407-TYPE MULTIPLE DATA STATION

DESCRIPTION

CONTENTS PAGE

1. GENERAL 1
2. PHYSICAL DESCRIPTION 4
Data Set 407A-L1 4
Data Set 407A-L1A 4
Data Set 407B 6
41-Type Data Mountings 6
101A Power Unit 7
46A1 Data Unit 7
47A1 Data Unit 9
Cabinets 9
3. FUNCTIONAL DESCRIPTION 9
Data Set 407A 9
Data Set 407B 12
OPTION AND INTERFACE INFORMATION 12
41-Type Data Mounting 12
Test Unit—46A1 and 47A1 Data Units 15
4. REFERENCES 15

1. GENERAL

1.01 This section provides information on the 407A- and 407B-type multiple data station optioned for either an Electronic Industries Association (EIA) voltage or a contact equivalent customer interface. The 407-type multiple data station performs functions similar to data set 403D-type multiple data station.

1.02 This section is reissued to add coverage on data set 407B. Since changes are extensive throughout the section, revision arrows have been omitted.

1.03 A 407A-type multiple data station, shown in Fig. 1, consists of the following units:

- Data set (DS) 407A
- 41-type data mounting (houses a maximum of eight DSs 407A) equipped with:
  - 101A power unit.
  - P3BJ power cord (one supplied ***only*** with the 41B1 and 41B2 data mountings). This power cord enables interconnection to other power units.
  - KS-14532-L16 power cord (one supplied ***only*** with the 41A1 and 41A2 data mountings). This 10-foot power cord is used for connection to the customer-provided ac power outlet.
  - 46A1 data unit (one supplied ***only*** with 41A1 or 41A2 data mountings).
  - 47A1 data unit (one supplied ***only*** with 41A1 or 41A2 data mountings).
- An appropriate housing such as a KS-20018-L11A or -L12A.

1.04 A 407B-type multiple data station is similar to the 407A-type shown in Fig. 1, but uses DS 407Bs, and only 41A2 and 41B2 data mountings.

Note: The KS-20018-L11A cabinet will hold 24 DS 407As, but only 16 DS 407Bs, due to thermal limitations.

1.05 The 407-type multiple data station is used primarily for Digital Inquiry Voice Answer-Back (DIVA) systems. These systems may be used in such applications as credit checking or retrieving

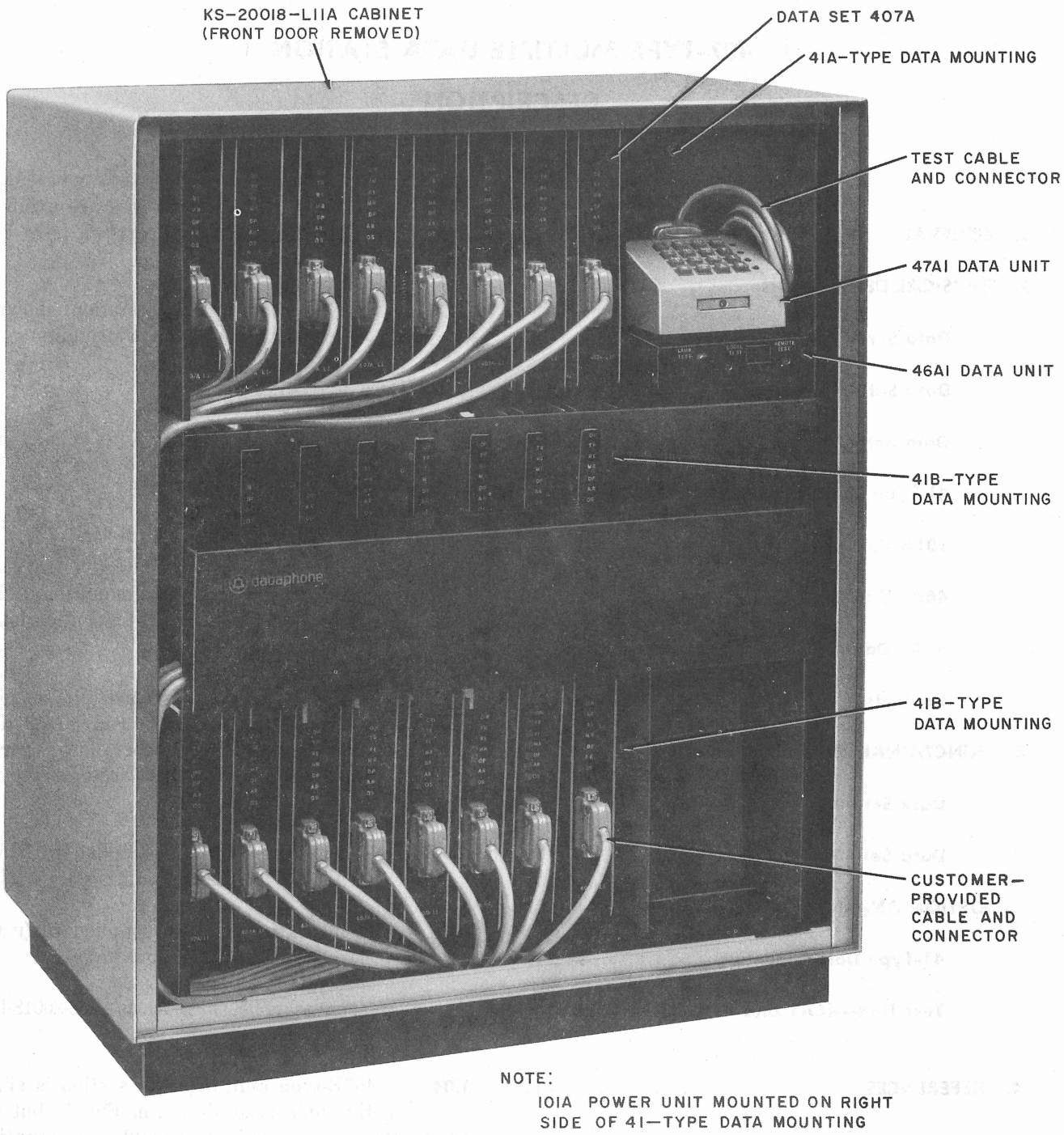


Fig. 1—407A-Type Multiple Data Station Mounted in a KS-20018-L11A Cabinet—Typical

information from a customer-provided computer. Using a Touch-Tone® telephone dial or TRANSACTION* telephone as the input device, a customer may call the computer and receive a voice or tone answer over the telephone handset. This answer may consist of machine-generated or prerecorded phrases. These phrases are under control of a customer-provided computer equipped with an audio response unit.

