DATA AUXILIARY SETS 801C3 AND 801C4
INSTALLATION AND CONNECTIONS

1. GENERAL

1.01 This section contains information on the installation of the Data Auxiliary Sets (DAS) 801C3 and 801C4. Also included in this section is information on wiring option connection, cord replacement, and power requirements.

1.02 This section is reissued to add information on the use of the automatic calling unit (ACU) speaker and on multiple DAS installations. Table D is revised to include information on setting the abandon call and retry timer.

1.03 The DAS 801C3 and 801C4 are used to provide automatic calling capabilities to a data station and are referred to in this section as ACUs.

1.04 This section does not include specific installation methods or information on associated data sets or control telephone sets. Refer to the applicable section for information on installation of the associated equipment.

Before starting installation, verify that telephone (data) line is arranged for TOUCH-TONE® service. If a ground-start line is required, verify that the line has been arranged for ground-start operation.

1.05 When a ground-start telephone line is used and a power failure has occurred, a momentary ground must be applied to the telephone (data) line when initiating a call. ▶The ground is applied by depressing the necessary button on the associated data auxiliary set.◀ Consult the applicable data set practice to verify that the necessary momentary ground option is provided. The data set button used by the installer to supply this ground should be labeled DIAL TONE.

Note: ▶Ground-start ACUs are not compatible with step-by-step common control or step-by-step noncommon control central offices. In these locations, remote exchange loops or loop-start ACUs must be provided.◀

1.06 Verify that the overall facilities have been tested and meet the transmission requirements specified in Section 314-410-500.

1.07 Cover removal and replacement procedures for the ACU are described in the section entitled Data Auxiliary Sets 801C3 and 801C4—Maintenance (598-012-301).

1.08 ▶If more than one DAS 801C3 or 801C4 is to be installed in a multiple installation, refer to the section entitled Data Sets—Multiple Installation Information (590-010-201) for additional information.◀

2. OPTIONS AND CONNECTIONS

To eliminate possible damage to electronic componnents in the data set or ACU, do not make power connection until all other connections have been completed.

2.01 The ACU wiring options to be provided must be specified on the service order. The connections required to install the options are made on TB1, with the exception of one connection that is made on TB2. Refer to Fig. 1 and 2. ▶Strapping clips are provided on both terminal boards for making connections.◀ The option connections are given in Table A. An AVAILABILITY column shows whether an option is a standard, ie, factory-furnished, or an installation option, and indicates which options are not available on specific models of the ACU. The REQ column shows the number of options in a specific group of options that may be installed in one ACU. This essentially gives the compatibility of the options, ie, options that can be used together. The CONNECTIONS ON TB1 column shows the connections or straps that must be installed or removed to provide or remove an option. Figure 1 shows the location of terminal board TB1 and the circuit packs.

Note: The 12-combination TOUCH-TONE transmitter CP AS64 is the standard transmitter beginning with series 3 models of the ACU.

2.02 When an ACU is being replaced or exchanged, it is necessary to verify that the replacing ACU is equipped with the same or equivalent options as the ACU being replaced. Therefore, before installing a replacement ACU, the option designations for the model being installed must be verified. Table B provides a means of determining the features or options provided by each model of the 801-type ACU. It should be noted that the same option may be designated differently for different models of the ACU. When substituting or replacing an ACU, the equivalent options that must be installed in the replacing ACU can be determined from this table. For information on the installation of the selected options, refer to the section covering the installation of the particular ACU being installed.

Note: DAS 801A- and C-type ACUs are not interchangeable without making the necessary modifications to the telephone lines, since the A-type ACU is designed for dial pulse equipment and the C-type ACU requires a line arranged for TOUCH-TONE service.

CORD REPLACEMENT PROCEDURE

Before attempting cord replacement, verify that the power cord has been disconnected.

