

701A-L1 DATA SERVICE UNIT
DESCRIPTION, OPERATION, INSTALLATION, AND MAINTENANCE
DIGITAL TERMINAL DATA MODULE
" DIMENSION® " /SYSTEM 85

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A. General	4	1.01 This section contains the physical and functional descriptions, installation, options, and testing information for 701A-L1 data service unit, digital terminal data module (DTDM)(Fig. 1).	
B. Customer Options	4	1.02 When this section is reissued, the reason for reissue will be contained in this paragraph.	
C. DTDM Tests	5	1.03 The DTDM is a data communications equipment (DCE) type device used to transmit and receive serial customer data from Electronic Industries Association (EIA) RS-232-C interface over a 4-wire digital communications protocol (DCP) link in the DIMENSION AIS/System 85.	
D. Self Test	6	1.04 The DTDM operates in an ambient temperature range of +40 to +120 degrees Fahrenheit and a relative humidity range of 20 to 95 percent noncondensing.	
E. Local Loop Test	6	1.05 The DTDM provides an interconnection medium between the System 85 and customer-provided data terminal equipment (DTE). The DTDM serves as an adjunct module to a 7403D and 7405D digital voice terminal.	
F. Remote Loop Test	6	1.06 The digital voice terminal provides the interconnect function to the DCP link interface. The digital voice terminal and the DTDM integrate both voice and data communications onto the same link allowing for simultaneous transmission. The	
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NOTICE

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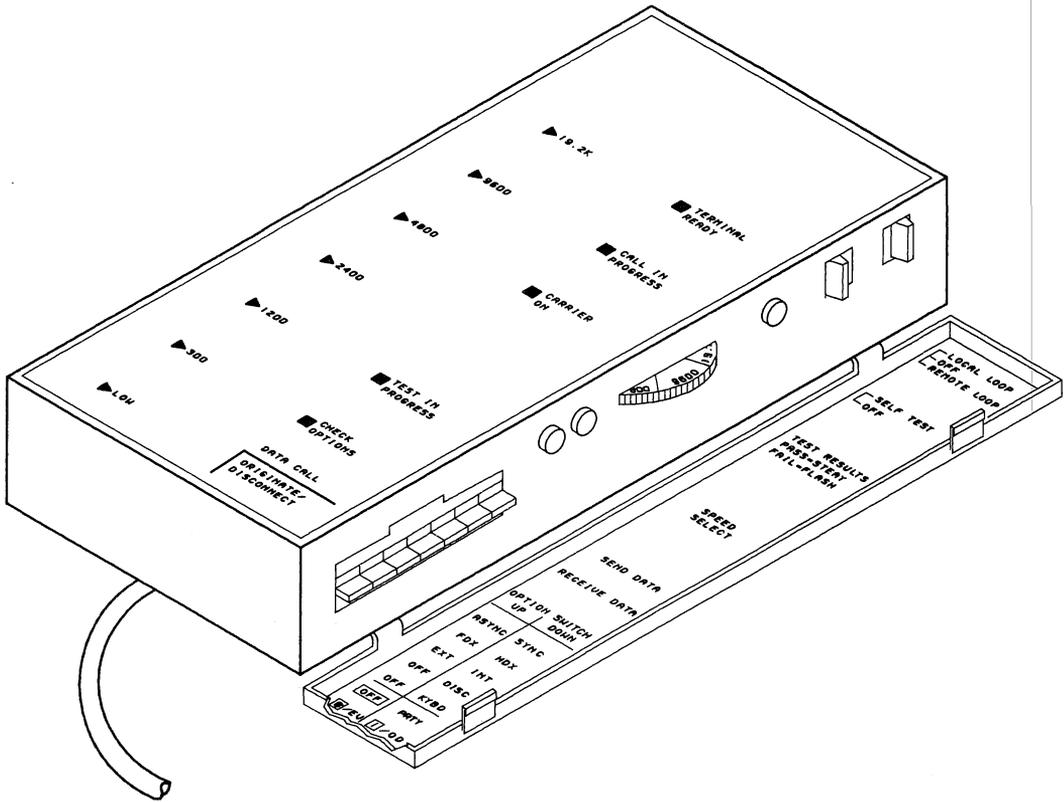


Fig. 1—Digital Terminal Data Module With Side Door Open

DTDM is contained in a slim housing designed to be physically coupled to the digital voice terminal to give a single-unit appearance.

1.07 The significant features of the DTDM are as follows:

- Available in selected standard data rates of up to 19.2 kb/s
- Synchronous or asynchronous operation
- Full- or half-duplex operation
- Ten-bit American Standard Code for Infor-

mation Interchange (ASCII) start-stop character dialing from the customer DTE

- Compatible with the System 85 equipment
- Indicators for monitoring data module status
- Customer selects options from conveniently located customer-option switches
- Automatic answer capability
- Local and end-to-end test capability for both telephone company and customer use

- Automatic self-test performed every 5 minutes when DTDM is idle with results made available to the System 85
- Power consumption is 5 watts.

2. PHYSICAL DESCRIPTION

2.01 The DTDM consists of two printed wiring boards contained in a molded plastic housing and a 7-foot M14J female EIA interface cord.

