

2960A01M "TOUCH-A-MATIC*" 16 TELEPHONE SET

IDENTIFICATION, INSTALLATION, CONNECTIONS, OPERATION, AND MAINTENANCE

| CONTENTS | PAGE | CONTENTS | PAGE |
|---|------|--|------|
| 1. GENERAL | 2 | A. Record a Number Into Memory | 16 |
| 2. IDENTIFICATION | 2 | B. Change a Number in Memory | 16 |
| A. Design Features | 2 | C. Delete a Number From Memory | 16 |
| B. Optional Features | 2 | D. Automatically Dial a Number From Memory | 16 |
| C. Operating Features | 4 | E. LAST NUMBER DIALED Feature | 16 |
| D. Ordering Guide | 4 | F. End-to-End Signaling | 17 |
| 3. INSTALLATION | 7 | G. Access Code | 17 |
| INSTALLATION CHECK PROCEDURE | 11 | H. Speakerphone Option | 17 |
| OPTIONAL APPARATUS INSTALLATION | 12 | I. Multiline Service (Using 6040/6050- Type Key) | 18 |
| D-180812 Kit of Parts (Record Disable and Dial Intermix) | 12 | 6. MAINTENANCE | 18 |
| COMPONENT LOCATION AND ACCESS IN- FORMATION | 13 | A. Return Procedure | 18 |
| A. Location of Components | 13 | B. Trouble Analysis | 19 |
| B. Access of Components | 15 | C. Battery | 19 |
| Faceplate Removal | 15 | D. Memory | 19 |
| Upper Housing Removal | 15 | E. 35AT3A Dial | 21 |
| Lower Housing Removal | 15 | F. P1A Ringer | 21 |
| Power Supply Board (PSB) Terminals | 15 | G. Handset Jack | 22 |
| 4. CONNECTIONS | 16 | 7. CONVERSION FROM DESK SET TO WALL SET | 22 |
| 5. OPERATION | 16 | 8. CORD DRESSING FOR OPTIONAL SERVICES (ADJUNCTS) | 23 |

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NOTICE

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1. GENERAL

1.01 This section contains information on the 2960A01M manufacture discontinued (MD) telephone set. This set is shipped from the factory as a desk set (Fig. 1) and can easily be converted to a wall set with no additional parts required.

⚡Warning: *This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class B computing device pursuant to Subpart J of Part 15 of Federal Communication Commission (FCC) Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.*

1.02 The reasons for reissuing this section are listed below. Revision arrows are used to emphasize the more significant changes.

- Show 2960A01M-50 telephone set MD
- Include electromagnetic interference warning notice in compliance with the FCC ruling which requires that a warning statement be placed in the user's documentation for equipment that generates and uses radio frequency energy and may radiate that energy, paragraph 1.01
- Add information on K6C-50 handset
- Add 10A speakerphone information.
- Add 813BH diode (Table C)
- Show 426N diode MD.

1.03 The 2960A01M ⚡(MD)⚡ telephone set is a single line set and is factory-wired for bridged ringing. It can be wired to provide A lead control for 1A1, 1A2, 6A, or 6B key telephone systems (KTS).

1.04 The telephone set is available in Ivory (-50) only. For color selection of available faceplate, refer to Table A.

2. IDENTIFICATION

2.01 The 2960A01M ⚡(MD)⚡ telephone set provides the standard features of a single line set plus manual TOUCH-TONE* dialing, automatic dialing of 15 frequently called or important numbers, and a LAST NUMBER DIALED scratch pad memory.

A. Design Features

2.02 The following are design features:

- Modular telephone set
- Integrated circuit memory and dial
- Surge protector
- Polarity guard
- Memory buttons from which to select preprogrammed telephone numbers for automatic dialing
- Capability to record and automatically dial 15 telephone numbers of up to 15 digits each
- Last number manually dialed memory
- Battery for memory retention in event of ac power outage
- Battery OFF-ON switch
- Supplementary directory
- Directory Privacy (hidden directory)
- Convertability from a desk set to a wall set
- End-to-end signaling.

