

SYNCHRONOUS "DATASPEED*" 40/4
SINGLE DISPLAY STATION ARRANGEMENTS

INSTALLATION

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	INTERPRETATION OF CON- TROLLER ARRANGEMENT FORMS.....	7	1.	GENERAL	
3.	INSTALLATION	18	1.01	This section provides installation informa- tion for all units and components con- tained in a DATASPEED 40/4 Single Display Station hereafter referred to as 40/4-Type (SDS) equipped with a 40C304/AA/001 Single Display Controller (SCD).	
	INSTALLATION OUTLINE.....	18	1.02	The reason for reissue of this section is to add installation information for the Single Display Station Dial-up version.	
	STATION CONFIGURATION WORKSHEET.....	18	<i>Note:</i>	When ordering replaceable parts or compo- nents, unless otherwise specified, prefix each part number with the letters "TP" (ie, TP410055).	
	UNPACKING INSTRUCTIONS ...	18	1.03	Abbreviations used in this section are defined in Section 582-200-101.	
	UNPACKING EQUIPMENT	18	1.04	The following warnings and danger are to be followed as safety measures for the apparatus and the craftsman.	
	PLACEMENT OF EQUIPMENT ...	19	<i>Warning 1:</i>	Turn off all the power and signal sources before removing or replacing any com- ponent.	
	MONITOR INSTALLATION	20			
	OPCON INSTALLATION.....	20			
	PRINTER INSTALLATION.....	21			
	A. Friction Feed	21			
	B. Tractor Feed.....	22			
	CABLE INSTALLATION	24			

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Warning 2: To avoid possible internal damage to circuitry, wear a 346392 static discharge strap connected to ground to allow static discharge before handling circuit cards for removal or replacement. Avoid touching circuit lands or components as much as possible.



Attach static ground strap tightly to wrist.



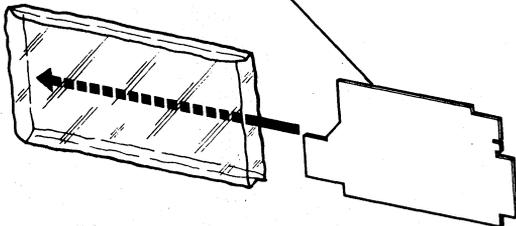
Attach clip end of static discharge strap to frame ground.

Warning 3: Place listed card in an RM150592 static bag immediately after removal from unit. Do not place any printer paper in the bag with the card. Keep the card in the static bag at all times. Never handle the card outside the bag without wearing a properly grounded 346392 static ground strap.

Danger: Safety glasses must be worn whenever monitor cover is removed or whenever monitor is replaced.

Cards List

Printer (410071, 410072, 410076, 410640, or 410729)
Controller — All Cards
(Not Monitor Cards)



STATION WORKSHEET

1.05 The Station Configuration Worksheet provides the craftsperson with an understanding of the station configuration prior to installation. A blank sample of the worksheet is given on the following page. When the W-Plan for SDS (W-4ECKG) is available, its worksheet will be the preferred sheet to use.

PREPARATION OF STATION WORKSHEET

1.06 Instructions for preparing 40/4-Type SDS worksheet. (See examples on Pages 4 and 5).

- (a) Use a separate worksheet for each station ordered.
- (b) In the upper portion of the configuration worksheet, include all information as required.
- (c) In the SDC area of the configuration worksheet, list the Station Poll Address (SPA) and Station Select Address (SSA) graphics for Private Line Version or The Station Identification Graphics For Dial-Up Version. Also, use Xs in boxes following the option numbers to show the selected option.
- (d) Private Line Version Only: Option 405b is the KD device number; fill in the line in the SDC box and list the KD device address in the box marked OPCON.
- (e) Private Line Version Only: Option 405c is the PTR device number; fill in the line in the SDC box and list the printer device address in the box marked PRINTER.
- (f) List the printer code on the line provided in the box marked PRINTER.
- (g) Options 408, 409 and 410 grouped by the controller as OPT4; mark the proper box with an X for station configuration purposes.
- (h) In the DATA SET/DATA AUX SET box, mark an X for either DATA SET or DATA AUX SET and transmission rate (1200, 2400, or 4800). List the proper code on the line provided.
- (i) On the line between the SDC box and DATA SET/DATA AUX SET box, line out the unused connecting cable number.

Note 1: In the example worksheet, entries that are not used are lined out.

Note 2: Entering the character that should be displayed for each "OPT" number (when in the OPT mode) on the worksheet will be helpful to the installer.

40/4-Type Station Configuration Worksheet - Single Display Station (SDS)

STATION CONFIGURATION WORKSHEET
SINGLE DISPLAY STATION

DATE _____

TELCO _____ CUSTOMER _____

TELCO CONTACT _____ TEL. NO. _____

USSO _____ CKT. NO. _____ TELCO REQ. NO. _____

WE REQ. NO. _____ SCHEDULE _____

SDC	SPA*	SSA*
	I.D.+ 1st 2nd 3rd 4th	
OPTIONS		
401 b.*	}	OPT 1* _____
402 a.		
402 b.		
402 c.		
402 d.	}	OPT 6 _____
403 a.		
403 b.		
403 c.		
403 d.	}	OPT 5 _____
405 b.*		
405 c.*		
406 a.		
406 b.	}	OPT 7 _____
407 a.		
407 b.		
408 a., 409 a. & 410 a.		
408 b., 409 a. & 410 a.	}	OPT 4 _____
408 a., 409 b. & 410 a.		
408 b., 409 b. & 410 a.		
408 b., 409 b. & 410 b.		
411 a.	}	OPT 8 _____
411 b.		
412 a.+		OPT 1+ _____
412 b.+		OPT 2+ _____
412 c.+		OPT 3+ _____
413 +		OPT 9 _____
OPCON		
KD ADDRESS* _____		

* PRIVATE LINE VERSION ONLY
+ DIAL-UP VERSION ONLY

406036
OR
406066

6 FT.

<input type="checkbox"/>	DATA SET
<input type="checkbox"/>	DATA AUX. SET
<input type="checkbox"/>	1200 BPS+
<input type="checkbox"/>	2400 BPS
<input type="checkbox"/>	4800 BPS

406039

6 FT.

PRINTER
PTR. ADDRESS*

Example Worksheet - Private Line Version

STATION CONFIGURATION WORKSHEET
SINGLE DISPLAY STATION

DATE 5-6-78

TELCO BELL CUSTOMER BCA Processing Co.
 TELCO CONTACT Joe Smith TEL. NO. 123-456-7890
 USSO 2161-9501-00 CKT. NO. 3FD254 TELCO REQ. NO. 5-59183
 WE REQ. NO. 49-3-55914 SCHEDULE 8-8-78

SDC	SPA* <u>C</u>	SSA* <u>T</u>	
	I.D.+ 1st 2nd 3rd 4th		
OPTIONS			
401 b.*	<u>03</u>	OPT 1 * <u>C</u>	
402 a.	}	OPT 6 <u>@</u>	
402 b.			X
402 c.			
402 d.			
403 a.	}	OPT 5 <u>@</u>	
403 b.			X
403 c.			
403 d.			
405 b.*	<u>3</u>	OPT 2 * <u>C</u>	
405 c.*	<u>1</u>	OPT 3 * <u>A</u>	
406 a.	}	OPT 7 <u>A</u>	
406 b.			
407 a.			X
407 b.			
408 a., 409 a. & 410 a.	}	OPT 4 <u>G</u>	
408 b., 409 a. & 410 a.			
408 a., 409 b. & 410 a.			
408 b., 409 b. & 410 a.			
408 b., 409 b. & 410 b.	}	OPT 8 <u>A</u>	
411 a.			X
411 b.	X		
412 a.+		OPT 1 +	
412 b.+		OPT 2 +	
412 c.+		OPT 3 +	
413 +		OPT 9 <u>@</u>	
OPCON			
KD ADDRESS* <u>C</u>			

* PRIVATE LINE VERSION ONLY
+ DIAL-UP VERSION ONLY

406036

~~OR~~

~~406066~~

6 FT.

<input checked="" type="checkbox"/>	DATA SET
<input type="checkbox"/>	DATA AUX. SET
	<u>208A</u>
<input type="checkbox"/>	1200 BPS+
<input type="checkbox"/>	2400 BPS
<input checked="" type="checkbox"/>	4800 BPS

406039

6 FT.

PRINTER	
<u>40P201</u>	
PTR. ADDRESS*	
<u>A</u>	

Example Worksheet — Dial-Up Version

STATION CONFIGURATION WORKSHEET
SINGLE DISPLAY STATION

DATE 5-6-78
 TELCO BELL CUSTOMER BAC Processing Co.
 TELCO CONTACT Jane Smith TEL. NO. 321-654-0987
 USSO 2781-9432-00 CKT. NO. 5FD206 TELCO REQ. NO. 6-60294
 WE REQ. NO. 61-3-60294 SCHEDULE 8-8-78

SDC	SPA*	SSA*
	I.D.+ 1st <u>F</u> 2nd <u>2</u> 3rd <u>B</u> 4th <u>W</u>	
OPTIONS		
401 b.*	}	OPT 1 *
402 a.		
402 b.		
402 c.		OPT 6 <u>A</u>
402 d.	X	
403 a.	}	
403 b.		
403 c.		X
403 d.		OPT 5 <u>B</u>
405 b.*		OPT 2 *
405 c.*		OPT 3 *
406 a.	}	X
406 b.		
407 a.		
407 b.		OPT 7 <u>@</u>
408 a., 409 a. & 410 a.	}	
408 b., 409 a. & 410 a.		
408 a., 409 b. & 410 a.		
408 b., 409 b. & 410 a.		X
408 b., 409 b. & 410 b.	X	OPT 4 <u>C</u>
411 a.	}	
411 b.		OPT 8 <u>@</u>
412 a.+ <u>2</u>		OPT 1 + <u>2</u>
412 b.+ <u>B</u>		OPT 2 + <u>B</u>
412 c.+ <u>W</u>		OPT 3 + <u>W</u>
413 + <u>7</u>		OPT 9 <u>G</u>
OPCON		
KD ADDRESS* _____		

* PRIVATE LINE VERSION ONLY
 + DIAL-UP VERSION ONLY

406036
~~OR~~
~~406066~~

6 FT.

<input checked="" type="checkbox"/>	DATA SET
<input type="checkbox"/>	DATA AUX. SET
	<u>212A</u>
<input checked="" type="checkbox"/>	1200 BPS +
<input type="checkbox"/>	2400 BPS
<input type="checkbox"/>	4800 BPS

406039

6 FT.

PRINTER
<u>40P202</u>
PTR. ADDRESS*

2. CONTROLLER ARRANGEMENT FORMS

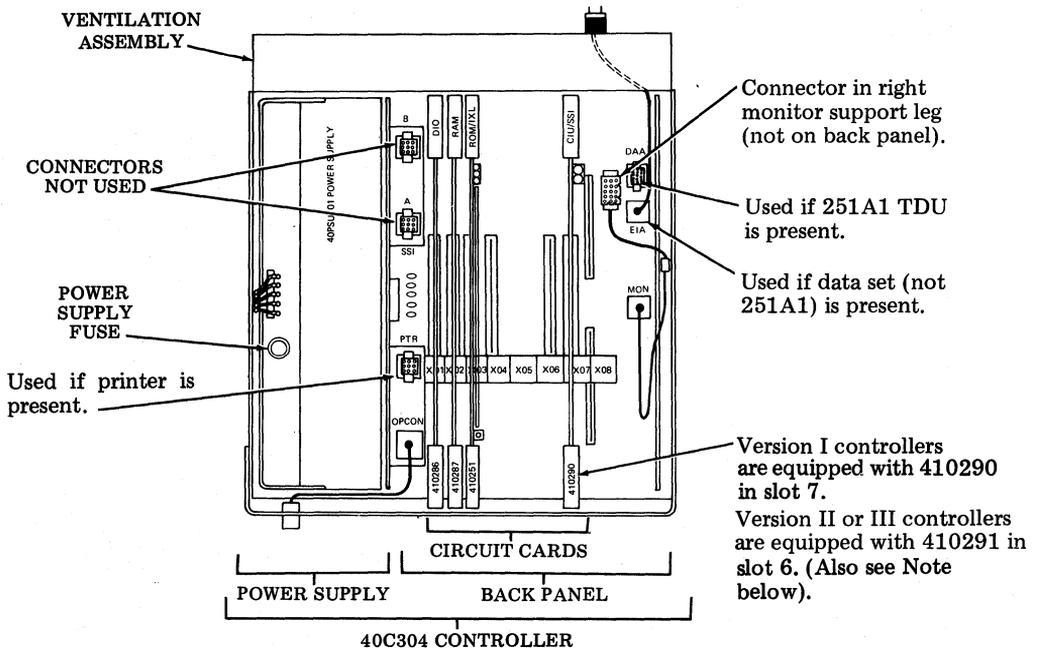
2.01 Identification of SDC arrangements are provided in this part. Controller Arrangement Forms are also provided and discussed.

2.02 The Controller Arrangement Forms of this part include a duplicate of the form which should be kept with the Single Display Station

(SDS). The form should be filled out in pencil by the service center and kept current by the crafts-person. A filled out form is required when performing the actions of Part 3. INSTALLATION. The purpose of the form is to provide: Location and type of circuit cards required, controller and printer options selected, and required cable connections to controller.

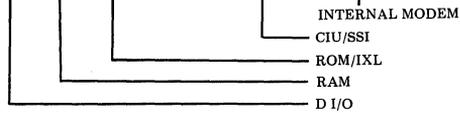
CONTROLLER ARRANGEMENT IDENTIFICATION

2.03 Single Display Controller (SDC) Arrangements:



Note: This section uses the term "Version I controller" to mean a controller equipped with a 410276 back panel, 410290 circuit card, and a 410261 Issue 3A (or earlier) circuit card. A Version II controller is equipped with a 410277 back panel, 410291 circuit card, 410261 Issue 4A (or later) circuit card. A Version III controller is equipped with 410277 back panel, 410291 circuit card and a 410262 (dial-up) or 410264 (private line) circuit card. The controller arrangement forms provide conversion and compatibility information.

APPLICATION			CIRCUIT CARD POSITION (All card numbers preceded by 410)									REFERENCE PAGE NO.
			1	2	3†	4	5	6	7	8	9	
PRIVATE LINE	No 251A1	Version I	286	287	251	—	—	—	290	—	NA	14
		Version II or III	286	287	251	—	—	291	—	—	—	10
	251A1	Version I	286	287	251	—	—	—	290	251A1	NA	16
		Version II or III	286	287	251	—	—	—	291	—	251A1	12
DIAL-UP			286	287	251	—	—	291	—	—	—	10



†The 41026N ROM circuit card is always piggybacked to the 410251 circuit card in Position 3.

INTERPRETATION OF CONTROLLER ARRANGEMENT FORMS

2.04 This paragraph consists of examples of how a Controller Arrangement Form for the Private Line Version (early design) controller can be filled out (a form for the late design Private Line or Dial-Up Version can be filled out in a similar manner).

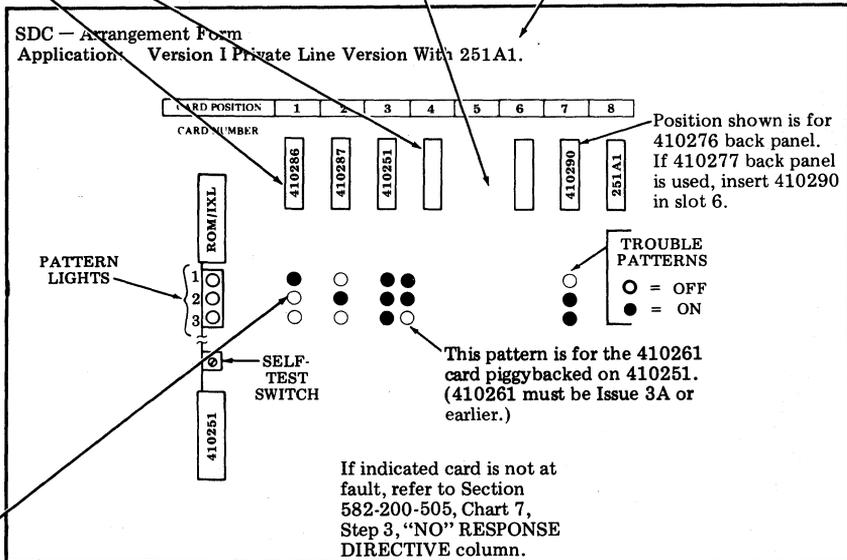
EXAMPLE:

This area lists circuit cards present and their respective locations in the controller.

Blank indicates no card present (card connector is present).

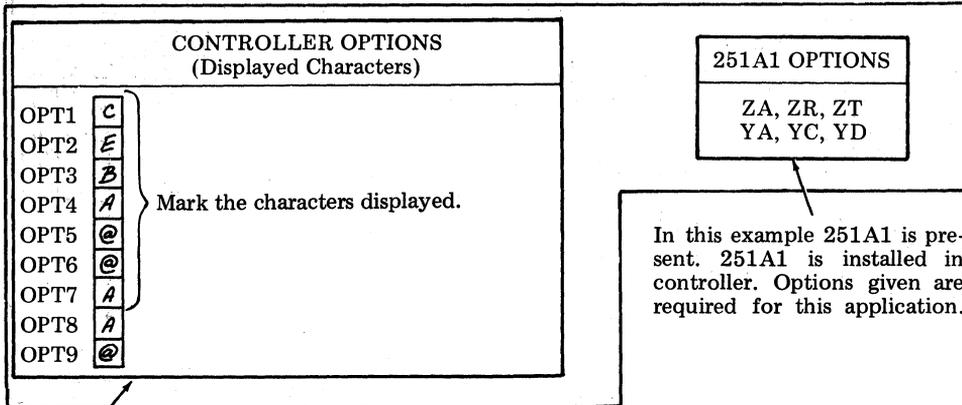
Slot 5 has no card connector (and no card).

Form applies if application is private line and is Version I with 251A1.



