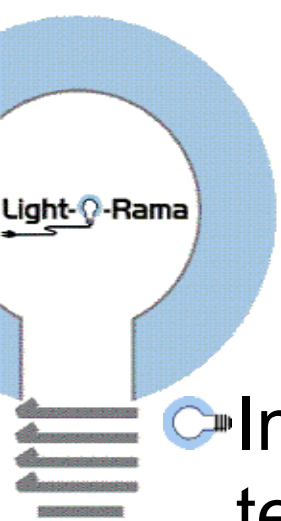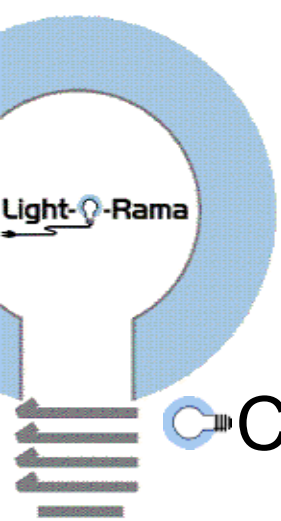# Light-O-Rama

Welcome
to
LOR 101 an Introduction
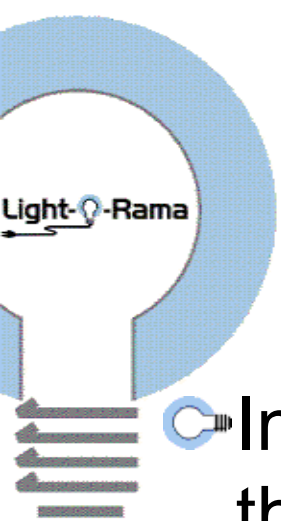# to Light O Rama

LOR Training

Objectives

Introduce Computer Control concepts and terminology

Introduce the Light-O-Rama product line and what it can do for your display

Discuss how to set up a basic light show with Light-O-Rama products.

LOR Training
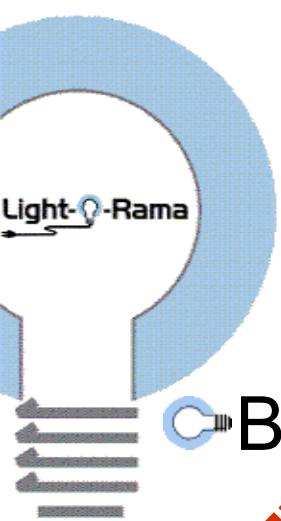
Intro to Computer Control

Consider a basic Circuit:

Intro to Computer Control

- In computer control, the computer becomes the switch!
- Allows for very precise timing control
- Allows for dimming and special effects
- Computer can control many circuits simultaneously
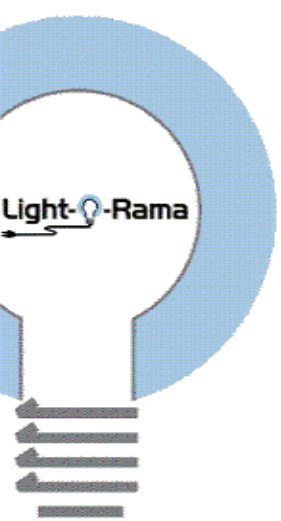
Types of Animation

Basic Animation

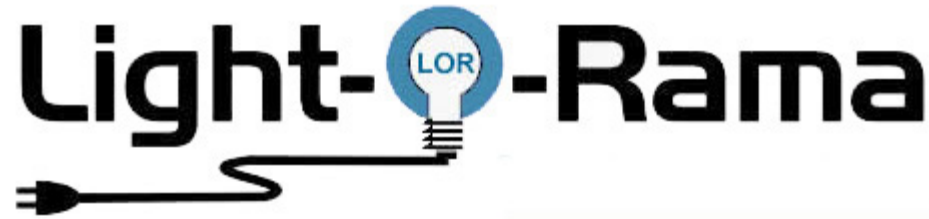- ❖ Chasing lights or shrubs
- ❖ Waving Santa or Animated Train

Musical Animations

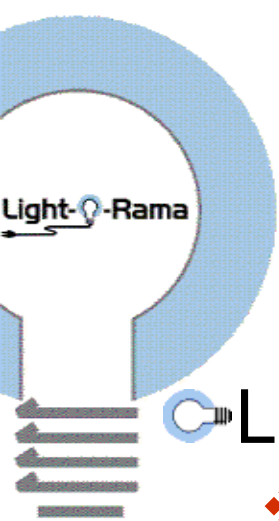- ❖ Display, or portions of it, synchronized to music
- ❖ Changes a static display into a multimedia experience, or "light show"

LOR Training

What is Light-O-Rama?

