



## 2 EPSON Command Mode

Command	Hex	Function Description
HT	09	Move cursor right
BS	08	Move cursor left
US LF	1F 0A	Move cursor up
LF	0A	Move cursor down
US CR	1F 0D	Move cursor to right-most position
CR	0D	Move cursor to left-most position
HOM	0B	Move cursor to home position
US B	1F 42	Move cursor to bottom position
US \$ x y	1F 24 x y	Move cursor to specified position $1 \leq x(\text{column}) \leq 20$ ; $1 \leq y(\text{row}) \leq 2$
US C n	1F 43 n	Select/cancel cursor display n=0, canceled ; n=1, selected
CLR	0C	Clear display screen
CAN	18	Clear cursor line
US X n	1F 58 n	Brightness adjustment $1 \leq n \leq 4$
US E n	1F 45 n	Blink display screen $0 \leq n \leq 255$ (n*50msec) ON / (n*50msec) OFF n= 0, blinking is canceled n=255, display is turned off
ESC @	1B 40	Initialize display
ESC t n	1B 74 n	Select character code table $0 \leq n \leq 5$ ( Please refer " <b>Chapter 5</b> " )
ESC R n	1B 52 n	Select international character set ( Please refer <b>International Font Set Table</b> )
US r n	1F 72 n	Select/cancel reverse character n=0, canceled ; n=1, selected
US MD1	1F 01	Specify overwrite mode
US MD2	1F 02	Specify vertical scroll mode
US MD3	1F 03	Specify horizontal scroll mode
US . n	1F 2E n	Specify period display n= display character code
US , n	1F 2C n	Specify comma display n= display character code
US ; n	1F 3B n	Specify semicolon (period+comma) display n= display character code
US # n m	1F 23 n m	Specify display annunciator,, turn the annunciator at "m" column on or off n=0,1 (Off, On) ; $0 \leq m \leq 20$
ESC & s n m [a(pl..p5)] (m-n+1)	1B 26 s n m [a(pl..p5)](m-n+1)	Define download characters s=1 ; $32 \leq n \leq m \leq 126$ ; a=5 ( p1..p5 = pattern1..pattern5 )
ESC ? n	1B 3F n	Cancel user-defined characters $32 \leq n \leq 126$ (n=character code)

ESC % n	1B 25 n	Select/cancel download character set n=0, canceled ; n=1, selected
ESC W n s (x1 y1 x2 y2)	1B 57 n s (x1 y1 x2 y2)	Specify/cancel the window range n=1,2,3,4 (four windows) ; s=0,1 (disable, enable) <b>1 ≤ x1 ≤ x2 ≤ 20 (column) ; 1 ≤ y1 ≤ y2 ≤ 2 (row)</b>
ESC = n	1B 3D n	Select peripheral device n=1, printer ; n=2, display ; n=3, printer & display
US :	1F 3A	Set starting/ending position of macro definition
US ^ n m	1F 5E n m	Execute and quit macro 0 ≤ (n,m) ≤ 255 n: specifies the time interval for display of characters in units of [n* 50msec] m: specifies the interval of macro execution every [m*50msec]
US @	1F 40	Execute self-test
US T h m	1F 54 h m	Display time :0 ≤ h ≤ 23 ; 0 ≤ m ≤ 59
US U	1F 55	Display of time counter

**\* International Font Set Table**

n (Hex)	International Font Set	n (Hex)	International Font Set
00h	U.S.A.	06h	ITALY
01h	FRANCE	07h	SPAIN
02h	GERMANY	08h	JAPAN
03h	U.K.	09h	NORWAY
04h	DENMARK I	0Ah	DENMARK II
05h	SWEDEN		SLAVONIC/RUSSIA

**※ Specify decimal point, comma, semicolon, annunciator\***

**(1) US . n (Decimal Point) / US , n (Comma) / US ; n (Semicolon):**

The displayed character codes are form 32(20h) to 127(7Eh), and 128(80h) to 255(FFh) in the character code table. The period/comma/semicolon displayed only for n. The period is not displayed for the subsequent display characters.

**(2) US # n m (annunciator):**

[ range ] n = 0(00h) or 1(01h) / m = 0(00h)~20(14h)

[ notes ] When n= 0, the annunciator at column m is turned off.

When n= 1, the annunciator at column m is turned on.

"m" specify column number (the most left column is column 1) at which annunciator to be turned on/off is placed.

When m = 0, all annunciators are turned on or off.

Once an annunciator(s) is turned on, it remains on until turned off by this command, the ESC@ or US@ command is executed, or the power is turned off.

