

**DEC STD**  
**107**  
**SEC. 0**  
**REV. B**

**Digital  
Standard for  
Terminal  
Keyboards**

# **Standard Keyboard Layouts**

TITLE: DIGITAL STANDARD FOR TERMINAL KEYBOARDS - STANDARD KEYBOARD LAYOUTS

ABSTRACT: Section 0 defines requirements for keyboard layouts, keyboard codes, and key pads to be used for all terminal designs that are introduced into production after January 1, 1978.

Section 1 defines the graphic character sets to be used by Digital hardware and software products for information interchange. The definitions include the code generated by each graphic character.

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## 1.0 INTRODUCTION

### 1.1 PURPOSE

The purpose of this standard is to describe a basic keyboard so that new Digital designs that are in progress can be controlled, thereby providing continuity with previously maintained designs. It is recognized that new designs may incorporate new features that require different keys on the keyboard. New designs must follow the requirements established, so that new features will become supplements rather than changes to this standard. These requirements provide room for expansion and flexibility. A change to a keyboard that is incompatible with this standard must be approved by the Engineering Committee before the change is incorporated in a high-volume product.

### 1.2 SCOPE

This standard applies to equipment that has a volume shipment of more than 500 units per year. Keyboards which are obsolete or very specialized applications (i.e., less than 500 units per year) and prior to the LA36 are not included in this standard.

The current Digital standard keyboard layout with 60 defined keys and 5 keys available for specific application definition, is described in paragraph 2.0. The Digital standard keyboard layout follows the ANSI X4.14-1971 standard typewriter-paired keyboard layout, with exceptions as described in paragraph 2.0.

This standard also describes the 18-key numeric pad that is offered as an accessory to the main keyboard and the standard APL Character Set Keyboard.

Paragraph 4.0 describes the keyboard arrangements and character sets that are available for the following European countries:

- a. France
- b. Germany
- c. Sweden
- d. Finland
- e. Norway/Denmark

A complete registry of graphic character sets is provided in Section 1 of this standard. The special keyboards that have been developed for use in non-European countries, and those used in special applications are described in paragraph 5.0.



The previous Digital standard keyboard and those keypad variations that are now obsolete are documented in paragraph 6.2.

### 1.3 RESPONSIBILITIES

#### 1.3.1 Design Engineering

Those Design Engineering Groups which introduce a new keyboard design intended for volume production of more than 500 units per year are responsible for adding their keyboard to this standard, with the approval of the Engineering Committee.

#### 1.3.2 Engineering Committee

An Engineering Committee representative on the Design Review Team shall inform any design group if their specification needs to be changed to conform to this standard.

#### 1.3.3 Keyboard Design Committee

The Keyboard Design Committee is responsible for this standard. For further information, contact:

Jim McGinnis, Chairman  
ML5-3/E12 DTN 223-3695

Digital Standards Administration shall assist the Keyboard Design Committee in the task of keeping this standard current with new keyboard-equipped products.

### 1.4 REFERENCED STANDARDS AND DOCUMENTATION

#### 1.4.1 Digital Standards

DEC STD 051 Standard Coded Character Set

DEC STD 138 Standard Registry of Control Functions For Character Imaging Devices

Copies of the referenced Digital Standards can be obtained from Digital Standards Administration, ML5-2/E56, DTN 223-2954.

#### 1.4.2 Referenced Documents

A-PS-1214333-0-0	<u>Key Cap Purchase Specification</u>
D-AR-7015765-0-0	<u>Keyboard Cap-Position Arrangement</u>
E-AD-7013910-0-0	<u>66-Key Main Array Assembly</u>
A-SP-7013910-0-1	<u>66-Key Switch Array Specifications</u>

Copies of these engineering documents can be obtained from any Digital Microfilm Reference Library.

#### 1.4.3 National And International Standards

ANSI X3.4-1977	<u>American National Standard Code For Information Interchange.</u>
ANSI X4.14-1971	<u>American National Standards Institute Keyboard Standard.</u>
ISO 646	<u>7-Bit Coded Character Set</u>

Copies of these standards can be obtained from the Corporate Library, ML4-3 or read from microfiche at the MR, TW, or MK branches.

ISBN 2-12-953907-0	<u>ISO International Register of Character Sets To Be Used with Escape Sequences,</u> published by Afnor, Paris, France.
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Additional information may be obtained from Terminals Engineering,  
ML5-3/E12 DTN 223-3695

## 2.0 CURRENT DIGITAL STANDARD KEYBOARD

### 2.1 65-KEY MAIN KEYBOARD

The current Digital Standard Keyboard configuration shown in Figure 1, is similar to the typewriter-paired keyboard arrangement approved by the American National Standards Institute, ANSI X4.14-1971. The specific variations from ANSI X4.14-1971 and from the original Digital standard keyboard layout (which exactly followed ANSI) are as follows:

- The number symbol (#) on the number 3 key is supplemented with the English pound symbol £.

- b. The RETURN key is moved one position to the left and formed into a uniform L shape.
- c. The LINE FEED key is relocated to the right of the righthand SHIFT key.
- d. The REPEAT key is deleted from the standard keyboard arrangement.
- e. The vertical bar backslash key is moved to the right of the RETURN key.
- f. The DELETE key is moved to the right of the RETURN key.
- g. The BRACKETS and BRACES symbols are arranged on the two keys to the right of the P key.
- h. The SET UP key is in the upper most left hand corner.
- i. Five keys left undesignated are: the lower key to the left of the SHIFT key, and four keys at the right end of the top row above the numerals.

## 2.2 65- KEY MAIN KEYBOARD CODE

### 2.2.1 Modes of Operation

The four modes of operation are:

- a. NORMAL
- b. SHIFT
- c. CAPS LOCK
- d. CONTROL

The NORMAL and SHIFT mode key characters comply with ANSI X4.14-1971, except for braces and square brackets. Refer to Figure 2 for code assignments.

### 2.2.2 Keyboard Operation Summary

Keyboard operation is as follows:

NORMAL - unshifted lower case characters

SHIFT - shifted, upper case characters

CONTROL - control characters (ASCII bits 6 and 7 set to zero on selected keys only).

CAPS LOCK - Upper case alpha, all other characters as in NORMAL mode.

CAPS LOCK & SHIFT - same as SHIFT

SHIFT & CONTROL - same as CONTROL

CAPS LOCK & CONTROL - same as CONTROL

CAPS LOCK & SHIFT & CONTROL - same as CONTROL

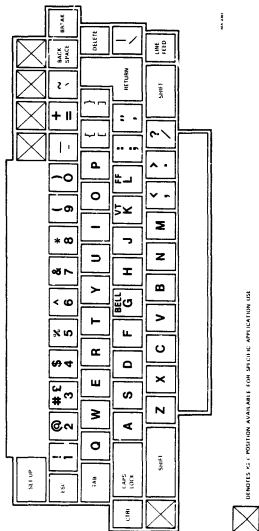
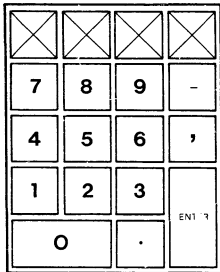


Figure 1. Current Digital Standard Keyboard



### 2.3 18-KEY NUMERIC KEYPAD

The 18-key numeric keypad shown in Figure 3 contains a 14-key numeric section similar to that of many calculators and is useful in fast data entry applications. The ASCII codes normally associated with each key are identical to those in the NORMAL mode on the main keyboard and remain the same for all four operating modes (i.e., NORMAL, SHIFT, CAPS LOCK and CONTROL). The ENTER key shall generate the code for the CR function. The top four keys are available for specific application use, and are left up to the discretion of the designer.



MA 3253

Figure 3. 18-Key Numeric Pad

## 2.4 AUTHORIZED VARIATIONS

The Digital Standard Keyboard and the 18-Key Numeric Keypad are manufactured as a Digital option designated the LK07 Keyboard, Digital part number 70-15765-00. Numerous variations of the basic keyboard assembly have been created, including one that deletes the 18-Key Numeric Keypad. Refer to Keyboard/Keycap Assembly, drawing D-AD-7015765-0-0, and the Keyboard/Keycap Assembly parts list, C-PL-7015765-0-0 for details regarding the authorized variations.

