

## Character Mnemonics & Character Sets

### Status of the Memo

This memo provides information for the Internet community. It does not specify an Internet standard. Distribution of this memo is unlimited.

### Summary

This memo lists a selection of characters and their presence in some coded character sets. To facilitate the coded character set tabulations an unambiguous mnemonic for each character is used, and a format for tabulating the coded character sets is defined. The coded character sets are given names for easy reference. A family of coded character sets called the mnemonic character sets and conversion between these coded character set without information loss is defined.

The character set names are registered with the Internet Assigned Numbers Authority (IANA). Additional character sets not described in this memo should be registered with the IANA. This memo may be updated periodically, or additional specifications may be published, to reflect other coded character sets.

Please send any comments including comments about the accuracy of the tables to the author, Keld Simonsen <Keld.Simonsen@dkuug.dk>.

### 1. INTRODUCTION

With the growing internationalization of the Internet, support for many coded character sets is required. It is the intention of this memo to document precisely the mapping between all characters and their corresponding coded representations in various coded character sets, and give names to these coded character sets, so they can be referenced unambiguously in Internet standards.

This memo does not indicate anything about the validity of using these specifications in any Internet standard, so you should consult each individual Internet standard to see which coded character sets and names are allowed there.

Unambiguous character mnemonics are specified, which provide a practical way of identifying a character, without reference to a coded character set and its code in this coded character set. The mnemonics are written in a minimal set of characters, namely the invariant 83 graphical characters of ISO 646, which is a kind of greatest common subset to be found between the majority of coded

character sets, including ASCII, national variants of the ISO 646 7-bit character set and various EBCDICs. In addition, the numeric value of the coded representations of all these characters are the same in all coded character sets compatible with ISO standards. All of them except two, EXCLAMATION MARK and QUOTATION MARK, have the same coded representation in all variants of EBCDIC. This minimal set of characters is called the reference character set in this memo.

The mnemonics can be used in Internet standards for easy and unambiguous reference, and they can also serve as a fallback representation in various Internet specifications.

The coded character sets covered include all parts of ISO 8859, ISO 6937-2 and all ISO 646 conforming coded character sets in the ISO character set registry managed by ECMA according to ISO 2375. Almost all graphic coded character sets in the ECMA registry (1) are covered. The graphic coded character sets not included are registry numbers 31, 38, 39, 53, 59, 68, 71, 72, 129 and 137. In addition many vendor defined character sets are covered, including PC codepages (4), (7), (8), many EBCDIC character sets (4), (5), (6) and HP, DEC and Apple character sets (8), (9), (10), (13), (14). The East-Asian 16-bit character sets from the ECMA registry is also included in this memo.

## 2. CHARACTER MNEMONICS

### 2.1 General Syntax

The character mnemonics are taken from the ISO committee draft (CD) of the POSIX.2 standard (3). They are classified into two groups:

1. A group with two-character mnemonics
  - Primarily intended for alphabetic scripts like Latin, Greek, Cyrillic, Hebrew and Arabic, and special characters.
2. A group with variable-length mnemonics
  - primarily intended for non-alphabetic scripts like Japanese and Chinese, but also used for some accented letters and special characters.

In the two-character mnemonics, all invariant graphic character in the ISO 646 character codes except "&" are used, i.e. the following characters:

```
! " % ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
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 Z _
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 z
```

The character "\_" is not used as the first character.

In the variable-length mnemonics, the character "\_" is not used as the first character. If it is used in a name, its presence is doubled.

The mnemonics can be used in several different ways for different purposes. One of these is description of coded character sets, which is detailed in section 3. Another is for extending a given coded character set to a mnemonic character set. This is described in section 4. The restrictions on the use of the characters "&" and "\_" are due to demands of the compositional methods of these techniques.

## 2.2 ISO Official Long Descriptive Character Name

For all mnemonics, the character for which it stands is indicated in the following table by a long descriptive name. This name is identical to the ISO name of the character as given in reference (2). For a few characters that are not included there, descriptive names of the same kind are introduced in this memo. The source of each character is stated in the table after the name and should be consulted for a reliable identification of the character.

These long descriptive names consists only of the capital Latin letters of the invariant part of ISO 646, the digits, "-", and SPACE. Digits are only used in names of ideographic and Hangul characters and never as the first character.

## 2.3 The 2-character Mnemonics

The two-character mnemonics include various accented Latin letters, Greek, Cyrillic, Hebrew, Arabic, Hiragana and Katakana. Also a fair number of special characters are included. Almost all ISO or ISO registered 7- and 8-bit graphical coded character sets are covered with these two-character mnemonics.

The two characters are chosen so the graphical appearance in the reference set resembles as much as possible (within the possibilities available) the graphical appearance of the character. The basic character set of ISO 646 is used as the reference set, as mentioned above.

The characters in the reference character set are chosen to represent themselves.

For control characters from ISO 646 the two-character acronyms of ISO 2047 are used as mnemonics. For the other control characters of ISO 6429, two-character mnemonics have been selected based on the variable-length acronyms used in that standard.

Letters, including Greek, Cyrillic, Arabic and Hebrew, are represented with the base letter as the first letter, and the second letter represents an accent or relation to a non-Latin script. Non-Latin letters are transliterated to Latin letters, following transliteration standards as closely as possible. This is also done with the Latin letters such as ETH and THORN, and the Danish/Norwegian/Swedish letter A WITH RING ABOVE is transliterated into "aa".

After a letter, the second character signifies the following:

|                   |   |                                   |
|-------------------|---|-----------------------------------|
| Exclamation mark  | ! | Grave                             |
| Apostrophe        | ' | Acute accent                      |
| Greater-Than sign | > | Circumflex accent                 |
| Question Mark     | ? | tilde                             |
| Hyphen-Minus      | - | Macron                            |
| Left parenthesis  | ( | Breve                             |
| Full Stop         | . | Dot Above                         |
| Colon             | : | Diaeresis                         |
| Comma             | , | Cedilla                           |
| Underline         | _ | Underline                         |
| Solidus           | / | Stroke                            |
| Quotation mark    | " | Double acute accent               |
| Semicolon         | ; | Ogonek                            |
| Less-Than sign    | < | Caron                             |
| Zero              | 0 | Ring above                        |
| Two               | 2 | Hook                              |
| Nine              | 9 | Horn                              |
| Equals            | = | Cyrillic                          |
| Asterisk          | * | Greek                             |
| Percent sign      | % | Greek/Cyrillic special            |
| Plus              | + | small: Arabic, capitals: Hebrew   |
| Three             | 3 | some Latin/Greek/Cyrillic letters |
| Four              | 4 | Bopomofo                          |
| Five              | 5 | Hiragana                          |
| Six               | 6 | Katakana                          |

In designing the mnemonics the following special characters were reserved: The ampersand is reserved as an intro character, indicating that the following string is in the mnemonic character set. The underline character is reserved for the variable-length mnemonics. This use does not eliminate usage as an accent or language identifier.

Special characters are encoded with some mnemonic value. These are not systematic thruout, but most mnemonics start with a related special character of the reference set.

#### 2.4 The Variable-length Character Mnemonics

The Variable-length Character Mnemonics are primarily meant for the ideographic characters in larger Asian character sets, but are also used for accented characters with several accents and some special characters. To have the mnemonics as short as possible, which both saves storage and is easier to input, a quite short name is preferred. Considering the Chinese standard GB 2312-1980, the Japanese standards JIS X0208 and JIS X0212, and the Korean standard KS C 5601, they are all given by row and column numbers between 1 and 94. So two positions for row and column and a character set identifier of one character would be almost as short as possible. The following character set identifiers are defined:

c GB 2312-1980  
 j JIS X0208-1990  
 J JIS X0212-1990  
 k KS C 5601-1987

This system for the representation of ideographic characters and Hangul characters is not truly mnemonic, but it provides short representations that are easy to connect to the corresponding character by means of the code table of an official character set standard. Alternative methods based on the graphic appearance or the pronunciation of the characters are thought to be unfeasible.

One prominent character in the reference character set is reserved for identifying variable-length mnemonics, namely the underline character "\_". This character is intended as a delimiter both in the front and in the end of the mnemonic. An example of its use would be: (&=intro):

&\_j3210\_ &\_j4436\_&\_j6530\_

### 3. CHARACTER MNEMONIC TABLE

The following table contains the character mnemonic and the encoding and long descriptive name of ISO 2DIS 10646 (2). Although the ISO 10646 is only at DIS stage at this moment of writing and there is quite some debate about it, the long descriptive naming in the DIS is considered to be stable and the best official ISO reference to character names. The 2-octet encoded value of the ISO 2DIS 10646 is also used, but only as an identification of the character, and it should only be used for identification purposes as the coded representation may be changed in the final 10646 international standard. Some characters not in the ISO 2DIS 10646 are allocated values in the private use zone and given names and references to a character set where it is used.

The format of the table is:

1st field is the character mnemonic (mostly 2 characters).  
 2nd field is the ISO 2DIS 10646 code in hexadecimal.  
 3rd field is the long descriptive name of ISO 2DIS 10646.

|    |      |                   |
|----|------|-------------------|
| SP | 0020 | SPACE             |
| !  | 0021 | EXCLAMATION MARK  |
| "  | 0022 | QUOTATION MARK    |
| Nb | 0023 | NUMBER SIGN       |
| DO | 0024 | DOLLAR SIGN       |
| %  | 0025 | PERCENT SIGN      |
| &  | 0026 | AMPERSAND         |
| '  | 0027 | APOSTROPHE        |
| (  | 0028 | LEFT PARENTHESIS  |
| )  | 0029 | RIGHT PARENTHESIS |
| *  | 002a | ASTERISK          |
| +  | 002b | PLUS SIGN         |

|    |      |                        |
|----|------|------------------------|
| ,  | 002c | COMMA                  |
| -  | 002d | HYPHEN-MINUS           |
| .  | 002e | FULL STOP              |
| /  | 002f | SOLIDUS                |
| 0  | 0030 | DIGIT ZERO             |
| 1  | 0031 | DIGIT ONE              |
| 2  | 0032 | DIGIT TWO              |
| 3  | 0033 | DIGIT THREE            |
| 4  | 0034 | DIGIT FOUR             |
| 5  | 0035 | DIGIT FIVE             |
| 6  | 0036 | DIGIT SIX              |
| 7  | 0037 | DIGIT SEVEN            |
| 8  | 0038 | DIGIT EIGHT            |
| 9  | 0039 | DIGIT NINE             |
| :  | 003a | COLON                  |
| ;  | 003b | SEMICOLON              |
| <  | 003c | LESS-THAN SIGN         |
| =  | 003d | EQUALS SIGN            |
| >  | 003e | GREATER-THAN SIGN      |
| ?  | 003f | QUESTION MARK          |
| At | 0040 | COMMERCIAL AT          |
| A  | 0041 | LATIN CAPITAL LETTER A |
| B  | 0042 | LATIN CAPITAL LETTER B |
| C  | 0043 | LATIN CAPITAL LETTER C |
| D  | 0044 | LATIN CAPITAL LETTER D |
| E  | 0045 | LATIN CAPITAL LETTER E |
| F  | 0046 | LATIN CAPITAL LETTER F |
| G  | 0047 | LATIN CAPITAL LETTER G |
| H  | 0048 | LATIN CAPITAL LETTER H |
| I  | 0049 | LATIN CAPITAL LETTER I |
| J  | 004a | LATIN CAPITAL LETTER J |
| K  | 004b | LATIN CAPITAL LETTER K |
| L  | 004c | LATIN CAPITAL LETTER L |
| M  | 004d | LATIN CAPITAL LETTER M |
| N  | 004e | LATIN CAPITAL LETTER N |
| O  | 004f | LATIN CAPITAL LETTER O |
| P  | 0050 | LATIN CAPITAL LETTER P |
| Q  | 0051 | LATIN CAPITAL LETTER Q |
| R  | 0052 | LATIN CAPITAL LETTER R |
| S  | 0053 | LATIN CAPITAL LETTER S |
| T  | 0054 | LATIN CAPITAL LETTER T |
| U  | 0055 | LATIN CAPITAL LETTER U |
| V  | 0056 | LATIN CAPITAL LETTER V |
| W  | 0057 | LATIN CAPITAL LETTER W |
| X  | 0058 | LATIN CAPITAL LETTER X |
| Y  | 0059 | LATIN CAPITAL LETTER Y |
| Z  | 005a | LATIN CAPITAL LETTER Z |
| <( | 005b | LEFT SQUARE BRACKET    |
| // | 005c | REVERSE SOLIDUS        |
| )> | 005d | RIGHT SQUARE BRACKET   |
| '> | 005e | CIRCUMFLEX ACCENT      |
| _  | 005f | LOW LINE               |
| '! | 0060 | GRAVE ACCENT           |

|    |      |   |
|----|------|---|
| a  | 0061 | LATIN SMALL LETTER A                      |
| b  | 0062 | LATIN SMALL LETTER B                      |
| c  | 0063 | LATIN SMALL LETTER C                      |
| d  | 0064 | LATIN SMALL LETTER D                      |
| e  | 0065 | LATIN SMALL LETTER E                      |
| f  | 0066 | LATIN SMALL LETTER F                      |
| g  | 0067 | LATIN SMALL LETTER G                      |
| h  | 0068 | LATIN SMALL LETTER H                      |
| i  | 0069 | LATIN SMALL LETTER I                      |
| j  | 006a | LATIN SMALL LETTER J                      |
| k  | 006b | LATIN SMALL LETTER K                      |
| l  | 006c | LATIN SMALL LETTER L                      |
| m  | 006d | LATIN SMALL LETTER M                      |
| n  | 006e | LATIN SMALL LETTER N                      |
| o  | 006f | LATIN SMALL LETTER O                      |
| p  | 0070 | LATIN SMALL LETTER P                      |
| q  | 0071 | LATIN SMALL LETTER Q                      |
| r  | 0072 | LATIN SMALL LETTER R                      |
| s  | 0073 | LATIN SMALL LETTER S                      |
| t  | 0074 | LATIN SMALL LETTER T                      |
| u  | 0075 | LATIN SMALL LETTER U                      |
| v  | 0076 | LATIN SMALL LETTER V                      |
| w  | 0077 | LATIN SMALL LETTER W                      |
| x  | 0078 | LATIN SMALL LETTER X                      |
| y  | 0079 | LATIN SMALL LETTER Y                      |
| z  | 007a | LATIN SMALL LETTER Z                      |
| (! | 007b | LEFT CURLY BRACKET                        |
| !! | 007c | VERTICAL LINE                             |
| !) | 007d | RIGHT CURLY BRACKET                       |
| '? | 007e | TILDE                                     |
| NS | 00a0 | NO-BREAK SPACE                            |
| !I | 00a1 | INVERTED EXCLAMATION MARK                 |
| Ct | 00a2 | CENT SIGN                                 |
| Pd | 00a3 | POUND SIGN                                |
| Cu | 00a4 | CURRENCY SIGN                             |
| Ye | 00a5 | YEN SIGN                                  |
| BB | 00a6 | BROKEN BAR                                |
| SE | 00a7 | SECTION SIGN                              |
| ': | 00a8 | DIAERESIS                                 |
| Co | 00a9 | COPYRIGHT SIGN                            |
| -a | 00aa | FEMININE ORDINAL INDICATOR                |
| << | 00ab | LEFT-POINTING DOUBLE ANGLE QUOTATION MARK |
| NO | 00ac | NOT SIGN                                  |
| -- | 00ad | SOFT HYPHEN                               |
| Rg | 00ae | REGISTERED SIGN                           |
| 'm | 00af | MACRON                                    |
| DG | 00b0 | DEGREE SIGN                               |
| +- | 00b1 | PLUS-MINUS SIGN                           |
| 2S | 00b2 | SUPERSCRIPIT TWO                          |
| 3S | 00b3 | SUPERSCRIPIT THREE                        |
| '' | 00b4 | ACUTE ACCENT                              |
| My | 00b5 | MICRO SIGN                                |
| PI | 00b6 | PILCROW SIGN                              |

|    |      |  |
|----|------|--|
| .M | 00b7 | MIDDLE DOT                                 |
| '  | 00b8 | CEDILLA                                    |
| 1S | 00b9 | SUPERSCRIPIT ONE                           |
| -o | 00ba | MASCULINE ORDINAL INDICATOR                |
| >> | 00bb | RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK |
| 14 | 00bc | VULGAR FRACTION ONE QUARTER                |
| 12 | 00bd | VULGAR FRACTION ONE HALF                   |
| 34 | 00be | VULGAR FRACTION THREE QUARTERS             |
| ?I | 00bf | INVERTED QUESTION MARK                     |
| A! | 00c0 | LATIN CAPITAL LETTER A WITH GRAVE          |
| A' | 00c1 | LATIN CAPITAL LETTER A WITH ACUTE          |
| A> | 00c2 | LATIN CAPITAL LETTER A WITH CIRCUMFLEX     |
| A? | 00c3 | LATIN CAPITAL LETTER A WITH TILDE          |
| A: | 00c4 | LATIN CAPITAL LETTER A WITH DIAERESIS      |
| AA | 00c5 | LATIN CAPITAL LETTER A WITH RING ABOVE     |
| AE | 00c6 | LATIN CAPITAL LETTER AE                    |
| C, | 00c7 | LATIN CAPITAL LETTER C WITH CEDILLA        |
| E! | 00c8 | LATIN CAPITAL LETTER E WITH GRAVE          |
| E' | 00c9 | LATIN CAPITAL LETTER E WITH ACUTE          |
| E> | 00ca | LATIN CAPITAL LETTER E WITH CIRCUMFLEX     |
| E: | 00cb | LATIN CAPITAL LETTER E WITH DIAERESIS      |
| I! | 00cc | LATIN CAPITAL LETTER I WITH GRAVE          |
| I' | 00cd | LATIN CAPITAL LETTER I WITH ACUTE          |
| I> | 00ce | LATIN CAPITAL LETTER I WITH CIRCUMFLEX     |
| I: | 00cf | LATIN CAPITAL LETTER I WITH DIAERESIS      |
| D- | 00d0 | LATIN CAPITAL LETTER ETH (Icelandic)       |
| N? | 00d1 | LATIN CAPITAL LETTER N WITH TILDE          |
| O! | 00d2 | LATIN CAPITAL LETTER O WITH GRAVE          |
| O' | 00d3 | LATIN CAPITAL LETTER O WITH ACUTE          |
| O> | 00d4 | LATIN CAPITAL LETTER O WITH CIRCUMFLEX     |
| O? | 00d5 | LATIN CAPITAL LETTER O WITH TILDE          |
| O: | 00d6 | LATIN CAPITAL LETTER O WITH DIAERESIS      |
| *X | 00d7 | MULTIPLICATION SIGN                        |
| O/ | 00d8 | LATIN CAPITAL LETTER O WITH STROKE         |
| U! | 00d9 | LATIN CAPITAL LETTER U WITH GRAVE          |
| U' | 00da | LATIN CAPITAL LETTER U WITH ACUTE          |
| U> | 00db | LATIN CAPITAL LETTER U WITH CIRCUMFLEX     |
| U: | 00dc | LATIN CAPITAL LETTER U WITH DIAERESIS      |
| Y' | 00dd | LATIN CAPITAL LETTER Y WITH ACUTE          |
| TH | 00de | LATIN CAPITAL LETTER THORN (Icelandic)     |
| ss | 00df | LATIN SMALL LETTER SHARP S (German)        |
| a! | 00e0 | LATIN SMALL LETTER A WITH GRAVE            |
| a' | 00e1 | LATIN SMALL LETTER A WITH ACUTE            |
| a> | 00e2 | LATIN SMALL LETTER A WITH CIRCUMFLEX       |
| a? | 00e3 | LATIN SMALL LETTER A WITH TILDE            |
| a: | 00e4 | LATIN SMALL LETTER A WITH DIAERESIS        |
| aa | 00e5 | LATIN SMALL LETTER A WITH RING ABOVE       |
| ae | 00e6 | LATIN SMALL LETTER AE                      |
| c, | 00e7 | LATIN SMALL LETTER C WITH CEDILLA          |
| e! | 00e8 | LATIN SMALL LETTER E WITH GRAVE            |
| e' | 00e9 | LATIN SMALL LETTER E WITH ACUTE            |
| e> | 00ea | LATIN SMALL LETTER E WITH CIRCUMFLEX       |
| e: | 00eb | LATIN SMALL LETTER E WITH DIAERESIS        |

|    |      |  |
|----|------|--|
| i! | 00ec | LATIN SMALL LETTER I WITH GRAVE        |
| i' | 00ed | LATIN SMALL LETTER I WITH ACUTE        |
| i> | 00ee | LATIN SMALL LETTER I WITH CIRCUMFLEX   |
| i: | 00ef | LATIN SMALL LETTER I WITH DIAERESIS    |
| d- | 00f0 | LATIN SMALL LETTER ETH (Icelandic)     |
| n? | 00f1 | LATIN SMALL LETTER N WITH TILDE        |
| o! | 00f2 | LATIN SMALL LETTER O WITH GRAVE        |
| o' | 00f3 | LATIN SMALL LETTER O WITH ACUTE        |
| o> | 00f4 | LATIN SMALL LETTER O WITH CIRCUMFLEX   |
| o? | 00f5 | LATIN SMALL LETTER O WITH TILDE        |
| o: | 00f6 | LATIN SMALL LETTER O WITH DIAERESIS    |
| -: | 00f7 | DIVISION SIGN                          |
| o/ | 00f8 | LATIN SMALL LETTER O WITH STROKE       |
| u! | 00f9 | LATIN SMALL LETTER U WITH GRAVE        |
| u' | 00fa | LATIN SMALL LETTER U WITH ACUTE        |
| u> | 00fb | LATIN SMALL LETTER U WITH CIRCUMFLEX   |
| u: | 00fc | LATIN SMALL LETTER U WITH DIAERESIS    |
| y' | 00fd | LATIN SMALL LETTER Y WITH ACUTE        |
| th | 00fe | LATIN SMALL LETTER THORN (Icelandic)   |
| y: | 00ff | LATIN SMALL LETTER Y WITH DIAERESIS    |
| A- | 0100 | LATIN CAPITAL LETTER A WITH MACRON     |
| a- | 0101 | LATIN SMALL LETTER A WITH MACRON       |
| A( | 0102 | LATIN CAPITAL LETTER A WITH BREVE      |
| a( | 0103 | LATIN SMALL LETTER A WITH BREVE        |
| A; | 0104 | LATIN CAPITAL LETTER A WITH OGONEK     |
| a; | 0105 | LATIN SMALL LETTER A WITH OGONEK       |
| C' | 0106 | LATIN CAPITAL LETTER C WITH ACUTE      |
| c' | 0107 | LATIN SMALL LETTER C WITH ACUTE        |
| C> | 0108 | LATIN CAPITAL LETTER C WITH CIRCUMFLEX |
| c> | 0109 | LATIN SMALL LETTER C WITH CIRCUMFLEX   |
| C. | 010a | LATIN CAPITAL LETTER C WITH DOT ABOVE  |
| c. | 010b | LATIN SMALL LETTER C WITH DOT ABOVE    |
| C< | 010c | LATIN CAPITAL LETTER C WITH CARON      |
| c< | 010d | LATIN SMALL LETTER C WITH CARON        |
| D< | 010e | LATIN CAPITAL LETTER D WITH CARON      |
| d< | 010f | LATIN SMALL LETTER D WITH CARON        |
| D/ | 0110 | LATIN CAPITAL LETTER D WITH STROKE     |
| d/ | 0111 | LATIN SMALL LETTER D WITH STROKE       |
| E- | 0112 | LATIN CAPITAL LETTER E WITH MACRON     |
| e- | 0113 | LATIN SMALL LETTER E WITH MACRON       |
| E( | 0114 | LATIN CAPITAL LETTER E WITH BREVE      |
| e( | 0115 | LATIN SMALL LETTER E WITH BREVE        |
| E. | 0116 | LATIN CAPITAL LETTER E WITH DOT ABOVE  |
| e. | 0117 | LATIN SMALL LETTER E WITH DOT ABOVE    |
| E; | 0118 | LATIN CAPITAL LETTER E WITH OGONEK     |
| e; | 0119 | LATIN SMALL LETTER E WITH OGONEK       |
| E< | 011a | LATIN CAPITAL LETTER E WITH CARON      |
| e< | 011b | LATIN SMALL LETTER E WITH CARON        |
| G> | 011c | LATIN CAPITAL LETTER G WITH CIRCUMFLEX |
| g> | 011d | LATIN SMALL LETTER G WITH CIRCUMFLEX   |
| G( | 011e | LATIN CAPITAL LETTER G WITH BREVE      |
| g( | 011f | LATIN SMALL LETTER G WITH BREVE        |
| G. | 0120 | LATIN CAPITAL LETTER G WITH DOT ABOVE  |

|    |      |   |
|----|------|---|
| g. | 0121 | LATIN SMALL LETTER G WITH DOT ABOVE         |
| G, | 0122 | LATIN CAPITAL LETTER G WITH CEDILLA         |
| g, | 0123 | LATIN SMALL LETTER G WITH CEDILLA           |
| H> | 0124 | LATIN CAPITAL LETTER H WITH CIRCUMFLEX      |
| h> | 0125 | LATIN SMALL LETTER H WITH CIRCUMFLEX        |
| H/ | 0126 | LATIN CAPITAL LETTER H WITH STROKE          |
| h/ | 0127 | LATIN SMALL LETTER H WITH STROKE            |
| I? | 0128 | LATIN CAPITAL LETTER I WITH TILDE           |
| i? | 0129 | LATIN SMALL LETTER I WITH TILDE             |
| I- | 012a | LATIN CAPITAL LETTER I WITH MACRON          |
| i- | 012b | LATIN SMALL LETTER I WITH MACRON            |
| I( | 012c | LATIN CAPITAL LETTER I WITH BREVE           |
| i( | 012d | LATIN SMALL LETTER I WITH BREVE             |
| I; | 012e | LATIN CAPITAL LETTER I WITH OGONEK          |
| i; | 012f | LATIN SMALL LETTER I WITH OGONEK            |
| I. | 0130 | LATIN CAPITAL LETTER I WITH DOT ABOVE       |
| i. | 0131 | LATIN SMALL LETTER I DOTLESS                |
| IJ | 0132 | LATIN CAPITAL LIGATURE IJ                   |
| ij | 0133 | LATIN SMALL LIGATURE IJ                     |
| J> | 0134 | LATIN CAPITAL LETTER J WITH CIRCUMFLEX      |
| j> | 0135 | LATIN SMALL LETTER J WITH CIRCUMFLEX        |
| K, | 0136 | LATIN CAPITAL LETTER K WITH CEDILLA         |
| k, | 0137 | LATIN SMALL LETTER K WITH CEDILLA           |
| kk | 0138 | LATIN SMALL LETTER KRA (Greenlandic)        |
| L' | 0139 | LATIN CAPITAL LETTER L WITH ACUTE           |
| l' | 013a | LATIN SMALL LETTER L WITH ACUTE             |
| L, | 013b | LATIN CAPITAL LETTER L WITH CEDILLA         |
| l, | 013c | LATIN SMALL LETTER L WITH CEDILLA           |
| L< | 013d | LATIN CAPITAL LETTER L WITH CARON           |
| l< | 013e | LATIN SMALL LETTER L WITH CARON             |
| L. | 013f | LATIN CAPITAL LETTER L WITH MIDDLE DOT      |
| l. | 0140 | LATIN SMALL LETTER L WITH MIDDLE DOT        |
| L/ | 0141 | LATIN CAPITAL LETTER L WITH STROKE          |
| l/ | 0142 | LATIN SMALL LETTER L WITH STROKE            |
| N' | 0143 | LATIN CAPITAL LETTER N WITH ACUTE           |
| n' | 0144 | LATIN SMALL LETTER N WITH ACUTE             |
| N, | 0145 | LATIN CAPITAL LETTER N WITH CEDILLA         |
| n, | 0146 | LATIN SMALL LETTER N WITH CEDILLA           |
| N< | 0147 | LATIN CAPITAL LETTER N WITH CARON           |
| n< | 0148 | LATIN SMALL LETTER N WITH CARON             |
| 'n | 0149 | LATIN SMALL LETTER N PRECEDED BY APOSTROPHE |
| NG | 014a | LATIN CAPITAL LETTER ENG (Lappish)          |
| ng | 014b | LATIN SMALL LETTER ENG (Lappish)            |
| O- | 014c | LATIN CAPITAL LETTER O WITH MACRON          |
| o- | 014d | LATIN SMALL LETTER O WITH MACRON            |
| O( | 014e | LATIN CAPITAL LETTER O WITH BREVE           |
| o( | 014f | LATIN SMALL LETTER O WITH BREVE             |
| O" | 0150 | LATIN CAPITAL LETTER O WITH DOUBLE ACUTE    |
| o" | 0151 | LATIN SMALL LETTER O WITH DOUBLE ACUTE      |
| OE | 0152 | LATIN CAPITAL LIGATURE OE                   |
| oe | 0153 | LATIN SMALL LIGATURE OE                     |
| R' | 0154 | LATIN CAPITAL LETTER R WITH ACUTE           |
| r' | 0155 | LATIN SMALL LETTER R WITH ACUTE             |

|    |      |  |
|----|------|--|
| R, | 0156 | LATIN CAPITAL LETTER R WITH CEDILLA      |
| r, | 0157 | LATIN SMALL LETTER R WITH CEDILLA        |
| r< | 0158 | LATIN CAPITAL LETTER R WITH CARON        |
| r< | 0159 | LATIN SMALL LETTER R WITH CARON          |
| S' | 015a | LATIN CAPITAL LETTER S WITH ACUTE        |
| s' | 015b | LATIN SMALL LETTER S WITH ACUTE          |
| S> | 015c | LATIN CAPITAL LETTER S WITH CIRCUMFLEX   |
| s> | 015d | LATIN SMALL LETTER S WITH CIRCUMFLEX     |
| S, | 015e | LATIN CAPITAL LETTER S WITH CEDILLA      |
| s, | 015f | LATIN SMALL LETTER S WITH CEDILLA        |
| S< | 0160 | LATIN CAPITAL LETTER S WITH CARON        |
| s< | 0161 | LATIN SMALL LETTER S WITH CARON          |
| T, | 0162 | LATIN CAPITAL LETTER T WITH CEDILLA      |
| t, | 0163 | LATIN SMALL LETTER T WITH CEDILLA        |
| T< | 0164 | LATIN CAPITAL LETTER T WITH CARON        |
| t< | 0165 | LATIN SMALL LETTER T WITH CARON          |
| T/ | 0166 | LATIN CAPITAL LETTER T WITH STROKE       |
| t/ | 0167 | LATIN SMALL LETTER T WITH STROKE         |
| U? | 0168 | LATIN CAPITAL LETTER U WITH TILDE        |
| u? | 0169 | LATIN SMALL LETTER U WITH TILDE          |
| U- | 016a | LATIN CAPITAL LETTER U WITH MACRON       |
| u- | 016b | LATIN SMALL LETTER U WITH MACRON         |
| U( | 016c | LATIN CAPITAL LETTER U WITH BREVE        |
| u( | 016d | LATIN SMALL LETTER U WITH BREVE          |
| U0 | 016e | LATIN CAPITAL LETTER U WITH RING ABOVE   |
| u0 | 016f | LATIN SMALL LETTER U WITH RING ABOVE     |
| U" | 0170 | LATIN CAPITAL LETTER U WITH DOUBLE ACUTE |
| u" | 0171 | LATIN SMALL LETTER U WITH DOUBLE ACUTE   |
| U; | 0172 | LATIN CAPITAL LETTER U WITH OGONEK       |
| u; | 0173 | LATIN SMALL LETTER U WITH OGONEK         |
| W> | 0174 | LATIN CAPITAL LETTER W WITH CIRCUMFLEX   |
| w> | 0175 | LATIN SMALL LETTER W WITH CIRCUMFLEX     |
| Y> | 0176 | LATIN CAPITAL LETTER Y WITH CIRCUMFLEX   |
| y> | 0177 | LATIN SMALL LETTER Y WITH CIRCUMFLEX     |
| Y: | 0178 | LATIN CAPITAL LETTER Y WITH DIAERESIS    |
| Z' | 0179 | LATIN CAPITAL LETTER Z WITH ACUTE        |
| z' | 017a | LATIN SMALL LETTER Z WITH ACUTE          |
| Z. | 017b | LATIN CAPITAL LETTER Z WITH DOT ABOVE    |
| z. | 017c | LATIN SMALL LETTER Z WITH DOT ABOVE      |
| Z< | 017d | LATIN CAPITAL LETTER Z WITH CARON        |
| z< | 017e | LATIN SMALL LETTER Z WITH CARON          |
| O9 | 01a0 | LATIN CAPITAL LETTER O WITH HORN         |
| o9 | 01a1 | LATIN SMALL LETTER O WITH HORN           |
| OI | 01a2 | LATIN CAPITAL LETTER OI                  |
| oi | 01a3 | LATIN SMALL LETTER OI                    |
| yr | 01a6 | LATIN LETTER YR                          |
| U9 | 01af | LATIN CAPITAL LETTER U WITH HORN         |
| u9 | 01b0 | LATIN SMALL LETTER U WITH HORN           |
| Z/ | 01b5 | LATIN CAPITAL LETTER Z WITH STROKE       |
| z/ | 01b6 | LATIN SMALL LETTER Z WITH STROKE         |
| ED | 01b7 | LATIN CAPITAL LETTER EZH                 |
| A< | 01cd | LATIN CAPITAL LETTER A WITH CARON        |
| a< | 01ce | LATIN SMALL LETTER A WITH CARON          |

