



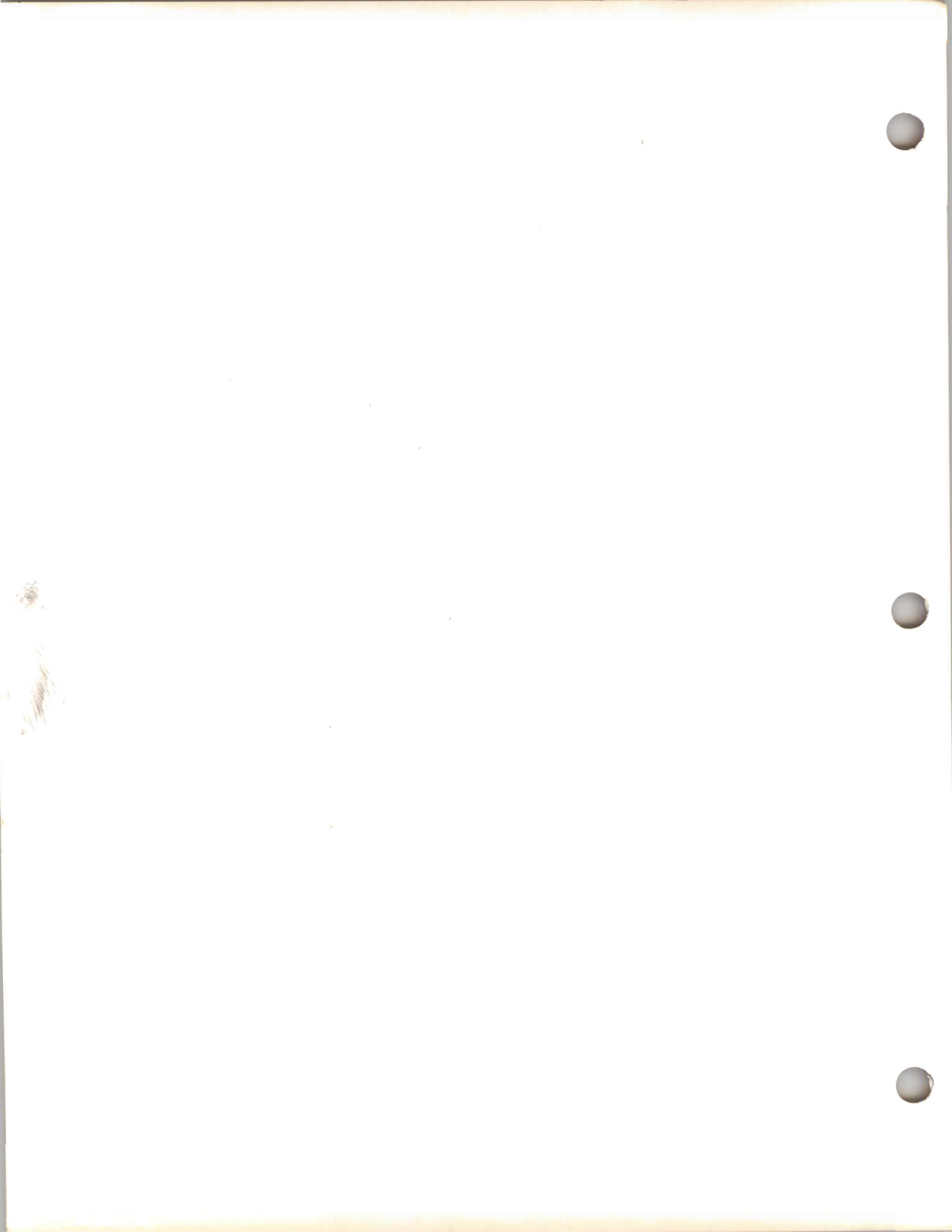
National Language Information and Design Guide

Volume 2

LEFT-TO-RIGHT LANGUAGES AND DOUBLE-BYTE CHARACTER SET LANGUAGES



National Language Technical Centre





National Language Information and Design Guide

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LEFT-TO-RIGHT LANGUAGES AND DOUBLE-BYTE CHARACTER SET LANGUAGES



National Language Technical Centre

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Preface

This manual is Volume 2 of the National Language Information and Design Guide (NLIDG) series. It provides general information about languages and countries in the left-to-right and DBCS groups.

Chapter 1, "Introduction" describes Volume 2.

Chapter 2, "National Language Descriptions" describes countries and their languages.

Chapter 3, "Technical Characteristics" describes the technical characteristics of information used in the countries.

There is an appendix of some of the standards and laws that apply to National Language Support (NLS).

There is a glossary of terms used in Volume 2.

The other volume of the *National Language Information and Design Guide* is:

- *Volume 1, Designing Enabled Products, Rules and Guidelines*, SE09-8001-00, describes rules and guidelines for designing products that are enabled for national languages. Enabling is an intermediate step between no national language support and national language implementation.



Contents

| | |
|--|------------|
| Chapter 1. Introduction | 1-1 |
| Terminology Used in Volume 2 | 1-1 |
| Language Groupings | 1-2 |
| | |
| Chapter 2. National Language Descriptions | 2-1 |
| Albania | 2-1 |
| Argentina | 2-2 |
| Austria | 2-2 |
| Belgium | 2-3 |
| Bulgaria | 2-4 |
| Canada | 2-4 |
| Czechoslovakia | 2-6 |
| Denmark | 2-6 |
| Finland | 2-7 |
| France | 2-8 |
| German Democratic Republic (GDR) | 2-8 |
| Germany, Federal Republic of (FRG) | 2-9 |
| Greece | 2-9 |
| Hungary | 2-10 |
| Iceland | 2-10 |
| Italy | 2-11 |
| Japan | 2-12 |
| The Netherlands | 2-13 |
| New Zealand | 2-14 |
| Norway | 2-15 |
| People's Republic of China | 2-15 |
| Poland | 2-16 |
| Portugal | 2-16 |
| Republic of China | 2-17 |
| Republic of Korea (South Korea) | 2-18 |
| Romania (Rumania) | 2-19 |
| South Africa | 2-19 |
| Spain | 2-20 |
| Sweden | 2-22 |
| Switzerland | 2-22 |
| Thailand | 2-23 |
| Turkey | 2-24 |
| United Kingdom | 2-25 |
| United States of America | 2-25 |
| Yugoslavia | 2-26 |

| | |
|--|------------|
| Chapter 3. Technical Characteristics | 3-1 |
| Sort Sequence, Monocasing, and Character Classification | 3-1 |
| Sort Sequence Considerations | 3-2 |
| Characters with Sort Weight between Spaces and Alphabetic Characters | 3-2 |
| Latin Alphabet Number 1 | 3-2 |
| MLP Sort Sequence | 3-3 |
| Sort Exits | 3-3 |
| Monocasing Considerations | 3-3 |
| Character Classification Considerations | 3-3 |
| Character Table Headings | 3-3 |
| Albania | 3-5 |
| Argentina | 3-7 |
| Austria | 3-10 |
| Belgium | 3-13 |
| Bulgaria | 3-16 |
| Canada | 3-17 |
| Czechoslovakia | 3-20 |
| Denmark | 3-22 |
| Finland | 3-25 |
| France | 3-28 |
| German Democratic Republic (GDR) | 3-32 |
| Germany, Federal Republic of (FRG) | 3-34 |
| Greece | 3-37 |
| Hungary | 3-41 |
| Iceland | 3-43 |
| Italy | 3-46 |
| Japan | 3-48 |
| The Netherlands | 3-50 |
| New Zealand | 3-52 |
| Norway | 3-54 |
| People's Republic of China | 3-56 |
| Poland | 3-57 |
| Portugal | 3-59 |
| Republic of China | 3-62 |
| Republic of Korea (South Korea) | 3-63 |
| Romania (Rumania) | 3-64 |
| South Africa | 3-66 |
| Spain | 3-69 |
| Sweden | 3-73 |
| Switzerland | 3-75 |
| Thailand | 3-79 |
| Turkey | 3-82 |
| United Kingdom | 3-84 |
| United States of America | 3-86 |
| Yugoslavia | 3-88 |
| Keyboards | 3-90 |
| Shift Lock | 3-90 |
| Caps Lock | 3-90 |
| Numeric Pad Formats | 3-90 |
| Currency | 3-93 |

| | |
|---|------------|
| Number Rounding | 3-98 |
| Number Notation | 3-99 |
| Percent Symbol | 3-101 |
| Calendars | 3-101 |
| Date Format | 3-102 |
| Time Format | 3-105 |
| Weights and Measurements System | 3-107 |
| Additional Symbols that Vary from Country to Country | 3-109 |
| | |
| Appendix. National Language Standards and Laws | A-1 |
| Language-Related Standards | A-1 |
| Standards Organizations' Addresses | A-1 |
| Sample National Language Standards | A-2 |
| National Laws | A-4 |
| | |
| Glossary | X-1 |
| | |
| Index | X-3 |

Figures

| | | |
|-------|---|------|
| 3-1. | General Sort Sequence | 3-2 |
| 3-2. | Character Table Heading | 3-4 |
| 3-3. | Character Table for Albania | 3-6 |
| 3-4. | Character Table for Argentina | 3-8 |
| 3-5. | Character Table for Austria | 3-11 |
| 3-6. | Character Table for Belgium | 3-14 |
| 3-7. | Character Table for Bulgaria | 3-16 |
| 3-8. | Character Table for Canada | 3-18 |
| 3-9. | Character Table for Czechoslovakia | 3-20 |
| 3-10. | Character Table for Denmark | 3-23 |
| 3-11. | Character Table for Finland | 3-26 |
| 3-12. | Character Table for France | 3-30 |
| 3-13. | Character Table for GDR | 3-33 |
| 3-14. | Character Table for FRG | 3-35 |
| 3-15. | Character Table for Greece | 3-38 |
| 3-16. | Character Table for Hungary | 3-42 |
| 3-17. | Character Table for Iceland | 3-44 |
| 3-18. | Character Table for Italy | 3-47 |
| 3-19. | Character Table for the Netherlands | 3-51 |
| 3-20. | Character Table for New Zealand | 3-53 |
| 3-21. | Character Table for Norway | 3-55 |
| 3-22. | Character Table for Poland | 3-58 |
| 3-23. | Character Table for Portugal | 3-60 |
| 3-24. | Character Table for Romania | 3-65 |
| 3-25. | Character Table for South Africa | 3-67 |
| 3-26. | Character Table for Spain | 3-71 |
| 3-27. | Character Table for Sweden | 3-74 |
| 3-28. | Character Table for Switzerland | 3-77 |
| 3-29. | Thai-Character Table for Thailand | 3-80 |
| 3-30. | Character Table for Turkey | 3-83 |
| 3-31. | Character Table for the UK | 3-85 |
| 3-32. | Character Table for the USA | 3-87 |
| 3-33. | Latin-Character Table for Yugoslavia | 3-88 |
| 3-34. | Cyrillic-Character Table for Yugoslavia | 3-89 |
| 3-35. | Keyboard Information Table 1: Left-to-Right Languages | 3-91 |
| 3-36. | Keyboard Information Table 2: DBCS Languages | 3-92 |
| 3-37. | Currency Format Table 1: Left-to-Right Languages | 3-94 |
| 3-38. | Currency Format Table 2: DBCS Languages | 3-95 |
| 3-39. | Currency Separator Table 1: Left-to-Right Languages | 3-96 |
| 3-40. | Currency Separator Table 2: DBCS Languages | 3-97 |
| 3-41. | Number Notation Table 1: Left-to-Right Languages | 3-99 |

| | | |
|-------|---|-------|
| 3-42. | Number Notation Table 2: DBCS Languages | 3-100 |
| 3-43. | Date Format Table 1: Left-to-Right Languages | 3-102 |
| 3-44. | Date Format Table 2: DBCS Languages | 3-104 |
| 3-45. | Time Format Table 1: Left-to-Right Languages | 3-105 |
| 3-46. | Time Format Table 2: DBCS Languages | 3-106 |
| 3-47. | Weights and Measurements Table 1: Left-to-Right Languages . | 3-107 |
| 3-48. | Weights and Measurements Table 2: DBCS Languages | 3-108 |



Chapter 1. Introduction

This manual gathers in one place the technical information for languages and countries. The information in this manual was obtained from the countries themselves. It was evaluated and assembled into this manual. At the back is a reader's comment form that you are encouraged to use to communicate any suggestions and comments.

Terminology Used in Volume 2

Whenever possible, this manual uses the names of the countries that are most familiar to North American English speakers. However, this is not possible in all cases because the countries themselves like to be referred to by their proper names, as follows:

- The German Democratic Republic is referred to as GDR.
- The Federal Republic of Germany is referred to as FRG.
- The People's Republic of China is referred to as PRC.
- The Republic of China is referred to as ROC. (Taiwan is the old name.)

Familiarity is also the reason for two abbreviations used in this manual. The name United States of America is abbreviated to USA and the name United Kingdom is abbreviated to UK.

Some languages are used in countries other than the country in which the language originated. For example, French is used in Belgium, Canada, and Switzerland, as well as France. Sometimes there are differences between the forms of the language used in the various countries. To distinguish between the different forms of a language, this manual assigns the generic name of the language to the form used in the country of origin. That is, French is used in France, English in the UK, and German is used in GDR, FRG and Austria. Canadian French is used in Canada, USA English is used in the USA, and Swiss German is used in Switzerland.

Language Groupings

There are three major language groups:

1. Left-to-right languages using single-byte character sets (SBCS)
2. Languages using double-byte character sets (DBCS)
3. Bidirectional languages using SBCS.

The tables in Chapter 3, “Technical Characteristics” of this volume, are structured according to the first two language groups.

Chapter 2. National Language Descriptions

This chapter provides information about:

- Countries
- The language (or languages) used in each country
- The percentage of the population that uses each language in the country
- The alphabet (or alphabets) used in each country
- The support that should be provided in countries that have two or more languages.

Albania

Albania (Shqipëri) is a southeast European country bordering on the Adriatic Sea, Yugoslavia, and Greece.¹ The capital is Tiranë (known as Tirana to English speakers). The population of Albania is 3 million.

Name of the Language

The language is Albanian.

Description of the Language

Albanian is a unique language, different from the languages of other European nations. Albanian is written left-to-right, top-to-bottom.

Percentage of the Population That Uses the Language

- Albanian 100%.

Alphabet Characteristics

Albanian uses the Latin alphabet.

¹ Bordering countries are listed in a north, east, south, and west sequence.

Argentina

Argentina is a South American country bordering on Bolivia, Paraguay, Brazil, Uruguay, the Atlantic Ocean, and Chile. The capital is Buenos Aires. The population of Argentina is 28 million.

Name of the Language

The language is Spanish.

Description of the Language

Spanish is a Romance language, written left-to-right, top-to-bottom.

Unique Characteristics of the Language as Used in Argentina

Argentine Spanish differs from Spanish only in minor ways.

Percentage of the Population That Uses the Language

- Spanish 100%.

Alphabet Characteristics

Spanish uses the Latin alphabet.

Austria

Austria (Österreich) is a Central European country bordering on Czechoslovakia, Hungary, Yugoslavia, Italy, Switzerland, and the Federal Republic of Germany. The capital is Wien (known as Vienna to English speakers). The population of Austria is 7.5 million.

Name of the Language

The language is German.

Description of the Language

German is written left-to-right, top-to-bottom.

Percentage of the Population That Uses the Language

- German 100%.

Alphabet Characteristics

German uses the Latin alphabet.



Belgium

Belgium (België or Belgique) is a European country bordering on the Netherlands, the Federal Republic of Germany, Luxembourg, and France. The capital is Bruxelles (known as Brussels to English speakers). The population of Belgium is 10 million.

Names of the Languages

The languages are:

- Belgian Dutch (Flemish)
- Belgian French
- German
- English.

Descriptions of the Languages

Belgium has three official languages, Belgian Dutch (also known as Flemish), Belgian French, and German, although English is widely used.

All languages are written left-to-right, top-to-bottom.



Unique Characteristics of the Languages as Used in Belgium

Belgian Dutch is similar to the Dutch language spoken in the Netherlands, but the vocabulary, code page, and keyboard are different. Dutch documents must be translated into Belgian Dutch.

Also, Belgian French is similar to French, but the vocabulary, code page, and keyboard are different. French documents must be translated into Belgian French. In Belgian French, English-language abbreviations such as RPG need not be translated into French equivalents such as GAP.

Belgian German is similar to German, but the code page and keyboard are different.

Percentage of the Population That Uses the Languages

The following numbers indicate the use of the languages in business:

- Belgian Dutch 55%
- Belgian French 40%
- German 5%
- English (See below.)

40% of all companies use English in addition to the three official languages.

Alphabet Characteristics

All languages use the Latin alphabet.

Support of More than One Language

English nomenclature is required.

Keyboards must use nonescaping (dead) keys to generate accents.

Bulgaria

Bulgaria (Bǎlgarija) is a southeast European country bordering on Romania, the Black Sea, Turkey, Greece, and Yugoslavia. The capital is Sofija (known as Sofia to English speakers). The population of Bulgaria is 9 million.

Names of the Languages

The language is Bulgarian, but some Turkish is also used unofficially.

Description of the Language

Bulgarian is a Slavic language and uses Cyrillic characters, written left-to-right, top-to-bottom.

Percentage of the Population That Uses the Languages

- Bulgarian 90%
- Turkish 10%.

Alphabet Characteristics

Bulgarian uses the Cyrillic alphabet.

Canada

Canada is the second-largest country in the world, bordering on the Arctic Ocean, Atlantic Ocean, the USA, and the Pacific Ocean. Canada contains ten provinces and two territories. The capital is Ottawa, located in the province of Ontario. The population of Canada is 25 million.

Names of Languages

The languages are:

- Canadian English
- Canadian French

Descriptions of the Languages

Canada has two official languages, English and French. Canadian French is the primary language of the province of Quebec. Both Canadian French and Canadian English are used in the province of New Brunswick. Canadian English is the primary language of the other provinces and territories.

Both languages are written left-to-right, top-to-bottom.

Unique Characteristics of the Languages as Used in Canada

Canada generally uses the United Kingdom spellings of English words, although United States spellings are accepted in publications.

Canadian French has evolved slightly differently from the French in France. One difference shows in the accenting of uppercase vowels in Canadian French. Until recently, this accenting was not done in France, but it is emerging as a requirement.

An accent can change the meaning of a word. For example:

«Porc salé» means “Salted pork.”

«Porc sale» means “Dirty pig.”

For quotation marks, Canadian English uses a double, comma-like symbol (“ and ”). Canadian French users prefer angled quotation marks (« and »).

Percentage of the Population That Uses the Languages

- English 70%
- French 20%
- Both 10%.

Alphabet Characteristics

Both Canadian English and Canadian French use the Latin alphabet.

Support of More than One Language

Users should be able to choose one of the two official languages at logon or in the user profile. Users should also be able to choose to have the Canadian French keyboard emulated on a keyboard that does not have Canadian French characters.

Canadian French keyboards and graphic character sets are different from those for French and from those for Canadian English. For example, France uses AZERTY keyboards. Canada uses QWERTY keyboards. Canadian English keyboards do not have accents; Canadian French keyboards do.

Czechoslovakia

Czechoslovakia (Československo) is a central European country bordering on Poland, the USSR, Hungary, Austria, the Federal Republic of Germany, and the German Democratic Republic. The capital is Praha (known as Prague to English speakers). The population of Czechoslovakia is 15 million.

Names of Languages

The languages are:

- Czech
- Slovak
- Hungarian (unofficially).

Descriptions of the Languages

Both Czech and Slovak are Slavic languages and are written left-to-right, top-to-bottom.

Percentage of the Population That Uses the Languages

- Czech 60%
- Slovak 33%
- Hungarian 7%.

Alphabet Characteristics

Czech and Slovak both use the Latin alphabet.

Denmark

Denmark (Danmark) is a Scandinavian country bordering on the North Sea, the Baltic Sea, and the Federal Republic of Germany. The North Sea separates Denmark from Norway. The Baltic Sea separates Denmark from Sweden on the northeast side and from the German Democratic Republic on the southeast side. Its capital is København (known to English speakers as Copenhagen). The population of Denmark is 5 million.

Name of the Language

The language is Danish.

Description of the Language

Danish is a Germanic language and has some similarities with German, Norwegian, and Swedish. Danish is written left-to-right, top-to-bottom.

Percentage of the Population That Uses the Language

- Danish 100%.

Alphabet Characteristics

Danish uses the Latin alphabet.

Finland

Finland (Suomi) is a Scandinavian country, bordering on Norway, the USSR, the Baltic Sea, and Sweden. The capital is Helsinki. The population of Finland is 5 million.

Names of Languages

The main language is Finnish, but Swedish is also spoken.

Descriptions of the Languages

Finnish is a unique language whose vocabulary and grammar have few similarities to neighboring major language groups, such as the Germanic languages of Norway, Sweden, and Denmark and the Slavic languages of the European part of the Soviet Union. The Finnish language is more closely related to the Turkish and Hungarian languages than to the Germanic and Slavic languages.

The Swedish used in Finland is identical to that used in Sweden.

Finnish and Swedish are written left-to-right, top-to-bottom.

Percentage of the Population That Uses the Languages

- Finnish 94%
- Swedish 6%.

Alphabet Characteristics

Both Finnish and Swedish use the Latin alphabet. The letters å, Å, ä, Ä, ö, and Ö are an integral part of the alphabet and are not considered to be accented letters. In the alphabet sequence, these letters follow the letter z.

France

France is a European country bordering on Belgium, Luxembourg, the Federal Republic of Germany, Switzerland, Italy, the Mediterranean Sea, Spain, and the Atlantic Ocean. The capital is Paris. The population of France is 54 million.

Name of Language

The language is French.

Description of the Language

French is a Romance language and is written left-to-right, top-to-bottom.

Unique Characteristics of the Language as Used in France

IBM France is changing its character set to include accented uppercase vowels.

An accent can change the meaning of a word. For example:

“Le President assassiné” means “the assassinated president.”

“Le President assassine” means “the president assassinates.”

Percentage of the Population That Uses the Language

- French 100%.

Alphabet Characteristics

French uses the Latin alphabet.

German Democratic Republic (GDR)

GDR (DDR - Deutsche Demokratische Republik) is a central European country bordering on the Baltic Sea, Poland, Czechoslovakia, and the Federal Republic of Germany. The capital is Ost Berlin (known to English speakers as East Berlin). The population of GDR is 17 million.

Name of the Language

The language is German.

Description of the Language

German is written left-to-right, top-to-bottom.

Percentage of the Population That Uses the Language

- German 99%
- Others 1% (Serbian).

Alphabet Characteristics

German uses the Latin alphabet.

Germany, Federal Republic of (FRG)

FRG (Bundesrepublik Deutschland) is a central European country bordering on the North Sea, Denmark, the Baltic Sea, the German Democratic Republic, Czechoslovakia, Austria, Switzerland, France, Luxembourg, Belgium, and the Netherlands. The capital is Bonn. The population of FRG is 61 million.

Name of the Language

The language is German.

Description of the Language

German is written left-to-right, top-to-bottom.

Percentage of the Population That Uses the Language

- German 100%.

Alphabet Characteristics

German uses the Latin alphabet.

Greece

Greece (Ellás) is an eastern European country bordering on Albania, Yugoslavia, Bulgaria, Turkey, the Aegean Sea, and the Mediterranean Sea. The capital is Athínai (known as Athens to English speakers). The population of Greece is 10 million.

Name of the Language

The language is Greek. The written form is New Hellenic, which is a combination of the “formal” and “popular” forms of Greek used until 1982. Formal Greek used many accents and was closest to the ancient Greek language.

Description of the Language

Greek is a native language for Greece and Cyprus.

New Hellenic is written left-to-right, top-to-bottom.

Percentage of the Population That Uses the Language

- Greek 100%.

Alphabet Characteristics

Greek uses the Greek alphabet.

Hungary

Hungary (Magyarország) is a central European country bordering on Czechoslovakia, USSR, Romania, Yugoslavia, and Austria. The capital is Budapest (actually two cities, Buda and Pest). The population of Hungary is 10.5 million.

Name of the Language

The language is Hungarian, which is a unique language. Hungarian is more closely related to Turkish and Finnish than to the Slavic languages of Hungary's neighbors.

Description of the Language

Hungarian is written left-to-right, top-to-bottom.

Percentage of the Population That Uses the Language

- Hungarian 100%.

Alphabet Characteristics

Hungarian uses the Latin alphabet.

Iceland

Iceland is an island in the North Atlantic Ocean, located between Greenland, Scotland and Norway, situated entirely South of the Arctic Circle. The capital of Iceland is Reykjavik, where about half the population lives. The total population is a quarter of a million.

Name of Language

The language is Icelandic.

Description of the Language

Icelandic is a Germanic language that has, for the most part, retained its written form for the past eight centuries. It is related to Norwegian, Danish and Swedish. The language is written left-to-right and top-to-bottom.

Unique Characteristics of the Icelandic Language

Icelandic does not adopt foreign words easily, so new Icelandic words are often made up through compounding and derivations. Compound words are frequently used in Icelandic.

All the vowels (A, E, I, U, O, and Y) can have the acute accent. Consequently, dead-key support is required on keyboards.

Percentage of the Population That Uses the Language

- Icelandic 100%.

Alphabet Characteristics

Icelandic uses the Latin alphabet.

Italy

Italy (Italia) is a European country bordering on Switzerland, Austria, Yugoslavia, the Adriatic Sea, the Mediterranean Sea, and France. The capital is Roma (known as Rome to English speakers). The population of Italy is 57 million.

Name of Language

The language is Italian.

Description of the Language

Italian is a Romance language and is written left-to-right, top-to-bottom.

Percentage of the Population That Uses the Language

- Italian 100%
- German 0.6%
- French 0.2%.

Alphabet Characteristics

Italian uses the Latin alphabet.

Japan

Japan (Nihon) consists of many islands located off the east coast of the Asian mainland. The largest of the islands are Hokkaido, Honshu, Shikoku, and Kyushu. The capital is Tokyo, located on the island of Honshu. The population of Japan is 119 million.

Name of the Language

The language is Japanese, which contains three forms of characters:

- Kanji
- Katakana
- Hiragana.

Description of the Language

Kanji (literally, Chinese characters) is a set of ideographic characters originally derived from Chinese characters. Hiragana is set of phonetic characters usually used to provide word endings required by Japanese but not provided by Kanji. Katakana is another set of phonetic characters that are primarily used to represent words of non-Japanese origin. The sound(s) of a Kanji character can be represented by Hiragana or Katakana. Note that any piece of written text may contain examples of all three forms of Japanese characters.

Japanese is written in two ways: the traditional way (top-to-bottom, right-to-left) and the modern way (left-to-right, top-to-bottom). The Japanese language does not use a blank between words.

Percentage of the Population That Uses the Language

- Japanese 100%.



Alphabet Characteristics

The following groups of characters are included in the Japanese Graphic Character Set:

- Kanji characters
- Katakana characters
- Hiragana characters
- Arabic numerals (0 through 9)
- Latin alphabetic characters (a through z and A through Z)
- Greek characters
- Russian characters.

The Japanese language itself does not have Latin, Greek, or Russian characters. These characters are included in the character set for information interchange purposes.

The Asian languages do not have alphabets. In Japanese, Hiragana and Katakana look like alphabets, but they are not really alphabets. They are complementary characters, and Kanji is the major character. This is different from languages using the Latin alphabet, which only need alphabetic characters to compose words.



The Netherlands

The Netherlands (Nederland) is a European country bordering on the North Sea, the Federal Republic of Germany, and Belgium. The Netherlands has two capitals, the business capital, Amsterdam, and the political capital, Den Haag or 's-Gravenhage (known as Hague to English speakers). The population of the Netherlands is 14 million.

Names of the Languages

The language is Dutch. English, French, German, and Spanish are also used in business.

Description of the Languages

Dutch is a Germanic language that is written left-to-right, top-to-bottom.

Unique Characteristics of the Languages as Used in the Netherlands

Dutch differs slightly from Belgian Dutch (Flemish) in syntax and vocabulary. Belgian Dutch documents must be translated into Dutch.

Percentage of the Population That Uses the Languages

The following numbers indicate the use of the languages in business:

- Dutch 100%
- English 80%
- German 50%
- French 30%
- Spanish 5%.

This list indicates that most business is conducted in two or more languages.

Alphabet Characteristics

All languages use the Latin alphabet.

New Zealand

New Zealand is located in the South Pacific and consists of two main islands. The nearest country is Australia to the West. The capital of New Zealand is Wellington. The population of New Zealand is 3.3 million.

Name of Language

The language is English.

Description of the Language

English is a Germanic language that uses the Latin alphabet.

Unique Characteristics of the Language as Used in New Zealand

For the most part, the New Zealand spelling of English is identical to the spelling in the UK.

Percentage of the Population That Uses the Language

- English 100%.

Alphabet Characteristics

English uses the Latin alphabet.



Norway

Norway (Norge) is a Scandinavian country bordering on the Norwegian Sea, the Barents Sea, the USSR, Finland, and Sweden. Its capital is Oslo. The population of Norway is 4 million.

Name of the Language

The language is Norwegian.

Description of the Language

Norwegian is a Germanic language and has some similarities with German, Danish, and Swedish. Norwegian is written left-to-right, top-to-bottom.

Percentage of the Population That Uses the Language

- Norwegian 100%.

Alphabet Characteristics

Norwegian uses the Latin alphabet.



People's Republic of China

The People's Republic of China (PRC) is located in eastern Asia and borders on the USSR, Mongolia, Korea, the Yellow Sea, East China Sea, South China Sea, Vietnam, Laos, Burma, India, Bhutan, Sikkim, Nepal, Jammu, and Kashmir. The capital is Beijing (formerly known as Peking). The population of PRC is over 1.1 billion.

Name of the Language

The language is Chinese.

Description of the Language

Written Chinese is made of ideographic characters, known as Hanzi, which were originally invented in China. Some Hanzi are also used in PRC's neighboring countries, such as Japan (known as Kanji) and Korea (known as Hanja). While most Hanzi still remain in their traditional form, in PRC however, many Hanzi have been simplified by the government to make them easier to use. Hence the written Chinese used in the PRC is generally referred to as **Simplified Chinese**.

Chinese is written in two orientations: the traditional way (top-to-bottom, right-to-left) and the modern way (left-to-right, top-to-bottom). The Chinese language does not use a blank between words, except that blanks are sometimes used in front of a person's name to show respect.

PRC uses the Arabic numeric system and the Chinese numeric system. The Arabic numeric system is used for data processing purposes.

Percentage of the Population That Uses the Language

- Chinese 100%.

Alphabet Characteristics

The Chinese language does not have an alphabet.

Poland

Poland (Polska) is a central European country bordering on the Baltic Sea, the USSR, Czechoslovakia, and the German Democratic Republic. The capital is Warszawa (known as Warsaw to English speakers). The population of Poland is 35 million.

Name of the Language

The language is Polish.

Description of the Language

Polish is a Slavic language and is written left-to-right, top-to-bottom.

Percentage of the Population That Uses the Language

- Polish 100%.

Alphabet Characteristics

Polish uses the Latin alphabet.

Portugal

Portugal is a European country bordering on Spain on the north and east, and the Atlantic Ocean to the south and west. The capital is Lisboa (known as Lisbon to English speakers). The population of Portugal is 10 million.

Name of the Language

The language is Portuguese.

Description of the Language

Portuguese is a Romance language and is also spoken in:

- Angola
- Brazil
- Cape Verde
- Guinea Bissau
- Mozambique
- Sao Tome and Principe.

Unique Characteristics of the Language as Used in Portugal

There are only minor differences between Portuguese used in Portugal and elsewhere.

As in French and Spanish, accented letters change the meaning of Portuguese words.

Percentage of the Population That Uses the Language

- Portuguese 100%.

Alphabet Characteristics

Portuguese uses the Latin alphabet.

Republic of China

The Republic of China (ROC) is located on the island of Taiwan off the southeast coast of mainland China. The Portuguese name for the island is Formosa. The capital is Taipei. The population of ROC is 20 million.

Name of the Language

The language is Chinese.

Description of the Language

Written Chinese is made of ideographic characters, known as Hanzi, which were originally invented in China. While the PRC has simplified many Hanzi, the Hanzi used in the ROC still remain in their traditional form and hence are generally referred to as **Traditional Chinese**.

Chinese is written in two orientations: the traditional way (top-to-bottom, right-to-left) and the modern way (left-to-right, top-to-bottom). The Chinese language does not use a blank between words, except that blanks are sometimes used in front of a person's name to show respect.

ROC uses the Arabic numeric system and the Chinese numeric system. The Arabic numeric system is used for data processing purposes.

Percentage of the Population That Uses the Language

- Chinese 100%.

Alphabet Characteristics

The Chinese language does not have an alphabet.

Republic of Korea (South Korea)

South Korea (Tachan-Min'guk) is located in the south part of the Korean peninsula on the east coast of the Asian mainland. The capital is Seoul. The population of South Korea is 41 million.

Name of the Language

The language is Korean, which contains two forms of characters:

- Hangeul
- Hanja.

Description of the Language

Hangeul is a set of phonetic characters formed from components, called Jamo, which represent consonants and vowels. One phonetic syllable, a Hangeul character, can consist of an initial consonant and vowel combination, or of an initial consonant, vowel, and final consonant combination. There are 52 Jamo components. Among them, 10 are basic vowels and 14 are basic consonants. Some consonants are composed of two basic consonants, and some vowels are composed of up to three basic vowels. There are 21 vowels and 31 consonants, 19 of which can be initial consonants and 28 can be final consonants. In total there are 11,571 ($19 \times 21 \times (28 + 1)$) Hangeul characters; each consists of two to seven basic Jamo components. Far fewer characters are in actual use.

The principal form of Korean characters is Hangeul. Hanja is mainly used to represent people's names and terminologies in science and education. The use of Hanja is declining.

Korean is written left-to-right, top-to-bottom, but the traditional way (top-to-bottom, right-to-left) is still used in newspapers.

Percentage of the Population That Uses the Language

- Korean 100%.