1.06 To operate with the Transaction telephone, a DS 407A-L1A or DS 407B-L1 must be used. The DS 407-L1A uses a JU1B line control and

*Trademark of AT&TCo

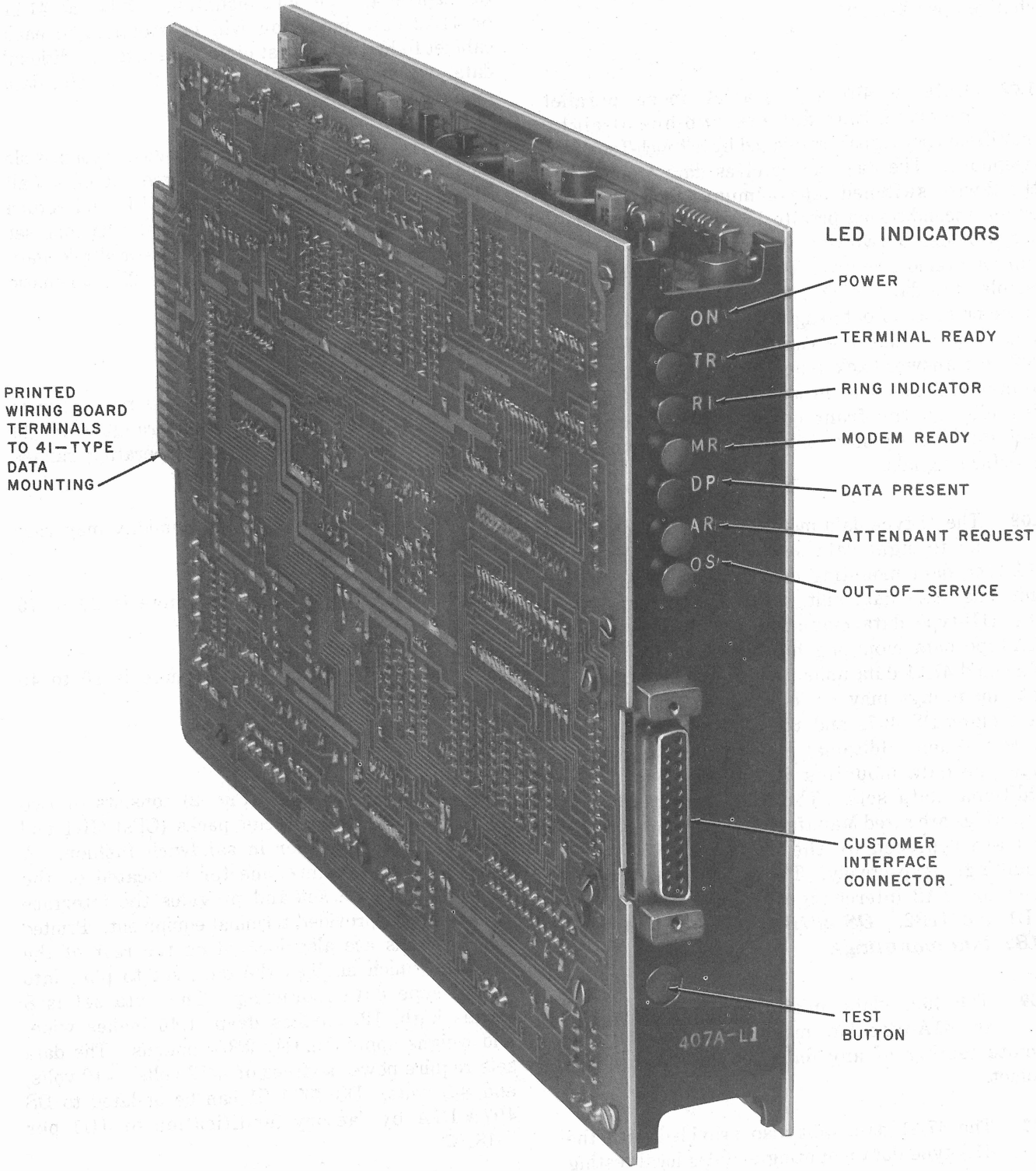


Fig. 2—Data Set 407A-L1 or -L1A

interface board or a factory-modified JU1 board changed per X-18107.

1.07 Data set 407-type is a low-speed, parallel receiver that detects two-out-of-eight multifrequency signals generated by a Touch-Tone-type telephone. The data set receives data from either the 2-wire switched telecommunications network or an unconditioned private line facility. The data set provides a two-way voice channel as well as full-time remote control. The remote control feature enables the data set to receive Touch-Tone signals in the presence of outgoing voice or tone answer-back. The data set has the capability of generating a 2025-Hz answer-back tone. Status light emitting diodes (LEDs), as shown in Fig. 2 and 3, are provided on the front panel of DS 407-type to indicate the state of various functions and customer interface signals.

