

Proportional Width Information

Proportional width during multipoint mode (ESC/P 2 only)

ESC/P 2

The width of proportional characters during multipoint mode varies depending on your selected point size.

The width is calculated based on the width of proportional 10-point (10.5-point) characters, using the following formula:

$$(\text{character width}) = \frac{\text{INT} \left(\frac{(\text{point size}) \times (\text{base width})}{10.5} + 0.5 \right)}{360} \text{ inch}$$

The base width in the above equation is the width listed for each character in the 24/48-pin proportional width tables in the next section.

For example, the width of a 26-point “e” would be determined as follows:

$$(\text{character width}) = \frac{\text{INT} \left(\frac{(26) \times (30)}{10.5} + 0.5 \right)}{360} \text{ inch}$$

$$(\text{character width}) = \frac{\text{INT} (74.786)}{360} \text{ inch}$$

$$(\text{character width}) = \frac{74}{360} \text{ inch}$$

24/48-pin proportional width tables

The tables in this section list the widths for all proportional 10.5-point characters on 24/48-pin printers.

The widths listed are in 1/360-inch units. For example, the width of the letter w during proportional spacing is 42/360 inch.

Upright and italic characters, 24-pin		
Character	Code	Width
SP	32	30
!	33	18
"	34	30
#	35	30
\$	36	30
%	37	36
&	38	36
'	39	18
(	40	24

Upright and italic characters, 24-pin		
Character	Code	Width
)	41	24
*	42	30
+	43	30
,	44	18
-	45	30
.	46	18
/	47	30
0	48	30
1	49	30

Upright and italic characters, 24-pin		
Character	Code	Width
2	50	30
3	51	30
4	52	30
5	53	30
6	54	30
7	55	30
8	56	30
9	57	30
:	58	18

Upright and italic characters, 24-pin		
Character	Code	Width
<i>i</i>	59	18
<	60	30
=	61	30
>	62	30
?	63	30
@	64	36
A	65	36
B	66	36
C	67	36
D	68	36
E	69	36
F	70	36
G	71	36
H	72	36
I	73	24
J	74	30
K	75	36
L	76	36
M	77	42
N	78	36
O	79	36
P	80	36
Q	81	36
R	82	36
S	83	36
T	84	36
U	85	42
V	86	36
W	87	42
X	88	36
Y	89	36
Z	90	30
[	91	24
\	92	30
]	93	24
^	94	30
_	95	30
`	96	18
a	97	30
b	98	36
c	99	30

Upright and italic characters, 24-pin		
Character	Code	Width
d	100	36
e	101	30
f	102	24
g	103	36
h	104	36
i	105	18
j	106	24
k	107	36
l	108	18
m	109	42
n	110	36
o	111	30
p	112	36
q	113	36
r	114	30
s	115	30
t	116	24
u	117	36
v	118	36
w	119	42
x	120	30
y	121	36
z	122	30
{	123	24
|	124	18
}	125	24
~	126	30
none	127	none
Ç	128	36
ü	129	36
é	130	30
â	131	30
ä	132	30
à	133	30
å	134	30
ç	135	30
ê	136	30
ë	137	30
è	138	30
ï	139	18
î	140	18

Upright and italic characters, 24-pin		
Character	Code	Width
î	141	18
Ä	142	36
Å	143	36
É	144	36
æ	145	42
Æ	146	42
ô	147	30
ö	148	30
ò	149	30
û	150	36
ù	151	36
ÿ	152	36
Ö	153	36
Ü	154	42
ç	155	30
£	156	30
¥	157	36
₤	158	42
<i>f</i>	159	30
á	160	30
í	161	18
ó	162	30
ú	163	36
ñ	164	36
Ñ	165	36
ª	166	30
º	167	30
¿	168	30
	169	30
¬	170	30
½	171	30
¼	172	30
ı	173	30
«	174	30
»	175	30
	176	30
	177	30
	178	30
	179	30
	180	30
	181	30

Upright and italic characters, 24-pin		
Character	Code	Width
	182	30
	183	30
	184	30
	185	30
	186	30
	187	30
	188	30
	189	30
	190	30
	191	30
	192	30
	193	30
	194	30
	195	30
	196	30
	197	30
	198	30
	199	30
	200	30
	201	30
	202	30
	203	30
	204	30
	205	30
	206	30
	207	30
	208	30
	209	30
	210	30
	211	30
	212	30
	213	30
	214	30
	215	30
	216	30
	217	30
	218	30
	219	30
	220	30
	221	30
	222	30

