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**Information technology — Keyboard  
layouts for text and office systems —**

**Part 9:  
Multi-lingual, multiscrypt keyboard  
layouts**

*Technologies de l'information — Disposition des claviers conçus pour  
la bureautique —*

*Partie 9: Dispositions de claviers multilingues et multi-écritures*

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## Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, SC 35, *User interferences*.

ISO/IEC 9995 consists of the following parts, under the general title *Information technology — Keyboard layouts for text and office systems*:

- *Part 1: General principles governing keyboard layouts*
- *Part 2: Alphanumeric section*
- *Part 3: Complementary layouts of the alphanumeric zone of the alphanumeric section*
- *Part 4: Numeric section*
- *Part 5: Editing and function section*
- *Part 7: Symbols used to represent functions*
- *Part 8: Allocation of letters to the keys of a numeric keypad*
- *Part 9: Multilingual, multiscript keyboard layouts*
- *Part 10: Conventional symbols and methods to represent graphic characters not uniquely recognizable by their glyph on a keyboard and in documentation*
- *Part 11: Functionality of dead keys and repertoires of characters entered by dead keys*

# Information technology — Keyboard layouts for office systems — Part 9: Multi-lingual, multiscript keyboard layouts

## 1 Scope

Within the general scope described in ISO/IEC 9995-1, this part of ISO 9995 defines the allocation on a keyboard of a set of graphic characters which, when used in combination with an existing national version keyboard layout, allows the input of a minimum character repertoire as defined herein.

This repertoire is intended to address all characters needed to write all contemporary languages using the Latin script, together with standardized Latin transliterations of some major languages using other scripts. It also contains all symbols and punctuation marks contained in ISO 8859-1, together with some selected other ones commonly used in typography and office use.

It also addresses characters of some other scripts (Greek, Cyrillic, Armenian, Georgian, Hebrew) to the same extent (in the case of Cyrillic, leaving out some minority languages of the Russian Federation which have only a few hundred speakers left). It provides means to include other scripts (e.g. Arabic, Devanagari) in future versions of this part of ISO 9995 (e.g. by amendments).

Furthermore, it addresses the International Phonetic Alphabet (IPA).

This part of ISO 9995 is primarily intended for word-processing and text-processing applications, to be used with full-sized keyboards as well as with miniature keyboards found on mobile devices ("smartphones" or handheld computers), especially ones which have only keys for the 26 basic Latin letters but no dedicated keys for digits.

## 2 Conformance

The layout of a keyboard conforms to this part of ISO 9995 if it meets all of the following conditions:

- It is either a Latin keyboard, or a Latin-conformant keyboard, as defined in Clause 3.
- It is either a compact keyboard, or a full keyboard, as defined in Clause 3.
- There is a special function called "Superselect", which, when (according to the layout) either operated (i.e. pressed if it is a key) together with any A to Z key, or followed by the actuation of any A to Z key, performs the function according to Tables 1 and 2 in Clause 5.

NOTE 1 The "Superselect" can be a single dedicated key, or a special sequence of other keys to be input.

EXAMPLE The "Superselect" can be a "symbol key" to be pressed together with a "shift key".

Furthermore, the software driving the keyboard shall fulfil the following requirements to make the keyboard conform to this part of ISO 9995:

- The keyboard is intended to output valid ISO/IEC 10646 characters and valid sequences thereof.
- Any of the groups contained in Tables 1 and 2 in Clause 5 and specified in the subsequent text are contained in the layout, unless they are marked as optional in these tables. The groups may contain

additional characters associated with other keys than in the tables as long as any listed pairing of D-Groups and L-Groups is unaffected.

NOTE 2 It is not specified in this part of 9995 which characters or symbols are in fact to be engraved on the keyboard.

Any statement of conformance to this part of ISO 9995 shall be taken to imply that the complete character repertoire of the IPA table in Annex C and of all groups listed in Clause 5 has been implemented, with the exception that group YY (compatibility characters and symbols), which may be implemented only partially or not at all.

