DATA SET 208B-TYPE
TRANSMITTER-RECEIVER
INSTALLATION AND CONNECTIONS

CONTENTS PAGE

1. GENERAL

1.01 This section contains information concerning installation and connection of data set (DS) 208B-type. DS 208B-type is a synchronous, binary, serial 4800-bps data set for use on the 2-wire switched telecommunications network. The data set should be installed in conformance with existing installation practices. Refer to the section entitled Data Sets and Data Access Arrangements—General Installation and Connection Information (590-010-200). DS 208B-type is recommended for use with a 565HK-type telephone set for manual call origination and voice/data transfer on the switched network. The telephone set must be ordered separately. If automatic call origination is required, a Bell System data auxiliary set (DAS) 801-type automatic calling unit (ACU) must be ordered separately. Station components required for an installation using an ACU are shown in Fig. 1.

1.02 This section is reissued to include information pertaining to DS 208B-L1B which replaces DS 208B-L1A. Concurrent with the introduction of DS 208B-L1B, DS 208B-L1A is rated Manufacture Discontinued/Not Orderable (MD/NO).

1.03 It is preferred that the data set be installed on a desk, table, stand, or in a Bell System-provided equipment cabinet. The data set will operate in an ambient temperature range of 40 to 120°F and a relative humidity of 20 to 95 percent.

1.04 DS 208B-type should be located near the business machine because the interface cord supplied by the customer should not exceed 50 feet in length (to reduce stray capacitance and to conform to EIA standards). To minimize inductive interference to data signals on the telephone (data) line, the line should not be carried in the same run as cable between the data set and business machine or lines connected to teletypewriter services. If this condition cannot be met, it will be necessary to run the telephone (data) line in type SK (shielded) station wire between the data set and the cable distribution terminal or building entrance. Ground the shield at one end only, preferably at the distribution terminal end.

1.05 DS 208B-type requires a 117 Vac 60 Hz outlet to accept the 3-prong plug on the KS-14532, L24 power cord. To prevent the data set from being turned off accidentally, the outlet should not be under control of a switch.

1.06 The customer interface connector is a 25-pin KS-19087-L2 connector located at the rear of the data set. This connector is designed to mate with a customer-provided Cinch or Cannon DB-19604-432 plug equipped with a DB-51226-1 hood. Pin assignments for the customer interface connector are given in Table A. Connection between the data set and telephone set or 149B adapter is by an M13F cord when an ACU is required. The

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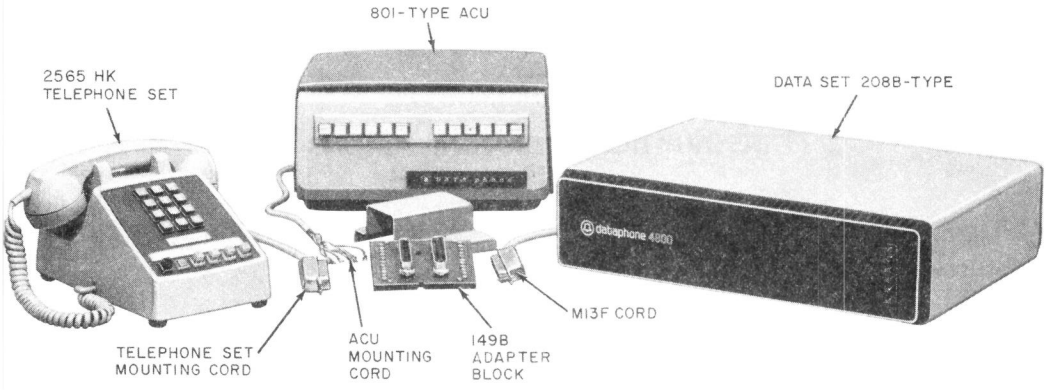


Fig. 1—Single Data Set 208B-Type With ACU—Station Components

interface between the telephone set and the data set line control circuitry is shown in Fig. 2 and 3.

1.07 DS 208B-type requires a type III DATA-PHONE® loop. Verify that the loop has been installed and meets requirements specified in the section entitled Data Systems—DATA-PHONE Service and Data Access Arrangements on Direct Distance Dialing Network—Test Requirements for Subscriber, Foreign Exchange, and Remote Exchange Lines (314-205-501).

2. TOOLS AND APPARATUS

2.01 A TTS-4 or equivalent transmission measuring set should be taken to the station installation site in addition to regular installation tools.

2.02 DS 208B-type comes equipped with an M13F (5-foot 6-inch) telephone cord and a KS-14532, L24 power cord (6 feet long).

2.03 For single data set installations not requiring an ACU (Fig. 2 and 3), the following apparatus must be ordered separately:

- 42A connecting block for telephone connection
- B25A cable for extension of M13F cord if required
- 565HK-type (or equivalent) telephone set
- D4-type cord to connect telephone set to connecting block.

2.04 In addition to the apparatus listed in 2.03, a single data set installation using an ACU (Fig. 4), requires the following apparatus which also must be ordered separately:

- 801-type ACU
- 149B adapter block

2.05 For multiple data set installations not requiring an ACU (Fig. 5), the following apparatus must be ordered separately:

- 565HK-type (or equivalent) telephone set—One for every five data sets.
- KS-21253, L3 line interface adapter—One for every five data sets
- 66E-type connecting block—One for each KS-21253, L3 line interface adapter. (Not needed when ACUs are used.)
- B25A cable—One for each data set (if extension of M13F cord if required).
- B25A cable—One for every KS-21253, L3 line interface adapter (to connect P6 of adapter to 66E-type connecting block). (Not needed when ACUs are used.)

→TABLE A←

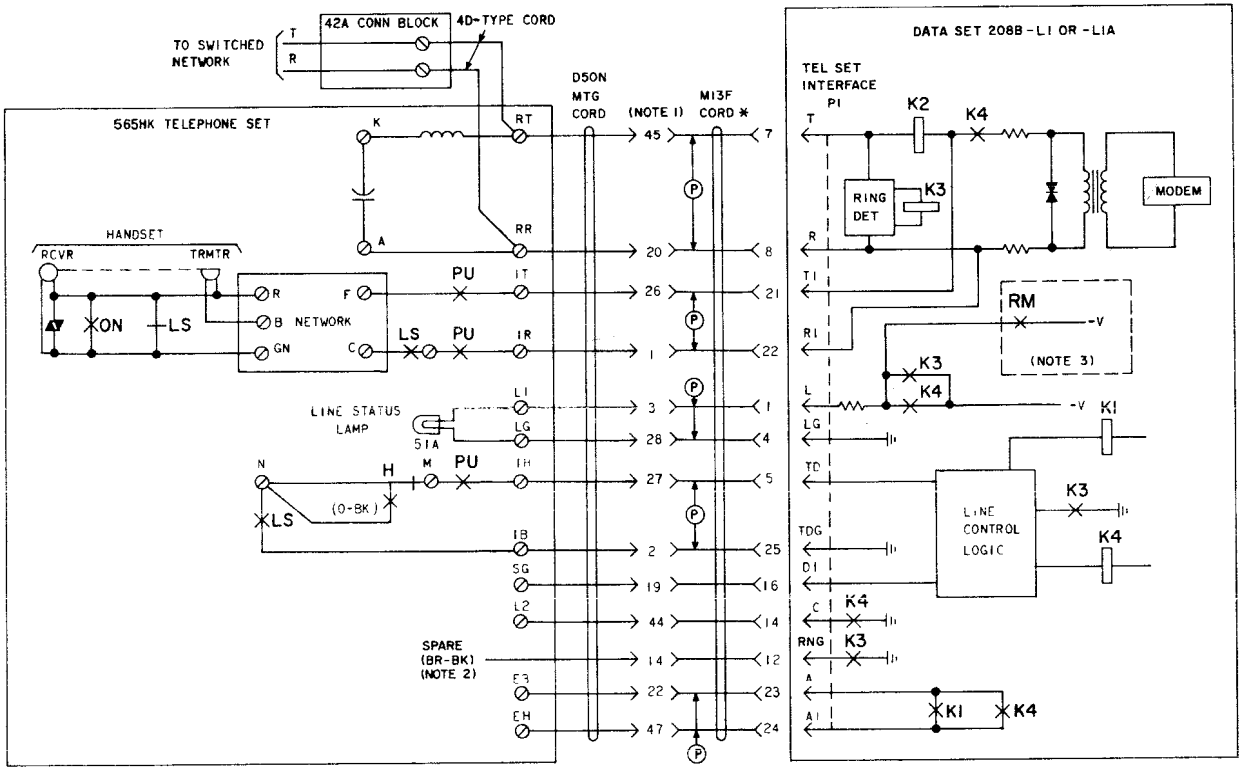
CUSTOMER INTERFACE CONNECTOR PIN ASSIGNMENTS

