

**Minutes  
Electrical Power Working Group  
Sunday 29 January 2012  
Marriott Solana  
Westlake, TX**

**Chairmen:**

Mitch Hefter, representing USITT; P; U  
Ken Vannice; Leviton Manufacturing Co., Inc.; P; MP

**Members attending:**

Ron Bonner; PLASA Technical Resources Office (PLASA EU); P; U  
Vincent J. Cannavale; Motion Laboratories; P; CP  
Edward R. Condit; O; U  
Ed Garstkiewicz; Harting Inc., North America (Harting KGAA); P; G  
Jerry Gorrell; Theatre Safety Programs; P; U  
Wendy Holt; AMPTP/CSATF (Alliance of Motion Picture and Television Producers); P; G  
Tyrone Mellon Jr.; Lex Products Corp.; A; CP  
Edwin S. Kramer; I.A.T.S.E. Local 1; P; U  
Roger Lattin; I.A.T.S.E. Local 728; P; U  
Michael Lay; Philips Color Kinetics (Royal Philips Electronics); P; MP  
Alan M. Rowe; IATSE Local 728; A; U  
Art Wanuch; Entertainment Electrical Safety Committee of Ontario; A; G  
Keith S. Woods; Lakhri Impressions Ltd., representing IATSE Local 891; P; U

**Visitors:**

Bruce Darden; Rigging Innovators, Inc.  
Sanford P. Gilzow; Shur-Rig LLC  
Eric Johnson; High End Systems

**1 Opening remarks**

Ken Vannice called the meeting to order at 9:00.

**2 Attendance and membership**

**2.1 Introduction of those present and taking attendance**

**2.2 Determination of quorum**

A show of hands was used to determine if a quorum was present. Vannice announced that it was and business could be conducted.(22 voting members: 7 is a quorum, 12 the minimum to pass a supermajority vote)

**2.3 Recognition of alternate voting members**

Tyrone Mellon Jr. and Art Wanuch were recognized. Alan Rowe and Roger Lattin were reminded that only one may vote for Local 728 on a question.

**2.4 Requirements for membership**

Ken Vannice reminded the assembly that membership is open to all who are affected by the work of the group. Voters who would be in the designer or dealer/rental company interest category in particular are encouraged to become members. Voting members are required to attend meetings and to vote on letter ballots. Voting members and their alternates may not miss three consecutive meetings or three consecutive letter ballots without a loss of voting status.

**2.5 Changes to observer status**

Members who have missed the previous two meetings and who will not have met the minimum attendance requirement for voters if this meeting is missed:

Elizabeth E. (Lizz) Pittsley  
Louis Bradfield

Neither was present, so both were moved to observer status.

Ken Vannice reported that Bradfield has an injured foot, which prevents him from traveling. Louis Bradfield had expressed his regrets for not being able to attend the meeting.

Eddie Kramer moved that we thank Louis Bradfield for his service. The motion was seconded and then approved with a show of hands.

## 2.6 Processing of new membership requests

Jim Digby; The Collective Endeavor Group, representing Linkin Park Touring/The Collective; Observer; User  
 Mitch Hefter; removing Philips as his employer affiliation but keeping his representation for USITT; Principal;  
 User

Eddie Kramer moved that the applications be accepted. The motion was seconded and then approved with a show of hands.

Keith Woods asked to be reinstated as a voting member. Eddie Kramer moved that Woods's request be accepted. The motion was seconded and then approved with a show of hands.

## 2.7 Consensus body

The full consensus body during this meeting, including voters not present, was:

Name	Representing	Voting status	Int. cat.
James Davey	AC Power Distribution Inc.	P	CP
Greg Mayberry	AC Power Distribution Inc.	A	CP
Jeff deRecat	Actuant Corporation	P	MP
William Drake	Actuant Corporation	A	MP
George Long	Aggreko	P	DR
Wendy Holt	Alliance of Motion Picture and Television Producers	P	G
Nathan Leonard	Bender GmbH & Co. KG	P	MP
Joe Boardman	Bender GmbH & Co. KG	A	MP
Torsten Gruhn	Bender GmbH & Co. KG	A	MP
Jody Williquette	Electrivers, Inc.	P	CP
Steve Terry	Electronic Theatre Controls, Inc.	P	MP
Ian Foulds	Entertainment Electrical Safety Committee of Ontario	P	G
Art Wanuch	Entertainment Electrical Safety Committee of Ontario	A	G
Ed Garstkiewicz	Harting KGAA	P	G
Howard Forryan	Harting KGAA	A	G
Edwin S. Kramer	I.A.T.S.E. Local 1	P	U
Roger Lattin	I.A.T.S.E. Local 728	P	U
R. Bruce Prochal	I.A.T.S.E. Local 728	A	U
Patric J. Abaravich	I.A.T.S.E. Local 728	A	U
Alan M. Rowe	I.A.T.S.E. Local 728	A	U
Keith S. Woods	IATSE Local 891	P	U
Ken Vannice	Leviton Manufacturing Co., Inc.	P	MP
Bill Grande	Leviton Manufacturing Co., Inc.	A	MP
Bob Luther	Lex Products Corp.	P	CP