2.02 The overall dimensions of the DTDM are 5.00 inches wide, 1.75 inches high, and 8.40 inches long. The DTDM weighs 1.75 pounds

2.03 The faceplate contains an ORIGINATE/DISCONNECT switch, seven triangularly shaped red indicators for data speed, and five square shaped green indicators for data module status. The ORIGINATE/DISCONNECT momentary contact switch connects the DTDM to and from the line. Both types of indicators are illuminated by light-emitting diodes (LEDs). The indicator captions and functions are as follows:

- (a) **19.2K:** This indicator is *on* when the DTDM is optioned for 19.2 Kb/s data transmission.
 - (b) **9600:** This indicator is *on* when the DTDM is optioned for 9600 bps data transmission.
 - (c) **4800:** This indicator is *on* when the DTDM is optioned for 4800 bps data transmission.
 - (d) **2400:** This indicator is *on* when the DTDM is optioned for 2400 bps data transmission.
 - (e) **1200:** This indicator is *on* when the DTDM is optioned for 1200 bps data transmission.
 - (f) **300:** This indicator is *on* when the DTDM is optioned for 300 bps data transmission.
 - (g) **LOW:** This indicator is *on* when the DTDM is optional for data transmission lower than 300 bps.
- Note:** When one of the above indicators is *on* it serves as an indication the DTDM is powered.
- (h) **TERMINAL READY:** This indicator is *on* when the DTE is ready to send or receive data.
 - (i) **CALL IN PROGRESS:** This indicator is *on* when a call is successfully established.
 - (j) **CARRIER ON:** This indicator is *on* when a data signal is being received.
 - (k) **TEST IN PROGRESS:** This indicator is *on* when the DTDM is in a test mode, including when placed in remote loop test by a remote data module. This indicator is *on* when the System 85 initiates the test.
 - (l) **CHECK OPTIONS:** This indicator is *on* when a call could not be completed because of incompatible options between the modules.

2.04 Diagnostic testing capabilities are provided by two paddle switches and three LED indicators located behind a hinged door located on the right side of the DTDM as shown in Fig. 1. The paddle switches and LED indicators are described as follows:

- (a) **LOCAL LOOP/REMOTE LOOP:** This is a 3-position locking paddle switch which during normal operation will be in the OFF position. In LOCAL LOOP position it enables the local loop test function. In REMOTE LOOP position it enables the remote loop test function.
- (b) **SELF TEST:** This is a 2-position locking paddle switch which during normal operation will be in the OFF position. In SELF TEST position it enables the self test function.
- (c) **TEST RESULTS:** This indicator is *on* when SELF TEST passes and flashes when SELF TEST fails.
- (d) **SEND DATA:** This indicator shows the state of EIA interface circuit BA and is *on* or flashing when data is sent from the DTE to the DTDM. It is also *on* when SPACE signal is transmitted.
- (e) **RECEIVE DATA:** This indicator shows the state of EIA interface circuit BB and is *on* or flashing when data is sent from the DTDM to the DTE. It is also *on* when SPACE signal is transmitted.

2.05 Eight customer option switches are located under the side cover, and are described in Customer Options.

2.06 The DCP interface is connected to the DTDM through the associated digital voice terminal.

A 20-pin connector located on the underside of the DTDM permits the transfer of the interface circuits from the digital voice terminal to the DTDM. The digital voice terminal has an 8-pin connector to the DCP interface. The pin assignments, lead designations, and lead descriptions presented by the digital voice terminal are shown in Table A.

TABLE A

VOICE TERMINAL DCP INTERFACE

PIN NUMBER	DESIGNATION	FUNCTION
1	DT1	Data Transmit 1
2	DT2	Data Transmit 2
3	DR1	Data Receive 1
4	VR	Voice Ring
5	VT	Voice Tip
6	DR2	Data Receive 2
7	P(-)	Power (-)
8	P(+)	Power (+)

2.07 The customer's interface is accessible through the 25-pin EIA RS-232-C compatible female connector attached to the M14J cord. The pin assignments, lead designations, and lead descriptions are summarized in Table B.

3. FUNCTIONAL DESCRIPTION

A. General

3.01 The DTDM transmits and receives serial binary data over the 4-wire DCP link switched by the System 85. The DTDM communicates with either another DTDM, a processor data module (PDM), or a trunk data module.

3.02 The DCP link transmission is accomplished via a 160 kb/s bipolar bit stream consisting of three separate channels. The DTDM uses one of two 64 kb/s information channels for data transmission; the digital voice terminal uses the other channel for digitized voice communications. The third channel is an 8 kb/s signaling link (S-channel) used by both digital voice terminal and DTDM during call setup and call termination. The remaining DCP bandwidth is used for frame synchronization.

3.03 The DTDM has two operating formats, asynchronous and synchronous. The asynchronous format provides ten bit start-stop communication at any one of the six data rates plus a low rate based on sampling customer data at 19.2K Hz. Synchronous output clocks are clamped **off** when asynchronous format is used.

3.04 The synchronous format provides communication at any one of the six data rates with no restriction on the transmitted character pattern. Synchronous communications between external optioned DTDM and slave optioned trunk data module is not permitted.

3.05 The DTDM must communicate with a data module optioned similarly, synchronous or asynchronous operation, and optioned for the same speed. The distant module if a PDM or trunk data module may have several optioned speeds, one of which must be common to the DTDM.

B. Customer Options

3.06 Customer options are installed by operating one rotary and seven switches located behind the side cover of the DTDM. The option switches are described as follows:

- (a) **SPEED:** The data rate is selected from one of seven positions on the rotary switch. Each of the selectable rates, LOW, 300, 1200, 2400, 4800, 9600, and 19.2K, is stamped on the knurled switch and is installed by turning the switch until the numbers are visible corresponding to the desired speed. Once a call is established, any change in the speed selection switch is ignored.

