

Specifications P6 and P7

P6/P7 Series Printers

- 80-column parallel interface — No. P660
- 80-column serial interface — No. P665
- 136-column parallel interface — No. P760
- 136-column serial interface — No. P765

Interface Boards

- Serial interface board (no extra memory) — No. 5202
- Serial interface board (32K extra memory and sockets for two font chips) — No. 5203
- Parallel interface board (32K extra memory and sockets for two font chips) — No. 5204

Font Chips

- Letter Gothic 15 — No. 96-001
- Letter Gothic 12 — No. 96-002
- Bold Italic PS — No. 96-003
- Super Focus 10 — No. 96-006
- Prestige Elite 12 WP — No. 96-013

Color Kits

- P6 — No. 5200
- P7 — No. 5201

P6/P7 Paper Handling Devices

- Sheet guide
P6 — No. 4201 P7 — No. 4301
- Bidirectional tractor
P6 — No. 4202 P7 — No. 4302
- Sheet feeder
P6 — No. 4203 P7 — No. 4303
- Unidirectional tractor
P6 — No. 4209 P7 — No. 4309

P6/P7 Ribbons

- Black fabric
P6 — No. 50-053
(2.2 million character life)
P7 — No. 50-054
(3.0 million character life)
- Four-color fabric (for printers with color kits installed)
CP6 — No. 50-055
CP7 — No. 50-056

Dimensions

- P6
H=4.9", W=16.1", D=13.1", W=18.7 lbs.
- P7
H=4.9", W=22.4", D=13.1", W=25.4 lbs.
- Shippable by UPS

Print Rate

- High-Speed Draft 216 cps
- Regular Draft 180 cps
- Letter Quality 65 cps

Acoustic Noise

- Regular mode 56 dBA
- Quiet mode 53 dBA

Print Head

- Impact 24-wire
- 200 million character life
- .2 mm diameter
- 2 x 12 staggered array

Vertical Line Spacing

- 3, 4, 6, 8 lines per inch
- n/60, n/180, n/360 programmable

Special Features

- Operator panel with font selection
- Digital font display
- Triple-width characters
- Double-width characters
- Double-height characters
- Hex data dump
- Auto paper loading

Resident Font Types

- Draft Gothic 10/Italic Gothic 10
- Draft Gothic 12/Italic Gothic 12
- Draft Gothic 15/Italic Gothic 15
- Draft Gothic 17/Italic Gothic 17
- Draft Gothic 20/Italic Gothic 20
- Draft Gothic HS/Italic Gothic HS
- LQ Courier 10/Italic LQ 10
- LQ Courier 12/Italic LQ 12
- LQ Courier 15/Italic LQ 15
- LQ Courier 17/Italic LQ 17
- LQ Courier 20/Italic LQ 20
- LQ Bold P5
- True Superscript/Subscript

Character Sets

- ASCII Standard
- IBM Graphic
- Italic
- 128 user-defined
- 12 language character sets

Input Buffer

- 8K Standard (Parallel)
- 10K Standard (Serial)

Graphic Resolution

- Up to 360 x 360 dpi

Copy Printing Capacity

- Original and three copies with copy control lever

Paper Widths

- P6 — 5 to 10 inches
- P7 — 5 to 16 inches

Reliability

- MTBF 5000 hours
- MTTR 20 minutes

Administrative Compliances

- UL 478
- CSA C22.2
- VDE 0806 (IEC 380)
- FCC Class B

Main Board Switch Settings

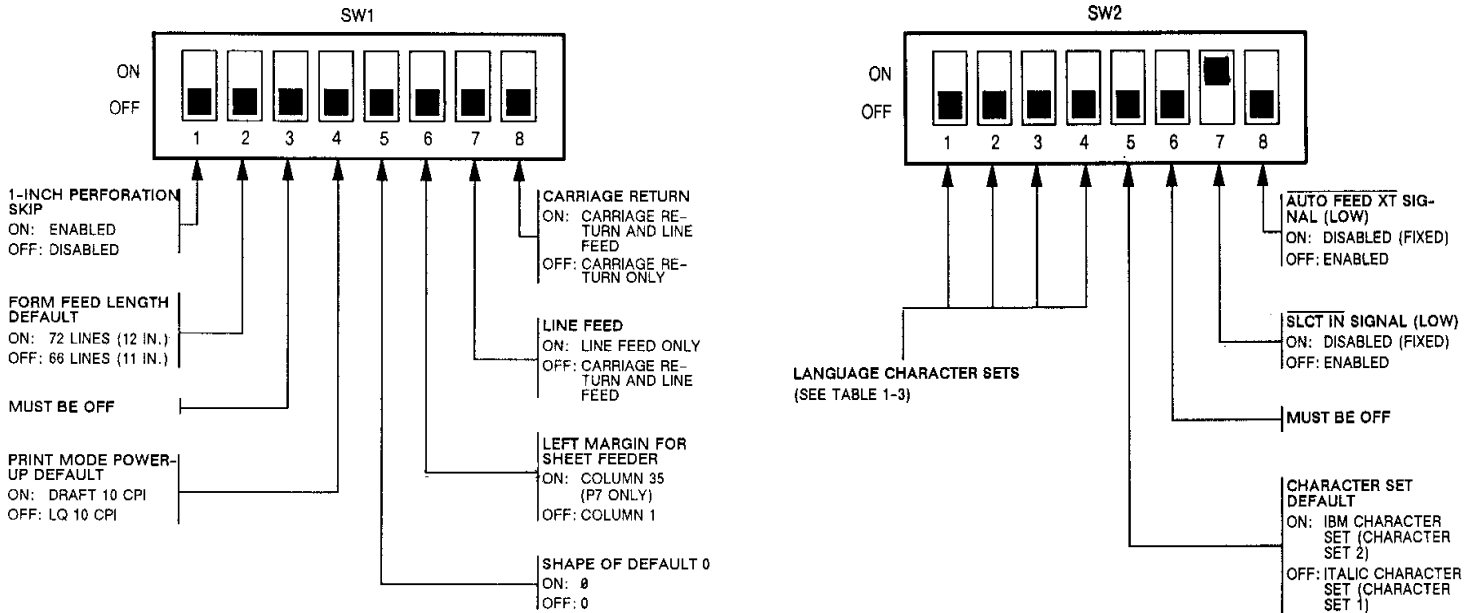


Table 1-3 Language Character Sets

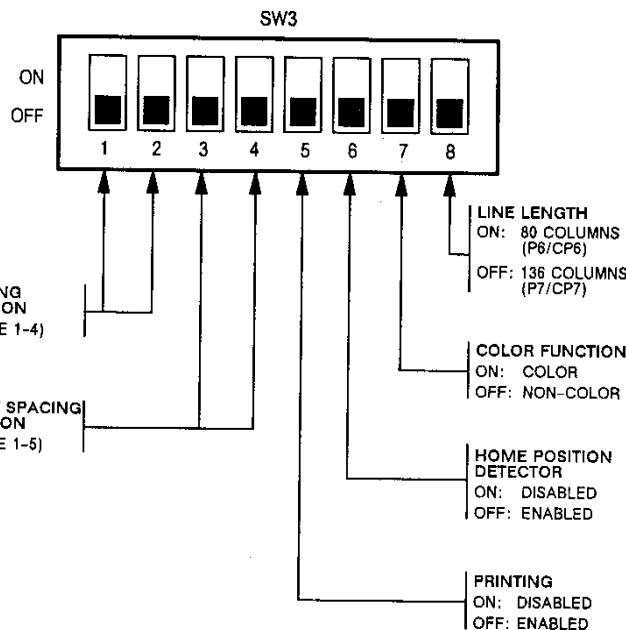
COUNTRY	SW2-1	SW2-2	SW2-3	SW2-4
USA	Off	Off	Off	Off
France	On	Off	Off	Off
Germany	Off	On	Off	Off
England	On	On	Off	Off
Denmark I	Off	Off	On	Off
Sweden	On	Off	On	Off
Italy	Off	On	On	Off
Spain	On	On	On	Off
Japan	Off	Off	Off	On
Norway	On	Off	Off	On
Denmark II	Off	On	Off	On
Netherlands	On	On	Off	On

