Register for The NAMM Show and these ESTA curated education sessions are free

ESTA has curated another stellar lineup of quality technical education at The 2020 NAMM Show!

The tracks of focus are Lighting & Electrical, Lighting Networking, Rigging, and Safety. Most of the sessions qualify for ETCP renewal credits! This is an opportunity to learn from some of the industries’ best and brightest, and all sessions are free with your registration! Nowhere can you access such high-quality education for five days—and, all of it free. NAMM and ESTA are committed to strengthening our industries by making education and training accessible to all. Register for half price through January 6 with the code ESTAATNAMM. Check out the following and make your schedule. All you have to do is register and then show up!

**Lighting and Electrical Track**

**WEDNESDAY AND THURSDAY, JANUARY 15 – 16TH**

*For the first time at NAMM, Richard Cadena is presenting his popular two-day training session on Stage Electrics! You are not required to attend both days, but why would you want to miss one?!!! All sessions with Richard are in collaboration with Lighting&Sound America and PLASA.*

**Stage Electrics: Clean, Safe Power for Audio, Video, and Lighting**

*Presenter: Richard Cadena  
6 ETCP renewal credits each day  
9:00 a.m. – 4:00 p.m.*

What does the stage at your local club have in common with the largest arena stages in the world? Every stage needs power for audio, video, and lighting, but not all power distribution systems are equally safe, clean, and quiet. Learn about best practices for setting up power distribution, how to safely meter power, how to test and troubleshoot it, and how to monitor it during the show in this two-day class. The class starts with circuit theory and covers power calculations, electrical safety, best practices, codes and regulations, and more. Bring your gloves and multimeters. This class covers topics listed in the content outline for the ETCP Entertainment Electrician Certification Exam and the Portable Power Distribution Technician exam. Attendance for both days is encouraged, but not required.

**THURSDAY, JANUARY 16TH**

**Changes in the 2020 National Electrical Code**

*Presenter: Steve Terry  
1 ETCP renewal credit  
11:00 a.m. – 12:00 p.m.*

Make sure you are up to date with the latest changes in the NEC Code. The 2020 NEC Code (NFPA 70) has significant revisions and new requirements. This session will cover what’s new and how it will affect the entertainment industry.

**When a Good Buzz is a Bad Thing** *(Getting the Buzz Out of Your Speakers)*

*Presenter: Michael Matthews  
1.5 ETCP renewal credits  
1:00 – 2:30 p.m.*

Noise in your audio system is not only annoying, it can create a serious safety hazard if the problem is not handled correctly. This class will examine how electrical issues can cause audio interference and “hum” in the sound system and how to safely quiet the buzz.

**Power on a Shoestring** *(Lighting Your Video on the Cheap)*

*Presenter: Michael Matthews  
1.5 ETCP renewal credits  
2:30 – 4:00 p.m.*

Need to shoot your music video but have no budget for lighting and power? This session will examine how to utilize inexpensive light and power sources to put the focus on your music, not your lighting. We will start with low power lights and examine using “house” power, small generators, and batteries. Electrical safety is a large part of this session as no one wants to literally burn down the house.

**New Technology in Lighting Design**

*Moderator: Ford Sellers  
Panelists: TBA  
1 ETCP renewal credit  
4:00 – 6:00 p.m.*

There is tons of new technology out there that lighting professionals need to master to stay on top of their game. In this dynamic panel discussion, Chauvet Professional Senior Product Development Manager Ford Sellers will lead a discussion with industry insiders on the cool opportunities and unique challenges the new technology presents to designers. If you don’t know how to use the technology, you’re not only missing out on potential benefits, but you can actually detract from your own design process. At the end of the panel, Ford and the panelists will peer into the future to shed light on what major technological advancements could be next.
FRIDAY, JANUARY 17TH
This is a very exciting day with some of the best in the industry. If these presenters were dropping names you would hear Ringo Starr, Hank Williams, Jr., Mary J. Blige, Jamie Foxx, Outkast, KISS, Halsey, Tiësto, and on and on. Beyond fascinating, these sessions will shed some light on how production and technology decisions are made.