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|-----|------|--|
| I<  | 01cf | LATIN CAPITAL LETTER I WITH CARON                |
| i<  | 01d0 | LATIN SMALL LETTER I WITH CARON                  |
| O<  | 01d1 | LATIN CAPITAL LETTER O WITH CARON                |
| o<  | 01d2 | LATIN SMALL LETTER O WITH CARON                  |
| U<  | 01d3 | LATIN CAPITAL LETTER U WITH CARON                |
| u<  | 01d4 | LATIN SMALL LETTER U WITH CARON                  |
| U:- | 01d5 | LATIN CAPITAL LETTER U WITH DIAERESIS AND MACRON |
| u:- | 01d6 | LATIN SMALL LETTER U WITH DIAERESIS AND MACRON   |
| U:' | 01d7 | LATIN CAPITAL LETTER U WITH DIAERESIS AND ACUTE  |
| u:' | 01d8 | LATIN SMALL LETTER U WITH DIAERESIS AND ACUTE    |
| U:< | 01d9 | LATIN CAPITAL LETTER U WITH DIAERESIS AND CARON  |
| u:< | 01da | LATIN SMALL LETTER U WITH DIAERESIS AND CARON    |
| U:! | 01db | LATIN CAPITAL LETTER U WITH DIAERESIS AND GRAVE  |
| u:! | 01dc | LATIN SMALL LETTER U WITH DIAERESIS AND GRAVE    |
| A1  | 01de | LATIN CAPITAL LETTER A WITH DIAERESIS AND MACRON |
| a1  | 01df | LATIN SMALL LETTER A WITH DIAERESIS AND MACRON   |
| A7  | 01e0 | LATIN CAPITAL LETTER A WITH DOT ABOVE AND MACRON |
| a7  | 01e1 | LATIN SMALL LETTER A WITH DOT ABOVE AND MACRON   |
| A3  | 01e2 | LATIN CAPITAL LETTER AE WITH MACRON              |
| a3  | 01e3 | LATIN SMALL LETTER AE WITH MACRON                |
| G/  | 01e4 | LATIN CAPITAL LETTER G WITH STROKE               |
| g/  | 01e5 | LATIN SMALL LETTER G WITH STROKE                 |
| G<  | 01e6 | LATIN CAPITAL LETTER G WITH CARON                |
| g<  | 01e7 | LATIN SMALL LETTER G WITH CARON                  |
| K<  | 01e8 | LATIN CAPITAL LETTER K WITH CARON                |
| k<  | 01e9 | LATIN SMALL LETTER K WITH CARON                  |
| O;  | 01ea | LATIN CAPITAL LETTER O WITH OGONEK               |
| o;  | 01eb | LATIN SMALL LETTER O WITH OGONEK                 |
| O1  | 01ec | LATIN CAPITAL LETTER O WITH OGONEK AND MACRON    |
| o1  | 01ed | LATIN SMALL LETTER O WITH OGONEK AND MACRON      |
| EZ  | 01ee | LATIN CAPITAL LETTER EZH WITH CARON              |
| ez  | 01ef | LATIN SMALL LETTER EZH WITH CARON                |
| j<  | 01f0 | LATIN SMALL LETTER J WITH CARON                  |
| G'  | 01f4 | LATIN CAPITAL LETTER G WITH ACUTE                |
| g'  | 01f5 | LATIN SMALL LETTER G WITH ACUTE                  |
| AA' | 01fa | LATIN CAPITAL LETTER A WITH RING ABOVE AND ACUTE |
| aa' | 01fb | LATIN SMALL LETTER A WITH RING ABOVE AND ACUTE   |
| AE' | 01fc | LATIN CAPITAL LETTER AE WITH ACUTE               |
| ae' | 01fd | LATIN SMALL LETTER AE WITH ACUTE                 |
| O/' | 01fe | LATIN CAPITAL LETTER O WITH STROKE AND ACUTE     |
| o/' | 01ff | LATIN SMALL LETTER O WITH STROKE AND ACUTE       |
| ;S  | 02bf | MODIFIER LETTER LEFT HALF RING                   |
| '<  | 02c7 | CARON  |
| '(  | 02d8 | BREVE  |
| '.  | 02d9 | DOT ABOVE  |
| '0  | 02da | RING ABOVE                                       |
| ';  | 02db | OGONEK   |
| '"  | 02dd | DOUBLE ACUTE ACCENT                              |
| A%  | 0386 | GREEK CAPITAL LETTER ALPHA WITH ACUTE            |
| E%  | 0388 | GREEK CAPITAL LETTER EPSILON WITH ACUTE          |
| Y%  | 0389 | GREEK CAPITAL LETTER ETA WITH ACUTE              |
| I%  | 038a | GREEK CAPITAL LETTER IOTA WITH ACUTE             |
| O%  | 038c | GREEK CAPITAL LETTER OMICRON WITH ACUTE          |

|    |      |   |
|----|------|---|
| U% | 038e | GREEK CAPITAL LETTER UPSILON WITH ACUTE             |
| W% | 038f | GREEK CAPITAL LETTER OMEGA WITH ACUTE               |
| i3 | 0390 | GREEK SMALL LETTER IOTA WITH ACUTE AND DIAERESIS    |
| A* | 0391 | GREEK CAPITAL LETTER ALPHA                          |
| B* | 0392 | GREEK CAPITAL LETTER BETA                           |
| G* | 0393 | GREEK CAPITAL LETTER GAMMA                          |
| D* | 0394 | GREEK CAPITAL LETTER DELTA                          |
| E* | 0395 | GREEK CAPITAL LETTER EPSILON                        |
| Z* | 0396 | GREEK CAPITAL LETTER ZETA                           |
| Y* | 0397 | GREEK CAPITAL LETTER ETA                            |
| H* | 0398 | GREEK CAPITAL LETTER THETA                          |
| I* | 0399 | GREEK CAPITAL LETTER IOTA                           |
| K* | 039a | GREEK CAPITAL LETTER KAPPA                          |
| L* | 039b | GREEK CAPITAL LETTER LAMDA                          |
| M* | 039c | GREEK CAPITAL LETTER MU                             |
| N* | 039d | GREEK CAPITAL LETTER NU                             |
| C* | 039e | GREEK CAPITAL LETTER XI                             |
| O* | 039f | GREEK CAPITAL LETTER OMICRON                        |
| P* | 03a0 | GREEK CAPITAL LETTER PI                             |
| R* | 03a1 | GREEK CAPITAL LETTER RHO                            |
| S* | 03a3 | GREEK CAPITAL LETTER SIGMA                          |
| T* | 03a4 | GREEK CAPITAL LETTER TAU                            |
| U* | 03a5 | GREEK CAPITAL LETTER UPSILON                        |
| F* | 03a6 | GREEK CAPITAL LETTER PHI                            |
| X* | 03a7 | GREEK CAPITAL LETTER CHI                            |
| Q* | 03a8 | GREEK CAPITAL LETTER PSI                            |
| W* | 03a9 | GREEK CAPITAL LETTER OMEGA                          |
| J* | 03aa | GREEK CAPITAL LETTER IOTA WITH DIAERESIS            |
| V* | 03ab | GREEK CAPITAL LETTER UPSILON WITH DIAERESIS         |
| a% | 03ac | GREEK SMALL LETTER ALPHA WITH ACUTE                 |
| e% | 03ad | GREEK SMALL LETTER EPSILON WITH ACUTE               |
| y% | 03ae | GREEK SMALL LETTER ETA WITH ACUTE                   |
| i% | 03af | GREEK SMALL LETTER IOTA WITH ACUTE                  |
| u3 | 03b0 | GREEK SMALL LETTER UPSILON WITH ACUTE AND DIAERESIS |
| a* | 03b1 | GREEK SMALL LETTER ALPHA                            |
| b* | 03b2 | GREEK SMALL LETTER BETA                             |
| g* | 03b3 | GREEK SMALL LETTER GAMMA                            |
| d* | 03b4 | GREEK SMALL LETTER DELTA                            |
| e* | 03b5 | GREEK SMALL LETTER EPSILON                          |
| z* | 03b6 | GREEK SMALL LETTER ZETA                             |
| y* | 03b7 | GREEK SMALL LETTER ETA                              |
| h* | 03b8 | GREEK SMALL LETTER THETA                            |
| i* | 03b9 | GREEK SMALL LETTER IOTA                             |
| k* | 03ba | GREEK SMALL LETTER KAPPA                            |
| l* | 03bb | GREEK SMALL LETTER LAMDA                            |
| m* | 03bc | GREEK SMALL LETTER MU                               |
| n* | 03bd | GREEK SMALL LETTER NU                               |
| c* | 03be | GREEK SMALL LETTER XI                               |
| o* | 03bf | GREEK SMALL LETTER OMICRON                          |
| p* | 03c0 | GREEK SMALL LETTER PI                               |
| r* | 03c1 | GREEK SMALL LETTER RHO                              |
| *s | 03c2 | GREEK SMALL LETTER FINAL SIGMA                      |
| s* | 03c3 | GREEK SMALL LETTER SIGMA                            |

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|----|------|--|
| t* | 03c4 | GREEK SMALL LETTER TAU                           |
| u* | 03c5 | GREEK SMALL LETTER UPSILON                       |
| f* | 03c6 | GREEK SMALL LETTER PHI                           |
| x* | 03c7 | GREEK SMALL LETTER CHI                           |
| q* | 03c8 | GREEK SMALL LETTER PSI                           |
| w* | 03c9 | GREEK SMALL LETTER OMEGA                         |
| j* | 03ca | GREEK SMALL LETTER IOTA WITH DIAERESIS           |
| v* | 03cb | GREEK SMALL LETTER UPSILON WITH DIAERESIS        |
| o% | 03cc | GREEK SMALL LETTER OMICRON WITH ACUTE            |
| u% | 03cd | GREEK SMALL LETTER UPSILON WITH ACUTE            |
| w% | 03ce | GREEK SMALL LETTER OMEGA WITH ACUTE              |
| 'G | 03d8 | GREEK NUMERAL SIGN                               |
| ,G | 03d9 | GREEK LOWER NUMERAL SIGN                         |
| T3 | 03da | GREEK CAPITAL LETTER STIGMA                      |
| t3 | 03db | GREEK SMALL LETTER STIGMA                        |
| M3 | 03dc | GREEK CAPITAL LETTER DIGAMMA                     |
| m3 | 03dd | GREEK SMALL LETTER DIGAMMA                       |
| K3 | 03de | GREEK CAPITAL LETTER KOPPA                       |
| k3 | 03df | GREEK SMALL LETTER KOPPA                         |
| P3 | 03e0 | GREEK CAPITAL LETTER SAMPI                       |
| p3 | 03e1 | GREEK SMALL LETTER SAMPI                         |
| '% | 03f4 | ACUTE ACCENT AND DIAERESIS (Tonos and Dialytika) |
| j3 | 03f5 | GREEK IOTA BELOW                                 |
| IO | 0401 | CYRILLIC CAPITAL LETTER IO                       |
| D% | 0402 | CYRILLIC CAPITAL LETTER DJE (Serbocroatian)      |
| G% | 0403 | CYRILLIC CAPITAL LETTER GJE (Macedonian)         |
| IE | 0404 | CYRILLIC CAPITAL LETTER UKRAINIAN IE             |
| DS | 0405 | CYRILLIC CAPITAL LETTER DZE (Macedonian)         |
| II | 0406 | CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I |
| YI | 0407 | CYRILLIC CAPITAL LETTER YI (Ukrainian)           |
| J% | 0408 | CYRILLIC CAPITAL LETTER JE                       |
| LJ | 0409 | CYRILLIC CAPITAL LETTER LJE                      |
| NJ | 040a | CYRILLIC CAPITAL LETTER NJE                      |
| Ts | 040b | CYRILLIC CAPITAL LETTER TSHE (Serbocroatian)     |
| KJ | 040c | CYRILLIC CAPITAL LETTER KJE (Macedonian)         |
| V% | 040e | CYRILLIC CAPITAL LETTER SHORT U (Byelorussian)   |
| DZ | 040f | CYRILLIC CAPITAL LETTER DZHE                     |
| A= | 0410 | CYRILLIC CAPITAL LETTER A                        |
| B= | 0411 | CYRILLIC CAPITAL LETTER BE                       |
| V= | 0412 | CYRILLIC CAPITAL LETTER VE                       |
| G= | 0413 | CYRILLIC CAPITAL LETTER GHE                      |
| D= | 0414 | CYRILLIC CAPITAL LETTER DE                       |
| E= | 0415 | CYRILLIC CAPITAL LETTER IE                       |
| Z% | 0416 | CYRILLIC CAPITAL LETTER ZHE                      |
| Z= | 0417 | CYRILLIC CAPITAL LETTER ZE                       |
| I= | 0418 | CYRILLIC CAPITAL LETTER I                        |
| J= | 0419 | CYRILLIC CAPITAL LETTER SHORT I                  |
| K= | 041a | CYRILLIC CAPITAL LETTER KA                       |
| L= | 041b | CYRILLIC CAPITAL LETTER EL                       |
| M= | 041c | CYRILLIC CAPITAL LETTER EM                       |
| N= | 041d | CYRILLIC CAPITAL LETTER EN                       |
| O= | 041e | CYRILLIC CAPITAL LETTER O                        |
| P= | 041f | CYRILLIC CAPITAL LETTER PE                       |

|     |      |   |
|-----|------|---|
| R=  | 0420 | CYRILLIC CAPITAL LETTER ER                |
| S=  | 0421 | CYRILLIC CAPITAL LETTER ES                |
| T=  | 0422 | CYRILLIC CAPITAL LETTER TE                |
| U=  | 0423 | CYRILLIC CAPITAL LETTER U                 |
| F=  | 0424 | CYRILLIC CAPITAL LETTER EF                |
| H=  | 0425 | CYRILLIC CAPITAL LETTER HA                |
| C=  | 0426 | CYRILLIC CAPITAL LETTER TSE               |
| C%  | 0427 | CYRILLIC CAPITAL LETTER CHE               |
| S%  | 0428 | CYRILLIC CAPITAL LETTER SHA               |
| Sc  | 0429 | CYRILLIC CAPITAL LETTER SHCHA             |
| = " | 042a | CYRILLIC CAPITAL LETTER HARD SIGN         |
| Y=  | 042b | CYRILLIC CAPITAL LETTER YERU              |
| %"  | 042c | CYRILLIC CAPITAL LETTER SOFT SIGN         |
| JE  | 042d | CYRILLIC CAPITAL LETTER E                 |
| JU  | 042e | CYRILLIC CAPITAL LETTER YU                |
| JA  | 042f | CYRILLIC CAPITAL LETTER YA                |
| a=  | 0430 | CYRILLIC SMALL LETTER A                   |
| b=  | 0431 | CYRILLIC SMALL LETTER BE                  |
| v=  | 0432 | CYRILLIC SMALL LETTER VE                  |
| g=  | 0433 | CYRILLIC SMALL LETTER GHE                 |
| d=  | 0434 | CYRILLIC SMALL LETTER DE                  |
| e=  | 0435 | CYRILLIC SMALL LETTER IE                  |
| z%  | 0436 | CYRILLIC SMALL LETTER ZHE                 |
| z=  | 0437 | CYRILLIC SMALL LETTER ZE                  |
| i=  | 0438 | CYRILLIC SMALL LETTER I                   |
| j=  | 0439 | CYRILLIC SMALL LETTER SHORT I             |
| k=  | 043a | CYRILLIC SMALL LETTER KA                  |
| l=  | 043b | CYRILLIC SMALL LETTER EL                  |
| m=  | 043c | CYRILLIC SMALL LETTER EM                  |
| n=  | 043d | CYRILLIC SMALL LETTER EN                  |
| o=  | 043e | CYRILLIC SMALL LETTER O                   |
| p=  | 043f | CYRILLIC SMALL LETTER PE                  |
| r=  | 0440 | CYRILLIC SMALL LETTER ER                  |
| s=  | 0441 | CYRILLIC SMALL LETTER ES                  |
| t=  | 0442 | CYRILLIC SMALL LETTER TE                  |
| u=  | 0443 | CYRILLIC SMALL LETTER U                   |
| f=  | 0444 | CYRILLIC SMALL LETTER EF                  |
| h=  | 0445 | CYRILLIC SMALL LETTER HA                  |
| c=  | 0446 | CYRILLIC SMALL LETTER TSE                 |
| c%  | 0447 | CYRILLIC SMALL LETTER CHE                 |
| s%  | 0448 | CYRILLIC SMALL LETTER SHA                 |
| sc  | 0449 | CYRILLIC SMALL LETTER SHCHA               |
| = ' | 044a | CYRILLIC SMALL LETTER HARD SIGN           |
| y=  | 044b | CYRILLIC SMALL LETTER YERU                |
| %'  | 044c | CYRILLIC SMALL LETTER SOFT SIGN           |
| je  | 044d | CYRILLIC SMALL LETTER E                   |
| ju  | 044e | CYRILLIC SMALL LETTER YU                  |
| ja  | 044f | CYRILLIC SMALL LETTER YA                  |
| io  | 0451 | CYRILLIC SMALL LETTER IO                  |
| d%  | 0452 | CYRILLIC SMALL LETTER DJE (Serbocroatian) |
| g%  | 0453 | CYRILLIC SMALL LETTER GJE (Macedonian)    |
| ie  | 0454 | CYRILLIC SMALL LETTER UKRAINIAN IE        |
| ds  | 0455 | CYRILLIC SMALL LETTER DZE (Macedonian)    |

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|----|------|--|
| ii | 0456 | CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I |
| yi | 0457 | CYRILLIC SMALL LETTER YI (Ukrainian)           |
| j% | 0458 | CYRILLIC SMALL LETTER JE                       |
| lj | 0459 | CYRILLIC SMALL LETTER LJE                      |
| nj | 045a | CYRILLIC SMALL LETTER NJE                      |
| ts | 045b | CYRILLIC SMALL LETTER TSHE (Serbocroatian)     |
| kj | 045c | CYRILLIC SMALL LETTER KJE (Macedonian)         |
| v% | 045e | CYRILLIC SMALL LETTER SHORT U (Byelorussian)   |
| dz | 045f | CYRILLIC SMALL LETTER DZHE                     |
| Y3 | 0462 | CYRILLIC CAPITAL LETTER YAT                    |
| y3 | 0463 | CYRILLIC SMALL LETTER YAT                      |
| O3 | 046a | CYRILLIC CAPITAL LETTER BIG YUS                |
| o3 | 046b | CYRILLIC SMALL LETTER BIG YUS                  |
| F3 | 0472 | CYRILLIC CAPITAL LETTER FITA                   |
| f3 | 0473 | CYRILLIC SMALL LETTER FITA                     |
| V3 | 0474 | CYRILLIC CAPITAL LETTER IZHITSA                |
| v3 | 0475 | CYRILLIC SMALL LETTER IZHITSA                  |
| C3 | 0480 | CYRILLIC CAPITAL LETTER KOPPA                  |
| c3 | 0481 | CYRILLIC SMALL LETTER KOPPA                    |
| G3 | 0490 | CYRILLIC CAPITAL LETTER GHE WITH UPTURN        |
| g3 | 0491 | CYRILLIC SMALL LETTER GHE WITH UPTURN          |
| A+ | 05d0 | HEBREW LETTER ALEF                             |
| B+ | 05d1 | HEBREW LETTER BET                              |
| G+ | 05d2 | HEBREW LETTER GIMEL                            |
| D+ | 05d3 | HEBREW LETTER DALET                            |
| H+ | 05d4 | HEBREW LETTER HE                               |
| W+ | 05d5 | HEBREW LETTER VAV                              |
| Z+ | 05d6 | HEBREW LETTER ZAYIN                            |
| X+ | 05d7 | HEBREW LETTER HET                              |
| Tj | 05d8 | HEBREW LETTER TET                              |
| J+ | 05d9 | HEBREW LETTER YOD                              |
| K% | 05da | HEBREW LETTER FINAL KAF                        |
| K+ | 05db | HEBREW LETTER KAF                              |
| L+ | 05dc | HEBREW LETTER LAMED                            |
| M% | 05dd | HEBREW LETTER FINAL MEM                        |
| M+ | 05de | HEBREW LETTER MEM                              |
| N% | 05df | HEBREW LETTER FINAL NUN                        |
| N+ | 05e0 | HEBREW LETTER NUN                              |
| S+ | 05e1 | HEBREW LETTER SAMEKH                           |
| E+ | 05e2 | HEBREW LETTER AYIN                             |
| P% | 05e3 | HEBREW LETTER FINAL PE                         |
| P+ | 05e4 | HEBREW LETTER PE                               |
| Zj | 05e5 | HEBREW LETTER FINAL TSADI                      |
| ZJ | 05e6 | HEBREW LETTER TSADI                            |
| Q+ | 05e7 | HEBREW LETTER QOF                              |
| R+ | 05e8 | HEBREW LETTER RESH                             |
| Sh | 05e9 | HEBREW LETTER SHIN                             |
| T+ | 05ea | HEBREW LETTER TAV                              |
| ,+ | 060c | ARABIC COMMA                                   |
| ;+ | 061b | ARABIC SEMICOLON                               |
| ?+ | 061f | ARABIC QUESTION MARK                           |
| H' | 0621 | ARABIC LETTER HAMZA                            |
| aM | 0622 | ARABIC LETTER ALEF WITH MADDA ABOVE            |

|    |      |                                     |
|----|------|-------------------------------------|
| aH | 0623 | ARABIC LETTER ALEF WITH HAMZA ABOVE |
| wH | 0624 | ARABIC LETTER WAW WITH HAMZA ABOVE  |
| ah | 0625 | ARABIC LETTER ALEF WITH HAMZA BELOW |
| yH | 0626 | ARABIC LETTER YEH WITH HAMZA ABOVE  |
| a+ | 0627 | ARABIC LETTER ALEF                  |
| b+ | 0628 | ARABIC LETTER BEH                   |
| tm | 0629 | ARABIC LETTER TEH MARBUTA           |
| t+ | 062a | ARABIC LETTER TEH                   |
| tk | 062b | ARABIC LETTER THEH                  |
| g+ | 062c | ARABIC LETTER JEEM                  |
| hk | 062d | ARABIC LETTER HAH                   |
| x+ | 062e | ARABIC LETTER KHAH                  |
| d+ | 062f | ARABIC LETTER DAL                   |
| dk | 0630 | ARABIC LETTER THAL                  |
| r+ | 0631 | ARABIC LETTER REH                   |
| z+ | 0632 | ARABIC LETTER ZAIN                  |
| s+ | 0633 | ARABIC LETTER SEEN                  |
| sn | 0634 | ARABIC LETTER SHEEN                 |
| c+ | 0635 | ARABIC LETTER SAD                   |
| dd | 0636 | ARABIC LETTER DAD                   |
| tj | 0637 | ARABIC LETTER TAH                   |
| zH | 0638 | ARABIC LETTER ZAH                   |
| e+ | 0639 | ARABIC LETTER AIN                   |
| i+ | 063a | ARABIC LETTER GHAIN                 |
| ++ | 0640 | ARABIC TATWEEL                      |
| f+ | 0641 | ARABIC LETTER FEH                   |
| q+ | 0642 | ARABIC LETTER QAF                   |
| k+ | 0643 | ARABIC LETTER KAF                   |
| l+ | 0644 | ARABIC LETTER LAM                   |
| m+ | 0645 | ARABIC LETTER MEEM                  |
| n+ | 0646 | ARABIC LETTER NOON                  |
| h+ | 0647 | ARABIC LETTER HEH                   |
| w+ | 0648 | ARABIC LETTER WAW                   |
| j+ | 0649 | ARABIC LETTER ALEF MAKSURA          |
| y+ | 064a | ARABIC LETTER YEH                   |
| :+ | 064b | ARABIC FATHATAN                     |
| "+ | 064c | ARABIC DAMMATAN                     |
| =+ | 064d | ARABIC KASRATAN                     |
| /+ | 064e | ARABIC FATHA                        |
| '+ | 064f | ARABIC DAMMA                        |
| 1+ | 0650 | ARABIC KASRA                        |
| 3+ | 0651 | ARABIC SHADDA                       |
| 0+ | 0652 | ARABIC SUKUN                        |
| aS | 0670 | SUPERSCRIPT ARABIC LETTER ALEF      |
| p+ | 067e | ARABIC LETTER PEH                   |
| v+ | 06a4 | ARABIC LETTER VEH                   |
| gf | 06af | ARABIC LETTER GAF                   |
| 0a | 06f0 | EASTERN ARABIC-INDIC DIGIT ZERO     |
| 1a | 06f1 | EASTERN ARABIC-INDIC DIGIT ONE      |
| 2a | 06f2 | EASTERN ARABIC-INDIC DIGIT TWO      |
| 3a | 06f3 | EASTERN ARABIC-INDIC DIGIT THREE    |
| 4a | 06f4 | EASTERN ARABIC-INDIC DIGIT FOUR     |
| 5a | 06f5 | EASTERN ARABIC-INDIC DIGIT FIVE     |

|      |      |   |
|------|------|---|
| 6a   | 06f6 | EASTERN ARABIC-INDIC DIGIT SIX                  |
| 7a   | 06f7 | EASTERN ARABIC-INDIC DIGIT SEVEN                |
| 8a   | 06f8 | EASTERN ARABIC-INDIC DIGIT EIGHT                |
| 9a   | 06f9 | EASTERN ARABIC-INDIC DIGIT NINE                 |
| A-0  | 1e00 | LATIN CAPITAL LETTER A WITH RING BELOW          |
| a-0  | 1e01 | LATIN SMALL LETTER A WITH RING BELOW            |
| B.   | 1e02 | LATIN CAPITAL LETTER B WITH DOT ABOVE           |
| b.   | 1e03 | LATIN SMALL LETTER B WITH DOT ABOVE             |
| B-.  | 1e04 | LATIN CAPITAL LETTER B WITH DOT BELOW           |
| b-.  | 1e05 | LATIN SMALL LETTER B WITH DOT BELOW             |
| B_   | 1e06 | LATIN CAPITAL LETTER B WITH LINE BELOW          |
| b_   | 1e07 | LATIN SMALL LETTER B WITH LINE BELOW            |
| C, ' | 1e08 | LATIN CAPITAL LETTER C WITH CEDILLA AND ACUTE   |
| c, ' | 1e09 | LATIN SMALL LETTER C WITH CEDILLA AND ACUTE     |
| D.   | 1e0a | LATIN CAPITAL LETTER D WITH DOT ABOVE           |
| d.   | 1e0b | LATIN SMALL LETTER D WITH DOT ABOVE             |
| D-.  | 1e0c | LATIN CAPITAL LETTER D WITH DOT BELOW           |
| d-.  | 1e0d | LATIN SMALL LETTER D WITH DOT BELOW             |
| D_   | 1e0e | LATIN CAPITAL LETTER D WITH LINE BELOW          |
| d_   | 1e0f | LATIN SMALL LETTER D WITH LINE BELOW            |
| D,   | 1e10 | LATIN CAPITAL LETTER D WITH CEDILLA             |
| d,   | 1e11 | LATIN SMALL LETTER D WITH CEDILLA               |
| D->  | 1e12 | LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW    |
| d->  | 1e13 | LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW      |
| E-!  | 1e14 | LATIN CAPITAL LETTER E WITH MACRON AND GRAVE    |
| e-!  | 1e15 | LATIN SMALL LETTER E WITH MACRON AND GRAVE      |
| E-'  | 1e16 | LATIN CAPITAL LETTER E WITH MACRON AND ACUTE    |
| e-'  | 1e17 | LATIN SMALL LETTER E WITH MACRON AND ACUTE      |
| E->  | 1e18 | LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW    |
| e->  | 1e19 | LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW      |
| E-?  | 1e1a | LATIN CAPITAL LETTER E WITH TILDE BELOW         |
| e-?  | 1e1b | LATIN SMALL LETTER E WITH TILDE BELOW           |
| E,(  | 1e1c | LATIN CAPITAL LETTER E WITH CEDILLA AND BREVE   |
| e,(  | 1e1d | LATIN SMALL LETTER E WITH CEDILLA AND BREVE     |
| F.   | 1e1e | LATIN CAPITAL LETTER F WITH DOT ABOVE           |
| f.   | 1e1f | LATIN SMALL LETTER F WITH DOT ABOVE             |
| G-   | 1e20 | LATIN CAPITAL LETTER G WITH MACRON              |
| g-   | 1e21 | LATIN SMALL LETTER G WITH MACRON                |
| H.   | 1e22 | LATIN CAPITAL LETTER H WITH DOT ABOVE           |
| h.   | 1e23 | LATIN SMALL LETTER H WITH DOT ABOVE             |
| H-.  | 1e24 | LATIN CAPITAL LETTER H WITH DOT BELOW           |
| h-.  | 1e25 | LATIN SMALL LETTER H WITH DOT BELOW             |
| H:   | 1e26 | LATIN CAPITAL LETTER H WITH DIAERESIS           |
| h:   | 1e27 | LATIN SMALL LETTER H WITH DIAERESIS             |
| H,   | 1e28 | LATIN CAPITAL LETTER H WITH CEDILLA             |
| h,   | 1e29 | LATIN SMALL LETTER H WITH CEDILLA               |
| H-(  | 1e2a | LATIN CAPITAL LETTER H WITH BREVE BELOW         |
| h-(  | 1e2b | LATIN SMALL LETTER H WITH BREVE BELOW           |
| I-?  | 1e2c | LATIN CAPITAL LETTER I WITH TILDE BELOW         |
| i-?  | 1e2d | LATIN SMALL LETTER I WITH TILDE BELOW           |
| I:'  | 1e2e | LATIN CAPITAL LETTER I WITH DIAERESIS AND ACUTE |
| i:'  | 1e2f | LATIN SMALL LETTER I WITH DIAERESIS AND ACUTE   |
| K'   | 1e30 | LATIN CAPITAL LETTER K WITH ACUTE               |

|      |      |  |
|------|------|--|
| k'   | 1e31 | LATIN SMALL LETTER K WITH ACUTE                  |
| K-   | 1e32 | LATIN CAPITAL LETTER K WITH DOT BELOW            |
| k-   | 1e33 | LATIN SMALL LETTER K WITH DOT BELOW              |
| K_   | 1e34 | LATIN CAPITAL LETTER K WITH LINE BELOW           |
| k_   | 1e35 | LATIN SMALL LETTER K WITH LINE BELOW             |
| L-   | 1e36 | LATIN CAPITAL LETTER L WITH DOT BELOW            |
| l-   | 1e37 | LATIN SMALL LETTER L WITH DOT BELOW              |
| L--. | 1e38 | LATIN CAPITAL LETTER L WITH DOT BELOW AND MACRON |
| l--. | 1e39 | LATIN SMALL LETTER L WITH DOT BELOW AND MACRON   |
| L_   | 1e3a | LATIN CAPITAL LETTER L WITH LINE BELOW           |
| l_   | 1e3b | LATIN SMALL LETTER L WITH LINE BELOW             |
| L->  | 1e3c | LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW     |
| l->  | 1e3d | LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW       |
| M'   | 1e3e | LATIN CAPITAL LETTER M WITH ACUTE                |
| m'   | 1e3f | LATIN SMALL LETTER M WITH ACUTE                  |
| M.   | 1e40 | LATIN CAPITAL LETTER M WITH DOT ABOVE            |
| m.   | 1e41 | LATIN SMALL LETTER M WITH DOT ABOVE              |
| M-   | 1e42 | LATIN CAPITAL LETTER M WITH DOT BELOW            |
| m-   | 1e43 | LATIN SMALL LETTER M WITH DOT BELOW              |
| N.   | 1e44 | LATIN CAPITAL LETTER N WITH DOT ABOVE            |
| n.   | 1e45 | LATIN SMALL LETTER N WITH DOT ABOVE              |
| N-   | 1e46 | LATIN CAPITAL LETTER N WITH DOT BELOW            |
| n-   | 1e47 | LATIN SMALL LETTER N WITH DOT BELOW              |
| N_   | 1e48 | LATIN CAPITAL LETTER N WITH LINE BELOW           |
| n_   | 1e49 | LATIN SMALL LETTER N WITH LINE BELOW             |
| N->  | 1e4a | LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW     |
| n->  | 1e4b | LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW       |
| O?'  | 1e4c | LATIN CAPITAL LETTER O WITH TILDE AND ACUTE      |
| o?'  | 1e4d | LATIN SMALL LETTER O WITH TILDE AND ACUTE        |
| O?:  | 1e4e | LATIN CAPITAL LETTER O WITH TILDE AND DIAERESIS  |
| o?:  | 1e4f | LATIN SMALL LETTER O WITH TILDE AND DIAERESIS    |
| O-!  | 1e50 | LATIN CAPITAL LETTER O WITH MACRON AND GRAVE     |
| o-!  | 1e51 | LATIN SMALL LETTER O WITH MACRON AND GRAVE       |
| O-'  | 1e52 | LATIN CAPITAL LETTER O WITH MACRON AND ACUTE     |
| o-'  | 1e53 | LATIN SMALL LETTER O WITH MACRON AND ACUTE       |
| P'   | 1e54 | LATIN CAPITAL LETTER P WITH ACUTE                |
| p'   | 1e55 | LATIN SMALL LETTER P WITH ACUTE                  |
| P.   | 1e56 | LATIN CAPITAL LETTER P WITH DOT ABOVE            |
| p.   | 1e57 | LATIN SMALL LETTER P WITH DOT ABOVE              |
| R.   | 1e58 | LATIN CAPITAL LETTER R WITH DOT ABOVE            |
| r.   | 1e59 | LATIN SMALL LETTER R WITH DOT ABOVE              |
| R-   | 1e5a | LATIN CAPITAL LETTER R WITH DOT BELOW            |
| r-   | 1e5b | LATIN SMALL LETTER R WITH DOT BELOW              |
| R--. | 1e5c | LATIN CAPITAL LETTER R WITH DOT BELOW AND MACRON |
| r--. | 1e5d | LATIN SMALL LETTER R WITH DOT BELOW AND MACRON   |
| R_   | 1e5e | LATIN CAPITAL LETTER R WITH LINE BELOW           |
| r_   | 1e5f | LATIN SMALL LETTER R WITH LINE BELOW             |
| S.   | 1e60 | LATIN CAPITAL LETTER S WITH DOT ABOVE            |
| s.   | 1e61 | LATIN SMALL LETTER S WITH DOT ABOVE              |
| S-   | 1e62 | LATIN CAPITAL LETTER S WITH DOT BELOW            |
| s-   | 1e63 | LATIN SMALL LETTER S WITH DOT BELOW              |
| S'.  | 1e64 | LATIN CAPITAL LETTER S WITH ACUTE AND DOT ABOVE  |
| s'.  | 1e65 | LATIN SMALL LETTER S WITH ACUTE AND DOT ABOVE    |

