T7   New to LOR: (Part 1): Hardware Basics

The "New to Light-O-Rama" series of classes are beginner level classes designed for those with little to no knowledge of how to build and run an animated light shows. Prior experience is not required.

This class will give you the tools you need to get LOR hardware up and running. We will review the hardware available (including the Showtime Central/TSO Signature Series), basic hardware configuration, networking and troubleshooting. If you are confused about what a Unit ID is, what channels are, or how to choose a controller - this is the class for you. For the complete beginner's guide to the Light-O-Rama system, consider attending the second half of this class: "New to Light-O-Rama: Show and Software Basics."
Don Teague

T8   xLights Jumpstart

In this beginner class, we will learn how to get started in xLights and begin rapid prototyping your potential display. We will take new people from the ground up and physically demonstrate how to do a show layout the correct way. We will have a basic working display of lights at the end of the hour. This class promises to be interactive, light hearted, and fun.
Russell McFarland

T9   Decorating Basics: Illumination of Lights

No redundancy in this class name. With holiday decorating, there is a wealth of lighting products to choose from—incandescent, LED, flood, strobe, RGB, node, strip, or chip. Newbies to the hobby can be inundated with choices and decisions from what to use, where to use it, here to find it, and what to spend. This class will explain the differences, brighten your perspective, and shed some light to help you with your decisions.
Mark Zembruski

T10   Networking 101

A broad introduction to the world of networking that covers terminology, IP addressing, routers and switches, cabling, and protocols.
Shane Rehm

T12   Fix it - Hold it - Seal it

We all use tapes, glues, sealants, and fasteners, but did you know all the other types and their uses? Whether you're repairing lights or props, attaching strings or stars, or patching inflatables, this presentation will stick to your ribs. Lots of sticky door prizes included.
Kevin "wirekat" Thomas

T13   New to LOR (Part 2): Show and Software Basics

The "New to Light-O-Rama" series of classes are beginner level classes designed for those with little to no knowledge of how to build and run an animated light shows. Prior experience is not required.

Put your LOR Hardware to work! In this class, we will review Sequences at a high level, purchasing sequences from our Sequence store and how to install them for your display, Show Building for PCs and MP3 directors using the LOR Hub, and MotionPak purchases and installation. If you have your hardware purchased (or are thinking about purchasing hardware), but are now confused on how to actually get it to work - this is the class for you. While not a requirement, if you are considering attending this class, please also consider attending the first half: "New to Light-O-Rama: Hardware Basics."

Don Teague

T14   Falcon Player Beginner

This class will help you learn what the Falcon Player is and why you should use it. We'll also cover FPP Hardware — Raspberry Pi or BeagleBone, installing FPP, and uploading a sequence and media files. From there, we'll review creating a basic playlist, scheduling your playlist, and connecting it all up (if time permits).

Patrick Delaney

T15   Animators Guide to Electricity: The Basics

Watts, volts, and amps, oh my! Ever wonder what all those electrical terms we hear about actually mean? Or the difference between Half-Wave and Full-Wave LED lights, or why you should care? We'll talk about some of the key definitions, how they're related, electrical safety, circuit protection, and the dreaded GFI. This is an introductory course that will explain the basics of electricity and some of the simple electronic components we encounter in our hobby, in easy to digest non-technical double talk. No engineering degree required.

Jeff Oberst

T16   An Experience vs. a Light Show

What is the difference between an experience vs a light show? Over my 7 years working at Thanksgiving Point in Lehi, UT. I have learned the answer to that question. In 2016 we created Luminaria: Experience the Light. Luminaria is a mile walk thru 27 unique holiday beats and sections. In this seminar, you will learn how to engage your guests in the 5 senses of sight, hearing, taste, smell, and touch. I will show our guest feedback with our experience management software and how we adapt in real time to solve issues. The class will conclude with questions and sharing of any successes/failures.

