PCSA
International Features Guide

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The Reader's Comments form on the last page of this document requests the user's critical evaluation to assist in preparing future documentation.

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About This Manual

The Personal Computing Systems Architecture (PCSA) is an extension of DIGITAL systems and networking architecture that merges VMS and MS-DOS environments. The PCSA network may include VAX, MicroVAX, or VAXmate servers running VAX/VMS Services for MS-DOS or VAXmate Services for MS-DOS. It also includes the DECnet/PCSA Client software that runs on PC workstations and on VAXmate workstations. Other PCSA products include ThinWire Ethernet products and other peripherals, such as the LN03 Plus and LA75 Companion printers.

The DIGITAL PCSA network fully integrates all the elements of personal and corporate computing required for direct information access and sharing. Thus, it has computing and communication capabilities substantially better than those of conventional PC local area networks (LANs).

Manual Objectives

The purposes of this guide are to:

- Provide general information about the international features of the PCSA product
- Describe how to change the default settings of your DOS and MS-Windows environments

Intended Readers

This guide is intended for PCSA workstation users who want to use the international features of PCSA.

Readers of this guide should:

- Have a general understanding of:
  - — MS-Windows
  - — MS-DOS (if you use a VAXmate workstation)
  - — DOS (if you use a PC workstation)
- Know how to use the mouse to select and perform commands

- Have access to the associated documentation:
  - — Your native DOS documentation if you use a PC workstation. This documentation is not supplied with the PCSA documentation set.
  - — *DOS Enhancements* (if you use a PC workstation).
  - — *MS-DOS Reference Guide* (if you use a VAXmate workstation).
  - — *Microsoft Windows User's Guide.*
  - — *MS-Windows Enhancements.*
  - — *Overview.*
  - — *Using Networks from Your Workstation.*

Manual Organization

Information about the international features of the PCSA product is organized into six chapters, as follows:

Chapter 1	The PCSA product supports the use of several character sets. This section describes each character set and explains how the implementation of the character sets differs, depending on whether you are using the DOS or MS-Windows interface.
Chapter 2	An alternate character is one which is either the third or fourth character on a keycap, or which is not legended on the keyboard. This section describes how to create third, fourth, and nonlegended characters and explains the differences between creating alternate characters within DOS and MS-Windows.
Chapter 3	The DOS environment you purchased defaults to industry-standard U.S. requirements. This section describes how you can customize your DOS environment to support items such as your country keyboard and preferred character set.
Chapter 4	The MS-Windows environment you purchased defaults to your usual country requirements. This section describes how you can customize your MS-Windows environment to support your preferred country information.
Appendix A	This section displays a chart of each of the international character sets supported by the PCSA product.
Appendix B	This section contains diagrams of the country-specific keyboards supported for your workstation.

Conventions Used

Convention	Meaning
Ctrl/Alt/Del	Hold down the Ctrl and Alt keys while you press the Del key on the numeric keypad. The Del key is also labeled Sel. You use the Ctrl/Alt/Del keys to reboot the workstation.
Alt/Shift/Tab	Hold down both the Alt key and the Shift key while you press the Tab key.
Backspace/Delete Key	Press the <⌫ key located on the upper right side of the main keypad.
Shift Key	The word Shift, followed by a slash, then by a letter or number means that you must hold down the Shift key while you press the letter or number.
Left Shift Key	Press the Shift key located on the lower left side of the main keypad.
enter	Type all text, spaces, and punctuation marks exactly as they are printed. Then press the Return key.
numbers	All numbers shown in this manual are in decimal form, unless otherwise noted.
workstation	A term used to refer to a VAXmate or PC computer used in a network or a standalone VAXmate computer.

1
International Character Sets in PCSA

Introduction

PCSA supports the use of the following character sets:

1. DIGITAL Multinational Character Set (MCS)

   This is the 8-bit character set developed by Digital. It includes the majority of the characters required by the Western European languages.

2. ISO Latin-1

   This is the 8-bit character set developed by the International Standards Organization for Western European languages. It is similar to the Digital MCS.

3. Industry-Standard Extended

   This is an 8-bit industry-standard character set, of which PCSA supports two variants: Industry-Standard Extended and Industry-Standard Norway and Denmark Extended. The first variant includes those characters required by all Western European languages except Norway and Denmark, and the second variant includes those characters required by Norway and Denmark. Within PCSA, the first variant is known as STD and the second variant as ST2.

4. National Replacement Character Set (NRC)

   This is a set of 7-bit character sets within which a number of the less commonly used symbols (such as [, @,) are replaced by national characters. Different countries use different variants of this character set. For example, Germany replaces the \ with Ö, while France replaces the same character with ç. Each country therefore has its own NRC.

Within PCSA, the implementation of these character sets differs, depending on whether or not they are being used within DOS or MS-Windows. The following sections describe the different implementations. Table 1–1 summarizes how the above character sets are supported within PCSA.

Table 1–1 Support of Character Sets Within PCSA

Use	VAXmate	PC
MS-Windows	ISO(default) (STD/ST2)	ISO(default) (STD/ST2)
VT200 Series with MS-Windows	ISO (default) MCS NRC	ISO (default) MCS NRC
DOS	STD/ST2 (default) MCS ISO NRC	STD/ST2

NOTE

One aspect of character set support that is common to both DOS and MS-Windows is that multinational characters (for example, é, ü, ç) should not be used in file names. It is very important that you remember this when you are creating files.

Character Sets in MS-Windows

When working within MS-Windows, the character set will vary, depending on how your application interacts with MS-Windows. You cannot choose a character set; the character set that is loaded depends on the application you use. For example:

- Applications that were developed specifically for use with MS-Windows (for example, Notepad, Paint, MS-DOS Executive) default to the ISO character set.
- Applications that were developed for DOS, but which run in a window (for example, COMMAND.COM), use the Industry-Standard Extended character set.
- Applications that do not run in a window (for example, the Microsoft BASIC Compiler) use the character set that was last loaded by DOS. Other applications may use their own character sets.

Character Sets in DOS

When working within DOS, the default character set (held in RAM) is Industry-Standard Extended. However, VAXmate users can choose their preferred character set (MCS, ISO, NRC) by using the DOS DECKEYB and FONT commands. If you do this, you must ensure that the character set and keyboard driver you choose are compatible. For further details on customizing your DOS environment, see the appropriate section of this guide.

2

Creating Alternate Characters

An alternate character is one which is either:

- The third or fourth character on a keycap (situated on the right-hand side of a keycap) or
- Not legended on the keyboard

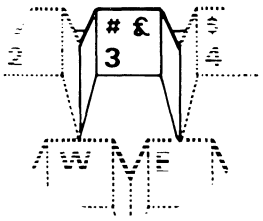
How to Display the Third or Fourth Character on a Keycap

All LK250 and industry-standard international keyboards contain multilegend keys; that is, keys that contain three or four characters. See the appropriate section of this guide for diagrams of the supported LK250 international keyboards. For diagrams of other keyboards, see your PC documentation.

This section describes how to display multilegend keys in the following situations:

- In DOS, when using an LK250 keyboard. Users of other keyboards should consult their PC documentation.
- In MS-Windows, when using an LK250, an IBM XT, IBM Personal Computer AT, Enhanced, or other industry-standard keyboard.

The following figure shows an example of a three-legend key.



MR-S-4724-88

Figure 2–1 Three-legend key

LK250 international keyboards are divided into three groups:

1. Group 1: U.S./U.K.

   On this keyboard, alternate characters are displayed by the same method, whether within DOS or MS-Windows.

   The third character is located at the upper-right corner of the key.

   If you are using U.S. software, to display the third character, press Ctrl/Alt/3. Note that you cannot display the £ sign using this method if the Industry-Standard Extended character set (STD) is loaded.

   If you are using U.K. software, to display the third character, press Shift/3.

2. Group 2: French, German, Spanish, Italian, Swiss-French, Swiss-German.

   On these keyboards, alternate characters are displayed by the same method, whether within DOS or MS-Windows.

   The third character is located at the lower-right corner of the key. To display this character, press Ctrl/Alt together with the key.

3. Group 3: Danish, Norwegian, Swedish, Finnish, Canadian-English, Canadian-French.

   The third character is located at the lower-right corner of the key, and the fourth character is located at the upper-right corner of the key.

Within DOS: To display the third character, press Alt together with the key. To display the fourth character, press Alt/Shift together with the key.

Within MS-Windows: To display the third character, press Ctrl/Alt together with the key. To display the fourth character, press Ctrl/Alt/Left Shift together with the key.

How to Display Nonlegended Characters

You can display nonlegended characters using the following methods:

- Two-key compose sequence
- Three-key compose sequence
- Alt/numeric pad sequence

All three of the above methods enable you to display characters on the screen that are not legended on the keyboard. For example, a French user will be able to display the character ä, or a U.S. user will be able to display the character ç.

Availability of the three methods differs, depending on the type of keyboard you are using, and whether you are using DOS or MS-Windows. The following sections explain these differences.

Two-Key Compose Sequence

To create a character using the two-key compose sequence, press the key containing the nonspacing diacritical mark (see NOTE), followed by the relevant key. You can use this method on all LK250 keyboards containing at least one diacritical mark; that is, all keyboards except the U.S./U.K. keyboard. Table 2–1 lists the valid two-key compose sequences. You can use two-key compose sequences in the following situations:

- In DOS. Table 2–1 indicates which characters can be used only when the ISO Latin-1 character set is loaded, and which characters can be used when the Digital MCS character set is loaded. See the appropriate section of this guide for further information on character sets.
- In MS-Windows, when you are using an application that was designed for use with MS-Windows, such as VT220 Emulator or Notepad. The VT220 Emulator uses ISO Latin-1 or Digital MCS. Notepad uses ISO Latin-1.

NOTE

Nonspacing diacritical marks are those diacritical marks associated with the nationality of the keyboard. For example, the nonspacing diacritical mark on a German keyboard is the umlaut. Nonspacing diacritical marks are also known as dead-diacriticals.

The following are nonspacing diacritical marks:

- Dieresis (umlaut mark)
- Acute accent
- Grave accent
- Circumflex accent
- Tilde mark
- Ring mark

See Table 2–1 for character representations of the above diacritical marks.

To use the two-key compose sequence, take the following actions:

1. Locate in the first column of Table 2–1 the character you want to create, and verify from the second column that this character can be created using a two-key compose sequence.
2. Enter the first character of the required two-key compose sequence. This will not be displayed on the screen.
3. Enter the second character. The composed character will be displayed.

You must enter the two characters in the order shown in the table. Otherwise the composed character will not be created.

To terminate a compose sequence before the composed character has been created, or to delete a composed character, press the <⌫ (Backspace) key.

If you enter an invalid compose sequence, the keyboard bell will ring once, and the compose sequence will be terminated. You will then need to restart the compose sequence.

Three-Key Compose Sequence

To create a character using the three-key compose sequence, press the Compose key, followed by the two relevant keys. You can use this method in the following situations:

- In DOS, when using a keyboard that contains a Compose key. Note that this method may not be used when the Industry-Standard Extended character set is loaded.
- In MS-Windows, when using a keyboard that contains a Compose key, or a keyboard mapping chart that contains a Compose key mapping. Note that this method will only work when you are running an application that was designed for MS-Windows, such as VT220 Emulator, Notepad.

To use the three-key compose sequence, take the following actions:

1. Locate in the first column of Table 2–1 the character you want to create.
2. Press the Compose key.
3. Enter the two characters indicated in column three of the table. Neither of these characters will be displayed on the screen. When you have entered both characters, the composed character will be displayed.

The order in which you enter the two characters does not matter, unless otherwise indicated in Table 2–1.

To terminate a compose sequence before the composed character has been created, or to delete a composed character, press the <⌫ (Backspace) key. If you accidentally press the Compose key during a compose sequence, a new three-key sequence will be started. The previous sequence will be terminated.

If you enter an invalid compose sequence, the keyboard bell will ring once, and the compose sequence will be terminated. You will then need to restart the compose sequence.

When you use a diacritical mark in a three-key compose sequence, it is treated as its equivalent character. Table 2–2 lists the diacritical marks and their equivalent characters.

