85A1/85A2 DATA SELECTIVE CALLING SERVICE

STATIONS USING DATA AUXILIARY SETS

820J AND 820L CONTROLLERS

MAINTENANCE

NOTICE

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1. GENERAL

A. Scope

1.01 This section contains information on the maintenance requirements and procedures for both the 85A1 data selective calling service (DSCS) station 100-word per minute half-duplex operation and the 85A2 DSCS station 150-word per minute half-duplex operation. These two DSCS stations will hereafter be referred to as the stations.

1.02 This section is reissued to add reference to AR751 circuit pack (CP), which replaces data set (DS) 108- or 109-type to provide Electronic Industries Association (EIA) interface leads BA, BB, AA, and AB for use with a 1A data station single channel arrangement (SCA) or for interconnecting low speed data communications equipment (DCE) using EIA leads BA, BB, AA, and AB. AR751 CP also provides a means for station testing at the customer location using a 911P EIA test adapter and a 911NA data test set.

B. Maintenance Policy

1.03 No routine maintenance is required for the data sets 108- and 109-type, ▶AR751 CP,◀ data auxiliary sets (DAS) 820J-L1/2, 820J-L1/3, 820L-L1/2, 820L-L1/3, 804N3, 804N5, 804R5, or 804R7. Routine station maintenance is limited to the periodic maintenance required for the 33, 35, and 37 teletypewriters (TTYs).

Note: Data sets 108E and 109E are the current models being produced for use in DSCS. New installations will be equipped with these sets; however, older models (data set 108A) currently in the field need not be replaced unless they are inoperative. In order to avoid confusion, the data sets in this BSP will be referred to as data sets 108-type and 109E unless a specific model is being discussed.

1.04 Routine maintenance of the TTYs should be performed in accordance with the procedures contained in the 579-series Field Maintenance Practices (FMPs), which cover information on the type of TTY being used at the station.

1.05 Stations suspected of being in trouble should be tested in accordance with the test procedures outlined in the section entitled 85A1 and 85A2 Data Selective Calling Service Stations Using Data Auxiliary Sets 820J and 820L Controllers—Test Procedures (581-131-502). Additional troubleshooting procedures that may be helpful are listed in Part 11, References.

1.06 The station or components of the station (CPs, DASs, etc) not meeting test requirements should be replaced to restore customer service as soon as possible.

1.07 *The defective unit should be sent to the nearest distributing house for repair. Maintenance on circuit packs other than at the distributing house should not be attempted.* This does not include operations such as cleaning the contacts of the circuit board or making prescribed adjustments.

1.08 Verify that proper options have been installed on the replacing CPs before placing them into their positions.

When the DAS 820J- or 820L-type controller is replaced or AR686 CP is to be changed, switches SA, SB, and SC on AR686 CP must be set to encode SCC and SIC for the station. Information on encoding the AR686 CP is provided in Part 3 of this section.

1.09 Information on obtaining access to the data set and DASs used as part of the station is contained in Part 2 of this section.

Caution: To prevent damage to this equipment, disconnect the power cord plug from the customer power receptacle before connecting or disconnecting CPs, making

connections of installation options, etc. After completing the required work on the station, return the station to service by reconnecting the cord to the power receptacle. If the customer power receptacle is not readily accessible, the power cord and the M connector must be disconnected at the controller.

1.10   If the trouble cannot be isolated to a particular CP within the station, replace all CPs as follows:

(1) Replace CPs one at a time, until the trouble is corrected.

(2) Reinstall all original CPs, one at a time, to determine which CP is causing the trouble condition.

(3) If, after replacing an original CP, the station does function properly, that circuit pack is probably defective and should be returned to the distributing house for repair.

(4) Circuit packs obtained from the distributing house to the station for replacement purposes are assumed to be in good working order.

1.11   Exercise care in handling and transporting the data set, DASs, and CPs. Whenever possible, these units should be stored, transported, and shipped in original cartons to protect them from damage.

2.   OBTAINING ACCESS TO DATA AUXILIARY SETS AND DATA SETS

33 ASR and RO TTY

2.01   Access to DAS 820J- or 820L-type and data set 108-type, 109E, ▶or AR751 CP◀ is obtained by removing the rear panel of the TTY stand. To facilitate ease of maintenance, the DAS can be tilted outward into a maintenance position (Fig. 1). This is accomplished as follows:

(1) Rotate the latch in a counterclockwise direction. This allows the DAS to pivot on the 91A bracket.

(2) Using both hands, gently tilt the DAS toward the rear of the station as shown in Fig. 1.

35 ASR and RO TTY

2.02   Access to DAS 820J- or 820L-type and data set 108-type, 109E, ▶or AR751 CP◀ is obtained by removing the lower compartment front panel. There is no maintenance position provided for the equipment mounted in a 35 TTY. Maintenance of these units is performed in the normal position as shown in Fig. 2.

37 ASR and RO TTY

2.03   To obtain access to the DAS 820J- and L-type and data set 108-type, 109E, ▶or AR751 CP,◀ the right compartment panel is opened. Maintenance of these units is performed by sliding the DAS out of the compartment and placing the controller in any convenient position as shown in Fig. 3.

35 and 37 ROTR TTY

2.04   The DAS 820J-type and data set 108-type or 109E cannot be mounted in the ROTR cabinet due to a space limitation when the ROTR is used as a primary station. A KS-20018-type cabinet is required to house the DAS 820J-type and data set 108-type, 109E, ▶or AR751 CP.◀ The attendant set used with the 35 or 37 ROTR station is mounted in the door of the stand. Access to the DAS is obtained by removing the front panel of the KS-20018 cabinet as follows:

(1) Apply outward pressure at the top of the KS-20018 cabinet panel until the catches disengage.

(2) Lift the panel up to remove it from the frame of the cabinet (Fig. 4), thereby providing access to the DAS.

3.   AR686 CP ENCODING FOR SCC AND ACK OR SIC

A.   General

3.01   AR686 CP (Fig. 5) is directly encoded with SCC so the station can recognize that it is being polled by the computer switcher.

3.02   The station can be arranged to answer the computer switcher poll with SIC or ACK to indicate a receiver-ready condition. When station identification is not required, the ACK character
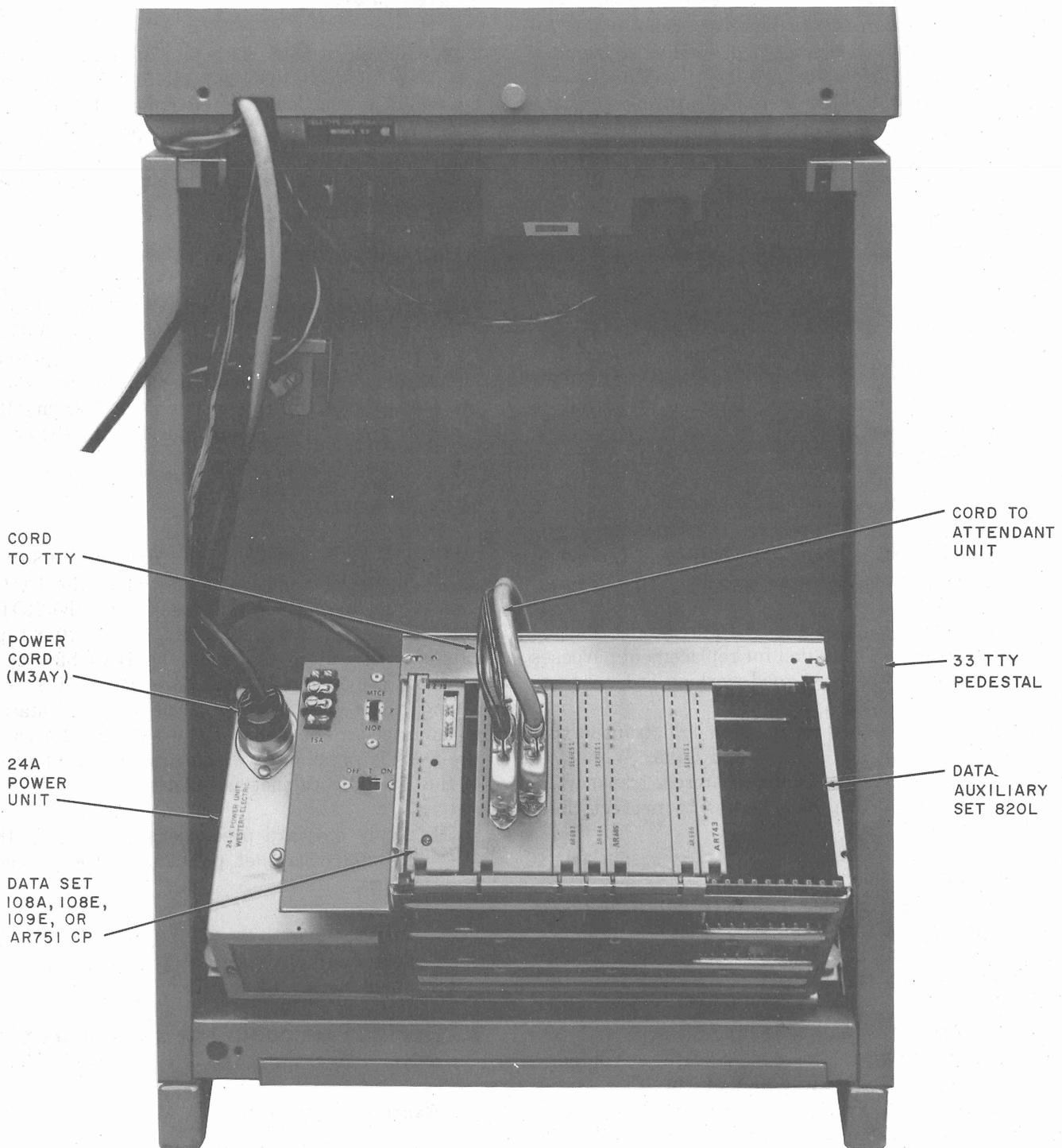
CORD
TO TTY