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|------|------|---|
| S<.  | 1e66 | LATIN CAPITAL LETTER S WITH CARON AND DOT ABOVE     |
| s<.  | 1e67 | LATIN SMALL LETTER S WITH CARON AND DOT ABOVE       |
| S.-. | 1e68 | LATIN CAPITAL LETTER S WITH DOT BELOW AND DOT ABOVE |
| S.-. | 1e69 | LATIN SMALL LETTER S WITH DOT BELOW AND DOT ABOVE   |
| T.   | 1e6a | LATIN CAPITAL LETTER T WITH DOT ABOVE               |
| t.   | 1e6b | LATIN SMALL LETTER T WITH DOT ABOVE                 |
| T-.  | 1e6c | LATIN CAPITAL LETTER T WITH DOT BELOW               |
| t-.  | 1e6d | LATIN SMALL LETTER T WITH DOT BELOW                 |
| T_   | 1e6e | LATIN CAPITAL LETTER T WITH LINE BELOW              |
| t_   | 1e6f | LATIN SMALL LETTER T WITH LINE BELOW                |
| T->  | 1e70 | LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW        |
| t->  | 1e71 | LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW          |
| U--: | 1e72 | LATIN CAPITAL LETTER U WITH DIAERESIS BELOW         |
| u--: | 1e73 | LATIN SMALL LETTER U WITH DIAERESIS BELOW           |
| U-?  | 1e74 | LATIN CAPITAL LETTER U WITH TILDE BELOW             |
| u-?  | 1e75 | LATIN SMALL LETTER U WITH TILDE BELOW               |
| U->  | 1e76 | LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW        |
| u->  | 1e77 | LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW          |
| U?'  | 1e78 | LATIN CAPITAL LETTER U WITH TILDE AND ACUTE         |
| u?'  | 1e79 | LATIN SMALL LETTER U WITH TILDE AND ACUTE           |
| U-:  | 1e7a | LATIN CAPITAL LETTER U WITH MACRON AND DIAERESIS    |
| u-:  | 1e7b | LATIN SMALL LETTER U WITH MACRON AND DIAERESIS      |
| V?   | 1e7c | LATIN CAPITAL LETTER V WITH TILDE                   |
| v?   | 1e7d | LATIN SMALL LETTER V WITH TILDE                     |
| V-.  | 1e7e | LATIN CAPITAL LETTER V WITH DOT BELOW               |
| v-.  | 1e7f | LATIN SMALL LETTER V WITH DOT BELOW                 |
| W!   | 1e80 | LATIN CAPITAL LETTER W WITH GRAVE                   |
| w!   | 1e81 | LATIN SMALL LETTER W WITH GRAVE                     |
| W'   | 1e82 | LATIN CAPITAL LETTER W WITH ACUTE                   |
| w'   | 1e83 | LATIN SMALL LETTER W WITH ACUTE                     |
| W:   | 1e84 | LATIN CAPITAL LETTER W WITH DIAERESIS               |
| w:   | 1e85 | LATIN SMALL LETTER W WITH DIAERESIS                 |
| W.   | 1e86 | LATIN CAPITAL LETTER W WITH DOT ABOVE               |
| w.   | 1e87 | LATIN SMALL LETTER W WITH DOT ABOVE                 |
| W-.  | 1e88 | LATIN CAPITAL LETTER W WITH DOT BELOW               |
| w-.  | 1e89 | LATIN SMALL LETTER W WITH DOT BELOW                 |
| X.   | 1e8a | LATIN CAPITAL LETTER X WITH DOT ABOVE               |
| x.   | 1e8b | LATIN SMALL LETTER X WITH DOT ABOVE                 |
| X:   | 1e8c | LATIN CAPITAL LETTER X WITH DIAERESIS               |
| x:   | 1e8d | LATIN SMALL LETTER X WITH DIAERESIS                 |
| Y.   | 1e8e | LATIN CAPITAL LETTER Y WITH DOT ABOVE               |
| y.   | 1e8f | LATIN SMALL LETTER Y WITH DOT ABOVE                 |
| Z>   | 1e90 | LATIN CAPITAL LETTER Z WITH CIRCUMFLEX              |
| z>   | 1e91 | LATIN SMALL LETTER Z WITH CIRCUMFLEX                |
| Z-.  | 1e92 | LATIN CAPITAL LETTER Z WITH DOT BELOW               |
| z-.  | 1e93 | LATIN SMALL LETTER Z WITH DOT BELOW                 |
| Z_   | 1e94 | LATIN CAPITAL LETTER Z WITH LINE BELOW              |
| z_   | 1e95 | LATIN SMALL LETTER Z WITH LINE BELOW                |
| h_   | 1e96 | LATIN SMALL LETTER H WITH LINE BELOW                |
| t:   | 1e97 | LATIN SMALL LETTER T WITH DIAERESIS                 |
| w0   | 1e98 | LATIN SMALL LETTER W WITH RING ABOVE                |
| y0   | 1e99 | LATIN SMALL LETTER Y WITH RING ABOVE                |
| A-.  | 1ea0 | LATIN CAPITAL LETTER A WITH DOT BELOW               |

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| a-   | lea1 | LATIN SMALL LETTER A WITH DOT BELOW                   |
| A2   | lea2 | LATIN CAPITAL LETTER A WITH HOOK ABOVE                |
| a2   | lea3 | LATIN SMALL LETTER A WITH HOOK ABOVE                  |
| A>'  | lea4 | LATIN CAPITAL LETTER A WITH CIRCUMFLEX AND ACUTE      |
| a>'  | lea5 | LATIN SMALL LETTER A WITH CIRCUMFLEX AND ACUTE        |
| A>!  | lea6 | LATIN CAPITAL LETTER A WITH CIRCUMFLEX AND GRAVE      |
| a>!  | lea7 | LATIN SMALL LETTER A WITH CIRCUMFLEX AND GRAVE        |
| A>2  | lea8 | LATIN CAPITAL LETTER A WITH CIRCUMFLEX AND HOOK ABOVE |
| a>2  | lea9 | LATIN SMALL LETTER A WITH CIRCUMFLEX AND HOOK ABOVE   |
| A>?  | leaa | LATIN CAPITAL LETTER A WITH CIRCUMFLEX AND TILDE      |
| a>?  | leab | LATIN SMALL LETTER A WITH CIRCUMFLEX AND TILDE        |
| A>-. | leac | LATIN CAPITAL LETTER A WITH CIRCUMFLEX AND DOT BELOW  |
| a>-. | lead | LATIN SMALL LETTER A WITH CIRCUMFLEX AND DOT BELOW    |
| A('  | leae | LATIN CAPITAL LETTER A WITH BREVE AND ACUTE           |
| a('  | leaf | LATIN SMALL LETTER A WITH BREVE AND ACUTE             |
| A(!  | leb0 | LATIN CAPITAL LETTER A WITH BREVE AND GRAVE           |
| a(!  | leb1 | LATIN SMALL LETTER A WITH BREVE AND GRAVE             |
| A(2  | leb2 | LATIN CAPITAL LETTER A WITH BREVE AND HOOK ABOVE      |
| a(2  | leb3 | LATIN SMALL LETTER A WITH BREVE AND HOOK ABOVE        |
| A(?  | leb4 | LATIN CAPITAL LETTER A WITH BREVE AND TILDE           |
| a(?  | leb5 | LATIN SMALL LETTER A WITH BREVE AND TILDE             |
| A(-. | leb6 | LATIN CAPITAL LETTER A WITH BREVE AND DOT BELOW       |
| a(-. | leb7 | LATIN SMALL LETTER A WITH BREVE AND DOT BELOW         |
| E-   | leb8 | LATIN CAPITAL LETTER E WITH DOT BELOW                 |
| e-   | leb9 | LATIN SMALL LETTER E WITH DOT BELOW                   |
| E2   | leba | LATIN CAPITAL LETTER E WITH HOOK ABOVE                |
| e2   | lebb | LATIN SMALL LETTER E WITH HOOK ABOVE                  |
| E?   | lebc | LATIN CAPITAL LETTER E WITH TILDE                     |
| e?   | lebd | LATIN SMALL LETTER E WITH TILDE                       |
| E>'  | lebe | LATIN CAPITAL LETTER E WITH CIRCUMFLEX AND ACUTE      |
| e>'  | lebf | LATIN SMALL LETTER E WITH CIRCUMFLEX AND ACUTE        |
| E>!  | lec0 | LATIN CAPITAL LETTER E WITH CIRCUMFLEX AND GRAVE      |
| e>!  | lec1 | LATIN SMALL LETTER E WITH CIRCUMFLEX AND GRAVE        |
| E>2  | lec2 | LATIN CAPITAL LETTER E WITH CIRCUMFLEX AND HOOK ABOVE |
| e>2  | lec3 | LATIN SMALL LETTER E WITH CIRCUMFLEX AND HOOK ABOVE   |
| E>?  | lec4 | LATIN CAPITAL LETTER E WITH CIRCUMFLEX AND TILDE      |
| e>?  | lec5 | LATIN SMALL LETTER E WITH CIRCUMFLEX AND TILDE        |
| E>-. | lec6 | LATIN CAPITAL LETTER E WITH CIRCUMFLEX AND DOT BELOW  |
| e>-. | lec7 | LATIN SMALL LETTER E WITH CIRCUMFLEX AND DOT BELOW    |
| I2   | lec8 | LATIN CAPITAL LETTER I WITH HOOK ABOVE                |
| i2   | lec9 | LATIN SMALL LETTER I WITH HOOK ABOVE                  |
| I-   | leca | LATIN CAPITAL LETTER I WITH DOT BELOW                 |
| i-   | lecb | LATIN SMALL LETTER I WITH DOT BELOW                   |
| O-   | lecc | LATIN CAPITAL LETTER O WITH DOT BELOW                 |
| o-   | lecd | LATIN SMALL LETTER O WITH DOT BELOW                   |
| O2   | lece | LATIN CAPITAL LETTER O WITH HOOK ABOVE                |
| o2   | lecf | LATIN SMALL LETTER O WITH HOOK ABOVE                  |
| O>'  | led0 | LATIN CAPITAL LETTER O WITH CIRCUMFLEX AND ACUTE      |
| o>'  | led1 | LATIN SMALL LETTER O WITH CIRCUMFLEX AND ACUTE        |
| O>!  | led2 | LATIN CAPITAL LETTER O WITH CIRCUMFLEX AND GRAVE      |
| o>!  | led3 | LATIN SMALL LETTER O WITH CIRCUMFLEX AND GRAVE        |
| O>2  | led4 | LATIN CAPITAL LETTER O WITH CIRCUMFLEX AND HOOK ABOVE |
| o>2  | led5 | LATIN SMALL LETTER O WITH CIRCUMFLEX AND HOOK ABOVE   |

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| O>?  | led6 | LATIN CAPITAL LETTER O WITH CIRCUMFLEX AND TILDE     |
| o>?  | led7 | LATIN SMALL LETTER O WITH CIRCUMFLEX AND TILDE       |
| O>-. | led8 | LATIN CAPITAL LETTER O WITH CIRCUMFLEX AND DOT BELOW |
| o>-. | led9 | LATIN SMALL LETTER O WITH CIRCUMFLEX AND DOT BELOW   |
| O9'  | leda | LATIN CAPITAL LETTER O WITH HORN AND ACUTE           |
| o9'  | ledb | LATIN SMALL LETTER O WITH HORN AND ACUTE             |
| O9!  | ledc | LATIN CAPITAL LETTER O WITH HORN AND GRAVE           |
| o9!  | ledd | LATIN SMALL LETTER O WITH HORN AND GRAVE             |
| O92  | lede | LATIN CAPITAL LETTER O WITH HORN AND HOOK ABOVE      |
| o92  | ledf | LATIN SMALL LETTER O WITH HORN AND HOOK ABOVE        |
| O9?  | lee0 | LATIN CAPITAL LETTER O WITH HORN AND TILDE           |
| o9?  | lee1 | LATIN SMALL LETTER O WITH HORN AND TILDE             |
| O9-. | lee2 | LATIN CAPITAL LETTER O WITH HORN AND DOT BELOW       |
| o9-. | lee3 | LATIN SMALL LETTER O WITH HORN AND DOT BELOW         |
| U-.  | lee4 | LATIN CAPITAL LETTER U WITH DOT BELOW                |
| u-.  | lee5 | LATIN SMALL LETTER U WITH DOT BELOW                  |
| U2   | lee6 | LATIN CAPITAL LETTER U WITH HOOK ABOVE               |
| u2   | lee7 | LATIN SMALL LETTER U WITH HOOK ABOVE                 |
| U9'  | lee8 | LATIN CAPITAL LETTER U WITH HORN AND ACUTE           |
| u9'  | lee9 | LATIN SMALL LETTER U WITH HORN AND ACUTE             |
| U9!  | leea | LATIN CAPITAL LETTER U WITH HORN AND GRAVE           |
| u9!  | leeb | LATIN SMALL LETTER U WITH HORN AND GRAVE             |
| U92  | leec | LATIN CAPITAL LETTER U WITH HORN AND HOOK ABOVE      |
| u92  | leed | LATIN SMALL LETTER U WITH HORN AND HOOK ABOVE        |
| U9?  | leee | LATIN CAPITAL LETTER U WITH HORN AND TILDE           |
| u9?  | leef | LATIN SMALL LETTER U WITH HORN AND TILDE             |
| U9-. | lef0 | LATIN CAPITAL LETTER U WITH HORN AND DOT BELOW       |
| u9-. | lef1 | LATIN SMALL LETTER U WITH HORN AND DOT BELOW         |
| Y!   | lef2 | LATIN CAPITAL LETTER Y WITH GRAVE                    |
| y!   | lef3 | LATIN SMALL LETTER Y WITH GRAVE                      |
| Y-.  | lef4 | LATIN CAPITAL LETTER Y WITH DOT BELOW                |
| y-.  | lef5 | LATIN SMALL LETTER Y WITH DOT BELOW                  |
| Y2   | lef6 | LATIN CAPITAL LETTER Y WITH HOOK ABOVE               |
| y2   | lef7 | LATIN SMALL LETTER Y WITH HOOK ABOVE                 |
| Y?   | lef8 | LATIN CAPITAL LETTER Y WITH TILDE                    |
| y?   | lef9 | LATIN SMALL LETTER Y WITH TILDE                      |
| ;'   | 1f00 | GREEK DASIA AND ACUTE ACCENT                         |
| ,'   | 1f01 | GREEK PSILI AND ACUTE ACCENT                         |
| ;!   | 1f02 | GREEK DASIA AND VARIA                                |
| ,!   | 1f03 | GREEK PSILI AND VARIA                                |
| ?;   | 1f04 | GREEK DASIA AND PERISPOMENI                          |
| ?,   | 1f05 | GREEK PSILI AND PERISPOMENI                          |
| !:   | 1f06 | GREEK DIAERESIS AND VARIA                            |
| ?:   | 1f07 | GREEK DIAERESIS AND PERISPOMENI                      |
| 1N   | 2002 | EN SPACE   |
| 1M   | 2003 | EM SPACE   |
| 3M   | 2004 | THREE-PER-EM SPACE                                   |
| 4M   | 2005 | FOUR-PER-EM SPACE                                    |
| 6M   | 2006 | SIX-PER-EM SPACE                                     |
| 1T   | 2009 | THIN SPACE   |
| 1H   | 200a | HAIR SPACE   |
| -1   | 2010 | HYPHEN   |
| -N   | 2013 | EN DASH  |

|     |      |  |
|-----|------|--|
| -M  | 2014 | EM DASH                                    |
| -3  | 2015 | HORIZONTAL BAR                             |
| !2  | 2016 | DOUBLE VERTICAL LINE                       |
| =2  | 2017 | DOUBLE LOW LINE                            |
| '6  | 2018 | LEFT SINGLE QUOTATION MARK                 |
| '9  | 2019 | RIGHT SINGLE QUOTATION MARK                |
| .9  | 201a | SINGLE LOW-9 QUOTATION MARK                |
| 9'  | 201b | SINGLE HIGH-REVERSED-9 QUOTATION MARK      |
| "6  | 201c | LEFT DOUBLE QUOTATION MARK                 |
| "9  | 201d | RIGHT DOUBLE QUOTATION MARK                |
| :9  | 201e | DOUBLE LOW-9 QUOTATION MARK                |
| 9"  | 201f | DOUBLE HIGH-REVERSED-9 QUOTATION MARK      |
| /-  | 2020 | DAGGER                                     |
| /=  | 2021 | DOUBLE DAGGER                              |
| ..  | 2025 | TWO DOT LEADER                             |
| %0  | 2030 | PER MILLE SIGN                             |
| 1'  | 2032 | PRIME                                      |
| 2'  | 2033 | DOUBLE PRIME                               |
| 3'  | 2034 | TRIPLE PRIME                               |
| 1"  | 2035 | REVERSED PRIME                             |
| 2"  | 2036 | REVERSED DOUBLE PRIME                      |
| 3"  | 2037 | REVERSED TRIPLE PRIME                      |
| Ca  | 2038 | CARET                                      |
| <1  | 2039 | SINGLE LEFT-POINTING ANGLE QUOTATION MARK  |
| >1  | 203a | SINGLE RIGHT-POINTING ANGLE QUOTATION MARK |
| :X  | 203b | REFERENCE MARK                             |
| !*2 | 203c | DOUBLE EXCLAMATION MARK                    |
| '-  | 203e | OVERLINE                                   |
| /f  | 2044 | FRACTION SLASH                             |
| 0S  | 2070 | SUPERSCRIPIT DIGIT ZERO                    |
| 4S  | 2074 | SUPERSCRIPIT DIGIT FOUR                    |
| 5S  | 2075 | SUPERSCRIPIT DIGIT FIVE                    |
| 6S  | 2076 | SUPERSCRIPIT DIGIT SIX                     |
| 7S  | 2077 | SUPERSCRIPIT DIGIT SEVEN                   |
| 8S  | 2078 | SUPERSCRIPIT DIGIT EIGHT                   |
| 9S  | 2079 | SUPERSCRIPIT DIGIT NINE                    |
| +S  | 207a | SUPERSCRIPIT PLUS SIGN                     |
| -S  | 207b | SUPERSCRIPIT MINUS                         |
| =S  | 207c | SUPERSCRIPIT EQUALS SIGN                   |
| (S  | 207d | SUPERSCRIPIT LEFT PARENTHESIS              |
| )S  | 207e | SUPERSCRIPIT RIGHT PARENTHESIS             |
| nS  | 207f | SUPERSCRIPIT LATIN SMALL LETTER N          |
| 0s  | 2080 | SUBSCRIPT DIGIT ZERO                       |
| 1s  | 2081 | SUBSCRIPT DIGIT ONE                        |
| 2s  | 2082 | SUBSCRIPT DIGIT TWO                        |
| 3s  | 2083 | SUBSCRIPT DIGIT THREE                      |
| 4s  | 2084 | SUBSCRIPT DIGIT FOUR                       |
| 5s  | 2085 | SUBSCRIPT DIGIT FIVE                       |
| 6s  | 2086 | SUBSCRIPT DIGIT SIX                        |
| 7s  | 2087 | SUBSCRIPT DIGIT SEVEN                      |
| 8s  | 2088 | SUBSCRIPT DIGIT EIGHT                      |
| 9s  | 2089 | SUBSCRIPT DIGIT NINE                       |
| +s  | 208a | SUBSCRIPT PLUS SIGN                        |

|       |      |                               |
|-------|------|-------------------------------|
| -s    | 208b | SUBSCRIPT MINUS               |
| =s    | 208c | SUBSCRIPT EQUALS SIGN         |
| (s    | 208d | SUBSCRIPT LEFT PARENTHESIS    |
| )s    | 208e | SUBSCRIPT RIGHT PARENTHESIS   |
| Li    | 20a4 | LIRA SIGN                     |
| Pt    | 20a7 | PESETA SIGN                   |
| W=    | 20a9 | WON SIGN                      |
| oC    | 2103 | DEGREE CENTIGRADE             |
| co    | 2105 | CARE OF                       |
| oF    | 2109 | DEGREE FAHRENHEIT             |
| N0    | 2116 | NUMERO SIGN                   |
| PO    | 2117 | SOUND RECORDING COPYRIGHT     |
| Rx    | 211e | PRESCRIPTION TAKE             |
| SM    | 2120 | SERVICE MARK                  |
| TM    | 2122 | TRADE MARK SIGN               |
| Om    | 2126 | OHM SIGN                      |
| AO    | 212b | ANGSTROEM SIGN                |
| 13    | 2153 | VULGAR FRACTION ONE THIRD     |
| 23    | 2154 | VULGAR FRACTION TWO THIRDS    |
| 15    | 2155 | VULGAR FRACTION ONE FIFTH     |
| 25    | 2156 | VULGAR FRACTION TWO FIFTHS    |
| 35    | 2157 | VULGAR FRACTION THREE FIFTHS  |
| 45    | 2158 | VULGAR FRACTION FOUR FIFTHS   |
| 16    | 2159 | VULGAR FRACTION ONE SIXTH     |
| 56    | 215a | VULGAR FRACTION FIVE SIXTHS   |
| 18    | 215b | VULGAR FRACTION ONE EIGHTH    |
| 38    | 215c | VULGAR FRACTION THREE EIGHTHS |
| 58    | 215d | VULGAR FRACTION FIVE EIGHTHS  |
| 78    | 215e | VULGAR FRACTION SEVEN EIGHTHS |
| 1R    | 2160 | ROMAN NUMERAL ONE             |
| 2R    | 2161 | ROMAN NUMERAL TWO             |
| 3R    | 2162 | ROMAN NUMERAL THREE           |
| 4R    | 2163 | ROMAN NUMERAL FOUR            |
| 5R    | 2164 | ROMAN NUMERAL FIVE            |
| 6R    | 2165 | ROMAN NUMERAL SIX             |
| 7R    | 2166 | ROMAN NUMERAL SEVEN           |
| 8R    | 2167 | ROMAN NUMERAL EIGHT           |
| 9R    | 2168 | ROMAN NUMERAL NINE            |
| aR    | 2169 | ROMAN NUMERAL TEN             |
| bR    | 216a | ROMAN NUMERAL ELEVEN          |
| cR    | 216b | ROMAN NUMERAL TWELVE          |
| 50R   | 216c | ROMAN NUMERAL FIFTY           |
| 100R  | 216d | ROMAN NUMERAL ONE HUNDRED     |
| 500R  | 216e | ROMAN NUMERAL FIVE HUNDRED    |
| 1000R | 216f | ROMAN NUMERAL ONE THOUSAND    |
| 1r    | 2170 | SMALL ROMAN NUMERAL ONE       |
| 2r    | 2171 | SMALL ROMAN NUMERAL TWO       |
| 3r    | 2172 | SMALL ROMAN NUMERAL THREE     |
| 4r    | 2173 | SMALL ROMAN NUMERAL FOUR      |
| 5r    | 2174 | SMALL ROMAN NUMERAL FIVE      |
| 6r    | 2175 | SMALL ROMAN NUMERAL SIX       |
| 7r    | 2176 | SMALL ROMAN NUMERAL SEVEN     |
| 8r    | 2177 | SMALL ROMAN NUMERAL EIGHT     |

|         |      |                                     |
|---------|------|-------------------------------------|
| 9r      | 2178 | SMALL ROMAN NUMERAL NINE            |
| ar      | 2179 | SMALL ROMAN NUMERAL TEN             |
| br      | 217a | SMALL ROMAN NUMERAL ELEVEN          |
| cr      | 217b | SMALL ROMAN NUMERAL TWELVE          |
| 50r     | 217c | SMALL ROMAN NUMERAL FIFTY           |
| 100r    | 217d | SMALL ROMAN NUMERAL ONE HUNDRED     |
| 500r    | 217e | SMALL ROMAN NUMERAL FIVE HUNDRED    |
| 1000r   | 217f | SMALL ROMAN NUMERAL ONE THOUSAND    |
| 1000RCD |      | 2180 ROMAN NUMERAL ONE THOUSAND C D |
| 5000R   | 2181 | ROMAN NUMERAL FIVE THOUSAND         |
| 10000R  | 2182 | ROMAN NUMERAL TEN THOUSAND          |
| <-      | 2190 | LEFTWARDS ARROW                     |
| -!      | 2191 | UPWARDS ARROW                       |
| ->      | 2192 | RIGHTWARDS ARROW                    |
| -v      | 2193 | DOWNWARDS ARROW                     |
| <>      | 2194 | LEFT RIGHT ARROW                    |
| UD      | 2195 | UP DOWN ARROW                       |
| <!!     | 2196 | NORTH WEST ARROW                    |
| //>     | 2197 | NORTH EAST ARROW                    |
| !!>     | 2198 | SOUTH EAST ARROW                    |
| <//     | 2199 | SOUTH WEST ARROW                    |
| <=      | 21d0 | LEFTWARDS DOUBLE ARROW              |
| =>      | 21d2 | RIGHTWARDS DOUBLE ARROW             |
| ==      | 21d4 | LEFT RIGHT DOUBLE ARROW             |
| FA      | 2200 | FOR ALL                             |
| dP      | 2202 | PARTIAL DIFFERENTIAL                |
| TE      | 2203 | THERE EXISTS                        |
| /0      | 2205 | EMPTY SET                           |
| DE      | 2206 | INCREMENT                           |
| NB      | 2207 | NABLA                               |
| (-      | 2208 | ELEMENT OF                          |
| -)      | 220b | CONTAINS AS MEMBER                  |
| *P      | 220f | N-ARY PRODUCT                       |
| +Z      | 2211 | N-ARY SUMMATION                     |
| -2      | 2212 | MINUS SIGN                          |
| -+      | 2213 | MINUS-OR-PLUS SIGN                  |
| *-      | 2217 | ASTERISK OPERATOR                   |
| Ob      | 2218 | RING OPERATOR                       |
| Sb      | 2219 | BULLET OPERATOR                     |
| RT      | 221a | SQUARE ROOT                         |
| 0(      | 221d | PROPORTIONAL TO                     |
| 00      | 221e | INFINITY                            |
| -L      | 221f | RIGHT ANGLE                         |
| -V      | 2220 | ANGLE                               |
| PP      | 2225 | PARALLEL TO                         |
| AN      | 2227 | LOGICAL AND                         |
| OR      | 2228 | LOGICAL OR                          |
| (U      | 2229 | INTERSECTION                        |
| )U      | 222a | UNION                               |
| In      | 222b | INTEGRAL                            |
| DI      | 222c | DOUBLE INTEGRAL                     |
| Io      | 222e | CONTOUR INTEGRAL                    |
| .:      | 2234 | THEREFORE                           |

|     |      |                                    |
|-----|------|------------------------------------|
| :.  | 2235 | BECAUSE                            |
| :R  | 2236 | RATIO                              |
| ::  | 2237 | PROPORTION                         |
| ?1  | 223c | TILDE OPERATOR                     |
| CG  | 223e | INVERTED LAZY S                    |
| ?-  | 2243 | ASYMPTOTICALLY EQUAL TO            |
| ?=  | 2245 | APPROXIMATELY EQUAL TO             |
| ?2  | 2248 | ALMOST EQUAL TO                    |
| =?  | 224c | ALL EQUAL TO                       |
| HI  | 2253 | IMAGE OF OR APPROXIMATELY EQUAL TO |
| !=  | 2260 | NOT EQUAL TO                       |
| =3  | 2261 | IDENTICAL TO                       |
| =<  | 2264 | LESS-THAN OR EQUAL TO              |
| >=  | 2265 | GREATER-THAN OR EQUAL TO           |
| <*  | 226a | MUCH LESS-THAN                     |
| *>  | 226b | MUCH GREATER-THAN                  |
| !<  | 226e | NOT LESS-THAN                      |
| !>  | 226f | NOT GREATER-THAN                   |
| (C  | 2282 | SUBSET OF                          |
| )C  | 2283 | SUPERSET OF                        |
| ( _ | 2286 | SUBSET OF OR EQUAL TO              |
| )_  | 2287 | SUPERSET OF OR EQUAL TO            |
| 0.  | 2299 | CIRCLED DOT OPERATOR               |
| 02  | 229a | CIRCLED RING OPERATOR              |
| -T  | 22a5 | UP TACK                            |
| .P  | 22c5 | DOT OPERATOR                       |
| :3  | 22ee | VERTICAL ELLIPSIS                  |
| .3  | 22ef | MIDLINE HORIZONTAL ELLIPSIS        |
| Eh  | 2302 | HOUSE                              |
| <7  | 2308 | LEFT CEILING                       |
| >7  | 2309 | RIGHT CEILING                      |
| 7<  | 230a | LEFT FLOOR                         |
| 7>  | 230b | RIGHT FLOOR                        |
| NI  | 2310 | REVERSED NOT SIGN                  |
| (A  | 2312 | ARC                                |
| TR  | 2315 | TELEPHONE RECORDER                 |
| Iu  | 2320 | TOP HALF INTEGRAL                  |
| Il  | 2321 | BOTTOM HALF INTEGRAL               |
| </  | 2329 | LEFT-POINTING ANGLE BRACKET        |
| />  | 232a | RIGHT-POINTING ANGLE BRACKET       |
| Vs  | 2423 | OPEN BOX                           |
| 1h  | 2440 | OCR HOOK                           |
| 3h  | 2441 | OCR CHAIR                          |
| 2h  | 2442 | OCR FORK                           |
| 4h  | 2443 | OCR INVERTED FORK                  |
| 1j  | 2446 | OCR BRANCH BANK IDENTIFICATION     |
| 2j  | 2447 | OCR AMOUNT OF CHECK                |
| 3j  | 2448 | OCR DASH                           |
| 4j  | 2449 | OCR CUSTOMER ACCOUNT NUMBER        |
| 1-o | 2460 | CIRCLED DIGIT ONE                  |
| 2-o | 2461 | CIRCLED DIGIT TWO                  |
| 3-o | 2462 | CIRCLED DIGIT THREE                |
| 4-o | 2463 | CIRCLED DIGIT FOUR                 |

|      |      |                                |
|------|------|--------------------------------|
| 5-o  | 2464 | CIRCLED DIGIT FIVE             |
| 6-o  | 2465 | CIRCLED DIGIT SIX              |
| 7-o  | 2466 | CIRCLED DIGIT SEVEN            |
| 8-o  | 2467 | CIRCLED DIGIT EIGHT            |
| 9-o  | 2468 | CIRCLED DIGIT NINE             |
| 10-o | 2469 | CIRCLED NUMBER TEN             |
| 11-o | 246a | CIRCLED NUMBER ELEVEN          |
| 12-o | 246b | CIRCLED NUMBER TWELVE          |
| 13-o | 246c | CIRCLED NUMBER THIRTEEN        |
| 14-o | 246d | CIRCLED NUMBER FOURTEEN        |
| 15-o | 246e | CIRCLED NUMBER FIFTEEN         |
| 16-o | 246f | CIRCLED NUMBER SIXTEEN         |
| 17-o | 2470 | CIRCLED NUMBER SEVENTEEN       |
| 18-o | 2471 | CIRCLED NUMBER EIGHTEEN        |
| 19-o | 2472 | CIRCLED NUMBER NINETEEN        |
| 20-o | 2473 | CIRCLED NUMBER TWENTY          |
| (1)  | 2474 | PARENTHESIZED DIGIT ONE        |
| (2)  | 2475 | PARENTHESIZED DIGIT TWO        |
| (3)  | 2476 | PARENTHESIZED DIGIT THREE      |
| (4)  | 2477 | PARENTHESIZED DIGIT FOUR       |
| (5)  | 2478 | PARENTHESIZED DIGIT FIVE       |
| (6)  | 2479 | PARENTHESIZED DIGIT SIX        |
| (7)  | 247a | PARENTHESIZED DIGIT SEVEN      |
| (8)  | 247b | PARENTHESIZED DIGIT EIGHT      |
| (9)  | 247c | PARENTHESIZED DIGIT NINE       |
| (10) | 247d | PARENTHESIZED NUMBER TEN       |
| (11) | 247e | PARENTHESIZED NUMBER ELEVEN    |
| (12) | 247f | PARENTHESIZED NUMBER TWELVE    |
| (13) | 2480 | PARENTHESIZED NUMBER THIRTEEN  |
| (14) | 2481 | PARENTHESIZED NUMBER FOURTEEN  |
| (15) | 2482 | PARENTHESIZED NUMBER FIFTEEN   |
| (16) | 2483 | PARENTHESIZED NUMBER SIXTEEN   |
| (17) | 2484 | PARENTHESIZED NUMBER SEVENTEEN |
| (18) | 2485 | PARENTHESIZED NUMBER EIGHTEEN  |
| (19) | 2486 | PARENTHESIZED NUMBER NINETEEN  |
| (20) | 2487 | PARENTHESIZED NUMBER TWENTY    |
| 1.   | 2488 | DIGIT ONE FULL STOP            |
| 2.   | 2489 | DIGIT TWO FULL STOP            |
| 3.   | 248a | DIGIT THREE FULL STOP          |
| 4.   | 248b | DIGIT FOUR FULL STOP           |
| 5.   | 248c | DIGIT FIVE FULL STOP           |
| 6.   | 248d | DIGIT SIX FULL STOP            |
| 7.   | 248e | DIGIT SEVEN FULL STOP          |
| 8.   | 248f | DIGIT EIGHT FULL STOP          |
| 9.   | 2490 | DIGIT NINE FULL STOP           |
| 10.  | 2491 | NUMBER TEN FULL STOP           |
| 11.  | 2492 | NUMBER ELEVEN FULL STOP        |
| 12.  | 2493 | NUMBER TWELVE FULL STOP        |
| 13.  | 2494 | NUMBER THIRTEEN FULL STOP      |
| 14.  | 2495 | NUMBER FOURTEEN FULL STOP      |
| 15.  | 2496 | NUMBER FIFTEEN FULL STOP       |
| 16.  | 2497 | NUMBER SIXTEEN FULL STOP       |
| 17.  | 2498 | NUMBER SEVENTEEN FULL STOP     |

