## TELEPHONE SETS—F-58554

## 1. GENERAL

1.01 This section contains identification, installation, connection, and maintenance information for the F-58504 telephone set.
1.02 The F-58554 telephone set (Fig. 1) is a desk-type, single line card dialer. providing for automatic and manual calling.


Fig. 1-F-58554 Telephone Set
$\mathbf{1 . 0 3}$ It is equipped with a F-58553 dial which contains an RC manual 12-button TOLCH-TONE: dial, polarity guard, and reed switch card reader.
1.04 This set is similar to the 2660-type telephone set and may be used to fill the demand for


Fig. 2-F-58554 Telephone Set, Location of TB1 for Speakerphone Use Only
a card dialer that will provide extended life in high usage applications.

## 2. IDENTIFICATION

Ordering Guide
2.01 Basic Telephone Set:

Set, Telephone, F-58554**
2.02 Replaceable Common Components:

Card, Set, 840360564 (20 cards)
Cord, Mounting, D3BN-*

- Dial, F-58553
- Faceplate (See Table A)
- P-13E363 Card Index Set (9 cards)

P-26E165 Retainer Card

P-82B0* Housing Assembly

- Ringer, M1A
-Set, Hand, G3A4-* $\dagger$
2.03 Optional Apparatus or Equipment (ordered separately):

Buzzer, KS-20419L1

Cord, Mounting, D4BK-*

- Cord, Mounting, D10R-* §

P-24E240 Terminal Board for speakerphone
-P-43A392 Screw (10) for speakerphone

* Add appropriate color suffix, see Table A.
$\dagger$ Same as G3AR handset, 4 indicates length of handset cord.
: Replaces D3BN mounting cord, for 1 A 1 or 1A2 KTS use.
§ Replaces existing mounting cord, for 3-type speakerphone use.

TABLE A
COLOR ORDERING GUIDE

| COLOR | SUFFIX | COORDINATED <br> COLOR | FACEPLATE <br> PIECE PART |
| :--- | :---: | :--- | :---: |
| Black | -03 | Charcoal | 840172704 |
| Ivory | -50 | Muted Iyory | 840172803 |
| Green | -51 | Lt Green | 840172712 |
| Red | -53 | Muted Red | 840172696 |
| Yellow | -56 | Lt Yellow | 840172720 |
| White | -58 | Lt Gray | 840172738 |
| Rose Pink | -59 | Muted Pink | 840172746 |
| Lt Beige | -60 | Muted Beige | 840172753 |
| Lt Gray | -61 | Charcoal | 840172704 |
| Aqua Blue | -62 | Muted Blue | 840172761 |
| Turquoise | -64 | Muted Turq | 840172779 |

## Design Features

### 2.04 Features of these sets are:

- Slot for smaller size cards with rectangular holes
- Manual 12-button TOUCH-TONE dial
- Roller card feelers
- Sealed reed contacts
- Reject button, releases card without dialing, release CALL bar for manual dialing when card is stuck
- Polarity guard for end-to-end signaling
- Expanded line switch for use with 3-type speakerphone
- AC buzzer (optional)
- Key telephone system use (optional)


## Application

2.04 This set can be used on CO, PBX line circuits, and 1A1 or 1A2 key telephone systems.

## 3. INSTALLATION AND CONNECTIONS

3.01 Install the F-58554 telephone sets in accordance with standard practices for desk-type 0 - and 1-button sets. Refer to appropriate connection figures and tables for connections and wiring options.
3.02 Table B lists line and ringer connection information, Table C wiring modifications required for 1A1 or 1A2 KTS use and Table D speakerphone wiring modifications.

## Options

3.03 A KS-20419L1 (10 volt AC only) buzzer (ordered separately) may be used in this set as an auxiliary signal. This is an insulated buzzer and may be mounted in any convenient location with a single screw.
3.04 When this set is connected for 1A1 or 1A2 KTS use, replace the D3BN mounting cord furnished with set with a D4BK mounting cord
table B
LINE AND RINGER CONNECTIONS