Alphabet Characteristics

The Korean language does not have an alphabet. In Korean, Jamo looks like an alphabet but is not really an alphabet. There are no Jamo characters; rather there are Jamo components, which are used to compose a Hangeul character. This structure is different from languages using the Latin alphabet, which only need alphabetic characters to compose words.

Romania (Rumania)

Romania (România) is a southeast European country bordering on the USSR, the Black Sea, Bulgaria, Yugoslavia, and Hungary. The capital is Bucuresti (known to English speakers as Bucharest). The population of Romania is 22 million.

Names of Languages

The language is Romanian but, Hungarian and German are also spoken.

Description of the Language

Romanian is a Romance language that is different from, but heavily influenced by, the Slavic languages of its neighbors.

Romanian is written left-to-right, top-to-bottom.

Percentage of the Population That Uses the Languages

- Romanian 90%
- Hungarian 8%
- German 1%
- Others 1%.

Alphabet Characteristics

Romanian uses the Latin alphabet.

South Africa

South Africa (Suid Africa) is the southernmost country in Africa. The capitals are Pretoria (administrative) and Cape Town (legislative). The population of South Africa is 30 million.

Names of Languages

The languages are:

- English
- Afrikaans.

Descriptions of the Languages

South Africa uses two languages, English and Afrikaans. Originally, Afrikaans was a variation of the Dutch spoken by the Boers who settled in South Africa in the seventeenth century. Now, the language has assimilated other languages to become a separate language, not just a variation of Dutch.

Both languages are written left-to-right, top-to-bottom.

Unique Characteristics of the Languages as Used in South Africa

South Africa generally uses the United Kingdom spellings of English words.

Percentage of the Population That Uses the Languages

- English 50%
- Afrikaans 50%.

Alphabet Characteristics

Both English and Afrikaans use the Latin alphabet.

Support of More than One Language

South Africa requires a common character set for English and Afrikaans. Keyboards require nonescaping (dead) keys input for accented characters. South Africa requires separate linguistic aids (dictionary, spelling aid, and so on) for English and Afrikaans.

Spain

Spain (España) is an European country bordering on the Atlantic Ocean, France, Andorra, the Mediterranean Sea, and Portugal. It shares the Iberian Peninsula, the westernmost part of mainland Europe, with Portugal. The capital is Madrid. The population of Spain is 39 million.

Names of Languages

The languages are:

- Castillian
- Catalan
- Gallego
- Basque.

Descriptions of the Languages

Castillian is the language commonly known as Spanish. Catalan is a language mainly used in eastern Spain (Catalonia). Gallego is a language mainly used in northwestern Spain (Galicia). Basque is a unique language, unlike any other European language, and is spoken in the northeast of Spain, along the border with France.

All four languages are written left-to-right, top-to-bottom.

Unique Characteristics of the Languages as Used in Spain

Castillian is spoken in Central and South America although some words used in Spain are not used in Central and South America.

An accent can change the meaning of a word. For example:

“Mascará” means “(He) will chew.”

“Mascara” means “Mask.”

Percentage of the Population That Uses the Languages

- Castillian 100.0%
- Catalan 25.0%
- Gallego 7.5%
- Basque 6.0%.

Note: All Spaniards use Castillian, and some also use Catalan, Gallego, or Basque.

Alphabet Characteristics

All languages use the Latin alphabet.

Support of More than One Language

All four languages are supported in the standard keyboard and character set and so can be represented on displays and printers.

Support of Castillian is required for customer setup information (CSU), machine readable information (MRI), documentation, and linguistic sensitive functions

(LSF), such as Spanish dictionaries, spelling aid, automatic hyphenation, and synonym aid. Support of Catalan is required for LSF such as dictionaries, spelling aid, automatic hyphenation, and, at a lower priority, synonym aid. MRI enabling for Catalan, Gallego, and Basque is part of the global MRI language enabling. Gallego and Basque also require LSF enabling.

Sweden

Sweden (Sverige) is a Scandinavian country bordering on Norway, Finland, and the Baltic Sea, which separates Sweden on the southwest side from Denmark. Its capital is Stockholm. The population of Sweden is 8 million.

Name of Language

The language is Swedish.

Description of the Language

Swedish is written left-to-right, top-to-bottom.

Percentage of the Population That Uses the Language

- Swedish 100%.

Alphabet Characteristics

Swedish uses the Latin alphabet. The letters å, Ä, ä, Å, ö, and Ö are an integral part of the alphabet and are not considered to be accented letters. In the alphabet sequence, these letters follow the letter z.

Switzerland

Switzerland (Schweiz, Suisse, or Svizzera) is a European country bordering on the Federal Republic of Germany, Austria, Italy, and France. The capital is Bern. The population of Switzerland is 6 million.

Names of Languages

The languages are:

- Swiss German
- Swiss French
- Swiss Italian

Another language, called Rhaeto-Romansch, is spoken in areas adjacent to the Italian border by a small minority in several dialects.

Descriptions of the Languages

Swiss German is the language most in use. French and Italian are also used.

All three languages are written left-to-right, top-to-bottom.

Unique Characteristics of the Languages as Used in Switzerland

Swiss German is slightly different from German. For example, the sharp s (ß) is not used in Swiss German, and several words have different genders in Swiss German.

There are only minor differences between Swiss French and French and between Swiss Italian and Italian.

Percentage of the Population That Uses the Languages

- Swiss German 65%
- Swiss French 18%
- Swiss Italian 10%
- Others 7%.

Alphabet Characteristics

All languages use the Latin alphabet.

Thailand

Thailand (Prathet Thai), formerly known as Siam, is in Southeast Asia. The capital is Krung Thep (known as Bangkok to English speakers). The population of Thailand is 52 million.

Names of Languages

The official language is Thai. English is also widely used. Chinese is used occasionally.

Description of the Language

Thai is a phonetic language containing consonants, tone marks, vowels (lower, middle, and upper), and numerals. Thai has its own numerals, but Arabic numerals are used for data processing.

Vowels are classified as upper, middle, and lower vowels depending on the printing position on the print line, in relation to the consonant character.

Thai is written left-to-right, top-to-bottom.

Percentage of the Population That Uses the Languages

The following table shows the percentage of languages used in business because these values are not necessarily reflected in the percentage of the total population that uses each language.

| | Government | Banking | Local Commerce | International Commerce |
|---------|------------|---------|-------------------|---------------------------|
| English | 30 | 60 | 40 | 80 |
| Thai | 70 | 35 | 60 | 20 |
| Chinese | 0 | 5 | 0 | 0 |

Alphabet Characteristics

Thai alphabets are used to form words similar to the way the Latin alphabet is used to form words. One word can consist of one to five syllables. Syllables are composed using consonants, vowels, and tone marks. Middle vowels are always at the same printing height as consonants. Upper vowels, lower vowels, and tone marks are used to compose a word or syllable in slim form. Words are run together using proportional space, so there is no break (blank) between syllables, or even words. The only breaks come at the end of sentences and to separate foreign words.

Turkey

Turkey (Türkiye) is partly European and partly Asian. It borders on Bulgaria, the Black Sea, the USSR, Iran, Iraq, Syria, the Mediterranean Sea, and Greece. The capital is Ankara. The population of Turkey is 52 million.

Name of the Language

The language is Turkish.

Description of the Language

Turkish is a unique language, which is also spoken in parts of:

- Iran
- Greece
- Bulgaria
- The USSR.

Percentage of the Population That Uses the Language

- Turkish 100%.

Alphabet Characteristics

Turkish uses the Latin alphabet.



United Kingdom

The United Kingdom (UK) consists of England, Scotland, Wales, and Northern Ireland. The capital is London. The population of the UK is 56 million.

Names of Languages

The primary language is English, although Welsh is spoken as the first language in some parts of Wales.

Description of the Language

English is a Germanic language that uses the Latin alphabet.

Unique Characteristics of the Language as Used in the UK

The UK uses spellings different from US English spellings for some words.

Percentage of the Population That Uses the Language

- English 100%.

Alphabet Characteristics

English uses the Latin alphabet.



United States of America

The United States of America (USA) consists of parts of North America and the Hawaiian Islands. The USA is largely bounded by Canada in the North and by Mexico in the South, with the state of Alaska bounded by Canada in the South and to the East. The capital of the USA is Washington D.C. The population of the USA is 236 million.

Names of Languages

The official language is English, although Spanish is spoken by some segments of the population.

Description of the Language

English is a Germanic language that uses the Latin alphabet.

Unique Characteristics of the Language as Used in the USA

UK English and USA English use different spellings for some words.

Percentage of the Population That Uses the Language

- English 100%.

Alphabet Characteristics

English uses the Latin alphabet.

Yugoslavia

Yugoslavia (Jugoslavija) is a southeast European country bordering on Austria, Hungary, Romania, Bulgaria, Greece, Albania, the Adriatic Sea, and Italy. The capital is Beograd (known as Belgrade to English speakers). The population of Yugoslavia is 22 million.

Names of Languages

The languages are:

- Serbo-Croatian
- Slovenian
- Macedonian
- Albanian
- Hungarian and others.

Descriptions of the Languages

Serbo-Croatian, Slovenian, and Macedonian are Slavic languages.

Serbo-Croatian is a spoken language that is written two ways: Serbian uses Latin and Cyrillic characters, while Croatian uses only Latin characters. Both are written left-to-right, top-to-bottom.

Percentage of the Population That Uses the Language

- Serbian 45.0%
- Croatian 27.0%
- Albanian 9.0%
- Slovenian 7.7%
- Macedonian 7.7%
- Hungarian 2.5%
- Others 1.1%.

Alphabet Characteristics

Serbian and Macedonian use Cyrillic characters. All others use Latin characters.

Chapter 3. Technical Characteristics

This chapter describes technical information on:

- Sort sequences, monocasing, and character classification
- Keyboards
- Currency
- Number Rounding
- Number Notation
- Calendars
- Format of the date and time
- Weights and measurements systems.

Sort Sequence, Monocasing, and Character Classification

This section describes how different countries use the alphabet characters belonging to their country language(s). In particular, this section provides detailed information on:

- The sequence used by each country to sort in ascending order
- Converting to single case (also known as monocasing)
- Using special characters as alphabetic or numeric.

The information on sort sequences, monocasing, and character classification is character set independent and applies equally to all the code pages (such as EBCDIC and ASCII) of a given country.

Sort Sequence Considerations

Figure 3-1 shows a common ascending-order sort sequence. A note in the character tables of countries using this sequence will refer to Figure 3-1. Other countries use a different sort sequence, which is shown in their character tables.

1. Spaces
2. Characters given a **sort weight between spaces and alphabetic characters** (listed for each country)
3. Alphabetic characters (sorted as shown in the following tables)
4. Numeric characters (sorted in numeric sequence)
5. Special characters (sorted by code point hexadecimal or binary sequence).

Figure 3-1. General Sort Sequence

Characters with Sort Weight between Spaces and Alphabetic Characters

Figure 3-1 indicates that some special characters are given a “sort weight between spaces and alphabetic characters.” These characters help decide the position of where the sorted data ends after the sort operation. They can be in a binary or hexadecimal sequence among themselves, but ultimately their final sort weight is between spaces and alphabetic characters. The following are samples of these special characters:

- The hyphen in “Wynne-Roberts” will cause this name to be sorted just after “Wynne Rogers.”
- The apostrophe in O’Brian will cause this word to be sorted ahead of any other OBrian that does not have the apostrophe.
- The Portuguese character string “De” at the beginning of a sort field and followed by a space in “De Souza” will cause this name to be sorted as if it was written “Souza.”

Latin Alphabet Number 1

Latin Alphabet Number 1 (LAN1) is an ISO character set used for English, German, French, and numerous other languages. LAN1 may be a superset of the character sets specified in some countries’ sort sequences. If this is so, the LAN1 characters not contained in such a sort sequence could be handled in a consistent manner as follows:

1. In the case where the regular nonaccented character is present on the country sort sequence, but accented characters or special forms of the character are not present, then these latter ones should follow the regular nonaccented character.

2. In the case where neither the regular nonaccented character, nor the accented characters or special forms of the character are given on the country sort sequence, then such characters should be placed according to the Multilingual Code Page (MLP) sort sequence.

MLP Sort Sequence

The Multilingual Code Page (MLP) sort sequence is the one used by FRG and Switzerland. Both of these countries have the same sort sequence, which is based on the MLP.

Some other countries have indicated that they could use an alternative sort sequence based on the MLP, the one used by FRG and Switzerland. But, this alternative sort sequence is not to be regarded as a substitute for these countries' main sort sequence.

Sort Exits

Sort programs need to provide user sort exits to allow for customizing and support of countries that have alternative sort sequences.

Monocasing Considerations

The monospace rules given for the various countries are to be followed when providing the Caps Lock function. This function is defined on page 3-90.

Character Classification Considerations

The classification of special characters into alphabetic characters and numeric characters **does not apply to sort sequences**. It applies to software programs that have to determine if a string of data is alphabetic or numeric. Such a classification is more commonly required after the user has manipulated the string of data. For example, the user has entered data in a screen input field containing currency figures, and the program has defined this field to contain only numeric data.

Character Table Headings

The following character tables show the alphabetic-character sort sequences for the countries, monocasing information, and character classification. Figure 3-2 is an example of the heading for the tables, as follows:

- The sequence number (item A in Figure 3-2)
- The graphic character (item B)
- The Character Identifier (item C) used in IBM Corporate Standards, which follows closely the character identifier used in ISO 6937/2, Annex D
- The monospace character, if only uppercase is used (item D)

- The character classification (A is alphabetic, N is numeric, and S is special) (item E)
- Notes defined with each table (item F).

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|------------|------|-----|--------------|---------------|------|
| (A) | (B) | (C) | (D) | (E) | (F) |

Figure 3-2. Character Table Heading



Albania

Character Classification Considerations

The following special characters are classified as alphabetic:

- Space (required and numeric) (SP30 and SP31)
- Hyphen (required and syllable) (SP10 and SP32).


The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Plus (SA01)
- Minus (SA00).

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- Hyphen (required or syllable) (SP10 and SP32)
- Apostrophe (SP05).



Character Table

Figure 3-3 shows the character table for Albania. The table lists the characters in ascending order with the lowest-weighted character listed first.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | | A |
| 1 | A | LA02 | | | A |
| 2 | b | LB01 | LB02 | | A |
| 2 | B | LB02 | | | A |
| 3 | c | LC01 | LC02 | | A |
| 3 | C | LC02 | | | A |
| 4 | ç | LC41 | LC42 | | A |
| 4 | Ç | LC42 | | | A |
| 5 | d | LD01 | LD02 | | A |
| 5 | D | LD02 | | | A |
| 6 | e | LE01 | LE02 | | A |
| 6 | E | LE02 | | | A |
| 7 | ë | LE17 | LE18 | | A |
| 7 | Ë | LE18 | | | A |
| 8 | f | LF01 | LF02 | | A |
| 8 | F | LF02 | | | A |
| 9 | g | LG01 | LG02 | | A |
| 9 | G | LG02 | | | A |
| 10 | h | LH01 | LH02 | | A |
| 10 | H | LH02 | | | A |
| 11 | i | LI01 | LI02 | | A |
| 11 | I | LI02 | | | A |
| 12 | j | LJ01 | LJ02 | | A |
| 12 | J | LJ02 | | | A |
| 13 | k | LK01 | LK02 | | A |
| 13 | K | LK02 | | | A |
| 14 | l | LL01 | LL02 | | A |
| 14 | L | LL02 | | | A |
| 15 | m | LM01 | LM02 | | A |
| 15 | M | LM02 | | | A |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 16 | n | LN01 | LN02 | | A |
| 16 | N | LN02 | | | A |
| 17 | o | LO01 | LO02 | | A |
| 17 | O | LO02 | | | A |
| 18 | p | LP01 | LP02 | | A |
| 18 | P | LP02 | | | A |
| 19 | q | LQ01 | LQ02 | | A |
| 19 | Q | LQ02 | | | A |
| 20 | r | LR01 | LR02 | | A |
| 20 | R | LR02 | | | A |
| 21 | s | LS01 | LS02 | | A |
| 21 | S | LS02 | | | A |
| 22 | t | LT01 | LT02 | | A |
| 22 | T | LT02 | | | A |
| 23 | u | LU01 | LU02 | | A |
| 23 | U | LU02 | | | A |
| 24 | v | LV01 | LV02 | | A |
| 24 | V | LV02 | | | A |
| 25 | w | LW01 | LW02 | | A |
| 25 | W | LW02 | | | A |
| 26 | x | LX01 | LX02 | | A |
| 26 | X | LX02 | | | A |
| 27 | y | LY01 | LY02 | | A |
| 27 | Y | LY02 | | | A |
| 28 | z | LZ01 | LZ02 | | A |
| 28 | Z | LZ02 | | | A |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-3. Character Table for Albania

Character Classification Considerations

The following special characters are classified as alphabetic:

- Space (required and numeric) (SP30 and SP31)
- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (if it has a letter ahead of and behind it, as in “s’havia”) (SP05).

The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Plus (SA01)
- Minus (SA00).

Sort Sequence Considerations

The following character strings should be given a **sort weight between spaces and alphabetic characters**, if they are at the start of a sort field and if they are immediately followed by a space:

- d', D', de, De, del, and Del
- el and El
- l', L', la and La.

Character Table

Figure 3-4 shows the character table for Argentina. The table lists the characters in ascending order with the lowest-weighted character listed first. In Argentina, some characters are regarded as equivalents and are listed in the table with equal weights. After a sort, these characters can be intermixed like, for example, the following words:

| Unsorted list | Sorted list |
|---------------|-------------|
| candor | cándido |
| casa | candor |
| Cantera | cántaro |
| Castro | Cantera |
| cándido | casa |
| cántaro | cáscara |
| cáscara | Castro |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | | A |
| 1 | A | LA02 | | | A |
| 1 | á | LA11 | LA12 | | A |
| 1 | Á | LA12 | | | A |
| 1 | à | LA13 | LA14 | | A |
| 1 | À | LA14 | | | A |
| 2 | b | LB01 | LB02 | | A |
| 2 | B | LB02 | | | A |
| 3 | c | LC01 | LC02 | | A |
| 3 | C | LC02 | | | A |
| 4 | ch | | | | A 1 |
| 4 | Ch | | | | A 1 |
| 4 | CH | | | | A 1 |
| 5 | d | LD01 | LD02 | | A |
| 5 | D | LD02 | | | A |
| 6 | e | LE01 | LE02 | | A |
| 6 | E | LE02 | | | A |
| 6 | é | LE11 | LE12 | | A |
| 6 | É | LE12 | | | A |
| 6 | è | LE13 | LE14 | | A |
| 6 | È | LE14 | | | A |
| 7 | f | LF01 | LF02 | | A |
| 7 | F | LF02 | | | A |
| 8 | g | LG01 | LG02 | | A |
| 8 | G | LG02 | | | A |
| 9 | h | LH01 | LH02 | | A |
| 9 | H | LH02 | | | A |
| 10 | i | LI01 | LI02 | | A |
| 10 | I | LI02 | | | A |
| 10 | í | LI15 | LI16 | | A |
| 10 | Í | LI16 | | | A |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 11 | j | LJ01 | LJ02 | | A |
| 11 | J | LJ02 | | | A |
| 12 | k | LK01 | LK02 | | A |
| 12 | K | LK02 | | | A |
| 13 | l | LL01 | LL02 | | A |
| 13 | L | LL02 | | | A |
| 14 | ll | | | | A 2 |
| 14 | Ll | | | | A 2 |
| 14 | LL | | | | A 2 |
| 15 | m | LM01 | LM02 | | A |
| 15 | M | LM02 | | | A |
| 16 | n | LN01 | LN02 | | A |
| 16 | N | LN02 | | | A |
| 17 | ñ | LN19 | LN20 | | A |
| 17 | Ñ | LN20 | | | A |
| 18 | o | LO01 | LO02 | | A |
| 18 | O | LO02 | | | A |
| 18 | ó | LO11 | LO12 | | A |
| 18 | Ó | LO12 | | | A |
| 18 | ò | LO13 | LO14 | | A |
| 18 | Ò | LO14 | | | A |
| 19 | p | LP01 | LP02 | | A |
| 19 | P | LP02 | | | A |
| 20 | q | LQ01 | LQ02 | | A |
| 20 | Q | LQ02 | | | A |
| 21 | r | LR01 | LR02 | | A |
| 21 | R | LR02 | | | A |
| 22 | s | LS01 | LS02 | | A |
| 22 | S | LS02 | | | A |
| 23 | t | LT01 | LT02 | | A |
| 23 | T | LT02 | | | A |

Figure 3-4 (Part 1 of 2). Character Table for Argentina

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 24 | u | LU01 | LU02 | | A |
| 24 | U | LU02 | | | A |
| 24 | ú | LU11 | LU12 | | A |
| 24 | Ú | LU12 | | | A |
| 24 | ü | LU17 | LU18 | | A |
| 24 | Ü | LU18 | | | A |
| 25 | v | LV01 | LV02 | | A |
| 25 | V | LV02 | | | A |
| 26 | w | LW01 | LW02 | | A |
| 26 | W | LW02 | | | A |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 27 | x | LX01 | LX02 | | A |
| 27 | X | LX02 | | | A |
| 28 | y | LY01 | LY02 | | A |
| 28 | Y | LY02 | | | A |
| 29 | z | LZ01 | LZ02 | | A |
| 29 | Z | LZ02 | | | A |
| | | | | | 3 |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-4 (Part 2 of 2). Character Table for Argentina

Notes for Figure 3-4:

1. The combinations ch, Ch, and CH are printed, displayed, and otherwise processed as two characters. During sorting, each combination is processed as one character that follows all other c characters. For example, the name *Córdoba* is sorted ahead of *Chávez*.
2. The combinations ll, Ll, and LL are printed, displayed, and otherwise processed as two characters. During sorting, each combination is processed as one character that follows all other l characters. For example, the name *López* is sorted ahead of *Llerena*.
3. Argentina's currency is now the austral (a capital A with two horizontal bars). It does not replace the dollar symbol (\$) in Argentina's character set.

Austria

Character Classification Considerations

The following special characters are classified as alphabetic:

- Space (required and numeric) (SP30 and SP31)
- Hyphen (required and syllable) (SP10 and SP32).

The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Plus (SA01)
- Minus (SA00).

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (SP05).

Character Table

Figure 3-5 shows the character table for German as used in Austria. The table lists the characters in ascending order with the lowest-weighted character listed first. In Austria, some characters are regarded as equivalents and are listed in the table with equal weights.

| Seq Num | Char | ID | Mono case | Alpha | Note /Num |
|---------|------|------|-----------|-------|-----------|
| 1 | a | LA01 | LA02 | A | 1 |
| 1 | A | LA02 | | A | 4 |
| 1 | ä | LA17 | LA18 | A | 2 |
| 1 | Ä | LA18 | | A | 4 |
| 2 | b | LB01 | LB02 | A | |
| 2 | B | LB02 | | A | |
| 3 | c | LC01 | LC02 | A | |
| 3 | C | LC02 | | A | |
| 4 | d | LD01 | LD02 | A | |
| 4 | D | LD02 | | A | |
| 5 | e | LE01 | LE02 | A | |
| 5 | E | LE02 | | A | |
| 6 | f | LF01 | LF02 | A | |
| 6 | F | LF02 | | A | |
| 7 | g | LG01 | LG02 | A | |
| 7 | G | LG02 | | A | |
| 8 | h | LH01 | LH02 | A | |
| 8 | H | LH02 | | A | |
| 9 | i | LI01 | LI02 | A | |
| 9 | I | LI02 | | A | |
| 10 | j | LJ01 | LJ02 | A | |
| 10 | J | LJ02 | | A | |
| 11 | k | LK01 | LK02 | A | |
| 11 | K | LK02 | | A | |
| 12 | l | LL01 | LL02 | A | |
| 12 | L | LL02 | | A | |
| 13 | m | LM01 | LM02 | A | |
| 13 | M | LM02 | | A | |
| 14 | n | LN01 | LN02 | A | |
| 14 | N | LN02 | | A | |
| 15 | o | LO01 | LO02 | A | |
| 15 | O | LO02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha | Note /Num |
|---|------|------|-----------|-------|-----------|
| 15 | ö | LO17 | LO18 | A | 2 |
| 15 | Ö | LO18 | | A | 4 |
| 16 | p | LP01 | LP02 | A | |
| 16 | P | LP02 | | A | |
| 17 | q | LQ01 | LQ02 | A | |
| 17 | Q | LQ02 | | A | |
| 18 | r | LR01 | LR02 | A | |
| 18 | R | LR02 | | A | |
| 19 | s | LS01 | LS02 | A | |
| 19 | S | LS02 | | A | |
| 20 | ß | LS61 | LS61 | A | 3 4 |
| 21 | t | LT01 | LT02 | A | |
| 21 | T | LT02 | | A | |
| 22 | u | LU01 | LU02 | A | |
| 22 | U | LU02 | | A | |
| 22 | ü | LU17 | LU18 | A | 2 |
| 22 | Ü | LU18 | | A | 4 |
| 23 | v | LV01 | LV02 | A | |
| 23 | V | LV02 | | A | |
| 24 | w | LW01 | LW02 | A | |
| 24 | W | LW02 | | A | |
| 25 | x | LX01 | LX02 | A | |
| 25 | X | LX02 | | A | |
| 26 | y | LY01 | LY02 | A | |
| 26 | Y | LY02 | | A | |
| 27 | z | LZ01 | LZ02 | A | |
| 27 | Z | LZ02 | | A | |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-5. Character Table for Austria

Notes for Figure 3-5:

1. For sorting purposes, capital and small letters have equal weight.
2. The same equivalence applies to letters with diaeresis:
 - ä and Ä are sorted as a,
 - ö and Ö are sorted as o, and
 - ü and Ü are sorted as u.
3. ß (LS61) is sorted as ss.
4. Words with original spelling are sorted ahead of words that become equal after modifications.
 - Band becomes band, but follows original band.
 - Häuser becomes Hauser, but follows original Hauser.
 - Maße becomes Masse, but follows original Masse.

Character Classification Considerations

The following special characters are classified as alphabetic:

- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (if it has a letter ahead of and behind it, as in “l’amour”) (SP05).

The following special characters are considered numeric:

- All superscripts
- Minus (SA00), plus (SA01), and plus-or-minus (SA02)
- Less than (SA03) and greater than (SA05)
- Divide (SA06) and multiply (SA07)
- Number (SM01), percent (SM02), and asterisk (SM04)
- Left and right brackets (SM06 and SM08)
- Left and right braces (SM11 and SM14)
- Left and right parenthesis (SP06 and SP07)
- Comma (SP08) and period (SP11)
- Slash and backslash (SP12 and SM07)
- Colon (SP13).

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (SP05).

Character Table

Figure 3-6 shows the character table for Belgium. The table lists the characters in ascending order with the lowest-weighted character listed first. In Belgium, some characters are regarded as equivalents and are listed in the table with equal weights. This means that, after a sort, these characters can be intermixed like, for example, the following words:

| Unsorted list | Sorted list |
|---------------|-------------|
| essen | Eingang |
| et | énumération |
| Eingang | époque |
| époque | essen |
| énumération | et |
| étoile | étoile |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | 1 |
| 1 | A | LA02 | | A | |
| 1 | á | LA11 | LA12 | A | |
| 1 | Á | LA12 | | A | |
| 1 | à | LA13 | LA14 | A | |
| 1 | À | LA14 | | A | |
| 1 | â | LA15 | LA16 | A | |
| 1 | Â | LA16 | | A | |
| 1 | ã | LA19 | LA20 | A | |
| 1 | Ã | LA20 | | A | |
| 2 | å | LA27 | LA28 | A | 2 |
| 2 | Å | LA28 | | A | 2 |
| 3 | ä | LA17 | LA18 | A | 3 |
| 3 | Ä | LA18 | | A | 3 |
| 4 | æ | LA51 | LA52 | A | 3 |
| 4 | Æ | LA52 | | A | 3 |
| 5 | b | LB01 | LB02 | A | |
| 5 | B | LB02 | | A | |
| 6 | c | LC01 | LC02 | A | |
| 6 | C | LC02 | | A | |
| 6 | ç | LC41 | LC42 | A | |
| 6 | Ç | LC42 | | A | |
| 7 | d | LD01 | LD02 | A | |
| 7 | D | LD02 | | A | |
| 8 | ð | LD63 | LD62 | A | |
| 8 | Ð | LD62 | | A | |
| 9 | e | LE01 | LE02 | A | |
| 9 | E | LE02 | | A | |
| 9 | é | LE11 | LE12 | A | |
| 9 | É | LE12 | | A | |
| 9 | è | LE13 | LE14 | A | |
| 9 | È | LE14 | | A | |
| 9 | ê | LE15 | LE16 | A | |
| 9 | Ê | LE16 | | A | |
| 9 | ë | LE17 | LE18 | A | |
| 9 | Ë | LE18 | | A | |
| 10 | f | LF01 | LF02 | A | |
| 10 | F | LF02 | | A | |
| 11 | g | LG01 | LG02 | A | |
| 11 | G | LG02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 12 | h | LH01 | LH02 | A | |
| 12 | H | LH02 | | A | |
| 13 | i | LI01 | LI02 | A | |
| 13 | I | LI02 | | A | |
| 13 | í | LI11 | LI12 | A | |
| 13 | Í | LI12 | | A | |
| 13 | ì | LI13 | LI14 | A | |
| 13 | Ì | LI14 | | A | |
| 13 | î | LI15 | LI16 | A | |
| 13 | Î | LI16 | | A | |
| 13 | ï | LI17 | LI18 | A | |
| 13 | Ï | LI18 | | A | |
| 14 | ı | LI61 | LI02 | A | |
| 15 | ij | LI51 | | A | 4,8 |
| 16 | j | LJ01 | LJ02 | A | |
| 16 | J | LJ02 | | A | |
| 17 | k | LK01 | LK02 | A | |
| 17 | K | LK02 | | A | |
| 18 | l | LL01 | LL02 | A | |
| 18 | L | LL02 | | A | |
| 19 | m | LM01 | LM02 | A | |
| 19 | M | LM02 | | A | |
| 20 | n | LN01 | LN02 | A | |
| 20 | N | LN02 | | A | |
| 21 | ñ | LN19 | LN20 | A | |
| 21 | Ñ | LN20 | | A | |
| 22 | o | LO01 | LO02 | A | |
| 22 | O | LO02 | | A | |
| 22 | ó | LO11 | LO12 | A | |
| 22 | Ó | LO12 | | A | |
| 22 | ò | LO13 | LO14 | A | |
| 22 | Ò | LO14 | | A | |
| 22 | ô | LO15 | LO16 | A | |
| 22 | Ô | LO16 | | A | |
| 22 | õ | LO19 | LO20 | A | |
| 22 | Õ | LO20 | | A | |
| 23 | ö | LO17 | LO18 | A | 5 |
| 23 | Ö | LO18 | | A | 5 |
| 23 | ø | LO61 | LO62 | A | 5 |
| 23 | Ø | LO62 | | A | 5 |

Figure 3-6 (Part 1 of 2). Character Table for Belgium

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 24 | œ | LO51 | LO52 | A | 5,8 |
| 24 | Œ | LO52 | | A | 5,8 |
| 25 | p | LP01 | LP02 | A | |
| 25 | P | LP02 | | A | |
| 26 | q | LQ01 | LQ02 | A | |
| 26 | Q | LQ02 | | A | |
| 27 | r | LR01 | LR02 | A | |
| 27 | R | LR02 | | A | |
| 28 | s | LS01 | LS02 | A | |
| 28 | S | LS02 | | A | |
| 29 | ß | LS61 | LS61 | A | 6 |
| 30 | t | LT01 | LT02 | A | |
| 30 | T | LT02 | | A | |
| 31 | þ | LT63 | LT64 | A | |
| 31 | Þ | LT64 | | A | |
| 32 | u | LU01 | LU02 | A | |
| 32 | U | LU02 | | A | |
| 32 | ú | LU11 | LU12 | A | |
| 32 | Û | LU12 | | A | |
| 32 | ü | LU13 | LU14 | A | |
| 32 | Û | LU14 | | A | |
| 32 | û | LU15 | LU16 | | |
| 32 | Û | LU16 | | | |
| 33 | ü | LU17 | LU18 | A | 7 |
| 33 | Û | LU18 | | A | 7 |
| 34 | v | LV01 | LV02 | A | |
| 34 | V | LV02 | | A | |
| 35 | w | LW01 | LW02 | A | |
| 35 | W | LW02 | | A | |
| 36 | x | LX01 | LX02 | A | |
| 36 | X | LX02 | | A | |
| 37 | y | LY01 | LY02 | A | |
| 37 | Y | LY02 | | A | |
| 37 | ý | LY11 | LY12 | A | |
| 37 | Ý | LY12 | | A | |
| 37 | ÿ | LY17 | LY02 | A | |
| 38 | z | LZ01 | LZ02 | A | |
| 38 | Z | LZ02 | | A | |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-6 (Part 2 of 2). Character Table for Belgium

Notes on Figure 3-6:

1. This sort sequence is based on the Latin Alphabet Number 1 character set. Explanations at the beginning of this chapter deal with products supporting other character sets.
2. å is sorted as aa.
3. ä and æ are sorted as ae.
4. ij ligature is sorted as two letters, i followed by j.
5. ö, ø and œ are sorted as oe.
6. ß (LS61) is sorted as ss.
7. ü is sorted as ue.
8. ij and œ are not part of the Latin Alphabet Number 1 character set, but they are included here because they are part of the Dutch language (ij) and the French language (œ).

