

**Minutes**  
**Electrical Power Working Group**  
Friday, 25 July 2014  
D/FW Marriott Solana  
Westlake, TX

**Chairmen:**

Mitch Hefter; USITT; P; U  
Ken Vannice; Ken Vannice LLC; I; G

**Recording secretary:**

Karl G. Ruling; PLASA NA

**Members attending:**

Matthew Antonucci; Contract Services Administration Trust Fund; P; U  
Justin Bennett; I; U  
Stephen (Steve) Brock; Bender ET Inc. (Bender GmbH & Co. KG); A; MP  
Richard Cadena; Academy of Production Technology; O; G  
James Davey; AC Power Distribution Inc.; P; CP  
Michael G. Davis ; Mole-Richardson Co.; A; CP  
Ed Garstkiewicz; Harting Inc., North America (Harting KGAA); P; G  
Jerry Gorrell; Theatre Safety Programs; P; U  
Tyrone Mellon\_Jr.; Lex Products Corp.; P; 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); P; MP  
Elizabeth E. (Lizz) Pittsley; I; U  
Alan M. Rowe; IATSE Local 728; A; U  
Larry Schoeneman; DesignLab Chicago, Inc.; P; DR  
Steve Terry; Electronic Theatre Controls; P; MP  
Art Wanuch; Entertainment Electrical Safety Committee of Ontario; P; G  
Keith S. Woods; Lakhri Impressions Ltd., representing IATSE Local 891; P; U

**1 Opening remarks**

Mitch Hefter welcomed the attendees to Texas. He called the meeting to order at 09:05.

**2 Attendance and membership**

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

A bright green sheet sign-in sheet was circulated while those present introduced themselves.

**2.2 Determination of quorum**

*Twenty-two voting members: eight for a quorum, 12 for a supermajority.*

Mitch Hefter asked for a show of hands of voting members. He counted them and then announced that a supermajority was present.

**2.3 Recognition of alternate voting members**

**2.4 Requirements for membership**

*The following statement was read aloud to the assembly by Mitch Hefter:*

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

The following voting members have missed the previous two meetings and are in jeopardy of being moved to Observer status if this meeting is also missed.

Keith S. Woods; IATSE Local 891 -- Present

Louis Bradfield -- Not present. Moved to Observer

Brian Eustace and Alex Yoon; Mole-Richardson Co. -- A representative was present

Jeff T. Miller; Walt Disney Company -- Not present. Moved to Observer.

## 2.6 Processing of new and other membership requests

As of 2014 the following applications have been received:

Ford Sellers; Change of representation to Chauvet Lighting; O; MP

Michael G. Davis; Mole-Richardson Co.; A; CP

Lizz Pittsley asked to be returned to voting status

Steve Terry moved that the membership requests be accepted. The motion was seconded. The motion was approved with a unanimous show of hands.

## 2.7 Consensus body

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

Delegate	Company	Representing	Voting status	Int. cat.
James Davey	AC Power Distribution Inc.	AC Power Distribution Inc.	P	CP
George Long	Aggreko Event Services	Aggreko	P	DR
Nathan Leonard	Bender Group	Bender GmbH & Co. KG	P	MP
Torsten Gruhn	Bender Inc.	Bender GmbH & Co. KG	A	MP
Stephen (Steve) Brock	Bender ET Inc.	Bender GmbH & Co. KG	A	MP
Matthew Antonucci	Contract Services Administration Trust Fund	Contract Services Administration Trust Fund	P	U
Larry Schoeneman	DesignLab Chicago, Inc.	DesignLab Chicago, Inc.	P	DR
Casey Diers	DesignLab Chicago, Inc.	DesignLab Chicago, Inc.	A	DR
Don Earl	Earl Girls, Inc.	Earl Girls, Inc.	P	DR
Steve Terry	Electronic Theatre Controls	Electronic Theatre Controls, Inc.	P	MP
Elizabeth E. (Lizz) Pittsley	Elizabeth Pittsley	Elizabeth Pittsley	I	U
Art Wanuch	Entertainment Electrical Safety Committee of Ontario	Entertainment Electrical Safety Committee of Ontario	P	G
Ian Foulds	IATSE Local 873	Entertainment Electrical Safety Committee of Ontario	A	G
Rodger Dean	R. Dean Lighting Limited	Entertainment Electrical Safety Committee of Ontario	A	G
Ed Garstkiewicz	Harting Inc., North America	Harting KGAA	P	G
Howard Forryan	Harting Ltd.	Harting KGAA	A	G
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	P	U
Roger Lattin	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	P	U