2.03 When it is necessary to replace the D10P-61 cord with a M14C-61 cord as required by

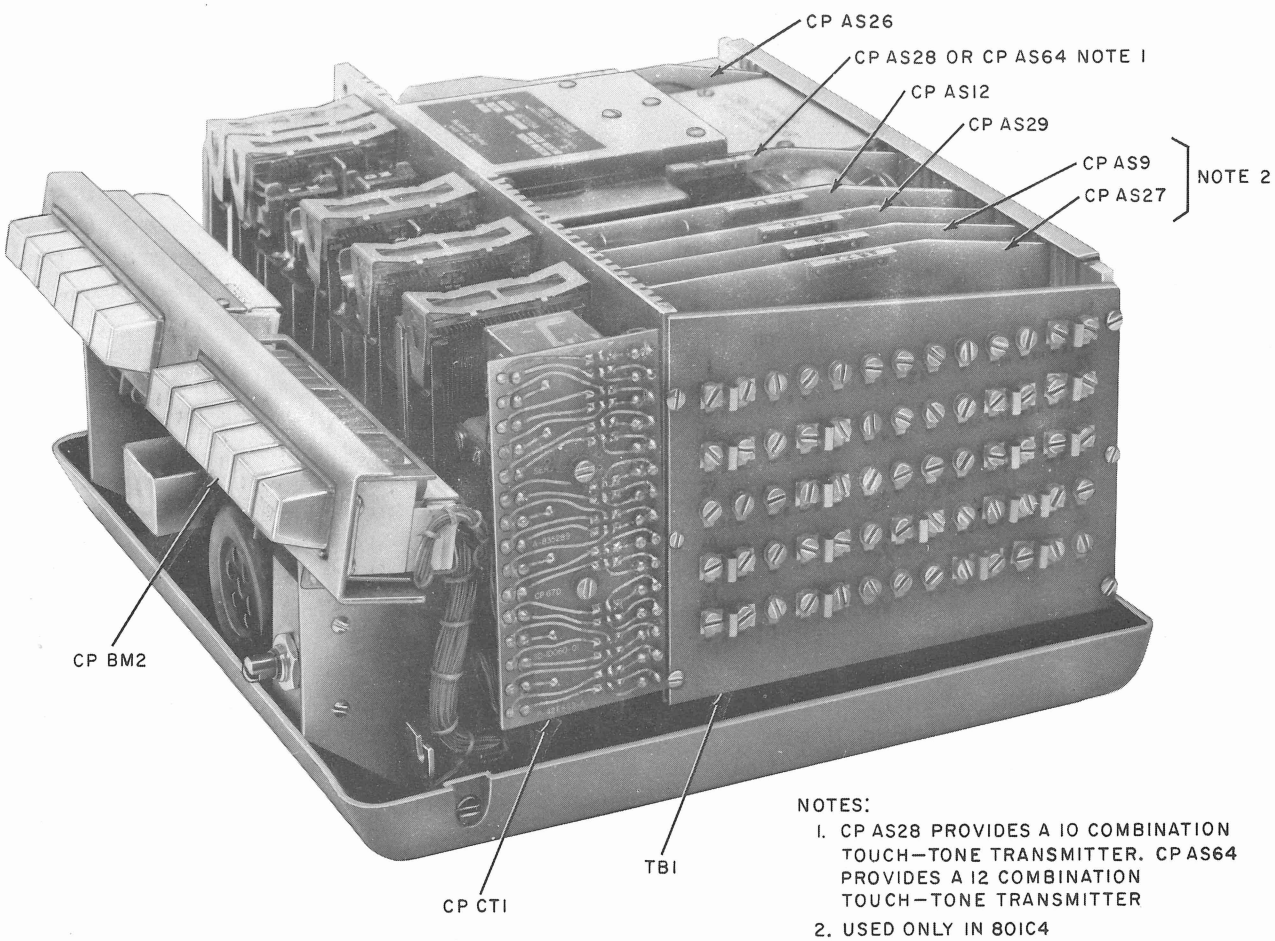

Fig. 1—Data Auxiliary Set 801C3 or 801C4—Covers Removed, Showing Circuit Pack Locations