The area below the circuit card listing shows the trouble patterns that may occur in the pattern lights at the rear of the 410251 card.

Example: (Cont)



This area indicates the character displayed when the corresponding customer desired options are installed. References to 4. OPTIONS will show that: the station number is 3; the KD is device 5; the printer is device 2; EBCDIC line code is used; the opcon is typewriter style; the display font is up-low; Options 403a, 402b, 406b and 411b are installed and the required OPT9 selection is made.

If a printer is present, the printer option record (part of a controller arrangement form) must be filled out; this example is for an up-low 80-column tractor feed printer.

Option 22 applies only to monospace.

Option 48 applies only to 132-column tractor feed printer.

Option 60 applies only if 402902 Modification Kit is used.

PRINTER OPTIONS	
Friction Feed	
Tractor Feed 80 Col	X
Tractor Feed 132 Col	
17. Specify Right Margin	80
Specify Left Margin	/
18a. No Paper Feed Out	
18b. Paper FO on "RM" Loss	
18c. Paper FO on "RM" Loss and ETX	X
19d. 96 Character Set	X
19e. 64 Character Set	
19f. Ext ASCII Set	
20a. Single LF	X
20b. Double LF	
21a. Lower and Upper Case Print	X
21b. Lower Case Prints as Upper Case	
22a. Lower Case Prints as Error	
22b. Lower Case Prints as Upper Case	
39a. Forms on	X
39b. Forms off	
48a. Paper Out Not Gated W/FF	
48b. Paper Out Gated W/FF	
60a. Aux. Alarm enabled	
60b. Aux. Alarm Disenabled	X

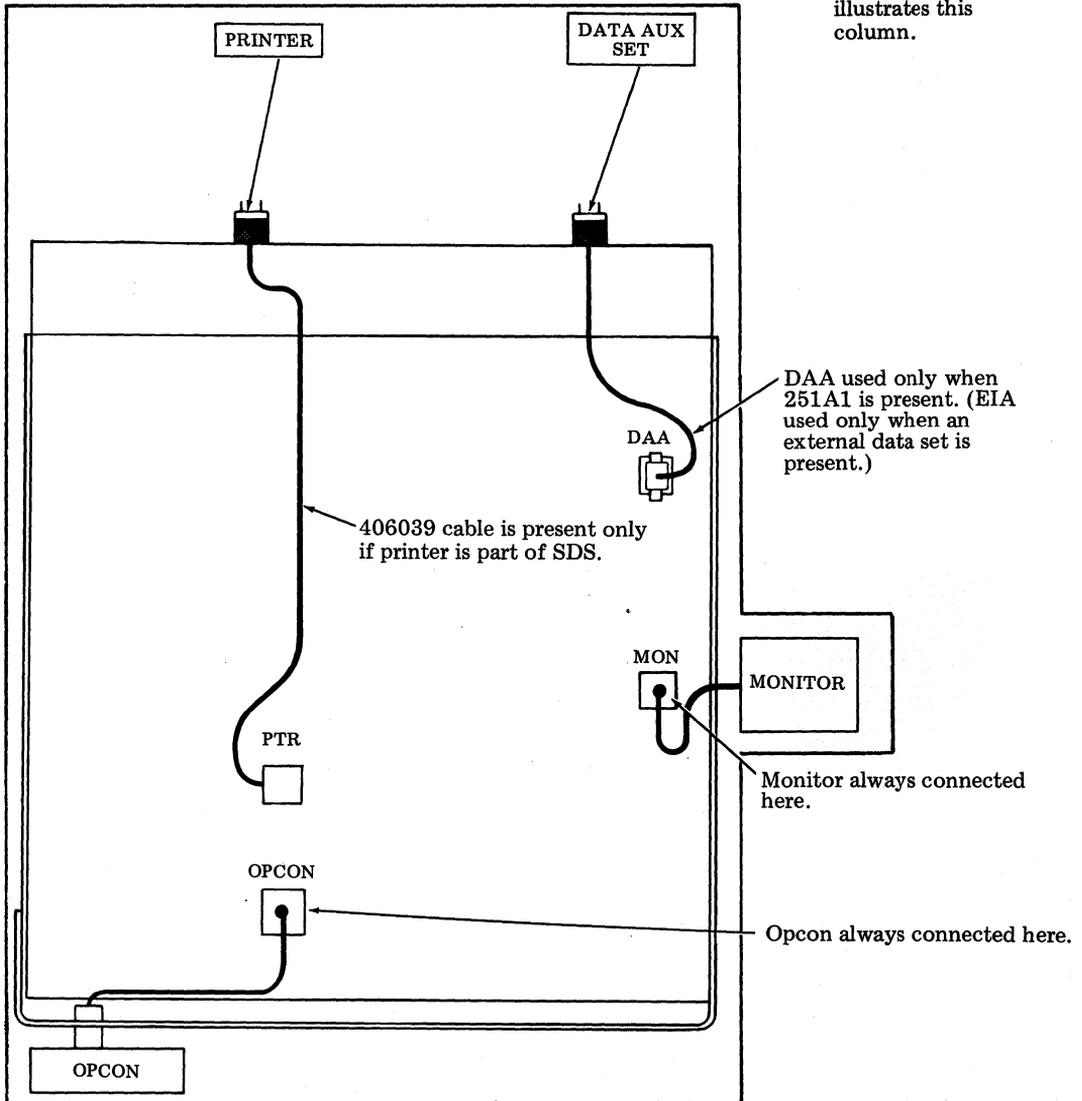
Example: (Cont)

CARD POSITION	I/O SOCKET	STATION WORKSHEET
7	OPCON, MON (1)	OPCON/ MON (1)
1	MON	MON (1)
7	PTR	PTR (2)
8	DAA	DATA AUX SET

(1) is Device No. 1

(2) is Device No. 2

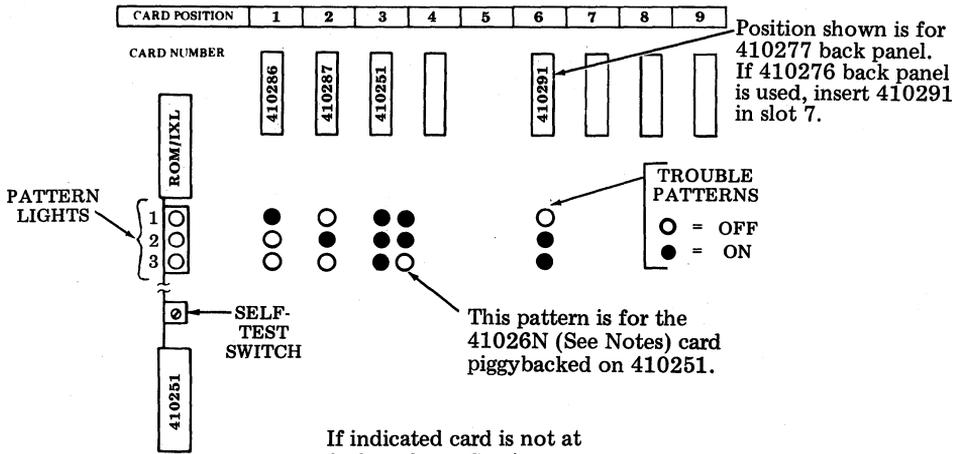
The drawing below illustrates this column.



Single Display Controller (SDC) Arrangement Forms

SDC — Arrangement Form

Application: Private Line (Version II or III Without 251A1) or Dial-Up Version.



- Note 1:** 410261 — Private Line — Version II
 410264 — Private Line — Version III
 410262 — Dial-Up

Note 2: If 410261 is used, it must be Issue 4A or later.

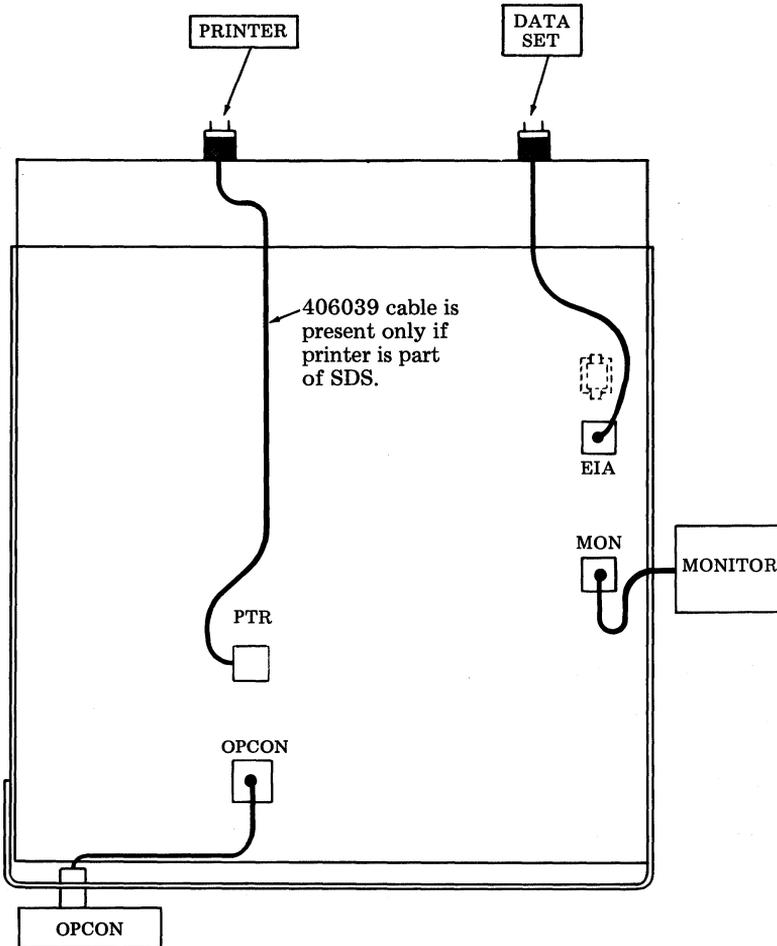
CONTROLLER OPTIONS (Displayed Characters)	
OPT1	<input type="checkbox"/>
OPT2	<input type="checkbox"/>
OPT3	<input type="checkbox"/>
OPT4	<input type="checkbox"/>
OPT5	<input type="checkbox"/>
OPT6	<input type="checkbox"/>
OPT7	<input type="checkbox"/>
OPT8	<input checked="" type="checkbox"/>
OPT9	<input type="checkbox"/>

Mark the Characters displayed.

PRINTER OPTIONS	
Friction Feed	<input type="checkbox"/>
Tractor Feed 80 Col	<input type="checkbox"/>
Tractor Feed 132 Col	<input type="checkbox"/>
17. Specify Right Margin Specify Left Margin	<input type="checkbox"/>
18a. No Paper Feed Out	<input type="checkbox"/>
18b. Paper FO on "RM" Loss	<input type="checkbox"/>
18c. Paper FO on "RM" Loss and ETX	<input type="checkbox"/>
19d. 96 Character Set	<input type="checkbox"/>
19e. 64 Character Set	<input type="checkbox"/>
19f. Ext ASCII Set	<input type="checkbox"/>
20a. Single LF	<input type="checkbox"/>
20b. Double LF	<input type="checkbox"/>
21a. Lower and Upper Case Print	<input type="checkbox"/>
21b. Lower Case Prints as Upper Case	<input type="checkbox"/>
22a. Lower Case Prints as Error	<input type="checkbox"/>
22b. Lower Case Prints as Upper Case	<input type="checkbox"/>
39a. Forms on	<input type="checkbox"/>
39b. Forms off	<input type="checkbox"/>
48a. Paper Out Not Gated W/FF	<input type="checkbox"/>
48b. Paper Out Gated W/FF	<input type="checkbox"/>
60a. Aux. Alarm enabled	<input type="checkbox"/>
60b. Aux. Alarm Disabled	<input type="checkbox"/>

See adjacent page for connections.

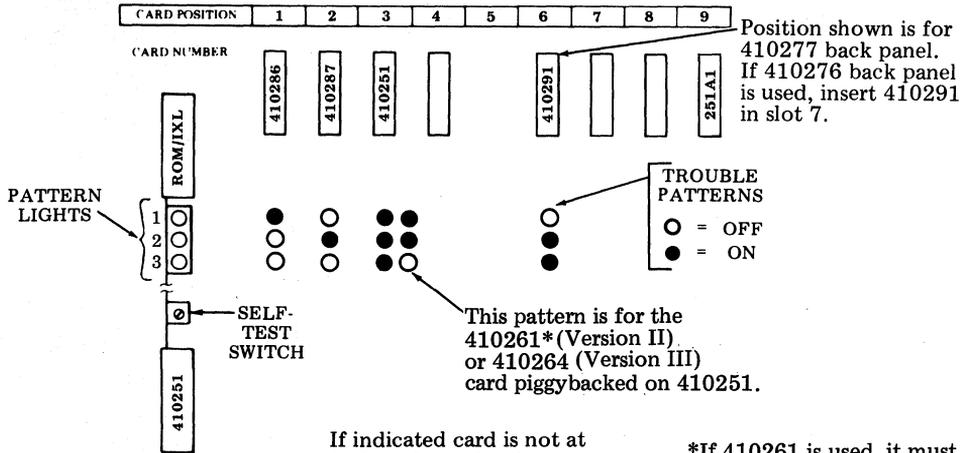
CARD POSITION	I/O SOCKET	STATION WORKSHEET
7	OPCON,	OPCON/
1	MON	MON (1)
7	PTR	PTR (2)
7	EIA	DATA SET



Note: If customer requires that print local operation be prohibited from the opcon, place a 340701 over the PRINT LOCAL position.

SDC — Arrangement Form

Application: Private Line Version II or III With 251A1



If indicated card is not at fault, refer to Section 582-200-505, Chart 7, Step 3, "NO" RESPONSE DIRECTIVE column.

*If 410261 is used, it must be issue 4A or later.

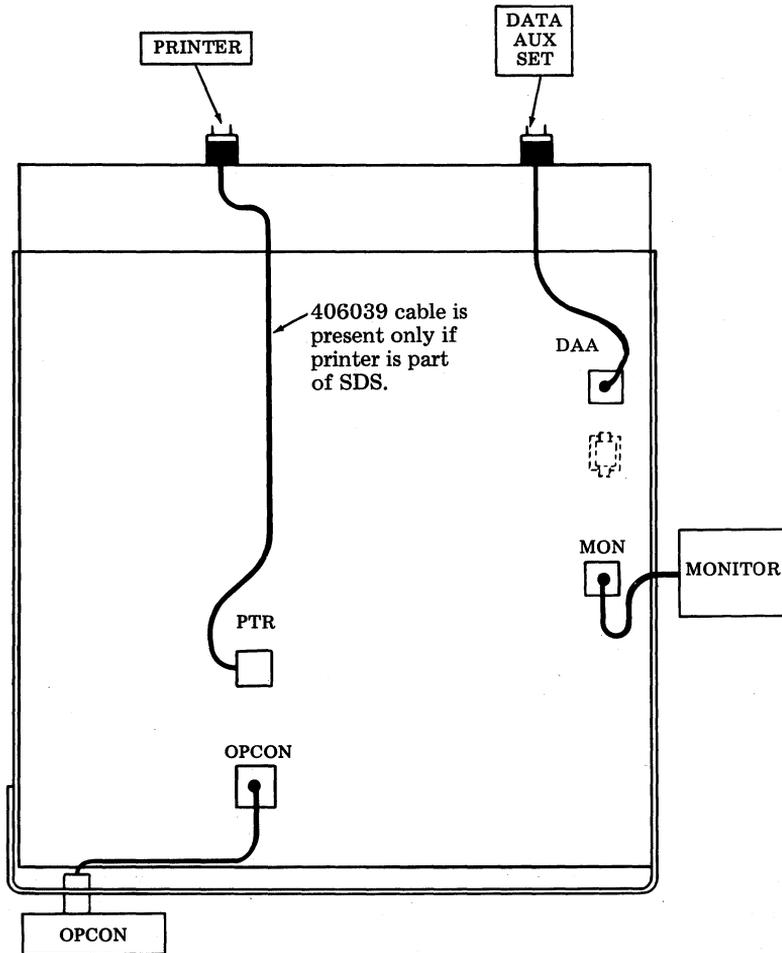
251A1 OPTIONS	
ZA, ZR, ZT	
YA, YC, YD	

CONTROLLER OPTIONS (Displayed Characters)	
OPT1	} Mark the characters displayed.
OPT2	
OPT3	
OPT4	
OPT5	
OPT6	
OPT7	
OPT8	
OPT9	

PRINTER OPTIONS	
Friction Feed	
Tractor Feed 80 Col	
Tractor Feed 132 Col	
17. Specify Right Margin	
Specify Left Margin	
18a. No Paper Feed Out	
18b. Paper FO on "RM" Loss	
18c. Paper FO on "RM" Loss and ETX	
19d. 96 Character Set	
19e. 64 Character Set	
19f. Ext ASCII Set	
20a. Single LF	
20b. Double LF	
21a. Lower and Upper Case Print	
21b. Lower Case Prints as Upper Case	
22a. Lower Case Prints as Error	
22b. Lower Case Prints as Upper Case	
39a. Forms on	
39b. Forms off	
48a. Paper Out Not Gated W/FF	
48b. Paper Out Gated W/FF	
60a. Aux. Alarm enabled	
60b. Aux. Alarm Disenabled	

See adjacent page for connections.