|     |      |                                    |
|-----|------|------------------------------------|
| 18. | 2499 | NUMBER EIGHTEEN FULL STOP          |
| 19. | 249a | NUMBER NINETEEN FULL STOP          |
| 20. | 249b | NUMBER TWENTY FULL STOP            |
| (a) | 249c | PARENTHESIZED LATIN SMALL LETTER A |
| (b) | 249d | PARENTHESIZED LATIN SMALL LETTER B |
| (c) | 249e | PARENTHESIZED LATIN SMALL LETTER C |
| (d) | 249f | PARENTHESIZED LATIN SMALL LETTER D |
| (e) | 24a0 | PARENTHESIZED LATIN SMALL LETTER E |
| (f) | 24a1 | PARENTHESIZED LATIN SMALL LETTER F |
| (g) | 24a2 | PARENTHESIZED LATIN SMALL LETTER G |
| (h) | 24a3 | PARENTHESIZED LATIN SMALL LETTER H |
| (i) | 24a4 | PARENTHESIZED LATIN SMALL LETTER I |
| (j) | 24a5 | PARENTHESIZED LATIN SMALL LETTER J |
| (k) | 24a6 | PARENTHESIZED LATIN SMALL LETTER K |
| (l) | 24a7 | PARENTHESIZED LATIN SMALL LETTER L |
| (m) | 24a8 | PARENTHESIZED LATIN SMALL LETTER M |
| (n) | 24a9 | PARENTHESIZED LATIN SMALL LETTER N |
| (o) | 24aa | PARENTHESIZED LATIN SMALL LETTER O |
| (p) | 24ab | PARENTHESIZED LATIN SMALL LETTER P |
| (q) | 24ac | PARENTHESIZED LATIN SMALL LETTER Q |
| (r) | 24ad | PARENTHESIZED LATIN SMALL LETTER R |
| (s) | 24ae | PARENTHESIZED LATIN SMALL LETTER S |
| (t) | 24af | PARENTHESIZED LATIN SMALL LETTER T |
| (u) | 24b0 | PARENTHESIZED LATIN SMALL LETTER U |
| (v) | 24b1 | PARENTHESIZED LATIN SMALL LETTER V |
| (w) | 24b2 | PARENTHESIZED LATIN SMALL LETTER W |
| (x) | 24b3 | PARENTHESIZED LATIN SMALL LETTER X |
| (y) | 24b4 | PARENTHESIZED LATIN SMALL LETTER Y |
| (z) | 24b5 | PARENTHESIZED LATIN SMALL LETTER Z |
| A-o | 24b6 | CIRCLED LATIN CAPITAL LETTER A     |
| B-o | 24b7 | CIRCLED LATIN CAPITAL LETTER B     |
| C-o | 24b8 | CIRCLED LATIN CAPITAL LETTER C     |
| D-o | 24b9 | CIRCLED LATIN CAPITAL LETTER D     |
| E-o | 24ba | CIRCLED LATIN CAPITAL LETTER E     |
| F-o | 24bb | CIRCLED LATIN CAPITAL LETTER F     |
| G-o | 24bc | CIRCLED LATIN CAPITAL LETTER G     |
| H-o | 24bd | CIRCLED LATIN CAPITAL LETTER H     |
| I-o | 24be | CIRCLED LATIN CAPITAL LETTER I     |
| J-o | 24bf | CIRCLED LATIN CAPITAL LETTER J     |
| K-o | 24c0 | CIRCLED LATIN CAPITAL LETTER K     |
| L-o | 24c1 | CIRCLED LATIN CAPITAL LETTER L     |
| M-o | 24c2 | CIRCLED LATIN CAPITAL LETTER M     |
| N-o | 24c3 | CIRCLED LATIN CAPITAL LETTER N     |
| O-o | 24c4 | CIRCLED LATIN CAPITAL LETTER O     |
| P-o | 24c5 | CIRCLED LATIN CAPITAL LETTER P     |
| Q-o | 24c6 | CIRCLED LATIN CAPITAL LETTER Q     |
| R-o | 24c7 | CIRCLED LATIN CAPITAL LETTER R     |
| S-o | 24c8 | CIRCLED LATIN CAPITAL LETTER S     |
| T-o | 24c9 | CIRCLED LATIN CAPITAL LETTER T     |
| U-o | 24ca | CIRCLED LATIN CAPITAL LETTER U     |
| V-o | 24cb | CIRCLED LATIN CAPITAL LETTER V     |
| W-o | 24cc | CIRCLED LATIN CAPITAL LETTER W     |
| X-o | 24cd | CIRCLED LATIN CAPITAL LETTER X     |

|     |      |  |
|-----|------|--|
| Y-o | 24ce | CIRCLED LATIN CAPITAL LETTER Y               |
| Z-o | 24cf | CIRCLED LATIN CAPITAL LETTER Z               |
| a-o | 24d0 | CIRCLED LATIN SMALL LETTER A                 |
| b-o | 24d1 | CIRCLED LATIN SMALL LETTER B                 |
| c-o | 24d2 | CIRCLED LATIN SMALL LETTER C                 |
| d-o | 24d3 | CIRCLED LATIN SMALL LETTER D                 |
| e-o | 24d4 | CIRCLED LATIN SMALL LETTER E                 |
| f-o | 24d5 | CIRCLED LATIN SMALL LETTER F                 |
| g-o | 24d6 | CIRCLED LATIN SMALL LETTER G                 |
| h-o | 24d7 | CIRCLED LATIN SMALL LETTER H                 |
| i-o | 24d8 | CIRCLED LATIN SMALL LETTER I                 |
| j-o | 24d9 | CIRCLED LATIN SMALL LETTER J                 |
| k-o | 24da | CIRCLED LATIN SMALL LETTER K                 |
| l-o | 24db | CIRCLED LATIN SMALL LETTER L                 |
| m-o | 24dc | CIRCLED LATIN SMALL LETTER M                 |
| n-o | 24dd | CIRCLED LATIN SMALL LETTER N                 |
| o-o | 24de | CIRCLED LATIN SMALL LETTER O                 |
| p-o | 24df | CIRCLED LATIN SMALL LETTER P                 |
| q-o | 24e0 | CIRCLED LATIN SMALL LETTER Q                 |
| r-o | 24e1 | CIRCLED LATIN SMALL LETTER R                 |
| s-o | 24e2 | CIRCLED LATIN SMALL LETTER S                 |
| t-o | 24e3 | CIRCLED LATIN SMALL LETTER T                 |
| u-o | 24e4 | CIRCLED LATIN SMALL LETTER U                 |
| v-o | 24e5 | CIRCLED LATIN SMALL LETTER V                 |
| w-o | 24e6 | CIRCLED LATIN SMALL LETTER W                 |
| x-o | 24e7 | CIRCLED LATIN SMALL LETTER X                 |
| y-o | 24e8 | CIRCLED LATIN SMALL LETTER Y                 |
| z-o | 24e9 | CIRCLED LATIN SMALL LETTER Z                 |
| 0-o | 24ea | CIRCLED DIGIT ZERO                           |
| hh  | 2500 | BOX DRAWINGS LIGHT HORIZONTAL                |
| HH  | 2501 | BOX DRAWINGS HEAVY HORIZONTAL                |
| vv  | 2502 | BOX DRAWINGS LIGHT VERTICAL                  |
| VV  | 2503 | BOX DRAWINGS HEAVY VERTICAL                  |
| 3-  | 2504 | BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL    |
| 3_  | 2505 | BOX DRAWINGS HEAVY TRIPLE DASH HORIZONTAL    |
| 3!  | 2506 | BOX DRAWINGS LIGHT TRIPLE DASH VERTICAL      |
| 3/  | 2507 | BOX DRAWINGS HEAVY TRIPLE DASH VERTICAL      |
| 4-  | 2508 | BOX DRAWINGS LIGHT QUADRUPLE DASH HORIZONTAL |
| 4_  | 2509 | BOX DRAWINGS HEAVY QUADRUPLE DASH HORIZONTAL |
| 4!  | 250a | BOX DRAWINGS LIGHT QUADRUPLE DASH VERTICAL   |
| 4/  | 250b | BOX DRAWINGS HEAVY QUADRUPLE DASH VERTICAL   |
| dr  | 250c | BOX DRAWINGS LIGHT DOWN AND RIGHT            |
| dR  | 250d | BOX DRAWINGS DOWN LIGHT AND RIGHT HEAVY      |
| Dr  | 250e | BOX DRAWINGS DOWN HEAVY AND RIGHT LIGHT      |
| DR  | 250f | BOX DRAWINGS HEAVY DOWN AND RIGHT            |
| dL  | 2510 | BOX DRAWINGS LIGHT DOWN AND LEFT             |
| dL  | 2511 | BOX DRAWINGS DOWN LIGHT AND LEFT HEAVY       |
| Dl  | 2512 | BOX DRAWINGS DOWN HEAVY AND LEFT LIGHT       |
| LD  | 2513 | BOX DRAWINGS HEAVY DOWN AND LEFT             |
| ur  | 2514 | BOX DRAWINGS LIGHT UP AND RIGHT              |
| uR  | 2515 | BOX DRAWINGS UP LIGHT AND RIGHT HEAVY        |
| Ur  | 2516 | BOX DRAWINGS UP HEAVY AND RIGHT LIGHT        |
| UR  | 2517 | BOX DRAWINGS HEAVY UP AND RIGHT              |

|      |      |   |
|------|------|---|
| ul   | 2518 | BOX DRAWINGS LIGHT UP AND LEFT                        |
| uL   | 2519 | BOX DRAWINGS UP LIGHT AND LEFT HEAVY                  |
| Ul   | 251a | BOX DRAWINGS UP HEAVY AND LEFT LIGHT                  |
| UL   | 251b | BOX DRAWINGS HEAVY UP AND LEFT                        |
| vr   | 251c | BOX DRAWINGS LIGHT VERTICAL AND RIGHT                 |
| vR   | 251d | BOX DRAWINGS VERTICAL LIGHT AND RIGHT HEAVY           |
| Udr  | 251e | BOX DRAWINGS UP HEAVY AND RIGHT DOWN LIGHT            |
| uDr  | 251f | BOX DRAWINGS DOWN HEAVY AND RIGHT UP LIGHT            |
| Vr   | 2520 | BOX DRAWINGS VERTICAL HEAVY AND RIGHT LIGHT           |
| UdR  | 2521 | BOX DRAWINGS DOWN LIGHT AND RIGHT UP HEAVY            |
| uDR  | 2522 | BOX DRAWINGS UP LIGHT AND RIGHT DOWN HEAVY            |
| VR   | 2523 | BOX DRAWINGS HEAVY VERTICAL AND RIGHT                 |
| vl   | 2524 | BOX DRAWINGS LIGHT VERTICAL AND LEFT                  |
| vL   | 2525 | BOX DRAWINGS VERTICAL LIGHT AND LEFT HEAVY            |
| Udl  | 2526 | BOX DRAWINGS UP HEAVY AND LEFT DOWN LIGHT             |
| uDl  | 2527 | BOX DRAWINGS DOWN HEAVY AND LEFT UP LIGHT             |
| Vl   | 2528 | BOX DRAWINGS VERTICAL HEAVY AND LEFT LIGHT            |
| UdL  | 2529 | BOX DRAWINGS DOWN LIGHT AND LEFT UP HEAVY             |
| uDl  | 252a | BOX DRAWINGS UP LIGHT AND LEFT DOWN HEAVY             |
| VL   | 252b | BOX DRAWINGS HEAVY VERTICAL AND LEFT                  |
| dh   | 252c | BOX DRAWINGS LIGHT DOWN AND HORIZONTAL                |
| dLr  | 252d | BOX DRAWINGS LEFT HEAVY AND RIGHT DOWN LIGHT          |
| dLR  | 252e | BOX DRAWINGS RIGHT HEAVY AND LEFT DOWN LIGHT          |
| dH   | 252f | BOX DRAWINGS DOWN LIGHT AND HORIZONTAL HEAVY          |
| Dh   | 2530 | BOX DRAWINGS DOWN HEAVY AND HORIZONTAL LIGHT          |
| DLr  | 2531 | BOX DRAWINGS RIGHT LIGHT AND LEFT DOWN HEAVY          |
| DlR  | 2532 | BOX DRAWINGS LEFT LIGHT AND RIGHT DOWN HEAVY          |
| DH   | 2533 | BOX DRAWINGS HEAVY DOWN AND HORIZONTAL                |
| uh   | 2534 | BOX DRAWINGS LIGHT UP AND HORIZONTAL                  |
| uLr  | 2535 | BOX DRAWINGS LEFT HEAVY AND RIGHT UP LIGHT            |
| uLR  | 2536 | BOX DRAWINGS RIGHT HEAVY AND LEFT UP LIGHT            |
| uH   | 2537 | BOX DRAWINGS UP LIGHT AND HORIZONTAL HEAVY            |
| Uh   | 2538 | BOX DRAWINGS UP HEAVY AND HORIZONTAL LIGHT            |
| ULr  | 2539 | BOX DRAWINGS RIGHT LIGHT AND LEFT UP HEAVY            |
| ULR  | 253a | BOX DRAWINGS LEFT LIGHT AND RIGHT UP HEAVY            |
| UH   | 253b | BOX DRAWINGS HEAVY UP AND HORIZONTAL                  |
| vh   | 253c | BOX DRAWINGS LIGHT VERTICAL AND HORIZONTAL            |
| vLr  | 253d | BOX DRAWINGS LEFT HEAVY AND RIGHT VERTICAL LIGHT      |
| vLR  | 253e | BOX DRAWINGS RIGHT HEAVY AND LEFT VERTICAL LIGHT      |
| vH   | 253f | BOX DRAWINGS VERTICAL LIGHT AND HORIZONTAL HEAVY      |
| Udh  | 2540 | BOX DRAWINGS UP HEAVY AND DOWN HORIZONTAL LIGHT       |
| uDh  | 2541 | BOX DRAWINGS DOWN HEAVY AND UP HORIZONTAL LIGHT       |
| Vh   | 2542 | BOX DRAWINGS VERTICAL HEAVY AND HORIZONTAL LIGHT      |
| UdLr | 2543 | BOX DRAWINGS LEFT UP HEAVY AND RIGHT DOWN LIGHT       |
| UdLR | 2544 | BOX DRAWINGS RIGHT UP HEAVY AND LEFT DOWN LIGHT       |
| uDlR | 2545 | BOX DRAWINGS LEFT DOWN HEAVY AND RIGHT UP LIGHT       |
| uDlR | 2546 | BOX DRAWINGS RIGHT DOWN HEAVY AND LEFT UP LIGHT       |
| UdH  | 2547 | BOX DRAWINGS DOWN LIGHT AND UP HORIZONTAL HEAVY       |
| uDH  | 2548 | BOX DRAWINGS UP LIGHT AND DOWN HORIZONTAL HEAVY       |
| VLr  | 2549 | BOX DRAWINGS RIGHT LIGHT AND LEFT VERTICAL HEAVY      |
| VlR  | 254a | BOX DRAWINGS LEFT LIGHT AND RIGHT VERTICAL HEAVY      |
| VH   | 254b | BOX DRAWINGS HEAVY VERTICAL AND HORIZONTAL            |
| FD   | 2571 | BOX DRAWINGS LIGHT DIAGONAL UPPER RIGHT TO LOWER LEFT |

|     |      |   |
|-----|------|---|
| BD  | 2572 | BOX DRAWINGS LIGHT DIAGONAL UPPER LEFT TO LOWER RIGHT |
| TB  | 2580 | UPPER HALF BLOCK                                      |
| LB  | 2584 | LOWER HALF BLOCK                                      |
| FB  | 2588 | FULL BLOCK  |
| lB  | 258c | LEFT HALF BLOCK                                       |
| RB  | 2590 | RIGHT HALF BLOCK                                      |
| .S  | 2591 | LIGHT SHADE   |
| :S  | 2592 | MEDIUM SHADE  |
| ?S  | 2593 | DARK SHADE  |
| fS  | 25a0 | BLACK SQUARE  |
| OS  | 25a1 | WHITE SQUARE  |
| RO  | 25a2 | WHITE SQUARE WITH ROUNDED CORNERS                     |
| Rr  | 25a3 | WHITE SQUARE CONTAINING BLACK SMALL SQUARE            |
| RF  | 25a4 | SQUARE WITH HORIZONTAL FILL                           |
| RY  | 25a5 | SQUARE WITH VERTICAL FILL                             |
| RH  | 25a6 | SQUARE WITH ORTHOGONAL CROSSHATCH FILL                |
| RZ  | 25a7 | SQUARE WITH UPPER LEFT TO LOWER RIGHT FILL            |
| RK  | 25a8 | SQUARE WITH UPPER RIGHT TO LOWER LEFT FILL            |
| RX  | 25a9 | SQUARE WITH DIAGONAL CROSSHATCH FILL                  |
| sB  | 25aa | BLACK SMALL SQUARE                                    |
| SR  | 25ac | BLACK RECTANGLE                                       |
| Or  | 25ad | WHITE RECTANGLE                                       |
| UT  | 25b2 | BLACK UP-POINTING TRIANGLE                            |
| uT  | 25b3 | WHITE UP-POINTING TRIANGLE                            |
| PR  | 25b6 | BLACK RIGHT-POINTING TRIANGLE                         |
| Tr  | 25b7 | WHITE RIGHT-POINTING TRIANGLE                         |
| Dt  | 25bc | BLACK DOWN-POINTING TRIANGLE                          |
| dT  | 25bd | WHITE DOWN-POINTING TRIANGLE                          |
| PL  | 25c0 | BLACK LEFT-POINTING TRIANGLE                          |
| Tl  | 25c1 | WHITE LEFT-POINTING TRIANGLE                          |
| Db  | 25c6 | BLACK DIAMOND   |
| Dw  | 25c7 | WHITE DIAMOND   |
| LZ  | 25ca | LOZENGE   |
| Om  | 25cb | WHITE CIRCLE  |
| Oo  | 25ce | BULLSEYE  |
| OM  | 25cf | BLACK CIRCLE  |
| OL  | 25d0 | CIRCLE WITH LEFT HALF BLACK                           |
| OR  | 25d1 | CIRCLE WITH RIGHT HALF BLACK                          |
| Sn  | 25d8 | INVERSE BULLET  |
| Ic  | 25d9 | INVERSE WHITE CIRCLE                                  |
| Fd  | 25e2 | BLACK LOWER RIGHT TRIANGLE                            |
| Bd  | 25e3 | BLACK LOWER LEFT TRIANGLE                             |
| *2  | 2605 | BLACK STAR  |
| *1  | 2606 | WHITE STAR  |
| TEL | 260e | BLACK TELEPHONE                                       |
| tel | 260f | WHITE TELEPHONE                                       |
| <H  | 261c | WHITE LEFT POINTING INDEX                             |
| >H  | 261e | WHITE RIGHT POINTING INDEX                            |
| 0u  | 263a | WHITE SMILING FACE                                    |
| 0U  | 263b | BLACK SMILING FACE                                    |
| SU  | 263c | WHITE SUN WITH RAYS                                   |
| Fm  | 2640 | FEMALE SIGN   |
| Ml  | 2642 | MALE SIGN   |

|      |      |                                |
|------|------|--------------------------------|
| cS   | 2660 | BLACK SPADE SUIT               |
| cH   | 2661 | WHITE HEART SUIT               |
| cD   | 2662 | WHITE DIAMOND SUIT             |
| cC   | 2663 | BLACK CLUB SUIT                |
| cS-  | 2664 | WHITE SPADE SUIT               |
| cH-  | 2665 | BLACK HEART SUIT               |
| cD-  | 2666 | BLACK DIAMOND SUIT             |
| cC-  | 2667 | WHITE CLUB SUIT                |
| Md   | 2669 | QUARTER NOTE                   |
| M8   | 266a | EIGHTH NOTE                    |
| M2   | 266b | BARRED EIGHTH NOTES            |
| M16  | 266c | BARRED SIXTEENTH NOTES         |
| Mb   | 266d | MUSIC FLAT SIGN                |
| Mx   | 266e | MUSIC NATURAL SIGN             |
| MX   | 266f | MUSIC SHARP SIGN               |
| OK   | 2713 | CHECK MARK                     |
| XX   | 2717 | BALLOT X                       |
| -X   | 2720 | MALTESE CROSS                  |
| IS   | 3000 | IDEOGRAPHIC SPACE              |
| ,_   | 3001 | IDEOGRAPHIC COMMA              |
| ._   | 3002 | IDEOGRAPHIC PERIOD             |
| + "  | 3003 | DITTO MARK                     |
| + _  | 3004 | IDEOGRAPHIC DITTO MARK         |
| * _  | 3005 | IDEOGRAPHIC ITERATION MARK     |
| ; _  | 3006 | IDEOGRAPHIC CLOSING MARK       |
| 0 _  | 3007 | IDEOGRAPHIC NUMBER ZERO        |
| <+   | 300a | LEFT DOUBLE ANGLE BRACKET      |
| >+   | 300b | RIGHT DOUBLE ANGLE BRACKET     |
| <'   | 300c | LEFT CORNER BRACKET            |
| >'   | 300d | RIGHT CORNER BRACKET           |
| <"   | 300e | LEFT WHITE CORNER BRACKET      |
| >"   | 300f | RIGHT WHITE CORNER BRACKET     |
| ("   | 3010 | LEFT BLACK LENTICULAR BRACKET  |
| )"   | 3011 | RIGHT BLACK LENTICULAR BRACKET |
| =T   | 3012 | POSTAL MARK                    |
| =_   | 3013 | GETA MARK                      |
| ('   | 3014 | LEFT TORTOISE SHELL BRACKET    |
| )'   | 3015 | RIGHT TORTOISE SHELL BRACKET   |
| (I   | 3016 | LEFT WHITE LENTICULAR BRACKET  |
| )I   | 3017 | RIGHT WHITE LENTICULAR BRACKET |
| -?   | 301c | WAVE DASH                      |
| =T:) | 3020 | POSTAL MARK FACE               |
| A5   | 3041 | HIRAGANA LETTER SMALL A        |
| a5   | 3042 | HIRAGANA LETTER A              |
| I5   | 3043 | HIRAGANA LETTER SMALL I        |
| i5   | 3044 | HIRAGANA LETTER I              |
| U5   | 3045 | HIRAGANA LETTER SMALL U        |
| u5   | 3046 | HIRAGANA LETTER U              |
| E5   | 3047 | HIRAGANA LETTER SMALL E        |
| e5   | 3048 | HIRAGANA LETTER E              |
| O5   | 3049 | HIRAGANA LETTER SMALL O        |
| o5   | 304a | HIRAGANA LETTER O              |
| ka   | 304b | HIRAGANA LETTER KA             |

|    |      |                          |
|----|------|--------------------------|
| ga | 304c | HIRAGANA LETTER GA       |
| ki | 304d | HIRAGANA LETTER KI       |
| gi | 304e | HIRAGANA LETTER GI       |
| ku | 304f | HIRAGANA LETTER KU       |
| gu | 3050 | HIRAGANA LETTER GU       |
| ke | 3051 | HIRAGANA LETTER KE       |
| ge | 3052 | HIRAGANA LETTER GE       |
| ko | 3053 | HIRAGANA LETTER KO       |
| go | 3054 | HIRAGANA LETTER GO       |
| sa | 3055 | HIRAGANA LETTER SA       |
| za | 3056 | HIRAGANA LETTER ZA       |
| si | 3057 | HIRAGANA LETTER SI       |
| zi | 3058 | HIRAGANA LETTER ZI       |
| su | 3059 | HIRAGANA LETTER SU       |
| zu | 305a | HIRAGANA LETTER ZU       |
| se | 305b | HIRAGANA LETTER SE       |
| ze | 305c | HIRAGANA LETTER ZE       |
| so | 305d | HIRAGANA LETTER SO       |
| zo | 305e | HIRAGANA LETTER ZO       |
| ta | 305f | HIRAGANA LETTER TA       |
| da | 3060 | HIRAGANA LETTER DA       |
| ti | 3061 | HIRAGANA LETTER TI       |
| di | 3062 | HIRAGANA LETTER DI       |
| tU | 3063 | HIRAGANA LETTER SMALL TU |
| tu | 3064 | HIRAGANA LETTER TU       |
| du | 3065 | HIRAGANA LETTER DU       |
| te | 3066 | HIRAGANA LETTER TE       |
| de | 3067 | HIRAGANA LETTER DE       |
| to | 3068 | HIRAGANA LETTER TO       |
| do | 3069 | HIRAGANA LETTER DO       |
| na | 306a | HIRAGANA LETTER NA       |
| ni | 306b | HIRAGANA LETTER NI       |
| nu | 306c | HIRAGANA LETTER NU       |
| ne | 306d | HIRAGANA LETTER NE       |
| no | 306e | HIRAGANA LETTER NO       |
| ha | 306f | HIRAGANA LETTER HA       |
| ba | 3070 | HIRAGANA LETTER BA       |
| pa | 3071 | HIRAGANA LETTER PA       |
| hi | 3072 | HIRAGANA LETTER HI       |
| bi | 3073 | HIRAGANA LETTER BI       |
| pi | 3074 | HIRAGANA LETTER PI       |
| hu | 3075 | HIRAGANA LETTER HU       |
| bu | 3076 | HIRAGANA LETTER BU       |
| pu | 3077 | HIRAGANA LETTER PU       |
| he | 3078 | HIRAGANA LETTER HE       |
| be | 3079 | HIRAGANA LETTER BE       |
| pe | 307a | HIRAGANA LETTER PE       |
| ho | 307b | HIRAGANA LETTER HO       |
| bo | 307c | HIRAGANA LETTER BO       |
| po | 307d | HIRAGANA LETTER PO       |
| ma | 307e | HIRAGANA LETTER MA       |
| mi | 307f | HIRAGANA LETTER MI       |
| mu | 3080 | HIRAGANA LETTER MU       |

|    |      |  |
|----|------|--|
| me | 3081 | HIRAGANA LETTER ME                       |
| mo | 3082 | HIRAGANA LETTER MO                       |
| yA | 3083 | HIRAGANA LETTER SMALL YA                 |
| ya | 3084 | HIRAGANA LETTER YA                       |
| yU | 3085 | HIRAGANA LETTER SMALL YU                 |
| yu | 3086 | HIRAGANA LETTER YU                       |
| yO | 3087 | HIRAGANA LETTER SMALL YO                 |
| yo | 3088 | HIRAGANA LETTER YO                       |
| ra | 3089 | HIRAGANA LETTER RA                       |
| ri | 308a | HIRAGANA LETTER RI                       |
| ru | 308b | HIRAGANA LETTER RU                       |
| re | 308c | HIRAGANA LETTER RE                       |
| ro | 308d | HIRAGANA LETTER RO                       |
| wA | 308e | HIRAGANA LETTER SMALL WA                 |
| wa | 308f | HIRAGANA LETTER WA                       |
| wi | 3090 | HIRAGANA LETTER WI                       |
| we | 3091 | HIRAGANA LETTER WE                       |
| wo | 3092 | HIRAGANA LETTER WO                       |
| n5 | 3093 | HIRAGANA LETTER N                        |
| vu | 3094 | HIRAGANA LETTER VU                       |
| "5 | 309b | KATAKANA-HIRAGANA VOICED SOUND MARK      |
| 05 | 309c | KATAKANA-HIRAGANA SEMI-VOICED SOUND MARK |
| *5 | 309d | HIRAGANA ITERATION MARK                  |
| +5 | 309e | HIRAGANA VOICED ITERATION MARK           |
| a6 | 30a1 | KATAKANA LETTER SMALL A                  |
| A6 | 30a2 | KATAKANA LETTER A                        |
| i6 | 30a3 | KATAKANA LETTER SMALL I                  |
| I6 | 30a4 | KATAKANA LETTER I                        |
| u6 | 30a5 | KATAKANA LETTER SMALL U                  |
| U6 | 30a6 | KATAKANA LETTER U                        |
| e6 | 30a7 | KATAKANA LETTER SMALL E                  |
| E6 | 30a8 | KATAKANA LETTER E                        |
| o6 | 30a9 | KATAKANA LETTER SMALL O                  |
| O6 | 30aa | KATAKANA LETTER O                        |
| Ka | 30ab | KATAKANA LETTER KA                       |
| Ga | 30ac | KATAKANA LETTER GA                       |
| Ki | 30ad | KATAKANA LETTER KI                       |
| Gi | 30ae | KATAKANA LETTER GI                       |
| Ku | 30af | KATAKANA LETTER KU                       |
| Gu | 30b0 | KATAKANA LETTER GU                       |
| Ke | 30b1 | KATAKANA LETTER KE                       |
| Ge | 30b2 | KATAKANA LETTER GE                       |
| Ko | 30b3 | KATAKANA LETTER KO                       |
| Go | 30b4 | KATAKANA LETTER GO                       |
| Sa | 30b5 | KATAKANA LETTER SA                       |
| Za | 30b6 | KATAKANA LETTER ZA                       |
| Si | 30b7 | KATAKANA LETTER SI                       |
| Zi | 30b8 | KATAKANA LETTER ZI                       |
| Su | 30b9 | KATAKANA LETTER SU                       |
| Zu | 30ba | KATAKANA LETTER ZU                       |
| Se | 30bb | KATAKANA LETTER SE                       |
| Ze | 30bc | KATAKANA LETTER ZE                       |
| So | 30bd | KATAKANA LETTER SO                       |

|    |      |                          |
|----|------|--------------------------|
| Zo | 30be | KATAKANA LETTER ZO       |
| Ta | 30bf | KATAKANA LETTER TA       |
| Da | 30c0 | KATAKANA LETTER DA       |
| Ti | 30c1 | KATAKANA LETTER TI       |
| Di | 30c2 | KATAKANA LETTER DI       |
| TU | 30c3 | KATAKANA LETTER SMALL TU |
| Tu | 30c4 | KATAKANA LETTER TU       |
| Du | 30c5 | KATAKANA LETTER DU       |
| Te | 30c6 | KATAKANA LETTER TE       |
| De | 30c7 | KATAKANA LETTER DE       |
| To | 30c8 | KATAKANA LETTER TO       |
| Do | 30c9 | KATAKANA LETTER DO       |
| Na | 30ca | KATAKANA LETTER NA       |
| Ni | 30cb | KATAKANA LETTER NI       |
| Nu | 30cc | KATAKANA LETTER NU       |
| Ne | 30cd | KATAKANA LETTER NE       |
| No | 30ce | KATAKANA LETTER NO       |
| Ha | 30cf | KATAKANA LETTER HA       |
| Ba | 30d0 | KATAKANA LETTER BA       |
| Pa | 30d1 | KATAKANA LETTER PA       |
| Hi | 30d2 | KATAKANA LETTER HI       |
| Bi | 30d3 | KATAKANA LETTER BI       |
| Pi | 30d4 | KATAKANA LETTER PI       |
| Hu | 30d5 | KATAKANA LETTER HU       |
| Bu | 30d6 | KATAKANA LETTER BU       |
| Pu | 30d7 | KATAKANA LETTER PU       |
| He | 30d8 | KATAKANA LETTER HE       |
| Be | 30d9 | KATAKANA LETTER BE       |
| Pe | 30da | KATAKANA LETTER PE       |
| Ho | 30db | KATAKANA LETTER HO       |
| Bo | 30dc | KATAKANA LETTER BO       |
| Po | 30dd | KATAKANA LETTER PO       |
| Ma | 30de | KATAKANA LETTER MA       |
| Mi | 30df | KATAKANA LETTER MI       |
| Mu | 30e0 | KATAKANA LETTER MU       |
| Me | 30e1 | KATAKANA LETTER ME       |
| Mo | 30e2 | KATAKANA LETTER MO       |
| YA | 30e3 | KATAKANA LETTER SMALL YA |
| Ya | 30e4 | KATAKANA LETTER YA       |
| YU | 30e5 | KATAKANA LETTER SMALL YU |
| Yu | 30e6 | KATAKANA LETTER YU       |
| YO | 30e7 | KATAKANA LETTER SMALL YO |
| Yo | 30e8 | KATAKANA LETTER YO       |
| Ra | 30e9 | KATAKANA LETTER RA       |
| Ri | 30ea | KATAKANA LETTER RI       |
| Ru | 30eb | KATAKANA LETTER RU       |
| Re | 30ec | KATAKANA LETTER RE       |
| Ro | 30ed | KATAKANA LETTER RO       |
| WA | 30ee | KATAKANA LETTER SMALL WA |
| Wa | 30ef | KATAKANA LETTER WA       |
| Wi | 30f0 | KATAKANA LETTER WI       |
| We | 30f1 | KATAKANA LETTER WE       |
| Wo | 30f2 | KATAKANA LETTER WO       |