1.08 The 41-type data mounting will accommodate up to eight data sets 407A or 407B. The 41A-type data mounting contains the 101A power unit, one 46A1 data unit, and one 47A1 data unit. The 41B-type data mounting is the same as the 41A-type data mounting but does ***not*** contain the 46A1 and 47A1 data units (test unit). The 41A-type data mountings may be used to accommodate the first eight DS 407s and the 46A1 and 47A1 data units. When additional DS 407s are used, one 41B-type data mounting is used for each eight additional data sets. The 41A1 and 41B1 data mountings are rated Manufacture Discontinued (MD) and are replaced by the 41A2 and 41B2 data mountings, respectively. The DS 407A uses either 41A1 or 41A2 interchangeably, and likewise the 41B1 and 41B2. ***DS 407B uses only 41A2 and 41B2 data mountings.***

1.09 The 46A1 data unit (Fig. 1) provided with the 41A-type data mounting enables local or remote testing of any data set 407-type in the cabinet.

1.10 The 47A1 data unit also provided with the 41A-type data mounting enables local testing by a telephone company (telco) employee or customer of any data set housed in the cabinet.

1.11 The 407-type multiple data station may be housed in a KS-20018-L11A or -L12A cabinet, or equivalent, or any mounting rack that will accept the 23-inch 41-type data mounting. Only one 41A1 or 41A2 data mounting will be mounted in each cabinet to house the first eight data sets. Additional data sets will be housed in the 41B1 or 41B2 data mountings, as required.

1.12 The 407-type multiple data station is compatible with a 565HK-type telephone set or a Call Director®. These units provide TALK and return to DATA functions as well as normal telephone set functions if required. The 407-type multiple data station is also compatible with the 2B automatic call distributor (ACD).

2. PHYSICAL DESCRIPTION

2.01 The 407-type multiple data station will operate in an ambient temperature range from 40 to 120°F. The relative humidity operating ranges for the data station are as follows:

- Between 40 to 75°F, the humidity may vary from 20 to 95 percent.
- At 100°F the humidity range is 20 to 70 percent.
- At 120°F the humidity range is 20 to 40 percent.

Data Set 407A-L1

2.02 Data set 407A-L1 (Fig. 2) consists of two printed wiring circuit packs (CPs) (JU1 and JU2) mounted together in sandwich fashion. A KS-19087-type 25-pin connector is located on the front of the data set and provides the interface with customer-provided terminal equipment. Printed CP terminals are also located on the rear of the data set which enables the data set to plug into the 41-type data mounting. The data set is 8 inches high, 12.1 inches deep, 1.45 inches wide, and weighs approximately 2-3/4 pounds. The data sets require power sources of +12 volts, −12 volts, and +5 volts. DS 407A-L1 can be updated to DS 407A-L1A by factory modification of JU1 per X-18107.

Data Set 407A-L1A

2.03 Data set 407A-L1A (Fig. 2) consists of two printed wiring CPs (JU1B and JU2) similar to DS 407A-L1. Dimensionally, DS 407A-L1A is the same as DS 407A-L1, and the power source