Name	Representing	Voting status	Int. cat.
Tyrone Mellon_Jr.	Lex Products Corp.	A	CP
Sean Sloat	Lex Products Corp.	A	CP
W. G. Krokaugger_PE	Mole-Richardson Co.	P	CP
Alex Yoon	Mole-Richardson Co.	A	CP
Vincent J. Cannavale	Motion Laboratories	P	CP
Peter Herrmann	Motion Laboratories	A	CP
David Herrmann	Motion Laboratories	A	CP
Ron Bonner	PLASA EU	P	U
Michael Lay	Royal Philips Electronics	P	MP
Michael Scudday	SSRC, Inc.	P	CP
Jerry Gorrell	Theatre Safety Programs	P	U
Mitch Hefter	USITT	P	U
	<b>Total votes possible</b>	<b>21</b>	
	Votes by interest categories	6	CP
		5	MP
		1	DR
		6	U
		3	G
		0	DE

### 3 Approval of the minutes from the previous meeting

See the draft minutes of the 28 October 2011 meeting, *EPmin10-2011.pdf*

Wendy Holt moved that the draft minutes be accepted. The motion was seconded and then approved with a show of hands

### 4 Reading of the call for patents

Ken Vannice read the following statement aloud to the assembly:

"PLASA intends not to publish any standard that contains protected intellectual property, unless that information can be licensed by anyone for a reasonable fee. PLASA uses a process of open patent and copyright disclosures to implement its intent. PLASA does not conduct patent or copyright searches and does not warrant that its standards contain no protected intellectual property.

"In keeping with the open disclosures policy, I ask if anyone present wishes to notify this working group of the existence of a patent or copyright or other intellectual property that might protect material in a standard being developed by this working group. You need not be the holder of the patent or copyright to notify this working group of its existence."

Nothing was reported.

### 5 Reading of the anti-trust statement

Ken Vannice read the following statement aloud to the assembly:

"The PLASA Board of Directors, the Technical Standards Council, and the leadership of this working group will reject or nullify any actions that unlawfully restrain trade. Anyone who feels that such an action is being or has been taken is requested to bring that matter to the attention of the chair immediately. Anyone who feels that actions in restraint of trade have been taken and not properly annulled is requested to notify the TSC chair or PLASA chairman immediately.

"PLASA legal counsel has informed us that violations of the anti-trust laws can have serious consequences. Individuals engaged in certain unlawful conduct can be found criminally liable. An

individual convicted of a criminal violation of the Sherman Act may be fined as much as \$1,000,000 and imprisoned for up to ten years. An easy to read pamphlet describing restraint of trade issues is available from the Technical Standards Manager."

The Technical Standards Manager held up one of the easy-to-read pamphlets to show it was available.

No restraint of trade issues were brought to the attention of the assembly.

## **6 Approval of agenda**

Ken Vannice asked to add the following items under Other business:

- ⤴ News of UL 508
- ⤴ NFPA activities of interest to this working group

Wendy Holt moved that the amended agenda be approved. The motion was seconded and then approved with a show of hands.

## **7 Old business - task group reports**

### **7.1 EMC task group**

Ken Vannice gave a reprise of the work to bring IEC 61000-3-2 and 61000-3-12 into force in North America and the work being done to make this not be onerous if it should happen. There are two IEEE Committees working on 61000-3-2 AND 61000-3-12. The US TAG to the IEC has the philosophy that the harmonic emission controls need to be devised with a balance between the benefits and costs, and not have all the benefits accrue to power suppliers and all the costs be born by the users and manufacturers of power-consuming equipment.

### **7.2 ANSI E1.16-2002 (R2007)**

Roger Lattin moved that we reaffirm ANSI E1.16. The motion was seconded. There was discussion, and then a unanimous show of hands in favor. There will be a letter ballot concurrent with a public review.