B. Optional Features

2.03 The following are optional features (Table B):

- (a) Selective ringing
- (b) Tip party with identification ground
- (c) 4-party full selective or 8-party semiselective ringing using an 11-type extender, 426N diode, or 28A ringer isolator as a coupling device

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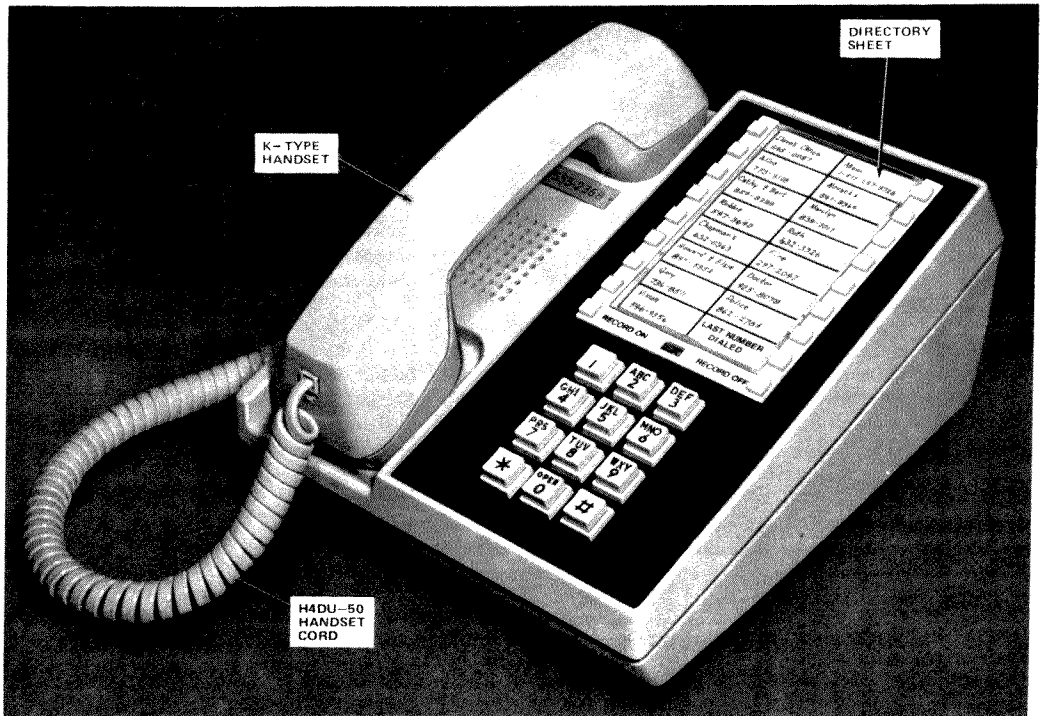


Fig. 1—2960A01M (MD) Telephone Set

(d) A lead control for 1A1, 1A2, 6A, or 6B key telephone systems

(e) Either 3-type (MD), 4A, or 10A speakerphone may be interfaced with the telephone set.

Note: For use with a speakerphone, all dialing must be performed with the handset off-hook (paragraph 5.09). Speakerphone and tip party identification options cannot be provided at the same time.

(f) Multiline service using adjunct key

Note: Replacing the handset each time a line is changed assures proper dialer operation (paragraph 5.10).

(g) 107-type loudspeaker set (SPOKESMAN* loudspeaker unit) may be interfaced with the telephone set (see Section 463-221-100)

(h) D-180812 Kit of Parts provides the following features:

(1) Record Disable (only): turns off the recording feature to prevent accidental erasures of previously stored numbers.

(2) Record Disable and Dial Intermix: same as record disable feature plus the following:

(a) Allow digits dialed from manual dial and from memory to be intermixed without

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having to depress the RECORD OFF button (see paragraph 5.06).

(b) Disables the LAST NUMBER DIALED feature.