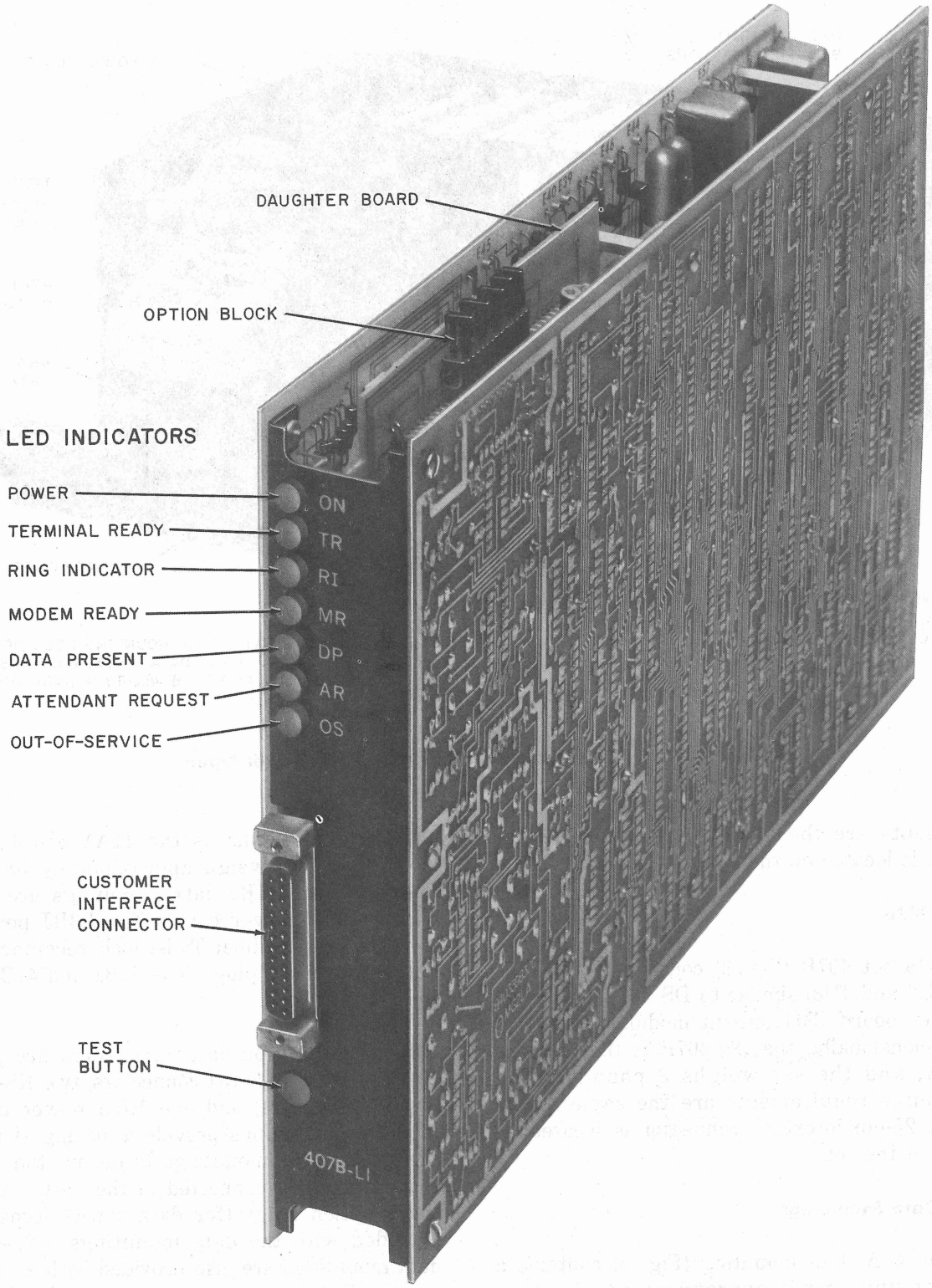


Fig. 3—Data Set 407B

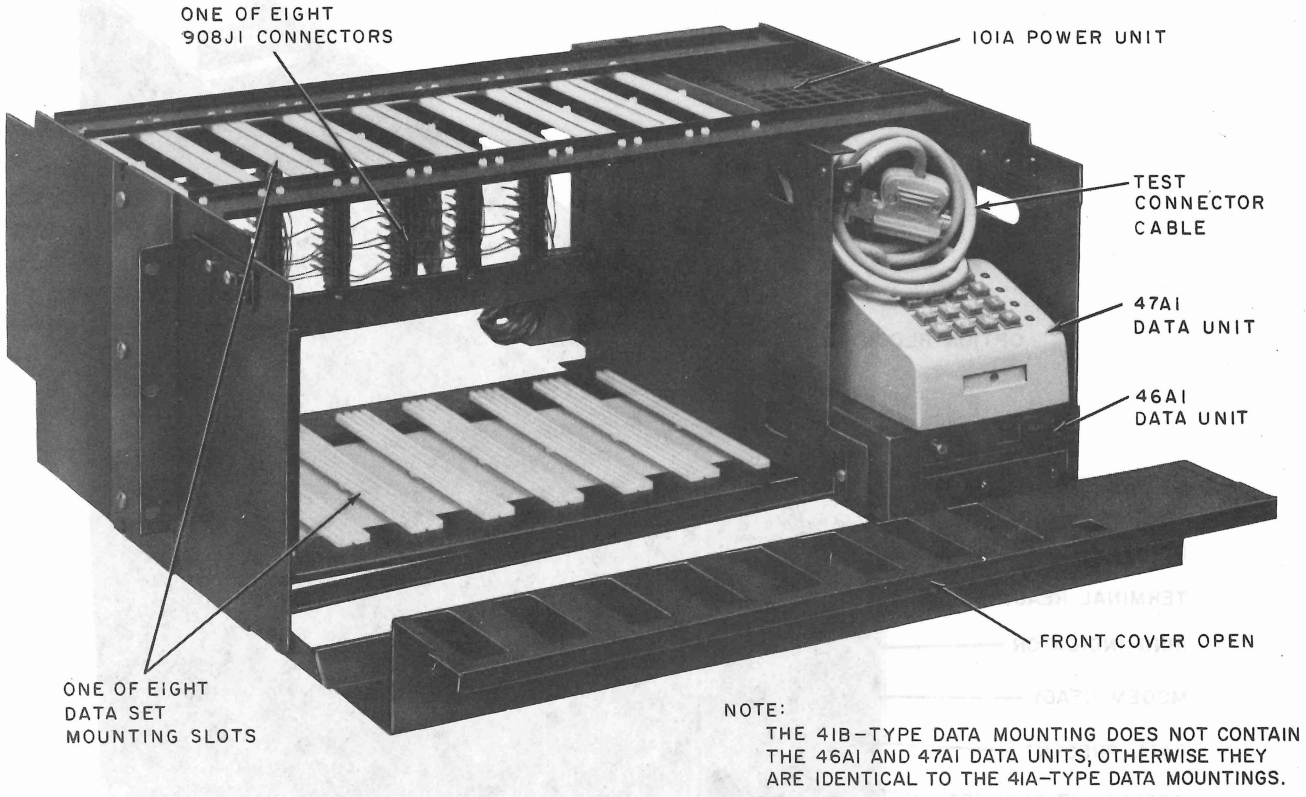


Fig. 4—41A-Type Data Mounting With Front Cover Open

requirements are the same. A 25-pin interface connector is located on the front of the set.

Data Set 407B

2.04 Data set 407B (Fig. 3) consists of two CPs (JU2 and JU3) similar to DS 407A-L1A, with a daughter board CM1 (circuit module) as part of JU3. Dimensionally, the DS 407B is the same as DS 407A, and the set weighs 3 pounds. The power source requirements are the same as DS 407A. A 25-pin interface connector is located on the front of the set.

41-Type Data Mountings

2.05 The 41A data mounting (Fig. 4) contains a test unit and is approximately 23 inches wide, 8.67 inches high, and 16.5 inches deep. It mounts on a 23-inch rack and weighs approximately 42 pounds. The 41A1 and 41A2 data mountings are supplied with a KS-14532-L16 power cord. The 41B1 and 41B2 data mountings have the same phsycial dimensions as the 41A1 and 41A2 data mountings and weigh approximately 38 pounds. The 41B1 and 41B2 data mountings are supplied with a P3BJ power cord. The P3BJ power cord consists of a Hubbel Twist-lock receptacle and a three-prong male plug. The 41B1 and 41B2 do ***not*** contain test units.