Delegate	Company	Representing	Voting status	Int. cat.
R. Bruce Prochal	IATSE Local 728	I.A.T.S.E. Local 728	A	U
Patric J. Abaravich	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	A	U
Alan M. Rowe	IATSE Local 728	I.A.T.S.E. Local 728	A	U
Keith S. Woods	Lakhri Impressions Ltd.	IATSE Local 891	P	U
Justin Bennett	Justin Bennett	Justin Bennett	I	U
Ken Vannice	Ken Vannice LLC	Ken Vannice LLC	I	G
Tyrone Mellon_Jr.	Lex Products Corp.	Lex Products Corp.	P	CP
Bob Luther	Lex Products Corp.	Lex Products Corp.	A	CP
Brian Eustace	Mole-Richardson Co.	Mole-Richardson Co.	P	CP
Michael G. Davis	Mole-Richardson Co.	Mole-Richardson Co.	A	CP
Gregory Quinkert	Motion Laboratories	Motion Laboratories	P	MP
Michael Lay	Philips Color Kinetics	Royal Philips	P	MP
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	P	U
Mitch Hefter	Mitch Hefter	USITT	P	U
		<b>Total possible</b>	<b>21</b>	
		<b>Subtotals by interest categories</b>	3	CP
			0	DE
			3	DR
			3	G
			4	MP
			8	U

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

See the draft minutes of the March 2014 meeting, [EPmin03-2014.pdf](#)

Eddie Kramer moved that the minutes be accepted as written. The motion was seconded. It was approved with a show of hands.

### 4 Reading of the call for patents

The following statement was read aloud to the assembly by Mitch Hefter:

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 revealed.

## 5 Reading of the anti-trust statement

*The following statement was read aloud to the assembly by Mitch Hefter:*

PLASA and its members take seriously their obligation to comply with all applicable antitrust laws. Therefore, during this meeting and during all PLASA events, all discussions will be limited to those subjects that are permitted by the antitrust laws. All members should refrain from any discussion or mention of competitively sensitive subjects such as the current or future prices charged for any member product or services, current or future marketing plans or strategies, and current or future costs, including employee salaries. There also must be no agreement on the suppliers or customers that members will do business with or the markets in which members will conduct business.

Violations of the antitrust laws can have serious consequences. If you have any questions or concerns about anything that is discussed at a PLASA meeting, please bring your concern to PLASA management. An easy to read pamphlet describing the antitrust laws is available from the PLASA staff.

No concerns were reported.

## 6 Approval of agenda

Larry Schoeneman moved to accept the draft minutes. The motion was seconded. The motion was approved with a unanimous show of hands.

## 7 Old business - task group reports

### 7.1 EMC task group

*From the March draft minutes:*

*Ken Vannice reported that the IEEE has shut down any NA attempt at the IEC standard. He noted that action by the Canadians on this subject will be of particular interest. Ken Vannice will continue to monitor the activity.*

*Any news?*

Ken Vannice reported that nothing is happening. He suggested that this standing item should be removed from the agenda.

Karl Ruling mentioned a phone conversation he had had on July 23 with Robin Townley, ABTT's CEO, about harmonics. Townley suggested that we should work on a standard for how manufacturers should report the harmonics signature of their products, and another guide for end-users on how they should understand this information, work with harmonics, and mitigate any problems. There was discussion within the working group of the utility of a harmonics document to rein in overzealous engineers. Steve Terry will ask Adam Bennette and Mark White what they have in mind on this topic.

### 7.2 ANSI E1.16-2002 (R2012) Configuration Standard for Metal Halide Ballast Power Cables (Revision, reaffirmation, or withdrawal by 2017)

*Any news or action at this time?*

No news or action.

### 7.3 BSR E1.19 – 201x, Recommended Practice for the Use of Class A Ground-Fault Circuit Interrupters (GFCIs) Intended for Personnel Protection in the Entertainment Industry

*See E1-19\_2ndRevwCmmntResols.pdf submitted by Ty Mellon and task group. Acceptance or revision of draft resolutions.*

Steve Terry moved that we accept the comment resolutions. The motion was seconded. There was discussion of the resolutions. The motion was approved with an unanimous show hands, except for one abstention.

Steve Terry moved that we offer the revised document for public review, with a concurrent letter ballot for acceptances as an American national Standard. The motion was seconded. The motion was approved with a show of hands, with all voting in favor, except for one abstention.

