TO BE SCANNED

MANUAL 382
Issue 1, July 1977

MODEL 40

410072 PRINTER LOGIC CARD

TELETYPE®

INSTALLATION AND OPTIONING MANUAL

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INSTRUCTIONS FOR INSTALLING AND OPTIONING THE 410072 132-COLUMN PRINTER LOGIC CIRCUIT CARD AND 402887 MODIFICATION KIT WHICH PROVIDES THE 410072 CIRCUIT CARD AND 402980 LOWER PAN

1. GENERAL

1.01 This specification covers the new 410072 printer logic card which replaces the 410729 circuit card.

1.02 Operational checkout and troubleshooting procedures for the printer are provided in the following documentation:

Bell System documentation:
Section 582-210-500
Service Manual 325-057 (when available)

Non-Bell documentation:
Teletype Manual 347

1.03 When ordering a new 410072 circuit card to replace a 410729 card in a 40P200 or 40P201 series printer, a 402887 modification kit should be ordered. This modification kit contains the new 410072 circuit card plus a 402980 lower pan that has switch access cutouts for the four switch packs and optioning information.

1.04 The 410072 circuit card assembly offers a number of new operational options. These options are all switch-selectable, with four switch packs mounted on the card itself. All options available on the 410729 circuit card are also available on the 410072 circuit card.

1.05 Listed below are the new additional features:

(a) LEFT-HAND MARGIN adjustment
(b) Additional RIGHT-HAND MARGIN adjustment
(c) 40-Second Idle Line Motor Turnoff
(d) Shift In/Shift Out Capabilities
(e) Escape Sequence Print Suppression
(f) Speed Selection
(g) SSI or OEM Mode

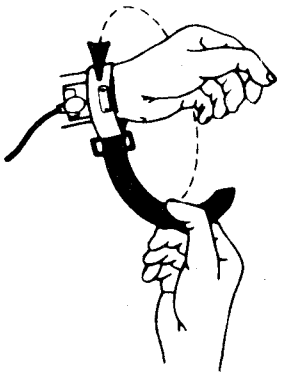
2. INSTALLATION

2.01 Installation of the 410072 circuit card or 402887 modification kit requires the following steps:

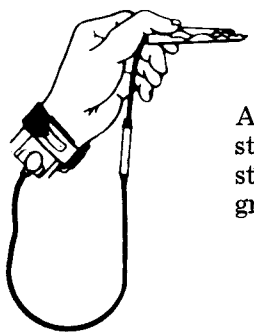
Danger: Remove all AC power from printer cabinet.

- Remove printer from cabinet and place on a suitable working surface.

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



Attach static ground strap tightly to wrist as shown.



Attach clip end of static discharge strap to frame ground.