[example]: To turn on the annunciator at the third column:

[n = 01h ], [ m = 03h ]

To turn off all the annunciators:

[n = 00h ], [ m = 00h ]

**※ Above commands relating decimal point, comma, semicolon, and annunciator may not be available due to hardware limit of display tube.**

ESC % n	1B 25 n	Select/cancel download character set n=0, canceled ; n=1, selected
ESC W n s (x1 y1 x2 y2)	1B 57 n s (x1 y1 x2 y2)	Specify/cancel the window range n=1,2,3,4 (four windows) ; s=0,1 (disable, enable) 1 ≤ x1 ≤ x2 ≤ 20 (column) ; 1 ≤ y1 ≤ y2 ≤ 2 (row)
ESC = n	1B 3D n	Select peripheral device n=1, printer ; n=2, display ; n=3, printer & display
US :	1F 3A	Set starting/ending position of macro definition
US ^ n m	1F 5E n m	Execute and quit macro 0 ≤ (n,m) ≤ 255 n: specifies the time interval for display of characters in units of [n* 50msec] m: specifies the interval of macro execution every [m*50msec]
US @	1F 40	Execute self-test
US T h m	1F 54 h m	Display time 0 ≤ h ≤ 23 ; 0 ≤ m ≤ 59
US U	1F 55	Display of time counter

**\* International Font Set Table**

n (Hex)	International Font Set	n (Hex)	International Font Set
00h	U.S.A.	06h	ITALY
01h	FRANCE	07h	SPAIN
02h	GERMANY	08h	JAPAN
03h	U.K.	09h	NORWAY
04h	DENMARK I	0Ah	DENMARK II
05h	SWEDEN		SLAVONIC/RUSSIA

**※ Specify decimal point, comma, semicolon, annunciator\***

**(3) US . n (Decimal Point) / US , n (Comma) / US ; n (Semicolon):**

The displayed character codes are form 32(20h) to 127(7Eh), and 128(80h) to 255(FFh) in the character code table. The period/comma/semicolon displayed only for n. The period is not displayed for the subsequent display characters.

**(4) US # n m (annunciator):**

[ range ] n = 0(00h) or 1(01h) / m = 0(00h)~20(14h)

[ notes ] When n= 0, the annunciator at column m is turned off.

When n= 1, the annunciator at column m is turned on.

"m" specify column number (the most left column is column 1) at which annunciator to be turned on/off is placed.

When m = 0, all annunciators are turned on or off.

Once an annunciator(s) is turned on, it remains on until turned off by this command, the ESC@ or US@ command is executed, or the power is turned off.

[example]: To turn on the annunciator at the third column:

[n = 01h ], [ m = 03h ]  
 To turn off all the annunciators:  
 [n = 00h ], [ m = 00h ]

✘ *Above commands relating decimal point, comma, semicolon, and annunciator may not be available due to hardware limit of display tube.*

### 3 UTC Standard Command Mode

Command	Hex	Function Description
BS	08	Back space
HT	09	Horizontal tab
LF	0A	Line feed
CR	0D	Carriage return
DC0 p	10 p	Move cursor to specified position, $0 \leq p \leq 39$ (Please refer <b>Row Character Position Chart</b> )
DC1	11	Over write display mode
DC2	12	Vertical scroll mode
DC3	13	Cursor on
DC4	14	Cursor off
ESC d	1B 64	Change to UTC enhanced mode
US	1F	Clear display

#### Row Character Position Chart (Decimal)

Row1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Row2	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39

#### Row Character Position Chart (Hex)

Row1	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13
Row2	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F	20	21	22	23	24	25	26	27

#### 4 UTC Enhance Command Mode

Command	Hex	Function Description
ESC u A..CR	1B 75 41 [data x 20] 0D	Upper line display
ESC u B..CR	1B 75 42 [data x 20] 0D	Bottom line display
ESC u D..CR	1B 75 44 [data x 45] 0D	Upper line message scroll continuously
ESC u E..CR	1B 75 45 hh ':' mm 0D	Set and display 24 hour time $0 \leq h, m \leq 9$
ESC u F..CR	1B 75 46 [data x 45] 0D	Upper line message scroll once pass
ESC u H..CR	1B 75 48 n m 0D	Change attention code $32 \leq n, m$ ( Default attention code $n=1Bh, m=75h$ )
ESC u 1..CR	1B 75 49 [data x 40] 0D	Two line display
ESC RS..CR	1B 0F 0D	Change to UTC standard mode