Making Magic with Technology: How the Latest Tech Helps Elevate the Art of Stage Lighting
Moderator: Richard Cadena
Panelists: Susan Rose, Daunte Kenner, and Sooner Routhier
0 ETPC renewal credits
9:00 – 10:30 a.m.
When James Taylor made an appearance on the BBC in the early 1970s, there were no moving lights, no color-changers, no technology other than dimmers and colored gels, yet it was a magical performance. Today, our stages are loaded with technology. How has that elevated the art of lighting the stage? What are the pitfalls? What are the advantages? Join Daunte Kenner (Lil Wayne, Chris Brown, Mary J. Blige) and Susan Rose (Ringo Starr, Louise Mandrell), and Sooner Routhier (KISS, Halsey, Pentatonix) in a lively discussion about their use of technology in stage lighting.

Show Power Equipment Distribution Basics
Presenter: Leonard Miller
.75 ETPC renewal credits
11:00 a.m. – 12:30 p.m.
This session from LEX Products offers a basic understanding of cable and cord types, connectors, and permanent and portable power distribution devices used in entertainment applications.

More Than Pretty Pictures: Moving Lights and LEDs on the Concert Stage
Moderator: Richard Cadena
Panelists: Susan Rose, Daunte Kenner, and Sooner Routhier
1.5 ETPC renewal credits
11:00 a.m. – 12:30 p.m.
It used to be that lighting designers were limited by the capabilities of moving lights and static lights with gels. Today, the sky is the limit, and with pixel-mapping, macros, and effects engines, lighting designers now have tools that are virtually unlimited in their creative use. Join Daunte Kenner (Lil Wayne, Chris Brown, Mary J. Blige), Susan Rose (Ringo Starr, Louise Mandrell), and Sooner Routhier (KISS, Halsey, Pentatonix) to learn how to leverage these tools for maximum effect.

Lighting for EDM
Presenter: Aron Altmark
.5 ETPC renewal credit
1:00 – 2:00 p.m.
EDM shows are endurance tests for lighting directors. They are usually busked for hours on end, and there is an art to the craft. Aron Altmark has been lighting the biggest EDM shows for several years, and in this session, he talks about the approach.

Talking Tech: How to Communicate Your Stage Lighting Design to Technicians
Moderator: Richard Cadena
Panelists: Susan Rose, Daunte Kenner, and Sooner Routhier
0 ETPC renewal credits
2:30 – 4:00 p.m.
If you’re in live event production, you understand the importance of effectively communicating your vision to take it from conception to reality. What is the best way to do that? There are a number of CAD programs, visualization tools, and design aids on the market. Daunte Kenner (Lil Wayne, Chris Brown, Mary J. Blige), Susan Rose (Ringo Starr, Louise Mandrell), and Sooner Routhier (KISS, Halsey, Pentatonix) will talk about their favorites.

A Map to Projection Mapping
Presenter: Nick Comis
1.5 ETPC renewal credits
3:00 – 6:00 p.m.
Don’t get lost in projection mapping! Learn techniques in content creation, media playback, projector selection, and what surfaces to project on to. Nick Comis will walk you through his workflow for projection mapping projects of various sizes and budgets.

Speaking AHJ
Presenters: Ken Wagner and Michael Matthews
2 ETPC renewal credits
4:00 – 6:00 p.m.
A good working relationship with the local Authority Having Jurisdiction (AHJ) is essential for every production. However, they are rarely from the entertainment industry and often do not understand our lingo and the way we work. This class will go over how our industry differs from traditional industry, the allowances we are given in the National Electrical Code (NFPA 70), and specific pitfalls that frequently cause misunderstanding between entertainment electricians and AHJs.