(i) K6C-50 (impaired hearing) handset containing a volume control is available for replacement of K1C-50 (MD) or K2C-50 handset

(j) D-180851 Kit of Parts provides the following features:

(l) Standard modular G-type handsets can be used with desk sets when modified with the D-180851 Kit of Parts. This kit consists of ivory colored transmitter and receiver caps used to replace the standard caps in the G-type handset. Modified G-type handsets can be used to provide the following features when the appropriate K-type handset is not available or is incompatible:

(a) Amplified receiver (G6BM)

(b) Amplified transmitter (G7BM)

(c) Noisy location (G8BM)

(d) Acoustic or inductive coupling to customer-provided equipment (G15A).

2.04 All options are implemented by the following:

(a) Wiring changes in the telephone set

(b) Installation of appropriate additional items.

C. Operating Features

2.05 The following are operating features:

- Dial (TOUCH-TONE* telephone dial), 35AT3A
- 16-button memory field of low force, low travel nonlocking buttons arranged in two columns; one along the left-hand edge of the memory and the second along the right-hand edge. Each column has eight memory buttons plus a ninth button (bottom button) for the record function

- LAST NUMBER DIALED button (the next to the bottom button in the right-hand column of nine buttons) when momentarily depressed, with the handset off-hook, initiates automatic redialing of the last number manually dialed

- RECORD button (the bottom button in the left-hand column of nine buttons) is nonlocking and when momentarily depressed, lights the RECORD lamp and enables the memory circuits to store telephone numbers manually dialed

- RECORD OFF button (the bottom button in the right-hand column of nine buttons) is nonlocking and when momentarily depressed, extinguishes the RECORD lamp indicating that the dialer is switched out of the record mode.

- Battery OFF-ON switch (located on the bottom of the set, Fig. 2), should be in the OFF position when set is not in service.

D. Ordering Guide

2.06 Order as follows:

(a) The 2960A01M telephone set is a modular type set and may be ordered as follows:

(1) Set, Telephone, 2960A01M-50 which includes:

(a) Adapter, 248B

(b) Plug, 523B4, (used when converting from a desk set to a wall set) Fig. 12

(c) Cord, Handset, H4DU-50

(d) All components listed in (c) Replaceable Components, except faceplates and D4BU-29 cords.

(b) Order the following separately:

- D-180894 Kit of Parts is required to provide ac powers for operation of the automatic dialer. The kit contains a 2012D transformer, 248B-49 adapter, D4BU-29 (14-foot) line cord, and instruction sheet (840364194).

Note: A 2012A (MD) or 2012C transformer shall not be substituted for a 2012B (MD) or

