

## TELEPHONE BOOTH

### KS-21716 AIRLIGHT III

#### 1. GENERAL

1.01 This section contains identification, installation, and maintenance information.

1.02 Whenever this section is reissued, the reason for reissue will be listed in this paragraph.

#### 2. IDENTIFICATION

2.01 The KS-21716 booth (Fig. 1) is an indoor/outdoor aluminum and glass telephone booth designed for single or multiple side-by-side installations. It is available in Polished Aluminum (List 60) and Gold (List 61).

2.02 This booth is designed for stand-up use, wheelchair customers, and customers of small stature.

2.03 The overall dimension of this booth is:

- Height—83-1/8 inches
- Width—33-1/2 inches
- Depth—33-1/2 inches (front sign projects 1-1/2 inches beyond this dimension)

#### PANELS

2.04 Side, rear, and bottom panels are available as described in Table A. Sign panels are available as described in Table B.

#### ILLUMINATION AND VENTILATION

2.05 Unless otherwise specified, the booth is illuminated by a KS-19207, List 7 light fixture which also illuminates the signs. Refer to Section 508-820-100.

2.06 Ventilation in top of booth is provided through an opening in the front sign and



Fig. 1—KS-21716 Booth

also through screened louvered panels which may be installed at the sides and rear in place of a sign.

2.07 A booth may be equipped with a KS-19261, List 1 light control unit. In multiple installations, a maximum of five booths may be interconnected and controlled by one light control mounted in the end booth of the row.

#### NOTICE

Not for use or disclosure outside the  
Bell System except under written agreement

SECTION 508-403-100

2.08 Refer to Section 508-825-100 for complete information on the KS-19261, List 1 light control unit.

2.09 In multiple installations, a KS-19580, List 51 receptacle assembly (Fig. 2) must be used in conjunction with a KS-19261, List 1 light control unit.

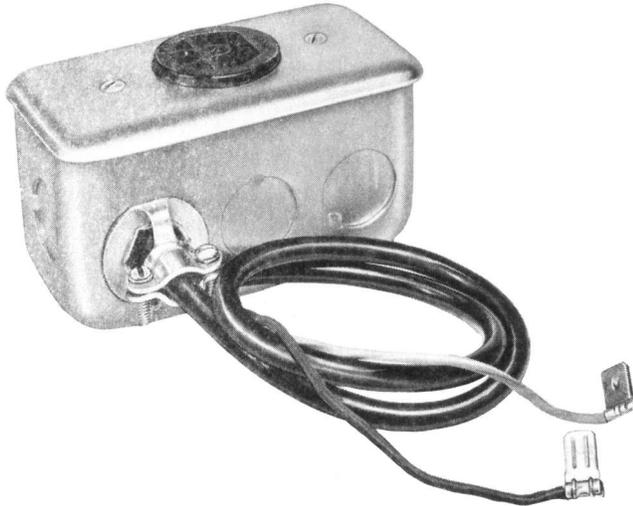


Fig. 2—KS-19580, List 51 Receptacle Assembly

2.10 A mounting bracket (Fig. 3) is provided in the ceiling area for mounting a KS-19580, List 51 receptacle assembly.

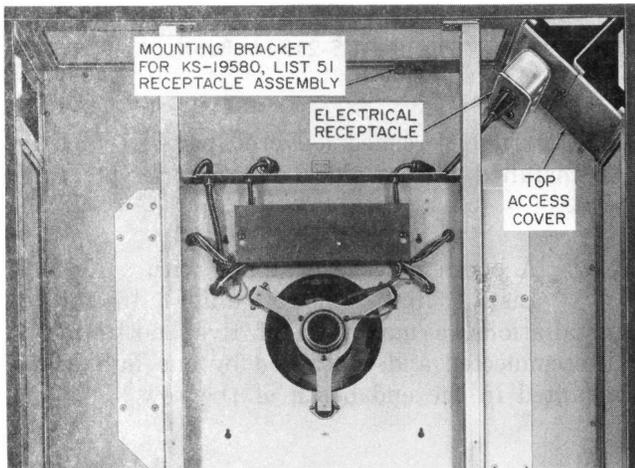


Fig. 3—KS-21716 Booth Ceiling Area

WIRING

Electric Wiring

2.11 Use one of the following.

- (a) **KS-19580, List 30 power cord assembly (Fig. 4):** Used for overhead power.
- (b) **KS-19580, List 31 power cord group (Fig. 5):** Used for ground level entrance where a circuit breaker is not required.
- (c) **KS-19425, List 24 power cable assembly (Fig. 6):** Used to bring power from the KS-19426, List 17 circuit breaker box to the electrical receptacle (Fig. 3) located above the ceiling.



*If a circuit breaker is required, order the following items separately:*

- Hineman Electric Co, No. 0912 circuit breaker, catalog No. 91-106-1
- KS-19426, List 17 circuit breaker box (Fig. 7)
- Two No. 8-32 by 3/8 Phillips RHM screws.

