

ESC/POS Commands List (for ESC/POS Mode)

Command	Code Description (decimal)	Function Description
BS	8	Move cursor left
HT	9	Move cursor right
LF	10	Move cursor down
US LF	31 10	Move cursor up
HOM	11	Move cursor to home position
CR	13	Move cursor to left-most position
US CR	31 13	Move cursor to right-most position
US B	31 66	Move cursor to bottom position
US \$	31 36 n m 1≤n≤20 m=1 or 2	Move cursor to specified position
CLR	12	Clear display screen
CAN	24	Clear cursor line
ESC=	27 61 n 0≤n≤255	Select peripheral device
ESC @	27 64	Initialize display
ESC %	27 37 n 1≤n≤3	Select/cancel user-defined character set
ESC &	27 38 s b m s=1 32≤n≤m≤126 0≤a≤5 0≤p1...≤psx a_255	Define user-defined character set
ESC ?	27 63 n 32≤n≤126	Cancel user-defined characters
ESC R	27 82 n 0≤n≤13	Select an international character set

Command	Code Description (decimal)	Function Description
ESC t	27 116 n 0≤n≤5, 16, 17, 18, 19, 254, 255	Select character code table
ESC W	27 28 n m(x1 y x2 t2) 1≤n≤4 M=0, 1, 48, 49 1≤x≤1≤x2 20	Select/cancel window range
US MD1	31 1	Specify overwrite mode
US MD2	31 2	Specify vertical scroll mode
US MD3	31 3	Specify horizontal scroll mode
US C	31 67 n n=0, 1, 48, 49	Select/cancel cursor display
US E	31 69 n 0≤n≤255	Select/cancel display screen blinking
US T	31 84 h m 1≤h≤23 1≤m≤59	Set and display time counter
US U	31 85	Display time counter
US X	31 88 n 1≤n≤4	Brightness adjustment
US r	31 114 n n=0, 1, 48, 49	Select/cancel reverse characters
US v	31 118 n n=0, 1, 48, 49	Status confirmation by DRT signal
US @	31 64	Execute self-test
US :	31 58	Start/end macro definition
US ^	31 94 n m 0≤n≤255 0≤m≤255	Execute and quit macro
US.n	31 46 n 32≤n≤255	Select/cancel cursor display

Command	Code Description (decimal)	Function Description
US,n	31 42 n 32≤n≤255	n= a displayable character code display the code with a dot
US:n	31 59 n 32≤n≤255	n= a displayable character code display the code with a semicolon
US#nm	31 35 n 1≤n≤20 1≤m≤2	Turn the annunciator (▼) ON/OFF

SELECT COMMAND MODES (for VFD 200/450/650/850/895)

The command modes can be selected when the display is operating in VFD/200/450/650/850/895 mode.

Mode 0: VFD-450 (Default)

Mode 1: EPSON ESC/POS Compatible

Mode 2: UTC Standard

Mode 3: UTC Enhanced

Mode 4: AEDEX

Mode 5: ICD 2002

Mode 6: CD 5220

Mode 7: DSP-800

Mode 8: ADM 787/788

Mode 0: VFD-450 mode

Command	Hexadecimal Codes	Function
B	42H	Set baud rate and parity
S	53H	Save the current view message
P	50H	Set cursor position
C	43H	Clear display message
D	44H	Display the saved DEMO message
ESC G	IBH 47H	Print ON command
ESC S	IBH 53H	Print OFF command
M	4DH	Select command mode
X	58H	Set all default

Mode 1: EPSON ESC/POS Compatible

Command	Code Description (hex)	Function
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 x=1-20 y=01,02	Move cursor to specified position
CLR	0C	Clear display screen
CAN	18	Clear cursor line
US E n	1F 45 n n=00-ff	Blink display screen
ESC @	1B 40	Initialize display
US MD1	1F 01	Specify overwrite mode
US MD2	1F 02	Specify vertical scroll mode
US MD3	1F 03	Specify horizontal scroll mode
ESC W n s x1 y1 x2 y2	1B 57 n s x1 y1 x2 y2 n=1,2,3,4 s=0,1	Specify/cancel the window range 1≤x1≤x2 ≤20 1≤y1≤y2 ≤2
US:	1F 3A	Set starting/ending position of macro definition
US ^ n m	1F 5E n m 00≤(n,m)≤ff	Execute and quit macro
US @	1F 40	Execute self-test

Command	Code Description (hex)	Function
US T h m	1F 54 h m $0 \leq h \leq 17$ $0 \leq m \leq 3b$	Display time
US U	1F 55	Display time continuously
US.n	1F 2E n	n= a displayable character core Display the code with a dot
US,n	1F 2C n	n= a displayable character code Display the code with a comma
US;n	1F 3B n	n= a displayable character code Display the code with a semicolon
US#nm	1F 23 n m $n=0 \text{ or } 1$ $0 \leq m \leq 20$	Turn the anuciator (▼) ON/OFF

Mode 2: UTC Standard mode

Command	Code Description (hex)	Function
BS	08	Back space
HT	09	Horizontal tab
LF	0A	Lined feed
CR	0D	Carriage return
DLE	0F	Display position
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