POWER
CORD
(M3AY)

24A
POWER
UNIT

DATA SET
108A, 108E,
109E, OR
AR751 CP

CORD TO
ATTENDANT
UNIT

33 TTY
PEDESTAL

DATA
AUXILIARY
SET 820L

Fig. 1—►Model 33 ASR TTY—Rear View With DAS 820L-L1/2 in Maintenance Position◄

POWER CORD (M3AY)   CORD TO TTY   CORD TO ATTENDANT SET   92A BRACKET (SEE NOTE)   35 TTY PEDESTAL

24A POWER UNIT   DATA SET 108A, 108E, 109E, OR AR751 CP   DATA AUXILIARY SET 820L-LI/2

NOTE:
DAS 820J USES
92A BRACKET ALSO
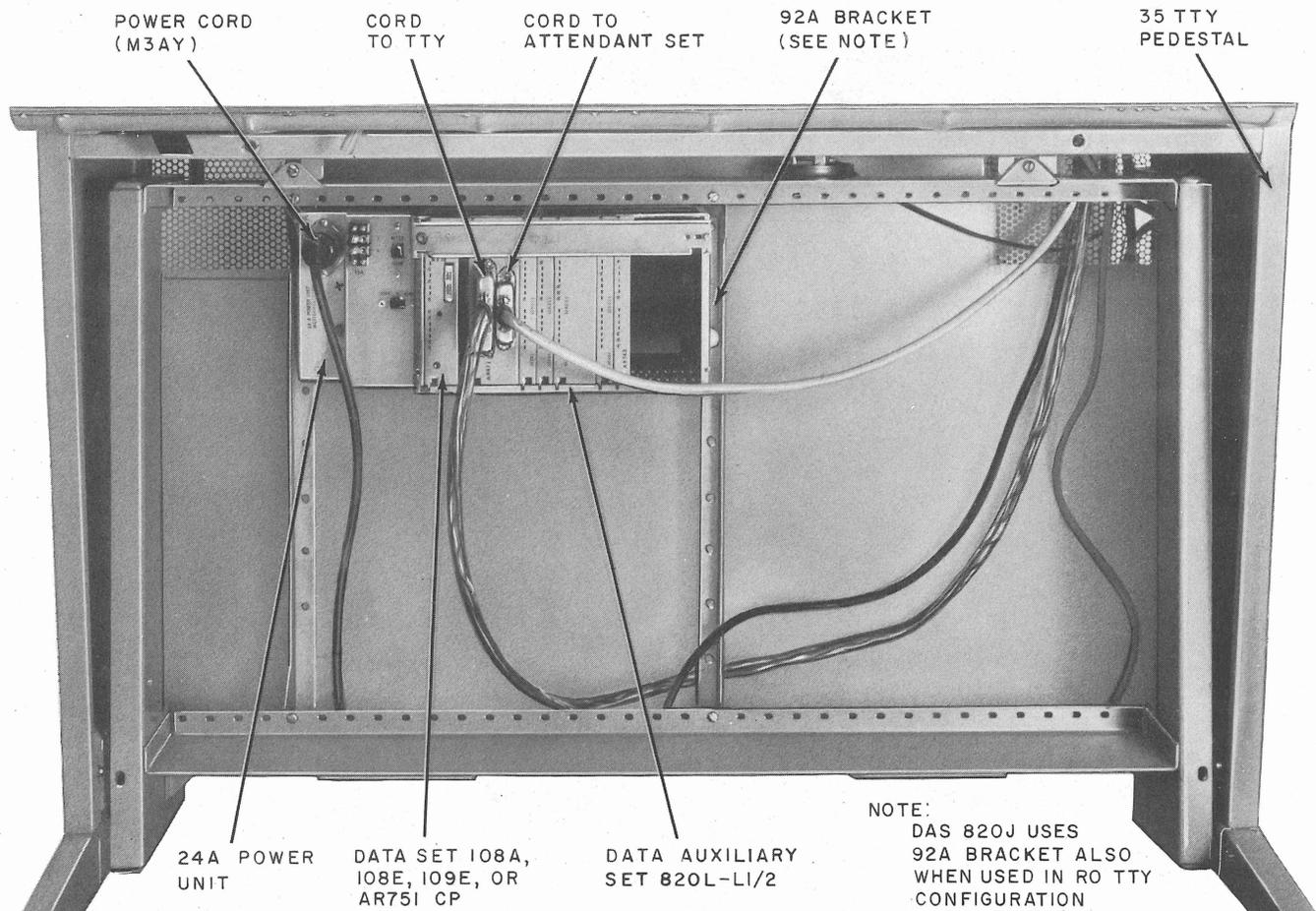WHEN USED IN RO TTY
CONFIGURATION

Fig. 2—Model 35 ASR TTY—Location of DAS 820L-L1/2

is used. Encoding the ACK mark-space sequence or SIC character is covered in 3.05.

3.03 AR686 CP is encoded for SCC by setting the SA and SB switches on the circuit pack. SIC or ACK is encoded by setting the SC switch contacts to give the required mark-space sequence.

B. Station Code Character (SCC) Encoding (AR686 CP)

3.04 Encode the SCC character as follows:

(1) Obtain the mark-space sequence for the character to be encoded (Fig. 6).

(2) Refer to Fig. 5 for the location of the SA and SB switches. The contact designations and switch setting required to obtain a mark or space are also shown in Fig. 5.

Note: Switches SA and SB are eight contact rocker arm-type switches. On both switches the rocker arms are ganged to operate two contacts as follows:

Switch SA

Contacts 1, 2—B7 (bit 7)
Contacts 3, 4—B6 (bit 6)
Contacts 5, 6—B5 (bit 5)
Contacts 7, 8—B4 (bit 4)

