

# Entertainment Services and Technology Association



## American National Standard E1.14 - 2001 (R2007) Entertainment Technology Recommendations for Inclusions in Fog Equipment Manuals F&S/1999-3006r3

This edition of ANSI E1.14 is a reaffirmation of ANSI E1.14 - 2001, and was approved by the American National Standards Institute on March 7, 2007.

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## **The ESTA Technical Standards Program**

**The ESTA Technical Standards Program** was created to serve the ESTA membership and the entertainment industry in technical standards related matters. The goal of the Program is to take a leading role regarding technology within the entertainment industry by creating recommended practices and standards, monitoring standards issues around the world on behalf of our members, and improving communications and safety within the industry. ESTA works closely with the technical standards efforts of other organizations within our industry including USITT, PLASA, and VPLT as well as representing the interests of ESTA members to ANSI, UL, and the NFPA. The Technical Standards Program is accredited by the American National Standards Institute as Accredited Standards Committee E1, Safety and Compatibility of Entertainment Technical Equipment and Practices.

**The Technical Standards Committee (TSC)** was established by ESTA's Board of Directors to oversee and coordinate the Technical Standards Program. Made up of individuals experienced in standards-making work from throughout our industry, the Committee approves all projects undertaken and assigns them to the appropriate working group. The Technical Standards Committee employs a Technical Standards Manager to coordinate the work of the Committee and its working groups as well as maintain a "Standards Watch" on behalf of members. Working groups include: Camera Cranes, Control Protocols, Electrical Power, Floors, Fog and Smoke, Photometrics, and Rigging.

**ESTA** encourages active participation in the Technical Standards Program. There are several ways to become involved. If you would like to become a member of an existing working group, as have over two hundred people, you must complete an application which is available from the ESTA office. Your application is subject to approval by the working group and you will be required to actively participate in the work of the group. This includes responding to letter ballots and attending meetings. Membership in ESTA is not a requirement. You can also become involved by requesting that the TSC develop a standard or a recommended practice in an area of concern to you.

**The Fog & Smoke Working Group**, which authored this standard, consists of a cross section of entertainment industry professionals representing manufacturers, consultants, dealers, and end-users. ESTA is committed to developing consensus-based standards and recommended practices in an open setting. Future Fog & Smoke Working Group projects will include updating this publication as changes in technology and experience warrant, as well as developing new standards and recommended practices for the benefit of the entertainment industry.

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## **1 Scope**

This standard shall apply to the instruction manuals for fog equipment manufactured for use in the entertainment industry.

## **2 Purpose**

There are several technologies used for the production of fog effects today, with each technology creating a specific type of effect. For every technology there are several manufacturers designing fog-making systems that are unique in and of themselves. In order to facilitate the safe and effective use of fog, the user must have some general knowledge of the technology, have a clear understanding of how to operate the fog making system, and be aware of the potential hazards related to the use of fog, and particularly the system that he is using.

This standard is designed to establish guidelines for manufacturers to provide to the user by way of an instruction manual the necessary information required for the safe and responsible use of their fog equipment. This standard sets minimum requirements and does not limit the amount of additional information that a manufacturer can include in the manual. It is encouraged that the manual developed in accordance with this standard be part of a comprehensive product stewardship program.

## **3 Inclusions**

### **3.1 Introduction**

The introduction shall include a brief explanation of the technology used in the fog making system and shall describe the type of fog that will be created through the proper use of the machine.

#### **3.1.1**

An explanation of how this particular fog making system works shall be given, stressing that it is a fog system designed to work within certain parameters.

#### **3.1.2**

A list of the fluids and/or gases that are recommended by the equipment manufacturer for use in this particular fog equipment shall be included.

### **3.2 Warnings**

Warnings and safeguards shall be listed in order to reduce the potential dangers associated with working with, or around, the fog equipment. Warnings shall include, but not be limited to, the following:

#### **3.2.1**

Areas of extreme temperature

#### **3.2.2**

Electrical shock hazards

#### **3.2.3**

Chemical use precautions