Table 1-4 LQ Spacing Corrections

LQ SPACING CORRECTION	SW3-1	SW3-2
Standard	Off	Off
Delays by 1/240 in. (to the right)	Off	On
Advances by 1/240 in. (to the left)	On	Off
Advances by 2/240 in. (to the left)	On	On

Table 1-5 HS Draft Spacing Corrections

HS DRAFT SPACING CORRECTION	SW3-3	SW3-4
Standard	Off	Off
Delays by 1/240 in. (to the right)	Off	On
Advances by 1/240 in. (to the left)	On	Off
Advances by 2/240 in. (to the left)	On	On



RS-232 Board Switch Settings

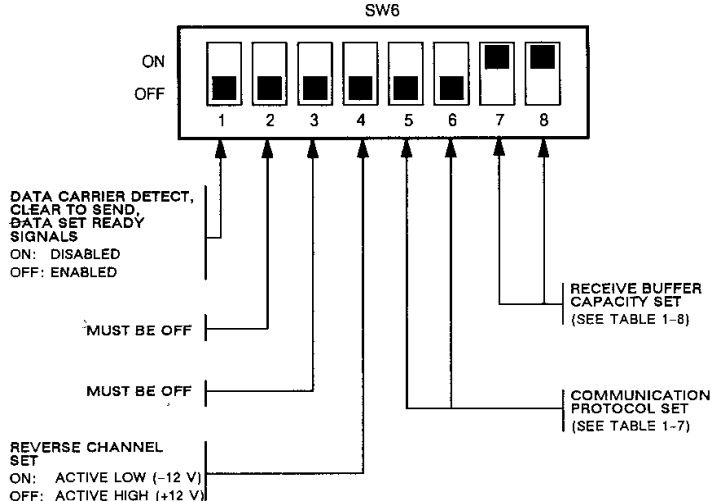
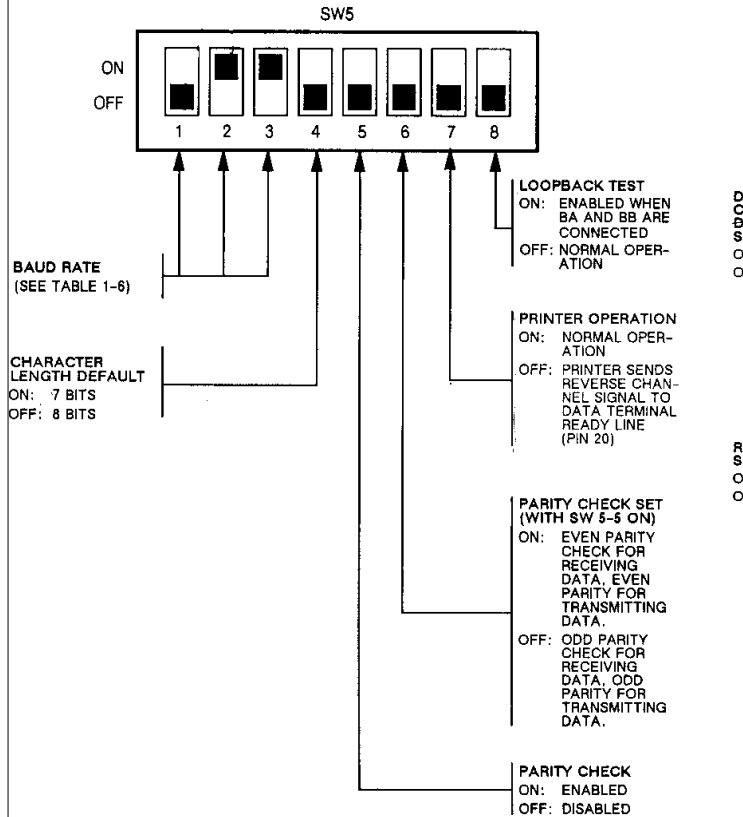


Table 1-6 Baud Rate Switch Settings

BAUD RATE (BITS PER SECOND)	SW5-1	SW5-2	SW5-3
1,200	Off	Off	Off
2,400	Off	Off	On
4,800	Off	On	Off
9,600	Off	On	On
19,200	On	Off	Off
150	On	Off	On
300	On	On	Off
600	On	On	On

Table 1-7 Communication Protocol Switch Settings

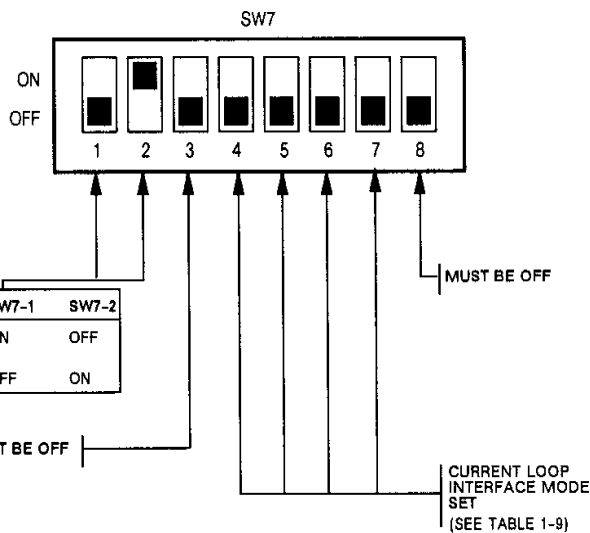
REVERSE CHANNEL	ETX/ACK	X-ON/X-OFF REPETITION	X-ON/X-OFF*	SW6-5	SW6-6
Enabled	Disabled	Disabled	Enabled	Off	Off
Enabled	Disabled	Enabled	Disabled	Off	On
Enabled	Enabled	Disabled	Disabled	On	Off

Table 1-8 Receive Buffer Capacity Switch Settings

RECEIVE BUFFER CAPACITY	SW6-7	SW6-8
152 Characters	Off	Off
288 Characters	Off	On
560 Characters	On	Off
1,936 Characters	On	On

Table 1-9 Current Loop Interface Mode Switch Settings

MODE	SW7-4	SW7-5	SW7-6	SW7-7
Normal operation.	Off	Off	Off	Off
The Pinwriter supplies power to the current loop interface when the host computer is not equipped to do so.	On	Off	Off	On
Executes loopback test when pins 17 and 23 are connected.	On	On	Off	Off
Executes loopback test when pins 24 and 25 are connected.	Off	Off	On	On



P6 and P7 Error and Status Codes

Error Codes Displayed at Power-On

ERROR CODE	DEFINITION
0	Check error in parallel interface controller or print data latch.
1	Check sum error in master firmware ROM.
2	RAM check error in master MPU.
3	Switch check error.
4	Check sum error in CG ROM.
C	Check sum error in firmware ROM or RAM check error in serial interface.
J	Check sum error in slave firmware ROM or RAM check error in slave MPU.
d	Check sum error in firmware ROM or RAM check error in Centronics buffer board.