Austin Brown

T18   How to Make a Viral Light Show Video

Have you ever wondered why some videos of light shows do substantially better than others in online popularity? In this class we will go over critical details that will set apart your display from others. Some topics covered will include use of props, musical attributes, video, content, and marketing.
Tom BetGeorge

T19   Getting Started with Animation using LOR Products

This class is for beginners looking for a step-by-step process to create an animated light display. Participants will be introduced to Light-O-Rama software and hardware. This session will also be helpful to those beginners who took Drew Hickmen's LOR Immersion pre-show workshop.
David Preston

T20   Making Your Home a 3D Model in xLights

This class will be an introduction for how to make your existing display or a new display in 3D on xLights. We will review software, including Hover, Sketchup, and xLights (layout tab). You will learn how to make a custom 3D model and get the house preview tab to light up when sequencing in xLights. Bring your laptop and a mouse to follow along in class. Follow up this class with *3D Props and Sequencing Techniques*.
Andrew Wilhelm

T21   Decorating Basics: Oh, Christmas Tree

Trees are a huge part of Christmas. It makes sense that they migrated outside to our outdoor Displays. In some cases they are subtle additions and, in most, they are a Majestic marvel that becomes the centerpiece of our Displays. This class gives you a historic look at Tree's, at what has been used traditionally in Displays, to what has become highly technical marvels, and a little of everything in between. The gamut of which will yield, some fun and un-expected twists that will surprise everyone.
Mark Zembruski

T22 & T28   Music's DNA (Part 1 & Part 2)

There are a million ways to design a show. Some people focus on color and musical emotion, others on creating as many different chases and patterns they can think of, and some go for the wow factor through the newest RGB equipment and technology. But what about taking your display to the next level? Musicality is the key to taking a good show and turning it into one people won't forget. In the first hour of this class, we'll explore how the building blocks of music go hand-in-hand with programming as we look at designing a show from a musician's perspective. The second hour will go deeper into the intricacy of music: focusing on how to use your display to highlight different instruments, subtle tricks to enhance musical patterns using direction, intensity, and effects, and ways to group fixtures in your display to work with the various patterns in music. Although Light-O-Rama will be used for this demonstration, a

knowledge of music can apply to any software, and no prior musical experience is required to attend this class. When it comes to putting on a display, you can have the best equipment and props in the world, but sequencing is what ties the show together. Any size display can be one that people won't forget — the key is including the music.

Aubrey Kall

T24   Incorporating Video Projection into Your Show

Adding video projection into your show can dramatically deepen the emotional impact for your audience. Combining music, lighting and video together, allows us to better tell our story. This provides a much more immersive and moving experience than can be achieved by using music and lights alone. In this seminar we will explore the use of video, including non-synchronized effects (Santa in a window), projection mapping (snowman form, pumpkins, Santa form, whole house), and projecting synchronized images on garage doors, front and rear projection materials. We will review how to select a projector for each type of application and how to set it up and program it in both xLights and Light-O-Rama. In addition, we will discuss how to build a low cost outdoor enclosure, and using both inexpensive and moderately priced front and rear projection materials. A list of vendors for video source material will be provided. We will discuss using video, animated GIFs, and static images in matrixes and virtual matrixes.

Jeff Haberman

T25   New to LOR (Part 3): Pixel Hardware & Pixel Prop Basics

The "New to Light-O-Rama" series of classes are beginner level classes designed for those with little to no knowledge of how to build and run an animated light shows. Prior experience is not required.

Thinking about expanding your LOR show and including pixels or LOR Pixel Props? This class will give you the basics you need to use and understand LOR pixel hardware, with an emphasis on Pixie and Cosmic Color Devices along with LOR Pixel Props like our singing faces and trees. We will briefly touch on what pixels are, how they work, and common terminology. From there we will discuss needed concepts when working with pixels including channels, triplets, and Pixie/Cosmic Color controller configuration. This class builds on both "New to Light-O-Rama: Hardware Basics" and "New to Light-O-Rama: Show and Software Basics." You should consider taking both of those classes if you are not at least somewhat familiar with LOR hardware and software concepts.

Don Teague

T26   xLights Sub Models: Setup your props for amazing effects!