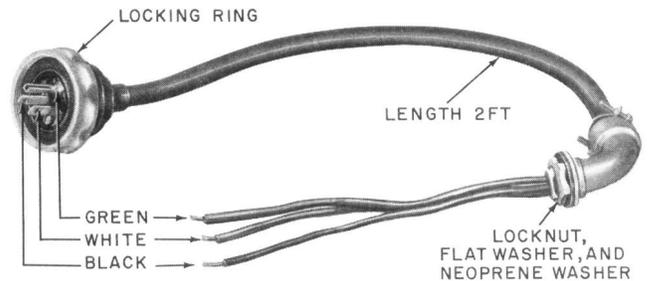


Fig. 4—KS-19580, List 30 Power Cord Assembly

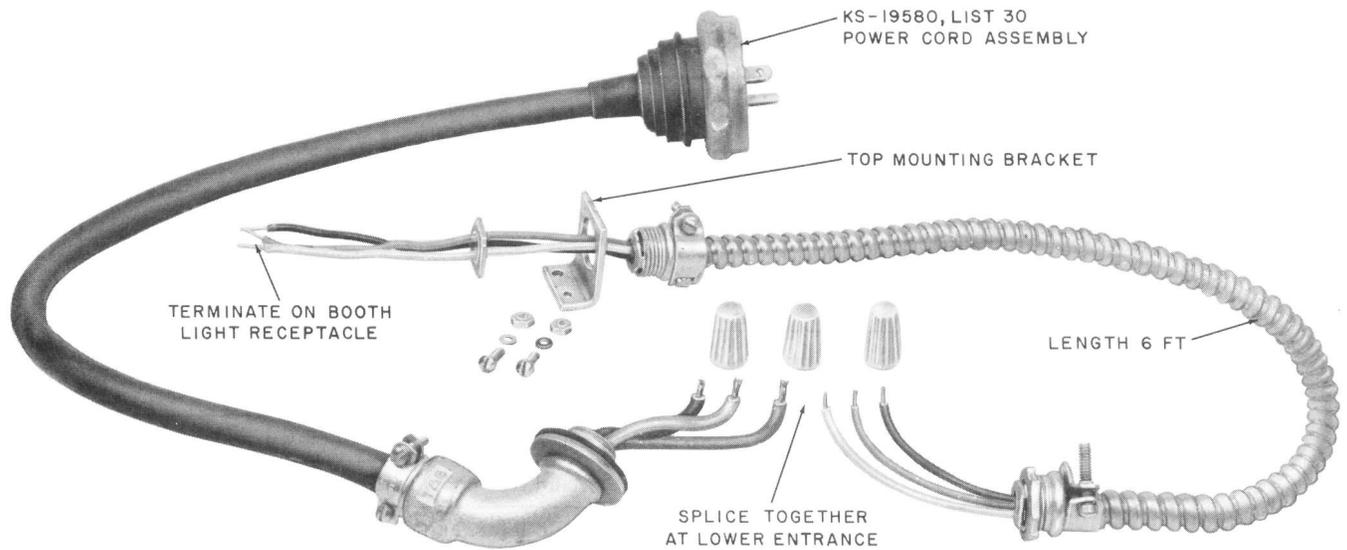


Fig. 5—KS-19580, List 31 Power Cord Assembly

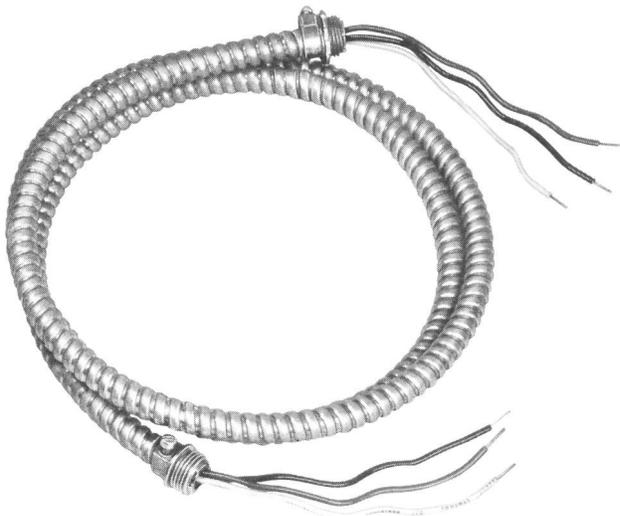


Fig. 6—KS-19425, List 24 Power Cable Assembly

#### Telephone Wiring

2.12 The telephone wire will terminate above the ceiling on a 123A1A protector which is furnished with the booth and located behind the top access cover (Fig. 3).

- The top access cover is equipped with key hole slots for convenient access.

- If required, the protector can be moved down behind the bottom access cover.

2.13 The booth is wired for coin telephone set connections.

#### CARD FRAME

2.14 Booth will accept a KS-19928, List 2 card frame. Refer to Section 508-811-100.

#### DIRECTORY HANGER AND SHELF

2.15 Unless otherwise specified, a KS-19580, List 29 shelf assembly is furnished with each booth (Fig. 8). The List 29 shelf will accept a KS-20030, List 1 or 2 directory hanger; ordered separately.

**Note:** There are two positions under the shelf for installing the directory hanger. It is recommended that the List 1 directory hanger be installed in the rear position for extra clearance. The KS-20030, List 2 should be used only when necessary.

#### FLOOR

2.16 Unless otherwise specified, an aluminum tread floor is furnished.

TABLE A

SIDE, REAR, AND BOTTOM PANELS

SPEC NO.	LIST NO.	DESCRIPTION	REMARKS		
KS-19580	10	Side or Rear Panels, Tempered Glass	7/32-inch thick small panel		
	12		7/32-inch thick large panel		
	32	Side or Rear Aluminum Panels*	Small side or rear panel		
	33		Large side or rear panel		
KS-21716	2	Bottom Aluminum Panels*	Short right side panel		
	3		Solid right side panel		
KS-19580	39		Short rear panel with tie down angle		
	41		Solid rear panel with tie down angle		
	49		Solid left side panel		
	50		Short left side panel		
	90		Porcelain Enamel Panels	Blue	
	91			Large side or rear panel	Gray
	92				Red
	93			Small side or rear panel	Blue
94	Gray				
95	Red				

\*Available in Polished Aluminum (List 60) and Gold (List 61).

**LEVELING DEVICES**

2.17 Adjustable mounting angles are provided to facilitate booth leveling up to 3 inches (Fig. 9). They are also used for bolting the booth to its mounting surface.

**MULTIPLE KITS**

2.18 Refer to Fig. 10.

**ORDERING GUIDE**

2.19 A standard booth is available which can be ordered as a KS-21716, List 1 booth without specifying additional list numbers. It has a List 60 finish and is equipped as follows:

- 1—KS-19580, List 72 Sign Panel
- 3—KS-19580, List 80 Sign Panel
- 3—KS-19580, List 12 Large Side Panels
- 6—KS-19580, List 10 Small Side Panels
- 1—KS-19580, List 39 Bottom Panel with List 60

finish

- 1—KS-19580, List 50 Bottom Panel with List 60 finish
- 1—KS-21716, List 2 Bottom Panel with List 60 finish
- 1—KS-19580, List 29 Shelf Assembly
- 1—KS-19207, List 7 Light Fixture

2.20 Following are examples of special orders and optional equipment:

**Special Order:**

- 1—Booth, Telephone, KS-21716, List 1 equipped with:
  - 1—Group, Power Cord
  - 1—Frame, Card, KS-19928, List 2
  - 1—Control, Light, KS-19261, List 1

**Optional Items:**

- 1—Panel, Red Porcelain, KS-19580, List 92 (Rear panel)

**TABLE B  
SIGN PANELS**

KS-19580 LIST NO.	COLOR		REMARKS
	LETTERS	BACKGROUND	
16	None	Aluminum Solid Panel	Used on sides and rear in place of telephone sign
35		Aluminum Louvered Panel	Used on sides and rear to increase ventilation of booth
72*	White	Blue	Front sign
75	Blue	White	
80*	White	Blue	Rear and side signs
84	Blue	White	
86	None	Blue	Front sign
87		White	
88		Blue	Rear and side signs
89		White	

\* KS-19580, List 72 and List 80 signs are furnished unless otherwise specified.

4—Panel, Red Porcelain, KS-19580, List 95 (1 for middle rear window and 3 for all bottom windows)

1—Assembly, Panel (Louvered) KS-19580, List 35 for rear assembly

### 3. INSTALLATION

**3.01** Booth location should be:

- Within full view of public
- Readily accessible to customer
- Free of such hazards as broken or uneven pavements
- Spaced with a minimum clearance of 6 inches from property lines and buildings
- Placed with no step-up but still maintain proper drainage.

**3.02** The KS-21716 booth requires anchoring at all installations.

**3.03** When necessary to provide a concrete base, a KS-19580, List 28 foundation template (Fig. 11) is used. Install the template as follows:

- (a) Prepare a form 40 inches square with an inside depth of 10 inches (Fig. 12).
- (b) Tamp 6 inches of cinders or gravel in the bottom of form.
- (c) Position the template in the form on wooden blocks so that the top of four mounting inserts will be flush with concrete base as shown in Fig. 12.