Pinwriter Self-Tests

TEST NUMBER	CONTROL PANEL BUTTON (HOLD DOWN)	FUNCTION
1	FEED	Prints a stored line to demonstrate print quality and accuracy. Also allows you to check printer line feed, spacing, and ribbon feed operations (user self-test).
2	FONT	Gives the revision level of firmware and a listing of switch settings, and prints a stored line of print styles. Also allows you to check printer line feed, spacing, and ribbon feed operations.
3	QUIET	Gives the revision level of firmware and a listing of switch settings, and enters the hex dump mode.

Error Codes Displayed During Printer Operation

ERROR CODE	DEFINITION
9	Master MPU stall.
H	Home position switch sensing error.
P	+34 V voltage check error (voltage drop).
S	Communication error between master and slave MPU.
A	Color ribbon initialization error/ribbon change error.
o	Control panel cable is not connected.

Font Selections

DISPLAY	SELECTION
0	Letter-quality 10 cpi
1	Letter-quality 12 cpi
2	Letter-quality 15 cpi
3	Letter-quality proportional spacing
4	Draft 10 cpi
5	Draft 12 cpi
6	Draft high speed 12 cpi
7	Draft 15 cpi
8	Draft 17 cpi
9	Draft 20 cpi
A	Host load

Status Codes

STATUS CODE	MEANING	CORRECTIVE ACTION
P.	Paper empty.	Load paper and press SLCT.
C.	Cover open.	Close the acrylic cover and press SLCT.
J.	Paper jam or insertion error when sheet feeder is installed.	Remove jammed paper and reload new paper.
b.	Serial interface buffer overflow.	Press SLCT.
H.	Print head is overheated.	Printing resumes automatically when print head cools.

Software Driver Information

P660 and P665 Select P6 or Epson LQ-1500

P760 or P765 Select P7 or Epson LQ-1500

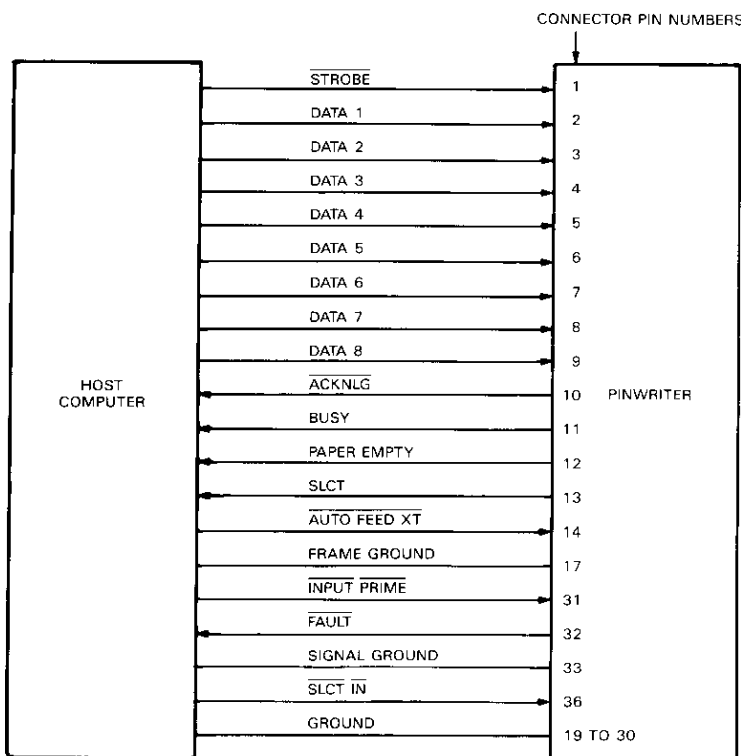
Drivers for the P6 and P7 can be obtained by calling the NEC BBS at 508-635-4706 and downloading the following filenames:

NECP24.EXE Windows 3.1

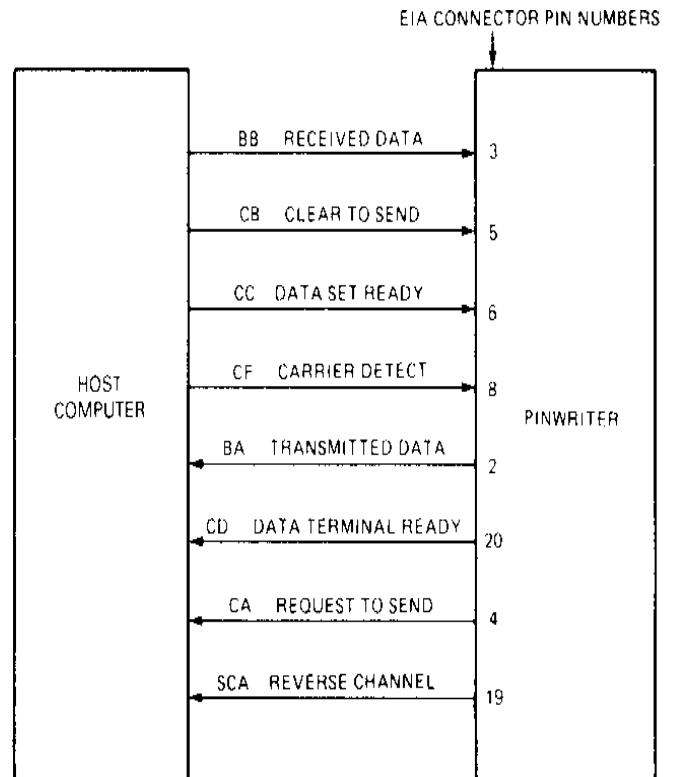
OS2PIN.EXE OS/2 2.X and OS/2 Warp

W3PINDRV.EXE Windows 3.0

Note: Please refer to FastFacts Document 273905 for Serial Cable configurations.