Upright and italic characters, 24-pin		
Character	Code	Width
	223	30
	224	30
ß	225	30
	226	30
	227	30
	228	30
	229	30
μ	230	30
	231	30
	232	30
	233	30
	234	30
	235	30
	236	30
	237	30
	238	30
	239	30
	240	30
±	241	30
	242	30
	243	30
	244	30
	245	30
÷	246	30
	247	30
°	248	30
·	249	30
·	250	30
	251	30
	252	30
²	253	30
	254	30
SP	255	30

Upright and italic international characters, 24-pin		
Character	Code	Width
°	none	24
◻	none	30
ß	none	36
¨	none	36
	none	30
Û	none	30
§	none	30
ü	none	36
é	none	30
ä	none	30
à	none	30
å	none	30
ç	none	30
ê	none	30
î	none	18
Ä	none	36
₩	none	42
Å	none	36
É	none	36
æ	none	42
Æ	none	42
ö	none	30
ò	none	30
ù	none	36
Ö	none	36
Û	none	42
£	none	30
¥	none	36
₤	none	42
ñ	none	36
Ñ	none	36
¿	none	30
¡	none	30

Upright and italic superscript/subscript characters, 24-pin		
Character	Code	Width
SP	32	20
!	33	12
"	34	20
#	35	20
\$	36	20
%	37	24
&	38	24
'	39	12
(	40	16
)	41	16
*	42	20
+	43	20
,	44	12
-	45	20
.	46	12
/	47	20
0	48	20
1	49	20
2	50	20
3	51	20
4	52	20
5	53	20
6	54	20
7	55	20
8	56	20
9	57	20
:	58	12
;	59	12
<	60	20
=	61	20
>	62	20
?	63	20
@	64	24
A	65	24
B	66	24
C	67	24
D	68	24
E	69	24
F	70	24
G	71	24

Upright and italic superscript/subscript characters, 24-pin		
Character	Code	Width
H	72	24
I	73	16
J	74	20
K	75	24
L	76	24
M	77	28
N	78	24
O	79	24
P	80	24
Q	81	24
R	82	24
S	83	24
T	84	24
U	85	28
V	86	24
W	87	28
X	88	24
Y	89	24
Z	90	20
[	91	16
\	92	20
]	93	16
^	94	20
_	95	20
`	96	12
a	97	20
b	98	24
c	99	20
d	100	24
e	101	20
f	102	16
g	103	24
h	104	24
i	105	12
j	106	16
k	107	24
l	108	12
m	109	28
n	110	24
o	111	20

Upright and italic superscript/subscript characters, 24-pin		
Character	Code	Width
p	112	24
q	113	24
r	114	20
s	115	20
t	116	16
u	117	24
v	118	24
w	119	28
x	120	20
y	121	24
z	122	20
{	123	16
|	124	12
}	125	16
~	126	20
none	127	none
Ç	128	24
ü	129	24
é	130	20
â	131	20
ä	132	20
à	133	20
å	134	20
ç	135	20
ê	136	20
ë	137	20
è	138	20
ï	139	12
î	140	12
ì	141	12
Ä	142	24
Å	143	24
É	144	24
æ	145	28
Æ	146	28
ô	147	20
ö	148	20
ò	149	20
û	150	24
ù	151	24

Upright and italic superscript/subscript characters, 24-pin		
Character	Code	Width
ÿ	152	24
ö	153	24
ü	154	28
ç	155	20
£	156	20
¥	157	24
₤	158	28
f	159	20
á	160	20
í	161	12
ó	162	20
ú	163	24
ñ	164	24
Ñ	165	24
ª	166	20
º	167	20
¿	168	20
	169	20
¬	170	20
½	171	20
¼	172	20
ı	173	12
«	174	20
»	175	20
	224	20
ß	225	20
	226	20
	227	20
	228	20
	229	20
μ	230	20
	231	20
	232	20
	233	20
	234	20
	235	20
	236	20
	237	20
	238	20
	239	20

Upright and italic superscript/subscript international characters, 24-pin		
Character	Code	Width
°	none	20
◊	none	24
ß	none	24
¨	none	20
	none	20
Û	none	20
§	none	24
ü	none	20
é	none	20
ä	none	20
à	none	20
â	none	20
ç	none	20
ê	none	20
î	none	12
Ä	none	24
Ẃ	none	42
Å	none	24
É	none	24
æ	none	28
Æ	none	28
ö	none	20
ò	none	20
ù	none	24
Ö	none	24
Ü	none	28
£	none	20
¥	none	24
₤	none	28
ñ	none	24
Ñ	none	24
¿	none	20
ı	none	12