Switch SB

Contacts 1, 2—B3 (bit 3)
Contacts 3, 4—B2 (bit 2)
Contacts 5, 6—B1 (bit 1)
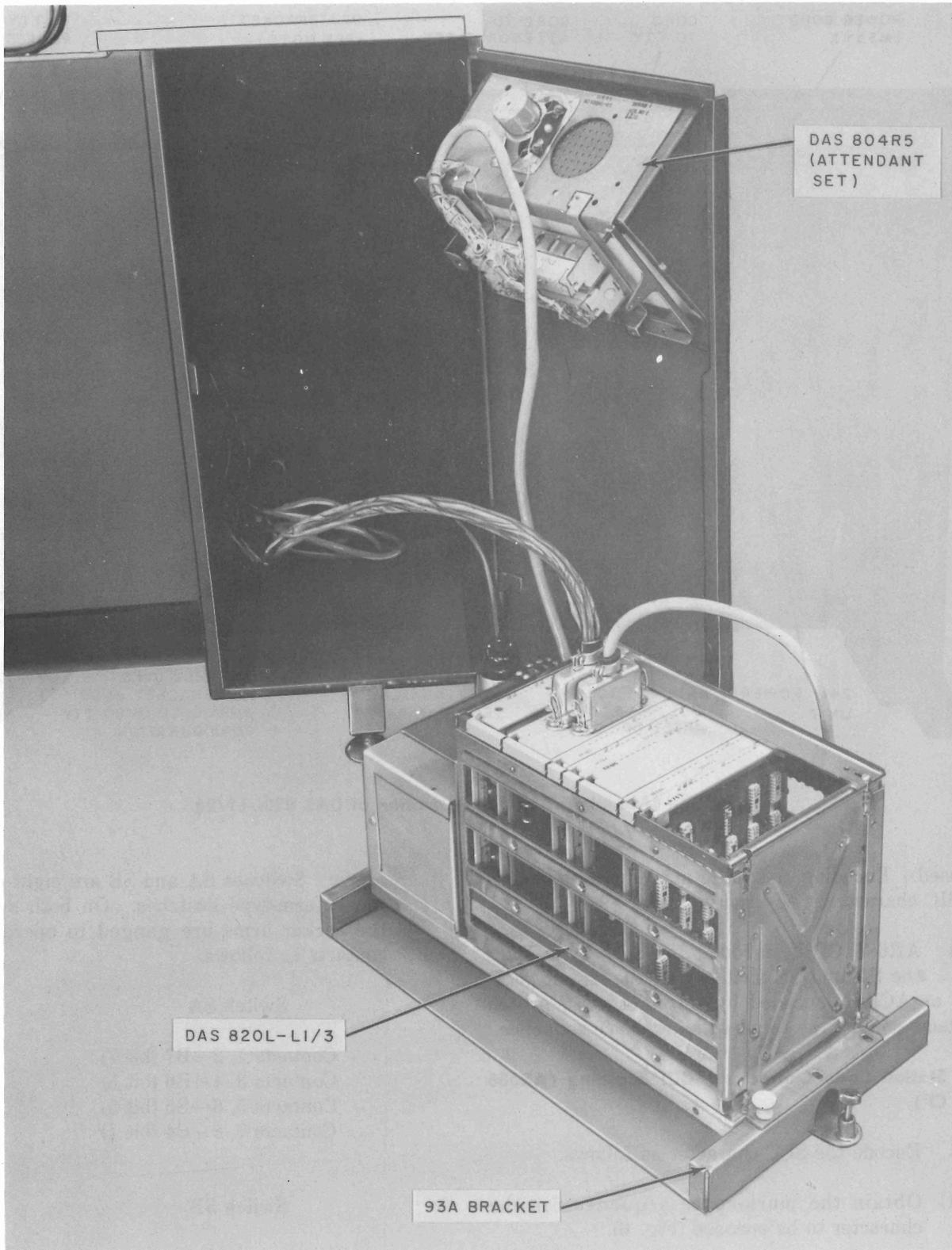Contacts 7, 8—not used.

DAS 804R5
(ATTENDANT
SET)

DAS 820L-LI/3

93A BRACKET

Fig. 3—Model 37 ASR TTY—DAS 820L-L1/3 in the Maintenance Position

SPACERS (TWO PER SIDE)　95A BRACKET　24A POWER UNIT　KS-20018-LI CABINET　DATA AUXILIARY SET 820J

POWER CORD　DATA SET 108A, 108E, 109E, OR AR751 CP　CORD TO ATTENDANT UNIT　CORD TO TTY
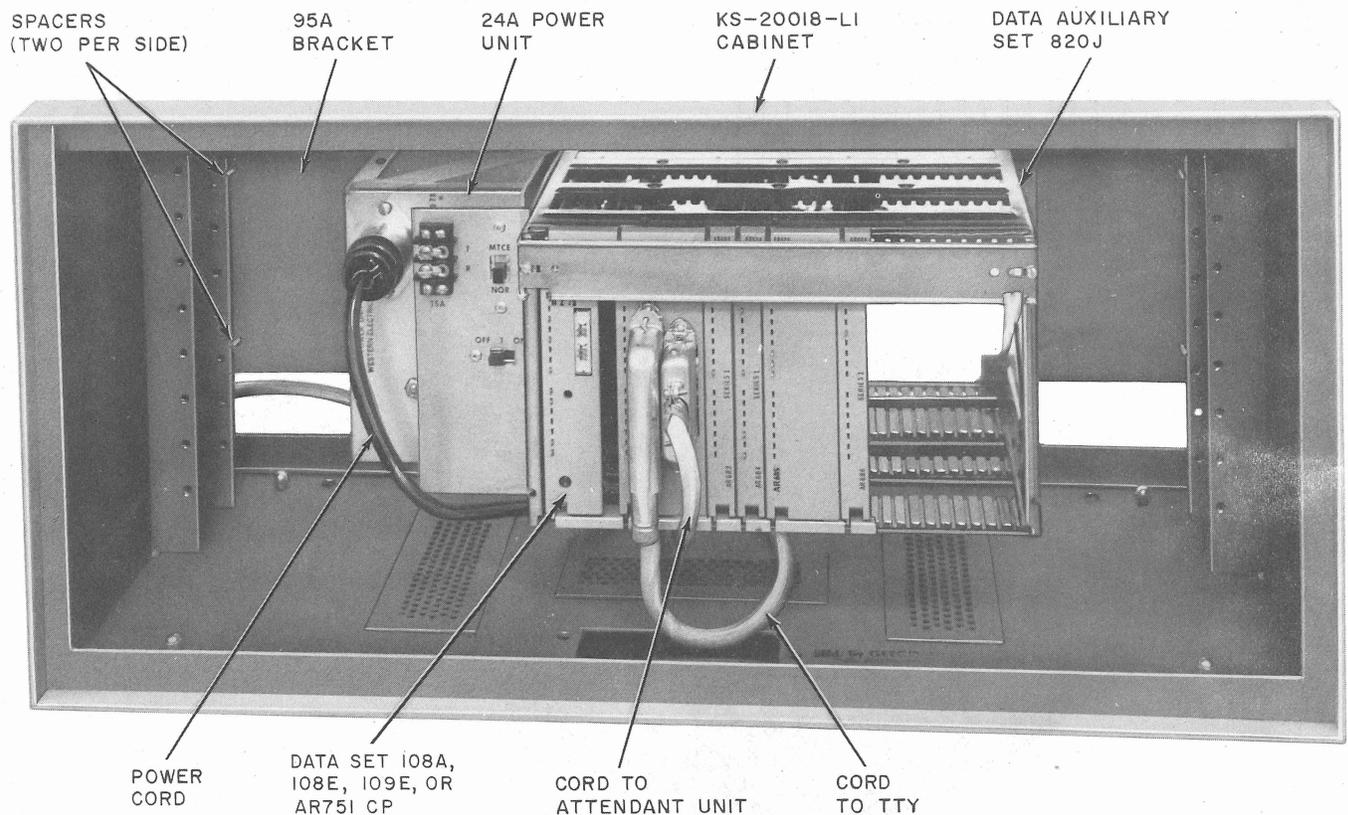
Fig. 4—▶DAS 820J-Type Mounted in a KS-20018 Cabinet With Front Panel Removed◀

(3) Encode bit 1 by depressing the side of the B1 rocker to give the required mark or space (Fig. 5).

(4) Encode the remaining bits (2 through 7) by setting the switch of the corresponding number to the required mark or space position. Encoding of the eighth bit is not required because the controller circuit will check for even parity.

C. Station Identity Code (SIC) Encoding (AR686 CP)

3.05 SIC or ACK is encoded using the SC switch on AR686 CP as follows:

(1) Obtain the mark-space sequence for the SIC character (or ACK character sequence) from Fig. 6.

(2) Refer to Fig. 5 for the location of the SC switch and the contact designations.

Note: The SC switch is an eight contact rocker arm-type switch. Depressing the side of the rocker arm toward the number (or dot) closes the switch contact resulting in a mark being encoded. To obtain a space, the rocker arm side without the number (or dot) is depressed. Contacts SC1 through SC7 correspond to bits 1 through 7, respectively. Contact SC8 is used for the even mark parity bit of the ASCII code.

(3) Encode the mark-space pattern obtained from Fig. 6 by depressing the rocker arms as required to give the selected mark-space sequence.