PIN NO.	NOTE 1	FUNCTION	DATA SET MNEMONIC	EIA DESIGNATION (RS-232-C)
1	—	Frame Ground	FG	AA
2	T	Send Data	SD	BA
3	D	Receive Data	RD	BB
4	T	Request to Send	RS	CA
5	D	Clear to Send	CS	CB
6	D	Data Set Ready	DSR	CC
7	—	Signal Ground	SG	AB
8	D	Carrier On	COD	CF
9	—	+12V	CI9 (+12V)	Reserved for Data Set Testing
10	—	−12V	CI10 (−12V)	Reserved for Data Set Testing
15	D	Serial Clock Transmitter	SCT	DB
16	D	Divided Clock Transmitter (Note 2)	DCT	SBB (Note 3)
17	D	Serial Clock Receiver	SCR	DD
18	D	Divided Clock Receiver (Note 2)	DCR	Unassigned
20	T	Data Terminal Ready	DTR	CD
22	D	Ring Indicator	RI	CE
24	T	Serial Clock Transmitter External	SCTE	DA
25	—	+5V (Note 2)	CI25 (+5V)	Unassigned

Note 1: T = terminator; D = driver.

Note 2: Functions not defined by EIA Standard RS-232-C.

Note 3: DS 208B uses pin 16 for a different function than that specified by EIA Standard RS-232-C.



NOTES:
1. CAN BE EXTENDED UP TO 200 FEET BY USE OF B25A CABLE
2. INSULATE AND STORE
3. -L1A SET ONLY (RING MEMORY)

(P) DENOTES PAIR

Fig. 2—Data Set 208B-L1 or -L1A/Telephone Set Without ACU—Interface Diagram

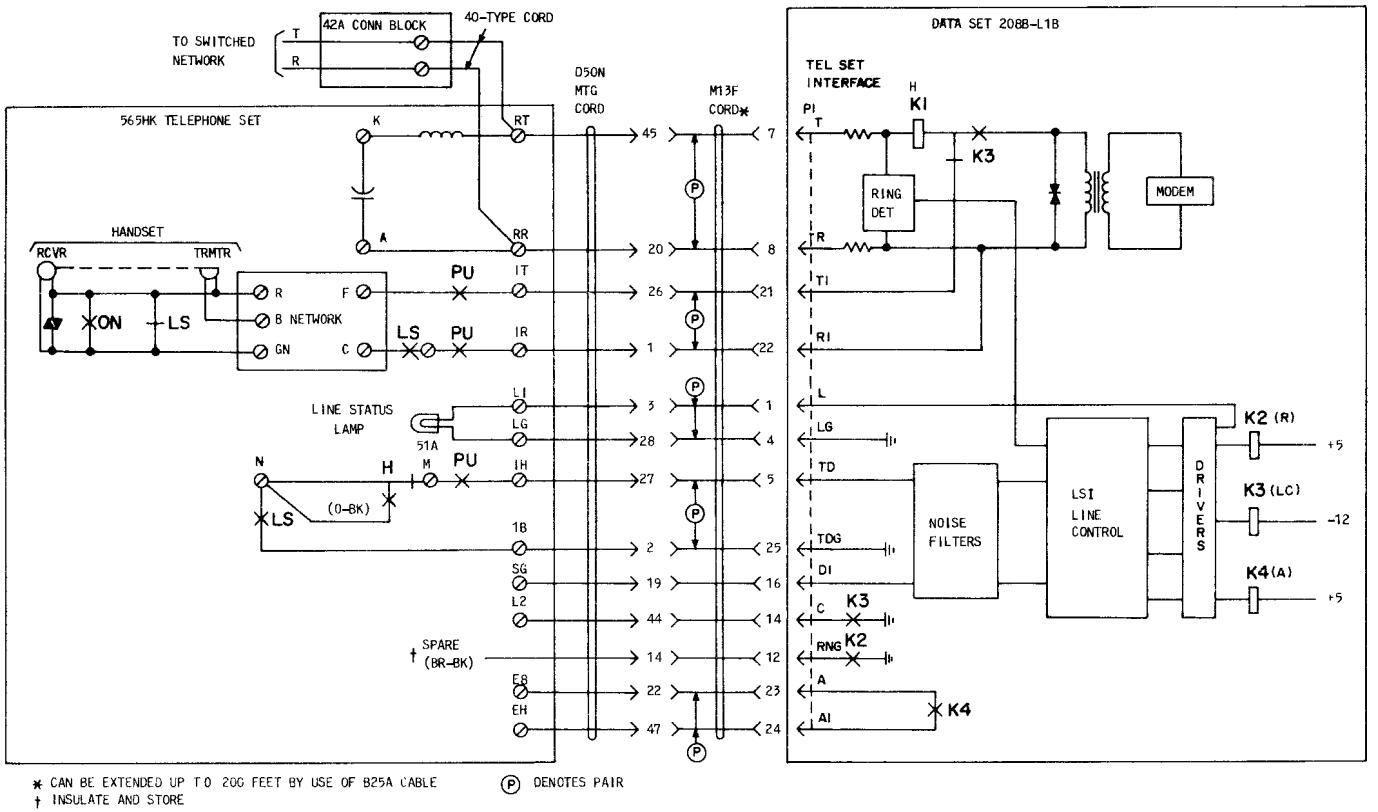


Fig. 3—Data Set 208B-L1B/Telephone Set Without ACU—Interface Diagram

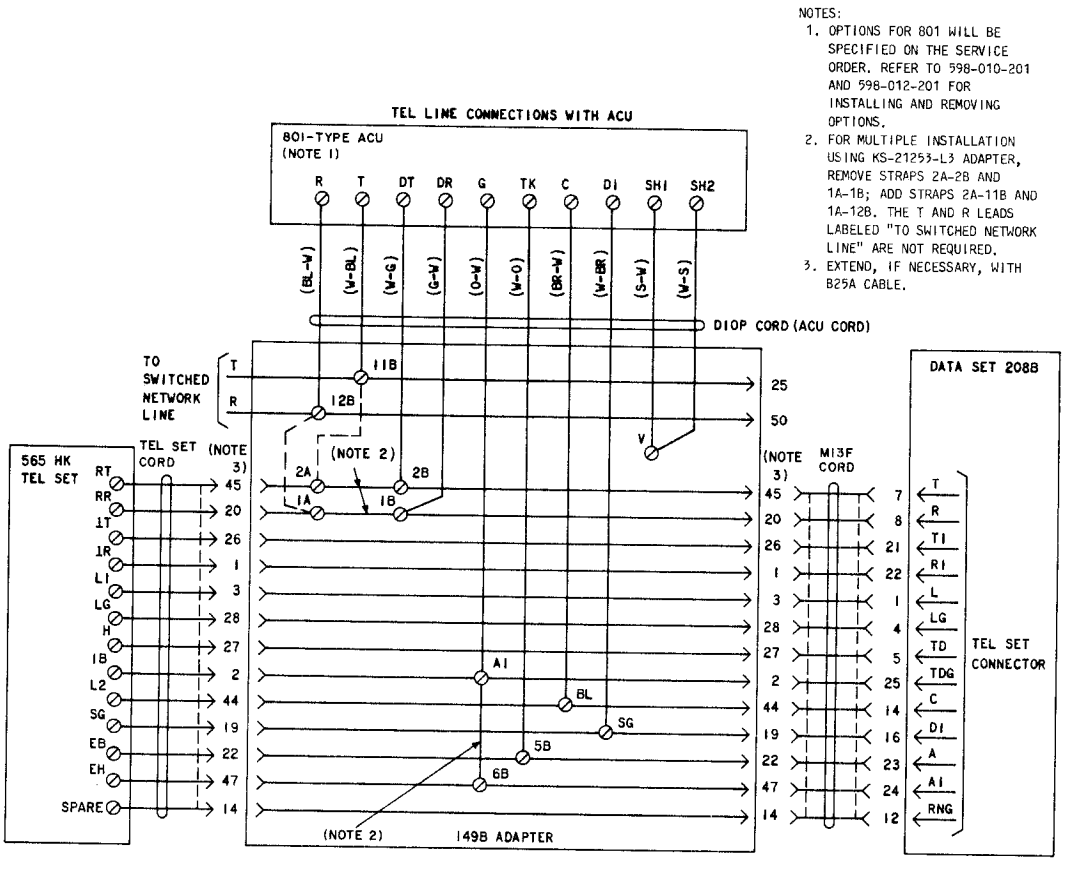


Fig. 4—Connection Diagram—Single Data Set 208B-Type With ACU Installation

- 2012A transformer—One for every KS-21253, L3 line interface adapter.