2.06 The 41-type data mountings are provided with eight 908J1 connectors, two KS-16672-L3 50-pin connectors, and one 101A power unit. All four data mountings provide a locking strip across the front of the mountings to ensure the data sets remain properly connected in the nest. A pack of spare option plugs (for data set 407-type) is also provided with the data mountings. The 41-type data mountings are also provided with a removable cover. Decals are attached to the inside of this front cover. One decal provides data set number location as well as computer port assignment for each data set in the 41-type data mounting. This decal appears on all 41-type data mountings. A second decal is located on 41A1 data mountings to

Fig. 5—101A Power Unit

provide local test information. This same decal, plus a third decal is located on 41A2 data mountings to provide local test information. Backplane wiring is also provided with the data mountings.

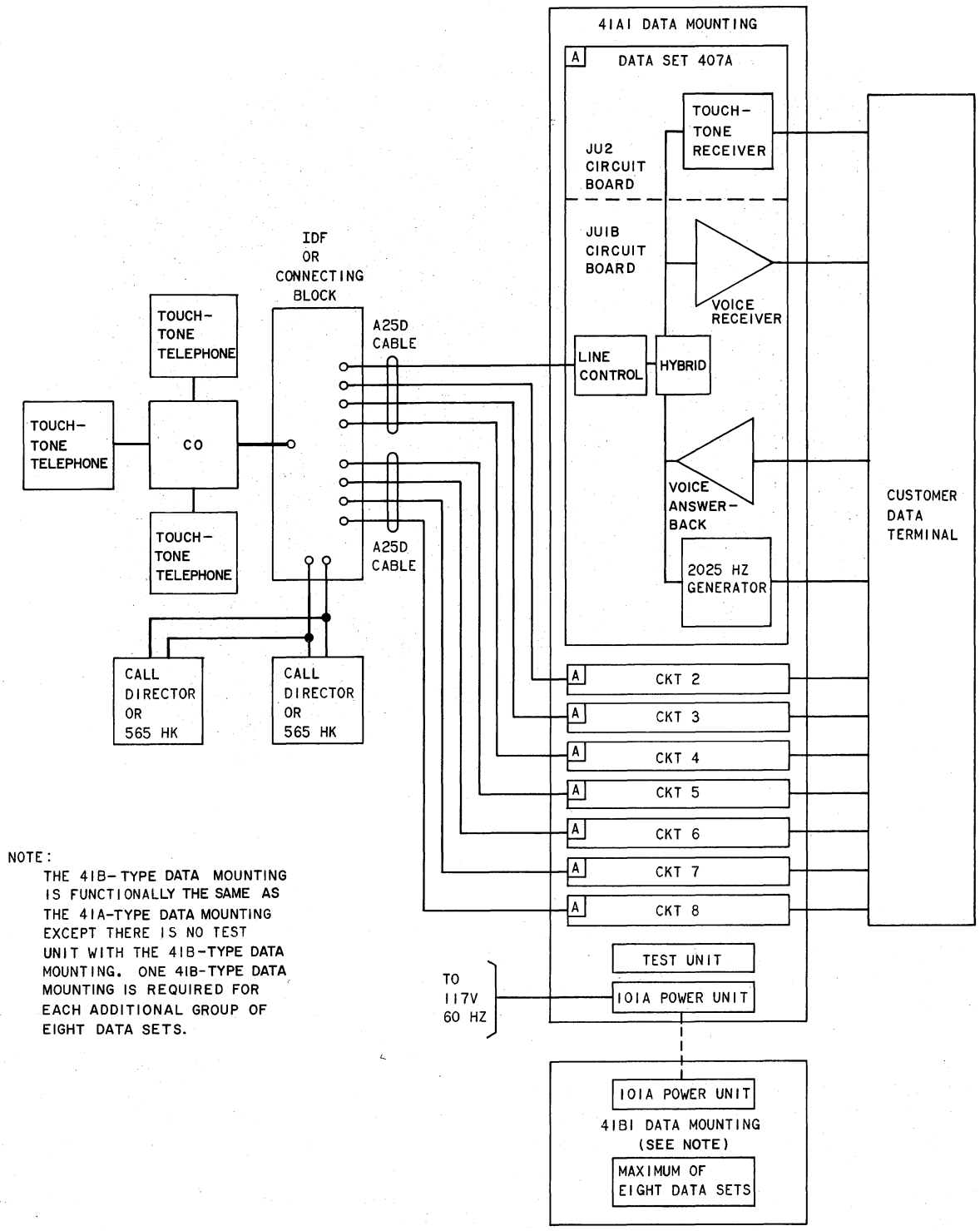
2.07 A 25D connector cable equipped with one KS-16689-L3 plug is used to make the necessary line facility connections per four data sets. The KS-16689-L3 plug is connected to the left (J4) or right (J3) KS-16672-L3 connector on the rear of the 41-type data mounting. In addition, connector J4 on the 41A1 or 41A2 data mounting also holds the tip and ring pair of the service line used in remote testing. A 5-foot long test connector cable is provided with 41A1 and 41A2 data mountings to facilitate testing of any data set in the cabinet.

101A Power Unit

2.08 The dc voltages are supplied to the data sets via the data mounting by the 101A power unit (Fig. 5.) The 101A power unit is mounted on the right side of the data mounting and weighs 20 pounds. If more than one data mounting is required, the 101A power units are interconnected (via P3BJ power cords) with the bottom power unit supplying the external power connection via the KS-14532-L16 power cord.

46A1 Data Unit

2.09 The 46A1 data unit (Fig. 1) is approximately 5.2 inches wide, 2 inches high, 4.2 inches deep, and weighs 1.5 pounds. This data unit



NOTE:
THE 41B-TYPE DATA MOUNTING IS FUNCTIONALLY THE SAME AS THE 41A-TYPE DATA MOUNTING EXCEPT THERE IS NO TEST UNIT WITH THE 41B-TYPE DATA MOUNTING. ONE 41B-TYPE DATA MOUNTING IS REQUIRED FOR EACH ADDITIONAL GROUP OF EIGHT DATA SETS.