**Light-O-Rama is a Hardware and Software solution for computerizing lighting displays**

What is Light-O-Rama?

Light-O-Rama is a *distributed* system.

- ❖ Lighting controllers and other hardware devices connect together with phone or Ethernet cable.
- ❖ Controllers can be placed near lights (in a weatherproof enclosure) to greatly reduce power cabling
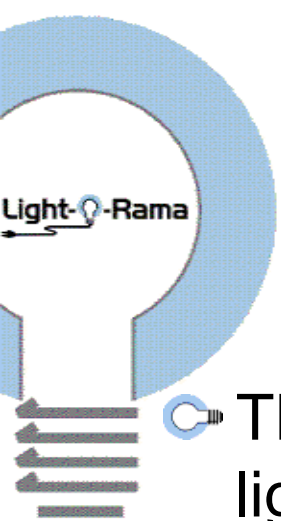- ❖ If you control the lights with a computer, you only need a single thin control cable going outside.

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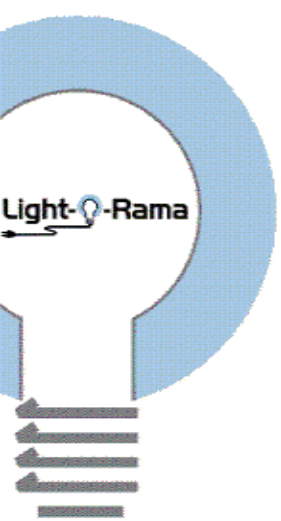
Light-O-Rama Hardware
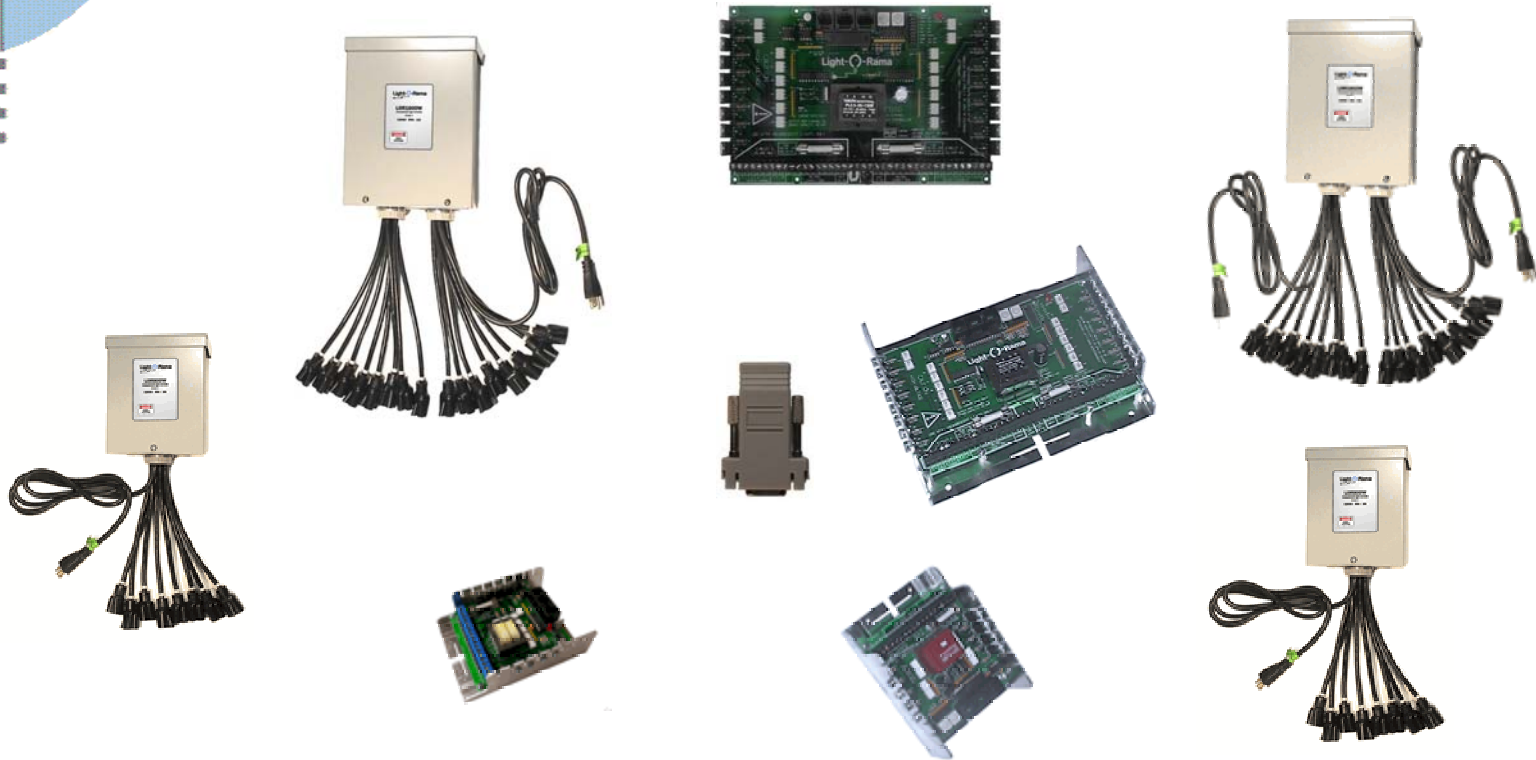
Light-O-Rama Lighting Controllers