4. MAINTENANCE PHILOSOPHY AND TROUBLE CLEARING PROCEDURE

4.01 Maintenance of the DSCS station should be performed in accordance with the flowchart shown in Fig. 7. This chart is provided as a guide for an organized trouble locating procedure with a minimum amount of time spent to locate a reported
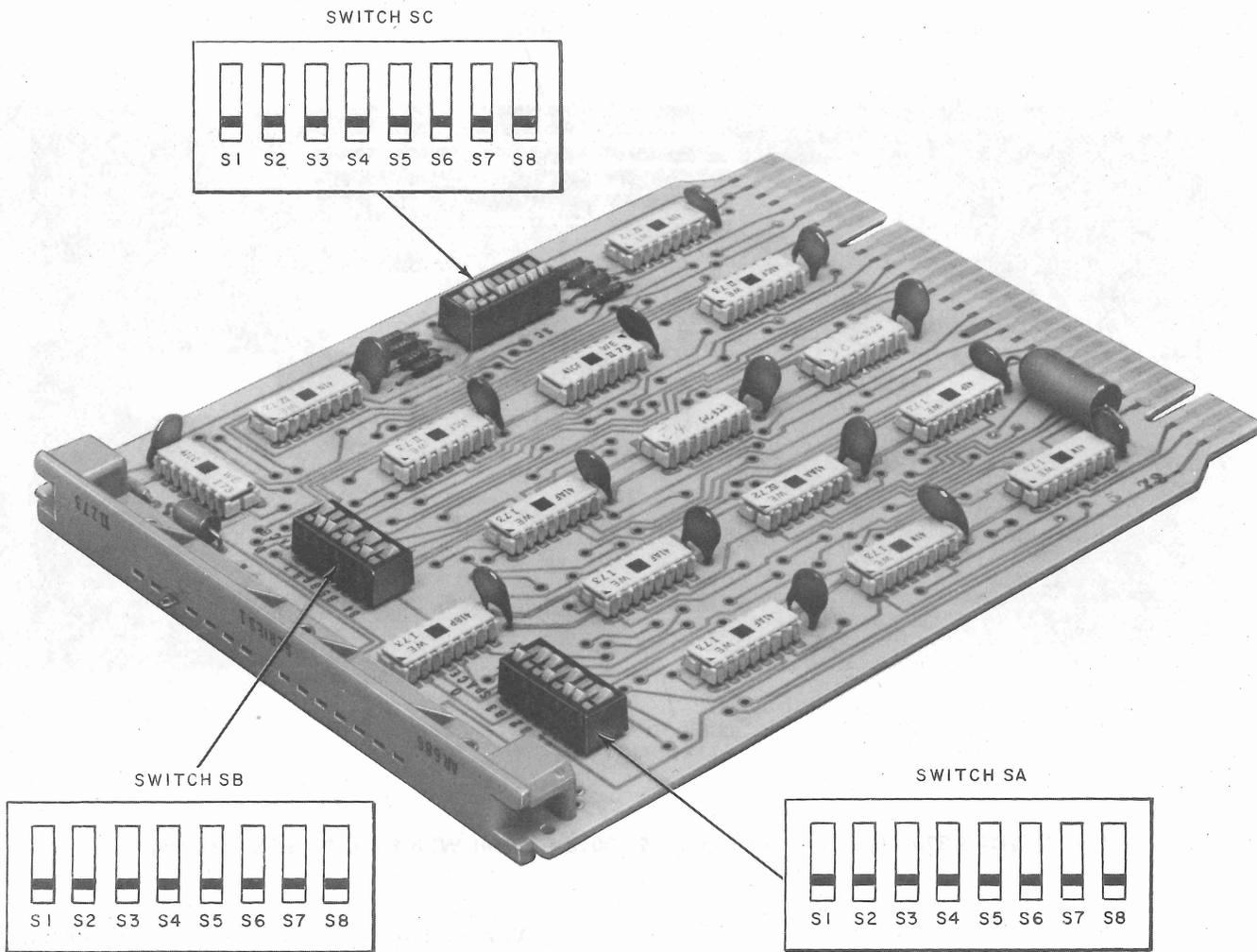
SWITCH SC

NOTE:
SWITCH CONTACT IS CLOSED (1) WHEN DOTTED SIDE OF ROCKER IS DEPRESSED

Fig. 5—AR686 CP Switch Designation and Location

trouble condition. Refer to Part 11, References, for additional troubleshooting procedures.

4.02 The station can be maintained by either replacement of major assemblies or by locating the circuit or circuit pack causing trouble and repairing or replacing *only* the defective circuit or circuit pack.

4.03 When a trouble condition occurs, it will be reported or referred to the STC. The first action to be taken is an analysis of the trouble to determine, if possible, the probable cause of the trouble.

4.04 In some cases, it will be obvious from the analysis of the trouble report that the TTY is causing the trouble condition (noisy operation, overheating, etc). When this is the case, a telco employee will have to be dispatched to clear the trouble and make any required adjustments. Trouble clearing and maintenance of the TTY should be performed in accordance with the applicable sections of the FMP covering the type of TTY used at the station.

4.05 After the trouble report has been received and analyzed, the STC should perform a loop-back test to verify the trouble and locate it.

	BIT NUMBER										BIT NUMBER							
	8	7	6	5	4	3	2	1		8	7	6	5	4	3	2	1
NUL									@								
SOH									A								
STX									B								
ETX									C								
EOT									D								
ENQ									E								
ACK									F								
BEL									G								
BS									H								
HT									I								
LF									J								
VT									K								
FF									L								
CR									M								
SO									N								
SI									O								
DLE									P								
DC1									Q								
DC2									R								
DC3									S								
DC4									T								
NAK									U								
SYN									V								
ETB									W								
CAN									X								
EM									Y								
SUB									Z								
ESC									[								
FS									\								
GS									]								
RS									^								
US									_								
SP									`								
!									a								
"									b								
#									c								
$									d								
%									e								
&									f								
'(APOS)									g								
(									h								
)									i								
*									j								
+									k								
,									l								
-									m								
.									n								
/									o								
0									p								
1									q								
2									r								
3									s								
4									t								
5									u								
6									v								
7									w								
8									x								
9									y								
:									z								
;									{								
<																		
=									}								
>									~								
?									DEL								

LEGEND: ■ MARK   □ SPACE

Fig. 6—American National Standard Code for Information interchange (ASCII)

The loop-back test should narrow the trouble analysis to either the data set (interface to line), AR-series CPs (control logic), or the TTY and its controls.

4.06 If the results of the tests indicate TTY trouble, refer to the appropriate FMP for clearance procedures. If the results indicate controller or attendant set trouble, dispatch a telco employee to the station to assist the STC in performing the attended test.

4.07 Should the attended test indicate that the DSCS station is operating properly, inform the customer of the test results and request him to check his equipment operation and format. If the trouble is resolved, return the circuit to normal operation and close the trouble report.

4.08 If the attended test indicates that the DSCS station is not operating properly, take the steps described in the section entitled 85A1 and 85A2 Data Selective Calling Stations Using Data Auxiliary Sets 820J and 820L Controllers—Test Procedures (581-131-502) to determine if a CP is faulty and locate any other cause of trouble. When found, the fault should be corrected and the remote loop-back test repeated.

If AR686 CP is found to be the faulty CP, its replacement will have to be encoded for the station to operate properly. The procedure is described in Part 3 of this section.

4.09 If all of the tests do not isolate the trouble to a specific component, it is recommended that additional help be requested through proper lines of organization in order to restore service to the customer.

4.10 After the trouble is cleared, return the circuit to normal service, perform the customer verification, and close the trouble report.

