ANSI.SYS

The *ansi.sys* installable device driver lets you use ANSI escape sequences in real mode. An ANSI *escape sequence* is a series of characters (beginning with an escape character or keystroke) developed by the American National Standards Institute (ANSI). These sequences are used to define functions for MS-DOS. Specifically, you can change graphics functions and affect the movement of the cursor.

Installing Ansi.sys

To install *ansi.sys*, include a command line of the following form in your *config.sys* file:

device=[*drive*][*path*]**ansi.sys**

The escape sequences used in the *ansi.sys* file are listed in an appendix found at the end of this manual.

ANSI Escape Sequences Used with MS-DOS

This section lists and explains valid ANSI escape sequences for MS-DOS.

The variables listed in the escape sequences themselves are as follows:

The Ansi.sys variables:

Code	Description
Pn	*Numeric parameter* - a decimal number that you specify with ASCII digits.
Ps	*Selective parameter* - a decimal number that you use to select a subfunction. You may specify more than one subfunction by separating the parameters with semicolons.
Pl	*Line parameter* - a decimal number that you specify with ASCII digits.

Pc *Column parameter* - a decimal number that you specify with ASCII digits.

The ANSI Escape Sequence List:

Sequence	**Function**

Changing the cursor position:

ESC[*Pl*;*Pc***H**	Cursor Position (CUP)
ESC[*Pl*;*Pc***F**	Horizontal & Vertical Position (HVP)
	CUP and HVP move the cursor to the position specified by the parameters. When no parameters are provided, the cursor moves to the home position (the upper-left corner of the screen).
ESC[*Pn***A**	Cursor Up (CUU)
	This sequence moves the cursor up *Pn* lines without changing columns. If the cursor is already on the top line, MS-DOS ignores the CUU sequence.
ESC[*Pn***B**	Cursor Down (CUD)
	This sequence moves the cursor down *Pn* lines without changing columns. If the cursor is already on the bottom line, MS-DOS ignores the CUD sequence.
ESC[*Pn***C**	Cursor Forward (CUF)
	This sequence moves the cursor forward *Pn* columns without changing lines. If the cursor is already in the far right column, MS-DOS ignores the CUF sequence.
ESC[*Pn***D**	Cursor Forward (CUB)
	This sequence moves the cursor back *Pn* columns without changing lines. If the cursor is already in the far left column, MS-DOS ignores the CUB sequence.
ESC[6**n**	Device Status Report (DSR)
	The console driver outputs an RCP sequence when it receives the DSR escape sequence.

ESC[**s** Save Cursor Position (SCP)

The console driver saves the current cursor position. This position can be restored with the RCP sequence.

ESC[**u** Restore Cursor Position (RCP)

This sequence restores the cursor position to the value it had when the console driver received the SCP sequence.

Affecting erase functions:

ESC[2**J** Erase Display (ED)

The ED sequence erases the screen. The cursor then goes to the home position.

ESC[**K** Erase Line (EL)

This sequence erases from the cursor to the end of the line (including the cursor position).

Affecting screen graphics:

ESC[*Ps*;...;*Ps***m** Set Graphics Rendition (SGR)

The SGR escape sequence calls the graphic functions specified by the following numeric parameters. These functions remain until the next occurence of an SGR escape sequence.

Graphics Functions

0	All attributes off
1	Bold on
2	Faint on
3	Italic on
5	Blink on
6	Rapid blink on
7	Reverse video on
8	Concealed on
30	Black foreground
31	Red foreground
32	Green foreground
33	Yellow foreground
34	Blue foreground
35	Magenta foreground
36	Cyan foreground
37	White foreground
40	Black background
41	Red background

42	Green background
43	Yellow background
44	Blue background
45	Magenta background
46	Cyan background
47	White background

48 Subscript background
49 Superscript background

Parameters 30 through 47 meet the ISO 6429 standard.

ESC=*Ps***h**
ESC=**h**
ESC=0**h**
ESC?7**h**

Set Mode (SM)

The SM escape sequence changes the screen width or type to one of the following numeric parameters:

Screen width parameters

0 40x25 B&W
1 40x25 color
2 80x25 B&W
3 80x25 color
4 320x200 color
5 320x200 B&W
6 640x200 B&W
7 Wraps at the end of each line

ESC=*Ps***l**
ESC=**l**
ESC=0**l**

Reset Mode (RM)

Parameters for RM are the same as for SM (Set Mode), except parameter 7 resets the mode that causes wrapping at the end of each line.