The "light switches" that will actually control your lights.

- ❖ A controller will control a group of lights
- ❖ Controllers can be used together to control small and large displays
- ❖ Controllers provide full dimming capability, as well as other special effects.
- ❖ Some controllers provide provision for inputs, to create interactive displays.
- ❖ Each controller can be assigned a unique unit number to distinguish it from other controllers on the network.
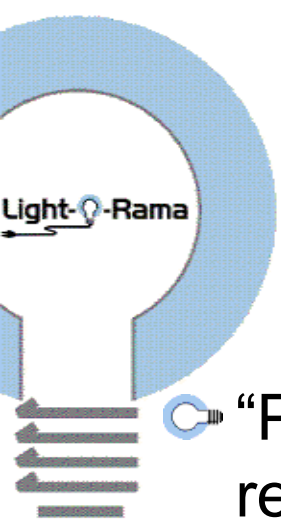
Controllers – "Showtime" Series

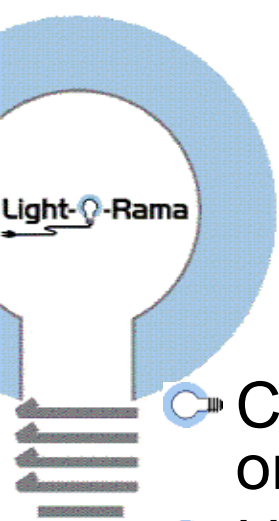- "Plug and Play" – controllers are ready to connect together, attach lights, and work.

- Best if you're not comfortable assembling your own controllers, or want to save time

- Available in weatherproof enclosures for placing near lights, if desired.

Controllers – "Hobbyist" Series

- Consist of a complete circuit board only
- User must provide enclosure and connections for power and lights
- For users who are familiar with working with electricity, as there are exposed electrical parts which could be dangerous
- Best for users who want to save money, who find satisfaction in building their own controllers, or have special needs not met by the Showtime products.
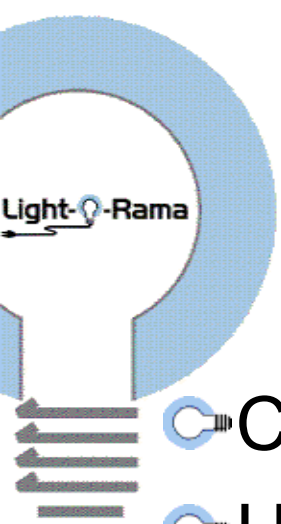
Controllers – "Hobbyist" Series