***Nail holes are provided in the four corners of the template for fastening the wooden blocks. Use the blocks to level and support the template at the proper height.***

- (d) If underground power and telephone wires are to be used, provide for holes in the concrete base at the positions of corresponding holes in the template.

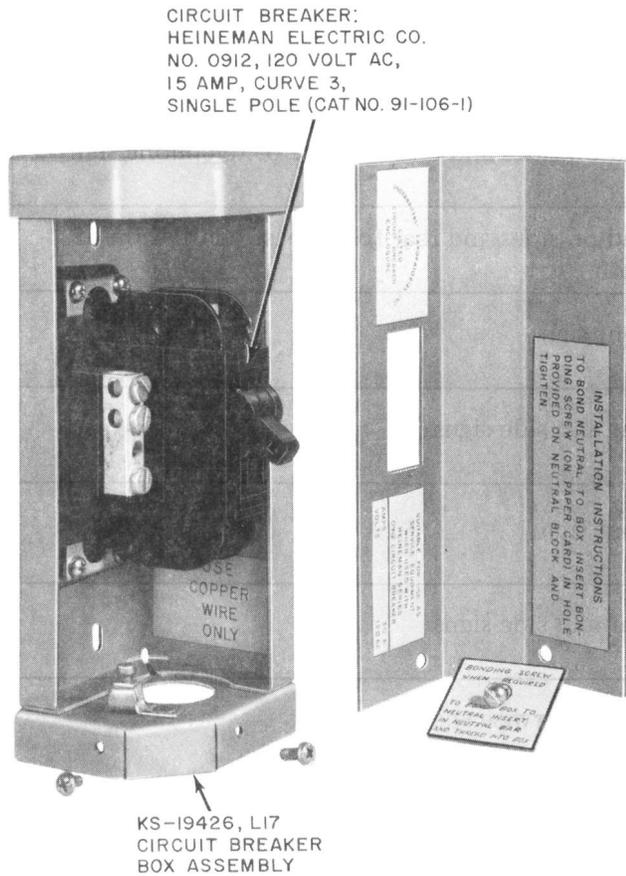


Fig. 7—Circuit Breaker and Box Assembly



*Do not remove screw plugs from booth mounting inserts until booth is installed. Their sole purpose is to prevent dirt from filling mounting holes.*

- (e) Pour concrete around the template to fill the form.
- (f) For multiple booth installations, where no separation between booths is required, fasten adjacent templates together with two No. 10-32 by 1/2 RHM screws and two No. 10 hex nuts.
- (g) For multiple booth installations, where separation of booths is required, fasten adjacent templates together with steel straps fabricated locally and No. 8 sheet metal screws.
- (h) For each additional booth, lengthen the form by approximately 33-1/2 inches.

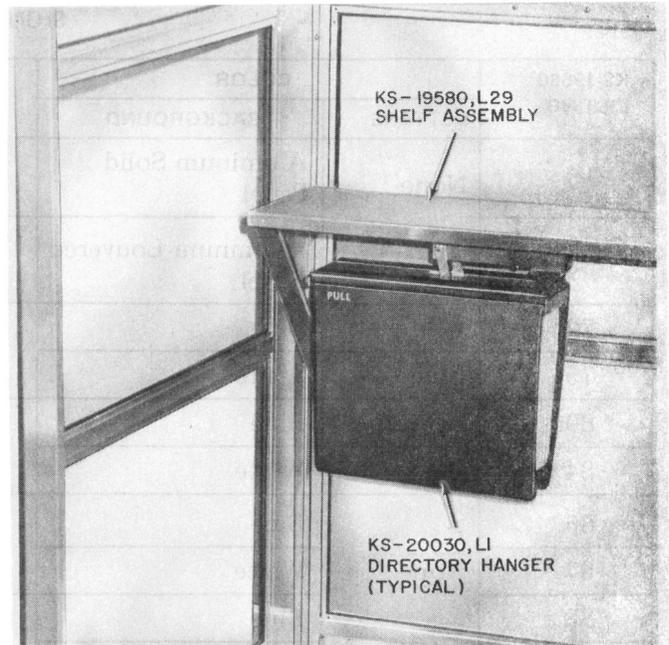


Fig. 8—KS-19580, List 29 Shelf Assembly with KS-20030, List 1 Directory Hanger (Typical)

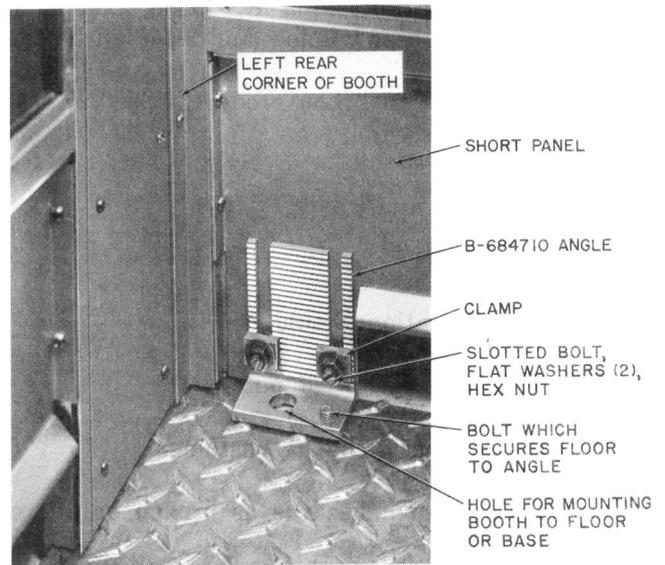


Fig. 9—Anchor Bracket and Leveling Device

## INSTALLATION OF BOOTH

### 3.04 Secure booth as follows:

- (a) If a KS-19580, List 28 foundation template is used, remove insert plugs from template