Note: The distant data module must be optioned for the same speed as the local data module.

- (b) **FDX/HDX:** When this switch is pushed **down** half-duplex transmission is selected. When the switch is pushed **up** full-duplex transmission is selected.

- (c) **ASYN/SYNC:** When this switch is pushed **down** synchronous operation is selected. When the switch is pushed **up** asynchronous operation is selected.

Note: The distant data module must be optioned for the same operation as the local data module.

TABLE B

CUSTOMER INTERFACE

PIN NO.	FUNCTION	EIA DESIGNATION (RS-232-C)
2	Transmitted Data	BA
3	Received Data	BB
4	Request to Send	CA
5	Clear to Send	CB
6	Data Set Ready	CC
7	Signal Ground	AB
8	Received Line Signal Detector	CF
9	Test Voltage	—
10	Test Voltage	—
15	DCE Transmit Signal Element Timing	DB
17	Receiver Signal Element Timing	DD
20	Data Terminal Ready	CD
22	Ring Indicator	CE
24	DTE Transmit Signal Element Timing (External)	DA

(d) **EXT/INT:** In the synchronous mode, this switch selects external or internal timing. When this switch is pushed **down** internal timing is selected. When this switch is pushed **up** external timing is selected.

Note: The distant data module must be optioned for the same timing as the local data module.

(e) **DISC:** When this switch is pushed **down** and asynchronous option is selected, calls may be terminated over the EIA interface from the customer data terminal keyboard. The EIA interface circuit BA permits 2 seconds of SPACE signal to terminate the call. When the switch is pushed **up** this option is disabled.

(f) **KYBD:** When this switch is pushed **down** calls may be dialed from the customer DTE keyboard. When this switch is pushed **up** this option is disabled.

(g) **PRTY:** Used when KYBD option is selected; this switch is pushed **down** to enable even and odd parity and pushed **up** to enable 1 and 0 parity. The PRTY switch is used in combination with the 0-EVEN/1-ODD switch described next.

(h) **0-EVEN/1-ODD:** When the PRTY switch is in the **down** position; push this switch to the **up** position to select even parity, push this switch to the **down** position to select odd parity. When the PRTY switch is in the **up** position; push this switch to the **up** position to select 0 parity, push this switch to the **down** position to select 1 parity.

C. DTDM Tests

3.07 This section describes the test procedures performed on the DTDM. The procedures consist of four separate tests; self test, local loop test, remote loop test, and remote loop/self test.

3.08 The tests are performed by operating the test switches corresponding to the test name. The

test switches are located under the side cover. The SELF TEST switch is a 2-position paddle switch. Self-test results are displayed on the TEST RESULTS LED indicator located near the test switches. The LOCAL LOOP/REMOTE LOOP test switch is a 3-position paddle switch.

3.09 Established calls are disconnected when the test switches are moved from their OFF position.

Note: Placing the LOCAL LOOP/REMOTE LOOP switch in the REMOTE LOOP position will not disconnect an established call.

All incoming calls or call origination requests are not accepted while the switches are in the test position. The DTDM TEST IN PROGRESS indicator remains **on** for the duration of each test.

D. Self Test

3.10 Place the SELF TEST switch in the SELF TEST position. This test first checks the DTDM integrity. If the test fails, the TEST RESULTS indicator flashes continuously. If the test passes, the TEST RESULTS indicator comes **on**.

3.11 The test continues, a known bit sequence is looped through the internal data path and checks for errors. Any errors detected cause the TEST RESULTS indicator to momentarily flutter. If the data is looped back without any detected errors, the TEST RESULTS indicator comes **on**. The indicator remains **on** until the SELF TEST switch is returned to the OFF position.

E. Local Loop Test

3.12 Place the LOCAL LOOP/REMOTE LOOP switch in the LOCAL LOOP position. This test checks the data path prior to the DCP link interface. Enter several DTE keyboard characters. The DTE display should show the same characters as just entered. When the test is complete, return the LOCAL LOOP/REMOTE LOOP switch to the OFF position.

F. Remote Loop Test

3.13 Place a call to another data module. Place the LOCAL LOOP/REMOTE LOOP switch in the REMOTE LOOP position. This test checks the data path from the DTE to the EIA interface of the called

module. Enter several DTE keyboard characters. The DTE display should show the same characters as just entered. When the test is complete, return the LOCAL LOOP/REMOTE LOOP switch to the OFF position.

G. Remote Loop/Self Test

3.14 Place a call to a data module. Place the LOCAL LOOP/REMOTE LOOP switch in the REMOTE LOOP position. Place the SELF TEST switch in the SELF TEST position. This test performs the known bit sequence check described earlier under the Self Test heading. The difference is the known bit sequence is looped through the data path from the DTDM to the EIA interface of the called module. Any errors detected cause the TEST RESULTS indicator to momentarily flutter. If the data is looped back without any detected errors the indicator comes **on**. The indicator remains **on** until the SELF TEST switch is returned to the OFF position. The SELF TEST switch must be returned to the OFF position before the REMOTE LOOP switch is returned to the OFF position or the call will be terminated.

4. INSTALLATION

4.01 The DTDM is one adjunct used with the 7403D and the 7405D digital voice terminal, each compatible with the System 85. This part includes information for installing the DTDM on a 7403D digital voice terminal, 7405D digital voice terminal, and 7405D digital voice terminal equipped with a function key module. For installation of other adjuncts in combination with the DTDM to the 7403D digital voice terminal, refer to Section 503-401-300. For installation of other adjuncts in combination with the DTDM to the 7405D digital voice terminal, refer to Section 503-401-310.