2.06 In addition to the apparatus listed in 2.05, multiple data station installations using an ACU (Fig. 6 and 7) require the following apparatus which also must be ordered separately:

- 801-type ACU—One for every data set requiring automatic call origination.

- 1044A connecting block—One for each ACU

OR

- 66E7-25 connecting block—One for each KS-21253, L3 line interface adapter.

- A25B cable—One for each KS-21253, L3 line interface adapter (for connecting P6 of adapter to connecting block).

Note: The 1044A or 66E7-25 connecting block and A25B cable are not needed if 149B adapters are used.

- 149B adapter—One for each ACU.

- B25A cable—One for each 149B adapter (for connecting 149B adapter to KS-21253, L3 line interface adapter).

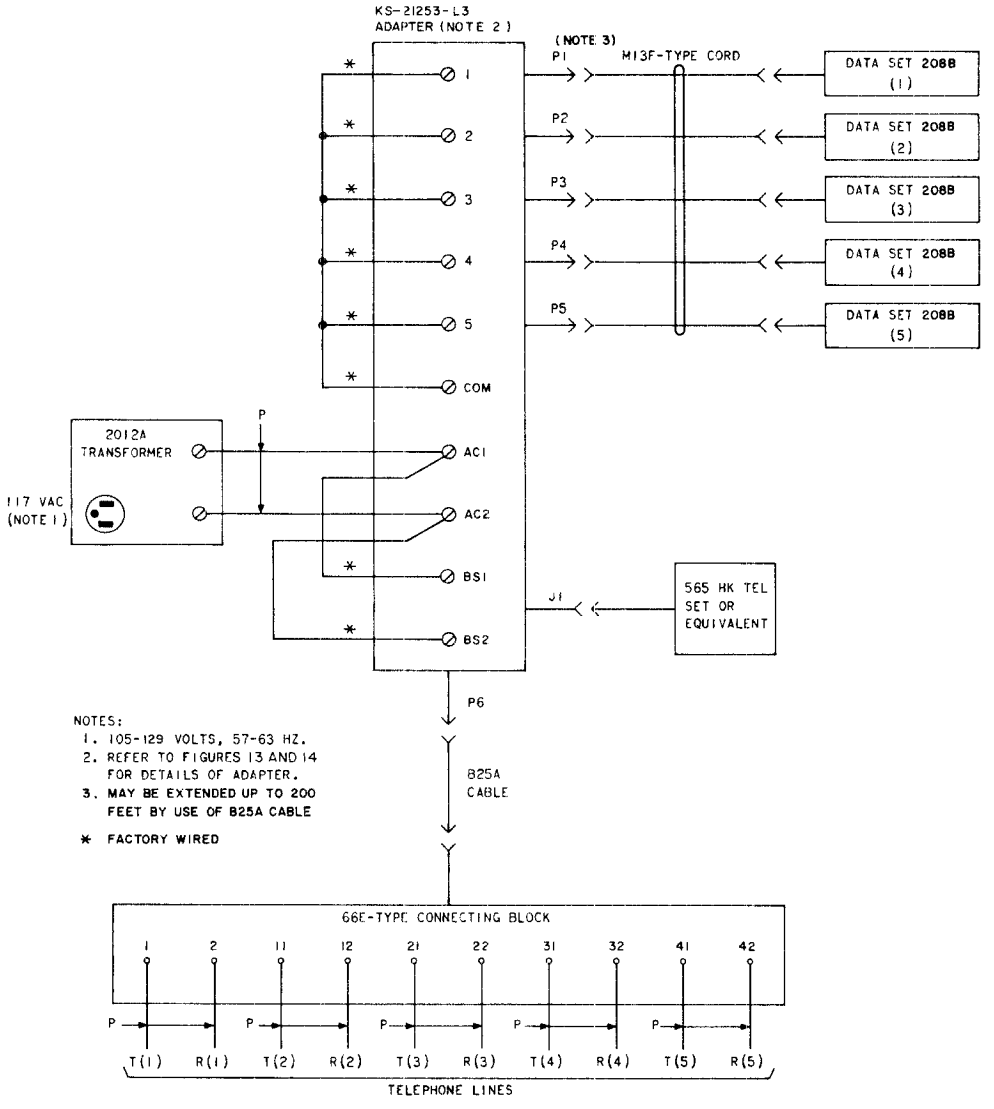


Fig. 5—Connection Diagram—Multiple Data Set 208B-Type W/O ACU Installation

Note: 149B adapter and B25A cable are not needed when 1044A or 66E7-25 connecting block and A25B cable are used.

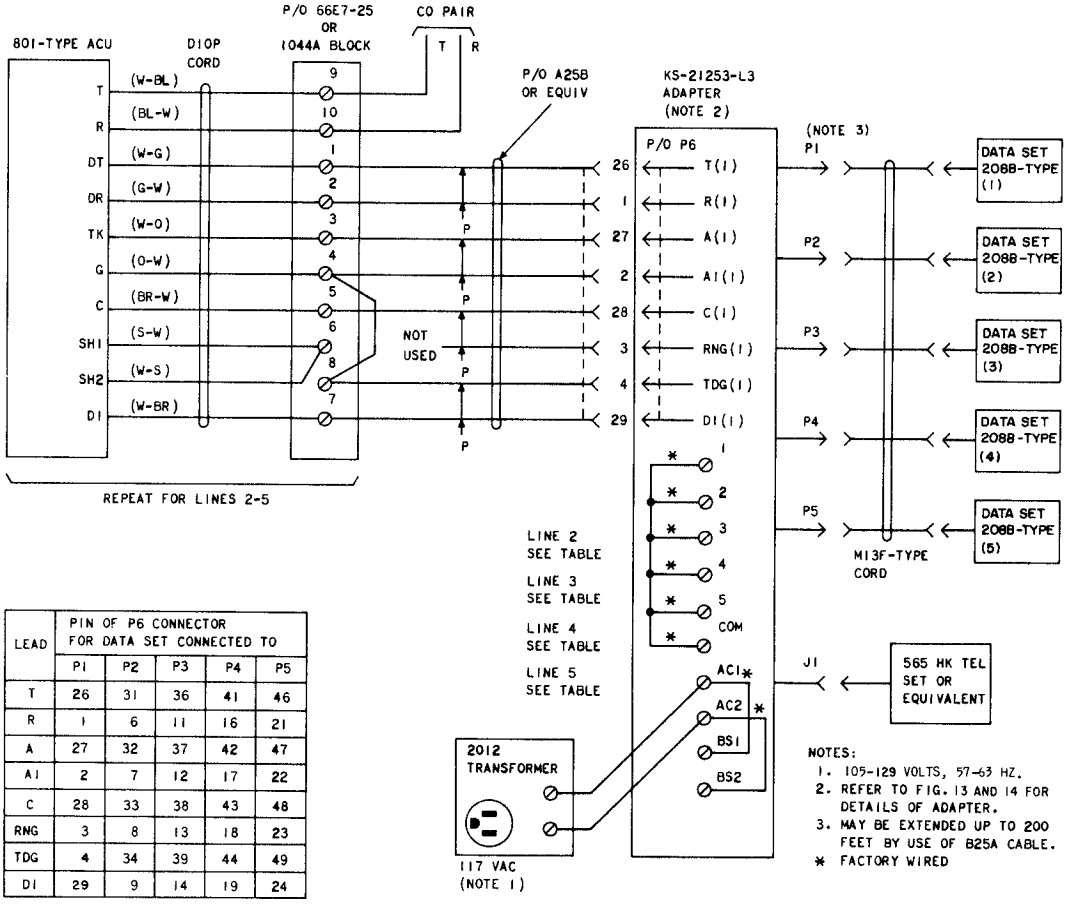
3. OPTIONS

A. Data Set 208B-Type

3.01 DS 208B-type is provided with a number of options which must be installed prior to placing the data set in service. These options should be installed as specified on the service order or circuit layout record card (CLRC) in accordance with Fig. 8, ▶or Fig. 9 and Table B,◀ or the option label (form E-6390 for -L1 sets, form E-6634 for -L1A sets, ▶and form E-6696 for -L1B sets).◀