|      |      |  |
|------|------|--|
| N6   | 30f3 | KATAKANA LETTER N                      |
| Vu   | 30f4 | KATAKANA LETTER VU                     |
| KA   | 30f5 | KATAKANA LETTER SMALL KA               |
| KE   | 30f6 | KATAKANA LETTER SMALL KE               |
| Va   | 30f7 | KATAKANA LETTER VA                     |
| Vi   | 30f8 | KATAKANA LETTER VI                     |
| Ve   | 30f9 | KATAKANA LETTER VE                     |
| Vo   | 30fa | KATAKANA LETTER VO                     |
| .6   | 30fb | KATAKANA MIDDLE DOT                    |
| -6   | 30fc | KATAKANA-HIRAGANA PROLONGED SOUND MARK |
| *6   | 30fd | KATAKANA ITERATION MARK                |
| +6   | 30fe | KATAKANA VOICED ITERATION MARK         |
| b4   | 3105 | BOPOMOFO LETTER B                      |
| p4   | 3106 | BOPOMOFO LETTER P                      |
| m4   | 3107 | BOPOMOFO LETTER M                      |
| f4   | 3108 | BOPOMOFO LETTER F                      |
| d4   | 3109 | BOPOMOFO LETTER D                      |
| t4   | 310a | BOPOMOFO LETTER T                      |
| n4   | 310b | BOPOMOFO LETTER N                      |
| l4   | 310c | BOPOMOFO LETTER L                      |
| g4   | 310d | BOPOMOFO LETTER G                      |
| k4   | 310e | BOPOMOFO LETTER K                      |
| h4   | 310f | BOPOMOFO LETTER H                      |
| j4   | 3110 | BOPOMOFO LETTER J                      |
| q4   | 3111 | BOPOMOFO LETTER Q                      |
| x4   | 3112 | BOPOMOFO LETTER X                      |
| zh   | 3113 | BOPOMOFO LETTER ZH                     |
| ch   | 3114 | BOPOMOFO LETTER CH                     |
| sh   | 3115 | BOPOMOFO LETTER SH                     |
| r4   | 3116 | BOPOMOFO LETTER R                      |
| z4   | 3117 | BOPOMOFO LETTER Z                      |
| c4   | 3118 | BOPOMOFO LETTER C                      |
| s4   | 3119 | BOPOMOFO LETTER S                      |
| a4   | 311a | BOPOMOFO LETTER A                      |
| o4   | 311b | BOPOMOFO LETTER O                      |
| e4   | 311c | BOPOMOFO LETTER E                      |
| eh4  | 311d | BOPOMOFO LETTER EH                     |
| ai   | 311e | BOPOMOFO LETTER AI                     |
| ei   | 311f | BOPOMOFO LETTER EI                     |
| au   | 3120 | BOPOMOFO LETTER AU                     |
| ou   | 3121 | BOPOMOFO LETTER OU                     |
| an   | 3122 | BOPOMOFO LETTER AN                     |
| en   | 3123 | BOPOMOFO LETTER EN                     |
| aN   | 3124 | BOPOMOFO LETTER ANG                    |
| eN   | 3125 | BOPOMOFO LETTER ENG                    |
| er   | 3126 | BOPOMOFO LETTER ER                     |
| i4   | 3127 | BOPOMOFO LETTER I                      |
| u4   | 3128 | BOPOMOFO LETTER U                      |
| iu   | 3129 | BOPOMOFO LETTER IU                     |
| v4   | 312a | BOPOMOFO LETTER V                      |
| nG   | 312b | BOPOMOFO LETTER NG                     |
| gn   | 312c | BOPOMOFO LETTER GN                     |
| (JU) | 321c | PARENTHESIZED HANGUL JU                |

|     |      |  |
|-----|------|--|
| 1c  | 3220 | PARENTHESIZED IDEOGRAPH ONE                    |
| 2c  | 3221 | PARENTHESIZED IDEOGRAPH TWO                    |
| 3c  | 3222 | PARENTHESIZED IDEOGRAPH THREE                  |
| 4c  | 3223 | PARENTHESIZED IDEOGRAPH FOUR                   |
| 5c  | 3224 | PARENTHESIZED IDEOGRAPH FIVE                   |
| 6c  | 3225 | PARENTHESIZED IDEOGRAPH SIX                    |
| 7c  | 3226 | PARENTHESIZED IDEOGRAPH SEVEN                  |
| 8c  | 3227 | PARENTHESIZED IDEOGRAPH EIGHT                  |
| 9c  | 3228 | PARENTHESIZED IDEOGRAPH NINE                   |
| 10c | 3229 | PARENTHESIZED IDEOGRAPH TEN                    |
| KSC | 327f | KOREAN STANDARD SYMBOL                         |
| ff  | fb00 | LATIN SMALL LIGATURE FF                        |
| fi  | fb01 | LATIN SMALL LIGATURE FI                        |
| fl  | fb02 | LATIN SMALL LIGATURE FL                        |
| ffi | fb03 | LATIN SMALL LIGATURE FFI                       |
| ffl | fb04 | LATIN SMALL LIGATURE FFL                       |
| ft  | fb05 | LATIN SMALL LIGATURE FT                        |
| st  | fb06 | LATIN SMALL LIGATURE ST                        |
| 3+; | fe7d | ARABIC SHADDA MEDIAL FORM                      |
| aM. | fe82 | ARABIC LETTER ALEF WITH MADDA ABOVE FINAL FORM |
| aH. | fe84 | ARABIC LETTER ALEF WITH HAMZA ABOVE FINAL FORM |
| a+- | fe8d | ARABIC LETTER ALEF ISOLATED FORM               |
| a+. | fe8e | ARABIC LETTER ALEF FINAL FORM                  |
| b+- | fe8f | ARABIC LETTER BEH ISOLATED FORM                |
| b+, | fe90 | ARABIC LETTER BEH INITIAL FORM                 |
| b+; | fe91 | ARABIC LETTER BEH MEDIAL FORM                  |
| b+. | fe92 | ARABIC LETTER BEH FINAL FORM                   |
| tm- | fe93 | ARABIC LETTER TEH MARBUTA ISOLATED FORM        |
| tm. | fe94 | ARABIC LETTER TEH MARBUTA FINAL FORM           |
| t+- | fe95 | ARABIC LETTER TEH ISOLATED FORM                |
| t+, | fe96 | ARABIC LETTER TEH INITIAL FORM                 |
| t+; | fe97 | ARABIC LETTER TEH MEDIAL FORM                  |
| t+. | fe98 | ARABIC LETTER TEH FINAL FORM                   |
| tk- | fe99 | ARABIC LETTER THEH ISOLATED FORM               |
| tk, | fe9a | ARABIC LETTER THEH INITIAL FORM                |
| tk; | fe9b | ARABIC LETTER THEH MEDIAL FORM                 |
| tk. | fe9c | ARABIC LETTER THEH FINAL FORM                  |
| g+- | fe9d | ARABIC LETTER JEEM ISOLATED FORM               |
| g+, | fe9e | ARABIC LETTER JEEM INITIAL FORM                |
| g+; | fe9f | ARABIC LETTER JEEM MEDIAL FORM                 |
| g+. | fea0 | ARABIC LETTER JEEM FINAL FORM                  |
| hk- | fea1 | ARABIC LETTER HAH ISOLATED FORM                |
| hk, | fea2 | ARABIC LETTER HAH INITIAL FORM                 |
| hk; | fea3 | ARABIC LETTER HAH MEDIAL FORM                  |
| hk. | fea4 | ARABIC LETTER HAH FINAL FORM                   |
| x+- | fea5 | ARABIC LETTER KHAH ISOLATED FORM               |
| x+, | fea6 | ARABIC LETTER KHAH INITIAL FORM                |
| x+; | fea7 | ARABIC LETTER KHAH MEDIAL FORM                 |
| x+. | fea8 | ARABIC LETTER KHAH FINAL FORM                  |
| d+- | fea9 | ARABIC LETTER DAL ISOLATED FORM                |
| d+. | feaa | ARABIC LETTER DAL FINAL FORM                   |
| dk- | feab | ARABIC LETTER THAL ISOLATED FORM               |
| dk. | feac | ARABIC LETTER THAL FINAL FORM                  |

|     |      |                                   |
|-----|------|-----------------------------------|
| r+- | fead | ARABIC LETTER REH ISOLATED FORM   |
| r+. | feae | ARABIC LETTER REH FINAL FORM      |
| z+- | feaf | ARABIC LETTER ZAIN ISOLATED FORM  |
| z+. | feb0 | ARABIC LETTER ZAIN FINAL FORM     |
| s+- | feb1 | ARABIC LETTER SEEN ISOLATED FORM  |
| s+, | feb2 | ARABIC LETTER SEEN INITIAL FORM   |
| s+; | feb3 | ARABIC LETTER SEEN MEDIAL FORM    |
| s+. | feb4 | ARABIC LETTER SEEN FINAL FORM     |
| sn- | feb5 | ARABIC LETTER SHEEN ISOLATED FORM |
| sn, | feb6 | ARABIC LETTER SHEEN INITIAL FORM  |
| sn; | feb7 | ARABIC LETTER SHEEN MEDIAL FORM   |
| sn. | feb8 | ARABIC LETTER SHEEN FINAL FORM    |
| c+- | feb9 | ARABIC LETTER SAD ISOLATED FORM   |
| c+, | feba | ARABIC LETTER SAD INITIAL FORM    |
| c+; | febb | ARABIC LETTER SAD MEDIAL FORM     |
| c+. | febc | ARABIC LETTER SAD FINAL FORM      |
| dd- | febd | ARABIC LETTER DAD ISOLATED FORM   |
| dd, | febe | ARABIC LETTER DAD INITIAL FORM    |
| dd; | febf | ARABIC LETTER DAD MEDIAL FORM     |
| dd. | fec0 | ARABIC LETTER DAD FINAL FORM      |
| tj- | fec1 | ARABIC LETTER TAH ISOLATED FORM   |
| tj, | fec2 | ARABIC LETTER TAH INITIAL FORM    |
| tj; | fec3 | ARABIC LETTER TAH MEDIAL FORM     |
| tj. | fec4 | ARABIC LETTER TAH FINAL FORM      |
| zH- | fec5 | ARABIC LETTER ZAH ISOLATED FORM   |
| zH, | fec6 | ARABIC LETTER ZAH INITIAL FORM    |
| zH; | fec7 | ARABIC LETTER ZAH MEDIAL FORM     |
| zH. | fec8 | ARABIC LETTER ZAH FINAL FORM      |
| e+- | fec9 | ARABIC LETTER AIN ISOLATED FORM   |
| e+, | feca | ARABIC LETTER AIN INITIAL FORM    |
| e+; | fecb | ARABIC LETTER AIN MEDIAL FORM     |
| e+. | fecc | ARABIC LETTER AIN FINAL FORM      |
| i+- | fecd | ARABIC LETTER GHAIN ISOLATED FORM |
| i+, | fece | ARABIC LETTER GHAIN INITIAL FORM  |
| i+; | fecf | ARABIC LETTER GHAIN MEDIAL FORM   |
| i+. | fed0 | ARABIC LETTER GHAIN FINAL FORM    |
| f+- | fed1 | ARABIC LETTER FEH ISOLATED FORM   |
| f+, | fed2 | ARABIC LETTER FEH INITIAL FORM    |
| f+; | fed3 | ARABIC LETTER FEH MEDIAL FORM     |
| f+. | fed4 | ARABIC LETTER FEH FINAL FORM      |
| q+- | fed5 | ARABIC LETTER QAF ISOLATED FORM   |
| q+, | fed6 | ARABIC LETTER QAF INITIAL FORM    |
| q+; | fed7 | ARABIC LETTER QAF MEDIAL FORM     |
| q+. | fed8 | ARABIC LETTER QAF FINAL FORM      |
| k+- | fed9 | ARABIC LETTER KAF ISOLATED FORM   |
| k+, | feda | ARABIC LETTER KAF INITIAL FORM    |
| k+; | fedb | ARABIC LETTER KAF MEDIAL FORM     |
| k+. | fedc | ARABIC LETTER KAF FINAL FORM      |
| l+- | fedd | ARABIC LETTER LAM ISOLATED FORM   |
| l+, | fede | ARABIC LETTER LAM INITIAL FORM    |
| l+; | fedf | ARABIC LETTER LAM MEDIAL FORM     |
| l+. | fee0 | ARABIC LETTER LAM FINAL FORM      |
| m+- | fee1 | ARABIC LETTER MEEM ISOLATED FORM  |

|     |      |  |
|-----|------|--|
| m+, | fee2 | ARABIC LETTER MEEM INITIAL FORM                              |
| m+; | fee3 | ARABIC LETTER MEEM MEDIAL FORM                               |
| m+. | fee4 | ARABIC LETTER MEEM FINAL FORM                                |
| n+- | fee5 | ARABIC LETTER NOON ISOLATED FORM                             |
| n+, | fee6 | ARABIC LETTER NOON INITIAL FORM                              |
| n+; | fee7 | ARABIC LETTER NOON MEDIAL FORM                               |
| n+. | fee8 | ARABIC LETTER NOON FINAL FORM                                |
| h+- | fee9 | ARABIC LETTER HEH ISOLATED FORM                              |
| h+, | feea | ARABIC LETTER HEH INITIAL FORM                               |
| h+; | feeb | ARABIC LETTER HEH MEDIAL FORM                                |
| h+. | feec | ARABIC LETTER HEH FINAL FORM                                 |
| w+- | feed | ARABIC LETTER WAW ISOLATED FORM                              |
| w+. | feee | ARABIC LETTER WAW FINAL FORM                                 |
| j+- | feef | ARABIC LETTER ALEF MAKSURA ISOLATED FORM                     |
| j+. | fef0 | ARABIC LETTER ALEF MAKSURA FINAL FORM                        |
| y+- | fef1 | ARABIC LETTER YEH ISOLATED FORM                              |
| y+, | fef2 | ARABIC LETTER YEH INITIAL FORM                               |
| y+; | fef3 | ARABIC LETTER YEH MEDIAL FORM                                |
| y+. | fef4 | ARABIC LETTER YEH FINAL FORM                                 |
| lM- | fef5 | ARABIC LIGATURE LAM WITH ALEF WITH MADDA ABOVE ISOLATED FORM |
| lM. | fef6 | ARABIC LIGATURE LAM WITH ALEF WITH MADDA ABOVE FINAL FORM    |
| lH- | fef7 | ARABIC LIGATURE LAM WITH ALEF WITH HAMZA ABOVE ISOLATED FORM |
| lH. | fef8 | ARABIC LIGATURE LAM WITH ALEF WITH HAMZA ABOVE FINAL FORM    |
| lh- | fef9 | ARABIC LIGATURE LAM WITH ALEF WITH HAMZA BELOW ISOLATED FORM |
| lh. | fefa | ARABIC LIGATURE LAM WITH ALEF WITH HAMZA BELOW FINAL FORM    |
| la- | fefb | ARABIC LIGATURE LAM WITH ALEF ISOLATED FORM                  |
| la. | fefc | ARABIC LIGATURE LAM WITH ALEF FINAL FORM                     |
| NU  | 0000 | NULL (NUL)   |
| SH  | 0001 | START OF HEADING (SOH)                                       |
| SX  | 0002 | START OF TEXT (STX)  |
| EX  | 0003 | END OF TEXT (ETX)  |
| ET  | 0004 | END OF TRANSMISSION (EOT)                                    |
| EQ  | 0005 | ENQUIRY (ENQ)  |
| AK  | 0006 | ACKNOWLEDGE (ACK)  |
| BL  | 0007 | BELL (BEL)   |
| BS  | 0008 | BACKSPACE (BS)   |
| HT  | 0009 | CHARACTER TABULATION (HT)                                    |
| LF  | 000a | LINE FEED (LF)   |
| VT  | 000b | LINE TABULATION (VT)   |
| FF  | 000c | FORM FEED (FF)   |
| CR  | 000d | CARRIAGE RETURN (CR)   |
| SO  | 000e | SHIFT OUT (SO)   |
| SI  | 000f | SHIFT IN (SI)  |
| DL  | 0010 | DATALINK ESCAPE (DLE)  |
| D1  | 0011 | DEVICE CONTROL ONE (DC1)                                     |
| D2  | 0012 | DEVICE CONTROL TWO (DC2)                                     |
| D3  | 0013 | DEVICE CONTROL THREE (DC3)                                   |

|    |      |   |
|----|------|---|
| D4 | 0014 | DEVICE CONTROL FOUR (DC4)   |
| NK | 0015 | NEGATIVE ACKNOWLEDGE (NAK)  |
| SY | 0016 | SYNCHRONOUS IDLE (SYN)  |
| EB | 0017 | END OF TRANSMISSION BLOCK (ETB)                                       |
| CN | 0018 | CANCEL (CAN)  |
| EM | 0019 | END OF MEDIUM (EM)  |
| SB | 001a | SUBSTITUTE (SUB)  |
| EC | 001b | ESCAPE (ESC)  |
| FS | 001c | FILE SEPARATOR (IS4)  |
| GS | 001d | GROUP SEPARATOR (IS3)   |
| RS | 001e | RECORD SEPARATOR (IS2)  |
| US | 001f | UNIT SEPARATOR (IS1)  |
| DT | 007f | DELETE (DEL)  |
| PA | 0080 | PADDING CHARACTER (PAD)   |
| HO | 0081 | HIGH OCTET PRESET (HOP)   |
| BH | 0082 | BREAK PERMITTED HERE (BPH)  |
| NH | 0083 | NO BREAK HERE (NBH)   |
| IN | 0084 | INDEX (IND)   |
| NL | 0085 | NEXT LINE (NEL)   |
| SA | 0086 | START OF SELECTED AREA (SSA)  |
| ES | 0087 | END OF SELECTED AREA (ESA)  |
| HS | 0088 | CHARACTER TABULATION SET (HTS)  |
| HJ | 0089 | CHARACTER TABULATION WITH JUSTIFICATION (HTJ)                         |
| VS | 008a | LINE TABULATION SET (VTS)   |
| PD | 008b | PARTIAL LINE FORWARD (PLD)  |
| PU | 008c | PARTIAL LINE BACKWARD (PLU)   |
| RI | 008d | REVERSE LINE FEED (RI)  |
| S2 | 008e | SINGLE-SHIFT TWO (SS2)  |
| S3 | 008f | SINGLE-SHIFT THREE (SS3)  |
| DC | 0090 | DEVICE CONTROL STRING (DCS)   |
| P1 | 0091 | PRIVATE USE ONE (PU1)   |
| P2 | 0092 | PRIVATE USE TWO (PU2)   |
| TS | 0093 | SET TRANSMIT STATE (STS)  |
| CC | 0094 | CANCEL CHARACTER (CCH)  |
| MW | 0095 | MESSAGE WAITING (MW)  |
| SG | 0096 | START OF GUARDED AREA (SPA)   |
| EG | 0097 | END OF GUARDED AREA (EPA)   |
| SS | 0098 | START OF STRING (SOS)   |
| GC | 0099 | SINGLE GRAPHIC CHARACTER INTRODUCER (SGCI)                            |
| SC | 009a | SINGLE CHARACTER INTRODUCER (SCI)                                     |
| CI | 009b | CONTROL SEQUENCE INTRODUCER (CSI)                                     |
| ST | 009c | STRING TERMINATOR (ST)  |
| OC | 009d | OPERATING SYSTEM COMMAND (OSC)  |
| PM | 009e | PRIVACY MESSAGE (PM)  |
| AC | 009f | APPLICATION PROGRAM COMMAND (APC)                                     |
|    | e000 | indicates unfinished (Mnemonic)                                       |
| /c | e001 | JOIN THIS LINE WITH NEXT LINE (Mnemonic)                              |
| UA | e002 | Unit space A (ISO-IR-8-1 064)   |
| UB | e003 | Unit space B (ISO-IR-8-1 096)   |
| "3 | e004 | NON-SPACING UMLAUT (ISO-IR-38 201) (character part)                   |
| "1 | e005 | NON-SPACING DIAERESIS WITH ACCENT (ISO-IR-70 192)<br>(character part) |
| "! | e006 | NON-SPACING GRAVE ACCENT (ISO-IR-103 193) (character                  |

|       |      |  |
|-------|------|--|
|       |      | part)  |
| " ' " | e007 | NON-SPACING ACUTE ACCENT (ISO-IR-103 194) (character part)       |
| ">    | e008 | NON-SPACING CIRCUMFLEX ACCENT (ISO-IR-103 195) (character part)  |
| "?"   | e009 | NON-SPACING TILDE (ISO-IR-103 196) (character part)              |
| "-"   | e00a | NON-SPACING MACRON (ISO-IR-103 197) (character part)             |
| "("   | e00b | NON-SPACING BREVE (ISO-IR-103 198) (character part)              |
| ".    | e00c | NON-SPACING DOT ABOVE (ISO-IR-103 199) (character part)          |
| ":    | e00d | NON-SPACING DIAERESIS (ISO-IR-103 200) (character part)          |
| "0    | e00e | NON-SPACING RING ABOVE (ISO-IR-103 202) (character part)         |
| " "   | e00f | NON-SPACING DOUBLE ACCUTE (ISO-IR-103 204) (character part)      |
| "<    | e010 | NON-SPACING CARON (ISO-IR-103 206) (character part)              |
| ","   | e011 | NON-SPACING CEDILLA (ISO-IR-103 203) (character part)            |
| ";    | e012 | NON-SPACING OGONEK (ISO-IR-103 206) (character part)             |
| "_    | e013 | NON-SPACING LOW LINE (ISO-IR-103 204) (character part)           |
| "="   | e014 | NON-SPACING DOUBLE LOW LINE (ISO-IR-38 217) (character part)     |
| "/    | e015 | NON-SPACING LONG SOLIDUS (ISO-IR-128 201) (character part)       |
| "i    | e016 | GREEK NON-SPACING IOTA BELOW (ISO-IR-55 39) (character part)     |
| "d    | e017 | GREEK NON-SPACING DASIA PNEUMATA (ISO-IR-55 38) (character part) |
| "p    | e018 | GREEK NON-SPACING PSILI PNEUMATA (ISO-IR-55 37) (character part) |
| ;;    | e019 | GREEK DASIA PNEUMATA (ISO-IR-18 92)                              |
| ,,    | e01a | GREEK PSILI PNEUMATA (ISO-IR-18 124)                             |
| b3    | e01b | GREEK SMALL LETTER MIDDLE BETA (ISO-IR-18 99)                    |
| Ci    | e01c | CIRCLE (ISO-IR-83 0294)  |
| f(    | e01d | FUNCTION SIGN (ISO-IR-143 221)                                   |
| ed    | e01e | LATIN SMALL LETTER EZH (ISO-IR-158 142)                          |
| am    | e01f | ANTE MERIDIAM SIGN (ISO-IR-149 0267)                             |
| pm    | e020 | POST MERIDIAM SIGN (ISO-IR-149 0268)                             |
| Tel   | e021 | TEL COMPATIBILITY SIGN (ISO-IR-149 0269)                         |
| a+:   | e022 | ARABIC LETTER ALEF FINAL FORM COMPATIBILITY (IBM868 144)         |
| Fl    | e023 | DUTCH GUILDER SIGN (IBM437 159)                                  |
| GF    | e024 | GAMMA FUNCTION SIGN (ISO-10646-1DIS 032/032/037/122)             |
| >V    | e025 | RIGHTWARDS VECTOR ABOVE (ISO-10646-1DIS 032/032/038/046)         |
| !*    | e026 | GREEK VARIA (ISO-10646-1DIS 032/032/042/164)                     |
| ?*    | e027 | GREEK PERISPOMENI (ISO-10646-1DIS 032/032/042/165)               |
| J<    | e028 | LATIN CAPITAL LETTER J WITH CARON (lowercase: 000/000/001/240)   |

#### 4. CHARSETS

The character mnemonics have been used to table a number of coded character sets. The coded character set names are taken if possible from the official ISO registration description in the ISO 2375 (ECMA) register, or with a number like the code page number - or with an indication of the language or country it is being used for - using

the country designators of ISO 3166. For the character sets in the ECMA register, their ISO registration number is also given (as ISO-IR-xxx). Often the ISO registration number does not cover all the codes of a character set in use, but for instance only the graphical characters, where another ISO registration number covers the control characters; in the case of the 8-bit character sets the ISO registration only covers the upper graphical characters (GR). The ISO registration number is here taken to indicate the full coded character set including control characters and lower half of the graphical characters, normally ISO 6429 and ASCII, respectively.

The ISO definition of the term "coded character set" is as follows: "A set of unambiguous rules that establishes a character set and the one-to-one relationship between the characters of the set and their coded representation." and this definition may be subject to different interpretations. This memo does not put further restrictions on the term of "coded character set" than the following: "A coded character set is a set of rules that unambiguously and completely determines which sequence of characters, if any, is represented by each possible sequence of n-bit bytes for a certain value of n." This implies that e.g. a coded character set extended with one or more other coded character sets by means of the extension techniques of ISO 2022 constitutes a coded character set in its own right. In this memo the term "charset" is used to refer to the above interpretation of the ISO term "coded character set".

A special problem is, if two characters of two different coded character sets with the same descriptive name, or depicted by what looks like the same graphic symbol, or with the same historical origin, really are to be regarded as the same character or not. This problem has been studied in great detail in the development efforts that have resulted in ISO DIS 10646 and Unicode (under the heading "character unification"). As much as possible such results have been used in the construction of the code tables of this section.

#### 4.1 Charset Naming

The coded character set names are given in ISO 646 invariant subset (83 characters, where a space in the name is replaced with an underline character; sometimes a hyphen is also used instead of a blank, or the blank is eliminated when practice exist). Case is not significant in the charset names.

#### 4.2 Code Table Format

The following code tables are given in a simple format to facilitate use of this text as program input. Programs and routines written in C to handle these tables are freely available from the author of this memo. Keywords are signified with the character "&" as the first character, to distinguish them from ordinary data. Numbers may be given in decimal, hexadecimal or octal notation; hexadecimal numbers are given with an "x" as the first character, and octal numbers has an "o" as the first character.

The following keywords are used:

"&charset" has one parameter defining the name of the character set. This is required for every character set.

"&alias" has one parameter defining a possible alternate name for the character set. This is optional.

"&g0esc", "&g1esc", "&g2esc", "&g3esc", "&c0esc", "&c1esc" has one parameter indicating the string of octets used to define the character set as the G0, G1, G2, G3, C0 or C1 set respectively, according to ISO 2022 (11). The string is to be preceded by an ESC character. It is only the relevant parts of the table, which can be used with the definition; the charset is often coded with both graphical and control character sets. If the coded character set is a 96-character set, it is tabled with the relevant GL set (normally ISO-IR-6) and with ISO 6429 as C0 and C1 (12). If it is a 94-character set, it is tabled with the C0 set of ISO 6429. If it is a double-octet coded character set, it is tabled without control character sets and accompanying one-octet coded character sets, and the two-octet code is tabled as a G0 set.

"&bits" has one parameter indicating the number of bits to represent the charset. This is optional and 8 bits is the default.

"&code" has one parameter indicating the byte number allocated to the following character mnemonic. After the "&code" specification the characters are listed with their mnemonic in ascending order. A character mnemonic of "??" indicates that the position is unused. A character mnemonic of "\_\_" indicates that the character set is not completely defined with the specifications in this memo.

"&code2" has 2 parameters specifying the row and column in certain 16-bit character sets. The value 32 must be added to obtain the first and second byte respectively. Mnemonics can be specified after the "&code2" specification as mentioned for the "&code" specification.

"&codex" has 5 parameters, specifying the character set prefix string, the start row number, the end row number, the start column number and the end column number respectively. This is equivalent to specifying a series of mnemonics of the form "nrrcc" where "n" is the character set name prefix string, "rr" is the row number running from the specified start row number to the end row number, and "cc" is the column number running from the specified start column number to the end column number. The thereby created series mnemonics are allocated to code positions which are added 32 to the row and column numbers to get the row and column octet.

"&duplicate" has a special meaning indicating that a position is being used for more than one character. This is an ugly convention but it is a sad fact of life that same code in one coded character set can mean different characters. "&duplicate" takes two parameters

- the first is the code to be duplicated, the other is the new mnemonic.

"&rem" is followed by text to explain something in the table to a human reader. All lines in such a remark has to start with this keyword.

"&comb2" specifies a combination of two characters which signifies a third character. All characters in the specification are given by their mnemonic. The two combining characters must be specified previously in the code table. The first combining character is specified as the first character after the keyword, and then the following pairs of characters are the second combining character and the result, respectively. The specification can be repeated, terminated by an occurrence of a keyword.

### 4.3 Mnemonic charsets

The following is compatible with current practice on the internet within EUnet - the European not-for-profit networking organisation in Europe and North Africa currently operating in 24 countries.

The mnemonic charsets are a family of charsets which have the facility that within the relevant parts of the message, encoded in an ordinary coded character set, text may have occurrences of the following sequence: an intro character sequence, followed by a string of characters that represent a character mnemonic, as described below. Similarly, the intro character sequence may be doubled, indicating a single occurrence of the respective symbols in decoded format.

Note that many characters within a mnemonic character set may be represented in two different ways. Normally the character itself is used, but it is also possible to use the mnemonic allocated to the character in a mnemonic sequence.

In this way all characters with assigned mnemonics can be represented without information loss in any character set, which contains the invariant ISO 646 characters as a subset. As a consequence, using a mnemonic character set all these characters can be generated uniformly on all keyboards and presented uniformly on all terminal equipment, whenever the real character is not available.

Data encoded in a mnemonic charset is intended to be read by the end user possibly without further treatment. If the transport encoding and the presentation encoding for the user differ, it is recommended that the data be translated into a mnemonic representation in the presentation encoding.

A mnemonic charset is specified with the name "mnemonic+charset+intro" where "mnemonic" is written as given and "charset" and "intro" is specified as described below. The mnemonic charset "mnemonic" is a shorthand for "mnemonic+ascii+38". The

mnemonic charset "mnem" is a shorthand for "mnemonic+ascii+8200".

It is discouraged to use mnemonics for Chinese characters of either Chinese, Japanese or Korean origin, as the probability that the end user equipment can deal with the original encoding is very high for the intended receiver, and the mnemonics for such Chinese characters described in this memo convey very little meaning to humans.

#### 4.3.1 charset

The charset is given as one of the charset names in this memo and is the encoding used for the transport. It cannot be a mnemonic charset.

#### 4.3.2 Intro

The intro character sequence is given as the decimal value of the intro characters in the transport character set. There may be up to two characters used in the intro character sequence, and the decimal value for two-character intro sequences are then the first character value multiplied with 256 to the power of the number of octets used in the character set, plus the second character value. The recommended value is 38 for the ampersand (&) character in ASCII. Another common value is 29 for the control character "Group Separator", or 8200 for "space" followed by "backspace", which may be convenient when operating in some environments, and ordinary text is not changed. Only the ampersand character may be chosen as intro from the invariant ISO 646 charset, but any character not in the invariant ISO 646 character can be used as intro. The intro character sequence is used for introducing character mnemonics when a character is not present in the mail transport character set (as defined by "charset"). Character mnemonics longer than two characters are surrounded by the underline character. The intro character sequence is doubled to represent one occurrence of itself. Characters in the mail transport character set are normally just represented with their encoding, but may also be represented by the intro character sequence and the mnemonic encoding.

If the intro character sequence is specified as 0 (zero), it is omitted in the transport, giving a better readable content, but eliminating the possibility of reversibility and introducing an information loss. With intro specified as 0, also underline characters surrounding mnemonics longer than 2 characters are removed. Mnemonic charsets with the intro specified as zero is equivalent to the ordinary charset, e.g. "mnemonic+ascii+0" is equivalent to "ascii".

The intro character can be given in a header "Mnemonic-Intro:" with the value given in decimal as noted above in the first parameter. This has only meaning if the charset can be deducted by other information as specified by the relevant Internet specification. This information has precedence over other information on the intro.

### 4.3.3 Compatibility

If applications conforming to this memo interoperate with other versions of this memo, and encounter mnemonics that are undefined with this memo, they shall leave the mnemonic as it is coded. This provides for upward compatibility.

### 4.3.4 Conversion Between Mnemonic Charsets

To determine which mnemonic charsets are permitted with the use of an Internet specification, please refer to that specification. It may be that only "ASCII" or "INVARIANT" is allowed as the base charset. ASCII is the most used character set, while INVARIANT will be very robust for traversing gateways, but it will cause trouble for (amongst other things) source code for several programming languages. The use of other character sets may be limited to agreement between the communicating parties. When such an agreement has been achieved, a conversion between different mnemonic charsets can be done according to the charset tables below, as characters occurring in both encodings are just transformed, and characters not existing in the receiving coded character set are represented by the intro character sequence of the receiving coded character set plus the character mnemonic, as described for the intro character sequence. The characters forming the mnemonic are translated into the receiving code, which must have these characters present. An undefined character in the originating coded character set is transformed into the following sequence: the intro character sequence, an underline, a question mark character, a "u" (for undefined) and then the hexadecimal value of the character with letters in lowercase (possibly more than one byte for multibyte character sets) and then a terminating underline character. Headers may need to be changed accordingly to reflect such conversion. The character mnemonic "/c" has a special meaning in specifying that a line is to be continued even if the next characters are specifying a new line.