Upright and Italic legal characters, 24-pin		
Character	Code	Width
°	none	30
”	none	30
,	none	18
®	none	36
™	none	36
'	none	18
¶	none	30
©	none	36
†	none	30

Upright and italic superscript/subscript legal characters, 24-pin		
Character	Code	Width
°	none	30
”	none	30
,	none	18
®	none	36
™	none	36
'	none	18
¶	none	30
©	none	36
†	none	30

9-pin proportional width tables

The tables in this section list the widths for all proportional characters on 9-pin printers.

The widths listed are in 1/120-inch units. For example, the width of an italic letter w during proportional spacing is 12/120 inch.

Upright characters, 9-pin		
Character	Code	Width
SP	32	12
!	33	5
"	34	8
#	35	12
\$	36	12
%	37	12
&	38	12
'	39	5
(	40	6
)	41	6
*	42	12
+	43	12
,	44	7
-	45	12
.	46	6
/	47	10
0	48	12
1	49	8
2	50	12
3	51	12
4	52	12
5	53	12
6	54	12
7	55	12
8	56	12
9	57	12
:	58	6
;	59	6
<	60	10
=	61	12
>	62	10
?	63	12
@	64	12
A	65	12
B	66	12

Upright characters, 9-pin		
Character	Code	Width
C	67	12
D	68	12
E	69	12
F	70	12
G	71	12
H	72	12
I	73	8
J	74	11
K	75	12
L	76	12
M	77	12
N	78	12
O	79	12
P	80	12
Q	81	12
R	82	12
S	83	12
T	84	12
U	85	12
V	86	12
W	87	12
X	88	10
Y	89	12
Z	90	10
[	91	8
\	92	10
]	93	8
^	94	12
_	95	12
`	96	5
a	97	12
b	98	11
c	99	11
d	100	11
e	101	12

Upright characters, 9-pin		
Character	Code	Width
f	102	10
g	103	11
h	104	11
i	105	8
j	106	9
k	107	10
l	108	8
m	109	12
n	110	11
o	111	12
p	112	11
q	113	11
r	114	11
s	115	12
t	116	11
u	117	12
v	118	12
w	119	12
x	120	10
y	121	12
z	122	10
{	123	9
|	124	5
}	125	9
~	126	12
none	127	none
ç	128	12
ü	129	11
é	130	12
â	131	12
ä	132	12
à	133	12
â	134	12
ç	135	11
ê	136	12

Upright characters, 9-pin		
Character	Code	Width
ë	137	12
è	138	12
ï	139	8
î	140	10
ì	141	8
Ä	142	12
Å	143	12
É	144	12
æ	145	12
Æ	146	12
ô	147	10
ö	148	10
ò	149	10
û	150	11
ù	151	11
ÿ	152	12
Ö	153	12
Ü	154	12
ç	155	11
£	156	12
¥	157	12
₤	158	12
f	159	11
á	160	12
í	161	8
ó	162	10
ú	163	11
ñ	164	11
Ñ	165	12
ª	166	12
º	167	12
¿	168	12
	169	12
¬	170	12
½	171	12
¼	172	12
ı	173	5
«	174	12
»	175	12
	176	12
	177	12
	178	12

Upright characters, 9-pin		
Character	Code	Width
	179	12
	180	12
	181	12
	182	12
	183	12
	184	12
	185	12
	186	12
	187	12
	188	12
	189	12
	190	12
	191	12
	192	12
	193	12
	194	12
	195	12
	196	12
	197	12
	198	12
	199	12
	200	12
	201	12
	202	12
	203	12
	204	12
	205	12
	206	12
	207	12
	208	12
	209	12
	210	12
	211	12
	212	12
	213	12
	214	12
	215	12
	216	12
	217	12
	218	12
	219	12
	220	12

Upright characters, 9-pin		
Character	Code	Width
	221	12
	222	12
	223	12
	224	12
ß	225	11
	226	10
	227	12
	228	10
	229	11
µ	230	11
	231	12
	232	10
	233	12
	234	12
	235	12
	236	12
	237	12
	238	10
	239	10
	240	12
±	241	12
	242	10
	243	10
	244	12
	245	12
÷	246	12
	247	12
°	248	8
·	249	6
·	250	6
	251	12
	252	8
²	253	8
	254	8
SP	255	12