3.02 The options and their functions are as follows:

(a) ***Compromise Equalizer IN:*** This is a filter used to provide nominal equalization to compensate for distortion present on the



LEAD	PIN OF P6 CONNECTOR FOR DATA SET CONNECTED TO				
	P1	P2	P3	P4	P5
T	26	31	36	41	46
R	1	6	11	16	21
A	27	32	37	42	47
A1	2	7	12	17	22
C	28	33	38	43	48
RNG	3	8	13	18	23
TDG	4	34	39	44	49
DI	29	9	14	19	24

Fig. 6—Connection Diagram—Multiple Data Set 208B-Type Installation Using P6 of KS-21253, L3 Line Interface Adapter for ACU Access

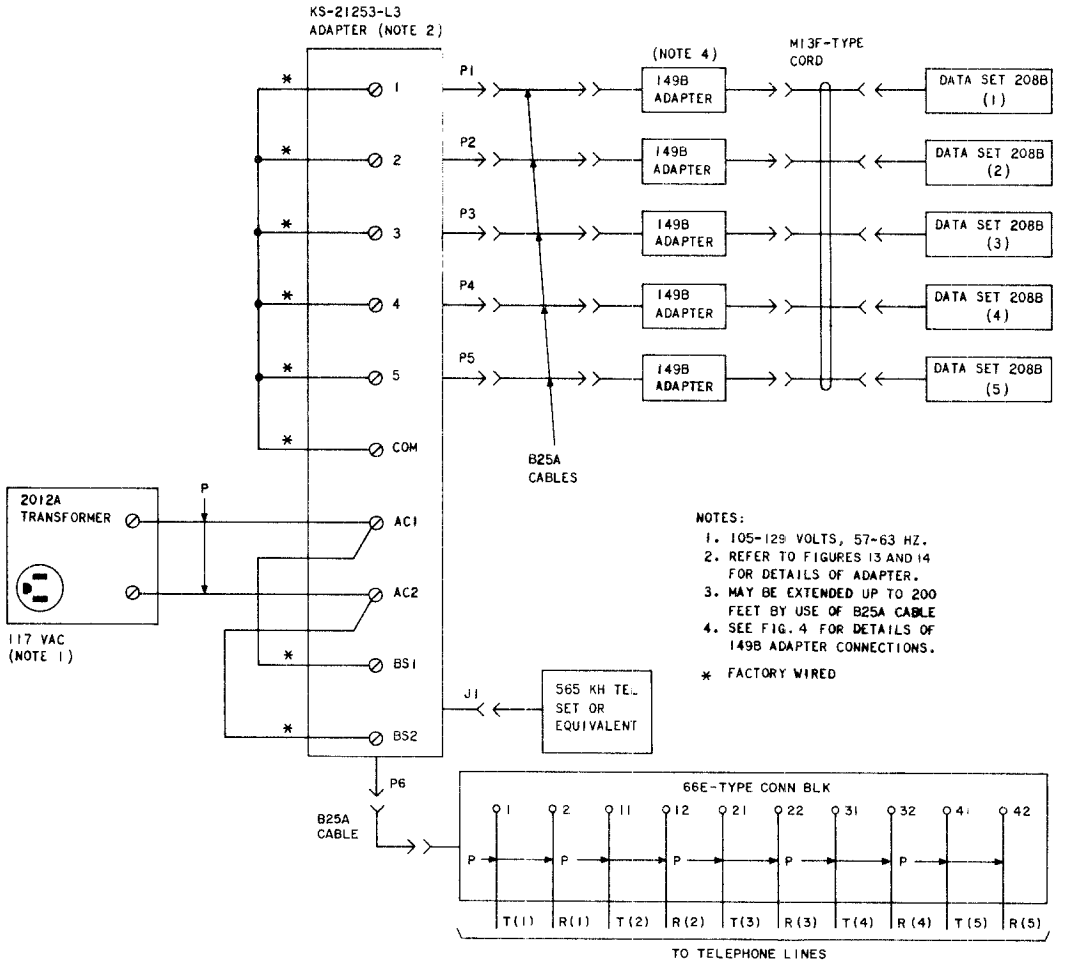
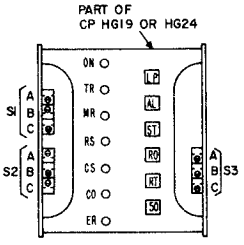


Fig. 7—Connection Diagram—Multiple Data Set 208B-Type Installation Using 149B Adapter for ACU Access

telephone channel. For ***DS 208B-L1,*** the compromise equalizer option (ZS) must always be installed; this provides an 8-dB slope. For ***DS 208B-L1A ▮and -L1B,▮*** there are two compromise equalizer IN options. One provides a 4-dB slope (WU) and the other provides an 8-dB slope (ZS). One of these options must always be installed except during test. The equalizer slope to be used is dependent on channel conditions and the proper option must be selected by telephone company personnel in accordance with tests described in Section 592-030-500. The 4-dB slope option is preferred for initial installation when tests cannot be made.

(b) ***Compromise Equalizer OUT (Option ZT):*** This option should only be installed for test purposes. It removes the compromise equalizer from the data set transmit circuit.

(c) ***CC ON in AL Mode (Option YM):*** This option provides an ON indication on



208B-L1A DATA SET OPTIONS (HG24)

SWITCH		COMPROMISE EQUALIZER SLOPE	OPTION
S2B	S2C		
§	DOWN	NONE (0DB)	ZT
UP	UP	4DB SLOPE & SYMMETRIC DELAY	WU *
DOWN	UP	8DB SLOPE & SYMMETRIC DELAY	ZS
OPTIONS FOR S3 AND 50 SWITCHES SAME AS 208B-L1			

208B-L1 DATA SET OPTIONS (HG19)

SWITCH	SWITCH POSITION	FEATURE	OPTION
S2C†	UP *	COMPROMISE EQUALIZER IN	ZS
	DOWN	COMPROMISE EQUALIZER OUT	ZT
S3A	UP	CC ON IN ANALOG LOOP MODE	YM
	DOWN *	CC OFF IN ANALOG LOOP MODE	YN
S3B	UP	MANUAL ANSWER	YO
	DOWN *	AUTOMATIC ANSWER	YP
S3C	UP	TRANSMITTER EXTERNALLY TIMED	YD
	DOWN *	TRANSMITTER INTERNALLY TIMED	YC
50††	IN	CA-CB INTERVAL OF 50 MSEC	
	OUT	CA-CB INTERVAL OF 150 MSEC	

* FACTORY INSTALLED
† COMPROMISE EQUALIZER SHOULD ALWAYS BE IN
†† IF NOT SPECIFIED ON SERVICE ORDER, INSTALL 50 INTERVAL
§ SWITCH MAY BE IN EITHER POSITION

TRANSMIT LEVEL

LEVEL (DBM)	SWITCH				OPTION
	S1A	S1B	S1C	S2A	
0 *	DOWN	UP	DOWN	UP	ZA
-1	DOWN	UP	DOWN	DOWN	ZB
-2	DOWN	UP	UP	UP	ZC
-3	DOWN	UP	UP	DOWN	ZD
-4	DOWN	DOWN	DOWN	UP	ZE
-5	DOWN	DOWN	DOWN	DOWN	ZF
-6	DOWN	DOWN	UP	UP	ZG
-7	DOWN	DOWN	UP	DOWN	ZH
-8	UP	UP	DOWN	UP	ZI
-9	UP	UP	DOWN	DOWN	ZJ
-10	UP	UP	UP	UP	ZK
-11	UP	UP	UP	DOWN	ZL
-12	UP	DOWN	DOWN	UP	ZM
-13	UP	DOWN	DOWN	DOWN	ZN
-14	UP	DOWN	UP	UP	ZO
-15	UP	DOWN	UP	DOWN	ZP

* FACTORY INSTALLED

Fig. 8—Data Set 208B-L1 and -L1A Option Switches

the CC interface lead when the data set is in AL test mode. This allows a customer to loop back signals through the data set for testing with terminal equipment.