CARD POSITION	I/O SOCKET	STATION WORKSHEET
7	OPCON,	OPCON/
1	MON	MON (1)
7	PTR	PTR (2)
9	DAA	DATA AUX SET

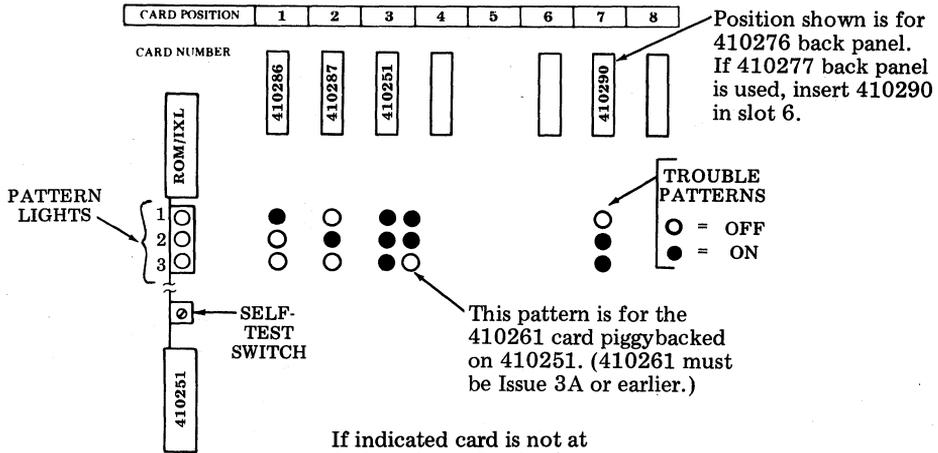


Note: If customer requires that print local operation be prohibited from the opcon, place a 340701 over the PRINT LOCAL position.

Single Display Controller (SDC) Arrangement Forms

SDC — Arrangement Form

Application: Private Line Version I Without 251A1



If indicated card is not at fault, refer to Section 582-200-505, Chart 7, Step 3, "NO" RESPONSE DIRECTIVE column.

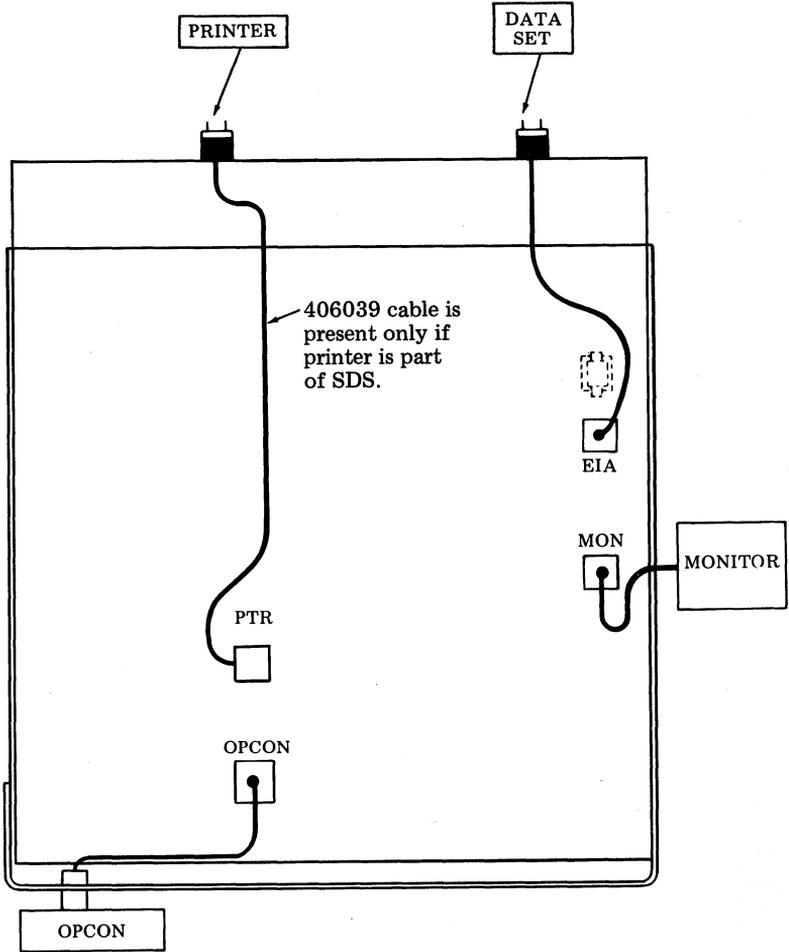
CONTROLLER OPTIONS (Displayed Characters)	
OPT1	<input type="checkbox"/>
OPT2	<input type="checkbox"/>
OPT3	<input type="checkbox"/>
OPT4	<input type="checkbox"/>
OPT5	<input type="checkbox"/>
OPT6	<input type="checkbox"/>
OPT7	<input type="checkbox"/>
OPT8	<input checked="" type="checkbox"/>
OPT9	<input checked="" type="checkbox"/>

Mark the characters displayed.

See adjacent page for connections.

PRINTER OPTIONS	
Friction Feed	<input type="checkbox"/>
Tractor Feed 80 Col	<input type="checkbox"/>
Tractor Feed 132 Col	<input type="checkbox"/>
17. Specify Right Margin	<input type="checkbox"/>
Specify Left Margin	<input type="checkbox"/>
18a. No Paper Feed Out	<input type="checkbox"/>
18b. Paper FO on "RM" Loss	<input type="checkbox"/>
18c. Paper FO on "RM" Loss and ETX	<input type="checkbox"/>
19d. 96 Character Set	<input type="checkbox"/>
19e. 64 Character Set	<input type="checkbox"/>
19f. Ext ASCII Set	<input type="checkbox"/>
20a. Single LF	<input type="checkbox"/>
20b. Double LF	<input type="checkbox"/>
21a. Lower and Upper Case Print	<input type="checkbox"/>
21b. Lower Case Prints as Upper Case	<input type="checkbox"/>
22a. Lower Case Prints as Error	<input type="checkbox"/>
22b. Lower Case Prints as Upper Case	<input type="checkbox"/>
39a. Forms on	<input type="checkbox"/>
39b. Forms off	<input type="checkbox"/>
48a. Paper Out Not Gated W/FF	<input type="checkbox"/>
48b. Paper Out Gated W/FF	<input type="checkbox"/>
60a. Aux. Alarm enabled	<input type="checkbox"/>
60b. Aux. Alarm Disabled	<input type="checkbox"/>

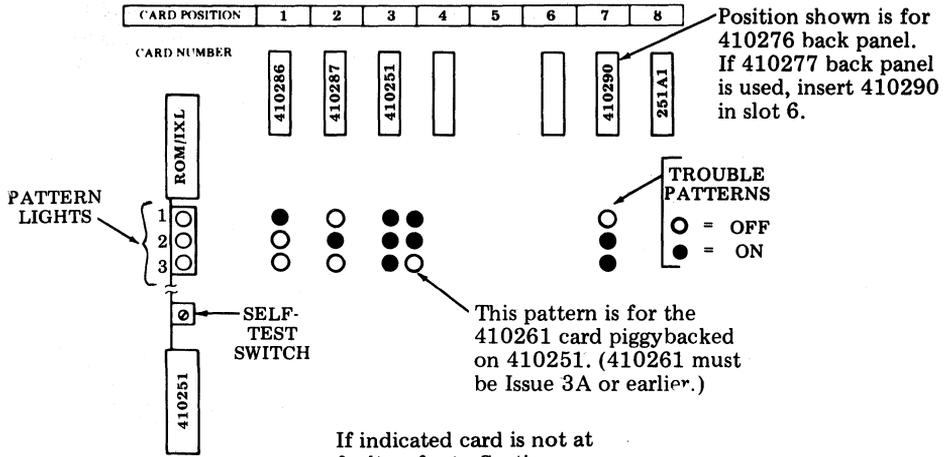
CARD POSITION	I/O SOCKET	STATION WORKSHEET
7	OPCON,	OPCON/
1	MON	MON (1)
7	PTR	PTR (2)
7	EIA	DATA SET



Note: If customer requires that print local operation be prohibited from the opcon, place a 340701 over the PRINT LOCAL position.

SDC — Arrangement Form

Application: Private Line Version I With 251A1



If indicated card is not at fault, refer to Section 582-200-505, Chart 7, Step 3, "NO" RESPONSE DIRECTIVE column.

251A1 OPTIONS	
ZA, ZR, ZT	
YA, YC, YD	

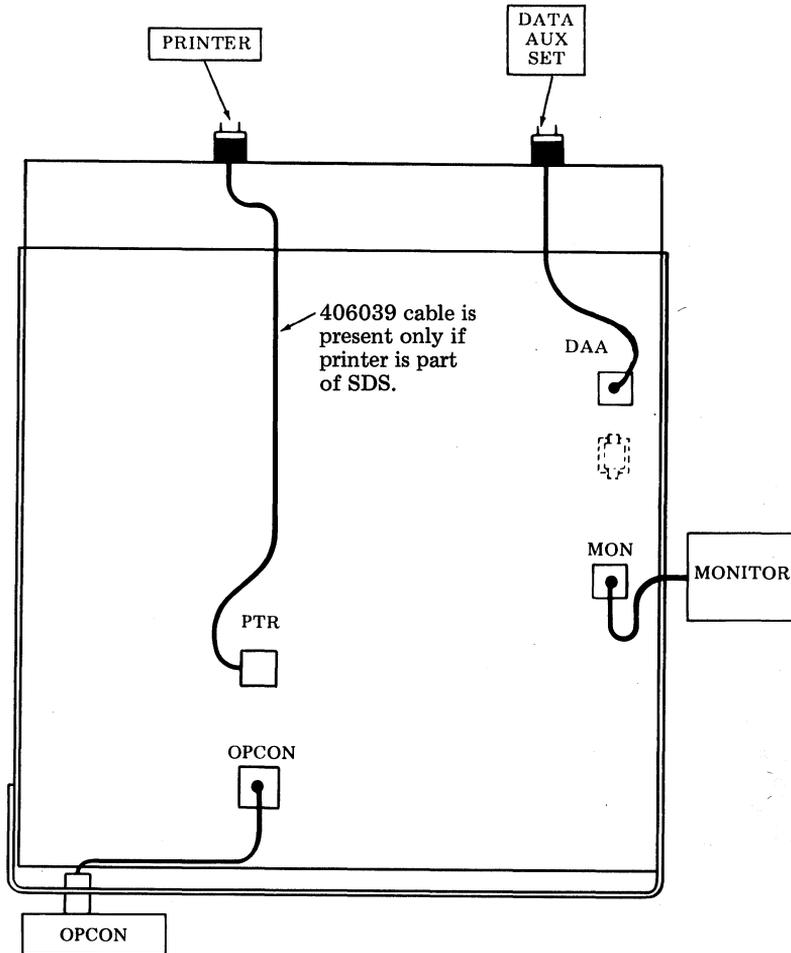
CONTROLLER OPTIONS (Displayed Characters)	
OPT1	<input type="checkbox"/>
OPT2	<input type="checkbox"/>
OPT3	<input type="checkbox"/>
OPT4	<input type="checkbox"/>
OPT5	<input type="checkbox"/>
OPT6	<input type="checkbox"/>
OPT7	<input type="checkbox"/>
OPT8	<input checked="" type="checkbox"/> A
OPT9	<input checked="" type="checkbox"/> @

Mark the characters displayed.

See adjacent page for connections.

PRINTER OPTIONS	
Friction Feed	<input type="checkbox"/>
Tractor Feed 80 Col	<input type="checkbox"/>
Tractor Feed 132 Col	<input type="checkbox"/>
17. Specify Right Margin	<input type="checkbox"/>
Specify Left Margin	<input type="checkbox"/>
18a. No Paper Feed Out	<input type="checkbox"/>
18b. Paper FO on "RM" Loss	<input type="checkbox"/>
18c. Paper FO on "RM" Loss and ETX	<input type="checkbox"/>
19d. 96 Character Set	<input type="checkbox"/>
19e. 64 Character Set	<input type="checkbox"/>
19f. Ext ASCII Set	<input type="checkbox"/>
20a. Single LF	<input type="checkbox"/>
20b. Double LF	<input type="checkbox"/>
21a. Lower and Upper Case Print	<input type="checkbox"/>
21b. Lower Case Prints as Upper Case	<input type="checkbox"/>
22a. Lower Case Prints as Error	<input type="checkbox"/>
22b. Lower Case Prints as Upper Case	<input type="checkbox"/>
39a. Forms on	<input type="checkbox"/>
39b. Forms off	<input type="checkbox"/>
48a. Paper Out Not Gated W/FF	<input type="checkbox"/>
48b. Paper Out Gated W/FF	<input type="checkbox"/>
60a. Aux. Alarm enabled	<input type="checkbox"/>
60b. Aux. Alarm Disenabled	<input type="checkbox"/>

CARD POSITION	I/O SOCKET	STATION WORKSHEET
7	OPCON,	OPCON/
1	MON	MON (1)
7	PTR	PTR (2)
9	DAA	DATA AUX SET



Note: If customer requires that print local operation be prohibited from the opcon, place a 340701 over the PRINT LOCAL position.

3. INSTALLATION

INSTALLATION OUTLINE

- (1) Review Service Order and Configuration Worksheet.
- (2) Unpack equipment (3.02 – 3.07).
- (3) Placement of equipment (3.08 – 3.09).
- (4) Installation of equipment (3.10 – 3.16).
- (5) Verify and install controller options (4.01 – 4.16).
- (6) Check options in printer (4.17, 4.19 – 4.22).
- (7) Check options in data set or internal modem (4.23 – 4.28).
- (8) Perform operational checkout (4.18), refer to Section 582-200-505.
 - (a) Self test with all cables installed,
 - (b) Component operational checks,
 - (c) Local test,
 - (d) On-line tests.
- (9) Have customer try out station.
- (10) Complete the installation:
 - (a) Give How To Operate manual(s) to customer.
 - (b) Clean up.
 - (c) Complete service order.

STATION CONFIGURATION WORKSHEET

3.01 Obtain the Station Configuration Worksheet. See 1.05 for purpose and examples of a worksheet. If a worksheet is not present or does not contain required information, obtain the service order.

Note: ID labels are not used; placement of equipment is done from the configuration worksheet.

UNPACKING INSTRUCTIONS

3.02 Any special instructions necessary to open a box will be affixed to the top of the box. A sample instructions label is shown.

If there is no label on the box, use these procedures:

- (a) With box in upright position, open top flaps and fold outward.
- (b) Lift contents out of box. Remove inner packing details from around product.
- (c) Remove plastic bag and all tape from product.

UNPACKING INSTRUCTIONS

1. TURN BOX BOTTOM SIDE UP. OPEN BOTTOM FLAPS AND FOLD OUTWARD.
2. RETURN BOX AND CONTENTS TO AN UPRIGHT POSITION, KEEPING BOTTOM FLAPS FOLDED OUTWARD.
3. REMOVE BOX AND PLACE ASIDE. REMOVE INNER PACKING DETAILS FROM AROUND PRODUCT.
4. REMOVE PLASTIC BAG AND ALL TAPE FROM PRODUCT.

28130PK 40CAB

UNPACKING EQUIPMENT

3.03 The following KD and controller components are packed separately:

40CAB251/ZZ + Related Parts	KD Cabinet (Includes 40C304 Controller and a 406047 Cabinet Modification Kit) and All Set Cables
40MN101	Monitor
40K104/DAB, 40K105/CAA OR 40K203/GAB*	Opcon

*If 40K203GAB Opcon is featured, Modification Kit 346936 will be attached to 40CAB251 Cabinet.

- 3.04 If a friction feed printer is part of the station, the following components are packed separately:

40P101/ZZ + Type Carrier or 40P102/ZZ + Type Carrier	Friction Feed Printer (Includes Type Carrier)
40CAB201/ZZ + Related Parts or 40CAB371/ZZ + Related Parts	Friction Feed Printer Cabinet
40PWU101 (If Present)	Paper Winder For 40CAB201/ZZ
40PWU102 (If Present)	Paper Winder For 40CAB201/ZZ or 40CAB371/ZZ

- 3.05 If an 80-column tractor feed printer is part of the station, the following components are packed separately:

40P151/ZZ + Type Carrier or 40P154/ZZ + Type Carrier	80-Column Tractor Feed Printer (Includes Type Carrier)
40CAB351/ZZ + Related Parts	80-Column Tractor Feed Printer Cabinet
407060	Paper Guide
405544 (If Present)	Paper Rack

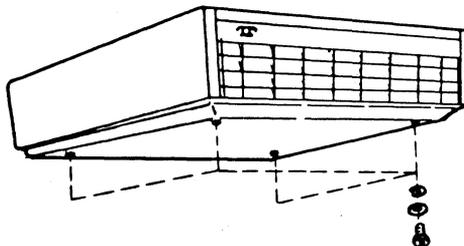
- 3.06 If a 132-column tractor feed printer is part of the station, the following components are packed separately:

40P201/ZZ + Type Carrier or 40P202/ZZ + Type Carrier	132-Column Tractor Feed Printer (Includes Type Carrier)
40CAB353/ZZ + Related Parts	132-Column Tractor Feed Printer Cabinet
407061	Paper Guide

- 3.07 Unpack all boxes.

PLACEMENT OF EQUIPMENT

- 3.08 Place the monitor support cabinet on a flat surface near the desired installation location. With the cabinet on its side, remove the mounting hardware (four places) from the cabinet bottom.

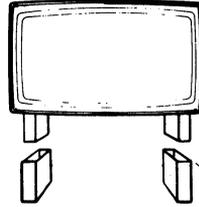


- 3.09 Place the cabinet on the customer provided table or desk (a pedestal may be used). Access to an ac outlet is required.

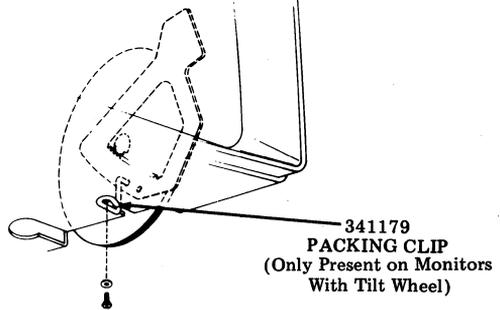
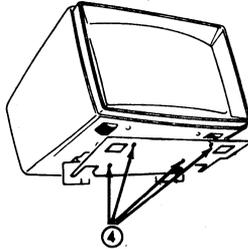
MONITOR INSTALLATION

3.10 40MN101 Monitor Installation to 40CAB251 Cabinet

- ① Unpack monitor.
- ② Place the monitor on its corresponding posts (there is no locking device associated with the monitor support posts, ie, it can be lifted off without releasing any latches).
- ③ Tilt the monitor back and remove the 341719 packing clip (if present) from the tube tilt mechanism. Retain the clip for future repacking.
- ④ Install the plastic bottom plate (packed separately) — snaps on with 4 studs that are part of the bottom plate.