Most of the authorized variations of the Digital Standard Keyboard have been created to provide special keycaps for the numerous Digital keyboard terminal applications. The specific set of keycaps used for each Digital keyboard terminal, such as the VT100 basic keyboard, the LA120 basic keyboard, the LA34 basic keyboard, the VT100-NA, NB DECform keyboard, and the VT100-WA, WB word processing keyboard, is documented in the following engineering drawings:

D-AR-7015765-0-1	<u>Keyboard Cap - Position Arrangement Drawing</u>
A-PS-1214333-0-0	<u>Keycaps Purchase Specification</u>

## 3.0 APL CHARACTER SET

Figure 4 represents the APL (A Programming Language) character set as applied to the Digital Standard Keyboard. This style keyboard is normally found in the university and scientific communities and meets the requirements of scientific users.



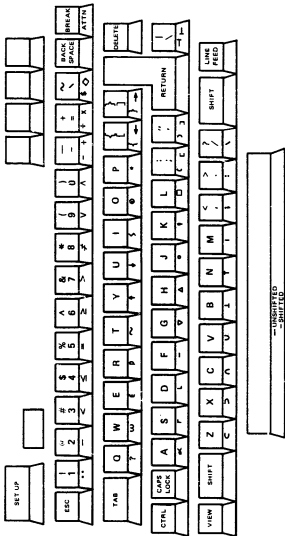


Figure 4. APL Character Set Keyboard

#### 4.0 EUROPEAN CHARACTER SETS AND CODES

This paragraph describes the keyboards and codes used in the following countries:

Country	Keyboard	Code
France	Figure 5	Figure 5
Germany	Figure 7	Figure 8
Sweden	Figure 9	Figure 10
Finland	Figure 11	Figure 12
Norway and Denmark	Figure 13	Figure 14





















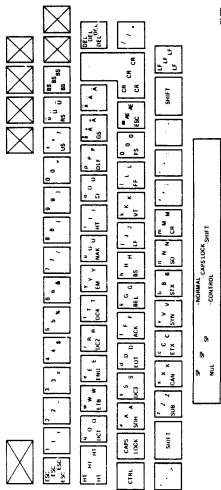


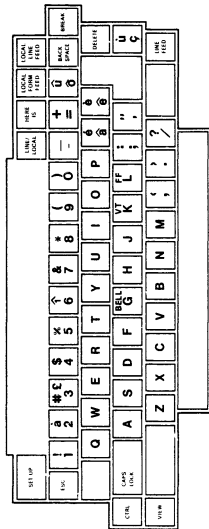
Figure 14. Norwegian/Danish Keyboard Code

## 5.0 SPECIAL KEYBOARDS

This paragraph is the history file for all other keyboards that are exceptions to the Digital Standard Keyboard. These keyboards are necessary to meet specific customer needs. It is intended that designers of different style keyboards will refer to the keyboard descriptions in this paragraph to determine if a similar design already exists before attempting to create a completely new design.

### 5.1 FRENCH-CANADIAN PRINTER KEYBOARD

The Canadian-French Keyboard version, shown in Figure 15, is required to satisfy the systems market in certain sections of Canada. The Canadian-French Keyboard code is shown in Figure 16.



M4.079

Figure 15. Canadian-French Printer Keyboard



## 5.2 KATAKANA PRINTER KEYBOARDS

The katakana printer keyboard is used in Japan. The keyboard provides a set of Japanese characters that relate to equivalent English characters on the keyboard.

Figure 17 shows the katakana keyboard that was designed for use with the LA36 DECwriter Terminal. This katakana keyboard is now obsolete.

Figure 18 shows the katakana keyboard that is currently used with the LA34 DECwriter Terminal. This keyboard design was released for production in April, 1979.

The standard U.S. keyboard mode yields the codes specified in Figure 2, which shows the Digital Standard Keyboard code. The codes generated in the katakana mode are shown in Figure 19.





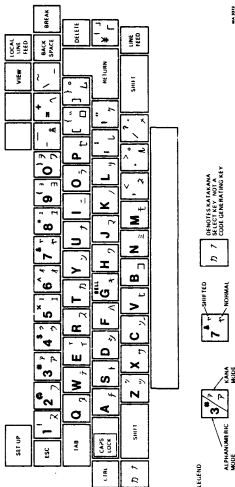


Figure 18. LA34 Printer Katakana Keyboard Introduced April, 1979



### 5.3 WORD PROCESSING SYSTEMS (WPS) KEYBOARDS

#### 5.3.1 WPS-8 Word Processing System

Figure 20 shows the keyboard used on the WPS-8 Word Processing System. The WPS-8 uses the now obsolete Digital Standard Keyboard layout and has added additional functions which are imprinted on the front surface of the keycaps.

#### 5.3.2 VT100 Word Processing System

Figure 21 shows the VT100 keyboard used on the new word processing systems, Model VT100-WA, WB.

This keyboard has a standard VT100 layout with the following exceptions:

- a. Additional legends are imprinted on the faces of the keys.
- b. The LINE FEED and VERTICAL BAR keys are swapped.
- c. The auxiliary keypad provides access to the special editing capabilities of the word processing software.

#### 5.3.3 Special European Character Sets For WPS

Figures 15 through 19 show the VT100 word processing system keyboards used in the following non-English speaking countries:

- a. WPS French Figure 22
- b. WPS French - Canadian Figure 23
- c. WPS Dutch Figure 24
- d. WPS German Figure 25

These layouts generally follow the standard typewriter conventions.

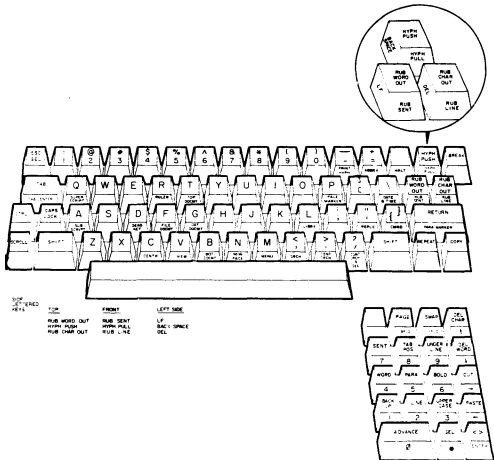


Figure 20. WPS-8 Version of the Digital Standard Keyboard



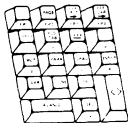
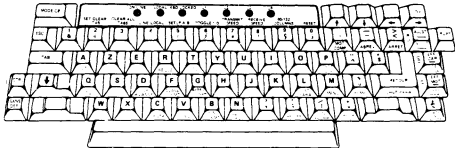


Figure 22. WPS French VT100 Keyboard

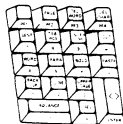
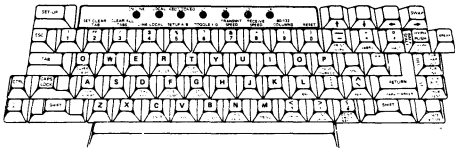


Figure 23. WPS French-Canadian VT100 Keyboard







#### 5.4 VT62 BLOCK MODE APPLICATIONS TERMINAL

Figure 26 shows the VT62 keyboard and associated numeric pad which is patterned after the obsolete Digital Standard Keyboard layout.

#### 5.5 TYPESET SYSTEM TERMINALS

Typeset systems designed prior to 1978 were built with a special LK05-A Keyboard, shown in Figure 27. Two variations were offered: the -01 variation, which is shown and the -00 version which has the top row of keys Fa-Fp as blank keycaps. Typeset systems under design during 1978 use keyboards shown in Figure 28 (LK09-B) and Figure 29 (LK09-C). A third version (not illustrated) is similar to the LK09-B, but the top row of the keys have been deleted.