Bulgaria

Character Table

Figure 3-7 shows the Cyrillic-character table for Bulgaria. The table lists the characters in ascending order with the lowest-weighted character listed first.

| Seq Num | Char | ID | Mono case | Alpha Note /Num |
|---|------|------|-----------|-----------------|
| 1 | а | KA01 | KA02 | A |
| 1 | А | KA02 | | A |
| 2 | б | KB01 | KB02 | A |
| 2 | Б | KB02 | | A |
| 3 | в | KV01 | KV02 | A |
| 3 | В | KV02 | | A |
| 4 | г | KG01 | KG02 | A |
| 4 | Г | KG02 | | A |
| 5 | д | KD01 | KD02 | A |
| 5 | Д | KD02 | | A |
| 6 | е | KE01 | KE02 | A |
| 6 | Е | KE02 | | A |
| 7 | ж | KZ21 | KZ22 | A |
| 7 | Ж | KZ22 | | A |
| 8 | з | KZ01 | KZ02 | A |
| 8 | З | KZ02 | | A |
| 9 | и | KI01 | KI02 | A |
| 9 | И | KI02 | | A |
| 10 | й | KJ11 | KJ12 | A |
| 10 | Й | KJ12 | | A |
| 11 | к | KK01 | KK02 | A |
| 11 | К | KK02 | | A |
| 12 | л | KL01 | KL02 | A |
| 12 | Л | KL02 | | A |
| 13 | м | KM01 | KM02 | A |
| 13 | М | KM02 | | A |
| 14 | н | KN01 | KN02 | A |
| 14 | Н | KN02 | | A |
| 15 | о | KO01 | KO02 | A |
| 15 | О | KO02 | | A |
| 16 | п | KP01 | KP42 | A |
| 16 | П | KP02 | | A |
| 17 | р | KR01 | KR02 | A |
| 17 | Р | KR02 | | A |
| 18 | с | KS01 | KS02 | A |
| 18 | С | KS02 | | A |
| 19 | т | KT01 | KT02 | A |
| 19 | Т | KT02 | | A |
| 20 | у | KU01 | KU02 | A |
| 20 | У | KU02 | | A |
| 21 | ф | KF01 | KF02 | A |
| 21 | Ф | KF02 | | A |
| 22 | х | KH01 | KH02 | A |
| 22 | Х | KH02 | | A |
| 23 | ц | KC01 | KC02 | A |
| 23 | Ц | KC02 | | A |
| 24 | ч | KC21 | KC22 | A |
| 24 | Ч | KC22 | | A |
| 25 | ш | KS21 | KS22 | A |
| 25 | Ш | KS22 | | A |
| 26 | щ | KS15 | KS16 | A |
| 26 | Щ | KS16 | | A |
| 27 | ъ | KU21 | KU22 | A |
| 27 | Ъ | KU22 | | A |
| 28 | ь | KX11 | KX12 | A |
| 28 | Ь | KX12 | | A |
| 29 | ю | KU15 | KU16 | A |
| 29 | Ю | KU16 | | A |
| 30 | я | KA15 | KA16 | A |
| 30 | Я | KA16 | | A |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | |

Figure 3-7. Character Table for Bulgaria

Character Classification Considerations

The following special characters are classified as alphabetic:

- Space (required) (SP30)
- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (if it has a letter ahead of and behind it, as in "l'amour" and "don't") (SP05).

The following special characters are considered numeric:

- Comma (SP08) and period (SP11)
- Plus (SA01) and minus (SA00)
- Space (numeric) (SP31)
- Left and right parenthesis (SP06 and SP07).

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (SP05).

Character Table

Figure 3-8 shows the character table for Canada. The table can be used for both Canadian French and Canadian English. The table lists the characters in ascending order with the lowest-weighted character listed first. In Canada, some characters are regarded as equivalents and are listed in the table with equal weights. After a sort, these characters can be intermixed like, for example, the following words (in Canadian French):

| Unsorted list | Sorted list |
|---------------|-------------|
| être | entreprise |
| espace | énumération |
| entreprise | époque |
| et | espace |
| époque | et |
| énumération | étoile |
| étoile | être |

Both in Canadian English and Canadian French, the uppercase and the lowercase of a letter (for example, a and A) have equal weights.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | |
| 1 | A | LA02 | | A | |
| 1 | à | LA13 | LA14 | A | |
| 1 | À | LA14 | | A | |
| 1 | â | LA15 | LA16 | A | |
| 1 | Â | LA16 | | A | |
| 2 | b | LB01 | LB02 | A | |
| 2 | B | LB02 | | A | |
| 3 | c | LC01 | LC02 | A | |
| 3 | C | LC02 | | A | |
| 3 | ç | LC41 | LC42 | A | |
| 3 | Ç | LC42 | | A | |
| 4 | d | LD01 | LD02 | A | |
| 4 | D | LD02 | | A | |
| 5 | e | LE01 | LE02 | A | |
| 5 | E | LE02 | | A | |
| 5 | é | LE11 | LE12 | A | |
| 5 | É | LE12 | | A | |
| 5 | è | LE13 | LE14 | A | |
| 5 | È | LE14 | | A | |
| 5 | ê | LE15 | LE16 | A | |
| 5 | Ê | LE16 | | A | |
| 5 | ë | LE17 | LE18 | A | |
| 5 | Ë | LE18 | | A | |
| 6 | f | LF01 | LF02 | A | |
| 6 | F | LF02 | | A | |
| 7 | g | LG01 | LG02 | A | |
| 7 | G | LG02 | | A | |
| 8 | h | LH01 | LH02 | A | |
| 8 | H | LH02 | | A | |
| 9 | i | LI01 | LI02 | A | |
| 9 | I | LI02 | | A | |
| 9 | ï | LI15 | LI16 | A | |
| 9 | Ï | LI16 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 9 | ï | LI17 | LI18 | A | |
| 9 | Ï | LI18 | | A | |
| 10 | j | LJ01 | LJ02 | A | |
| 10 | J | LJ02 | | A | |
| 11 | k | LK01 | LK02 | A | |
| 11 | K | LK02 | | A | |
| 12 | l | LL01 | LL02 | A | |
| 12 | L | LL02 | | A | |
| 13 | m | LM01 | LM02 | A | |
| 13 | M | LM02 | | A | |
| 14 | n | LN01 | LN02 | A | |
| 14 | N | LN02 | | A | |
| 15 | o | LO01 | LO02 | A | |
| 15 | O | LO02 | | A | |
| 15 | ô | LO15 | LO16 | A | |
| 15 | Ô | LO16 | | A | |
| 16 | p | LP01 | LP02 | A | |
| 16 | P | LP02 | | A | |
| 17 | q | LQ01 | LQ02 | A | |
| 17 | Q | LQ02 | | A | |
| 18 | r | LR01 | LR02 | A | |
| 18 | R | LR02 | | A | |
| 19 | s | LS01 | LS02 | A | |
| 19 | S | LS02 | | A | |
| 20 | t | LT01 | LT02 | A | |
| 20 | T | LT02 | | A | |
| 21 | u | LU01 | LU02 | A | |
| 21 | U | LU02 | | A | |
| 21 | ù | LU13 | LU14 | A | |
| 21 | Û | LU14 | | A | |
| 21 | û | LU15 | LU16 | A | |
| 21 | Û | LU16 | | A | |
| 21 | ü | LU17 | LU18 | A | |
| 21 | Ü | LU18 | | A | |

Figure 3-8 (Part 1 of 2). Character Table for Canada

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 22 | v | LV01 | LV02 | A | |
| 22 | V | LV02 | | A | |
| 23 | w | LW01 | LW02 | A | |
| 23 | W | LW02 | | A | |
| 24 | x | LX01 | LX02 | A | |
| 24 | X | LX02 | | A | |
| 25 | y | LY01 | LY02 | A | |
| 25 | Y | LY02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|--|------|------|-----------|------------|------|
| 26 | z | LZ01 | LZ02 | A | |
| 26 | Z | LZ02 | | A | |
| <p>All other characters are sorted as shown in Figure 3-1 on page 3-2.</p> | | | | | |

Figure 3-8 (Part 2 of 2). Character Table for Canada

Czechoslovakia

Character Table

Figure 3-9 shows the character table for Czechoslovakia. The table lists the characters in ascending order with the lowest-weighted character listed first. In Czechoslovakia, some characters are regarded as equivalents and are listed in the table with equal weights.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | |
| 1 | Á | LA02 | | A | |
| 2 | á | LA11 | LA12 | A | |
| 2 | Á | LA12 | | A | |
| 3 | ä | LA17 | LA18 | A | |
| 3 | Ä | LA18 | | A | |
| 4 | b | LB01 | LB02 | A | |
| 4 | B | LB02 | | A | |
| 5 | c | LC01 | LC02 | A | |
| 5 | C | LC02 | | A | |
| 6 | č | LC21 | LC22 | A | |
| 6 | Č | LC22 | | A | |
| 7 | d | LD01 | LD02 | A | |
| 7 | D | LD02 | | A | |
| 8 | ď | LD21 | LD22 | A | |
| 8 | Ď | LD22 | | A | |
| 9 | e | LE01 | LE02 | A | |
| 9 | E | LE02 | | A | |
| 10 | é | LE11 | LE12 | A | |
| 10 | É | LE12 | | A | |
| 11 | ě | LE21 | LE22 | A | |
| 11 | Ě | LE22 | | A | |
| 12 | f | LF01 | LF02 | A | |
| 12 | F | LF02 | | A | |
| 13 | g | LG01 | LG02 | A | |
| 13 | G | LG02 | | A | |
| 14 | h | LH01 | LH02 | A | |
| 14 | H | LH02 | | A | |
| 15 | ch | | | | 1 |
| 15 | Ch | | | | 1 |
| 16 | i | LI01 | LI02 | A | |
| 16 | I | LI02 | | A | |
| 17 | í | LI11 | LI12 | A | |
| 17 | Í | LI12 | | A | |
| 18 | j | LJ01 | LJ02 | A | |
| 18 | J | LJ02 | | A | |
| 19 | k | LK01 | LK02 | A | |
| 19 | K | LK02 | | A | |
| 20 | l | LL01 | LL02 | A | |
| 20 | L | LL02 | | A | |
| 21 | ĺ | LL11 | LL12 | A | |
| 21 | Ĺ | LL12 | | A | |
| 22 | ľ | LL21 | LL22 | A | |
| 22 | Ľ | LL22 | | A | |
| 23 | m | LM01 | LM02 | A | |
| 23 | M | LM02 | | A | |
| 24 | n | LN01 | LN02 | A | |
| 24 | N | LN02 | | A | |
| 25 | ň | LN21 | LN22 | A | |
| 25 | Ň | LN22 | | A | |
| 26 | o | LO01 | LO02 | A | |
| 26 | O | LO02 | | A | |
| 27 | ó | LO11 | LO12 | A | |
| 27 | Ó | LO12 | | A | |
| 28 | ô | LO15 | LO16 | A | |
| 28 | Ô | LO16 | | A | |
| 29 | ö | LO17 | LO18 | A | |
| 29 | Ö | LO18 | | A | |
| 30 | p | LP01 | LP02 | A | |
| 30 | P | LP02 | | A | |
| 31 | q | LQ01 | LQ02 | A | |
| 31 | Q | LQ02 | | A | |
| 32 | r | LR01 | LR02 | A | |
| 32 | R | LR02 | | A | |

Figure 3-9 (Part 1 of 2). Character Table for Czechoslovakia

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 33 | ř | LR11 | LR12 | | A |
| 33 | Ř | LR12 | | | A |
| 34 | ř | LR21 | LR22 | | A |
| 34 | Ř | LR22 | | | A |
| 35 | s | LS01 | LS02 | | A |
| 35 | S | LS02 | | | A |
| 36 | š | LS21 | LS22 | | A |
| 36 | Š | LS22 | | | A |
| 37 | t | LT01 | LT02 | | A |
| 37 | T | LT02 | | | A |
| 38 | ť | LT21 | LT22 | | A |
| 38 | Ť | LT22 | | | A |
| 39 | u | LU01 | LU02 | | A |
| 39 | U | LU02 | | | A |
| 40 | ú | LU11 | LU12 | | A |
| 40 | Ú | LU12 | | | A |
| 41 | ů | LU27 | LU28 | | A |
| 41 | Ů | LU28 | | | A |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 42 | ü | LU17 | LU18 | | A |
| 42 | Ü | LU18 | | | A |
| 43 | v | LV01 | LV02 | | A |
| 43 | V | LV02 | | | A |
| 44 | w | LW01 | LW02 | | A |
| 44 | W | LW02 | | | A |
| 45 | x | LX01 | LX02 | | A |
| 45 | X | LX02 | | | A |
| 46 | y | LY01 | LY02 | | A |
| 46 | Y | LY02 | | | A |
| 47 | ý | LY11 | LY12 | | A |
| 47 | Ý | LY12 | | | A |
| 48 | z | LZ01 | LZ02 | | A |
| 48 | Z | LZ02 | | | A |
| 49 | ž | LZ21 | LZ22 | | A |
| 49 | Ž | LZ22 | | | A |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-9 (Part 2 of 2). Character Table for Czechoslovakia

Notes for Figure 3-9:

1. The combinations ch and Ch are printed, displayed, and otherwise processed as two characters. During sorting, each combination is processed as one character that follows the h and H characters.

Denmark

Character Classification Considerations

The following special characters are classified as alphabetic:

- Space (required and numeric) (SP30 and SP31)
- Hyphen (required and syllable) (SP10 and SP32).

The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Plus (SA01)
- Minus (SA00).

Sort Sequence Considerations

The following characters should be given a sort weight between spaces and alphabetic characters:

- Hyphen (required and syllable) (SP10 and SP32).

Character Table

Figure 3-10 shows the character table for Denmark. The table lists the characters in ascending order with the lowest-weighted character listed first.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | |
| 2 | á | LA11 | LA12 | A | |
| 2 | à | LA13 | LA14 | A | |
| 2 | â | LA15 | LA16 | A | |
| 3 | A | LA02 | | A | |
| 4 | Á | LA12 | | A | |
| 4 | À | LA14 | | A | |
| 4 | Â | LA16 | | A | |
| 5 | b | LB01 | LB02 | A | |
| 6 | B | LB02 | | A | |
| 7 | c | LC01 | LC02 | A | |
| 8 | C | LC02 | | A | |
| 9 | d | LD01 | LD02 | A | |
| 10 | D | LD02 | | A | |
| 11 | e | LE01 | LE02 | A | |
| 12 | é | LE11 | LE12 | A | |
| 12 | è | LE13 | LE14 | A | |
| 12 | ê | LE15 | LE16 | A | |
| 12 | ë | LE17 | LE18 | A | |
| 13 | E | LE02 | | A | |
| 14 | É | LE12 | | A | |
| 14 | È | LE14 | | A | |
| 14 | Ê | LE16 | | A | |
| 14 | Ë | LE18 | | A | |
| 15 | f | LF01 | LF02 | A | |
| 16 | F | LF02 | | A | |
| 17 | g | LG01 | LG02 | A | |
| 18 | G | LG02 | | A | |
| 19 | h | LH01 | LH02 | A | |
| 20 | H | LH02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 21 | i | LI01 | LI02 | A | |
| 22 | í | LI11 | LI12 | A | |
| 22 | ì | LI13 | LI14 | A | |
| 22 | î | LI15 | LI16 | A | |
| 22 | ï | LI17 | LI18 | A | |
| 23 | I | LI02 | | A | |
| 24 | Í | LI12 | | A | |
| 24 | Ì | LI14 | | A | |
| 24 | Î | LI16 | | A | |
| 24 | Ï | LI18 | | A | |
| 25 | j | LJ01 | LJ02 | A | |
| 26 | J | LJ02 | | A | |
| 27 | k | LK01 | LK02 | A | |
| 28 | K | LK02 | | A | |
| 29 | l | LL01 | LL02 | A | |
| 30 | L | LL02 | | A | |
| 31 | m | LM01 | LM02 | A | |
| 32 | M | LM02 | | A | |
| 33 | n | LN01 | LN02 | A | |
| 34 | N | LN02 | | A | |
| 35 | o | LO01 | LO02 | A | |
| 36 | ó | LO11 | LO12 | A | |
| 36 | ò | LO13 | LO14 | A | |
| 36 | ô | LO15 | LO16 | A | |
| 37 | O | LO02 | | A | |
| 38 | Ó | LO12 | | A | |
| 38 | Ò | LO14 | | A | |
| 38 | Ô | LO16 | | A | |
| 39 | p | LP01 | LP02 | A | |
| 40 | P | LP02 | | A | |

Figure 3-10 (Part 1 of 2). Character Table for Denmark

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 41 | q | LQ01 | LQ02 | A | |
| 42 | Q | LQ02 | | A | |
| 43 | r | LR01 | LR02 | A | |
| 44 | R | LR02 | | A | |
| 45 | s | LS01 | LS02 | A | |
| 46 | S | LS02 | | A | |
| 47 | t | LT01 | LT02 | A | |
| 48 | T | LT02 | | A | |
| 49 | u | LU01 | LU02 | A | |
| 50 | ú | LU11 | LU12 | A | |
| 50 | ù | LU13 | LU14 | A | |
| 50 | û | LU15 | LU16 | A | |
| 51 | U | LU02 | | A | |
| 52 | Ú | LU12 | | A | |
| 52 | Û | LU14 | | A | |
| 52 | Û | LU16 | | A | |
| 53 | v | LV01 | LV02 | A | |
| 54 | V | LV02 | | A | |
| 55 | w | LW01 | LW02 | A | |
| 56 | W | LW02 | | A | |
| 57 | x | LX01 | LX02 | A | |
| 58 | X | LX02 | | A | |
| 59 | y | LY01 | LY02 | A | |
| 60 | ý | LY11 | LY12 | A | |
| 60 | ÿ | LY17 | LY02 | A | |
| 61 | ü | LU17 | LU18 | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 62 | Y | LY02 | | A | |
| 63 | Ý | LY12 | | A | |
| 64 | Û | LU18 | | A | |
| 65 | z | LZ01 | LZ02 | A | |
| 66 | Z | LZ02 | | A | |
| 67 | æ | LA51 | LA52 | A | |
| 68 | ä | LA17 | LA18 | A | |
| 69 | Æ | LA52 | | A | |
| 70 | Ä | LA18 | | A | |
| 71 | ø | LO61 | LO62 | A | |
| 72 | ö | LO17 | LO18 | A | |
| 73 | Ø | LO62 | | A | |
| 74 | Ö | LO18 | | A | |
| 75 | å | LA27 | LA28 | A | |
| 76 | Å | LA28 | | A | |
| 77 | 0 | ND10 | | N | |
| 78 | 1 | ND01 | | N | |
| 79 | 2 | ND02 | | N | |
| 80 | 3 | ND03 | | N | |
| 81 | 4 | ND04 | | N | |
| 82 | 5 | ND05 | | N | |
| 83 | 6 | ND06 | | N | |
| 84 | 7 | ND07 | | N | |
| 85 | 8 | ND08 | | N | |
| 86 | 9 | ND09 | | N | |

Figure 3-10 (Part 2 of 2). Character Table for Denmark

Finland

Character Classification Considerations

The following characters are classified as alphabetic:

- Special characters
- Space (required and numeric) (SP30 and SP31)
- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (when used within words) (SP05).

The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Plus (SA01)
- Minus (SA00)
- Asterisk (SM04).

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (SP05).

Character Table

Figure 3-11 shows the character table for Finland. The table lists the characters in ascending order with the lowest-weighted character listed first.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | |
| 2 | A | LA02 | | A | |
| 3 | à | LA13 | LA02 | A | |
| 4 | b | LB01 | LB02 | A | |
| 5 | B | LB02 | | A | |
| 6 | c | LC01 | LC02 | A | |
| 7 | C | LC02 | | A | |
| 8 | d | LD01 | LD02 | A | |
| 9 | D | LD02 | | A | |
| 10 | e | LE01 | LE02 | A | |
| 11 | E | LE02 | | A | |
| 12 | é | LE11 | LE12 | A | |
| 13 | É | LE12 | | A | |
| 14 | è | LE13 | LE02 | A | |
| 15 | ê | LE15 | LE02 | A | |
| 16 | ë | LE17 | LE02 | A | |
| 17 | f | LF01 | LF02 | A | |
| 18 | F | LF02 | | A | |
| 19 | g | LG01 | LG02 | A | |
| 20 | G | LG02 | | A | |
| 21 | h | LH01 | LH02 | A | |
| 22 | H | LH02 | | A | |
| 23 | i | LI01 | LI02 | A | |
| 24 | I | LI02 | | A | |
| 25 | j | LJ01 | LJ02 | A | |
| 26 | J | LJ02 | | A | |
| 27 | k | LK01 | LK02 | A | |
| 28 | K | LK02 | | A | |
| 29 | l | LL01 | LL02 | A | |
| 30 | L | LL02 | | A | |
| 31 | m | LM01 | LM02 | A | |
| 32 | M | LM02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 33 | n | LN01 | LN02 | A | |
| 34 | N | LN02 | | A | |
| 35 | o | LO01 | LO02 | A | |
| 36 | O | LO02 | | A | |
| 37 | p | LP01 | LP02 | A | |
| 38 | P | LP02 | | A | |
| 39 | q | LQ01 | LQ02 | A | |
| 40 | Q | LQ02 | | A | |
| 41 | r | LR01 | LR02 | A | |
| 42 | R | LR02 | | A | |
| 43 | s | LS01 | LS02 | A | |
| 44 | S | LS02 | | A | |
| 45 | t | LT01 | LT02 | A | |
| 46 | T | LT02 | | A | |
| 47 | u | LU01 | LU02 | A | |
| 48 | U | LU02 | | A | |
| 49 | v | LV01 | LV02 | A | |
| 50 | V | LV02 | | A | |
| 51 | w | LW01 | LW02 | A | |
| 52 | W | LW02 | | A | |
| 53 | x | LX01 | LX02 | A | |
| 54 | X | LX02 | | A | |
| 55 | y | LY01 | LY02 | A | |
| 56 | Y | LY02 | | A | |
| 57 | ü | LU17 | LU18 | A | |
| 58 | Ü | LU18 | | A | |
| 59 | z | LZ01 | LZ02 | A | |
| 60 | Z | LZ02 | | A | |
| 61 | å | LA27 | LA28 | A | |
| 62 | Å | LA28 | | A | |
| 63 | ä | LA17 | LA18 | A | |
| 64 | Ä | LA18 | | A | |

Figure 3-11 (Part 1 of 2). Character Table for Finland

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 65 | ö | LO17 | LO18 | A | |
| 66 | Ö | LO18 | | A | |
| 67 | 0 | ND10 | | N | |
| 68 | 1 | ND01 | | N | |
| 69 | 2 | ND02 | | N | |
| 70 | 3 | ND03 | | N | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 71 | 4 | ND04 | | N | |
| 72 | 5 | ND05 | | N | |
| 73 | 6 | ND06 | | N | |
| 74 | 7 | ND07 | | N | |
| 75 | 8 | ND08 | | N | |
| 76 | 9 | ND09 | | N | |

Figure 3-11 (Part 2 of 2). Character Table for Finland

France

Character Classification Considerations

The following special characters are classified as alphabetic:

- Required space (SP30)
- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (if it has a letter ahead of and behind it, as in “l’amour”) (SP05).

The following special characters are considered numeric:

- Numeric space (SP31),
- Comma (SP08), and
- Minus (SA00).

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (SP05).

The following character strings should be given a **sort weight between spaces and alphabetic characters**, if they are at the beginning of a sort field:

- d', and D'
- l', and L'.

The following character strings should be given a **sort weight between spaces and alphabetic characters**, if they are at the beginning of a sort field and if they are immediately followed by a space:

- de, De, des, Des, and du
- la, La, le, Le, les, and Les.

Character Table

Figure 3-12 shows the character table for French. The table lists the characters in ascending order with the lowest-weighted character listed first. In France, some characters are regarded as equivalents and are listed in the table with equal weights. After a sort, these characters can be intermixed like, for example, the following words:

| Unsorted list | Sorted list |
|---------------|-------------|
| espace | entreprise |
| entreprise | énumération |
| et | époque |
| époque | espace |
| énumération | et |
| étoile | étoile |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | |
| 1 | À | LA02 | | A | |
| 1 | à | LA13 | LA14 | A | 1 |
| 1 | Â | LA14 | | A | 1 |
| 1 | â | LA15 | LA16 | A | 1 |
| 1 | Â | LA16 | | A | 1 |
| 1 | æ | LA51 | LA52 | A | 2 |
| 1 | Æ | LA52 | | A | 2 |
| 2 | b | LB01 | LB02 | A | |
| 2 | B | LB02 | | A | |
| 3 | c | LC01 | LC02 | A | |
| 3 | C | LC02 | | A | |
| 3 | ç | LC41 | LC42 | A | 3 |
| 3 | Ç | LC42 | | A | 3 |
| 4 | d | LD01 | LD02 | A | |
| 4 | D | LD02 | | A | |
| 5 | e | LE01 | LE02 | A | |
| 5 | E | LE02 | | A | |
| 5 | é | LE11 | LE12 | A | 4 |
| 5 | É | LE12 | | A | 4 |
| 5 | è | LE13 | LE14 | A | 4 |
| 5 | È | LE14 | | A | 4 |
| 5 | ê | LE15 | LE16 | A | 4 |
| 5 | Ê | LE16 | | A | 4 |
| 5 | ë | LE17 | LE18 | A | 4 |
| 5 | Ë | LE18 | | A | 4 |
| 6 | f | LF01 | LF02 | A | |
| 6 | F | LF02 | | A | |
| 7 | g | LG01 | LG02 | A | |
| 7 | G | LG02 | | A | |
| 8 | h | LH01 | LH02 | A | |
| 8 | H | LH02 | | A | |
| 9 | i | LI01 | LI02 | A | |
| 9 | I | LI02 | | A | |
| 9 | î | LI15 | LI16 | A | 5 |
| 9 | Î | LI16 | | A | 5 |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 9 | ï | LI17 | LI18 | A | 5 |
| 9 | Ï | LI18 | | A | 5 |
| 10 | j | LJ01 | LJ02 | A | |
| 10 | J | LJ02 | | A | |
| 11 | k | LK01 | LK02 | A | |
| 11 | K | LK02 | | A | |
| 12 | l | LL01 | LL02 | A | |
| 12 | L | LL02 | | A | |
| 13 | m | LM01 | LM02 | A | |
| 13 | M | LM02 | | A | |
| 14 | n | LN01 | LN02 | A | |
| 14 | N | LN02 | | A | |
| 15 | o | LO01 | LO02 | A | |
| 15 | O | LO02 | | A | |
| 15 | ô | LO15 | LO16 | A | 6 |
| 15 | Ô | LO16 | | A | 6 |
| 15 | œ | LO51 | LO52 | A | 2 |
| 15 | Œ | LO52 | | A | 2 |
| 16 | p | LP01 | LP02 | A | |
| 16 | P | LP02 | | A | |
| 17 | q | LQ01 | LQ02 | A | |
| 17 | Q | LQ02 | | A | |
| 18 | r | LR01 | LR02 | A | |
| 18 | R | LR02 | | A | |
| 19 | s | LS01 | LS02 | A | |
| 19 | S | LS02 | | A | |
| 20 | t | LT01 | LT02 | A | |
| 20 | T | LT02 | | A | |
| 21 | u | LU01 | LU02 | A | |
| 21 | U | LU02 | | A | |
| 21 | ù | LU13 | LU14 | A | 7 |
| 21 | Û | LU14 | | A | 7 |
| 21 | û | LU15 | LU16 | A | 7 |
| 21 | Û | LU16 | | A | 7 |
| 21 | ü | LU17 | LU18 | A | 7 |
| 21 | Ü | LU18 | | A | 7 |

Figure 3-12 (Part 1 of 2). Character Table for France

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 22 | v | LV01 | LV02 | A | |
| 22 | V | LV02 | | A | |
| 23 | w | LW01 | LW02 | A | |
| 23 | W | LW02 | | A | |
| 24 | x | LX01 | LX02 | A | |
| 24 | X | LX02 | | A | |
| 25 | y | LY01 | LY02 | A | |
| 25 | Y | LY02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 25 | ÿ | LY17 | LY18 | A | 8 |
| 25 | ÿ | LY18 | | A | 8 |
| 26 | z | LZ01 | LZ02 | A | |
| 26 | Z | LZ02 | | A | |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-12 (Part 2 of 2). Character Table for France

Notes for Figure 3-12:

1. à and â are sorted as a.
2. æ is sorted as ae, and œ is sorted as oe.
3. ç is sorted as c.
4. é, è, ê, and ë are sorted as e.
5. î and ï are sorted as i.
6. ô is sorted as o.
7. ù, û, and ü are sorted as u.
8. ÿ is sorted as y.

German Democratic Republic (GDR)

Character Classification Considerations

The following special characters are classified as alphabetic:

- Space (required and numeric) (SP30 and SP31)
- Hyphen (required and syllable) (SP10 and SP32).

The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Plus (SA01)
- Minus (SA00).

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (SP05).

Character Table

Figure 3-13 shows the character table for German as used in the GDR. The table lists the characters in ascending order with the lowest-weighted character listed first. In GDR, some characters are regarded as equivalents and are listed in the table with equal weights.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | |
| 1 | À | LA02 | | A | |
| 1 | ä | LA17 | LA18 | A | 1 |
| 1 | Ä | LA18 | | A | 1 |
| 2 | b | LB01 | LB02 | A | |
| 2 | B | LB02 | | A | |
| 3 | c | LC01 | LC02 | A | |
| 3 | C | LC02 | | A | |
| 4 | d | LD01 | LD02 | A | |
| 4 | D | LD02 | | A | |
| 5 | e | LE01 | LE02 | A | |
| 5 | E | LE02 | | A | |
| 6 | f | LF01 | LF02 | A | |
| 6 | F | LF02 | | A | |
| 7 | g | LG01 | LG02 | A | |
| 7 | G | LG02 | | A | |
| 8 | h | LH01 | LH02 | A | |
| 8 | H | LH02 | | A | |
| 9 | i | LI01 | LI02 | A | |
| 9 | I | LI02 | | A | |
| 10 | j | LJ01 | LJ02 | A | |
| 10 | J | LJ02 | | A | |
| 11 | k | LK01 | LK02 | A | |
| 11 | K | LK02 | | A | |
| 12 | l | LL01 | LL02 | A | |
| 12 | L | LL02 | | A | |
| 13 | m | LM01 | LM02 | A | |
| 13 | M | LM02 | | A | |
| 14 | n | LN01 | LN02 | A | |
| 14 | N | LN02 | | A | |
| 15 | o | LO01 | LO02 | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 15 | O | LO02 | | A | |
| 15 | ö | LO17 | LO18 | A | 1 |
| 15 | Ö | LO18 | | A | 1 |
| 16 | p | LP01 | LP02 | A | |
| 16 | P | LP02 | | A | |
| 17 | q | LQ01 | LQ02 | A | |
| 17 | Q | LQ02 | | A | |
| 18 | r | LR01 | LR02 | A | |
| 18 | R | LR02 | | A | |
| 19 | s | LS01 | LS02 | A | |
| 19 | S | LS02 | | A | |
| 20 | ß | LS61 | LS61 | A | 2 |
| 21 | t | LT01 | LT02 | A | |
| 21 | T | LT02 | | A | |
| 22 | u | LU01 | LU02 | A | |
| 22 | U | LU02 | | A | |
| 22 | ü | LU17 | LU18 | A | 1 |
| 22 | Ü | LU18 | | A | 1 |
| 23 | v | LV01 | LV02 | A | |
| 23 | V | LV02 | | A | |
| 24 | w | LW01 | LW02 | A | |
| 24 | W | LW02 | | A | |
| 25 | x | LX01 | LX02 | A | |
| 25 | X | LX02 | | A | |
| 26 | y | LY01 | LY02 | A | |
| 26 | Y | LY02 | | A | |
| 27 | z | LZ01 | LZ02 | A | |
| 27 | Z | LZ02 | | A | |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-13. Character Table for GDR

Notes for Figure 3-13:

1. ä is sorted as a, ö is sorted as o, and ü is sorted as u.
2. ß (LS61) is sorted as ss.

Germany, Federal Republic of (FRG)

Character Classification Considerations

The following special characters are classified as alphabetic:

- Space (required and numeric) (SP30 and SP31)
- Hyphen, Minus Sign (SP10)
- Syllable Hyphen (SP32).

The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Hyphen, Minus Sign (SP10)
- Plus (SA01).

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- Syllable Hyphen (SP32)
- Hyphen, Minus Sign (SP10)
- Apostrophe (SP05).

Standards Note: The German Standard DIN 5007 draft Feb 85 provides a slightly different sort sequence.