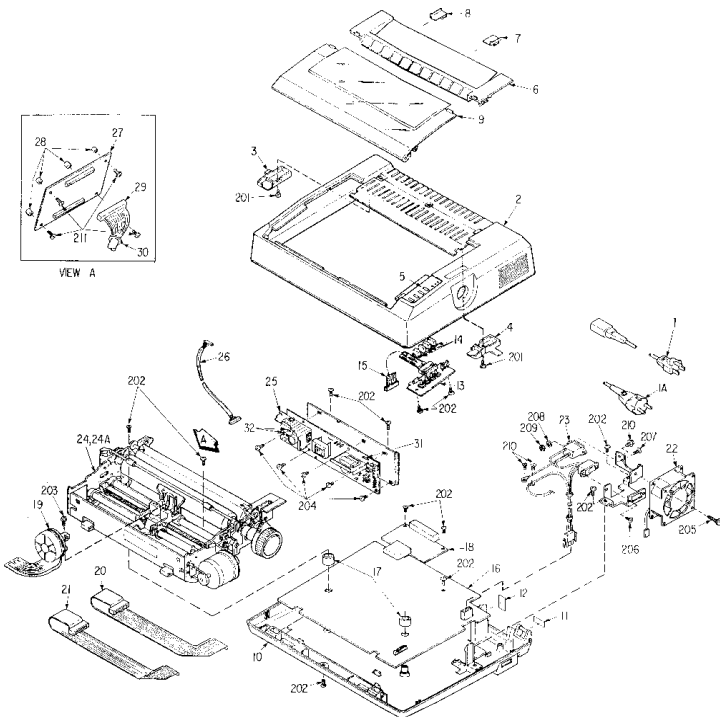


Parallel

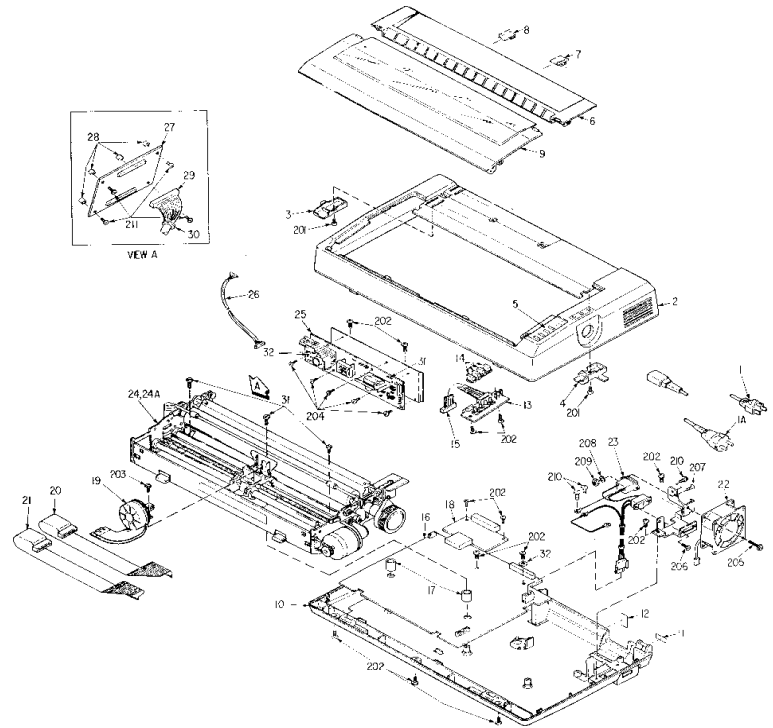


RS-232

P6 Major Assemblies



P7 Major Assemblies

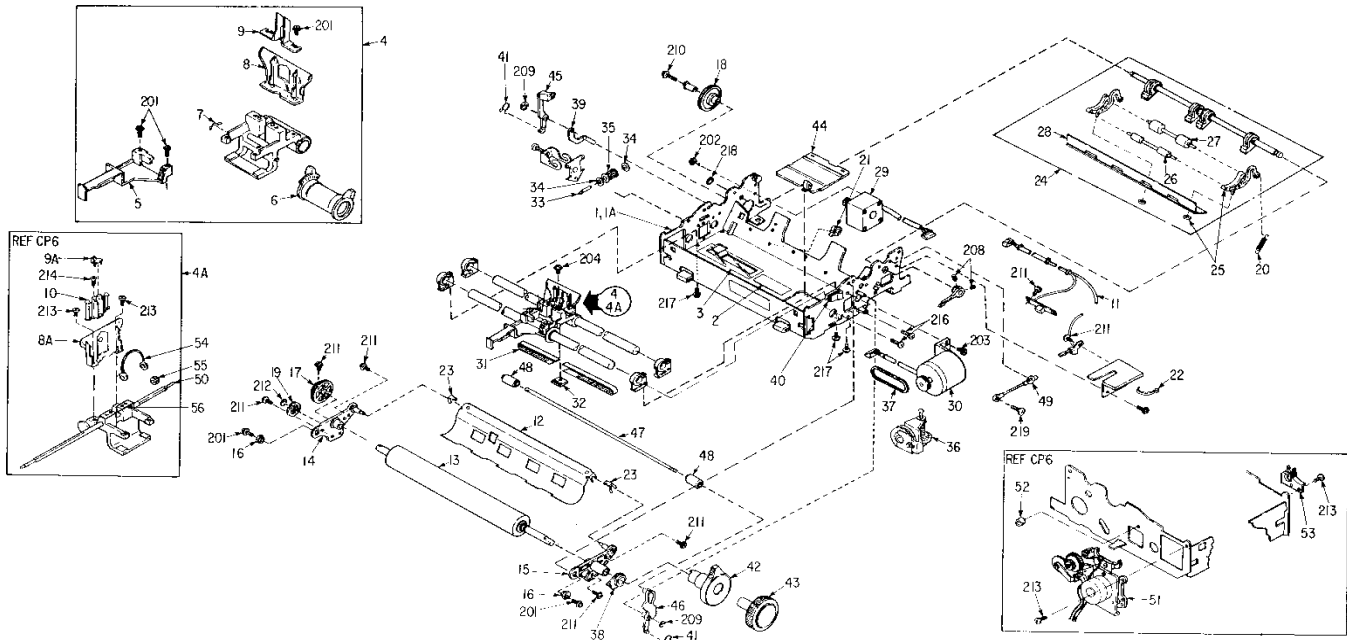


ITEM	PART NUMBER	DESCRIPTION	QTY
1	808-846004-001-A	Power Cord Assembly (115 V)	1
1A	808-840491-001-A	Power Cord Assembly (230 V)	1
2	136-783411-001-A	Top Cover Assembly	1
3	136-758917-002-A	Dust Cover (L)	1
4	136-758917-001-A	Dust Cover (R)	1
5	136-777205-001-A	Control Panel Label	1
6	136-779266-001-A	Cover Insert	1
7	136-754558-001-A	Paper Set Piece (R)	1
8	136-754558-002-A	Paper Set Piece (L)	1
9	136-772033-001-A	Acrylic Cover (Canopy)	1
10	136-777746-001-A	Base Cover Assembly	1
11	136-748947-002-A	Connector Label (Voltage)	1
12	136-754557-A	Ground Label	1
13	136-433271-001-B	PCB Ass'y, Control Panel(G9WZNA)	1
14	136-748937-A	Key Top	4
15	808-840467-001-A	Control Panel Cable	1
16	136-433270-002-C	PCB Ass'y, Mother Board(G9WZMB)	1
17	136-760238-A	Collar	2
18	136-433297-001-A	PCB Ass'y, Parallel Connector (G9XBBA)	1
19	136-201618-001-A	Print Head Assembly	1
20	808-805168-001-A	Print Head Cable	1
21	808-805168-002-A	Print Head Cable	1
22	136-782041-001-A	Fan Assembly	1
23	136-201620-001-A	Switch and Filter Assembly*	1
24	136-201606-301-A	Mechanical Assembly (P6)	1
24A	136-201606-310-A	Mechanical Assembly (CP6)	1
25	136-433272-B	PCB Ass'y, Power Supply (G9WZS)	1
26	808-840521-001-A	DC Cable Assembly	1
27	136-432192-A	PCB Ass'y, Color Driver (G9SGW)	1
28	136-754173-A	Collar A (CP6 only)	4
29	808-840236-002-A	Connector Cable Ass'y (CP6 only)	1
30	808-814004-923-A	TY-23M Cable Tie (CP6 only)	1
31	808-960321-001-A	Fuse 250 V, 2 A	1
32	808-960321-012-A	Fuse 125 V, 4 A	2
201	808-802044-310-0	Screw BCPTS 3*10*15BF	2
202	808-802044-412-0	Screw SL-CPIMS 3*12*15BF	12
203	805-310003-012-0	Screw SL-CPIMS 3*6*15BF	2
204	805-310003-006-0	Screw PL-CPIMS 3*37*15BF	5**
205	805-300003-037-0	Screw PL-CPIMS 3*6*15BF	2
206	805-300003-006-0	Screw CFIMS 3*12*15BF	2
207	805-010003-012-0	Washer #2STLWA 3*15BF	2
208	805-622003-0	Nut AHXIN 3*15BF	2
209	805-500003-0	Screw PL-CPIMS 4*8*15BF	3
210	805-300004-008-0	Screw SL-CPIMS 3*10*15BF (CP6)	4
211	805-310003-010-0		

