# TELEPHONE SETS-3666A1-TYPE <br> IDENTIFICATION, INSTALLATION, OPERATION, CONNECTIONS, AND MAINTENANCE 

## 1. GENERAL

1.001 This addendum supplements Section 529-236-133, Issue 2.
1.002 This addendum is issued to add lamp replacement information for 635-type keys.

## 6. MAINTENANCE

The following change applies to Part 6 of this section:
(a) 6 (d) added
(d) The current production 635-type keys have been modified for easy lamp replacement by merely removing the lamp cap and inserting a 553 -type tool through the hole in the top of the button. In early production keys it was necessary to remove faceplate, key collar, and button for lamp replacement.

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## TELEPHONE SETS—3666A1-TYPE

 IDENTIFICATION, INSTALLATION, OPERATION, CONNECTIONS, AND MAINTENANCE
## 1. GENERAL

1.01 The 3666A1-type telephone set is intended solely for use with specially engineered lines-not for general telephone use.


Do not attempt any installation or connections of this equipment unless the practice has been read and thoroughly understood.
1.02 This section is reissued to:

- Add 425K network, Fig. 4
- Add KS-20419 buzzer (option)
- Add color Ivory to Table A

2. IDENTIFICATION

ORDERING GUIDE
Set, Telephone, 3666A1A-*
Set, Telephone, 3666A1B-*
(a) Replaceable Components

- Cord, Mounting D50W-*
- Dial, 67A (Nonilluminated)
- Dial, 67B (Illuminated)
- Handset, G3Y-*
- Key, 635A2
- Lamp, 51A (635A2 Key)
- Lamp, 53A (67B Dial)
- P-29E378 Board Assembly (Includes MA4 Relay and Polarity Guard)
- P-29E718 Card Set (two)
- P-29E719 Card Index Set
- P-44E776 Self Designation Key Tab
- P-82F5* Housing Assembly
- P-82F9* Faceplate
- Ringer, M1A
(b) Replaceable Optional Components
- Buzzer, KS-8109L2 (ac or dc)
- Buzzer, KS-20419 (10 volt ac only)
*Refer to Table A for color selection
TABLE A
COLOR ORDERING GUIDE

| TELEPHONE SET* |  | FACEPLATE |  |
| :--- | :--- | :--- | ---: |
| STANDARD COLOR | SUFFIX | Coordinated color | suffix |
| Black | -03 | Charcoal | -70 |
| Ivory | -50 | Muted Ivory | -80 |
| Green | -51 | Light Green | -71 |
| Red | -53 | Muted Red | -69 |
| Yellow | -56 | Light Yellow | -72 |
| White | -58 | Light Gray | -73 |
| Rose Pink | -59 | Muted Pink | -74 |
| Light Beige | -60 | Muted Beige | -75 |
| Light Gray | -61 | Charcoal | -70 |
| Aqua Blue | -62 | Muted Blue | -76 |
| Turquoise | -64 | Muted Turquoise | -77 |

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## DESIGN FEATURES

- 6-Button Set
- Mechanical Card Reader
- 16-Button TOUCH-TONE ${ }^{\circledR}$ Dial
- All pickup keys convertible to signaling
- Dial Illumination (3666A1B Set)
- Exclusion Feature
- Common Ringer
- 2- and 4-Wire Service
- AC or DC Operated Buzzer (optional)
- Optional Speakerphone (666B Trans)


## 3. INSTALLATION

(a) Planning

- Safety for yourself, customer, and maintenance personnel.
- Location-desk, table, console, etc.
- Space requirements.
- Distance between associated equipment or apparatus.
- General appearance of installation.
(b) Installing
- Install sets in accordance with standard installation procedures covering 6-button telephone sets.
- Install the KS-8109L2 buzzer (ac or dc) ordered separately, on L1 terminal of network using spacer and screw provided or install the KS-20419 miniature buzzer (10 volt ac only) at any convenient location within the telephone set. Provide mounting screw as required or secure buzzer using an existing screw. Refer to appropriate section in Division 501 for detailed information on KS-20419 buzzer.
(c) Coding Cards
- It is important that card is properly punched and checked for accuracy to ensure satisfactory results.
- Coding instructions for cards are as follows:
(1) Write name and telephone number on card in spaces provided (Fig. 2). Convert exchange letters to numbers by referring to telephone dial (i.e. use 7 for $P, R$, or S ; 8 for $\mathrm{T}, \mathrm{U}$, or V ; etc).
(2) There are two groups of numbers and symbols on the left side of the card. The symbols (A, P, I, F, FO, and $\star$ ) are used to encode special service codes.
(3) There are 16 columns to the right of the number groups in which the telephone number is to be encoded. Each digit in the telephone number heads a column. To code a number or symbol locate it in the upper group on the left and punch out the perforation in the column corresponding to that unit in the telephone number. In the same column locate and punch out the unit in the lower group of numbers. Use a pencil or ball-point pen to punch out the perforations.