Table 2–1 Valid Compose Sequences

Character	Character Set	Two-Key Sequence	Three-Key Sequence
# (number sign)			++
@ (commercial at)			aa
[(opening bracket)			((
\ (backslash)			/< or //
] (closing bracket)			))
{ (opening brace)			-(
| (vertical line)			/ ^
¦ (broken vertical bar)	ISO		| | or ! ^
} (closing brace)			)-
« (angle quotes left)			<<
» (angle quotes right)			>>
NBSP (No Break Space)	ISO		(sp)(sp) (Two spaces)
¡ (inverted !)			!!
¿ (inverted ?)			??
° (degree sign)			0 ^ or * (sp)
© (copyright sign)			co
® (reg. trademark)	ISO		ro
¢ (cent sign)			c/ or c |
£ (pound sign)			l- or l=
¤ (general currency)			xo
¥ (yen sign)			y- or y=
- (soft hyphen)	ISO		– –
¯ (macron sign)	ISO		_ ^ or - ^
µ (micro sign)			/u
¬ (logical NOT sign)			-, (order sensitive)
± (plus/minus sign)			+-
× (multiply sign)			xx

Table 2–1 (Cont.) Valid Compose Sequences

Character	Character Set	Two-Key Sequence	Three-Key Sequence
÷ (divide sign)			-: (order sensitive)
¹ (superscript 1)			1 ^
² (superscript 2)			2 ^
³ (superscript 3)			3 ^
¶ (paragraph sign)			!p
§ (section sign)			so or s!
ª (feminine ordinal)			_a or _A
º (masculine ordinal)			_o or _O
· (middle dot)			^.
1/4 (fraction one-quarter)			14 (order sensitive)
1/2 (fraction one-half)			12 (order sensitive)
3/4 (fraction three-quarters)	ISO		34 (order sensitive)
ß (German sharp s)			ss
Ð (cap Icelandic Eth)	ISO		-D
ð (sm Icelandic Eth)	ISO		-d
Ø (O slash)			O/
ø (o slash)			o/
Þ (cap Icelandic Thorn)	ISO		TH (order sensitive)
þ (sm Icelandic Thorn)	ISO		th (order sensitive)
~ (tilde character)		~ (sp)	~ (sp)
` (grave accent)		‘ (sp)	‘ (sp)
(apostrophe)		’ (sp)	’ (sp)
´ (acute accent)	ISO		”
^ (circumflex character)		^ (sp)	^ (sp)
" (double quote)		" (sp)	dieresis (sp)
¨ (dieresis)	ISO		" "

Table 2–1 (Cont.) Valid Compose Sequences

Character	Character Set	Two-Key Sequence	Three-Key Sequence
¸ (cedilla)	ISO		,,
À (A grave)		‘A	A‘
à (a grave)		‘a	a‘
Á (A acute)		’A	A’
á (a acute)		’a	a’
Â (A circumflex)		^A	A^
â (a circumflex)		^a	a^
Ã (A tilde)		~A	A~
ã (a tilde)		~a	a~
Ä (A umlaut)		"A	A"
ä (a umlaut)		"a	a"
Å (A ring)		*A or °A	A* or A° (degree sign)
å (a ring)		*a or °a	a* or a° (degree sign)
Æ (AE ligature)			AE (order sensitive)
æ (ae ligature)			ae (order sensitive)
Ç (C cedilla)		,C	C,
ç (c cedilla)		,c	c,
È (E grave)		‘E	E‘
è (e grave)		‘e	e‘
É (E acute)		’E	E’
é (e acute)		’e	e’
Ê (E circumflex)		^ E	E ^
ê (e circumflex)		^ e	e ^
Ë (E umlaut)		"E	E"
ë (e umlaut)		"e	e"
Ì (I grave)		‘I	I‘
ì (i grave)		‘i	i‘

Table 2–1 (Cont.) Valid Compose Sequences

Character	Character Set	Two-Key Sequence	Three-Key Sequence
Í (I acute)		'I	I'
í (i acute)		'i	i'
Î (I circumflex)		^ I	I ^
î (i circumflex)		^ i	i ^
Ï (I umlaut)		"I	I"
ï (i umlaut)		"i	i"
Ñ (N tilde)		~N	N~
ñ (n tilde)		~n	n~
Ò (O grave)		`O	O`
ò (o grave)		`o	o`
Ó (O acute)		'O	O'
ó (o acute)		'o	o'
Ô (O circumflex)		^ O	O ^
ô (o circumflex)		^ o	o ^
Õ (O tilde)		~ O	O ~
õ (o tilde)		~ o	o ~
Ö (O umlaut)		"O	O"
ö (o umlaut)		"o	o"
Œ (OE ligature)	MCS		OE (order sensitive)
œ (oe ligature)	MCS		oe (order sensitive)
Ù (U grave)		`U	U`
ù (u grave)		`u	u`
Ú (U acute)		'U	U'
ú (u acute)		'u	u'
Û (U circumflex)		^ U	U ^
û (u circumflex)		^ u	u ^
Ü (U umlaut)		"U	U"

Table 2–1 (Cont.) Valid Compose Sequences

Character	Character Set	Two-Key Sequence	Three-Key Sequence
ü (u umlaut)		"u	u"
Ý (Y acute)	ISO	'Y	Y'
ý (y acute)	ISO	'y	y'
Ÿ (Y umlaut)	MCS	"Y	Y"
ÿ (y umlaut)		"y	y"

Table 2–2 Diacritical Mark in a Three-Key Sequence

Diacritical Mark	Equivalent Character
Dieresis (umlaut mark)	Double quote "
Acute accent	Apostrophe '
Grave accent	Single quote ‘
Circumflex accent	Circumflex character ^
Tilde mark	Tilde character ~
Ring mark	Asterisk * or degree sign

Alt/Numeric Pad Sequence

Users of LK250 and other supported industry-standard keyboards may use this method to display characters that are not legended on the keyboard. This method is especially useful for users of IBM XT and IBM Personal Computer AT keyboards, who cannot use the three-key compose sequence method, because their keyboard does not include a Compose key.

You can use Alt/Numeric pad sequences in both DOS and MS-Windows, with any character set that is loaded.

To use the Alt/Numeric pad sequence, take the following actions:

1. Locate on the relevant character set chart the ASCII value of the character you wish to create.
2. Press and hold down the ALT key.

3. Enter the three digits corresponding to the ASCII value of the character you wish to create.
4. Release the ALT key.

See Appendix A which contains illustrated character set charts and their corresponding ASCII values.

3

Customizing the DOS Environment

The DOS environment you purchased defaults to the following information:

- U.S. keyboard
- Industry-Standard Extended character set
- U.S. Country Format Information (date, time, number, and currency formats)
- Industry-Standard Extended graphics font
- Industry-Standard Extended collating sequence

If you do not want to use the default information, you may customize your DOS environment so that it supports your preferences.

You can set up your country information either for the current session only (that is, until you switch off or reboot your workstation), or as the user-defined default.

Country Information That Can Be Customized Within DOS

This section lists the country information you may customize, and indicates the various methods of doing this.

- Keyboard and Character Set
  - — Using the DECKEYB and FONT commands. Any information you change using this method will be valid for the current session only. Note that both the DECKEYB and FONT commands are available to VAXmate users. Only the DECKEYB command is available to PC users.
  - — Using the Configuration Aide. Note that this utility is not available to standalone VAXmate users.

— Using the MS-DOS SELECT command. Note that this command is not available to PC users.

— Modifying the DECKEYB and FONT commands in your AUTOEXEC.BAT file. VAXmate users can modify both these commands; PC users can modify only the DECKEYB command.

To load your country collating sequence, use the SORT command. The system will automatically load the collating sequence that corresponds to the currently loaded character set.

- Country Format Information (Date, Time, Number, Currency)

  — Using the LCOUNTRY command. Note that any information you change using this method will be valid for the current session only. This command is only available to VAXmate users.

  — Using the MS-DOS SELECT command. Note that this command is not available to PC users.

  — Modifying the LCOUNTRY command in your CONFIG.SYS file. Note that this command is not available to PC users.

- Graphics Information

  — Using the GRAFTABL command. Note that any information you change using this method will be valid for the current session only. This command is not available to PC users.

  — Modifying the GRAFTABL command in your AUTOEXEC.BAT file.

How to Use the DECKEYB, FONT and LCOUNTRY Commands

To customize your keyboard, character set and country information for the current session only, use the DECKEYB, FONT, and LCOUNTRY commands.

Any changes you make using these commands will remain active until you switch off or reboot your workstation. It is recommended that you run these commands from the \COUNTRY directory since that is where the country files (.KEY and .FNT) are usually held. Otherwise you will need to either use the APPEND command to append the \COUNTRY directory to whichever directory you are currently using, or set the default directory to the COUNTRY area.

For further information on the DECKEYB, FONT, LCOUNTRY, PATH and APPEND commands, see the *MS-DOS Reference Manual.*

You may use the DECKEYB, FONT and LCOUNTRY commands in any order, but you must ensure that all the files used in the commands are compatible. For example, if you are setting up a French DOS environment, and want to use the Digital Multinational Character Set, you should enter the commands at the appropriate drive, as follows:

```
> DECKEYB MCSFR.KEY

> FONT MCS.FNT

> LCOUNTRY 033  (033 is the country code for France)
```

NOTE
Each country has its own National Replacement Character Set (NRC). The MCS, ISO and STD (or ST2) character sets support all Western European countries.

For a full list of supported country codes, .KEY and .FNT files, see the *MS-DOS Reference Manual.*

How to Use the GRAFTABL Command

To customize your graphics font for the current session only, use the GRAFTABL command.

NOTE
This command is not available to PC users.

It is recommended that you run this command from the \COUNTRY directory, since that is where the graphics files (.GRF) are usually held. Otherwise you will need to either use the APPEND command to append the \COUNTRY directory to whichever directory you are currently using, or set the default directory to the COUNTRY area. command in your AUTOEXEC.BAT and AUTOUSER.BAT files.

You must load the graphics font file that corresponds to your current text font file. For example, if your current text font file is ST2.FNT (ST2 character set), you must enter the GRAFTABL command as follows:

```
> GRAFTABL ST2.GRF
```

For a full list of supported graphics font files, see the *MS-DOS Reference Manual.*

How to Use the SELECT Command

The SELECT command enables you to set up your keyboard, character set and country format information as the user-defined default.

NOTE
The SELECT command is not available to PC users.

The SELECT command automatically inserts the DECKEYB and FONT commands into your AUTOEXEC.BAT file, and the LCOUNTRY command into your CONFIG.SYS file. Both these files are held in your root directory, and are loaded each time your system is booted. For further information on the AUTOEXEC.BAT and CONFIG.SYS files, see the *MS-DOS Reference Manual* and *Using Networks from Your Workstation.*

To use the SELECT command, perform the following steps:

1. Decide which country information you wish to set up, then locate the following information in the *MS-DOS Reference Manual*:

   - Country code
   - Character set code and .FNT filename
   - Country keyboard abbreviation and .KEY filename

   For a full list of supported country codes, character set codes and country keyboard abbreviations, see the *MS-DOS Reference Manual.*

   You must ensure that the information you choose matches. For example, if you want to set up Norwegian country information and use the ST2 character set, you must choose the following information:

   - 047
   - ST2 and ST2.FNT
   - NO and ST2NO.KEY

2. Move to your root directory (the directory from which you boot). Copy the .FNT and .KEY files into your root directory from your system directory, for example, at the prompt, enter:

   ```
   > COPY L:\COUNTRY\filename *
   ```

3. From the root directory, enter the SELECT command. A Norwegian user wanting to use the ST2 character set would enter the SELECT command as follows:

```
> SELECT 047 ST2 NO
```

4. Reboot your workstation to make the new information in the CONFIG.SYS and AUTOEXEC.BAT files effective.

See the *MS-DOS Reference Manual* for further information on the SELECT command.

How to Use the Configuration Aide

Client users can use the Country option of the Configuration Aide (AIDE.EXE) to set up their preferred keyboard and character set as the user-defined default. The Configuration Aide will store your selected keyboard and character set in your AUTOEXEC.BAT file, in the form of DECKEYB and FONT commands for VAXmate users, and DECKEYB commands for PC users.

For further information on the Configuration Aide, see *Using Networks from Your Workstation.*

How to Modify Your AUTOEXEC.BAT and CONFIG.SYS Files

To set up your preferred country information as the user-defined default, the relevant commands need to be listed in your AUTOEXEC.BAT and CONFIG.SYS files.

To set up your preferred keyboard, character set and graphics font, edit the DECKEYB, FONT and GRAFTABL commands in your AUTOEXEC.BAT file. To set up your preferred country format information (date, time, number, currency), edit the LCOUNTRY command in your CONFIG.SYS file.

For detailed information on the AUTOEXEC.BAT and CONFIG.SYS files, see the *MS-DOS Reference Manual.*

4

Customizing the MS-Windows Environment

The MS-Windows environment you purchased is already set up to default to your country requirements, that is, your usual country keyboard, date format, time format, number format and currency format. You may customize this environment to include your preferences.

Country Information That Can Be Customized Within MS-Windows

Within MS-Windows, you can:

- Select your preferred keyboard, using the MS-Windows SETUP utility.
- Select your country preferences defaults.
- Modify your country format information (date, time, number, currency, etc.), using the Control Panel.

How to Use the SETUP Utility

To select your preferred keyboard, use the MS-Windows SETUP utility. The SETUP utility creates a new version of MS-Windows (consisting of seven files), which then becomes the user-defined default. Refer to *MS-Windows Enhancements* for detailed information on how to use the SETUP utility.

NOTE

You may only customize your MS-Windows keyboard if you have write access to your system directory. Normally, only system administrators and standalone users have such access.

If you are a system administrator, after you have used the SETUP utility you should run the Configuration Aide, to include the location of the new version of MS-Windows in your AUTOEXEC.BAT file. For further information on the Configuration Aide, see *Using Networks from Your Workstation*.

If you are a standalone user, there are two ways of ensuring that the new version of MS-Windows is used when MS-Windows is started:

- Store the new version of MS-Windows in the subdirectory \WIN\STD, which overwrites the existing version of MS-Windows.
- Alter the PATH command line in the AUTOEXEC.BAT to set up a path for the new version of MS-Windows. See the *MS-DOS Reference Manual* for detailed information on the PATH command.