The key to add stunning effects to your individual props is to create sub models. Standard props like snowflakes, spinners, stars, and candy canes can all benefit by investing time into building their sub models correctly. Models like the PPD Wreath, Grand Illusion, Mesmerizer, and many other high pixel density props have some amazing lines and shapes that can really stand out when creating your sequences. In this class we will review how the sub model dialog box works and walk through the steps to build sub models. We will also create logical submodel groups,

add them to your layout, and set them up in your sequence so they render effects easily and correctly.
Clyde Lindsey

T27   Planning Your Light Show, or Journey Of a First Year Newbie

This class is geared towards the beginner as we will show you the steps you need to take in planning your first smart pixel light show. We will cover topics like what does it cost, how to design my layout, determining what to you need to order for props, lights, and controllers. As well as covering safety, things I would have done differently my first year and planning for future growth.
Lorne Counter

T30   Roundtable Discussion: Traditional Displays

Static or "lightly animated" displays continue to be popular, and can provide a feeling of nostalgia and tradition. Join in this Roundtable Discussion to discuss and share design ideas, display items, power use, and more with other "traditionalists."

T31   Converting from LOR S4 to S5

Light-O-Rama S5 was released in 2017, but it can still seem daunting to learn a "new" piece of software, especially if you have a whole playlist of working sequences built in S4. This class will show just how easy the process is to bring those sequences up to S5, and how to avoid spending hours "redoing" your sequences from S4 after import. LOR S5 shifts from channel-centric to prop-centric sequencing, but that doesn't mean it's only for pixels. Come learn how S5 can improve your ability to sequence, no matter what types of lights are in your display. A computer is not required, but if you have a laptop and have already downloaded the software, bring your computer to class and follow along!
Matt Brown & Aubrey Kall

T32   Falcon Player How-To

Class description coming soon
Ben Shaver

T33   How to Repair or Shorten Your LED Light Strings

This class covers how to replace LED light string rectifiers, how to shorten LED light strings, how to construct new rectifiers for the string, and how to test your LED light string. And we even have door prizes for attendees!
Pete Peters

T34   Power Injection: The Good, The Bad, and the Ah-hah Moments.

Power injection, or self-power injection, is a huge conversation every year. I found that I was very confused about the topic because there were so many people that had an opinion. After

spending a few years talking to others to gain a better understanding, I wrote the "Power injection demystified" article. Once that was published there were other questions that came in over and over again. To help my article correlate the "What if I run at x-percent or I inject here or there," I created the pixel power calculator. In this class I will walk through all the touch points that should be considered as you plan the power in your display.
John Spiker

T36   Establish Your Business
Identify where your business is currently and take the necessary steps to reach the next level. Understand where to focus your marketing efforts in each of the following phases; launch, presence, growth, and establish.
Jordan Avner

F37   LOR Preview Editor (Pt 1): The Basics and Traditional Lights
This class will show how to create and edit a "Preview," also known as your virtual display layout for traditional lights in S5. If this is your first year with Light-O-Rama, this class is a "can't miss" since a Preview is the foundation for creating your sequences later on. Learn about the basics of the Preview Editor, how to create and modify elements, assigning Unit IDs and channels, and see the best ways to model common elements such as strobes, mega trees, icicle lights, flood lights, roof lines, arches, and more. A computer is not required, but if you have a laptop and have already downloaded the software, bring your computer to class and follow along!
Matt Brown & Aubrey Kall

F38   xLights: In the Mind of a Professional Squencer - the Artistry of Madness
In this class Ron will demonstrate his process for beginning a sequence, sharing some tricks of the trade for those xLights enthusiasts looking for ideas to begin their own sequencing journey. Learn how a basic effect on the arches groups can shape an entire sequence.
Ron Howard

F39   Go Fog Yourself!
This class will be covering the In's and Outs of using Fog, Snow, Haze, Scent and Bubbles at your display or event. You'll learn what is available, how and where to use them, equipment, supplies, and how it all works.
Tater Lynd

F40   Using Drones to Film Your Christmas Display
Join us to cover the latest news in the constantly evolving FAA regulations regarding drone flight so that you can safely and legally operate a drone to film your Christmas display. We will explore the essentials needed to capture smooth quality video and techniques to use when planning multiple camera shots to create a video you can be proud to share. We'll discuss the

various flight modes and advanced aircraft settings that you can use to achieve smoother flight using the popular DJI Phantom 4 as an example. Then we will dive into camera principles and settings to get the most out of using a drone to record your display.
Doug Reel

