MOVING iMAGE TECHNOLOGIES

INSTRUCTIONS

FOR

INSTALLATION, OPERATION, AND MAINTENANCE

OF

A-LMS 24
Architectural Lighting Management System
Part number A000230-xxx

Manual Version 1.0

Manual
A-LMS 24

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1.   INTRODUCTION

1.1   SPECIAL NOTICES

Two kinds of specific notices are used within this manual to emphasize information.

1.1.1 Warning

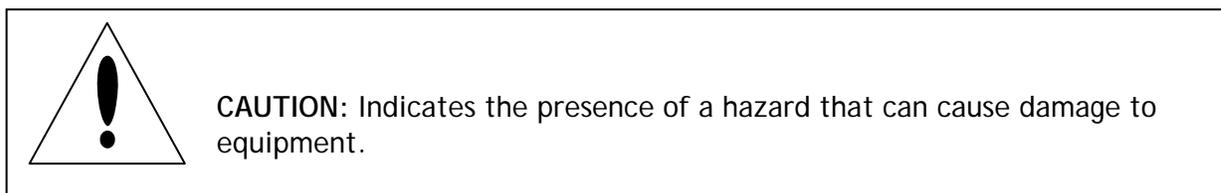|	
⚠ WARNING	**WARNING:** Indicates the presence of a hazard that can cause personal injury if the hazard is not avoided.

1.1.2 Caution

⚠	**CAUTION:** Indicates the presence of a hazard that can cause damage to equipment.
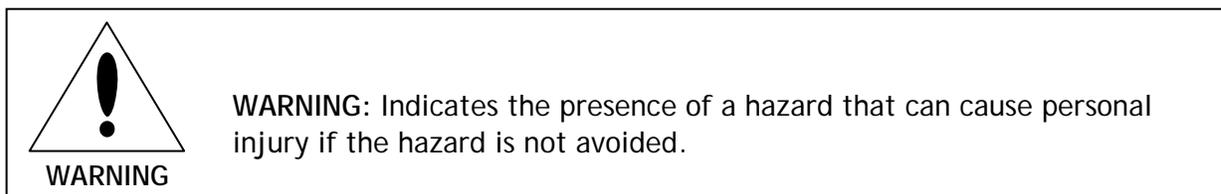
1.2 SAFETY

✓ This device is not required to be connected to AC power in order to operate, the only danger from electrical shock with the device is related to what the user connects it to. However the unit does control lighting which has safety implications as far as national and local fire safety rules.

2.   GENERAL DESCRIPTION

The MiT model A-LMS 24 Architectural Lighting Management System controls LED lighting fixtures conforming to the IEC 60929 1.0-10VDC Architectural dimming standard. The unit is available in two models: 2-channel as standard, a 4-channel unit is also available. All versions have six scene settings plus an override, "All On 100%" mode for emergency or cleaning.

The unit accepts scene cues from external contact closures, serial port, or a LAN port. The unit is housed in a 1U rack-mount enclosure. MiT can provide a list of LED fixtures that have been tested for compatibility with the A-LMS.

Because these types of lighting fixture use a low-voltage control signal, the same model A-LMS controller may be used regardless of lighting circuit voltage: 100-277 VAC. The A-LMS unit itself operates on 12VDC, the universal power supply included may be connected to 100-240VAC.
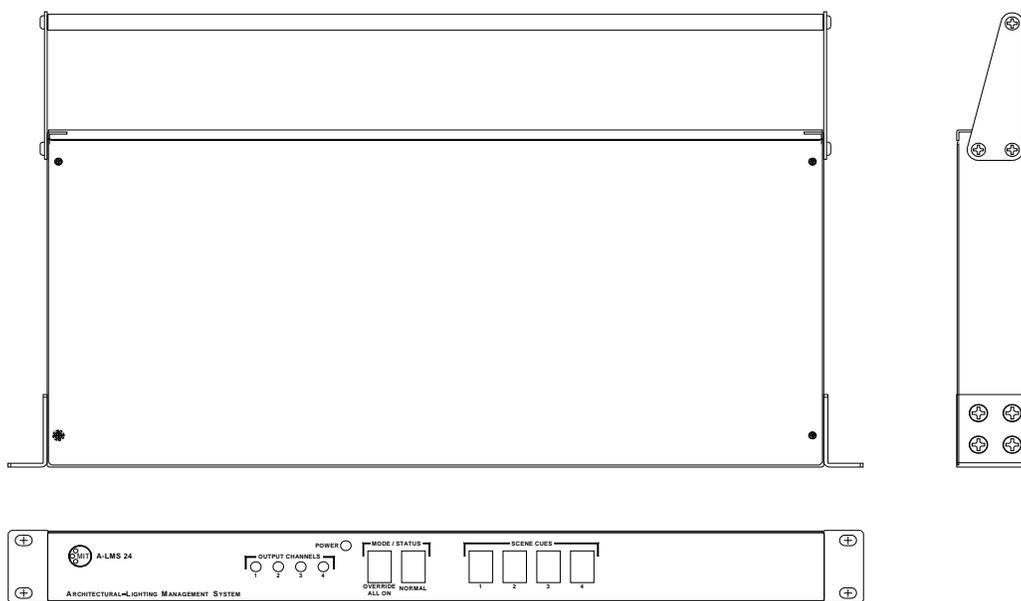
Figure 2-1: Outline