For diagrams of all supported LK250 international keyboards, see the appropriate section of this guide.

How to Use the Control Panel

Each time MS-Windows is started up, the system reads the WIN.INI file, which contains all the information specific to your MS-Windows environment. To customize the country format information within your MS-Windows environment, you need to amend your WIN.INI file, using the Control Panel. Any changes you make will be incorporated in your WIN.INI file, and will be effective immediately.

For detailed information on the WIN.INI file, see the *Microsoft Windows User's Guide*.

To change all the default country information to that of another country, highlight your chosen country in the Control Panel list box.

If you want only to amend a particular format (for example, number format), move the cursor to the appropriate field in the Control Panel window, and overwrite the existing information.

For further information on the Control Panel, see the *Microsoft Windows User's Guide*.

A

Character Set Charts

BITS B4 B3 B2 B1	ROW	COLUMN 0	0	COLUMN 1	1	COLUMN 2	2	COLUMN 3	3	COLUMN 4	4	COLUMN 5	5	COLUMN 6	6	COLUMN 7	7
0 0 0 0	0	NUL	0 0 0	DLE	20 16 10	SP	40 32 20	0	60 48 30	@	100 64 40	P	120 80 50	`	140 96 60	p	160 112 70
0 0 0 1	1	SOH	1 1 1	DC1 (XON)	21 17 11	!	41 33 21	1	61 49 31	A	101 65 41	Q	121 81 51	a	141 97 61	q	161 113 71
0 0 1 0	2	STX	2 2 2	DC2	22 18 12	"	42 34 22	2	62 50 32	B	102 66 42	R	122 82 52	b	142 98 62	r	162 114 72
0 0 1 1	3	ETX	3 3 3	DC3 (XOFF)	23 19 13	#	43 35 23	3	63 51 33	C	103 67 43	S	123 83 53	c	143 99 63	s	163 115 73
0 1 0 0	4	EOT	4 4 4	DC4	24 20 14	$	44 36 24	4	64 52 34	D	104 68 44	T	124 84 54	d	144 100 64	t	164 116 74
0 1 0 1	5	ENQ	5 5 5	NAK	25 21 15	%	45 37 25	5	65 53 35	E	105 69 45	U	125 85 55	e	145 101 65		165 117 75
0 1 1 0	6	ACK	6 6 6	SYN	26 22 16	&	46 38 26	6	66 54 36	F	106 70 46	V	126 86 56	f	146 102 66	v	166 118 76
0 1 1 1	7	BEL	7 7 7	ETB	27 23 17	'	47 39 27	7	67 55 37	G	107 71 47	W	127 87 57	g	147 103 67	w	167 119 77
1 0 0 0	8	BS	10 8 8	CAN	30 24 18	(	50 40 28	8	70 56 38	H	110 72 48	X	130 88 58	h	150 104 68	x	170 120 78
1 0 0 1	9	HT	11 9 9	EM	31 25 19	)	51 41 29	9	71 57 39	I	111 73 49	Y	131 89 59	i	151 105 69	y	171 121 79
1 0 1 0	10	LF	12 10 A	SUB	32 26 1A	*	52 42 2A	:	72 58 3A	J	112 74 4A	Z	132 90 5A	j	152 106 6A	z	172 122 7A
1 0 1 1	11	VT	13 11 B	ESC	33 27 1B	+	53 43 2B	;	73 59 3B	K	113 75 4B	[	133 91 5B	k	153 107 6B	{	173 123 7B
1 1 0 0	12	FF	14 12 C	FS	34 28 1C	,	54 44 2C	<	74 60 3C	L	114 76 4C	\	134 92 5C	l	154 108 6C	|	174 124 7C
1 1 0 1	13	CR	15 13 D	GS	35 29 1D	-	55 45 2D	=	75 61 3D	M	115 77 4D	]	135 93 5D	m	155 109 6D	}	175 125 7D
1 1 1 0	14	SO	16 14 E	RS	36 30 1E	.	56 46 2E	>	76 62 3E	N	116 78 4E	^	136 94 5E	n	156 110 6E	~	176 126 7E
1 1 1 1	15	SI	17 15 F	US	37 31 1F	/	57 47 2F	?	77 63 3F	O	117 79 4F	_	137 95 5F	o	157 111 6F	DEL	177 127 7F

KEY

ASCII CHARACTER — ESC — 1 11 COLUMN ROW; 33 OCTAL; 27 DECIMAL; 1B HEX

LJ-0865

Figure A–1 ISO Latin-1 Character Set 0-7

B8 B7 B6 B5 / BITS B4 B3 B2 B1	ROW	8 (1 0 0 0)	9 (1 0 0 1)	10 (1 0 1 0)	11 (1 0 1 1)	12 (1 1 0 0)	13 (1 1 0 1)	14 (1 1 1 0)	15 (1 1 1 1)
0 0 0 0	0	200 128 80	DCS 220 144 90	NBSP 240 160 A0	° 260 176 B0	À 300 192 C0	Ð 320 208 D0	à 340 224 E0	ð 360 240 F0
0 0 0 1	1	201 129 81	PU1 221 145 91	¡ 241 161 A1	± 261 177 B1	Á 301 193 C1	Ñ 321 209 D1	á 341 225 E1	ñ 361 241 F1
0 0 1 0	2	202 130 82	PU2 222 146 92	¢ 242 162 A2	2 262 178 B2	Â 302 194 C2	Ò 322 210 D2	â 342 226 E2	ò 362 242 F2
0 0 1 1	3	203 131 83	STS 223 147 93	£ 243 163 A3	3 263 179 B3	Ã 303 195 C3	Ó 323 211 D3	ã 343 227 E3	ó 363 243 F3
0 1 0 0	4	IND 204 132 84	CCH 224 148 94	¤ 244 164 A4	´ 264 180 B4	Ä 304 196 C4	Ô 324 212 D4	ä 344 228 E4	ô 364 244 F4
0 1 0 1	5	NEL 205 133 85	MW 225 149 95	¥ 245 165 A5	µ 265 181 B5	Å 305 197 C5	Õ 325 213 D5	å 345 229 E5	õ 365 245 F5
0 1 1 0	6	SSA 206 134 86	SPA 226 150 96	¦ 246 166 A6	¶ 266 182 B6	Æ 306 198 C6	Ö 326 214 D6	æ 346 230 E6	ö 366 246 F6
0 1 1 1	7	ESA 207 135 87	EPA 227 151 97	§ 247 167 A7	• 267 183 B7	Ç 307 199 C7	x 327 215 D7	ç 347 231 E7	÷ 367 247 F7
1 0 0 0	8	HTS 210 136 88	230 152 98	¨ 250 168 A8	¸ 270 184 B8	È 310 200 C8	Ø 330 216 D8	è 350 232 E8	ø 370 248 F8
1 0 0 1	9	HTJ 211 137 89	231 153 99	© 251 169 A9	1 271 185 B9	É 311 201 C9	Ù 331 217 D9	é 351 233 E9	ù 371 249 F9
1 0 1 0	10	VTS 212 138 8A	232 154 9A	ª 252 170 AA	º 272 186 BA	Ê 312 202 CA	Ú 332 218 DA	ê 352 234 EA	ú 372 250 FA
1 0 1 1	11	PLD 213 139 8B	CSI 233 155 9B	« 253 171 AB	» 273 187 BB	Ë 313 203 CB	Û 333 219 DB	ë 353 235 EB	û 373 251 FB
1 1 0 0	12	PLU 214 140 8C	ST 234 156 9C	¬ 254 172 AC	1/4 274 188 BC	Ì 314 204 CC	Ü 334 220 DC	ì 354 236 EC	ü 374 252 FC
1 1 0 1	13	RI 215 141 8D	OSC 235 157 9D	SHY 255 173 AD	1/2 275 189 BD	Í 315 205 CD	Ý 335 221 DD	í 355 237 ED	ý 375 253 FD
1 1 1 0	14	SS2 216 142 8E	PM 236 158 9E	® 256 174 AE	3/4 276 190 BE	Î 316 206 CE	Þ 336 222 DE	î 356 238 EE	þ 376 254 FE
1 1 1 1	15	SS3 217 143 8F	APC 237 159 9F	¯ 257 175 AF	¿ 277 191 BF	Ï 317 207 CF	ß 337 223 DF	ï 357 239 EF	ÿ 377 255 FF

LJ 0866

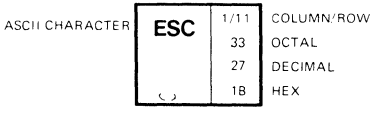
Figure A–2 ISO Latin-1 Character Set 8-15

ROW	COLUMN 0		COLUMN 1		COLUMN 2		COLUMN 3		COLUMN 4		COLUMN 5		COLUMN 6		COLUMN 7	
	BITS b8 b7 b6 b5 b4 b3 b2 b1		0 0 0 0		0 0 0 1		0 0 1 0		0 0 1 1		0 1 0 0		0 1 0 1		0 1 1 0		0 1 1 1	
0	0 0 0 0	NUL	0 0 0	DLE	20 16 10	SP	40 32 20	0	60 48 30	@	100 64 40	P	120 80 50	`	140 96 60	p	160 112 70
1	0 0 0 1	SOH	1 1 1	DC1 (XON)	21 17 11	!	41 33 21	1	61 49 31	A	101 65 41	Q	121 81 51	a	141 97 61	q	161 113 71
2	0 0 1 0	STX	2 2 2	DC2	22 18 12	"	42 34 22	2	62 50 32	B	102 66 42	R	122 82 52	b	142 98 62	r	162 114 72
3	0 0 1 1	ETX	3 3 3	DC3 (XOFF)	23 19 13	#	43 35 23	3	63 51 33	C	103 67 43	S	123 83 53	c	143 99 63	s	163 115 73
4	0 1 0 0	EOT	4 4 4	DC4	24 20 14	$	44 36 24	4	64 52 34	D	104 68 44	T	124 84 54	d	144 100 64	t	164 116 74
5	0 1 0 1	ENQ	5 5 5	NAK	25 21 15	%	45 37 25	5	65 53 35	E	105 69 45	U	125 85 55	e	145 101 65	u	165 117 75
6	0 1 1 0	ACK	6 6 6	SYN	26 22 16	&	46 38 26	6	66 54 36	F	106 70 46	V	126 86 56	f	146 102 66	v	166 118 76
7	0 1 1 1	BEL	7 7 7	ETB	27 23 17	'	47 39 27	7	67 55 37	G	107 71 47	W	127 87 57	g	147 103 67	w	167 119 77
8	1 0 0 0	BS	10 8 8	CAN	30 24 18	(	50 40 28	8	70 56 38	H	110 72 48	X	130 88 58	h	150 104 68	x	170 120 78
9	1 0 0 1	HT	11 9 9	EM	31 25 19	)	51 41 29	9	71 57 39	I	111 73 49	Y	131 89 59	i	151 105 69	y	171 121 79
10	1 0 1 0	LF	12 10 A	SUB	32 26 1A	*	52 42 2A	:	72 58 3A	J	112 74 4A	Z	132 90 5A	j	152 106 6A	z	172 122 7A
11	1 0 1 1	VT	13 11 B	ESC	33 27 1B	+	53 43 2B	;	73 59 3B	K	113 75 4B	[	133 91 5B	k	153 107 6B	{	173 123 7B
12	1 1 0 0	FF	14 12 C	FS	34 28 1C	,	54 44 2C	<	74 60 3C	L	114 76 4C	\	134 92 5C	l	154 108 6C	|	174 124 7C
13	1 1 0 1	CR	15 13 D	GS	35 29 1D	-	55 45 2D	=	75 61 3D	M	115 77 4D	]	135 93 5D	m	155 109 6D	}	175 125 7D
14	1 1 1 0	SO	16 14 E	RS	36 30 1E	.	56 46 2E	>	76 62 3E	N	116 78 4E	^	136 94 5E	n	156 110 6E	~	176 126 7E
15	1 1 1 1	SI	17 15 F	US	37 31 1F	/	57 47 2F	?	77 63 3F	O	117 79 4F	_	137 95 5F	o	157 111 6F	DEL	177 127 7F

C1 CODES

GR CODES (DEC SUPPLEMENTAL GRAPHICS)

KEY



LJ-0839;