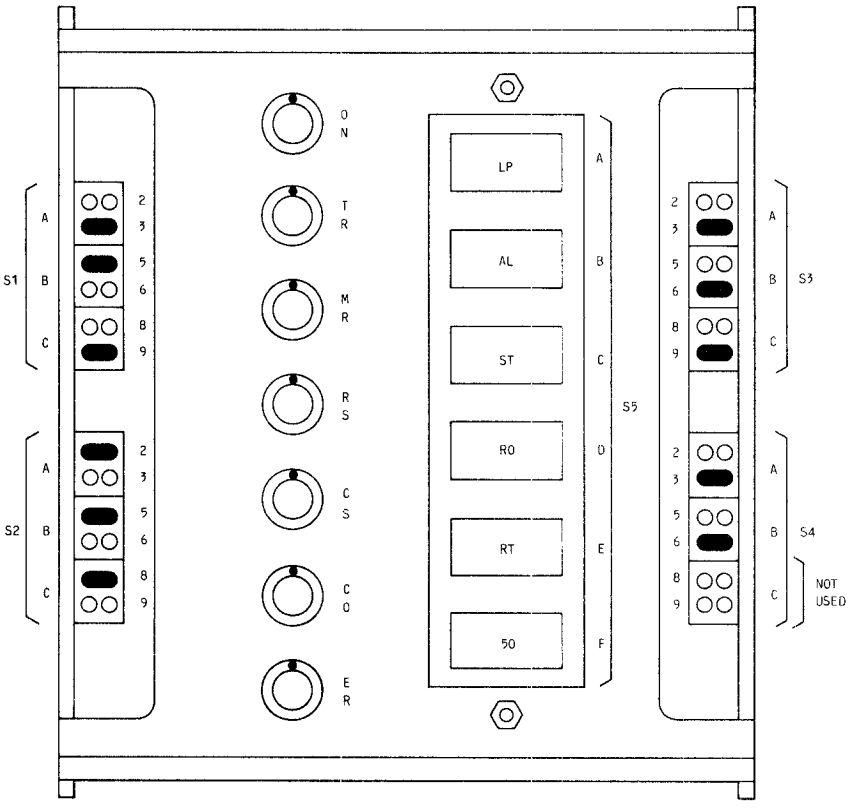
(d) ***CC OFF in AL Mode (Option YN):*** This option provides an OFF indication on the CC interface lead when the data set is in AL test mode. With this option installed, loop-back tests of the data set with terminal equipment may not be possible.

(e) ***Manual Answer (Option YO):*** With this option installed, all incoming calls ***must*** be answered manually.

(f) ***Automatic Answer (Option YP):*** This option allows the data set to answer incoming calls automatically and enter the data mode under control of the CD interface lead.

(g) ***Transmitter Externally Timed (Option YD):*** With this option installed, the customer ***must*** provide serial clock to the data set on the DA interface lead. The DB clock signal is present and is phase-locked to the signal on the DA lead.

(h) ***Transmitter Internally Timed (Option YC):*** With this option installed, the ***data***



NOTES:
1. OPTIONS ON THE CAMBION SWITCHES OF CP HG25 ARE SELECTED BY PLACING SHORTING PLUGS ACROSS THE DESIRED PAIRS OF TERMINALS AS SHOWN. EACH SWITCH SECTION A, B AND C CONSISTS OF AN UPPER AND LOWER PAIR (EG 2 AND 3) OF TERMINALS DESIGNATED UP AND DOWN, RESPECTIVELY. SHORTING PLUGS ARE SHOWN THUSLY ▬ IN FACTORY-INSTALLED POSITIONS. BE CAREFUL TO ALWAYS PLACE STRAPS IN HORIZONTAL POSITION TO IMPLEMENT DESIRED OPTION. (SEE OPTION LABEL E-6696)
2. LEDS ARE POLARIZED. INSTALL REPLACEMENT LEDS WITH RED DOT ADJACENT TO DOT SHOWN IN CONCENTRIC CIRCLES REPRESENTING LEDS.

Fig. 9—Data Set 208B-L1B Option Switches

set provides serial clock to the customer on the DB interface lead.

(i) ***CA-CB Interval 50 ms ("50" Button Depressed):*** This option causes the CB lead to remain off for approximately 50 ms after the CA lead is turned on. Unless otherwise specified on the service order or CLRC, this option should always be provided.

(j) ***CA-CB Interval 150 ms ("50" Button Released):*** This option causes the CB lead to remain off for approximately 150 ms after the CA lead is turned on. Unless specified

→TABLE B←

DS 208B-L1B OPTIONS (CP HG25)

SWITCH	OPTION STRAP POSITION	OPTION FEATURE	OPTION DESIGNATION
S2B	†	Compromise Equalizer Out	ZT
S2C	Down		
S2B	Up	Compromise Equalizer (4-dB Slope)	WU*
S2C	Up		
S2B	Down	Compromise Equalizer (8-dB Slope)	ZS
S2C	Up		
S3A	Up	DSR *on* in Analog Loop Mode	YM
	Down	DSR *off* in Analog Loop Mode	YN*
S3B	Up	Manual Answer	YO
	Down	Automatic Answer	YP*
S3C	Up	Transmitter Externally Timed	YD
	Down	Transmitter Internally Timed	YC*
S4A‡	Up		
	Down*		
S4B‡	Up		
	Down*		
"50"	In	RS-CS Interval of 50 ms	(Customer Switch)
	Out	RS-CS Interval of 150 ms	

* Factory installed.
† Strap may be up or down.
‡ Down position must be selected.

on the service order or CLRC, this option is never provided.

(k) ***Transmit Line Signal Level:*** This option allows for adjustment of the data set transmit level to compensate for losses in various local loops.

3.03 To gain access to the option switch panel and to the circuit packs, remove the front cover (Fig. ▶10 or 11◀) by gently squeezing it on

top and bottom and pulling forward. To replace the cover, position it properly, gently squeeze it at top and bottom, and push it into place.

3.04 All of the option switches are located on CP HG19 (DS 208B-L1), CP HG24 (DS 208B-L1A) ▶or CP HG25 (DS 208B-L1B).◀ The request-to-send/clear-to-send (CA-CB) timer option switch is activated by depressing or releasing the locking pushbutton labeled "50". All other options are located on switches S1, S2, S3, ▶and S4.◀ Each switch is divided into three sections: A, B, and C. To access the switch screws (-L1 or -L1A), the hinged protective cover must first be opened by pulling it from the end with the dot. Each switch section is individually adjusted to one of two positions, using a screwdriver mounted on the CP to gently rotate the adjustable screw to either the up or down position (-L1 or -L1A), or by using long nose pliers to position the straps to the up or down position (-L1B). Failure to properly position the screwdriver slot may result in improper data set operation.

Caution: On DS 208B-L1 and -L1A, the final position of the screw must be such that screwdriver slot is parallel with the spacer. Care must be taken not to force the screw, as this could damage the switch. ▶On DS 208B-L1B, always place straps horizontally, eg, 3 to 3.◀

3.05 Switch sections are referred to by adding the letter designation (either A, B, or C) to the switch number. Thus, S2B refers to switch S2, section B.

3.06 If it becomes necessary to remove CP HG19 (DS 208B-L1), CP HG24 (DS 208B-L1A), ▶or CP HG25 (DS 208B-L1B),◀ first remove the locking bar, then (on DS 208B-L1 or -L1A) remove the screwdriver by gently pulling it forward. Remove the CP by grasping the black plastic block and gently pulling forward. To replace the CP, align it in the proper slot and push gently into place. Replace screwdriver (on DS 208B-L1 or -L1A) by aligning it in the captive slots and pushing gently in.

