

7-Bit ASCII Code

HEX	ASCII	DEC	BIT 7	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
00	NUL	0								
01	SOH	1								
02	STX	2								
03	ETX	3								
04	EOT	4								
05	ENQ	5								
06	ACK	6								
07	BEL	7								
08	BS	8								
09	HT	9								
0A	LF	10								
0B	VT	11								
0C	FF	12								
0D	CR	13								
0E	SO	14								
0F	SI	15								
10	DLE	16								
11	DC1	17								
12	DC2	18								
13	DC3	19								
14	DC4	20								
15	NAK	21								
16	SYN	22								
17	ETB	23								
18	CAN	24								
19	EM	25								
1A	SUB	26								
1B	ESC	27								
1C	FS	28								
1D	GS	29								
1E	RS	30								
1F	US	31								
20	SPACE	32								
21	!	33								
22	"	34								
23	#	35								
24	\$	36								
25	%	37								
26	&	38								
27	'	39								
28	(40								
29)	41								
2A	*	42								
2B	+	43								
2C	,	44								
2D	-	45								
2E	.	46								
2F	:	47								
30	;	48								
31	<	49								
32	=	50								
33	>	51								
34	@	52								
35	A	53								
36	B	54								
37	C	55								
38	D	56								
39	E	57								
3A	F	58								
3B	G	59								
3C	H	60								
3D	I	61								
3E	J	62								
3F	K	63								
40	L	64								
41	M	65								
42	N	66								
43	O	67								
44	P	68								
45	Q	69								
46	R	70								
47	S	71								
48	T	72								
49	U	73								
4A	V	74								
4B	W	75								
4C	X	76								
4D	Y	77								
4E	Z	78								
4F	[79								
50	\	80								
51]	81								
52	^	82								
53	_	83								
54	`	84								
55	{	85								
56		86								
57	}	87								
58	~	88								
59	DEL	89								

KEY

ASCII CHARACTER	HEX	DECIMAL
ESC	1B	27

NOTE: The following control characters are generated differently from previous DIGITAL terminals.

Code	VT100	Previous Terminal
NUL	CTRL - Space bar	CTRL - @
RS	CTRL - ~	CTRL - ^
US	CTRL - ?	CTRL - _

Cursor Control Key Codes

Cursor Key (arrow)	VT52 Mode	ANSI/Cursor Key Mode Reset	ANSI/Cursor Key Mode Set
Up	ESC A	ESC [A	ESC O A
Down	ESC B	ESC [B	ESC O B
Right	ESC C	ESC [C	ESC O C
Left	ESC D	ESC [D	ESC O D

Special Graphics Characters

HEX	ASCII	DEC	BIT 7	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
80	NUL	0								
81	SOH	1								
82	STX	2								
83	ETX	3								
84	EOT	4								
85	ENQ	5								
86	ACK	6								
87	BEL	7								
88	BS	8								
89	HT	9								
8A	LF	10								
8B	VT	11								
8C	FF	12								
8D	CR	13								
8E	SO	14								
8F	SI	15								
90	DLE	16								
91	DC1	17								
92	DC2	18								
93	DC3	19								
94	DC4	20								
95	NAK	21								
96	SYN	22								
97	ETB	23								
98	CAN	24								
99	EM	25								
9A	SUB	26								
9B	ESC	27								
9C	FS	28								
9D	GS	29								
9E	RS	30								
9F	US	31								
A0	SPACE	32								
A1	!	33								
A2	"	34								
A3	#	35								
A4	\$	36								
A5	%	37								
A6	&	38								
A7	'	39								
A8	(40								
A9)	41								
AA	*	42								
AB	+	43								
AC	,	44								
AD	-	45								
AE	.	46								
AF	:	47								
B0	;	48								
B1	<	49								
B2	=	50								
B3	>	51								
B4	@	52								
B5	A	53								
B6	B	54								
B7	C	55								
B8	D	56								
B9	E	57								
BA	F	58								
BB	G	59								
BC	H	60								
BD	I	61								
BE	J	62								
BF	K	63								
C0	L	64								
C1	M	65								
C2	N	66								
C3	O	67								
C4	P	68								
C5	Q	69								
C6	R	70								
C7	S	71								
C8	T	72								
C9	U	73								
CA	V	74								
CB	W	75								
CC	X	76								
CD	Y	77								
CE	Z	78								
CF	[79								
D0	\	80								
D1]	81								
D2	^	82								
D3	_	83								
D4	`	84								
D5	{	85								
D6		86								
D7	}	87								
D8	~	88								
D9	DEL	89								

KEY

ASCII CHARACTER	HEX	DECIMAL
ESC	1B	27

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VT100 PROGRAMMING REFERENCE CARD

ANSI COMPATIBLE MODE

Cursor Movement Commands

Cursor up	ESC [Pn A
Cursor down	ESC [Pn B
Cursor forward (right)	ESC [Pn C
Cursor backward (left)	ESC [Pn D
Direct cursor addressing	ESC [P; Pc H
Direct cursor addressing	ESC [P; Pc f
Index	ESC D
Next Line	ESC E
Reverse index	ESC M
Save cursor and attributes	ESC 7
Restore cursor and attributes	ESC B

Line Size (Double-Height and Double-Width) Commands

Change this line to double-height top half	ESC # 3
Change this line to double-height bottom half	ESC # 4
Change this line to single-width single-height	ESC # 5
Change this line to double-width single-height	ESC # 6

