

BOOTHS — UNIVERSAL
(INDOOR-OUTDOOR) KS-16797

ELECTRIC WIRING AND GROUNDING REQUIREMENTS

1.00 INTRODUCTION

1.01 This section covers general methods and procedures for providing power service to booth.

1.02 A power service of 110 to 125 volts ac is necessary for operation of blower and illumination of the booth and sign panels.

1.03 The booth is furnished with a 2-lamp fluorescent light fixture equipped with power cord. This power cord and the blower cord plug into a double receptacle on top of ceiling assembly.

- Electrical wiring to booth is terminated on this receptacle.

2.00 GENERAL

2.01 Wiring shall be installed to meet requirements of the National Electrical Code, local governmental regulations, and approved practices and standards of the telephone company.

2.02 Rigid grounding requirements are necessary to ensure de-energizing of electrical circuit if a defect or fault occurs. This is accomplished by connecting all metal parts of the booth electrically to the power-system ground.

2.03 Check the source and continuity of the grounding system to which the booth wiring is to be connected.

2.04 The green or grounding terminal of the power receptacle is connected internally to the mounting lugs. When the receptacle is installed in the booth, a grounding circuit is complete between metal booth and grounding terminal of receptacle.

2.05 A metallic conduit is provided for power entrance at the top left rear of booth.

3.00 WIRING

3.01 No. 14 AWG conductors are used for electrical wiring for the booth. A 15-ampere fuse must be located in the power circuit to the booth.

4.00 GROUNDING

4.01 The metal booth power-grounding requirements are as follows:

(a) If power is supplied to the booth by means of a conduit, electric metallic tubing, or armored cable, the metal enclosure of this wiring is generally adequate as a protective grounding path for the return of accidental fault currents to the power service equipment. To ensure that this path will not be interrupted, it is paralleled by a third No. 14-gauge conductor within the enclosure. This third wire may be bare copper, have green insulation, or be colored green at the ends. Where a portion of this circuit is run overhead, the third conductor is continued through the aerial run by means of a third aerial conductor.

(b) A power-grounding electrode is not required at the booth in outdoor installations when a 3-wire arrangement is used.

(c) If the third conductor has not been provided, and if the booth is located outside the building that supplies its branch circuit, interconnect the power neutral and the protective ground terminals at the receptacle. When this is done, it is necessary to provide a power-

grounding electrode at the booth. The metallic wire conduit connected to the booth may serve as this electrode, provided a length of at least 10 feet of it is buried in permanently moist soil. Otherwise a pipe or ground rod must be provided at the booth and be connected to the booth with No. 6 wire.

4.02 The pipe or rod electrode is driven at least 8 feet into moist earth with the top of the rod or pipe 3 inches below the surface. Use either of the following:

- **Pipe electrode** — steel or iron, not smaller than 3/4-inch diameter, with the outer surface galvanized or otherwise metal coated for corrosion protection. Minimum length, 8 feet.
- **Rod electrode** — steel or iron, not smaller than 5/8-inch diameter. Approved rods of nonferrous materials, or their approved equivalents, shall be no smaller than 1/2-inch diameter. Minimum length, 8 feet.

5.00 BOOTH POWER GROUND WIRE TERMINATION

5.01 When the third wire is provided, connect it on the green terminal of the power receptacle.

5.02 If a driven electrode is used at the booth, strip approximately 4 inches of insulation from the No. 6 wire, insert the bare wire between

booth floor and panel, and connect to bolthead anchoring the right rear corner of the booth.

6.00 MULTIPLE BOOTH INSTALLATIONS

6.01 Adjoining booths should be bonded together for grounding purposes.

6.02 Install power service to end booth and extend to other booth through knockouts provided in roof assembly.

7.00 STATION PROTECTOR GROUNDING

7.01 The ground terminal of the station protector, when located in the booth, is connected to booth ceiling with strap provided. No additional grounding for the protector is required except when all three of the following conditions exist:

- Power system is not of the multi-grounded neutral type.
- Power ground consists of a driven electrode.
- A length of less than 10 feet of the conduit associated with the booth is buried in permanently moist soil.

7.02 Refer to the sections pertaining to station protection for detailed information.