## 5. CHARSET TABLES

```
&charset ISO_646.basic:1983
&rem source: ECMA registry
&alias ref
&code 32
```

```
SP ! " ?? ?? % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
?? 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 Z ?? ?? ?? ?? _
?? 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 z
```

```
&charset INVARIANT
```

```
&code 0
```

```
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " ?? ?? % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
?? 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 Z ?? ?? ?? ?? _
?? 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 z ?? ?? ?? ?? DT
```

```

&charset ISO_646.irv:1983
&rem source: ECMA registry
&alias iso-ir-2
&alias irv
&g0esc x2840 &glesc x2940 &g2esc x2a40 &g3esc x2b40
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb Cu % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '- DT

```

```

&charset BS_4730
&rem source: ECMA registry
&alias iso-ir-4
&alias ISO646-GB
&g0esc x2841 &glesc x2941 &g2esc x2a41 &g3esc x2b41
&alias gb
&alias uk
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Pd DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '- DT

```

```

&charset ANSI_X3.4-1968
&rem source: ECMA registry
&alias iso-ir-6
&alias ANSI_X3.4-1986
&alias ISO_646.irv:1991
&g0esc x2842 &glesc x2942 &g2esc x2a42 &g3esc x2b42
&alias ASCII
&alias ISO646-US
&alias US-ASCII
&alias us
&alias IBM367
&alias cp367
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT

```

```

&charset NATS-SEFI
&rem source: ECMA registry
&alias iso-ir-8-1
&g0esc x2843 &glesc x2943 &g2esc x2a43 &g3esc x2b43
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?

```

UA 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 Z A: O: AA fS \_  
 UB 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 z a: o: aa -N DT

```
&charset NATS-SEFI-ADD
&rem source: ECMA registry
&alias iso-ir-8-2
&g0esc x2844 &glesc x2944 &g2esc x2a44 &g3esc x2b44
&code 0
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? A! ?? ?? D/ E' ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
TH ?? ?? ?? ?? U: ?? ?? ?? ?? ?? AE O/ ?? ?? ??
?? a! ?? ?? d/ e' ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
th ?? ?? ?? ?? u: ?? ?? ?? ?? ?? ae o/ ?? ?? ??
```

```
&charset NATS-DANO
&rem source: ECMA registry
&alias iso-ir-9-1
&g0esc x2845 &glesc x2945 &g2esc x2a45 &g3esc x2b45
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! << >> DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
UA 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 Z AE O/ AA fS _
UB 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 z ae o/ aa -N DT
```

```
&charset NATS-DANO-ADD
&rem source: ECMA registry
&alias iso-ir-9-2
&g0esc x2846 &glesc x2946 &g2esc x2a46 &g3esc x2b46
&code 0
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? A! ?? ?? D/ E' ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
TH ?? ?? ?? ?? U: ?? ?? ?? ?? ?? A: O: ?? ?? ??
?? a! ?? ?? d/ e' ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
th ?? ?? ?? ?? u: ?? ?? ?? ?? ?? a: o: ?? ?? ??
```

```
&charset SEN_850200_B
&rem source: ECMA registry
&alias iso-ir-10
&alias FI
&alias ISO646-FI
&alias ISO646-SE
&alias se
&g0esc x2847 &glesc x2947 &g2esc x2a47 &g3esc x2b47
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
```

```
SP ! " Nb Cu % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z A: O: AA '> _
'! 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 z a: o: aa '- DT
```

```
&charset SEN_850200_C
&rem source: ECMA registry
&alias iso-ir-11
&alias ISO646-SE2
&g0esc x2848 &glesc x2948 &g2esc x2a48 &g3esc x2b48
&alias se2
&code 0
```

```
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb Cu % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
E' 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 Z A: O: AA U: _
e' 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 z a: o: aa u: DT
```

```
&charset JIS_C6220-1969-jp
&rem source: ECMA registry
&alias JIS_C6220-1969
&alias iso-ir-13
&alias katakana
&alias x0201-7
&g0esc x2849 &glesc x2949 &g2esc x2a49 &g3esc x2b49
&code 0
```

```
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP . _ <' >' , _ .6 Wo a6 i6 u6 e6 o6 YA YU YO TU
-6 A6 I6 U6 E6 O6 Ka Ki Ku Ke Ko Sa Si Su Se So
Ta Ti Tu Te To Na Ni Nu Ne No Ha Hi Hu He Ho Ma
Mi Mu Me Mo Ya Yu Yo Ra Ri Ru Re Ro Wa N6 "5 05
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? DT
```

```
&charset JIS_C6220-1969-ro
&rem source: ECMA registry
&alias iso-ir-14
&g0esc x284a &glesc x294a &g2esc x2a4a &g3esc x2b4a
&alias jp
&alias ISO646-JP
&code 0
```

```
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( Ye )> '> _
'! 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 z (! !! !) '- DT
```

```
&charset IT
&rem source: ECMA registry
&alias iso-ir-15
&alias ISO646-IT
&g0esc x2859 &glesc x2959 &g2esc x2a59 &g3esc x2b59
&code 0
```

```

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Pd DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
SE 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 Z DG c, e' '> _
u! 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 z a! o! e! i! DT

```

```
&charset PT
```

```
&rem source: ECMA registry
```

```
&alias iso-ir-16
```

```
&alias ISO646-PT
```

```
&g0esc x284c &glesc x294c &g2esc x2a4c &g3esc x2b4c
```

```
&code 0
```

```

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
SE 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 Z A? C, O? '> _
'! 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 z a? c, o? DG DT

```

```
&charset ES
```

```
&rem source: ECMA registry
```

```
&alias iso-ir-17
```

```
&alias ISO646-ES
```

```
&g0esc x285a &glesc x295a &g2esc x2a5a &g3esc x2b5a
```

```
&code 0
```

```

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Pd DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
SE 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 Z !I N? ?I '> _
'! 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 z DG n? c, '? DT

```

```
&charset greek7-old
```

```
&rem source: ECMA registry
```

```
&alias iso-ir-18
```

```
&g0esc x285b &glesc x295b &g2esc x2a5b &g3esc x2b5b
```

```
&code 0
```

```

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Pd DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
'' a* b* q* d* e* f* g* y* i* c* k* l* m* n* o*
p* j3 r* s* t* h* w* *s x* u* z* ?, ,, ,' '? _
'! A* B* Q* D* E* F* G* Y* I* C* K* L* M* N* O*
P* ?? R* S* T* H* W* .M X* U* Z* ?; ;; ;' ': DT

```

```
&charset latin-greek
```

```
&rem source: ECMA registry
```

```
&alias iso-ir-19
```

```
&g0esc x285c &glesc x295c &g2esc x2a5c &g3esc x2b5c
```

```
&code 0
```

```

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Pd DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _

```

```
'! A* B* Q* D* E* F* G* Y* I* C* K* L* M* N* O*
P* ?? R* S* T* H* W* .M X* U* Z* (! !! !) ': DT
```

```
&charset DIN_66003
&rem source: ECMA registry
&alias iso-ir-21
&g0esc x284b &glesc x294b &g2esc x2a4b &g3esc x2b4b
&alias de
&alias ISO646-DE
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
SE 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 Z A: O: U: '> _
'! 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 z a: o: u: ss DT
```

```
&charset NF_Z_62-010_(1973)
&rem source: ECMA registry
&alias iso-ir-25
&alias ISO646-FR1
&g0esc x2852 &glesc x2952 &g2esc x2a52 &g3esc x2b52
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Pd DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
a! 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 Z DG c, SE '> _
'! 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 z e' u! e! ': DT
```

```
&charset Latin-greek-1
&rem source: ECMA registry
&alias iso-ir-27
&g0esc x2855 &glesc x2955 &g2esc x2a55 &g3esc x2b55
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP C* " G* Cu % & ' ( ) * + , - . /
0 1 2 3 4 5 6 7 8 9 Q* ; < = > P*
D* 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 Z W* H* F* L* S*
'! 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 z (! !! !) '- DT
```

```
&charset ISO_5427
&rem source: ECMA registry
&alias iso-ir-37
&g0esc x284e &glesc x294e &g2esc x2a4e &g3esc x2b4e
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb Cu % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
ju a= b= c= d= e= f= g= h= i= j= k= l= m= n= o=
p= ja r= s= t= u= z% v= %' y= z= s% je sc c% ='
JU A= B= C= D= E= F= G= H= I= J= K= L= M= N= O=
```

P= JA R= S= T= U= Z% V= %" Y= Z= S% JE Sc C% DT

```
&charset JIS_C6226-1978
&rem source: ECMA registry
&alias iso-ir-42
&bits 16
&g0esc x2440 &glesc x242940 &g2esc x242a40 &g3esc x242b40
&code2 1 1
SP ,_ . _ , . .6 : ; ! "5 05 ' ' ! ' : ' > ' - _ *6 +6 *5 +5 +"
+_ *_ ;_ 0_ -6 -? -N
&code2 1 31
FD BD ?1 PP !! .3 .. '6 '9 "6 "9 ( ) ( ' )' <( )>
(! !) <1 >1 </ /> <' >' <" >" ( " )" + - +- *X -: = != < > =< >= 00
.: Ml Fm DG 1' 2' oC Ye DO Ct Pd % Nb & * At SE *1 *2 0m 0M 0o LZ
&code2 2 1
Db OS fS uT UT dT DT :X =T -> <- -! -v =_
&code2 3 16
0 1 2 3 4 5 6 7 8 9
&code2 3 33
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 Z
&code2 3 65
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 z
&code2 4 1
A5 a5 I5 i5 U5 u5 E5 e5 O5 o5 ka ga ki gi ku
gu ke ge ko sa za si zi su zu se ze so zo ta
da ti di tu du te de to do na ni nu ne no ha
ba pa hi bi pi hu bu pu he be pe ho bo po ma mi
mu me mo yA ya yU yu yO yo ra ri ru re ro wA wa
wi we wo n5
&code2 5 1
a6 A6 i6 I6 u6 U6 e6 E6 o6 O6 Ka Ga Ki Gi Ku
Gu Ke Ge Ko Go Sa Za Si Zi Su Zu Se Ze So Zo Ta
Da Ti Di Tu Du Te De To Do Na Ni Nu Ne No Ha
Ba Pa Hi Bi Pi Hu Bu Pu He Be Pe Ho Bo Po Ma Mi
Mu Me Mo YA Ya YU Yu YO Yo Ra Ri Ru Re Ro WA Wa
Wi We Wo N6 Vi KA KE
&code2 6 1
A* B* G* D* E* Z* Y* H* I* K* L* M* N* C* O*
P* R* S* T* U* F* X* Q* W*
&code2 6 33
a* b* g* d* e* z* y* h* i* k* l* m* n* c* o*
p* r* s* t* u* f* x* q* w*
&code2 7 1
A= B= V= G= D= E= IO Z% Z= I= J= K= L= M= N= O= P=
R= S= T= U= F= H= C= C% S% Sc =" Y= %" JE JU JA
&code2 7 49
a= b= v= g= d= e= io z% z= i= j= k= l= m= n= o= p=
r= s= t= u= f= h= c= c% s% sc =' y= %' je ju ja
&codex j 16 46 1 94
&codex j 47 47 1 51
&codex j 48 83 1 94
```

&charset BS\_viewdata

```

&rem source: ECMA registry
&alias iso-ir-47
&g0esc x2856 &glesc x2956 &g2esc x2a56 &g3esc x2b56
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Pd DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <- 12 -> -! OS
'! 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 z 14 PP 34 -: DT

```

```

&charset INIS
&rem source: ECMA registry
&alias iso-ir-49
&g0esc x2857 &glesc x2957 &g2esc x2a57 &g3esc x2b57
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ?? ?? ?? DO % ?? ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ??
?? 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 Z <( ?? )> ?? ??
?? 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 z ?? !! ?? ?? DT

```

```

&charset INIS-8
&rem source: ECMA registry
&alias iso-ir-50
&g0esc x285d &glesc x295d &g2esc x2a5d &g3esc x2b5d
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? a* b* g* d* C* ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? -> In
0S 1S 2S 3S 4S 5S 6S 7S 8S 9S +S -S Ru D* L* W*
0s 1s 2s 3s 4s 5s 6s 7s 8s 9s S* m* n* w* p* DT

```

```

&charset INIS-cyrillic
&rem source: ECMA registry
&alias iso-ir-51
&g0esc x285e &glesc x295e &g2esc x2a5e &g3esc x2b5e
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? RT ?? -> In
a* b* g* d* S* m* n* w* p* C* D* L* W* =" -S +S
ju a= b= c= d= e= f= g= h= i= j= k= l= m= n= o=
p= ja r= s= t= u= z% v= %' y= z= s% je sc c% ='
JU A= B= C= D= E= F= G= H= I= J= K= L= M= N= O=
P= JA R= S= T= U= Z% V= %" Y= Z= S% JE Sc C% DT

```

```

&charset ISO_5427:1981
&rem source: ECMA registry
&alias iso-ir-54
&g0esc x2851 &glesc x2951 &g2esc x2a51 &g3esc x2b51

```

```

&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
g3 d% g% ie io ds ii yi j% lj nj ts kj v% dz ??
y3 f3 v3 o3 ?? ?? ?? ?? ?? ?? ?? ?? <( ?? )> ?? _
G3 D% G% IE IO DS II YI J% LJ NJ Ts KJ V% DZ ="
Y3 F3 V3 O3 ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? DT

```

```

&charset ISO_5428:1980
&rem source: ECMA registry
&alias iso-ir-55
&g0esc x2853 &glesc x2953 &g2esc x2a53 &g3esc x2b53
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP " ! " ' " : " ? " p " d " i ?? ?? ?? ?? ?? ?? ?? ??
<< >> " 9 " 6 ' G , G ?? ?? ?? ?? ?? .M ?? ?? ?? ;
?? A* B* ?? G* D* E* T3 M3 Z* Y* H* I* K* L* M*
N* C* O* P* K3 R* S* ?? T* U* F* X* Q* W* P3 ??
?? a* b* b3 g* d* e* t3 m3 z* y* h* i* k* l* m*
n* c* o* p* k3 r* s* *s t* u* f* x* q* w* p3 DT

```

```

&charset GB_1988-80
&rem source: ECMA registry
&alias iso-ir-57
&g0esc x2854 &glesc x2954 &g2esc x2a54 &g3esc x2b54
&alias cn
&alias ISO646-CN
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb Ye % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
' ! 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 z ( ! ! ! ) '- DT

```

```

&charset GB_2312-80
&rem source: ECMA registry
&alias iso-ir-58
&g0esc x2441 &glesc x242941 &g2esc x242a41 &g3esc x242b41
&bits 16
&alias chinese
&code2 1 1
SP ,_ .6 .M 'm '< ': +" *_ -6 ?1
!2 .3 '6 '9 "6 "9 (' )'
<1 >1 << >> <+ >+ <7 7> (I )I (" )" +- *X -: :R AN OR +Z *P (U )U (-
:: RT -T PP -L
(A 0. In Io =3 =? ?2 CG 0( != !< !> =< >= 00
:. .: Ml Fm DG 1' 2' oC DO
Cu Ct Pd %0 SE NB *1 *2 0m 0M 0o Dw Db OS fS uT UT :X -> <- -! -v =_
&code2 2 17
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20.

```

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14)  
 (15) (16) (17) (18) (19) (20) 1-o 2-o 3-o 4-o 5-o 6-o 7-o 8-o 9-o  
 &code2 2 69

1c 2c 3c 4c 5c 6c 7c 8c 9c 10c

&code2 2 81

1R 2R 3R 4R 5R 6R 7R 8R 9R aR bR cR

&code2 3 1

! " Nb Ye % & ' ( ) \* + , - . / 0 1 2 3 4 5 6 7  
 8 9 : ; < = > ? At 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 Z <( // )> '> \_ 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 z (! !! !) '-

&code2 4 1

A5 a5 I5 i5 U5 u5 E5 e5 O5 o5 ka ga ki gi ku  
 gu ke ge ko go sa za si zi su zu se ze so zo ta  
 da ti di tU tu du te de to do na ni nu ne no ha  
 ba pa hi bi pi hu bu pu he be pe ho bo po ma mi  
 mu me mo yA ya yU yu yO yo ra ri ru re ro wA wa  
 wi we wo n5

&code2 5 1

a6 A6 i6 I6 u6 U6 e6 E6 o6 O6 Ka Ga Ki Gi Ku  
 Gu Ke Ge Ko Go Sa Za Si Zi Su Zu Se Ze So Zo Ta  
 Da Ti Di TU Tu Du Te De To Do Na Ni Nu Ne No Ha  
 Ba Pa Hi Bi Pi Hu Bu Pu He Be Pe Ho Bo Po Ma Mi  
 Mu Me Mo YA Ya YU Yu YO Yo Ra Ri Ru Re Ro WA Wa  
 Wi We Wo N6 Vi KA KE

&code2 6 1

A\* B\* G\* D\* E\* Z\* Y\* H\* I\* K\* L\* M\* N\* C\* O\*  
 P\* R\* S\* T\* U\* F\* X\* Q\* W\*

&code2 6 33

a\* b\* g\* d\* e\* z\* y\* h\* i\* k\* l\* m\* n\* c\* o\*  
 p\* r\* s\* t\* u\* f\* x\* q\* w\*

&code2 7 1

A= B= V= G= D= E= IO Z% Z= I= J= K= L= M= N= O= P=  
 R= S= T= U= F= H= C= C% S% Sc =" Y= %" JE JU JA

&code2 7 49

a= b= v= g= d= e= io z% z= i= j= k= l= m= n= o= p=  
 r= s= t= u= f= h= c= c% s% sc =' y= %' je ju ja

&code2 8 1

a- a' a< a! e- e' e< e! i- i' i< i! o- o' o< o! u- u' u< u! u:- u:<  
 u: ! u: e>

&code2 8 37

b4 p4 m4 f4 d4 t4 n4 l4 g4 k4 h4 j4 q4 x4 zh ch sh r4 z4 c4  
 s4 a4 o4 e4 eh4 ai ei au ou an en aN eN er i4 u4 iu

&code2 9 4

hh HH vv VV 3- 3\_ 3! 3/ 4- 4\_ 4! 4/ dr dR Dr DR dl dL Dl LD  
 ur uR Ur UR ul uL Ul UL vr vR Udr uDr Vr UdR uDR VR  
 vl vL UdL uDL Vl UdL uDL VL  
 dh dLr dlR dH Dh DLr DLr DH  
 vh vLr vlR vH Udh uDh Vh UdLr  
 UdLr uDLr uDLR UdH uDH VLr VLr VH

&codex c 16 54 1 94

&codex c 55 55 1 89

&codex c 56 87 1 94

```

&charset NS_4551-1
&rem source: ECMA registry
&alias iso-ir-60
&alias ISO646-NO
&g0esc x2860 &glesc x2960 &g2esc x2a60 &g3esc x2b60
&alias no
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z AE O/ AA '> _
'! 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 z ae o/ aa '- DT

```

```

&charset NS_4551-2
&rem source: ECMA registry
&alias ISO646-NO2
&alias iso-ir-61
&g0esc x2861 &glesc x2961 &g2esc x2a61 &g3esc x2b61
&alias no2
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " PI DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z AE O/ AA '> _
'! 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 z ae o/ aa !! DT

```

```

&charset NF_Z_62-010
&rem source: ECMA registry
&alias iso-ir-69
&alias ISO646-FR
&g0esc x2866 &glesc x2966 &g2esc x2a66 &g3esc x2b66
&alias fr
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Pd DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
a! 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 Z DG c, SE '> _
My 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 z e' u! e! ': DT

```

```

&charset videotex-suppl
&rem source: ECMA registry
&alias iso-ir-70
&g0esc x2862 &glesc x2962 &g2esc x2a62 &g3esc x2b62
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " ?? ?? % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '- DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS !I Ct Pd DO Ye Nb SE Cu '6 "6 << <- -! -> -v

```

```

DG +- 2S 3S *X My PI .M -: '9 "9 >> 14 12 34 ?I
"1 "!" "' "> "? "- "( ". ": ?? "0 ", ?? "" "; "<
-M 1S Rg Co TM Md ?? ?? ?? ?? ?? ?? 18 38 58 78
Om AE D- -a H/ ?? IJ L. L/ O/ OE -o TH T/ NG 'n
kk ae d/ d- h/ i. ij l. l/ o/ oe ss th t/ ng ??
&comb2 "' SP '' a a' A A' e e' E E' i i' I I' o o' O O' u u' U U'
          y y' Y Y' c c' C C' l l' L L' n n' N N' r r' R R'
          s s' S S' z z' Z Z'
&comb2 "( SP '( a a( A A( g g( G G(                               u u( U U(
&comb2 "< SP '< c c< C C< d d< D D< e e< E E< l l< L L< n n< N N<
          r r< R R< s s< S S< t t< T T< z z< Z Z<
&comb2 ", SP ', c c, C C, g g, G G, k k, K K, l l, L L, n n, N N,
          r r, R R, s s, S S, t t, T T,
&comb2 ">          a a> A A> e e> E E> i i> I I> o o> O O> u u> U U>
          y y> Y Y> c c> C C> g g> G G> h h> H H> j j> J J>
          s s> S S> w w> W W>
&comb2 ": SP ': a a: A A: e e: E E: i i: I I: o o: O O: u u: U U:
          y y: Y Y:
&comb2 ". SP '. c c. C C. e e. E E. g g. G G.           I I. z z. Z Z.
&comb2 "" SP ''          o o" O O" u u" U U"
&comb2 "!          a a! A A! e e! E E! i i! I I! o o! O O! u u! U U!
&comb2 "-          a a- A A- e e- E E- i i- I I- o o- O O- u u- U U-
&comb2 "; SP '; a a; A A; e e; E E; i i; I I; u u; U U;
&comb2 "0 SP '0 a aa A AA                               u u0 U U0
&comb2 "? SP '? a a? A A? n n? N N? i i? I I? o o? O O? u u? U U?

```

```

&charset PT2
&rem source: ECMA registry
&alias iso-ir-84
&alias ISO646-PT2
&g0esc x2867 &g1esc x2967 &g2esc x2a67 &g3esc x2b67
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
'' 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 Z A? C, O? '> _
'! 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 z a? c, o? '- DT

```

```

&charset ES2
&rem source: ECMA registry
&alias iso-ir-85
&alias ISO646-ES2
&g0esc x2868 &g1esc x2968 &g2esc x2a68 &g3esc x2b68
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
Sb 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 Z !I N? C, ?I _
'! 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 z '' n? c, ': DT

```

```

&charset MSZ_7795.3
&rem source: ECMA registry
&alias iso-ir-86

```

```

&alias ISO646-HU
&g0esc x2869 &glesc x2969 &g2esc x2a69 &g3esc x2b69
&alias hu
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb Cu % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
A' 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 Z E' O: U: '> _
a' 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 z e' o: u: '" DT

&charset JIS_C6226-1983
&rem source: ECMA registry
&alias iso-ir-87
&bits 16
&g0esc x2442 &glesc x242942 &g2esc x242a42 &g3esc x242b42
&alias x0208
&alias JIS_X0208-1983
&code2 1 1
SP ,_ . _ , . .6 : ; ! "5 05 ' ' ' ! ' : ' > ' - _ *6 +6 *5 +5 +
+_ *_ ;_ 0_ -6 -? -N
&code2 1 31
FD BD ?1 PP !! .3 .. '6 '9 "6 "9 ( ) ( ' )' <( )>
(! !) <1 >1 </ /> <' >' <" >" ( " )" + - +- *X -: = != < > =< >= 00
.: Ml Fm DG 1' 2' oC Ye DO Ct Pd % Nb & * At SE *1 *2 0m 0M 0o LZ
&code2 2 1
Db OS fS uT UT dT DT :X =T -> <- -! -v =_
&code2 2 26
(- -) (_ )_ (C )C (U )U
&code2 2 42
AN OR NO => <= FA TE
&code2 2 60
-V -T (A dP NB =3 HI <* *> RT CG 0( :. In DI
&code2 2 82
AA %0 MX Mb Md /- /= PI
&code2 2 94
Ci
&code2 3 16
0 1 2 3 4 5 6 7 8 9
&code2 3 33
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 Z
&code2 3 65
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 z
&code2 4 1
A5 a5 I5 i5 U5 u5 E5 e5 O5 o5 ka ga ki gi ku
gu ke ge ko go sa za si zi su zu se ze so zo ta
da ti di tU tu du te de to do na ni nu ne no ha
ba pa hi bi pi hu bu pu he be pe ho bo po ma mi
mu me mo yA ya yU yu yO yo ra ri ru re ro wA wa
wi we wo n5
&code2 5 1
a6 A6 i6 I6 u6 U6 e6 E6 o6 O6 Ka Ga Ki Gi Ku
Gu Ke Ge Ko Go Sa Za Si Zi Su Zu Se Ze So Zo Ta
Da Ti Di TU Tu Du Te De To Do Na Ni Nu Ne No Ha

```

Ba Pa Hi Bi Pi Hu Bu Pu He Be Pe Ho Bo Po Ma Mi  
 Mu Me Mo YA Ya YU Yu YO Yo Ra Ri Ru Re Ro WA Wa  
 Wi We Wo N6 Vi KA KE

&code2 6 1

A\* B\* G\* D\* E\* Z\* Y\* H\* I\* K\* L\* M\* N\* C\* O\*  
 P\* R\* S\* T\* U\* F\* X\* Q\* W\*

&code2 6 33

a\* b\* g\* d\* e\* z\* y\* h\* i\* k\* l\* m\* n\* c\* o\*  
 p\* r\* s\* t\* u\* f\* x\* q\* w\*

&code2 7 1

A= B= V= G= D= E= IO Z% Z= I= J= K= L= M= N= O= P=  
 R= S= T= U= F= H= C= C% S% Sc =" Y= %" JE JU JA

&code2 7 49

a= b= v= g= d= e= io z% z= i= j= k= l= m= n= o= p=  
 r= s= t= u= f= h= c= c% s% sc =' y= %' je ju ja

&code2 8 1

hh vv dr dl ul ur vr dh vl uh vh  
 HH VV DR LD UL UR VR DH VL UH VH  
 Vr dH Vl uH vH vR Dh vL Uh Vh

&codex j 16 46 1 94

&codex j 47 47 1 51

&codex j 48 83 1 94

&codex j 84 84 1 4

&charset greek7

&rem source: ECMA registry

&alias iso-ir-88

&g0esc x286a &g1esc x296a &g2esc x2a6a &g3esc x2b6a

&code 0

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI  
 DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US  
 SP ! " Nb Cu % & ' ( ) \* + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?  
 At A\* B\* G\* D\* E\* Z\* Y\* H\* I\* ?? K\* L\* M\* N\* C\*  
 O\* P\* R\* S\* T\* U\* F\* ?? X\* Q\* W\* <( // )> '> \_  
 '! a\* b\* g\* d\* e\* z\* y\* h\* i\* ?? k\* l\* m\* n\* c\*  
 o\* p\* r\* s\* t\* u\* f\* \*s x\* q\* w\* (! !! !) '- DT

&charset ASMO\_449

&rem source: ECMA registry

&alias ISO\_9036

&alias arabic7

&alias iso-ir-89

&g0esc x286b &g1esc x296b &g2esc x2a6b &g3esc x2b6b

&code 0

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI  
 DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US  
 SP ! " Nb Cu % & ' ( ) \* + ,+ - . / 0 1 2 3 4 5 6 7 8 9 : ;+ < = > ?+  
 At H' aM aH wH ah yH a+ b+ tm t+ tk g+ hk x+ d+  
 dk r+ z+ s+ sn c+ dd tj zH e+ i+ <( // )> '> \_  
 ++ f+ q+ k+ l+ m+ n+ h+ w+ j+ y+ :+ "+ =+ /+ '+  
 1+ 3+ 0+ ?? ?? ?? ?? ?? ?? ?? ?? (! !! !) '- DT

&charset iso-ir-90

```

&rem source: ECMA registry
&g0esc x286c &glesc x296c &g2esc x2a6c &g3esc x2b6c
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb Cu % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '- DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS !I Ct Pd DO Ye ?? SE ?? '6 "6 << <- -! -> -v
DG +- 2S 3S *X My PI .M -: '9 "9 >> 14 12 34 ?I
?? "!" " ' "> "? "- "( ". ": ?? "0 ", "_ "" "; "<
-M 1S Rg Co TM Md ?? ?? ?? ?? ?? ?? 18 38 58 78
Om AE D- -a H/ ?? IJ L. L/ O/ OE -o TH T/ NG 'n
kk ae d/ d- h/ i. ij l. l/ o/ oe ss th t/ ng ??
&comb2 "' SP '' a a' A A' e e' E E' i i' I I' o o' O O' u u' U U'
      y y' Y Y' c c' C C' l l' L L' n n' N N' r r' R R'
      s s' S S' z z' Z Z'
&comb2 "( SP '( a a( A A( g g( G G(          u u( U U(
&comb2 "< SP '< c c< C C< d d< D D< e e< E E< l l< L L< n n< N N<
      r r< R R< s s< S S< t t< T T< z z< Z Z<
&comb2 ", SP ', c c, C C, g g, G G, k k, K K, l l, L L, n n, N N,
      r r, R R, s s, S S, t t, T T,
&comb2 ">      a a> A A> e e> E E> i i> I I> o o> O O> u u> U U>
      y y> Y Y> c c> C C> g g> G G> h h> H H> j j> J J>
      s s> S S> w w> W W>
&comb2 ": SP ': a a: A A: e e: E E: i i: I I: o o: O O: u u: U U:
      y y: Y Y:
&comb2 ". SP '. c c. C C. e e. E E. g g. G G.          I I. z z. Z Z.
&comb2 "" SP ''          o o" O O" u u" U U"
&comb2 "!      a a! A A! e e! E E! i i! I I! o o! O O! u u! U U!
&comb2 "-      a a- A A- e e- E E- i i- I I- o o- O O- u u- U U-
&comb2 "; SP '; a a; A A; e e; E E; i i; I I; u u; U U;
&comb2 "0 SP '0 a aa A AA          u u0 U U0
&comb2 "? SP '? a a? A A? n n? N N? i i? I I? o o? O O? u u? U U?

```

```

&charset JIS_C6229-1984-a
&rem source: ECMA registry
&alias iso-ir-91
&g0esc x286d &glesc x296d &g2esc x2a6d &g3esc x2b6d
&alias jp-ocr-a
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ?? " Pd DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; 1h = 3h ?
?? 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 Z ?? Ye 2h '> _
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? 4h ?? ?? DT

```

```

&charset JIS_C6229-1984-b
&rem source: ECMA registry
&alias iso-ir-92

```

```

&alias ISO646-JP-OCR-B
&g0esc x286e &glesc x296e &g2esc x2a6e &g3esc x2b6e
&alias jp-ocr-b
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z </ Ye /> '> _
?? 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 z (! !! !) ?? DT

```

```

&charset JIS_C6229-1984-b-add
&rem source: ECMA registry
&alias iso-ir-93
&g0esc x286f &glesc x296f &g2esc x2a6f &g3esc x2b6f
&alias jp-ocr-b-add
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ?? ?? Pd Cu // ?? SE ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? DT

```

```

&charset JIS_C6229-1984-hand
&rem source: ECMA registry
&alias iso-ir-94
&g0esc x2870 &glesc x2970 &g2esc x2a70 &g3esc x2b70
&alias jp-ocr-hand
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z </ Ye /> '> _
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? !! ?? ?? DT

```

```

&charset JIS_C6229-1984-hand-add
&rem source: ECMA registry
&alias iso-ir-95
&g0esc x2871 &glesc x2971 &g2esc x2a71 &g3esc x2b71
&alias jp-ocr-hand-add
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ?? ?? ?? ?? // ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? DT

```

```

&charset JIS_C6229-1984-kana
&rem source: ECMA registry
&alias iso-ir-96
&g0esc x2872 &glesc x2972 &g2esc x2a72 &g3esc x2b72
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ?? <' >' ?? ?? Wo ?? ?? ?? ?? ?? ?? ?? ??
-6 A6 I6 U6 E6 O6 Ka Ki Ku Ke Ko Sa Si Su Se So
Ta Ti Tu Te To Na Ni Nu Ne No Ha Hi Hu He Ho Ma
Mi Mu Me Mo Ya Yu Yo Ra Ri Ru Re Ro Wa N6 "5 05
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? DT

```

```

&charset ISO_2033-1983
&rem source: ECMA registry
&alias iso-ir-98
&alias e13b
&g0esc x2873 &glesc x2973 &g2esc x2a73 &g3esc x2b73
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
0 1 2 3 4 5 6 7 8 9 1j 2j 3j 4j ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? DT

```

```

&charset ANSI_X3.110-1983
&rem source: ECMA registry
&alias iso-ir-99
&alias CSA_T500-1983
&alias NAPLPS
&g0esc x2874 &glesc x2974 &g2esc x2a74 &g3esc x2b74
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " ?? ?? % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS !I Ct Pd DO Ye Nb SE Cu '6 "6 << <- -! -> -v
DG +- 2S 3S *X My PI .M -: '9 "9 >> 14 12 34 ?I
?? " ! " ' "> "? "- "( ". ": "/ "0 ", "_ "" "; "<
-M 1S Rg Co TM Md HH VV FD BD Fd Bd 18 38 58 78
Om AE D- -a H/ VH IJ L. L/ O/ OE -o TH T/ NG 'n
kk ae d/ d- h/ i. ij l. l/ o/ oe ss th t/ ng ??
&comb2 "' SP '( a a' A A' e e' E E' i i' I I' o o' O O' u u' U U'
          y y' Y Y' c c' C C' l l' L L' n n' N N' r r' R R'
          s s' S S' z z' Z Z'
&comb2 "( SP '( a a( A A( g g( G G(                               u u( U U(

```

```

&comb2 "< SP '< c c< C C< d d< D D< e e< E E< l l< L L< n n< N N<
          r r< R R< s s< S S< t t< T T< z z< Z Z<
&comb2 ", SP ', c c, C C, g g, G G, k k, K K, l l, L L, n n, N N,
          r r, R R, s s, S S, t t, T T,
&comb2 ">          a a> A A> e e> E E> i i> I I> o o> O O> u u> U U>
          y y> Y Y> c c> C C> g g> G G> h h> H H> j j> J J>
          s s> S S> w w> W W>
&comb2 " : SP ': a a: A A: e e: E E: i i: I I: o o: O O: u u: U U:
          y y: Y Y:
&comb2 ". SP '. c c. C C. e e. E E. g g. G G.          I I. z z. Z Z.
&comb2 "" SP '"          o o" O O" u u" U U"
&comb2 "!          a a! A A! e e! E E! i i! I I! o o! O O! u u! U U!
&comb2 "- SP '- a a- A A- e e- E E- i i- I I- o o- O O- u u- U U-
&comb2 "; SP '; a a; A A; e e; E E; i i; I I; u u; U U;
&comb2 "0 SP '0 a aa A AA          u u0 U U0
&comb2 "?          a a? A A? n n? N N? i i? I I? o o? O O? u u? U U?