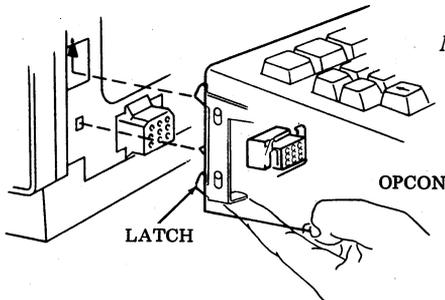
Caution: Wear safety glasses.



OPCON INSTALLATION

3.11 40K104/DAB, 40K105/CAA or 40K203/GAB Opcon Installation to 40CAB251 Cabinet

- ① Slide latches downward and position opcon so that connectors are aligned and latches on left and right side are fully engaged.



Note: Remove shipping plates.

- ② Slide latches upward and check that opcon is firmly attached on both sides before releasing.

PRINTER INSTALLATION

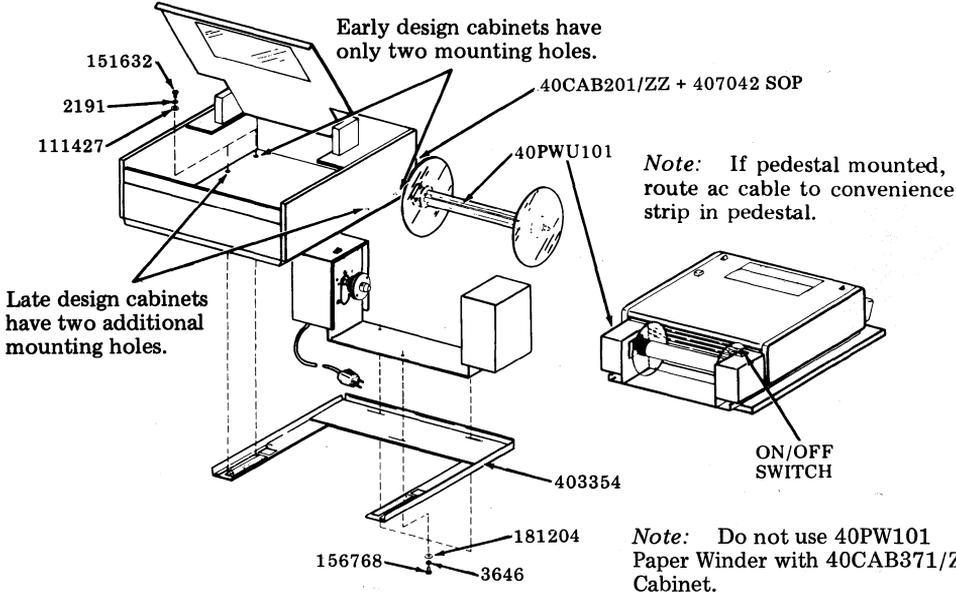
3.12 If a printer is part of the station, install as applies — A. Friction Feed or B. Tractor Feed.

A. Friction Feed

3.13 40P101/ZZ or 40P102/ZZ Friction Feed Printer

- (a) Unpack printer and 40CAB201/ZZ or 40CAB371/ZZ cabinet.
- (b) If four 400409 immobilization screws are present (see 3.14 for approximate location), back them off 7 or 8 turns.
- (c) Install printer in cabinet.
- (d) If pedestal is provided with the printer (per Station Configuration Worksheet), unpack pedestal, place printer and cabinet on pedestal top, open the pedestal door and route ac cable from printer cabinet into ac convenience strip inside of pedestal.

- (e) If printer is not mounted on a pedestal, connect ac cable to an ac outlet.
- (f) The controller to printer cable has already been routed to the printer location. Connect the cable to the PTR connector the separate ground terminal to the cabinet ground lug.
- (g) Installation of 40PWU101 Paper Winder —(If Supplied)
- (h) Install paper and ribbon.
- (i) Printer options are installed per Service Order and entered on Controller Arrangement Form attached to controller to which printer is connected. (See 4.19.)
- (j) If it becomes necessary to check or change options, refer to Section 582-210-705 or FIMP 579-505-350, Component Access for removal of printer circuit card.
- (k) Connect ac cable from pedestal (if pedestal mounted) or from printer cabinet and paper winder (if used) to 115 V ac outlet.

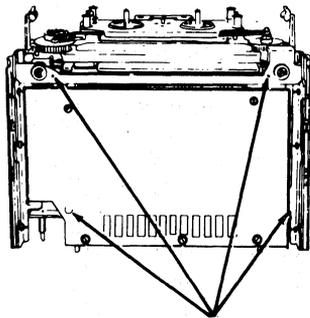
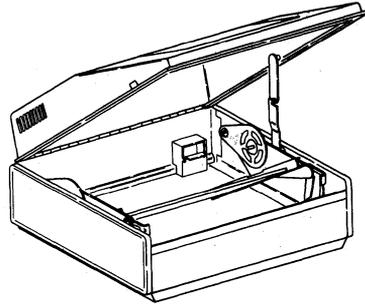


B. Tractor Feed

3.14 40P151/ZZ or 40P154/ZZ — 80-Column and 40P201/ZZ or 40P202/ZZ — 132-Column Tractor Feed Printer

- (a) Unpack printer, cabinet and pedestal.
- (b) Install printer into cabinet as follows.

- ① Back off the four black shock mount immobilizing screws 7 or 8 turns.
- ② Place cabinet on pedestal with opening in bottom of cabinet over slot in pedestal. Open lid by depressing latches on either side of lid and then raising it until it locks.

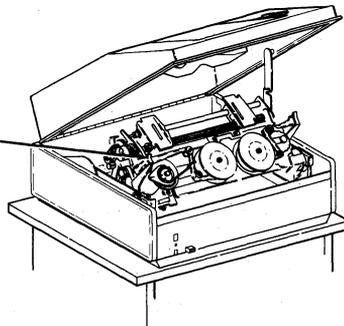


40P151/ZZ is shown.

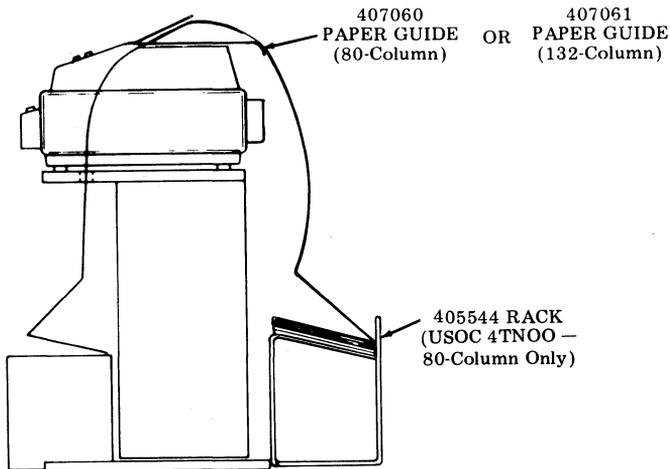
402539
IMMOBILIZATION SCREWS
(4 Places)

- ③ Install printer in tracks until detents are seated.

Note: With printer properly seated, all power and SSI connections will be made.

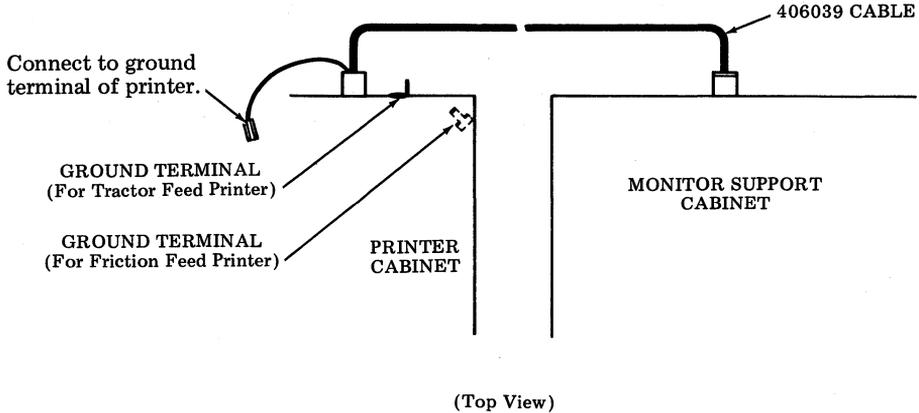


- (c) Place cabinet on pedestal. Open pedestal door. Connect ac cable at rear of printer cabinet to ac convenience strip inside of pedestal.
- (d) Connect printer cable to printer as in 3.15.
- (e) Install paper and ribbon.
- (f) Printer options are installed per Service Order and entered on Controller Arrangement Form attached to controller to which printer is connected. (See printer options in 4.20 or 4.22, as applies.)
- (g) If it becomes necessary to check or change printer options, refer to Section 582-210-705 or FIMP 579-505-350, Component Access, for removal of printer circuit card in 80-column printer. (Options for 132-column printers are changed without removing circuit card.)
- (h) If printer cabinet is mounted on a pedestal, connect ac cable from pedestal to 115 V ac outlet.
- (i) Assemble paper guide as shown.
- (j) If included with order, install 405544 rack as shown.



CABLE INSTALLATION

3.15 If a printer is present, connect the 406039 cable to the printer. The connection includes attaching the cable ground connector to the printer cabinet frame terminal.

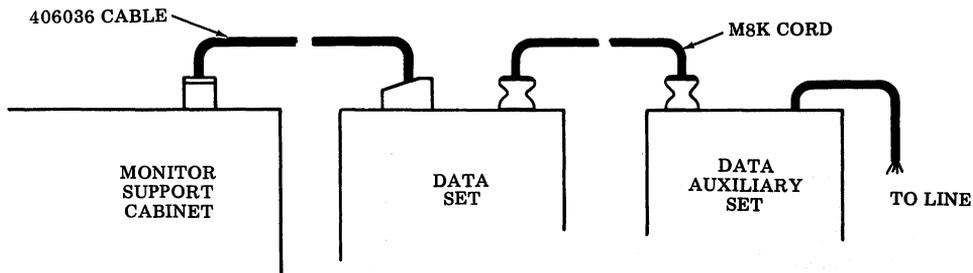


Note: Printer distance can be extended up to a maximum of 50 feet by connecting one of the following cables in between the 406039 printer cable and the printer cabinet.

<u>Cable</u>	<u>Length</u>
405306	6 Feet
405307	12 Feet
405308	25 Feet
405309	50 Feet

3.16 Either a data set or internal modem will be part of the station, see (a) or (b) as applies.

- (a) Data Set: Connect 406036 cable to data set; connect data set to data auxiliary set; connect data auxiliary set to line. See Note.



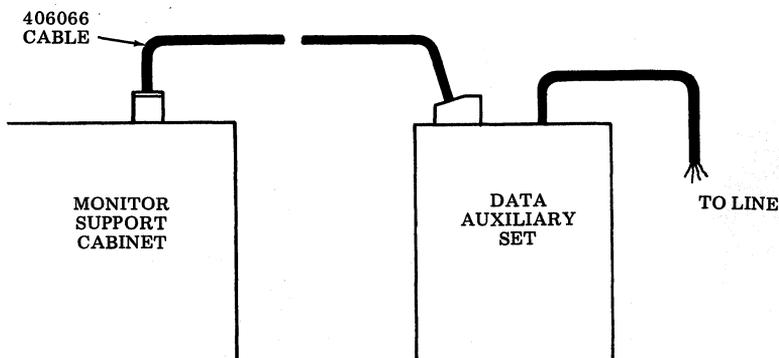
(Top View)

Note 1: Data Set distance can be extended up to 25 feet by connecting one of the following cables between the 406036 EIA Cable and the data set. These cables are connected to the EIA cable by using the two 325713 post assemblies which are in a muslin bag attached to the EIA cable.

<u>Cable</u>	<u>Length</u>
408065	7 Feet
408066	12 Feet
408067	25 Feet

Note 2: In some applications, the data set is connected directly to the line and a data auxiliary set is not present.

- (b) Internal Modem: Connect 406066 cable to data auxiliary set; connect data auxiliary set to line.



(Top View)

4. OPTIONS

CONTROLLER

4.01 All controller optioning is done from the opcon in the "OPT" mode by depressing appropriate keytops while an option listing (see 4.03) is displayed on the monitor. All controller cards are left in place. To determine what options to enter in the controller, read the filled out Station Worksheet (and the following cross reference tables, if required) before attempting to enter the "OPT" mode.

Note: To insure the nickel-cadmium battery on the 410251 circuit card is fully charged, ac power must be applied to the controller for approximately 20 hours. The battery charge should be sufficient to hold the option selections without ac power being applied to the controller for several weeks. It may be assumed by the TELCO installer that the WECO tester has sufficiently charged the battery when the 410251 is furnished in the controller.

OPTION CROSS REFERENCE TABLE A

OPTION	CORRESPONDING DISPLAYED OPT	OPTION	CORRESPONDING DISPLAYED OPT
401b*	OPT1 (followed by char.)	408a	OPT4 @ (or B)
402a	OPT6 H	408b	OPT4 A (or C or G)
402b	OPT6 @	409a	OPT4 @ (or A)
402c	OPT6 I	409b	OPT4 B (or C or G)
402d	OPT6A	409c	(does not apply)
403a	OPT5 @	410a	OPT4 @ (or A, or B, or C)
403b	OPT5 A	410b	OPT4 G
403c	OPT5 B	411a	OPT8 @
403d	OPT5 D	411b	OPT8 A
404	(does not apply)	— *	OPT9 @ (required)
405b*	OPT2 (followed by char.)	412a +	OPT1 (followed by char.)
405c*	OPT3 (followed by char.)	412b +	OPT2 (followed by char.)
406a	OPT7 @	412c +	OPT3 (followed by char.)
406b	OPT7 A	413 +	OPT9 (followed by char.)
407a	OPT7 A		
407b	OPT7 @		

OPTION CROSS REFERENCE TABLE B

DISPLAYED OPT	CORRESPONDING OPTION	DISPLAYED OPT	CORRESPONDING OPTION
OPT1 (followed by char.)	401b* OR 412a+	OPT5 @	403.a.
OPT2 (followed by char.)	405b* OR 412b+	OPT5 A	403.b.
OPT3 (followed by char.)	405c* OR 412c+	OPT5 B	403.c.
OPT4 @	408a, 409a, 410a	OPT5 D	403.d.
OPT4 A	408b, 409a, 410a	OPT6 H	402.a.
OPT4 B	408a, 409b, 410a	OPT6 @	402.b.
OPT4 C	408b, 409b, 410a	OPT6 I	402.c.
OPT4 G	408b, 409b, 410b	OPT6 A	402.d.
		OPT7 @	406.a. or 407.b.
		OPT7 A	406.b. or 407.a.
		OPT8 @	411.a.
		OPT8 A	411.b.
		OPT9 @	Required*
		OPT9 (Followed by Char.)	413+

*Private Line Version

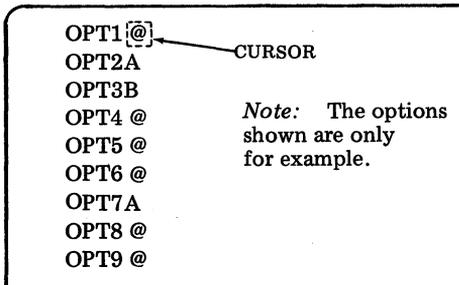
+Dial-Up Version

- 4.02 To enter or change any option:
- (a) Turn on power to the station.
 - (b) Check brightness control level (under monitor).
 - (c) Tilt the monitor up.
 - (d) Unlatch and open the cabinet cover.
 - (e) Depress the SELF-TEST switch near the front of the 410251 circuit card for about one second.

Note: If the SELF-TEST switch is depressed for more than six seconds, the controller will enter the self-test mode. If this happens, make sure the switch is in the raised position to allow the controller to return to the operating mode in about one minute.

4.03 The option listing is now displayed on the monitor. Each option (identified by "OPT1", etc) is followed by a graphic character which represents the presently selected option.

4.04 The cursor is over the OPT1 graphic character.



Note: Cursor movement to the graphic character for the next option is done by depressing the CURSOR TAB key. Thus, if only one option is to be changed, just use CURSOR TAB to position the cursor to the graphic character to be changed. There is a slight delay of cursor movement in this mode. If the cursor is below the character to be changed, CURSOR TAB will cause the cursor to wraparound (go from OPT9 back to OPT1).

Caution: Changing options by the entry of an alpha character requires the character to be upper case.

4.05 Private Line Version Only: (See 4.06 for Dial-Up Version) To enter the station poll and select addresses and device addresses, perform the following:

- (a) Find the desired station number or poll address in the OPT1 List on the next page. OPT1 corresponds to Option 401b. Depress the corresponding key on the opcon. Check the OPT1 character column to assure that the proper character is now displayed.
- (b) Depress CURSOR TAB key. OPT2 corresponds to Option 405b. Find the proper device number for the KD in the OPT2 and OPT3 List. Depress the corresponding key on the opcon. Check the OPT2 or OPT3 character column to assure the proper character is now displayed after OPT2.
- (c) Depress CURSOR TAB key. OPT3 corresponds to Option 405c. If printer is part of the station, a printer device number is required. Use the OPT2 and OPT3 List. Depress the corresponding key for the device number. Check the OPT2 and OPT3 character column to assure the proper character is now displayed. If no printer is present, proceed to 4.07.

Note: The printer device number must be different from the KD device number (example: 1 and 5, or 10 and 3 — not 1 and 1).

OPT2 AND OPT3 LIST
 (Private Line Version Only)

402 or 403 Device Number	(Depress/Display) OPT2 or OPT3 Character	Corresponding Device Address
0	@	SPACE
1	A	A
2	B	B
3	C	C
4	D	D
5	E	E
6	F	F
7	G	G
8	H	H
9	I	I
10	J	[(+)
11	K	PERIOD
12	L	<
13	M	(
14	N	+
15	O	! (!)