### **7.3 BSR E1.18 portable feeder cable selection and use**

Jerry Gorrell reported that we are making progress. He realized that the task group had been dealing with comment resolutions only, but it needs to address the whole document. They are cleaning it up, and would rather be good than fast. A new version might be ready by March, but perhaps not.

Eddie Kramer asked about the task group Membership. Gorrell said it consists of alan rowe, lizz Pitsley, george long, and himself.

Gorrell said they are bringing the requirements of carnivals as stated in the NEC and OSHA regulations into the document.

There was a long discussion of whether to put the over-roadway requirements into the document or to reference the NEC and OSHA requirements, which are the same. This lead to a discussion of whether this is a back pocket guide that should have everything in it for reference, or if it is not a stand-alone reference and should point to the relevant parts of the NEC and be a training document.

### **7.4 ANSI E1.19 – 2009, Recommended Practice for the Use of Class A Ground-Fault Circuit Interrupters (GFCIs) Intended for Personnel Protection in the Entertainment Industry**

#### **Any news or action?**

Roger Lattin said there is a problem with ground-fault protection on power feeder cables, that there is a need for coordinated GFP on power distribution systems. Eddie Kramer said that we should work on this. It will take years to develop changes to the NEC to address the problem.

There was a discussion of whether this is a project we should do.

Ty Mellon and Roger Lattin were appointed as a study group to investigate changes to the Code to allow coordinated GFP. Roger Lattin made a motion to create this coordinated ground fault protection study group. The motion was seconded and then approved with a show of hands.

### **7.5 BSR E1.24 - 20xx, pin connectors**

Ken Vannice reported that it is published. He expressed Steve Terry's regrets for not being able to attend our meeting, but reported what Terry had told him about the standard's adoption by UL. Charles (Chuck) Kurten of UL will present it to the 498 STP. We can expect a UL 498 revision to reference it possibly later this year.

### **7.6 BSR E1.32 luminaire inspection guidance**

Ruling reported that its approval is on the TSC agenda.

### **7.7 UL Stage and Studio Luminaire standard**

Ruling reported that he and the task group haven't done anything yet. No report.

### **8 New business, possible project – Ground Bonding Procedure**

Roger Lattin moved that a grounding task group be formed to work on a clear description of the project scope before the March meeting. The motion was seconded by discussion, then approved with a show of hands.

Ron Bonner suggested that we look at section 7 of BS 7909.

## **9 Other business**

### **9.1 Industrial Control Equipment Movement from UL 508 to UL 60947-4-1A**

Ken Vannice reported.

UL announced that they were moving Industrial Control Equipment from UL 508 to UL 60947-4-1A, a tri-national standard based on the IEC standard of the same number. Knowing that stage dimmer racks, architectural dimmer panels and relay panels were in UL 508 and not in IEC 60497-4-1A, Vannice asked UL where these items would be moving. Vannice was told that only certain CCNs would be moving and that these items, which are under CCN NMTR, would remain in UL 508.

UL announced that CCNs NLDX, NRNT, NLRV, NKJH and NKCR were moving from UL 508 to UL 60947-4-1A, the move to be completed by January 27, 2017. With the NMTR category excluded, there are probably very few lighting controls in these categories until it is noted that all the component air-gap and solid-state relays used in the NMTR dimmer and relay panels, wall-box dimmers, fan speed controls, occupancy sensors and energy management equipment are in the CCNs to be moved. If in the move all these relays would be required to be re-tested and re-evaluated it would greatly impact all the lighting controls that use them. All the ratings would change and no longer match the ratings required in the lighting control standards. Vannice brought this to the attention of UL and was informed:

1. Sufficient national deviations were added to the UL version of 60947-4-1A so as to make it match UL 508.
2. Relay manufacturers can open a blanket administrative project to move their entire product line over to the new standard without additional testing and evaluation.
3. The CCNs will not change so the references in the lighting control documents will not need to change.
4. Lighting control manufacturers will only need to verify that their relay manufacturers moved their products.

Vannice verified that all the relay rating types found in UL 508 had been included in UL 60947-4-1A except Electronic Ballasts. Vannice has been informed by UL that this is an oversight and is being rectified.

UL has announced that they were creating a harmonization project to move relays from UL 508 to UL 61810-1. This sounded like a re-run of the above finished process so Vannice joined the committee. Vannice is the only representative from the lighting control industry on the committee.