ITEM	PART NUMBER	DESCRIPTION	QTY
1	808-846004-001-A	Power Cord Assembly (115 V)	1
1A	808-840491-001-A	Power Cord Assembly (230 V)	1
2	136-783412-001-A	Top Cover Assembly	1
3	136-758917-002-A	Dust Cover (L)	1
4	136-758917-001-A	Dust Cover (R)	1
5	136-777205-001-A	Control Panel Label	1
6	136-779267-001-A	Cover Insert	1
7	136-754558-001-A	Paper Set Piece (R)	1
8	136-754558-002-A	Paper Set Piece (L)	1
9	136-772036-001-A	Acrylic Cover (Canopy)	1
10	136-777747-001-A	Base Cover Assembly	1
11	136-748947-002-A	Connector Label (Voltage)	1
12	136-754557-A	Ground Label	1
13	136-433271-001-B	PCB Ass'y, Control Panel (G9WZNA)	1
14	136-748937-A	Key Top	4
15	808-840467-002-A	Control Panel Cable	1
16	136-433270-002-C	PCB Ass'y, Mother Board (G9WZMB)	1
17	136-760238-A	Collar	2
18	136-433297-001-A	PCB Ass'y, Parallel Connector (G9XBBA)	1
19	136-201618-001-A	Print Head Assembly	1
20	808-805168-001-A	Print Head Cable	1
21	808-805168-002-A	Print Head Cable	1
22	136-782041-501-A	Fan Assembly	1
23	136-201620-501-A	Switch and Filter Assembly*	1
24	136-201606-801-A	Mechanical Assembly (P7)	1
24A	136-201606-810-A	Mechanical Assembly (CP7)	1
25	136-433272-B	PCB Ass'y, Power Supply (G9WZS)	1
26	808-840521-001-A	DC Cable Assembly	1
27	136-432192-A	PCB Ass'y, Color Driver (G9SGW) (CP7 only)	1
28	136-754173-A	Collar A (CP7 only)	4
29	808-840236-002-A	Connector Cable Ass'y (CP7 only)	1
30	808-814004-923-A	TY-23M Cable Tie (CP7 only)	1
31	136-757787-A	Shoulder Screw	3
32	136-762285-A	PCB Washer	1
33	136-960321-001-A	Fuse 250 V, 2 A	1
34	808-960321-012-A	Fuse 125 V, 4 A	2
201	808-802044-310-0	Screw BCPTS 3*10*15BF	2
202	808-802044-412-0	Screw SL-CPIMS 3*12*15BF	13
203	805-310003-012-0	Screw SL-CPIMS 3*6*15BF	2
204	805-310003-006-0	Screw PL-CPIMS 3*37*15BF	5**
205	805-300003-037-0	Screw PL-CPIMS 3*6*15BF	2
206	805-300003-006-0	Screw CFIMS 3*12*15BF	2
207	805-010003-012-0	Washer #2STLWA 3*15BF	2
208	805-622003-0	Nut AHXIN 3*15BF	2
209	805-500003-0	Screw PL-CPIMS 4*8*15BF	3
210	805-300004-008-0	Screw SL-CPIMS 3*10*15BF	2
211	805-310003-010-0	Screw SL-CPIMS 3*10*15BF (CP7)	4

Note: Due to the age of this printer some parts may be limited. Please check with our Parts Department at 1-800-388-8888 for availability.