SATURDAY, JANUARY 18TH

Everything is for Broadcast – Presented with Timeless Communications
Presenters: Stan Crocker and Seth Robinson
0 ETPC renewal credits
10:00 – 11:30 a.m.
You will be judged on the quality of the Instagram photo someone sent to your client. You will be judged on the quality of the live stream that production forgot to tell you about. You will be judged on the quality of the tour video they shot on the seventh day of a nine-in-a-row. As professional designers, it is important for us to understand where and how our work will be viewed and to consider all scenarios as we build a show. But how do you light for camera and live? What do you do when the client says they don’t care about the broadcast? During their tenure as lighting designers for the Apple Music Festival, Stan Crocker and Seth Robinson developed some simple methods to capture live shows for broadcast without hurting the live experience. In this presentation, they will reveal some of their hard-earned secrets, which include not only the technical processes but also tips on how to talk about cameras with your clients and collaborators. This session is co-presented by ESTA and Pro Production by PLSN and FOH.

Electrify the Audience, Not the Performers (or the Crew)
Presenter: Richard Cadena
1 ETPC renewal credit
4:30 – 6:00 p.m.
It’s been five years since Agustin Briolini was electrocuted on stage during a sound check. The tragedy was barely fading from memory when Barbara Weldens suffered a similar fate. Recently, a stagehand working on a show had been shocked badly enough that he fell off of the structure he was climbing. Fortunately, he was wearing a harness and he survived. How long before it happens again? And what can we do to prevent it from happening in the future? If you’re involved in live event production, join us in a discussion about how we can all make stages safer and save lives.
### Lighting Networking Track

#### SATURDAY, JANUARY 18TH

**Ethernet Networking for the Mid-Sized Entertainment Venue**

**Presenter:** Jon Hole  
1 ETCP renewal credit  
9:00 – 11:00 a.m.

A brief history of the “good old days” of 0 – 10 V, analog multiplexing, and proprietary Ethernet controls followed by a review and comparison between the open Ethernet, DMX512-A, RDM, Art-Net, and sACN protocols available today. This is a great opportunity to gain knowledge and insight of all the free extra features (priorities, synchronization, etc.) that are only available on an Ethernet network. This session is a fun and relaxing big picture view of “only what the user needs to know” to easily deploy and take advantage of Ethernet networking on their next show.

**Advanced Ethernet Networking for Entertainment Systems**

**Presenter:** Kevin Loewen  
1 ETCP renewal credit  
11:00 a.m. – 1:00 p.m.

The best practices for designing and maintaining Ethernet systems used for entertainment systems are constantly evolving. This session is intended for technicians who are designing or maintaining these show-critical networks. Review the many caveats of the critical components in your network—from the patch cable right up to cybersecurity. ESTA’s Control Protocol Working Group members will share practical, no-nonsense, tell-it-like-it-is expertise that make this session a “must attend” if you use Ethernet networking in your entertainment venue.

**An Introduction to E1.33 RDMnet Running Over Ethernet Networks**

**Presenters:** Scott Blair and Sam Kearney  
1 ETCP renewal credit  
1:00 – 3:00 p.m.

This lively, educational discussion will illustrate the challenges solved by ESTA’s E1.33 (RDMnet) Message Transport and Management for ANSI E1.20 (RDM) compatible and similar devices over IP Networks (more commonly known as RDMnet) as well as explain how it works from both a user perspective and within the protocol itself. The recommended “best practices” approach in implementation for developers will also be discussed. Attendees will have the opportunity to ask questions of the CPWG subject matter members that authored this standard. This is an extraordinary opportunity to take advantage of the knowledge and experience of the CPWG, one of the Technical Standards Program’s largest working groups.

**Troubleshooting Your DMX512 and RDM Control Network**

**Presenter:** Milton Davis  
2 ETCP renewal credits  
3:00 – 5:00 p.m.

So you’ve hung the lighting plot, powered up your dimmers, and you need to start programming the lighting console for the show—but, some of your moving lights are responding strangely—what’s happened? Attend this session to find out! As a Co-Chair of the ESTA Control Protocols Working Group, experienced field engineer, and long-time show technician, Milton Davis has seen almost all of the RDM and DMX512-A episodes of Stranger Things and will share his systematic troubleshooting process and valuable tips for getting your rig up and running in time for rehearsal.