F42   I Love it When a Plan Comes Together: Displays the A -Team Way

What's the A-Team got to do with a Christmas display? Actually, more than you think. Everyone knows that when Hannibal reveled in that statement, smiles happened, and all turned out well. Newbies and tenured decorators, get glassy eyed looking at ALL the cool things that can be done for a Holiday display. Inevitably most try to run first, stumble, then crawl to recover. There are key aspects to executing a display that are often forgotten. A display can be a detailed coordination of many elements. This class will provide a fun and entertaining overview, providing some insight that will help prepare you, so that you can Light Up! your display on time and without stress.
Mark Zembruski

F43   The LOR Preview Editor (Pt 2): Adding Pixels (& Managing Networks)

After using traditional light strings for years, taking the first step into RGB pixels (aka: smart pixels) can seem intimidating. In this class, we'll show how Light-O-Rama hardware and the Light-O-Rama S5 software can make that transition easier. We'll spend this class focused on adding pixel elements to your Preview and highlighting how certain settings change when adding pixels vs. traditional lights. Lastly, when adding high amounts of pixels, you may find yourself needing to use "multiple networks." We'll make sure you leave this class confident in knowing how to separate your pixels and traditional lights on various networks for best performance, and how to configure those settings in the software. A computer is not required, but if you have a laptop and have already downloaded the software, bring your computer to class and follow along!
Matt Brown & Aubrey Kall

F44   Falcon Player Advanced: Above & Beyond

Ben Shaver, Pat Delaney, Greg Macaree

F45   There's Still a Place for Wireframes

With everyone clamoring for mega pixel trees, projection, and a matrix covering their roof, don't forget about the versatility and joy of wireframes. When you ask a young child what they liked best about your display, they will often comment on the snowman, the waving Santa, or in my case, it is the 20' sea-serpent breathing fire. This class includes a discussion of premade wireframes, custom made designs, and homemade examples, including where to get your materials and techniques to use in welding. We will also talk about repair and refurbishment.
Stephan Sherrick

F46   Don't Let the Grinch Steal Your Identity: Tips to Keep You Merry and Safe All Year Long

You've seen stories about cyberattacks and ransomware demands against government facilities, power grids, retailers, hospitals, even meat packers. And you may think that your computer and equipment that runs in your house is pretty safe, but if you've downloaded graphics, used shared sequences, clicked on a link in a forum, responded to an email from an unknown fan, or purchased lights from a foreign retailer that you've never heard of before, you could be a. And do we even need to talk about insecure passwords? Remember, the Grinch hit Cindy Lou Who, and he can hit you, too.

Russell Schrader

F48   Intro to soldering

This is one of those skills that just about every decorator needs. You may not ever want to solder surface-mount electronics, but soldering those occasional parts and wires together is a must. We'll start you off right with a new soldering iron and a basic kit. Together we'll learn the soldering basics and build a functioning electronic kit.

Kevin "wirekat" Thomas

F49   The LOR Preview Editor (Pt 3): Groups, Channel Conflicts, & Custom Shapes

Once all elements are created in your Preview, organization is the key to success. In this class, we'll cover how to create "groups" for both traditional lights and pixels in the Preview Editor in order to ease the process of sequencing later on. We'll also cover common errors that can arise when creating a preview and how to fix them using the Channel Conflicts & Bulk Changes tab of the Preview Editor. If there's time at the end of class, we'll dive into create custom shapes in the Preview Editor, which will allow you to model smart RGB elements, or just have a clearer design of a custom made AC prop! A computer is not required, but if you have a laptop and have already downloaded the software, bring your computer to class and follow along!

Matt Brown & Aubrey Kall

F50   Introduction to LED Panels: The Basics

This will be a remote presentation. This class provides an Introduction to LED Panels, the different types of panels, which you would use, when, and why. We'll focus on Indoor vs. Outdoor; The different resolutions & P No's. P2/3/5/10 etc.; RGB vs. Single Color; Powering the Panels; Connecting Data; Different Controller options, Pi/BBB/Colorlight; and Pro's / Con's of each. We'll finish with a Review & Wrap Up.