Upright international characters, 9-pin		
Character	Code	Width
°	none	8
□	none	12
β	none	11
ˆ	none	8
ˆ	none	12
Û	none	12
§	none	10
ü	none	11
é	none	12
ä	none	12
à	none	12
å	none	12
ç	none	11
ê	none	12
î	none	8
Ä	none	12
Å	none	12
É	none	12
æ	none	12
Æ	none	12
ö	none	10
ò	none	10
ù	none	11
Ö	none	12
Ü	none	12
£	none	12
¥	none	12
₣	none	12
ñ	none	11
Ñ	none	12
¿	none	12
¡	none	5

Italic characters, 9-pin		
Character	Code	Width
<i>SP</i>	32	12
<i>!</i>	33	10
<i>"</i>	34	10
<i>#</i>	35	12
<i>\$</i>	36	11

Italic characters, 9-pin		
Character	Code	Width
‰	37	12
&	38	12
'	39	5
(	40	8
)	41	8
*	42	12
+	43	12
,	44	8
-	45	12
.	46	7
/	47	10
0	48	12
1	49	9
2	50	12
3	51	12
4	52	12
5	53	12
6	54	11
7	55	12
8	56	12
9	57	11
:	58	8
;	59	9
<	60	10
=	61	11
>	62	9
?	63	11
@	64	12
<i>A</i>	65	12
<i>B</i>	66	12
<i>C</i>	67	12
<i>D</i>	68	12
<i>E</i>	69	12
<i>F</i>	70	12
<i>G</i>	71	12
<i>H</i>	72	12
<i>I</i>	73	10
<i>J</i>	74	12
<i>K</i>	75	12
<i>L</i>	76	10

Italic characters, 9-pin		
Character	Code	Width
<i>M</i>	77	12
<i>N</i>	78	12
<i>O</i>	79	12
<i>P</i>	80	12
<i>Q</i>	81	12
<i>R</i>	82	12
<i>S</i>	83	12
<i>T</i>	84	12
<i>U</i>	85	12
<i>V</i>	86	11
<i>W</i>	87	12
<i>X</i>	88	12
<i>Y</i>	89	12
<i>Z</i>	90	12
[	91	11
\	92	7
]	93	11
^	94	10
_	95	12
`	96	5
<i>a</i>	97	11
<i>b</i>	98	11
<i>c</i>	99	11
<i>d</i>	100	12
<i>e</i>	101	11
<i>f</i>	102	12
<i>g</i>	103	11
<i>h</i>	104	11
<i>i</i>	105	9
<i>j</i>	106	10
<i>k</i>	107	11
<i>l</i>	108	9
<i>m</i>	109	11
<i>n</i>	110	10
<i>o</i>	111	11
<i>p</i>	112	11
<i>q</i>	113	11
<i>r</i>	114	10
<i>s</i>	115	11
<i>t</i>	116	10

Italic characters, 9-pin		
Character	Code	Width
<i>u</i>	117	11
<i>v</i>	118	10
<i>w</i>	119	12
<i>x</i>	120	12
<i>y</i>	121	11
<i>z</i>	122	12
{	123	10
/	124	9
}	125	10
~	126	12
<i>none</i>	127	<i>none</i>
ç	128	12
ü	129	12
é	130	11
â	131	12
ä	132	11
à	133	11
å	134	11
ç	135	11
ê	136	12
ë	137	11
è	138	11
ï	139	10
î	140	11
ì	141	8
Ä	142	12
Å	143	12
É	144	12
æ	145	12
Æ	146	12
ô	147	12
ö	148	11
ò	149	11
û	150	11
ù	151	11
ÿ	152	11
Ö	153	12
Û	154	12
ç	155	11
£	156	11

Italic characters, 9-pin		
Character	Code	Width
¥	157	12
ƒ	158	12
f	159	12
á	160	11
í	161	10
ó	162	12
ú	163	11
ñ	164	12
Ñ	165	12
ª	166	11
º	167	12
¿	168	11
	169	12
¬	170	12
½	171	12
¼	172	12
ı	173	10
«	174	12
»	175	12

Italic international characters, 9-pin		
Character	Code	Width
É	none	12
æ	none	12
Æ	none	12
ö	none	11
ò	none	11
ù	none	11
Ö	none	12
Û	none	12
£	none	12
¥	none	12
ƒ	none	12
ñ	none	12
Ñ	none	12
¿	none	11
ı	none	10