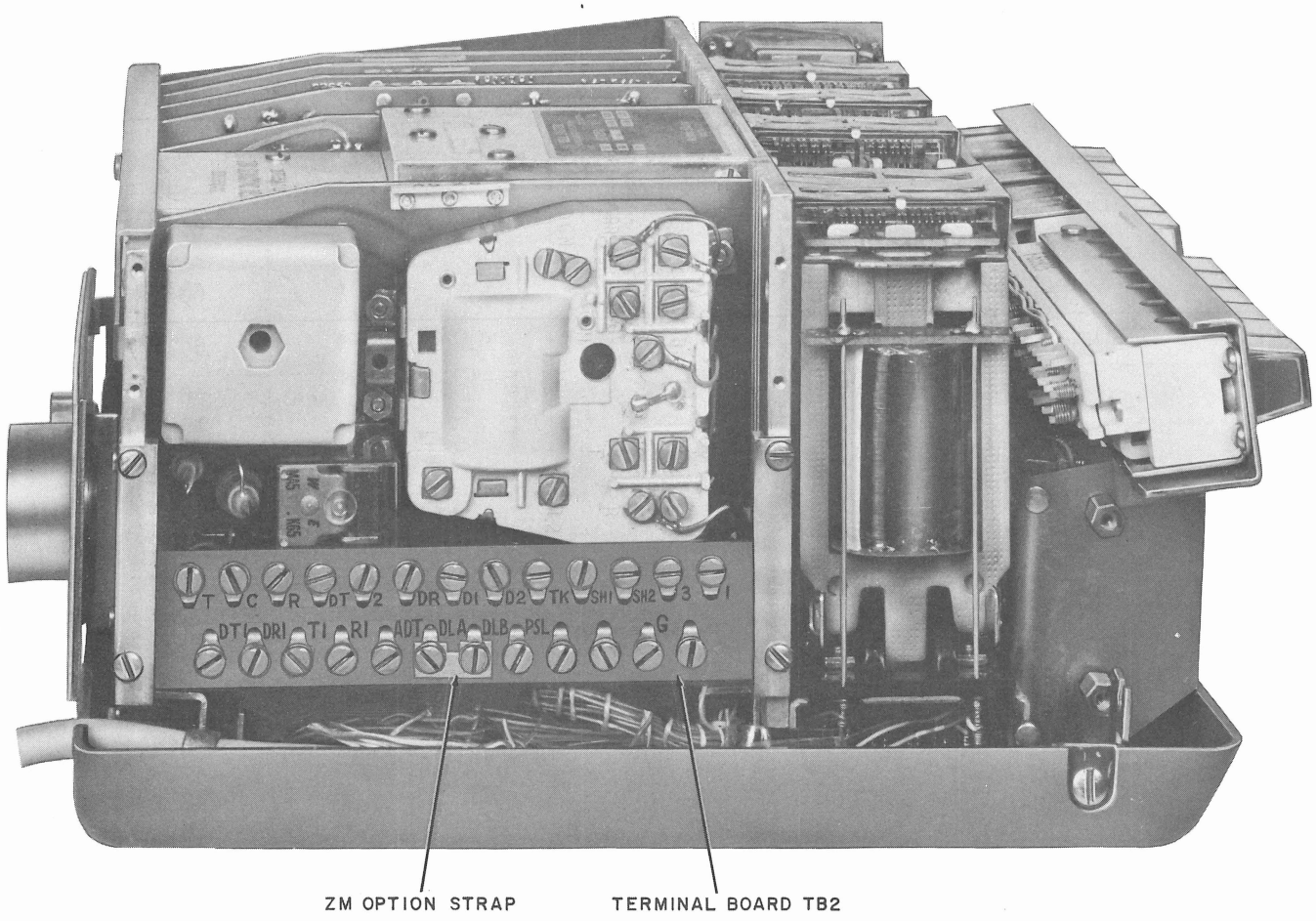

Fig. 2—Data Auxiliary Set 801C3 or 801C4—Covers Removed, Showing Location of Terminal Board TB2

the installation and connection section of the data set, perform the following operations.

(a) Remove the rear cover, front cover, and basepan of the ACU as outlined in the section entitled Data Auxiliary Sets 801C3 and 801C4—Maintenance (598-012-301).

(b) Loosen the screw terminals on terminal board TB2 and remove the spade-tipped leads listed in Table C. Refer to Fig. 2 for the location of terminal board TB2 and the locations of the terminals given by Table C.

(c) Remove the cord stay hook from its holder which is mounted in the basepan of the ACU and then remove the cord.

(d) Attach the cord stay hook of the new cord to the holder.

(e) Connect the spade-tipped leads of the new cord to the TB2 terminals as indicated by Table C. (Refer to Fig. 2.)

(f) Replace the covers and basepan of the ACU as outlined in the section entitled Data Auxiliary Sets 801C3 and 801C4—Maintenance (598-012-301).

3. INSTALLATION PROCEDURES

3.01 The DAS 801C3 or 801C4 shall be installed in conformance with existing practices covering installation of station sets. Refer to the section entitled General Installation Information (590-010-200).