5. DATA AUXILIARY SET 820J- OR 820L-TYPE MAINTENANCE

5.01 Maintenance of DAS 820J- or 820L-type controller is limited to the replacement of defective CPs.

TROUBLE REPORT IS
RECEIVED AND
ANALYZED

STC PERFORMS
UNATTENDED TEST TO
VERIFY TROUBLE AND
LOCATE, IF POSSIBLE

IS
TROUBLE
OBVIOUSLY
IN TTY

YES

REFER TO
APPLICABLE TTY
MAINT PRACTICES

NO

DISPATCH TELCO
EMPLOYEE TO
STATION TO PERFORM
ATTENDED TESTS

PERFORM ATTENDED
TESTS TO LOCATE
CAUSE OF TROUBLE

DOES
ATTENDED
TEST INDICATE
PROPER OPER-
ATION

YES

INFORM CUSTOMER OF
TEST RESULTS AND
REQUEST CUST CHECK
HIS EQUIP OPER
AND FORMAT. RETURN
STA TO NORM
OPERATION

NO

TAKE STEPS
INDICATED BY BSP
581-131-50Z AND
666-702-500 TO
CLEAR TROUBLE

REQUEST HELP
THROUGH PROPER
LINES OF AUTHORITY

NO

REPEAT STEPS OF
ATTENDED TEST TO
VERIFY THAT TROUBLE
IS LOCATED

IS
TROUBLE
CLEARED

YES

RETURN THE STA TO
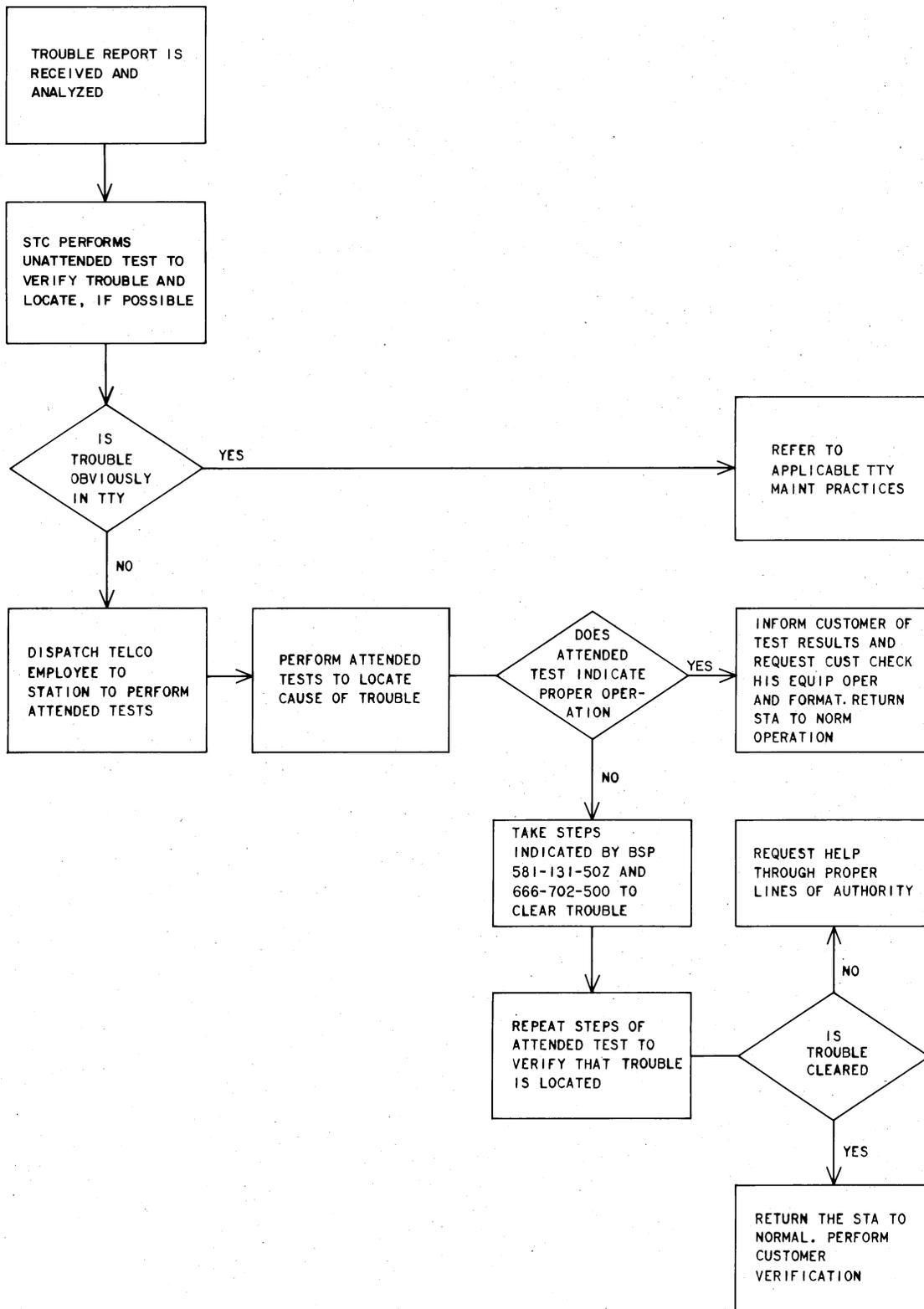NORMAL. PERFORM
CUSTOMER
VERIFICATION

Fig. 7—Flowchart—Maintenance Philosophy and Troubleshooting Procedure

5.02 Table A lists the CPs used in the DAS 820J- or 820L-type controllers. When it is necessary to replace a CP, proceed as follows:

(1) Gain access to the DAS 820J- or 820L-type controller as indicated in Part 2 of this BSP.

(2) Disconnect power from the station.

(3) Remove the card lock strip.

(4) Use the notched end of the lock strip to extract the CP from the DAS.

Note: When reinstalling a CP, make sure to place this CP in the correct slot and seat it firmly in the connector of the DAS.

6. DATA AUXILIARY SET 804N-TYPE MAINTENANCE

6.01 Maintenance of DAS 804N-type is limited to the replacement of lamps, keys, cord, and/or loudspeaker.

6.02 Table B summarizes the codes for the replacement parts.

Lamps

6.03 To replace lamps:

Note: Before changing lamps, unplug the N connector from the DAS 820J- or 820L-type controller.

(1) Remove faceplate from the cover by removing the two mounting screws.

(2) Remove key cap (by applying longitudinal force to key cap).

(3) Using a 553A tool (lamp extractor), remove lamp.

(4) Replace lamp. Make sure the lamp is properly seated to avoid shorts that might damage the controller interface CP.

(5) Replace key cap.

(6) Replace faceplate.

(7) Reconnect N connector.

→TABLE A←

CIRCUIT PACK DESIGNATIONS

SLOT NUMBER	CONTROLLER			
	820J-L 1/2	820J-L 1/3	820L-L 1/2	820L-L 1/3
1	Note	Note	Note	Note
6	AR682	AR681	AR741	AR742
12	AR683	AR683	AR683	AR683
14	AR684	AR684	AR684	AR684
16	AR685	AR685	AR685	AR685
21	AR686	AR686	AR686	AR686
23	—	—	AR743	AR743

Note: Data set 108E and 109E are the current models being produced for use in data selective calling service. New installations will be equipped with these sets; however, older models (data sets 108A-type) currently in the field need not be replaced unless they are inoperative. This slot will be occupied by an AR751 CP when the station is used as a 1A SCA.

TABLE B

SUMMARY OF REPLACEMENT PART CODES

TTY MODEL	MODEL	KEY	ATTENDANT LAMP	UNIT CORD	LOUDSPEAKER
33	RO	804N3	635K2	53A	M24K	KS-16908-L1
33	ASR	804N5	635L2 635M2	53A	M36D	KS-16908-L1
35	RO	804N3	635K2	53A	M24K	KS-16908-L1
35	ASR	804N5	635L2 635M2	53A	M36D	KS-16908-L1
35	ROTR	804R7	635F2	53A	M24K	KS-16107-L2
37	RO	804R7	635K2	53A	M24K	KS-16107-L2
37	ASR	804R5	635L2 635M2	53A	M36D	KS-16107-L2
37	ROTR	804R7	635F2	53A	M24K	KS-16107-L2

33 TTY

6.04 Replacement of keys, cord, and/or loudspeaker will require removal of the TTY cover.

6.05 To remove the cover:

(1) Remove faceplate from the cover by removing the two mounting screws.

(2) Remove nameplate by pulling it down and out. This will expose four cover mounting screws in front.

(3) Remove these four screws and the three cover mounting screws located at the rear of the cover.

  Note: On 33 ASR TTYs, also remove the screw from the left rear corner of the tape reader cover.

(4) Remove platen knob.

(5) Gently lift the cover from the subbase.

35 ASR or RO TTY

6.06 Replacement of keys, cord, and/or loudspeaker will require opening TTY housing cover.

6.07 To open the TTY housing cover:

(1) Open upper cover to its partially open latched position.

(2) Remove faceplate from cover by removing the two mounting screws.

(3) Open latch on right-hand side of TTY.

(4) Grasp hand grips located in the front of TTY housing and raise cover.

(5) Verify that left rear stop arm is latched when cover is opened fully.

804N3 Keys

6.08 After opening or removing the cover, key replacement is as follows:

(1) Loosen key locking bar retaining screw (Fig. 8) on DAS 804N3.

(2) Lift 635K2 key sufficiently to clear the bracket.

(3) Release spring-retaining clips which hold the plug to the key and remove plug.