### Tightening DMX512-A Compliance in the Entertainment Industry

**Presenter:** Javid Butler  
.5 ETCP renewal credit  
5:00 – 6:00 p.m.

Although DMX512-A has provided reliable lighting control for three decades, the Control Protocols Working Group is developing a new Recommended Practice document to tighten DMX512-A compliance and interoperability. This document will describe known issues and their solutions, make recommendations on how to test products for full compliance with the DMX512 standard, as well as provide descriptions of interoperable implementations, including physical layer and timing parameters. This session is an excellent education opportunity on the subtle inner workings of ESTA’s ANSI E1.11 – 2008 (R2018) Entertainment Technology – USITT DMX512-A, Asynchronous Serial Digital Data Transmission Standard for Controlling Lighting Equipment and Accessories standard.

### SUNDAY, JANUARY 19TH

**Mythbusting sACN and Art-Net on Your Lighting Network**

**Presenter:** Wayne Howell  
1 ETCP renewal credit  
9:00 – 11:00 a.m.

Many show business professionals are utilizing ESTA’s E1.31 - 2018 Lightweight Streaming Protocol for Transport of DMX512-A Using ACN (more commonly known as “streaming” ACN, or sACN) for live data control, and Art-Net as a discovery management and RDM tool. At this session many of the myths of using these two standards on an Ethernet control network will be debunked, and the best practices of utilizing these two protocols together will be reviewed. Moderated by Wayne Howell, the author of the Art-Net standard and one of the members of the ESTA Control Protocols Working Group who authored the sACN standard.

**Wireless DMX512 Networking for the Lighting Tech**

**Presenter:** Paul Kleissler  
1 ETCP renewal credit  
11:00 a.m. – 1:00 p.m.

Wireless DMX512-A has become a technology of significant importance in our industry, allowing us to control entertainment products in locations that are not conducive to permanent control wiring. This class will cover practical techniques to setup and operate wireless DMX512 and Ethernet networks—a convenient technology that will make many projects easier, and in some cases—possible!

**An Introduction to Show Networking**

**Presenter:** John Huntington  
2 ETCP renewal credits  
1:00 – 3:00 p.m.

Standard computer industry networking technologies now form the backbone of control and audio/video distribution systems on shows today of nearly any size. Ethernet today is used to control lighting equipment, carry other protocols like DMX512, link video systems, or transport audio.
This basic session for beginners introduces networks and their applications on shows and offers an overview of the protocols that make modern networks work. Key topics like IP addresses, network topology, and basic transport protocols will be introduced, basic aspects of network operations will be demonstrated. John Huntington is a theatre professor at College of Technology – New York City.

**Rigging Track**

**THURSDAY, JANUARY 16TH**

*This is Dave Carmack’s first time presenting at NAMM but far from his first presentation. He makes it so easy to understand.*

**Electrical Theory and Trouble Shooting for Chain Hoists**

*Presented by Columbus McKinnon. Three phase vs. single phase? Why does it go up when I hit the down button? What is the difference between phase reversing and plug reversing? This session will cover the general electrical theory of chain hoists, and common trouble shooting techniques to use in the field.*

**Automation in Performer Flight**

*Presented by Paul Sapsis
2 ETCP renewal credits
2:00 – 6:00 p.m.*

Using the finest grades of rigging, technology, and mathematics, riggers and technicians successfully navigate the difficulties and dangers of defying Newton’s Law. What is automated performer flying? What is its history, and how do we use it now? In this class, we’re covering everything we can pack into four hours: mechanical and control design, 2D and 3D math and vector analysis, risk assessment, as well as past experiences.