TABLE A

FEATURE OR OPTION		DESIG	REQ	AVAILABILITY		CONNECTIONS ON TB1	
				801C3	801C4	FROM	TO
Answer Detection	Detect End of Answer Tone	W	One per ACU	NA	*	60	61
	Detect Beginning of Answer Tone	X		NA	†	61	62
	Detect 2025 Tone	S	One per ACU	NA	†	63	64
	Detect 2225 Tone	T		NA	*	64	65
Ground Start	With 2-Wire Operation	V	One per ACU	†	*	6 19 32 34 45 58	7 20 33 35 46 59
	With 4-Wire Operation T1 Monitored	ZK		*	*	7 32 34 45 58	8 33 35 46 59
	Without Ground Start	Y		NA	†	14 36 46	15 37 47
Mounting Cord	D10P-61	M	One per ACU	†	†	See cord replacement section of BSP	
	M14C-61	N		*	*		
2-Wire Operation		ZH	One per ACU	†	†	10 11 22 24	11 12 23 25
4-Wire Operation		ZJ		*	*	12 23 25	13 24 26
Data Set to Data Mode by Contact to DT		Q	One per ACU	†	†	4	5
Data Set to Data Mode by Isolated Contact		F		*	*	No connections required except removal of the Q and ZG options	
Data Set to Data Mode by Grounded Contact		ZG		*	*	27	28

TABLE A (Cont)

FEATURE OR OPTION	DESIG	REQ	AVAILABILITY		CONNECTIONS ON TB1	
			801C3	801C4	FROM	TO
ACR Timer Stopped When DSS Turned On	R	One per ACU	†	†	1	2
ACR Timer is Not Stopped When DSS Turned On	H		*	*	No connections required; only removal of R option necessary	
Data Set Answer Detection Without End of Number (EON)	E	One per ACU	*	*	3 16 29 64	4 17 30 65
ACU Answer Detection or End of Number (EON)	B		†	†	17 30 43 56	18 31 44 57
Isolated TK Contact	ZA	One per ACU	†	†	48	49
Isolated CL Contact	ZC		*	*	51	52
Grounded TK and CL Contacts	ZB		*	*	49 50	50 51
Terminate the Call Via the Data Set After DSS On (line transfer in test)	G	One per ACU	*	*	54	55
Terminate the Call Via the CRQ Signal After DSS On (line transfer)	Z		†	†	38 54	39 55
Terminate the Call Via the CRQ Signal After DSS On (CL contact)	A		*	*	40 53	41 54
Terminate the Call Via Data Set After DSS ON (CL contact in test)	ZD		*	*	53	54
801C Control of DLO Lead	ZM	One per ACU	†	†	TB2 DLA	TB2 DLB
External Control of DLO Lead	ZL		*	*	No connections required; only removal of ZM option connections	

NA — Option is not available or cannot be provided in this model of the ACU.
* Installation Option — This option can be installed at the time of installation if required. Install the option by making the specified connections and disconnecting any noncompatible options.
† Standard Option — The ACU is shipped with this option already installed by the factory.