Character Attributes

ESC [Ps;Ps;Ps;...Ps m	All Attributes Off
Ps = 0 or None	Bold on
1	Underscore on
4	Blink on
5	Reverse video on
7	

PROGRAMMABLE LEDs

ESC | Ps;Ps;...;Ps q

Ps = 0 or None	All LEDs Off
1	L1 on
2	L2 on
3	L3 on
4	L4 on

Character Sets (G0 and G1 Designators)

Character Set	G0	G1
United Kingdom (UK)	ESC (A	ESC) A
United States (USASCII)	ESC (B	ESC) B
Special graphics characters and line drawing set	ESC (O	ESC) O
Alternate character ROM	ESC (1	ESC) 1
Alternate character ROM special graphics characters	ESC (2	ESC) 2

Scrolling Region

ESC | Pt : Pb r

Tab Stops

Set tab at current column	ESC H
Clear tab at current column	ESC g
Clear tab at current column	ESC 0 g
Clear all tabs	ESC 3 g

Modes

Mode Name	Mode	To Set		To Reset	
		Sequence	Mode	Sequence	Mode
Line feed/new line	New line	ESC[20 h	Line feed	ESC[20/*	
Cursor key mode	Application	ESC[?1 h	Cursor	ESC[?1/*	
ANSI/VT52 mode	ANSI		VT52	ESC[?2/*	
Column mode	132 Col	ESC[?3 h	80 Col	ESC[?3/*	
Scrolling mode	Smooth	ESC[?4 h	Jump	ESC[?4/*	
Screen mode	Reverse	ESC[?5 h	Normal	ESC[?5/*	
Origin mode	Relative	ESC[?6 h	Absolute	ESC[?6/*	
Wraparound	On	ESC[?7 h	Off	ESC[?7/*	
Auto repeat	On	ESC[?8 h	Off	ESC[?8/*	
Interface	On	ESC[?9 h	Off	ESC[?9/*	
Graphic proc. option	On	ESC 1	Off	ESC 2	
Keypad mode	Application	ESC =	Numeric	ESC >	

*The last character of the sequence is a lowercase L (154_g).

Reports

Cursor Position Report

Invoked by ESC | 6 n
 Response is ESC | Pl; Pc R

Status Report

Invoked by ESC | 5 n
 Response is ESC | 0 n (terminal ok)
 ESC | 3 n (terminal not ok)

What Are You

Invoked by ESC | c
 Invoked by ESC | 0 c
 Response is ESC | ? 1 ; Ps c

Ps = 0	Base VT100, no options
1	Processor option (STP)
2	Advanced video option (AVO)
3	AVO and STP
4	Graphics processor option (GPO)
5	GPO and STP
6	GPO and AVO
7	GPO, STP, and AVO

Alternately invoked by ESC Z (not recommended). Response is the same.

Reset

ESC c

Confidence Tests

Fill Screen with "Es"	ESC # 8
Invoke Test(s)	ESC 2 ; Ps y
Ps = 1	Power-up self test (ROM checksum, RAM, NVR, keyboard and AVO if installed)
2 (Loopback connector required)	Data Loopback
4 (Loopback connector required)	EIA Modern Control Test
8	Repeat selected test(s) indefinitely (until failure or power off)

VT52 COMPATIBLE MODE

Cursor Up	ESC A	
Cursor Down	ESC B	
Cursor Right	ESC C	
Cursor Left	ESC D	
Select Special Graphics character set	ESC F	
Select ASCII character set	ESC G	
Cursor to home	ESC H	
Reverse line feed	ESC I	
Erase to end of screen	ESC J	
Erase to end of line	ESC K	
Direct cursor address	ESC Pl Pc	(see note 1)
Identify	ESC Z	(see note 2)
Enter alternate keypad mode	ESC =	
Exit alternate keypad mode	ESC >	
Enter ANSI mode	ESC <	

NOTE 1: Line and column numbers for direct cursor address are single character codes whose values are the desired number plus 37_g.

NOTE 2: Response to ESC Z is ESZ / Z.

Auxiliary Keypad Codes

Key	VT52 Numeric Mode	VT52 Application Mode	ANSI Numeric Mode	ANSI Application Mode
0	0	ESC?p	0	ESCOp
1	1	ESC?q	1	ESCQq
2	2	ESC?r	2	ESCOr
3	3	ESC?s	3	ESCOS
4	4	ESC?t	4	ESCQt
5	5	ESC?u	5	ESCQu
6	6	ESC?v	6	ESCQv
7	7	ESC?w	7	ESCQw
8	8	ESC?x	8	ESCQx
9	9	ESC?y	9	ESCQy
-(minus)	-(minus)	ESC?m	-(minus)	ESCQm
.(comma)	.(comma)	ESC?/*	.(comma)	ESCQ/*
.(period)	.(period)	ESC?n	.(period)	ESCQn
ENTER	Same as RETURN	ESC?M	Same as RETURN	ESCQM
PF1	ESCP	ESCP	ESCOP	ESCOP
PF2	ESCQ	ESCQ	ESCQO	ESCQO
PF3	ESCR	ESCR	ESCOR	ESCOR
PF4	ESCS	ESCS	ESCOS	ESCOS

*The last character of the sequence is a lowercase (154_g).