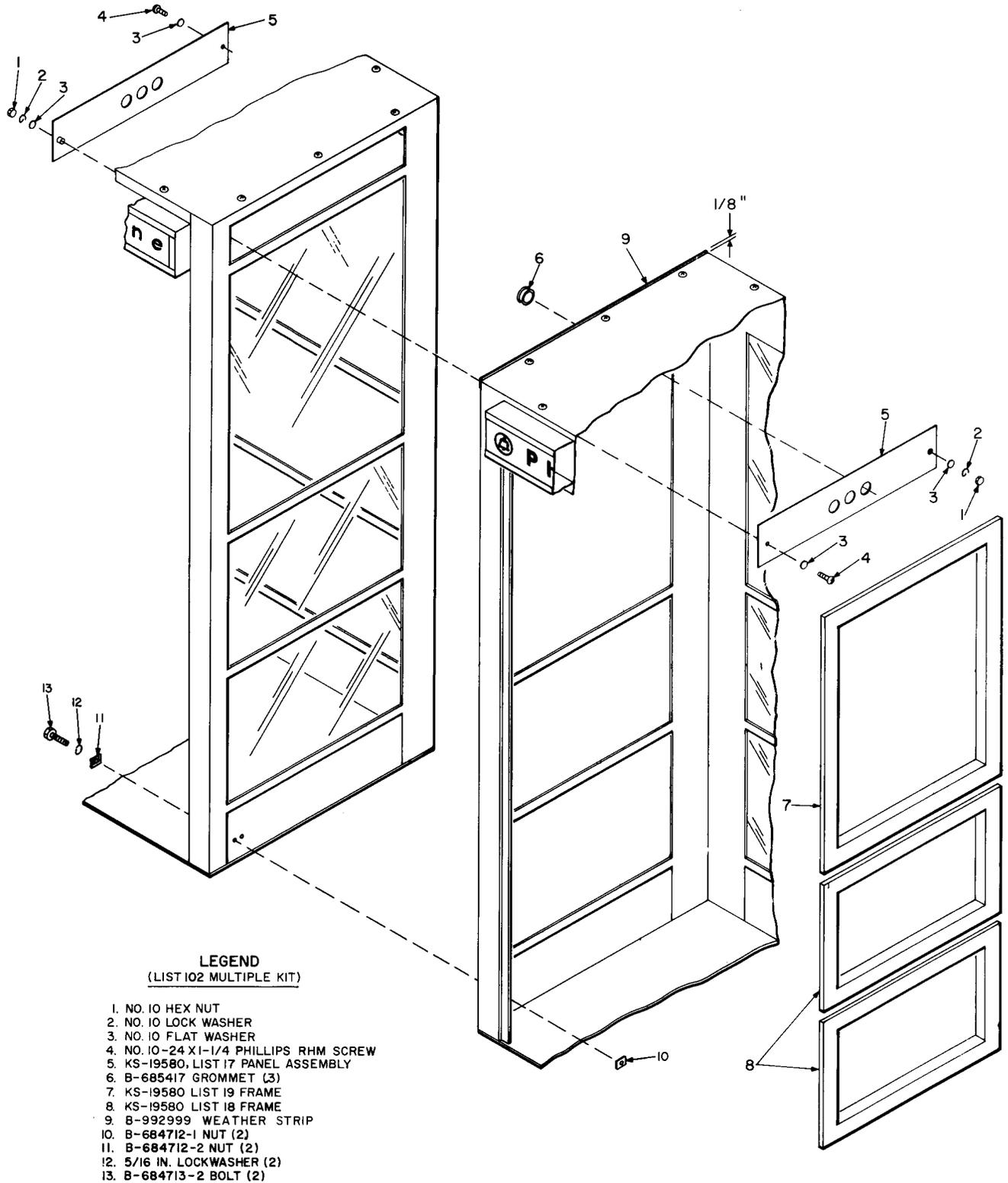


Fig. 10—KS-19580, List 102 Multiple Kit

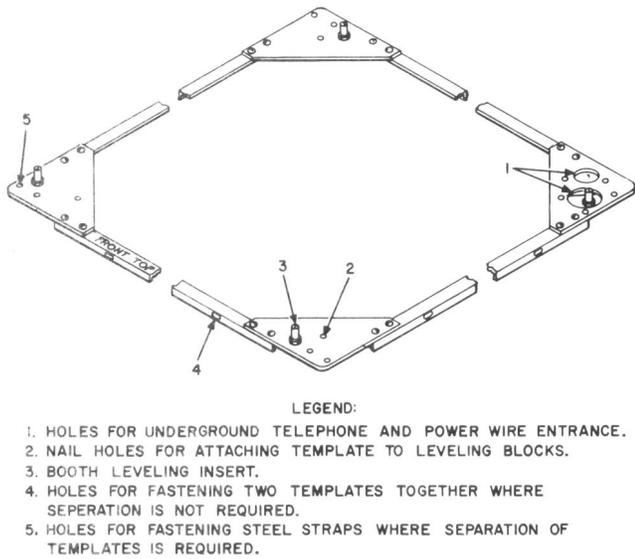


Fig. 11—KS-19580, List 28 Foundation Template

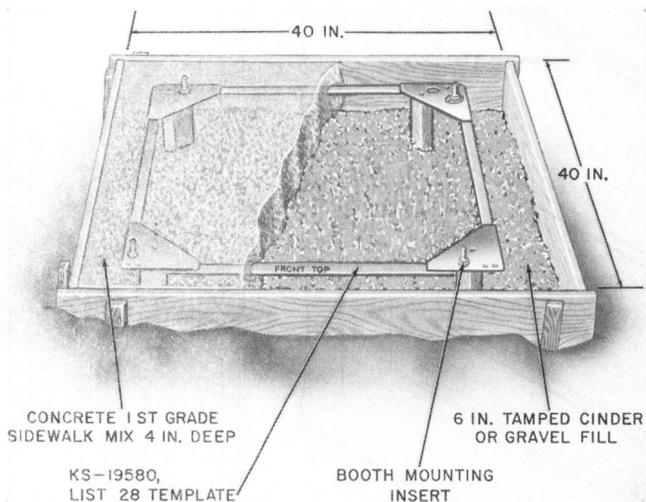


Fig. 12—Concrete Base Preparation with KS-19580, List 28 Template

and secure anchor brackets (Fig. 9) of booth to template using four 3/8-16 by 1-1/4 hex head bolts, four 3/8-inch lockwashers, and four 3/8-inch flatwashers.

(b) If a KS-19580, List 28 foundation template is not used, and the booth is to be mounted on concrete, perform the following operations:

- (1) Mark the locations for four mounting holes.
- (2) Drill four 5/8-inch diameter holes to accept 3/8-inch machine bolt anchors for bolts.
- (3) Install the fasteners.
- (4) Secure anchor brackets of booth to bolt anchors using four 3/8-16 (length required) hex head bolts, four 3/8-inch lockwashers, and four 3/8-inch flatwashers.

(c) If booth is to be mounted on a wooden floor, perform the following operations:

- (1) Mark the location for four mounting holes.
- (2) Drill four lead holes to accommodate 5/16 by 2-1/2 inch lag screws.
- (3) Secure booth to floor using the four 5/16 by 2-1/2 inch lag screws, four 5/16-inch lockwashers, and four 5/16-inch flatwashers.

(d) Adjust the anchor brackets (Fig. 9) if necessary, and ensure that the booth is level.

## TELEPHONE WIRING

### First Attachment

3.05 Attach drop wire hook (Fig. 13) or corner bracket (Fig. 14) (whichever is required) on right rear column adjacent to the entrance hole as follows.

#### A. Drop Wire Hook

- (1) Secure drop wire hook (Fig. 13) to clinch nut (provided with booth) using one 1/4-20 by 3/4 FHM screw, one 1/4-inch flatwasher, and one 1/4-inch lockwasher.

**B. Corner Bracket**

- (1) Secure the corner bracket (Fig. 14) to the threaded clinch nut using one 1/4-20 by 3/4 Phillips RHM screw.
- (2) Using the bracket as a template, drill a clearance hole for another 1/4-inch screw.
- (3) Further secure the bracket to the booth using one 1/4-20 by 3/4 Phillips RHM screw, one 1/4-inch flatwasher, one 1/4-inch lockwasher, and one 1/4-inch hex nut.