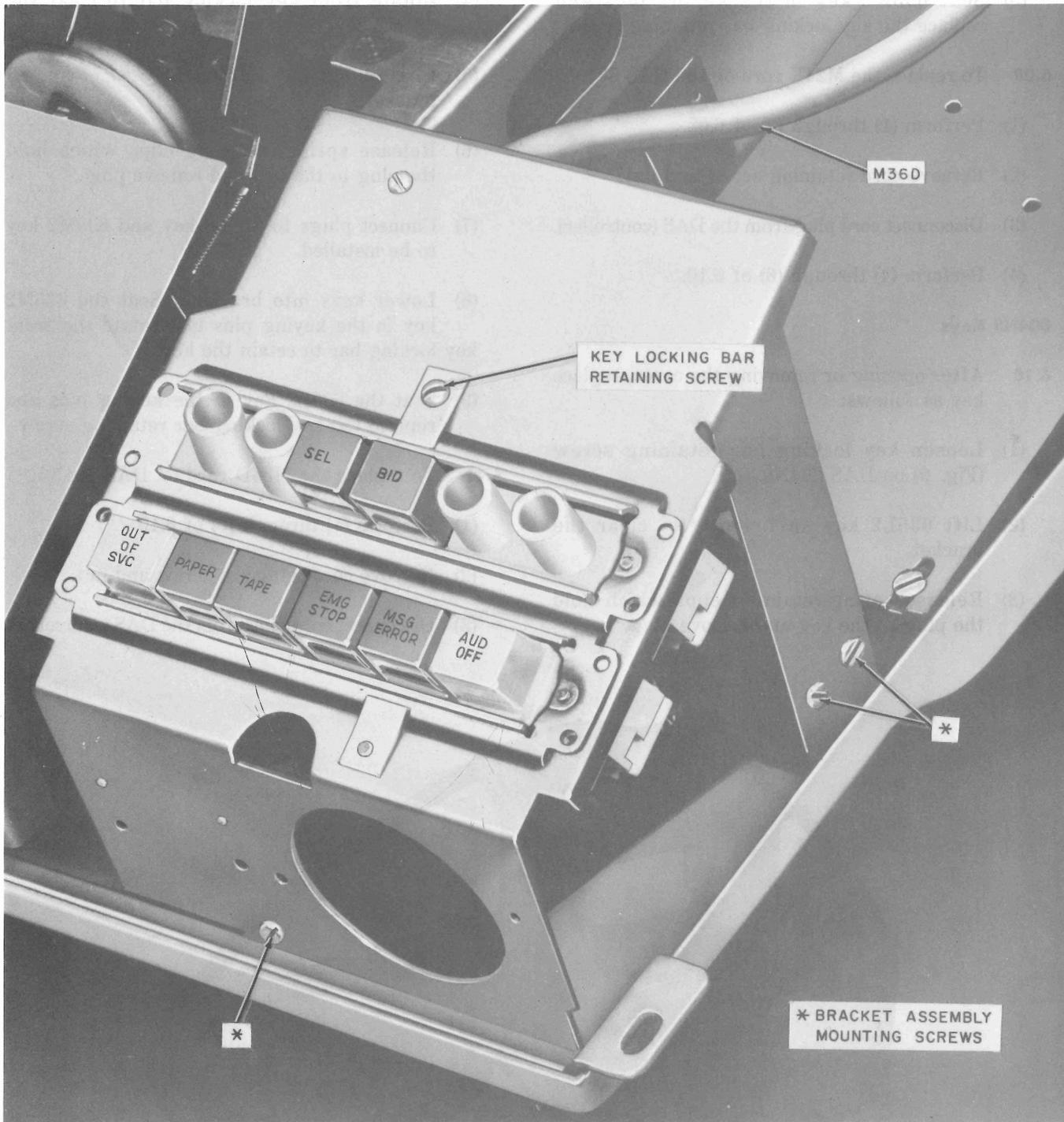(4) Connect plugs to the 635K2 key to be installed and lower the key into the bracket.

(5) Seat 635K2 key in the keying pins and replace the key locking bar retaining screw.

6.09 To replace the M24K cord on the DAS 804N3:

(1) Perform (1) through (3) of 6.08.

(2) Remove cord-retaining screw and nut.

(3) Disconnect cord plug from the DAS (controller).

(4) Perform (4) through (6) of 6.10.

804N5 Keys

6.10 After opening or removing the cover, replace key as follows:

(1) Loosen key locking bar retaining screw (Fig. 9) on DAS 804N5.

(2) Lift 635L2 key sufficiently to clear the bracket.

(3) Release spring-retaining clips which hold the plug to the key and remove plug.

(4) Rotate front key locking bar to clear the 634M2 key.

(5) Lift 635M2 key sufficiently to clear the bracket.

(6) Release spring-retaining clips which hold the plug to the key and remove plug.

(7) Connect plugs to 635L2 key and 635M2 key to be installed.

(8) Lower keys into bracket. Seat the 635M2 key in the keying pins and rotate the front key locking bar to retain the key.

(9) Seat the 635L2 key in the keying pins and replace the key locking bar retaining screw.

6.11 To replace the M36D cord on DAS 804N5:

(1) Perform (1) through (5) of 6.10.

(2) Remove cord-retaining screw and nut.

(3) Disconnect cord plug from the DAS (controller).

M24K CORD

KEY LOCKING BAR RETAINING SCREW

*BRACKET ASSEMBLY MOUNTING SCREW

TPA 536673

Fig. 8—DAS 804N3 Showing Mounting Screws and Key Retaining Screw

Fig. 9—DAS 804N5 Mounted in a 35 ASR TTY Showing Mounting Screws and Key Retaining Screw

(4) Loosen the two screws on terminal strip (TS B) which connect the cord to the loudspeaker terminal strip. Remove spade tips from TS B.

(5) Remove cord.

(6) Reverse the procedure for installing the cord.

Loudspeaker

6.12 To replace the loudspeaker:

33 TTY

(1) Remove DAS 804N-type by removing the four screws on the mounting plate.

(2) Loosen, but do not remove, five bracket assembly mounting screws.

(3) Lift bracket assembly sufficiently to clear mounting screws.

(4) Turn DAS 804N-type over to expose TS B.

(5) Loosen two bottom screws which connect the loudspeaker leads to TS B.

(6) Remove the two screws which hold the loudspeaker to the bracket assembly.

(7) Remove loudspeaker.

(8) Reverse the procedure for installing the loudspeaker.

35 ASR or RO TTY

(1) Remove DAS 804N-type by removing the two screws (with an Allen wrench) from the TTY pan on the bottom right-hand side.

(2) Loosen, but do not remove, five bracket asembly mounting screws (Fig. 8).

(3) Lift bracket assembly sufficiently to gain access to TS B.

The loudspeaker is not mounted on the bracket assembly. Exercise care when lifting the bracket assembly to prevent damaging wires to the loudspeaker.

(4) Loosen the two bottom screws which connect the loudspeaker leads to TS B.

(5) Remove four loudspeaker mounting screws (using an Allen wrench) located at the right-front bottom of the TTY pan.

(6) Remove loudspeaker.

(7) Reverse the procedure for installing the loudspeaker.

7. DATA AUXILIARY SET 804R5

7.01 Maintenance of DAS 804R5 is limited to the replacement of lamps, keys, cord, and/or loudspeaker. The DAS 804R5 is mounted in the door of the ASR TTY (Fig. 10).

7.02 DAS 804R5 replacement parts are shown in Table B.

Lamps

7.03 To replace lamps:

(1) Remove faceplate by moving the latch spring to the left. Lift faceplate by the left side and disengage the right side.

(2) Remove key cap (by applying longitudinal force to key cap).

(3) Using a 553A tool (lamp extractor), remove lamp.

(4) Replace lamp.

(5) Replace key cap.

(6) Replace faceplate.

Keys

7.04 To replace keys:

(1) Remove faceplate by moving the latch spring to the left. Lift faceplate by left side and disengage the right side.

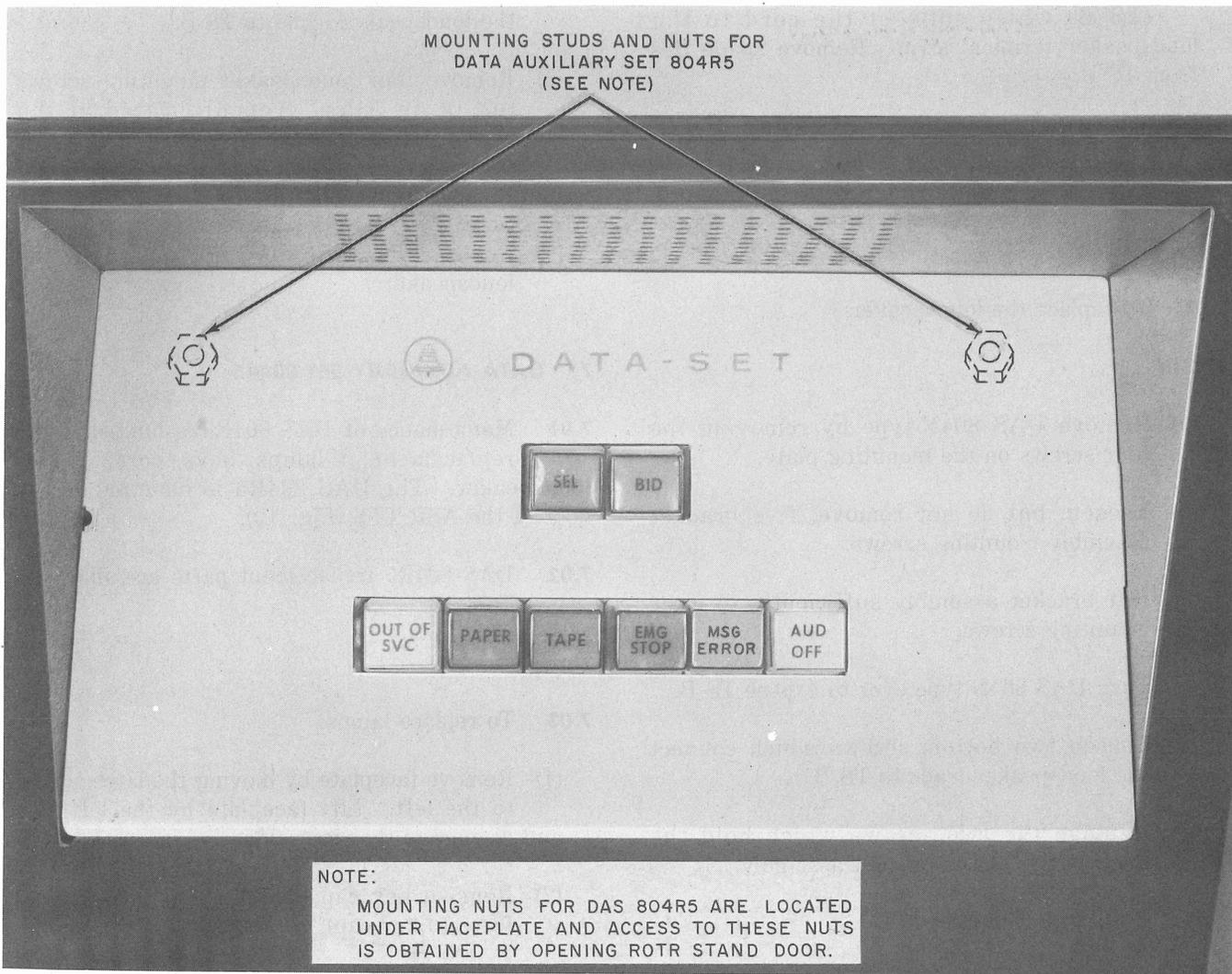(2) Using a KS-6854 screwdriver, or equivalent, remove the four screws which hold the key to the bracket.