Character Table

Figure 3-14 shows the character table for FRG, which is based on the Multilingual Code Page (MLP). The table lists the characters in ascending order with the lowest-weighted character listed first. In FRG, some characters are regarded as equivalent and are listed in the table with equal weights.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | 1 |
| 1 | À | LA02 | | A | |
| 2 | á | LA11 | LA12 | A | 2 |
| 2 | Â | LA12 | | A | |
| 2 | à | LA13 | LA14 | A | |
| 2 | À | LA14 | | A | |
| 2 | â | LA15 | LA16 | A | |
| 2 | Â | LA16 | | A | |
| 2 | ä | LA17 | LA18 | A | 3 |
| 2 | Ä | LA18 | | A | 3 |
| 2 | ã | LA19 | LA20 | A | |
| 2 | Ä | LA20 | | A | |
| 2 | å | LA27 | LA28 | A | |
| 2 | Å | LA28 | | A | |
| 2 | æ | LA51 | LA52 | A | |
| 2 | Æ | LA52 | | A | |
| 3 | b | LB01 | LB02 | A | |
| 3 | B | LB02 | | A | |
| 4 | c | LC01 | LC02 | A | |
| 4 | C | LC02 | | A | |
| 5 | ç | LC41 | LC42 | A | |
| 5 | Ç | LC42 | | A | |
| 6 | d | LD01 | LD02 | A | |
| 6 | D | LD02 | | A | |
| 7 | ð | LD63 | LD62 | A | |
| 7 | Ð | LD62 | | A | |
| 8 | e | LE01 | LE02 | A | |
| 8 | E | LE02 | | A | |
| 9 | é | LE11 | LE12 | A | |
| 9 | Ê | LE12 | | A | |
| 9 | è | LE13 | LE14 | A | |
| 9 | Ê | LE14 | | A | |
| 9 | ê | LE15 | LE16 | A | |
| 9 | Ê | LE16 | | A | |
| 9 | ë | LE17 | LE18 | A | |
| 9 | Ë | LE18 | | A | |
| 10 | f | LF01 | LF02 | A | |
| 10 | F | LF02 | | A | |
| 11 | g | LG01 | LG02 | A | |
| 11 | G | LG02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 12 | h | LH01 | LH02 | A | |
| 12 | H | LH02 | | A | |
| 13 | i | LI01 | LI02 | A | |
| 13 | I | LI02 | | A | |
| 14 | í | LI11 | LI12 | A | |
| 14 | Í | LI12 | | A | |
| 14 | ì | LI13 | LI14 | A | |
| 14 | Ì | LI14 | | A | |
| 14 | î | LI15 | LI16 | A | |
| 14 | Î | LI16 | | A | |
| 14 | ï | LI17 | LI18 | A | |
| 14 | Ï | LI18 | | A | |
| 15 | j | LJ01 | LJ02 | A | |
| 15 | J | LJ02 | | A | |
| 16 | k | LK01 | LK02 | A | |
| 16 | K | LK02 | | A | |
| 17 | l | LL01 | LL02 | A | |
| 17 | L | LL02 | | A | |
| 18 | m | LM01 | LM02 | A | |
| 18 | M | LM02 | | A | |
| 19 | n | LN01 | LN02 | A | |
| 19 | N | LN02 | | A | |
| 20 | ñ | LN19 | LN20 | A | |
| 20 | Ñ | LN20 | | A | |
| 21 | o | LO01 | LO02 | A | |
| 21 | O | LO02 | | A | |
| 22 | ó | LO11 | LO12 | A | |
| 22 | Ó | LO12 | | A | |
| 22 | ò | LO13 | LO14 | A | |
| 22 | Ò | LO14 | | A | |
| 22 | ô | LO15 | LO16 | A | |
| 22 | Ô | LO16 | | A | |
| 22 | ö | LO17 | LO18 | A | 3 |
| 22 | Ö | LO18 | | A | 3 |
| 22 | õ | LO19 | LO20 | A | |
| 22 | Õ | LO20 | | A | |
| 22 | ø | LO61 | LO62 | A | |
| 22 | Ø | LO62 | | A | |
| 23 | p | LP01 | LP02 | A | |
| 23 | P | LP02 | | A | |

Figure 3-14 (Part 1 of 2). Character Table for FRG

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 24 | q | LQ01 | LQ02 | A | |
| 24 | Q | LQ02 | | A | |
| 25 | r | LR01 | LR02 | A | |
| 25 | R | LR02 | | A | |
| 26 | s | LS01 | LS02 | A | |
| 26 | S | LS02 | | A | |
| 27 | ß | LS61 | LS61 | A | 4 |
| 28 | t | LT01 | LT02 | A | |
| 28 | T | LT02 | | A | |
| 29 | þ | LT63 | LT64 | A | |
| 29 | Þ | LT64 | | A | |
| 30 | u | LU01 | LU02 | A | |
| 30 | U | LU02 | | A | |
| 31 | ú | LU11 | LU12 | A | |
| 31 | Û | LU12 | | A | |
| 31 | ù | LU13 | LU14 | A | |
| 31 | Û | LU14 | | A | |
| 31 | û | LU15 | LU16 | A | |
| 31 | Û | LU16 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 31 | ü | LU17 | LU18 | A | 3 |
| 31 | Û | LU18 | | A | 3 |
| 32 | v | LV01 | LV02 | A | |
| 32 | V | LV02 | | A | |
| 33 | w | LW01 | LW02 | A | |
| 33 | W | LW02 | | A | |
| 34 | x | LX01 | LX02 | A | |
| 34 | X | LX02 | | A | |
| 35 | y | LY01 | LY02 | A | |
| 35 | Y | LY02 | | A | |
| 36 | ÿ | LY11 | LY12 | A | |
| 36 | ÿ | LY12 | | A | |
| 36 | ÿ | LY17 | LY02 | A | |
| 37 | z | LZ01 | LZ02 | A | |
| 37 | Z | LZ02 | | A | |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-14 (Part 2 of 2). Character Table for FRG

Notes for Figure 3-14:

1. Small letters precede the capital letters, and letters without diacritics precede letters with diacritics.
2. Equal letters with different diacritics are sequenced according to the Character Identifier.
3. When the sort is according to the sound of the words as in telephone directories, address lists, then:
 - ä is sorted as ae, ö is sorted as oe, and ü is sorted as ue.

For other sorts such as dictionaries, encyclopedias, then:

 - ä is sorted as a, ö is sorted as o, and ü is sorted as u.
4. ß (LS61) is sorted as ss.



Greece

Character Classification Considerations

The following special characters are classified as alphabetic:

- Space (required) (SP30)
- Hyphen (required and syllable) (SP10 and SP32).

The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Plus (SA01)
- Minus (SA00).

Sort Sequence Considerations

The following characters should be given a sort weight between spaces and alphabetic characters:

- All special characters.

Character Table




Figure 3-15 shows the character table for Greece. The table lists the characters in ascending order with the lowest-weighted character listed first.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | A | GA02 | | A | |
| 2 | ´A | GA12 | | A | |
| 3 | α | GA01 | GA02 | A | |
| 4 | á | GA11 | GA12 | A | |
| 5 | B | GB02 | | A | |
| 6 | β | GB01 | GB02 | A | |
| 7 | Γ | GG02 | | A | |
| 8 | γ | GG01 | GG02 | A | |
| 9 | Δ | GD02 | | A | |
| 10 | δ | GD01 | GD02 | A | |
| 11 | E | GE02 | | A | |
| 12 | ´E | GE12 | | A | |
| 13 | ε | GE01 | GE02 | A | |
| 14 | έ | GE11 | GE12 | A | |
| 15 | Z | GZ02 | | A | |
| 16 | ζ | GZ01 | GZ02 | A | |
| 17 | H | GE32 | | A | |
| 18 | ´H | GE42 | | A | |
| 19 | η | GE31 | GE32 | A | |
| 20 | ή | GE71 | GE72 | A | |
| 21 | Θ | GT62 | | A | |
| 22 | θ | GT63 | GT62 | A | |
| 23 | I | GI02 | | A | |
| 24 | ´I | GI12 | | A | |
| 25 | ι | GI01 | GI02 | A | |
| 26 | ί | GI11 | GI12 | A | |
| 27 | ϊ | GI17 | | A | |
| 28 | ΐ | GI73 | | A | |
| 29 | K | GK02 | | A | |
| 30 | κ | GK01 | GK02 | A | |
| 31 | Λ | GL02 | | A | |
| 32 | λ | GL01 | GL02 | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 33 | M | GM02 | | A | |
| 34 | μ | GM01 | GM02 | A | |
| 35 | N | GN02 | | A | |
| 36 | ν | GN01 | GN02 | A | |
| 37 | Ξ | GX02 | | A | |
| 38 | ξ | GX01 | GX02 | A | |
| 39 | O | GO02 | | A | |
| 40 | ´O | GO12 | | A | |
| 41 | ο | GO01 | GO02 | A | |
| 42 | ό | GO11 | GO12 | A | |
| 43 | Π | GP02 | | A | |
| 44 | π | GP01 | GP02 | A | |
| 45 | P | GR02 | | A | |
| 46 | ρ | GR01 | GR02 | A | |
| 47 | Σ | GS02 | | A | |
| 48 | σ | GS01 | GS02 | A | |
| 49 | ς | GS61 | GS02 | A | |
| 50 | T | GT02 | | A | |
| 51 | τ | GT01 | GT02 | A | |
| 52 | Υ | GU02 | | A | |
| 53 | ´Y | GU12 | | A | |
| 54 | υ | GU01 | GU02 | A | |
| 55 | ύ | GU11 | GU12 | A | |
| 56 | ϋ | GU17 | | A | |
| 57 | ΰ | GU73 | | A | |
| 58 | Φ | GF02 | | A | |
| 59 | φ | GF01 | GF02 | A | |
| 60 | X | GH02 | | A | |
| 61 | χ | GH01 | GH02 | A | |
| 62 | Ψ | GP62 | | A | |
| 63 | ψ | GP61 | GP62 | A | |
| 64 | Ω | GO32 | | A | |

Figure 3-15 (Part 1 of 3). Character Table for Greece

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 65 | Ω | GO72 | | A | |
| 66 | ω | GO31 | GO32 | A | |
| 67 | ώ | GO71 | GO72 | A | |
| 68 | Α | LA02 | | A | |
| 69 | Ä | LA18 | | A | |
| 70 | α | LA01 | LA02 | A | |
| 71 | à | LA13 | LA02 | A | |
| 72 | â | LA15 | LA02 | A | |
| 73 | ä | LA17 | LA18 | A | |
| 74 | Β | LB02 | | A | |
| 75 | β | LB01 | LB02 | A | |
| 76 | ϸ | LC02 | | A | |
| 77 | Ç | LC42 | | A | |
| 78 | ϸ | LC01 | LC02 | A | |
| 79 | ç | LC41 | LC42 | A | |
| 80 | Δ | LD02 | | A | |
| 81 | δ | LD01 | LD02 | A | |
| 82 | Ε | LE02 | | A | |
| 83 | ε | LE01 | LE02 | A | |
| 84 | é | LE11 | LE02 | A | |
| 85 | è | LE13 | LE02 | A | |
| 86 | ê | LE15 | LE02 | A | |
| 87 | ë | LE17 | LE02 | A | |
| 88 | Φ | LF02 | | A | |
| 89 | φ | LF01 | LF02 | A | |
| 90 | Γ | LG02 | | A | |
| 91 | γ | LG01 | LG02 | A | |
| 92 | Η | LH02 | | A | |
| 93 | η | LH01 | LH02 | A | |
| 94 | Ι | LI02 | | A | |
| 95 | ι | LI01 | LI02 | A | |
| 96 | î | LI15 | LI02 | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 97 | ï | LI17 | LI02 | A | |
| 98 | Ή | LJ02 | | A | |
| 99 | ή | LJ01 | LJ02 | A | |
| 100 | Κ | LK02 | | A | |
| 101 | κ | LK01 | LK02 | A | |
| 102 | Λ | LL02 | | A | |
| 103 | λ | LL01 | LL02 | A | |
| 104 | Μ | LM02 | | A | |
| 105 | μ | LM01 | LM02 | A | |
| 106 | Ν | LN02 | | A | |
| 107 | ν | LN01 | LN02 | A | |
| 108 | Ο | LO02 | | A | |
| 109 | Ö | LO18 | | A | |
| 110 | ο | LO01 | LO02 | A | |
| 111 | ô | LO15 | LO02 | A | |
| 112 | ö | LO17 | LO18 | A | |
| 113 | Ρ | LP02 | | A | |
| 114 | ρ | LP01 | LP02 | A | |
| 115 | Σ | LQ02 | | A | |
| 116 | σ | LQ01 | LQ02 | A | |
| 117 | Ρ | LR02 | | A | |
| 118 | ρ | LR01 | LR02 | A | |
| 119 | Σ | LS02 | | A | |
| 120 | σ | LS01 | LS02 | A | |
| 121 | Τ | LT02 | | A | |
| 122 | τ | LT01 | LT02 | A | |
| 123 | Υ | LU02 | | A | |
| 124 | Û | LU18 | | A | |
| 125 | υ | LU01 | LU02 | A | |
| 126 | ù | LU13 | LU02 | A | |
| 127 | û | LU15 | LU02 | A | |
| 128 | ü | LU17 | LU18 | A | |

Figure 3-15 (Part 2 of 3). Character Table for Greece

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 129 | V | LV02 | | | A |
| 130 | v | LV01 | LV02 | | A |
| 131 | W | LW02 | | | A |
| 132 | w | LW01 | LW02 | | A |
| 133 | X | LX02 | | | A |
| 134 | x | LX01 | LX02 | | A |
| 135 | Y | LY02 | | | A |
| 136 | y | LY01 | LY02 | | A |
| 137 | Z | LZ02 | | | A |
| 138 | z | LZ01 | LZ02 | | A |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 139 | 0 | ND10 | | | N |
| 140 | 1 | ND01 | | | N |
| 141 | 2 | ND02 | | | N |
| 142 | 3 | ND03 | | | N |
| 143 | 4 | ND04 | | | N |
| 144 | 5 | ND05 | | | N |
| 145 | 6 | ND06 | | | N |
| 146 | 7 | ND07 | | | N |
| 147 | 8 | ND08 | | | N |
| 148 | 9 | ND09 | | | N |

Figure 3-15 (Part 3 of 3). Character Table for Greece



Hungary

Character Classification Considerations

The following special characters are classified as alphabetic:

- Space (required and numeric) (SP30 and SP31)
- Hyphen (required and syllable) (SP10 and SP32).

The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Plus (SA01)
- Minus (SA00).

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- Hyphen (required or syllable) (SP10 and SP32).

Character Table




Figure 3-16 shows the character table for Hungarian. The table lists the characters in ascending order with the lowest-weighted character listed first.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | |
| 1 | A | LA02 | | A | |
| 2 | á | LA11 | LA12 | A | |
| 2 | Á | LA12 | | A | |
| 3 | b | LB01 | LB02 | A | |
| 3 | B | LB02 | | A | |
| 4 | c | LC01 | LC02 | A | |
| 4 | C | LC02 | | A | |
| 5 | d | LD01 | LD02 | A | |
| 5 | D | LD02 | | A | |
| 6 | e | LE01 | LE02 | A | |
| 6 | E | LE02 | | A | |
| 7 | é | LE11 | LE12 | A | |
| 7 | É | LE12 | | A | |
| 8 | f | LF01 | LF02 | A | |
| 8 | F | LF02 | | A | |
| 9 | g | LG01 | LG02 | A | |
| 9 | G | LG02 | | A | |
| 10 | h | LH01 | LH02 | A | |
| 10 | H | LH02 | | A | |
| 11 | i | LI01 | LI02 | A | |
| 11 | I | LI02 | | A | |
| 12 | í | LI11 | LI12 | A | |
| 12 | Í | LI12 | | A | |
| 13 | j | LJ01 | LJ02 | A | |
| 13 | J | LJ02 | | A | |
| 14 | k | LK01 | LK02 | A | |
| 14 | K | LK02 | | A | |
| 15 | l | LL01 | LL02 | A | |
| 15 | L | LL02 | | A | |
| 16 | m | LM01 | LM02 | A | |
| 16 | M | LM02 | | A | |
| 17 | n | LN01 | LN02 | A | |
| 17 | N | LN02 | | A | |
| 18 | o | LO01 | LO02 | A | |
| 18 | O | LO02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 19 | ó | LO11 | LO12 | A | |
| 19 | Ó | LO12 | | A | |
| 20 | ö | LO17 | LO18 | A | |
| 20 | Ö | LO18 | | A | |
| 21 | ő | LO25 | LO26 | A | |
| 21 | Ő | LO26 | | A | |
| 22 | p | LP01 | LP02 | A | |
| 22 | P | LP02 | | A | |
| 23 | q | LQ01 | LQ02 | A | |
| 23 | Q | LQ02 | | A | |
| 24 | r | LR01 | LR02 | A | |
| 24 | R | LR02 | | A | |
| 25 | s | LS01 | LS02 | A | |
| 25 | S | LS02 | | A | |
| 26 | t | LT01 | LT02 | A | |
| 26 | T | LT02 | | A | |
| 27 | u | LU01 | LU02 | A | |
| 27 | U | LU02 | | A | |
| 28 | ú | LU11 | LU12 | A | |
| 28 | Ú | LU12 | | A | |
| 29 | ü | LU17 | LU18 | A | |
| 29 | Ü | LU18 | | A | |
| 30 | ű | LU25 | LU26 | A | |
| 30 | Ű | LU26 | | A | |
| 31 | v | LV01 | LV02 | A | |
| 31 | V | LV02 | | A | |
| 32 | w | LW01 | LW02 | A | |
| 32 | W | LW02 | | A | |
| 33 | x | LX01 | LX02 | A | |
| 33 | X | LX02 | | A | |
| 34 | y | LY01 | LY02 | A | |
| 34 | Y | LY02 | | A | |
| 35 | z | LZ01 | LZ02 | A | |
| 35 | Z | LZ02 | | A | |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-16. Character Table for Hungary



Iceland

Character Classification Considerations

The following special characters are classified as alphabetic:

- Space (required and numeric) (SP30 and SP31)
- Hyphen (required and syllable) (SP10 and SP32).

The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Plus (SA01)
- Minus (SA00).

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- Hyphen (required and syllable) (SP10 and SP32).

Character Table




Figure 3-17 shows the character table for Iceland. The table lists the characters in ascending order with the lowest-weighted character listed first.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | |
| 1 | Á | LA02 | | A | |
| 1 | ä | LA17 | LA18 | A | |
| 1 | Ä | LA18 | | A | |
| 1 | á | LA27 | LA28 | A | |
| 1 | Á | LA28 | | A | |
| 2 | á | LA11 | LA12 | A | |
| 2 | Á | LA12 | | A | |
| 3 | b | LB01 | LB02 | A | |
| 3 | B | LB02 | | A | |
| 4 | c | LC01 | LC02 | A | |
| 4 | C | LC02 | | A | |
| 5 | d | LD01 | LD02 | A | |
| 5 | D | LD02 | | A | |
| 6 | ð | LD63 | LD62 | A | |
| 6 | Ð | LD62 | | A | |
| 7 | e | LE01 | LE02 | A | |
| 7 | E | LE02 | | A | |
| 7 | ë | LE17 | LE18 | A | |
| 7 | Ë | LE18 | | A | |
| 8 | é | LE11 | LE12 | A | |
| 8 | É | LE12 | | A | |
| 9 | f | LF01 | LF02 | A | |
| 9 | F | LF02 | | A | |
| 10 | g | LG01 | LG02 | A | |
| 10 | G | LG02 | | A | |
| 11 | h | LH01 | LH02 | A | |
| 11 | H | LH02 | | A | |
| 12 | i | LI01 | LI02 | A | |
| 12 | I | LI02 | | A | |
| 12 | ï | LI17 | LI18 | A | |
| 12 | Ï | LI18 | | A | |
| 13 | í | LI11 | LI12 | A | |
| 13 | Í | LI12 | | A | |
| 14 | j | LJ01 | LJ02 | A | |
| 14 | J | LJ02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 15 | k | LK01 | LK02 | A | |
| 15 | K | LK02 | | A | |
| 16 | l | LL01 | LL02 | A | |
| 16 | L | LL02 | | A | |
| 17 | m | LM01 | LM02 | A | |
| 17 | M | LM02 | | A | |
| 18 | n | LN01 | LN02 | A | |
| 18 | N | LN02 | | A | |
| 19 | o | LO01 | LO02 | A | |
| 19 | O | LO02 | | A | |
| 20 | ó | LO11 | LO12 | A | |
| 20 | Ó | LO12 | | A | |
| 21 | p | LP01 | LP02 | A | |
| 21 | P | LP02 | | A | |
| 22 | q | LQ01 | LQ02 | A | |
| 22 | Q | LQ02 | | A | |
| 23 | r | LR01 | LR02 | A | |
| 23 | R | LR02 | | A | |
| 24 | s | LS01 | LS02 | A | |
| 24 | S | LS02 | | A | |
| 25 | t | LT01 | LT02 | A | |
| 25 | T | LT02 | | A | |
| 26 | u | LU01 | LU02 | A | |
| 26 | U | LU02 | | A | |
| 26 | ü | LU17 | LU18 | A | |
| 26 | Ü | LU18 | | A | |
| 27 | ú | LU11 | LU12 | A | |
| 27 | Ú | LU12 | | A | |
| 28 | v | LV01 | LV02 | A | |
| 28 | V | LV02 | | A | |
| 29 | w | LW01 | LW02 | A | |
| 29 | W | LW02 | | A | |
| 30 | x | LX01 | LX02 | A | |
| 30 | X | LX02 | | A | |
| 31 | y | LY01 | LY02 | A | |
| 31 | Y | LY02 | | A | |
| 31 | ÿ | LY17 | | A | |

Figure 3-17 (Part 1 of 2). Character Table for Iceland

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 32 | ý | LY11 | LY12 | | A |
| 32 | Ý | LY12 | | | A |
| 33 | z | LZ01 | LZ02 | | A |
| 33 | Z | LZ02 | | | A |
| 34 | þ | LT63 | LT64 | | A |
| 34 | Þ | LT64 | | | A |
| 35 | æ | LA51 | LA52 | | A |
| 35 | Æ | LA52 | | | A |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 36 | ö | LO17 | LO18 | | A |
| 36 | Ö | LO18 | | | A |
| 36 | ø | LO61 | LO62 | | A |
| 36 | Ø | LO62 | | | A |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-17 (Part 2 of 2). Character Table for Iceland

Italy

Character Classification Considerations

The following special characters are considered numeric:

- Superscript 2 and superscript 3 (ND021 and ND031)
- One-half, one-quarter, and three-quarters (NF01, NF04, and NF05)
- Minus, plus, and plus-or-minus (SA00, SA01, and SA02)
- Less-than, equal, and greater-than (SA03, SA04, and SA05)
- Pound sign and dollar sign (SC02 and SC03)
- Percent and asterisk (SM02 and SM04)
- Square brackets (left and right) (SM06 and SM08)
- Braces (left and right) (SM11 and SM14)
- Micro symbol (SM17)
- Degree (temperature) symbol (SM19)
- Parentheses (left and right) (SP06 and SP07)
- Comma, period and slash (SP08, SP11 and SP12)
- Space (SP31).

Sort Sequence Considerations

The following characters **do not change the sort position and must be treated by the sort as if they were not present**. An example of this implementation is the “.DC IXI Control Word” of SCRIPT/VS, which allows the listing of characters to be deleted from index entries (not from the record) before sorting.

- Hyphen (required or syllable) (SP10 and SP32)
- Apostrophe (SP05)
- Ampersand (SM03)
- Space and required space (SP01 and SP30)
- All (stand alone) diacritics
- Period
- Comma
- Colon
- Semicolon
- Quotes and quotation marks
- Slash and reverse slash
- Parentheses, brackets, and braces.

Character Table

Figure 3-18 shows the character table for Italy. The table lists the characters in ascending order with the lowest-weighted character listed first. In Italy, some characters are regarded as equivalents and are listed in the table with equal weights. After a sort, these characters can be intermixed.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | 1 |
| 1 | À | LA02 | | A | |
| 1 | à | LA13 | LA14 | A | |
| 1 | À | LA14 | | A | |
| 2 | b | LB01 | LB02 | A | |
| 2 | B | LB02 | | A | |
| 3 | c | LC01 | LC02 | A | |
| 3 | C | LC02 | | A | |
| 4 | d | LD01 | LD02 | A | |
| 4 | D | LD02 | | A | |
| 5 | e | LE01 | LE02 | A | |
| 5 | E | LE02 | | A | |
| 5 | é | LE11 | LE12 | A | |
| 5 | É | LE12 | | A | |
| 5 | è | LE13 | LE14 | A | |
| 5 | È | LE14 | | A | |
| 6 | f | LF01 | LF02 | A | |
| 6 | F | LF02 | | A | |
| 7 | g | LG01 | LG02 | A | |
| 7 | G | LG02 | | A | |
| 8 | h | LH01 | LH02 | A | |
| 8 | H | LH02 | | A | |
| 9 | i | LI01 | LI02 | A | |
| 9 | I | LI02 | | A | |
| 9 | ì | LI13 | LI14 | A | |
| 9 | Ì | LI14 | | A | |
| 10 | j | LJ01 | LJ02 | A | |
| 10 | J | LJ02 | | A | |
| 11 | k | LK01 | LK02 | A | |
| 11 | K | LK02 | | A | |
| 12 | l | LL01 | LL02 | A | |
| 12 | L | LL02 | | A | |
| 13 | m | LM01 | LM02 | A | |
| 13 | M | LM02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 14 | n | LN01 | LN02 | A | |
| 14 | N | LN02 | | A | |
| 15 | o | LO01 | LO02 | A | |
| 15 | O | LO02 | | A | |
| 15 | ò | LO13 | LO14 | A | |
| 15 | Ò | LO14 | | A | |
| 16 | p | LP01 | LP02 | A | |
| 16 | P | LP02 | | A | |
| 17 | q | LQ01 | LQ02 | A | |
| 17 | Q | LQ02 | | A | |
| 18 | r | LR01 | LR02 | A | |
| 18 | R | LR02 | | A | |
| 19 | s | LS01 | LS02 | A | |
| 19 | S | LS02 | | A | |
| 20 | t | LT01 | LT02 | A | |
| 20 | T | LT02 | | A | |
| 21 | u | LU01 | LU02 | A | |
| 21 | U | LU02 | | A | |
| 21 | ù | LU13 | LU14 | A | |
| 21 | Ù | LU14 | | A | |
| 22 | v | LV01 | LV02 | A | |
| 22 | V | LV02 | | A | |
| 23 | w | LW01 | LW02 | A | |
| 23 | W | LW02 | | A | |
| 24 | x | LX01 | LX02 | A | |
| 24 | X | LX02 | | A | |
| 25 | y | LY01 | LY02 | A | |
| 25 | Y | LY02 | | A | |
| 26 | z | LZ01 | LZ02 | A | |
| 26 | Z | LZ02 | | A | |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-18. Character Table for Italy

Notes for Figure 3-18:

1. All accented characters and special forms of characters have the same sort weight as the regular nonaccented character. For example, ä is sorted as an a, ç is sorted as c, ñ is sorted as n, and so on.

Japan

Character Set Considerations

Japan uses the following character sets:

- The Japanese EBCDIC Latin - A single-byte character set that contains the same set of Latin characters as in the USA EBCDIC.
- The EBCDIC Katakana - A single-byte character set that contains uppercase Latin characters and Katakana characters. Lowercase Latin characters are excluded. It should be noted that some of the Katakana characters are assigned with the same code points that are normally assigned to the lowercase Latin characters in the USA EBCDIC.
- The SBCS-PC Katakana - A single-byte character set that contains both uppercase and lowercase Latin characters and Katakana characters.
- The DBCS-Host and DBCS-PC - Both are double-byte character sets and each consists of the following groups of characters:
 - Kanji characters
 - Non-Kanji characters containing:
 - Latin characters
 - Katakana and Hiragana characters
 - Greek and Russian characters
 - Special symbols.
 - Additional characters to be defined by users.

SBCS Sort Sequence

While the Japanese EBCDIC Latin is sorted the same as the USA EBCDIC, the EBCDIC Katakana and SBCS-PC are sorted by special algorithms.

DBCS Sort Sequence

Different algorithms are used for DBCS sorting, depending on the applications. The most commonly used ones are based on the following types of character sequence:

- Telephone directory
- Dictionary
- Strokes and radicals.

Monocasing Considerations

- The Latin characters in the Japanese EBCDIC Latin and the SBCS-PC Katakana are monocased in the same manners as the USA EBCDIC and the US-PC code, respectively.
- Monocasing is not applicable to the EBCDIC Katakana because there are no lowercase Latin characters defined in the set.
- Monocasing for either the DBCS-Host or the DBCS-PC is usually not required unless specifically requested.

The Netherlands

Character Classification Considerations

The following special characters are classified as alphabetic:

- Space (required and numeric) (SP30 and SP31)
- Hyphen (required and syllable) (SP10 and SP32).

The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Plus (SA01)
- Minus (SA00).

Sort Sequence Considerations

The following characters should be given a sort weight between spaces and alphabetic characters:

- In family names, on the first pass:
 - d', de, de la, der, des, and du
 - het and 't
 - in de, in den, in der, in het, and in 't
 - l', la, and le
 - uit de, uit den, uit het, and uit 't
 - van, van de, van den, van der, van het, van 't, von, von der, and von dem.

Include them on the second pass to provide a final sorting, as follows:

- Bogaard
 - in den Bogaard
 - uit de Bogaard
 - van den Bogaard.
- In city names: 't, 's, de, and den may be ignored.

Character Table

Figure 3-19 shows the character table for the Netherlands. The table lists the characters in ascending order with the lowest-weighted character listed first.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | 1 |
| 1 | A | LA02 | | A | |
| 2 | b | LB01 | LB02 | A | |
| 2 | B | LB02 | | A | |
| 3 | c | LC01 | LC02 | A | |
| 3 | C | LC02 | | A | |
| 4 | d | LD01 | LD02 | A | |
| 4 | D | LD02 | | A | |
| 5 | e | LE01 | LE02 | A | |
| 5 | E | LE02 | | A | |
| 6 | f | LF01 | LF02 | A | |
| 6 | F | LF02 | | A | |
| 7 | g | LG01 | LG02 | A | |
| 7 | G | LG02 | | A | |
| 8 | h | LH01 | LH02 | A | |
| 8 | H | LH02 | | A | |
| 9 | i | LI01 | LI02 | A | 2 |
| 9 | I | LI02 | | A | |
| 10 | j | LJ01 | LJ02 | A | |
| 10 | J | LJ02 | | A | |
| 11 | k | LK01 | LK02 | A | |
| 11 | K | LK02 | | A | |
| 12 | l | LL01 | LL02 | A | |
| 12 | L | LL02 | | A | |
| 13 | m | LM01 | LM02 | A | |
| 13 | M | LM02 | | A | |
| 14 | n | LN01 | LN02 | A | |
| 14 | N | LN02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 15 | o | LO01 | LO02 | A | |
| 15 | O | LO02 | | A | |
| 16 | p | LP01 | LP02 | A | |
| 16 | P | LP02 | | A | |
| 17 | q | LQ01 | LQ02 | A | |
| 17 | Q | LQ02 | | A | |
| 18 | r | LR01 | LR02 | A | |
| 18 | R | LR02 | | A | |
| 19 | s | LS01 | LS02 | A | |
| 19 | S | LS02 | | A | |
| 20 | t | LT01 | LT02 | A | |
| 20 | T | LT02 | | A | |
| 21 | u | LU01 | LU02 | A | |
| 21 | U | LU02 | | A | |
| 22 | v | LV01 | LV02 | A | |
| 22 | V | LV02 | | A | |
| 23 | w | LW01 | LW02 | A | |
| 23 | W | LW02 | | A | |
| 24 | x | LX01 | LX02 | A | |
| 24 | X | LX02 | | A | |
| 25 | y | LY01 | LY02 | A | |
| 25 | Y | LY02 | | A | |
| 26 | z | LZ01 | LZ02 | A | |
| 26 | Z | LZ02 | | A | |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-19. Character Table for the Netherlands

Notes on Figure 3-19:

1. All accented characters and special forms of characters have the same sort weight as the regular nonaccented character. For example, ä is sorted as an a, ç is sorted as c, ñ is sorted as n, and so on.
2. In a dictionary sort sequence, the ij ligature is sorted as an i followed by a j. In a telephone directory sort sequence, the ij ligature is sorted as a y.

New Zealand

Character Classification Considerations

The following special characters are classified as alphabetic:

- Space (required and numeric) (SP30 and SP31)
- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (if it has a letter ahead of and behind it, as in “don’t”) (SP05).

The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Plus (SA01)
- Minus (SA00).

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (SP05).

Character Table

Figure 3-20 shows the character table for New Zealand. The table lists the characters in ascending order with the lowest-weighted character listed first.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | |
| 1 | A | LA02 | | A | |
| 2 | b | LB01 | LB02 | A | |
| 2 | B | LB02 | | A | |
| 3 | c | LC01 | LC02 | A | |
| 3 | C | LC02 | | A | |
| 4 | d | LD01 | LD02 | A | |
| 4 | D | LD02 | | A | |
| 5 | e | LE01 | LE02 | A | |
| 5 | E | LE02 | | A | |
| 6 | f | LF01 | LF02 | A | |
| 6 | F | LF02 | | A | |
| 7 | g | LG01 | LG02 | A | |
| 7 | G | LG02 | | A | |
| 8 | h | LH01 | LH02 | A | |
| 8 | H | LH02 | | A | |
| 9 | i | LI01 | LI02 | A | |
| 9 | I | LI02 | | A | |
| 10 | j | LJ01 | LJ02 | A | |
| 10 | J | LJ02 | | A | |
| 11 | k | LK01 | LK02 | A | |
| 11 | K | LK02 | | A | |
| 12 | l | LL01 | LL02 | A | |
| 12 | L | LL02 | | A | |
| 13 | m | LM01 | LM02 | A | |
| 13 | M | LM02 | | A | |
| 14 | n | LN01 | LN02 | A | |
| 14 | N | LN02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 15 | o | LO01 | LO02 | A | |
| 15 | O | LO02 | | A | |
| 16 | p | LP01 | LP02 | A | |
| 16 | P | LP02 | | A | |
| 17 | q | LQ01 | LQ02 | A | |
| 17 | Q | LQ02 | | A | |
| 18 | r | LR01 | LR02 | A | |
| 18 | R | LR02 | | A | |
| 19 | s | LS01 | LS02 | A | |
| 19 | S | LS02 | | A | |
| 20 | t | LT01 | LT02 | A | |
| 20 | T | LT02 | | A | |
| 21 | u | LU01 | LU02 | A | |
| 21 | U | LU02 | | A | |
| 22 | v | LV01 | LV02 | A | |
| 22 | V | LV02 | | A | |
| 23 | w | LW01 | LW02 | A | |
| 23 | W | LW02 | | A | |
| 24 | x | LX01 | LX02 | A | |
| 24 | X | LX02 | | A | |
| 25 | y | LY01 | LY02 | A | |
| 25 | Y | LY02 | | A | |
| 26 | z | LZ01 | LZ02 | A | |
| 26 | Z | LZ02 | | A | |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-20. Character Table for New Zealand

Norway

Character Classification Considerations

The following special characters are classified as alphabetic:

- Space (required and numeric) (SP30 and SP31)
- Hyphen (required and syllable) (SP10 and SP32).

The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Plus (SA01)
- Minus (SA00).

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- Hyphen (required and syllable) (SP10 and SP32).