A. Additional Components Required for Installing a DTDM to Digital Voice Terminal

4.02 An auxiliary power source consisting of a 329A power unit, and a D6AP cord are required to power the DTDM (Fig. 2).

4.03 Use a 400B adapter to concentrate into one connector the power supplied from the 329A power unit by D6AP cord and DCP link circuit connections from the connecting block. A D8W cord, (ordered separately) is then used to connect the circuits to the digital voice terminal-DTDM assembly.

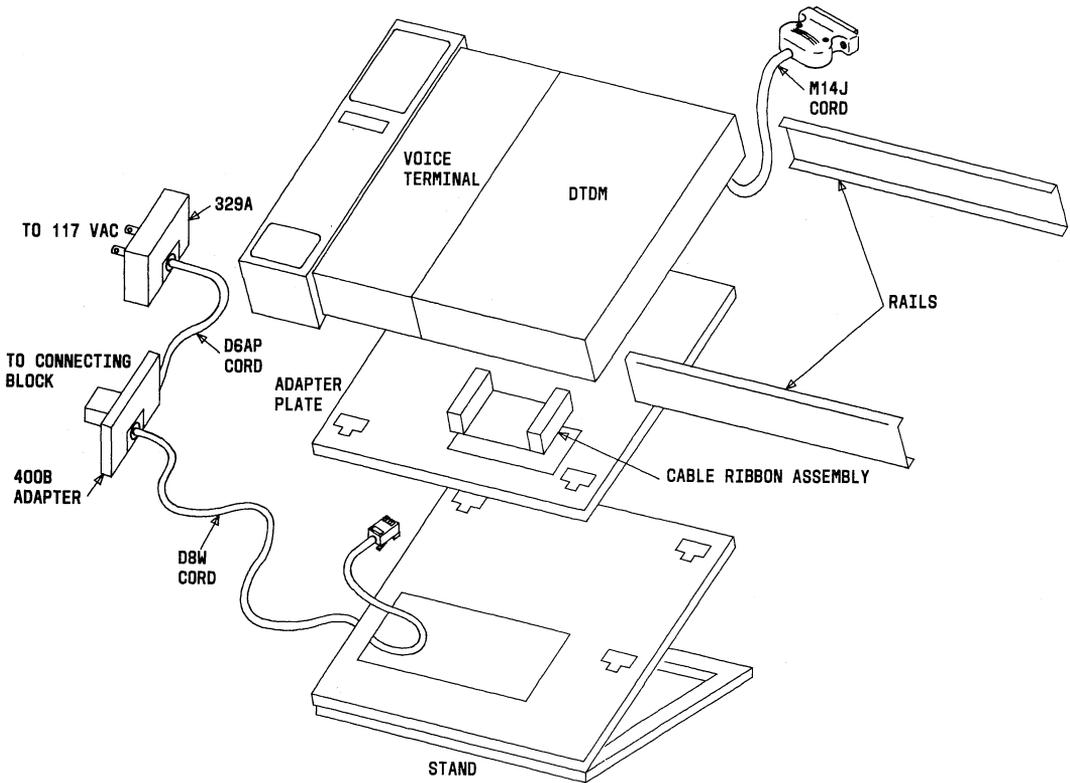


Fig. 2—Components Used With DTDM

4.04 The customer must provide a standard 3-wire grounded 105- to 129-volts at 57- to 63-Hz power receptacle easily accessible to the 329A power unit and DTDM. The receptacle must not be under control of a switch. The power required for the 329A power unit is approximately 30 watts.

4.05 Additional components contained in D-Kit of Parts are used to provide mechanical support of the combined digital voice terminal-DTDM assembly. The D-181169 Kit of Parts is used to attach the DTDM to the 7403D digital voice terminal, D-181170 Kit of Parts is used to attach the DTDM to the 7405D digital voice terminal and D-181171 Kit of Parts is used to attach the DTDM to a 7405D digital voice terminal equipped with a function key module.

4.06 Each D-Kit of Parts contains an adapter plate, ribbon cable assembly, two rails, and either a stand or an adapter plate or both, each specifically designed for the width of the combined assembly.

B. Cabling Distance

4.07 The maximum cable distance from the System 85 to the DTDM locations is limited to 4000 feet when 26 gauge conventional twisted pair station cabling wire is used. This distance limitation may be increased to 5000 feet if 24 gauge wire of the same quality is used. In both instances the wire is terminated in a connecting block compatible with the 400B adapter.

4.08 The DTDM should be located within 50 feet of the customer-provided data terminal equipment.

C. Attaching DTDM to a Digital Voice Terminal

4.09 **Caution: Avoid destroying DTDM internal circuitry by ensuring the DCP interface link cord (D8W) is removed from the associated digital voice terminal before attaching or removing the ribbon cable assembly to or from the DTDM.** The DTDM may be installed in an already existing digital voice terminal installation or added to a digital voice terminal at the time of a new installation. The procedures used to attach the DTDM to a 7403D digital voice terminal, 7405D digital voice terminal, and 7405D digital voice terminal equipped with a function key module are as follows:

- (1) Unpack the DTDM and remove the protective covering. Repeat the same for the digital voice terminal if required.