Greg Macaree

F51   Roundtable Discussion: RGB and Pixels

Join Drew Hickman for an informal Roundtable Discussion on all things RGB and Pixels. No stupid questions here, we want you to go home with a completed understanding of those

burning little questions that you haven't found an answer for yet. Step right up and get advice from an expert and also join in talking about all things RGB and Pixels with others in the session.
Drew Hickman

F52   Intro to Photoshop
Want to put Bernie Mittens on the roof of the Luxor, or magically make the Evergiven disappear in an instant? Join us for a hands on look at the industry's most wishlist used photo and graphics software, Photoshop! We'll cover file types, importing and exporting, selections, graphic design, and working with typography. Join us, and you, too, could instantly lose 25 pounds!
Jorden Nash

F55   The LOR Sequencer (Pt 1): The Toolbars and Fundamentals
After your preview is ready to go, it's time to head to the LOR S5 Sequencer and put your creative talents to work. While the basic functionality from S4 has remained the same at its core, there are a variety of new features and shortcuts in S5 that will improve your sequencing speed and quality. In this class, we'll discuss the basics of the S5 Sequencer: toolbars, tabs, timing grids, and most importantly, setting up your grid configuration for success (known as a "channel configuration" in S4). A computer is not required, but if you have a laptop and have already downloaded the software, bring your computer to class and follow along!
Matt Brown & Aubrey Kall

F56   3D Props and Sequencing Techniques
xLights' 3D capability has created a new level for sequencing and capabilities. With adding depth to props and providing 3D rendering, xLights provides an even more powerful tool for sequences. This class will review the basics of 3D models and review how different effects can provide different outputs based on rendering type. Suggested basics before this class is *Making Your Home a 3D Model in xLights.*
Barry Wiles

F57   3D Printing for Christmas Light Enthusiasts
Need a part for your display and need it now? Print it! This class will help you understand 3D printing, choose the appropriate printer, upgrade, import, modify and print models utilizing open source software. Also discussed will be the costs associated with your prints and how to determine if it is cheaper to print or buy your prop.
Catherine Baer

F58   Introduction to Sound Editing with Audacity
Ever find that 'perfect' song, but didn't like the way it ended? How about stitching songs together for a seamless flow? This is the class for you! This introductory class will demonstrate

the use of Audacity audio editing software and will cover Basic Controls, Mixing, Blending, Cutting and saving Christmas music files.
Jeff Oberst

F61   The LOR Sequencer (Pt 2): AC Effects & Color Fades

AC command logic looks different in S5, but once you understand how things have improved, you'll wonder how you ever lived without those options in S4. This class will dive into how to create sequencing effects for AC (traditional) lights and dumb RGB, and show you how to take advantage of the new grid configuration options from Part 1 to optimize your sequencing (no more need for "Tracks" from S4)! A computer is not required, but if you have a laptop and have already downloaded the software, bring your computer to class and follow along!
Matt Brown & Aubrey Kall

F62   Understanding the xLights Master Render View

Have you ever wondered why when you map someone else's sequence, it doesn't render the same way on your layout? Have you also wondered what the different views mean in the sequencer tab? If you're still looking for the "Master View" and wonder why it is sometimes different in each sequence, then this class is for you. I'll help you understand exactly what the Master View is and how you can setup multiple rendering views for different xLights sequencers. This way when you map their sequences, they will render the same way for you as they do for their own layout.
Eric Schulz

F64   Putting the "Show" in Light Show

Ladies and gentlemen, please keep your arms and legs inside the car at all times. A boring, but necessary, announcement at amusement parks everywhere — unless you're at a Disney Park. Why? Because they think about every single moment of the experience and ensure that it is engaging and fun. This class will go over how to take your show to the next level by thinking about the details, including how to script and record voiceovers, what to think about when laying out the song order, what to consider when choosing songs to mash-up, and more. If you're ready to take your show to the next level by putting the show in your light show, this is the class for you.
Leanne Oberst

F66   Intro to DMX

Are you tired of using plug-and-play Christmas lights? Are you ready to dive into the "universe" of using theatrical fixtures like moving heads, mega strobes, RGB floods, and the myriad others available? Then you need an understanding of the basics of DMX. DMX is the stepping stone to using theatrical fixtures, RGB, and smart pixels. We'll discuss the DMX standards for signal, wiring, and termination and also show many examples of DMX controllers, fixtures and

demonstrate with some live products. There will be a few devices available for testing your DMX devices and network and we'll finish with a free drawing for a DMX tester.
Kevin "wirekat" Thomas

