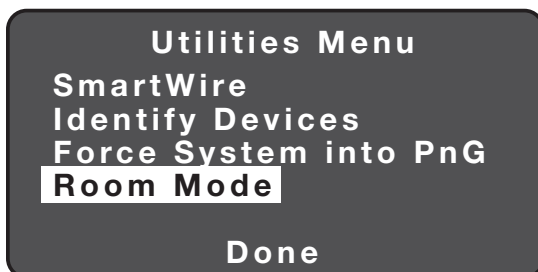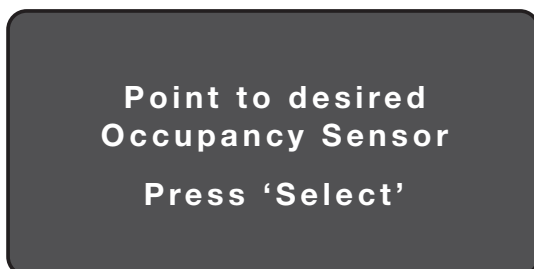
Press
Select

Room Mode

Room Mode will force the mode of the room into the After Hours or Normal Hours mode. Note that sensor settings changed while in After Hours mode will apply only when the room is scheduled into that state. Be sure to return the room to the proper mode before exiting.
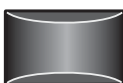
```
        Utilities Menu
  SmartWire
  Identify Devices
  Force System into PnG
  Room Mode

        Done
```

Press
Select

```
        Set Room Mode
  Select either Normal
  Hours or After Hours



  Normal Hrs    After Hrs
```

Press
Select

```
      Point to desired
    Occupancy Sensor

      Press 'Select'
```

Point and   Configuration
Press Select   Sent

TROUBLESHOOTING

Problem: Display doesn't come on when I press the Power On button.

1. Make sure batteries are installed correctly.
2. Make sure batteries are good.

Problem: Error message when the LMCT-100 requires a response from a device.

> No response
> from device.
>
> Press 'Select'
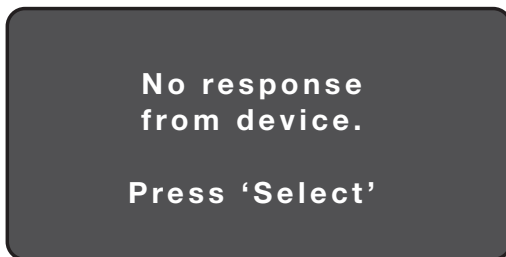
Press Select to return to the Home menu, then re-select the menu function.

Problem: If the LMCT-100 still can't get a response from the device:

1. Point to the device and try again.
2. Make sure you are pointing at the correct type of device.
3. Make sure the device is within range.
4. Make sure the device you are pointing at is powered and connected to the DLM Local Network.
5. Make sure the device is IR equipped.
6. Make sure the IR lenses on the device and the LMCT-100 are clean.
7. Check batteries.

Problem: The Home Menu does not display all the configuration functions described in this manual.

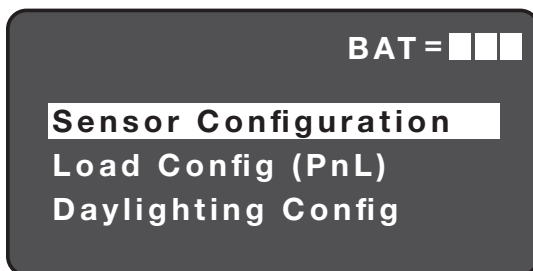**Explanation:** Check the Start-up Screen for version number.
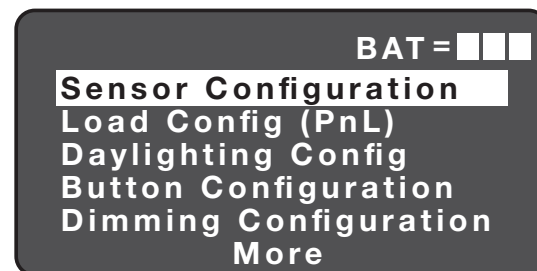
Start-up Screen