TABLE B

OPTIONS OF ALL AVAILABLE ACUs

DESCRIPTION	DATA AUXILIARY SETS			
	801C1 & 2	801C3 & 4	801A1, 2, 3 & 4	805A5 & 6
Ground Start (4-Wire)	Not Avail.	ZK	Not Avail.	Not Avail.
Ground Start (2-Wire)	V	V	Fac. Wired	Fac. Wired
Without Ground Start (Loop Start)	Y	Y	Not Avail.	Not Avail.
Detect End of Answer Tone	W	W	W	W
Detect Beginning of Answer Tone	X Note 1	X Note 2	X Note 3	X Note 5
Detect 2025 Answer Tone	S	S	S	S
Detect 2225 Answer Tone	T Note 1	T Note 2	T Note 3	T Note 5
Mounting Cord — 10 Conductor	M	M	K	M
Mounting Cord — 14 Conductor	N Note 4	N	M	N
Data Set to Data Mode by Contact to DT	Q	Q	Q	Q
Data Set to Data Mode by Isolated Contact	Remove Q	F	Remove Q	F
Data Set to Data Mode by Grounded Contact	Not Avail.	ZG	Not Avail.	ZG
Stop ACR Timer When DSS Goes On	R	R	Y	R
Do Not Stop ACR Timer When DSS Goes On	Remove R	H	Remove Y	H
Data Set Answer Detection Without End of Number	Not Avail.	E	Not Avail.	E
ACU Answer Detection or End of Number	Fac. Wired	B	Fac. Wired	B
Isolated TK Contact	Fac. Wired	ZA	Fac. Wired	ZA
Isolated CL Contact	Not Avail.	ZC	Not Avail.	ZC
Grounded TK and CL Contacts	Not Avail.	ZB	Not Avail.	ZB
Terminate Call Via Data Set After DSS On (line transfer in test)	Remove Z	G	Z	G
Terminate Call Via Data Set After DSS On (CL contact in test)	Not Avail.	ZD	Not Avail.	ZD
Terminate Call Via CRQ After DSS On (line transfer)	Z	Z	Remove Z	Z
Termination Call Via CRQ After DSS On (CL contact)	Not Avail.	A	Not Avail.	A
2-Wire	Fac Wired.	ZH	Fac. Wired	Fac. Wired
4-Wire	Not Avail.	ZJ	Not Avail.	Not Avail.
DLO Controlled by ACU	Fac Wired	ZM	Fac. Wired	Fac. Wired
DLO Controlled by ACU and Data Set	Not Avail.	ZL	Not Avail.	Not Avail.
Contact Interface	Not Avail.	Not Avail.	U Note 6	ZE
Voltage Interface	Fac. Wired	Fac. Wired	V Note 7	ZF

Notes:

1. Available only in 801C2
2. Available only in 801C4
3. Available only in 801A1 and 2
4. P in early production sets
5. Available only in 801A6
6. Available only in 801A2 and 3
7. Available only in 801A1 and 4

TABLE C

TB2 TERMINAL	M14C CORD	D10P CORD
T	W-BL	W-BL
C	R-BL	BR-W
R	BL-W	BL-W
2	R-O	—
DR	G-W	G-W
D1	W-BR	W-BR
D2	BR-W	—
TK	BL-R	W-O
SH1	S-W	S-W
SH2	W-S	W-S
3	W-O	—
1	O-R	—
DT	W-G	W-G
G	O-W	O-W

3.02 Locate the data auxiliary set within reach of the business machine interface connecting cord. This cord, which is supplied by the customer, should not exceed 50 feet in length. The cord should be equipped with a plug that mates with the KS-19087-L6 connector on the ACU.

3.03 The customer must furnish a standard 3-wire grounding-type power receptacle. This receptacle must be on a circuit that is not controlled by a switch in order to avoid service interruptions.

3.04 To avoid the possibility of data errors due to a potential difference between data set or data auxiliary set ground and business machine ground, power should be supplied to all data sets and data auxiliary sets from the same ac distribution panel used to supply power to the business machine. If these units are not served from the same distribution panel, a test using the 6A impulse counter should be made to detect excessive noise. The test procedure for using the 6A impulse counter is given in the section entitled Data Auxiliary Sets 801C3 and 801C4—Test Procedure (598-012-501). If the test requirements are not met, the grounds must be bonded together.

The method of providing this bond should be in accordance with local instructions.

3.05 Set the abandon call retry timer (ACR) for the interval specified on the service order. ▶In DAS 801C3 and 801C4 series 5 and above, there is an additional 40-second monitor setting that makes it possible to monitor the progress of the normal call through the ACU speaker.◀ If no interval is specified, set the ACR timer to the 40-second position. Refer to Fig. 3 and Table D for information on setting the timer.

Note: ▶Only the 40-second ACR timer setting can be checked or verified when the ACU is placed in the test mode by operation of the

▶TABLE D◀

ACR TIMER ADJUSTMENT

INTERVAL SELECTED SECONDS	ACR TIMER ADJUSTMENT
7	Rotate adjustment screw to extreme counterclockwise position.
10	Rotate adjustment screw one position clockwise from extreme counterclockwise position.
15	Rotate adjustment screw two positions clockwise from extreme counterclockwise position.
25	Rotate adjustment screw three positions clockwise from extreme counterclockwise position.
40	Rotate adjustment screw four positions clockwise from extreme counterclockwise position.
*40 MONITOR	Rotate adjustment screw to extreme clockwise position for 40-second monitor.

* 801C3 and 801C4 series 5 and above.