Character Table

Figure 3-21 shows the character table for Norway. The table lists the characters in ascending order with the lowest-weighted character listed first.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | |
| 1 | A | LA02 | | A | |
| 2 | b | LB01 | LB02 | A | |
| 2 | B | LB02 | | A | |
| 3 | c | LC01 | LC02 | A | |
| 3 | C | LC02 | | A | |
| 4 | d | LD01 | LD02 | A | |
| 4 | D | LD02 | | A | |
| 5 | e | LE01 | LE02 | A | |
| 5 | E | LE02 | | A | |
| 6 | f | LF01 | LF02 | A | |
| 6 | F | LF02 | | A | |
| 7 | g | LG01 | LG02 | A | |
| 7 | G | LG02 | | A | |
| 8 | h | LH01 | LH02 | A | |
| 8 | H | LH02 | | A | |
| 9 | i | LI01 | LI02 | A | |
| 9 | I | LI02 | | A | |
| 10 | j | LJ01 | LJ02 | A | |
| 10 | J | LJ02 | | A | |
| 11 | k | LK01 | LK02 | A | |
| 11 | K | LK02 | | A | |
| 12 | l | LL01 | LL02 | A | |
| 12 | L | LL02 | | A | |
| 13 | m | LM01 | LM02 | A | |
| 13 | M | LM02 | | A | |
| 14 | n | LN01 | LN02 | A | |
| 14 | N | LN02 | | A | |
| 15 | o | LO01 | LO02 | A | |
| 15 | O | LO02 | | A | |
| 16 | p | LP01 | LP02 | A | |
| 16 | P | LP02 | | A | |
| 17 | q | LQ01 | LQ02 | A | |
| 17 | Q | LQ02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 18 | r | LR01 | LR02 | A | |
| 18 | R | LR02 | | A | |
| 19 | s | LS01 | LS02 | A | |
| 19 | S | LS02 | | A | |
| 20 | t | LT01 | LT02 | A | |
| 20 | T | LT02 | | A | |
| 21 | u | LU01 | LU02 | A | |
| 21 | U | LU02 | | A | |
| 22 | v | LV01 | LV02 | A | |
| 22 | V | LV02 | | A | |
| 23 | w | LW01 | LW02 | A | |
| 23 | W | LW02 | | A | |
| 24 | x | LX01 | LX02 | A | |
| 24 | X | LX02 | | A | |
| 25 | y | LY01 | LY02 | A | |
| 25 | Y | LY02 | | A | |
| 26 | z | LZ01 | LZ02 | A | |
| 26 | Z | LZ02 | | A | |
| 27 | æ | LA51 | LA52 | A | |
| 27 | Æ | LA52 | | A | |
| 28 | ø | LO61 | LO62 | A | |
| 28 | Ø | LO62 | | A | |
| 29 | å | LA27 | LA28 | A | |
| 29 | Å | LA28 | | A | |
| 30 | 0 | ND10 | | N | |
| 31 | 1 | ND01 | | N | |
| 32 | 2 | ND02 | | N | |
| 33 | 3 | ND03 | | N | |
| 34 | 4 | ND04 | | N | |
| 35 | 5 | ND05 | | N | |
| 36 | 6 | ND06 | | N | |
| 37 | 7 | ND07 | | N | |
| 38 | 8 | ND08 | | N | |
| 39 | 9 | ND09 | | N | |

Figure 3-21. Character Table for Norway

People's Republic of China

Character Set Considerations

The People's Republic of China (PRC) uses two character sets:

- A single-byte character set (SBCS) for Latin characters
- A double-byte character set (DBCS) that contains:
 - A level 1 Chinese character set
 - A level 2 Chinese character set
 - A non-Chinese character set containing:
 - Latin, Greek, and Russian alphabets
 - Arabic, Chinese, and Roman numerals
 - Japanese Hiragana and Katakana
 - Chinese phonetic symbols
 - Special characters and symbols.

SBCS Sort Sequence

Latin characters are sorted like USA English.

DBCS Sort Sequence

The DBCS sort sequence is done by using different sorting algorithms such as:

- Phonetic sequence
- Radicals within strokes
- Strokes within radicals.

Monocasing Considerations

- SBCS Latin characters are monocased the same as USA English.
- DBCS does not have uppercase and lowercases.



Poland

Character Classification Considerations

The following special characters are classified as alphabetic:

- Space (required and numeric) (SP30 and SP31)
- Hyphen (required and syllable) (SP10 and SP32).

The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Plus (SA01)
- Minus (SA00).

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- Hyphen (required and syllable) (SP10 and SP32).

Character Table




Figure 3-22 shows the character table for Poland. The table lists the characters in ascending order with the lowest-weighted character listed first.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | |
| 1 | À | LA02 | | A | |
| 2 | ą | LA43 | LA44 | A | |
| 2 | Ą | LA44 | | A | |
| 3 | b | LB01 | LB02 | A | |
| 3 | B | LB02 | | A | |
| 4 | c | LC01 | LC02 | A | |
| 4 | C | LC02 | | A | |
| 5 | ć | LC11 | LC12 | A | |
| 5 | Ć | LC12 | | A | |
| 6 | d | LD01 | LD02 | A | |
| 6 | D | LD02 | | A | |
| 7 | e | LE01 | LE02 | A | |
| 7 | E | LE02 | | A | |
| 8 | ę | LE43 | LE44 | A | |
| 8 | Ę | LE44 | | A | |
| 9 | f | LF01 | LF02 | A | |
| 9 | F | LF02 | | A | |
| 10 | g | LG01 | LG02 | A | |
| 10 | G | LG02 | | A | |
| 11 | h | LH01 | LH02 | A | |
| 11 | H | LH02 | | A | |
| 12 | i | LI01 | LI02 | A | |
| 12 | I | LI02 | | A | |
| 13 | j | LJ01 | LJ02 | A | |
| 13 | J | LJ02 | | A | |
| 14 | k | LK01 | LK02 | A | |
| 14 | K | LK02 | | A | |
| 15 | l | LL01 | LL02 | A | |
| 15 | L | LL02 | | A | |
| 16 | ł | LL61 | LL62 | A | |
| 16 | Ł | LL62 | | A | |
| 17 | m | LM01 | LM02 | A | |
| 17 | M | LM02 | | A | |
| 18 | n | LN01 | LN02 | A | |
| 18 | N | LN02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 19 | ń | LN11 | LN12 | A | |
| 19 | Ń | LN12 | | A | |
| 20 | o | LO01 | LO02 | A | |
| 20 | O | LO02 | | A | |
| 21 | ó | LO11 | LO12 | A | |
| 21 | Ó | LO12 | | A | |
| 22 | p | LP01 | LP02 | A | |
| 22 | P | LP02 | | A | |
| 23 | q | LQ01 | LQ02 | A | |
| 23 | Q | LQ02 | | A | |
| 24 | r | LR01 | LR02 | A | |
| 24 | R | LR02 | | A | |
| 25 | s | LS01 | LS02 | A | |
| 25 | S | LS02 | | A | |
| 26 | ś | LS11 | LS12 | A | |
| 26 | Ś | LS12 | | A | |
| 27 | t | LT01 | LT02 | A | |
| 27 | T | LT02 | | A | |
| 28 | u | LU01 | LU02 | A | |
| 28 | U | LU02 | | A | |
| 29 | v | LV01 | LV02 | A | |
| 29 | V | LV02 | | A | |
| 30 | w | LW01 | LW02 | A | |
| 30 | W | LW02 | | A | |
| 31 | x | LX01 | LX02 | A | |
| 31 | X | LX02 | | A | |
| 32 | y | LY01 | LY02 | A | |
| 32 | Y | LY02 | | A | |
| 33 | z | LZ01 | LZ02 | A | |
| 33 | Z | LZ02 | | A | |
| 34 | ź | LZ11 | LZ12 | A | |
| 34 | Ź | LZ12 | | A | |
| 35 | ż | LZ29 | LZ30 | A | |
| 35 | Ż | LZ30 | | A | |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-22. Character Table for Poland

Portugal

Character Classification Considerations

The following special characters are classified as alphabetic:

- Space (required and numeric) (SP30 and SP31)
- Hyphen (required and syllable) (SP10 and SP32).
- Apostrophe (if it has a letter ahead of and behind it) (SP05).

The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Plus (SA01)
- Minus (SA00).

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- Hyphen (required and syllable) (SP10 and SP32).

The following character strings should be given a **sort weight between spaces and alphabetic characters**, if they are at the start of a sort field and if they are immediately followed by a space:

- d', D', da Da, das, Das, de, De, do, Do, dos, and Dos
- e.

Character Table

Figure 3-23 shows the character table for Portugal. The table lists the characters in ascending order with the lowest-weighted character listed first. In Portugal, some characters are regarded as equivalents and are listed in the table with equal weights.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | |
| 1 | À | LA02 | | A | |
| 1 | á | LA11 | LA12 | A | |
| 1 | Â | LA12 | | A | |
| 1 | à | LA13 | LA14 | A | |
| 1 | Ã | LA14 | | A | |
| 1 | â | LA15 | LA16 | A | |
| 1 | Ä | LA16 | | A | |
| 1 | ã | LA19 | LA20 | A | |
| 1 | Å | LA20 | | A | |
| 1 | ä | SM21 | | A | |
| <hr/> | | | | | |
| 2 | b | LB01 | LB02 | A | |
| 2 | B | LB02 | | A | |
| <hr/> | | | | | |
| 3 | c | LC01 | LC02 | A | |
| 3 | C | LC02 | | A | |
| 3 | ç | LC41 | LC42 | A | |
| 3 | Ç | LC42 | | A | |
| <hr/> | | | | | |
| 4 | d | LD01 | LD02 | A | |
| 4 | D | LD02 | | A | |
| <hr/> | | | | | |
| 5 | e | LE01 | LE02 | A | |
| 5 | E | LE02 | | A | |
| 5 | é | LE11 | LE12 | A | |
| 5 | Ê | LE12 | | A | |
| 5 | è | LE13 | LE14 | A | |
| 5 | Ë | LE14 | | A | |
| 5 | ê | LE15 | LE16 | A | |
| 5 | Ë | LE16 | | A | |
| <hr/> | | | | | |
| 6 | f | LF01 | LF02 | A | |
| 6 | F | LF02 | | A | |
| <hr/> | | | | | |
| 7 | g | LG01 | LG02 | A | |
| 7 | G | LG02 | | A | |
| <hr/> | | | | | |
| 8 | h | LH01 | LH02 | A | |
| 8 | H | LH02 | | A | |
| <hr/> | | | | | |
| 9 | i | LI01 | LI02 | A | |
| 9 | I | LI02 | | A | |
| 9 | í | LI11 | LI12 | A | |
| 9 | Î | LI12 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 10 | j | LJ01 | LJ02 | A | |
| 10 | J | LJ02 | | A | |
| <hr/> | | | | | |
| 11 | k | LK01 | LK02 | A | |
| 11 | K | LK02 | | A | |
| <hr/> | | | | | |
| 12 | l | LL01 | LL02 | A | |
| 12 | L | LL02 | | A | |
| <hr/> | | | | | |
| 13 | m | LM01 | LM02 | A | |
| 13 | M | LM02 | | A | |
| <hr/> | | | | | |
| 14 | n | LN01 | LN02 | A | |
| 14 | N | LN02 | | A | |
| <hr/> | | | | | |
| 15 | o | LO01 | LO02 | A | |
| 15 | O | LO02 | | A | |
| 15 | ó | LO11 | LO12 | A | |
| 15 | Ô | LO12 | | A | |
| 15 | ò | LO13 | LO14 | A | |
| 15 | Õ | LO14 | | A | |
| 15 | ô | LO15 | LO16 | A | |
| 15 | Ö | LO16 | | A | |
| 15 | õ | LO19 | LO20 | A | |
| 15 | Ï | LO20 | | A | |
| 15 | o | SM20 | | A | |
| <hr/> | | | | | |
| 16 | p | LP01 | LP02 | A | |
| 16 | P | LP02 | | A | |
| <hr/> | | | | | |
| 17 | q | LQ01 | LQ02 | A | |
| 17 | Q | LQ02 | | A | |
| <hr/> | | | | | |
| 18 | r | LR01 | LR02 | A | |
| 18 | R | LR02 | | A | |
| <hr/> | | | | | |
| 19 | s | LS01 | LS02 | A | |
| 19 | S | LS02 | | A | |
| <hr/> | | | | | |
| 20 | t | LT01 | LT02 | A | |
| 20 | T | LT02 | | A | |
| <hr/> | | | | | |
| 21 | u | LU01 | LU02 | A | |
| 21 | U | LU02 | | A | |
| 21 | ú | LU11 | LU12 | A | |
| 21 | Ú | LU12 | | A | |
| 21 | ù | LU13 | LU14 | A | |
| 21 | Û | LU14 | | A | |

Figure 3-23 (Part 1 of 2). Character Table for Portugal

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 22 | v | LV01 | LV02 | | A |
| 22 | V | LV02 | | | A |
| 23 | w | LW01 | LW02 | | A |
| 23 | W | LW02 | | | A |
| 24 | x | LX01 | LX02 | | A |
| 24 | X | LX02 | | | A |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 25 | y | LY01 | LY02 | | A |
| 25 | Y | LY02 | | | A |
| 26 | z | LZ01 | LZ02 | | A |
| 26 | Z | LZ02 | | | A |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-23 (Part 2 of 2). Character Table for Portugal

Republic of China

Character Set Considerations

ROC (Taiwan being the old name) uses two character sets:

- A single-byte character set (SBCS) for Latin characters
- A double-byte character set (DBCS) that contains:
 - A primary Chinese character set
 - A secondary Chinese character set
 - A non-Chinese character set containing:
 - Latin, Greek, and Russian alphabets
 - Arabic, Chinese, and Roman numerals
 - Japanese Hiragana and Katakana
 - Chinese phonetic symbols
 - Special characters and symbols.

SBCS Sort Sequence

This sort sequence is by prespecified tables.

DBCS Sort Sequence

DBCS characters are sorted using different sorting algorithms, depending on the following sort sequences:

- Strokes within radicals
- Radicals within strokes
- Phonetic sequence.

Monocasing Considerations

- Latin characters on the SBCSs are moncased the same as USA English.
- Chinese characters do not have uppercase and lowercases.



Republic of Korea (South Korea)

Character Set Considerations

Korea uses two character sets:

- A single-byte character set (SBCS) containing 147 characters made up of Latin characters and Jamo components of Hangeul characters
- A double-byte character set (DBCS) that contains:
 - A Hangeul character set
 - A Hanja character set
 - A non-Hangeul and non-Hanja character set containing:
 - Latin characters
 - Jamo components
 - Hiragana, Katakana, Greek, special characters, and Roman numerals.

SBCS Sort Sequence

This sort sequence is by prespecified tables.

DBCS Sort Sequence

- Hangeul characters are sorted by binary value, because they are arranged in dictionary sequence.
- Hanja characters are sorted by phonetic sequence.
- Non-Hangeul and non-Hanja characters are sorted by binary value.

Monocasing Considerations

- Latin characters on the SBCSs are moncased the same as USA English,
- Jamo components, Hangeul characters, and Hanja characters do not have uppercase and lowercases.

Romania (Rumania)

Character Classification Considerations

The following special characters are classified as alphabetic:

- Space (required and numeric) (SP30 and SP31)
- Hyphen (required and syllable) (SP10 and SP32).

The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Plus (SA01)
- Minus (SA00).

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (SP05).

Character Table

Figure 3-24 shows the character table for Romania. The table lists the characters in ascending order with the lowest-weighted character listed first.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | |
| 1 | À | LA02 | | A | |
| 2 | ã | LA23 | LA24 | A | |
| 2 | Ä | LA24 | | A | |
| 3 | â | LA15 | LA16 | A | |
| 3 | Â | LA16 | | A | |
| 4 | b | LB01 | LB02 | A | |
| 4 | B | LB02 | | A | |
| 5 | c | LC01 | LC02 | A | |
| 5 | C | LC02 | | A | |
| 6 | d | LD01 | LD02 | A | |
| 6 | D | LD02 | | A | |
| 7 | e | LE01 | LE02 | A | |
| 7 | E | LE02 | | A | |
| 8 | f | LF01 | LF02 | A | |
| 8 | F | LF02 | | A | |
| 9 | g | LG01 | LG02 | A | |
| 9 | G | LG02 | | A | |
| 10 | h | LH01 | LH02 | A | |
| 10 | H | LH02 | | A | |
| 11 | i | LI01 | LI02 | A | |
| 11 | I | LI02 | | A | |
| 12 | î | LI15 | LI16 | A | |
| 12 | Î | LI16 | | A | |
| 13 | j | LJ01 | LJ02 | A | |
| 13 | J | LJ02 | | A | |
| 14 | k | LK01 | LK02 | A | |
| 14 | K | LK02 | | A | |
| 15 | l | LL01 | LL02 | A | |
| 15 | L | LL02 | | A | |
| 16 | m | LM01 | LM02 | A | |
| 16 | M | LM02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 17 | n | LN01 | LN02 | A | |
| 17 | N | LN02 | | A | |
| 18 | o | LO01 | LO02 | A | |
| 18 | O | LO02 | | A | |
| 19 | p | LP01 | LP02 | A | |
| 19 | P | LP02 | | A | |
| 20 | q | LQ01 | LQ02 | A | |
| 20 | Q | LQ02 | | A | |
| 21 | r | LR01 | LR02 | A | |
| 21 | R | LR02 | | A | |
| 22 | s | LS01 | LS02 | A | |
| 22 | S | LS02 | | A | |
| 23 | ş | LS41 | LS42 | A | |
| 23 | Ş | LS42 | | A | |
| 24 | t | LT01 | LT02 | A | |
| 24 | T | LT02 | | A | |
| 25 | ț | LT41 | LT42 | A | |
| 25 | Ț | LT42 | | A | |
| 26 | u | LU01 | LU02 | A | |
| 26 | U | LU02 | | A | |
| 27 | v | LV01 | LV02 | A | |
| 27 | V | LV02 | | A | |
| 28 | w | LW01 | LW02 | A | |
| 28 | W | LW02 | | A | |
| 29 | x | LX01 | LX02 | A | |
| 29 | X | LX02 | | A | |
| 30 | y | LY01 | LY02 | A | |
| 30 | Y | LY02 | | A | |
| 31 | z | LZ01 | LZ02 | A | |
| 31 | Z | LZ02 | | A | |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-24. Character Table for Romania

South Africa

Character Classification Considerations

The following special characters are classified as alphabetic:

- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (SP05).

The following special characters are considered numeric:

- Numeric space (SP31, as thousands separator)
- Comma (SP08)
- Period (SP11)
- Plus (SA01)
- Minus (SA00).

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (SP05).

Character Table

The table on Figure 3-25 lists the characters in ascending order with the lowest-weighted character listed first. In South Africa, some characters are regarded as equivalents and are listed in the table with equal weights. After a sort, these characters can be intermixed like, for example, the following words:

| Unsorted list | Sorted list |
|---------------|--------------|
| leërmag | leer |
| lêer | leër |
| leerbock | lêer |
| leër | leërafdeling |
| leer | leerbock |
| leërafdeling | leërmag |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | 1 |
| 1 | À | LA02 | | A | |
| 1 | á | LA11 | LA12 | A | 2 |
| 1 | Á | LA12 | | A | |
| 1 | à | LA13 | LA14 | A | |
| 1 | À | LA14 | | A | |
| 1 | â | LA15 | LA16 | A | |
| 1 | Â | LA16 | | A | |
| 1 | ä | LA17 | LA18 | A | |
| 1 | Ä | LA18 | | A | |
| 1 | ã | LA19 | LA20 | A | |
| 1 | Ã | LA20 | | A | |
| 1 | ä | LA27 | LA28 | A | |
| 1 | Ä | LA28 | | A | |
| 1 | æ | LA51 | LA52 | A | |
| 1 | Æ | LA52 | | | |
| | | | | | |
| 2 | b | LB01 | LB02 | A | |
| 2 | B | LB02 | | A | |
| | | | | | |
| 3 | c | LC01 | LC02 | A | |
| 3 | C | LC02 | | A | |
| | | | | | |
| 4 | ç | LC41 | LC42 | A | |
| 4 | Ç | LC42 | | A | |
| | | | | | |
| 5 | d | LD01 | LD02 | A | |
| 5 | D | LD02 | | A | |
| | | | | | |
| 6 | ð | LD63 | LD62 | A | |
| 6 | Ð | LD62 | | A | |
| | | | | | |
| 7 | e | LE01 | LE02 | A | |
| 7 | E | LE02 | | A | |
| 7 | é | LE11 | LE12 | A | |
| 7 | É | LE12 | | A | |
| 7 | è | LE13 | LE14 | A | |
| 7 | È | LE14 | | A | |
| 7 | ê | LE15 | LE16 | A | |
| 7 | Ê | LE16 | | A | |
| 7 | ë | LE17 | LE18 | A | |
| 7 | Ë | LE18 | | A | |
| | | | | | |
| 8 | f | LF01 | LF02 | A | |
| 8 | F | LF02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 9 | g | LG01 | LG02 | A | |
| 9 | G | LG02 | | A | |
| | | | | | |
| 10 | h | LH01 | LH02 | A | |
| 10 | H | LH02 | | A | |
| | | | | | |
| 11 | i | LI01 | LI02 | A | |
| 11 | I | LI02 | | A | |
| 11 | í | LI11 | LI12 | A | |
| 11 | Í | LI12 | | A | |
| 11 | ì | LI13 | LI14 | A | |
| 11 | Ì | LI14 | | A | |
| 11 | ï | LI15 | LI16 | A | |
| 11 | Ï | LI16 | | A | |
| 11 | î | LI17 | LI18 | A | |
| 11 | Î | LI18 | | A | |
| 11 | ı | LI61 | | A | |
| | | | | | |
| 12 | j | LJ01 | LJ02 | A | |
| 12 | J | LJ02 | | A | |
| | | | | | |
| 13 | k | LK01 | LK02 | A | |
| 13 | K | LK02 | | A | |
| | | | | | |
| 14 | l | LL01 | LL02 | A | |
| 14 | L | LL02 | | A | |
| | | | | | |
| 15 | m | LM01 | LM02 | A | |
| 15 | M | LM02 | | A | |
| | | | | | |
| 16 | n | LN01 | LN02 | A | |
| 16 | N | LN02 | | A | |
| | | | | | |
| 17 | ñ | LN19 | LN20 | A | |
| 17 | Ñ | LN20 | | A | |
| | | | | | |
| 18 | o | LO01 | LO02 | A | |
| 18 | O | LO02 | | A | |
| 18 | ó | LO11 | LO12 | A | |
| 18 | Ó | LO12 | | A | |
| 18 | ò | LO13 | LO14 | A | |
| 18 | Ò | LO14 | | A | |
| 18 | ô | LO15 | LO16 | A | |
| 18 | Ô | LO16 | | A | |
| 18 | ö | LO17 | LO18 | A | |
| 18 | Ö | LO18 | | A | |

Figure 3-25 (Part 1 of 2). Character Table for South Africa

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 18 | ō | LO19 | LO20 | A | |
| 18 | Ō | LO20 | | A | |
| 18 | ø | LO61 | LO62 | A | |
| 18 | Ø | LO62 | | A | |
| 19 | p | LP01 | LP02 | A | |
| 19 | P | LP02 | | A | |
| 20 | q | LQ01 | LQ02 | A | |
| 20 | Q | LQ02 | | A | |
| 21 | r | LR01 | LR02 | A | |
| 21 | R | LR02 | | A | |
| 22 | s | LS01 | LS02 | A | |
| 22 | S | LS02 | | A | |
| 23 | β | LS61 | LS61 | A | |
| 24 | t | LT01 | LT02 | A | |
| 24 | T | LT02 | | A | |
| 25 | þ | LT63 | LT64 | A | |
| 25 | Þ | LT64 | | A | |
| 26 | u | LU01 | LU02 | A | |
| 26 | U | LU02 | | A | |
| 26 | ú | LU11 | LU12 | A | |
| 26 | Ú | LU12 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 26 | ù | LU13 | LU14 | A | |
| 26 | Û | LU14 | | A | |
| 26 | û | LU15 | LU16 | A | |
| 26 | Û | LU16 | | A | |
| 26 | ü | LU17 | LU18 | A | |
| 26 | Û | LU18 | | A | |
| 27 | v | LV01 | LV02 | A | |
| 27 | V | LV02 | | A | |
| 28 | w | LW01 | LW02 | A | |
| 28 | W | LW02 | | A | |
| 29 | x | LX01 | LX02 | A | |
| 29 | X | LX02 | | A | |
| 30 | y | LY01 | LY02 | A | |
| 30 | Y | LY02 | | A | |
| 30 | ý | LY11 | LY12 | A | |
| 30 | Ý | LY12 | | A | |
| 30 | ÿ | LY17 | LY02 | A | |
| 31 | z | LZ01 | LZ02 | A | |
| 31 | Z | LZ02 | | A | |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-25 (Part 2 of 2). Character Table for South Africa

Notes for Figure 3-25:

1. Small and capital variations of the same letter, with or without diacritics, have the same sort weight. They can be sequenced according to the Character Identifier.
2. For printers supporting character subsets because of technical or printing speed limitations, all the accented vowels are monocased to their corresponding nonaccented capital vowel.

Character Classification Considerations

The following special characters are classified as alphabetic:

- Middle dot (SD63)
- Space (required and numeric) (SP30 and SP31)
- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (if it has a letter ahead of and behind it, as in “s’havia”) (SP05)
- All numbers (0-9).

The following special characters are considered numeric:

- Superscript 2 and superscript 3 (ND021 and ND031)
- One-half, one-quarter, and three-quarters (NF01, NF04, and NF05)
- Minus, plus, and plus-or-minus (SA00, SA01, and SA02)
- Less-than, equal, and greater-than (SA03, SA04, and SA05)
- Pound sign and dollar sign (SC02 and SC03)
- Percent and asterisk (SM02 and SM04)
- Square brackets (left and right) (SM06 and SM08)
- Braces (left and right) (SM11 and SM14)
- Micro symbol (SM17)
- Degree (temperature) symbol (SM19)
- Parentheses (left and right) (SP06 and SP07)
- Comma, period and slash (SP08, SP11 and SP12)
- Space (SP31).

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- Middle dot (SD63)
- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (SP05).

The following character strings should be given a **sort weight between spaces and alphabetic characters**, if they are at the start of a sort field and if they are immediately followed by a space:

- d', D', de, De, del, and Del
- el and El
- l', L', la, and La.

Middle Dot Location in the Character Matrix

- Horizontal position: at the center of the box
- Vertical position: at the height of the hyphen.

In proportional spacing printers, the width of the middle dot should be the same as the width of the small i. The size should be the size of the dot over the small i. If, due to technical limitations, this size is not feasible, then the size of the normal period should be provided.

Character Table

The table on Figure 3-26 lists the characters in ascending order with the lowest-weighted character listed first. In Spain, some characters are regarded as equivalents and are listed in the table with equal weights. After a sort, these characters can be intermixed like, for example, the following words:

| Unsorted list | Sorted list |
|---------------|-------------|
| candor | cándido |
| casa | candor |
| Cantera | cántaro |
| Castro | Cantera |
| cándido | casa |
| cántaro | cáscara |
| cáscara | Castro |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | 1 |
| 1 | À | LA02 | | A | 2 |
| 1 | á | LA11 | LA12 | A | |
| 1 | Á | LA12 | | A | |
| 1 | à | LA13 | LA14 | A | |
| 1 | À | LA14 | | A | |
| 1 | â | LA15 | LA16 | A | |
| 1 | Â | LA16 | | A | |
| 1 | ä | LA17 | LA18 | A | |
| 1 | Ä | LA18 | | A | |
| 1 | ã | LA19 | LA20 | A | |
| 1 | Ã | LA20 | | A | |
| 1 | ä | LA27 | LA28 | A | |
| 1 | Ä | LA28 | | A | |
| 1 | æ | LA51 | LA52 | A | |
| 1 | Æ | LA52 | | A | |
| 2 | b | LB01 | LB02 | A | |
| 2 | B | LB02 | | A | |
| 3 | c | LC01 | LC02 | A | |
| 3 | C | LC02 | | A | |
| 4 | ç | LC41 | LC42 | A | |
| 4 | Ç | LC42 | | A | |
| 5 | ch | | | A | 3 |
| 5 | Ch | | | A | |
| 5 | CH | | | A | |
| 6 | d | LD01 | LD02 | A | |
| 6 | D | LD02 | | A | |
| 7 | ð | LD63 | LD62 | A | |
| 7 | Ð | LD62 | | A | |
| 8 | e | LE01 | LE02 | A | |
| 8 | E | LE02 | | A | |
| 8 | é | LE11 | LE12 | A | |
| 8 | É | LE12 | | A | |
| 8 | è | LE13 | LE14 | A | |
| 8 | È | LE14 | | A | |
| 8 | ê | LE15 | LE16 | A | |
| 8 | Ê | LE16 | | A | |
| 8 | ë | LE17 | LE18 | A | |
| 8 | Ë | LE18 | | A | |
| 9 | f | LF01 | LF02 | A | |
| 9 | F | LF02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 10 | g | LG01 | LG02 | A | |
| 10 | G | LG02 | | A | |
| 11 | h | LH01 | LH02 | A | |
| 11 | H | LH02 | | A | |
| 12 | i | LI01 | LI02 | A | |
| 12 | I | LI02 | | A | |
| 12 | í | LI11 | LI12 | A | |
| 12 | Í | LI12 | | A | |
| 12 | ì | LI13 | LI14 | A | |
| 12 | Ì | LI14 | | A | |
| 12 | ï | LI15 | LI16 | A | |
| 12 | Ï | LI16 | | A | |
| 12 | ï | LI17 | LI18 | A | |
| 12 | Ï | LI18 | | A | |
| 13 | j | LJ01 | LJ02 | A | |
| 13 | J | LJ02 | | A | |
| 14 | k | LK01 | LK02 | A | |
| 14 | K | LK02 | | A | |
| 15 | l | LL01 | LL02 | A | |
| 15 | L | LL02 | | A | |
| 16 | ll | | | A | 4 |
| 16 | Ll | | | A | |
| 16 | LL | | | A | |
| 16 | H | | | A | 5 |
| 16 | EL | | | A | |
| 17 | m | LM01 | LM02 | A | |
| 17 | M | LM02 | | A | |
| 18 | n | LN01 | LN02 | A | |
| 18 | N | LN02 | | A | |
| 19 | ñ | LN19 | LN20 | A | |
| 19 | Ñ | LN20 | | A | |
| 20 | o | LO01 | LO02 | A | |
| 20 | O | LO02 | | A | |
| 20 | ó | LO11 | LO12 | A | |
| 20 | Ó | LO12 | | A | |
| 20 | ò | LO13 | LO14 | A | |
| 20 | Ò | LO14 | | A | |
| 20 | ô | LO15 | LO16 | A | |
| 20 | Ô | LO16 | | A | |
| 20 | ö | LO17 | LO18 | A | |
| 20 | Ö | LO18 | | A | |

Figure 3-26 (Part 1 of 2). Character Table for Spain

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 20 | ō | LO19 | LO20 | A | |
| 20 | Ö | LO20 | | A | |
| 20 | ø | LO61 | LO62 | A | |
| 20 | Ø | LO62 | | A | |
| 21 | p | LP01 | LP02 | A | |
| 21 | P | LP02 | | A | |
| 22 | q | LQ01 | LQ02 | A | |
| 22 | Q | LQ02 | | A | |
| 23 | r | LR01 | LR02 | A | |
| 23 | R | LR02 | | A | |
| 24 | s | LS01 | LS02 | A | |
| 24 | S | LS02 | | A | |
| 25 | ß | LS61 | LS61 | A | |
| 26 | t | LT01 | LT02 | A | |
| 26 | T | LT02 | | A | |
| 27 | þ | LT63 | LT64 | A | |
| 27 | Þ | LT64 | | A | |
| 28 | u | LU01 | LU02 | A | |
| 28 | U | LU02 | | A | |
| 28 | ú | LU11 | LU12 | A | |
| 28 | Ú | LU12 | | A | |
| 28 | ù | LU13 | LU14 | A | |
| 28 | Û | LU14 | | A | |
| 28 | û | LU15 | LU16 | A | |
| 28 | Û | LU16 | | A | |
| 28 | ü | LU17 | LU18 | A | |
| 28 | Û | LU18 | | A | |
| 29 | v | LV01 | LV02 | A | |
| 29 | V | LV02 | | A | |
| 30 | w | LW01 | LW02 | A | |
| 30 | W | LW02 | | A | |
| 31 | x | LX01 | LX02 | A | |
| 31 | X | LX02 | | A | |
| 32 | y | LY01 | LY02 | A | |
| 32 | Y | LY02 | | A | |
| 32 | ý | LY11 | LY12 | A | |
| 32 | Ý | LY12 | | A | |
| 32 | ÿ | LY17 | LY02 | A | |
| 33 | z | LZ01 | LZ02 | A | |
| 33 | Z | LZ02 | | A | |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-26 (Part 2 of 2). Character Table for Spain

Notes for Figure 3-26:

- Spain uses character subsets for printers with technical or printing speed limitations.
- Small and capital variations of the same letter, with or without diacritics, have the same sort weight. They can be sequence according to the Character Identifier.
- The combinations *ch*, *Ch*, and *CH* are printed, displayed, and otherwise processed as two characters. During sorting, each combination is processed as one character that follows all other characters. For example, the name *Cuenca* is sorted ahead of *Chinchón*.
- The combinations *ll*, *Ll*, and *LL* are printed, displayed, and otherwise processed as two characters. During sorting, each combination is processed as one character that follows all other *l* characters. For example, the name *López* is sorted ahead of *Llorente*.
- The combination *ll* and *LL* are printed, displayed, and otherwise processed as three characters. During sorting, each combination is processed as one character, following all other *l* characters, but equivalent to the *ll*, *Ll*, and *LL* combinations. For example, the following four names are sorted: *Columpio*, *Collar*, *Collecció*, and *Collerón*.

Character Classification Considerations

The following characters are classified as alphabetic:

- Space (required and numeric) (SP30 and SP31)
- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (when used within words) (SP05).

The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Plus (SA01)
- Minus (SA00)
- Asterisk (SM04).

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (SP05).