Such statements of conformance may be made for fonts. If such a statement of conformance for a font is made in connection with one or more of the terms: "Latin", "Greek", "Cyrillic", "Armenian", "Georgian", "Hebrew", "Arabic", "Korean", "IPA", this shall be taken to imply that the character repertoire(s) listed in Annex D under the correspondingly named headers D.2.2 to D.2.10 has/have to be supplied by the font, and, as long as any of the listed terms except "IPA" is applied, this shall be taken to imply that also the character repertoire listed there under D.2.1 "Digits, punctuation and symbols" has to be supplied by the font. In no case is there an implication whether the character repertoire listed under D.2.1 "Compatibility characters and symbols" is supplied completely, partially or not at all by the font.

### 3 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 646:1991, *Information technology — ISO 7-bit coded character set for information interchange*

ISO/IEC 9995-1:2009, *Information technology — Keyboard layouts for text and office systems — Part 1: General principles governing keyboard layouts*

ISO/IEC 9995-3:2010, *Information technology — Keyboard layouts for text and office systems — Part 3: Complementary layouts of the alphanumeric zone of the alphanumeric section*

ISO/IEC 10646: 2014, *Information technology — Universal Coded Character Set (UCS)*

IPA: Handbook of the International Phonetic Association. Cambridge 1999 (reprinted 2003). ISBN 0 521 63751 1: Appendix 2: Computer coding of IPA symbols (pp. 161-185)

### 4 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 9995-1 and the following apply.

#### 4.1

##### **actuate a character**

select a character by selecting the appropriate group and level (if necessary) and pressing the key itself

#### 4.2

##### **associated with <key>**

key used to enter a character or to call a function

Note 1 to entry: Any group and/or level selection prerequisite for this action must be done for the key actuation to enter the intended character or call the intended function.

#### 4.3

##### **A to Z key**

key associated with any Latin letter A...Z

**4.4****base mode**

mode in which keys have their usual function such as selecting characters according to the active group and level

**4.5****compact keyboard**

keyboard having at least the following 30 different keys: 26 keys for the Latin letters A...Z, Space key, Enter key; and having a function to select Level 2, function to select the group and/or level which contains the digits 0...9, and where the digits 0...9 have none of their own keys but are contained in a single level of a group

**4.6****complementary group**

group that can be paired with another group in such a manner that on a full keyboard, it can be unified with the other group by incorporating its full content

Note 1 to entry: This is true of D-groups and L-groups.

Note 2 to entry: This doubles the input possibilities for the characters contained in the paired groups, but may be useful especially when the contents of such a pair are engraved on the keys according to the rules for a single group.

**4.7****D-group**

group declaring characters associated to the levels 1 and 2 of any digit key, where the associations to the levels are independent on the level to which the digits themselves are in their group

**4.8****digit key**

key associated with any digit 0...9

**4.9****enter key**

key associated with an enter or return function

**4.10****full keyboard**

keyboard having at least the following 39 different keys: 26 keys for the Latin letters A...Z, 10 keys for the digits 0..9, Space key, Enter key; and a level 2 selector key

Note 1 to entry: The digit keys typically enter the digits in level 1 or 2 of group 1.

Note 2 to entry: The level 2 selector key is usually called "shift key".

**4.11****L-Group**

group which declares characters associated to levels 1 and 2 of any A to Z key and optionally of the Space key

**4.12****latch to <a group>**

select a group in such a manner that only the next key actuation is affected, with the group reverting to the previously selected group (reference group) afterwards

**4.13****latin keyboard**

keyboard with a layout which has all Latin lowercase letters a...z (U+0061...U+007A) in group 1 level 1, and all Latin uppercase letters A...Z (U+0041...U+005A) in group 1 level 2, each uppercase letter being associated with the same key as its lowercase counterpart, and which has a level 2 selector key which is either to be pressed simultaneously with the letter key or separately immediately before pressing the letter key, to select level 2

**4.14**

**latin conformant keyboard**

keyboard with a layout which has all Latin letters a...z and A...Z in a single group other than Group 1, where that group can be selected permanently, and which otherwise behaves as a Latin keyboard as long as that group is selected

**4.15**

**mode**

state which determines the effects of all the keys of a keyboard

**4.16**

**reference group**

group that is switched to, or reverted to after the actuation of a key has disengaged a group previously latched to

**4.17**

**reference group switching mode**

special mode where the next key actuation either switches to a new group or has the sole effect of generating an error signal to the user, should there be no group to be switched to when pressing that key

**4.18**

**space key**

key associated with character U+0020 SPACE

**4.19**

**special mode**

mode which is not the base mode, and where the functions of the keys are defined by the description of the mode

**4.20**

**supplementary group**

group not identical to the primary group of the national version keyboard layout or to the complementary Latin group layout (secondary group)

**4.21**

**supplementary character collection**

collection of characters contained in any supplementary group

**4.22**

**superselect**

function which, upon simultaneous or consecutive actuation of any A to Z key, latches or switches to a supplementary group

EXAMPLE Superselect can be a key, a combination of keys, or another function.