**FRIDAY, JANUARY 17TH**

**Truss in the Entertainment Industry—Truth Versus Fiction**

*Presented by Elmer Veith
8 ETCP renewal credits
9:00 a.m. – 6:00 p.m.*

It is as common as LED fixtures and XLR connectors, but how much of what you think you know about using truss is correct? In this full-day session learn about how aluminum truss has evolved in the entertainment industry, how to choose the correct truss for the project, and the guidelines for using and inspecting the equipment once you have it. This session will talk about a wide range of applications, from simple straight truss spans to grid systems, ground supports, and outdoor structures.

**SATURDAY, JANUARY 18TH**

**Motorized Rigging: First Response Troubleshooting and Repair**

*Presenters: Drew Becker, Bruce Darden, and Sandy Gilzow
1.5 ETCP renewal credits
9:00 a.m. – 12:00 p.m.*

This fast paced session will introduce the concepts of three phase and single phase motor rotation, limit switches, circuit protection, reversing contactors, and VFD controllers. It will teach how to identify the features of most of the common systems in use. Techniques for the safe diagnosis of a problem will be presented starting from the dangers of 480 VAC and moving towards 24 VDC controls. A strong emphasis of knowing when to call a facility electrician or outside service organization is paramount.

*Time will fly as this dynamic duo takes you through what you should know if your work takes your feet off the ground.*

**Working at Heights Safely**

*Presenters: Eric Rouse and Bill Sapsis
6 ETCP renewal credits
12:00 – 6:00 p.m.*

Even though safety consciousness is a hot topic these days, not everyone understands the right gear or procedures. When you go to work in the high steel or on a loading bridge, do you have the right safety equipment? Are you using it properly? What if something goes wrong and you fall? How do they get you down? During this session we’ll describe how to choose the right equipment for your job, how to use it, inspect it, and maintain it. We’ll even tell you when to throw it away. We will also discuss the concepts associated with an assisted rescue. What gear you will need and what kind of training is required. At the end of the day, you’ll be better prepared to do your job safely.

**SUNDAY, JANUARY 19TH**

**Rigging Math**

*Presented by Eric Rouse
4 ETCP renewal credits
9:00 a.m. – 1:00 p.m.*

Many riggers fear the math that is sometimes required to calculate loads for their rigging systems. Ignoring the problem isn’t the solution! This session will delve into the math and concepts that riggers use to determine loads on entertainment structures. We will calculate point loads and uniform loads, and look at how they create different reactions on structures. We will discuss the concepts used to determine bridle lengths and learn how to calculate load distribution and line tension. Last but not least, we will discuss the concept of indeterminate structures and how it should affect our thinking when designing the rigging. This is a great class for those wanting to brush up on material for the ETCP Rigging exam.

**A Standard for Suspended Loudspeaker Enclosures: Does It Work for You?**

*Moderator: Richard Nix
Panelists: TBA
.75 ETCP renewal credit
1:30 – 3:00 p.m.*

**ANSI E1.8-2018, Entertainment Technology—Loudspeaker Enclosures Intended for Overhead Suspension—Classification, Manufacture and Structural Testing** is a standard first published in 2005. It covers the requirements for enclosures intended for overhead suspension but addresses only the structural suspension characteristics of the enclosure, such as enclosure construction, component security, and validation methods. It’s the only available standard specifically addressing this, but many enclosure manufacturers don’t use it. Does it work for you? ESTA wants your input. Download the standard at http://estalink.us/freestandards, then participate in an open-forum discussion with standards developers and manufacturers about methodologies, compliance issues, and what can be done to help make ANSI E1.8 a universally useful standard.
Safety Track
THURSDAY, JANUARY 16TH

Planning a Safe Event
Presenters: Kent Jorgensen and Eddie Raymond
2 ETCP renewal credits
9:00 – 11:00 a.m.
Before any entertainment event, those planning the event need a program that is designed to keep workers and audience members from harm, and a specific response plan for all reasonably expected emergencies. The speakers combine more than 50 years of experience in the industry to talk about real-world events and how to create those programs and plans.