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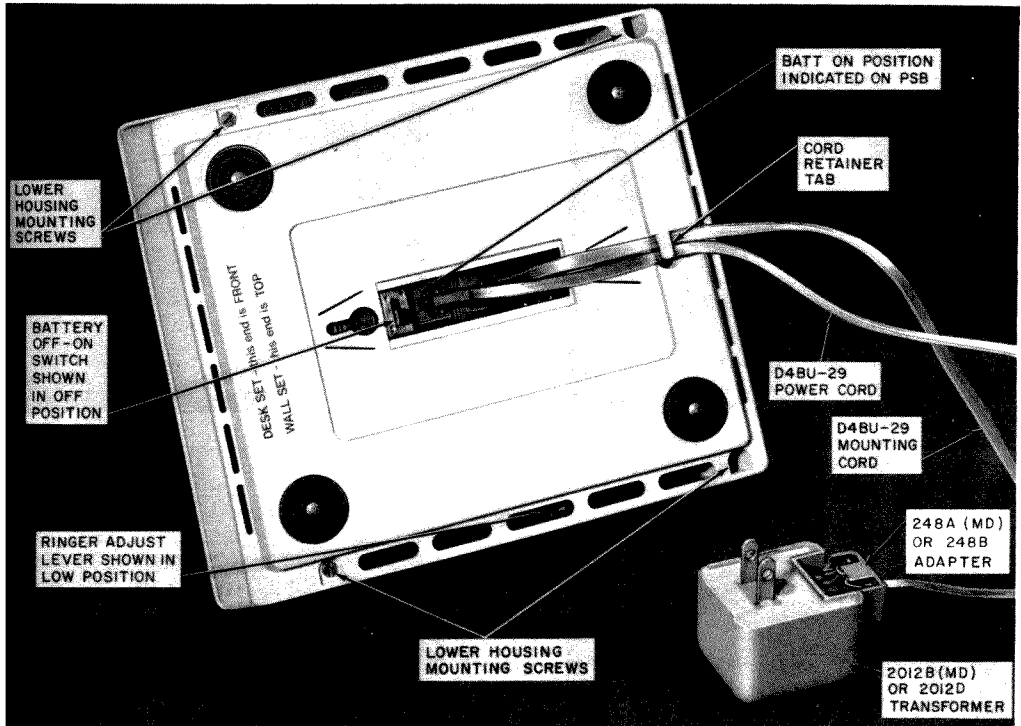
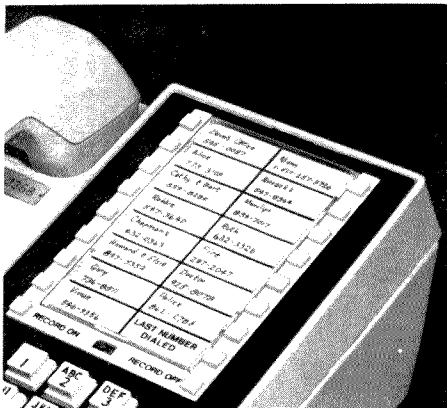


Fig. 2—2960A01M (MD) Telephone Set, Bottom View

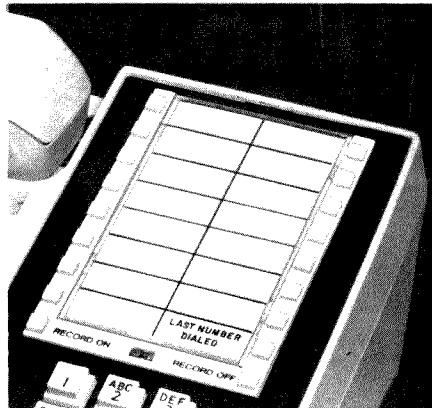
2012D, as set will not operate properly on the lower voltage.

- Clamp, 2A [used to secure 2012B (MD) or 2012D transformer to outlet].
 - Faceplate, 260A- (refer to Table A for color suffix).
 - Cord, Mounting, D4BU-29.
 - Cord, Mounting, D4BU-29 (line cord, maximum 14 feet).
 - Cord Clips, B (for dressing cords as needed).
- (c) Replaceable components may be ordered separately as follows:
- Lower Housing Assembly, 60AL-50

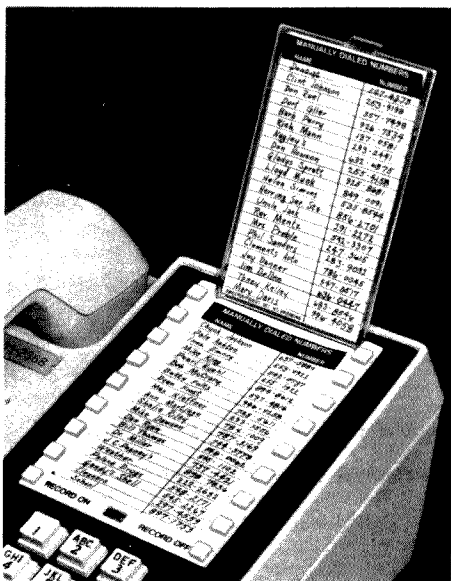
- Upper Housing Assembly, 60AU-50
- Faceplate, 260A- (refer to Table A for color suffix)
- Handset, K2C-50 or K1C-50 (MD)
- Cord, Handset, H4DU-50
- Cord, Mounting, D4BU-29
- Cord, Mounting, D4BU-29 (line cord, maximum 14 feet)
- Jack, Handset, 616J
- Battery, KS-20390L5
- Ringer, P1A