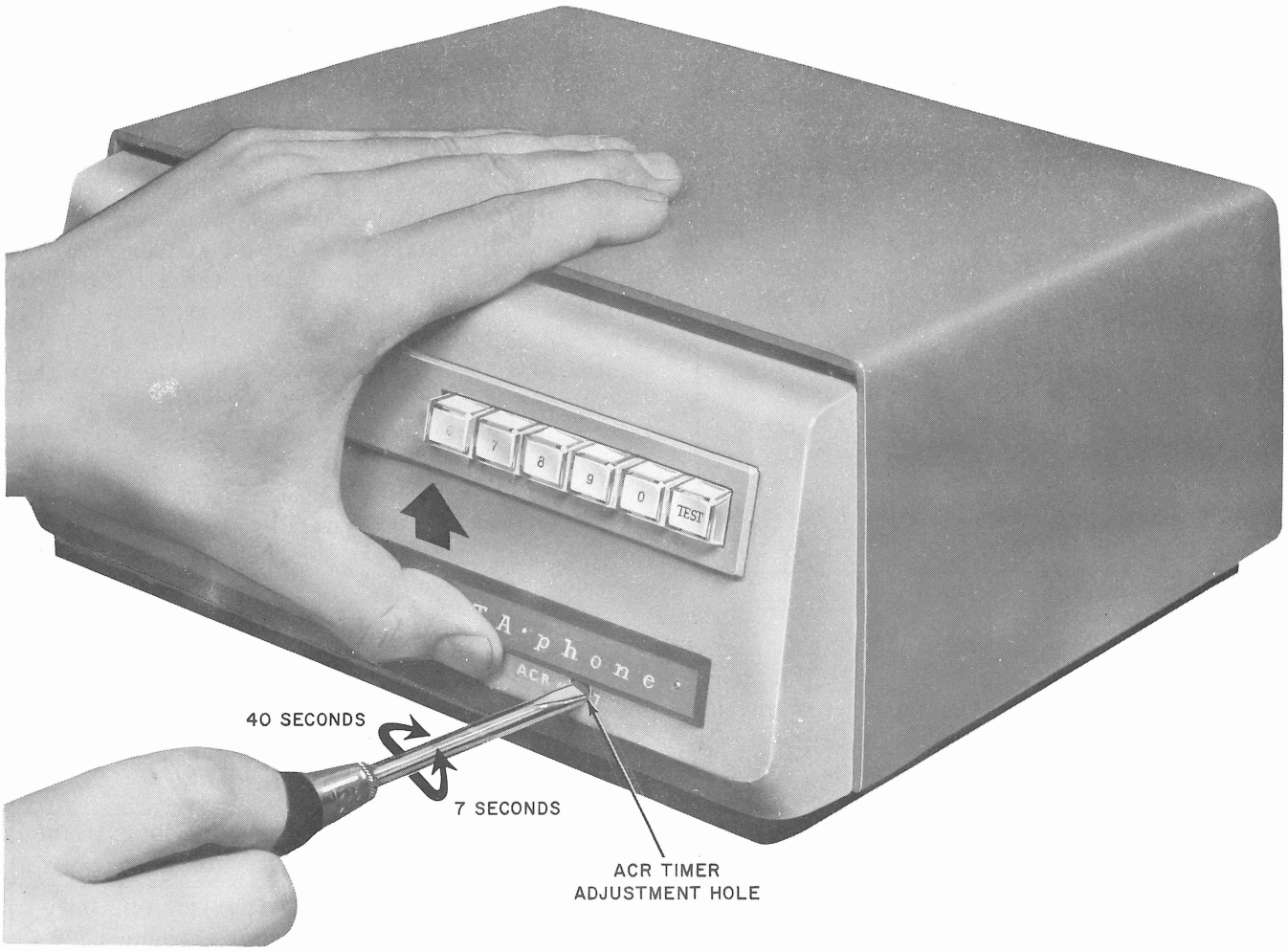

Fig. 3—Data Auxiliary Set 801C3 and 801C4—ACR Timer Adjustment

TEST key. The timer circuit is designed so that the timer will not expire in less than 40 seconds with the ACU in the test mode, to facilitate the testing of the TOUCH-TONE transmitter and associated circuits.

3.06 A typical installation layout of major station components is shown in Fig. 4.

3.07 The mounting cord interconnnecting arrangements for the data auxiliary set and the associated data set are given in the installation and connection section covering the data set. Refer to the applicable section for this information.