Italic international characters, 9-pin		
Character	Code	Width
º	none	8
σ	none	12
β	none	11
¨	none	9
	none	12
Û	none	12
š	none	12
ü	none	12
é	none	11
ä	none	11
à	none	11
å	none	11
ç	none	11
ê	none	11
ï	none	8
Ä	none	12
Å	none	12

ASCII Code Table

	0	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
0	NUL		SP	0	@	P		p	NUL		SP	0	@	P		p
1		DC1		1	A	Q	a	q		DC1	!	!	A	Q	a	q
2		DC2		2	B	R	b	r		DC2	"	"	B	R	b	r
3		DC3	#	3	C	S	c	s		DC3	#	3	C	S	c	s
4		DC4	\$	4	D	T	d	t		DC4	\$	4	D	T	d	t
5			%	5	E	U	e	u			%	5	E	U	e	u
6			&	6	F	V	f	v			&	6	F	V	f	v
7	DEL			7	G	W	g	w	DEL			7	G	W	g	w
8	BS	CAN	(	8	H	X	h	x	BS	CAN	(	8	H	X	h	x
9	HI	EM	)	9	I	Y	i	y	HI	EM	)	9	I	Y	i	y
A	LF		*	:	J	Z	j	z	LF		*	:	J	Z	j	z
B	VT	ESC	+	;	K	[	k	{	VT	ESC	+	;	K	[	k	{
C	FF		<		L	\	l	|	FF		<		L	\	l	|
D	CR		=		M	]	m	}	CR		=		M	]	m	}
E	SO		>		N	^	n	~	SO		>		N	^	n	~
F	SI		/	?	O	_	o		DEL	SI	/	?	O	_	o	

*Codes in shaded boxes are printer control codes.

Parallel Interface

EPSON printers feature an industry standard Centronics Parallel type interface. The printer side of this interface utilizes a 36 Pin connector. The pin assignments for this connector are as follows:

Pins and signals

Signal Pin	Return Pin	Signal	Direction	Description
1	19	$\overline{\text{STROBE}}$	IN	STROBE pulse to read data. Pulse width must be more than 0.5 microseconds at the receiving terminal.
2	20	DATA 1	IN	These signals represent information of bits 1 to 8 of parallel data, respectively. Each signal is at HIGH level when data is logical 1 and LOW when it is logical 0.
3	21	DATA 2	IN	
4	22	DATA 3	IN	
5	23	DATA 4	IN	
6	24	DATA 5	IN	
7	25	DATA 6	IN	
8	26	DATA 7	IN	
9	27	DATA 8	IN	
10	28	$\overline{\text{ACKNLG}}$	OUT	About an 11-microsecond pulse. LOW indicates that data has been received and that the printer is ready to accept more data.
11	29	BUSY	OUT	A HIGH signal indicates that the printer cannot receive data. The signal goes HIGH in the following cases: 1) During data entry (ea. char. time) 2) During a printer-error
12	30	PE	OUT	A HIGH signal indicates that the printer is out of paper.
13	—	SLCT	OUT	Always at high level when the printer is on.
14	—	$\overline{\text{AUTO}}$ $\overline{\text{FEED XT}}$	IN	When this signal is LOW, the paper is automatically fed 1 line after printing. (The signal level can be fixed to LOW by setting the DIP switch or SelectType. See the user's guide of each printer.)

Pins and signals (continued)