Vannice brought the same concerns as above to the attention of UL. To date Vannice has had no official response but this is what Vannice believe to be true based on committee discussions:

1. Sufficient national deviations will be added to the UL version of 61810-1 so as to make it match UL 508.
2. Before the above move can take place relays will be redirected to this new standard. Contactors and motor starters will continue their move as indicated above.
3. Relay manufacturers will be able to open a blanket administrative project to move their entire product line over to the new standard without additional testing and evaluation.
4. The CCNs will most likely need to change. Lighting control manufacturers will be able to open a blanket administrative project to repair their UL documentation.

## **9.2 NFPA news**

The NEC meetings are in process, reported Vannice.

There is work being done with temporary portable GFCI devices. These have neutral protection while portable (not temporary) and fixed GFCI devices do not. There is a proposal to require neutral protection for all portable equipment (temporary and non-temporary) and on all GFCI devices that might be used in portable equipment, which would, of course, be all GFCI devices.

There was a proposal to raise the GFCI current-carrying capacity, which would have had 4 mA GFCIs on 30 ampere and higher circuits. That proposal was killed.

There is work being done to clean up the theatrical switchboards section. It's antiquated.

## **10 Schedule for future meetings**

It was announced that the next working group meeting is scheduled for Wednesday 28 March 2012, from 09:00 to noon, at the Westin Long Beach in California. We will have a July meeting in New York.

## **11 Adjournment**

Wendy Holt moved that the meeting adjourn. The motion was seconded and then approved by acclamation. Vannice declared the meeting adjourned at 11:55.

**Membership as of 7 March 2012**

Name	Representing	Company	Voting status	Int. cat.
Patric J. Abaravich	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	A	U
Daniel Ayers	Norcostco	Norcostco (Sales-Midwest)	O	DR
Robert Barbagallo	Solotech Inc.	Solotech Inc.	O	DR
Lee J. Bloch	Bloch Design Group, Inc.	Bloch Design Group, Inc.	O	G
Joe Boardman	Bender GmbH & Co. KG	Bender Inc.	A	MP
Ron Bonner	PLASA EU	PLASA Technical Resources Office	P	U
Eric Bouchard	Cirque du Soliel	Cirque du Soliel	O	CP
Louis Bradfield	Louis Bradfield	Louis Bradfield	O	U
André Broucke	André Broucke	André Broucke	O	G
John (Javid) D. Butler	Integrated Theatre, Inc.	Integrated Theatre, Inc.	O	CP
Vincent J. Cannavale	Motion Laboratories	Motion Laboratories	P	CP
Michael J. Carnaby	Mikan Theatricals	Mikan Theatricals	O	DR
Edward R. Condit	Edward R. Condit	Edward R. Condit	O	U
James Davey	AC Power Distribution Inc.	AC Power Distribution Inc.	P	CP
Kenny Delahoussaye	Aggreko	Aggreko	O	DR
Jeff deRecat	Actuant Corporation	Marinco	P	MP
Jim Digby	Linkin Park Touring/The Collective	The Collaborative Endeavor Group	O	U
William Drake	Actuant Corporation	Marinco	A	MP
Marsha DuBois	Pintech Stage Connectors, Inc.	Pintech Stage Connectors, Inc.	O	CP
Steve DuBois	Pintech Stage Connectors, Inc.	Pintech Stage Connectors, Inc.	O	CP
James Eade	PLASA	PLASA	O	G
Don Earl	Earl Girls, Inc.	Earl Girls, Inc.	O	DR
Jose J. Flores	Kino Flo, Inc.	Kino Flo, Inc.	O	MP
Trevor Forrest	Helvar Lighting Control	Helvar Lighting Control	O	MP
Howard Forryan	Harting KGAA	Harting Ltd.	A	G
Ian Foulds	Entertainment Electrical Safety Committee of Ontario	IATSE Local 873	P	G