#### **7.4 ANSI E1.24 - 2012, pin connectors** (Revision, reaffirmation, or withdrawal by 2017)

*Any news or action at this time?*

No news or action.

#### **7.5 ANSI E1.32 - 2012, Guide for the Inspection of Entertainment Industry Incandescent Lamp Luminaires** (Revision, reaffirmation, or withdrawal by 2017)

*Any news or action at this time?*

No news or action.

#### **7.6 Grounding and Bonding on portable structures**

*From the March draft minutes:*

*After a brief discussion, Bonding and Grounding on Portable Structures was agreed upon by general consensus as the working title. Art Wanuch reported that the task group will need feedback as to whether this is a guide document or a recommended practice with more shoulds than shalls; The task group will collect feedback and look at filing a formal project proposal in July, if necessary.*

Art Wanuch said that he had not been able to make progress on this; it needs another leader. The consensus was that we should set this aside until the next meeting. Richard Cadena offered to review the material Art Wanuch has collected. He will then send it to Karl Ruling, and Ruling will put it on the web in the meetingfiles area.

#### **7.7 BSR E1.51—A Canadian E1.18**

*Public review ended 2 June 2014. See comment summary, E1-51CommentSummary.pdf, which was distributed to the working group and task group. Work on comment resolutions*

Art Wanuch reported on the comment resolutions.

Keith Woods said we can't reference as a reason part of a future edition of the CEC. However, that future edition will be published soon.

There was discussion of the draft resolutions with an extended discussion of single-set screw cam-type connectors as opposed to double-set screw connectors. Single-set screw tends to work loose with 4/0 cable.

The comment resolution document was modified to address single-set screw connectors. Steve Terry moved that the amended comment resolutions be accepted. The motion was seconded and then approved iwth a unanimous show of hands, except for one abstention.

Eddie Kramer moved that the working group direct the Technical Standards Manager to modify the E1.51 document and send it to the working group for a letter ballot to approve it for public review. The motion was seconded. It was approved with a unanimous show of hands.

#### **7.8 CSA and UL harmonization**

*From the March draft minutes:*

*Ken Vannice commented that CSA and UL harmonization is moving toward a CSA rewrite. Should be close to going out to public review, which the working group will be informed of when possible.*

*Update?*

Ken Vannice offered the following written progress report:

CSA C22.2 No. 166 Stage & Studio Luminaires

7/22/14

Ken Vannice

The revised standard is within a couple of months of being ready for public review. The writing is done; and the editing has begun. This is close to being a complete revision which will probably

require a file review of all manufacturers' records. Manufacturers need to consider this revision very carefully. It is heavily dependent on C22.2 No. 250.0, Luminaires. C22.2 No. 250.0 is a tri-national standard with UL 1598, Luminaires. This sounds good from a US perspective. Unfortunately UL 1573 wasn't written based on UL 1598 principles. An attempt was made to harmonize with UL 1573 but the wording had to be different for copyright reasons. This may have caused unintentional issues. It also contains many IEC references to 60598-1, Luminaires, General Requirements & Tests, and 60598-2-17, Luminaires, Particular Requirements, Luminaires for Stage Lighting, Television, Film & Photographic Studios (outdoor and indoor). It is suggested that when this document comes out for public review every manufacturer of stage luminaires with Listings/Certifications to the CSA standard, check the proposed draft against their typical luminaires clause by clause. The time to speak up is now and not during a file review.

Vannice added that supposedly someone has proposed a 166.1 that would put connector strips into the Canadian standard. It could cover dimmers, switchgear, wiring devices. There is no scope yet, and it has been moved into a group outside of the stage and studio luminaires working group.

### **7.9 BSR E1.52—19-Pin circular connectors**

*From the March draft minutes:*

*Ty Mellon reported that he hadn't made any progress on this document. There is still no scope and help is needed with getting manufacturers engaged and expanding the scope statement. The working group chairs will reach out to Colin Waters to find out his intention of continuing with this endeavor.*

*Update?*

Mitch Hefter said he saw Colin Waters at Lightfair, and at that time Colin said he was working on the project. Ty Mellon said that he is interested in working on the project, but not as the only connector manufacturer. More manufacturers need to be involved.

Ken Vannice said that he will call Colin Waters to ask what his intention is. We need to move forward or abandon the project.

### **7.10 NEC proposals and 20 mA GFCI devices**

*An ad-hoc task group met on Thursday evening, 24 July.*

Steve Terry reported on the wide-ranging discussions from the task group meeting last night.