#### 5 AEDEX Command Mode

Command	Hex	Function Description
! # 1..CR	21 23 31 [data x 20] 0D	Upper line display
! # 2..CR	21 23 32 [data x 20] 0D	Bottom line display
! # 4..CR	21 23 34 [data x 45] 0D	Upper line message scroll continuously
! # 5..CR	21 23 35 hh ':' mm 0D	Set and display 24 hour time $0 \leq h, m \leq 9$
! # 5 CR	21 23 35 0D	Display 24 hour time
! # 6..CR	21 23 36 [data x 45] 0D	Upper line message scroll once pass
! # 8..CR	21 23 38 n m 0D	Change attention code $32 \leq n, m$ ( Default attention code $n="!", m="#"$ )
! # 9..CR	21 23 39 [data x 40] 0D	Two line display

## 6 ADM788 Command Mode

Command	Hex	Function Description
CLR	0C	Clear display
CR	0D	Carriage return
SLE1	0E	Clear up line and move cursor to upper line left most end
SLE2	0F	Clear low line and move cursor to lower line left most end
DC0	10 n	Set period to upper line last n position $1 \leq n \leq 7$
DC1	11 n	Set line blinking n=1, upper line n=2, lower line
DC2	12 n	Clear line blinking n=1, upper line n=2, lower line
SF1	1E	Clear field 1 and move cursor to field 1 fast position
SF2	1F	Clear field 2 and move cursor to field 2 fast position

## 7 DSP800 Command Mode

Command	Hex	Function Description
EOT SOH I n ETB	04 01 49 n 17	Select international character set ( Please refer <i>International Font Set Table</i> )
EOT SOH P n ETB	04 01 50 n 17	Move cursor to specified position $49 \leq n \leq 88$
EOT SOH C n m ETB	04 01 43 n m 17	Clear display range from <u>n</u> position to <u>m</u> position and move cursor to <u>n</u> position $49 \leq n \leq m \leq 88$
EOT SOH S n ETB	04 01 53 n 17	Save the current displaying data (40 characters) to n'th layer for demo display $1 \leq n \leq 3$ ( n specify the layer 1, 2, or 3 )
EOT SOH D n m ETB	04 01 44 n m 17	Display the saved data $1 \leq n \leq 3$ ( n specify the layer 1, 2, or 3 ) "m" can be ignored
EOT SOH A n ETB	04 01 41 n 17	Brightness adjustment $1 \leq n \leq 4$
EOT SOH = n ETB	04 01 3D n 17	Select peripheral device n=1, printer ; n=2, display
EOT SOH % ETB	04 01 25 17	Initialize display

### \* International Font Set Table

n (Hex)	International Font Set
30h	U.S.A.
31h	FRANCE
32h	GERMANY
33h	U.K.
34h	DENMARK I
35h	SWEDEN
36h	ITALY
37h	SPAIN
38h	JAPAN
39h	NORWAY
3Ah	DENMARK II
XXh	SLAVONIC/RUSSIA
	RUSSIAN
	GREEK
	CZECH
	LATIVAIN



## 8 CD5220 Command Mode

Command	Hex	Function Description
ESC DC1	1B 11	Overwrite mode
ESC DC2	1B 12	Vertical scroll mode
ESC DC3	1B 13	Horizontal scroll mode
ESC Q A CR	1B 51 41 [N]20 0D	Set string display mode, write string to upper line
ESC Q B CR	1B 51 42 [N]20 0D	Set string display mode, write string to lower line
ESC Q D CR	1B 51 44 [N]m20 0D	Upper line message scroll continuously m<40
ESC [ D	1B 5B 44	Move cursor left
BS	08	Move cursor left
ESC [ C	1B 5B 43	Move cursor right
HT	09	Move cursor right
ESC [ A	1B 5B 41	Move cursor up
ESC [ B	1B 5B 42	Move cursor down
LF	0A	Move cursor down
ESD [ H	1B 5B 48	Move cursor to home position
HOM	0B	Move cursor to home position
ESC [ L	1B 5B 4C	Move cursor to left-most position
CR	0D	Move cursor to left-most position
ESC [ R	1B 5B 52	Move cursor to right-most position
ESC [ K	1B 5B 4B	Move cursor to bottom position
ESC I x y	1B 6C x y	Move cursor to specified position 1 ≤ x ≤ 20 (column) ; y=1,2 (row)
ESC @	1B 40	Initialize display
ESC W s x1 x2 y	1B 57 s x1 x2 y	Enable or disable the window range at horizontal scroll mode s=0,1 (disable, enable) 1 ≤ x1 ≤ x2 ≤ 20 (column) ; y=1,2 (row)
CLR	0C	Clear display screen, and clear string mode
CAN	18	Clear cursor line, and clear string mode
ESC * n	1B 2A n	Brightness adjustment 1 ≤ n ≤ 4
ESC & s n m [a(pl..p5)] (m-n+1)	1B 26 s n m [a(pl..p5)] (m-n+1)	Define download characters s=1 ; 32 ≤ n ≤ m ≤ 126 ; a=5 ( p1..p5 = pattern1..pattern5 )
ESC ? n	1B 3F n	Delete download characters 32 ≤ n ≤ 126 (n=character code)
ESC % n	1B 25 n	Select / cancel download character set. n=0, canceled ; n=1, selected
ESC _ n	1B 5F n	Set cursor ON/OFF n=0,1 (Off,On)
ESC f n	1B 66 n	Select international fonts set
ESC c n	1B 63 n	Select fonts, ASCII code or JIS code
ESC = n	1B 3D n	Select peripheral device n=1, printer ; n=2, display ; n=3, printer & display