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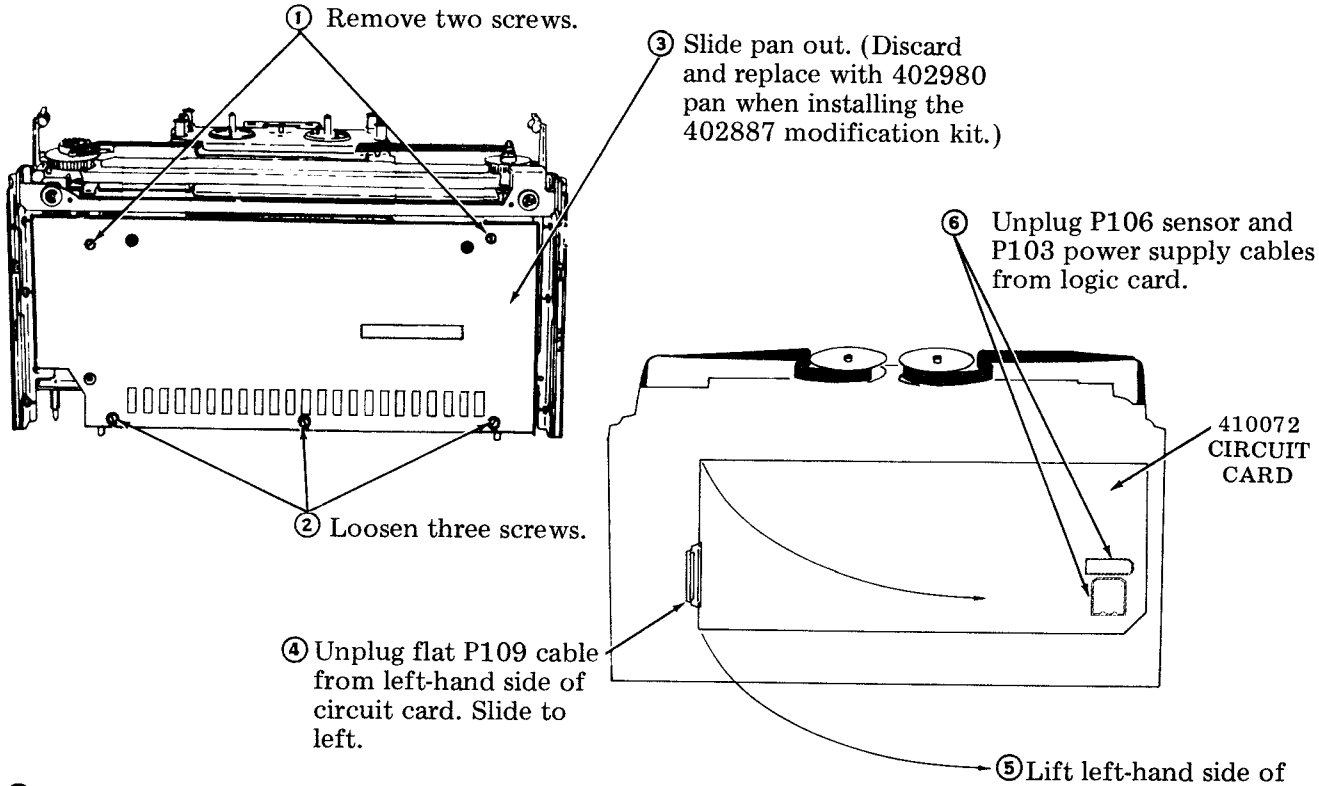
- Place printer on backside.

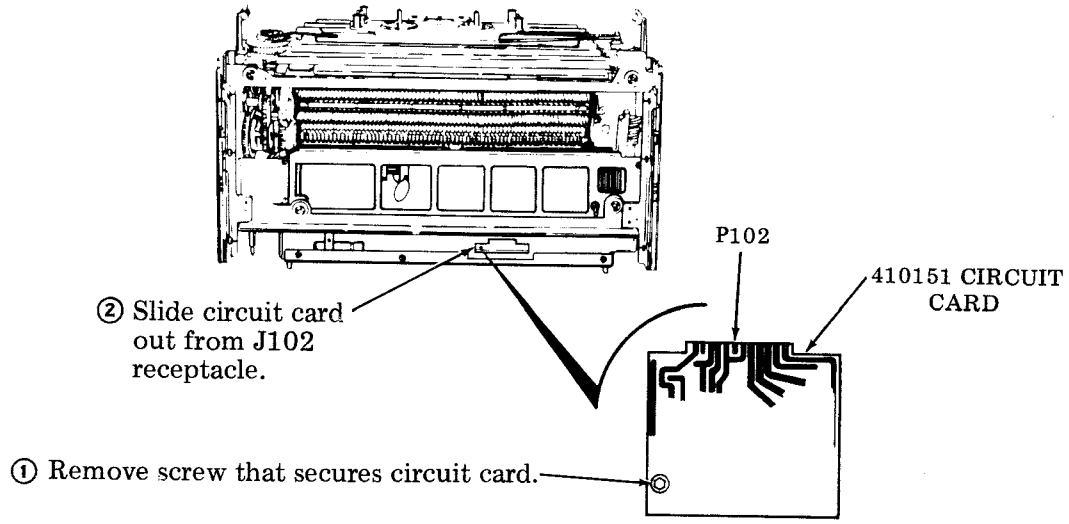


⑦ Remove circuit card, check options on the new circuit card. Refer to Part 3 Activating Options. If OEM mode is selected, check steps below.