Figure A–3 DIGITAL Multinational Character Set 0-7

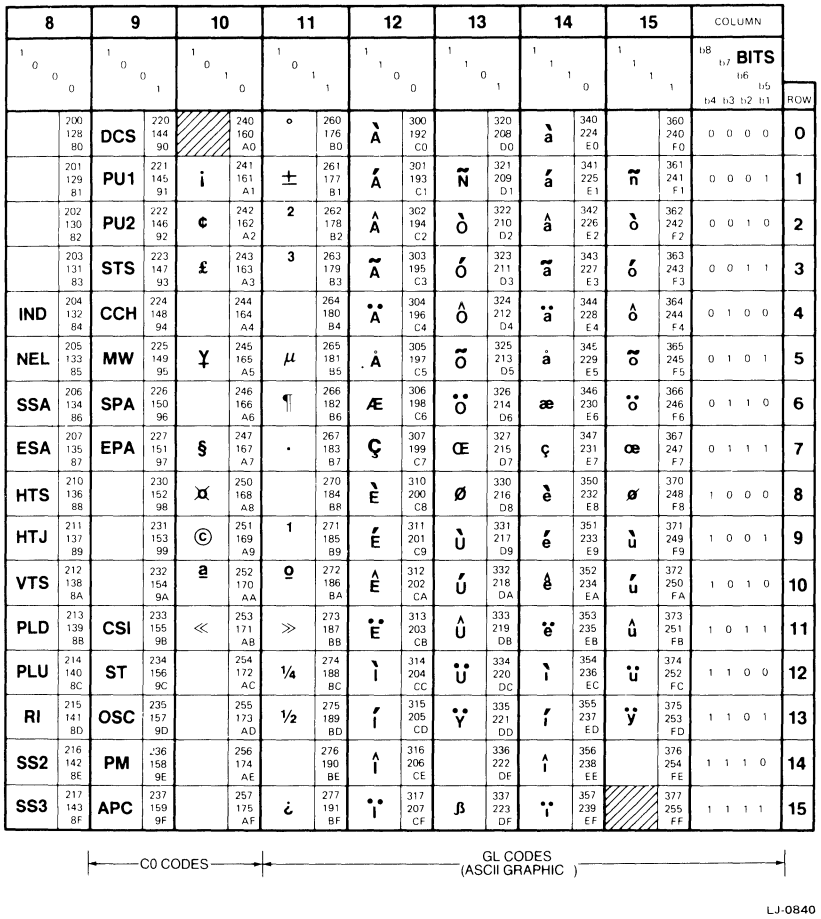


Figure A–4 DIGITAL Multinational Character Set 8-15

B8 B7 B6 B5 BITS B4 B3 B2 B1	ROW	COLUMN 0		1		2		3		4		5		6		7	
0 0 0 0	0	BLANK (NULL)	0 0 0	►	20 16 10	SP	40 32 20	0	60 48 30	@	100 64 40	P	120 80 50	‘	140 96 60	p	160 112 70
0 0 0 1	1	☺	1 1 1	◄	21 17 11	!	41 33 21	1	61 49 31	A	101 65 41	Q	121 81 51	a	141 97 61	q	161 113 71
0 0 1 0	2	☻	2 2 2	↕	22 18 12	"	42 34 22	2	62 50 32	B	102 66 42	R	122 82 52	b	142 98 62	r	162 114 72
0 0 1 1	3	♥	3 3 3	‼	23 19 13	#	43 35 23	3	63 51 33	C	103 67 43	S	123 83 53	c	143 99 63	s	163 115 73
0 1 0 0	4	♦	4 4 4	¶	24 20 14	$	44 36 24	4	64 52 34	D	104 68 44	T	124 84 54	d	144 100 64	t	164 116 74
0 1 0 1	5	♣	5 5 5	§	25 21 15	%	45 37 25	5	65 53 35	E	105 69 45	U	125 85 55	e	145 101 65	u	165 117 75
0 1 1 0	6	♠	6 6 6	▬	26 22 16	&	46 38 26	6	66 54 36	F	106 70 46	V	126 86 56	f	146 102 66	v	166 118 76
0 1 1 1	7	•	7 7 7	↨	27 23 17	’	47 39 27	7	67 55 37	G	107 71 47	W	127 87 57	g	147 103 67	w	167 119 77
1 0 0 0	8	◘	10 8 8	↑	30 24 18	(	50 40 28	8	70 56 38	H	110 72 48	X	130 88 58	h	150 104 68	x	170 120 78
1 0 0 1	9	○	11 9 9	↓	31 25 19	)	51 41 29	9	71 57 39	I	111 73 49	Y	131 89 59	i	151 105 69	y	171 121 79
1 0 1 0	10	◙	12 10 A	→	32 26 1A	*	52 42 2A	:	72 58 3A	J	112 74 4A	Z	132 90 5A	j	152 106 6A	z	172 122 7A
1 0 1 1	11	♂	13 11 B	←	33 27 1B	+	53 43 2B	;	73 59 3B	K	113 75 4B	[	133 91 5B	k	153 107 6B	{	173 123 7B
1 1 0 0	12	♀	14 12 C	└	34 28 1C	,	54 44 2C	<	74 60 3C	L	114 76 4C	\	134 92 5C	l	154 108 6C	¦	174 124 7C
1 1 0 1	13	♪	15 13 D	↔	35 29 1D	-	55 45 2D	=	75 61 3D	M	115 77 4D	]	135 93 5D	m	155 109 6D	}	175 125 7D
1 1 1 0	14	♫	16 14 E	▲	36 30 1E	.	56 46 2E	>	76 62 3E	N	116 78 4E	^	136 94 5E	n	156 110 6E	~	176 126 7E
1 1 1 1	15	☼	17 15 F	▼	37 31 1F	/	57 47 2F	?	77 63 3F	O	117 79 4F	_	137 95 5F	o	157 111 6F	△	177 127 7F

KEY

ASCII CHARACTER **ESC** 33 OCTAL, 27 DECIMAL, 1B HEX

LJ-0895

Figure A–5 STD Character Set 0-7

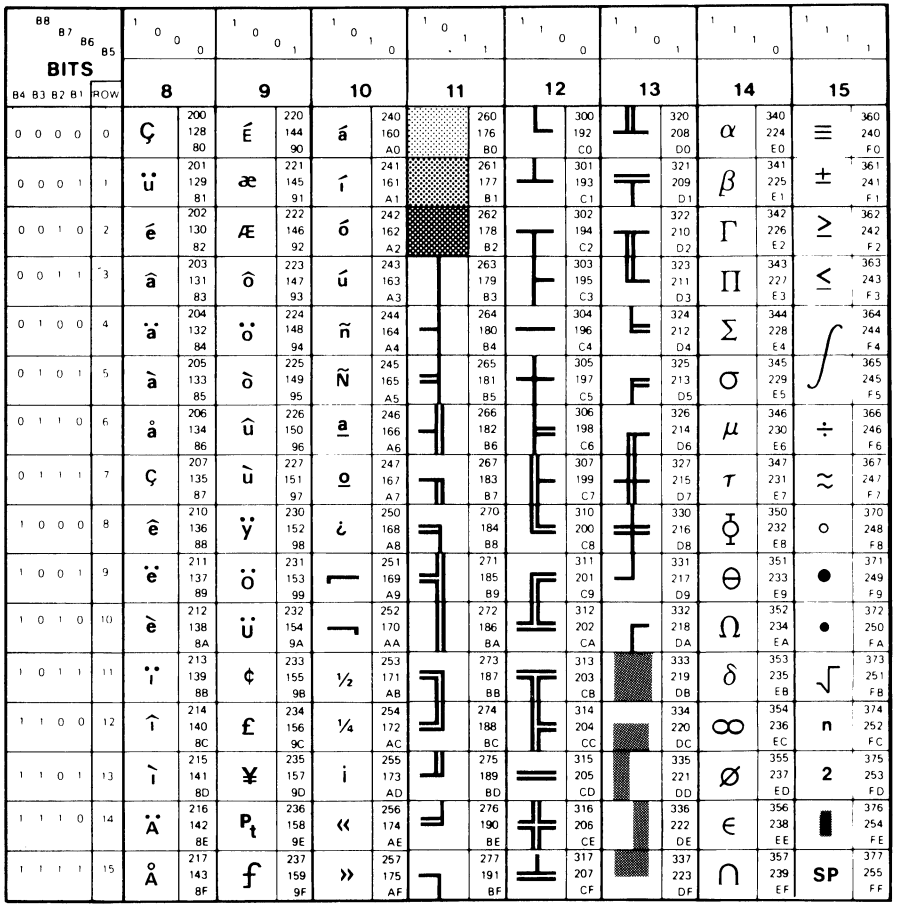


Figure A–6 STD Character Set 8-15

B8 B7 B6 B5 BITS B4 B3 B2 B1	ROW	COLUMN 0		COLUMN 1		COLUMN 2		COLUMN 3		COLUMN 4		COLUMN 5		COLUMN 6		COLUMN 7	
0 0 0 0	0	BLANK (NULL)	0 0 0	►	20 16 10	SP	40 32 20	0	60 48 30	@	100 64 40	P	120 80 50	‘	140 96 60	p	160 112 70
0 0 0 1	1	☺	1 1 1	◄	21 17 11	!	41 33 21	1	61 49 31	A	101 65 41	Q	121 81 51	a	141 97 61	q	161 113 71
0 0 1 0	2	☻	2 2 2	↕	22 18 12	"	42 34 22	2	62 50 32	B	102 66 42	R	122 82 52	b	142 98 62	r	162 114 72
0 0 1 1	3	♥	3 3 3	‼	23 19 13	#	43 35 23	3	63 51 33	C	103 67 43	S	123 83 53	c	143 99 63	s	163 115 73
0 1 0 0	4	♦	4 4 4	¶	24 20 14	$	44 36 24	4	64 52 34	D	104 68 44	T	124 84 54	d	144 100 64	t	164 116 74
0 1 0 1	5	♣	5 5 5	§	25 21 15	%	45 37 25	5	65 53 35	E	105 69 45	U	125 85 55	e	145 101 65	u	165 117 75
0 1 1 0	6	♠	6 6 6	▬	26 22 16	&	46 38 26	6	66 54 36	F	106 70 46	V	126 86 56	f	146 102 66	v	166 118 76
0 1 1 1	7	•	7 7 7	↨	27 23 17	’	47 39 27	7	67 55 37	G	107 71 47	W	127 87 57	g	147 103 67	w	167 119 77
1 0 0 0	8	◘	10 8 8	↑	30 24 18	(	50 40 28	8	70 56 38	H	110 72 48	X	130 88 58	h	150 104 68	x	170 120 78
1 0 0 1	9	○	11 9 9	↓	31 25 19	)	51 41 29	9	71 57 39	I	111 73 49	Y	131 89 59	i	151 105 69	y	171 121 79
1 0 1 0	10	◙	12 10 A	→	32 26 1A	*	52 42 2A	:	72 58 3A	J	112 74 4A	Z	132 90 5A	j	152 106 6A	z	172 122 7A
1 0 1 1	11	♂	13 11 B	←	33 27 1B	+	53 43 2B	;	73 59 3B	K	113 75 4B	[	133 91 5B	k	153 107 6B	{	173 123 7B
1 1 0 0	12	♀	14 12 C	∟	34 28 1C	,	54 44 2C	<	74 60 3C	L	114 76 4C	\	134 92 5C	l	154 108 6C	¦	174 124 7C
1 1 0 1	13	♪	15 13 D	↔	35 29 1D	-	55 45 2D	=	75 61 3D	M	115 77 4D	]	135 93 5D	m	155 109 6D	}	175 125 7D
1 1 1 0	14	♫	16 14 E	▲	36 30 1E	.	56 46 2E	>	76 62 3E	N	116 78 4E	^	136 94 5E	n	156 110 6E	~	176 126 7E
1 1 1 1	15	☼	17 15 F	▼	37 31 1F	/	57 47 2F	?	77 63 3F	O	117 79 4F	—	137 95 5F	o	157 111 6F	△	177 127 7F