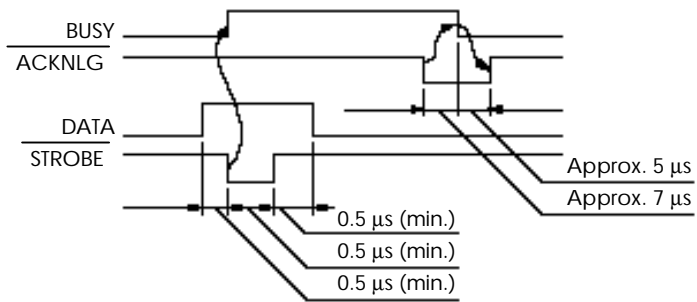
Signal Pin	Return Pin	Signal	Direction	Description
15	—	NC	—	Not used.
16	—	GND	—	Logic ground level.
17	—	CHASSIS GND	—	Printer's chassis ground, which is isolated from the logic ground.
18	—	NC	—	Not used.
19–30	—	GND	—	Twisted-pair return signal ground level.
31	16	$\overline{\text{INIT}}$	IN	When this level becomes LOW, the printer controller is reset to its power-up state and the print buffer is cleared. This level is normally HIGH; its pulse width must be more than 50 microseconds at the receiving terminal.
32	—	$\overline{\text{ERROR}}$	OUT	This level becomes LOW when the printer is: 1) In paper out state. 2) In error state.
33	—	GND	—	Same as for Pins 19-30.
34	—	NC	—	Not used.
35	—	—	OUT	Pulled up to 5V through 3.3 k Ω resistance.
36	—	$\overline{\text{SLCT IN}}$ or NC	IN or —	The DC1/DC3 code is valid only when this $\overline{\text{SLCT IN}}$ signal is HIGH. (Internal fixing can be carried out with the jumper switch. The level of this signal is factory-set to LOW.) Some printers do not use this function. For specific information, see the user's guide of each printer.

Note:

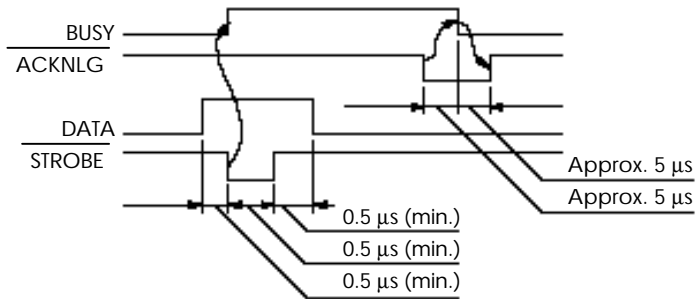
- The values may vary from printer to printer. See the user's guide of your printer.
- The column heading "Direction" refers to the direction of signal flow as viewed from the printer.
- "Return" denotes the twisted-pair return, to be connected at signal ground level. For the interface wiring, be sure to use a twisted-pair cable for each signal and to complete the connection on the return side. To prevent noise, these cables should be shielded and connected to either the chassis of the host computer or the printer (but not at both ends).
- All interface conditions are based on TTL level. Both the rise and the fall times of each signal must be less than 0.2 microseconds.
- Data transfer must be carried out by observing the ACKNLG or BUSY signal. (Data transfer to this printer can be carried out only after receipt of the ACKNLG signal or when the level of the BUSY signal is LOW.)

Parallel interface timing

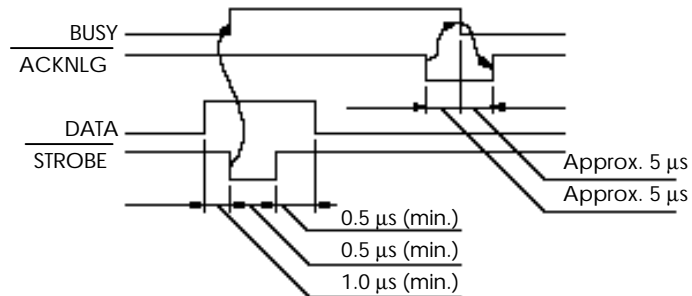
9-pin printers (excluding MX-series, and LX-300 and later printers)



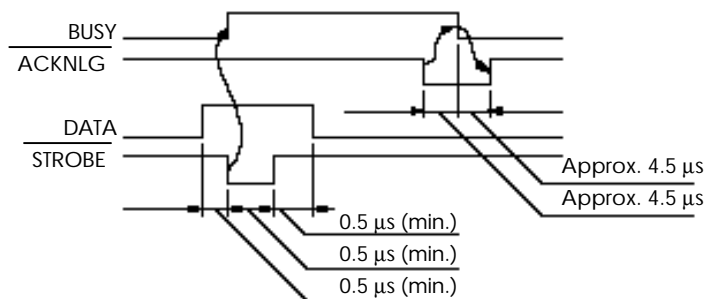
24/48-pin printers (excluding LQ-1500, SQ-2000, and LQ-300 and later printers)