Note: The handset cord may be removed from digital voice terminal. Set aside for reinstallation.

- (2) Observe and note orientation of digital voice terminal end cap. Grasp end cap and remove (Fig. 3).
- (3) Slide top and bottom rails off from the digital voice terminal.

Note: Depending on local procedure, return unused items to the telephone company supply inventory.

- (4) Engage DTDM dove tails with corresponding slots in digital voice terminal housing and slide downward. Make certain both unit faceplate surfaces are level with each other.
- (5) Slide upper and lower rails from Kit of Parts across the units and seat firmly against the stop located near the handset (Fig. 4).

Note: Chamfered rails edges must be visible to the user.

- (6) Attach digital voice terminal end cap to DTDM. Ensure that the end cap is oriented in the same position as it was found.

- (7) Lay assembly facedown on work surface.

- (8) Pry plastic cover from housing concealing the DTDM interface connector. Store the cover in location provided in adapter plate. The adapter plate is provided in the Kit of Parts.

Note: Avoid foreign objects from entering and contaminating the exposed interface connector



A warning label attached to the module states the ribbon cable assembly must not be connected or disconnected while the D8W cord is connected to the digital voice terminal

- (9) Plug the ribbon cable assembly from the Kit of Parts into the digital voice terminal and DTDM interface connectors (Fig. 5).

- (10) Place adapter plate over all T-shaped tabs located on the underside of the units. Route DTDM interface cord so it is not damaged when the adapter plate is attached to the tabs.

- (11) Press adapter plate upward until the adapter plate catch locks on the terminal T-tabs (Fig. 6).

Note: Reinstall the handset cord to digital voice terminal if removed in previous step.

- (12) Return assembled units to face-up position.

- (13) Place assembly on stand from Kit of Parts and align T-tabs on adapter with slots on the stand.

- (14) Slide assembly forward until firmly seated (Fig. 7).

- (15) Connect D8W cord to digital voice terminal.

- (16) Connect other end of D8W cord to 400B adapter connected to DCP interface connecting block.

- (17) Connect D6AP cord to 329A power unit and 400B adapter.

- (18) Connect 329A power unit to 117 Vac power receptacle.

- (19) Perform installation test procedures given in paragraph 4.10.

4.10 Test a DTDM installed as an adjunct to a digital voice terminal as follows:

- (1) Observe an illuminated speed indicator on the DTDM faceplate.

Note: Refer to paragraph 5.03 for instructions to place a data call.

- (2) Perform a DTDM self test. If self test fails replace DTDM. Refer to paragraph 4.11 for removal instructions.
- (3) Connect M14J cord to customer DTE if available.
- (4) Install DTDM customer options.
- (5) Perform local loop test.
- (6) Place a data call to another data module source using the digital voice terminal. Terminate call upon hearing the distinctive tone in handset.
- (7) Place a data call to perform a remote loop test and a self-test remote loop test. If these tests fail replace DTDM. Refer to paragraph 4.11 for removal instructions.
- (8) Turn over equipment to customer.

D. Removing DTDM From Digital Voice Terminal

4.11 *Caution: Avoid destroying DTDM internal circuitry by ensuring the DCP interface link cord (D8W) is removed from the associated digital voice terminal before removing the ribbon cable assembly from the DTDM.* The procedures used to remove the DTDM from a 7403D digital voice terminal, 7405D digital voice terminal, and 7405D digital voice terminal equipped with a function key module are as follows:

- (1) Disconnect M14J interface cord from customer DTE.
- (2) Disconnect the D8W cord from the 400B adapter and the digital voice terminal.
- (3) Disconnect the 329A power unit from the 117 Vac power receptacle. Disconnect the

D6AP cord from the 329A power unit and 400B adapter.

- (4) Remove the 400B adapter from the connecting block.

Note: The handset cord may be removed from digital voice terminal. Set aside for reinstallation.

- (5) Grasp DTDM end cap and remove.
- (6) Slide upper and lower rails off the assembly.
- (7) Grasp digital voice terminal-DTDM assembly and slide off the stand.
- (8) Lay assembly face down.
- (9) Release adapter catch and slide adapter plate off the terminal T-tabs.
- (10) Disconnect the ribbon cable assembly from the digital voice terminal and DTDM. Replace plastic interface cover on DTDM interface connector receptacle.
- (11) Disengage the DTDM from the digital voice terminal.
- (12) If the digital voice terminal will remain in service, slide appropriate rails on the digital voice terminal. Reinstall digital voice terminal end cap. Connect D8W cord to digital voice terminal and connecting block.

Note: Reinstall the handset cord if removed in a previous step.

- (13) If the digital voice terminal is taken out of service, package digital voice terminal, DTDM, and associated equipment in a Kit A protective packaging carton. Refer to Part 6, MAINTENANCE for additional information.

5. OPERATION

5.01 The DTDM may be used when the associated digital voice terminal is in use. The DCP link is fully utilized when both the digital voice terminal and DTDM are in use.

5.02 Place a data call from keyboard optioned DTDM as follows:

- Turn **on** the DTE.
- The DTDM TERMINAL READY and CARRIER ON indicators come **on**.
- Option the DTDM compatible with the module at the other end.
- The DTDM red LED indicator corresponding to the speed selected comes **on**.
- Press the DTDM ORIGINATE/DISCONNECT switch or the DTE keyboard break key to activate the DTDM.

Note: The digital voice terminal sounds a "click" when either of these are pressed.

- The message DIAL appears on the DTE display.
- Enter the number of the called data module followed by a carriage return.