KEY

ASCII CHARACTER | ESC | 33 OCTAL / 27 DECIMAL / 1B HEX

LJ-0895

Figure A–7 ST2 Character Set 0-7

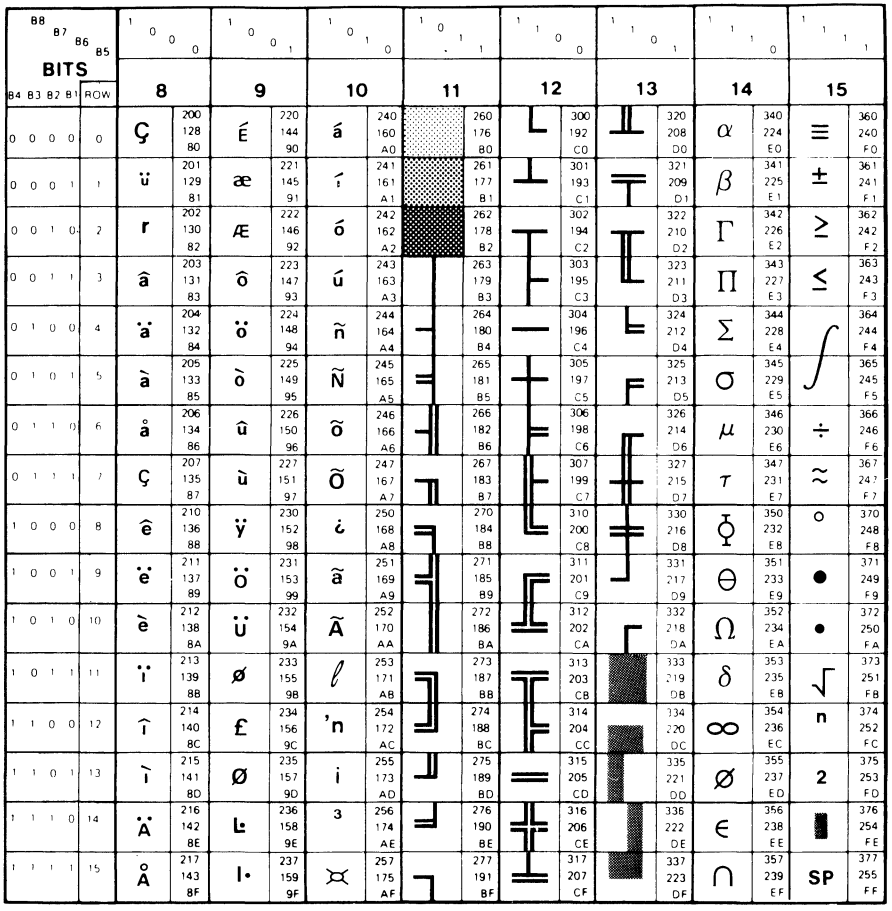


Figure A–8 ST2 Character Set 8-15

ROW	BITS B4 B3 B2 B1	COLUMN 0 B7 0 B6 0 B5 0	1 (0 0 1)	2 (0 1 0)	3 (0 1 1)	4 (1 0 0)	5 (1 0 1)	6 (1 1 0)	7 (1 1 1)
0	0 0 0 0	NUL 0 0 0	20 16 10	SP 40 32 20	0 60 48 30	@ 100 64 40	P 120 80 50	é 140 96 60	p 160 112 70
1	0 0 0 1	1 1 1	DC1 (XON) 21 17 11	! 41 33 21	1 61 49 31	A 101 65 41	Q 121 81 51	a 141 97 61	q 161 113 71
2	0 0 1 0	2 2 2	22 18 12	" 42 34 22	2 62 50 32	B 102 66 42	R 122 82 52	b 142 98 62	r 162 114 72
3	0 0 1 1	3 3 3	DC3 (XOFF) 23 19 13	# 43 35 23	3 63 51 33	C 103 67 43	S 123 83 53	c 143 99 63	s 163 115 73
4	0 1 0 0	4 4 4	24 20 14	$ 44 36 24	4 64 52 34	D 104 68 44	T 124 84 54	d 144 100 64	t 164 116 74
5	0 1 0 1	5 5 5	25 21 15	% 45 37 25	5 65 53 35	E 105 69 45	U 125 85 55	e 145 101 65	u 165 117 75
6	0 1 1 0	6 6 6	26 22 16	& 46 38 26	6 66 54 36	F 106 70 46	V 126 86 56	f 146 102 66	v 166 118 76
7	0 1 1 1	7 7 7	27 23 17	' 47 39 27	7 67 55 37	G 107 71 47	W 127 87 57	g 147 103 67	w 167 119 77
8	1 0 0 0	BS 10 8 8	CAN 30 24 18	(50 40 28	8 70 56 38	H 110 72 48	X 130 88 58	h 150 104 68	x 170 120 78
9	1 0 0 1	HT 11 9 9	31 25 19	) 51 41 29	9 71 57 39	I 111 73 49	Y 131 89 59	i 151 105 69	y 171 121 79
10	1 0 1 0	LF 12 10 A	SUB 32 26 1A	* 52 42 2A	: 72 58 3A	J 112 74 4A	Z 132 90 5A	j 152 106 6A	z 172 122 7A
11	1 0 1 1	VT 13 11 B	ESC 33 27 1B	+ 53 43 2B	; 73 59 3B	K 113 75 4B	Ä 133 91 5B	k 153 107 6B	ä 173 123 7B
12	1 1 0 0	FF 14 12 C	34 28 1C	, 54 44 2C	< 74 60 3C	L 114 76 4C	Ö 134 92 5C	l 154 108 6C	ö 174 124 7C
13	1 1 0 1	CR 15 13 D	35 29 1D	- 55 45 2D	= 75 61 3D	M 115 77 4D	Å 135 93 5D	m 155 109 6D	å 175 125 7D
14	1 1 1 0	SO 16 14	36 30 1E	. 56 46 2E	> 76 62 3E	N 116 78 4E	Ü 136 94 5E	n 156 110 6E	ü 176 126 7E
15	1 1 1 1	SI 17 15 F	37 31 1F	/ 57 47 2F	? 77 63 3F	O 117 79 4F	_ 137 95 5F	o 157 111 6F	DEL 177 127 7F

KEY

ASCII CHARACTER: ESC | 1 11 COLUMN ROW | 33 OCTAL | 27 DECIMAL | 1B HEX

HIGHLIGHTS DIFFERENCES FROM ASCII

LJ-0861

Figure A–9 Finnish 7-Bit National Replacement Character Set

ROW	BITS B4 B3 B2 B1	COLUMN 0 B7 0 B6 0 B5 0	1 0 0 1	2 0 1 0	3 0 1 1	4 1 0 0	5 1 0 1	6 1 1 0	7 1 1 1
0	0 0 0 0	NUL 0 0 0	20 16 10	SP 40 32 20	0 60 48 30	à 100 64 40	P 120 80 50	ô 140 96 60	p 160 112 70
1	0 0 0 1	1 1 1	DC1 (XON) 21 17 11	! 41 33 21	1 61 49 31	A 101 65 41	Q 121 81 51	a 141 97 61	q 161 113 71
2	0 0 1 0	2 2 2	22 18 12	" 42 34 22	2 62 50 32	B 102 66 42	R 122 82 52	b 142 98 62	r 162 114 72
3	0 0 1 1	3 3 3	DC3 (XOFF) 23 19 13	# 43 35 23	3 63 51 33	C 103 67 43	S 123 83 53	c 143 99 63	s 163 115 73
4	0 1 0 0	4 4 4	24 20 14	$ 44 36 24	4 64 52 34	D 104 68 44	T 124 84 54	d 144 100 64	t 164 116 74
5	0 1 0 1	5 5 5	25 21 15	% 45 37 25	5 65 53 35	E 105 69 45	U 125 85 55	e 145 101 65	u 165 117 75
6	0 1 1 0	6 6 6	26 22 16	& 46 38 26	6 66 54 36	F 106 70 46	V 126 86 56	f 146 102 66	v 166 118 76
7	0 1 1 1	7 7 7	27 23 17	' 47 39 27	7 67 55 37	G 107 71 47	W 127 87 57	g 147 103 67	w 167 119 77
8	1 0 0 0	BS 10 8 8	CAN 30 24 18	(50 40 28	8 70 56 38	H 110 72 48	X 130 88 58	h 150 104 68	x 170 120 78
9	1 0 0 1	HT 11 9 9	31 25 19	) 51 41 29	9 71 57 39	I 111 73 49	Y 131 89 59	i 151 105 69	y 171 121 79
10	1 0 1 0	LF 12 10 A	SUB 32 26 1A	* 52 42 2A	: 72 58 3A	J 112 74 4A	Z 132 90 5A	j 152 106 6A	z 172 122 7A
11	1 0 1 1	VT 13 11 B	ESC 33 27 1B	+ 53 43 2B	; 73 59 3B	K 113 75 4B	â 133 91 5B	k 153 107 6B	é 173 123 7B
12	1 1 0 0	FF 14 12 C	34 28 1C	, 54 44 2C	< 74 60 3C	L 114 76 4C	ç 134 92 5C	l 154 108 6C	ù 174 124 7C
13	1 1 0 1	CR 15 13 D	35 29 1D	- 55 45 2D	= 75 61 3D	M 115 77 4D	ê 135 93 5D	m 155 109 6D	è 175 125 7D
14	1 1 1 0	SO 16 14 E	36 30 1E	. 56 46 2E	> 76 62 3E	N 116 78 4E	î 136 94 5E	n 156 110 6E	û 176 126 7E
15	1 1 1 1	SI 17 15 F	37 31 1F	/ 57 47 2F	? 77 63 3F	O 117 79 4F	— 137 95 5F	o 157 111 6F	DEL 177 127 7F

KEY

ASCII CHARACTER: ESC | 1 11 COLUMN ROW | 33 OCTAL | 27 DECIMAL | 1B HEX

HIGHLIGHTS DIFFERENCES FROM ASCII

LJ-0863

Figure A–10 French-Canadian 7-Bit National Replacement Character Set

ROW	BITS B4 B3 B2 B1	COLUMN 0 (B7 0, B6 0, B5 0)	1 (0 0 1)	2 (0 1 0)	3 (0 1 1)	4 (1 0 0)	5 (1 0 1)	6 (1 1 0)	7 (1 1 1)
0	0 0 0 0	NUL 0 0 0	20 16 10	SP 40 32 20	0 60 48 30	à 100 64 40	P 120 80 50	` 140 96 60	p 160 112 70
1	0 0 0 1	1 1 1	DC1 (XON) 21 17 11	! 41 33 21	1 61 49 31	A 101 65 41	Q 121 81 51	a 141 97 61	q 161 113 71
2	0 0 1 0	2 2 2	22 18 12	" 42 34 22	2 62 50 32	B 102 66 42	R 122 82 52	b 142 98 62	r 162 114 72
3	0 0 1 1	3 3 3	DC3 (XOFF) 23 19 13	£ 43 35 23	3 63 51 33	C 103 67 43	S 123 83 53	c 143 99 63	s 163 115 73
4	0 1 0 0	4 4 4	24 20 14	$ 44 36 24	4 64 52 34	D 104 68 44	T 124 84 54	d 144 100 64	t 164 116 74
5	0 1 0 1	5 5 5	25 21 15	% 45 37 25	5 65 53 35	E 105 69 45	U 125 85 55	e 145 101 65	u 165 117 75
6	0 1 1 0	6 6 6	26 22 16	& 46 38 26	6 66 54 36	F 106 70 46	V 126 86 56	f 146 102 66	v 166 118 76
7	0 1 1 1	7 7 7	27 23 17	' 47 39 27	7 67 55 37	G 107 71 47	W 127 87 57	g 147 103 67	w 167 119 77
8	1 0 0 0	BS 10 8 8	CAN 30 24 18	(50 40 28	8 70 56 38	H 110 72 48	X 130 88 58	h 150 104 68	x 170 120 78
9	1 0 0 1	HT 11 9 9	31 25 19	) 51 41 29	9 71 57 39	I 111 73 49	Y 131 89 59	i 151 105 69	y 171 121 79
10	1 0 1 0	LF 12 10 A	SUB 32 26 1A	* 52 42 2A	: 72 58 3A	J 112 74 4A	Z 132 90 5A	j 152 106 6A	z 172 122 7A
11	1 0 1 1	VT 13 11 B	ESC 33 27 1B	+ 53 43 2B	; 73 59 3B	K 113 75 4B	° 133 91 5B	k 153 107 6B	é 173 123 7B
12	1 1 0 0	FF 14 12 C	34 28 1C	, 54 44 2C	< 74 60 3C	L 114 76 4C	ç 134 92 5C	l 154 108 6C	ù 174 124 7C
13	1 1 0 1	CR 15 13 D	35 29 1D	- 55 45 2D	= 75 61 3D	M 115 77 4D	§ 135 93 5D	m 155 109 6D	è 175 125 7D
14	1 1 1 0	SO 16 14 E	36 30 1E	. 56 46 2E	> 76 62 3E	N 116 78 4E	^ 136 94 5E	n 156 110 6E	•• 176 126 7E
15	1 1 1 1	SI 17 15 F	37 31 1F	/ 57 47 2F	? 77 63 3F	O 117 79 4F	_ 137 95 5F	o 157 111 6F	DEL 177 127 7F

KEY

ASCII CHARACTER | ESC | 1 11 COLUMN ROW | 33 OCTAL | 27 DECIMAL | 1B HEX

HIGHLIGHTS DIFFERENCES FROM ASCII

NOTE
QUOTATION MARKS (") ARE USED AS AN APPROXIMATION FOR THE DIAERESIS MARK (¨), COLUMN 7/ROW 14.

