

See also

810, Part II, which covers the antenna installation for such equipment

810.3, which references Parts I and II of Article 640 as appropriate for wiring requirements (other than for the antenna)

(M) Generators. Generators shall be installed in accordance with 445.10 through 445.12, 445.14 through 445.16, and 445.18. Grounding of portable and vehicle-mounted generators shall be in accordance with 250.34.

(N) Organ Pipes. Additions of pipe organ pipes to an electronic organ shall be in accordance with 650.4 through 650.9.

640.4 Protection of Electrical Equipment. Amplifiers, loudspeakers, and other equipment shall be so located or protected as to guard against environmental exposure or physical damage, such as might result in fire, shock, or personal hazard.

640.5 Access to Electrical Equipment Behind Panels Designed to Allow Access. Access to equipment shall not be denied by an accumulation of wires and cables that prevents removal of panels, including suspended ceiling panels.

640.6 Mechanical Execution of Work.

(A) Installation of Audio Distribution Cables. Cables installed exposed on the surface of ceilings and sidewalls shall be supported in such a manner that the audio distribution cables will not be damaged by normal building use. Such cables shall be secured by straps, staples, cable ties, hangers, or similar fittings designed and installed so as not to damage the cable. The installation shall conform to 300.4 and 300.11(A).

If installed in the hollow space above a suspended, dropped, or similar ceiling, cables of audio systems covered in Article 640 are required to be supported in accordance with 300.11. Without specific instructions permitting the use of the ceiling system support wires as a means to support wiring methods, an independent support system for the cables must be installed. Additional ceiling wires installed to support the audio system wiring are required to be secured in place. Attachment of the additional support wires to the ceiling system and to the building structure above the ceiling provides the secure support required by 300.11(B)(1) and (B)(2). The use of securing hardware such as straps, staples, cable ties, hangers, or other approved means is required, and this hardware must be installed so as not to damage the audio cable. The NEC® does not specify the distance between securing points.

(B) Abandoned Audio Distribution Cables. The accessible portion of abandoned audio distribution cables shall be removed.

(C) Installed Audio Distribution Cable Identified for Future Use.

(1) Cable Identification Means. Cables identified for future use shall be marked with a tag of sufficient durability to withstand the environment involved.

(2) Cable Tag Criteria. Cable tags shall have the following information:

- (1) Date cable was identified for future use
- (2) Date of intended use
- (3) Information related to the intended future use of cable

640.7 Grounding.

(A) General. Wireways and auxiliary gutters shall be connected to an equipment grounding conductor(s), to an equipment bonding jumper, or to the grounded conductor where permitted or required by 250.92(B)(1) or 250.142. Where the wireway or auxiliary gutter does not contain power-supply wires, the equipment grounding conductor shall not be required to be larger than 14 AWG copper or its equivalent. Where the wireway or auxiliary gutter contains power-supply wires, the equipment grounding conductor shall not be smaller than specified in 250.122.

(B) Separately Derived Systems with 60 Volts to Ground. Grounding of separately derived systems with 60 volts to ground shall be in accordance with 647.6.

(C) Isolated Ground Receptacles. Isolated grounding-type receptacles shall be permitted as described in 250.146(D), and for the implementation of other technical power systems in compliance with Article 250. For separately derived systems with 60 volts to ground, the branch-circuit equipment grounding conductor shall be terminated as required in 647.6(B).

Informational Note: See 406.3(E) for grounding-type receptacles and required identification.

The reference to 647.6 provides requirements for grounding separately derived systems operating at 60 volts to ground. These separately derived systems are used for the reduction of electromagnetic noise in audio and video systems.

Section 640.7(B) addresses the proper use of isolated ground receptacles when used with technical power systems of the type that are separately derived systems with 60 volts to ground.

640.8 Grouping of Conductors. Insulated conductors of different systems grouped or bundled so as to be in close physical contact with each other in the same raceway or other enclosure, or in portable cords or cables, shall comply with 300.3(C)(1).

640.9 Wiring Methods.

(A) Wiring to and Between Audio Equipment.

(1) Power Wiring. Wiring and equipment from source of power to and between devices connected to the premises wiring systems shall comply with the requirements of Chapters 1 through 4, except as modified by this article.

(2) Separately Derived Power Systems. Separately derived systems shall comply with the applicable articles of this Code, except as modified by this article. Separately derived systems