**(REMARK)**

\* While using command “ESC Q A” or “ESC Q B”, these two commands could be used combining with terminal printer - TP 2688 or TP3688

\* If using command “ESC Q A” or “ESC Q B”, others commands can't be used except using command “CLR” or “CAN” to change operating mode.

\* If using command “ESC Q D”, message on upper line will move continuously till receiving a new command, clearing upper line, and moving cursor to most left position on upper line.

**\* International Font Set Table**

<b>n ( Decimal )</b>	<b>International Font Set</b>
A	U.S.A
G	GERMANY
I	ITALY
J	JAPAN
U	U.K.
F	FRANCE
S	SPAIN
N	NORWAY
W	SWEDEN
D	DENMARK I
E	DENMARK II
L	SLAVONIC
R	RUSSIA
	Reserved

**\* Select Code Table**

<b>n ( Decimal )</b>	<b>International Code</b>
A	compliance with ASCII code
J	compliance with JIS code
R	compliance with RUSSIA code
L	compliance with SLAVONIC code

## 9 EMAX Command Mode

Command	Hex	Function Description
ESC DC1	1B 11	Overwrite mode
ESC DC2	1B 12	Vertical mode
ESC DC3	1B 13	Horizontal scroll mode
ESC [ D	1B 5B 44	Move cursor left
BS	08	Move cursor left
ESC [ C	1B 5B 43	Move cursor right
HT	09	Move cursor right
ESC [ A	1B 5B 41	Move cursor up
ESC [ B	1B 5B 42	Move cursor down
ESC [ H	1B 5B 48	Move cursor to home position
HOM	0B	Move cursor to home position
ESC [ L	1B 5B 4C	Move cursor to left-most position
CR	0D	Move cursor to left-most position
ESC [ R	1B 5B 52	Move cursor to right-most position
ESC [ K	1B 5B 4B	Move cursor to bottom position
ESC I x y	1B 6C x y $1 \leq x \leq 20, y = 1, 2$	Move cursor to specified position
ESC @	1B 40	Initialize display
CLR	0C	Clear display screen, and clear string mode
CAN	18	Clear cursor line, and clear string mode
ESC * n	1B 2A n $1 \leq n \leq 4$	Brightness mode
ESC _ n	1B 5F n $n = 0, 1$	Set cursor ON/OFF
ESC f n	1B 66 n	Select international fonts
ESC c n	1B 63 n	Select fonts, ASCII code or JIS code
ESC = n	1B 3D	Select peripheral device, display or printer n = 1; enable printer, disable display n = 2; disable printer, enable display n = 3; enable printer, enable display

## 10 LOGIC Command Mode

Command	Hex	Function Description
^Q	11	Overwrite mode
^R	12	Vertical mode
^I	09	Horizontal tab
^H	08	Back space
^J	0A	Line feed
^M	0D	Carriage return
^S	13	Cursor on
^T	14	Cursor off
^P	10	Digital select e.g. 10 00 MSD of top row 10 13 LSD of top row 10 14 MSD of bottom row 10 27 LSD of bottom row
^_	1F	Reset
^D n	04 n	Brightness mode 04 FF – 100% Brightness mode 04 60 – 60% Brightness mode 04 40 – 40% Brightness mode 04 20 – 20% Brightness mode

# Character Set

## 1 U.S.A. / Standard Character Set ( 20h - 7Eh)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
20h		!	“	#	\$	%	&	'	(	)	*	+	,	-	.	/
30h	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
40h	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
50h	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
60h	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
70h	p	q	r	s	t	u	v	w	x	y	z	{		}	~	