LJ-0862

Figure A–11 French 7-Bit National Replacement Character Set

ROW	BITS B4 B3 B2 B1	COLUMN 0 B7 0 B6 0 B5 0	1 0 0 1	2 0 1 0	3 0 1 1	4 1 0 0	5 1 0 1	6 1 1 0	7 1 1 1
0	0 0 0 0	NUL 0 0 0	20 16 10	SP 40 32 20	0 60 48 30	§ 100 64 40	P 120 80 50	` 140 96 60	p 160 112 70
1	0 0 0 1	1 1 1	DC1 (XON) 21 17 11	! 41 33 21	1 61 49 31	A 101 65 41	Q 121 81 51	a 141 97 61	q 161 113 71
2	0 0 1 0	2 2 2	22 18 12	" 42 34 22	2 62 50 32	B 102 66 42	R 122 82 52	b 142 98 62	r 162 114 72
3	0 0 1 1	3 3 3	DC3 (XOFF) 23 19 13	# 43 35 23	3 63 51 33	C 103 67 43	S 123 83 53	c 143 99 63	s 163 115 73
4	0 1 0 0	4 4 4	24 20 14	$ 44 36 24	4 64 52 34	D 104 68 44	T 124 84 54	d 144 100 64	t 164 116 74
5	0 1 0 1	5 5 5	25 21 15	% 45 37 25	5 65 53 35	E 105 69 45	U 125 85 55	e 145 101 65	u 165 117 75
6	0 1 1 0	6 6 6	26 22 16	& 46 38 26	6 66 54 36	F 106 70 46	V 126 86 56	f 146 102 66	v 166 118 76
7	0 1 1 1	7 7 7	27 23 17	' 47 39 27	7 67 55 37	G 107 71 47	W 127 87 57	g 147 103 67	w 167 119 77
8	1 0 0 0	BS 10 8 8	CAN 30 24 18	(50 40 28	8 70 56 38	H 110 72 48	X 130 88 58	h 150 104 68	x 170 120 78
9	1 0 0 1	HT 11 9 9	31 25 19	) 51 41 29	9 71 57 39	I 111 73 49	Y 131 89 59	i 151 105 69	y 171 121 79
10	1 0 1 0	LF 12 10 A	SUB 32 26 1A	* 52 42 2A	: 72 58 3A	J 112 74 4A	Z 132 90 5A	j 152 106 6A	z 172 122 7A
11	1 0 1 1	VT 13 11 B	ESC 33 27 1B	+ 53 43 2B	; 73 59 3B	K 113 75 4B	Ä 133 91 5B	k 153 107 6B	ä 173 123 7B
12	1 1 0 0	FF 14 12 C	34 28 1C	, 54 44 2C	< 74 60 3C	L 114 76 4C	Ö 134 92 5C	l 154 108 6C	ö 174 124 7C
13	1 1 0 1	CR 15 13 D	35 29 1D	- 55 45 2D	= 75 61 3D	M 115 77 4D	Ü 135 93 5D	m 155 109 6D	ü 175 125 7D
14	1 1 1 0	SO 16 14 E	36 30 1E	. 56 46 2E	> 76 62 3E	N 116 78 4E	^ 136 94 5E	n 156 110 6E	ß 176 126 7E
15	1 1 1 1	SI 17 15 F	37 31 1F	/ 57 47 2F	? 77 63 3F	O 117 79 4F	_ 137 95 5F	o 157 111 6F	DEL 177 127 7F

KEY

ASCII CHARACTER: ESC | 1 11 COLUMN/ROW | 33 OCTAL | 27 DECIMAL | 1B HEX

HIGHLIGHTS DIFFERENCES FROM ASCII

LJ-0864

Figure A–12 German 7-Bit National Replacement Character Set

ROW	BITS B4 B3 B2 B1	COLUMN 0		1		2		3		4		5		6		7	
		B7 0 B6 0 B5 0		0 0 1		0 1 0		0 1 1		1 0 0		1 0 1		1 1 0		1 1 1	
0	0 0 0 0	NUL	0 0 0		20 16 10	SP	40 32 20	0	60 48 30	§	100 64 40	P	120 80 50	ù	140 96 60	p	160 112 70
1	0 0 0 1		1 1 1	DC1 (XON)	21 17 11	!	41 33 21	1	61 49 31	A	101 65 41	Q	121 81 51	a	141 97 61	q	161 113 71
2	0 0 1 0		2 2 2		22 18 12	"	42 34 22	2	62 50 32	B	102 66 42	R	122 82 52	b	142 98 62	r	162 114 72
3	0 0 1 1		3 3 3	DC3 (XOFF)	23 19 13	£	43 35 23	3	63 51 33	C	103 67 43	S	123 83 53	c	143 99 63	s	163 115 73
4	0 1 0 0		4 4 4		24 20 14	$	44 36 24	4	64 52 34	D	104 68 44	T	124 84 54	d	144 100 64	t	164 116 74
5	0 1 0 1	ENQ	5 5 5		25 21 15	%	45 37 25	5	65 53 35	E	105 69 45	U	125 85 55	e	145 101 65	u	165 117 75
6	0 1 1 0		6 6 6		26 22 16	&	46 38 26	6	66 54 36	F	106 70 46	V	126 86 56	f	146 102 66	v	166 118 76
7	0 1 1 1	BEL	7 7 7		27 23 17	'	47 39 27	7	67 55 37	G	107 71 47	W	127 87 57	g	147 103 67	w	167 119 77
8	1 0 0 0	BS	10 8 8	CAN	30 24 18	(	50 40 28	8	70 56 38	H	110 72 48	X	130 88 58	h	150 104 68	x	170 120 78
9	1 0 0 1	HT	11 9 9		31 25 19	)	51 41 29	9	71 57 39	I	111 73 49	Y	131 89 59	i	151 105 69	y	171 121 79
10	1 0 1 0	LF	12 10 A	SUB	32 26 1A	*	52 42 2A	:	72 58 3A	J	112 74 4A	Z	132 90 5A	j	152 106 6A	z	172 122 7A
11	1 0 1 1	VT	13 11 B	ESC	33 27 1B	+	53 43 2B	;	73 59 3B	K	113 75 4B	°	133 91 5B	k	153 107 6B	à	173 123 7B
12	1 1 0 0	FF	14 12 C		34 28 1C	,	54 44 2C	<	74 60 3C	L	114 76 4C	ç	134 92 5C	l	154 108 6C	ò	174 124 7C
13	1 1 0 1	CR	15 13 D		35 29 1D	-	55 45 2D	=	75 61 3D	M	115 77 4D	é	135 93 5D	m	155 109 6D	è	175 125 7D
14	1 1 1 0	SO	16 14 E		36 30 1E	.	56 46 2E	>	76 62 3E	N	116 78 4E	^	136 94 5E	n	156 110 6E	ì	176 126 7E
15	1 1 1 1	SI	17 15 F		37 31 1F	/	57 47 2F	?	77 63 3F	O	117 79 4F	_	137 95 5F	o	157 111 6F	DEL	177 127 7F

KEY

ASCII CHARACTER | ESC | 1/11 COLUMN/ROW | 33 OCTAL | 27 DECIMAL | 1B HEX

HIGHLIGHTS DIFFERENCES FROM ASCII

LJ-0893

Figure A–13 Italian 7-Bit National Replacement Character Set

ROW	BITS B4 B3 B2 B1	COLUMN 0 (B7 0, B6 0, B5 0)		1 (0 0 1)		2 (0 1 0)		3 (0 1 1)		4 (1 0 0)		5 (1 0 1)		6 (1 1 0)		7 (1 1 1)	
0	0 0 0 0	NUL	0 0 0		20 16 10	SP	40 32 20	0	60 48 30	@	100 64 40	P	120 80 50	`	140 96 60	p	160 112 70
1	0 0 0 1		1 1 1	DC1 (XON)	21 17 11	!	41 33 21	1	61 49 31	A	101 65 41	Q	121 81 51	a	141 97 61	q	161 113 71
2	0 0 1 0		2 2 2		22 18 12	"	42 34 22	2	62 50 32	B	102 66 42	R	122 82 52	b	142 98 62	r	162 114 72
3	0 0 1 1		3 3 3	DC3 (XOFF)	23 19 13	#	43 35 23	3	63 51 33	C	103 67 43	S	123 83 53	c	143 99 63	s	163 115 73
4	0 1 0 0		4 4 4		24 20 14	$	44 36 24	4	64 52 34	D	104 68 44	T	124 84 54	d	144 100 64	t	164 116 74
5	0 1 0 1		5 5 5		25 21 15	%	45 37 25	5	65 53 35	E	105 69 45	U	125 85 55	e	145 101 65	u	165 117 75
6	0 1 1 0		6 6 6		26 22 16	&	46 38 26	6	66 54 36	F	106 70 46	V	126 86 56	f	146 102 66	v	166 118 76
7	0 1 1 1		7 7 7		27 23 17	'	47 39 27	7	67 55 37	G	107 71 47	W	127 87 57	g	147 103 67	w	167 119 77
8	1 0 0 0	BS	10 8 8	CAN	30 24 18	(	50 40 28	8	70 56 38	H	110 72 48	X	130 88 58	h	150 104 68	x	170 120 78
9	1 0 0 1	HT	11 9 9		31 25 19	)	51 41 29	9	71 57 39	I	111 73 49	Y	131 89 59	i	151 105 69	y	171 121 79
10	1 0 1 0	LF	12 10 A	SUB	32 26 1A	*	52 42 2A	:	72 58 3A	J	112 74 4A	Z	132 90 5A	j	152 106 6A	z	172 122 7A
11	1 0 1 1	VT	13 11 B	ESC	33 27 1B	+	53 43 2B	;	73 59 3B	K	113 75 4B	Æ	133 91 5B	k	153 107 6B	æ	173 123 7B
12	1 1 0 0	FF	14 12 C		34 28 1C	,	54 44 2C	<	74 60 3C	L	114 76 4C	Ø	134 92 5C	l	154 108 6C	ø	174 124 7C
13	1 1 0 1	CR	15 13 D		35 29 1D	-	55 45 2D	=	75 61 3D	M	115 77 4D	Å	135 93 5D	m	155 109 6D	å	175 125 7D
14	1 1 1 0	SO	16 14 E		36 30 1E	.	56 46 2E	>	76 62 3E	N	116 78 4E	^	136 94 5E	n	156 110 6E	~	176 126 7E
15	1 1 1 1	SI	17 15 F		37 31 1F	/	57 47 2F	?	77 63 3F	O	117 79 4F	_	137 95 5F	o	157 111 6F	DEL	177 127 7F

KEY

ASCII CHARACTER — ESC | 1 11 COLUMN-ROW | 33 OCTAL | 27 DECIMAL | 1B HEX

HIGHLIGHTS DIFFERENCES FROM ASCII

LJ-0894

Figure A–14 Norwegian/Danish 7-Bit National Replacement Character Set

ROW	BITS B4 B3 B2 B1	COLUMN 0		1		2		3		4		5		6		7	
	B7 B6 B5	0 0 0		0 0 1		0 1 0		0 1 1		1 0 0		1 0 1		1 1 0		1 1 1	
0	0 0 0 0	NUL	0 0 0		20 16 10	SP	40 32 20	0	60 48 30	É	100 64 40	P	120 80 50	é	140 96 60	p	160 112 70
1	0 0 0 1		1 1 1	DC1 (XON)	21 17 11	!	41 33 21	1	61 49 31	A	101 65 41	Q	121 81 51	a	141 97 61	q	161 113 71
2	0 0 1 0		2 2 2		22 18 12	"	42 34 22	2	62 50 32	B	102 66 42	R	122 82 52	b	142 98 62	r	162 114 72
3	0 0 1 1		3 3 3	DC3 (XOFF)	23 19 13	#	43 35 23	3	63 51 33	C	103 67 43	S	123 83 53	c	143 99 63	s	163 115 73
4	0 1 0 0		4 4 4		24 20 14	$	44 36 24	4	64 52 34	D	104 68 44	T	124 84 54	d	144 100 64	t	164 116 74
5	0 1 0 1		5 5 5		25 21 15	%	45 37 25	5	65 53 35	E	105 69 45	U	125 85 55	e	145 101 65	u	165 117 75
6	0 1 1 0		6 6 6		26 22 16	&	46 38 26	6	66 54 36	F	106 70 46	V	126 86 56	f	146 102 66	v	166 118 76
7	0 1 1 1		7 7 7		27 23 17	'	47 39 27	7	67 55 37	G	107 71 47	W	127 87 57	g	147 103 67	w	167 119 77
8	1 0 0 0	BS	10 8 8	CAN	30 24 18	(	50 40 28	8	70 56 38	H	110 72 48	X	130 88 58	h	150 104 68	x	170 120 78
9	1 0 0 1	HT	11 9 9		31 25 19	)	51 41 29	9	71 57 39	I	111 73 49	Y	131 89 59	i	151 105 69	y	171 121 79
10	1 0 1 0	LF	12 10 A	SUB	32 26 1A	*	52 42 2A	:	72 58 3A	J	112 74 4A	Z	132 90 5A	j	152 106 6A	z	172 122 7A
11	1 0 1 1	VT	13 11 B	ESC	33 27 1B	+	53 43 2B	;	73 59 3B	K	113 75 4B	Ä	133 91 5B	k	153 107 6B	ä	173 123 7B
12	1 1 0 0	FF	14 12 C		34 28 1C	,	54 44 2C	<	74 60 3C	L	114 76 4C	Ö	134 92 5C	l	154 108 6C	ö	174 124 7C
13	1 1 0 1	CR	15 13 D		35 29 1D	-	55 45 2D	=	75 61 3D	M	115 77 4D	Å	135 93 5D	m	155 109 6D	å	175 125 7D
14	1 1 1 0	SO	16 14 E		36 30 1E	.	56 46 2E	>	76 62 3E	N	116 78 4E	Ü	136 94 5E	n	156 110 6E	ü	176 126 7E
15	1 1 1 1	SI	17 15 F		37 31 1F	/	57 47 2F	?	77 63 3F	O	117 79 4F	_	137 95 5F	o	157 111 6F	DEL	177 127 7F