Fig. 6—Functional Block Diagram—407A-Type Multiple Data Station Arrangement—Typical

contains a LOCAL-REMOTE test switch, test indication LEDs, and a LAMP TEST switch for testing all LEDs in the cabinet.

47A1 Data Unit

2.10 The 47A1 data unit (Fig. 1) is approximately 4.5 inches wide, 2.5 inches high, 4.5 inches deep, and weighs 1.5 pounds. This data unit is a modified 16-button Touch-Tone dial. The data unit contains LEDs across the top and down the right side of the dial.

Cabinets

2.11 The 407-type multiple data station may be housed in one of two KS-20018-type cabinets. The front panel of each cabinet is tinted plastic, while the back panel is perforated metal. The cabinet exteriors are textured aluminum with a clear finish. The cabinets and physical characteristics are as follows:

- KS-20018-L11A cabinet can house one 41A1 or 41A2 and up to two 41B1 or 41B2 data mountings with a maximum of twenty-four DS 407As or sixteen DS 407Bs. The cabinet is approximaely 24 inches wide, 30 inches high, 19 inches deep, and weighs 31 pounds.

- KS-20018-L12A cabinet can house one 41A1 or 41A2 data mounting with a maximum of eight data sets. The cabinet is approximately 24 inches wide, 17 inches high, 19 inches deep, and weighs 22 pounds.

Stations requiring more data sets that can be accommodated in the KS-20018-L11A cabinet can be served by using multiple cabinets. Interconnection between cabinets must be made at time of installation.

3. FUNCTIONAL DESCRIPTION

3.01 The 407-type multiple data station provides a maximum of eight interface connections between the data sets and customer-provided terminals per data mounting. Two line facility interface connectors per data mounting are also provided. Each of the line facility connectors provide the necessary interface to connect four data sets to the telephone network. The telephone network connections are made via an intermediate distribution frame (IDF) or connecting block, as required. A functional block diagram is shown in Fig. 6.

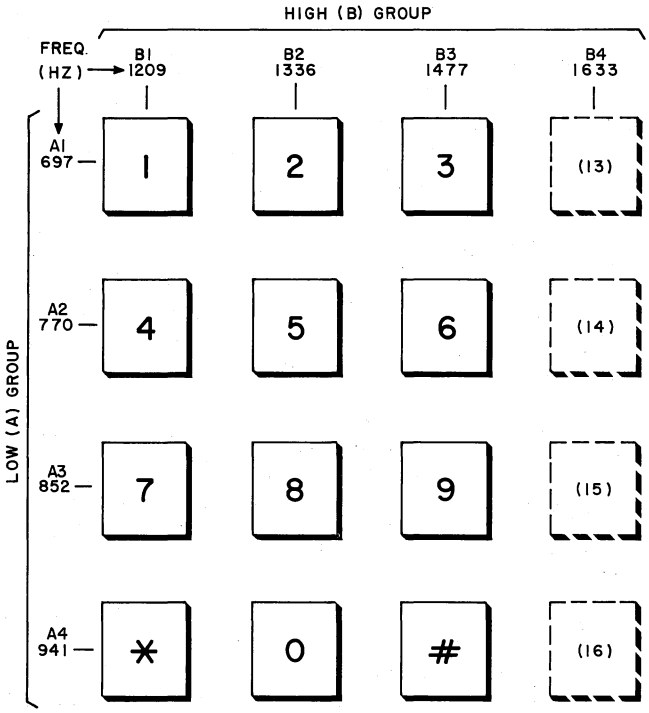


Fig. 7—Touch-Tone Dial Frequency Assignments

Data Set 407A

3.02 Data sets 407A-L1 and -L1A are functionally, as well as physically, divided into two halves; a line control and interface CP (JU1 or JU1B) and a receiver CP (JU2).

3.03 The JU1 or JU1B CP provides the interface between the telephone lines and the data set. This CP is also the interface between the data set and customer-provided terminal via the KS-19087-type 25-pin connector. An impedance match of 600 ohms (private line) or 900 ohms direct distance dialing [(DDD) line] is provided by the data set via the JU1 or JU1B CP. The JU1 or JU1B CP provides the following additional functions:

- Automatic answer.

- Normal voice telephone service with an associated key telephone set, if required.

- Two-way voice channel.
- Return to data.
- Tone answer-back (2025 Hz) (see note).
- Local and remote test capability.
- Indicator LEDs.
- Call referral.
- Automatic Call Distributor (ACD) interface.

Note: DS 407A-L1A (using a JU1B or modified JU1) has a tighter tolerance on answer-tone duration than DS 407A-L1.

3.04 The hybrid network located on JU1 or JU1B CP allows detection of valid data signals in the presence of near-end signals such as voice answer-back or tone answer-back. (Full-time remote control).

3.05 The JU2 CP is the receiver portion of the data set and accepts a two-out-of-eight Touch-Tone transmission code. The transmission code consists of two groups of frequencies, a low group and a high group, each containing four frequencies. These frequencies are grouped and designated as shown in Fig. 7.

3.06 The receiver detects the Touch-Tone signals at a maximum rate of ten characters per second. A character consists of one frequency from each group shown in Fig. 7. Therefore, the two-out-of-eight code provides 16 different frequency pairs (characters). Data set 407-type recognizes all of these characters.

3.07 Seven status LEDs are provided on the front of data sets 407A-L1 and -L1A as shown in Fig. 2. The LED names and functions are defined as follows:

- The "ON" LED indicates that power is applied to the data set.
- The terminal ready (TR) LED indicates the status of the data terminal ready signal from the customer interface.
- The ring indicator (RI) LED indicates that ringing is being applied to the data set.
- The modem ready (MR) LED indicates the status of data set ready signal to the customer interface. This LED comes ON 3 seconds after ringing is tripped, if the station is in the Data mode and TR is ON. Once it comes ON, it stays ON until termination of the call, whether the line is in the Talk or the Data mode.
- The data present (DP) LED indicates the status of the data present signal to the customer interface. This signal (DP LED ON) indicates that the data set is receiving data.
- The attendant request (AR) LED indicates the status of attendant request signal from the customer interface.
- The out-of-service LED indicates that the data set has been placed out of service.

