

DATA SET 403D-TYPE MULTIPLE DATA SET STATION MAINTENANCE

1. GENERAL

1.01 This section contains information for the maintenance of a Data Set 403D-type multiple data set station and associated components.

1.02 This section is reissued for the following reasons:

- To show Data Sets 403D3, 5, and 7 rated Manufacture Discontinued (MD).
- To show Data Sets 403D9, 11, and 13 as the respective replacing data sets.
- To include new circuit packs (CPs) used in the current standard data sets, which provide for operation with ESS and on Unigauge loops and meet the signal level constraints of FCC Tariff No. 263.
- To include a call origination and return-to-data feature. This requires a 1B3 Data Mounting instead of a 1B2 and a CP AR462 instead of the CP AR252. The 1B2 Data Mounting and CP AR252 are rated MD. This feature also requires a modified CALL DIRECTOR®.
- To show CP AR250 rated Additions and Maintenance (A & M) only.
- To show 3A2 Data Mounting rated MD and to show 3A3 Data Mounting as the replacement.

Because many of the Data Sets 403D3, 5, and 7 (MD) are still used in the field, information on these units is retained. Since this reissue constitutes a general revision, arrows ordinarily used to indicate changes have been omitted.

1.03 No routine maintenance is required for the station. Maintenance for the purpose of clearing trouble is limited to complete component

replacement or circuit pack replacement of the following:

- Data Set 403D-type basic receiver
- 15A-type Data Unit
- 1B-type Data Mounting
- 31A Power Unit
- 400D KTUs
- KS-15900 Interrupter
- Data Auxiliary Set 804K-type.

1.04 The current and superseded data sets and the current and superseded circuit pack complement of the basic receiver are given in Tables A and B, respectively.

1.05 When test or demonstration calls are made, refer to the section entitled Crediting Charges on Test Calls (010-250-001) for proper procedures for crediting charges.

2. TESTING

2.01 Before proceeding with data station repair, check the following:

- (1) Confirm, if possible, that customer equipment is operating properly.
- (2) Check for cord and connector defects. Check that the 117V, 60-Hz power source is energized.
- (3) Check for tone from the transmitting station.
- (4) Confirm that Data Auxiliary Set 804K-type is operating properly.

TABLE A

DATA SETS 403D-TYPE USED IN MULTIPLE RECEIVER STATION

DATA SET CODE	DATA UNIT SUPPLIED	CP SUPPLYING MULTIPLE RECEIVER CONTROL	TYPE OF CUSTOMER INTERFACE PROVIDED
403D3 (MD) 403D9	15A1	AR252 (MD) AR462	2-out-of-8 Contact
403D5 (MD) 403D11	15A2	AR252 (MD) AR462	4-Level Binary Coded Matrix (EIA Voltage)
403D7 (MD) 403D13	15A3	AR252 (MD) AR462	Serial ASCII (EIA Voltage)

Note: These data sets are supplied with a P47M644 Adapter to fit 25-inch mounting space.

TABLE B

CIRCUIT PACK COMPLEMENT OF DATA SET 403D-TYPE BASIC
RECEIVERS USED IN DATA SET 403D-TYPE MULTIPLE
RECEIVER STATION

DATA SET	CIRCUIT PACK USED							
	CONTROL UNIT	LINE CONTROL	OPTION BOARD	AGC	FILTER	GROUP LIMITERS	CHANNEL DETECTORS	TIMERS, DETECTOR
CURRENT STANDARD								
403D9 403D11 403D13	AR462	AR422	AR461					
RATED MD				AR249	755A	AR248	AR246 & AR247	AR245
403D3 403D5 403D7	AR252 ¹	AR251 ¹	AR250 ²					

Notes: 1. Rated MD

2. Rated A & M only

(5) Check for intermittent trouble in inside wiring, drop wire, and protector, and check for central office trouble.

(6) Refer to the data test center for a loop-back test.

2.02 To gain access to the cabinet, perform the following:



To open the cabinet from the front open the left door first, then the right, and next the center door to prevent damaging the door panels.

- (a) The left door is held in the closed position by magnetic latches.

Open this door by grasping the top and pulling forward.

- (b) Open the right door by grasping the top and pulling forward.
- (c) The center door is held by a spring-loaded latch located at the top of the door.