WattStopper
xx.xx.xx ← Version number

Home Menu

Version 03.02.20 or 04.02.20

```
                    BAT=███
  Sensor Configuration
  Load Config (PnL)
  Daylighting Config
```

Version 03.02.21 or 04.02.21

```
                    BAT=███
  Sensor Configuration
  Load Config (PnL)
  Daylighting Config
  Button Configuration
  Dimming Configuration
          More
```
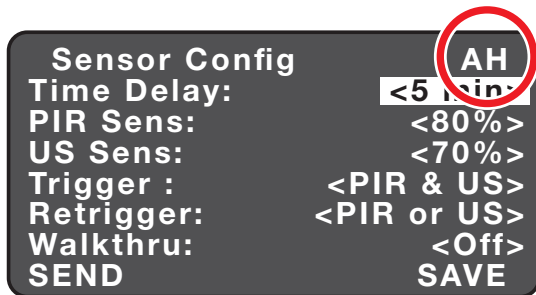
If using a LMCT-100 version prior to 03.02.21 or 04.02.21, configuration functions are described on pages 1 through 19.

Problem: A parameter value field shows <????>.

Explanation: If <????> appears in any value field, the current setting is invalid. Adjust the setting to one of the valid options.

For other questions concerning versions, contact Technical Support.

Problem: An "AH" appears in the upper right corner on the menu title line. For example:

```
  Sensor Config          AH
Time Delay:          <5 min>
PIR Sens:            <80%>
US Sens:             <70%>
Trigger :          <PIR & US>
Retrigger:        <PIR or US>
Walkthru:            <Off>
SEND                 SAVE
```

Explanation: There are two sets of parameters in every device, one for normal hours, which is the default configuration, and one for After Hours. "AH" is a flag that appears on a screen if the device that the LMCT-100 is communicating with is in After Hours mode.

If this indicator does not appear then the device or load is in Normal Hours.

Parameters changed while in one of these modes will be changed for that mode only.

After Hours parameters are only available in network systems where a Segment Manager is used to set After Hours schedules for a load or device.

Problem: I need more information about the DLM System.

1. The DLM System Installation Guide, Dimming System Addendum, and Segment Management Networking Addendum are available at www.wattstopper.com ⇨ Resources ⇨ Downloads ⇨ Installation Instructions ⇨ Digital Lighting Management.

LMLS-400 / LMLS-500 Daylighting Control

Problem: Lights do not switch or dim when desired, under daylighting control.

1. Use the pushbutton on the photosensor face to manually test load control.
2. Quick press to cycle through the load binding verification test. Press and hold for two seconds to start automatic calibration (first, relinquish load binding verification.
3. If the lights do not switch on and off, check Zone Setup to rebind the loads.
4. If the lights do switch on and off, use the Zone Settings screen to verify that the On and Off setpoints are correct (if Switched / Bi-Level / Tri-Level) or Day and Night setpoints are correct (if Dimmed). Place the photosensor in Test Mode to quickly verify daylighting operation; shine a flashlight into the sensor, or cover the sensor, to simulate major light level changes.

Problem: Red LED is ON, not flashing

Explanation: There is an internal failure in the LMLS sensor. Try unplugging the sensor from the DLM network, then plug it back in and wait for ten seconds. If the red LED comes back on, and is not flashing, the sensor is defective and must be replaced.

Problem: Red LED is flashing ON for three seconds, OFF for one second (repeating).

Explanation: The LMLS sensor is in Control Mode <Disable>. Use the LMCT-100 to change the Control Mode parameter to <Normal> to resume daylighting operation.

Problem: Blue LED is flashing

Explanation: If the blink is slow (one flash every four seconds), the photosensor is in an override condition, either due to an override from a wall switch or due to an automatic or manual commissioning operation.

If the latter, complete the commissioning operation first; otherwise, use a wall switch to turn off the controlled loads to terminate the override.

Explanation: If the blink is faster (one flash every second), the photosensor is in Test Mode or Demo Mode.

1.   Test Mode will cancel automatically after five minutes.

2.   Alternatively, it can be turned off by selecting the Control Mode menu from the LMLS-400/ LMLS-500 main screen in the LMCT-100.

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Recycle