Figure 2-2: Rear Panel

3 INSTALLATION

⚠ **CAUTION:** Users are urged to read this instruction manual thoroughly and understand the procedures described herein before installing the system.

⚠ **CAUTION:** National and Local electrical codes should be observed at all times.

AC lighting systems involve connection to high voltages ranging from 120V to 277V. This wiring must be done by licensed electricians or other personnel with appropriate training. **The technical information in this manual is provided for use by certified electricians and other qualified personnel ONLY**.

3.1 GPI Inputs

A connector on the rear panel allows the connection to external switches or relays to select scenes by dry contact closures. The input pin is connected to common to activate the desired scene. The voltage on unconnected control pins is 5V and compatible with a variety of other systems, for example the Moving iMage Technologies M4800 AC dimmer series. The inputs on the two dimmers may be connected in parallel if you wish to control both LED 1.0-10V and 120VAC phase control lighting fixtures in the same auditorium.

3.2 Output Connections

There are two sets of output connectors on the rear of the unit. One connector is the 1.0-10V analog control voltage to be connected to the LED fixtures/drivers. Each channel can drive approximately 50mA current. This should easily drive 20-50 LED light fixtures that conform to IEC 60929 (usually each fixture only requires about 0.5mA of current on the control line).

The other connector is a switch output for turning off the power to the lighting fixtures when the dimming level reaches the bottom end of the dimming range. This is optional, only needed if desired. See Figure 3-2 for a typical connection diagram (one channel).
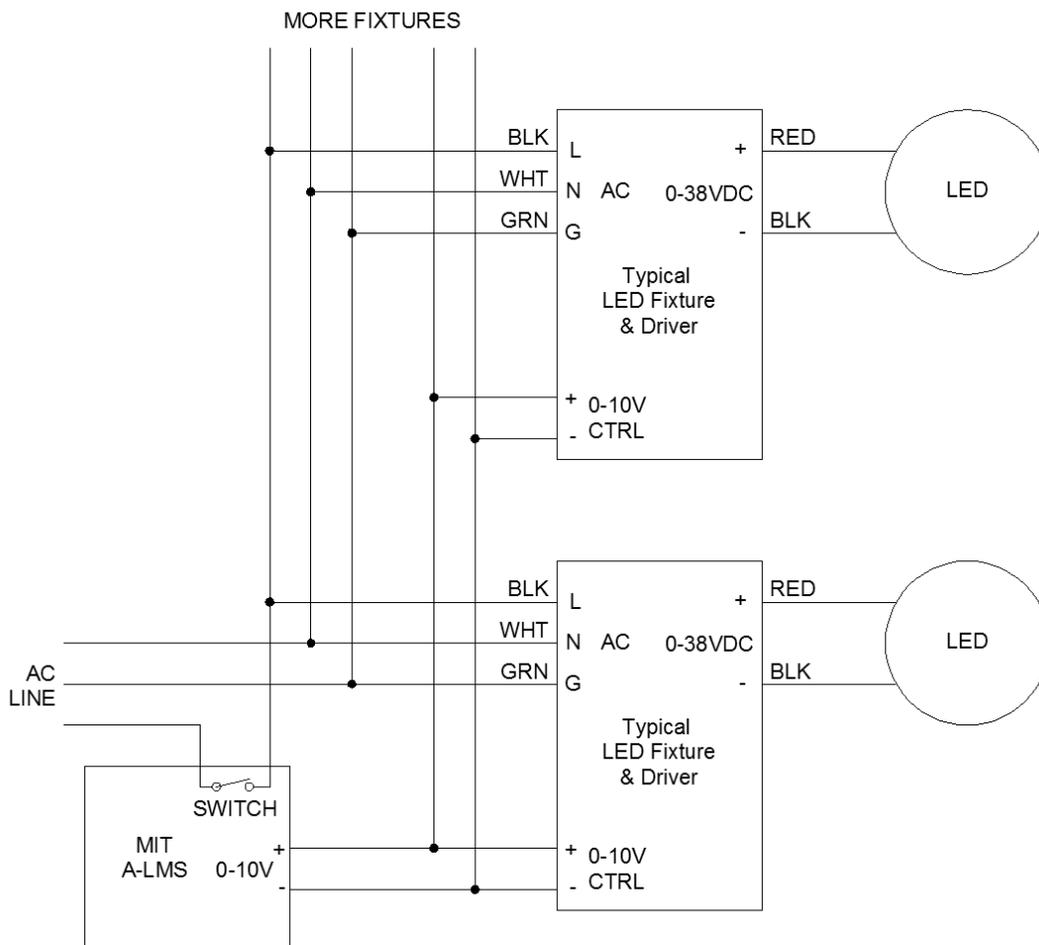