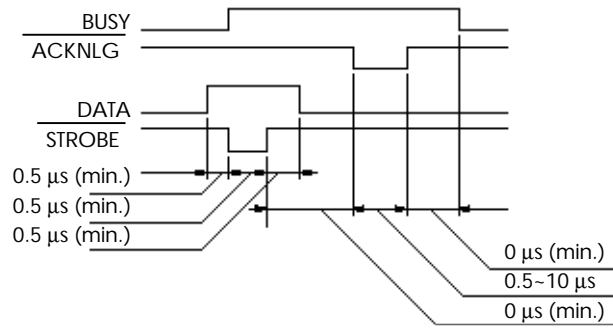
MX-series printers



LQ-1500, SQ-2000

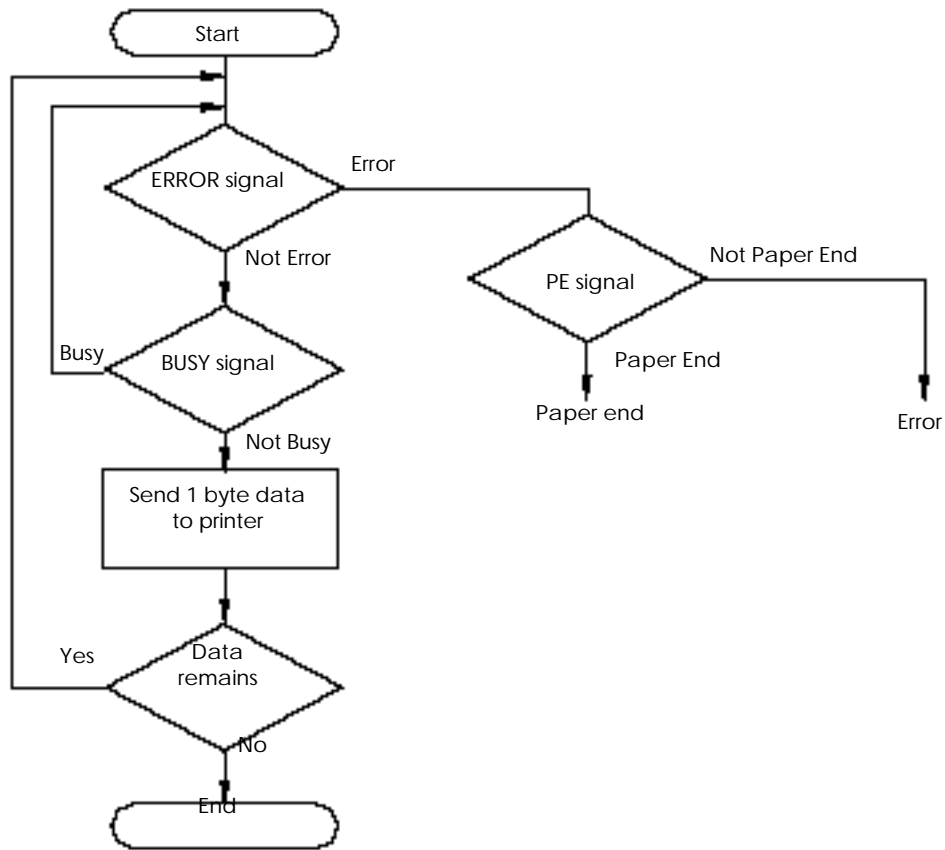


LX-300 and later 9-pin printers, and LQ-300 and later 24/48-pin printers



The flow chart shown below illustrates the recommended procedure for checking the status of a parallel interface.

Parallel interface flow chart



Internal Serial Interface

Six-pin DIN connector type

Connector pin assignment

Pin Number	Signal	Signal Dir.	Description
1	TXD	Out	Transmits data for Xon/Xoff
2	REV	Out	Whether or not the printer is ready to receive data
3	RXD	In	Receive data
4	NC	—	Not Used
5	SG	—	Signal Ground
6	FG	—	Frame Ground

Synchronization Asynchronous

Data format 1 start bit
Data word length: 8 bits
Odd, even, or no parity
1 stop bit

Baud rate 300-19,200 bps, depending on printer

Signal level Mark (1) -3V to -27V
Space (0) +3V to +27V

Handshaking Handshaking by DTR signal or X-on/X-off. When the number of free bytes in the input buffer drops below 256, the DTR signal changes to “mark”, signifying the printer is not ready to receive data. When the number of free bytes rises above 528, the DTR signal changes to “space,” specifying that the printer is now ready to receive data.