S67 Adapting Shared Sequences in S5

There are hundreds of shared LOR sequences available, but how do you adapt them to work with your setup? And where do you find these sequences? What about getting the music? And how do you incorporate elements into your display that are different from the shared sequence? We'll cover how to decide what parts of a 144 channel sequence to use with your 48 channels, as well as how to deal with singing characters. This class is primarily for the new LOR user who is a bit overwhelmed and wants to have a show that they helped create, but someone else did most of the heavy lifting. We will utilize LOR S5, but many of the concepts are applicable to earlier versions.
Stephan Sherrick

S68 LED Panel Build, Part One: Physical Build

This will be a remote presentation where you'll watch me build a small 3x3 panel from scratch and learn how it's put together.
Greg Macaree

S69 Ladder and Rooftop Safety… Survive to Decorate Another Year

You will learn the proper use of ladders when decorating your display, what not to do when using a ladder, what types of ladders to use when decorating, proper fall protection when decorating on the roof and, most importantly, how not to be an accident statistic. We even have a door prize!
Pete Peters

S70 Halloween: Going From Good to Spooktacular!

Want to take your Halloween display from good to spooktacular? Wondering how to use Christmas light show props for Halloween without making your display look like an orange and purple Christmas display? This seminar will cover the ingredients you'll need to add some spooky treats to your display. We'll be discussing hHow to use a pixel tree for Halloween without it looking like a Christmas tree; Using UV paint and lights to give your display some pop; Mixing animated lights and traditional haunted house props; Adding a light weight facade to your house; and Adding some humor to your display
Mike Barsky

S71 Roundtable Discussion: Holiday Entertaining with Chef Jeff *Specialty Class*

Do you have any burning (oh no!) questions to ask a chef? Like, what temperature should I cook the turkey? Brine or no brine? How many appetizers do I need for 30 people? Should I make my

own eggnog? Why put sea salt on the chocolate chip cookies? What IS sea salt? In this first-of-its-kind-at-Expo Specialty class, we're sitting down with a professional chef to "dish" on all things kitchen. *Classes marked "Specialty" are open to those holding Expo passes and their spouses/significant others and free for companion pass holders.*
Chef Jeff Wittenauer

S72   All the Colors: Thematic Color in Commercial Show Design

Color = Excitement! From immersive walk-throughs to dynamic light shows, color can make or break the emotional experience for your guests. This class will empower you to make intentional color choices and create impactful, emotional, and insta-worthy experiences for your guests.
Jeffrey Holmes

S73   LOR Sequencer (Part 3): Motion Effects for Smart Pixels

This class will focus solely on the Motion Effect Generator for smart pixels. Come learn about the fundamentals of the MEG, such as choosing a preset effect or LOR Shared Favorite effect to start, then see how many different ways there are to mix and layer effects to create a sequence that is truly unique instead of one that looks like every other pixel house on YouTube. A computer is not required, but if you have a laptop and have already downloaded the software, bring your computer to class and follow along!
Matt Brown & Aubrey Kall

S74   Panel Build Demo

This will be a remote presentation where we will get a Pi and Hat setup with FPP/xLights and make it all go blinky flashy.
Greg Macaree

S75   Decorating Basics: The Art & Presentation of a Christmas Display

Display layout takes planning and we'll show you how to plan your display to take it from just another house with lights and turn it into a Christmas card that has people talking! You'll learn how to create a truly successful Christmas display that appeals to all ages. We'll discuss how to think objectively about your motivation and approach when setting up your display and gain insights into key concepts and techniques that transform your display from just another house with lights into a Christmas card. If you want to know how to become the destination display for your community, this class is for you.
Mark Zembruski

S76   Intro to Motion Graphics in After Effects

As social media and video content availability continue to rise, motion graphics and visual effects are becoming ever more common, and easier to create. In this demonstration, we'll dive into animation, keyframing, effects, and typography using Adobe After Effects. Time permitting

we'll touch on motion tracking, rotoscoping, and 3D. Join us to learn how to create some awesome video content for your next display!
Jorden Nash

S77   Indoor Decorating: More than just the tree! *Specialty Class*

If you need a little inspiration to step up your indoor décor, this class is for you! *Classes marked "Specialty" are open to those holding Expo passes and their spouses/significant others and free for companion pass holders.*
Carrie Hazelip

S78   How to Interface Snow, Bubble, Fog, Flame, Cold Spark Machines, and more.