MOUNTING STUDS AND NUTS FOR
DATA AUXILIARY SET 804R5
(SEE NOTE)

DATA-SET

SEL   BID

OUT OF PAPER TAPE EMG   MSG   AUD
SVC   STOP ERROR OFF

NOTE:
MOUNTING NUTS FOR DAS 804R5 ARE LOCATED
UNDER FACEPLATE AND ACCESS TO THESE NUTS
IS OBTAINED BY OPENING ROTR STAND DOOR.

Fig. 10—DAS 804R5 Mounted in the Door of a 37 ASR TTY

(3) Lift key (to be replaced) sufficiently to clear the bracket.

(4) Release spring-retaining clips which hold the plug to the key and remove plug.

(5) Connect plug to the key to be installed and fasten the spring-retaining clips.

(6) Lower key into bracket.

(7) Replace four screws. Do not tighten screws.

(8) Align key, then tighten screws.

(9) Replace faceplate.

Cord

7.05 To replace M36D cord on DAS 804R5:

(1) Perform (1) through (4) of 7.04.

(2) Disconnect M36D cord plug from the N connector on the DAS (controller).

(3) Loosen two screws which connect the cord to the loudspeaker. Remove spade tips from loudspeaker.

(4) Remove cord.

(5) Reverse the procedure for installing the cord.

Loudspeaker

7.06 To replace loudspeaker:

(1) Open door of the ASR stand.

(2) Loosen two screws on the loudspeaker which connect the cord conductors to the loudspeaker and remove spade lugs from the loudspeaker.

(3) Remove two mounting nuts which hold DAS 804R5 to the door.

(4) Remove four screws which hold the loudspeaker to the mounting plate assembly.

(5) Remove loudspeaker.

(6) Reverse the procedure for installing the loudspeaker.

8.   DATA AUXILIARY SET 804R7

8.01 Maintenance of DAS 804R7 is limited to the replacement of lamps, keys, cord, and/or loudspeaker. The DAS 804R7 is mounted in the door of the ROTR stand (Fig. 11).

> *Note:* DAS 804R7 is used with a 37 ROTR and RO only when the 37 ROTR and RO are used as primary receivers.

8.02 DAS 804R7 replacement parts are shown in Table B.

Lamps

8.03 To replace lamp:

(1) Remove faceplate by moving latch spring to the left. Lift faceplate by left side and disengage right side.

(2) Remove key cap.

(3) Using a 553A tool (lamp extractor), remove lamp.

(4) Replace lamp.

(5) Replace key cap.

(6) Replace faceplate.

Keys

8.04 To replace key:

(1) Remove faceplate by moving latch spring to the left. Lift faceplate by left side and disengage right side.

(2) Using a KS-6854 screwdriver, or equivalent, remove four scews which hold the key to the bracket.

(3) Lift key (to be replaced) sufficiently to clear the bracket.

(4) Release spring-retaining clips which hold the plug to the key and remove plug.

(5) Connect plug to the key to be installed and fasten spring-retaining clips.

(6) Lower key into bracket.

(7) Replace four screws. Do not tighten screws.

(8) Align key, then tighten screws.

(9) Replace faceplate.

Cord

8.05 To replace M24K cord on DAS 804R7:

(1) Perform (1) through (4) of 8.04.

> *Note:* Perform the following Step (2) when the DAS 804R7 is used with an ROTR or (3) when the DAS 804R7 is used with an RO.

37 ROTR

(2) Disconnect M24K cord plug from the 212A adapter.

> *Note:* Access to the 212A adapter will require opening the door of the ROTR stand (Fig. 12).

MOUNTING STUDS AND NUTS FOR
DATA AUXILIARY SET 804R7
(SEE NOTE)

DATA-SET

SEL | MSG ERROR | TAPE | AUD OFF | OUT OF SVC

NOTE:
MOUNTING NUTS FOR DAS 804R7 ARE LOCATED
UNDER FACEPLATE AND ACCESS TO THESE NUTS
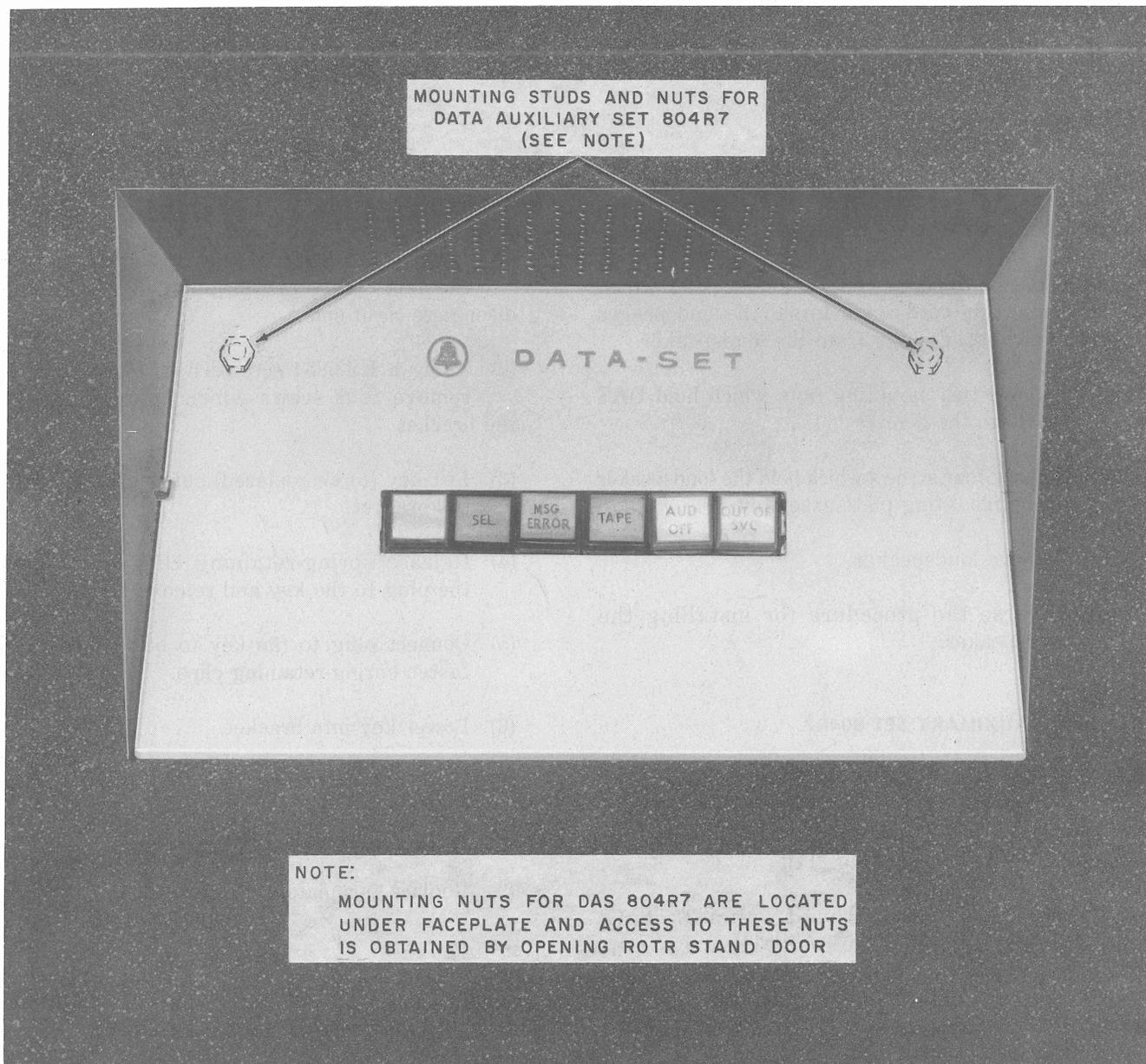IS OBTAINED BY OPENING ROTR STAND DOOR

Fig. 11—DAS 804R7 Mounted in the Door of a Primary 35 ROTR TTY

37 RO

(3) Disconnect M24K cord plug from the N connector on the DAS (controller).