- (1) Higher-current GFCI seems to have film industry use only at this time..
- (2) The film industry is not having a problem with these right now. Higher trip current devices are used along with Class A GFCI devices with success, and not with any Code problems. Some over-zealous inspectors are asking for GFCI everywhere, but they are not citing Code.
- (3) The Code is silent about anything other than Class A GFCI. It probably would be better not to suggest that higher-current GFCI requirements be added to the NEC; it might be difficult to avoid making a mess.
- (4) An application guide for coordinated GFCI systems would be useful.

The consensus was that an application guide would be useful, but that there is no burning need to address this right now. We will keep it on the agenda to consider later.

There was further discussion of other work being done on the NEC.

## **8 New business**

None.

## **9 Other business and announcements**

### **9.1 Above & Beyond Awards**

Mitch Hefter reminded people that the nomination site is open year round at [tsp.plasa.org/AboveandBeyond](http://tsp.plasa.org/AboveandBeyond). Nominate a worthy person.

### **9.2 TSP sessions at LDI 2014**

It was announced that members of the EPWG are scheduled to participate in the following sessions at LDI on Saturday, 22 November 2014:

11:00-12:30 p.m., "Listed Switchboards And SJ Power Cords: Changes To The NEC"

3:30-5:30 p.m., "The Technician's Tool Kit."

## **10 Schedule for future meetings**

Mitch Hefter announced that the next meeting is scheduled for Friday, 21 November, from 7:00-11:00 p.m. at the Las Vegas Hotel (LVH), in Las Vegas, NV.

Mitch Hefter noted that the Panel 15 meetings were scheduled in late January, so there might be a conflict with our January meeting dates.

## **11 Adjournment**

Steve Terry. moved that the meeting adjourn. The motion was seconded and then approved with a show of hands. Mitch Hefter declared the meeting adjourned at 11:20.

Delegate	Company	Representing	Voting status	Int. cat.
Patric J. Abaravich	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	A	U
Matthew Antonucci	Contract Services Administration Trust Fund	Contract Services Administration Trust Fund	P	U
Robert Barbagallo	Solotech Inc.	Solotech Inc.	O	DR
Justin Bennett	Justin Bennett	Justin Bennett	I	U
Lee J. Bloch	Bloch Design Group, Inc.	Bloch Design Group, Inc.	O	G
Ron Bonner	PLASA Technical Resources Office	PLASA EU	O	U
Eric Bouchard	Cirque du Soleil	Cirque du Soleil	O	CP
Louis Bradfield	Louis Bradfield	Louis Bradfield	P	U
Stephen (Steve) Brock	Bender ET Inc.	Bender GmbH & Co. KG	A	MP
André Broucke	André Broucke	André Broucke	O	G
John (Javid) D. Butler	Integrated Theatre, Inc.	Integrated Theatre, Inc.	O	CP
Richard Cadena	Academy of Production Technology	Academy of Production Technology	O	G
Vincent J. Cannavale	Motion Laboratories	Motion Laboratories	O	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
Michael G. Davis	Mole-Richardson Co.	Mole-Richardson Co.	A	CP
Jeremy Day	Philips Color Kinetics	Royal Philips	O	MP
Rodger Dean	R. Dean Lighting Limited	Entertainment Electrical Safety Committee of Ontario	A	G
Kenny Delahoussaye	Aggreko	Aggreko	O	DR
Jeff deRecat	Marinco	Actuant Corporation	O	MP
Casey Diers	DesignLab Chicago, Inc.	DesignLab Chicago, Inc.	A	DR
Jim Digby	The Collaborative Endeavor Group	Linkin Park Touring/The Collective	O	U
William Drake	Marinco	Actuant Corporation	O	MP
Marsha DuBois	Pintech Stage Connectors, Inc.	Pintech Stage Connectors, Inc.	O	CP