- Connect a power plug to power the board and lights

- Connect receptacles so lights can be attached easily
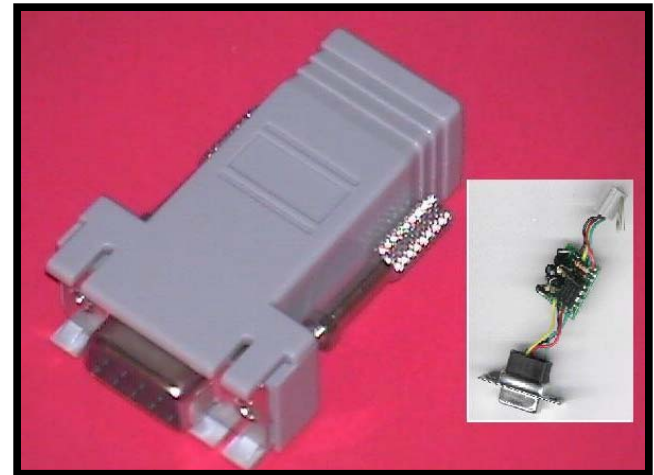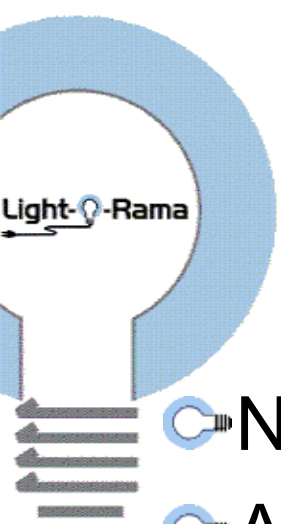
- Place in an enclosure

A Hobbyist board in an enclosure assembled by Tim Fischer, a LOR user.

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Computer Interface

- Connects computer to Light-O-Rama network
- Used to either directly control the lights from the computer via the lighting controllers, or to program controllers or other devices on the Light-O-Rama network
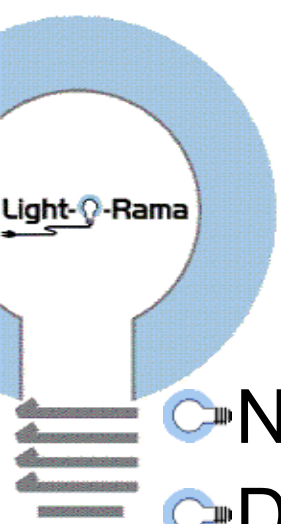
MP3-Director Show Player

- New for 2006 (LOR-MP3-DIR)
- Allows you to run a music-synchronized light show without a dedicated computer
- Unit is programmed by connecting it to a computer, and shows are stored on memory cards
- Once programmed, the unit can be disconnected and will control the show and play music files with no computer attached

DMX Lighting Interface

- New for 2006
- DMX is a lighting control standard used in concerts, theater productions, dance clubs, etc
- Allows Light-O-Rama software to control DMX devices, such as robotic lighting, theatrical effects, etc
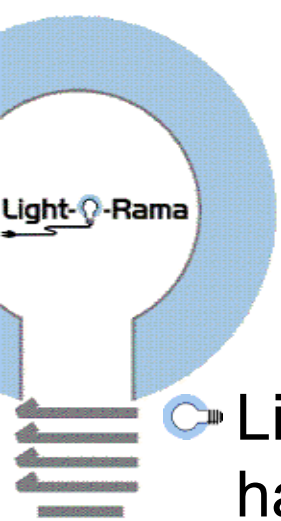- When programming shows, the DMX channels will appear as standard Light-O-Rama channels
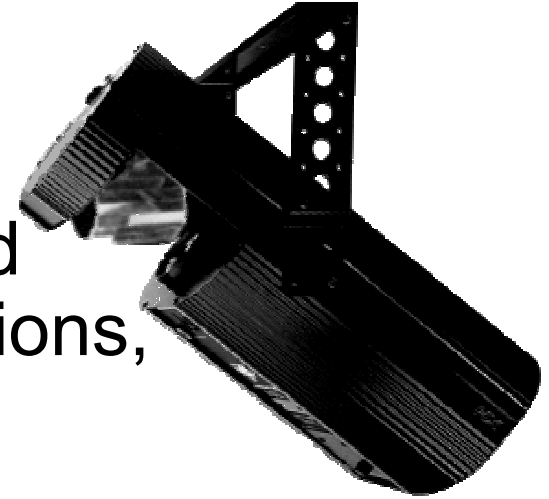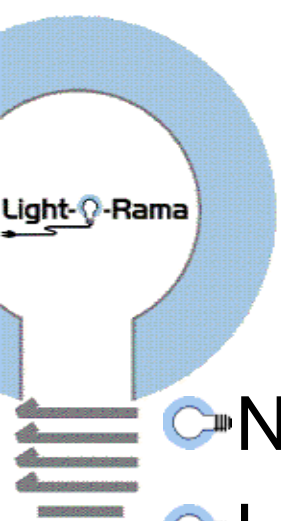
Digital I/O Card

