

SWITCHBOARD LAMPS

METHOD OF PLACING

1. GENERAL

1.01 This section describes methods of placing No. 2 and similar type switchboard lamps in order to obtain such increase or decrease in the effective illumination as is afforded by variation of the position of the lamps in their sockets.

1.02 This section is reissued to revise the information covering the use of Lucite lamp caps. Detailed reasons for reissue will be found at the end of the section.

1.03 The standard lamp socket mountings used with No. 2 and similar type switchboard lamps are so designed that when a lamp is fully inserted (the base of the lamp against the base of the socket) there is a considerable clearance between the tip of the lamp and the back surface of the lamp cap or designation strip. When lamps are placed well down in their sockets, there is a large reduction in their effective illumination, as shown below.

DISTANCE BETWEEN TIP OF LAMP AND REAR OF LAMP CAP (INCH)	EFFECTIVE ILLUMINATION PER CENT
0	100
1/16	58
1/8	40
3/16	28
1/4	20

1.04 When placing lamps, consideration shall be given to securing the maximum brilliance best suited to existing conditions. In determining the effective illumination desired, the depth each lamp is placed in its socket shall be governed by the brilliance of the particular type of lamp, the color and translucence of the lamp cap and lighting conditions on the face of the switchboard. It is desirable that adjacent lamps associated with circuits of the same kind be of approximately the same brilliance.

1.05 In cases where sufficient effective illumination cannot be obtained by positioning the lamp, considerable improvement may be obtainable by selection of lamp caps of the same color having greater translucence.

1.06 When acting in response to a report of a dim switchboard lamp or when following the procedures of this section for any other reason, see that each lamp and lamp cap is clean and free from dust prior to installation.

2. LIST OF TOOLS

CODE OR SPEC NO. TOOLS	DESCRIPTION
553A	Lamp Extractor
319B	Lamp Cap Extractor (See 3.07)
KS-6320	Orange Stick

3. METHOD

Placing Lamps for Maximum Effective Illumination

3.01 *Mountings Equipped with Glass Lamp*

Caps: With the types of lamp socket mountings in general use, partially insert the lamp into its socket. Place the lamp cap over the lamp and push the lamp and lamp cap firmly into position. In so doing, the tip of the lamp remains in contact with the cap.

Note: It is important that the cap be firmly seated, otherwise, lamps and lamp caps are more apt to be broken if struck by plugs. If, in any particular location an appreciable amount of lamp breakage seems to have resulted from this cause, a slight clearance should be left between the lamp and cap. Provision of the necessary clearance may be afforded if the lamp is first set in position by

using a cap, the back surface of which is covered with paper (or other material), of suitable thickness and the regular lamp cap is then substituted for the one used in placing the lamp.

3.02 Combined Lamp Socket Mounting and Designation Strip: Insert the lamp into its socket far enough so that the tip of the lamp will be close to the designation strip when the latter is in position.

3.03 No. 8AW Lamp Cap Used with No. 93A Designation Strip: Since the metallic shell of the No. 8AW lamp cap projects relatively deeply into the lamp socket mounting, contact between the lamp terminals and this shell must be avoided. It is therefore necessary, where this type of cap is used, to insert the lamps far enough to insure avoidance of such contact.

3.04 Mountings Equipped with Lucite Lamp Caps: When using Lucite lamp caps, the procedure in 3.01 cannot be followed due to the concaved inner surface of the cap. To insure electrical contact, insert the lamp flush with the front of the strip or lamp socket before placing the cap.

3.05 Use of Lucite Lamp Caps in Central Office Switchboards: These caps may be damaged and their translucence impaired by heat dissipated from high wattage lamps. If damage to these caps is evident, it is an indication that glass caps should be installed in order to withstand the heat from the lamps.

3.06 Use of Lucite Lamp Caps in PBX Switchboard: PBX switchboards may be provided with Lucite lamp caps as follows.

(a) **507-type Switchboards:** Lucite lamp caps may be used in all lamp appearances.

(b) **Cord-type Switchboards:** Lucite lamp caps may be used only in supervisory lamp appearances in all cord-type switchboards except the 606- and 607-type, where glass caps should be used.

3.07 Use of No. 319B Lamp Cap Extractor With Lucite Lamp Caps: Due to the increased height of the lenses in the Lucite lamp caps, there may not be sufficient internal clearance in all No. 319B lamp cap extractors to allow them to grasp Lucite lamp caps. It is suggested that the existing No. 319B lamp cap extractors, particularly those with worn tips, be modified locally by grinding the jaws to provide the needed clearance.

Placing Lamps for Other than Maximum Effective Illumination

3.08 In normal cases where the maximum obtainable effective illumination is not desired or where the requirements are not critical, insert the lamp into its socket and push it into position with the thumb.

3.09 For those cases where less illumination is desired than would be obtained under the conditions of 3.08, push the lamp further into its socket with the KS-6320 orange stick.

REASONS FOR REISSUE

1. To add the information covering the use of Lucite lamp caps in central office switchboards (3.05).
2. To revise the information covering the use of Lucite lamp caps to omit reference to types of lamps (3.06).