Delegate	Company	Representing	Voting status	Int. cat.
Steve DuBois	Pintech Stage Connectors, Inc.	Pintech Stage Connectors, Inc.	O	CP
James Eade	PLASA	PLASA EU	O	G
Don Earl	Earl Girls, Inc.	Earl Girls, Inc.	P	DR
Brian Eustace	Mole-Richardson Co.	Mole-Richardson Co.	P	CP
Jose J. Flores	Kino Flo, Inc.	Kino Flo, Inc.	O	MP
Trevor Forrest	Helvar Lighting Control	Helvar Lighting Control	O	MP
Howard Forryan	Harting Ltd.	Harting KGAA	A	G
Ian Foulds	IATSE Local 873	Entertainment Electrical Safety Committee of Ontario	A	G
Ed Garstkiewicz	Harting Inc., North America	Harting KGAA	P	G
Richard B. Glickman	Gliconen Corporation	Rosco Laboratories	O	MP
Reuben Goldberg	Technic Services	Technic Services	O	U
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	P	U
Erin Grabe	PLASA NA	PLASA NA	exf	G
Bill Grande	Leviton Manufacturing Co., Inc.	Leviton Manufacturing Co., Inc.	O	MP
Torsten Gruhn	Bender Inc.	Bender GmbH & Co. KG	A	MP
Mitch Hefter	Mitch Hefter	USITT	P	U
Peter Herrmann	Motion Laboratories	Motion Laboratories	O	CP
David Herrmann	Motion Laboratories	Motion Laboratories	O	CP
Jim Holladay	Luxence	Luxence	O	G
Simon Hunt	IATSE Local 891	IATSE Local 891	O	U
Tyrone Mellon_Jr.	Lex Products Corp.	Lex Products Corp.	P	CP
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

Delegate	Company	Representing	Voting status	Int. cat.
Roger Lattin	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	P	U
Michael Lay	Philips Color Kinetics	Royal Philips	P	MP
Marty Lazarus	Chicago Spotlight, Inc.	Chicago Spotlight, Inc.	O	DR
Nathan Leonard	Bender Group	Bender GmbH & Co. KG	P	MP
Dave Lester	Clair Global	Clair Global	O	U
George Long	Aggreko Event Services	Aggreko	P	DR
Bob Luther	Lex Products Corp.	Lex Products Corp.	A	CP
William L. Maiman	William L. Maiman	William L. Maiman	O	U
Paul F. Mardon	Pulsar Ltd.	Pulsar Ltd.	O	MP
Greg Mayberry	AC Power Distribution Inc.	AC Power Distribution Inc.	O	CP
Pat Miller	Hubbell Wiring Devices	Hubbell Inc.	O	MP
Jeff T. Miller	Worldwide Standards and Auditing	Walt Disney Company	O	U
Kevin O'Brien	Bestek Lighting & Staging	Bestek Lighting & Staging	O	U
Natti Pierce-Thomson	North American Theatre Technology	North American Theatre Technology	O	U
Elizabeth E. (Lizz) Pittsley	Elizabeth Pittsley	Elizabeth Pittsley	P	U
R. Bruce Prochal	IATSE Local 728	I.A.T.S.E. Local 728	A	U
Gregory Quinkert	Motion Laboratories	Motion Laboratories	P	MP
Alan M. Rowe	IATSE Local 728	I.A.T.S.E. Local 728	A	U
Karl G. Ruling	PLASA NA	PLASA NA	exf	G
Jared Saltzman	Jared Saltzman	Jared Saltzman	O	U
Larry Schoeneman	DesignLab Chicago, Inc.	DesignLab Chicago, Inc.	P	DR
Ford Sellers	Chauvet Lighting	Chauvet Lighting	O	MP
Mike Skinner	CBS Studio Center	Alliance of Motion Picture and Television Producers	O	U
Jonny Starr	TMB	TMB	O	MP
Arnold Tang	Arnold Tang Productions	Arnold Tang Productions	O	G

Delegate	Company	Representing	Voting status	Int. cat.
Steve Terry	Electronic Theatre Controls	Electronic Theatre Controls, Inc.	P	MP
Robert Timmerman	Philips Color Kinetics	Royal Philips	O	MP
Stephen Vanciel	Stephen Vanciel	Stephen Vanciel	O	U
Ken Vannice	Ken Vannice LLC	Ken Vannice LLC	I	G
Art Wanuch	Entertainment Electrical Safety Committee of Ontario	Entertainment Electrical Safety Committee of Ontario	P	G
Colin Waters	TMB	TMB	O	DR
Jody Williquette	Electrivers, Inc.	Electrivers, Inc.	O	CP
Richard Wolpert	Union Connector Company (MO)	Union Connector Company	O	CP
Keith S. Woods	Lakhri Impressions Ltd.	IATSE Local 891	P	U
Jiantong Wu	Beijing Special Engineering Design & Research Institute	Beijing Special Engineering Design & Research Institute	O	G

**Key to codes:**

P	principal	CP	custom-market producer
A	alternate	DE	designer
I	individual	DR	dealer/rental company
O	observer	G	general interest
		MP	mass-market producer
		U	user