Figure 3-2

3.3 Mechanical mounting

Once the electrical connections are made the unit may be installed in a standard 19" equipment rack. Or the unit may be mounted to a wall if desired. In this case the rack mounting brackets may be removed from the sides.

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4 NETWORK CONFIGURATION

4.1 LAN Setup

In order to issue commands to the A-LMS device via a Local Area Network you'll have to configure the IP address of the unit. The unit can be configured using Telnet or the web page interface. This section describes the Telnet method, for the web page interface see Section 5.

Units are configured at the factory with the IP address set to a default value. The IP address is indicated on a label on the rear of the A-LMS chassis.

Note: Please contact MiT Engineering if you would like your A-LMS unit(s) set to a specific IP address at the time of production.

The IP address may be changed by the user after installation using Telnet. No special software tools are required.

Procedure to set the IP Address:

1. Windows XP: From the Start menu, click RUN and enter the following:

   Windows: telnet x.x.x.x 9100

2. Windows 7/8: From the start menu, click RUN and type 'cmd', or type 'cmd' in the 'Search programs and files' box. When the command line window appears type the following:

   telnet x.x.x.x
   Where x.x.x.x is the IP address indicated on the label on the A-LMS chassis.

3. A login prompt will appear. Type 'admin' and press Enter.

4. A password prompt will appear. Type 'admin' and press Enter.

5. A '/>' prompt will appear. Type 'ipconfig -a y.y.y.y -m 255.255.255.0' and press Enter. Where y.y.y.y is the new IP address.

6. Type 'exit' and close the command prompt window.

5 A-LMS Web Interface

To adjust the dimming settings you must log into the A-LMS using the web interface. Open an internet browser window and enter the IP address marked on the rear of the unit (or the IP address you configured in Sec. 4).

Login to the unit by entering admin in the login box and admin in the password box and press Enter.

5.1 Scene Settings page

The default page is the Scene Settings. Here is where you may change the dimming levels and fade times for each scene and channel. The factory default values are shown below. If desired you may enter a name for each lighting channel, for example House, Stage, Sconce, etc. On 2-channel models only the first two channels are applicable. After making changes on this page you must click the button to Update the unit.

5.2 System Settings page

The System Settings tab allows you to change the IP address, the subnet mask, the name of the unit, the name of the theater, and so on. After making changes on this page you will need to click the box that says Update A-LMS. If you make changes to the IP address you will have to reboot the unit.

MiT suggests putting the auditorium number or name in the Device Name field, and the name of the theater in the Location 1 field. For example "ABC Cinemas Fountain Valley #456". Additional information may be added in the other Location fields if desired, but aren't required.