Note: Synchronous communication between a DTDM optioned for external timing and a trunk data module optioned for slave timing is not allowed.

- The message RINGING appears on the DTE display if the data module is available. The message BUSY followed by DISCONNECTED appears on the DTE display if the called data module is unavailable.
- The message ANSWERED appears on the DTE display.
- Handshaking occurs, CARRIER ON indicator goes **off** and module options compatibility is checked.
- The DTDM CALL IN PROGRESS and CARRIER ON indicators come **on** if the data modules are compatibly optioned. Data transmission can now take place. The CALL IN PROGRESS indicator remains **on** until the call is terminated.
- The DTDM CHECK OPTIONS indicator comes **on** if the data modules are not compatibly optioned. Also, the DTE sounds once followed by the message CHECK OPTIONS

appearing on the DTE display. Next, a sound is produced by the DTE. The message DISCONNECTED appears on the display followed by a sound from the DTE.

- The DTDM CHECK OPTIONS indicator remains **on** until the ORIGINATE/DISCONNECT or any of the test switches are operated.

5.03 Place a data call from the digital voice terminal attached to the DTDM as follows:

- Turn **on** the DTE.
- The DTDM TERMINAL READY indicator comes **on**.
- Option the DTDM compatible with the data module at the other end.
- The DTDM red LED indicator corresponding to the speed selected comes **on**.
- Pick up the handset from the digital voice terminal and dial the number of the data module as you would a regular voice call.
- As in a voice call, a busy signal or a ringing tone will be heard in the handset.
- When the data source answers, a distinctive tone is heard in the handset. Now transfer the call to the DTDM by pressing the DATA button on the digital voice terminal.
- Return the handset to the on-hook position.
- Handshaking occurs, and module options compatibility is checked.
- The DTDM CALL IN PROGRESS and CARRIER ON indicators come **on** if the modules are compatibly optioned. Data transmission can now take place. The CALL IN PROGRESS indicator remains **on** until the call is terminated.
- The DTDM CHECK OPTIONS indicator comes **on** if the modules are not compatibly optioned. The indicator remains **on** until ORIGINATE/DISCONNECT or any of the test switches are operated.

5.04 Data calls are answered automatically if the DTDM is idle. Answer a data call as follows:

- Turn **on** the DTE.
- The DTDM TERMINAL READY and CARRIER ON indicators come **on**.
- Option the DTDM compatible with the data module expected to call.
- The DTDM red LED indicator corresponding to the speed selected comes on.
- Handshaking occurs, CARRIER ON indicator goes **off** and data module options compatibility is checked after the call is answered.
- The DTDM CALL IN PROGRESS indicator comes **on** if the modules are compatibly optioned. If the keyboard option is installed the message INCOMING CALL-ANSWERED appears on the DTE display. Data transmission can now take place. The CALL IN PROGRESS indicator remains **on** until the call is terminated.

5.05 To end a data call, any of the following terminates the connection:

- Turn **off** the DTE.
- Press the DTDM ORIGINATE/DISCONNECT switch
- Press the keyboard break key if DTDM DISC option is used
- Press the LOCAL LOOP test switch to the local loop test position
- Return the SELF TEST to OFF position after the REMOTE LOOP test switch is returned to OFF in REMOTE LOOP/SELF TEST.

5.06 The call may also be terminated if the System 85 sends a DISCONNECT message or a DESTRUCTIVE RESET message to the DTDM.

6. MAINTENANCE

- 6.01 The DTDM does not require scheduled maintenance. Troubles isolated to a DTDM are cleared by replacing the faulty DTDM.
- 6.02 The System 85 monitors and directs remote DTDM testing activities. The DTDM performs

an internal self test every 5 minutes with results made available to the System 85 when requested.

6.03 The self test is performed if the DTDM is idle. The DTDM TEST IN PROGRESS indicator remains **off** for the duration of this test. The test results are made available to the System 85 when requested.

6.04 The System 85 can perform a loopback test involving the data transmission channel portion of the DCP link. This test destroys the data on the channel at the time of the test and ends the call. The DTDM TEST IN PROGRESS indicator is **on** for the duration of the test.

6.05 The System 85 retrieves information from the DTDM for display on a maintenance terminal. The following information is available for display:

- Data module type and firmware vintage
- Self-test results
- Current settings of the customer option switches
- State of the EIA interface leads.

Note: State of DB, DD, DA, BA, and BB leads are not displayed.

7. REFERENCES

7.01 Additional information concerning the DTDM and the associated voice terminals is contained in the following Bell System Practices:

SECTION	TITLE
503-401-300	7403D01A Multifunctional Digital Telephone Set (MFDT)—Identification, Installation, Operation, and Maintenance
503-401-310	7405D01A Multifunctional Digital Telephone Set (MFDT) Identification, Installation, Operation, and Maintenance

7.02 Detailed information concerning the DTDM and the associated digital voice terminals is contained in CD- and SD-1D330-01.