Character Table

Figure 3-27 shows the character table for Sweden. The table lists the characters in ascending order with the lowest-weighted character listed first.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|--|------|------|-----------|------------|------|
| All non-alphameric characters are sorted ahead of the numbers. | | | | | |
| 0 | 0 | ND10 | | N | |
| 1 | 1 | ND01 | | N | |
| 2 | 2 | ND02 | | N | |
| 3 | 3 | ND03 | | N | |
| 4 | 4 | ND04 | | N | |
| 5 | 5 | ND05 | | N | |
| 6 | 6 | ND06 | | N | |
| 7 | 7 | ND07 | | N | |
| 8 | 8 | ND08 | | N | |
| 9 | 9 | ND09 | | N | |
| 10 | a | LA01 | LA02 | A | |
| 10 | A | LA02 | | A | |
| 10 | à | LA13 | LA14 | A | |
| 10 | À | LA14 | | A | |
| 11 | b | LB01 | LB02 | A | |
| 11 | B | LB02 | | A | |
| 12 | c | LC01 | LC02 | A | |
| 12 | C | LC02 | | A | |
| 13 | d | LD01 | LD02 | A | |
| 13 | D | LD02 | | A | |
| 14 | e | LE01 | LE02 | A | |
| 14 | E | LE02 | | A | |
| 14 | é | LE11 | LE12 | A | |
| 14 | É | LE12 | | A | |
| 15 | f | LF01 | LF02 | A | |
| 15 | F | LF02 | | A | |
| 16 | g | LG01 | LG02 | A | |
| 16 | G | LG02 | | A | |
| 17 | h | LH01 | LH02 | A | |
| 17 | H | LH02 | | A | |
| 18 | i | LI01 | LI02 | A | |
| 18 | I | LI02 | | A | |
| 19 | j | LJ01 | LJ02 | A | |
| 19 | J | LJ02 | | A | |
| 20 | k | LK01 | LK02 | A | |
| 20 | K | LK02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 21 | l | LL01 | LL02 | A | |
| 21 | L | LL02 | | A | |
| 22 | m | LM01 | LM02 | A | |
| 22 | M | LM02 | | A | |
| 23 | n | LN01 | LN02 | A | |
| 23 | N | LN02 | | A | |
| 24 | o | LO01 | LO02 | A | |
| 24 | O | LO02 | | A | |
| 25 | p | LP01 | LP02 | A | |
| 25 | P | LP02 | | A | |
| 26 | q | LQ01 | LQ02 | A | |
| 26 | Q | LQ02 | | A | |
| 27 | r | LR01 | LR02 | A | |
| 27 | R | LR02 | | A | |
| 28 | s | LS01 | LS02 | A | |
| 28 | S | LS02 | | A | |
| 29 | t | LT01 | LT02 | A | |
| 29 | T | LT02 | | A | |
| 30 | u | LU01 | LU02 | A | |
| 30 | U | LU02 | | A | |
| 31 | v | LV01 | LV02 | A | |
| 31 | V | LV02 | | A | |
| 32 | w | LW01 | LW02 | A | |
| 32 | W | LW02 | | A | |
| 33 | x | LX01 | LX02 | A | |
| 33 | X | LX02 | | A | |
| 34 | y | LY01 | LY02 | A | |
| 34 | Y | LY02 | | A | |
| 34 | ü | LU17 | LU18 | A | |
| 34 | Û | LU18 | | A | |
| 35 | z | LZ01 | LZ02 | A | |
| 35 | Z | LZ02 | | A | |
| 36 | å | LA27 | LA28 | A | |
| 36 | Å | LA28 | | A | |
| 37 | ä | LA17 | LA18 | A | |
| 37 | Ä | LA18 | | A | |
| 38 | ö | LO17 | LO18 | A | |
| 38 | Ö | LO18 | | A | |

Figure 3-27. Character Table for Sweden



Switzerland

Character Classification Considerations

The following special characters are classified as alphabetic:

- Required space (SP30)
- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (if it has a letter ahead of and behind it, as in “l’amour”) (SP05).

The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Plus (SA01)
- Minus (SA00).

Monocasing Considerations

While the letters Ä, Ö, and Ü are contained in the Swiss character set, they are not contained in the Swiss keyboard as a single key. They can be created with the aid of the nonescaping (dead) key containing the diaeresis. However, it is common in Switzerland to add the letter e after the letters A, O, or U to represent Ä, Ö, and Ü, as follows:

- Aerger represents Ärger (Anger)
- Oel represents Öl (Oil)
- Uebersicht represents Übersicht (Overview).

The above Swiss words monocase to AERGER, OEL, and UEBERSICHT, but the lowercase letters ä, ö, and ü monocase to Ä, Ö, and Ü, respectively.

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (SP05).

The following character strings should be given a **sort weight between spaces and alphabetic characters**, if they are at the beginning of a sort field:

- d', and D'
- l', and L'.

The following character strings should be given a **sort weight between spaces and alphabetic characters**, if they are at the beginning of a sort field and if they are immediately followed by a space:

- de, De, des, Des, and du
- la, La, le, Le, les, and Les.

Character Table

Figure 3-28 shows the character table for Switzerland, which is based on the Multilingual Code Page (MLP). Only a subset of the MLP is actually in use.

| Seq Num | Char | ID | Mono case | Alpha | Note /Num |
|---------|------|------|-----------|-------|-----------|
| 1 | a | LA01 | LA02 | A | 1 |
| 1 | À | LA02 | | A | |
| 2 | á | LA11 | LA12 | A | 2 |
| 2 | Á | LA12 | | A | |
| 2 | à | LA13 | LA14 | A | |
| 2 | À | LA14 | | A | |
| 2 | â | LA15 | LA16 | A | |
| 2 | Â | LA16 | | A | |
| 2 | ä | LA17 | LA18 | A | 3 |
| 2 | Ä | LA18 | | A | 3 |
| 2 | ã | LA19 | LA20 | A | |
| 2 | Ã | LA20 | | A | |
| 2 | å | LA27 | LA28 | A | |
| 2 | Å | LA28 | | A | |
| 2 | æ | LA51 | LA52 | A | |
| 2 | Æ | LA52 | | A | |
| 3 | b | LB01 | LB02 | A | |
| 3 | B | LB02 | | A | |
| 4 | c | LC01 | LC02 | A | |
| 4 | C | LC02 | | A | |
| 5 | ç | LC41 | LC42 | A | |
| 5 | Ç | LC42 | | A | |
| 6 | d | LD01 | LD02 | A | |
| 6 | D | LD02 | | A | |
| 7 | ð | LD63 | LD62 | A | |
| 7 | Ð | LD62 | | A | |
| 8 | e | LE01 | LE02 | A | |
| 8 | E | LE02 | | A | |
| 9 | é | LE11 | LE12 | A | |
| 9 | É | LE12 | | A | |
| 9 | è | LE13 | LE14 | A | |
| 9 | È | LE14 | | A | |
| 9 | ê | LE15 | LE16 | A | |
| 9 | Ê | LE16 | | A | |
| 9 | ë | LE17 | LE18 | A | |
| 9 | Ë | LE18 | | A | |
| 10 | f | LF01 | LF02 | A | |
| 10 | F | LF02 | | A | |
| 11 | g | LG01 | LG02 | A | |
| 11 | G | LG02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha | Note /Num |
|---------|------|------|-----------|-------|-----------|
| 12 | h | LH01 | LH02 | A | |
| 12 | H | LH02 | | A | |
| 13 | i | LI01 | LI02 | A | |
| 13 | I | LI02 | | A | |
| 14 | í | LI11 | LI12 | A | |
| 14 | Í | LI12 | | A | |
| 14 | ì | LI13 | LI14 | A | |
| 14 | Ì | LI14 | | A | |
| 14 | î | LI15 | LI16 | A | |
| 14 | Î | LI16 | | A | |
| 14 | ï | LI17 | LI18 | A | |
| 14 | Ï | LI18 | | A | |
| 15 | j | LJ01 | LJ02 | A | |
| 15 | J | LJ02 | | A | |
| 16 | k | LK01 | LK02 | A | |
| 16 | K | LK02 | | A | |
| 17 | l | LL01 | LL02 | A | |
| 17 | L | LL02 | | A | |
| 18 | m | LM01 | LM02 | A | |
| 18 | M | LM02 | | A | |
| 19 | n | LN01 | LN02 | A | |
| 19 | N | LN02 | | A | |
| 20 | ñ | LN19 | LN20 | A | |
| 20 | Ñ | LN20 | | A | |
| 21 | o | LO01 | LO02 | A | |
| 21 | O | LO02 | | A | |
| 22 | ó | LO11 | LO12 | A | |
| 22 | Ó | LO12 | | A | |
| 22 | ò | LO13 | LO14 | A | |
| 22 | Ò | LO14 | | A | |
| 22 | ô | LO15 | LO16 | A | |
| 22 | Ô | LO16 | | A | |
| 22 | ö | LO17 | LO18 | A | 3 |
| 22 | Ö | LO18 | | A | 3 |
| 22 | õ | LO19 | LO20 | A | |
| 22 | Õ | LO20 | | A | |
| 22 | ø | LO61 | LO62 | A | |
| 22 | Ø | LO62 | | A | |
| 23 | p | LP01 | LP02 | A | |
| 23 | P | LP02 | | A | |

Figure 3-28 (Part 1 of 2). Character Table for Switzerland

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 24 | q | LQ01 | LQ02 | A | |
| 24 | Q | LQ02 | | A | |
| 25 | r | LR01 | LR02 | A | |
| 25 | R | LR02 | | A | |
| 26 | s | LS01 | LS02 | A | |
| 26 | S | LS02 | | A | |
| 27 | ß | LS61 | LS61 | A | 4 |
| 28 | t | LT01 | LT02 | A | |
| 28 | T | LT02 | | A | |
| 29 | þ | LT63 | LT64 | A | |
| 29 | Þ | LT64 | | A | |
| 30 | u | LU01 | LU02 | A | |
| 30 | U | LU02 | | A | |
| 31 | ú | LU11 | LU12 | A | |
| 31 | Ú | LU12 | | A | |
| 31 | ù | LU13 | LU14 | A | |
| 31 | Û | LU14 | | A | |
| 31 | ü | LU15 | LU16 | A | |
| 31 | Û | LU16 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 31 | ü | LU17 | LU18 | A | 3 |
| 31 | Û | LU18 | | A | 3 |
| 32 | v | LV01 | LV02 | A | |
| 32 | V | LV02 | | A | |
| 33 | w | LW01 | LW02 | A | |
| 33 | W | LW02 | | A | |
| 34 | x | LX01 | LX02 | A | |
| 34 | X | LX02 | | A | |
| 35 | y | LY01 | LY02 | A | |
| 35 | Y | LY02 | | A | |
| 36 | ÿ | LY11 | LY12 | A | |
| 36 | ÿ | LY12 | | A | |
| 36 | ÿ | LY17 | LY02 | A | |
| 37 | z | LZ01 | LZ02 | A | |
| 37 | Z | LZ02 | | A | |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-28 (Part 2 of 2). Character Table for Switzerland

Notes for Figure 3-14:

1. Small letters precede the capital letters, and letters without diacritics precede letters with diacritics.
2. Equal letters with different diacritics are sequenced according to the Character Identifier.
3. When the sort is according to the sound of the words as in telephone directories, address lists, then:
 - ä is sorted as ae, ö is sorted as oe, and ü is sorted as ue.

For other sorts such as dictionaries, encyclopedias, then:

 - ä is sorted as a, ö is sorted as o, and ü is sorted as u.
4. ß (LS61) is sorted as ss.



Thailand

Character Classification Considerations

The following special characters are classified as alphabetic:

- Space (required and numeric) (SP30 and SP31)
- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (SP05).

The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Plus (SA01)
- Minus (SA00).

Sort Sequence Considerations

Thailand uses a single-byte character set (SBCS) for Latin characters and Thai character components (vowels, consonants, numerals, and tone marks).

The Latin characters contained in the Thai SBCS are sorted the same as USA English.



User sort exits are needed to sort USA English text and to support the Thai Telephone Directory and Thai Dictionary sort sequence.

Character Table

Figure 3-29 shows the Thai-character table for Thailand. The table lists the characters in ascending order with the lowest-weighted character listed first.

| Seq Num | Char ID | Mono case | Alpha /Num | Note |
|---------|---------|-----------|------------|------|
| 1 | BK10 | | A | |
| 2 | BK20 | | A | |
| 3 | BK30 | | A | |
| 4 | BK40 | | A | |
| 5 | BK50 | | A | |
| 6 | BK60 | | A | |
| 7 | BN10 | | A | |
| 8 | BC10 | | A | |
| 9 | BX10 | | A | |
| 10 | BS10 | | A | |
| 11 | BX20 | | A | |
| 12 | BX30 | | A | |
| 13 | BY10 | | A | |
| 14 | BD10 | | A | |
| 15 | BT10 | | A | |
| 16 | BT20 | | A | |
| 17 | BT30 | | A | |
| 18 | BT40 | | A | |
| 19 | BN20 | | A | |
| 20 | BD20 | | A | |
| 21 | BT50 | | A | |
| 22 | BT60 | | A | |
| 23 | BT70 | | A | |
| 24 | BT80 | | A | |
| 25 | BN30 | | A | |
| 26 | BB10 | | A | |
| 27 | BP10 | | A | |
| 28 | BP20 | | A | |
| 29 | BF10 | | A | |
| 30 | BP30 | | A | |
| 31 | BF20 | | A | |

| Seq Num | Char ID | Mono case | Alpha /Num | Note |
|---------|---------|-----------|------------|------|
| 32 | BP40 | | A | |
| 33 | BM10 | | A | |
| 34 | BY20 | | A | |
| 35 | BR10 | | A | |
| 36 | BR20 | | A | |
| 37 | BL10 | | A | |
| 38 | BL20 | | A | |
| 39 | BW10 | | A | |
| 40 | BS20 | | A | |
| 41 | BS30 | | A | |
| 42 | BS40 | | A | |
| 43 | BH10 | | A | |
| 44 | BL30 | | A | |
| 45 | BO10 | | A | |
| 46 | BH20 | | A | |
| 47 | BQ20 | | A | |
| 48 | BA20 | | A | |
| 49 | BA10 | | A | |
| 50 | BA30 | | A | |
| 51 | BA40 | | A | |
| 52 | BI10 | | A | |
| 53 | BI20 | | A | |
| 54 | BU10 | | A | |
| 55 | BU20 | | A | |
| 56 | BU30 | | A | |
| 57 | BU40 | | A | |
| 58 | BQ30 | | A | |
| 59 | BE20 | | A | |
| 60 | BE30 | | A | |
| 61 | BO20 | | A | |
| 62 | BA50 | | A | |

Figure 3-29 (Part 1 of 2). Thai-Character Table for Thailand

| Seq Num | Char ID | Mono case | Alpha /Num | Note |
|---------|----------|-----------|------------|------|
| 63 | BA60 | | A | |
| 64 | BA70 | | A | |
| 65 | BQ10 | | A | |
| 66 | BE10 | | A | |
| 67 | BZ10 | | A | |
| 68 | BZ20 | | A | |
| 69 | BZ30 | | A | |
| 70 | BZ40 | | A | |
| 71 | BZ50 | | A | |
| 72 | BN40 | | A | |
| 73 | ND100002 | | S | |

| Seq Num | Char ID | Mono case | Alpha /Num | Note |
|---------|----------|-----------|------------|------|
| 74 | ND010002 | | S | |
| 75 | ND020002 | | S | |
| 76 | ND030002 | | S | |
| 77 | ND040002 | | S | |
| 78 | ND050002 | | S | |
| 79 | ND060002 | | S | |
| 80 | ND070002 | | S | |
| 81 | ND080002 | | S | |
| 82 | ND090002 | | S | |
| 83 | SC13 | | S | |

Figure 3-29 (Part 2 of 2). Thai-Character Table for Thailand

Notes on Figure 3-29:

1. The "Char" column is left blank as Thai characters are not printable on this system at the present time.

Turkey

Character Classification Considerations

No special characters are classified as alphabetic.

The following special characters are considered numeric:

- Comma (SP08) (used as a decimal separator)
- Minus (SA00)
- Plus (SA01).

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- All special characters (that is, all characters except those shown in the character table).

Character Table

Figure 3-30 shows the character table for Turkey. The table lists the characters in ascending order with the lowest-weighted character listed first. In Turkey, some characters are regarded as equivalents and are listed in the table with equal weights.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | |
| 1 | A | LA02 | | A | |
| 1 | â | LA15 | LA16 | A | |
| 1 | Â | LA16 | | A | |
| 2 | b | LB01 | LB02 | A | |
| 2 | B | LB02 | | A | |
| 3 | c | LC01 | LC02 | A | |
| 3 | C | LC02 | | A | |
| 4 | ç | LC41 | LC42 | A | |
| 4 | Ç | LC42 | | A | |
| 5 | d | LD01 | LD02 | A | |
| 5 | D | LD02 | | A | |
| 6 | e | LE01 | LE02 | A | |
| 6 | E | LE02 | | A | |
| 7 | f | LF01 | LF02 | A | |
| 7 | F | LF02 | | A | |
| 8 | g | LG01 | LG02 | A | |
| 8 | G | LG02 | | A | |
| 9 | ğ | LG23 | LG24 | A | |
| 9 | Ğ | LG24 | | A | |
| 10 | h | LH01 | LH02 | A | |
| 10 | H | LH02 | | A | |
| 11 | ı | LI61 | LI02 | A | |
| 11 | I | LI02 | | A | |
| 12 | i | LI01 | LI30 | A | |
| 12 | İ | LI30 | | A | |
| 12 | î | LI15 | LI16 | A | |
| 12 | Î | LI16 | | A | |
| 13 | j | LJ01 | LJ02 | A | |
| 13 | J | LJ02 | | A | |
| 14 | k | LK01 | LK02 | A | |
| 14 | K | LK02 | | A | |
| 15 | l | LL01 | LL02 | A | |
| 15 | L | LL02 | | A | |
| 16 | m | LM01 | LM02 | A | |
| 16 | M | LM02 | | A | |
| 17 | n | LN01 | LN02 | A | |
| 17 | N | LN02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------------------------------|------|------|-----------|------------|------|
| 18 | o | LO01 | LO02 | A | |
| 18 | O | LO02 | | A | |
| 19 | ö | LO17 | LO18 | A | |
| 19 | Ö | LO18 | | A | |
| 20 | p | LP01 | LP02 | A | |
| 20 | P | LP02 | | A | |
| 21 | q | LQ01 | LQ02 | A | |
| 21 | Q | LQ02 | | A | |
| 22 | r | LR01 | LR02 | A | |
| 22 | R | LR02 | | A | |
| 23 | s | LS01 | LS02 | A | |
| 23 | S | LS02 | | A | |
| 24 | ş | LS41 | LS42 | A | |
| 24 | Ş | LS42 | | A | |
| 25 | t | LT01 | LT02 | A | |
| 25 | T | LT02 | | A | |
| 26 | u | LU01 | LU02 | A | |
| 26 | U | LU02 | | A | |
| 26 | û | LU15 | LU16 | A | |
| 26 | Û | LU16 | | A | |
| 27 | ü | LU17 | LU18 | A | |
| 27 | Ü | LU18 | | A | |
| 28 | v | LV01 | LV02 | A | |
| 28 | V | LV02 | | A | |
| 29 | w | LW01 | LW02 | A | |
| 29 | W | LW02 | | A | |
| 30 | x | LX01 | LX02 | A | |
| 30 | X | LX02 | | A | |
| 31 | y | LY01 | LY02 | A | |
| 31 | Y | LY02 | | A | |
| 32 | z | LZ01 | LZ02 | A | |
| 32 | Z | LZ02 | | A | |
| 33 | 0 | ND10 | | N | |
| 34 | 1 | ND01 | | N | |
| 35 | 2 | ND02 | | N | |
| and so on for other numerals... | | | | | |
| 41 | 8 | ND08 | | N | |
| 42 | 9 | ND09 | | N | |

Figure 3-30. Character Table for Turkey

The United Kingdom

Character Classification Considerations

The following special characters are classified as alphabetic:

- Space (required and numeric) (SP30 and SP31)
- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (if it has a letter ahead of and behind it, as in “don’t”) (SP05).

The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Plus (SA01)
- Minus (SA00).

Sort Sequence Considerations

The following characters should be given a sort weight between spaces and alphabetic characters:

- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (SP05).

Character Table

Figure 3-31 shows the character table for the UK. The table lists the characters in ascending order with the lowest-weighted character listed first.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | | A |
| 1 | A | LA02 | | | A |
| 2 | b | LB01 | LB02 | | A |
| 2 | B | LB02 | | | A |
| 3 | c | LC01 | LC02 | | A |
| 3 | C | LC02 | | | A |
| 4 | d | LD01 | LD02 | | A |
| 4 | D | LD02 | | | A |
| 5 | e | LE01 | LE02 | | A |
| 5 | E | LE02 | | | A |
| 6 | f | LF01 | LF02 | | A |
| 6 | F | LF02 | | | A |
| 7 | g | LG01 | LG02 | | A |
| 7 | G | LG02 | | | A |
| 8 | h | LH01 | LH02 | | A |
| 8 | H | LH02 | | | A |
| 9 | i | LI01 | LI02 | | A |
| 9 | I | LI02 | | | A |
| 10 | j | LJ01 | LJ02 | | A |
| 10 | J | LJ02 | | | A |
| 11 | k | LK01 | LK02 | | A |
| 11 | K | LK02 | | | A |
| 12 | l | LL01 | LL02 | | A |
| 12 | L | LL02 | | | A |
| 13 | m | LM01 | LM02 | | A |
| 13 | M | LM02 | | | A |
| 14 | n | LN01 | LN02 | | A |
| 14 | N | LN02 | | | A |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 15 | o | LO01 | LO02 | | A |
| 15 | O | LO02 | | | A |
| 16 | p | LP01 | LP02 | | A |
| 16 | P | LP02 | | | A |
| 17 | q | LQ01 | LQ02 | | A |
| 17 | Q | LQ02 | | | A |
| 18 | r | LR01 | LR02 | | A |
| 18 | R | LR02 | | | A |
| 19 | s | LS01 | LS02 | | A |
| 19 | S | LS02 | | | A |
| 20 | t | LT01 | LT02 | | A |
| 20 | T | LT02 | | | A |
| 21 | u | LU01 | LU02 | | A |
| 21 | U | LU02 | | | A |
| 22 | v | LV01 | LV02 | | A |
| 22 | V | LV02 | | | A |
| 23 | w | LW01 | LW02 | | A |
| 23 | W | LW02 | | | A |
| 24 | x | LX01 | LX02 | | A |
| 24 | X | LX02 | | | A |
| 25 | y | LY01 | LY02 | | A |
| 25 | Y | LY02 | | | A |
| 26 | z | LZ01 | LZ02 | | A |
| 26 | Z | LZ02 | | | A |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-31. Character Table for the UK

The United States

Character Classification Considerations

The following special characters are classified as alphabetic:

- Space (required and numeric) (SP30 and SP31)
- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (if it has a letter ahead of and behind it, as in “don’t”) (SP05).

The following special characters are considered numeric:

- Period (SP11)
- Comma (SP08)
- Plus (SA01)
- Minus (SA00).

Sort Sequence Considerations

The following characters should be given a **sort weight between spaces and alphabetic characters**:

- Hyphen (required and syllable) (SP10 and SP32)
- Apostrophe (SP05).

Character Table

Figure 3-32 shows the character table for the USA. The table lists the characters in ascending order with the lowest-weighted character listed first.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---------|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | |
| 1 | A | LA02 | | A | |
| 2 | b | LB01 | LB02 | A | |
| 2 | B | LB02 | | A | |
| 3 | c | LC01 | LC02 | A | |
| 3 | C | LC02 | | A | |
| 4 | d | LD01 | LD02 | A | |
| 4 | D | LD02 | | A | |
| 5 | e | LE01 | LE02 | A | |
| 5 | E | LE02 | | A | |
| 6 | f | LF01 | LF02 | A | |
| 6 | F | LF02 | | A | |
| 7 | g | LG01 | LG02 | A | |
| 7 | G | LG02 | | A | |
| 8 | h | LH01 | LH02 | A | |
| 8 | H | LH02 | | A | |
| 9 | i | LI01 | LI02 | A | |
| 9 | I | LI02 | | A | |
| 10 | j | LJ01 | LJ02 | A | |
| 10 | J | LJ02 | | A | |
| 11 | k | LK01 | LK02 | A | |
| 11 | K | LK02 | | A | |
| 12 | l | LL01 | LL02 | A | |
| 12 | L | LL02 | | A | |
| 13 | m | LM01 | LM02 | A | |
| 13 | M | LM02 | | A | |
| 14 | n | LN01 | LN02 | A | |
| 14 | N | LN02 | | A | |

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 15 | o | LO01 | LO02 | A | |
| 15 | O | LO02 | | A | |
| 16 | p | LP01 | LP02 | A | |
| 16 | P | LP02 | | A | |
| 17 | q | LQ01 | LQ02 | A | |
| 17 | Q | LQ02 | | A | |
| 18 | r | LR01 | LR02 | A | |
| 18 | R | LR02 | | A | |
| 19 | s | LS01 | LS02 | A | |
| 19 | S | LS02 | | A | |
| 20 | t | LT01 | LT02 | A | |
| 20 | T | LT02 | | A | |
| 21 | u | LU01 | LU02 | A | |
| 21 | U | LU02 | | A | |
| 22 | v | LV01 | LV02 | A | |
| 22 | V | LV02 | | A | |
| 23 | w | LW01 | LW02 | A | |
| 23 | W | LW02 | | A | |
| 24 | x | LX01 | LX02 | A | |
| 24 | X | LX02 | | A | |
| 25 | y | LY01 | LY02 | A | |
| 25 | Y | LY02 | | A | |
| 26 | z | LZ01 | LZ02 | A | |
| 26 | Z | LZ02 | | A | |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-32. Character Table for the USA

Yugoslavia

Character Classification Considerations

Figure 3-33 shows the Latin-character table for Yugoslavia. Figure 3-34 shows the Cyrillic-character table for Yugoslavia. The tables list the characters in ascending order with the lowest-weighted character listed first.

| Seq Num | Char | ID | Mono case | Alpha /Num | Note |
|---|------|------|-----------|------------|------|
| 1 | a | LA01 | LA02 | A | |
| 1 | A | LA02 | | A | |
| 2 | b | LB01 | LB02 | A | |
| 2 | B | LB02 | | A | |
| 3 | c | LC01 | LC02 | A | |
| 3 | C | LC02 | | A | |
| 4 | ć | LC11 | LC12 | A | |
| 4 | Ć | LC12 | | A | |
| 5 | č | LC21 | LC22 | A | |
| 5 | Č | LC22 | | A | |
| 6 | d | LD01 | LD02 | A | |
| 6 | D | LD02 | | A | |
| 7 | đ | LD61 | LD62 | A | |
| 7 | Đ | LD62 | | A | |
| 8 | e | LE01 | LE02 | A | |
| 8 | E | LE02 | | A | |
| 9 | f | LF01 | LF02 | A | |
| 9 | F | LF02 | | A | |
| 10 | g | LG01 | LG02 | A | |
| 10 | G | LG02 | | A | |
| 11 | h | LH01 | LH02 | A | |
| 11 | H | LH02 | | A | |
| 12 | i | LI01 | LI02 | A | |
| 12 | I | LI02 | | A | |
| 13 | j | LJ01 | LJ02 | A | |
| 13 | J | LJ02 | | A | |
| 14 | k | LK01 | LK02 | A | |
| 14 | K | LK02 | | A | |
| 15 | l | LL01 | LL02 | A | |
| 15 | L | LL02 | | A | |
| 16 | m | LM01 | LM02 | A | |
| 16 | M | LM02 | | A | |
| 17 | n | LN01 | LN02 | A | |
| 17 | N | LN02 | | A | |
| 18 | o | LO01 | LO02 | A | |
| 18 | O | LO02 | | A | |
| 19 | p | LP01 | LP02 | A | |
| 19 | P | LP02 | | A | |
| 20 | q | LQ01 | LQ02 | A | |
| 20 | Q | LQ02 | | A | |
| 21 | r | LR01 | LR02 | A | |
| 21 | R | LR02 | | A | |
| 22 | s | LS01 | LS02 | A | |
| 22 | S | LS02 | | A | |
| 23 | š | LS21 | LS22 | A | |
| 23 | Š | LS22 | | A | |
| 24 | t | LT01 | LT02 | A | |
| 24 | T | LT02 | | A | |
| 25 | u | LU01 | LU02 | A | |
| 25 | U | LU02 | | A | |
| 26 | v | LV01 | LV02 | A | |
| 26 | V | LV02 | | A | |
| 27 | w | LW01 | LW02 | A | |
| 27 | W | LW02 | | A | |
| 28 | x | LX01 | LX02 | A | |
| 28 | X | LX02 | | A | |
| 29 | y | LY01 | LY02 | A | |
| 29 | Y | LY02 | | A | |
| 30 | z | LZ01 | LZ02 | A | |
| 30 | Z | LZ02 | | A | |
| 31 | ž | LZ21 | LZ22 | A | |
| 31 | Ž | LZ22 | | A | |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | | |

Figure 3-33. Latin-Character Table for Yugoslavia

| Seq Num | Char | ID | Mono case | Alpha Note /Num |
|---------|------|------|-----------|-----------------|
| 1 | а | KA01 | KA02 | A |
| 1 | А | KA02 | | A |
| 2 | б | KB01 | KB02 | A |
| 2 | Б | KB02 | | A |
| 3 | в | KV01 | KV02 | A |
| 3 | В | KV02 | | A |
| 4 | г | KG01 | KG02 | A |
| 4 | Г | KG02 | | A |
| 5 | д | KD01 | KD02 | A |
| 5 | Д | KD02 | | A |
| 6 | ђ | KG11 | KG12 | A |
| 6 | Ђ | KG12 | | A |
| 7 | ђ | KD61 | KD62 | A |
| 7 | Ђ | KD62 | | A |
| 8 | е | KE01 | KE02 | A |
| 8 | Е | KE02 | | A |
| 9 | ж | KZ21 | KZ22 | A |
| 9 | Ж | KZ22 | | A |
| 10 | з | KZ01 | KZ02 | A |
| 10 | З | KZ02 | | A |
| 11 | ѕ | KZ15 | KZ16 | A |
| 11 | Ѕ | KZ16 | | A |
| 12 | и | KI01 | KI02 | A |
| 12 | И | KI02 | | A |
| 13 | ј | KJ01 | KJ02 | A |
| 13 | Ј | KJ02 | | A |
| 14 | к | KK01 | KK02 | A |
| 14 | К | KK02 | | A |
| 15 | л | KL01 | KL02 | A |
| 15 | Л | KL02 | | A |
| 16 | љ | KL41 | KL42 | A |
| 16 | Љ | KL42 | | A |
| 17 | м | KM01 | KM02 | A |
| 17 | М | KM02 | | A |

| Seq Num | Char | ID | Mono case | Alpha Note /Num |
|---|------|------|-----------|-----------------|
| 18 | н | KN01 | KN02 | A |
| 18 | Н | KN02 | | A |
| 19 | њ | KN11 | KN12 | A |
| 19 | Њ | KN12 | | A |
| 20 | о | KO01 | KO02 | A |
| 20 | О | KO02 | | A |
| 21 | п | KP01 | KP02 | A |
| 21 | П | KP02 | | A |
| 22 | р | KR01 | KR02 | A |
| 22 | Р | KR02 | | A |
| 23 | с | KS01 | KS02 | A |
| 23 | С | KS02 | | A |
| 24 | т | KT01 | KT02 | A |
| 24 | Т | KT02 | | A |
| 25 | ќ | KK11 | KK12 | A |
| 25 | Ќ | KK12 | | A |
| 26 | ћ | KC11 | KC12 | A |
| 26 | Ћ | KC12 | | A |
| 27 | у | KU01 | KU02 | A |
| 27 | У | KU02 | | A |
| 28 | ф | KF01 | KF02 | A |
| 28 | Ф | KF02 | | A |
| 29 | х | KH01 | KH02 | A |
| 29 | Х | KH02 | | A |
| 30 | ц | KC01 | KC02 | A |
| 30 | Ц | KC02 | | A |
| 31 | ч | KC21 | KC22 | A |
| 31 | Ч | KC22 | | A |
| 32 | џ | KG21 | KG22 | A |
| 32 | Џ | KG22 | | A |
| 33 | ш | KS21 | KS22 | A |
| 33 | Ш | KS22 | | A |
| All other characters are sorted as shown in Figure 3-1 on page 3-2. | | | | |

Figure 3-34. Cyrillic-Character Table for Yugoslavia

Keyboards

This section provides information on types of locks used (caps lock or shift lock) and on types of numeric keypads.

Shift Lock

Shift lock is the equivalent to keeping the shift key down to access characters engraved on the upper-shift position of the keys. Other shifts such as the Alternate or Control are not affected by Shift lock.

Caps Lock

Caps lock converts lowercase alphabetic characters to their monospace (uppercase) character. It is equivalent to the monospace rules given for the various character sets, and it is performed regardless of the shift position of the lowercase alpha character. For example, if caps lock is activated and e being in the upper-shift location of the key is pressed along with the shift key, then the character E or È is generated, depending on the monospace rules of the particular character set.