Open the door by grasping the latch lever and pulling down, then pull door forward.



Before attempting assembly replacement, disconnect the power cord from the unit being replaced. Do not disconnect the main power cord to the station; this will disable other data sets within the station.

3. DATA AUXILIARY SET 804K-TYPE REPLACEMENT

- 3.01** If Data Auxiliary Set 804K-type is found to be faulty, gain access to the front of the cabinet by opening the cabinet doors as described above.



Inform the customer that service will be affected by maintenance of the station.

- 3.02** Remove the four protective covers over the jacks at the rear of Data Auxiliary Set 804K-type.
- 3.03** Tag, or otherwise identify, and disconnect the cables interconnecting Data Auxiliary Set 804K-type and 1B-type Data Mounting.
- 3.04** Loosen, but do not remove, the two mounting screws at the top edge of the door.
- 3.05** Remove the ten mounting screws securing the data auxiliary set within the cutout portion of the door and lift the set from its mounting. Remove the two top screws.
- 3.06** Install a replacement Data Auxiliary Set 804K-type, by placing two mounting screws in the top of the set, but do not tighten. Hang

the set on the cabinet door by placing the screws in the mounting slots at the top of the door.

- 3.07** Install the ten remaining screws and tighten all twelve mounting screws.
- 3.08** Connect interconnecting cables, as necessary.

4. 31A POWER UNIT REPLACEMENT



Exercise care when positioning this unit for mounting; it weights 46 pounds.

- 4.01** Disconnect interconnecting cables from the power unit.
- 4.02** Remove eight screws and remove the 31A Power Unit from the shelf of the 1B-type Data Mounting.
- 4.03** Install a replacement 31A Power Unit by placing the unit in position and securing with eight 12-24 screws, using a screw starter Kedman Co. No. 1736 or equivalent.

5. KS-15900 INTERRUPTER

- 5.01** If the lamps do not wink or flash, the interrupter may be at fault. Remove the faulty unit by loosening screws securing the interrupter and remove the unit.
- 5.02** Install a replacement KS-15900 Interrupter by plugging the unit into the 1B-type Data Unit. Tighten the bracket securing the interrupter.

6. 400D KTUs

- 6.01** If the "hold" feature for the service line, utility line, or spare line 1 is not operating properly, the 400D KTU which provides this feature may be at fault. Remove the 400D KTU by loosening the screws securing the locking bar. Unplug the 400D KTU.
- 6.02** Install a replacement 400D KTU by plugging it into the 1B-type Data Mounting. Tighten the locking bar.

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7. 1B-TYPE DATA MOUNTING REPLACEMENT

- 7.01** Tag, or otherwise identify, cords and cables interconnecting the 1B-type Data Mounting to other components of the data station.
- 7.02** Remove the 31A Power Unit as discussed in Part 4.
- 7.03** Remove eight mounting screws and remove the 1B-type Data Mounting.
- 7.04** Install a replacement 1B-type Data Mounting by placing the unit in position and securing with eight 12-24 BHM screws.
- 7.05** Replace the 31A Power Unit as discussed in Part 4.
- 7.06** Connect interconnecting cables as necessary.

8. DATA SET 403D-TYPE REPLACEMENT

- 8.01** Tag, or otherwise identify, and remove cords interconnecting the data set to the business machine interconnection panel and 1B-type Data Mounting.
- 8.02** Remove four 12-24 BHM screws and remove the data set.

- 8.03** Install a replacement Data Set 403D-type by placing the unit in position and securing with four 12-24 BHM screws.

9. REFERENCES

- 9.01** For additional information on data sets and other components making up a Data Set 403D-type multiple data set station, refer to the following:

- Data Sets 403A-, D-, and E-Types—Reference Guide (590-004-106)
- Data Auxiliary Set 804K-Type—Identification (598-055-100)
- 1B-Type Data Mounting—Identification (590-102-101)
- Data Set 403D-Type Multiple Data Set Station—Description and Operation (594-025-101)
- Data Set 403D-Type Multiple Data Set Station—Installation and Connections (594-025-201)
- Data Set 403D-Type Multiple Data Set Station— Test Procedures (594-025-501).