3.08 Connect the business machine cord to the business machine interface connector.

3.09 Connect the power cord to the ACU and to the customer-furnished power outlet. Where local codes permit, secure the power outlet end of the cord with an approved-type clamp.

3.10 Test the completed installation in accordance with the test procedure outlined in the section entitled Data Auxiliary Sets 801C3 and 801C4—Test Procedure (598-012-501). Successful completion of these test procedures completes the installation of the data auxiliary set.

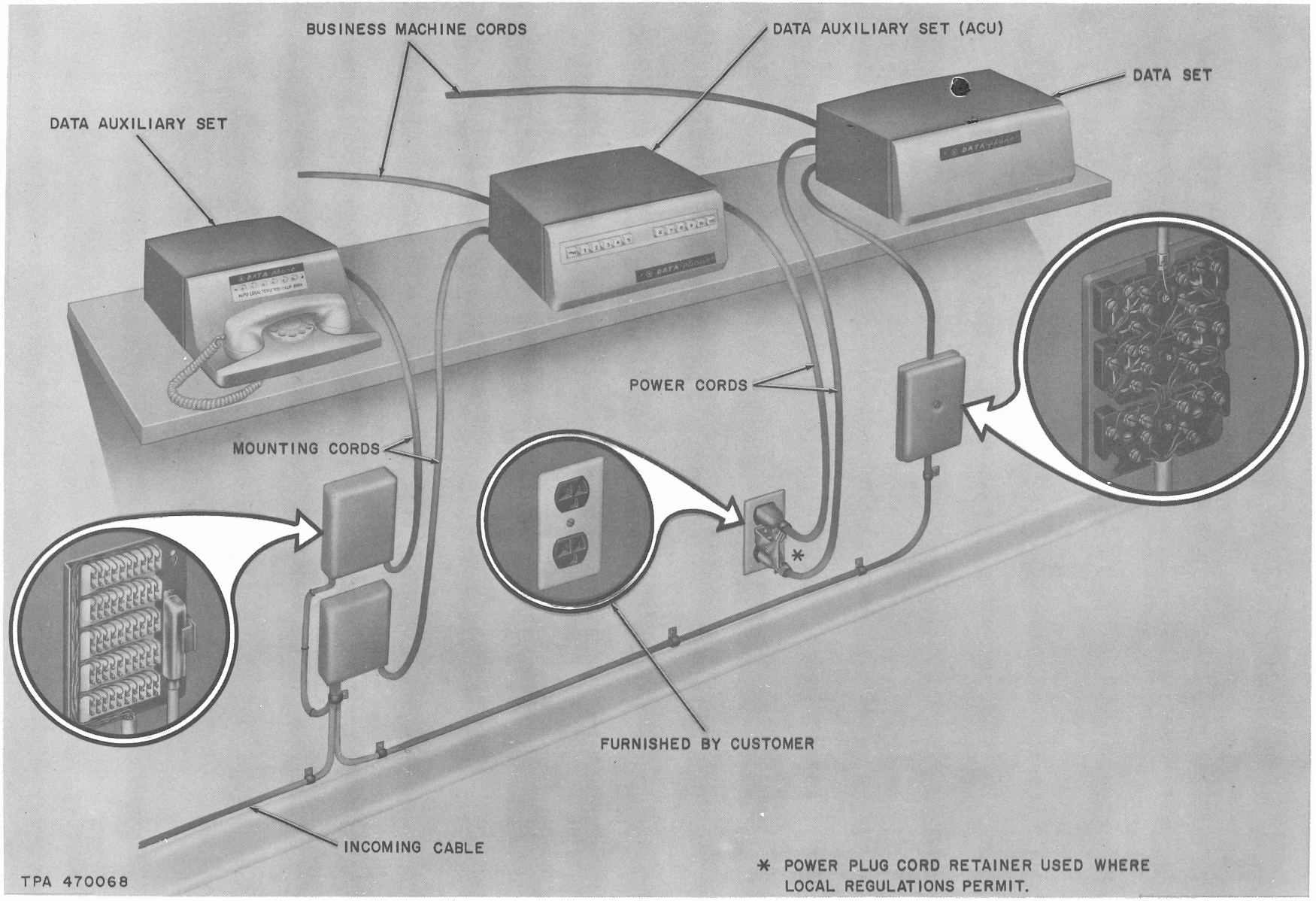

Fig. 4—Main Components of a Typical Installation Layout