**4.23**

**switch to <a group>**

select a group or a mode which then stays in effect until another group or mode is selected, be it by switching to another group or selecting another reference group

**4.24**

**symbol**

graphical symbol which is neither a letter nor a digit nor a punctuation mark

Note 1 to entry: This definition does not apply to the term "symbol" as part of the phrase "graphical symbol" as defined in ISO/IEC 9995-1.

## 5 Groups and modes

### 5.1 General

The groups in this standard are denoted by a single Latin letter (if such a group is to be primarily used as a reference group which can be switched to, which does not exclude that such a group can also be latched to) or a combination of two Latin letters (if such a group is primarily designed to be latched to). For the latter ones, the first letter either denotes the single-letter-named group to which its content is related, or "D" for diacritics, or "Y" for symbols (including digits).

The group denoted "N" and all two letter combinations containing a "N" are reserved for national standards based on this standard and thus will not be used in future versions of this standard.

The group number according to ISO/IEC 9995-1 is computed for the former groups as "letter number × 100", for the latter groups as "first letter number × 100 + second letter number", where "letter number" is 1 for A, 2 for B, and so on until 26 for Z (e.g. "Group G" is "Group 700", "Group GE" is "Group 705").

This standard thus defines groups within the number range from "Group 100" to "Group 2626" (not filling this number range contiguously).

Group L matches the basic Latin letters to itself (lowercase letters in Level 1, uppercase letters in Level 2), as well as the space and the digits (in Level 1). All other groups are defined in Annex B.

All combining characters (accents, diacritical marks, etc.) contained in the groups defined in this standard are to be entered after their corresponding base character, according to the order in which they are to be stored according to ISO/IEC 10646, with the following single exception:

When the keyboard layout incorporates a secondary group according to ISO/IEC 9995-3:2010, or any "dead keys" in its primary group, the three combining characters contained in the group G ("Greek") are to be entered using the Dead Key method described in ISO/IEC 9995-3:2010.

NOTE This exception will enable users who only use the combining characters of the secondary group and the additional Greek combining characters contained in the group G ("Greek") defined in this standard, to use all combining characters in a uniform way.

### 5.2 Groups denoted by single Latin letters

The following table lists the Groups denoted by single Latin letters (all these groups are "L-Groups").

**Table 1 — Groups denoted by single Latin letters**

Key	Reference group selected by the key in the reference group switching mode	Symbol <sup>a</sup>
Q	Group Q (Georgian) <sup>c</sup>	105 ლ <sup>b</sup>
W	Group W (Armenian) <sup>d</sup>	105 Խ
E	<i>Reserved for future use</i>	
R	<i>Reserved for future use</i>	
T	<i>Reserved for future use</i>	
Y	<i>Reserved for future use</i>	
U	<i>Reserved for future use</i>	
I	<i>Reserved for future use</i>	