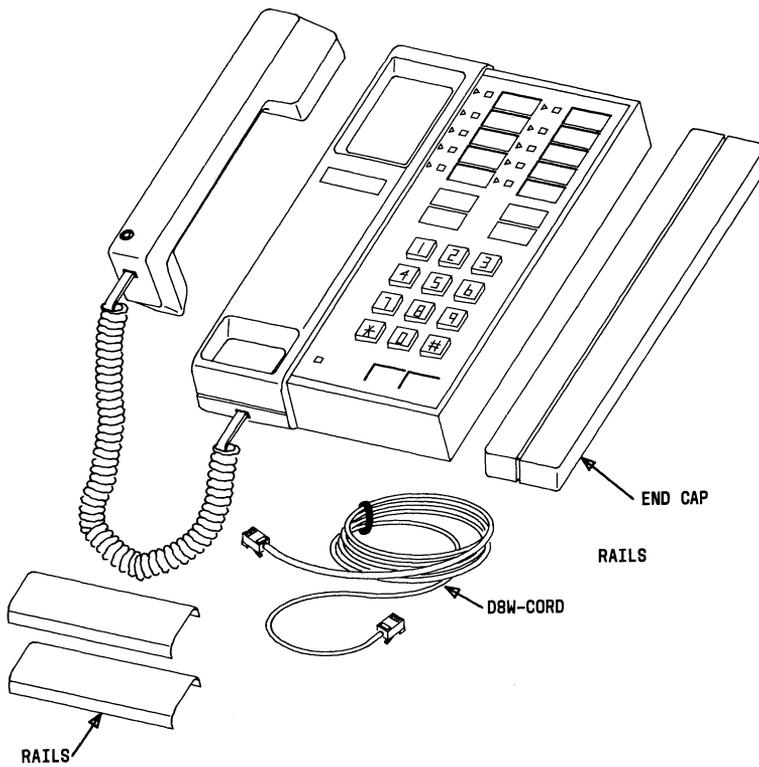


Fig. 3—Components Removed From Digital Voice Terminal in Preparation to Attach DTDM