#### 5.6 FUTURE SPECIAL KEYBOARDS

The following special keyboards are currently in engineering development:

VT162	Block Mode Applications Terminal.
KED	Keyboard for the PDT family.
EDT	Keyboard for the PDT family.
FMS	Keyboard for the PDT family.

Descriptions of these keyboards are not included in this revision of DEC STD 107 because accurate descriptions cannot be guaranteed at this time. The status of these keyboards will be updated in future revisions of this standard.

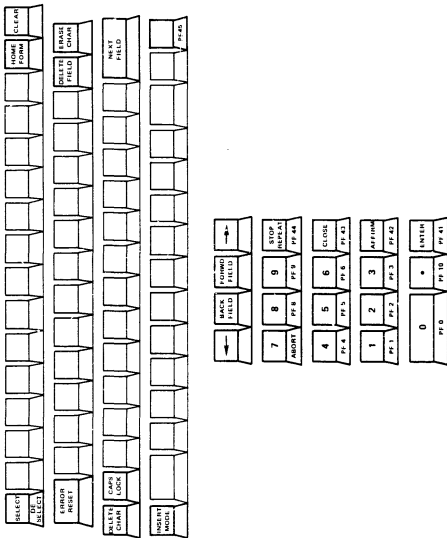
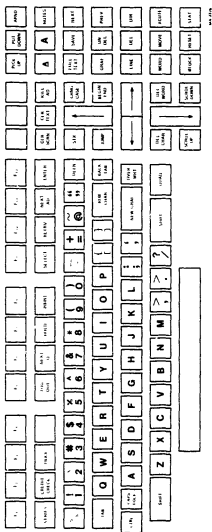


Figure 26. VT62 Keyboard, Block Mode Applications Terminal







## 6.0 OBSOLETE DIGITAL STANDARD KEYBOARD AND PADS

### 6.1 62-KEY MAIN KEYBOARD - LK82

The obsolete Digital Standard Keyboard configuration is shown in Figure 30. The arrangement conforms to a typewriter keyboard rather than a teletypewriter and encompasses the typewriter keyboard layout approved by the American Standards Institute Standard of ANSI X4.14-1971.

The "BREAK" key is simply a set of normally open switch contacts whose use is left up to the designer.

The two undefined keys are reserved for future standardization requirements and are not intended for the designer's use.

#### 6.1.1 62-Key Encoded Keyboard Code

The keyboard code generated by the complete encoded keyboard is presented in Figure 31, showing the five modes of operation: NORMAL, SHIFT, CAPS LOCK, CONTROL, SHIFT AND CONTROL mode key characters have been dictated by the ANSI X4.14-1971 standard. The CONTROL and SHIFT AND CONTROL output codes are generated by applying the standard ASCII code chart algorithm (i.e., when CONTROL is pushed, ASCII bits 6 and 7 are set to zero, when SHIFT and CONTROL are pushed, the procedure is to apply the CONTROL rule to the SHIFTED code character). The CAPS LOCK produces upper case for the alpha characters only. All other key codes remain as per the NORMAL mode. CAPS LOCK is a locking key which is unlocked by pressing CAPS LOCK again. Depressing the SHIFT key does not unlock the CAPS LOCK key.

In summary, the keyboard operation is as follows:

NORMAL - unshifted, lower case characters

SHIFT - shifted upper case characters

CONTROL - control characters (ASCII bits 6 and 7 set to zero)

CAPS LOCK - upper case alpha, all other characters as in NORMAL mode.

CAPS LOCK AND SHIFT - same as SHIFT



SHIFT AND CONTROL - control characters produced by taking the SHIFT code and setting bits 6 and 7 to zero.

CAPS LOCK AND CONTROL - same as CONTROL

CAPS LOCK AND SHIFT AND CONTROL - same as SHIFT and CONTROL

### 6.1.2 62-Key Main Keyboard Data Entry Option

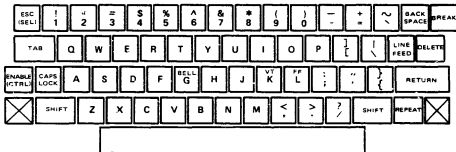
Certain data entry users require that the RETURN key be located within the touch typing area, i.e., two keys to the right of the L key. Although this is in violation of the ANSI X4.14-1971 standard, in view of the fact that other manufacturers do offer the RETURN key in the touch typing area, and in order to increase the sales potential, the option is provided, thereby enabling the RETURN key to be moved and located as shown in Figure 32. The BRACES key is placed to the right of RETURN. This option was provided to increase sales potential.

### 6.2 11-KEY NUMERIC PAD - LK03

The 11-key numeric pad shown in Figure 33 is available as a key array only or complete with a PC board and cable for attachment to the main keyboard. The encoded version will provide ASCII code for the numerics and decimal point in four operating modes and must be operated connected to the main keyboard to achieve this coding. The 5 key contains a dimple defining the home position.

### 6.3 19-KEY NUMERIC PAD

The 19-key pad shown in Figure 33 is available as a key array only. It is not supplied with a self contained PC board and electronics. It is presented here as an informative measure for future designs that may require a numeric pad along with cursor or control keys. The lower left hand key station is intended to accept a double size key cap such as the "0" key on a numeric pad.

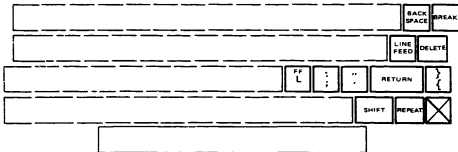


DENOTES KEY POSITION  
AVAILABLE FOR EXPANSION

MA-3360

Figure 30. Obsolete Digital Standard Keyboard



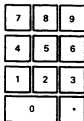


MA 3360

Figure 32. Obsolete Digital Standard Data Entry Variation

## NOTE

KEY CODE: The ASCII Code for the indicated numerics and decimal point is the same in all four operating modes (i.e., NORMAL, SHIFT, CAPS LOCK, CAPS LOCK AND SHIFT).



MA 3368

Figure 33. Obsolete 11-Key Numeric Key Pad - LK03

**DEC STD**  
**107**  
**SEC. 1**  
**REV. B**

**REGISTRY  
OF  
GRAPHIC**

# CHARACTER SET



TITLE: DIGITAL STANDARD FOR TERMINAL KEYBOARDS - REGISTRY OF GRAPHIC CHARACTER SETS

ABSTRACT: This section defines the graphic character sets to be used in Digital hardware and software products for information interchange. The definitions include the code generated by each graphic character.

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3-Jan-80	--	Roy Lomicka	Eng. Comm. Secy. <i>(of) Lomicka</i>	A
6-Aug-81	ML001	Dave Hughes	<i>(of) Lomicka</i>	B

Document Identifier

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## SECTION 1 - REGISTRY OF GRAPHIC CHARACTER SETS

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## 1 INTRODUCTION

This document is the registry of graphic character sets to be used in Digital hardware and software products for information interchange.

### 1.1 PURPOSE

The purpose of this registry is to promote compatibility in information interchange and avoid duplication of effort in developing application oriented character sets.

The standard code for interchange of information among Digital products is the 7-bit coded character set defined in DEC STD 051, Standard Coded Character Set. Provision for additional characters is made by code extension techniques in which the additional characters or character sets are identified by escape sequences. The procedures for code extension and the structure and use of escape sequences are fully documented in DEC STD 138, Standard Registry Of Control Functions For Character Imaging Devices.

### 1.2 SCOPE

The first graphic character sets to be included in this registry were originated as part of the development projects for the VT100, LA120, and LA34/LA38 terminals. These were determined after consulting various national standards and after talking with people in the various countries to see what they wanted and needed.

In order to invoke different character sets dynamically under remote control, it was decided to use the escape sequences specified in the ISO International Register of Character Sets To Be Used With Escape Sequences.