FRIDAY, JANUARY 17TH

New Guidelines for MEWPs—The Lifts Formerly Known as AWPs
Presenter: Ethan Gilson
2 ETCP renewal credits
9:00 – 11:00 a.m.
Do you, or those you supervise, work at height using a lift? Did you know that as of December 20th, 2019 there are new ANSI standards in effect for those who use what are formerly known as Aerial Work Platforms? ANSI A92.22 (Safe Use) and ANSI A92.24 (Training) establish new guidelines for users and supervisors of Mobile Elevated Work Platforms (MEWPs). This session will cover all the changes that you need to know about before jumping into that MEWP and going to work, from proper pre-shift inspection, to equipment classifications, to fall restraint, and rescue requirements. Why leave it (and the user) up in the air! Joins us to learn about the changes every user and supervisor needs to know.

Don’t Fall Off the Stage—How Standards are All Around Us
Presenters: Tim Hansen and Karl Ruling
.5 ETCP renewal credit
12:00 – 1:00 p.m.
We work in a creative industry. Why is it that we have trouble coming up with creative ways to keep people from falling off platforms and into orchestra pits? We can be creative, and standards can help guide our thinking to help us devise good solutions that work for the show and venue. The session will focus on ANSI E1.46, Standard for the Prevention of Falls from Theatrical Stages and Raised Performance Platforms, but it also will point out some others that can help us do our work safely.

Standards—Why You Need Them
Presenters: Richard Nix and Karl Ruling
.5 ETCP renewal credit
1:00 – 2:30 p.m.
ESTA has been accredited by the American National Standards Institute to write American National Standards for more than 20 years. Many of the standards published concern the safety of the entertainment industry, the venues in which events take place, methods of working safely, and the equipment used. This will be a discussion of those standards, what they mean, and how they can be applied to ensure safer environments for workers and audience members.

SATURDAY AND SUNDAY, JANUARY 18 – 19TH

OSHA 10: I.A.T.S.E.—Day 1
(Attendance both days is required)
Presenters: Joe Aldridge, Kent Jorgensen, Eddie Raymond, and Alan M. Rowe
8 ETCP renewal credits
9:00 a.m. – 5:00 p.m.
The IATSE Craft Advancement Program and the IATSE Training Trust Fund have developed an OSHA 10 course for the Entertainment and Exhibition Industries. This course takes all mandatory and chosen elective subjects and applies these laws to the broader entertainment work place. This is a “must” for both crews and managers in the entertainment industry. All attendees must bring $8 cash to cover the cost of the OSHA 10 cards issued by the Outreach Training Institute after the class is completed. *Attendance both days is required. ETCP renewal credits total 8.*

SUNDAY, JANUARY 19TH
Mark is the Director of Education and Life Safety for the International Association of Venue Managers and retired from law enforcement.

Situational Awareness: Securing Events in Extreme Situations
Presenter: Mark Herrera
0 ETCP renewal credits
2:00 – 4:00 p.m.
This session will give you the tools to augment your situational awareness to mitigate risk through guest service interjection. You’ll learn to increase your observational capabilities of anonymous behavior and identify behavior patterns not conducive to your venue environment. You’ll also hear about the current threat level facing venues and how to establish increased mental preparation, response, and mitigation to possible threats.

That’s a lot of information but all relevant, enriching, and some even highly entertaining! A short schedule is available at www.estaw.org/namm. All sessions are on the fourth floor of the Anaheim Hilton. Learn all about ESTA at NAMM from our home page www.estaw.org, and remember to use ESTAATNAMM to register for half price. This ends January 6, so don’t delay. Your badge gives you free admission to all the ESTA curated sessions and most carry ETCP Certification renewal credits. What a deal! The ESTA booth is #10646 in the Event Technology Hall A. Stop by and say hello. See you in Anaheim!

It just doesn’t get any better than free education! Thank you to all the presenters and volunteers as well as ESTA’s partners NAMM, IAVM, as well as Lighting & Sound America and PLASA.