Note: The stop in column 1 is already punched.
(4) Repeat this procedure in the telephone number. The digit " 0 "' must be punched out in each group of numbers just as any other digit.
(5) Do not punch STOP following the last digit of the telephone number. (A stop is used only for certain operations requiring an interruption in the automatic dialing process.)
(6) For DDD calling, punch out the access code, if required, area code and the complete telephone number.
(d) In certain PBX systems, it may be necessary to dial an access code to obtain central office


Fig. 1-3666A1A Telephone Set
dial tone. To prepare a card for dialing an access code, proceed as follows (Fig. 3):
(1) Punch out the access code in column 1.
(2) In column two, punch out the STOP. Beginning in column two, punch out in the regular manner the area code, if any, and the telephone number desired.
(e) Check card before using to be sure it is properly punched for the number desired. There should be two punched holes in each column plus a STOP, if required. Holes should be punched out completely and neatly.


Fig. 2-Card Coded For 7-Digit Telephone Number


Fig. 3-Card Coded For Access Code (9), STOP, Area Code (311), and 7-Digit Telephone Number

## 4. OPERATION

(a) Operate card dial as follows:
(1) Insert punched card into card slot with name at top, facing front of set. Push card down completely.
(2) Remove handset and listen for dial tone.
(3) Depress dialer START bar (Fig. 1). Dialer will start and number will be dialed automatically as the card rises in the card slot.
(4) On completion of call, replace handset. Remove card and return it to index.
(5) To abandon call during dialing, restore handset. The card dialer will continue to read entire card. After card travel has ceased, remove card from slot and return it to the index.
(b) If a second stop is coded in the card (such as for PBX access) the card will stop, the START bar will return to its unoperated position, and a second dial tone will be obtained. Dialing can be continued either manually with the TOUCH-TONE dial or with the coded card by depressing the start bar.

## 5. CONNECTION INDEX



No changes in wiring other than those specified in this practice shall be made.

Table B-Pickup-Signaling Key Conversion
Table C-Speakerphone Connections
Table D-Ringer and Buzzer Connections
Fig. 4-3666A1-Type Telephone Set, Connections

## 6. MAINTENANCE

(a) Maintenance of the 3666A1A and 3666A1B telephone sets is similar to the maintenance of a 1500 -type set, except for the card dial. Sections covering maintenance of keys, ringers, handsets, etc. should be referenced for maintenance procedures of these components.
(b) Reference the section covering 66-type TOUCH-TONE dial for maintenance procedures on the 66 B 3 A and 66 B 4 B dials used in the 67 A and 67 B card dial.
(c) Maintenance of the 67 A and 67 B card dial is limited to the following:
(1) On reports of mechanical trouble with the card dialer, such as cards sticking, etc, make a visual inspection of the dial for loose parts or wire interfering with the dialer. Check to see if any foreign material (paper clips, etc.) is lodged in the card slot. Check faulty cards for proper size by comparing them with a working card. Replace bent or mutilated cards. Do not attempt to adjust springs or dialer contacts.
(2) For electrical troubles, such as dialing wrong numbers, use a card coded with a local test number. Check at least twice on each line with test code card. Inspect customer cards for proper coding.
(3) If trouble still persists, replace set.

TABLE B
PICKUP-SIGNALING KEY CONVERSION*
(Connections to TB2)

| No. OF PICKUP KEYS PROVIDED | $\begin{aligned} & \text { NO. OF } \\ & \text { CONVERTED } \\ & \text { KEYS } \\ & \text { PROVIDED } \end{aligned}$ | NO. $O F$ PRIV AND INTERCOM LINES WITH COMMON SIG. KEY | KEY POSItIon and lead |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{gathered} \text { TST } \\ (\mathrm{O}-\mathrm{W}) \end{gathered}$ | $\begin{aligned} & \text { 2ND } \\ & \text { (S-W) } \end{aligned}$ | $\begin{aligned} & 3 R D \\ & \text { (G-R } \end{aligned}$ | $\begin{gathered} 4 \mathrm{TH} \\ (\mathrm{BL}-\mathrm{BK}) \end{gathered}$ | $\begin{gathered} 5 \mathrm{SH} \\ \text { (BR-BK) } \end{gathered}$ | $\begin{gathered} 5 \mathrm{TH} \\ (\mathrm{BR}-\mathrm{W}) \end{gathered}$ |
| 5 |  |  | 1 | 1 | 1 | 1 | 1 | 2 |
| 4 | 1 |  | 1 | 1 | 1 | 1 | 4 | 2 |
| 3 | 2 |  | 1 | 1 | 1 | 4 | 4 | 2 |
| 2 | 3 |  | 1 | 1 | 4 | 4 | 4 | 2 |
| 4 | 1 | 2 | 1 | 1 | 2 | 2 | 4 | 2 |
| 4 | 1 | 3 | 1 | 2 | 2 | 2 | 4 | 2 |