The escape sequences specified in this document are used to assign registered character sets to the G0 and G1 graphic sets. The G0 graphic set is that set of graphic characters which is invoked by the Shift In (SI) control character, code 017 octal. The G1 graphic set is that set of graphic characters which is invoked by the Shift Out (SO) control character, code 016 octal. For a more complete discussion of SI/SO operation, refer to ANSI Standard X3.41-1974.

The escape sequences designate unique character sets. A character set is unique if it differs from any other set in one or more character positions. Character sets not listed in this document must be assigned an appropriate ISO registered or DEC private escape sequence, and must be added to this document.

### 1.3 RESPONSIBILITIES

Refer to Section 0, paragraphs 1.3.1 through 1.3.3.

### 1.4 REFERENCED STANDARDS

DEC STD 051	<u>Standard Coded Character Set</u>
DEC STD 138 (proposed)	<u>Registry of Control Functions For Character Imaging Devices</u>
ANSI Standard X3.41-1974	<u>Code Extension Techniques For Use With the 7-Bit Coded Character Set of ASCII.</u>
ISBN 2-12-9539870	<u>ISO International Register Of Character Sets To Be Used With Escape Sequences</u>

## 2 LIST OF THE REGISTERED CHARACTER SETS AND ESCAPE SEQUENCES

Character sets may be designated by means of escape sequences. The escape sequences allow the character sets to be designated as either G0 or G1 character sets. G0 character sets are invoked by the control character SI (017 octal) in 7 bits or by the most significant bit (bit 7=0) in 8 bits. G1 character sets are invoked by the control character SO (016 octal) in 7 bits or by the most significant bit (bit 7=1) in 8 bits.

If only one character set is implemented as G0 or G1, then the escape sequence may be omitted. Examples of this are APL and Katakana, which are implemented as G1 sets exclusively in some terminals.

Escape sequences listed in the following chart are specified in terms of DEC STD 051 graphics, as well as octal representations.

Name	Escape Sequences		Notes
	G0	G1	
Great Britain	ESC ( A 033 050 101	ESC ) A 033 051 101	
United States	ESC ( B 033 050 102	ESC ) B 033 051 102	
Finland	ESC ( 5 033 050 065	ESC ) 5 033 051 065	1,2
Norway and Denmark	ESC ( 6 033 050 067	ESC ) 6 033 051 066	1,3
Sweden	ESC ( 7 033 050 067	ESC ) 7 033 051 067	1,4
Germany	ESC ( K 033 050 113	ESC ) K 033 051 113	
France	ESC ( R 033 050 113	ESC ) R 033 051 122	
Canada (French)	ESC ( 9 033 050 071	ESC ) 9 033 051 071	1,5,6
Japan (Roman)	ESC ( J 033 050 112	ESC ) J 033 051 112	
Japan (Katakana)	ESC ( I 033 050 102	ESC ) I 033 051 102	
APL	ESC ( 8 033 050 070	ESC ) 8 033 051 070	7

**Notes:**

1. These character sets are different from the registered ISO character sets. Details of the differences are listed under subhead 4. Private escape sequences have been assigned to these character sets. If a designated escape sequence is not implemented by a terminal, it is acceptable for the terminal to designate a "closest fit" character set as a fall-back.

**CAUTION**

Character sets implemented as "closest fit" are subject to change. In all cases, the private escape sequence listed in the table is recommended.

2. This character set should be designated as a "closest fit" if the final character "C" (103) is used.
3. This character set should be designated as a "closest fit" if the final character "E" (105) is used.
4. This character set should be designated as a "closest fit" if the final character "H" (110) is used.
5. This character set should be designated as a "closest fit" if the final character "Q" (121) is used.
6. On the Bell Canada version of the LA120, this character set is selected by ESC ( R. This means of selection is not endorsed by this standard.
7. This is the APL typewriter-paired character set.

**3 GRAPHIC CHARACTER SETS AND RELATED CODES**

Refer to Tables 1 through 11.

**Notes**

In the tables, codes are specified as 3-digit octal numbers.

A small dot adjacent to an entry indicates the character is either hand drawn or modified by hand. This type of entry may not be a perfect reproduction of the machine printed character.

Table 1. Great Britain

CODE	GRAPHIC	NAMES OR MEANINGS	CODE	GRAPHIC	NAMES OR MEANINGS
041	!	Exclamation Point	070	8	Digit Eight
042	"	Quotation Marks, Diaeresis	071	9	Digit Nine
043	£	Pound Sign	072	:	Colon
044	\$	Dollar Sign	073	;	Semicolon
045	%	Percent Sign	074	<	Opening (Left) Angle Bracket, Less Than Sign
046	&	Amperсанд	075	=	Equal Sign
047	'	Closing Single Quotation Mark, Apostrophe, Acute Accent	076	>	Closing (Right) Angle Bracket, Greater Than Sign
050	(	Opening (Left) Parenthesis	077	?	Question Mark
051	)	Closing (Right) Parenthesis	100	@	Commercial At Sign
052	*	Asterisk	101	A	Capital Letter A
053	+	Plus Sign	102	B	Capital Letter B
054	,	Comma, Cedilla	103	C	Capital Letter C
055	-	Hyphen, Minus Sign	104	D	Capital Letter D
056	.	Period, Full Stop, Decimal Point	105	E	Capital Letter E
057	/	Solidus, Slant, Slash	106	F	Capital Letter F
060	0	Digit Zero	107	G	Capital Letter G
061	1	Digit One	110	H	Capital Letter H
062	2	Digit Two	111	I	Capital Letter I
063	3	Digit Three	112	J	Capital Letter J
064	4	Digit Four	113	K	Capital Letter K
065	5	Digit Five	114	L	Capital Letter L
066	6	Digit Six	115	M	Capital Letter M
067	7	Digit Seven	116	N	Capital Letter N
			117	O	Capital Letter O

Table 1. Great Britain (continued)

CODE	GRAPHIC	NAMES OR MEANINGS	CODE	GRAPHIC	NAMES OR MEANINGS
120	P	Capital Letter P	150	h	Small Letter H
121	Q	Capital Letter Q	151	i	Small Letter I
122	R	Capital Letter R	152	j	Small Letter J
123	S	Capital Letter S	153	k	Small Letter K
124	T	Capital Letter T	154	l	Small Letter L
125	U	Capital Letter U	155	m	Small Letter M
126	V	Capital Letter V	156	n	Small Letter N
127	W	Capital Letter W	157	o	Small Letter O
130	X	Capital Letter X	160	p	Small Letter P
131	Y	Capital Letter Y	161	q	Small Letter Q
132	Z	Capital Letter Z	162	r	Small Letter R
133	[	Opening (Left) Square Bracket	163	s	Small Letter S
134	\	Reverse Solidus, Reverse Slant, Backslash	164	t	Small Letter T
135	]	Closing (Right) Square Bracket	165	u	Small Letter U
136	^	Upward Arrow Head, Circumflex Accent	166	v	Small Letter V
137	_	Underline	167	w	Small Letter W
140	`	Opening Single Quotation Mark, Grave Accent	170	x	Small Letter X
141	a	Small Letter A	171	y	Small Letter Y
142	b	Small Letter B	172	z	Small Letter Z
143	c	Small Letter C	173	{	Opening (Left) Curly Bracket, Opening (Left) Brace
144	d	Small Letter D	174		Vertical Line
145	e	Small Letter E	175	}	Closing (Right) Curly Bracket, Closing (Right) Brace
146	f	Small Letter F	176	~	Tilde, Overline, General Accent