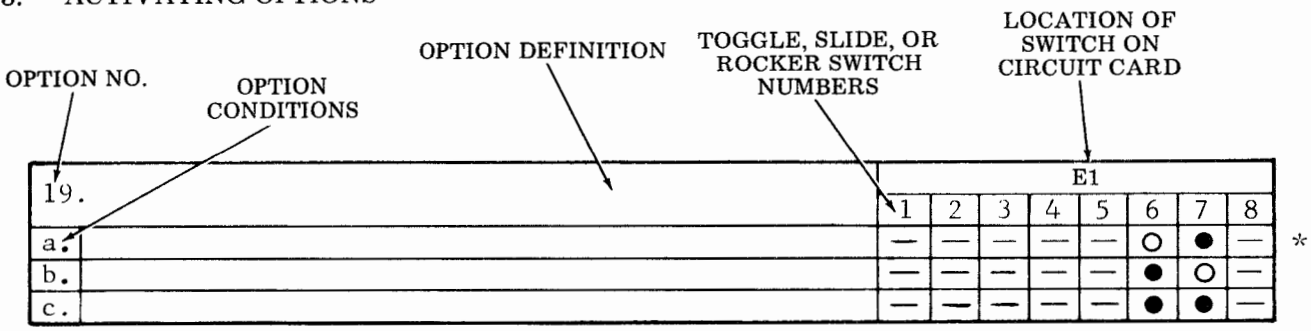
⑧ Reassemble by reversing steps ① through ⑦ .

Note 1: After replacing 410072 circuit card, remake IMPELLER SHAFT SENSOR (Final) and FLAG SENSOR (Final) adjustments. Refer to appropriate Teletype document.

Note 2: If OEM mode is selected, remove 410151 regulator circuit card and check Option 61.b.



3. ACTIVATING OPTIONS

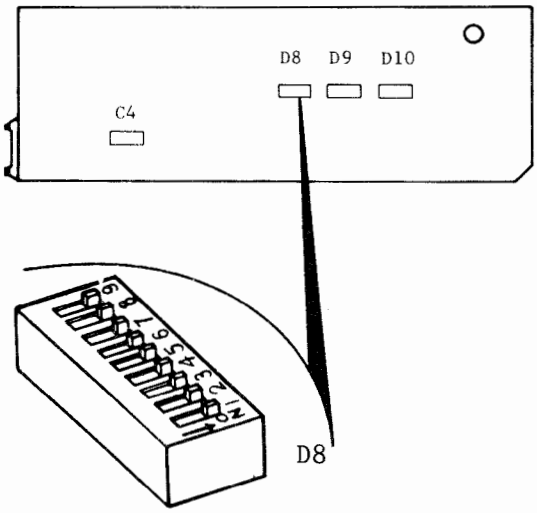


19.	E1								
	1	2	3	4	5	6	7	8	
a.	—	—	—	—	—	○	●	—	*
b.	—	—	—	—	—	●	○	—	
c.	—	—	—	—	—	●	●	—	

Legend:

- ● Indicates switch in ON position.
- ○ Indicates switch in OFF position.
- — Position of switch does not affect option.
- * Factory Programmed.