```

```

&charset ISO_8859-1:1987
&rem source: ECMA registry
&alias iso-ir-100
&gllesc x2d41 &g2esc x2e41 &g3esc x2f41
&alias ISO_8859-1
&alias ISO-8859-1
&alias latin1
&alias l1
&alias IBM819
&alias CP819
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> ' > _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS !I Ct Pd Cu Ye BB SE ': Co -a << NO -- Rg '-
DG +- 2S 3S '' My PI .M ', 1S -o >> 14 12 34 ?I
A! A' A> A? A: AA AE C, E! E' E> E: I! I' I> I:
D- N? O! O' O> O? O: *X O/ U! U' U> U: Y' TH ss
a! a' a> a? a: aa ae c, e! e' e> e: i! i' i> i:
d- n? o! o' o> o? o: -: o/ u! u' u> u: y' th y:

```

```

&charset ISO_8859-2:1987
&rem source: ECMA registry
&alias iso-ir-101
&gllesc x2d42 &g2esc x2e42 &g3esc x2f42
&alias ISO_8859-2
&alias ISO-8859-2
&alias latin2
&alias l2
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US

```

```

SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> ' > _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS A; '( L/ Cu L< S' SE ': S< S, T< Z' -- Z< Z.
DG a; '; l/ ' ' l< s' '< ', s< s, t< z' '" z< z.
R' A' A> A( A: L' C' C, C< E' E; E: E< I' I> D<
D/ N' N< O' O> O" O: *X R< U0 U' U" U: Y' T, ss
r' a' a> a( a: l' c' c, c< e' e; e: e< i' i> d<
d/ n' n< o' o> o" o: -: r< u0 u' u" u: y' t, '.

```

```

&charset T.61-7bit
&rem source: ECMA registry
&alias iso-ir-102
&g0esc x2875 &glesc x2975 &g2esc x2a75 &g3esc x2b75
&code 0

```

```

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb Cu % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( ?? )> ?? _
?? 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 z ?? !! ?? ?? DT

```

```

&charset T.61-8bit
&alias T.61
&rem source: ECMA registry
&alias iso-ir-103
&g0esc x2876 &glesc x2976 &g2esc x2a76 &g3esc x2b76
&code 0

```

```

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " ?? ?? % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( ?? )> ?? _
?? 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 z ?? !! ?? ?? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS !I Ct Pd DO Ye Nb SE Cu ?? ?? << ?? ?? ?? ??
DG +- 2S 3S *X My PI .M -: ?? ?? >> 14 12 34 ?I
?? " ! " ' " > " ? " - " ( " . " : ?? " 0 " , " _ " " " ; "<
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
Om AE D- -a H/ ?? IJ L. L/ O/ OE -o TH T/ NG 'n
kk ae d/ d- h/ i. ij l. l/ o/ oe ss th t/ ng ??

```

```

&comb2 "' SP '' a a' A A' e e' E E' i i' I I' o o' O O' u u' U U'
          y y' Y Y' c c' C C' l l' L L' n n' N N' r r' R R'
          s s' S S' z z' Z Z'
&comb2 "( SP '( a a( A A( g g( G G(                               u u( U U(
&comb2 "< SP '< c c< C C< d d< D D< e e< E E< l l< L L< n n< N N<
          r r< R R< s s< S S< t t< T T< z z< Z Z<
&comb2 ", SP ', c c, C C, g g, G G, k k, K K, l l, L L, n n, N N,
          r r, R R, s s, S S, t t, T T,
&comb2 ">
          a a> A A> e e> E E> i i> I I> o o> O O> u u> U U>
          y y> Y Y> c c> C C> g g> G G> h h> H H> j j> J J>
          s s> S S> w w> W W>

```

```

&comb2 ": SP ': a a: A A: e e: E E: i i: I I: o o: O O: u u: U U:
          y y: Y Y:
&comb2 ". SP '. c c. C C. e e. E E. g g. G G.          I I. z z. Z Z.
&comb2 "" SP '"          o o" O O" u u" U U"
&comb2 "!          a a! A A! e e! E E! i i! I I! o o! O O! u u! U U!
&comb2 "- SP '- a a- A A- e e- E E- i i- I I- o o- O O- u u- U U-
&comb2 "; SP '; a a; A A; e e; E E; i i; I I; u u; U U;
&comb2 "0 SP '0 a aa A AA          u u0 U U0
&comb2 "?          a a? A A? n n? N N? i i? I I? o o? O O? u u? U U?

```

```

&charset ISO_8859-3:1988
&rem source: ECMA registry
&alias iso-ir-109
&glESC x2d43 &g2ESC x2e43 &g3ESC x2f43
&alias ISO_8859-3
&alias ISO-8859-3
&alias latin3
&alias l3
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS H/ '( Pd Cu ?? H> SE ': I. S, G( J> -- ?? Z.
DG h/ 2S 3S '' My h> .M ', i. s, g( j> 12 ?? z.
A! A' A> ?? A: C. C> C, E! E' E> E: I! I' I> I:
?? N? O! O' O> G. O: *X G> U! U' U> U: U( S> ss
a! a' a> ?? a: c. c> c, e! e' e> e: i! i' i> i:
?? n? o! o' o> g. o: -: g> u! u' u> u: u( s> '.

```

```

&charset ISO_8859-4:1988
&rem source: ECMA registry
&alias iso-ir-110
&glESC x2d44 &g2ESC x2e44 &g3ESC x2f44
&alias ISO_8859-4
&alias ISO-8859-4
&alias latin4
&alias l4
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS A; kk R, Cu I? L, SE ': S< E- G, T/ -- Z< '-
DG a; '; r, '' i? l, '< ', s< e- g, t/ NG z< ng
A- A' A> A? A: AA AE I; C< E' E; E: E. I' I> I-
D/ N, O- K, O> O? O: *X O/ U; U' U> U: U? U- ss

```

a- a' a> a? a: aa ae i; c< e' e; e: e. i' i> i-  
d/ n, o- k, o> o? o: -: o/ u; u' u> u: u? u- '.

```
&charset ECMA-cyrillic
&rem source: ECMA registry
&alias iso-ir-111
&glesc x2d40 &g2esc x2e40 &g3esc x2f40
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS IO D% G% IE DS II YI J% LJ NJ Ts KJ -- V% DZ
N0 io d% g% ie ds ii yi j% lj nj ts kj Cu v% dz
A= B= V= G= D= E= Z= I= J= K= L= M= N= O= P=
R= S= T= U= F= H= C= C% S% Sc =" Y= %" JE JU JA
a= b= v= g= d= e= z% z= i= j= k= l= m= n= o= p=
r= s= t= u= f= h= c= c% s% sc =' y= %' je ju ja
```

```
&charset CSA_Z243.4-1985-1
&rem source: ECMA registry
&alias iso-ir-121
&g0esc x2877 &glesc x2977 &g2esc x2a77 &g3esc x2b77
&alias ISO646-CA
&alias csa7-1
&alias ca
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
a! 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 Z a> c, e> i> _
o> 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 z e' u! e! u> DT
```

```
&charset CSA_Z243.4-1985-2
&rem source: ECMA registry
&alias iso-ir-122
&alias ISO646-CA2
&g0esc x2878 &glesc x2978 &g2esc x2a78 &g3esc x2b78
&alias csa7-2
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
a! 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 Z a> c, e> E' _
o> 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 z e' u! e! u> DT
```

```
&charset CSA_Z243.4-1985-gr
&rem source: ECMA registry
&alias iso-ir-123
&glesc x2d45 &g2esc x2e45 &g3esc x2f45
```

```

&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> ' > _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS !I ': Pd Ct Ye +- '' (S )S 12 +S ', -- .M -S
0S 1S 2S 3S 4S 5S 6S 7S 8S 9S 14 34 <= != >= ?I
A! A' A> C, E! E' E> E: I' I> I: N? O' O> U! U'
U> U: Rg SE PI m* -a -o '6 '9 "6 "9 << >> DG BB
a! a' a> c, e! e' e> e: i' i> i: n? o' o> u! u'
u> u: Co hh vv ur ul dl dr vr uh vl dh vh NO FB

```

```

&charset ISO_8859-7:1987
&rem source: ECMA registry
&alias iso-ir-126
&gllesc x2d46 &g2esc x2e46 &g3esc x2f46
&alias ISO_8859-7
&alias ISO-8859-7
&alias EL0T_928
&alias ECMA-118
&alias greek
&alias greek8

```

```

&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> ' > _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS 9' '9 Pd ?? ?? BB SE ': Co ?? << NO -- ?? -M
DG +- 2S 3S '' '% A% .M E% Y% I% >> O% 12 U% W%
i3 A* B* G* D* E* Z* Y* H* I* K* L* M* N* C* O*
P* R* ?? S* T* U* F* X* Q* W* J* V* a% e% y% i%
u3 a* b* g* d* e* z* y* h* i* k* l* m* n* c* o*
p* r* *s s* t* u* f* x* q* w* j* v* o% u% w% ??

```

```

&charset ISO_8859-6:1987
&rem source: ECMA registry
&alias iso-ir-127
&gllesc x2d47 &g2esc x2e47 &g3esc x2f47
&alias ISO_8859-6
&alias ISO-8859-6
&alias ECMA-114
&alias ASMO-708
&alias arabic

```

```

&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?

```

```

At 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 Z <( // )> ' > _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS ?? ?? ?? Cu ?? ?? ?? ?? ?? ?? ?? ,+ -- ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ;+ ?? ?? ?? ?+
?? H' aM aH wH ah yH a+ b+ tm t+ tk g+ hk x+ d+
dk r+ z+ s+ sn c+ dd tj zH e+ i+ ?? ?? ?? ?? ??
++ f+ q+ k+ l+ m+ n+ h+ w+ j+ y+ :+ "+ =+ /+ '+
1+ 3+ 0+ ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??

```

```

&charset T.101-G2
&rem source: ECMA registry
&alias iso-ir-128
&g0esc x287c &glesc x297c &g2esc x2a7c &g3esc x2b7c
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " ?? ?? % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> ' > _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS !I Ct Pd DO Ye Nb SE Cu '6 "6 << <- -! -> -v
DG +- 2S 3S *X My PI .M -: '9 "9 >> 14 12 34 ?I
?? " ! " ' " > " ? " - " ( " . " : " / " 0 " , " _ " " " ; " <
-M 1S Rg Co TM Md HH VV FD BD Fd Bd 18 38 58 78
Om AE D- -a H/ VH IJ L. L/ O/ OE -o TH T/ NG 'n
kk ae d/ d- h/ i. ij l. l/ o/ oe ss th t/ ng ??
&comb2 "' SP ' ' a a' A A' e e' E E' i i' I I' o o' O O' u u' U U'
      y y' Y Y' c c' C C' l l' L L' n n' N N' r r' R R'
      s s' S S' z z' Z Z'
&comb2 "( SP '( a a( A A( g g( G G(          u u( U U(
&comb2 "< SP '< c c< C C< d d< D D< e e< E E< l l< L L< n n< N N<
      r r< R R< s s< S S< t t< T T< z z< Z Z<
&comb2 ", SP ', c c, C C, g g, G G, k k, K K, l l, L L, n n, N N,
      r r, R R, s s, S S, t t, T T,
&comb2 ">      a a> A A> e e> E E> i i> I I> o o> O O> u u> U U>
      y y> Y Y> c c> C C> g g> G G> h h> H H> j j> J J>
      s s> S S> w w> W W>
&comb2 ": SP ': a a: A A: e e: E E: i i: I I: o o: O O: u u: U U:
      y y: Y Y:
&comb2 ". SP '. c c. C C. e e. E E. g g. G G.          I I. z z. Z Z.
&comb2 "\" SP '\"          o o" O O" u u" U U"
&comb2 "!      a a! A A! e e! E E! i i! I I! o o! O O! u u! U U!
&comb2 "- SP '- a a- A A- e e- E E- i i- I I- o o- O O- u u- U U-
&comb2 "; SP ';' a a; A A; e e; E E; i i; I I; u u; U U;
&comb2 "0 SP '0 a aa A AA          u u0 U U0
&comb2 "?      a a? A A? n n? N N? i i? I I? o o? O O? u u? U U?

```

```

&charset ISO_8859-8:1988
&rem source: ECMA registry
&alias iso-ir-138

```

```

&glesc x2d48 &g2esc x2e48 &g3esc x2f48
&alias ISO_8859-8
&alias ISO-8859-8
&alias hebrew
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS ?? Ct Pd Cu Ye BB SE ': Co *X << NO -- Rg '-
DG +- 2S 3S '' My PI .M ', 1S -: >> 14 12 34 ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? =2
A+ B+ G+ D+ H+ W+ Z+ X+ Tj J+ K% K+ L+ M% M+ N%
N+ S+ E+ P% P+ Zj ZJ Q+ R+ Sh T+ ?? ?? ?? ?? ??

```

```

&charset CSN_369103
&rem source: ECMA registry
&alias iso-ir-139
&glesc x2d49 &g2esc x2e49 &g3esc x2f49
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb Cu % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS A; '( L/ DO L< S' SE ': S< S, T< Z' -- Z< Z.
DG a; '; l/ '' l< s' '< ', s< s, t< z' '' z< z.
R' A' A> A( A: L' C' C, C< E' E; E: E< I' I> D<
D/ N' N< O' O> O" O: *X R< U0 U' U" U: Y' T, ss
r' a' a> a( a: l' c' c, c< e' e; e: e< i' i> d<
d/ n' n< o' o> o" o: -: r< u0 u' u" u: y' t, '.

```

```

&charset JUS_I.B1.002
&rem source: ECMA registry
&alias iso-ir-141
&g0esc x287a &glesc x297a &g2esc x2a7a &g3esc x2b7a
&alias ISO646-YU
&alias js
&alias yu
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
Z< 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 Z S< D/ C' C< _
z< 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 z s< d/ c' c< DT

```

```

&charset ISO_6937-2-add

```

```

&rem source: ECMA registry and ISO 6937-2:1983
&alias iso-ir-142
&gllesc x2d4a &g2esc x2e4a &g3esc x2f4a
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb Cu % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS !I Ct Pd DO Ye ?? SE ?? '6 "6 << <- -! -> -v
DG +- 2S 3S *X My PI .M -: '9 "9 >> 14 12 34 ?I
?? "!" " ' "> "? "- "( ". ": ?? "0 ", "_ "" "; "<
-M 1S Rg Co TM Md NO BB ?? ?? ?? ?? 18 38 58 78
Om AE D- -a H/ ?? IJ L. L/ O/ OE -o TH T/ NG 'n
kk ae d/ d- h/ i. ij l. l/ o/ oe ss th t/ ng --
&comb2 "' SP '' a a' A A' e e' E E' i i' I I' o o' O O' u u' U U'
      y y' Y Y' c c' C C' l l' L L' n n' N N' r r' R R'
      s s' S S' z z' Z Z'
&comb2 "( SP '( a a( A A( g g( G G(          u u( U U(
&comb2 "< SP '< c c< C C< d d< D D< e e< E E< l l< L L< n n< N N<
      r r< R R< s s< S S< t t< T T< z z< Z Z<
&comb2 ", SP ', c c, C C, g g, G G, k k, K K, l l, L L, n n, N N,
      r r, R R, s s, S S, t t, T T,
&comb2 ">      a a> A A> e e> E E> i i> I I> o o> O O> u u> U U>
      y y> Y Y> c c> C C> g g> G G> h h> H H> j j> J J>
      s s> S S> w w> W W>
&comb2 ": SP ': a a: A A: e e: E E: i i: I I: o o: O O: u u: U U:
      y y: Y Y:
&comb2 ". SP '. c c. C C. e e. E E. g g. G G.          I I. z z. Z Z.
&comb2 "" SP ''          o o" O O" u u" U U"
&comb2 "!      a a! A A! e e! E E! i i! I I! o o! O O! u u! U U!
&comb2 "- SP '- a a- A A- e e- E E- i i- I I- o o- O O- u u- U U-
&comb2 "; SP ';' a a; A A; e e; E E; i i; I I; u u; U U;
&comb2 "0 SP '0 a aa A AA          u u0 U U0
&comb2 "?      a a? A A? n n? N N? i i? I I? o o? O O? u u? U U?

```

```

&charset IEC_P27-1
&rem source: ECMA registry
&alias iso-ir-143
&gllesc x2d4b &g2esc x2e4b&g3esc x2f4b
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
'< =3 AN OR (U )U (C )C <= => .: :. (- -) ( _ )_
In Io 00 NB dP ?1 ?2 ?- ?= =< != >= <> NO FA TE
A+ OS PP G* D* -T -V -L H* </ /> L* 1' 2' C* -+

```

P\* 2S S\* \*X 3S U\* F\* .M Q\* W\* /0 >V RT f( 0( +-  
 DG a\* b\* g\* d\* e\* z\* y\* h\* i\* k\* l\* m\* n\* c\* %0  
 p\* r\* s\* -: t\* u\* f\* x\* q\* w\* /- <- -! -> -v '-

```
&charset ISO_8859-5:1988
&rem source: ECMA registry
&alias iso-ir-144
&glesc x2d4c &g2esc x2e4c &g3esc x2f4c
&alias ISO_8859-5
&alias ISO-8859-5
&alias cyrillic
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS IO D% G% IE DS II YI J% LJ NJ Ts KJ -- V% DZ
A= B= V= G= D= E= Z% Z= I= J= K= L= M= N= O= P=
R= S= T= U= F= H= C= C% S% Sc =" Y= %" JE JU JA
a= b= v= g= d= e= z% z= i= j= k= l= m= n= o= p=
r= s= t= u= f= h= c= c% s% sc =' y= %' je ju ja
N0 io d% g% ie ds ii yi j% lj nj ts kj SE v% dz
```

```
&charset JUS_I.B1.003-serb
&rem source: ECMA registry
&alias iso-ir-146
&g0esc x287b &glesc x297b &g2esc x2a7b &g3esc x2b7b
&alias serbian
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
Z% A= B= C= D= E= F= G= H= I= J% K= L= M= N= O=
P= LJ R= S= T= U= V= NJ DZ DS Z= S% D% Ts C% _
z% a= b= c= d= e= f= g= h= i= j% k= l= m= n= o=
p= lj r= s= t= u= v= nj dz ds z= s% d% ts c% DT
```

```
&charset JUS_I.B1.003-mac
&rem source: ECMA registry
&alias macedonian
&alias iso-ir-147
&g0esc x287d &glesc x297d &g2esc x2a7d &g3esc x2b7d
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
Z% A= B= C= D= E= F= G= H= I= J% K= L= M= N= O=
P= LJ R= S= T= U= V= NJ DZ DS Z= S% G% KJ C% _
z% a= b= c= d= e= f= g= h= i= j% k= l= m= n= o=
p= lj r= s= t= u= v= nj dz ds z= s% g% kj c% DT
```

```

&charset ISO_8859-9:1989
&rem source: ECMA registry
&alias iso-ir-148
&glesc x2d4d &g2esc x2e4d &g3esc x2f4d
&alias ISO_8859-9
&alias ISO-8859-9
&alias latin5
&alias l5
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS !I Ct Pd Cu Ye BB SE ': Co -a << NO -- Rg '-
DG +- 2S 3S '' My PI .M ', 1S -o >> 14 12 34 ?I
A! A' A> A? A: AA AE C, E! E' E> E: I! I' I> I:
G( N? O! O' O> O? O: *X O/ U! U' U> U: I. S, ss
a! a' a> a? a: aa ae c, e! e' e; e: e. i' i> i-
g( n? o! o' o> o? o: -: o/ u! u' u> u: i. s, y:

```

```

&charset KS_C_5601-1987
&rem source: ECMA registry
&alias iso-ir-149
&alias KS_C_5601-1989
&alias KSC_5601
&bits 16
&g0esc x2443 &glesc x242943 &g2esc x242a43 &g3esc x242b43
&alias korean
&code2 1 1
SP ,_ .6 .M .. .3 ': + " -N -M PP // ?1 '6 '9 "6 "9 ( ' )' <1 >1 <+ >+
<' >' <" >" ( " )" +- *X -: != =< >= 00
.: DG 1' 2' oC Ye AA Ct Pd Ml Fm
-V -T (A dP NB =3 HI SE :X *1 *2
0m 0M 0o Dw Db OS fS uT UT dT DT -> <-
-! -v <> =2 <* *> RT CG 0( :. In DI
&code2 2 1
=> == FA TE '' '? '< '( '" '0 '. ', '; !I ?I :R Io +Z *P Cu oF %0 Tl
PL Tr PR cS- cS cH cH- cC- cC 0. cD-
Rr 0L 0R .S RF RY RK RZ RH RX =T:) tel TEL
<H >H PI /- /= UD //> <// <!! !!>
Mb Md M8 M16 KSC (JU) N0 Co TM am pm Tel
&code2 3 1
! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7
8 9 : ; < = > ? At 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 Z <( W= )> '> _ 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 z (! !! !) '-
&codex k 4 4 1 94
&code2 5 1
1r 2r 3r 4r 5r 6r 7r 8r 9r ar br cr

```

```

&code2 5 16
1R 2R 3R 4R 5R 6R 7R 8R 9R aR bR cR
&code2 5 33
A* B* G* D* E* Z* Y* H* I* K* L* M* N* C* O*
P* R* S* T* U* F* X* Q* W*
&code2 5 65
a* b* g* d* e* z* y* h* i* k* l* m* n* c* o*
p* r* s* t* u* f* x* q* w*
&code2 6 1
hh vv dr dl ul ur vr dh vl uh vh
HH VV DR LD UL UR VR DH VL UH VH Vr
dH Vl uH vH vR Dh vL Uh Vh Dl dL Ul uL Ur uR Dr dR
Udr uDr UdR uDR Udl uDl UdL
uDL dLr dLr DLr DLr uLr uLr vLr vLr Udh uDh
UdLr UdLr uDLr uDLr UdH uDH VLr VLr
&codex k 7 7 1 79
&code2 8 1
AE D- -a H/ ?? IJ ?? L. L/ O/ OE -o TH T/ NG
&codex k 8 8 17 44
&code2 8 45
a-o b-o c-o d-o e-o f-o g-o h-o i-o j-o k-o l-o m-o n-o o-o
p-o q-o r-o s-o t-o u-o v-o w-o x-o y-o z-o
1-o 2-o 3-o 4-o 5-o 6-o 7-o 8-o 9-o 10-o 11-o 12-o 13-o 14-o 15-o
12 13 23 14 34 18 38 58 78
&code2 9 1
ae d/ d- h/ i. ij kk l. l/ o/ oe ss th t/ ng 'n
&codex k 9 9 17 44
&code2 9 45
(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) (z)
(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15)
1S 2S 3S 4S nS 1s 2s 3s 4s
&code2 10 1
A5 a5 I5 i5 U5 u5 E5 e5 O5 o5 ka ga ki gi ku
gu ke ge ko go sa za si zi su zu se ze so zo ta
da ti di tU tu du te de to do na ni nu ne no ha
ba pa hi bi pi hu bu pu he be pe ho bo po ma mi
mu me mo yA ya yU yu yO yo ra ri ru re ro wA wa
wi we wo n5
&code2 11 1
a6 A6 i6 I6 u6 U6 e6 E6 o6 O6 Ka Ga Ki Gi Ku
Gu Ke Ge Ko Go Sa Za Si Zi Su Zu Se Ze So Zo Ta
Da Ti Di TU Tu Du Te De To Do Na Ni Nu Ne No Ha
Ba Pa Hi Bi Pi Hu Bu Pu He Be Pe Ho Bo Po Ma Mi
Mu Me Mo YA Ya YU Yu YO Yo Ra Ri Ru Re Ro WA Wa
Wi We Wo N6 Vi KA KE
&code2 12 1
A= B= V= G= D= E= IO Z% Z= I= J= K= L= M= N= O= P=
R= S= T= U= F= H= C= C% S% Sc =" Y= %" JE JU JA
&code2 12 49
a= b= v= g= d= e= io z% z= i= j= k= l= m= n= o= p=
r= s= t= u= f= h= c= c% s% sc =' y= %' je ju ja
&codex k 16 40 1 94

```

```
&codex k 42 93 1 94
```

```
&charset greek-ccitt
```

```
&rem source: ECMA registry
```

```
&alias iso-ir-150
```

```
&g0esc x282140 &g1esc x292140 &g2esc x2a2140 &g3esc x2b2140
```

```
&code 0
```

```
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb Cu % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At A* B* G* D* E* Z* Y* H* I* K* L* M* N* C* O*
P* R* ?? S* T* U* F* X* Q* W* ?? <( // )> '> _
?? a* b* g* d* e* z* y* h* i* k* l* m* n* c* o*
p* r* *s s* t* u* f* x* q* w* ?? (! !! !) '- DT
```

```
&charset NC_NC00-10:81
```

```
&rem source: ECMA registry
```

```
&alias cuba
```

```
&alias iso-ir-151
```

```
&alias ISO646-CU
```

```
&g0esc x282141 &g1esc x292141 &g2esc x2a2141 &g3esc x2b2141
```

```
&code 0
```

```
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb Cu % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z !I N? )> ?I _
'! 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 z '' n? <( ': DT
```

```
&charset ISO_6937-2-25
```

```
&rem source: ECMA registry
```

```
&alias iso-ir-152
```

```
&g1esc x2d4e &g2esc x2e4e &g3esc x2f4e
```

```
&code 0
```

```
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb Cu % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS ?? ?? ?? ?? ?? ?? ?? ?? ?? "6 ?? <- -! -> -v
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? "9 ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? TM Md ?? ?? ?? ?? ?? ?? 18 38 58 78
Om ?? ?? ?? ?? ?? IJ L. ?? ?? OE ?? W> Y> Y: 'n
?? ?? ?? ?? ?? ?? ij l. ?? ?? oe ?? w> y> ?? ??
```

```
&charset GOST_19768-74
```

```
&rem source: ECMA registry
```

```
&alias ST_SEV_358-88
```

```
&alias iso-ir-153
```

```
&g1esc x2d4f &g2esc x2e4f &g3esc x2f4f
```

```
&code 0
```

```

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS IO ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? -- ?? ??
A= B= V= G= D= E= Z% Z= I= J= K= L= M= N= O= P=
R= S= T= U= F= H= C= C% S% Sc =" Y= %" JE JU JA
a= b= v= g= d= e= z% z= i= j= k= l= m= n= o= p=
r= s= t= u= f= h= c= c% s% sc =' y= %' je ju ja
?? io ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??

```

```

&charset ISO_8859-supp
&rem source: ECMA registry
&alias iso-ir-154
&alias latin1-2-5
&glESC x2d50 &g2ESC x2e50 &g3ESC x2f50
&code 0

```

```

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
?? ?? A- C> C. ?? E. E- G> '6 "6 TM <- -! -> -v
?? ?? a- c> c. d- e. e- g> '9 "9 Md 18 38 58 78
?? G( G. G, H> H/ I? I. I- I; IJ J> K, L, L. N,
-M NG O- OE R, S> T/ TH U? U( U- U; W> Y' Y> Y:
Om g( g. g, h> h/ i? i. i- i; ij j> k, l, l. n,
kk ng o- oe r, s> t/ th u? u( u- u; w> y' y> 'n

```

```

&charset ISO_10367-box
&rem source: ECMA registry
&alias iso-ir-155
&glESC x2d51 &g2ESC x2e51 &g3ESC x2f51
&code 0

```

```

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
VV HH DR LD UR UL VR VL DH UH VH UB LB FB sB ??
vv hh dr dl ur ul vr vl dh uh vh .S :S ?S ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??

```

```

&charset latin6
&rem source: ECMA registry
&alias iso-ir-157
&alias l6
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS A; E- G, I- I? K, L, N' R, S< T/ Z< -- kk NG
d/ a; e- g, i- i? k, l, n' r, s< t/ z< SE ss ng
A- A' A> A: AA AE I; C< E' E; E: E. I' I> I:
D/ N, O- O' O> O? O: U? O/ U; U' U> U: Y' TH U-
a- a' a> a? a: aa ae i; c< e' e; e: e. i' i> i:
d- n, o- o' o> o? o: u? o/ u; u' u> u: y' th u-

```

```

&charset latin-lap
&rem source: ECMA registry
&alias lap
&alias iso-ir-158
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
'' ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
;S ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
A( A> A! A- A1 A7 A3 E( E! E- G/ G< K< O( O! O;
O1 U- ED EZ ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
a( a> a! a- a1 a7 a3 e( e! e- g/ g< k< o( o! o;
o1 u- ed ez ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??

```

```

&charset JIS_X0212-1990
&rem source: ECMA registry
&alias x0212
&alias iso-ir-159
&bits 16
&g0esc x2444 &g1esc x242944 &g2esc x242a44 &g3esc x242b44
&code2 2 15
'( '< ', '. '" '- '; '0 '
'' '%
&code2 2 34
!I BB ?I TM Cu N0
&code2 2 75
-o -a Co Rg
&code2 6 65
A% E% Y% I% J* ?? O% ?? U% V* ?? W%

```

```

&code2 6 81
a% e% y% i% j* i3 o% *s u% v* u3 w%
&code2 7 34
D% G% IE DS II YI J% LJ NJ Ts KJ V% DZ
&code2 7 82
d% g% ie ds ii yi j% lj nj ts kj v% dz
&code2 9 1
AE D/ ?? H/ ?? IJ ?? L/ L. ?? NG O/ OE ?? T/ TH
&code2 9 33
ae d/ d- h/ i. ij kk l/ l. 'n ng o/ oe ss t/ th
&code2 10 1
A' A! A: A> A( A< A; AA A? C' C> C< C, C. D< E' E! E: E> E( E. E-
E; ?? G> G( G, G. H> I' I! I: I> I< I. I- I; I? J> K, L' L, N' N< N,
N? O' O! O: O> O< O" O- O? R' R< R, S' S> S< S, T< T, U' U! U: U( U<
U" U- U; U0 U:' U:! U:< U:- W. Y' Y: Y> Z' Z< Z.
&code2 11 1
a' a! a: a> a( a< a; aa a? c' c> c< c, c. d< e' e! e: e> e( e. e-
e; g' g> g( ?? g. h> i' i! i: i> i< ?? i- i; i? j> k, l' l, n' n< n,
n? o' o! o: o> o< o" o- o? r' r< r, s' s> s< s, t< t, u' u! u: u( u<
u" u- u; u0 u:' u:! u:< u:- w. y' y: y> z' z< z.
&codex J 16 76 1 94
&codex J 77 77 1 67

```

```

&charset DS_2089
&rem source: Danish Standard, DS 2089, February 1974
&alias DS2089
&alias ISO646-DK
&alias dk
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z AE O/ AA '> _
'! 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 z ae o/ aa '? DT

```

```

&charset us-dk
&rem for compatibility with ASCII
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
&duplicate 91 AE
&duplicate 92 O/
&duplicate 93 AA
&duplicate 123 ae
&duplicate 124 o/
&duplicate 125 aa
&duplicate 91 A:
&duplicate 92 O:
&duplicate 123 a:
&duplicate 124 o:

```

```

&charset dk-us
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z AE O/ AA '> _
'! 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 z ae o/ aa '? DT
&duplicate 91 <(
&duplicate 92 //
&duplicate 93 )>
&duplicate 123 (!
&duplicate 124 !!
&duplicate 125 !)
&duplicate 91 A:
&duplicate 92 O:
&duplicate 123 a:
&duplicate 124 o:

```

```

&charset JIS_X0201
&alias X0201
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( Ye )> '> _
'! 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 z (! !! !) '- DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS ._ <' >' ,_ .6 Wo a6 i6 u6 e6 o6 YA YU YO TU
-6 A6 I6 U6 E6 O6 Ka Ki Ku Ke Ko Sa Si Su Se So
Ta Ti Tu Te To Na Ni Nu Ne No Ha Hi Hu He Ho Ma
Mi Mu Me Mo Ya Yu Yo Ra Ri Ru Re Ro Wa N6 "5 05
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??