O	<i>Reserved for future use</i>	
P	Group A (Arabic) <sup>e</sup>  Switching to this group by this key also selects a mode "Eastern Arabic-Indian digits". This mode causes that digit keys which otherwise enter the standard decimal digits U+0030...U+0039 enter the according Eastern Arabic-Indic digits 06F0...06F9 instead. This mode stays in effect until another "reference group" selection is done.	105  U+06F5
A	Group A (Arabic) <sup>f</sup>	105  U+0628
S	<i>Reserved for future use</i>	
D	<i>Reserved for future use</i> (preferably a Group D "Devanagari")	
F	<i>Reserved for future use</i>	
G	Group G ("Greek")	105 Ω
H	Group H ("Hebrew")	105 ך
J	<i>Reserved for Group J ("Japanese" for Hiragana and Katakana)</i>	
K	Group K ("Korean Hangul")  Switching to this group by this key also selects a mode "Hangul" (Hangeul).  In this mode, one, two or three consonant (Jamo) can be input between two consecutive vowels (Jongseong, Syllable-peak letters).  1) If only one consonant Jamo is input, it will be replaced by a corresponding Choseong Jamo (Syllable-initial letter). 2) If two consonant Jamos are input, the first consonant Jamo will be replaced by a corresponding Jongseong Jamo (Syllable-final letter) and the second consonant Jamo will be replaced by a corresponding Choseong Jamo (Syllable-initial letter). 3) If three consonant Jamos are input, the first and second consonant Jamos will be replaced by a corresponding Jongseong complex Jamo (Syllable-final complex letter), and the third consonant Jamo will be replaced by a corresponding Choseong Jamo (Syllable-initial letter). 4) If no vowel precedes a consonant Jamo, it will be treated as in 1) above. 5) If no vowel follows one [or two] consonant Jamos, it [or they] will be replaced by a corresponding Jongseong Jamo [or Jongseong complex Jamo].  Implementations that replace the input of Jamo sequences by the appropriate Hangul characters when this mode is active, are compliant to this standard.  This mode stays in effect until another "reference group" selection is done.	105 가  (U+AC00)
L	Group L ("Latin")	105 L
Z	<i>Reserved for future use.</i>	

X	Group A (Arabic).  Switching to this group by this key also selects a mode "Arabic-Indian digits". This mode causes that digit keys which otherwise enter the standard decimal digits U+0030...U+0039 enter the according Arabic-Indic digits 0660...0669 instead. This mode stays in effect until another "reference group" selection is done.	105  U+0664
C	Group C ("Cyrillic")	105 Я
V	<i>Reserved for future use</i>	
B	<i>Reserved for future use</i>	
N	<i>Reserved for future use</i>	
M	<i>Reserved for future use</i>	

a The column "Symbol" denotes the number of the symbol in ISO/IEC 9995-7:2009 Amd1 for the group or mode selection when this selection function is associated to a single key (in addition to the "Superselect" mechanism described here), or is to be displayed on an on-screen keyboard after the actuation of "Superselect".

b If the symbol number is 105 "Switch to specific group", 106 "Latch to specific group", or 107 "Switch to specific mode". It is followed by the character to be enclosed by the symbol.

c "G" selects Greek

d "A" is reserved to select Arabic

e ; "P" stands for Persian/Pashto

f *This selection deselects any mode selected as listed for keys "P" or "X", i.e. digit keys subsequently enter the standard decimal digits U+0030...U+0039*

### 5.3 Other groups

The following table lists the other groups and the modes specified in this part of ISO/IEC 9995, according to the letter key which is to be pressed after or together with the "Superselect" function, as described in Clause 2.

Column G denotes whether the group is an L-Group, a D-Group, or E for an Extended D-Group.

Column labelled "CG" denotes the Complementary Group of a group if such one exists.

Column "Symbol" has the same meaning as in Table 1.

**Table 2 — Other groups defined in this part of ISO/IEC 9995**

Key	Function performed by this key when used with the "Superselect" function	G	CG	Symbol
Q	Latches to Group LQ ("Hook below") when Group L (Latin) is the reference group.	L		90
W	Latches to Group LW ("Hook above") when Group L (Latin) is the reference group.	L		91
E	Latches to Group LE ("Latin Extra Letters") when Group L (Latin) is the reference group.  Latches to Group AE ("Arabic Extra Letters") when Group A (Arabic) is the reference group.  Latches to Group CE ("Cyrillic Extra Letters") when Group C (Cyrillic) is the reference group.	L  L  L		106 X