| Wire or lead |  |  | $\begin{gathered} \text { INDIV } \\ \text { BRIDGED } \\ \text { BRI } \end{gathered}$ | TIP PARTY |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | IDENT GRD |
|  |  |  |  | $1000 \Omega$ | $2650 \Omega$ |
| $\begin{gathered} \text { Mtg Cord } \\ \text { at Conn Blk } \end{gathered}$ | Tip | (G) |  | G | G | G |
|  | Ring | (R) | R | R | R |
|  | GRD A1 | (Y) | G | Y | Y |
| Mtg Cord in Set | Tip | (G) | G | G | G |
|  | Ring | (R) | L2 | L2 | L2 |
|  | GRD A1 | (Y) | A | 9 | 9 |
| Ringer |  | (R) | 7 | 7 | 7 |
|  |  | (S-R) | * | * | 5 |
|  |  | (S) | * | 5 | * |
|  |  | (BK) | 6 | 6 | 6 |
| Line Switch |  | (S) | G | K | K |
| Ringer Straps |  | (G) | 7 to L2 | 7 to A | 7 to A |
|  |  | (G-R) | 6 to K | 6 to 9 | 6 to 9 |

* Insulate and store.

Note: For tip party service without identifying ground, reverse tip and ring at connecting block.
(ordered separately) and complete wiring changes per Table C.
3.05 When speakerphone is required, (order separately) D10R mounting cord, P-24E240 terminal board, and (10) P-43A392 screws. Install terminal board (TB1) at location shown in Fig. 2. Replace existing mounting cord with D10R and make the necessary wiring modifications and connections in accordance with Table D and Fig. 6.

## Card Size

3.06 The card slot of the F-58553 dial will accept only the smaller size card with rectangular holes ( $2-1 / 8$ by $3-3 / 8$ inch). These cards are slightly smaller in size than the cards used with 2660-type card dialers. Either the punchable cards supplied with the set or prepunched cards (KS-20640) furnished by the customer may be used. Cards for this new dialer are not interchangeable with cards used with earlier model card dialers.
table C
MODIFICATION FOR IAI OR 1 A2 KTS

| $\begin{aligned} & \text { WIRE } \\ & \text { OR } \\ & \text { LEAD } \end{aligned}$ |  | color | REMOVE FROM | $\begin{gathered} \text { CONNECT } \\ \text { TO } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
|  |  | NEt. | NEt. |
| Line Switch |  |  | (S) | G | * |
| Dial |  | (G) | F | A |
| D4BK <br> Mtg Cord) <br> (See Note) | Tip | (G) |  | A |
|  | Ring | (R) |  | L2 |
|  | A1 | (Y) |  | G |
|  | A | (BK) |  | F |

Note: Replace D3BN mounting cord furnished with telephone set with D4BK mounting cord, ordered separately.

* Insulate and store.


## Coding Cards

3.07 Code cards as follows:
(1) Write name and telephone number in spaces provided as shown in Fig. 3 and 4.
(2) Convert exchange letters to numbers. For example: use 2 for $\mathrm{A}, \mathrm{B}$, or $\mathrm{C} ; 7$ for P , $R$, or $S$; etc.

Note: There are two groups of numbers 1 through 0 on the card (Fig. 3), plus 6 special characters, *, \#, a, b, c, d. DO NOT confuse these with exchange letters.
(3) In Fig. 3 the first digit of the telephone number is 5 . In row 1 , locate digit 5 in the first group of numbers and punch out the perforation with a pencil or ballpoint pen. In the same row, locate digit 5 in the second group of numbers and again punch out the perforation.
(4) Repeat this procedure for each digit in the telephone number. The digit 0 must be punched out in each group of numbers just as any other digit.
(5) It is not necessary to punch a stop following the last telephone number digit, except in certain operations where transmission of a single

697 Hz frequency transmission after the last digit dialed is undesirable.
(6) If a stop is punched after the last telephone number digit, the $R$ bar must be operated to release the card.


Fig. 3-Dial Card Coded For 7-Digit Telephone Number


Fig. 4-Dial Card Coded for Access Code (9), Stop, Area Code (311), and 7-Digit Telephone Number
3.08 In certain PBX systems, it may be necessary to dial an access code to obtain central office dial tone. To prepare a card, proceed as follows (Fig. 4):
(1) Punch out the access code in row 1.
(2) If a second dial tone is required, punch out the STOP in the appropriate row. Punching out the first STOP will result in a wait after the first digit.
(3) Beginning in row 2, punch out in the regular manner the directing or area code, if any, and telephone number.
3.09 For DDD calling, punch out the access code, if required, area code, and the complete telephone number.
3.10 Check card before using to be sure it is properly punched for the number desired. There should be two punched holes in each row plus a STOP, if required. Holes should be punched out completely and neatly.

## Station Number Card

3.11 To install station number card, remove faceplate, 4.04 by releasing latch located above card slot and slide number card behind number card retainer. Replace faceplate.