Characters in parentheses appear on EBCDIC opcons.

! is "logic OR" (see Device No. 15).

OPT1 LIST (Private Line Version Only)

OPTION 401 STATION NUMBER	DEPRESS/DISPLAY OPT1 CHARACTER		CORRESPONDING STATION	
			POLL ADDRESS	STATION SELECT ADDRESS
00		@	SPACE	- MINUS
01		A	A	/
02		B	B	S
03		C	C	T
04		D	D	U
05		E	E	V
06		F	F	W
07		G	G	X
08		H	H	Y
09		I	I	Z
10		J	[ ( † )	| VERTICAL LINE
11		K	. PERIOD	, COMMA
12		L	<	%
13		M	(	_ UNDERSCORE
14		N	+	>
15		O	! (!)	?
16		P	&	0 ZERO
17		Q	J	1 ONE
18		R	K	2
19		S	L	3
20		T	M	4
21		U	N	5
22		V	O	6
23		W	P	7
24		X	Q	8
25		Y	R	9
26		Z] (!)	:
		EBCDIC [§]		
	ASCII [‡]	DEPRESS	DISPLAY	
27	|	⌐	¢	\$ #
28	\	\	\	* @
29	] |	|	|	) ,
30	^	¢	⌐	=
31	_	_	_	^(⌐) ”

Characters in parentheses appear on EBCDIC opcons.

| is “logical OR” (see Station No. 15).

⌐ is “logical NOT” (see Station No. 31).

‡ ASCII indicates American National Standard Code for Information Interchange.

§ EBCDIC indicates Extended Binary Coded Decimal Interchange Code.

4.06 Dial-Up Version Only: To enter the station ID sequence, perform the following: (See Note)

- (a) Find the desired 2nd character of the station ID sequence in the OPT1, OPT2 and OPT3 List below. OPT1 corresponds to Option 412a. Depress the corresponding key on the opcon. Check the OPT1 character to assure that the proper character is now displayed.
- (b) Depress the Cursor Tab key. OPT2 corresponds to Option 412b. Find the desired 3rd character of the station ID sequence in the

OPT1, OPT2, and OPT3 List. Depress the corresponding key on the opcon. Check the OPT2 character to assure that the proper character is now displayed.

- (c) Depress the Cursor Tab key. OPT3 corresponds to Option 412c. Find the desired 4th character of the station ID sequence in the OPT1, OPT2 and OPT3 List. Depress the corresponding key on the opcon. Check the OPT3 character to assure that the proper character is now displayed.

OPT1, OPT2 AND OPT3 LIST (Dial-Up Version Only)

412. STATION IDENTIFICATION SEQUENCE							
SP	(	0	8	@	H	P	X
!(|)	)	1	9	A	I	Q	Y
"	*	2	:	B	J	R	Z
#	+	3	;	C	K	S	[(ϕ)
\$	,	4	<	D	L	T	\
%	-	5	=	E	M	U](!)
&	.	6	>	F	N	V	~(-)
,	/	7	?	G	O	W	-

Characters in parenthesis appear on EBCDIC opcons.

Note: The SDS ID sequence consists of 4 characters. The first character is preset (when option 408-ASCII or EBCDIC is chosen) to "F" when the ASCII line code is chosen or "f" when the EBCDIC line code is chosen. This first character is not displayed after OPT1, OPT2 or OPT3.

4.07 Depress CURSOR TAB key. Choose the desired operation from the OPT4 list for type of opcon, display font and line code (408). Only one keytop is depressed to select all three options. Depress the required keytop on the opcon. Check the OPT4 character column to assure that the proper character is now displayed.

OPT4 LIST

Option 410 Opcon	Option 409 Display Font	Option 408 Line Code	(Depress/Display) OPT4 Character
a. Typewriter	a. Up-Low	a. ASCII	@
a. Typewriter	a. Up-Low	b. EBCDIC	A
a. Typewriter	b. Monocase	a. ASCII	B
a. Typewriter	b. Monocase	b. EBCDIC	C
b. Internal Num Cluster	b. Monocase	b. EBCDIC	G

† Factory optioned (for SDC, refers to selection that provides corresponding operation for a SCC/DCC or MCC).

4.08 Depress CURSOR TAB key. Choose the proper character from the OPT5 List. Depress the required keytop on the opcon for the option selected. Check the OPT5 character column to assure that the proper character is now displayed.

OPT5 LIST

403. Display Field Intensities	(Depress/Display) OPT5 Character
a. Intensified and Blink Fields are Intensified	@
b. Intensified and Blink Fields are Blinked	A
c. Blink Fields are Blinked, Intensified Fields are Intensified. Mixed Intensified and Blinked Fields on the same Display are Blinked.	B
d. Blink Special Intensified Fields All fields marked as intensified, protected and alpha-numeric will be blinked.	D

4.09 Depress CURSOR TAB key. Choose from OPT6 List and proceed as for OPT5.

OPT6 LIST

402. Type of Alarm on Receipt of Alarm, Write Control, or Copy Control Character and Action Upon Opcon Entry of TAB	(Depress/Display) OPT6 Character
a. Continuous Alarm TAB key erases field (inserts nulls) and moves cursor to first character of next unprotected field.	H
b. Single Alarm TAB key erases field (inserts nulls) and moves cursor to first character of the next unprotected field.	@
c. Continuous Alarm TAB key erases field (inserts nulls), no cursor movement.	I
d. Single Alarm TAB key erases field (inserts nulls), no cursor movement.	A

Note: A continuous alarm causes the opcon bell to ring repeatedly. Alarm and TAB have been grouped into OPT6 for convenience. There is no relationship between TAB and alarm.

¶Factory optioned (for SDC, refers to selection that provides corresponding operation for a SCC/DCC or MCC).

4.10 Depress CURSOR TAB key. The style of the opcon determines whether Option 406 or 407 applies. Use the OPT7 List and depress key required for the option selected. Check the OPT7 character column to assure that the proper character is now displayed.

OPT7 LIST

406. Numeric Field Override (Used With Typewriter Style Opcon — 40K104)		(Depress/Display) OPT7 Character
a.	Alpha Data Can be Entered in Numeric Field (Bell Will Sound)	@
b.	Alpha Data Cannot be Entered in Numeric Field (Bell Will Sound)	A ¶
407. Numeric Lock Special Feature (Used With Data Entry Style Opcon — 40K105)		(Depress/Display) OPT 7 Character
a.	Enabled — Only Digits 0 to 9, Minus, DUP, Period Can be Entered Into a Numeric Field. (These are in the numeric cluster — see Note below.)	A
b.	Disabled — In a Numeric Field, Entry of Unshifted Characters Causes Unshifted Characters to be Displayed.	@ ¶

Note: In operation, the numeric lock special feature can be temporarily overridden by simultaneously depressing NUMERIC or ALPHA and a character key.

4.11 Depress CURSOR TAB key. Use OPT8 List. Depress required key. Check displayed character.

OPT8 LIST

411. External Data Set/Internal Modem Loopback Testing (See Caution Below.)		(Depress/Display) OPT8 Character
a.	External Data Set	@ ¶
b.	Internal Modem	A
c.	Loopback Testing Only (See Section 582-200-505 for testing procedures.)	C

Caution: Option 411a or 411b (For Private Line Version) or 411a only (For Dial-Up Version) is required to provide customer operation. Option 411c is only used during installation or maintenance. As explained in Section 582-200-505, operation with Option 411c on the customer data channel can cause transmissions to be scrambled and possibly halt all system operation.

¶ Factory optioned (for SDC, refers to selection that provides corresponding operation for a SCC/DCC or MCC).

- 4.12 Private Line Version Only: Depress CURSOR TAB key. Use the OPT9 List. Depress SPACE key. Check that the @ character is now displayed.

OPT9 LIST (Private-Line Version Only)

Reserved for Future Use	Depress Key	(Depress/Display) OPT9 Character
Proper Station Operation (required)	SPACE	@ ¶

¶ Factory optioned (for SDC, refers to selection that provides corresponding operation for a SCC/DCC or MCC).

- 4.13 Dial-Up Version Only: Depress Cursor Tab key. Use the OPT9 List below. Depress required key on the opcon for the option selected. Check the OPT9 character column to assure that the proper character is now displayed.

OPT9 LIST (Dial-Up Version Only)

413. Automatic Disconnect Timer (1 to 15 minutes)			
Time-out	Depress/Display OPT9 Character	Time-out	Depress/Display OPT9 Character
1 Min.	A	9 Min.	I
2 Min.	B	10 Min.	J
3 Min.	C	11 Min.	K
4 Min.	D	12 Min.	L
5 Min.	E	13 Min.	M
6 Min.	F	14 Min.	N
7 Min.	G	15 Min.	O
8 Min.	H		

- 4.14 Again check all options to make sure that displayed characters match these entered on Station Configuration Worksheet supplied with station.
- 4.15 Option 404 is not used in a single display station because it does not apply. Option 404 is type of block abort procedure used when station abnormally stops sending on-line.
- 4.16 Depress LOCAL or RESET key on opcon to exit the "OPT" mode. The controller will exit; go through a power-up routine and begin normal operation. Lower and latch cabinet cover. Tilt monitor forward to the operating position.
- 4.17 To check printer and data set (or internal modem) options, turn off all power and proceed to (4.19 through 4.28) for printer options and (4.29 through 4.37) for the data set (or internal modem).
- 4.18 To perform an operational checkout, refer to Section 582-200-505.

PRINTER — 80-COLUMN

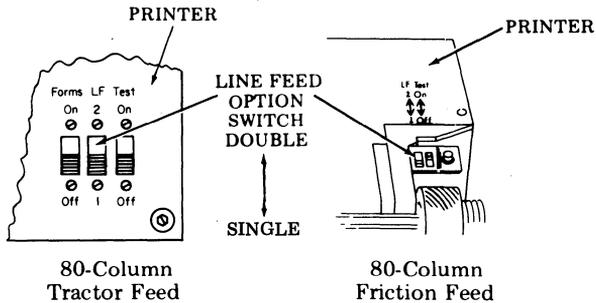
4.19 For options, refer to:

PRINTER CODE	DESCRIPTION	COMPATIBLE PRINTER LOGIC CIRCUIT CARD	REFERENCE PARAGRAPHS
40P101/ZZ	Friction Feed	410640 410076	4.20 and 4.21 4.20 and 4.22
40P102/ZZ	Friction Feed	410076	4.20 and 4.22
40P151/ZZ	Tractor Feed	410640 410076	4.20 and 4.21 4.20 and 4.22
40P154/ZZ	Tractor Feed	410071	4.20, 4.23 and 4.28

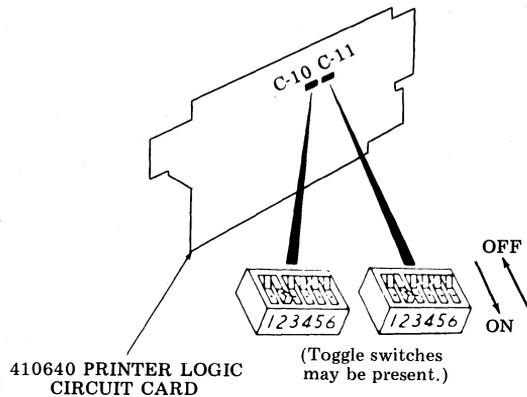
Note 1: Selected printer options must be entered on the Controller Arrangement Form.

Note 2: Refer to 4.24 for 132-column printer options.

4.20 Location of “Forms” and “LF” switches on all 80-column printers.



4.21 Printer options for 410640 circuit card.



17. Printer Margin and Form Width	C10						C11						
	1	2	3	4	5	6	1	2	3	4	5	6	
c. Last Character on 80th Column	—	—	—	—	—	—	○	●	●	○	—	—	**
Last Character on 79th Column	—	—	—	—	—	—	○	●	●	●	—	—	
Last Character on 78th Column	—	—	—	—	—	—	●	○	○	●	—	—	
d.(X) Last Character on 77th Column	—	—	—	—	—	—	●	○	●	○	—	—	
Last Character on 76th Column	—	—	—	—	—	—	●	○	○	●	—	—	
Last Character on 75th Column	—	—	—	—	—	—	●	●	○	●	—	—	
Last Character on 74th Column	—	—	—	—	—	—	●	●	●	○	—	—	
Last Character on 73rd Column	—	—	—	—	—	—	●	●	●	●	—	—	

Unless otherwise specified, choose 17c.

Note: If right margin specified is 36 through 72, a 410076 circuit card must be used.

18. Printer Paper Feed Out	C-10						C-11						
	1	2	3	4	5	6	1	2	3	4	5	6	
a. No Paper Feed Out	●	—	—	—	—	—	—	—	—	—	—	○	
b. Paper Feed Out on "RM" Loss — 16 Lines	○	—	—	—	—	—	—	—	—	—	—	○	
c. Paper Feed Out on "RM" Loss or ETX	○	—	—	—	—	—	—	—	—	—	—	●	**

Unless otherwise specified, choose 18c.

- Indicates on.
- Indicates off.
- Position of switch does not affect option.
- ** Factory optioned.

(X) Indicates desired column number.

19. Printer Errored Character Symbol		C10						C11					
		1	2	3	4	5	6	1	2	3	4	5	6
c.	Not Printed on Parity Error	-	-	-	●	●	-	-	-	-	-	-	-

→ Required Selection

19. Printer Errored Character Symbol		C10						C11					
		1	2	3	4	5	6	1	2	3	4	5	6
d.	Printers With 96 Character Set	-	●	○	-	-	-	-	-	-	-	-	-
e.	Printers With 64 Character Set	-	○	●	-	-	-	-	-	-	-	-	-
f.	Printers With Extended ASCII Character Set	-	○	○	-	-	-	-	-	-	-	-	-

Use of 400629 (♠) or 400784 (♠) type carriers require selection of 19d.
 Use of 400645 (♠) or 400785 (♠) type carriers require selection of 19e.
 Use of 400775 (♠) type carrier requires selection of 19f (internal use only).

20. Line Feed on Printer		See 4.20.												
a.	Single													**
b.	Double													

Unless otherwise specified, choose 20a.

21. Foldover on Up-Low Printer		C-10						C-11						
		1	2	3	4	5	6	1	2	3	4	5	6	
a.	Lower Case and Upper Case Print	-	-	-	-	-	-	-	-	-	-	○	-	**
b.	Lower Case Prints as Upper Case	-	-	-	-	-	-	-	-	-	-	-	●	-

→ Consider only with selection of 19d or 19f.
 Unless otherwise specified, choose 21a.

22. Foldover on Mono Case Printer		C-10						C-11							
		1	2	3	4	5	6	1	2	3	4	5	6		
a.	Lower Case Not Folded Over	-	-	-	-	-	-	-	-	-	-	-	○	-	
b.	Lower Case Printed as Upper Case	-	-	-	-	-	-	-	-	-	-	-	-	●	**

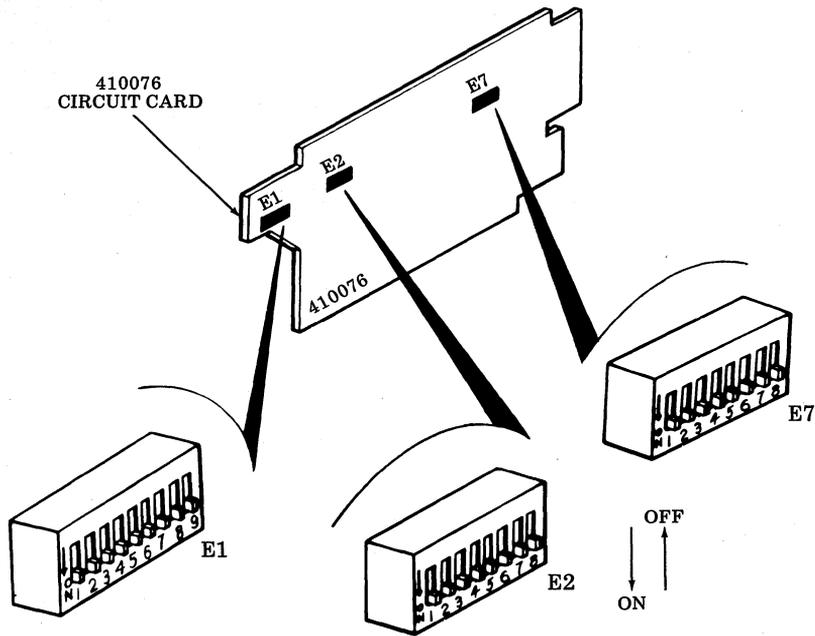
→ Consider only with selection of 19e.
 Unless otherwise specified, choose 22b.

39. Forms (Tractor Printer Only)		See 4.20.												
a.	On													
b.	Off													**

Unless otherwise specified, choose 39a.

- Indicates on.
- Indicates off.
- Position of switch does not affect option.
- ** Factory optioned.

4.22 Printer options for 410076 circuit card.



17. Printer Left Margin and Form Width		E7							
		1	2	3	4	5	6	7	8
a.	First Printed Column -- Column 1	—	—	●	●	●	—	—	—
	First Printed Column -- Column 2	—	—	●	●	○	●	—	—
	First Printed Column -- Column 3	—	—	●	●	○	○	—	—
	First Printed Column -- Column 4	—	—	●	○	○	○	—	—
	First Printed Column -- Column 5	—	—	○	○	●	○	—	—
	b.(X) First Printed Column -- Column 6	—	—	○	○	○	●	—	—
	First Printed Column -- Column 7	—	—	○	●	○	○	—	—
	First Printed Column -- Column 8	—	—	●	○	●	○	—	—
	First Printed Column -- Column 9	—	—	○	○	●	●	—	—
	First Printed Column -- Column 10	—	—	○	●	○	●	—	—
	First Printed Column -- Column 11	—	—	●	●	●	○	—	—
	First Printed Column -- Column 12	—	—	●	○	○	●	—	—
	First Printed Column -- Column 13	—	—	○	●	●	○	—	—

Unless otherwise specified, choose 17a.