3.07 The data set is supplied from the factory with a strap at the power supply terminal

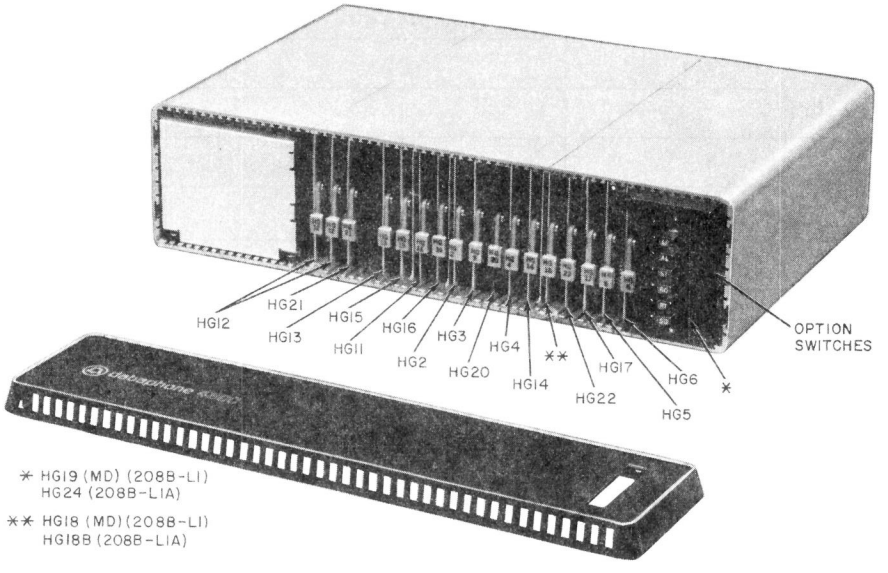


Fig. 10—▶Data Set 208B-L1 or -L1A—Front View With Cover Removed◀

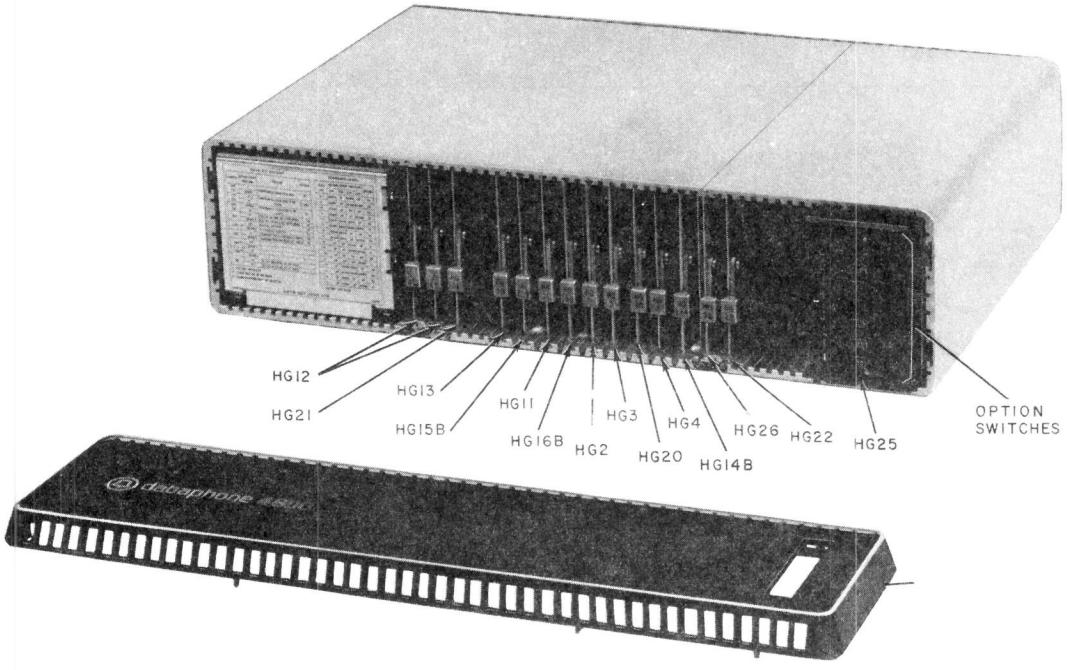


Fig. 11—Data Set 208B-L1B—Front View With Cover Removed

strip to connect frame ground to signal ground (Fig. 12). This strap can be disconnected if the customer specifies a different grounding arrangement. This should be determined at installation. To disconnect the strap, loosen the screws, pull back on the strap until the connection is broken, then tighten the strap under the frame ground screw.

3.08 The data set output level must be set so that the signal reaching the serving central office does not exceed -12 dBm. In order to do this, it is necessary to know the loop loss between the serving central office and the data station. This information can be obtained from the CLRC. In the event the information is not available, determine loop loss as follows:

(1) Dial the serving central office milliwatt supply or request that the local testboard transmit a 1000-Hz tone at 0 dBm on the loop.

(2) Use a TTS-4 (or equivalent) transmission measuring set to measure the incoming signal across the line tip and ring. The reading on the meter is the loop loss.

(3) The data set output level required is equal to the difference of the desired power level of -12 dBm and the loop loss obtained in step 2. For example, if the loop loss is 5 dB:

$$\text{Data Set Output} = -12 \text{ dBm} - (-5 \text{ dB})$$

$$= -12 + 5$$

$$= -7 \text{ dBm.}$$

(4) The data set output signal level should be set to -7 dBm.

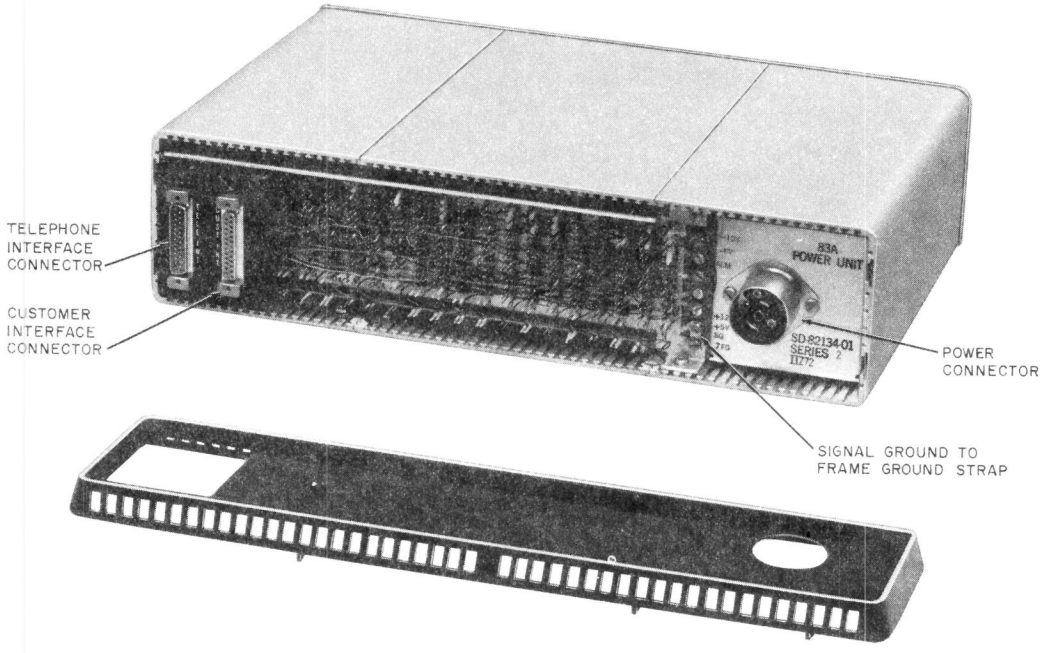


Fig. 12—Data Set 208B-Type—Rear View With Cover Removed

B. DAS 801-Type ACU

3.09 DS 208B-type can be used with either DAS 801A6, 801C4 or 801C-L1 ACU. DAS 801A6, 801C4, and 801C-L1 options are listed in Table C. Options to be used are identified in the REMARKS column of Table C as follows:

- REQUIRED: ***Always*** install these options for DS 208B-type installations.
- DO NOT USE: ***Never*** install these options for DS 208B-type installations.
- CUSTOMER SELECTS ONE: Refer to service order or CLRC to determine which option to install.
- TELCO SELECTS ONE: Refer to service order or CLRC to determine which option to install.