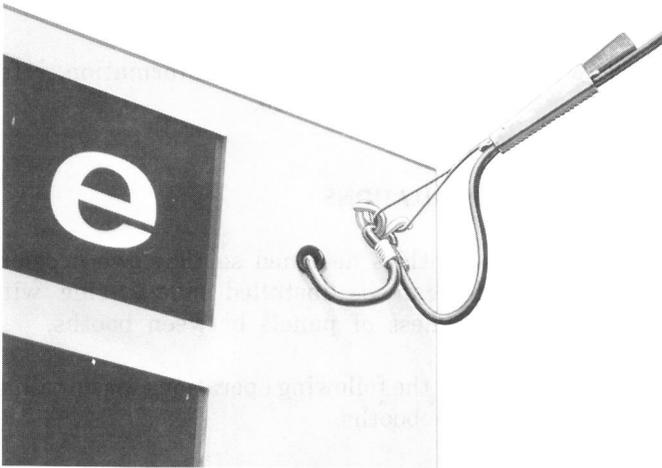


Fig. 13—Drop Wire Hook for First Attachment

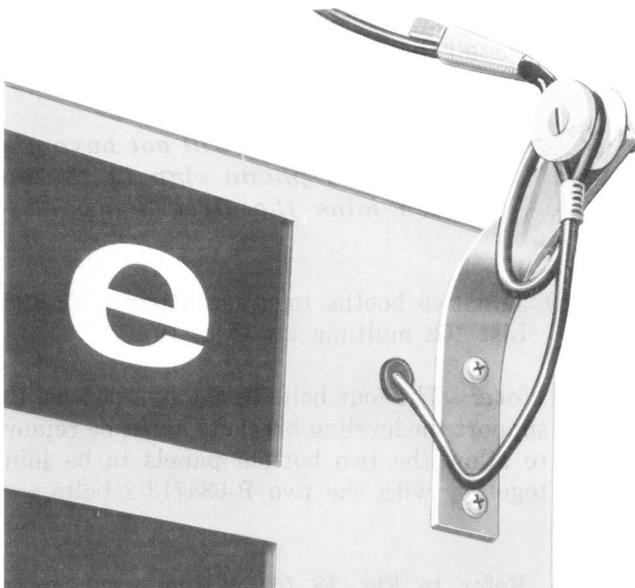


Fig. 14—Corner Bracket for First Attachment

**Drop Wire**

- 3.06** Telephone wire entrance holes are located in the following locations:
- Top of right-side column
  - Bottom of right-side column
  - Through metallic conduit to holes provided in the right-rear corner of the booth floor.
- 3.07** Feed drop wire through entrance hole and terminate on 123A1A station protector (see 3.14).

**ELECTRICAL SERVICE AND GROUNDING****Wiring**

- 3.08** Power wire entrance holes are located in the following locations:
- Top of right-rear column
  - Bottom of right-rear column
  - Through metallic conduit to holes provided in the right-rear corner of the booth floor.
- 3.09** Refer to 2.11 for available cords and Fig. 15 and 16 for their usage.

**Circuit Breaker**

- 3.10** If a circuit breaker is required, order parts per 2.11 and install as follows.
- (1) Remove corner panel below coin telephone set to make work area accessible (Fig. 17).
- Note:** A mounting bracket is provided to mount the circuit breaker.
- (2) Install the circuit breaker box using two No. 3-32 by 3/8 Phillips RHM screws.
  - (3) Install circuit breaker using hardware furnished.

- 3.11** Feed BX cable down through left channel and connect BX cable with connector into top of circuit breaker box assembly. Conduit or steel tubing may or may not be connected into bottom of circuit breaker box when underground feed is used.

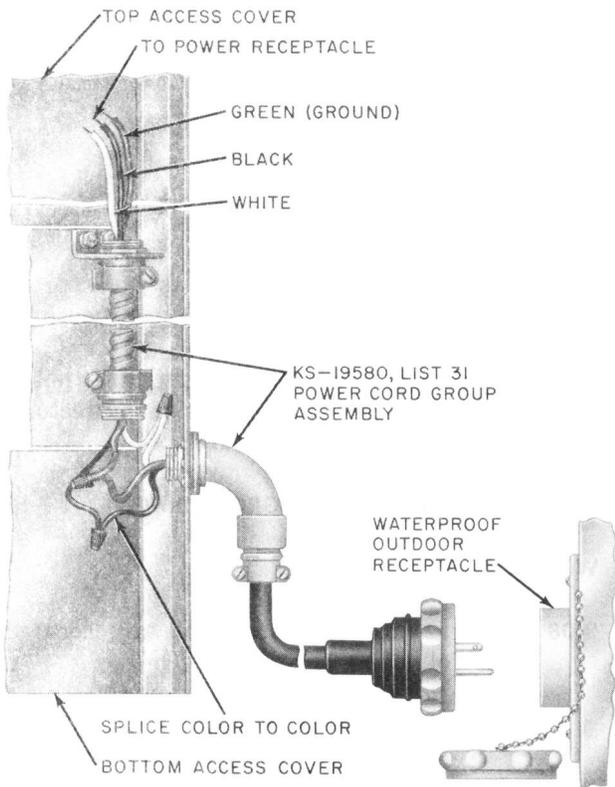


Fig. 15—KS-19580, List 31 Power Cord Group Assembly for Ground Level Entrance

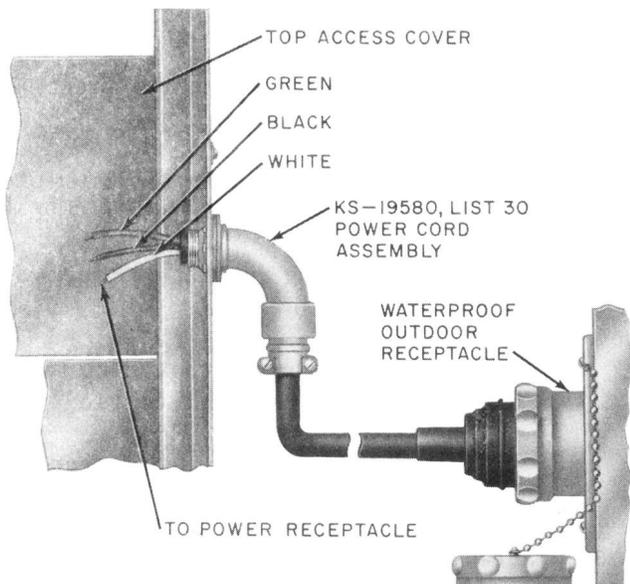


Fig. 16—KS-19580, List 30 Power Cord Assembly for Overhead Entrance

3.12 Complete connections at outlet box in top of booth. Complete wiring connections to circuit breaker.

3.13 Replace cover on circuit breaker box and replace corner panel.

**Grounding**

3.14 Ensure that the ground terminal of the station protector is connected to the booth with bonding wire provided.

3.15 In multiple installations, bond the booths together for grounding purposes.

3.16 For additional grounding information, refer to Section 508-100-100.

**MULTIPLE INSTALLATIONS**

3.17 This booth is designed so that two or more booths can be installed side-by-side with only one thickness of panels between booths.