Numeric Pad Formats

These diagrams show the numeric keypads used in Figure 3-35 and Figure 3-36.

| Format 1 | Format 2 | Format 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|----------|----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|--|---|---|---|---|---|---|---|---|---|---|-----|---|
| <table border="1"><tr><td>7</td><td>8</td><td>9</td></tr><tr><td>4</td><td>5</td><td>6</td></tr><tr><td>1</td><td>2</td><td>3</td></tr><tr><td>0</td><td>,</td><td></td></tr></table> | 7 | 8 | 9 | 4 | 5 | 6 | 1 | 2 | 3 | 0 | , | | <table border="1"><tr><td>7</td><td>8</td><td>9</td></tr><tr><td>4</td><td>5</td><td>6</td></tr><tr><td>1</td><td>2</td><td>3</td></tr><tr><td>0</td><td>.</td><td></td></tr></table> | 7 | 8 | 9 | 4 | 5 | 6 | 1 | 2 | 3 | 0 | . | | <table border="1"><tr><td>7</td><td>8</td><td>9</td></tr><tr><td>4</td><td>5</td><td>6</td></tr><tr><td>1</td><td>2</td><td>3</td></tr><tr><td>0</td><td>000</td><td>,</td></tr></table> | 7 | 8 | 9 | 4 | 5 | 6 | 1 | 2 | 3 | 0 | 000 | , |
| 7 | 8 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 2 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | , | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 8 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 2 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | . | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 8 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 2 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 000 | , | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Format 4 | Format 5 | Format 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"><tr><td>7</td><td>8</td><td>9</td></tr><tr><td>4</td><td>5</td><td>6</td></tr><tr><td>1</td><td>2</td><td>3</td></tr><tr><td>→ </td><td>0</td><td>.</td></tr></table> | 7 | 8 | 9 | 4 | 5 | 6 | 1 | 2 | 3 | → | 0 | . | <table border="1"><tr><td>7</td><td>8</td><td>9</td></tr><tr><td>4</td><td>5</td><td>6</td></tr><tr><td>1</td><td>2</td><td>3</td></tr><tr><td>0</td><td>00</td><td>,</td></tr></table> | 7 | 8 | 9 | 4 | 5 | 6 | 1 | 2 | 3 | 0 | 00 | , | <table border="1"><tr><td>1</td><td>2</td><td>3</td></tr><tr><td>4</td><td>5</td><td>6</td></tr><tr><td>7</td><td>8</td><td>9</td></tr><tr><td>0</td><td>.</td><td></td></tr></table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | . | |
| 7 | 8 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 2 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| → | 0 | . | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 8 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 2 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 00 | , | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 2 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 8 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | . | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Country | Numeric Pad Definition | Type of lock Preferred | Alternative Type of Lock |
|----------------|------------------------|------------------------|--------------------------|
| Albania | Format 1 | | |
| Argentina | Format 1 | caps | |
| Austria | Format 1 | | |
| Belgium | Format 1 | shift | |
| Bulgaria | Format 1 | | |
| Canada | Format 2 | caps | shift (Note 1) |
| Czechoslovakia | Format 1 | | |
| Denmark | Format 1 | caps | |
| Finland | Format 1 | caps | shift (Note 1) |
| France | Format 5 | shift | |
| Germany (GDR) | Format 1 | | |
| Germany (FRG) | Format 1 | | |
| Greece | Format 3 | | |
| Hungary | Format 1 | | |
| Iceland | Format 1 | caps | shift (Note 1) |
| Italy | Format 3 | shift | |
| Netherlands | Format 1 | caps | |
| New Zealand | Format 2 | shift | |
| Norway | Format 1 | caps | |
| Poland | Format 1 | | |
| Portugal | Format 1 | | |
| Romania | Format 1 | | |
| South Africa | Format 2 | | |
| Spain | Format 1 | | |
| Sweden | Format 1 | caps | shift (Note 1) |
| Switzerland | Format 2 | caps | |
| Thailand | Format 2 | | |
| Turkey | Format 1 | caps | shift (Note 2) |
| UK | | shift | |
| USA | Format 2 | caps | |

Figure 3-35 (Part 1 of 2). Keyboard Information Table 1: Left-to-Right Languages

| Country | Numeric Pad Definition | Type of lock Preferred | Alternative Type of Lock |
|------------|------------------------|------------------------|--------------------------|
| Yugoslavia | Format 1 | shift | |

Figure 3-35 (Part 2 of 2). Keyboard Information Table 1: Left-to-Right Languages

Notes on Figure 3-35:

1. The country wants to be able to switch between caps lock and shift lock.
2. Both caps lock and shift lock are acceptable.

| Country | Numeric Pad Definition | Type of lock Preferred | Alternative Type of Lock |
|--------------|------------------------|------------------------|--------------------------|
| Japan | Format 2 | | |
| Korea | Format 2 | | |
| PRC | | caps | shift |
| ROC (Taiwan) | Format 2 | | |

Figure 3-36. Keyboard Information Table 2: DBCS Languages




Currency

The following section is about money and how it is represented in various countries. In particular, this section describes:

- The symbol used to represent the currency
- The currency format used
- The representation of negative values
- The padding character used
- The characters used for thousands separator and decimal separator.

The following tables (Figure 3-37 and Figure 3-38) show the currency symbols used in each country, the format used in each country to state the value of an item of money, the format used to indicate a negative amount of money, and the International Currency Sign.

Standards Note: The International Currency Sign is taken from the *ISO 4217 Codes for the representation of currency and funds*.



| Country | Currency Name | Positive Format | Negative Format | International Format |
|-----------------|--------------------|-----------------------|--------------------------|------------------------|
| Albania | Lek | Lek123,45 | -Lek123,45 | ALL 123,45 |
| Argentina | Austral | A123,45 | -A123,45 | ARP 123,45 |
| Austria | Schilling | S 123,45 | -S 123,45 | ATS 123,45 |
| Belgium | Belgian Franc | 123,45 BF (Note 1) | -123,45 BF | BEF 123,45 (Note 2) |
| Bulgaria | Lew | Lw123,45 | -Lw123,45 | BGL 123,45 |
| Canada (Note 3) | Canadian Dollar | \$123.45 123,45 \$ | -\$123.45 (123,45 \$) | CAD 123.45 |
| Czechoslovakia | Koruna | Kčs 123,45 | -Kčs 123,45 | CSK 123,45 |
| Denmark | Danish Krone | kr 123,45 | kr -123,45 | DKK 123,45 |
| Finland | Markka | 123,45 Mk | Mk 123,45- Mk -123,45 | FIM 123,45 |
| France | French Franc | 123,45 F | -123,45 F | FRF 123,45 |
| Germany (GDR) | Mark der DDR | MDM123,45 | -MDM123,45 | DDM 123,45 |
| Germany (FRG) | Deutsche Mark | DM123,45 | -DM123,45 | DEM 123,45 |
| Greece | Drachma | Drs123,45 | -Drs123,45 | GRD 123,45 |
| Hungary | Forint | FT123,45 | -FT123,45 | HUF 123,45 |
| Iceland | Icelandic Krona | 123,45 kr | -123,45 kr | ISK 123,45 |
| Italy | Lira | L. 123 | -L. 123 | ITL. 123 |
| Netherlands | Florin | F 123,45 | F -123,45 | NLG 123,45 |
| New Zealand | New Zealand Dollar | \$123.45 | -\$123.45 | NZD 123.45 |
| Norway | Norwgn Krone | kr123,45 | kr123,45- | NOK 123,45 |
| Poland | Złoty | Zł123,45 | -Zł123,45 | PLZ 123,45 |
| Portugal | Escudo | 123\$45 | -123\$45 | PTE 123\$45 |
| Romania | Leu | Lei 123,45 | -Lei 123,45 | ROL 123,45 |
| South Africa | Rand | R123.45 | (R123.45) | ZAR 123.45 |
| Spain | Peseta | Pts 123 (Note 4) | -Pts 123 -123 Pts | ESP 123 |
| Sweden | Swedish Krona | 123,45 kr | -123,45 kr | SEK 123,45 |
| Switzerland | Swiss Franc | Fr.123.45 | -Fr.123.45 | SFR 123.45 |
| Thailand | Baht | ฿123.45 | ฿-123.45 | THB 123.45 |
| Turkey | Turkish Lira | TL123 123TL | -TL123 -123TL | TRL 123 |
| UK | Pound | £123.45 | -£123.45 | GBP 123.45 |

Figure 3-37 (Part 1 of 2). Currency Format Table 1: Left-to-Right Languages

| Country | Currency Name | Positive Format | Negative Format | International Format |
|------------|-----------------|-----------------|-----------------|----------------------|
| USA | American Dollar | \$123.45 | -\$123.45 | AMD 123.45 |
| Yugoslavia | Dinar | Din 123,45 | -Din 123,45 | YUD 123,45 |

Figure 3-37 (Part 2 of 2). Currency Format Table 1: Left-to-Right Languages

Notes on Figure 3-37:

1. "123,45 FB" and "123,45 Fr" are also acceptable.
2. BEC (convertible franc) and BEL (financial franc) are also used as currency symbols.
3. Canadian English documents use the first format, and Canadian French documents use the second format.
4. The singular is Pta, but the plural can be Ptas or Pts. Both "Pts 123" and "123 Pts" are acceptable.

| Country | Currency Name | Positive Format | Negative Format | International Format |
|--------------|--------------------|-----------------|----------------------|----------------------|
| Japan | Yen | ¥123 | -¥123 | JPY 123 |
| Korea | Won | ₩123.45 | -₩123.45 (Note 1) | KRW 123.45 |
| PRC | Yuan Ren Min Bi | ¥123 | -¥123 | CNY 123 |
| ROC (Taiwan) | NT Dollar | \$123.45 | -\$123.45 | TWD 123.45 |

Figure 3-38. Currency Format Table 2: DBCS Languages

Notes on Figure 3-38:

1. (₩123.45) is also used.

The tables on Figure 3-39 and Figure 3-40 show the characters used as thousands and decimal separators, the number of decimal positions, the length of the currency field used in the country (including the decimal positions, if applicable), and the symbols used in each country to pad out the format (eg. \$***0.45).

Standards Note: The International Conference on Weights and Measurements has recommended that neither the Comma nor the Fullstop be used as the triad (thousand) separator but that the Space be used instead.

| Country | Thousand Separator | Decimal Separator | Currency Decimal Position | Currency Field Length | Padding Character |
|----------------|---------------------|-------------------|---------------------------|-----------------------|-------------------|
| Albania | . | , | 2 | 11 | * |
| Argentina | . | , | 2 | 11 | * |
| Austria | . | , | 2 | 11 | * |
| Belgium | . (Note 1) | , (Note 2) | 2 | 11 | * |
| Bulgaria | . | , | 2 | 11 | * |
| Canada | , or space (Note 3) | . or , (Note 4) | 2 | undefined | * |
| Czechoslovakia | . | , | 2 | 11 | * |
| Denmark | . | , | 2 | 15 | none |
| Finland | space | , | 2 | 11 | * |
| France | space | , | 2 | 10 | * |
| Germany (GDR) | . | , | 2 | 11 | * |
| Germany (FRG) | . | , | 2 | 11 | * |
| Greece | . | , | 2 | 15 | * |
| Hungary | space | , | 2 | 11 | * |
| Iceland | . | , | 2 | 15 | * |
| Italy | . | none | none | 15 | * |
| Netherlands | . | , | 2 | 14 | none |
| New Zealand | , | . | 2 | 11 | * |
| Norway | . | , | 2 | 15 | * |
| Poland | . | , | 2 | 11 | * |
| Portugal | . | \$ | 2 | 14 | * |
| Romania | . | , | 2 | 11 | * |
| South Africa | space | , | 2 | 13 | * |
| Spain | . | , | none | 16 | * |
| Sweden | . | , | 2 | 11 | * |

Figure 3-39 (Part 1 of 2). Currency Separator Table 1: Left-to-Right Languages

| Country | Thousand Separator | Decimal Separator | Currency Decimal Position | Currency Field Length | Padding Character |
|-------------|---------------------|-------------------|---------------------------|-----------------------|-------------------|
| Switzerland | apostrophe or space | . | 2 | 11 | * |
| Thailand | , | . | 2 | 15 | * |
| Turkey | . | , | none | 15 | * |
| UK | , | . | 2 | | * |
| USA | , | . | 2 | | |
| Yugoslavia | . | , | 2 | 11 | * |

Figure 3-39 (Part 2 of 2). Currency Separator Table 1: Left-to-Right Languages

Notes on Figure 3-39:

1. Belgium official documents use a space as a thousands separator, rather than the period, and American companies use a comma as a thousands separator.
2. Belgium official documents also use a comma as a decimal separator, but American companies use a period as a decimal separator.
3. Canadian English documents use a comma as a thousand separator, and Canadian French documents use a space as a thousand separator.
4. Canadian English documents use a period as a decimal separator, and Canadian French documents use a comma as a decimal separator.

| Country | Thousand Separator | Decimal Separator | Currency Decimal Position | Currency Field Length | Padding Character |
|--------------|--------------------|-------------------|---------------------------|-----------------------|-------------------|
| Japan | , | none | none | 14 | undefined |
| Korea | , | . | 2 | 16 | none |
| PRC | , | . | 2 | 12 | none |
| ROC (Taiwan) | , | . | 2 | 12 | * |

Figure 3-40. Currency Separator Table 2: DBCS Languages

Number Rounding

In general, numbers round according to the following (where . represents the decimal separator):

XYZ.0 through XYZ.4 round to XYZ
XYZ.5 through XYZ.9 round to XY(Z + 1)

For example: 123.4 rounds to 123
123.7 rounds to 124

Numbers with two decimal positions round according to the following (where . represents the decimal separator):

XYZ.AB0 through XYZ.AB4 round to XYZ.AB
XYZ.AB5 through XYZ.AB9 round to XYZ.A(B + 1)

For example: 123.454 rounds to 123.45
123.457 rounds to 123.46

Argentina rounds two decimal places as above. The third decimal place (second in some cases) rounds as follows (where . is the decimal separator although , is also accepted):

XYZ.AB1 and XYZ.AB2 round to XYZ.AB0
XYZ.AB3 through XYZ.AB7 round to XYZ.AB5
XYZ.AB8 and XYZ.AB9 round to XYZ.A(B + 1)0

For example: 123,452 rounds to 123,450
123,453 rounds to 123,455
123,458 rounds to 123,460

Switzerland has different rounding rules for monetary values as shown below (where . is the decimal separator):

XY.(Z-1)76 through XY.Z25 round to XY.Z0
XY.Z26 through XY.Z75 round to XY.Z5

For example: 17.376 rounds to 17.40
23.525 rounds to 23.50
9.826 rounds to 9.85
3.475 rounds to 3.45

For nonmonetary values, the Swiss rounding follows normal conventions.

Number Notation

The following tables (Figure 3-41 and Figure 3-42) show the notation used to represent numbers in the various countries.

| Country | Positive Format | Negative Format |
|-----------------|------------------------|---------------------------|
| Albania | 12.345,67 | -12.345,67 |
| Argentina | 12.345,67 | -12.345,67 |
| Austria | 12.345,67 | -12.345,67 |
| Belgium | 12.345,67 | -12.345,67 |
| Bulgaria | 12.345,67 | -12.345,67 |
| Canada (Note 1) | 12,345.67 12 345,67 | -12,345.67 (12 345,67) |
| Czechoslovakia | 12.345,67 | -12.345,67 |
| Denmark | 12.345,67 | -12.345,67 |
| Finland | 12 345,67 | 12 345,67- |
| France | 12 345,67 | -12 345,67 |
| Germany (GDR) | 12.345,67 | -12.345,67 |
| Germany (FRG) | 12.345,67 | -12.345,67 |
| Greece | 12.345,67 | -12.345,67 |
| Hungary | 12 345,67 | -12 345,67 |
| Iceland | 12.345,67 | -12.345,67 |
| Italy | 12.345,67 | -12.345,67 |
| Netherlands | 12.345,67 | -12.345,67 |
| New Zealand | 12,345.67 | -12,345.67 |
| Norway | 12.345,67 | 12.345,67- |
| Poland | 12.345,67 | -12.345,67 |
| Portugal | 12.345,67 | -12.345,67 |
| Romania | 12.345,67 | -12.345,67 |
| South Africa | 12 345.67 | (12 345.67) |
| Spain | 12.345,67 | -12.345,67 |
| Sweden (Note 2) | 12 345,67 | -12 345,67 |
| Switzerland | 12'345.67 | -12'345.67 |
| Thailand | 12,345.67 | -12,345.67 |
| Turkey | 12.345,67 | -12.345,67 |
| UK | 12,345.67 | -12,345.67 |
| USA | 12,345.67 | -12,345.67 |

Figure 3-41 (Part 1 of 2). Number Notation Table 1: Left-to-Right Languages

| Country | Positive Format | Negative Format |
|------------|-----------------|-----------------|
| Yugoslavia | 12.345,67 | -12.345,67 |

Figure 3-41 (Part 2 of 2). Number Notation Table 1: Left-to-Right Languages

Notes on Figure 3-41:

1. Canadian English documents use the first format, and Canadian French documents use the second format.

As an alternative negative format, Canadian English documents use (12,345.67), and Canadian French documents use -12 345,67.

2. Sweden uses a period as a thousand separator when the amount is a monetary amount.

| Country | Positive Format | Negative Format |
|--------------|-----------------|-----------------|
| Japan | 12,345.67 | -12,345.67 |
| Korea | 12,345.67 | -12,345.67 |
| PRC | 12,345.67 | -12,345.67 |
| ROC (Taiwan) | 12,345.67 | -12,345.67 |

Figure 3-42. Number Notation Table 2: DBCS Languages



Percent Symbol

The usual format used to indicate percent is:

37 %

South Africa and Switzerland prefer no space between the number and the symbol, as follows:

37%

The Dutch Language used by Belgium and The Netherlands sometimes uses the abbreviation pct., as follows:

37 pct.

In Turkey, the percent symbol is written before the number:

%37

Calendars



Most countries use the Gregorian calendar. The following countries use other calendars:

- Japan uses the Gregorian calendar but also uses a Japanese calendar, which differs from the Gregorian calendar in that an *era name* replaces the year. The era name indicates the year of the reign of the emperor. For example, the era name SHOWA 60 is equivalent to 1985. In the example, SHOWA 60 means year 60 in the reign of the current emperor, who is named SHOWA.
- ROC also uses the Chinese lunar calendar.
- Thailand uses the Buddhist Era (B.E.) calendar.



Date Format

The following tables (Figure 3-43 and Figure 3-44) show the preferred and alternative formats for recording the date. All examples use the nineteenth day of the tenth month of 1986.

| Country | Date Format Preferred | Alternative Date Format |
|----------------|-------------------------------|-------------------------------|
| Albania | 1986-10-19 | 86-10-19 |
| Argentina | 19/10/86 | 19-10-86 |
| Austria | 1986-10-19 | 19. Okt. 1986 |
| Belgium | 19/10/86 (Note 1) | 86/10/19 |
| Bulgaria | 1986-X-19 | 86-X-19 (Note 2) |
| Canada | 10/19/86 86-10-19 (Note 3) | 86-10-19 19-10-86 (Note 3) |
| Czechoslovakia | 1986-10-19 | 86-10-19 |
| Denmark | 19-10-86 | 1986-10-19 |
| Finland | 19.10.1986 | none |
| France | 19.10.86 | 19-10-86 |
| Germany (GDR) | 1986-10-19 | 86-10-19 |
| Germany (FRG) | 19.10.1986 | 1986-10-19 |
| Greece | 19/10/86 | 19 Oktovriou 1986 |
| Hungary | 1986-10-19 | 86-10-19 |
| Iceland | 1986-10-19 | 19/10/86 |
| Italy | 19/10/86 | 19/10/1986 |
| Netherlands | 19 oktober 1986 | 19-10-86 |
| New Zealand | 19/10/86 | 19/10/86 |
| Norway | 19.10.86 | 1986-10-19 |
| Poland | 1986-10-19 | 86-10-19 |
| Portugal | 19-10-1986 (Note 4) | 19 Outubro 1986 |
| Romania | 1986-10-19 | 86-10-19 |
| South Africa | 1986-10-19 | none |
| Spain | 19/10/86 | 19 Octubre 1986 |
| Sweden | 1986-10-19 | 86-10-19 (Note 5) |
| Switzerland | 19. Oktober 1986 | 19. 10. 86 |
| Thailand | 19/10/86 (Note 6) | dd mmmmm yyyy (Note 7) |
| Turkey | 19/10/86 | 86/10/19 |

Figure 3-43 (Part 1 of 2). Date Format Table 1: Left-to-Right Languages

| Country | Date Format Preferred | Alternative Date Format |
|------------|-----------------------|-------------------------|
| UK | 19/10/86 | none |
| USA | 10/19/86 | 86/10/19 |
| Yugoslavia | 1986-10-19 | 86-10-19 |

Figure 3-43 (Part 2 of 2). Date Format Table 1: Left-to-Right Languages

Notes for Figure 3-43:

1. Belgium Official documents use 19.10.86.
2. Bulgaria uses Roman numerals for the month number.
3. For Canadian French documents.
4. 19/10/1986 and 19/10/86 are also acceptable. The official Portuguese standard (that is, 1986-10-19) is like the ISO standard, but it is not commonly used.
5. Leading zeros must not be suppressed (for example 1986-05-08).
6. Year is replaced by Buddhist Era.
7. Official documents use this date format. Spaces are used as separators. The month is abbreviated to five Thai characters, and the year is replaced by Buddhist Era and uses four Thai characters.

| Country | Date Format Preferred | Alternative Date Format |
|----------------|------------------------------|--------------------------------|
| Japan | 1986-10-19 | 10/19/86 |
| Korea | 1986.10.19 | 10/19/86 (Note 1) |
| PRC | 1986.10.19 | none |
| ROC (Taiwan) | 86/10/19 | 10/19/86 (Note 2) |

Figure 3-44. Date Format Table 2: DBCS Languages

Notes for Figure 3-44:

1. 86.10.19 is an alternative date format.
2. 19/10/86 is an alternative date format.

Time Format

Tables Figure 3-45 and Figure 3-46 show the format for recording the time. All examples use a time of 10 hours, 42 minutes, 00 seconds; some have an additional 30 milliseconds shown.

Standards Note: According to the International Standards Organization (ISO), standards IS 3307 and IS 1000, the decimal digits representing “fractions of a second” and the decimal digits representing the “seconds” should be separated by the same character representing the “decimal separator” (a comma or a period) for the country. (See section on Number Notation.) The fractions could be tenths of a second (one digit), hundredths of a second (two digit) or thousandths of a second (three digits).

| Country | Time Format Preferred | Range of Hours |
|----------------|-----------------------|----------------|
| Albania | 10:42:00 | 0 - 23 |
| Argentina | 10:42:00 | 0 - 23 |
| Austria | 10:42:00,030 | 0 - 23 |
| Australia | 10:42:00 | 0 - 23 |
| Belgium | 10:42:00 | 0 - 23 |
| Bulgaria | 10:42:00 | 0 - 23 |
| Canada | 10:42:00.03 | 0 - 23 |
| Czechoslovakia | 10:42:00 | 0 - 23 |
| Denmark | 10.42.00,03 | 0 - 23 |
| Finland | 10.42.00,000 | 0 - 23 |
| France | 10.42.00 | 0 - 23 |
| Germany (GDR) | 10:42:00 | 0 - 23 |
| Germany (FRG) | 10:42:00 | 0 - 23 |
| Greece | 10:42:00.030 | 0 - 23 |
| Hungary | 10:42:00 | 0 - 23 |
| Iceland | 10:42:00 | 0 - 23 |
| Italy | 10.42.00,030 | 0 - 23 |
| Netherlands | 10:42:00 | 0 - 23 |
| New Zealand | 10:42:00 | 0 - 23 |
| Norway | 10:42:00,030 | 0 - 23 |
| Poland | 10:42:00 | 0 - 23 |
| Portugal | 10:42:00 | 0 - 23 |
| Romania | 10:42:00 | 0 - 23 |

Figure 3-45 (Part 1 of 2). Time Format Table 1: Left-to-Right Languages

| Country | Time Format Preferred | Range of Hours |
|--------------|-----------------------|----------------|
| South Africa | 10h42:00.030 | 0 - 23 |
| Spain | 10:42:00 | 0 - 23 |
| Sweden | kl 10.42.00 | 0 - 23 |
| Switzerland | 10,42,00 (Note 1) | 0 - 23 |
| Thailand | 10:42:00 | 0 - 23 |
| Turkey | 10:42:00 | 0 - 23 |
| UK | 10:42:00 | 0 - 23 |
| USA | 10:42:00 | 0 - 12 |
| Yugoslavia | 10:42:00 | 0 - 23 |

Figure 3-45 (Part 2 of 2). Time Format Table 1: Left-to-Right Languages

Notes on Figure 3-45:

1. While the decimal separator for currency is the period, the comma is used for all other fractions; thus for seconds, the comma is used.

| Country | Time Format Preferred | Range of Hours |
|--------------|-----------------------|----------------|
| Japan | 10:42:00 | 0 - 23 |
| Korea | 10:42:00 | 0 - 23 |
| PRC | 10:42:00 | 0 - 23 |
| ROC (Taiwan) | 10:42:00.030 | 0 - 23 |

Figure 3-46. Time Format Table 2: DBCS Languages

Weights and Measurements System

The following tables (Figure 3-47 and Figure 3-48) show the system of measurements used in the countries.

| Country | Measurement System |
|----------------|--------------------|
| Albania | Metric |
| Argentina | Metric |
| Austria | Metric |
| Belgium | Metric |
| Bulgaria | Metric |
| Canada | Metric (Note 1) |
| Czechoslovakia | Metric |
| Denmark | Metric |
| Finland | Metric |
| France | Metric |
| Germany (GDR) | Metric |
| Germany (FRG) | Metric |
| Greece | Metric |
| Hungary | Metric |
| Iceland | Metric |
| Italy | Metric |
| Netherlands | Metric |
| New Zealand | Metric |
| Norway | Metric |
| Poland | Metric |
| Portugal | Metric |
| Romania | Metric |
| South Africa | Metric |
| Spain | Metric |
| Sweden | Metric |
| Switzerland | Metric |
| Thailand | Metric (Note 1) |
| Turkey | Metric |
| UK | Metric (Note 1) |
| USA | (Note 2) |
| Yugoslavia | Metric |

Figure 3-47. Weights and Measurements Table 1: Left-to-Right Languages

Notes for Figure 3-47:

1. Imperial is still used in some areas.

2. Most units are Imperial, or Imperial-derived USA units.
In the scientific area, Metric units are used.

| Country | Measurement System |
|--------------|--------------------|
| Japan | Metric |
| Korea | Metric |
| PRC | Metric |
| ROC (Taiwan) | Metric |

Figure 3-48. Weights and Measurements Table 2: DBCS Languages

Additional Symbols that Vary from Country to Country

France sometimes uses superscripted letters when abbreviating words. For example, the word *Compagnie* is abbreviated to *Cie*, but with the letters *i* and *e* written in a smaller font and superscripted. This technique is also practiced in English when abbreviating ordinal numbers. For example, the ordinal number, *second* is abbreviated to *2nd*, but with the letters *n* and *d* written in a smaller font and superscripted. In the latter case, the abbreviated form is often seen without the tail letters superscripted, when superscripting is not available.

Argentina, Belgium, Bulgaria, France, Italy, Portugal, and UK use N followed by a superscripted lowercase o (SM00), as a symbol for number, not #.

The Dutch Language used by Belgium and The Netherlands uses No. or nr. as short forms of the word *number*.

Norway uses the following abbreviations:

nr. for number

kl for time (see note following Figure 3-45 on page 3-105)

md for month

USD for USA dollar

In the Netherlands, \pm is used to indicate *approximately*.



Appendix. National Language Standards and Laws

This appendix lists:

- Some standards organizations and their addresses
- Some language standards that relate to graphic symbols
- Some language laws that have been passed by various countries.

The following lists of standards organizations, standards, and national laws are not an exhaustive compilation. The standards organizations and national governments should be consulted for current and complete versions of the material.

Language-Related Standards

Standards Organizations' Addresses

| | |
|--------------|---|
| AFNOR | Association française de normalisation Tour Europe, Cedex 7, 92080 PARIS LA DEFENCE |
| ANSI | American National Standards Institute 1430 Broadway, New York, N.Y. 10018 |
| ASMO | Arab Organization for Standardization and Metrology P.O. Box 926161, Amman, Jordan |
| CAS | China Association for Standards P.O. Box 820, Beijing, China |
| CCITT | Consultative Committee for International Telegraph and Telephone 2, rue de Varembe, CH-1211 Geneva 20, Switzerland |
| CSA | Canadian Standards Association 178 Rexdale Blvd, Rexdale, Ontario, M9W 1R3 |
| DIN | Deutsches Institut fuer Normung Burggrafenstrasse 4-10, Postfach 1107, D-1000 Berlin 30 |
| EMCA | European Computer Manufacturing Association 114 Rue du Rhone, 1204 Geneva, Switzerland |

| | |
|-------------|---|
| FIPS | Federal Information Processing Standards U.S. National Bureau of Standards, Institute for Computer Sciences and Technology, Gaithersburg, MD 20899 |
| IEC | International Electrotechnical Commission 3, rue de Verambe, CH-1211 Geneva 20, Switzerland |
| ISO | International Standards Organization 1, rue de Verambe, Case Postal 56, CH-1211 Geneva 20, Switzerland |
| JIS | Japanese Industrial Standards Committee c/o Standards Department, Agency of Industrial Science and Technology Ministry of International Trade and Industry, 1-3-1, Kasumigaseki Chiyoda-ku, Tokyo 100 |
| SCC | Standards Council of Canada International Standardizations Branch, 2000 Argentina Road, Suite 2-401, Mississauga, Ontario, L5N 1V8 |

Sample National Language Standards

| | |
|-----------------------------------|--|
| AFNOR NF 62-10 | French 7-Bit Code |
| ANSI BSR X3.134.1 | 8-Bit ASCII Structure and Rules |
| ANSI BSR X3.134.2 | 8-Bit ASCII Supplemental Multilingual Graphic Character Set |
| ANSI X3.110-1983--CSA T500 | Videotex/Teletex Presentation Level Protocol Syntax - North American PLPS |
| ANSI X3.32 | Graphic Representations of the Control Characters of ASCII |
| ANSI X3.4 | American National Standard Code for Information Interchange |
| ANSI X3.41 | Code Extension Techniques for Use with ASCII |
| ANSI X3.64 | Additional Controls for Use with ASCII |
| ANSI X4.16 | American National Standard Magnetic Stripe Encoding for Credit Cards |
| CAS GB1988-80 | 7-Bit Coded Character Sets for Information Processing and Interchange |
| CAS GB2311-80 | Information Processing - 7-Bit Coded Character Set - Code Extension Techniques |
| CAS GB2312-80 | Code of Chinese Graphic Character Set for Information Interchange - Primary Set |
| CCITT T.61 | Character Repertoire and Coded Character Sets for the International Teletex Service |

| | |
|-------------------------|--|
| CCITT T.100.1984 | International Information Exchange for Interactive Videotex |
| CSA Z243.4-1985 | 7-Bit and 8-Bit Coded Character Sets for Information Processing and Interchange |
| DIN 66003 | Informationsverarbeitung 7-Bit Code (German 7 Bit Code) |
| FIPS PUB 15 | Federal Information Processing Standards - Subsets of the Standard Code for Information Interchange |
| IEC - 417 | Graphic Symbols for Use on Equipment |
| ISO DIS 4882 | Office Machines and Data Processing Equipment, Line Spacings and Character Spacings |
| ISO DIS-6329 | Symbols for Duplicating and Document Copying Machines |
| ISO-IR | International Register of Coded Character Sets to be Used with Escape Sequences - Registration Authority: ECMA, Geneva |
| ISO R1090 | Functions Key Symbols for Typewriters |
| ISO R1093 | Keypoint and Printed or Displayed Symbols for Adding Machines and Calculating Machines |
| ISO 646 | Information Processing - 7-Bit Coded Character Set for Information Interchange |
| ISO 2022 | Information Processing - ISO 7-Bit and 8-Bit Coded Character Sets - Code Extension Techniques |
| ISO 2375 | Data Processing - Procedure for Registration of Escape Sequences |
| ISO 3461 | Graphic Symbols, General Principles for Presentation |
| ISO 4062 | Dictation Equipment Symbols |
| ISO 4217 | Codes for the representation of currency and funds |
| ISO 4873 | Information Processing - 8 Bit Code for Information Interchange - Structure and Rules for Implementation |
| ISO 6429 | Information Processing - ISO 7-Bit and 8-Bit Coded Character Sets - Additional Control Functions for Character Imaging Devices |
| ISO 6937 | Information Processing - Coded Character Sets for Text Communication |
| ISO 7350 | Text Communication - Registration of Graphic Character Sub-repertoires |
| ISO 8859 | 8-Bit Single-Byte Coded Graphic Character Sets |
| JIS C 6226 | Code of the Japanese Graphic Character Set for Information Interchange |

National Laws

Most countries have language laws affecting the importation, sale or use of data processing equipment, software and documentation. Some of the laws specify the language(s) to be used on labels, keyboards, documentation, and software. Other laws regulate cultural aspects such as date formats, calendars, and numeric representation. Since there are many laws and constant revision of laws, only the country issuing a law can adequately describe it. The following are a few of the language laws which have been issued (but may not be current):

Canada: Quebec Law 101, Charter of the French Language, August 26, 1977; Canadian Official Language Act of 1969.

Sweden: The Work Environment Act, 1st July 1978.

Venezuela: Consumer Protection Law, Article 10.

Glossary

This glossary includes definitions of some terms found in this document. Some of the terms defined below are from *The American National Dictionary for Information Processing*, copyright 1977 by the Computer and Business Equipment Manufacturers Association, copies of which may be purchased from the American National Standards Institute a 1430 Broadway, New York, New York 10018. These definitions are identified by an asterisk. The symbol (ISO) at the beginning of a definition indicates that it is reproduced from a published section of the International Organization for Standardization *Vocabulary of Data Processing* or from a published section of the ISO *Vocabulary of Office Machines*.

Arabic numerals. The numerals 1, 2, 3, 4, 5, 6, 7, 8, 9, and 0. See also Roman numerals.

AZERTY keyboard. A keyboard in which the keys in the second-from-top row (row D) are labeled (from left to right): A, Z, E, R, T, Y, U, I, O, and P. See also QWERTY keyboard.

Character Identifier. An identifier assigned to each graphic character.

character set. A defined set of characters. No coded representation is assumed.

code page. A specification of code points for each graphic character in a set or in a collection of graphic character sets. Within a code page, a code point can have one and only one specific meaning.

***coded character set.** (ISO) A set of unambiguous rules that establish a character set and the one-to-one relationships between the characters of the set and their coded representations.

CSU. See customer setup.

Customer setup. The unpacking, setup, and checkout of IBM CSU-designated machines by user personnel, according to a sequence of instructions provided by IBM, without the use of tools or the assistance of IBM personnel.

data entry. The method of entering data into a computer system for processing, usually in a field-oriented environment where the entry is governed by a program. See text entry for comparison.