Table 2. United States

CODE	GRAPHIC	NAMES OR MEANINGS	CODE	GRAPHIC	NAMES OR MEANINGS
041	!	Exclamation Point	070	8	Digit Eight
042	"	Quotation Marks, Diaeresis	071	9	Digit Nine
043	#	Number Sign	072	:	Colon
044	\$	Dollar Sign	073	;	Semicolon
045	%	Percent Sign	074	<	Opening (Left) Angle Bracket, Less Than Sign
046	&	Ampersand	075	=	Equal Sign
047	'	Closing Single Quotation Mark, Apostrophe, Acute Accent	076	>	Closing (Right) Angle Bracket, Greater Than Sign
050	(	Opening (Left) Parenthesis	077	?	Question Mark
051	)	Closing (Right) Parenthesis	100	@	Commercial At Sign
052	*	Asterisk	101	A	Capital Letter A
053	+	Plus Sign	102	B	Capital Letter B
054	,	Comma, Cedilla	103	C	Capital Letter C
055	-	Hyphen, Minus Sign	104	D	Capital Letter D
056	.	Period, Full Stop, Decimal Point	105	E	Capital Letter E
057	/	Solidus, Slant, Slash	106	F	Capital Letter F
060	0	Digit Zero	107	G	Capital Letter G
061	1	Digit One	110	H	Capital Letter H
062	2	Digit Two	111	I	Capital Letter I
063	3	Digit Three	112	J	Capital Letter J
064	4	Digit Four	113	K	Capital Letter K
065	5	Digit Five	114	L	Capital Letter L
066	6	Digit Six	115	M	Capital Letter M
067	7	Digit Seven	116	N	Capital Letter N
			117	O	Capital Letter O

Table 2. United States (continued)

CODE	GRAPHIC	NAMES OR MEANINGS	CODE	GRAPHIC	NAMES OR MEANINGS
120	P	Capital Letter P	150	h	Small Letter H
121	Q	Capital Letter Q	151	i	Small Letter I
122	R	Capital Letter R	152	j	Small Letter J
123	S	Capital Letter S	153	k	Small Letter K
124	T	Capital Letter T	154	l	Small Letter L
125	U	Capital Letter U	155	m	Small Letter M
126	V	Capital Letter V	156	n	Small Letter N
127	W	Capital Letter W	157	o	Small Letter O
130	X	Capital Letter X	160	p	Small Letter P
131	Y	Capital Letter Y	161	q	Small Letter Q
132	Z	Capital Letter Z	162	r	Small Letter R
133	[	Opening (Left) Square Bracket	163	s	Small Letter S
134	\	Reverse Solidus, Reverse Slant, Backslash	164	t	Small Letter T
135	]	Closing (Right) Square Bracket	165	u	Small Letter U
136	^	Upward Arrow Head, Circumflex Accent	166	v	Small Letter V
137	_	Underline	167	w	Small Letter W
140	`	Opening Single Quotation Mark, Grave Accent	170	x	Small Letter X
141	a	Small Letter A	171	y	Small Letter Y
142	b	Small Letter B	172	z	Small Letter Z
143	c	Small Letter C	173	{	Opening (Left) Curly Bracket, Opening (Left) Brace
144	d	Small Letter D	174		Vertical Line
145	e	Small Letter E	175	}	Closing (Right) Curly Bracket, Closing (Right) Brace
146	f	Small Letter F	176	~	Tilde, Overline, General Accent

Table 3. Finland

CODE	GRAPHIC	NAME OR MEANING	CODE	GRAPHIC	NAMES OR MEANINGS
041	!	Exclamation Point	070	8	Digit Eight
042	"	Quotation Marks, Diaeresis	071	9	Digit Nine
043	#	Number Sign	072	:	Colon
044	\$	Dollar Sign	073	;	Semicolon
045	%	Percent Sign	074	<	Opening (Left) Angle Bracket, Less Than Sign
046	&	Ampersand	075	=	Equal Sign
047	'	Closing Single Quotation Mark, Apostrophe, Acute Accent	076	>	Closing (Right) Angle Bracket, Greater Than Sign
050	(	Opening (Left) Parenthesis	077	?	Question Mark
051	)	Closing (Right) Parenthesis	100	@	Commercial At Sign
052	*	Asterisk	101	A	Capital Letter A
053	+	Plus Sign	102	B	Capital Letter B
054	,	Comma, Cedilla	103	C	Capital Letter C
055	-	Hyphen, Minus Sign	104	D	Capital Letter D
056	.	Period, Full Stop, Decimal Point	105	E	Capital Letter E
057	/	Solidus, Slant, Slash	106	F	Capital Letter F
060	0	Digit Zero	107	G	Capital Letter G
061	1	Digit One	110	H	Capital Letter H
062	2	Digit Two	111	I	Capital Letter I
063	3	Digit Three	112	J	Capital Letter J
064	4	Digit Four	113	K	Capital Letter K
065	5	Digit Five	114	L	Capital Letter L
066	6	Digit Six	115	M	Capital Letter M
067	7	Digit Seven	116	N	Capital Letter N
			117	O	Capital Letter O

Table 3. Finland (continued)

CODE	GRAPHIC	NAMES OR MEANINGS	CODE	GRAPHIC	NAMES OR MEANINGS
120	P	Capital Letter P	150	h	Small Letter H
121	Q	Capital Letter Q	151	i	Small Letter I
122	R	Capital Letter R	152	j	Small Letter J
123	S	Capital Letter S	153	k	Small Letter K
124	T	Capital Letter T	154	l	Small Letter L
125	U	Capital Letter U	155	m	Small Letter M
126	V	Capital Letter V	156	n	Small Letter N
127	W	Capital Letter W	157	o	Small Letter O
130	X	Capital Letter X	160	p	Small Letter P
131	Y	Capital Letter Y	161	q	Small Letter Q
132	Z	Capital Letter Z	162	r	Small Letter R
133	Ä	Capital Letter A Umlaut	163	s	Small Letter S
134	Ö	Capital Letter O Umlaut	164	t	Small Letter T
135	Å	Capital Letter A Ring	165	u	Small Letter U
136	Ü	Capital Letter U Umlaut	166	v	Small Letter V
137	_	Underline	167	w	Small Letter W
140	é	Small Letter E with Acute Accent Mark	170	x	Small Letter X
141	a	Small Letter A	171	y	Small Letter Y
142	b	Small Letter B	172	z	Small Letter Z
143	c	Small Letter C	173	ä	Small Letter A Umlaut
144	d	Small Letter D	174	ö	Small Letter O Umlaut
145	e	Small Letter E	175	å	Small Letter A Ring
146	f	Small Letter F	176	ü	Small Letter U Umlaut
147	g	Small Letter G			

Table 4. Norway and Denmark

CODE	GRAPHIC	NAME OR MEANING	CODE	GRAPHIC	NAMES OR MEANINGS
041	!	Exclamation Point	070	8	Digit Eight
042	"	Quotation Marks, Diaeresis	071	9	Digit Nine
043	#	Number Sign	072	:	Colon
044	\$	Dollar Sign	073	;	Semicolon
045	%	Percent Sign	074	<	Opening (Left) Angle Bracket, Less Than Sign
046	&	Ampersand	075	=	Equal Sign
047	'	Closing Single Quotation Mark, Apostrophe, Acute Accent	076	>	Closing (Right) Angle Bracket, Greater Than Sign
050	(	Opening (Left) Parenthesis	077	?	Question Mark
051	)	Closing (Right) Parenthesis	100	Ä	Capital Letter A Umlaut
052	*	Asterisk	101	A	Capital Letter A
053	+	Plus Sign	102	B	Capital Letter B
054	,	Comma, Cedilla	103	C	Capital Letter C
055	-	Hyphen, Minus Sign	104	D	Capital Letter D
056	.	Period, Full Stop, Decimal Point	105	E	Capital Letter E
057	/	Solidus, Slant, Slash	106	F	Capital Letter F
060	0	Digit Zero	107	G	Capital Letter G
061	1	Digit One	110	H	Capital Letter H
062	2	Digit Two	111	I	Capital Letter I
063	3	Digit Three	112	J	Capital Letter J
064	4	Digit Four	113	K	Capital Letter K
065	5	Digit Five	114	L	Capital Letter L
066	6	Digit Six	115	M	Capital Letter M
067	7	Digit Seven	116	N	Capital Letter N
			117	O	Capital Letter O

Table 4. Norway and Denmark (continued)