## 4. MAINTENANCE

4.01 Refer to appropriate sections for maintenance of components, such as handset, ringer, dials, etc.
4.02 Maintenance of this card dialer is limited to the following:
(1) Sticking Cards: Make visual inspection of dial for loose parts or wires which might interfere with the dial mechanism.
(2) Foreign Material: Check for material such as paper clips, hairpins, etc. lodged in card slot.
(3) Faulty Cards: Check cards for proper size by comparing with a working card. Replace bent or multilated cards. Depress $R$ bar to release any stuck cards.
(4) Wrong Numbers: Verify coding of card. Check at least twice on line with a test code card. Check manual operation of TOUCH-TONE dial in the normal manner.
4.03 If tests indicate trouble in the F-58553 dial, replace the dial.

Note: Do not make any adjustments on the F-58553 dial in the field.

## Faceplate Removal

4.04 To remove faceplate:
(1) Place point of KS-16750 type releaser or equivalent at edge of faceplate catch.
(2) Push catch toward rear of set until releaser enters notched portion of faceplate.
(3) Turn point of releaser under faceplate and raise.

Note: When replacing faceplate, use releaser to hold catch until faceplate is in position.

## Housing Removal

4.05 To remove housing:
(1) Loosen four captive screws through access holes in base of set.
(2) Lift housing straight off.

## Dial Replacement

4.06 To remove F-58553 dial:
(1) Remove faceplate and housing (4.04 and 4.05).
(2) Disconnect spade-tipped dial leads from network and terminal board.
(3) Turn set on side, remove dial mounting screws and lift dial away from base.
(4) To replace dial, reverse procedure used to remove dial.

Caution: Handle dial with care so as not to bend or damage reed leads.
(5) Check manual and credit card dial operations.

## Ringer Replacement

4.07 To remove M1A ringer:
(1) Remove faceplate and housing, 4.04 and 4.05 .
(2) Disconnect ringer leads from terminal board.
(3) Remove dial mounting screws and lay dial aside to gain access to ringer. Do not disconnect dial leads.
(4) Remove screws holding ringer to base and remove ringer.
(5) To replace ringer, reverse procedure used to remove ringer.


## NOTES:

1. CONNECTIONS SHOWN ARE FOR RING PARTY SERVICE.

FOR TIP PARTY SERVICE WITHOUT IDENTIFYING
GROUND REVERSE TIP AND RING AT CONN. BLK.
FOR OTHER CLASSES OF SERVICE, SEE TABLE 8.
2. LINE SWITCH OFF-HOOK SEQUENCE:
bc CLOSES
de AND $b^{\prime} c^{\prime}$ CLOSE
ab AND albl OPEN
fg OPENS
3. DESIGNATIONS:
a - manual dial contacts
b - Card reader dial contacts
CR - CARD READER SWITCH
CS - COMMON SWITCH (OIAL)
LS - LINE SWITCH

* INSULATED AND STORED
†40100 NETWORK TERM.

Fig. 5-F-58554 Telephone Set Connections (Factory Wiring)


NOTE:

> SCREW TERMINAL LOCATED ON TB2,

UNMARKED SCREW TERMINALS LOCATED
ON TBI (ORDERED SEPARATELY).
LEGEND
CS - COMMON SWITCH
LS - line switch

* insulate and store
t $40 I O D$ NETWORK TERMINAL
* LEADS INVOLVED IN MODIFICATION

Fig. 6-F-58554 Telephone Set, Speakerphone Connections

TABLE D
MODIFICATION FOR SPEAKERPHONE

| WIRE OR LEAD |  | REMOVE <br> FROM | CONNECT <br> TO |
| :---: | :---: | :---: | :---: |
| Line <br> Switch | BR | $\mathrm{F} \dagger$ | $7 \ddagger$ |
|  | S | $\mathrm{G} \dagger$ | $4 \ddagger$ |
|  | Y | $\mathrm{G} \dagger$ | $3 \ddagger$ |
|  | O | ${ }^{*}+$ | $\mathrm{G} \dagger$ |
|  | G | $\mathrm{F} \dagger$ | $\mathrm{G} \dagger$ |
|  | V | $*$ | $5 \ddagger$ |
|  | $\mathrm{G}-\mathrm{W}$ | ${ }^{*}$ | $\mathrm{RR} \dagger$ |

* Insulated and stored.
$\dagger$ Network terminal.
$\ddagger$ Terminal board 2 .