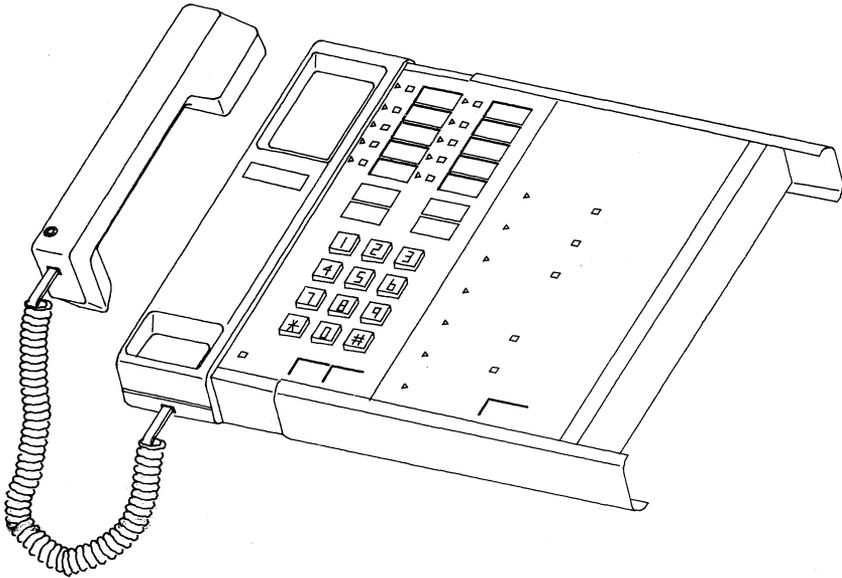


Fig. 4—Sliding Rails Across DTDM and Digital Voice Terminal

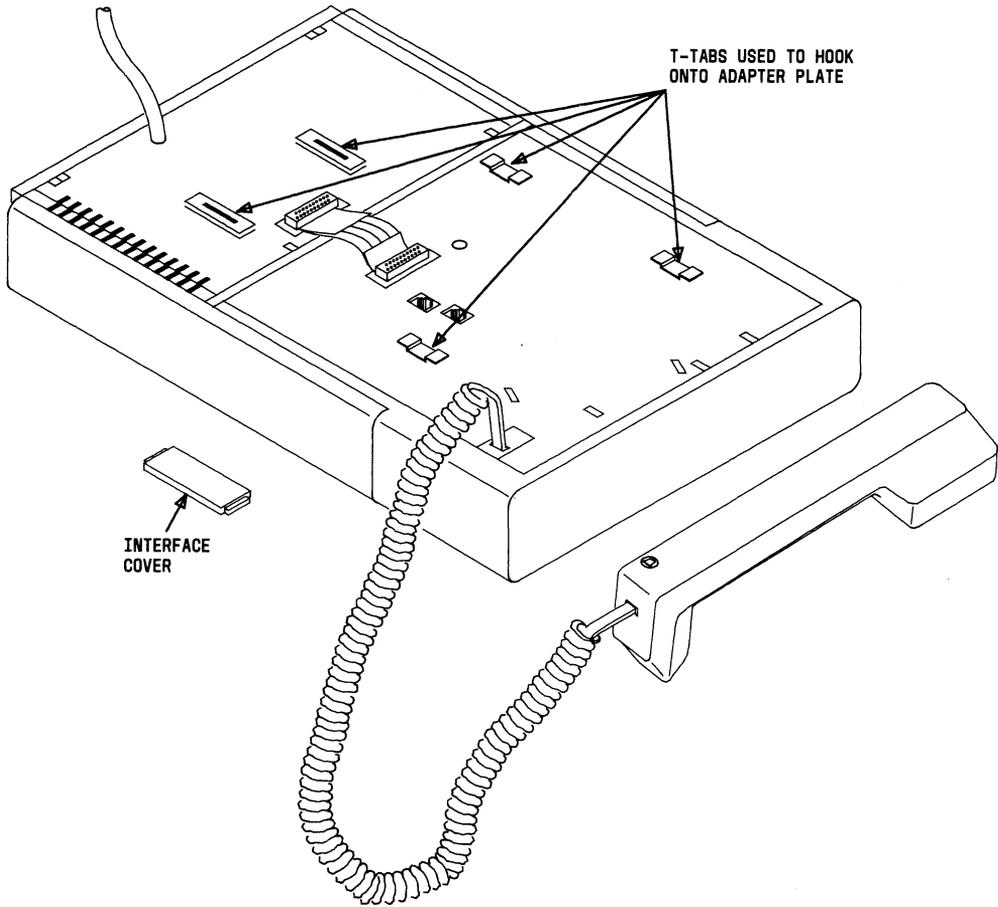


Fig. 5—Bottom View of Configuration After Cable Ribbon Assembly Attachment

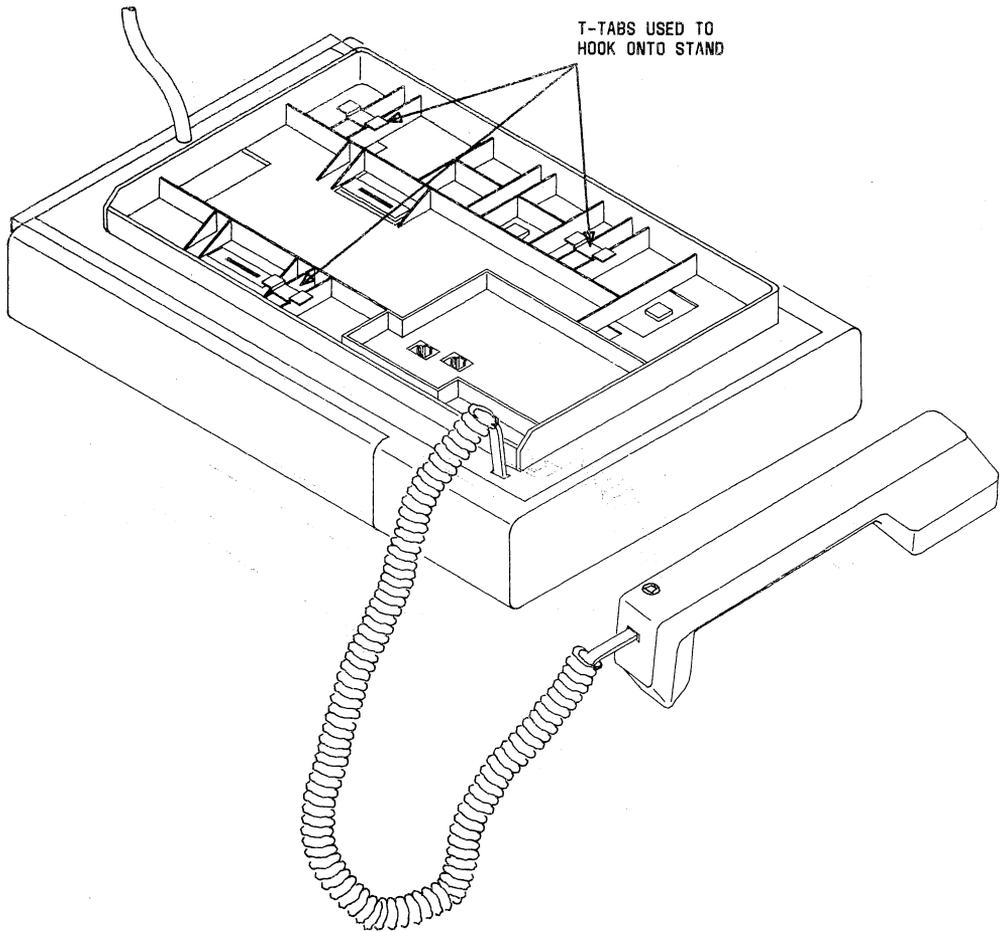


Fig. 6—Bottom View of Configuration After Adapter Plate Attachment

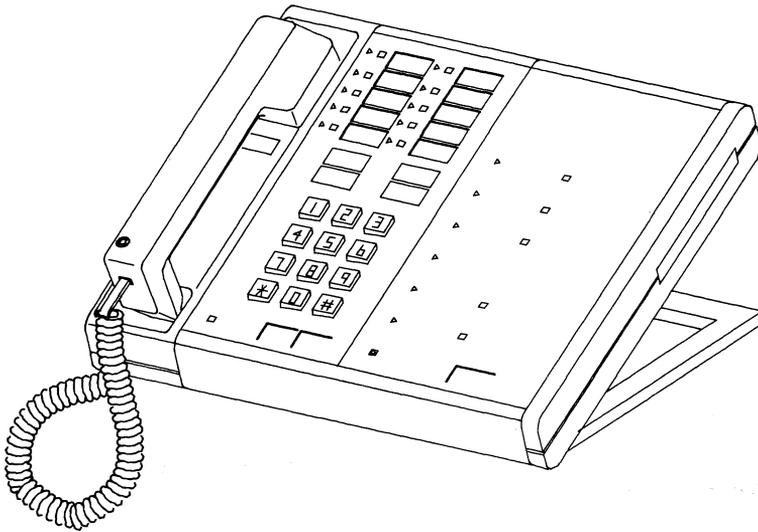


Fig. 7—Configuration Appearance After Attachment Procedures are Complete