- New for 2006

- Like a lighting controller, but allows control of non-lighting inductive loads such as motors or low voltage devices

- Connects to a Light-O-Rama network

Non Light-O-Rama Hardware

- Light-O-Rama can control several other varieties of hardware
- The devices will appear as standard Light-O-Rama channels when programming sequences
- Types supported:
  - ❖ X-10 Hardware
  - ❖ Digital I/O Cards
  - ❖ Dasher boards (v2.0 and prior)
- Some features may not be available, if the hardware doesn't support it (e.g. dimming)

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Light-O-Rama Terminology

Channel

- Represents a particular circuit on a particular controller, which you can have lights hooked up to.

- Used to abstract the hardware from the programming – channels can be assigned to various controllers, and later reassigned to a different controller without reprogramming the effects on the channel.
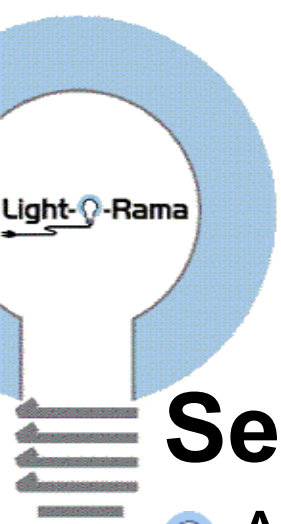
LOR Training
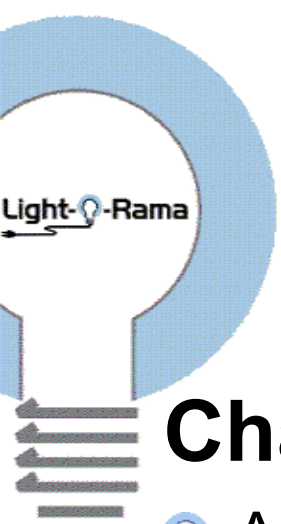
Light-O-Rama Terminology

Channel

- A channel can be a circuit on:
  - ❖ Light-O-Rama controller
  - ❖ DIO card
  - ❖ X-10 module
  - ❖ etc.
- Conceptually assigned to an element in your display
  - ❖ Red tree lights
  - ❖ Train Smoke Frame 1
  - ❖ Big Star

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Light-O-Rama Terminology

Sequence

- A sequence is a string of commands that will be sent to lights

  - Example: a sequence may command the lights to turn on when the sequence starts, turn off a second later, stay off for a tenth of a second, start twinkling for the next two seconds, and then fade up, from completely off to completely on, during the next five seconds.

- May control different groups of lights separately, but at the same time.

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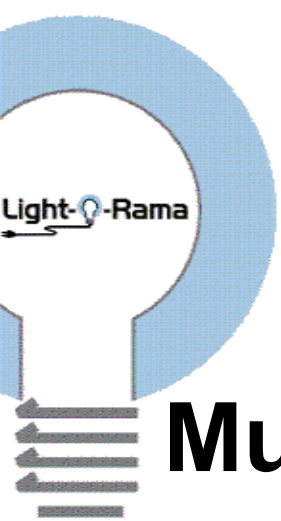
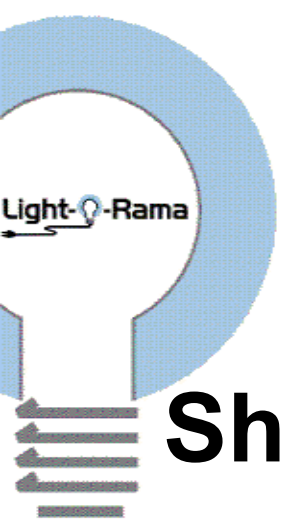# *Light-O-Rama Terminology*

Musical Sequence

- 'Musical sequences are associated with songs (or other sound effects); the lights can be set up to turn off and on (and do other effects) in sync with music.

- Only one musical sequence can be running at a time.