	Latches to Group GE ("Greek Extra Letters") when Group G (Greek) is the reference group.	L		
	Latches to Group HE ("Hebrew Extra Letters") when Group H (Hebrew) is the reference group.	L		
	Latches to Group WE ("Armenian Extra letters") when Group W (Armenian) is the ref. group.			
R	Latches to Group LR ("Raised Latin Characters")	L	YT	93
T	Latches to Group LL ("Lowered Latin Characters")	L		94
Y	Latches to Group YY ("Compatibility characters and symbols") <sup>a</sup> Note:	L		106 ł
U	Latches to Group YU ("Universal compatibility").	D	YP	106 &
I	Switches to Mode "IPA" (International Phonetic Alphabet)			107 ə
O	Latches to Group YT ("Digits Raised and Lowered")	D	LR	95
P	Latches to Group YP ("Punctuation")	L	YU	106 #
A	Latches to Group DD ("Diacritics"). <sup>b</sup> Exception: Latches to Group DI ("Diacritics for IPA") when the mode "IPA" is active, treating the next key as independent ISO/IEC 10646 character.	L		106 ~
S	Latches to Group YS ("Symbols")	L		106 §
D	Switches to Mode "Unicode decimal".			103
F	Latches to Group LS ("Latin Supplement") when Group L (Latin) is the reference group. <sup>c</sup>	L		106 S
G	Latches to Group G ("Greek") <sup>d</sup>	L		106 Ω
H	Switches to Mode "Unicode hexadecimal"			104
J	Latches to Group DS ("Spacing Diacritics") Exception: Latches to Group DJ ("Spacing Diacritics and Symbols for IPA") when the mode "IPA" is active.	L	DM	106 ´
K	Switches to Mode "reference group switching mode" to switch to a group according to Table 1 by the subsequent key actuation. <sup>e</sup>			107 *

L	Latches to Group GE ("Greek Extra Letters") <sup>f</sup>	L		106 ω
Z	Latches to Group LZ ("Horizontal Stroke") when Group L (Latin) is the reference group.  Latches to Group CZ ("Cyrillic Church Slavonic Letters") when Group C (Cyrillic) is the reference group.	L L		87 106 Α
X	Latches to Group LX ("Diagonal Stroke") when Group L (Latin) is the reference group.  Latches to Group CX ("Cyrillic Additional Extra Letters") when Group C (Cyrillic) is the reference group.	L L		88 106 Ъ
C	Latches to Group YC ("Currency symbols")	L		106
V	Reserved for future use.			
B	Latches to Group DM ("Modifier letters")	D	DS	106 ~
N	Latches to any Group NN ("National") if such a group is defined by a national standard <sup>g</sup>	L		
M	Latches to Group YM ("Mathematical and extra symbols")	L	YU	106 ∞
[Space]	Switches to base mode and to Group 1 (whichever this is, depending on the national or manufacturer standard used)			107 ←
[Enter]	Function: Mode selection beyond the scope of this standard (if the device supports such a function).			
<p><sup>a</sup> This group needs not to be implemented completely by any device claiming conformance to this standard; see Clause 2.</p> <p><sup>b</sup> "A" is a mnemonic for "Accents".</p> <p><sup>c</sup> For keyboards not having a secondary group according to ISO/IEC 9995-3:2010, the group LS does not need to be implemented.</p> <p><sup>d</sup> This is useful to enter single Greek letters used as symbols.</p> <p><sup>e</sup> "K" is a mnemonic for "Keyboard selection"</p> <p><sup>f</sup> This is useful to enter single Greek special letters used as symbols.</p> <p><sup>g</sup> e.g. containing precomposed letters frequent in the concerned language[s]</p>				

## 6 Special keys

### 6.1 Use of the Backspace key

If the keyboard has a Backspace key, this shall operate as follows when pressed directly after a group selector, a mode switching key, or a level selector which does not act by simultaneous pressing with the concerned key: it simply cancels that group selection, mode switching, or level selection.

## 6.2 Recommended allocation of the Superselect function

On a keyboard layout which:

- has no dedicated key for the Superselect function;
- has no dedicated Symbol key;
- has a Level 3 Select key, and;
- has a Tab key which has no other character or function allocated on its Level 3;

the Superselect function should be allocated to the key combination Level 3 Select + Tab key.

NOTE1 The Level 3 select key is likely to have the engraving AltGr

NOTE2 This applies to several national layouts for full size keyboards.

