

## Chapter E 540

## MOTION PICTURE PROJECTORS

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## A. GENERAL

**E 540.01 Scope.** This chapter applies to motion picture projectors and associated equipment of the professional and non-professional types.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

## B. EQUIPMENT AND PROJECTORS OF THE PROFESSIONAL TYPE

**E 540.10 Professional projector; definition.** The professional projector employs a 35-millimeter film which is 1 $\frac{1}{8}$  inch wide and has on each edge 5.4 perforations per inch.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 540.11 Enclosure.** The professional type of projector, such as is commonly used in theatres and motion-picture houses, shall be located in an approved enclosure. Such enclosure shall not be considered as a hazardous location as defined in chapter E 500.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 540.12 Motor-driven projectors.** Motor-driven projectors shall be approved for the purpose as an assembly or shall comply with all of the following conditions:

- (1) An approved projector shall be used.
- (2) An approved projector lamp shall be used.
- (3) Motors shall be so designed or guarded as to prevent ignition of film by sparks or arcs.
- (4) Projectors shall be in charge of a qualified operator.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 540.13 Conductor size.** Conductors supplying outlets for arc projectors of the professional type shall not be smaller than No. 8 and shall be of sufficient size for the projector employed. Conductors for incandescent type projectors shall conform to normal wiring standards as provided in section E 210.25.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 540.14 Conductors on lamps and hot equipment.** Asbestos covered conductors type AA or other types of insulated conductors having a maximum operating temperature of 200° C. (392° F.) shall be used on all lamps or other equipment where the ambient temperature at the conductors as installed will exceed 50° C. (122° F.).

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 540.15 Flexible cords.** Cords approved for hard service in table E 400.11 shall be used on portable equipment.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 540.16 Lamp guards.** Incandescent lamps in projection rooms or booths shall be provided with an approved lamp guard unless otherwise protected by noncombustible shades or other enclosures.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 540.17 Location of equipment.** Motor-generator sets, transformers, rectifiers, rheostats, and similar equipment, for the supply or control of current to arc lamps on projectors shall, if practicable, be located in separate rooms. Where placed in the projector room, they shall be so located or guarded that arcs or sparks cannot come in contact with film, and motor-generator sets shall have the commutator end or ends protected as provided in section E 520.48.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 540.18 Construction and ventilation.** It is recommended that the administrative authority having jurisdiction over the construction and ventilation of rooms for professional type projectors refer to the NFPA Standard for the Storage and Handling of Cellulose Nitrate Motion Picture Film (NFPA No. 40).

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 540.19 Equipment prohibited.** Switches, overcurrent devices, or other equipment not normally required or used for projectors, sound reproduction, flood, or other special effect lamps or other equipment shall not be installed in such booths or rooms.

(1) **EXCEPTION:** Remote-control switches for the control of auditorium lights or a switch for the motor operating the curtain at the motion-picture screen.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 540.20 Approval.** Projectors and enclosures for arc or incandescent lamps, rectifiers, transformers, rheostats, and similar equipment, shall be of an approved type.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 540.21 Marking.** Projectors and other equipment as set forth in section E 540.20 shall be marked with the name or trademark of the maker and with the voltage and current for which they are designed.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 540.22 Rewinding, examination and storage of extra films.** It is recommended that the administrative authority having jurisdiction refer to the NFPA Standard for the Storage and Handling of Cellulose Nitrate Motion Picture Film (NFPA No. 40).

*Note:* See sections E 530.51 and E 530.52. Also see section E 530.41 for viewing tables.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**C. NON-PROFESSIONAL TYPE PROJECTORS**

**E 540.30 Definition.** The non-professional projector employs film other than that used on professional type projectors.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 540.31 Booth not required.** Projectors of the non-professional or miniature type, when employing only approved slow-burning (cellulose acetate or equivalent) film, may be operated without a booth.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 540.32 Approval.** Projectors, lamp enclosures, and current-controlling devices and similar devices shall be approved as component parts of the projector equipment.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 540.33 Source of illumination.** The source of illumination shall be a lamp of a type approved for stereopticon use or for motion-picture projection.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 540.34 Marking.** Projectors shall be marked with name or trademark of the maker, with the current and voltage for which they are designed, and for projectors of this type using the standard 35-millimeter film, with the wording "For use with slow-burning films only".

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 540.35 Non-professional film marking.** The slow-burning (cellulose acetate or equivalent) film shall have a permanent distinctive marker for its entire length identifying the manufacturer and the slow-burning character of the film stock.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**D. SOUND RECORDING AND REPRODUCTION**

**E 540.50 Sound recording and reproduction.** Sound recording and reproduction equipment shall comply with chapter E 640. ✓

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.