3.18 Perform the following operations for installing multiple booths.

- (a) Install the first booth in the same manner outlined in 3.04.
- (b) Install adhesive backing weather strip on second booth per Fig. 10.
- (c) Install the second booth adjacent to the first booth.



*The second booth will not have glass panels and phone sign in the side which joins the first booth.*

- (d) Join two booths together using a KS-19580 List 102 multiple kit (Fig. 10).

**Note:** The four bolts in the two booths, that support the leveling brackets, must be removed to allow the two bottom panels to be joined together with the two B-684713-2 bolts.

- (e) Refer to Fig. 18 for wiring arrangements of multiple installations.

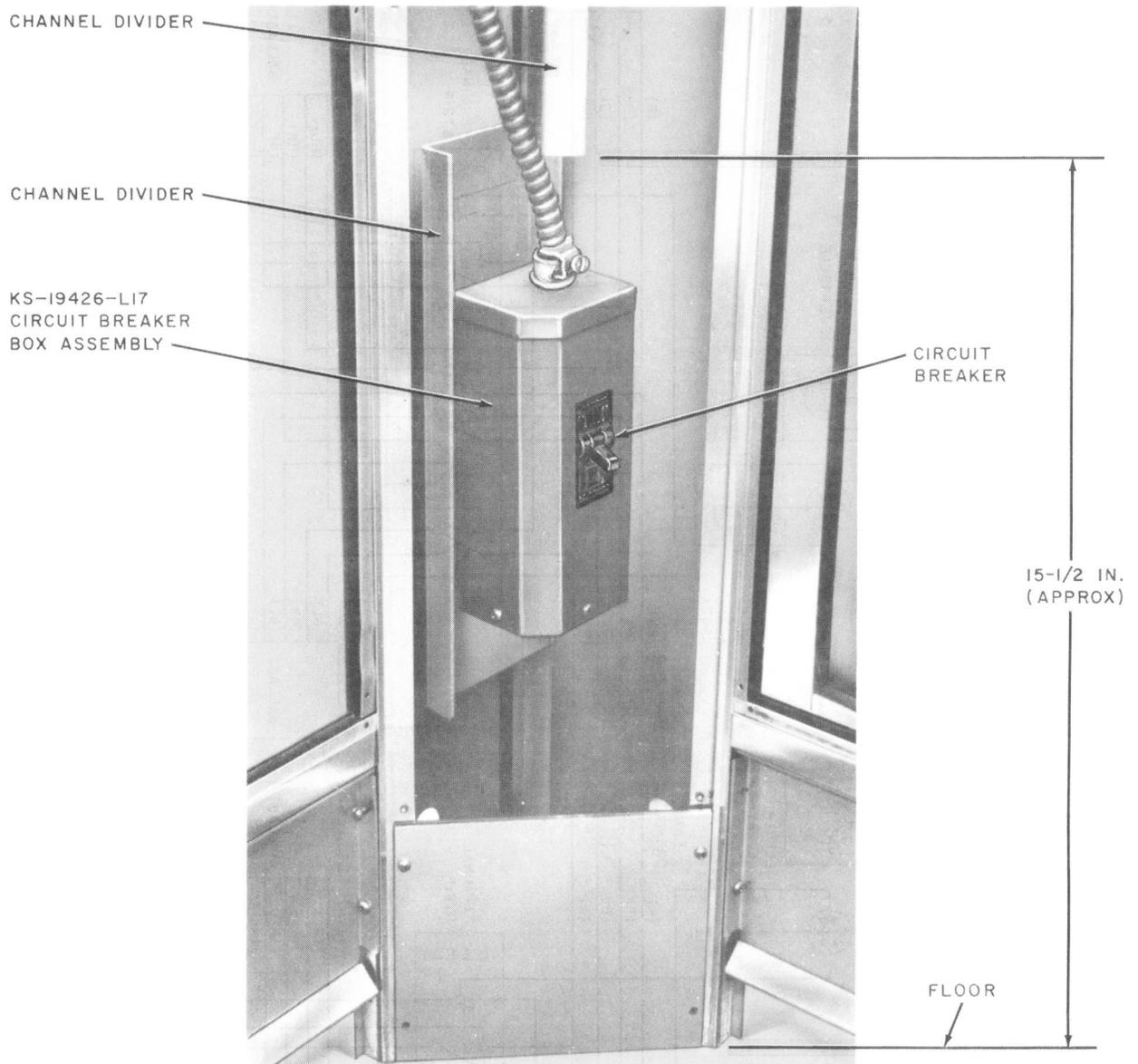
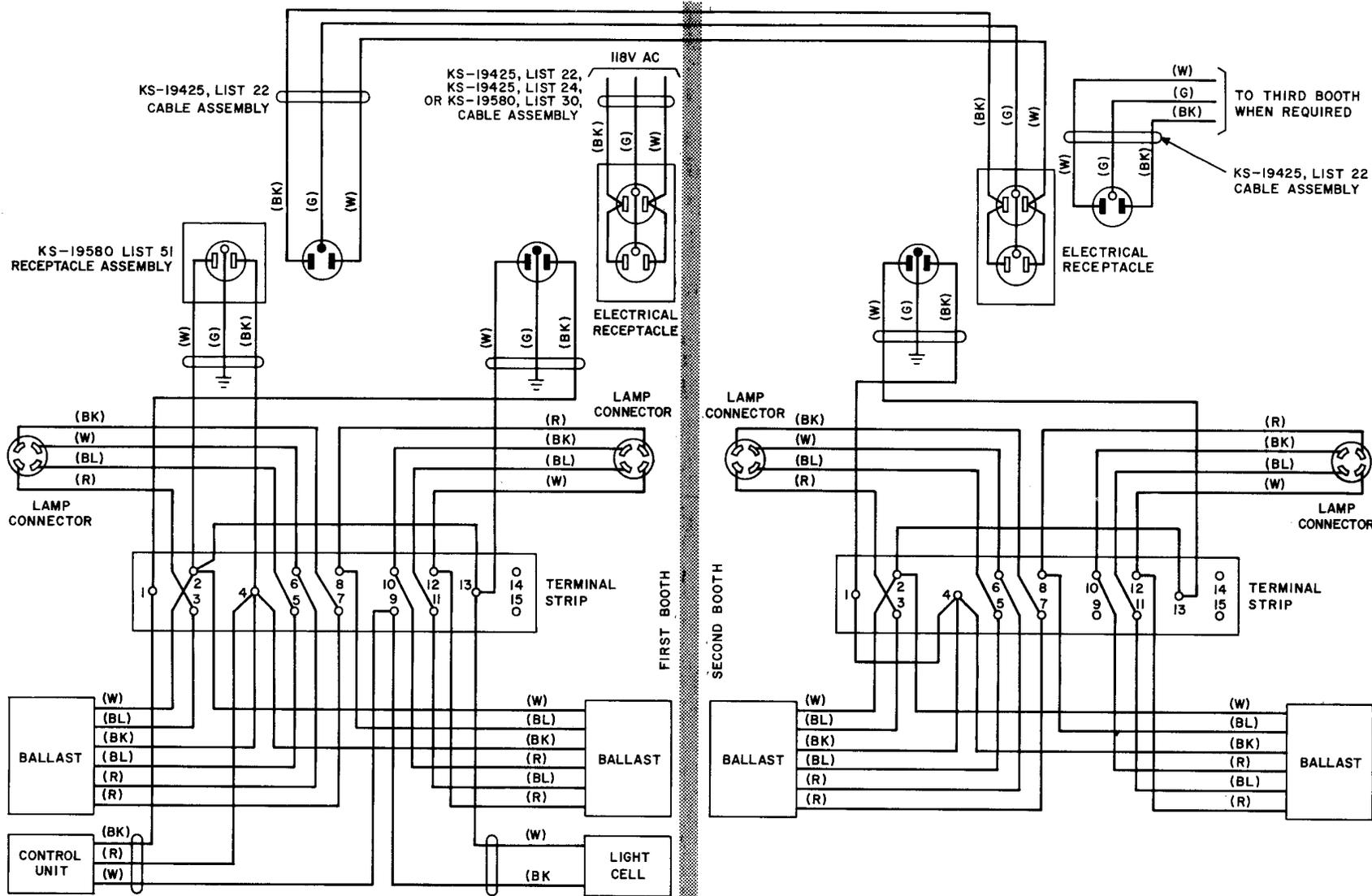