```

```

&charset KSC5636
&alias ISO646-KR
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( W= )> '> _
'! 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 z (! !! !) '? DT

```

```

&charset DEC-MCS
&rem VAX/VMS User's Manual, Order Number: AI-Y517A-TE, April 1986.
&alias dec
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _

```

```
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
?? !I Ct Pd ?? Ye ?? SE Cu Co -a << ?? ?? ?? ??
DG +- 2S 3S ?? My PI .M ?? 1S -o >> 14 12 ?? ?I
A! A' A> A? A: AA AE C, E! E' E> E: I! I' I> I:
?? N? O! O' O> O? O: OE O/ U! U' U> U: Y: ?? ss
a! a' a> a? a: aa ae c, e! e' e> e: i! i' i> i:
?? n? o! o' o> o? o: oe o/ u! u' u> u: y: ?? ??
```

&charset hp-roman8

```
&rem source: LaserJet IIP Printer User's Manual,
&rem HP part no 33471-90901, Hewlet-Packard, June 1989.
```

&alias roman8

&alias r8

&code 0

```
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
PA HO BH NH IN NL SA ES HS HJ VS PD PU RI S2 S3
DC P1 P2 TS CC MW SG EG SS GC SC CI ST OC PM AC
NS A! A> E! E> E: I> I: ' ' 1" AN ': ?1 U! U> Li
'- Y' y' DG C, c, N? n? !I ?I Cu Pd Ye SE Fl Ct
a> e> o> u> a' e' o' u' a! e! o! u! a: e: o: u:
AA i> O/ AE aa i' o/ ae A: i! O: U: E' i: ss O>
A' A? a? D- d- I' I! O' O! O? o? S< s< U' Y: y:
TH th .M My PI 34 -M 14 12 -a -o << fS >> +- ??
```

&charset macintosh

```
&rem source: The Unicode Standard ver1.0, ISBN 0-201-56788-1, Oct 1991
```

&alias mac

&code 0

```
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
A: AA C, E' N? O: U: a' a! a> a: a? aa c, e' e!
e> e: i' i! i> i: n? o' o! o> o: o? u' u! u> u:
/- DG Ct Pd SE Sb PI ss Rg Co TM ' ' ': != AE O/
00 +- =< >= Ye My dP +Z *P p* In -a -o W* ae o/
?I !I NO RT Fl ?2 D* << >> .3 NS A! A? O? OE oe
-M -N "6 "9 '6 '9 -: Db y: Y: /f Cu <1 >1 fi fl
/= .M .9 :9 %0 A> E> A' E: E! I' I> I: I! O' O>
?? O! U' U> U! i. ?? ?? '- '( '. '0 ', '" '; '<
```

&charset IBM037

```
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
```

&alias cp037

&alias ebcdic-cp-us

&alias ebcdic-cp-ca

```

&alias ebcdic-cp-wt
&alias ebcdic-cp-nl
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP NS a> a: a! a' a? aa c, n? Ct . < ( + !!
& e' e> e: e! i' i> i: i! ss ! DO * ) ; NO
- / A> A: A! A' A? AA C, N? BB , % _ > ?
o/ E' E> E: E! I' I> I: I! '! : Nb At ' = "
O/ a b c d e f g h i << >> d- y' th +-
DG j k l m n o p q r -a -o ae ', AE Cu
My '? s t u v w x y z !I ?I D- Y' TH Rg
'> Pd Ye .M Co SE PI 14 12 34 <( )> '- ': '' *X
(! A B C D E F G H I -- o> o: o! o' o?
!) J K L M N O P Q R 1S u> u: u! u' y:
// -: S T U V W X Y Z 2S O> O: O! O' O?
0 1 2 3 4 5 6 7 8 9 3S U> U: U! U' DT

```

```

&charset IBM038
&rem source: IBM 3174 Character Set Ref, GA27-3831-02, March 1990
&alias EBCDIC-INT
&alias cp038

```

```

&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? <( . < ( + !
& ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? )> DO * ) ; '>
- / ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? BB , % _ > ?
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? '! : Nb At ' = "
?? 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 z ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
(! 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 Z ?? ?? ?? ?? ?? ?? ??
0 1 2 3 4 5 6 7 8 9 ?? ?? ?? ?? ?? ?? DT

```

```

&charset IBM273
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
&alias CP273

```

```

&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP NS a> (! a! a' a? aa c, n? A: . < ( + !
& e' e> e: e! i' i> i: i! '? U: DO * ) ; '>
- / A> <( A! A' A? AA C, N? o: , % _ > ?

```

```

o/ E' E> E: E! I' I> I: I! '! : Nb SE ' = "
O/ a b c d e f g h i << >> d- y' th +-
DG j k l m n o p q r -a -o ae ', AE Cu
My ss s t u v w x y z !I ?I D- Y' TH Rg
Ct Pd Ye .M Co At PI 14 12 34 NO !! '- ': '' *X
a: A B C D E F G H I -- o> BB o! o' o?
u: J K L M N O P Q R 1S u> !) u! u' y:
O: -: S T U V W X Y Z 2S O> // O! O' O?
0 1 2 3 4 5 6 7 8 9 3S U> )> U! U' DT

```

&charset IBM274

&rem source: IBM 3174 Character Set Ref, GA27-3831-02, March 1990

&alias EBCDIC-BE

&alias CP274

&code 0

```

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? <( . < ( + !
& ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? )> DO * ) ; '>
- / ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? u! , % _ > ?
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? '! : Nb a! ' = "
?? 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 z ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
e' A B C D E F G H I ?? ?? ?? ?? ?? ??
e! J K L M N O P Q R ?? ?? ?? ?? ?? ??
c, ?? S T U V W X Y Z ?? ?? ?? ?? ?? ??
0 1 2 3 4 5 6 7 8 9 ?? ?? ?? ?? ?? DT

```

&charset IBM275

&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990

&alias EBCDIC-BR

&alias cp275

&code 0

```

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? E' . < ( + !
& ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? DO C, * ) ; '>
- / ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? c, , % _ > ?
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? a? : O? A? ' = "
?? 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 z ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
o? A B C D E F G H I ?? ?? ?? ?? ?? ??
e' J K L M N O P Q R ?? ?? ?? ?? ?? ??
// ?? S T U V W X Y Z ?? ?? ?? ?? ?? ??
0 1 2 3 4 5 6 7 8 9 ?? ?? ?? ?? ?? DT

```

```

&charset IBM277
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
&alias EBCDIC-CP-DK
&alias EBCDIC-CP-NO
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP NS a> a: a! a' a? !) c, n? Nb . < ( + !
& e' e> e: e! i' i> i: i! ss Cu AA * ) ; '>
- / A> A: A! A' A? DO C, N? o/ , % _ > ?
BB E' E> E: E! I' I> I: I! '! : AE O/ ' = "
At a b c d e f g h i << >> d- y' th +-
DG j k l m n o p q r -a -o (! ', <( )>
My u: s t u v w x y z !I ?I D- Y' TH Rg
Ct Pd Ye .M Co SE PI 14 12 34 NO !! '- ': '' *X
ae A B C D E F G H I -- o> o: o! o' o?
aa J K L M N O P Q R 1S u> '? u! u' y:
// -: S T U V W X Y Z 2S O> O: O! O' O?
0 1 2 3 4 5 6 7 8 9 3S U> U: U! U' DT
    
```

```

&charset IBM278
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
&alias CP278
&alias ebcdic-cp-fi
&alias ebcdic-cp-se
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP NS a> (! a! a' a? !) c, n? SE . < ( + !
& '! e> e: e! i' i> i: i! ss Cu AA * ) ; '>
- / A> Nb A! A' A? DO C, N? o: , % _ > ?
o/ E' E> E: E! I' I> I: I! e' : A: O: ' = "
O/ a b c d e f g h i << >> d- y' th +-
DG j k l m n o p q r -a -o ae ', AE )>
My u: s t u v w x y z !I ?I D- Y' TH Rg
Ct Pd Ye .M Co <( PI 14 12 34 NO !! '- ': '' *X
a: A B C D E F G H I -- o> BB o! o' o?
aa J K L M N O P Q R 1S u> '? u! u' y:
// -: S T U V W X Y Z 2S O> At O! O' O?
0 1 2 3 4 5 6 7 8 9 3S U> U: U! U' DT
    
```

```

&charset IBM280
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
&alias CP280
&alias ebcdic-cp-it
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
    
```

```

?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP NS a> a: (! a' a? aa // n? DG . < ( + !
& )> e> e: !) i' i> i: '? ss e' DO * ) ; '>
- / A> A: A! A' A? AA C, N? o! , % _ > ?
o/ E' E> E: E! I' I> I: I! u! : Pd SE ' = "
O/ a b c d e f g h i << >> d- y' th +-
<( j k l m n o p q r -a -o ae ', AE Cu
My i! s t u v w x y z !I ?I D- Y' TH Rg
Ct Nb Ye .M Co At PI 14 12 34 NO !! '- ': '' *X
a! A B C D E F G H I -- o> o: BB o' o?
e! J K L M N O P Q R 1S u> u: '! u' y:
c, -: S T U V W X Y Z 2S O> O: O! O' O?
0 1 2 3 4 5 6 7 8 9 3S U> U: U! U' DT

```

```

&charset IBM281
&rem source: IBM 3174 Character Set Ref, GA27-3831-02, March 1990
&alias EBCDIC-JP-E
&alias cp281

```

```

&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? Pd . < ( + !!
& ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ! Ye * ) ; NO
- / ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? BB , % _ > ?
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? '! : Nb At ' = "
?? 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 z ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
(! A B C D E F G H I ?? ?? ?? ?? ?? ?? ??
!) J K L M N O P Q R ?? ?? ?? ?? ?? ?? ??
DO ?? S T U V W X Y Z ?? ?? ?? ?? ?? ?? ??
0 1 2 3 4 5 6 7 8 9 ?? ?? ?? ?? ?? ?? DT

```

```

&charset IBM284
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
&alias CP284
&alias ebcdic-cp-es

```

```

&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP NS a> a: a! a' a? aa c, BB <( . < ( + !!
& e' e> e: e! i' i> i: i! ss )> DO * ) ; NO
- / A> A: A! A' A? AA C, Nb n? , % _ > ?
o/ E' E> E: E! I' I> I: I! '! : N? At ' = "
O/ a b c d e f g h i << >> d- y' th +-
DG j k l m n o p q r -a -o ae ', AE Cu
My ': s t u v w x y z !I ?I D- Y' TH Rg

```

```

Ct Pd Ye .M Co SE PI 14 12 34 '> ! '- '? '' *X
(! A B C D E F G H I -- o> o: o! o' o?
!) J K L M N O P Q R 1S u> u: u! u' y:
// -: S T U V W X Y Z 2S O> O: O! O' O?
0 1 2 3 4 5 6 7 8 9 3S U> U: U! U' DT

```

```

&charset IBM285
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
&alias CP285
&alias ebcdic-cp-gb
&code 0

```

```

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP NS a> a: a! a' a? aa c, n? DO . < ( + !!
& e' e> e: e! i' i> i: i! ss ! Pd * ) ; NO
- / A> A: A! A' A? AA C, N? BB , % _ > ?
o/ E' E> E: E! I' I> I: I! '! : Nb At ' = "
O/ a b c d e f g h i << >> d- y' th +-
DG j k l m n o p q r -a -o ae ', AE Cu
My '? s t u v w x y z !I ?I D- Y' TH Rg
Ct <( Ye .M Co SE PI 14 12 34 '> )> '- ': '' *X
(! A B C D E F G H I -- o> o: o! o' o?
!) J K L M N O P Q R 1S u> u: u! u' y:
// -: S T U V W X Y Z 2S O> O: O! O' O?
0 1 2 3 4 5 6 7 8 9 3S U> U: U! U' DT

```

```

&charset IBM290
&rem source: IBM 3174 Character Set Ref, GA27-3831-02, March 1990
&alias cp290
&alias EBCDIC-JP-kana
&code 0

```

```

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP . _ <' >' , _ .6 Wo a6 i6 u6 Pd . < ( + !!
& e6 o6 YA YU YO TU ?? -6 ?? ! Ye * ) ; NO
- / ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? BB , % _ > ?
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? '! : Nb At ' = "
?? A6 I6 U6 E6 O6 Ka Ki Ku Ke Ko ?? Sa Si Su Se
So Ta Ti Tu Te To Na Ni Nu Ne No ?? ?? Ha Hi Hu
?? '- He Ho Ma Mi Mu Me Mo Ya Yu ?? Yo Ra Ri Ru
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? Re Ro Wa N6 "5 05
?? A B C D E F G H I ?? ?? ?? ?? ?? ??
?? J K L M N O P Q R ?? ?? ?? ?? ?? ??
DO ?? S T U V W X Y Z ?? ?? ?? ?? ?? ??
0 1 2 3 4 5 6 7 8 9 ?? ?? ?? ?? ?? DT

```

```

&charset IBM297
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
&alias cp297

```

```
&alias ebcdic-cp-fr
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP NS a> a: At a' a? aa // n? DG . < ( + !
& (! e> e: !) i' i> i: i! ss SE DO * ) ; '>
- / A> A: A! A' A? AA C, N? u! , % _ > ?
o/ E' E> E: E! I' I> I: I! My : Pd a! ' = "
O/ a b c d e f g h i << >> d- y' th +-
<( j k l m n o p q r -a -o ae ', AE Cu
'! ': s t u v w x y z !I ?I D- Y' TH Rg
Ct Nb Ye .M Co )> PI 14 12 34 NO !! '- '? '' *X
e' A B C D E F G H I -- o> o: o! o' o?
e! J K L M N O P Q R 1S u> u: BB u' y:
c, -: S T U V W X Y Z 2S O> O: O! O' O?
0 1 2 3 4 5 6 7 8 9 3S U> U: U! U' DT
```

```
&charset IBM420
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
&rem IBM NLS RM p 11-11
&alias cp420
&alias ebcdic-cp-ar1
```

```
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP NS 3+ 3+; ++ ?? H' aM aM. aH Ct . < ( + !!
& aH. wH ?? ?? yH a+ a+. b+ b+, ! DO * ) ; NO
- / tm t+ t+, tk tk, g+ g+, hk BB , % _ > ?
hk, x+ x+, d+ dk r+ z+ s+ s+, ,+ : Nb At ' = "
sn a b c d e f g h i sn, c+ c+, dd dd, tj
zH j k l m n o p q r e+ e+. e+, e+; i+ i+.
i+, -: s t u v w x y z i+; f+ f+, q+ q+, k+
k+, l+ lM- lM. lH- lH. ?? ?? la- la. l+, m+ m+, n+ n+, h+
;+ A B C D E F G H I -- h+, ?? h+; ?? w+
?+ J K L M N O P Q R j+ j+. y+ y+. y+, 0a
*X ?? S T U V W X Y Z 1a 2a ?? 3a 4a 5a
0 1 2 3 4 5 6 7 8 9 ?? 6a 7a 8a 9a DT
```

```
&charset IBM423
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
&alias cp423
&alias ebcdic-cp-gr
```

```
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP A* B* G* D* E* Z* Y* H* I* <( . < ( + !
& K* L* M* N* C* O* P* R* S* )> DO * ) ; '>
```

```

- / T* U* F* X* Q* W* ?? ?? ?? , % _ > ?
?? A% E% Y% ?? I% O% U% W% '! : Pd SE ' = "
A: a b c d e f g h i a* b* g* d* e* z*
O: j k l m n o p q r y* h* i* k* l* m*
U: ' : s t u v w x y z n* c* o* p* r* *s
?? a% e% y% j* i% o% u% v* w% s* t* u* f* x* q*
%' y= z= s% je sc c% =' JU A= B= C= D= E= F= G=
', A B C D E F G H I ?? w* A> a! a: e>
'' J K L M N O P Q R +- e' e! e: i> i:
DG ?? S T U V W X Y Z 12 o: o> u> u! u:
0 1 2 3 4 5 6 7 8 9 y: c, C, ?? ?? DT

```

```

&charset IBM424
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
&alias cp424
&alias ebcdic-cp-he
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP A+ B+ G+ D+ H+ W+ Z+ X+ Tj Ct . < ( + !!
& J+ K% K+ L+ M% M+ N% N+ S+ ! DO * ) ; NO
- / E+ P% P+ Zj ZJ Q+ R+ Sh BB , % _ > ?
?? T+ ?? ?? NS ?? ?? ?? == '! : Nb At ' = "
?? a b c d e f g h i << >> ?? ?? ?? ??
DG j k l m n o p q r ?? ?? ?? ', ?? Cu
My '? s t u v w x y z ?? ?? ?? ?? ?? Rg
'> Pd Ye .M Co SE PI 14 12 34 <( )> '- ': '' *X
(! A B C D E F G H I -- ?? ?? ?? ?? ??
!) J K L M N O P Q R 1S ?? ?? ?? ?? ??
// -: S T U V W X Y Z 2S ?? ?? ?? ?? ??
0 1 2 3 4 5 6 7 8 9 3S ?? ?? ?? ?? DT

```

```

&charset IBM437
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
&alias cp437
&alias 437
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
C, u: e' a> a: a! aa c, e> e: e! i: i> i! A: AA
E' ae AE o> o: o! u> u! y: O: U: Ct Pd Ye Pt Fl
a' i' o' u' n? N? -a -o ?I NI NO 12 14 !I << >>
.S :S ?S vv vl vL Vl Dl dL VL VV LD UL Ul uL dl
ur uh dh vr hh vh vR Vr UR DR UH DH VR HH VH uH
Uh dH Dh Ur uR dR Dr Vh vH ul dr FB LB lB RB TB
a* b* G* p* S* s* m* t* F* H* W* d* 00 /0 e* (U
=3 +- >= =< Iu Il -: ?2 Ob .M Sb RT nS 2S fS NS

```

```

&charset IBM500
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
&alias CP500
&alias ebcdic-cp-be
&alias ebcdic-cp-ch
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP NS a> a: a! a' a? aa c, n? <( . < ( + !
& e' e> e: e! i' i> i: i! ss )> DO * ) ; '>
- / A> A: A! A' A? AA C, N? BB , % _ > ?
o/ E' E> E: E! I' I> I: I! '! : Nb At ' = "
O/ a b c d e f g h i << >> d- y' th +-
DG j k l m n o p q r -a -o ae ', AE Cu
My '? s t u v w x y z !I ?I D- Y' TH Rg
Ct Pd Ye .M Co SE PI 14 12 34 NO !! '- ': '' *X
(! A B C D E F G H I -- o> o: o! o' o?
!) J K L M N O P Q R 1S u> u: u! u' y:
// -: S T U V W X Y Z 2S O> O: O! O' O?
0 1 2 3 4 5 6 7 8 9 3S U> U: U! U' DT

```

```

&charset IBM850
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
&alias cp850
&alias 850
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
C, u: e' a> a: a! aa c, e> e: e! i: i> i! A: AA
E' ae AE o> o: o! u> u! y: O: U: o/ Pd O/ *X Fl
a' i' o' u' n? N? -a -o ?I Rg NO 12 14 !I << >>
.S :S ?S vv vl A' A> A! Co VL VV LD UL Ct Ye dl
ur uh dh vr hh vh a? A? UR DR UH DH VR HH VH Cu
d- D- E> E: E! i. I' I> I: ul dr FB LB BB I! TB
O' ss O> O! o? O? m* TH th U' U> U! y' Y' -M ''
-- +- == 34 PI SE -: '; DG ': '. 1S 3S 2S fS NS

```

```

&charset IBM851
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
&alias cp851
&alias 851
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
C, u: e' a> a: a! A% c, e> e: e! i: i> E% A: Y%

```

```

I% ?? O% o> o: U% u> u! W% O: U: a% Pd e% y% i%
j* i3 o% u% A* B* G* D* E* Z* Y* 12 H* I* << >>
.S :S ?S vv vl K* L* N* M* VL VV LD UL C* O* dl
ur uh dh vr hh vh P* R* UR DR UH DH VR HH VH S*
T* U* F* X* Q* W* a* b* g* ul dr FB LB d* e* TB
z* y* h* i* k* l* m* n* c* o* p* r* s* *s t* ''
-- +- u* f* x* SE q* ';' DG ': w* v* u3 w% fS NS

```

&charset IBM852

&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990

&alias cp852

&alias 852

&code 0

```

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
C, u: e' a> a: u0 c' c, l/ e: O" o" i> Z' A: C'
E' L' l' o> o: L< l< S' s' O: U: T< t< L/ *X c<
a' i' o' u' A; a; Z< z< E; e; ?? z' C< s, << >>
.S :S ?S vv vl A' A> E< S, VL VV LD UL Z. z. dl
ur uh dh vr hh vh A( a( UR DR UH DH VR HH VH Cu
d/ D/ D< E: d< N< I' U> e< ul dr FB LB T, U0 TB
O' ss O> N' n' n< S< s< R' U' r' U" y' Y' t, ''
-- '" ', '<' ( SE -: ';' DG ': '. u" R< r< fS NS

```

&charset IBM855

&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990

&alias cp855

&alias 855

&code 0

```

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
d% D% g% G% io IO ie IE ds DS ii II yi YI j% J%
lj LJ nj NJ ts TS kj KJ v% V% dz DZ ju JU =' ="
a= A= b= B= c= C= d= D= e= E= f= F= g= G= << >>
.S :S ?S vv vl h= H= i= I= VL VV LD UL j= J= dl
ur uh dh vr hh vh k= K= UR DR UH DH VR HH VH Cu
l= L= m= M= n= N= o= O= p= ul dr FB LB P= ja TB
JA r= R= s= S= t= T= u= U= z% Z% v= V= %' %" ''
-- y= Y= z= Z= s% S% je JE sc Sc c% C% ?? fS NS

```

&charset IBM857

&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990

&alias cp857

&alias 857

&code 0

```

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US

```

```

SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
C, u: e' a> a: a! aa c, e> e: e! i: i> i. A: AA
E' ae AE o> o: o! u> u! I. O: U: o/ Pd O/ S, s,
a' i' o' u' n? N? G( g( ?I Rg NO 12 14 !I << >>
.S :S ?S vv vl A' A> A! Co VL VV LD UL Ct Ye dl
ur uh dh vr hh vh a? A? UR DR UH DH VR HH VH Cu
-o -a E> E: E! ?? I' I> I: ul dr FB LB BB I! TB
O' ss O> O! o? O? m* ?? *X U' U> U! i! y: -M ''
-- +- ?? 34 PI SE -: '; DG ': '. 1S 3S 2S fS NS

```

&charset IBM860

&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990

&alias cp860

&alias 860

&code 0

```

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
C, u: e' a> a? a! A' c, e> E> e! I> O> i! A? A>
E' A! E! o> o? o! U' u! I! O? U: Ct Pd U! Pt O!
a' i' o' u' n? N? -a -o ?I O' NO 12 14 !I << >>
.S :S ?S vv vl vL V1 D1 dL VL VV LD UL U1 uL dl
ur uh dh vr hh vh vR Vr UR DR UH DH VR HH VH uH
Uh dH Dh Ur uR dR Dr Vh vH ul dr FB LB lB RB TB
a* b* G* p* S* s* m* t* F* H* W* d* 00 /0 e* (U
=3 +- >= =< Iu Il -: ?2 Ob .M Sb RT nS 2S fS NS

```

&charset IBM861

&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990

&alias cp861

&alias 861

&alias cp-is

&code 0

```

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
C, u: e' a> a: a! aa c, e> e: e! D- d- TH A: AA
E' ae AE o> o: th u> Y' y' O: U: o/ Pd O/ Pt O!
a' i' o' u' A' I' O' U' ?I ?? NO 12 14 !I << >>
.S :S ?S vv vl vL V1 D1 dL VL VV LD UL U1 uL dl
ur uh dh vr hh vh vR Vr UR DR UH DH VR HH VH uH
Uh dH Dh Ur uR dR Dr Vh vH ul dr FB LB lB RB TB
a* b* G* p* S* s* m* t* F* H* W* d* 00 /0 e* (U
=3 +- >= =< Iu Il -: ?2 Ob .M Sb RT nS 2S fS NS

```

&charset IBM862

&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990

```

&alias cp862
&alias 862
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
A+ B+ G+ D+ H+ W+ Z+ X+ Tj J+ K% K+ L+ M% M+ N%
N+ S+ E+ P% P+ Zj ZJ Q+ R+ Sh T+ Ct Pd U! Pt O!
a' i' o' u' n? N? -a -o ?I ?? NO 12 14 !I << >>
.S :S ?S vv vl vL V1 D1 dL VL VV LD UL U1 uL dl
ur uh dh vr hh vh vR Vr UR DR UH DH VR HH VH uH
Uh dH Dh Ur uR dR Dr Vh vH ul dr FB LB lB RB TB
a* b* G* p* S* s* m* t* F* H* W* d* 00 /0 e* (U
=3 +- >= =< Iu Il -: ?2 Ob .M Sb RT nS 2S fS NS

```

```

&charset IBM863
&rem source: IBM Keyboard layouts and code pages, PN 07G4586 June 1991
&alias cp863
&alias 863
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
C, u: e' a> A> a! PI c, e> e: e! i: i> i! A! SE
E' E! E> o> E: I: u> u! Cu O> U: Ct Pd U! U> Fl
BB '' o' u' ': ', 3S '- I> NI NO 12 14 34 << >>
.S :S ?S vv vl vL V1 D1 dL VL VV LD UL U1 uL dl
ur uh dh vr hh vh vR Vr UR DR UH DH VR HH VH uH
Uh dH Dh Ur uR dR Dr Vh vH ul dr FB LB lB RB TB
a* b* G* p* S* s* m* t* F* H* W* d* 00 /0 e* (U
=3 +- >= =< Iu Il -: ?2 Ob .M Sb RT nS 2S fS NS

```

```

&charset IBM864
&rem source: IBM Keyboard layouts and code pages, PN 07G4586 June 1991
&alias cp864
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
DG .M Ob RT :S hh vv vh vl dh vr uh dl dr ur ul
ss 00 o/ +- 12 14 ?2 << >> lH- lH. ?? ?? la- la. a+:
?? -- aM. Pd Cu aH. ?? ?? a+. b+ t+ tk ,+ g+ hk x+
0a 1a 2a 3a 4a 5a 6a 7a 8a 9a v+ ;+ s+ sn c+ ?+
Ct H' aM aH wH e+. yH a+ b+, tm t+, tk, g+, hk, x+, d+
dk r+ z+ s+, sn, c+, dd, tj zH e+, i+, BB NO -: *X e+
++ f+. q+. k+, l+. m+, n+. h+, w+ j+ y+, dd m+. i+. i+ m+
3+; 3+ n+ h+ h+; j+. y+. f+ q+ lM- lM. l+ k+ y+ fS NS

```

```

&charset IBM865
&rem source: IBM DOS 3.3 Ref (Abridged), 94X9575 (Feb 1987)
&alias cp865
&alias 865
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
C, u: e' a> a: a! aa c, e> e: e! i: i> i! A: AA
E' ae AE o> o: o! u> u! y: O: U: o/ Pd O/ Pt Fl
a' i' o' u' n? N? -a -o ?I NI NO 12 14 !I << >>
.S :S ?S vv vl vL Vl D1 dL VL VV LD UL Ul uL dl
ur uh dh vr hh vh Vr UR DR UH DH VR HH VH uH
Uh dH Dh Ur uR dR Dr Vh vH ul dr FB LB lB RB TB
a* b* G* p* S* s* m* t* F* H* W* d* 00 /0 e* (U
=3 +- >= =< Iu Il -: ?2 Ob .M Sb RT nS 2S fS NS

```

```

&charset IBM868
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
&alias CP868
&alias cp-ar
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
0a 1a 2a 3a 4a 5a 6a 7a 8a 9a ,+ ;+ ?+ aM a+ a+.
a+: b+ b+, p+ ?? tm t+ t+, ?? ?? tk tk, g+ g+, ?? ??
hk hk, x+ x+, d+ ?? dk r+ ?? z+ ?? s+ s+, sn << >>
sn, c+ .S :S ?S vv vl c+, dd dd, tj VL VV LD UL zH
e+ dl ur uh dh vr hh vh e+. e+, UR DR UH DH VR HH
VH e+; i+ i+. i+, i+; f+ f+, q+ q+, k+. ul dr FB TB k+,
?? LB ?? l+ l+. l+; m+ m+, ?? n+ n+, ?? w+ ?? ?? ??
?? H' -- ?? ?? ?? ?? ?? ?? ?? ?? 3+ 3+; ?? fS NS

```

```

&charset IBM869
&rem source: IBM Keyboard layouts and code pages, PN 07G4586 June 1991
&alias cp869
&alias 869
&alias cp-gr
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
?? ?? ?? ?? ?? ?? A% ?? .M NO BB 9' '9 E% -M Y%
I% J* O% ?? ?? U% V* Co W% 2S 3S a% Pd e% y% i%
j* i3 o% u% A* B* G* D* E* Z* Y* 12 H* I* << >>

```

```
.S :S ?S vv vl K* L* M* N* VL VV LD UL C* O* dl
ur uh dh vr hh vh P* R* UR DR UH DH VR HH VH S*
T* U* F* X* Q* W* a* b* g* ul dr FB LB d* e* TB
z* y* h* i* k* l* m* n* c* o* p* r* s* *s t* ''
-- +- u* f* x* SE q* '% DG ': w* v* u3 w% fS NS
```

```
&charset IBM870
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
&alias CP870
&alias ebcdic-cp-roece
&alias ebcdic-cp-yu
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP NS ?? a: ?? a' a( c< c, c' <( . < ( + !
& e' ?? e: u0 i' ?? l< l' ss )> DO * ) ; '>
- / ?? A: '" A' ?? C< C, C' !! , % _ > ?
'< E' ?? E: U0 I' ?? L< L' '! : Nb At ' = "
'( a b c d e f g h i s' n< d/ y' r< ??
DG j k l m n o p q r l/ n' s< ', '; Cu
a; '? s t u v w x y z S' N< D/ Y' R< ??
.M A; z. ?? Z. SE PI z< z' Z< Z' N' S< ': '' *X
(! A B C D E F G H I -- o> o: r' o' o"
!) J K L M N O P Q R E< u" u: t< u' e<
// -: S T U V W X Y Z d< O> O: R' O' O"
0 1 2 3 4 5 6 7 8 9 D< U" U: T< U' DT
```

```
&charset IBM871
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
&alias CP871
&alias ebcdic-cp-is
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP NS a> a: a! a' a? aa c, n? th . < ( + !
& e' e> e: e! i' i> i: i! ss AE DO * ) ; O:
- / A> A: A! A' A? AA C, N? BB , % _ > ?
o/ E' E> E: E! I' I> I: I! d- : Nb D- ' = "
O/ a b c d e f g h i << >> '! y' (! +-
DG j k l m n o p q r -a -o!) ', )> Cu
My o: s t u v w x y z !I ?I At Y' <( Rg
Ct Pd Ye .M Co SE PI 14 12 34 NO !! '- ': // *X
TH A B C D E F G H I -- o> '? o! o' o?
ae J K L M N O P Q R 1S u> u: u! u' y:
'' -: S T U V W X Y Z 2S O> '> O! O' O?
0 1 2 3 4 5 6 7 8 9 3S U> U: U! U' DT
```

```
&charset IBM880
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
```

```

&alias cp880
&alias EBCDIC-Cyrillic
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP ?? d% g% io ?? ds ii yi j% <( . < ( + !
& lj nj ts kj ?? dz =" NO D% )> DO * ) ; '>
- / G% IO ?? DS II YI J% LJ BB , % _ > ?
NJ Ts KJ ?? ?? DZ ju a= b= ?? : Nb At ' = "
c= a b c d e f g h i d= e= f= g= h= i=
j= j k l m n o p q r k= l= m= n= o= p=
ja ?? s t u v w x y z r= s= t= u= z% v=
%' y= z= s% je sc c% =' JU A= B= C= D= E= F= G=
?? A B C D E F G H I H= I= J= K= L= M=
?? J K L M N O P Q R N= O= P= JA R= S=
// Cu S T U V W X Y Z T= U= Z% V= %" Y=
0 1 2 3 4 5 6 7 8 9 Z= S% JE Sc C% DT

```

```

&charset IBM891
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
&alias cp891
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??

```

```

&charset IBM903
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
&alias cp903
&code 0
NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> _
'! 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 z (! !! !) '? DT
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??

```

?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??

&charset IBM904
&rem source: IBM NLS RM Vol2 SE09-8002-01, March 1990
&alias cp904
&alias 904
&code 0

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
SP ! " Nb DO % & ' ( ) \* + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ?
At 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 Z <( // )> '> \_
'! 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 z (! !! !) '? DT
Ct ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??

&charset IBM905
&rem source: IBM 3174 Character Set Ref, GA27-3831-02, March 1990
&alias CP905
&alias ebcddic-cp-tr
&code 0

NU SH SX EX ET EQ AK BL BS HT LF VT FF CR SO SI
DL D1 D2 D3 D4 NK SY EB CN EM SB EC FS GS RS US
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
SP ?? a> a: a! a' ?? c. (! n? C, . < ( + !
& e' e> e: e! i' i> i: i! ss G( I. \* ) ; '>
- / A> A: A! A' ?? C. <( N? s, , % \_ > ?
?? E' E> E: E! I' I> I: I! i. : O: S, ' = U:
'( a b c d e f g h i h/ c> s> u( ?? !!
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|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| NU | SH | SX | EX | ET | EQ | AK | BL | BS | HT | LF | VT | FF | CR | SO | SI |    |
| DL | D1 | D2 | D3 | D4 | NK | SY | EB | CN | EM | SB | EC | FS | GS | RS | US |    |
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ACKNOWLEDGEMENTS

This memo has been produced with a grant from Nordisk Industrifond project number 91030. I thank all of the people in the IETF 822ext WG for their constructive discussion and remarks on this memo. People from many other circles have also commented on the text and the tables. The following is a list of persons that I remember bringing forward suggestions that made me change the specifications - my aging memory may have forgot even significant contributions, and I apologize for that.

- |                             |                         |
|-----------------------------|-------------------------|
| Alain LaBonte'              | Alina Da Cruz           |
| Anders Samuelsson           | Bob Smart               |
| Cuong Bui                   | Dan Oscarsson           |
| David Crocker               | David Joslin            |
| Dick Weaver                 | Dmitry V. Volodin       |
| Erik van der Poel           | Geir Petersen           |
| Greg Vaudreuil              | Harald Tveit Alvestrand |
| Hugh Tucker                 | Isai Scheinberg         |
| James Do                    | Jan-Michael Rynning     |
| Johan van Wingen            | John C. Klensin         |
| John F. Chandler            | Johnny Erikson          |
| Justin Bur                  | Keith Moore             |
| Kevin Donnelly              | Kim F. Storm            |
| Marius Olofson              | Masahiro Sekiguchi      |
| Maurizio Sichera            | Michael Patton          |
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| Ned Freed                   | Neil Katin              |
| Olle Jaernefors             | Patrick Faeltstroem     |
| Paul Pomes                  | Peter Svanberg          |
| Philippe-Andre' Prindeville | Randall Atkinson        |
| Steve Hardcastle-Kille      |                         |

## REFERENCES

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