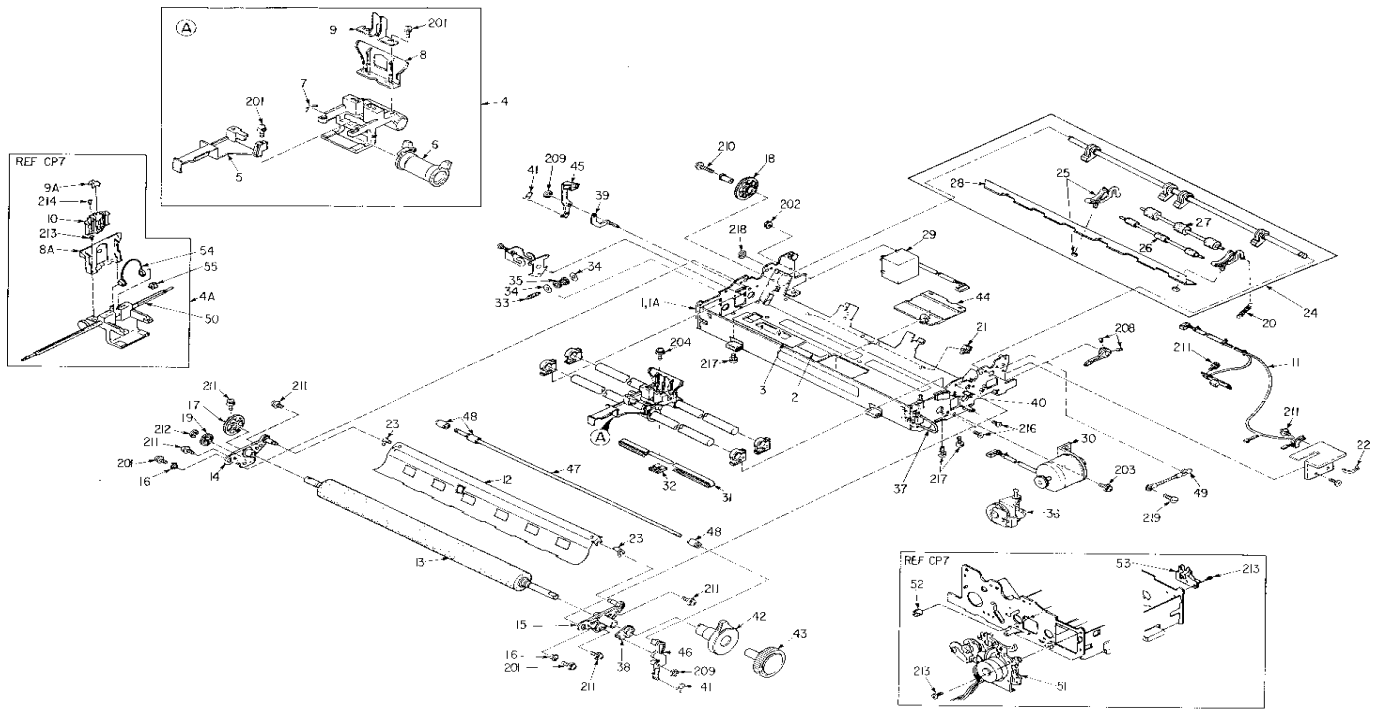
P6 Mechanical Assembly



ITEM	PART NUMBER	DESCRIPTION	QTY
1	136-201607-301-A	Frame Ass'y (P6)	1
1A	136-201607-310-A	Frame Ass'y (CP6)	1
2	136-772950-B	Font Indicator Sheet	1
3	136-772968-A	Dust Sheet	1
4	136-201610-001-A	Carriage Ass'y (P6)	1
4A	136-201610-510-A	Carriage Ass'y (CP6)	1
5	136-757147-C	Connector Guide	1
6	136-763420-A	Eccentric Sleeve	1
7	136-751476-A	Detent Spring	1
8	136-757527-A	Card Holder (P6)	1
8A	136-779981-901-A	Card Holder (CP6)	1
9	136-757537-A	Ribbon Guide (P6)	1
9A	136-762227-A	Ribbon Guide (CP6)	1
10	136-762242-A	Ribbon Lift Ass'y (CP6 only)	1
11	136-772965-001-A	Paper-Out Sensor Ass'y	1
12	136-759857-001-A	Paper Guide Ass'y	1
13	136-757160-A	Platen	1
14	136-757474-A	Platen Holder (L)	1
15	136-757479-A	Platen Holder (R)	1
16	136-751468-A	Eccentric Bushing	2
17	136-757482-A	Platen Gear	1
18	136-771905-A	Line Feed Gear (30D)	1
19	136-757572-A	Idler Gear	1
20	136-757524-A	Pressure Spring	4
21	808-811031-001-A	Wire Saddle, WS-1NS	2
22	808-814004-923-A	1B Tie	2
23	136-757654-A	Lock Piece	1
24	136-763399-001-A	Pressure Roller Ass'y	1
25	136-757497-B	Roller Support (with washer)	4
26	136-757159-002-A	Pressure Roller (Front)	2
27	136-757159-001-A	Pressure Roller (Rear)	2
28	136-777984-001-A	Pressure Sheet Ass'y	1
29	136-201156-B	Line Feed Motor Ass'y	1
30	136-202114-001-B	Spacing Motor Ass'y	1
31	808-805108-301-A	Carriage Drive Belt	1
32	136-750195-A	Belt Holder	1
33	136-750290-A	Driven Pulley Shaft	1
34	136-751499-A	Driven Pulley Shim	2
35	136-750264-A	Driven Pulley Ass'y	1
36	136-037964-B	Ribbon Feed Ass'y	1
37	136-750222-A	Ribbon Drive Belt	1
38	136-751474-A	Release Cam	1
39	136-757511-A	Insertion Switch Lever	1
40	808-955130-501-A	Cable Clamp	1
41	136-757512-001-A	Bail Arm Spring	2
42	136-757529-A	Paper Release Lever	1
43	136-757530-A	Platen Knob	1
44	136-757156-C	Cable Cover	1
45	136-757507-A	Bail Arm (L)	1
46	136-757508-A	Bail Arm (R)	1
47	136-757641-A	Bail Shaft	1
48	136-762248-A	Bail Roller	2
49	136-772969-A	Field Ground Cable	1
50	136-766870-301-A	Change Shaft (CP6 only)	1
51	136-762245-A	Ribbon Change Ass'y (CP6 only)	1

ITEM	PART NUMBER	DESCRIPTION	QTY
52	136-763443-A	Oldham Coupling	1
53	136-766865-A	Cassette Holder (R) (CP6 only)	1
54	136-766894-A	Limit Sleeve (CP6 only)	1
55	136-766893-A	Slide Torque Gear (CP6 only)	1
56	136-777007-A	Spacer (CP6 only)	1
201	805-300003-010-0	Screw PL-CPIMS 3*10*15BF	6**
202	808-802086-031-0	Nut #1FSHEXIN 3*15BF	2
203	805-310004-008-0	Screw SL-CPIMS 4*8*15BF	2
204	805-330003-006-0	Screw L-CPIMS 3*6*15BF	1
208	808-802002-404-0	Set Screw M4*L4	2
209	803-010030-032-0	Retainer E-32	2
210	805-300004-024-0	Screw PL-CPIMS 4*24*15BF	1
211	805-300003-008-0	Screw PL-CPIMS 3*8*15BF	9
212	803-010030-050-0	Retainer E-50	1
213	805-310003-008-0	Screw SL-CPIMS 3*8*15BF (CP6 only)	6
214	805-010003-006-0	Screw CFIMS 3*6*15BF (CP6 only)	1
216	805-330004-012-0	Screw L-CPIMS 4*12*15BF	4
217	805-330004-026-0	Screw L-CPIMS 4*26*15BF	4
218	803-010030-064-0	Retainer E-64	1
219	805-310003-007-0	Screw SL-CPIMS 3*7*15BF	1

P7 Mechanical Assembly



ITEM	PART NUMBER	DESCRIPTION	QTY
1	136-201607-801-A	Frame Ass'y (P7)	1
1A	136-201607-810-A	Frame Ass'y (CP7)	1
2	136-772950-B	Font Indicator Sheet	1
3	136-772968-A	Dust Sheet	1
4*	136-201610-001-A	Carriage Ass'y (P7)	1
4A*	136-201610-510-A	Carriage Ass'y (CP7)	1
5	136-757147-C	Connector Guide	1
6*	136-763420-A	Eccentric Sleeve	1
7	136-751476-A	Detent Spring	1
8	136-757527-A	Card Holder (P7)	1
8A	136-779081-001-A	Card Holder (CP7)	1
9	136-757537-A	Ribbon Guide (P7)	1
9A	136-762227-A	Ribbon Guide (CP7)	1
10	136-762242-A	Ribbon Lift Ass'y (CP7 only)	1
11	136-772965-501-A	Paper-Out Sensor Ass'y	1
12	136-759857-501-A	Paper Guide Ass'y	1
13*	136-757460-B	Platen	1
14*	136-757474-A	Platen Holder (L)	1
15*	136-757479-A	Platen Holder (R)	1
16	136-751468-A	Eccentric Bushing	2
17	136-757482-A	Platen Gear	1
18	136-771905-A	Line Feed Gear (30D)	1
19	136-757572-A	Idler Gear	1
20	136-757524-A	Pressure Spring	4
21	808-811031-001-A	Wire Saddle, WS-1NS	3
22	808-814004-923-A	IB Tie	1
23	136-757654-A	Lock Piece	2
24*	136-763399-501-A	Pressure Roller Ass'y	1
25*	136-757497-B	Roller Support (with washer)	4
26*	136-757607-A	Pressure Roller (Front)	2
27*	136-757608-A	Pressure Roller (Rear)	2
28*	136-777984-501-A	Pressure Sheet Ass'y	1
29	136-201156-B	Line Feed Motor Ass'y	1
30	136-202114-501-B	Spacing Motor Ass'y	1
31	808-805108-801-A	Carriage Drive Belt	1
32	136-750195-A	Belt Holder	1
33	136-750290-A	Driven Pulley Shaft	1
34	136-751499-A	Driven Pulley Shim	2
35	136-750264-A	Driven Pulley Ass'y	1
36	136-037964-B	Ribbon Feed Ass'y	1
37	136-750222-A	Ribbon Drive Belt	1
38	136-751474-A	Release Cam	1
39	136-757511-A	Insertion Switch Lever	1
40	808-955130-501-A	Cable Clamp	1
41	136-757512-001-A	Bail Arm Spring	2
42	136-757529-A	Paper Release Lever	1
43	136-757530-A	Platen Knob	1
44	136-757156-C	Cable Cover	1
45	136-757507-A	Bail Arm (L)	1
46	136-757508-A	Bail Arm (R)	1
47	136-757552-A	Bail Shaft	1
48	136-762248-A	Bail Roller	3
49	136-772969-A	Field Ground Cable	1
50	136-766870-801-A	Change Shaft (CP7 only)	1
51	136-762245-A	Ribbon Change Ass'y (CP7 only)	1