5.3 Configuration Management page

This page allows the user to backup, restore, and reset a unit to its factory defaults. The Backup and Restore function is handy for setting all the A-LMS units in a multiplex with the same values.

A-LMS

Firmware: v1.0.12.318 Web: v1.1.0

| Scene Settings | System Settings | Configuration Management |

Backup

Backing up this unit will allow you to save the settings to a file on your computer. This file can then be restored on this unit or another unit at a later time.

Restore

You can restore the settings from this unit or another unit by uploading a saved file from your computer.

Reset

You can reset this unit to the factory settings. This will remove ALL changes that have been made.

Clicking on Backup will open a dialogue window to prompt for the location and filename for where you wish to save the settings.

Clicking on Restore will open a similar window, asking what file you want to restore from.

Clicking on Reset will revert all the settings of the unit to the factory default values. You will be prompted to confirm that you want to do that.

6 OPERATION

6.1 Front Panel Controls

The controls on the front panel consist of manual pushbuttons to select desired scenes, as well as to select the emergency ALL ON mode or Resume Normal mode. The LEDs indicate when the unit is in the Emergency or Normal mode. Scenes 1-4 each have their own selection button. To select Scene 5, press buttons 1 and 4 simultaneously. To select Scene 6 press buttons 2 and 4. The indicator LEDs on the buttons will reflect the same pattern, i.e. for Scene 6 the LEDs on buttons 2 and 4 will remain illuminated.

6.2 Remote Operation

Scene cues may be received by the GPI input connector, the Serial connector, or the LAN connector. The GPI digital inputs accept switch or relay closures as described in Sec. 3.1.

To use the serial or LAN inputs to receive scene cues you will need to send ASCII text strings from the controlling device.

To send scene cues to the A-LMS via the LAN connection, in addition to configuring the desired IP address described in Sec. 4 or 5, you will need to establish a TCP/IP connection to the Host address (192.168.1.xxx or other IP address that you configured), using the port of 9100, then send the appropriate text string.

See Table 6-1 for the commands accepted.

Table 6-1

GPI Input	Function Desc	LAN / Serial Command String
1	Activate Scene 1 settings	SCENE1
2	Activate Scene 2 settings	SCENE2
3	Activate Scene 3 settings	SCENE3
4	Activate Scene 4 settings	SCENE4
5	Activate Scene 5 settings	SCENE5
6	Activate Scene 6 settings	SCENE6
7	Exit Emergency mode, return to last scene	EMERG-OFF
8	Activate Emergency mode, all outputs on full	EMERG-ON
-	Report status and health of A-LMS	STATUS?

Here is an example of the setup procedure for controlling the A-LMS with a D-cinema server (based on the GDC server, others should be similar):

1. Add the A-LMS as a 'Network Socket'

2. Enter the IP address as previously configured

3. Enter the default port of 9100

4. Transport control is TCP

5. Linefeed type is CR, LF. The 'None' option will not work.

6. Define the control cues.

   a. Enter 'Lights-Intermission' for the name and 'SCENE1' for the Value.

   b. Enter 'Lights-Previews' for the name and 'SCENE2' for the Value.

   c. Enter 'Lights-Feature' for the name and 'SCENE3' for the Value.

   d. Enter 'Lights-Credits' for the name and 'SCENE4' for the Value.

   e. Enter whatever name you want to use for Scene 5 and 6 (if needed)

7. Enter the control cues in a playlist.

8. After these steps, Save. Now the A-LMS device will be available to work with the usual automation macros defined for playlists.

Note: cleaning or emergency lighting modes will normally be selected by a hardware input rather than by the playlist in the server.

Appendix

Parts List, Schematics, and Warranty

MODELS AND PART NUMBERS

A000230-001   A-LMS 2 channel
A000230-002   A-LMS 4 channel

REPLACEMENT PARTS LIST

Standard Product Warranty

WARRANTY, DISCLAIMERS AND LIMITATION OF LIABILITY

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CONTACTING MiT

To order parts or request information from MiT, use the address, telephone number, or fax number given on the inside front page of this document. When contacting MiT be prepared to provide:

- Model and serial number.
- Part name and part number, as shown in this manual.
- Original Purchase order number.

The purchase order number is essential for replacement parts requested under warranty. MiT issues credit for defective parts received. Please request a Return Authorization number from MiT for any defective parts.