Fig. 17—KS-19426, List 17 Circuit Breaker Box Assembly, Installed

**4. MAINTENANCE**

**BOOTH CHECK POINTS**

- Safe approach to booth (have dangerous conditions corrected)
- Appearance of booth
- Electrical grounding
- Panels and signs
- Booth lighting
- Directories and binders
- Dome and lights
- Security of booth anchorage
- Loose screws and bolts



NOTE:

FOR MULTIPLE INSTALLATIONS USING KS-19207, LIST 7 UNITS, AND USING A KS-19261 LIGHT CONTROL UNIT (MAXIMUM OF FIVE BOOTHS FOR EACH CONTROL UNIT), REMOVE THE STRAP WIRE FROM TERMINAL STRIP TERMINALS 1 AND 4 IN FIRST BOOTH. INSTALL A KS-19580, LIST 51 RECEPTACLE ASSEMBLY IN THE FIRST BOOTH. CONNECT ELECTRICAL RECEPTACLE OF SECOND BOOTH TO LIST 51 RECEPTACLE OF FIRST BOOTH USING KS-19425, LIST 22 CABLE ASSEMBLY. CONNECT ELECTRICAL RECEPTACLE OF THIRD, FOURTH, AND FIFTH BOOTHS TO ELECTRICAL RECEPTACLE OF PREVIOUS BOOTH USING KS-19425, LIST 22 CABLE ASSEMBLY.

Fig. 18—Wiring Diagram of Multiple Installation

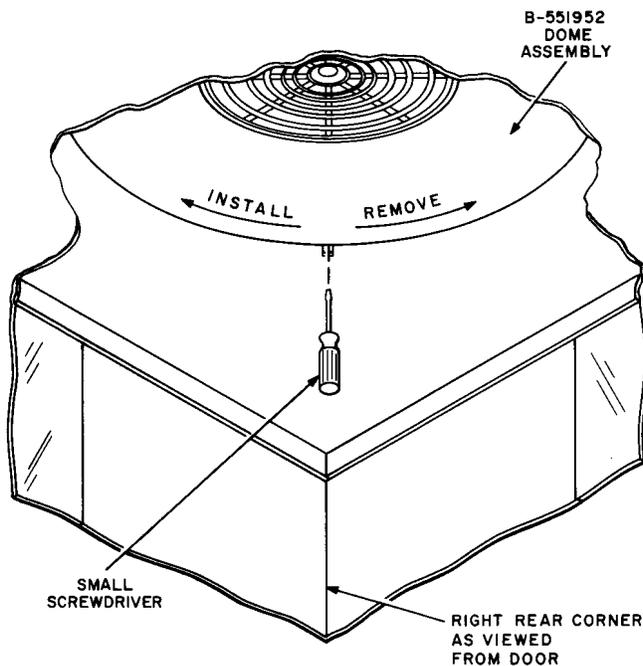
- Shelf assemblies
- Power cords.

#### DOME ASSEMBLY



**Use eye protection when removing the dome assembly.**

**4.01** The B-551952 dome assembly must be removed to make the light assembly accessible. Do this in accordance with Fig. 19.



#### NOTES:

1. FOR REMOVAL, INSERT SMALL SCREWDRIVER THROUGH SLOT IN CEILING, DEPRESS DETENT SPRING, AND TURN DOME ASSEMBLY COUNTERCLOCKWISE.
2. FOR INSTALLATION, PLACE DOME ASSEMBLY IN CEILING AND TURN IT CLOCKWISE UNTIL DETENT SPRING ENGAGES AND LOCKS DOME.

**Fig. 19—Method of Removing Dome Assembly**

**4.02** Replace dome assemblies which do not meet company standards.

#### LIGHT FIXTURE



**Use eye protection when handling fluorescent lamps. Before making any repairs or replacements in electrical equipment, disconnect**

**plug or turn the service switch off and verify that circuit is dead by checking with an approved voltmeter.**

**4.03** Each unit is equipped with two fluorescent Circline 40-watt cool white lamps.

**4.04** When ballast shows signs of leaking compound, replace the complete KS-19207 unit per Section 508-820-100.

#### PANEL REPLACEMENT

##### Side and Rear Panels

**Warning:** Wear gloves and eye protection when handling glass panels to prevent personal injury. Use care when handling tempered glass. Nicks or scratches will damage the glass and may cause it to shatter. Do not allow metal tools to come in contact with edge of tempered glass. Before installation, examine glass for nicks or chips along edges. If such defects are apparent, do not use this glass.

**4.05** Replace those panels which are broken or which will not meet local telephone company standards. Refer to Table A for available panels.

**4.06** Booth panels and signs are held in place by four interlocking retaining strips. They are inserted in sequence as shown in Fig. 20. The No. 4 strip is rippled and is held in place by interface friction.

**4.07** Replace panels as follows:

- (1) Remove No. 4 locking strip.
- (2) Remove retaining strips No. 2 and 3.
- (3) Remove retaining strip No. 1.
- (4) Remove panel and rubber glazing strip.
- (5) Apply rubber glazing strip to replacement panel.
- (6) Insert panel into frame with the beaded edge of glazing strip on the outside.