We'll discuss how to wire, setup, and control special effects using the DMX512 protocol. Special effects such as snow machines, bubble machines, fog machines, cold spark machines, flame machines, theatrical lighting, and moving head lights can add tremendous impact to your show. Every time they turn on, you can hear the squeals of delight from kids and adults alike (*MOM, look at the bubbles, it's snowing!!!*). We will also quickly review an alternate option to hard wire them to controllers, and then discuss multiple approaches to integrate these machines into your show, and the advantages and disadvantages of each approach. Both Light-o-Rama and xLights setups will be discussed. The session will also provide tips on wiring, configuration, keeping your electric bill from skyrocketing, testing, and common problems encountered when tying these props into your light shows.
Jeff Haberman

S79   LOR SuperStar and S5 Sequencer Integration

Did you know Light-O-Rama's SuperStar fits hand-in-glove with the latest S5 Sequencer? This class includes creation of Previews in the S5 Sequencer to best work with SuperStar, orientation of individual props, use of the pre-built SuperStar props, and sequencing the props separately or as a group. We'll also cover mixing and matching SuperStar effects with S5's built-in motions effects, the difference between horizontal and vertical prop orientation, and when to use the wrap-around mode. At the end you'll have a thorough knowledge of how to combine the best features of SuperStar and the S5 Sequencer effects to create over-the-top shows. A computer is not required, but if you have a laptop and have already downloaded the software, bring your computer to class and follow along!
Brian Bruderer & Matt Brown

S80   Sequencing Things That Aren't Meant to be Sequenced

For animated lighting, one of the first things we learn to do is make lights dance to music. But what happens when we want to take that a step further and sequence other things? We can

turn motors, flip switches, and trigger other practical effects. Join us as we do some hands-on hacking to sequence some unconventional things that aren't lights!
David Peace

S81   The Great Christmas Light Fight

Join us for something new, and meet Producers and Casting Agents from the show. More information coming soon!

S82   Voice Overs: Mini Master Class — Intro to Creating Your Own Voice-overs and Bumpers for Your Holiday Display

Of course, you can pay a few, or even hundreds of dollars for a professionally recorded voiceover for your display but have you considered learning to do it yourself? Creating a voice-over requires a basic understanding of recording, audio editing, mixing, exporting down to a audio file which can be used in your display and this class will provide a high-level overview of the tools needed to create your own voiceovers. We'll cover Creating a usable recording environment; Creating a script; Selecting the right tools, including microphones and other recording equipment; Dynamic vs. condenser microphones / USB vs. XLR; Obtaining music, "sound beds," sound effects, and other files which can be used without copyright issues or royalties; Overall voice recording process; and Tips and tricks to refine your audio file for that professional sound.
Carl Mirsky

S83   Introduction to Pixel Props workshop

This class is for beginners into the RGB world of pixels. Class Instruction will inform the student on how to differentiate between smart pixels and RGB dumb pixels, and how each type functions. We'll show myriad of available Pixel Controllers and how to attach the Pixel strings onto the controller boards. Class instruction will also show how to install pixels into a Coroplastic prop, then map out the installation of pixels into their preferred software. Students will then be able to assemble and take home their own functioning pixel prop.
Don McGillivray

S84   Decorating Basics: Securing Your Display

We invest thousands of dollars in lighting to bring smiles to our community. Unfortunately, the attention it brings can also can also attract a Grinch. This class will focus on how to better physically protect these assets and keep the vandals at bay.
Mark Zembruski