CODE	GRAPHIC	NAMES OR MEANINGS	CODE	GRAPHIC	NAMES OR MEANINGS
120	P	Capital Letter P	150	h	Small Letter H
121	Q	Capital Letter Q	151	i	Small Letter I
122	R	Capital Letter R	152	j	Small Letter J
123	S	Capital Letter S	153	k	Small Letter K
124	T	Capital Letter T	154	l	Small Letter L
125	U	Capital Letter U	155	m	Small Letter M
126	V	Capital Letter V	156	n	Small Letter N
127	W	Capital Letter W	157	o	Small Letter O
130	X	Capital Letter X	160	p	Small Letter P
131	Y	Capital Letter Y	161	q	Small Letter Q
132	Z	Capital Letter Z	162	r	Small Letter R
132	Æ	Capital Letter Æ Ligature	163	s	Small Letter S
134	Ø	Capital Letter O Crossbar	164	t	Small Letter T
135	Å	Capital Letter A Ring	165	u	Small Letter U
136	Ü	Capital Letter U Umlaut	166	v	Small Letter V
137	—	Underline	167	w	Small Letter W
140	ä	Small Letter A Umlaut	170	x	Small Letter X
141	a	Small Letter A	171	y	Small Letter Y
142	b	Small Letter B	172	z	Small Letter Z
143	c	Small Letter C	173	æ	Small Letter Æ Ligature
144	d	Small Letter D	174	ø	Small Letter O Crossbar
145	e	Small Letter E	175	å	Small Letter A Ring
146	f	Small Letter F	176	ü	Small Letter U Umlaut
147	g	Small Letter G			

Table 5. Sweden

CODE	GRAPHIC	NAME OR MEANING	CODE	GRAPHIC	NAMES OR MEANINGS
041	!	Exclamation Point	070	8	Digit Eight
042	"	Quotation Marks, Diaeresis	071	9	Digit Nine
043	#	Number Sign	072	:	Colon
044	\$	Dollar Sign	073	;	Semicolon
045	%	Percent Sign	074	<	Opening (Left) Angle Bracket, Less Than Sign
046	&	Ampersand	075	=	Equal Sign
047	'	Closing Single Quotation Mark, Apostrophe, Acute Accent	076	>	Closing (Right) Angle Bracket, Greater Than Sign
050	(	Opening (Left) Parenthesis	077	?	Question Mark
051	)	Closing (Right) Parenthesis	100	É	Capital Letter E with Acute Accent Mark
052	*	Asterick	101	A	Capital Letter A
053	+	Plus Sign	102	B	Capital Letter B
054	,	Comma, Cedilla	103	C	Capital Letter C
055	-	Hyphen, Minus Sign	104	D	Capital Letter D
056	.	Period, Full Stop, Decimal Point	105	E	Capital Letter E
057	/	Solidus, Slant, Slash	106	F	Capital Letter F
060	0	Digit Zero	107	G	Capital Letter G
061	1	Digit One	110	H	Capital Letter H
062	2	Digit Two	111	I	Capital Letter I
063	3	Digit Three	112	J	Capital Letter J
064	4	Digit Four	113	K	Capital Letter K
065	5	Digit Five	114	L	Capital Letter L
066	6	Digit Six	115	M	Capital Letter M
067	7	Digit Seven	116	N	Capital Letter N
			117	O	Capital Letter O

Table 5. Sweden (continued)

CODE	GRAPHIC	NAMES OR MEANINGS	CODE	GRAPHIC	NAMES OR MEANINGS
120	P	Capital Letter P	150	h	Small Letter H
121	Q	Capital Letter Q	151	i	Small Letter I
122	R	Capital Letter R	152	j	Small Letter J
123	S	Capital Letter S	153	k	Small Letter K
124	T	Capital Letter T	154	l	Small Letter L
125	U	Capital Letter U	155	m	Small Letter M
126	V	Capital Letter V	156	n	Small Letter N
127	W	Capital Letter W	157	o	Small Letter O
130	X	Capital Letter X	160	p	Small Letter P
131	Y	Capital Letter Y	161	q	Small Letter Q
132	Z	Capital Letter Z	162	r	Small Letter R
133	Ä	Capital Letter A Umlaut	163	s	Small Letter S
134	Ö	Capital Letter O Umlaut	164	t	Small Letter T
135	Å	Capital Letter A Ring	165	u	Small Letter U
136	Ü	Capital Letter U Umlaut	166	v	Small Letter V
137	—	Underline	167	w	Small Letter W
140	é	Small Letter E with Acute Accent Mark	170	x	Small Letter X
141	a	Small Letter A	171	y	Small Letter Y
142	b	Small Letter B	172	z	Small Letter Z
143	c	Small Letter C	173	ä	Small Letter a Umlaut
144	d	Small Letter D	174	ö	Small Letter o Umlaut
145	e	Small Letter E	175	å	Small Letter a Ring
146	f	Small Letter F	176	ü	Small Letter u Umlaut
147	g	Small Letter G			



Table 6. Germany

CODE	GRAPHIC	NAME OR MEANING	CODE	GRAPHIC	NAMES OR MEANINGS
041	!	Exclamation Point	070	8	Digit Eight
042	"	Quotation Marks, Diaeresis	071	9	Digit Nine
043	#	Number Sign	072	:	Colon
044	\$	Dollar Sign	073	;	Semicolon
045	%	Percent Sign	074	<	Opening (Left) Angle Bracket, Less Than Sign
046	&	Ampersand	075	=	Equal Sign
047	'	Closing Single Quotation Mark, Apostrophe, Acute Accent	076	>	Closing (Right) Angle Bracket, Greater Than Sign
050	(	Opening (Left) Parenthesis	077	?	Question Mark
051	)	Closing (Right) Parenthesis	100	¶	Paragraph Sign
052	*	Asterisk	101	A	Capital Letter A
053	+	Plus Sign	102	B	Capital Letter B
054	,	Comma, Cedilla	103	C	Capital Letter C
055	-	Hyphen, Minus Sign	104	D	Capital Letter D
056	.	Period, Full Stop, Decimal Point	105	E	Capital Letter E
057	/	Solidus, Slant, Slash	106	F	Capital Letter F
060	0	Digit Zero	107	G	Capital Letter G
061	1	Digit One	110	H	Capital Letter H
062	2	Digit Two	111	I	Capital Letter I
063	3	Digit Three	112	J	Capital Letter J
064	4	Digit Four	113	K	Capital Letter K
065	5	Digit Five	114	L	Capital Letter L
066	6	Digit Six	115	M	Capital Letter M
067	7	Digit Seven	116	N	Capital Letter N
			117	O	Capital Letter O

Table 6. Germany (continued).

CODE	GRAPHIC	NAMES OR MEANINGS	CODE	GRAPHIC	NAMES OR MEANINGS
120	P	Capital Letter P	150	h	Small Letter H
121	Q	Capital Letter Q	151	i	Small Letter I
122	R	Capital Letter R	152	j	Small Letter J
123	S	Capital Letter S	153	k	Small Letter K
124	T	Capital Letter T	154	l	Small Letter L
125	U	Capital Letter U	155	m	Small Letter M
126	V	Capital Letter V	156	n	Small Letter N
127	W	Capital Letter W	157	o	Small Letter O
130	X	Capital Letter X	160	p	Small Letter P
131	Y	Capital Letter Y	161	q	Small Letter Q
132	Z	Capital Letter Z	162	r	Small Letter R
133	Ä	Capital Letter A Umlaut	163	s	Small Letter S
134	Ö	Capital Letter O Umlaut	164	t	Small Letter T
135	Ü	Capital Letter U Umlaut	165	u	Small Letter U
136	^	Upward Arrow Head, Circumflex Accent	166	v	Small Letter V
137	_	Underline	167	w	Small Letter W
140	`	Opening Single Quotation Mark, Grave Accent	170	x	Small Letter X
141	a	Small Letter A	171	y	Small Letter Y
142	b	Small Letter B	172	z	Small Letter Z
143	c	Small Letter C	173	ä	Small Letter A Umlaut
144	d	Small Letter D	174	ö	Small Letter O Umlaut
145	e	Small Letter E	175	ü	Small Letter U Umlaut
146	f	Small Letter F	176	ß	Sharp S
147	g	Small Letter G			