## 2 International Character Selection

No.	International	23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E
	U.S.A.	#	\$	@	[	\	]	^	`	{		}	~
1	FRANCE	#	\$	à	°	Ç	§	^	`	é	ù	è	¨
2	GERMANY	#	\$	§	Ä	Ö	Ü	^	`	ä	ö	ü	β
3	U.K.	£	\$	@	[	\	]	^	`	{		}	~
4	DENMARK I	#	\$	@	Æ	Φ	Â	^	`	æ	ø	â	~
5	SWEDEN	#	α	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü
6	ITALY	#	\$	@	°	\	é	^	ù	à	ò	è	ì
7	SPAIN	℞	\$	@	ı	Ñ	ı	^	`	¨	ñ	}	~
8	JAPAN	#	\$	@	[	¥	]	^	`	{		}	~
9	NORWAY	#	α	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü
10	DENMARK II	#	\$	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü
11	SLAVONIC	#	\$	@	[	\	]	^	`	{		}	~
12	RUSSIA	#	\$	@	[	\	]	^	`	{		}	~

### 3 Character Code Table










#### 3.1 Page 0 (PC437: U. S.A., Standard Europe)

00h – 7Fh










	00h	10h	20h	30h	40h	50h	60h	70h
0				0	@	P	`	p
1			!	1	A	Q	a	q
2			"	2	B	R	b	r
3			#	3	C	S	c	s
4			\$	4	D	T	d	t
5			%	5	E	U	e	u
6			&	6	F	V	f	v
7			'	7	G	W	g	w
8			(	8	H	X	h	x
9			)	9	I	Y	i	y
A			*	:	@	Z	j	z
B			+	;	A	[	k	{
C			,	<	B	\	l	
D			-	=	C	]	m	}
E			.	>	D	^	n	~
F			/	?	E	_	o	

*To be continued on next page...*




























80h – FFh

	80h	90h	A0h	B0h	C0h	D0h	E0h	F0h
0	Ç	É	á		└	⊥	α	≡
1	ü	æ	í		└	⊥	β	±
2	é	Æ	ó		└	└	Γ	≥
3	â	ô	ú		└	└	π	≤
4	ä	ö	ñ	└	—	└	Σ	∫
5	à	ò	Ñ	└	+	└	σ	∫
6	å	û	ä	└	└	└	μ	÷
7	ç	ù	◊	└	└	└	τ	≈
8	ê	ÿ	ı	└	└	└	Φ	°
9	ë	Ö	└	└	└	└	Θ	•
A	è	Û	└		└	└	Ω	•
B	ï	ç	½	└	└		δ	√
C	î	£	¼	└	└		∞	n
D	ì	¥	ı	└	==		φ	²
E	Ä	Ð	«	└	└		ε	
F	Å	f	»	└	└		∩	

### 3.2 Page 1 (PC863: Canadian-French)

	80h	90h	A0h	B0h	C0h	D0h	E0h	F0h
0	Ç	É	ı		└	┘	α	≡
1	ü	È	´		┘	┘	β	±
2	é	Ê	ó		┘	┘	Γ	≠
3	â	ô	ú		┘	┘	π	≠
4	Â	Ë	¨	┘	—	┘	Σ	∫
5	à	Ï	¸	┘	+	┘	σ	∫
6	¶	û	³	┘	┘	┘	μ	÷
7	ç	ù	˘	┘	┘	┘	τ	≈
8	ê	æ	Î	┘	┘	┘	Φ	°
9	ë	Ô	┘	┘	┘	┘	Θ	•
A	è	Û	┘		┘	┘	Ω	•
B	ï	ç	½	┘	┘		δ	√
C	î	£	¼	┘	┘		∞	n
D	—	Û	¾	┘	==		φ	²
E	À	Û	«	┘	┘		ε	
F	§	f	»	┘	┘		∩	



	80h	90h	A0h	B0h	C0h	D0h	E0h	F0h
0					タ	ミ	□	日
1			.	ア	チ	ム		月
2			「	イ	ツ	メ		火
3			」	ウ	テ	モ	○	水
4			、	エ	ト	ヤ	●	木
5			.	オ	ナ	ユ	◇	金
6			ヲ	カ	ニ	ヨ	◆	土
7		→	フ	キ	ヌ	ラ	◆	年
8		←	イ	ク	ネ	リ	▶	円
9		↑	ウ	ケ	ノ	ル	◀	分
A		↓	エ	コ	ハ	レ	▲	人
B		×	オ	サ	ヒ	ロ	▼	大
C		÷	ヤ	ツ	フ	ワ	《	中
D		±	ユ	ス	ヘ	ン	》	小
E		≤		セ	ホ	“	1/2	〒
F		≥	ツ	ソ	マ	。°	1/4	℃