410072 Printer Logic Circuit Card

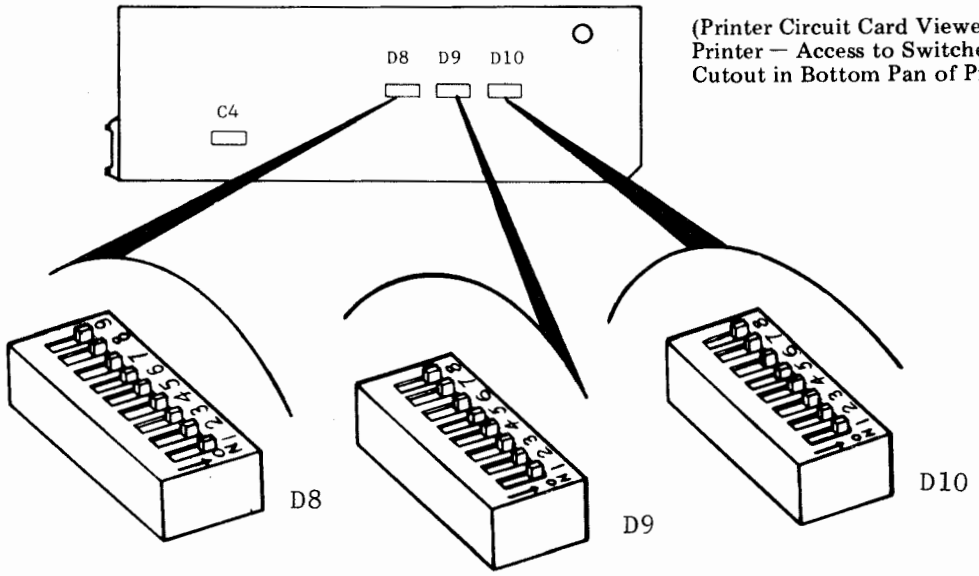


(Printer Circuit Card Viewed From Beneath Printer — Access to Switches is Through a Cutout in Bottom Pan of Printer.)

17. Printer Left Margin and Form Width		D8									
		1	2	3	4	5	6	7	8	9	
a.	First Printed Column -- Column 1	—	—	●	●	●	●	—	—	—	*
b2.	First Printed Column -- Column 2	—	—	●	●	○	●	—	—	—	
b3.	First Printed Column -- Column 3	—	—	●	●	○	○	—	—	—	
b4.	First Printed Column -- Column 4	—	—	●	○	○	○	—	—	—	
b5.	First Printed Column -- Column 5	—	—	○	○	●	○	—	—	—	
b6.	First Printed Column -- Column 6	—	—	○	○	○	●	—	—	—	
b7.	First Printed Column -- Column 7	—	—	○	●	○	○	—	—	—	
b8.	First Printed Column -- Column 8	—	—	●	○	●	○	—	—	—	
b9.	First Printed Column -- Column 9	—	—	○	○	●	●	—	—	—	
b10.	First Printed Column -- Column 10	—	—	○	●	○	●	—	—	—	
b11.	First Printed Column -- Column 11	—	—	●	●	●	○	—	—	—	
b12.	First Printed Column -- Column 12	—	—	●	○	○	●	—	—	—	
b13.	First Printed Column -- Column 13	—	—	○	●	●	○	—	—	—	

(See Legend for ●, ○, —, and * above.)

410072 Printer Logic Circuit Card (Cont)



(Printer Circuit Card Viewed From Beneath Printer — Access to Switches is Through a Cutout in Bottom Pan of Printer.)

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	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●	●	●	○	—	○	○	—	—	—	

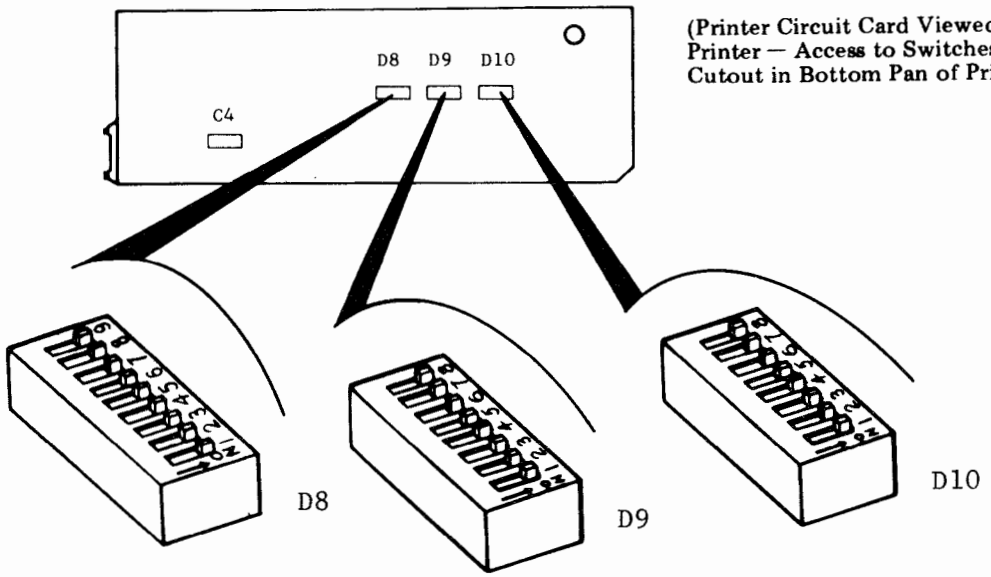
To obtain counts:

121 through 132 program as shown.
109 through 120 program as shown, then operate D9 position 7 off.
97 through 108 program as shown, then operate D9 position 8 off.
85 through 96 program as shown, then operate D8 position 7 off.
73 through 84 program as shown, then operate D8 position 8 off.