25-pin subminiature D-shell connector (female) type

Connector pin assignment

Pin Number	Signal	Signal Dir.	Description
2	TXD	Out	Transmits data for Xon/Xoff
20	DTR	Out	Indicates that the printer is ready to receive data or not.
11	REV	Out	Connected directly to the DTR signal
4	RTS	Out	Request to send. Always SPACE level when the printer is powered on. Pulled up to +12V via 4.7Kohm resistor.
3	RXD	In	Receive data
7	SG	—	Signal Ground
1	FG	—	Frame Ground
Other	NC	—	Not Used

Synchronization Asynchronous

Data format 1 start bit
Data word length: 7 or 8 bits
Odd, even, or no parity
1 stop bit

Baud rate 300-19,200 bps, depending on printer

Signal level EIA-232D Mark (1) -3V to -25V
Space (0) +3V to +25V

Handshaking **DTR signal and XON/XOFF**
The DTR signal is MARK and an XOFF code (DC3, 13H) is transmitted when the available input buffer space drops to 256 bytes. The DTR signal is SPACE and an XON (DC1, 11H) is transmitted when the available input buffer space returns to 256 bytes.

ETX, ACK/NAK d

At the time the printer receives an ETX (03H) command, if the available buffer space is more than 256 bytes, the printer sends an ACK (06H) code in reply, or if the available buffer space is less than 256 bytes, the printer sends NAK (15H) and "d" (64H) codes continuously. The ETX-ACK handshaking protocol can be enabled or disabled altering the default settings.

Error handling When a parity error is detected, the received byte is changed to the "*" character code. Overrun errors and framing errors are ignored.

Optional Serial Interfaces

Several optional serial interfaces are offered for the EPSON printer line. The pin assignments and signal direction from the printer side of the Female DB-25 are described in the table below:

Optional serial interface pin assignments

Pin	Signal Name	Dir.	Description
1	Protective Ground	n/a	Chassis Ground
2	Transmitted Data (TXD)	Out	Transmitted Data
3	Received Data (RXD)	In	Received Data
6	Data Set Ready (DSR)	In	This signal must be at the positive EIA level for the printer to receive data.
7	Signal Ground	In	Return path for data and control signals
8	Data Carrier Detect (DCD)	In	This is the same signal as DSR at pin #6, DCD and DSR can be held at "SPACE" internally. The signal polarity is factory set to "SPACE"
11	Reverse Channel	Out	This signal is at the positive EIA level when the printer is ready to accept data entry, and at the negative EIA (= 2nd RTS) level when the printer is not ready. The user can invert the polarity of this signal via DIP switch.
17	TTY-TXD	Out	Low impedance ("MARK") between pins 17 and 24 or X-ON signal sent across pins 17 and 24 indicates that the printer is ready to accept data. High impedance ("SPACE") or X-OFF signal being sent indicates that the printer is busy. The operator can invert the polarity via DIP switch.
20	Data Terminal Ready (DTR)	Out	See Pin 11 for description
23	TTY-TXD Return	n/a	
24	TTY-TXD Return	n/a	See Pin 17 for description
25	TTY-RXD	In	Input data when using serial current loop.

Selecting PreESC/P 2 Fonts in ESC/P 2 Multipoint Mode

ESC/P 2

You can use the ESC X command to select fonts identical to those available in non-ESC/P 2 printers. Send the ESC X parameters on the right to obtain the point and pitch sizes selected by the commands on the left.

	SO	SI	ESC w 1	Point	Pitch	ESC X		
						m	nL	nH
ESC P				10.5	10	36	21	0
	✓			10.5	5	72	21	0
		✓		10.5	17.14	21	21	0
			✓	21	10	36	42	0
	✓	✓		10.5	8.57	42	21	0
	✓		✓	10.5	5	72	21	0
		✓	✓	21	17.14	21	42	0
	✓	✓	✓	21	8.57	42	42	0
ESC M				10.5	12	30	21	0
	✓			10.5	6	60	12	0
		✓		10.5	20	18	21	0
			✓	21	12	30	42	0
	✓	✓		10.5	10	36	21	0
	✓		✓	10.5	6	60	21	0
		✓	✓	21	20	18	42	0
	✓	✓	✓	21	10	36	42	0
ESC g				10.5	15	24	1	0
	✓			10.5	7.5	48	21	0
		✓		10.5	15	24	21	0
			✓	21	15	24	42	0
	✓	✓		10.5	7.5	48	21	0
	✓		✓	10.5	7.5	48	21	0
		✓	✓	21	15	24	42	0
	✓	✓	✓	21	7.5	48	42	0
ESC p				10.5	Prop.	1	21	0
			✓	21	Prop.	1	42	0