Name	Representing	Company	Voting status	Int. cat.
Phillip M. Gallo	TMB	TMB	O	DR
Ed Garstkiewicz	Harting KGAA	Harting Inc., North America	P	G
Richard B. Glickman	Rosco Laboratories	Gliconen Corporation	O	MP
Reuben Goldberg	Technic Services	Technic Services	O	U
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	P	U
Bill Grande	Leviton Manufacturing Co., Inc.	Leviton Manufacturing Co., Inc.	A	MP
Torsten Gruhn	Bender GmbH & Co. KG	Bender Inc.	A	MP
Mitch Hefter	USITT	Mitch Hefter	P	U
Peter Herrmann	Motion Laboratories	Motion Laboratories	A	CP
David Herrmann	Motion Laboratories	Motion Laboratories	A	CP
Jim Holladay	Luxence	Luxence	O	G
Wendy Holt	Alliance of Motion Picture and Television Producers	AMPTP/CSATF	P	G
Simon Hunt	IATSE Local 891	IATSE Local 891	O	U
Richard L. Eberth_Jr.	Airpax Corporation	North Shore Safety	O	MP
Tyrone Mellon_Jr.	Lex Products Corp.	Lex Products Corp.	A	CP
Kirk D. Keen	Hollywood Lighting, Inc.	Hollywood Lighting Services, Inc.	O	DR
Hiroshi Kita	Marumo Electric Co., Ltd.	Marumo Electric Co., Ltd.	O	MP
Wayne Kowalski	Coleman Cable Inc.	Coleman Cable Inc.	O	MP
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	P	U
Charles (Chuck) Kurten	Underwriters Laboratories, Inc.	Underwriters Laboratories, Inc.	O	G
Roger Lattin	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	P	U
Michael Lay	Royal Philips Electronics	Philips Color Kinetics	P	MP
Marty Lazarus	Chicago Spotlight, Inc.	Chicago Spotlight, Inc.	O	DR
Nathan Leonard	Bender GmbH & Co. KG	Bender Group	P	MP
George Long	Aggreko	Aggreko Event Services	P	DR
Bob Luther	Lex Products Corp.	Lex Products Corp.	P	CP
William L. Maiman	William L. Maiman	William L. Maiman	O	U



Name	Representing	Company	Voting status	Int. cat.
Paul F. Mardon	Pulsar Ltd.	Pulsar Ltd.	O	MP
Greg Mayberry	AC Power Distribution Inc.	AC Power Distribution Inc.	A	CP
Pat Miller	Hubbell Inc.	Hubbell Wiring Devices	O	MP
Martin Moore	Martin Moore	Martin Moore	O	DE
David Murray	IPC Resistors Inc.	IPC Resistors Inc.	O	CP
Kevin O'Brien	Bestek Lighting & Staging	Bestek Lighting & Staging	O	U
W. G. Krokaugger_PE	Mole-Richardson Co.	Mole-Richardson Co.	P	CP
Natti Pierce-Thomson	North American Theatre Technology	North American Theatre Technology	O	U
Elizabeth E. (Lizz) Pittsley	Elizabeth Pittsley	Elizabeth Pittsley	O	U
R. Bruce Prochal	I.A.T.S.E. Local 728	IATSE Local 728	A	U
Alan M. Rowe	I.A.T.S.E. Local 728	IATSE Local 728	A	U
Larry Schoeneman	DesignLab Chicago, Inc.	DesignLab Chicago, Inc.	O	DE
Michael Scudday	SSRC, Inc.	SSRC, Inc.	P	CP
Ford Sellers	Cornell University	Cornell University	O	U
Mike Skinner	Alliance of Motion Picture and Television Producers	CBS Studio Center	O	U
Sean Sloat	Lex Products Corp.	Lex Products Corp.	A	CP
Arnold Tang	Arnold Tang Productions	Arnold Tang Productions	O	G
Steve Terry	Electronic Theatre Controls, Inc.	Electronic Theatre Controls	P	MP
Eric Tishman	Rosco Laboratories	Rosco Laboratories	O	MP
Stephen Vanciel	Stephen Vanciel	Stephen Vanciel	O	U
Ken Vannice	Leviton Manufacturing Co., Inc.	Leviton Manufacturing Co., Inc.	P	MP
Art Wanuch	Entertainment Electrical Safety Committee of Ontario	Entertainment Electrical Safety Committee of Ontario	A	G
Colin Waters	TMB	TMB	O	DR
Jody Williquette	Electrivers, Inc.	Electrivers, Inc.	P	CP
Richard Wolpert	Union Connector Company	Union Connector Company (MO)	O	CP
Keith S. Woods	IATSE Local 891	Lakhri Impressions Ltd.	P	U

Name	Representing	Company	Voting status	Int. cat.
Jiantong Wu	Beijing Special Engineering Design & Research Institute	Beijing Special Engineering Design & Research Institute	O	G
Alex Yoon	Mole-Richardson Co.	Mole-Richardson Co.	A	CP

**Key to codes:**

P principal voting member  
A alternate voting member  
I individual voting member  
O observer, non-voting

MP mass-market producer interest category  
CP custom-market producer interest category  
DR dealer or rental company interest category  
U user interest category  
G general-interest interest category  
DE designer interest category