ITEM	PART NUMBER	DESCRIPTION	QTY
52	136-763443-A	Oldham Coupling	1
53	136-766865-A	Cassette Holder (R) (CP7 only)	1
54	136-766894-A	Limit Sleeve (CP7 only)	1
55	136-766893-A	Slide Torque Gear (CP7 only)	1
201	805-300003-010-0	Screw PL-CPIMS 3*10*15BF	6**
202	808-802086-031-0	Nut #1FSHEXIN 3*15BF	2
203	805-310004-008-0	Screw SL-CPIMS 4*8*15BF	2
204	805-330003-006-0	Screw L-CPIMS 3*6*15BF	1
208	808-802002-404-0	Set Screw M4*L4	2
209	803-010030-032-0	Retainer E-32	2
210	805-300004-024-0	Screw PL-CPIMS 4*24*15BF	1
211	805-300003-008-0	Screw PL-CPIMS 3*8*15BF	9
212	803-010030-050-0	Retainer E-50	1
213	805-310003-008-0	Screw SL-CPIMS 3*8*15BF (CP7 only)	6
214	805-010003-006-0	Screw CFIMS 3*6*15BF (CP7 only)	1
216	805-330004-012-0	Screw L-CPIMS 4*12*15BF	4
217	805-330004-026-0	Screw L-CPIMS 4*26*15BF	4
218	803-010030-064-0	Retainer E-64	1
219	805-310003-007-0	Screw SL-CPIMS 3*7*15BF	1

P6 and P7 Control and Escape Codes

CONTROL CODE OR SEQUENCE	CONTROL CHARACTER EQUIVALENTS		FUNCTION
	HEX	DECIMAL	
Backspace (BS)	08	08	Moves the print head one space to the left (backspace).
Cancel (CAN)	18	24	Cancels current line of data. Cancels elongated printing mode.
Carriage Return (CR)	0D	13	Moves the print head to the left margin.
Delete (DEL)	7F	127	Deletes the preceding character.
Device Control 1 (DC1)	11	17	Places the printer in the active state. SW2-7 must be off.
Device Control 2 (DC2)	12	18	Cancels condensed print, returning the printer to the previously set print mode.

CONTROL CODE OR SEQUENCE	CONTROL CHARACTER EQUIVALENTS		FUNCTION
	HEX	DECIMAL	
FS R	52	82	Selects reverse line feed. This command is ignored when sheet feeder is installed.
FS S(n)	53(n)	83(n)	Selects 12 cpi printing. n=0 selects draft 12. n=1 selects high-speed 12.
FS V(n)	56(n)	86(n)	Selects vertical enlargement. n=0 cancels enlargement. n=1 selects double vertical enlargement.
FS Z(n1)(n2)	5A(n1)(n2)	90(n1)(n2)	Selects high-density dot graphics (360 dpi).
FS @	40	64	Initializes the printer to default values except for user-defined buffer.

CONTROL CODE OR SEQUENCE	CONTROL CHARACTER EQUIVALENTS		FUNCTION
	HEX	DECIMAL	
Device Control 3 (DC3)	13	19	Places the printer in the inactive state. The lights on the operator control panel are not affected. The printer will ignore all codes until it receives a Select Printer code (DC1). SW2-7 must be off.
Device Control 4 (DC4)	14	20	Cancels elongated printing mode.
Form Feed (FF)	0C	12	Advances the paper one page length. With sheet feeder installed, ejects a sheet already in the printer to the stacker and inserts the next sheet from the hopper.
Horizontal Tab (HT)	09	09	Advances the paper to the next preset horizontal tab.
Line Feed (LF)	0A	10	Advances the paper one line.
Shift In (SI)	0F	15	Selects condensed printing mode (17 cpi or 20 cpi).
Shift Out (SO)	0E	14	Selects one-line elongated printing mode.
Vertical Tab (VT)	0B	11	Advances the paper to the next preset vertical tab.
FSC 0	30	48	Sets line spacing at 8 lines per inch.
ESC 2	32	50	Sets line spacing at 6 lines per inch.
ESC 3(n)	33(n)	51(n)	Sets line spacing at n/180-inch where n = 0 to 255.
ESC 4	34	52	Selects italic printing.
ESC 5	35	53	Cancels italic printing.

CONTROL CODE OR SEQUENCE	CONTROL CHARACTER EQUIVALENTS		FUNCTION
	HEX	DECIMAL	
Device Control 3 (DC3)	13	19	Places the printer in the inactive state. The lights on the operator control panel are not affected. The printer will ignore all codes until it receives a Select Printer code (DC1). SW2-7 must be off.
Device Control 4 (DC4)	14	20	Cancels elongated printing mode.
Form Feed (FF)	0C	12	Advances the paper one page length. With sheet feeder installed, ejects a sheet already in the printer to the stacker and inserts the next sheet from the hopper.
Horizontal Tab (HT)	09	09	Advances the paper to the next preset horizontal tab.
Line Feed (LF)	0A	10	Advances the paper one line.
Shift In (SI)	0F	15	Selects condensed printing mode (17 cpi or 20 cpi).
Shift Out (SO)	0E	14	Selects one-line elongated printing mode.
Vertical Tab (VT)	0B	11	Advances the paper to the next preset vertical tab.
FSC 0	30	48	Sets line spacing at 8 lines per inch.
ESC 2	32	50	Sets line spacing at 6 lines per inch.
ESC 3(n)	33(n)	51(n)	Sets line spacing at n/180-inch where n = 0 to 255.
ESC 4	34	52	Selects italic printing.
ESC 5	35	53	Cancels italic printing.