(X) indicates desired column number.

(See Legend for ●, ○, —, and * on Page 3.)

410072 Printer Logic Circuit Card (Cont)



(Printer Circuit Card Viewed From Beneath Printer — Access to Switches is Through a Cutout in Bottom Pan of Printer.)

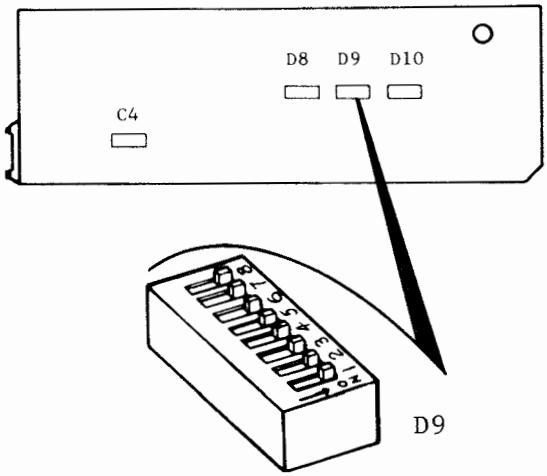
18. Printer Paper Feed Out		D9 1	2	3	4	5	6	7	8	
a.	No Paper Feed Out	—	—	●	—	—	—	—	—	
b.	Paper Feed Out on DSR or RM Loss -- 16 Lines or One Form	—	○	○	—	—	—	—	—	
c.	Paper Feed Out on DSR or RM Loss or ETX -- 16 Lines or One Form	—	●	○	—	—	—	—	—	*

19. Printer Errored Character Symbol		D10 1	2	3	4	5	6	7	8	
a.	Printed on Even Parity Error	—	—	—	—	—	○	●	—	*
b.	Printed on Odd Parity Error	—	—	—	—	—	●	○	—	
c.	Not Printed on Parity Error	—	—	—	—	—	●	●	—	

19. Character Set		D8 1	2	3	4	5	6	7	8	9	
d.	Printers With 96-Character Set	●	○	—	—	—	—	—	—	—	
e.	Printers With 64-Character Set	○	●	—	—	—	—	—	—	—	*
f.	Printers With Extended ASCII Character Set	○	○	—	—	—	—	—	—	—	
g.	Printers With Longest Character Set Having Less Than 64 Characters	○	○	—	—	—	—	—	—	—	

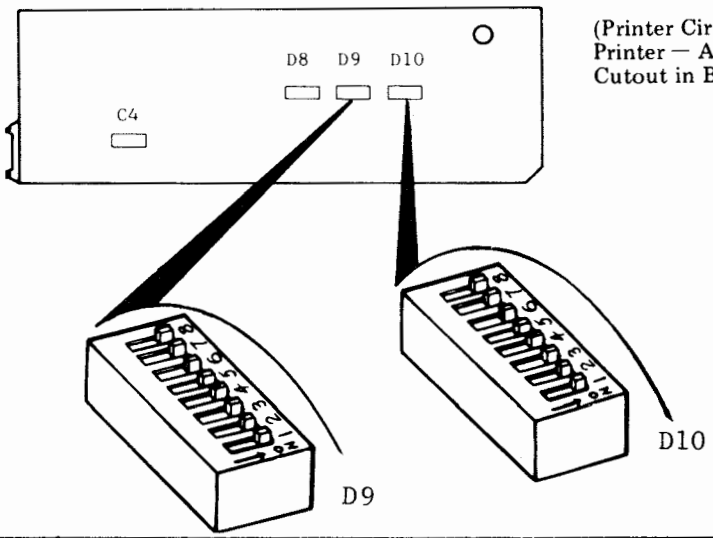
(See Legend for ●, ○, —, and * on Page 3.)