(4) Loosen two screws which connect the cord to the loudspeaker. Remove spade tips from loudspeaker.

(5) Remove cord-retaining screw and nut.

(6) Remove cord.

(7) Reverse the procedure for installing the cord.

Loudspeaker

8.06 To replace loudspeaker:

(1) Open door of the TTY stand.
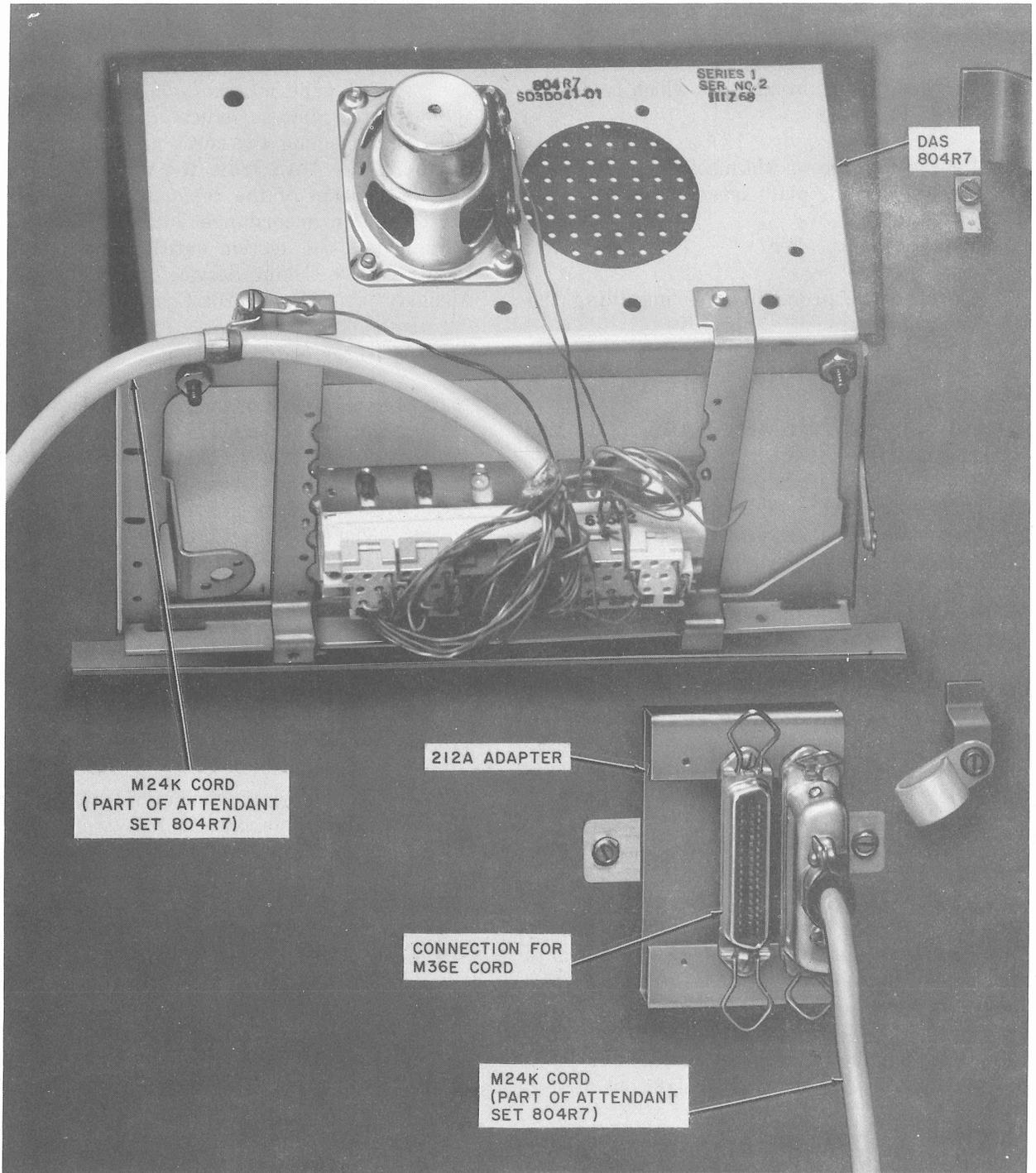
Fig. 12—DAS 804R7 and the 212A Adapter—Rear View

(2) Loosen two screws on the loudspeaker which connect the cord conductors to the loudspeaker and remove spade lugs from the loudspeaker.

(3) Remove two mounting nuts which hold DAS 804R7 to the door.

(4) Remove four screws which hold the loudspeaker to the mounting plate assembly.

(5) Remove loudspeaker.

(6) Reverse the procedure for installing the loudspeaker.

9. DATA SETS 108-TYPE, 109E, ♦AND AR751 CP♦ REPLACEMENT

Note: Data sets 108E and 109E are the current models being produced for use in the DSCS. New installations will be equipped with these sets; however, older models (data set 108A) currently in the field need not be replaced unless they are inoperative.

9.01 The data sets used as part of the station require no maintenance and are replaced when they malfunction or cause trouble. To replace data set 108-type or 109E, ♦or AR751 CP,♦ proceed as follows:

(1) Obtain access to DAS 820L-type or 820J-type as indicated in Part 2 of this BSP.

(2) Remove lock strip (card-retaining bar) by loosening the two screws which hold it to the apparatus mounting. Slide lock strip from beneath screws.

(3) Grasp handle on data set 108-type or 109E, ♦or AR751 CP♦ and pull straight out.

Note: The replacing data set must be equipped with the same options as the data set being removed before it is installed in the DAS. ♦There are no options on AR751 CP.♦

(4) Replace the data set in accordance with installation instructions contained in the section entitled 85A1 and 85A2 Data Selective Calling Service Stations Using Data Auxiliary Sets 820J and 820L Controllers (581-131-202).

10. DATA AUXILIARY SETS 820J-TYPE AND 820L-TYPE REPLACEMENT

10.01 Replacement of the DAS 820J-type or 820L-type is accomplished by obtaining access to the unit as indicated in Part 2 of this BSP, disconnecting the cords and connectors, and removing the DAS from the mounting bracket. The installation of the replacing DAS should be performed in accordance with the instructions contained in the section entitled 85A1 and 85A2 Data Selective Calling Service Stations Using Data Auxiliary Sets 820J and 820L Controllers (581-131-202).

DAS 804N-Type and 804R-Type

10.02 Replacement of the DASs used as attendant units is accomplished by obtaining access to these units (as described in Parts 7 and 8 of this BSP), removing the connecting cords from their respective connectors, and removing the mounting screws. The replacing unit can now be installed by reversing the procedure. When replacing or reinstalling an attendant unit, the bezel or cover may have to be adjusted to prevent it from binding on the keys of the attendant unit.

11. REFERENCES

11.01 The following schematic drawings, circuit descriptions, and Bell System Practices (BSPs) pertain to the 85A1 and 85A2 DSCS stations:

NUMBER	TITLE
SD- & CD-1D198-01	Data Set 109E
SD- & CD-1D244-01	820J-Type and 820L-Type Controller
SD- & CD-1D258-01	♦EIA Interface Coupler (AR751 CP)♦
SD- & CD-1D299-01	Data Set 108E
SD- & CD-3D024-01	Data Set 108A
SD- & CD-3D041-01	Data Systems Station
SD- & CD-73092-01	♦Data Test Set 911NA♦
SD- & CD-73112-01	♦EIA Test Adapter 911P♦