Mode 3: UTC enhanced mode

Command	Code Description (hex)	Function
ESC u ACR	1B 75 41 [data x 20] 0D	Upper line display
ESC u BCR	1B 75 42 [data x 20] 0D	Bottom line display
ESC u DCR	1B 75 44 [data x 20] 0D	Upper line message scroll continuously
ESC u ECR	1B 75 45 hh ':' mm 0D h,m='0'-'9'	Display time
ESC u FCR	1B 75 46 [data x 20] 0D	Upper line message scroll once pass
ESC u HCR	1B 75 48 n m 0D 20h≤n,m	Change attention code
ESC u ICR	1B 75 49 [data x 40] 0D	Two line display
ESC RS CR	1B 0F 0D	Change to UTC standard mode

Mode 4: AEDEX mode

Command	Code Description (hex)	Function
! # 1CR	21 23 31 [data x 20] 0D	Upper line display
! # 2CR	21 23 32 [data x 20] 0D	Bottom line display
! # 4CR	21 23 34 [data x 20] 0D	Upper line message scroll continuously
! # 5CR	21 23 35 hh ':' mm 0D h,m='0'-'9'	Display time
! # 6CR	21 23 36 [data x 20] 0D	Upper line message scroll once pass
! # 8CR	21 23 38 n m 0D 20h≤n,m	Change attention code
! # 9CR	21 23 39 [data x 40] 0D	Two line display
! # ACR	21 23 41 [data x 20] 0D	Upper line scroll message
! # BCR	21 23 42 [data x 20] 0D	Bottom line display message

Mode 5: ICD 2002 mode

Command	Code Description (hex)	Function
HT	09	Move cursor right (only valid in overwrite mode)
BS	08	Move cursor left (only valid in overwrite mode)
CR	0D	Move cursor left-most (only valid in overwrite mode)
ESC @	1B 40	Initialize customer display to initial state, clears display buffer, set display mode to shift and sets current display row to upper row
ESC U	1B 55	Select upper row as current row (default)
ESC D	1B 44	Select lower row as current row
ESC A Φ	1B 41 Φ	Set customer display disable or enable Φ 'D'=disable 'E'=enable
ESC C r c	1B 43 r c	Move cursor to specified position (only valid in overwrite mode) -r Row ('U'=upper, 'D'=lower) -c Column number (range from 1-20)
ESC E r Φ	1B 45 r Φ	Set special effect or display mode of specified row

(REMARK)*Using command “ESC E r Φ ”, the value of parameter:

r 58= all rows

55= upper row

44= lower row

Φ special function, the value is one of

30= shift mode (default)

31= rotation mode

32= blink mode

33= clear this row and switch to shift mode

34= overwrite mode

35= vertical mode

Mode 6: CD 5220 standard mode

Command	Code Description (hex)	Function
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]x20 0D	Set the string display mode, write string to upper line
ESC Q B...CR	1B 51 42 [n]x20 0D	Set the string display mode, write string to lower line
ESC Q D...CR	1B 51 44 [n]x20 0D	Upper line message scroll continuously
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
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

Command	Code Description (hex)	Function
ESC [R	1B 5B 52	Move cursor to right-most position
ESC [K	1B 5B 4B	Move cursor to bottom position
ESC 1 x y	1B 6C x y 1≤x≤20, y=1,2	Move cursor to specified position
ESC @	1B 40	Initialize display
ESC W s x1 x2 y	1B 57 1 x1 x2 y 0≤x1≤x2≤20 y=1,2	Set or cancel the window range at horizontal scroll mode
CLR	0C	Clear display screen, and clear string mode
CAN	18	Clear cursor line, and clear string mode
ESC_n	1B 5F n n=0.1	Set cursor ON/OFF

Mode 7: DSP-800 mode

Command	Code Description (hex)	Function
EOT SOH P n ETB	04 01 50 n 17 n=31H-58H	Move cursor to specified position
EOT SOH C n m ETB	04 01 53 n 17 31H≤n≤m≤58H	Clear display range from n position to m position and move cursor to n position
EOT SOH S n ETB	04 01 53 n 17 n=31H-35H	Save the current displaying data to n layer for demo display
EOT SOH D n m ETB	04 01 44 n m 17 n=31H-4FH m=31H-33H	Display the saved data
EOT SOH T ETB	04 01 54 17	Transmit the current view message to computer
EOT SOH B n N ETB	04 01 42 n 4E 17 n=31H: 9600 n=32H: 4800 n=33H: 2400 n=34H: 1200 n=35H: 600 n=36H: 300	Set baud rate

Mode 8: ADM 787/788 mode

Command	Code Description (hex)	Function
CLR	0C	Clear display
CR	0D	Carriage return
SLE1	0E	Clear upper line and move cursor to upper left-end position
SLE2	0F	Clear bottom line and move cursor to bottom left-end position
DC0	10 n	Set period to upper line, last n position $31h \leq n \leq 37h$
DC1	11 n	Set line blinking, upper line n='1', bottom line n='2'
DC2	12 n	Clear line blinking, upper line n='1', bottom line n='2'
SF1	1E	Clear field 1 and move cursor to field 1, first position
SF2	1F	Clear field 2 and move cursor to field 2, first position