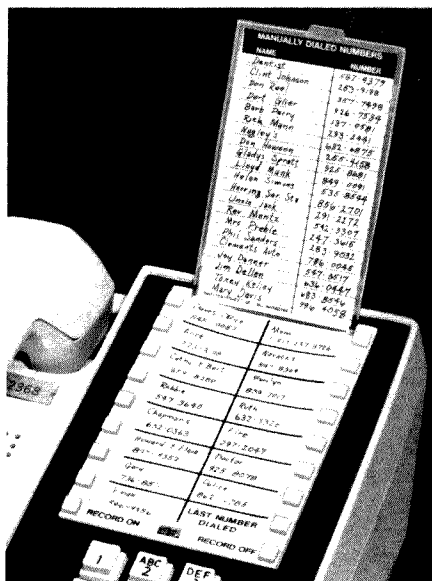
A. DIRECTORY DISPLAYED (WINDOW CLOSED)



C. DIRECTORY PRIVACY (WINDOW CLOSED)



B. DIRECTORY DISPLAYED (WINDOW OPEN)



D. DIRECTORY PRIVACY (WINDOW OPEN)

Fig. 3—Optional Methods of Installing Directory Cards

TABLE A

FACEPLATE ORDERING GUIDE (See Note)

| CODE | COLOR |
|----------|---------|
| 260A-100 | Avocado |
| 260A-108 | Teak |
| 260A-109 | Walnut |
| 260A-111 | Gold |
| 260A-112 | Orange |
| 260A-113 | Brown |
| 260A-114 | Red |
| 260A-115 | Blue |
| 260A-118 | Black |

Note: A display package containing all 9 color faceplates can be ordered as a D-180666 Kit of Parts. This package is intended for use as an aid to permit selection of color on customers premises. Cardboard insert shipped with set is discarded at time of installation.

- Dial, 35AT3A
- Memory, 960-type (includes button field)
- 841382245 Cover Assembly
- 841382146 Directory Sheet Set (includes four directory sheets and one sheet of color dots)
- 812558039 (P-25E803) Station Number Card Retainer
- 841381098 Handset Hook

Caution: A 2012A (MD) or 2012C transformer shall not be substituted for a 2012B (MD) or 2012D, as set will not operate properly on the lower voltage.

- Transformer, 2012D
- 841417165 Shield and Lead Assembly (Fig. 4)

- Subscriber, Instruction Booklet (SIB 2480C).

(d) See Table B for apparatus required.

3. INSTALLATION

Danger 1: For safety, securely attach retaining clamp to ac outlet using outlet cover screw **BEFORE** attempting to install 2012B (MD) or 2012D transformer. The transformer and any other cord plugged into the ac outlet should always be unplugged completely from outlet **BEFORE** attempting to attach or remove the clamp. This will prevent the possibility of a loosened retainer clamp or metallic outlet cover making contact with the ac prongs of the transformer when partially withdrawn from outlet. Do not use retaining clamp on outlets where cover mounting screw holds the duplex outlet in the box.

Danger 2: Care should be taken to trim and dress leads connecting to low voltage output terminals of 2012B (MD) or 2012D transformer to assure that inadvertent connection to conducting surfaces or other power source does not occur. If more than one transformer is plugged into a multiple receptacle power strip, there must be at least one inch separation between transformers. Only UL listed receptacle power strips with adequate power rating shall be used. Use of a continuous terminal power strip that allows the secondary output terminals of the transformer to be in close proximity to the ac line source is not recommended.

Warning: Do not turn on the battery switch or plug in the 2012B (MD) or 2012D transformer until all connections and modifications are completed. Take extreme care not to damage the exposed components, circuits, etc. when the set is opened.