KEY

ASCII CHARACTER: ESC | 1 11 COLUMN/ROW | 33 OCTAL | 27 DECIMAL | 1B HEX

HIGHLIGHTS DIFFERENCES FROM ASCII

LJ-1064

Figure A–15 Swedish 7-Bit National Replacement Character Set

B8 B7 B6 B5 / BITS B4 B3 B2 B1	ROW	COLUMN 0		COLUMN 1		COLUMN 2				COLUMN 4		COLUMN 5		COLUMN 6		COLUMN 7	
0 0 0 0	0	NUL	0 0 0		20 16 10	SP	40 32 20	0	60 48 30	à	100 64 40	P	120 80 50	ô	140 96 60	p	160 112 70
0 0 0 1	1		1 1 1	DC1 (XON)	21 17 11	!	41 33 21	1	61 49 31	A	101 65 41	Q	121 81 51	a	141 97 61	q	161 113 71
0 0 1 0	2		2 2 2		22 18 12	"	42 34 22	2	62 50 32	B	102 66 42	R	122 82 52	b	142 98 62	r	162 114 72
0 0 1 1	3		3 3 3	DC3 (XOFF)	23 19 13	ù	43 35 23	3	63 51 33	C	103 67 43	S	123 83 53	c	143 99 63	s	163 115 73
0 1 0 0	4		4 4 4		24 20 14	$	44 36 24	4	64 52 34	D	104 68 44	T	124 84 54	d	144 100 64	t	164 116 74
0 1 0 1	5		5 5 5		25 21 15	%	45 37 25	5	65 53 35	E	105 69 45	U	125 85 55	e	145 101 65	u	165 117 75
0 1 1 0	6		6 6 6		26 22 16	&	46 38 26	6	66 54 36	F	106 70 46	V	126 86 56	f	146 102 66	v	166 118 76
0 1 1 1	7	-	7 7 7		27 23 17	'	47 39 27	7	67 55 37	G	107 71 47	W	127 87 57	g	147 103 67	w	167 119 77
1 0 0 0	8	BS	10 8 8	CAN	30 24 18	(	50 40 28	8	70 56 38	H	110 72 48	X	130 88 58	h	150 104 68	x	170 120 78
1 0 0 1	9	HT	11 9 9		31 25 19	)	51 41 29	9	71 57 39	I	111 73 49	Y	131 89 59	i	151 105 69	y	171 121 79
1 0 1 0	10	LF	12 10 A	SUB	32 26 1A	*	52 42 2A	:	72 58 3A	J	112 74 4A	Z	132 90 5A	j	152 106 6A	z	172 122 7A
1 0 1 1	11	VT	13 11 B	ESC	33 27 1B	+	53 43 2B	;	73 59 3B	K	113 75 4B	é	133 91 5B	k	153 107 6B	ä	173 123 7B
1 1 0 0	12	FF	14 12 C		34 28 1C	,	54 44 2C	<	74 60 3C	L	114 76 4C	ç	134 92 5C	l	154 108 6C	ö	174 124 7C
1 1 0 1	13	CR	15 13 D		35 29 1D	-	55 45 2D	=	75 61 3D	M	115 77 4D	ê	135 93 5D	m	155 109 6D	ü	175 125 7D
1 1 1 0	14	SO	16 14 E		36 30 1E	.	56 46 2E	>	76 62 3E	N	116 78 4E	î	136 94 5E	n	156 110 6E	û	176 126 7E
1 1 1 1	15	SI	17 15 F		37 31 1F	/	57 47 2F	?	77 63 3F	O	117 79 4F	è	137 95 5F	o	157 111 6F	DEL	177 127 7F

KEY

ASCII CHARACTER

ESC	1/11 COLUMN/ROW
	33 OCTAL
	27 DECIMAL
	1B HEX

LJ-1065

Figure A–16 Swiss 7-Bit National Replacement Character Set

ROW	BITS B4 B3 B2 B1	COLUMN 0 B7 0 B6 0 B5 0	1 0 0 1	2 0 1 0	3 0 1 1	4 1 0 0	5 1 0 1	6 1 1 0	7 1 1 1
0	0 0 0 0	NUL 0 0 0	20 16 10	SP 40 32 20	0 60 48 30	§ 100 64 40	P 120 80 50	` 140 96 60	p 160 112 70
1	0 0 0 1	1 1 1	DC1 (XON) 21 17 11	! 41 33 21	1 61 49 31	A 101 65 41	Q 121 81 51	a 141 97 61	q 161 113 71
2	0 0 1 0	2 2 2	22 18 12	" 42 34 22	2 62 50 32	B 102 66 42	R 122 82 52	b 142 98 62	r 162 114 72
3	0 0 1 1	3 3 3	DC3 (XOFF) 23 19 13	£ 43 35 23	3 63 51 33	C 103 67 43	S 123 83 53	c 143 99 63	s 163 115 73
4	0 1 0 0	4 4 4	24 20 14	$ 44 36 24	4 64 52 34	D 104 68 44	T 124 84 54	d 144 100 64	t 164 116 74
5	0 1 0 1	5 5 5	25 21 15	% 45 37 25	5 65 53 35	E 105 69 45	U 125 85 55	e 145 101 65	u 165 117 75
6	0 1 1 0	6 6 6	26 22 16	& 46 38 26	6 66 54 36	F 106 70 46	V 126 86 56	f 146 102 66	v 166 118 76
7	0 1 1 1	7 7 7	27 23 17	' 47 39 27	7 67 55 37	G 107 71 47	W 127 87 57	g 147 103 67	w 167 119 77
8	1 0 0 0	BS 10 8 8	CAN 30 24 18	(50 40 28	8 70 56 38	H 110 72 48	X 130 88 58	h 150 104 68	x 170 120 78
9	1 0 0 1	HT 11 9 9	31 25 19	) 51 41 29	9 71 57 39	I 111 73 49	Y 131 89 59	i 151 105 69	y 171 121 79
10	1 0 1 0	LF 12 10 A	SUB 32 26 1A	* 52 42 2A	: 72 58 3A	J 112 74 4A	Z 132 90 5A	j 152 106 6A	z 172 122 7A
11	1 0 1 1	VT 13 11 B	ESC 33 27 1B	+ 53 43 2B	; 73 59 3B	K 113 75 4B	¡ 133 91 5B	k 153 107 6B	ç 173 123 7B
12	1 1 0 0	FF 14 12 C	34 28 1C	, 54 44 2C	< 74 60 3C	L 114 76 4C	Ñ 134 92 5C	l 154 108 6C	ñ 174 124 7C
13	1 1 0 1	CR 15 13 D	35 29 1D	- 55 45 2D	= 75 61 3D	M 115 77 4D	¿ 135 93 5D	m 155 109 6D	Ç 175 125 7D
14	1 1 1 0	SO 16 14 E	36 30 1E	. 56 46 2E	> 76 62 3E	N 116 78 4E	^ 136 94 5E	n 156 110 6E	~ 176 126 7E
15	1 1 1 1	SI 17 15 F	37 31 1F	/ 57 47 2F	? 77 63 3F	O 117 79 4F	_ 137 95 5F	o 157 111 6F	DEL 177 127 7F

KEY

ASCII CHARACTER: ESC | 1 11 COLUMN ROW | 33 OCTAL | 27 DECIMAL | 1B HEX

HIGHLIGHTS DIFFERENCES FROM ASCII

LJ-1062

Figure A–17 Spanish 7-Bit National Replacement Character Set

ROW	BITS B4 B3 B2 B1	COLUMN 0 B7 0 B6 0 B5 0		1 0 0 1		2 0 1 0		3 0 1 1		4 1 0 0		5 1 0 1		6 1 1 0		7 1 1 1	
0	0 0 0 0	NUL	0 0 0		20 16 10	SP	40 32 20	0	60 48 30	@	100 64 40	P	120 80 50	`	140 96 60	p	160 112 70
1	0 0 0 1		1 1 1	DC1 (XON)	21 17 11	!	41 33 21	1	61 49 31	A	101 65 41	Q	121 81 51	a	141 97 61	q	161 113 71
2	0 0 1 0		2 2 2		22 18 12	"	42 34 22	2	62 50 32	B	102 66 42	R	122 82 52	b	142 98 62	r	162 114 72
3	0 0 1 1		3 3 3	DC3 (XOFF)	23 19 13	£	43 35 23	3	63 51 33	C	103 67 43	S	123 83 53	c	143 99 63	s	163 115 73
4	0 1 0 0		4 4 4		24 20 14	$	44 36 24	4	64 52 34	D	104 68 44	T	124 84 54	d	144 100 64	t	164 116 74
5	0 1 0 1		5 5 5		25 21 15	%	45 37 25	5	65 53 35	E	105 69 45	U	125 85 55	e	145 101 65	u	165 117 75
6	0 1 1 0		6 6 6		26 22 16	&	46 38 26	6	66 54 36	F	106 70 46	V	126 86 56	f	146 102 66	v	166 118 76
7	0 1 1 1		7 7 7		27 23 17	'	47 39 27	7	67 55 37	G	107 71 47	W	127 87 57	g	147 103 67	w	167 119 77
8	1 0 0 0	BS	10 8 8	CAN	30 24 18	(	50 40 28	8	70 56 38	H	110 72 48	X	130 88 58	h	150 104 68	x	170 120 78
9	1 0 0 1	HT	11 9 9		31 25 19	)	51 41 29	9	71 57 39	I	111 73 49	Y	131 89 59	i	151 105 69	y	171 121 79
10	1 0 1 0	LF	12 10 A	SUB	32 26 1A	*	52 42 2A	:	72 58 3A	J	112 74 4A	Z	132 90 5A	j	152 106 6A	z	172 122 7A
11	1 0 1 1	VT	13 11 B	ESC	33 27 1B	+	53 43 2B	;	73 59 3B	K	113 75 4B	[	133 91 5B	k	153 107 6B	{	173 123 7B
12	1 1 0 0	FF	14 12 C		34 28 1C	,	54 44 2C	<	74 60 3C	L	114 76 4C	\	134 92 5C	l	154 108 6C	|	174 124 7C
13	1 1 0 1	CR	15 13 D		35 29 1D	-	55 45 2D	=	75 61 3D	M	115 77 4D	]	135 93 5D	m	155 109 6D	}	175 125 7D
14	1 1 1 0	SO	16 14 E		36 30 1E	.	56 46 2E	>	76 62 3E	N	116 78 4E	^	136 94 5E	n	156 110 6E	~	176 126 7E
15	1 1 1 1	SI	17 15 F		37 31 1F	/	57 47 2F	?	77 63 3F	O	117 79 4F	_	137 95 5F	o	157 111 6F	DEL	177 127 7F