3.08 The data set has the capability of giving an out-of-service indication to the connecting data facility under any of the following conditions:

- Out-of-service customer interface lead is placed in the ON state by the customer terminal.
- The data set is under test.
- Power is lost to the data set.
- The data set is not plugged into the nest correctly or has been removed from the nest.
- The connector to the customer terminal is not plugged in correctly and the EIA interface option is used.

3.09 The data set detects ringing current on its associated line circuit and generates a ring indicator (RI) signal on the customer interface. If the customer terminal is ready to accept the call (DTR is turned on), the line control circuit will answer the call automatically and then sense DC loop current. A 2025-Hz answer tone is then transmitted for about 1.5 seconds to the calling station, indicating the call has been answered. The DSR lead is turned ON indicating the data set is connected to the line. During a call, the line control circuit will indicate line and data set status

TABLE A

DATA SET 407-TYPE OPTIONS

OPTION	SELECTION	DESIG	AVAILABLE IN
Type of Operation	Switched Network	A*	Both 407A and 407B
	Private Line	B	
Used With ACD	No	C*	Both 407A and 407B
	Yes	D	
Answer Back Level	-3 dBm	E	Both 407A and 407B
	-7 dBm	F	
	-12 dBm	G*	
Customer Interface	EIA	H*	Both 407A and 407B
	Contact Equivalent	J	
Terminal Initiated Referral	Always	K	407B Only
	During Computer Down Only	L*	
OS Controlled by DTR	No	M*	407B Only
	Yes	N	
Computer Down Detection	Switch Only	AA	407B Only
	All DTR Off Only	BB	
	Switch or All DTR Off	CC	
	Not Used	DD	
Out-of-Service Wiring	Tip-Ring Short	EE	Both 407A and 407B
	Third Wire Ground	FF	
	Separate Pair Short	GG	
Grounding	Frame Ground Connected to Signal Ground	HH*	Both 407A and 407B
	Frame Ground and Signal Ground Not Connected	JJ	

* Factory Furnished Option.

by means of a lamp indication on the associated Call Director or 565HK-type telephone station as follows:

- In the ***Idle*** mode the lamp is OFF.
- In the ***Data*** mode the lamp is ON.
- In the ***Data*** mode, when the attendent request lead is ON, the lamp flashes.
- In the ***Talk*** Mode the lamp is ON.
- In the ***Out-of-Service*** mode the lamp is ON.

The call is terminated when the loop current is interrupted during a call after the automatic answering sequence is over. The call is also disconnected by the following means:

- TALK mode—attendant hangs up
- DATA mode—DTR ***off***
- ACD—DTR ***off.***

Data Set 407B

3.10 Data set 407B (Fig. 2) performs all the functions of DS 407A; and also provides the following three additional features:

- Terminal-initiated referral capability
- Remote call termination
- Limited call-handling capability when customer-provided equipment is out of service.

The DS 407B is also functionally and physically divided into two halves; a line control and interface (JU3) and a receiver (JU2). The additional functions listed above are provided by a daughter board which is part of JU3 CP; the JU2 CP provides the same functions for both data sets.

3.11 When DS 407B is optioned for "terminal initiated referral—always," the calling terminal may request an attendant any time (computer "up" or "down") by sending the "attendant request" signal (* *).

3.12 In addition to the features described above, when the 407B data station goes into "computer down" mode, the data sets answer incoming calls, generate a 3.5-second answer tone to indicate "computer down" to the calling terminal and can respond to an "attendant request" signal (* *) from a terminal. A 15-second time-out feature is provided so that calls that do not get referred are promptly terminated.

3.13 Data set 407B responds to the Touch-Tone sequence * # * (star, number sign, star) by momentarily turning off data terminal ready (DTR) regardless of the status of the DTR lead at the customer interface. This causes the data set to terminate the call.

3.14 Out of service may be controlled by DTR by option.

OPTION AND INTERFACE INFORMATION

Data Sets 407A and 407B

3.15 On DS 407A-type, option strapping is provided by means of two-pronged plugs which fit into numbered jacks on the JU1-type CP. On DS 407B the same options are funished as part of JU3 CP. Additional options required when DS 407B is used with a Transaction telephone are provided by rectangular jacks which fit over prongs on a lettered option block on the daughter board (CM1) which is part of JU3. Options for DS 407-type are listed in Table A.

Customer Interface Information

3.16 Interface pin numbers, lead designations, abbreviations, and functions for data set 407-type are shown in Table B. Twenty-three of the twenty-five leads on the customer interface connector are assigned. The two unassigned leads are spares.

41-Type Data Mounting

3.17 The 41-type data mounting is a multiple apparatus housing which will accommodate a maximum of eight data sets. Connectors J3 and J4 on the 41-type data mounting provide interconnection from the eight mounting slots to the telephone network via an IDF or connecting block. The 908J1 connectors (eight per mounting) accept data set 407-type.