- Indicates on.
- Indicates off.
- Position of switch does not affect option.
- **Factory optioned.

(X) Indicates desired column number.

17. Printer Right Margin and Form Width		E1									E2								E7							
Last Char Printed		1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Column Number		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
c.	80	—	—	—	—	○	●	—	●	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
d. (X)	73 61 49 37 25	—	—	—	—	●	●	—	●	●	—	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—
	74 62 50 38 26	—	—	—	—	●	●	—	●	○	—	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—
	75 63 51 39 27	—	—	—	—	●	●	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	76 64 52 40 28	—	—	—	—	●	○	—	●	●	—	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—
	77 65 53 41 29	—	—	—	—	●	○	—	●	○	—	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—
	78 66 54 42 30	—	—	—	—	●	○	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	79 67 55 43 31	—	—	—	—	○	●	—	●	●	—	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—
	68 56 44 32	—	—	—	—	○	●	—	○	—	—	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—
	69 57 45 33	—	—	—	—	○	●	—	○	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70 58 46 34	—	—	—	—	○	○	—	●	●	—	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—
	71 59 47 35	—	—	—	—	○	○	—	○	○	—	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—
	72 60 48 36	—	—	—	—	○	○	—	○	●	—	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—

To obtain counts:

- 73 through 80 operate switches as shown.
- 61 through 72 operate switches as shown, then operate E7 position 2 to OFF.
- 49 through 60 operate switches as shown, then operate E7 position 1 to OFF.
- 37 through 48 operate switches as shown, then operate E2 position 7 to OFF.
- 25 through 36 operate switches as shown, then operate E2 position 8 to OFF.

Unless otherwise specified, choose 17c.

18. Printer Paper Feed Out		E1									E2							
		1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8
a.	No Paper Feed Out Out	●	—	—	—	—	—	—	—	—	—	—	—	—	—	○	—	—
b.	Paper Feed Out on DSR or RM Loss - - 16 Lines or One Form	○	—	—	—	—	—	—	—	—	—	—	—	—	—	○	—	—
c.	Paper Feed Out on DSR or RM Loss or ETX - - 16 Lines or One Form	○	—	—	—	—	—	—	—	—	—	—	—	—	—	●	—	—

Unless otherwise specified, choose 18c.

19. Printer Errored Character Symbol		E1								
		1	2	3	4	5	6	7	8	9
c.	Not Printed on Parity Error	—	—	●	●	—	—	—	—	—

Required Selection

- Indicates on.
- Indicates off.
- Position of switch does not affect option.
- ** Factory optioned.
- (X) Indicates desired column number.

19 Character Set		E2							
		1	2	3	4	5	6	7	8
d.	Printers With 96-Character Set (Up-Low)	-	-	-	○	●	-	-	-
e.	Printers With 64-Character Set (Monocase)	-	-	-	●	○	-	-	-
f.	Printers With Special Carrier (Line Drawing)	-	-	-	○	○	-	-	-

**

Use of 400629 (♣) or 400784 (♣) type carriers require selection of 19d.
 Use of 400645 () or 400785 (♣) type carriers require selection of 19e.
 Use of 400775 (♣) type carrier requires selection of 19f (internal use only).

20. Line Feed on Printer	See 4.20.																
a. Single																	
b. Double																	

**

Unless otherwise specified, choose 20a.

21. Foldover on Up-Low Printer		E2							
		1	2	3	4	5	6	7	8
a.	Lower Case and Upper Case Print	-	-	○	-	-	-	-	-
b.	Lower Case Prints as Upper Case	-	-	●	-	-	-	-	-

**

→ Consider only with selection of 19d or 19f.

Unless otherwise specified, choose 21a.

22. Foldover on Monocase Printer		E2							
		1	2	3	4	5	6	7	8
a.	Lower Case Prints as Error Symbol	-	-	○	-	-	-	-	-
b.	Lower Case Prints as Upper Case	-	-	●	-	-	-	-	-

**

→ Consider only with selection of 19e.

Unless otherwise specified, choose 22b.

39. Forms	See 4.20.																
a. On																	
b. Off																	

**

Unless otherwise specified, choose 39a.

48. Incomplete Form Suppresses Paper Alarm		E2							
		1	2	3	4	5	6	7	8
a.	No (Paper Out Not Gated With Form Out)	-	●	-	-	-	-	-	-
b.	Yes (Paper Out Gated With Form Out)	-	○	-	-	-	-	-	-

**

→ Position of switch has no effect with friction feed printer.

For tractor feed printer, unless otherwise specified, choose 48b.

- Indicates on.
- Indicates off.
- Position of switch does not affect option.
- ** Factory optioned.

54. Printing of Escape Sequences Suppressed		E1									
		1	2	3	4	5	6	7	8	9	
a.	Character After ESC Printed as Received	—	○	—	—	—	—	—	—	—	**
b.	Printing of Character After ESC Suppressed	—	●	—	—	—	—	—	—	—	

→ Not Applicable — Position of switch does not affect operation.

55. SI/SO Detection		E1									
		1	2	3	4	5	6	7	8	9	
a.	SI/SO Detection Not Used	—	—	—	—	—	—	○	—	—	**
b.	SI/SO Detection Enables Printing Additional Characters	—	—	—	—	—	—	●	—	—	

→ Not Applicable — Position of switch does not affect operation.

56. Friction Feed/Tractor Feed Printer		E2								
		1	2	3	4	5	6	7	8	
a.	Friction Feed Printer — Motor Held On After Paper Alarm	○	—	—	—	—	—	—	—	**
b.	Tractor Feed Printer — Motor Turned Off After Paper Alarm	●	—	—	—	—	—	—	—	

For friction feed printer, choose 56a.
For tractor feed printer, choose 56b.

57. SSI/OEM Interface		E7								
		1	2	3	4	5	6	7	8	
a.	SSI	—	—	—	—	—	—	●	—	**

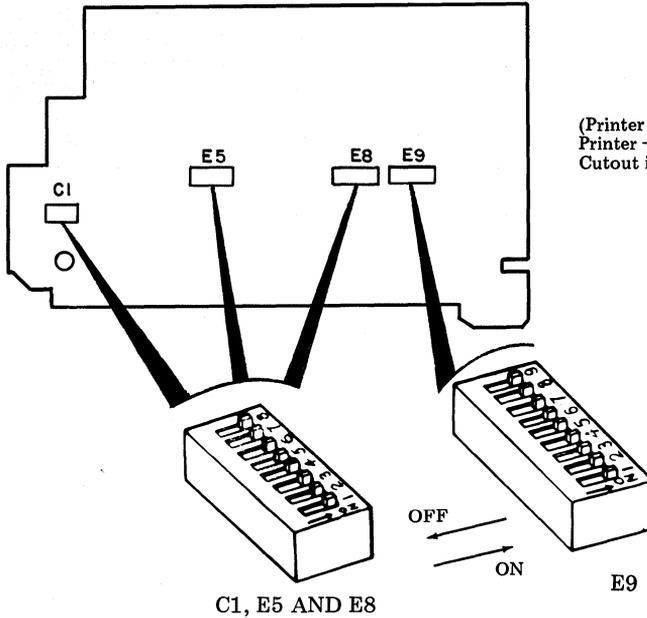
→ Required Selection

58. Idle Line Motor Control		E7								
		1	2	3	4	5	6	7	8	
a.	Disabled — Motor Held On Indefinitely During Idle Line	—	—	—	—	—	—	—	○	**
b.	Enabled — Motor Turned Off After 40-Seconds Idle Line	—	—	—	—	—	—	—	●	

Unless otherwise specified, choose 58b.

- Indicates on.
- Indicates off.
- Position of switch does not affect option.
- ** Factory optioned.

4.23 Printer options for 410071 circuit card.



17 Printer Left Margin and Form Width		E5									
		1	2	3	4	5	6	7	8	9	
a.	First Printed Column — Column 1	—	—	●	●	●	●	—	—	—	**
	First Printed Column — Column 2	—	—	●	●	○	●	—	—	—	
	First Printed Column — Column 3	—	—	●	●	○	○	—	—	—	
	First Printed Column — Column 4	—	—	●	○	○	○	—	—	—	
	First Printed Column — Column 5	—	—	○	○	●	○	—	—	—	
b.(X)	First Printed Column — Column 6	—	—	○	○	○	●	—	—	—	
	First Printed Column — Column 7	—	—	○	●	○	○	—	—	—	
	First Printed Column — Column 8	—	—	●	○	●	○	—	—	—	
	First Printed Column — Column 9	—	—	○	○	●	●	—	—	—	
	First Printed Column — Column 10	—	—	○	●	○	●	—	—	—	
	First Printed Column — Column 11	—	—	●	●	○	○	—	—	—	
	First Printed Column — Column 12	—	—	●	○	○	●	—	—	—	
	First Printed Column — Column 13	—	—	○	●	●	○	—	—	—	

Unless otherwise specified, choose 17a.

- Indicates on.
- Indicates off.
- Position of switch does not affect option.
- ** Factory optioned.
- (X) Indicates desired column number.

17. Printer Right Margin and Form Width		E9								E5								E8									
c.	Last Char Printed	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	
	Column Number																										
	80	○	●	—	●	○	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
d. (X)	73 61 49 37 25	●	●	—	●	●	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	74 62 50 38 26	○	●	—	●	●	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	75 63 51 39 27	●	○	—	●	●	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	76 64 52 40 28	●	●	—	○	●	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	77 65 53 41 29	○	●	—	○	●	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	78 66 54 42 30	●	○	—	○	●	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	79 67 55 43 31	●	●	—	●	○	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	68 56 44 32	○	●	—	●	○	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	69 57 45 33	●	○	—	●	○	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70 58 46 34	●	●	—	○	○	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	71 59 47 35	○	●	—	○	○	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	72 60 48 36	●	○	—	○	○	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

To obtain counts:

- 73 through 80 operate switches as shown.
- 61 through 72 operate switches as shown, then operate E8 position 8 to OFF.
- 49 through 60 operate switches as shown, then operate E5 position 1 to OFF.
- 37 through 48 operate switches as shown, then operate E5 position 7 to OFF.
- 25 through 36 operate switches as shown, then operate E5 position 8 to OFF.

Unless otherwise specified, choose 17c.

18. Printer Paper Feed Out		E8							
		1	2	3	4	5	6	7	8
a.	No Paper Feed Out	—	—	●	—	—	—	—	—
b.	Paper Feed Out on DSR or RM Loss -- 16 Lines or One Form	—	○	○	—	—	—	—	—
c.	Paper Feed Out on DSR or RM Loss or ETX -- 16 Lines or One Form	—	●	○	—	—	—	—	—

Unless otherwise specified, choose 18c.

19. Printer Errored Character Symbol		E9								
		1	2	3	4	5	6	7	8	9
c.	Not Printed on Parity Error	—	—	—	—	—	●	●	—	—

→ Required Selection

- Indicates on.
- Indicates off.
- Position of switch does not affect option.
- ** Factory optioned.
- (X) Indicates desired column number.

19. Character Set		E8							
		1	2	3	4	5	6	7	8
d.	Printers With 96-Character Set (Up-Low)	-	-	-	-	●	○	-	-
e.	Printers With 64-Character Set (Monocase)	-	-	-	-	○	●	-	-
f.	Printers With Special Carrier (Line Drawing)	-	-	-	-	○	○	-	-

**

Use of 400629 (♂) or 400784 (♂) type carriers require selection of 19d.
 Use of 400645 (♂) or 400785 (♂) type carriers require selection of 19e.
 Use of 400775 (♂) type carrier requires selection of 19f (internal use only).

20. Line Feed on Printer		See 4.20.												
a.	Single													
b.	Double													

**

Unless otherwise specified, choose 20a.

21. Foldover on Up-Low Printer		E8							
		1	2	3	4	5	6	7	8
a.	Lower Case and Upper Case Print	○	-	-	-	-	-	-	-
b.	Lower Case Prints as Upper Case	●	-	-	-	-	-	-	-

**

→ Consider only with selection of 19d or 19f.

Unless otherwise specified, choose 21a.

22. Foldover on Monocase Printer		E8							
		1	2	3	4	5	6	7	8
a.	Lower Case Prints as Error Symbol	○	-	-	-	-	-	-	-
b.	Lower Case Prints as Upper Case	●	-	-	-	-	-	-	-

**

→ Consider only with selection of 19e.

Unless otherwise specified, choose 22b.

39. Forms		See 4.20.												
a.	On													
b.	Off													

**

Unless otherwise specified, choose 39a.

48. Incomplete Form Suppresses Paper Alarm		E9								
		1	2	3	4	5	6	7	8	9
a.	No (Paper Out Not Gated With Form Out)	-	-	-	-	-	-	-	-	●
b.	Yes (Paper Out Gated With Form Out)	-	-	-	-	-	-	-	-	○

**

Unless otherwise specified, choose 48b.

- Indicates on.
- Indicates off.
- Position of switch does not affect option.
- ** Factory optioned.

54. Printing of Escape Sequences Suppressed		E9								
		1	2	3	4	5	6	7	8	9
a.	Character After ESC Printed as Received	—	—	—	—	—	—	—	○	—
b.	Printing of Character After ESC Suppressed	—	—	—	—	—	—	—	●	—

→ Not Applicable — Position of switch does not affect operation.

55. SI/SO Detection		E9								
		1	2	3	4	5	6	7	8	9
a.	SI/SO Detection Not Used	—	—	○	—	—	—	—	—	—
b.	SI/SO Detection Enables Printing Additional Characters	—	—	●	—	—	—	—	—	—

→ Not Applicable — Position of switches does not affect operation.

57. SSI/OEM Interface		E8							
		1	2	3	4	5	6	7	8
a.	SSI	—	—	—	—	—	—	●	—

→ Required Selection

58. Idle Line Motor Control		E8							
		1	2	3	4	5	6	7	8
a.	Disabled - - Motor Held On Indefinitely During Idle Line	—	—	—	○	—	—	—	—
b.	Enabled - - Motor Turned Off After 40-Second Idle Line	—	—	—	●	—	—	—	—

Unless otherwise specified, choose 58b.

59. Speed Selection (Applies Only if Option 57b is Selected)		C1							
		1	2	3	4	5	6	7	8
a.	75 Baud	●	○	○	○	○	○	○	○
b.	150 Baud	○	●	○	○	○	○	○	○
c.	300 Baud	○	○	○	○	○	○	○	●
d.	600 Baud	○	○	●	○	○	○	○	○
e.	1200 Baud	○	○	○	○	○	●	○	○
f.	2400 Baud	○	○	○	●	○	○	○	○
g.	4800 Baud	○	○	○	○	●	○	○	○
h.	9600 Baud	○	○	○	○	○	○	●	○

→ Not Applicable — Position of switches does not affect operation.

60. Aux Alarm		E5							
		1	2	3	4	5	6	7	8
a.	Enable	—	○	—	—	—	—	—	—
b.	Disable	—	●	—	—	—	—	—	—

→ Note: If 402920 modification kit (paper jam alarm) is installed in printer, choose 60a. Otherwise, 60b must be chosen.

● Indicates on.
○ Indicates off.

— Position of switch does not affect option.
** Factory optioned.

PRINTER — 132-COLUMN

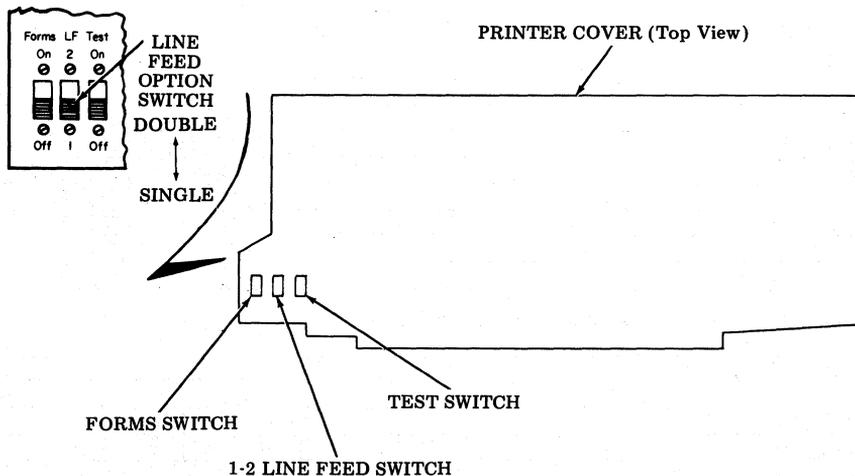
4.24 For options, refer to:

PRINTER CODE	DESCRIPTION	COMPATIBLE PRINTER LOGIC CIRCUIT CARD	SEE THESE PARAGRAPHS
40P201/ZZ	TRACTOR FEED	410729 410072 **	4.25, 4.26 and 4.28 4.25, 4.27 and 4.28
40P202/ZZ	TRACTOR FEED	410072	4.25, 4.27 and 4.28

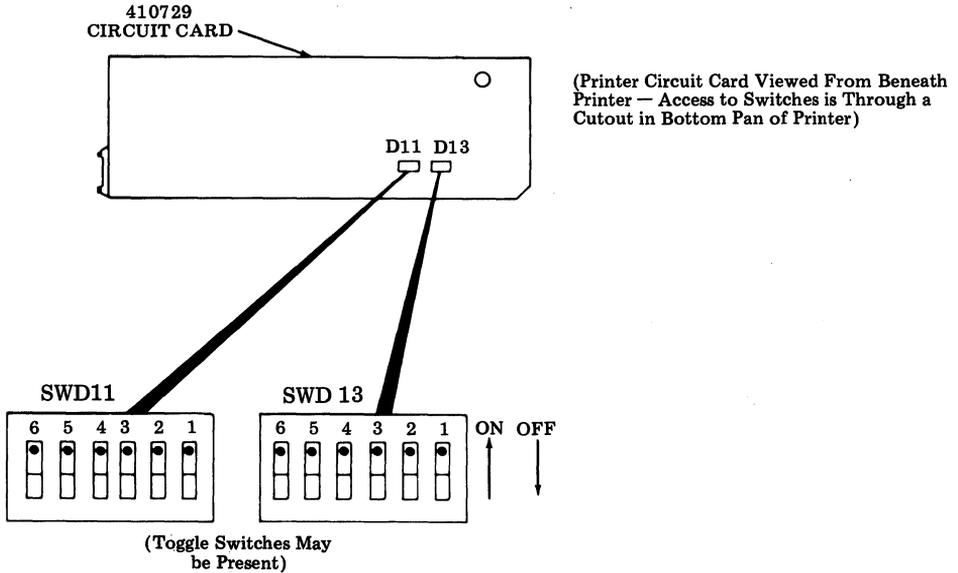
** Use of the 410072 card in a 40P201/ZZ printer requires use of a 402980 lower pan assembly. The 402887 modification kit includes both a 410072 card and a 402980 lower pan assembly. The 402980 lower pan assembly is compatible with either the 410729 or 410072 cards.