*LOR Training*
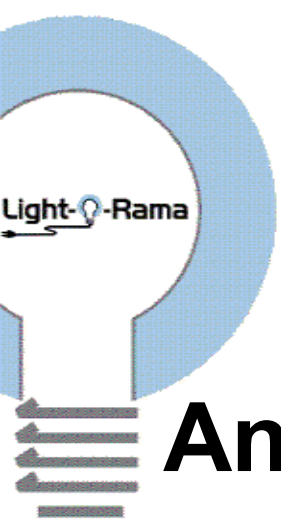
Light-O-Rama Terminology

Animation Sequence

- Not associated with music or sound.
- Many animation sequences can run at once, and can run at the same time as a musical sequence.
- May contain loops

Light-O-Rama Terminology

Show

- A show is a collection of sequences (animation or musical) set up to run at the same time, or in sequence.

- A "package" of sequences that can be scheduled to run at a given time.

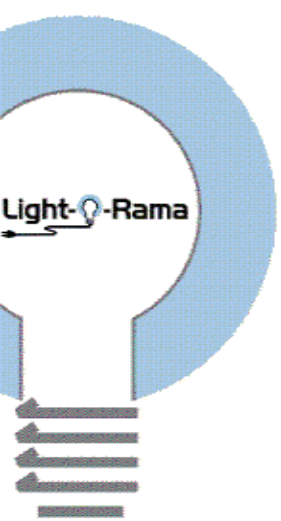- Many different shows can be created and scheduled separately.
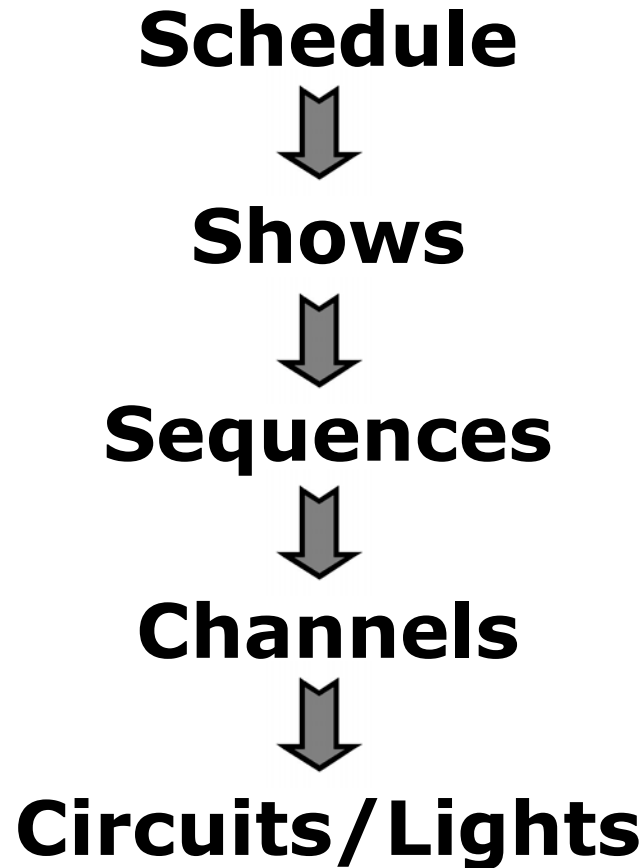
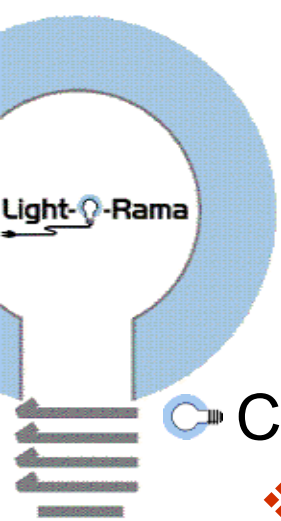*LOR Training*
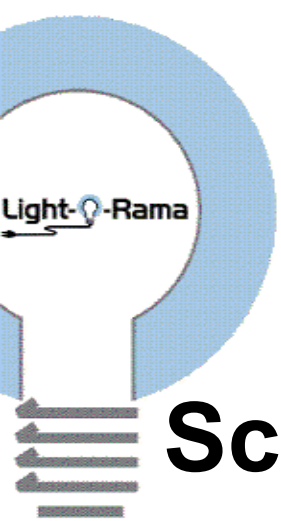
Light-O-Rama Terminology

Schedule

- The "master calendar" for your light show.
- Various shows can be scheduled at different times, either as a one-time event or a repeated event.
- Created with the Light-O-Rama Scheduler utility

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Light-O-Rama Terminology

Schedule

⬇

Shows

⬇

Sequences

⬇

Channels

⬇

Circuits/Lights

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Standalone or Computer-controlled

Computer-controlled

- ❖ A computer is directly sending instructions to the lighting controllers, and providing the audio for a musical-synced show
- ❖ Best to have a dedicated computer

Standalone

- ❖ Show is created on a computer, and downloaded into a lighting controller or the MP3 Show Controller
- ❖ The controller can control other lighting controllers to provide for a full light show
- ❖ No computer is necessary once the show is downloaded into the controllers.