3.10 After determining which options must be installed, refer to one of the following sections for installation procedures.

- 598-010-201—Data Auxiliary Sets 801A5 and 801A6 for Automatic Calling—Installation and Connections.
- 598-012-201—Data Auxiliary Sets 801C3 and 801C4—Installation and Connections.
- 598-012-202 Data Auxiliary Set 801C-L1/2—Installation and Connections.

4. CONNECTIONS

4.01 This part covers the connections required for the following DS 208B-type arrangements:

(a) Single data set without ACU—4.02 and Fig. 2 ▶or 3◀

→TABLE C←

DAS 801A6 AND 801C4 ACU OPTIONS FOR USE WITH DS 208B-TYPE

OPTION				REMARKS*
FEATURE	DESIGNATION			
	801A6	801C4	801C-L1	
Mounting Cord D10P-61 Mounting Cord D14C-61	M N	M N	M13G	Required Do not use
2-Wire 4-Wire	Not avail. Not avail.	ZH ZJ	Fact. wired Not avail.	Required Do not use
ACU answer detection or end of number Data set answer detection w/o end of number	B E	B E	B E	Required Do not use
Detect end of answer tone Detect beginning of answer tone	W X	W X	W X	Required Do not use
Detect 2025 answer tone Detect 2225 answer tone	S T	S T	S T	Required Do not use
DLO controlled by ACU DLO controlled by ACU and data set	Not avail. Not avail.	ZM ZL	Fact. wired Not avail.	Required Do not use
Data set to data mode by grounded contact Data set to data mode by contact to DT Data set to data mode by isolated contact	ZG Q F	ZG Q F	ZG Q Not avail.	Required Do not use Do not use
Isolated TK contact Grounded TK and CL contacts Isolated CL contact	ZA ZB ZC	ZA ZB ZC	ZA Use ZP Not avail.	Required † Do not use Do not use
Stop ACR timer when DSS goes on Do not stop ACR timer when DSS goes on	R H	R H	R H	Customer selects one
Terminate call via data set after DSS on (line transfer in test) Terminate call via CRQ after DSS on (line transfer)	G Z	G Z	G Z	Customer selects one
Terminate call via data set after DSS on (CL contact in test) Terminate call via CRQ after DSS on (CL contact)	ZD A	ZD A	G Z	Do not use Do not use
Voltage interface Contact interface	ZF ZE	Not avail. Not avail.	Fact. wired Not avail.	Customer selects one
Long loop (over 400 ohms) Short loop (under 400 ohms)	ZU w/o ZU	Not avail. Not avail.	Not avail. Not avail.	Telco. selects one
Ground start (2-wire) w/o ground start (loop start)	Not avail. Not avail.	V Y	V Y	Telco selects one
Ground start (4-wire)	Not avail.	ZK	Not avail.	Do not use
7-second ACR timing interval 14-second ACR timing interval 28-second ACR timing interval 56-second ACR timing interval	Screwdriver Adjustment		ZQ ZR ZS ZT	Telco selects one
SG connected to FG SG not connected to FG	Strap No strap	Strap No strap	ZU ZV	Telco selects one

* Refer to 3.09 and 3.10.
† CL and TK contacts are not used by DS 208B-type. Option ZA is specified to provide uniformity of installation.

(b) Single data set with ACU—4.03 and Fig. 4

(c) Multiple data sets without ACUs—4.04 and Fig. 5, 13, and 14.

(d) Multiple data sets with ACUs—4.05 through 4.07 and Fig. 6, 7, 13, and 14.

4.02 A single data set ***without an ACU*** is shown in Fig. 2 and 3. DS 208B-type is connected to the telephone set via an M13F cord. The telephone set can be located up to a maximum of 200 feet from the data set by using a B25A cable to extend the M13F cord. The telephone set is connected via the telephone line to the switched network at the 42A connecting block by use of a D4-type cord.

4.03 A single data set ***with an ACU*** arrangement is shown in Fig. 4. The data set, telephone set, and ACU are interconnected by use of a 149B adapter as follows:

(a) Telephone set—to 149B adapter via the telephone set cord.

(b) ACU—via a D10P-61 cord.

(c) Data set—via an M13F cord. The telephone set, ACU, and 149B adapter can be located up to a maximum of 200 feet from the data set by using a B25A cable to extend the M13F cord.

The 149B adapter requires the installation of three straps as shown in Fig. 4. The telephone line to the switched network is connected to the data station at the 149B adapter.

4.04 A multiple data set ***without ACUs*** is shown in Fig. 5. This arrangement requires the use of a KS-21253, L3 line interface adapter (Fig. 13) which allows up to five data sets to be associated with one telephone set. A wiring diagram of the KS-21253, L3 line interface adapter is given in Fig. 14. The data set(s) are connected to plugs P1 through P5 of the KS-21253, L3 adapter via M13F cord(s) and the telephone set cord is connected via connector J1. Tip and ring leads of the data set(s) are fed via the B25A cable between plug P6 of the KS-21253, L3 adapter and the 66E-type connecting block where they are cross-connected to the telephone line(s) to the switched network.