Table 7. France

CODE	GRAPHIC	NAMES OR MEANINGS	CODE	GRAPHIC	NAMES OR MEANINGS
041	!	Exclamation Point	070	8	Digit Eight
042	"	Quotation Marks, Diaeresis	071	9	Digit Nine
043	£	Pound Sign	072	:	Colon
044	\$	Dollar Sign	073	;	Semicolon
045	%	Percent Sign	074	<	Opening (Left) Angle Bracket, Less Than Sign
046	&	Ampersand	075	=	Equal Sign
047	'	Closing Single Quotation Mark, Apostrophe, Acute Accent	076	>	Closing (Right) Angle Bracket, Greater Than Sign
050	(	Opening (Left) Parenthesis	077	?	Question Mark
051	)	Closing (Right) Parenthesis	100	à	Small Letter A with Grave Accent Mark
052	*	Asterisk	101	A	Capital Letter A
053	+	Plus Sign	102	B	Capital Letter B
054	,	Comma, Cedilla	103	C	Capital Letter C
055	-	Hyphen, Minus Sign	104	D	Capital Letter D
056	.	Period, Full Stop, Decimal Point	105	E	Capital Letter E
057	/	Solidus, Slant, Slash	106	F	Capital Letter F
060	0	Digit Zero	107	G	Capital Letter G
061	1	Digit One	110	H	Capital Letter H
062	2	Digit Two	111	I	Capital Letter I
063	3	Digit Three	112	J	Capital Letter J
064	4	Digit Four	113	K	Capital Letter K
065	5	Digit Five	114	L	Capital Letter L
066	6	Digit Six	115	M	Capital Letter M
067	7	Digit Seven	116	N	Capital Letter N
			117	O	Capital Letter O

Table 7. France (continued)

CODE	GRAPHIC	NAMES OR MEANINGS	CODE	GRAPHIC	NAMES OR MEANINGS
120	P	Capital Letter P	150	h	Small Letter H
121	Q	Capital Letter Q	151	i	Small Letter I
122	R	Capital Letter R	152	j	Small Letter J
123	S	Capital Letter S	153	k	Small Letter K
124	T	Capital Letter T	154	l	Small Letter L
125	U	Capital Letter U	155	m	Small Letter M
126	V	Capital Letter V	156	n	Small Letter N
127	W	Capital Letter W	157	o	Small Letter O
130	X	Capital Letter X	160	p	Small Letter P
131	Y	Capital Letter Y	161	q	Small Letter Q
132	Z	Capital Letter Z	162	r	Small Letter R
133	°	Degree Sign	163	s	Small Letter S
134	ç	Small Letter C Cedilla	164	t	Small Letter T
135	§	Paragraph Sign	165	u	Small Letter U
136	^	Upward Arrow Head, Circumflex Accent	166	v	Small Letter V
137	_	Underline	167	w	Small Letter W
140	`	Opening Single Quotation Mark, Grave Accent	170	x	Small Letter X
141	a	Small Letter A	171	y	Small Letter Y
142	b	Small Letter B	172	z	Small Letter Z
143	c	Small Letter C	173	é	Small Letter E with Acute Accent Mark
144	d	Small Letter D	174	ù	Small Letter U with Grave Accent Mark
145	e	Small Letter E	175	è	Small Letter E with Grave Accent Mark
146	f	Small Letter F	176	¨	Diaeresis, Trema
147	g	Small Letter G			

Table 8. Canada (French)

CODE	GRAPHIC	NAMES OR MEANINGS	CODE	GRAPHIC	NAMES OR MEANINGS
041	!	Exclamation Point	070	8	Digit Eight
042	"	Quotation Marks, Diaeresis	071	9	Digit Nine
043	#	Number Sign	072	:	Colon
044	\$	Dollar Sign	073	;	Semicolon
045	%	Percent Sign	074	<	Opening (Left) Angle Bracket, Less Than Sign
046	&	Ampersand	075	=	Equal Sign
047	'	Closing Single Quotation Mark, Apostrophe, Acute Accent	076	>	Closing (Right) Angle Bracket, Greater Than Sign
050	(	Opening (Left) Parenthesis	077	?	Question Mark
051	)	Closing (Right) Parenthesis	100	à	Small Letter A with Grave Accent Mark
052	*	Asterisk	101	A	Capital Letter A
053	+	Plus Sign	102	B	Capital Letter B
054	,	Comma, Cedilla	103	C	Capital Letter C
055	-	Hyphen, Minus Sign	104	D	Capital Letter D
056	.	Period, Full Stop, Decimal Point	105	E	Capital Letter E
057	/	Solidus, Slant, Slash	106	F	Capital Letter F
060	0	Digit Zero	107	G	Capital Letter G
061	1	Digit One	110	H	Capital Letter H
062	2	Digit Two	111	I	Capital Letter I
063	3	Digit Three	112	J	Capital Letter J
064	4	Digit Four	113	K	Capital Letter K
065	5	Digit Five	114	L	Capital Letter L
066	6	Digit Six	115	M	Capital Letter M
067	7	Digit Seven	116	N	Capital Letter N
			117	O	Capital Letter O

Table 8. Canada (French) (continued)

CODE	GRAPHIC	NAMES OR MEANINGS	CODE	GRAPHIC	NAMES OR MEANINGS
120	P	Capital Letter P	150	h	Small Letter H
121	Q	Capital Letter Q	151	i	Small Letter I
122	R	Capital Letter R	152	j	Small Letter J
123	S	Capital Letter S	153	k	Small Letter K
124	T	Capital Letter T	154	l	Small Letter L
125	U	Capital Letter U	155	m	Small Letter M
126	V	Capital Letter V	156	n	Small Letter N
127	W	Capital Letter W	157	o	Small Letter O
130	X	Capital Letter X	160	p	Small Letter P
131	Y	Capital Letter Y	161	q	Small Letter Q
132	Z	Capital Letter Z	162	r	Small Letter R
133	â	Small Letter A with Circumflex Accent	163	s	Small Letter S
134	ç	Small Letter C Cedilla	164	t	Small Letter T
135	ê	Small Letter E with Circumflex Accent	165	u	Small Letter U
136	î	Small Letter I with Circumflex Accent	166	v	Small Letter V
137	_	Underline	167	w	Small Letter W
140	ô	Small Letter O with Circumflex Accent	170	x	Small Letter X
141	a	Small Letter A	171	y	Small Letter Y
142	b	Small Letter B	172	z	Small Letter Z
143	c	Small Letter C	173	é	Small Letter E with Acute Accent Mark
144	d	Small Letter D	174	ù	Small Letter U with Grave Accent Mark
145	e	Small Letter E	175	è	Small Letter E with Grave Accent Mark
146	f	Small Letter F	176	û	Small Letter U with Circumflex Accent

Table 9. Japan (Roman)

CODE	GRAPHIC	NAMES OR MEANINGS	CODE	GRAPHIC	NAMES OR MEANINGS
041	!	Exclamation Point	070	8	Digit Eight
042	"	Quotation Marks, Diaeresis	071	9	Digit Nine
043	#	Number Sign	072	:	Colon
044	\$	Dollar Sign	073	;	Semicolon
045	%	Percent Sign	074	<	Opening (Left) Angle Bracket, Less Than Sign
046	&	Ampersand	075	=	Equal Sign
047	'	Closing Single Quotation Mark, Apostrophe, Acute Accent	076	>	Closing (Right) Angle Bracket, Greater Than Sign
050	(	Opening (Left) Parenthesis	077	?	Question Mark
051	)	Closing (Right) Parenthesis	100	@	Commercial At Sign
052	*	Asterisk	101	A	Capital Letter A
053	+	Plus Sign	102	B	Capital Letter B
054	,	Comma, Cedilla	103	C	Capital Letter C
055	-	Hyphen, Minus Sign	104	D	Capital Letter D
056	.	Period, Full Stop, Decimal Point	105	E	Capital Letter E
057	/	Solidus, Slant, Slash	106	F	Capital Letter F
060	0	Digit Zero	107	G	Capital Letter G
061	1	Digit One	110	H	Capital Letter H
062	2	Digit Two	111	I	Capital Letter I
063	3	Digit Three	112	J	Capital Letter J
064	4	Digit Four	113	K	Capital Letter K
065	5	Digit Five	114	L	Capital Letter L
066	6	Digit Six	115	M	Capital Letter M
067	7	Digit Seven	116	N	Capital Letter N
			117	O	Capital Letter O