Note: Selected printer options must be entered on the Controller Arrangement Form.

4.25 Location of "Forms" and "LF" switches on 132-column printers.



4.26 Printer options for 410729 circuit card.



17. Printer Right Margin and Form Width		D11						D13						
		6	5	4	3	2	1	6	5	4	3	2	1	
e.	Last Character on Column 132	—	—	—	—	—	—	○	○	○	●	—	—	**
f.(X)	Last Character on Column 131	—	—	—	—	—	—	○	○	●	○	—	—	
	Last Character on Column 130	—	—	—	—	—	—	○	○	●	●	—	—	
	Last Character on Column 129	—	—	—	—	—	—	○	●	○	●	—	—	
	Last Character on Column 128	—	—	—	—	—	—	○	●	●	○	—	—	
	Last Character on Column 127	—	—	—	—	—	—	○	○	●	●	—	—	
	Last Character on Column 126	—	—	—	—	—	—	●	○	○	●	—	—	
	Last Character on Column 125	—	—	—	—	—	—	●	○	●	○	—	—	
	Last Character on Column 124	—	—	—	—	—	—	●	○	●	●	—	—	
	Last Character on Column 123	—	—	—	—	—	—	●	○	○	●	—	—	
Last Character on Column 122	—	—	—	—	—	—	●	●	●	○	—	—		
Last Character on Column 121	—	—	—	—	—	—	●	●	●	●	—	—		

Unless otherwise specified, choose 17e.

Note: If right margin specified is 73 through 120, a 410072 card must be used.

- Indicates on.
- Indicates off.
- Position of switch does not affect option.
- ** Factory optioned.
- (X) Indicates desired column number.

18. Printer Paper Feed Out		D11					D13						
		6	5	4	3	2	1	6	5	4	3	2	1
a.	No Paper Feed Out	-	-	●	-	-	-	-	-	-	-	-	○
b.	Paper Feed Out on RM Loss - 16 Lines	-	-	○	-	-	-	-	-	-	-	-	○
c.	Paper Feed Out on RM Loss or ETX	-	-	○	-	-	-	-	-	-	-	-	●

Unless otherwise specified, choose 18c.

19. Printer Errored Character Symbol		D11					D13						
		6	5	4	3	2	1	6	5	4	3	2	1
c.	Not Printed on Parity Error	-	-	-	●	●	-	-	-	-	-	-	-

→ Required Selection

19. Printer Errored Character Symbol		D11					D13						
		6	5	4	3	2	1	6	5	4	3	2	1
d.	Printers With 96 Character Set (Up-Low)	●	○	-	-	-	-	-	-	-	-	-	-
e.	Printers With 64 Character Set (Monocase)	○	●	-	-	-	-	-	-	-	-	-	-

Use of 400777 (♂) or 400783 (♂) type carriers, require selection of 19d.
 Use of 400780 (♂) or 400887 (♂) type carriers, require selection of 19e.

20. Line Feed on Printer		See 4.20.																				
a.	Single																					
b.	Double																					

Unless otherwise specified, choose 20a.

- Indicates on.
- Indicates off.
- Position of switch does not affect option.
- ** Factory optioned.

21. Foldover on Up-Low Printer		D11					D13							
		6	5	4	3	2	1	6	5	4	3	2	1	
a.	Lower Case and Upper Case Print	-	-	-	-	-	-	-	-	-	-	○	-	**
b.	Lower Case Prints as Upper Case	-	-	-	-	-	-	-	-	-	-	●	-	

Consider only with selection of 19d.
Unless otherwise specified, choose 21a.

22. Foldover on Monocase Printer		D11					D13							
		6	5	4	3	2	1	6	5	4	3	2	1	
a.	Lower Case Prints as Error Symbol	-	-	-	-	-	-	-	-	-	-	○	-	**
b.	Lower Case Prints as Upper Case	-	-	-	-	-	-	-	-	-	-	●	-	

Consider only with selection of 19e.
Unless otherwise specified, choose 22b.

39. Forms		Refer to 4.20.													
a.	On														**
b.	Off														

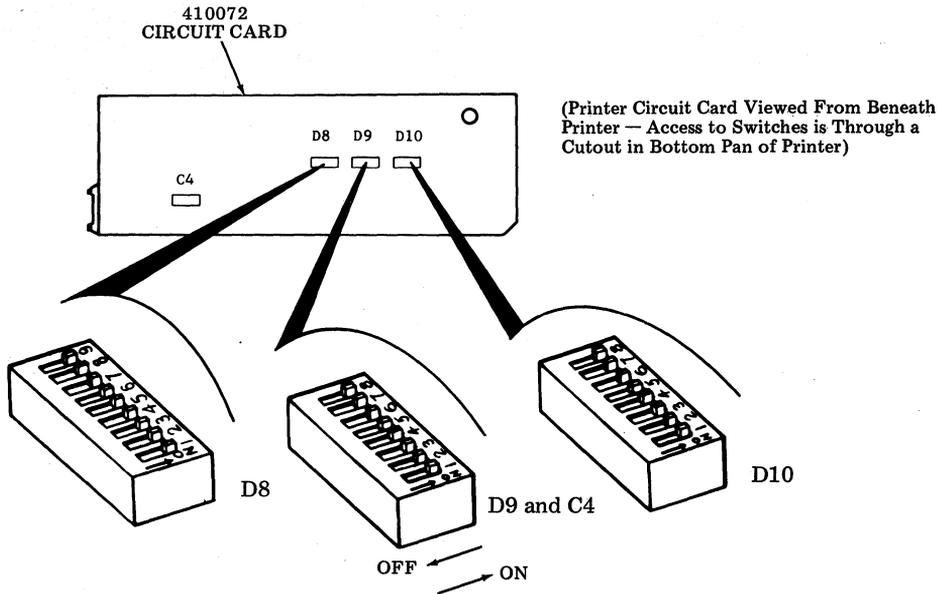
Unless otherwise specified, choose 39a.

48. Incomplete Form Suppresses Paper Alarm		D11					D13							
		6	5	4	3	2	1	6	5	4	3	2	1	
a.	No (Paper-Out Not Gated With Form-Out)	-	-	-	-	-	●	-	-	-	-	-	-	**
b.	Yes (Paper-Out Gated With Form-Out)	-	-	-	-	-	○	-	-	-	-	-	-	

Unless otherwise specified, choose 48b.

- Indicates on.
- Indicates off.
- Position of switch does not affect option.
- **Factory optioned.

4.27 Printer options for 410072 circuit card.



17. Printer Left Margin and Form Width		E5									
		1	2	3	4	5	6	7	8	9	
a.	First Printed Column — Column 1	—	—	●	●	●	●	—	—	—	**
	First Printed Column — Column 2	—	—	●	●	○	●	—	—	—	
	First Printed Column — Column 3	—	—	●	●	○	○	—	—	—	
	First Printed Column — Column 4	—	—	●	○	○	○	—	—	—	
	First Printed Column — Column 5	—	—	○	○	●	○	—	—	—	
b.(X)	First Printed Column — Column 6	—	—	○	○	○	●	—	—	—	
	First Printed Column — Column 7	—	—	○	●	○	○	—	—	—	
	First Printed Column — Column 8	—	—	●	○	●	○	—	—	—	
	First Printed Column — Column 9	—	—	○	○	●	●	—	—	—	
	First Printed Column — Column 10	—	—	○	○	○	●	—	—	—	
	First Printed Column — Column 11	—	—	●	●	●	○	—	—	—	
	First Printed Column — Column 12	—	—	●	○	○	●	—	—	—	
	First Printed Column — Column 13	—	—	○	●	●	○	—	—	—	

Unless otherwise specified, choose 17a.

- Indicates on.
- Indicates off.
- Position of switch does not affect option.
- ** Factory optioned.
- (X) Indicates desired column number.

17. Printer Right Margin and Form Width																												
Last Char Printed	Column Number	D8							D9							D10												
		1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8		
e.	132	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	—	—	●	●	●	○	—	○	○	—	—	**
f. (X)	121 109 97 85 73	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	—	—	●	●	●	○	—	○	○	—	—	**
	122 110 98 86 74	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	—	—	●	●	●	○	—	○	○	—	—	**
	123 111 99 87 75	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	—	—	●	●	●	○	—	○	○	—	—	**
	124 112 100 88 76	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	—	—	●	●	●	○	—	○	○	—	—	**
	125 113 101 89 77	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	—	—	●	●	●	○	—	○	○	—	—	**
	126 114 102 90 78	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	—	—	●	●	●	○	—	○	○	—	—	**
	127 115 103 91 79	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	—	—	●	●	●	○	—	○	○	—	—	**
	128 116 104 92 80	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	—	—	●	●	○	—	○	○	—	—	**	
	129 117 105 93 81	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	—	—	●	●	●	○	—	○	○	—	—	**
	130 118 106 94 82	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	—	—	●	●	●	○	—	○	○	—	—	**
	131 119 107 95 83	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	—	—	●	○	○	—	○	○	—	—	**	
	120 108 96 84	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	—	—	●	●	○	—	○	○	—	—	**	

To obtain counts:

- 121 through 132 operate switches as shown.
- 109 through 120 operate switches as shown, then operate D9 position 7 to OFF.
- 97 through 108 operate switches as shown, then operate D9 position 8 to OFF.
- 85 through 96 operate switches as shown, then operate D8 position 7 to OFF.
- 73 through 84 operate switches as shown, then operate D8 position 8 to OFF.

Unless otherwise specified, choose 17e.

18. Printer Paper Feed Out		D9							
		1	2	3	4	5	6	7	8
a.	No Paper Feed Out	—	—	●	—	—	—	—	—
b.	Paper Feed Out on DSR or RM Loss — 16 Lines or One Form	—	○	○	—	—	—	—	—
c.	Paper Feed Out on DSR or RM Loss or ETX — 16 Lines or One Form	—	●	○	—	—	—	—	**

Unless otherwise specified, choose 18c.

19. Printer Errored Character Symbol		D10							
		1	2	3	4	5	6	7	8
c.	Not Printed on Parity Error	—	—	—	—	—	●	●	—

→ Required Selection

- Indicates on.
- Indicates off.
- Position of switch does not affect option.
- ** Factory optioned.
- (X) Indicates desired column number.

55. SI/SO Detection		D10								
		1	2	3	4	5	6	7	8	
a.	SI/SO Detection Not Used	—	—	○	—	—	—	—	—	**
b.	SI/SO Detection Enables Printing Additional Characters	—	—	●	—	—	—	—	—	

→ Not Applicable — Position of switch does not affect operation.

57. SSI/OEM Interface		D8									
		1	2	3	4	5	6	7	8	9	
a.	SSI	—	—	—	—	—	—	—	—	●	**

→ Required Selection

58. Idle Line Motor Control		D9								
		1	2	3	4	5	6	7	8	
a.	Disabled -- Motor Held On Indefinitely During Idle Line	—	—	—	—	—	○	—	—	**
b.	Enabled -- Motor Turned Off After 40-Second Idle Line	—	—	—	—	—	●	—	—	

Unless otherwise specified, choose 58b.

59. Speed Selection (Applies Only if Option 57b is Selected)		C4								
		1	2	3	4	5	6	7	8	
a.	75 Baud	●	○	○	○	○	○	○	○	
b.	150 Baud	○	●	○	○	○	○	○	○	
c.	300 Baud	○	○	○	●	○	○	○	○	
d.	600 Baud	○	○	●	○	○	○	○	○	
e.	1200 Baud	○	○	○	○	○	○	●	○	**
f.	2400 Baud	○	○	○	○	●	○	○	○	**
g.	4800 Baud	○	○	○	○	○	●	○	○	
h.	9600 Baud	○	○	○	○	○	○	○	●	

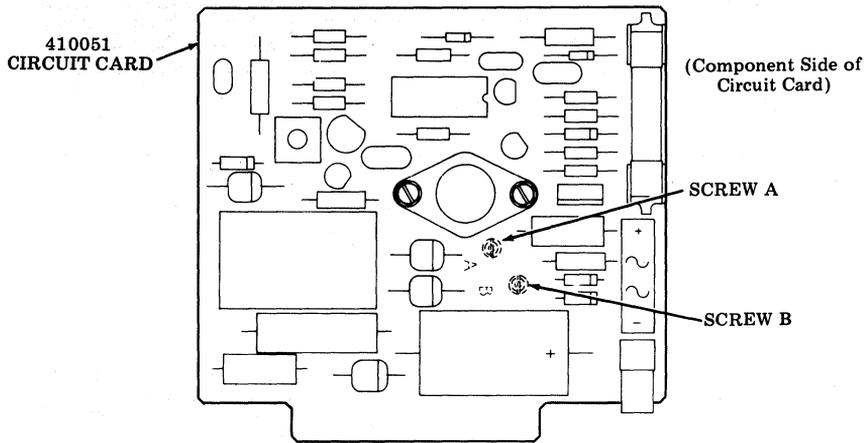
→ Not Applicable — Position of switch does not affect operation.

60. Aux Alarm		D9								
		1	2	3	4	5	6	7	8	
a.	Enable	—	—	—	—	○	—	—	—	
b.	Disable	—	—	—	—	●	—	—	—	**

→ Note: If 402920 modification kit (paper jam alarm) is installed in printer, choose 60a. Otherwise, 60b must be chosen.

- Indicates on.
- Indicates off.
- Position of switch does not affect option.
- ** Factory optioned.

4.28 Printer options for 410151 circuit card.



61	Regulator Grounding (Circuit Gnd to Frame Gnd)	Screw A		Screw B	
		Component	Noncomponent	Component	Noncomponent
a.	SSI	In	—	—	In
b.	(OEM) At Printer	In	—	In	—
c.	(OEM) Ext to Printer	—	In	In	—

Either 61a or 61b must be chosen for proper operation.

DATA SET, DATA SERVICE UNIT, INTERNAL MODEM, AUTOMATIC CALLING UNIT, AND TELEPHONE SET

4.29 Section references:

Data Set 201B (DS), 2400 BPS — Section 592-011-Series and Tech. Ref. Pub. 41201. The 201B is manufacture discontinued.

Data Set 201C (DS), 2400 BPS — Section 592-029-Series and Tech. Ref. Pub. 41210.

Data Set 208A (DS), 4800 BPS — Section 592-027-Series and Tech. Ref. Pub. 41209.

Data Set 208B (DS) 4800 BPS-Section 592-030 Series.

Data Set 212A (DS), 1200 BPS-Section 592-034 Series.

500A-L1/2 Data Service Unit (DSU), 2400 BPS and 500A-L1/3 Data Service Unit (DSU), 4800 BPS — Section 595-200-Series.

251A1 Terminal Data Unit (TDU), 2400 BPS — (No section released). This TDU is an internal modem.

Automatic Calling Unit-801 type (DAS)-Section 592-010 and 592-012 Series.

Telephone Set 2565 HK-Section 502-543-405.

4.30 The three tables that follow list options for DSs, DSUs and the TDU. The SDS should be connected to the DS, DSU or TDU. After making the connection and checking the options, go to Section 582-200-505.

4.31 Private Line Version Only: A Data Set 201B, 201C or 208A can be used with the station arrangement provided there is access to a private line system with 2000 or 3002 conditioning (the Data Set 208A requires 3002).

4.32 201- and 208- Type Data Sets (Private Line Version Only)

		DATA SET AT DATASPEED 40/4 STATION				
DESCRIPTION OF RECOMMENDED DATA SET OPTIONS		201B-LIST	201-B3	201C-L1A	208A-L1A	
WITHOUT AUX DATA SET		—	ZJ	YJ	S3C-DOWN	YJ
NEW SYNC — NOT USED		ZL	W	YA	S4C-DOWN	YA
600 or 900 OHM IMPEDANCE		—	Y or X	ZQ or ZR	—	—
4-WIRE SWITCHED CARRIER (Note 1)		B	ZB	XA	S4B-DOWN	XA
ECHO DELAY		—	T	—	—	—
EIA INTERFACE		ZR-ZT	ZD-ZF	YK,YG,YE	—	—
XMIT LEVEL (Optional)		—	G,F,E,B,A	ZA---ZP	—	—
REC LEVEL (Optional)		—	S,R,Q,N	ZU	—	—
COMP. EQUALIZER- IN		—	—	ZS	—	—
INTERNAL XMIT TIMING		—	—	YC	S3A-DOWN	YC
DSR "ON" IN AL-MODE		—	—	—	S1A-UP	YM
NO COMP. EQUALIZER TEST **		—	—	—	S1B-UP	YQ
RETRAIN AUTOMATICALLY **		—	—	—	S3B-UP	YU
1-SEC. HOLDOVER ENABLED **		—	—	—	S4A-DOWN	YX
EQUALIZER ADJ. (Note 2)		—	—	—	S2B-UP	ZS
					S2C-UP	
SWITCHED RTS					S1C-DOWN	YT
DATA SET AT CUSTOMER LCU — SAME AS ABOVE, EXCEPT:		201B-LIST	201-B3	201C-L1A	208A-L1A	
O M I T	4-WIRE SWITCHED CARRIER	B	ZB	XA	S4B-DOWN	XA
	1-SEC. HOLDOVER ENABLED	—	—	—	S4A-DOWN	YX
	NEW SYNC. NOT USED (Note 3)	ZL	W	YA	S4C-DOWN	YA
A D D	CONTINUOUS CARRIER	—	ZA	XB	S4B-UP	XB
	1-SEC. HOLDOVER-DISABLED	—	—	—	S4A-UP	YW
	NEW SYNC. USED (See Note 3) if required at Cust. machine)	—	ZK	YB	S4C-UP	YB

**Required for 208A-L1A.

Note 1: In a single 40/4 station telephone channel to a customer's equipment station, the continuous carrier option is preferred at the 40/4 station.