- 3.01 Terminate the local loop into a jack or connecting block suitable for the D4BU-29 mounting cord. If this is to be a wall set installation, terminate loop into a 630A4 connecting block and refer to Part 7 of this section for conversion of set.

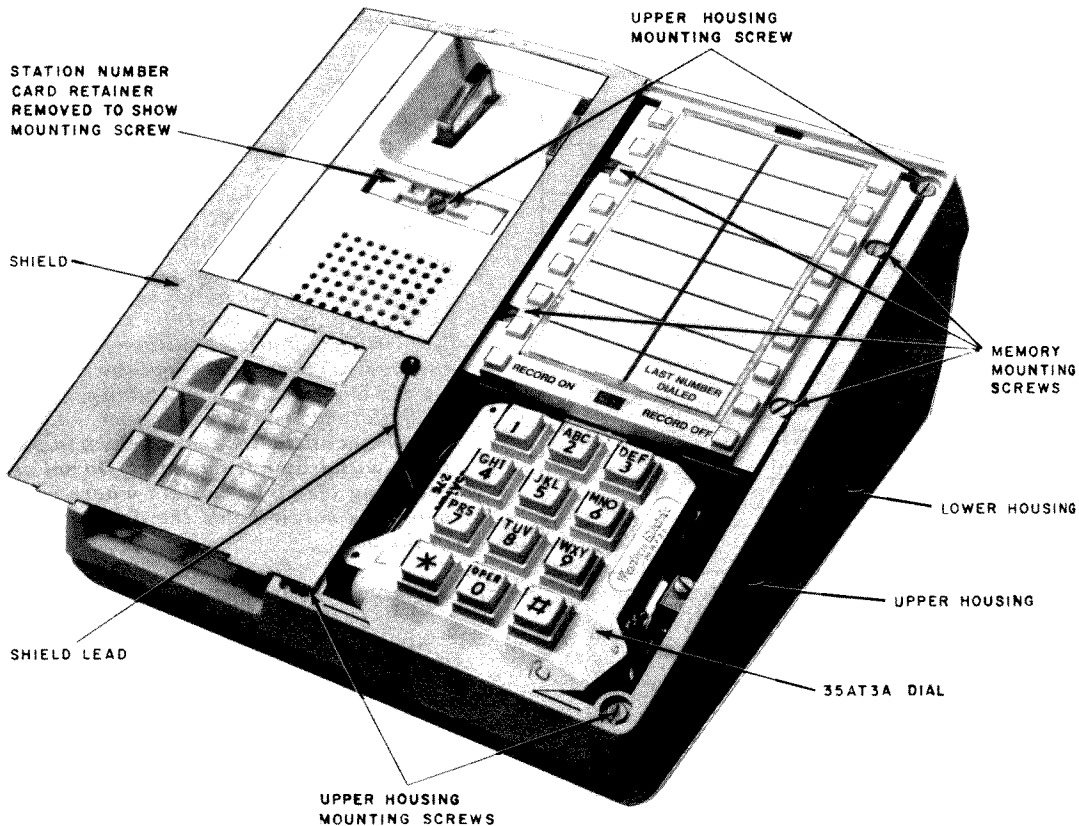


Fig. 4—2960A01M (MD) Telephone Set With Handset and Faceplate Removed and Shield Laid Aside

For standard desk set installation, terminate loop into 625-type connecting block.

Note: For information on modular connecting blocks or adapters, refer to Section 503-100-100.

Caution 1: On sets manufactured or repaired prior to November 1979, to protect the circuit from static discharge, the black (BK) shield lead was factory wired to the yellow (Y) lead of the mounting cord jack. Upon installation of the set the yellow (Y) lead was connected to earth

ground through a 625 or 630-type connecting block. This placed the black (BK) shield lead at earth ground potential.

Caution 2: During wiring options, care had to be taken that the black (BK) shield lead remained connected to earth ground. Sets manufactured or repaired after October 1979 will have the black (BK) shield lead connected to terminal 16 on the power supply board. This is the dialer common terminal. This wiring change will provide a discharge path for static electricity buildup.