Table 9. Japan (Roman) (continued)

CODE	GRAPHIC	NAMES OR MEANINGS	CODE	GRAPHIC	NAMES OR MEANINGS
120	P	Capital Letter P	150	h	Small Letter H
121	Q	Capital Letter Q	151	i	Small Letter I
122	R	Capital Letter R	152	j	Small Letter J
123	S	Capital Letter S	153	k	Small Letter K
124	T	Capital Letter T	154	l	Small Letter L
125	U	Capital Letter U	155	m	Small Letter M
126	V	Capital Letter V	156	n	Small Letter N
127	W	Capital Letter W	157	o	Small Letter O
130	X	Capital Letter X	160	p	Small Letter P
131	Y	Capital Letter Y	161	q	Small Letter Q
132	Z	Capital Letter Z	162	r	Small Letter R
133	[	Opening (Left) Square Bracket	163	s	Small Letter S
134	¥	Yen Sign	164	t	Small Letter T
135	]	Closing (Right) Square Bracket	165	u	Small Letter U
136	^	Upward Arrow Head, Circumflex Accent	166	v	Small Letter V
137	_	Underline	167	w	Small Letter W
140	`	Opening Single Quotation Mark, Grave Accent	170	x	Small Letter X
141	a	Small Letter A	171	y	Small Letter Y
142	b	Small Letter B	172	z	Small Letter Z
143	c	Small Letter C	173	{	Opening (Left) Curly Bracket, Opening (Left) Brace
144	d	Small Letter D	174		Vertical Line
145	e	Small Letter E	175	}	Closing (Right) Curly Bracket, Closing (Right) Brace
146	f	Small Letter F	176	~	Tilde, Overline, General Accent
		Small Letter G			



Table 10. Japan (Katakana)

CODE	GRAPHIC	NAMES OR PRONUNCIATIONS	CODE	GRAPHIC	NAMES OR PRONUNCIATIONS
041	・	Full Stop	070	ク	KU
042	〔	Opening Bracket	071	ケ	KE
043	〕	Closing Bracket	072	コ	KO
044	、	Comma	073	サ	SA
045	・	Conjunctive Symbol	074	シ	SHI
046	ワ	Wo	075	ス	SU
047	ア	Small A	076	セ	SE
050	イ	Small I	077	ソ	SO
051	ウ	Small U	100	タ	TA
052	エ	Small E	101	チ	CHI
053	オ	Small O	102	ツ	TSU
054	ヤ	Small YA	103	テ	TE
055	ユ	Small YU	104	ト	TO
056	ヨ	Small YO	105	ナ	NA
057	ツ	Small TSU	106	ニ	NI
060	ー	Prolonged Sound Symbol	107	ヌ	NU
061	パ	A	110	ネ	NE
062	ピ	I	111	ノ	NO
063	プ	U	112	ハ	HA
064	ペ	E	113	ヒ	HI
065	ポ	O	114	フ	FU
066	カ	KA	115	ヘ	HE
067	キ	KI	116	ホ	HO
			117	マ	MA

Table 10. Japan (Katakana) (continued)

CODE	GRAPHIC	NAMES OR PRONUNCIATIONS	CODE	GRAPHIC	NAMES OR PRONUNCIATIONS
120	キ	KI	150	ヰ	NE
121	ク	KU	151	ノ	NO
122	ケ	KE	152	ハ	HA
123	コ	KO	153	ヒ	HI
124	カ	KA	154	フ	FU
125	ユ	YU	155	ヘ	HE
126	ヨ	YO	156	ホ	HO
127	ラ	RA	157	マ	MA
130	リ	RI	160	キ	KI
131	ル	RU	161	ク	KU
132	レ	RE	162	ケ	KE
133	ロ	RO	163	コ	KO
134	ワ	WA	164	カ	KA
135	ン	N(M)	165	ユ	YU
136	゛	Voiced Sound Symbol	166	ヨ	YO
137	゜	Semi-Voiced Sound Symbol	167	ラ	RA
140	チ	TA	170	リ	RI
141	チ	CHI	171	ル	RU
142	ツ	TSU	172	レ	RE
143	テ	TE	173	ロ	RO
144	ト	TO	174	ワ	WA
145	ナ	NA	175	ン	N(M)
146	ニ	NI	176	゛	Voiced Sound Symbol
147	ヌ	NU			

Table 11. APL

CODE	GRAPHIC	NAMES OR MEANINGS	CODE	GRAPHIC	NAMES OR MEANINGS
041	"	Diastasis	070	8	Digit 8
042	)	Closing (Right) Parenthesis	071	9	Digit 9
043	<	Less Than Sign	072	(	Opening (Left) Parenthesis
044	≤	Less Than Or Equal Sign	073	[	Opening (Left) Square Bracket
045	=	Equal Sign	074	;	Semicolon
046	>	Greater Than Sign	075	×	Multiplication Sign
047	]	Closing (Right) Square Bracket	076	:	Colon
050	∨	Logical Or Sign	077	\	Reverse Solidus, Reverse Slant, Backslash
051	∧	Logical And Sign	100	-	Negation Sign
052	≠	Not Equal Sign	101	α	Greek Letter Alpha
053	÷	Division Sign	102	⌊	Decode Sign
054	,	Comma	103	⌋	
055	+	Plus Sign	104	⌋	Floor, Minimum
056	.	Period, Full Stop, Decimal Point	105	ε	Greek Letter Epsilon
057	/	Solidus, Slant, Slash	106	_	Underscore
060	0	Digit 0	107	∇	Del
061	1	Digit 1	110	Δ	Delta
062	2	Digit 2	111	ι	Index
063	3	Digit 3	112	∘	Small Circle
064	4	Digit 4	113	⋅	Ravel
065	5	Digit 5	114	□	Quad
066	6	Digit 6	115	⌈	Residue
067	7	Digit 7	116	⌊	Encode Sign
			117	⊙	Large Circle

Table 11. APL (continued)

CODE	GRAPHIC	NAMES OR MEANINGS	CODE	GRAPHIC	NAMES OR MEANINGS
120	*	Star	150	H	Capital Letter H
121	?	Question Mark	151	I	Capital Letter I
• 122	$\rho$	Greek Letter Rho	152	J	Capital Letter J
• 123	f	Ceiling	153	K	Capital Letter K
124	~	Tilde	154	L	Capital Letter L
• 125	↓	Down Arrow	155	M	Capital Letter M
• 126	U		156	N	Capital Letter N
• 127	$\omega$	Greek Letter Omega	157	O	Capital Letter O
• 130	⇒		160	P	Capital Letter P
• 131	↑	Up Arrow	161	Q	Capital Letter Q
• 132	↵		162	R	Capital Letter R
• 133	←	Left Arrow	163	S	Capital Letter S
• 134	└	Left Tack	164	T	Capital Letter T
• 135	→	Right Arrow	165	U	Capital Letter U
• 136	≥	Greater Than Or Equal Sign	166	V	Capital Letter V
137	-	Minus Sign	167	W	Capital Letter W
• 140	◊	Diamond	170	X	Capital Letter X
141	A	Capital Letter A	171	Y	Capital Letter Y
142	B	Capital Letter B	172	Z	Capital Letter Z
143	C	Capital Letter C	173	{	Opening (Left) Brace
144	D	Capital Letter D	• 174	┘	Right Tack
145	E	Capital Letter E	175	}	Closing (Right) Brace
146	F	Capital Letter F	176	\$	Dollar Sign
147	G	Capital Letter G			