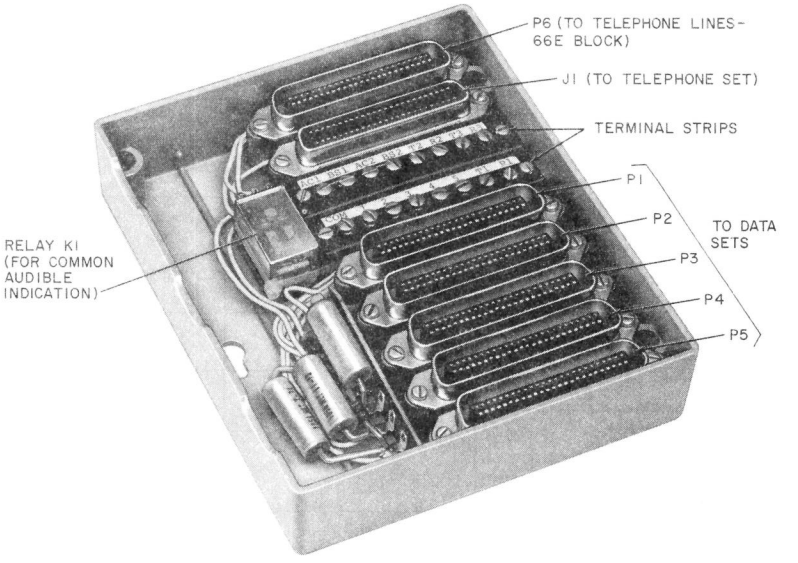


Fig. 13—KS-21253, L3 Line Interface Adapter With Cover Removed

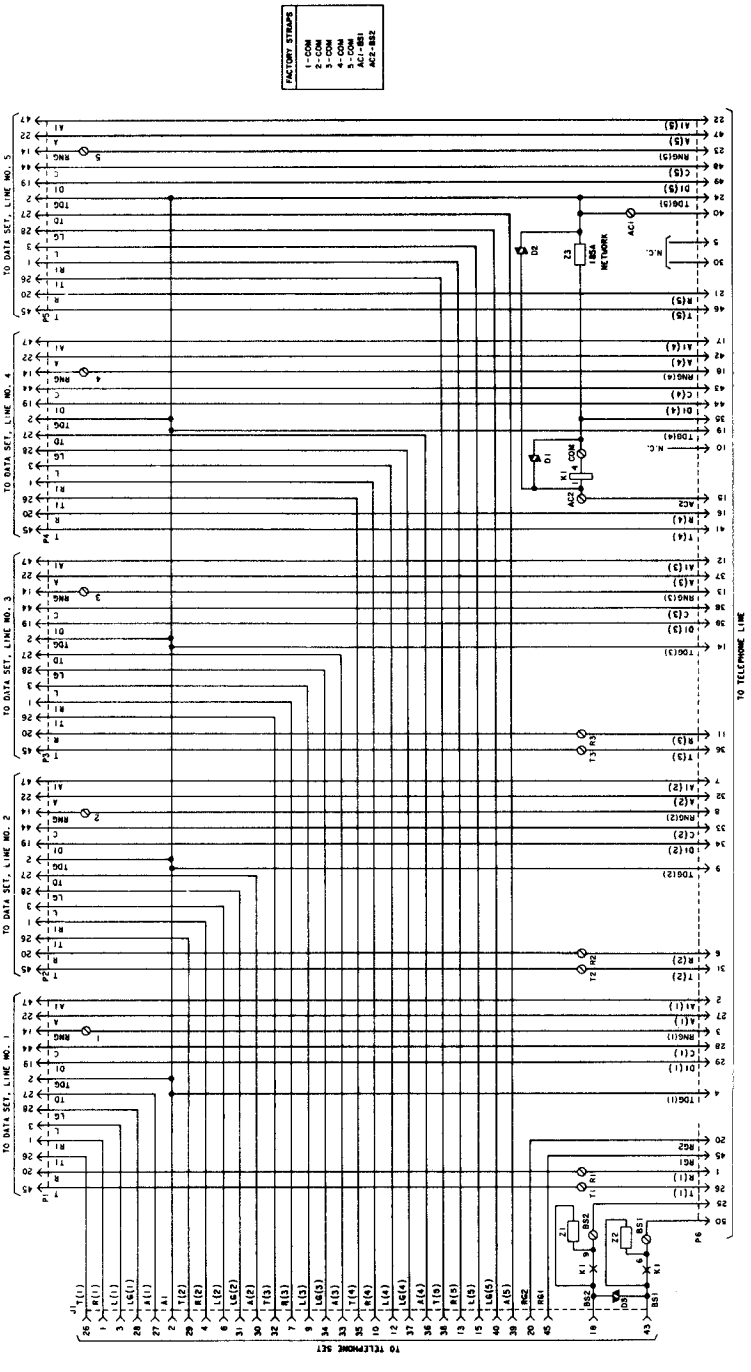


Fig. 14—Wiring Diagram—KS-21253, L3 Adapter

Power is supplied to the KS-21253, L3 adapter by a 2012A transformer.

4.05 There are two possible multiple data set arrangements ***with ACUs.*** Fig. 6 shows the arrangement where ACU access is provided via plug P6 of the KS-21253, L3 adapter. Fig. 7 shows the arrangement where ACU access is provided by the 149B adapter(s).

4.06 ***ACU Access Provided Via P6 of KS Adapter (Fig. 6):*** In this arrangement the data set(s) are connected to plugs P1 through P5 of the KS-21253, L3 adapter via M13F cord(s). The telephone set is connected to connector J1 of the KS-21253, L3 adapter. The data set leads required by the ACU that appear at P6 are fed to the 1044A connecting block(s) or a 66E7-25 connecting block via the A25B cable where they are cross-connected to the ACU.

> ***Note:*** The 1044A connecting block provides ten terminals. Therefore, one 1044A is required for each ACU. The 66E7-25 connecting block provides five rows of ten terminals each allowing up to five ACUs to be cross-connected. Telephone lines to the switched network are connected to the data station at the 1044A or 66E7-25 connecting blocks.

4.07 ***ACU Access Provided Via 149B Adapters (Fig. 7):*** In this arrangement one 149B adapter is required for each data set to be associated with an ACU. The data set, ACU, telephone set, 149B adapter, and KS-21253, L3 adapter are interconnected as follows:

(a) Data set—to the 149B adapter via the M13F cord.

(b) ACU—to the 149B adapter via the D10P-61 cord.

(c) Telephone set—via the telephone set cord to J1 of the KS-21253, L3 adapter.

(d) KS-21253, L3 adapter—to the 149B adapter via B25A cable connected to plugs P1, P2, P3, P4, or P5 of KS-21253, L3 adapter. Tip and ring leads of each data station are fed via a B25A cable between P6 of the KS-21253, L3 adapter and the 66E-type connecting block where they are cross-connected to telephone lines to the switched network. Power is supplied to the KS-21253, L3 adapter by a 2012A transformer.

5. MULTIPLE MOUNTINGS

5.01 There are three ways in which DS 208B-type can be installed for multiple arrangements. They are:

(a) Up to three data sets can be stacked on top of each other.

(b) By use of the D-180467 mounting bracket, they can be mounted (including complete housing) on a 19- or 23-inch rack mounting (Fig. 15).

(c) By use of the D-180467 or D-180556 mounting brackets, they can be mounted (including complete housing) in a KS-20018, L15 or L17 cabinet.

5.02 KS-20018, L15 and L17 cabinets will accommodate up to 12 DS 208B-type. However, because of temperature limitations, no more than eight DS 208B-type shall be mounted in the KS-20018, L15 or L17 cabinet. Figure 16 gives a typical arrangement for DS 208B-type mounted in a KS-20018, L15 or L17 cabinet. For the KS-20018, L15 and L17 cabinet installation procedures, refer to the section entitled Data Sets—Multiple Installation Information (590-010-201).

6. INSTALLATION TEST

6.01 After the data set has been installed, it should be tested to determine if it is operating properly. Perform appropriate installation tests specified in the test section (592-030-500).

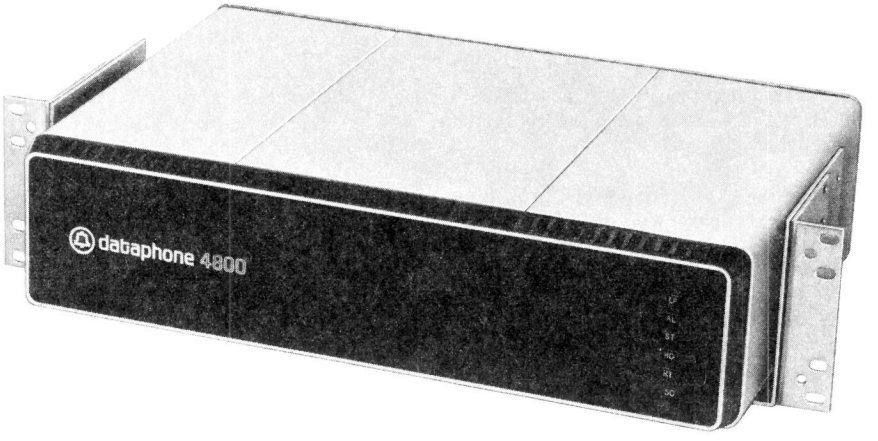


Fig. 15—Data Set 208B-Type With D-180467 Mounting Bracket Installed—Front View

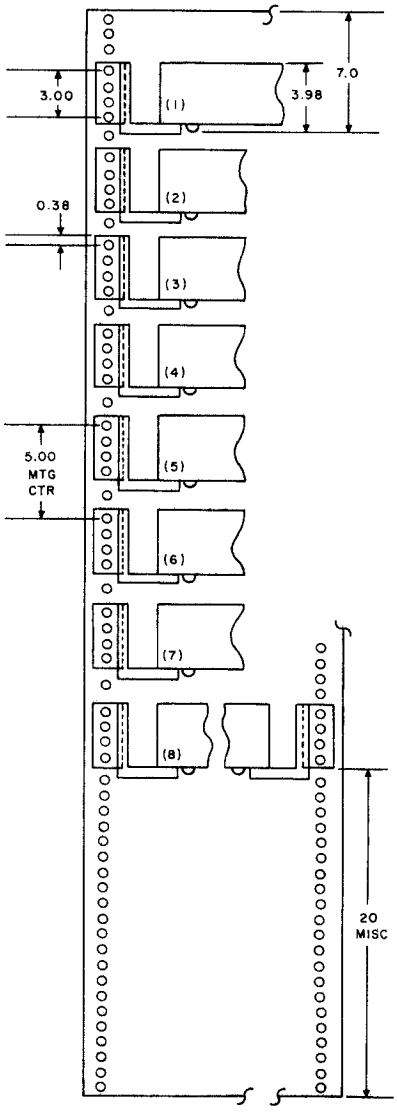


Fig. 16—Eight Data Sets 208B-Type Mounted in KS-20018, L15 or L17 Cabinet