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Light-O-Rama Software –
A Software Suite
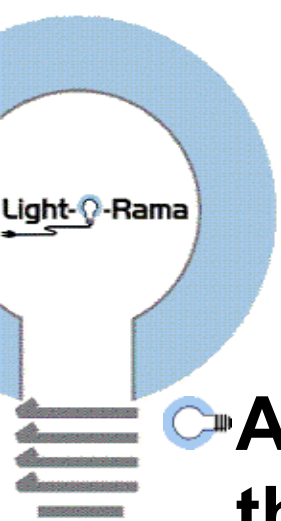
A Number of different programs make up the Light-O-Rama Software Package

Sequence Editor

- Creates lighting sequences (animation or musical)

- Uses a grid (spreadsheet-like) mechanism to instruct the controllers what events to perform and when

- Assigns the various controller circuits to channels

- Contains utilities to visualize your display without having lights connected

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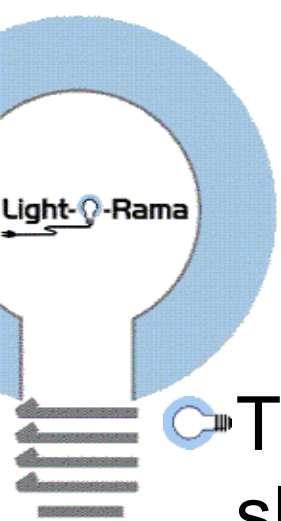
Show Editor

- Takes sequences, and groups them into a show.

- Allows you to set up the order sequences run in, set special pre and post-show sequences, etc

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Scheduler

- Sets the master schedule for when shows should run

- Allows great flexibility for how to run your display.

- Musical shows will finish the current sequence before ending
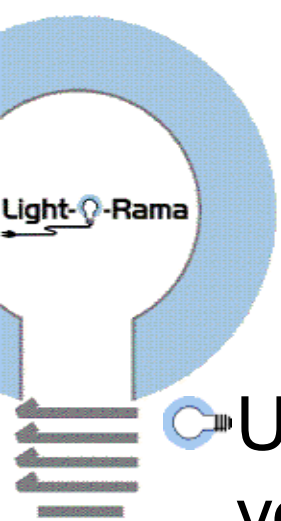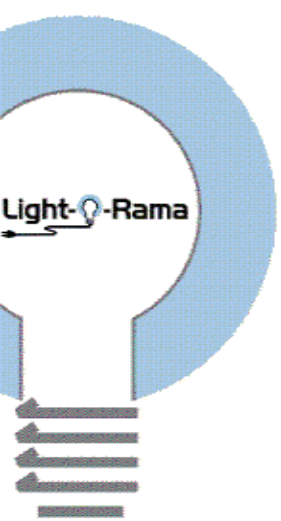
Hardware Utility

- Used to configure and manage the hardware you use to control your lights.

- Used to assign controller ID on some boards.

- Contains utilities to test controllers, locate controllers on the network, and send basic commands.

- Used to download sequences into a controller for standalone use.
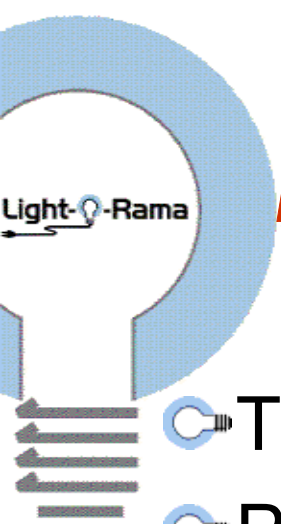
Light-O-Rama Control Panel

- Task-bar utility
- Provides quick access to the other Light-O-Rama software pieces
- Runs the schedule and controls the lights during a light show (for a direct computer-controlled show).

The End

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