KEY

ASCII CHARACTER: ESC

1/11 COLUMN/ROW
33 OCTAL
27 DECIMAL
1B HEX

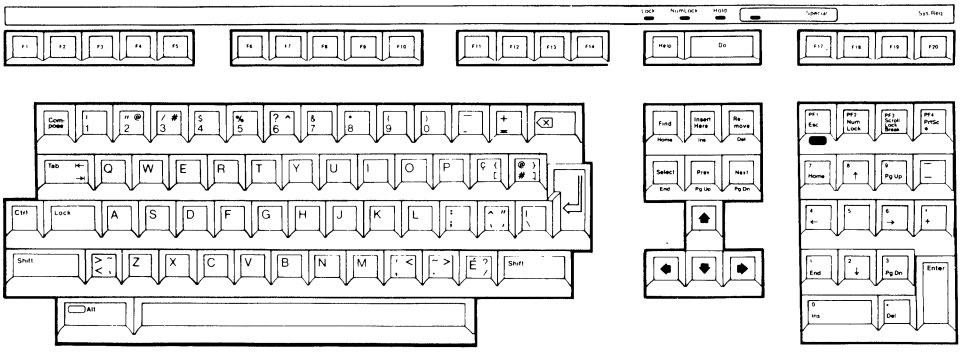
HIGHLIGHTS DIFFERENCES FROM ASCII

LJ-1066

Figure A–18 U.K. 7-Bit National Replacement Character Set

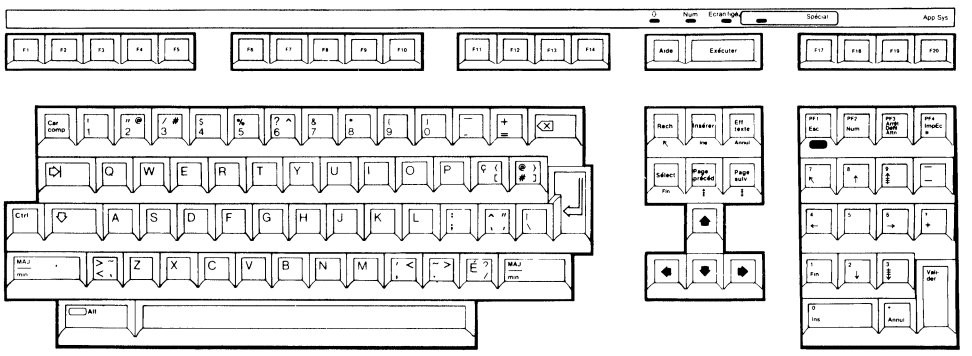
B

International Keyboards



LJ-0826

Figure B–1 Canadian-English Keyboard



LJ-0827

Figure B–2 Canadian-French Keyboard

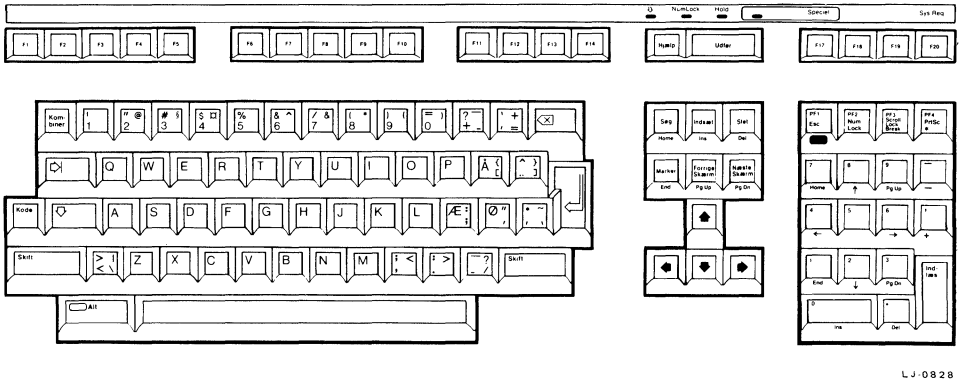


Figure B–3 Danish Keyboard

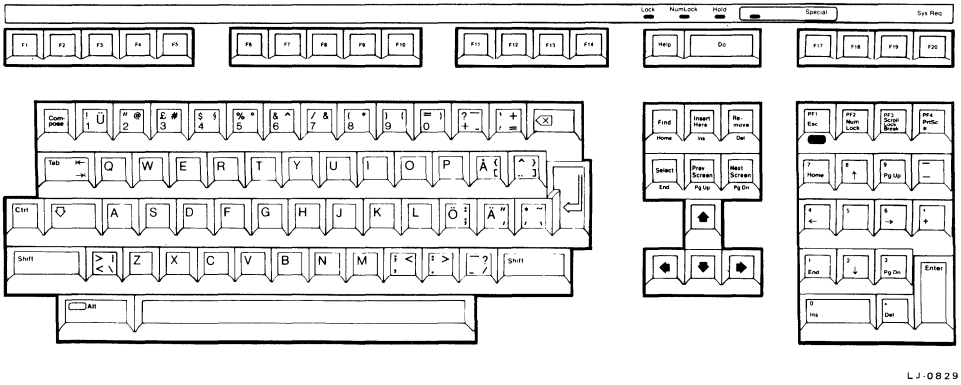


Figure B–4 Finnish Keyboard

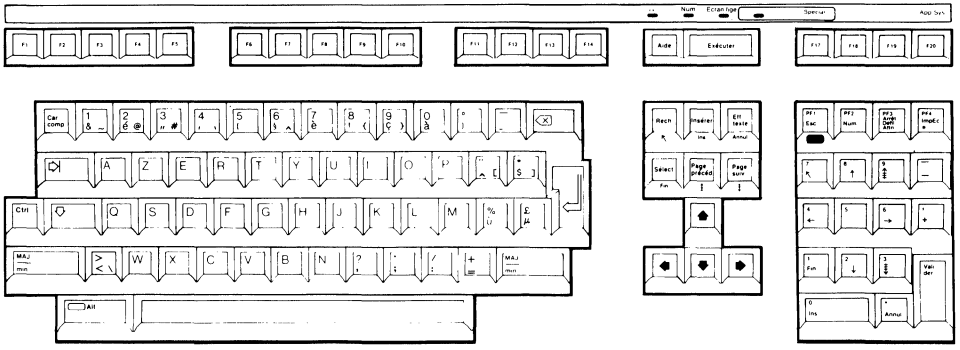


Figure B–5 French Keyboard

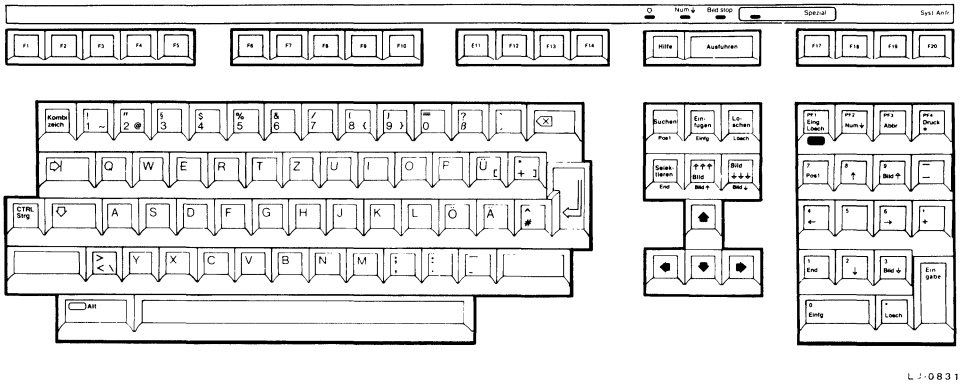
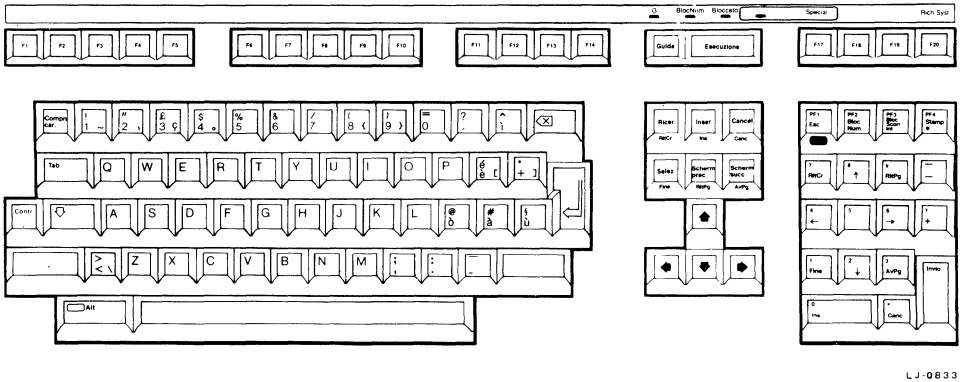


Figure B–6 German/Austrian Keyboard



LJ-0833

Figure B–7 Italian Keyboard

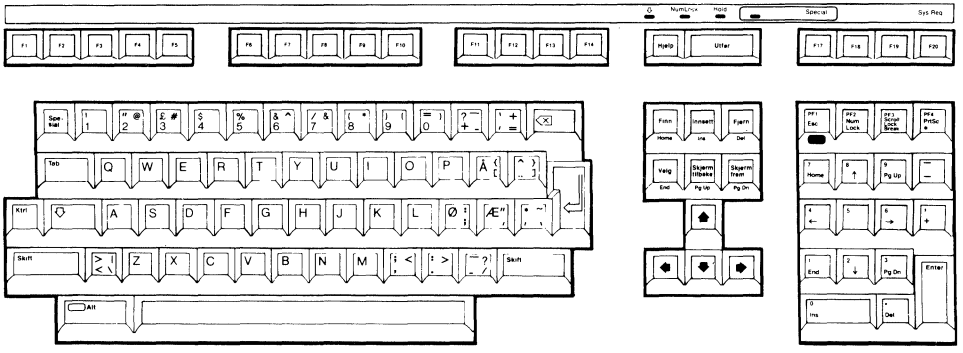


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Figure B–8 Norwegian Keyboard

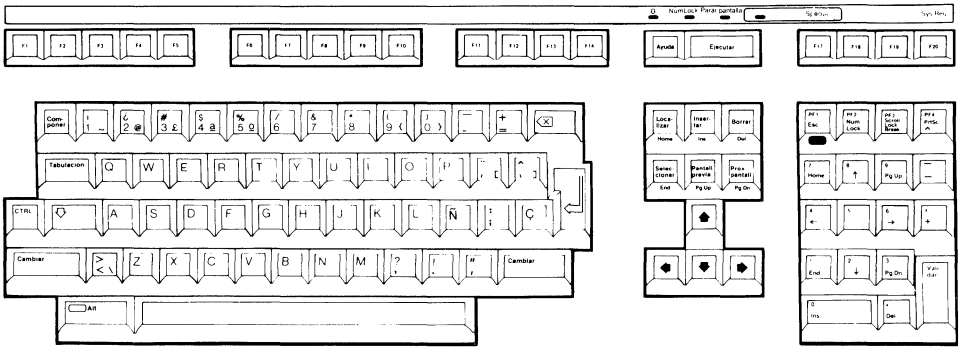

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Figure B–9 Spanish Keyboard

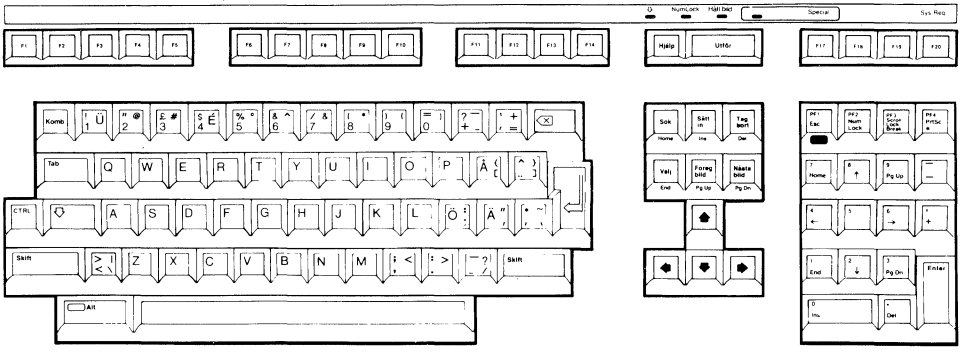

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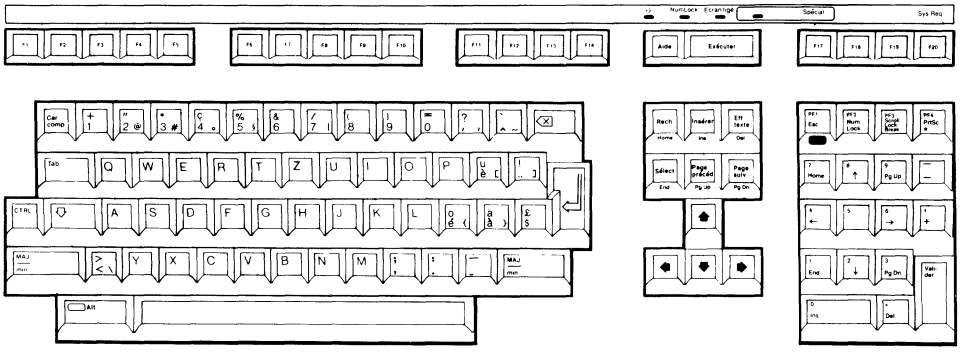
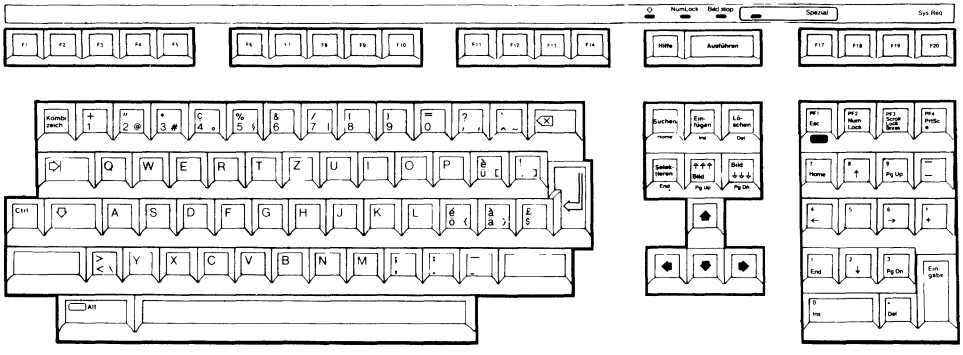
Figure B–10 Swedish Keyboard



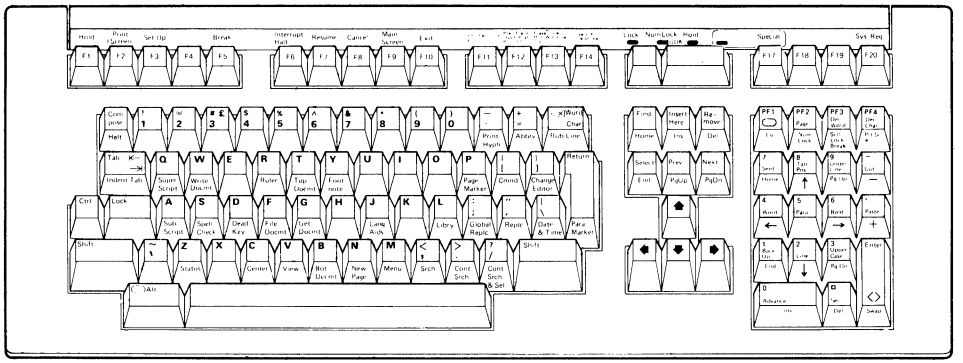
LJ-0837

Figure B–11 Swiss-French Keyboard



LJ-0838

Figure B–12 Swiss-German Keyboard



RE2421

Figure B–13 US/UK Keyboard

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(b) Operation/use (d) Programming (f) Other (Please specify.) _____

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