* All convertible key positions are arranged in the shop as pickup positions. To convert a key position from pickup (locking) to signal (nonlocking), remove the screw detail from the plunger of the key position being converted and make necessary connection changes. Store screw details in telephone set by taping to set base. To convert from signaling to pickup, reverse procedure.

TABLE C
SPEAKERPHONE CONNECTIONS

| WIRE OR <br> LEAD | LEAD <br> DESIG | CONNECT TO |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | TB2 | NETWORK | EXCLUSION SWITCH <br> TERM. |  |
| $(\mathrm{G}-\mathrm{V})$ | R 1 | 19 |  |  |
| $(\mathrm{~V}-\mathrm{G})$ | T 1 | 23 |  |  |
| $(\mathrm{BR}-\mathrm{V})$ | IR | 8 |  |  |
| $(\mathrm{~V}-\mathrm{S})$ | AG | 16 | L, |  |
| $(\mathrm{~S}-\mathrm{V})$ | LK | $\mathrm{P} *$ |  | 5 |
| $(\mathrm{~V}-\mathrm{O})$ | $\mathrm{P} 4^{*}$ |  |  | 4 |
| $(\mathrm{O}-\mathrm{V})$ |  |  |  |  |

* P3 and P4 are terminated to off-normal contacts of rotary dial when 1008B auxiliary rotary dial is used.

TABLE D
RINGER AND BUZZER CONNECTIONS

| RINGER OPTION |  | WIRE OR LEAD | COLOR | COnNeCt to |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | тв1 |  | тв2 | NET. |
| When used as bridged ringer on any one line (Note 1) |  |  | Ringer | (R) | 6 |  |  |
|  |  | (BK) |  |  | 11 |  |
|  |  | D50W Cord | (S-Y) |  |  | A |
|  |  | (Y-S) |  | 11 |  |
| When used as Private line, Common Signal, or other use (Notes 1 and 2) | With Capacitor |  | Ringer | (R) | 6 |  |  |
|  |  | (BK) |  |  | 11 |  |
|  |  | D50W Cord | (S-Y) |  |  | A |
|  |  |  | (Y-S) | 6 |  |  |
|  | Without Capacitor | Ringer | (R) | 6 |  |  |
|  |  |  | (BK) |  | 11 |  |
|  |  | D50W <br> Cord | (S-Y) | 6 |  |  |
|  |  |  | (Y-S) |  | 11 |  |
| Set Ringer not used <br> (Note 3) |  | Ringer | (R) | 6 |  |  |
|  |  | (BK) |  | 11 |  |
|  |  | D50W Cord | (S-Y) |  |  | A |
|  |  | (Y-S) |  | 11 |  |
| KS-8109L2 <br> Buzzer Option (Note 4) | AC Operation |  | $\begin{gathered} \text { D50W } \\ \text { Cord } \end{gathered}$ | (BL-V) | Term. A of Buzzer |  |  |
|  |  | (V-BL) |  |  | of B |  |
|  | DC Operation | (BL-V) |  |  | Fram |  |
|  |  | (V-BL) |  |  | of B |  |
| KS-20419 <br> Buzzer <br> Option <br> (Note 4) | AC <br> Operation | D50W Cord | (BL-V) (V-BL) | Any spare screw terminals, connect (BL) buzzer leads to same terminals or use D-161488 connectors |  |  |

Notes 1: Connect cable pair associated with R or R1 (S-Y) and B or B1 (Y-S) at distribution terminal as required.

2: Ringer may be connected with or without capacitor for private line, common, or intercom line signals as desired. When power failure feature is provided, a capacitor is required.

3: Do not terminate associated cable pair at distribution terminal if set ringer is not used.
4: Buzzer leads BZ (BL-V) and BZ1 (V-BL) may be connected to the R, R1, or BZ, and B. B1, or BZ1 terminals, respectively, at the distribution terminal to provide the required type of buzzer operation.


Fig. 4-3666A1-Type Telephone Set, Connections (Sheet 3 of 3)


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[^1]:    * Refer to Section 500-120-100 for promoted colors.