410072 Printer Logic Circuit Card (Cont)



(Printer Circuit Card Viewed From Beneath Printer — Access to Switches is Through a Cutout in Bottom Pan of Printer.)

21. Foldover on Printers With 96-Character Set		D9							
		1	2	3	4	5	6	7	8
a.	Lower Case and Upper Case Print	O	—	—	—	—	—	—	—
b.	Lower Case Prints as Upper Case	●	—	—	—	—	—	—	—



(Printer Circuit Card Viewed From Beneath Printer — Access to Switches is Through a Cutout in Bottom Pan of Printer.)

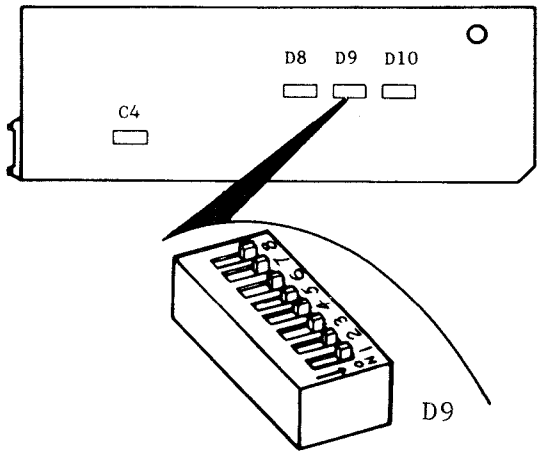
22. Foldover on Printers With 64-Character Set		D9								
		1	2	3	4	5	6	7	8	
a.	Lower Case Prints as Error Symbol	O	—	—	—	—	—	—	—	
b.	Lower Case Prints as Upper Case	●	—	—	—	—	—	—	—	*

23. Extended ASCII on Printer (Extended ASCII)		D10								
		1	2	3	4	5	6	7	8	
a.	Prints Extended ASCII Characters (No Parity Check)	—	—	—	—	—	O	O	—	
b.	Does Not Print Extended ASCII (See Option 19.a., b., or c.)	—	—	—	(As in 19.)		—	—	—	*

Note: Option 23.a. requires local engineering.

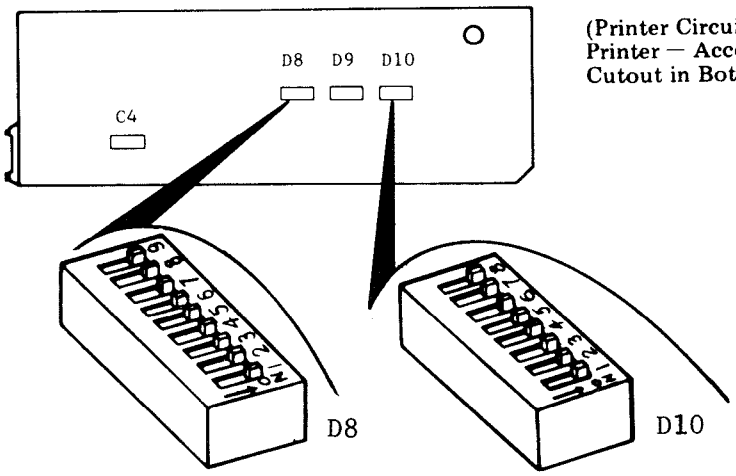
(See Legend for ●, O, —, and * on Page 3.)

410072 Printer Logic Circuit Card (Cont)



(Printer Circuit Card Viewed From Beneath Printer — Access to Switches is Through a Cutout in Bottom Pan of Printer.)

48. Incomplete Form Suppresses Paper Alarm		D9								
		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)	—	—	—	○	—	—	—	—	*



(Printer Circuit Card Viewed From Beneath Printer — Access to Switches is Through a Cutout in Bottom Pan of Printer.)