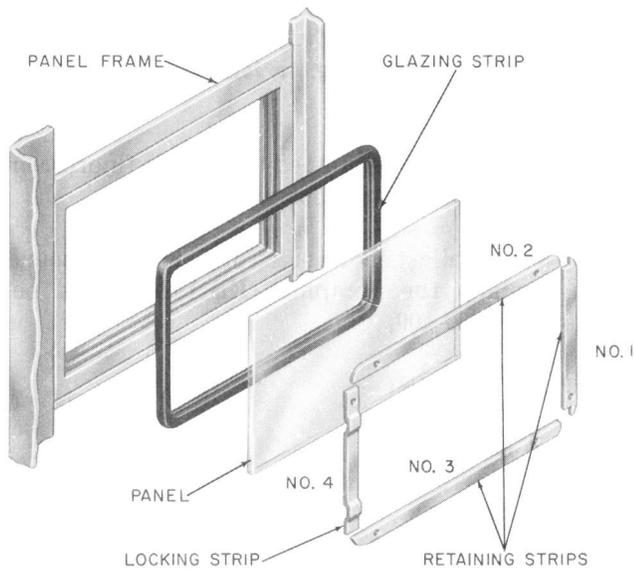


Fig. 20—Assembly of Side or Rear Panels

- (7) Replace retaining strips in sequence as shown in Fig. 20.

**Bottom Panels**

4.08 Replace those panels which are broken or which will not meet local telephone company standards. Refer to Table A for available panels.

4.09 To remove panels, remove Phillips RH screws (eight for short panel and ten for solid panel).



*The rear bottom panels are equipped with a mounting bracket and leveling device. When ordering replacement panels for the rear, and a mounting bracket angle (B-684710) is not needed, the following numbers may be used.*

- KS-19580, List 49—Solid Panel
- KS-19580, List 50—Short Panel.

**PHONE SIGNS**

4.10 The front sign may be removed as follows:

- (a) Remove four self-tapping screws and the top metal retainer which secures the sign.

- (b) Slide the sign up and out of the enclosure assembly.

- (c) Use reverse procedure for installing.



**Roof must be removed before side and rear sign panels can be removed. See 4.19 and 4.20.**

4.11 After roof is removed, the side and rear signs are removed in the same manner as the side panels (see 4.07 and Fig. 20).

4.12 Replace signs which are broken or which will not meet local company standards. Refer to Table B for available signs.

**DIRECTORIES AND BINDERS**

4.13 Directory binder rods or hinge fasteners shall not be broken or distorted to the extent that directories are not capable of being held securely in the binder. Hinges shall not be so bent, burred, or distorted as to obstruct the free passage of hinge fasteners or prevent smooth operation of covers.

4.14 Binder locking devices shall operate freely and lock securely. Adjustable backplates shall be in good condition.

**PROTECTOR**

4.15 The protector is mounted on the access cover in the top-right rear corner of booth (Fig. 21).

4.16 The booth is equipped with a bonding wire at each of the access covers. Ensure that this wire is secured to the booth and protector.

4.17 If the bonding wire becomes broken, replace with copper or aluminum wire no smaller than No. 14 gauge.

**FLOOR**

4.18 If a booth is equipped with an abrasive-clad floor, the finish can be restored with the use of Goodyear Griptred flooring and protective coating, dark gray 592-7005 or equivalent. This can be applied with an ordinary paint brush.

**TABLE C**  
**REPLACEMENT PARTS**

NAME	PART NO. LIST NO., OR DESCRIPTION	REMARKS
Angle	B-994924	Adjustable mounting bracket in right front corner
	B-684710	Adjustable mounting bracked in left and right rear corners
	B-684711	Adjustable mounting bracket in left front corner
Bracket	B-994165	Holds dome in ceiling assembly
Cover Assembly	B-685414-1	123A1A protector access cover
Dome Assembly	B-551952	Circular lens and ventilator under light fixture
Enclosure Assembly	B-685376	Encloses front sign
Floor	B-684719-1	Tread plate
Grommet	B-684716	Used at telephone wire entrance holes
Lamp	40 Watt-Circline cool white	Used in KS-19207 light unit
Nut	B-684712-1	Used in conjunction with mounting bracket angles
	B-684712-2	
Plug	Fastex No. 207-560401-00-3102	Plug button for plugging power wire entrance holes
	Fastex No. 207-440401-00-0667	Plug button for plugging light-control entrance hole
Retainer	B-562371	Use with B-562370 locking spring
Roof Assembly	B-651303	
Spring	B-562370	Locks dome in place
Strip, Glazing	B-685410-1	Side or rear sign
	B-685410-2	Side and rear glass panels (large)
	B-685410-3	Side and rear glass panels (small)
	B-685411-1	Multiple installation sign panel assembly
	B-685411-2	Aluminum or porcelain type panels (large)
	B-685411-3	Aluminum or porcelain type panels (small)
	B-685410-5	Front sign

TABLE C (Cont)

REPLACEMENT PARTS

NAME	PART NO. LIST NO., OR DESCRIPTION	REMARKS
Strip, Retaining	B-685372-4	Either side of large side panels
	B-685372-5	Locking strip for large side panels
	B-685372-6	Either side of small side panels
	B-685372-7	Top of small side panels, large side panels, or side and rear phone signs
	B-685372-8	Locking strip for small side panels
	B-685372-9	Bottom of small side panels, large side panels, or side and rear phone signs
	B-685372-10	Either side of phone signs (front and rear)
	B-685372-11	Locking strip for phone signs
Strip, Rubber	3M Company Pressure sensitive tape No. 4508, 1/8-inch thick, 3/4-inch wide, black vinyl foam (or equivalent)	Adhesive backed roof gaskets*

\*Roof gaskets should be checked for damage each time roof is removed.

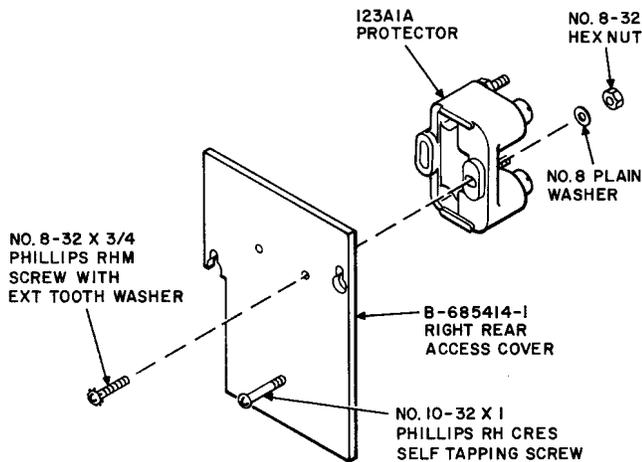


Fig. 21—Assembly of 123A1A Protector on Right Rear Access Cover

ROOF

4.19 If it becomes necessary to remove the roof, remove twelve 8-32 by 5/8 Phillips RH screws and lift off.

4.20 There are four adhesive backed rubber strips along the booth edge under the roof. Check strips for damage each time roof is removed. Replace strips as necessary.

- Strips are 3M Company single coated tape No. 4508 pressure sensitive, 1/8-inch thick, 3/4-inch wide, black vinyl foam (or equivalent).

REPLACEMENT PARTS

4.21 The parts listed in Table C may be ordered as necessary. Refer to Tables A and B for panels and signs.

CLEANING

4.22 Clean booth as directed in Section 508-100-101.