S85   LOR SuperStar - New Features and Auto Sequence

Love Light-O-Rama's SuperStar? New features are constantly being added but you might have missed the latest. In this class we'll cover the newest features (like morphasizing), as well as auto-sequence and automatic face animation. Leave the class with a new understanding of the

magic you can do with the powerful SuperStar tool, for both pixels and AC lights. A computer is not required, but if you have a laptop and have already downloaded the software, bring your computer to class and follow along!
Brian Bruderer

S86   Roundtable Discussion: xLights Q&A

Join in this informal discussion about all things xLights. Still have questions that haven't been answered, or need some inspiration? If so, then this session is for you.
Ron Howard

S87   DIY Building with plastics in and for your display using PVC, CORO, Acrylics, Strips, and 3D printing

This class will present many DIY uses and techniques for using PVC, HDPE, PEX, and ABS pipe. Corrugated Plastics (Coro), Acrylic Sheets, domes, and tubes, pixel strips, and 3D printed tools and props. You will see multiple examples of the materials used, as well as resources for further learning and resourcing. There will also be tips and tools for working with the plastics, along with how-to's for many of the popular display elements in use today. Learn about signage, singing/talking trees and bulbs, stars, snowflakes, candy canes, leaping arches, and different styles of pixel strips and much more. We will finish the class with some fun door prizes.
Don McGillivray

S88   Singing Animatronic Dolls

This class will cover converting Cricket Dolls (from 1986) to servo controlled, computer synchronized animated dolls. They can be used for creating singing elves or dolls, like in Disney's *It's a Small World* ride, or the *Chucky* doll for Halloween.
David Kipp

S89   The making of a GREAT Drive Thru Event

Find out about the ups and downs of opening a brand new 1.5 mile Holiday drive thru event in a public park. The venue, weather, permitting, power, displays, install, design, pricing, theme, look, advertising, promotions, staffing, premiums, and every possible aspect you can think of. You will see drawings, photos and video of many of the design and advertising- build, and promotions — all the agony and ecstasy of a first year show. And then we will tell you what happened last year, the second year for the Covid show!
Ralph Garrity

S90   How to use Pixels and Still have a Traditional Looking Display

You want to use pixels, but you don't want to look like a rock concert. It is possible to use pixels and keep a traditional look and feel. This class will help you with suggestions for what to consider when decorating with pixels and how best to use them in a traditional setting. From reviewing what types of display elements to use, setting up your layout/preview, sequencing

with pixels and video samples, you will see how to transition from standard LEDs to pixels and also how to blend to the two together in your display.
Darren Huffty

S91   LOR Software: The Future

The Light-O-Rama team is always hard at work developing new hardware and new software features. This session is your opportunity to give feedback in an 'open forum' style about your favorite new features of S5 (so development efforts continue), which features you've noticed but aren't sure how to use (so documentation can be expanded), and which "wishlist features" you would like considered for a future release (so that the user community can help shape the direction of LOR).
LOR

S92   Video Editing: Taking Your Display Video to the Next Level

This class will cover basic video editing techniques with a focus on using multiple camera angles and editing those clips into a single video you can be proud to share. Using Adobe Premier Pro as an example we will demonstrate a work flow on how to import 4k footage with low resolution proxies, how to sync multiple clips and how to add audio tracks. Then we will show the basics steps of creating a rough edit, applying transitions, creating movement and color correcting to create a polished final product.
Doug Reel

S93   How to Not Get Your Lights Show Shut Down

Do you want to drive more traffic to your lights display? Well, be careful what you wish for! Michael from HiTech Lights (www.HiTechLights.com) will help you setup a community relations plan on how to deal with neighbors, homeowners association, city government, etc. He will also cover working with charities, collecting donations, and the local and national media outlets. After attending this class, you will have a better understanding of how to deal with your community better, get free publicity for your display, increase your traffic overnight… and doing so without getting your display shut down by The Grinch!!
Michael Simmons

S94   Advanced Network Setup & Troubleshooting for Light Shows

As your show grows larger so does the network that supports it. Network issues are some of the hardest to troubleshoot as they are often intermittent, complex, and require the ability to understand what is happening and how to break it down and validate each segment. Network issues almost manifest themselves in multiple ways in a large or small show from lag, flickering, or not allowing data to reach the controller at all. This class dives into how to troubleshoot an established network and how to set it up for success when you start your show.

Zeb Elliott