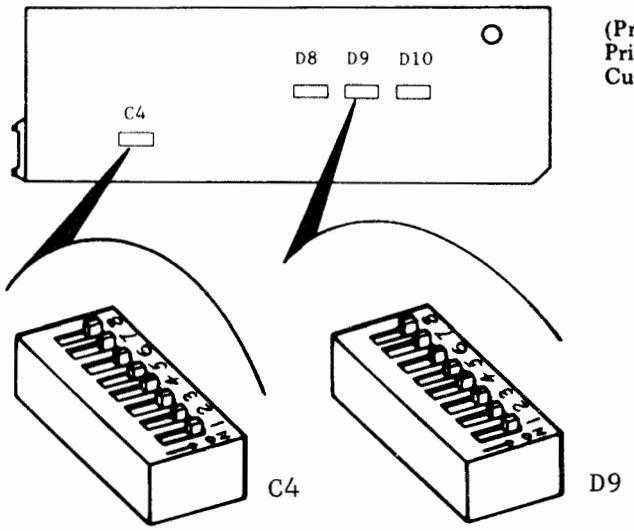
54. Printing of Escape Sequences Suppressed		D10								
		1	2	3	4	5	6	7	8	
a.	Character After ESC Printed as Received	—	—	—	—	—	—	—	○	*
b.	Printing of Character After ESC Suppressed	—	—	—	—	—	—	—	●	

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	—	—	●	—	—	—	—	—	

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

(See Legend for ●, ○, —, and * on Page 3.)

410072 Printer Logic Circuit Card (Cont)



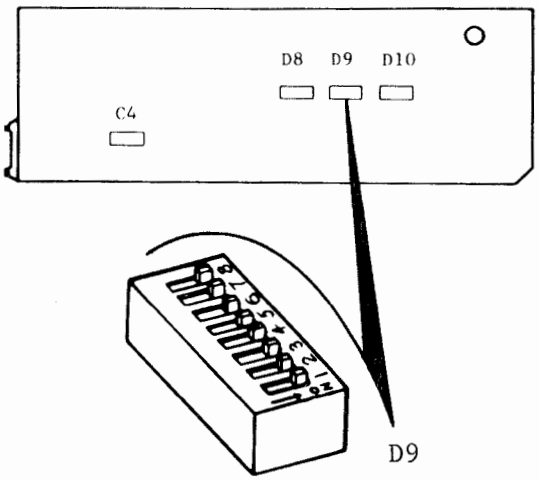
(Printer Circuit Card Viewed From Beneath Printer — Access to Switches is Through a Cutout in Bottom Pan of Printer.)

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	—	—	—	—	—	●	—	—	

59. Speed Selection (Applies Only if Option 57.b. 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	○	○	○	○	○	○	○	●	

(See Legend for ●, ○, —, and * on Page 3.)

410072 Printer Logic Circuit Card (Cont)

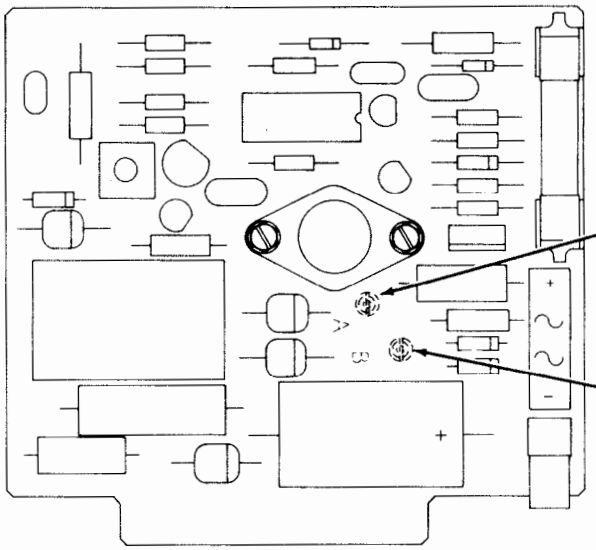


(Printer Circuit Card Viewed From Beneath Printer — Access to Switches is Through a Cutout in Bottom Pan of Printer.)

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

Note: Future alarm mechanism. Switch must be closed when alarm mechanism is not present.

410151 Circuit Card



(Component Side of 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	—	

(See Legend for ●, ○, —, and * on Page 3.)