DBCS. See double-byte character set.

dead key. On a typewriter and in word processing, a key that allows a character to be typed without the imprint position being changed. This term should be replaced with *nonescaping key*.

Diacritics. Modifying marks of a character, for example, the accent mark.

double-byte character set. A character set in which each character is represented by a 2-byte code. Some character sets, such as Kanji, which is used in Japan, are too rich in symbols to be able to represent all the characters using 1-byte codes. A double-byte character set is used to represent the symbols that make up these larger character sets.

EBCDIC. Extended Binary Coded Decimal Interchange Code. A coded character set consisting of 8-bit coded characters.

enable (national languages). To design a product to facilitate the inclusion of national language functions.

folding. The substitution of one character for another, generally to map a larger character set into a subset. Folding may result in the loss of information. For example, folding allows the printing of uppercase graphic characters when lowercase characters are not available in the character array on the printer chain or train.

***graphic character.** (ISO) A character, other than a control character, that is normally represented by a graphic.

graphic character set. A defined set of graphic characters. No coded representation is assumed.

ideographic language. A written language in which each character represents a thing or an idea. An example of such a language is Chinese. See also phonetic language.

implement (national languages). To develop, integrate, test, and release specific national language functions on a product.

ISO. International Organization for Standardization.

***language. (ISO)** A set of characters, conventions, and rules, that is used for conveying information. The three aspects of language are pragmatics, semantics, and syntax.

Latin alphabet. An alphabet comprising the letters a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, and z in uppercase lowercase, with or without accents.

Latin alphabet number 1. Latin alphabet number 1 is set of 190 characters as described by ISO 8859/1.

lowercase. The small letters a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, and z, and other characters in the lower shift. See also uppercase.

machine readable information (MRI). All textual information contained in a program such as a system control program, an application program, or microcode. MRI includes all information that is presented to or received from a user interacting with a system. This includes menus, prompts, messages, report headings, commands, and responses. MRI may appear on printers or on display panels. Contrast with machine readable material (MRM), which includes MRI, executable code, and the constants.

MLP. See multilingual code page.

monocasing. The translation of alphabetic characters from one case (usually the lowercase) to their equivalents in another case (usually the uppercase).

MRI. See machine readable information.

multilingual code page (MLP). A code page supporting more than one language.

national language support. The ability for a user to communicate with products in a language other than US English.

national use graphics. Graphics on a code page not forming part of the invariant character set.

NL function. National language function. Those functions permitting a user to interact with products using a national language. They include character sets, code pages, all language, logistics, and cultural functions, and translatability considerations.

NLS. See national language support.

nonescaping key. On a typewriter and in word processing, a key that allows a character to be typed without the imprint position being changed.

phonetic language. A written language in which each character represents a sound. Examples of phonetic languages are English, Greek, and Russian. See also ideographic language.

product. A hardware or software unit that is individually packaged, that is marketable, and to which a type number/program number has been assigned.

QWERTY keyboard. Keyboard in which the keys in the second-from-top row (row D) are labeled (from left to right): Q, W, E, R, T, Y, U, I, O, and P. See also AZERTY keyboard.

retrofit (national languages). To implement national language function on an unenabled product.

Roman numerals. The numerals I, V, X, L, C, D, and M. See also Arabic numerals.

SBCS. See single-byte character set.

single-byte character set. A character set in which each character is represented by a 1-byte code.

special character. A graphic character that is not a letter, not a digit, and not a space character.

system. A collection of interconnected hardware and software organized to accomplish a set of specific functions.

text entry. Entry of characters in a free format. See data entry for comparison.

uppercase. The capital letters A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, and Z, and other characters in the upper shift. See also lowercase.

user. A person who requires the services of a computing system.

Index

A

- Albania
 - alphabet characteristics 2-1
 - character classification
 - considerations 3-5
 - character table 3-5
 - currency 3-94
 - currency separator symbols 3-96
 - date format 3-102
 - description 2-1
 - keyboard information 3-91
 - language
 - description 2-1
 - name 2-1
 - percentage of population 2-1
 - number format 3-99
 - sort sequence
 - considerations 3-5
 - time format 3-105
 - weights and measurements 3-107
- alphabet characteristics
 - Albania 2-1
 - Argentina 2-2
 - Austria 2-2
 - Belgium 2-4
 - Bulgaria 2-4
 - Canada 2-5
 - Czechoslovakia 2-6
 - Denmark 2-7
 - Finland 2-7
 - France 2-8
 - FRG 2-9
 - GDR 2-9
 - Greece 2-10
 - Hungary 2-10
 - Iceland 2-11
 - Italy 2-12
 - Japan 2-13
 - Korea 2-19
 - Netherlands 2-14
 - New Zealand 2-14
 - Norway 2-15
 - Poland 2-16
 - Portugal 2-17
 - PRC 2-16
 - ROC 2-18
 - Romania 2-19
 - South Africa 2-20
 - Spain 2-21
 - Sweden 2-22
 - Switzerland 2-23
 - Thailand 2-24
 - Turkey 2-24
 - UK 2-25
 - USA 2-26
 - Yugoslavia 2-26
- Arabic numerals
 - definition X-1
 - Japanese usage of 2-13
 - PRC usage of 2-15
 - ROC usage of 2-17
 - Thailand usage of 2-23
- Argentina
 - alphabet characteristics 2-2
 - character classification
 - considerations 3-7
 - character table 3-7
 - currency 3-94
 - currency separator symbols 3-96
 - date format 3-102
 - description 2-2
 - keyboard information 3-91
 - language
 - description 2-2
 - name 2-2
 - percentage of population 2-2
 - number format 3-99
 - sort equal weight characters 3-7
 - sort sequence
 - considerations 3-7
 - time format 3-105
 - unique characteristics of the language 2-2
 - weights and measurements 3-107
- Australia
 - time format 3-105
- Austria
 - alphabet characteristics 2-2
 - character classification
 - considerations 3-10
 - character table 3-10
 - currency 3-94
 - currency separator symbols 3-96
 - date format 3-102
 - description 2-2
 - keyboard information 3-91
 - language
 - description 2-2
 - name 2-2
 - percentage of population 2-2
 - number format 3-99
 - sort equal weight characters 3-10
 - sort sequence
 - considerations 3-10
 - time format 3-105
 - weights and measurements 3-107
- AZERTY keyboard
 - definition X-1

usage 2-5

B

Basque

language
Spain 2-21

Belgium

alphabet characteristics 2-4
character classification
considerations 3-13
character table 3-13
currency 3-94
currency separator symbols 3-96
date format 3-102
description 2-3
keyboard information 3-91
language
description 2-3
name 2-3
percentage of population 2-3
number format 3-99
sort equal weight characters 3-13
sort sequence
considerations 3-13
support of more than one language 2-4
time format 3-105
unique characteristics of the language 2-3
weights and measurements 3-107

Bulgaria

alphabet characteristics 2-4
character table 3-16
currency 3-94
currency separator symbols 3-96
date format 3-102
description 2-4
keyboard information 3-91
language
description 2-4
name 2-4
percentage of population 2-4
number format 3-99
time format 3-105
weights and measurements 3-107

C

calendar

Gregorian 3-101
Japan 3-101
ROC 3-101
Thailand 3-101

Canada

alphabet characteristics 2-5
character classification
considerations 3-17
character table 3-17
currency 3-94
currency separator symbols 3-96
date format 3-102
description 2-4
keyboard information 3-91
language
description 2-5
name 2-4
percentage of population 2-5
number format 3-99
sort equal weight characters 3-17
sort sequence
considerations 3-17
support of more than one language 2-5
time format 3-105
unique characteristics of the language 2-5
weights and measurements 3-107

caps lock

description 3-90
monocasing 3-3
table 3-91, 3-92

Castillian

language
Spain 2-21

Catalan

language
Spain 2-21

ch

effect on sorting 3-9, 3-21, 3-72

character

graphic
definition X-1

table
description of heading 3-4

character classification 3-1

considerations 3-3

Albania 3-5
Argentina 3-7
Austria 3-10
Belgium 3-13
Canada 3-17
Denmark 3-22
Finland 3-25
France 3-28
FRG 3-34
GDR 3-32
Greece 3-37
Hungary 3-41
Iceland 3-43
Italy 3-46
Netherlands 3-50
New Zealand 3-52
Norway 3-54
Poland 3-57

- Portugal 3-59
- Romania 3-64
- South Africa 3-66
- Spain 3-69
- Sweden 3-73
- Switzerland 3-75
- Thailand 3-79
- Turkey 3-82
- UK 3-84
- USA 3-86
- Character Identifier, definition X-1
- character set
 - considerations
 - Japan 3-48
 - Korea 3-63
 - PRC 3-56
 - ROC 3-62
 - definition X-1
- character table 3-76
 - Albania 3-5
 - Argentina 3-7
 - Austria 3-10
 - Belgium 3-13
 - Bulgaria 3-16
 - Canada 3-17
 - country 3-76
 - Czechoslovakia 3-20
 - Denmark 3-22
 - Finland 3-25
 - France 3-29
 - FRG 3-34
 - GDR 3-32
 - Greece 3-37
 - Hungary 3-41
 - Iceland 3-43
 - Italy 3-46
 - Netherlands 3-50
 - New Zealand 3-52
 - Norway 3-54
 - Poland 3-57
 - Portugal 3-59
 - Romania 3-64
 - South Africa 3-66
 - Spain 3-70
 - Sweden 3-73
 - Thailand 3-79
 - Turkey 3-82
 - UK 3-84
 - USA 3-86
 - Yugoslavia 3-88
- characteristics
 - technical 3-1
- code page
 - coding schemes 3-1
 - definition X-1
- coded character set
 - definition X-1
- CSU
 - See Customer setup

- currency
 - field length 3-96, 3-97
 - negative format 3-93
 - positive format 3-93
 - separators 3-96, 3-97
 - symbols 3-93
- customer setup
 - definition X-1
 - Spanish requirements 2-21
- Cyrillic-character table
 - Bulgaria 3-16
 - Yugoslavia 3-88
- Czechoslovakia
 - alphabet characteristics 2-6
 - character table 3-20
 - currency 3-94
 - currency separator symbols 3-96
 - date format 3-102
 - description 2-6
 - keyboard information 3-91
 - language
 - description 2-6
 - name 2-6
 - percentage of population 2-6
 - number format 3-99
 - sort equal weight characters 3-20
 - time format 3-105
 - weights and measurements 3-107

D

- data entry
 - character classification 3-3
 - definition X-1
- date format
 - table 3-102, 3-104
- DBCS
 - See also double-byte character set
 - double-byte character set X-1
- dead key
 - See also nonescaping key
 - definition X-1
- Denmark
 - alphabet characteristics 2-7
 - character classification
 - considerations 3-22
 - character table 3-22
 - currency 3-94
 - currency separator symbols 3-96
 - date format 3-102
 - description 2-6
 - keyboard information 3-91
 - language
 - description 2-6
 - name 2-6
 - percentage of population 2-7

- number format 3-99
- sort sequence
 - considerations 3-22
- time format 3-105
- weights and measurements 3-107
- description
 - Albania 2-1
 - Argentina 2-2
 - Austria 2-2
 - Belgium 2-3
 - Bulgaria 2-4
 - Canada 2-4
 - Czechoslovakia 2-6
 - Denmark 2-6
 - Finland 2-7
 - France 2-8
 - FRG 2-9
 - GDR 2-8
 - Greece 2-9
 - Hungary 2-10
 - Iceland 2-10
 - Italy 2-11
 - Japan 2-12
 - Korea 2-18
 - Netherlands 2-13
 - New Zealand 2-14
 - Norway 2-15
 - Poland 2-16
 - Portugal 2-16
 - PRC 2-15
 - ROC 2-17
 - Romania 2-19
 - South Africa 2-19
 - Spain 2-20
 - Sweden 2-22
 - Switzerland 2-22
 - Thailand 2-23
 - Turkey 2-24
 - UK 2-25
 - USA 2-25
 - Yugoslavia 2-26
- descriptions
 - national languages 2-1
- diacritics
 - definition X-1
 - FRG 3-36
 - global sorting
 - South Africa 3-68
 - Spain 3-72
 - Switzerland 3-78
- dictionary
 - sort
 - Japan 3-48
- double-byte character set
 - definition X-1
 - Japan 3-48
 - Korea 3-63
 - PRC 3-56

- ROC 3-62
- Dutch
 - language
 - Belgium 2-3
 - Netherlands 2-13

E

- EBCDIC
 - definition X-1
- enable
 - definition X-1
 - information iii
- English
 - language
 - Belgium 2-3
 - Canada 2-4
 - New Zealand 2-14
 - South Africa 2-20
 - UK 2-25
 - USA 2-25
- era name
 - Japanese calendar 3-101

F

- Finland
 - alphabet characteristics 2-7
 - character classification
 - considerations 3-25
 - character table 3-25
 - currency 3-94
 - currency separator symbols 3-96
 - date format 3-102
 - description 2-7
 - keyboard information 3-91
 - language
 - description 2-7
 - name 2-7
 - percentage of population 2-7
 - number format 3-99
 - sort sequence
 - considerations 3-25
 - time format 3-105
 - weights and measurements 3-107
- Flemish
 - language
 - Belgium 2-3
- folding, definition X-1
- formats
 - currency
 - negative 3-93
 - positive 3-93

- date 3-102
- number notation 3-99, 3-100
- numeric pad 3-90
- percent 3-101
- time 3-105
- France
 - alphabet characteristics 2-8
 - character classification
 - considerations 3-28
 - character table 3-29
 - currency 3-94
 - currency separator symbols 3-96
 - date format 3-102
 - description 2-8
 - keyboard information 3-91
 - language
 - description 2-8
 - name 2-8
 - percentage of population 2-8
 - number format 3-99
 - sort equal weight characters 3-29
 - sort sequence
 - considerations 3-28
 - time format 3-105
 - unique characteristics of the language 2-8
 - weights and measurements 3-107
- French
 - language
 - Belgium 2-3
 - Canada 2-4
 - France 2-8
 - South Africa 2-20
 - Switzerland 2-22
- FRG 2-9
 - alphabet characteristics 2-9
 - character classification
 - considerations 3-34
 - character table 3-34
 - currency 3-94
 - currency separator symbols 3-96
 - date format 3-102
 - description 2-9
 - keyboard information 3-91
 - language
 - description 2-9
 - name 2-9
 - percentage of population 2-9
 - number format 3-99
 - sort equal weight characters 3-34
 - sort sequence
 - considerations 3-34
 - time format 3-105
 - weights and measurements 3-107

G

- Gallego
 - language
 - Spain 2-21
- GDR 2-8
 - alphabet characteristics 2-9
 - character classification
 - considerations 3-32
 - character table 3-32
 - currency 3-94
 - currency separator symbols 3-96
 - date format 3-102
 - description 2-8
 - keyboard information 3-91
 - language
 - description 2-8
 - name 2-8
 - percentage of population 2-9
 - number format 3-99
 - sort equal weight characters 3-32
 - sort sequence
 - considerations 3-32
 - time format 3-105
 - weights and measurements 3-107
- general sort sequence 3-2
- German
 - language
 - Austria 2-2
 - Belgium 2-3
 - FRG 2-9
 - GDR 2-8
 - Switzerland 2-22
- Germany, Democratic Republic
 - See GDR
- Germany, Federal Republic of
 - See FRG
- glossary X-1
- graphic character set, definition X-1
- graphic character, definition X-1
- Greece
 - alphabet characteristics 2-10
 - character classification
 - considerations 3-37
 - character table 3-37
 - currency 3-94
 - currency separator symbols 3-96
 - date format 3-102
 - description 2-9
 - keyboard information 3-91
 - language
 - description 2-10
 - name 2-9
 - percentage of population 2-10
 - number format 3-99
 - sort sequence
 - considerations 3-37

time format 3-105
weights and measurements 3-107

H

Hangeul

characters 3-63
description 2-18

Hanja

characters 3-63
description 2-18

Hanzi

characters
 PRC 3-56
 ROC 3-62
description
 PRC 2-15
 ROC 2-17

heading

character table
description 3-4

Hiragana

characters 3-48
description 2-12

Hungary

alphabet characteristics 2-10
character classification
 considerations 3-41
character table 3-41
currency 3-94
currency separator symbols 3-96
date format 3-102
description 2-10
keyboard information 3-91
language
 description 2-10
 name 2-10
 percentage of population 2-10
number format 3-99
sort equal weight characters 3-41
sort sequence
 considerations 3-41
time format 3-105
weights and measurements 3-107

I

Iceland

alphabet characteristics 2-11
character classification
 considerations 3-43
character table 3-43

currency 3-94
currency separator symbols 3-96
date format 3-102
description 2-10
keyboard information 3-91
language
 description 2-11
 name 2-11
 percentage of population 2-11
number format 3-99
sort sequence
 considerations 3-43
time format 3-105
unique characteristics of the language 2-11
weights and measurements 3-107

Icelandic

language
 Iceland 2-11

ideographic characters

Hanzi 2-15, 2-17
Kanji 2-12

ideographic language

See also ideographic characters
definition X-2

implement, definition X-2

introduction 1-1

ISO, definition X-2

Italian

language
 Italy 2-11
 Switzerland 2-22

Italy

alphabet characteristics 2-12
character classification
 considerations 3-46
character table 3-46
currency 3-94
currency separator symbols 3-96
date format 3-102
description 2-11
keyboard information 3-91
language
 description 2-11
 name 2-11
 percentage of population 2-12
number format 3-99
sort equal weight characters 3-46
sort sequence
 considerations 3-46
time format 3-105
weights and measurements 3-107

J**Jamo**

characters 3-63
description 2-18

Japan

alphabet characteristics 2-13
calendar 3-101
character set
 considerations 3-48
currency 3-95
currency separator symbols 3-97
date format 3-104
DBCS 3-48
description 2-12
keyboard information 3-92
language
 description 2-12
 name 2-12
 percentage of population 2-12
monocasing considerations 3-49
number format 3-100
SBCS 3-48
sort
 dictionary 3-48
 strokes and radicals 3-48
 telephone directory 3-48
sort sequence
 considerations 3-48
time format 3-106
weights and measurements 3-108

K**Kanji**

characters 3-48
description 2-12

Katakana

characters 3-48
description 2-12

keyboards 3-90

Korea

alphabet characteristics 2-19
character set
 considerations 3-63
currency 3-95
currency separator symbols 3-97
date format 3-104
DBCS 3-63
description 2-18
keyboard information 3-92
language
 description 2-18
 name 2-18

percentage of population 2-18
monocasing considerations 3-63
number format 3-100
SBCS 3-63
sort sequence
 considerations 3-63
time format 3-106
weights and measurements 3-108

L**language**

definition X-2
percentage of population
 Albania 2-1
 Argentina 2-2
 Austria 2-2
 Belgium 2-3
 Bulgaria 2-4
 Canada 2-5
 Czechoslovakia 2-6
 Denmark 2-7
 Finland 2-7
 France 2-8
 FRG 2-9
 GDR 2-9
 Greece 2-10
 Hungary 2-10
 Iceland 2-11
 Italy 2-12
 Japan 2-12
 Korea 2-18
 Netherlands 2-14
 New Zealand 2-14
 Norway 2-15
 Poland 2-16
 Portugal 2-17
 PRC 2-16
 ROC 2-18
 Romania 2-19
 South Africa 2-20
 Spain 2-21
 Sweden 2-22
 Switzerland 2-23
 Thailand 2-24
 Turkey 2-24
 UK 2-25
 USA 2-26
 Yugoslavia 2-26
support of more than one
 Belgium 2-4
 Canada 2-5
 South Africa 2-20
 Spain 2-21
unique characteristics
 Argentina 2-2

- Belgium 2-3
- Canada 2-5
- France 2-8
- Iceland 2-11
- Netherlands 2-13
- New Zealand 2-14
- Portugal 2-17
- South Africa 2-20
- Spain 2-21
- Switzerland 2-23
- UK 2-25
- USA 2-26
- language description
 - Albania 2-1
 - Argentina 2-2
 - Austria 2-2
 - Belgium 2-3
 - Bulgaria 2-4
 - Canada 2-5
 - Czechoslovakia 2-6
 - Denmark 2-6
 - Finland 2-7
 - France 2-8
 - FRG 2-9
 - GDR 2-8
 - Greece 2-10
 - Hungary 2-10
 - Iceland 2-11
 - Italy 2-11
 - Japan 2-12
 - Korea 2-18
 - Netherlands 2-13
 - New Zealand 2-14
 - Norway 2-15
 - Poland 2-16
 - Portugal 2-17
 - PRC 2-15
 - ROC 2-17
 - Romania 2-19
 - South Africa 2-20
 - Spain 2-21
 - Sweden 2-22
 - Switzerland 2-23
 - Thailand 2-23
 - Turkey 2-24
 - UK 2-25
 - USA 2-25
 - Yugoslavia 2-26
- language groupings 1-2
- Latin alphabet
 - definition X-2
 - Japan 3-48
 - Korea 3-63
 - PRC 3-56
 - ROC 3-62
 - Thailand 3-79
- Latin alphabet number 1
 - definition X-2

- sort sequence 3-2
- Latin-character table
 - Bulgaria 3-16
 - Yugoslavia 3-88
- ll
 - effect on sorting 3-9, 3-72
- lowercase
 - caps lock information 3-90
 - definition X-2

M

- machine readable information
 - definition X-2
 - Spanish requirements 2-21
- measurements 3-107
- middle dot
 - effect on sorting 3-72
 - location in the character matrix 3-70
- MLP
 - definition X-2
 - sort sequence 3-3
 - FRG 3-34
 - Switzerland 3-76
- monocasing 3-1
 - caps lock 3-3
 - considerations 3-3
 - Switzerland 3-75
 - definition X-2
- monocasing considerations
 - Japan 3-49
 - Korea 3-63
 - PRC 3-56
 - ROC 3-62
- MRI
 - See machine readable information

N

- national language descriptions 2-1
- national language support, definition X-2
- national laws
 - laws
 - national A-4
- national use graphics, definition X-2
- Netherlands
 - alphabet characteristics 2-14
 - character classification
 - considerations 3-50
 - character table 3-50
 - currency 3-94
 - currency separator symbols 3-96
 - date format 3-102

- description 2-13
- keyboard information 3-91
- language
 - description 2-13
 - name 2-13
 - percentage of population 2-14
- number format 3-99
- sort sequence
 - considerations 3-50
- time format 3-105
- unique characteristics of the language 2-13
- weights and measurements 3-107
- New Zealand
 - alphabet characteristics 2-14
 - character classification
 - considerations 3-52
 - character table 3-52
 - currency 3-94
 - currency separator symbols 3-96
 - date format 3-102
 - description 2-14
 - keyboard information 3-91
 - language
 - description 2-14
 - name 2-14
 - percentage of population 2-14
 - number format 3-99
 - sort sequence
 - considerations 3-52
 - time format 3-105
 - unique characteristics of the language 2-14
 - weights and measurements 3-107
- NL function, definition X-2
- NLS, definition X-2
- nonescaping key
 - definition X-2
 - usage 2-4, 2-20
- Norway
 - alphabet characteristics 2-15
 - character classification
 - considerations 3-54
 - character table 3-54
 - currency 3-94
 - currency separator symbols 3-96
 - date format 3-102
 - description 2-15
 - keyboard information 3-91
 - language
 - description 2-15
 - name 2-15
 - percentage of population 2-15
 - number format 3-99
 - sort sequence
 - considerations 3-54
 - time format 3-105
 - weights and measurements 3-107
- number
 - notation table 3-99, 3-100
 - rounding 3-98

- numeric pad
 - format 3-90
 - table 3-91, 3-92

P

- padding character
 - table 3-96, 3-97
- percent symbol 3-101
- phonetic language, definition X-2
- phonetic sequence
 - sort
 - PRC 3-56
 - ROC 3-62
- Poland
 - alphabet characteristics 2-16
 - character classification
 - considerations 3-57
 - character table 3-57
 - currency 3-94
 - currency separator symbols 3-96
 - date format 3-102
 - description 2-16
 - keyboard information 3-91
 - language
 - description 2-16
 - name 2-16
 - percentage of population 2-16
 - number format 3-99
 - sort sequence
 - considerations 3-57
 - time format 3-105
 - weights and measurements 3-107
- Portugal
 - alphabet characteristics 2-17
 - character classification
 - considerations 3-59
 - character table 3-59
 - currency 3-94
 - currency separator symbols 3-96
 - date format 3-102
 - description 2-16
 - keyboard information 3-91
 - language
 - description 2-17
 - name 2-16
 - percentage of population 2-17
 - number format 3-99
 - sort equal weight characters 3-59
 - sort sequence
 - considerations 3-59
 - time format 3-105
 - unique characteristics of the language 2-17
 - weights and measurements 3-107
- PRC 2-15
 - See also PRC

- alphabet characteristics 2-16
- character set
 - considerations 3-56
- currency 3-95
- currency separator symbols 3-97
- date format 3-104
- DBCS 3-56
- description 2-15
- keyboard information 3-92
- language
 - description 2-15
 - name 2-15
 - percentage of population 2-16
- monocasing considerations 3-56
- number format 3-100
- SBCS 3-56
- sort
 - phonetic sequence 3-56
 - radical within stroke 3-56
 - stroke within radical 3-56
- sort sequence
 - considerations 3-56
- time format 3-106
- weights and measurements 3-108
- product, definition X-2

Q

- QWERTY keyboard
 - definition X-2
 - usage 2-5

R

- radical within stroke
 - sort
 - PRC 3-56
 - ROC 3-62
- retrofit, definition X-2
- ROC
 - alphabet characteristics 2-18
 - calendar 3-101
 - character set
 - considerations 3-62
 - currency 3-95
 - currency separator symbols 3-97
 - date format 3-104
 - DBCS 3-62
 - description 2-17
 - keyboard information 3-92
 - language
 - name 2-17
 - percentage of population 2-18

- monocasing considerations 3-62
- number format 3-100
- SBCS 3-62
- sort
 - phonetic sequence 3-62
 - radical within stroke 3-62
 - stroke within radical 3-62
- sort sequence
 - considerations 3-62
- time format 3-106
- weights and measurements 3-108
- Roman numerals
 - definition X-2
 - Korea usage of 3-63
- Romania
 - alphabet characteristics 2-19
 - character classification
 - considerations 3-64
 - character table 3-64
 - currency 3-94
 - currency separator symbols 3-96
 - date format 3-102
 - description 2-19
 - keyboard information 3-91
 - language
 - description 2-19
 - name 2-19
 - percentage of population 2-19
 - number format 3-99
 - sort sequence
 - considerations 3-64
 - time format 3-105
 - weights and measurements 3-107

S

- SBCS
 - See single-byte character set
- shift lock
 - description 3-90
 - table 3-91, 3-92
- single-byte character set
 - definition X-2
 - Japan 3-48
 - Korea 3-63
 - PRC 3-56
 - ROC 3-62
- sort
 - general 3-2
 - Japan
 - dictionary 3-48
 - strokes and radicals 3-48
 - telephone directory 3-48
 - PRC
 - phonetic sequence 3-56

- radical within stroke 3-56
- stroke within radical 3-56
- ROC
 - phonetic sequence 3-62
 - radical within stroke 3-62
 - stroke within radical 3-62
- sort equal weight characters
 - Argentina 3-7
 - Austria 3-10
 - Belgium 3-13
 - Canada 3-17
 - Czechoslovakia 3-20
 - France 3-29
 - FRG 3-34
 - GDR 3-32
 - Hungary 3-41
 - Italy 3-46
 - Portugal 3-59
 - South Africa 3-66
 - Spain 3-70
 - Turkey 3-82
- sort exits 3-3
- sort sequence 3-1
 - considerations 3-2
 - Albania 3-5
 - Argentina 3-7
 - Austria 3-10
 - Belgium 3-13
 - Canada 3-17
 - Denmark 3-22
 - Finland 3-25
 - France 3-28
 - FRG 3-34
 - GDR 3-32
 - Greece 3-37
 - Hungary 3-41
 - Iceland 3-43
 - Italy 3-46
 - Japan 3-48
 - Korea 3-63
 - Netherlands 3-50
 - New Zealand 3-52
 - Norway 3-54
 - Poland 3-57
 - Portugal 3-59
 - PRC 3-56
 - ROC 3-62
 - Romania 3-64
 - South Africa 3-66
 - Spain 3-69
 - Sweden 3-73
 - Switzerland 3-76
 - Thailand 3-79
 - Turkey 3-82
 - UK 3-84
 - USA 3-86
 - Latin alphabet number 1 3-2
 - MLP 3-3
 - FRG 3-34
- Switzerland 3-76
- South Africa
 - alphabet characteristics 2-20
 - character classification
 - considerations 3-66
 - character table 3-66
 - currency 3-94
 - currency separator symbols 3-96
 - date format 3-102
 - description 2-19
 - keyboard information 3-91
 - language
 - description 2-20
 - name 2-20
 - percentage of population 2-20
 - number format 3-99
 - sort equal weight characters 3-66
 - sort sequence
 - considerations 3-66
 - support of more than one language 2-20
 - time format 3-106
 - unique characteristics of the language 2-20
 - weights and measurements 3-107
- Spain
 - alphabet characteristics 2-21
 - character classification
 - considerations 3-69
 - character table 3-70
 - currency 3-94
 - currency separator symbols 3-96
 - date format 3-102
 - description 2-20
 - keyboard information 3-91
 - language
 - description 2-21
 - name 2-21
 - percentage of population 2-21
 - number format 3-99
 - sort equal weight characters 3-70
 - sort sequence
 - considerations 3-69
 - support of more than one language 2-21
 - time format 3-106
 - unique characteristics of the language 2-21
 - weights and measurements 3-107
- Spanish
 - language
 - Argentina 2-2
 - Spain 2-21
 - special character
 - definition X-2
 - sort 3-2
 - standards
 - language-related A-2
 - standards organizations' addresses A-1
 - stroke within radical
 - sort
 - PRC 3-56

- ROC 3-62
- strokes and radicals
- sort
 - Japan 3-48
- Sweden
 - alphabet characteristics 2-22
 - character classification
 - considerations 3-73
 - character table 3-73
 - currency 3-94
 - currency separator symbols 3-96
 - date format 3-102
 - description 2-22
 - keyboard information 3-91
 - language
 - description 2-22
 - name 2-22
 - percentage of population 2-22
 - number format 3-99
 - sort sequence
 - considerations 3-73
 - time format 3-106
 - weights and measurements 3-107
- Switzerland 3-76
 - alphabet characteristics 2-23
 - character classification
 - considerations 3-75
 - character table 3-76
 - currency 3-94
 - currency separator symbols 3-97
 - date format 3-102
 - description 2-22
 - keyboard information 3-91
 - language
 - description 2-23
 - name 2-22
 - percentage of population 2-23
 - monocasing
 - considerations 3-75
 - number format 3-99
 - sort sequence
 - considerations 3-76
 - time format 3-106
 - unique characteristics of the language 2-23
 - weights and measurements 3-107
- system, definition X-2

T

- table
 - character
 - description of heading 3-4
 - currency field length 3-96, 3-97
 - currency format 3-94, 3-95
 - currency separator symbols 3-96, 3-97

- currency symbol 3-94, 3-95
- date format 3-102, 3-104
- date separator symbols 3-102, 3-104
- keyboard information 3-91, 3-92
- number notation 3-99, 3-100
- padding character 3-96, 3-97
- time format 3-105, 3-106
- time separator symbols 3-105, 3-106
- weights and measurements 3-107, 3-108
- technical characteristics 3-1
- telephone directory
 - sort
 - Japan 3-48
- terminology used in Volume 2 1-1
- text entry, definition X-2
- Thailand
 - alphabet characteristics 2-24
 - calendar 3-101
 - character classification
 - considerations 3-79
 - character table 3-79
 - currency 3-94
 - currency separator symbols 3-97
 - date format 3-102
 - description 2-23
 - keyboard information 3-91
 - language
 - description 2-23
 - name 2-23
 - percentage of population 2-24
 - number format 3-99
 - sort sequence
 - considerations 3-79
 - time format 3-106
 - weights and measurements 3-107
- time format
 - table 3-105, 3-106
- Turkey
 - alphabet characteristics 2-24
 - character classification
 - considerations 3-82
 - character table 3-82
 - currency 3-94
 - currency separator symbols 3-97
 - date format 3-102
 - description 2-24
 - keyboard information 3-91
 - language
 - description 2-24
 - name 2-24
 - percentage of population 2-24
 - number format 3-99
 - sort equal weight characters 3-82
 - sort sequence
 - considerations 3-82
 - time format 3-106
 - weights and measurements 3-107

U

UK

- alphabet characteristics 2-25
- character classification
 - considerations 3-84
- character table 3-84
- currency 3-94
- currency separator symbols 3-97
- date format 3-103
- description 2-25
- keyboard information 3-91
- language
 - description 2-25
 - name 2-25
 - percentage of population 2-25
- number format 3-99
- sort sequence
 - considerations 3-84
- time format 3-106
- unique characteristics of the language 2-25
- weights and measurements 3-107

uppercase

- caps lock information 3-90
- definition X-2

USA

- alphabet characteristics 2-26
- character classification
 - considerations 3-86
- character table 3-86
- currency 3-95
- currency separator symbols 3-97
- date format 3-103
- description 2-25
- keyboard information 3-91
- language

- description 2-25
 - name 2-25
 - percentage of population 2-26
 - number format 3-99
 - sort sequence
 - considerations 3-86
 - time format 3-106
 - unique characteristics of the language 2-26
 - weights and measurements 3-107
- user, definition X-2

W

- weights 3-107

Y

Yugoslavia

- alphabet characteristics 2-26
- character table 3-88
- currency 3-95
- currency separator symbols 3-97
- date format 3-103
- description 2-26
- keyboard information 3-92
- language
 - description 2-26
 - name 2-26
 - percentage of population 2-26
- number format 3-100
- time format 3-106
- weights and measurements 3-107



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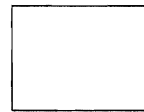
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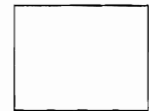
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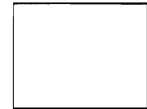
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