TABLE B

CUSTOMER INTERFACE LEAD FUNCTIONS

PIN NO.	LEAD DESIGNATION	ABBREVIATION	FUNCTION
1	Frame Ground	FG	Common to ac power service ground.
2	Voice Receive A	VRA	Provides one-half of a 600Ω balanced pair for line signals being passed to the customer.
3 4 5 6	A1 Data A2 Data A3 Data A4 Data	A1 A2 A3 A4	Low group outputs from data set when a valid Touch-Tone character is present.
7	Spare	—	Not used.
8	Voice Receive B	VRB	Provides one-half of a 600Ω balanced pair for line signals being passed to the customer.
9 10 11 12	B1 Data B2 Data B3 Data B4 Data	B1 B2 B3 B4	High group outputs from data set when a valid Touch-Tone character is present.
13	Spare	—	Not used.
14	Ring Indicator	RI	An ON condition on this lead indicates that ringing signal is being received.
15	Attendant Request	AR	An ON condition on this lead (data set in data mode) indicates that an attendant is requested on the line.
16	Data Present	DP	An ON condition on this lead indicates that the data set is receiving a valid Touch-Tone signal. This lead is considered a data lead and therefore an ON condition is a negative voltage.
17 18	Voice Answer-Back A Voice Answer-Back B	VAA VAB	Provides a 600Ω balanced pair for answer-back signal from customer to data set.
19	Data Mode	DM	An ON condition on this lead and the DSR lead (pin 23) indicates the data set is in the data mode. An OFF condition on the DM lead and an ON condition on the DSR lead indicates the data set is in the talk mode.

TABLE B (Cont)

CUSTOMER INTERFACE LEAD FUNCTIONS

PIN NO.	LEAD DESIGNATION	ABBREVIATION	FUNCTION
20	Tone Answer-Back	TAB	An ON condition on this lead causes the data set to disable the voice answer-back port and generate an answer-back tone (2025 Hz).
21	Data Receive	DR	An ON condition *must* be placed on this lead (by the customer) to connect the Touch-Tone receiver to the telco line. This enables the data set to receive data.
22	Data Terminal Ready	DTR	An ON condition on this lead prepares the data set to be connected to the telco line. In DS 407B, the out-of-service function can be optionally controlled by the DTR lead. When that option (N) is selected, the OS lead has no effect and the set is out of service when DTR is off.
23	Data Set Ready	DSR	An ON condition on this lead indicates the data set is *either* in the data mode and ready to receive data, transmit answer-back signals, or both, depending on the condition of the DR lead (Pin 21), or is in the talk mode (DM lead Pin 19 is OFF).
24	Signal Ground	SG	This conductor establishes the common ground for signals referenced to it and is optionally connected to frame ground via a strap located on the power unit.
25	Out of Service	OS	An ON condition on this lead makes the data set appear busy to incoming calls. When an ACD is employed, this lead is placed in the OFF condition at all times. In DS 407B, the out-of-service function can be optionally controlled by the DTR lead. When that option (N) is selected, the OS lead has no effect and the set is out of service when DTR is off.

3.18 Each of the 41A1 (MD), 41A2, 41B1 (MD), and 41B2 data mountings are equipped with one 101A power unit. The 101A power unit supplies power to a maximum of eight data sets. Separate outputs on the power unit provide +12 volts, −12 volts, and +5 volts filtered dc power for each data set in the 41-type mounting. The power unit is powered from a 117-volt 60-Hz three-wire (with ground) source.

3.19 The single test unit in the 41A1 or 41A2 data mounting provides both local and remote

testing capabilities for all the data sets within a single cabinet.

Test Unit—46A1 and 47A1 Data Units

3.20 When a data set is placed under test (local or remote), the customer interface cable is removed from the data set and the test cable from the 46A1 data unit (CA1) is connected directly to the data set interface connector. An extension of this 25-pin test connector automatically operates the TEST switch located on the front of the data set. When the data set is placed in the test mode, the following functions occur:

- Data set is transferred from its associated line to a test line.
- The local test start (LTS) and remote test release (RTR) leads of the set under test are connected to the test circuit.
- The interface leads are placed in the contact equivalent option.
- If an ACD is used for voice access and call distribution, the data terminal ready indication to the ACD is disabled. This makes the data set under test appear busy to the ACD.
- The incoming line is made busy so no calls will be directed to the data set under test.

3.21 The 46A1 data unit provides local, remote, and LED testing of up to 24 of the 407-type data sets in a multiple data station. The LOCAL-REMOTE test switch is operated to REMOTE TEST, thereby placing the data set in the remote test mode. In the remote test mode, the data set under test is connected to a service line and then called from a remote data test center. When the LAMP TEST switch is depressed, the status LEDs on the data sets and test unit should light. This test feature checks that all LEDs are in working condition.

3.22 The 47A1 data unit provides means for local testing of up to 24 data sets by the customer or telco employee, by operating the LOCAL-REMOTE test switch on the 46A1 data unit to LOCAL TEST. When a Touch-Tone button on the 47A1 data unit is depressed and held, the two LEDs representing the horizontal and vertical coordinates of the depressed button will flash at a steady rate. This test enables the customer or telco employee to obtain a rapid check of a data set.

4. REFERENCES

4.01 The following documents pertain to the 407-type multiple data station.

SD & CD 1D240-01 Data System Station—407-Type Data Station

SD & CD 1D241-01 Power Unit 101A

SECTION	TITLE
314-811-100	1A Transaction Telephone Test Line Station—Description
476-270-203	2B Automatic Call Distributing System—Cabling and Cross Connects
581-235-101	2B Automatic Call Distributor—General Description Information
590-004-109	Data Set 407-Type Multiple Data Station—Reference Guide
590-100-132	46A1 Data Unit—Identification
590-100-133	47A1 Data Unit—Identification
590-102-132	41-Type Data Mounting—Identification
594-030-100	Data Set 407-Type—Identification
594-800-101	407-Type Multiple Data Station Using 2B Automatic Call Distributor—Description
594-800-200	407-Type Multiple Data Station—Installation and Connections
594-800-300	407-Type Multiple Data Station—Maintenance

SECTION	TITLE
594-800-500	407-Type Multiple Data Station—Test Procedures
594-800-501	407-Type Multiple Data Station Using 2B Automatic Call Distributor—Test Procedures
668-104-540	Data Test Center 904A- and 904C-Types—407-Type Multiple Data Station—Loop-Back Test