Note 2: For switched carrier operation, correct setting of the Compromise Equalizer must be

determined using the Compromise Equalizer Test in Section 592-027-500.

Note 3: In multipoint station arrangements, the data set at the customer LCU may use NEW SYNC OPTION to quench timing signals in the data set and condition the receiver for the next message — if required, refer to customer LCU requirements.

4.33 Private Line Version Only: A 500A-Type Data Service Unit (DSU) can be used with a station arrangement provided there is access to a synchronous digital data system. The 500A-L1/2 operates at 2400 BPS and uses the NH1 and HP1 circuit cards. The 500A-L1/3 operates at 4800 BPS and uses the HN2 and HP1 circuit cards.

Note 1: Option WV required only under guidelines of Section 886-100-115 when local cable pairs are too short for proper operation of receiver.

Note 2: Options YQ and XK should not be installed except as required in other installation practices.

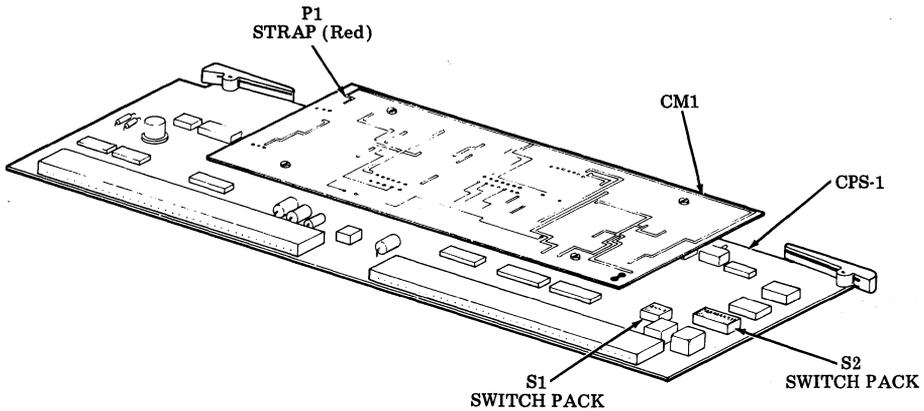
Note 3: DSUs are not capable of near-end analog loopback.

Note 4: Refer to Section 595-200-Series for details.

500A-TYPE DSUs

OPTION	FEATURE	SWITCH	SWITCH POSITION	CP		
WV	Fixed line build-out network installed (Note 1)	S1A	3	HN1 or HN2		
		S1B	5			
		S1C	9			
WW	Fixed line build-out network removed	S1A	2			
		S1B	6			
		S1C	8			
YK	Signal ground connected to frame ground	S2	IN		HP1	
YL	Signal ground disconnected from frame ground		OUT			
YS	Continuous request-to-send (permanent RTS)	S3A	2			HN1 or HN2
YT	Switched request-to-send		3			
YQ	Circuit assurance installed (Note 2)	S3B	6			
YR	Circuit assurance removed		5			
XK	System status installed (Note 2)		9			
XL	System status removed	S3C	8			
XM	Switch LED assembly installed to rear			HN1 or HN2		
XN	Switch LED assembly installed to front					
XO	LL spring clip installed					
XP	LL spring clip not installed					

4.34 Private Line Version Only: 251A1 TDU can be used in place of a Data Set 201B or a 201C provided the required station arrangement hardware is present. An 828 or 829 Data Auxiliary Set is also required.



251 TDU

OPTION	DESCRIPTION	SWITCH PACKS ON CPS-1	STRAPPING ON CM1
ZA	0 -DB For Transmit Line Signal Level (Required for Private Line Application)	Close S2-3,5,6,10 Open S2-2,4,7,8	—
ZR	-24 DB For Carrier On Sensitivity (Required For Private Line Application)	—	Remove P1 Strap
ZT	4-Wire Private Line Operation With 7 Millisecond CTS Delay	Open S1-4	—
YA	851A1 TAU Auto Dialer Out	Close S1-5	—
YC	DSR on in Private Line Service	Close S2-9 S1-3	—
YD	4-Wire Private Line	Close S1-1 S2-1 Open S1-2	—

4.35 212A-Type Data Set (Dial-Up Version Only)

DATA SET 212A-L1 AND 212A-L1A OPTIONS

FEATURE		OPTION	SWITCH SETTINGS																
			S1 SWITCH											S5					
			1	2	3	4	212A-L1A only												
Tip Ring Make Busy	IN	F	X																
	OUT	E*	O																
CC Indication (DSR on) for Analog Loop	ON	ZF*			X	X													
	OFF	ZE			O	O													
					S2 SWITCH														
Speed Control (212A-L1A only)	Interface	XJ	O																X
	HS Button	XK*	X																O
Speed Control (212A-L1 only)	HS Button (XJ not available, see L1 entries YG and YH)	XK*	X																O
Interface Control MB/AL via CN Lead (See Options XO, XN, XR)	IN	YE			O														
	OUT	YF*			X														
Transmitter Timing	INT.	YC*			O	O													
	EXT.	YD			O	X													
	Slave	WI			X	O													
1200 BPS Operation	Async/Start-Stop	YG*						O										O	O
	Sync	YH						X										X	X
1200 BPS Operation (212A-L1 only)	Async/Start-Stop	YG*	X					O					O	O	O	O		O	O
	Sync	YH	X					X					O	O	X	X			
Character Length (Use with YG)	9 Bit	YI						O											
	10 Bit	YJ*						X											
RCVR responds to Digital Loop (In HS mode only)	IN	YK*											O						
	OUT	YL											X						
Interface Control RDL Lead (212A-L1A only)	IN	XL													X				
	OUT	XM*													O				
Interface Control RDL Lead (212A-L1 only) (See L1 entries YG and YH)	OUT	XM*													O				

See Note

(Continued on next page)

Note: RDL (Remote Digital Loopback) can be used when both the near-end and far-end data sets are 212A type. Depressing the RDL key on the near-end data set causes the far-end data set to go

into the DL mode. When the RDL key is depressed again (to release RDL) or the on-line connection is broken, the far-end is restored to the normal operating mode.

DATA SET 212A-L1 AND 212A-L1A OPTIONS
(Dial-Up Version Only)

FEATURE		OPTION	SWITCH SETTINGS									
			S3 SWITCH									
			1	2	3	4	5	6	7	8		
Loss of Carrier causes Disconnect	IN	S*	X									
	OUT	R	O									
Received Space causes Disconnect	IN	V*		X								
	OUT	Y		O								
CB (CTS) and CF (DCD) Indications	COM	A*			X							
	SEP	B			O							
Send Space then Disconnect on loss of DTR	IN	T*				X						
	OUT	U				O						
Automatic Answer	IN	ZH*					O					
	OUT	ZG					X					
Answer Mode Indication on CE (RI) (Option W is required)	CE ON	X						X				
	CE OFF	W*						O				
Speed Mode	HIGH	YO							X			
	DUAL	YP*								O		
Interface Speed Indication-CI (Pin 12, on for HS)	IN	YQ										X
	OUT	YR*										O
CN and TM Interface Pin Assignments (212A-L1A only)	CN is 25. TM (No Connection)		XO*	Strap Plugs E3-E4, E1-E2								
	CN is 18. TM (No Connection)		XN	Strap Plugs E4-E5, E1-E2								
	CN is 18. TM is 25.		XR	Strap Plugs E4-E5, E2-E3								
CN and TM Interface Pin Assignments (212A-L1 only)	CN is 25. TM (No Connection)		XO*	(No Switch Settings or Plugs)								
Signal Ground to Frame Connection (on 47D Mounting)	IN	Q*	S1 Closed									
	OUT	P	S1 Open									

X Switch closed. — Switch does not affect option.
O Switch open. * Factory furnished option.

Recommended options for 212A-L1 (unless otherwise specified) for 2-wire switched network: E, ZF, XK, YF, YC, YH, YJ, YK, XM, R, Y, B, U, ZH, W, YO, YR, XO, Q. Options YK and XM are furnished by Option YG (or YH).

Recommended options for 212A-L1A (unless otherwise specified) for 2-wire switched network: E, ZF, XK, YF, YC, YH, YJ, YK, XM, R, Y, B, U, ZH, W, YO, YR, XO, Q.

4.36 201C-L1A Type Data Set (Dial-Up Version Only)

FEATURE		OPTION	STRAPPING ON ANALOG BOARD (JB1 CP) INSTALL RED STRAPS	STRAPPING ON DIGITAL BOARD (JB2 CP) INSTALL RED STRAPS	REMOVE RED STRAPS FOR OPTION
Transmit Line Signal Level	0 dBm	ZA	27-28, 29-30, 31-32, 33-34		ZP
	- 1 dBm	ZB	19-20, 29-30, 31-32, 33-34		ZO
	- 2 dBm	ZC	27-28, 21-22, 31-32, 33-34		ZN
	- 3 dBm	ZD	19-20, 21-22, 31-32, 33-34		ZM
	- 4 dBm	ZE	27-28, 29-30, 23-24, 33-34		ZL
	- 5 dBm	ZF	19-20, 29-30, 23-24, 33-34		ZK
	- 6 dBm	ZG	27-28, 21-22, 23-24, 33-34		ZJ
	- 7 dBm	ZH	19-20, 21-22, 23-24, 33-34		ZI
	- 8 dBm	ZI	27-28, 29-30, 31-32, 25-26		ZH
	- 9 dBm	ZJ	19-20, 29-30, 31-32, 25-26		ZG
	-10 dBm	ZK	27-28, 21-22, 31-32, 25-26		ZF
	-11 dBm	ZL	19-20, 21-22, 31-32, 25-26		ZE
	-12 dBm	ZM	27-28, 29-30, 23-24, 25-26		ZD
	-13 dBm	ZN	19-20, 29-30, 23-24, 25-26		ZC
	-14 dBm	ZO	27-28, 21-22, 23-24, 25-26		ZB
-15 dBm	ZP	19-20, 21-22, 23-24, 25-26		ZA	
Line Impedance	600 Ω	ZQ	16-17		ZR
	900 Ω	ZR	17-18		ZQ
Compromise† Equalizer	IN	ZS	8-9, 11-12		ZT
	OUT	ZT	9-10, 12-13		ZS
Carrier ON Sensitivity	-24 for PL	ZU			ZV
	-44 for DDD	ZV	1-2		

Choose One

FEATURE		OPTION	STRAPPING ON ANALOG BOARD (JB1 CP) INSTALL RED STRAPS	STRAPPING ON DIGITAL BOARD (JB2 CP) INSTALL RED STRAPS	REMOVE RED STRAPS FOR OPTION
New Sync	Not Used	YA		20-21	YB
	Customer-Controlled	YB		19-20	YA
Transmitter Timing	INT	YC			YD
	EXT	YD		13-14	
Automatic Answer	RDY and DTR Control or Not Provided	YE			YF
	DTR Control Only	YF		17-18	
Ring Indication On Customer Interface	EIA	YG		22-24	YH
	Contact	YH		22-23	YG
Use With DAS 828-Type	Yes	YI			YJ
	No	YJ		15-16	
Grounding Option	Common	YK		25-26	
	Not Common	YL			YK
Type of Operation and Clear-to-Send Delay	4-Wire PL	XA	35-36	1-3, 4-6, 28-29, 11-12	Note 1
		XB	35-36	1-3, 5-6, 28-29, 11-12	Note 2
		XC	35-36	2-3, 5-6, 28-29, 11-12	Note 3
	2-Wire DDD	XD	4-5	1-3, 4-6, 27-28	Note 4
	2-Wire PL	XE	4-5, 35-36	1-3, 4-6, 133-134, 11-12	Note 5

* DO NOT REMOVE ANY BLACK TEST STRAPS.

† Use option ZS for all installations.

Note 1: Remove red straps: 4-5 on JB1 CP; 2-3, 5-6, 27-28, 133-134 on JB2 CP

Note 2: Remove red straps: 4-5 on JB1 CP; 2-3, 4-6, 27-28, 133-134 on JB2 CP

Note 3: Remove red straps: 4-5 on JB1 CP; 1-3, 4-6, 27-28, 133-134 on JB2 CP

Note 4: Remove red straps: 35-36 on JB1 CP; 2-3, 5-6, 28-29, 11-12, 133, 134 on JB2 CP

Note 5: Remove red straps: 2-3, 5-6, 27-28, 28-29 on JB2 CP

Recommended Options YJ, YA, ZQ or ZR, XD, ZS, ZV, YC, YF, YG, and YK.

4.37 201C -L1C type Data Set (Dial-Up Version Only)

DATA SET 201C-L1C OPTIONS

FEATURE		OPTION	LINE CONTROL BOARD (TP1)		PROVIDE
			STRAP IN	STRAP OUT	
ONE PER OPTION	0dB	ZA		1, 2, 4, 8	
	1dB	ZB	1	2, 4, 8	
	2dB	ZC	2	1, 4, 8	
	3dB	ZD	1, 2	4, 8	
	4dB	ZE	4	1, 2, 8	
	5dB	ZF	1, 4	2, 8	
	6dB	ZG	2, 4	1, 8	
	7dB	ZH	1, 2, 4	8	
	8dB	ZI	8	1, 2, 4	
	9dB	ZJ	1, 8	2, 4	
	10dB	ZK	2, 8	1, 4	
	11dB	ZL	1, 2, 8	4	
	12dB	ZM	4, 8	1, 2	
	13dB	ZN	1, 4, 8	2	
	14dB	ZO	2, 4, 8	2	
15dB	ZP	1, 2, 4, 8	1		

FEATURE		OPTION	DIGITAL BOARD (J84)	SWITCH SETTING									
				1	2	3	4	5	6	7	8		
TRANSMITTER TIMING	INTERNAL	YC		YC			X						
	EXTERNAL	YD		YD			0						
AUTOMATIC ANSWER	ROY & DTR CONTROLLED OR NOT PROVIDED	YE		YE								0	
	DTR CONTROLLED ONLY	YF		YF									X
GROUNDING OPTION	SIGNAL GROUND CONNECTED TO FRAME GROUND	YK	INSTALL E1-E2										
	SIGNAL GROUND NOT CONNECTED TO FRAME GROUND	YL	REMOVE E1-E2										
FUNCTION OF EIA INTER-FACE PIN 18	INITIATES LOCAL ANALOG LOOPBACK	YS	INSTALL E3-E4	YS			X						
	PROVIDES RECEIVE SYMBOL CLOCK	YT	INSTALL E4-E5	YT			0						
CONTINUOUS RECEIVER BIT CLOCK	IN	YO		YO								0	
	OUT	YP		YP									X
SATELLITE OPTION	IN	YQ		YQ			X						
	OUT	YR		YR			0						

Factory Furnished Option

Recommended Options YC, YF, YK, YS, YO and YR

4.38 208B Type Data Set (Dial-Up Version Only)

SWITCH	SWITCH POSITION	FEATURE	OPTION
S2C*	UP *	COMPROMISE EQUALIZER IN	ZS
	DOWN	COMPROMISE EQUALIZER OUT	ZT
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
5011	IN	RS-CS INTERVAL OF 50 MSEC	
	OUT	RS-CS INTERVAL OF 150 MSEC	

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

LEVEL (DB)	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

Recommended Options ZS, YM, YP and YC.

5. TOOLS AND SUPPLIES

5.01 The following tools and supplies may be required for installation or servicing of DATASPEED 40 apparatus. Most of these items should normally be present in standard maintenance tool kits. (Reference Section 570-005-800)

5.02 Tools

Cleaning Brush (Type Face)		151394
Cutting Pliers		108286
Gauge (Friction Feed Printer)		400610
Gauge (Tractor Feed Printer)		402617
Keyswitch Extractor		346257
Keytop Extractor		346260
Long-nose Pliers		108285
Nut Driver	Handle	135676
Nut Driver	1/4"	89954
Nut Driver	5/16"	89955
Nut Driver	1/4"	135677
Nut Driver	5/16"	135678
Retaining Ring Pliers		160396
Ruler, 6"		95960
Scales, Spring (802)		110443
Screwdriver	1/8", 2" Blade	95368
Screwdriver	1/4", 6" Blade	100982
Screwdriver	(Blade Less Than 5/32")	94647
Spring Hook (Pull)		142554
Spring Hook (Pull)		75675
Spring Hook (Push)		75503
Static Ground Strap		346392
Terminal Extractor (Data Set)		341983
Terminal Extractor (40/4)	(MOLEX HT2285)	402840
Tweezers		151392
Wrench	3/16" socket	125752
Wrench, Open End	3/8"	125765
Wrench, Open End	3/16" and 1/4"	129534
Wrench, Open End	5/16" and 3/8"	152835
Wrench, Open End	3/4"	129537
Wrench, Open End	1/2" and 7/16"	129536

5.03 Supplies

All purpose grease — 145867, 4 oz tube or 143484, 1 lb can
 Oil — KS7470
 Thermal compound — 402640
 Ribbon — 402444
 Paper (friction feed) — standard 8-1/2" wide, 5" dia. roll
 Paper (tractor feed)
 Degreaser (trichlorotriflorethylene) — KS20406 L-1

6. ADJUSTMENTS

6.01 The only adjustments in the station are in printers and monitors.

6.02 Monitor adjustments are give in BSP Section 582-213-XXX series or FIMP 579-505-350.

6.03 The 80-column printer adjustments are given in BSP Section 582-210-XXX series or FIMP 579-505-350.

6.04 The 132-column printer adjustments are given in BSP Section 582-210-XXX series.