CONTROL CODE OR SEQUENCE	CONTROL CHARACTER EQUIVALENTS		FUNCTION
	HEX	DECIMAL	
ESC N(n)	4E(n)	78(n)	Selects skip-over perforation function where n = 1 to 127 lines.
ESC O	4F	79	Cancels skip-over perforation function.
FSC P	50	80	Selects 10 cpi printing mode.
ESC Q(n)	51(n)	81(n)	Sets right margin where n = 1 to 255 character columns. Maximum value of n depends upon the pitch.
ESC R(n)	52(00-0B)	82(00-11)	Selects language character sets. n=0 United States n=1 France n=2 Germany n=3 England n=4 Denmark I n=5 Sweden n=6 Italy n=7 Spain n=8 Japan n=9 Norway n=10 Denmark II n=11 Netherlands
ESC S(n)	53(n)	83(n)	Selects superscripts or subscripts. n=0 selects superscripts. n=1 selects subscripts.
ESC SI	0F	15	Selects condensed printing mode. Same as SI.
ESC SO	0E	14	Selects one-line elongated printing mode. Same as SO.
ESC SP(n)	20(n)	32(n)	Sets the space between characters at n dots where n = 0 to 127.
ESC T	54	84	Cancels superscripts and subscripts.

P6 and P7 Control and Escape Codes (Cont'd)

CONTROL CODE OR SEQUENCE	CONTROL CHARACTER EQUIVALENTS		FUNCTION
	HEX	DECIMAL	
ESC U(n)	55(n)	85(n)	Selects unidirectional printing or bidirectional printing in text or graphics. n=0 selects bidirectional printing. n=1 selects unidirectional printing.
ESC V(n) (data) ESC V NUL	56(n) 56 00	86(n) 86 0	Repeats data n times where n = 1 to 255. Defines beginning of data to be repeated. Must be immediately followed by data. ESC V NUL indicates end of data to be repeated. Amount of data cannot exceed size of input buffer.
ESC W(n)	57(n)	87(n)	Selects or cancels elongated printing. n=1 selects elongated printing. n=0 cancels elongated printing.
ESC Y(n1)(n2)	59(n1)(n2)	89(n1)(n2)	Selects high-speed double-density dot graphics (120 dots per inch).
ESC Z(n1)(n2)	5A(n1)(n2)	90(n1)(n2)	Selects quadruple-density dot graphics (240 dots per inch).
ESC a(n)	61(n)	97(n)	Selects justification. n=0 selects left justification. n=1 selects center justification. n=2 selects right justification. n=3 selects full justification.
ESC e 0(n)	65 30(n)	101 48(n)	Sets horizontal tabs at every column n, based upon the current pitch. The value of n ranges from 1 to 255.
ESC e 1(n)	65 31(n)	101 49(n)	Sets vertical tabs at every line n, based upon the current line spacing. The value of n ranges from 1 to 255.

CONTROL CODE OR SEQUENCE	CONTROL CHARACTER EQUIVALENTS		FUNCTION
	HEX	DECIMAL	
ESC x(n)	78(n)	120(n)	Selects the draft or letter-quality mode. n=0 selects draft mode. n=1 selects letter-quality mode.
ESC *(m) (n1)(n2)	2A (m) (n1)(n2)	42 (m) (n1)(n2)	Prints selected-density dot graphics. See Table 4-3 for value of m.
ESC (n)	2D(n)	45(n)	Selects or cancels continuous underlining. n=1 selects underlining. n=0 cancels underlining.
ESC (n)	2F(n)	47(n)	Selects a vertical tab channel where n = 0 to 7.
ESC #	23	35	Cancels control of the eighth data bit.
ESC \$(n1)(n2)	24(n1)(n2)	36(n1)(n2)	Moves the print head to an absolute horizontal position. The position, in inches, is determined by the formula (n1+n2*256)/60.
ESC \ (n1)(n2)	5C(n1)(n2)	92(n1)(n2)	Moves the print head a specified distance in either direction. The distance, in inches, is determined by the following formulas. Draft (n1+n2*256)/120 LQ (n1+n2*256)/180 PS (n1+n2*256)/180
ESC ! (n)	21(n)	33(n)	Selects any print style or combination according to the value of n (n = 0 to 255). See Table 4-4 to calculate the value of n.
ESC % (n)	25(n)	37(n)	Selects either the internal or user-defined character set. n=0 selects internal set. n=1 selects user-defined set.

CONTROL CODE OR SEQUENCE	CONTROL CHARACTER EQUIVALENTS		FUNCTION
	HEX	DECIMAL	
ESC f 0(n)	66 30(n)	102 48(n)	Moves print head n columns after printing data in buffer. The value of n ranges from 1 to 255.
ESC f 1(n)	66 31(n)	102 49(n)	Advances the paper n lines after printing data in buffer. The value of n ranges from 1 to 255.
ESC g	67	103	Selects 15 cpi printing.
ESC j(n)	6A(n)	106(n)	Reverses the paper n/180-inch where n=0 to 255. Line spacing is not changed.
ESC b(c)(n1)(n2) (n...)NUL	62(c)(n1) (n2)(n...) 00	98(c)(n1) (n2)(n...) 00	Sets vertical tabs in tab channels.
ESC l(n)	6C(n)	108(n)	Sets left margin where n = 0 to 255 character columns.
ESC p(n)	70(n)	112(n)	Selects or cancels proportional spacing. n=1 selects proportional spacing. n=0 cancels proportional spacing.
ESC r(n) *See note.	72(00-07)	114(00-07)	Selects the print color where n = 0 to 7. n=0 black n=1 magenta n=2 cyan n=3 violet n=4 yellow n=5 orange n=6 green n=7 brown
ESC s(n)	73(n)	115(n)	Selects half-speed (quiet mode) or full-speed printing. n=1 selects half-speed printing. n=0 selects full-speed printing.

CONTROL CODE OR SEQUENCE	CONTROL CHARACTER EQUIVALENTS		FUNCTION
	HEX	DECIMAL	
ESC : (NUL) (NUL)(NUL)	3A(00) (00)(00)	58 (0)(0)(0)	Copies the currently active character set to the user-defined character set.
ESC & NUL (n1)(n2)	26 00 (n1)(n2)	38 0 (n1)(n2)	Loads user-defined characters into the user-defined character set.
ESC ?(s)(m)	3F(s)(m)	63(s)(m)	Assigns any graphics mode to any one of the four other graphics commands (ESC K, ESC L, ESC Y, ESC Z).
ESC <	3C	60	Returns the print head to the left side of the printer (one-line unidirectional printing).
ESC =	3D	61	Sets the eighth data bit to 0.
ESC >	3E	62	Sets the eighth data bit to 1.
ESC @	40	64	Initializes the printer to default values except for control-panel-selectable features, subscript and superscript, user-defined buffer, character sets, and unidirectional printing in graphics mode.
FS 3(n)	33(n)	51(n)	Sets line spacing at n/360-inch where n = 0 to 255.
FS E(n)	45(n)	69(n)	Selects horizontal enlargement. n=0 cancels enlargement. n=1 selects double horizontal enlargement. n=2 selects triple horizontal enlargement.
FS F	46	70	Selects forward line feed.
FS I(n)	49(n)	73(n)	Selects italic or IBM character set. n=0 selects italic set. n=1 selects IBM set.