## 6.3 The Secondary Superselect function

### 6.3.1 Secondary superselect function definition

Keyboards may allocate a Secondary Superselect function, which is defined as follows:

**Table 3 — Secondary superselect function definition**

Condition	Effect of Secondary superselect key		
	If actuated once	If actuated twice	If actuated three times
Reference group is Group L (Latin) and keyboard has a secondary group according to ISO/IEC 9995-3:2010	Latches to group LS (Latin supplement)		
Reference group is Group L (Latin) and keyboard has no secondary group	Latches to group LE (Latin extra letters)		
Reference group is Group C (Cyrillic)	Latches to group CE (Cyrillic extra letters)	Latches to Group CZ (Cyrillic church Slavonic letters)	Latches to CX (Cyrillic additional extra letters)
Reference group is Group G (Greek)	Latches to group GE (Greek extra letters)		
Reference group is group H (Hebrew)	Latches to group HE (Hebrew extra letters)		
Reference group is group W (Armenian)	Latches to group WE (Armenian extra letters)		

**6.3.1.2** If it is actuated one time:

It latches to Group LS ("Latin Supplement") when Group L (Latin) is the reference group, and when the keyboard has a secondary group according to ISO/IEC 9995-3:2010.

It latches to Group LE ("Latin Extra Letters") when Group L (Latin) is the reference group, and when the keyboard does not have such a secondary group.

It latches to Group CE ("Cyrillic Extra Letters") when Group C (Cyrillic) is the reference group.

It latches to Group GE ("Greek Extra Letters") when Group G (Greek) is the reference group.

It latches to Group HE ("Hebrew Extra Letters") when Group H (Hebrew) is the reference group.

It latches to Group WE ("Armenian Extra letters") when Group W (Armenian) is the reference group.

**6.3.1.3** If it is actuated two times consecutively:

It latches to Group CZ ("Cyrillic Church Slavonic Letters") when Group C (Cyrillic) is the reference group.

**6.3.1.4** If it is actuated three times consecutively:

It latches to Group CX ("Cyrillic Additional Extra Letters") when Group C (Cyrillic) is the reference group.

**6.3.2 Recommended allocation**

On a keyboard layout which:

- has no dedicated key for the Secondary Superselect function;
- has a Level 3 select key;
- has a Backspace key which has no other character or function allocated on its Level 3;

the Secondary superselect function should be allocated to the key combination Level 3 Select + Backspace key.

NOTE The Level 3 select key is likely to have the engraving AltGr

**7 The special modes "Unicode decimal" and Unicode hexadecimal"**

These modes are to enter any valid ISO/IEC 10646 character, by entering their code point values as decimal resp. hexadecimal number.

NOTE 1 The names of these special modes reflect the fact that the character set defined by ISO/IEC 10646 is usually synchronized with the one defined by the industry standard "Unicode", the name of which is more popular and memorable, and is reflected in the "U"-like shapes of the ISO/IEC 9995-3 symbols which are associated with this special modes.

The mode "Unicode Decimal" works as follows:

All actuations of keys associated with decimal digits are temporarily stored into a sequence representing a decimal number. When any other key except a Backspace key is pressed, then, if the decimal number contains at least one digit and represents a valid ISO/IEC 10646 value, then the according character shall be output. If not, then a U+FFFD OBJECT REPLACEMENT CHARACTER shall be output, followed by the entered sequence of decimal digits. In any case, the temporary sequence shall be cleared.

Then, if the other key pressed is not an Enter key, a Decimal Separator key or a Space key, the keyboard shall be switched to base mode.

If the other key pressed is an Enter key, the keyboard shall be switched to base mode, and the Enter key itself shall not be processed further.

If the other key pressed is a Decimal Separator or a Space key, the mode "Unicode Decimal" shall persist, and the Decimal Separator key or Space key itself shall not be processed further.

If a Backspace key is pressed, while the temporarily stored sequence is not empty, the last digit appended to that sequence shall be dropped from that sequence.

NOTE 2 If a Backspace key is pressed, while the temporarily stored sequence is empty, the effect is not defined by this standard.

NOTE 3 The underlying software is allowed to erase the last entered ISO/IEC 10646 character from the input sequence but is not required to do so, as it is beyond the scope of this standard what happens to characters on completion of entering.

Thus, the user can enter any sequence of valid ISO/IEC 10646 characters by entering their decimal code values, separated by Space or decimal separator (which is especially convenient if any numeric keypad is used), and terminated by Enter.

The mode "Unicode Hexadecimal" works accordingly. Hexadecimal digits are all decimal digits and A...F and a...f, not differentiating between upper and lower case.

However, if on a compact keyboard, any decimal digit is associated with a key also associated with a letter A...F, the key when actuated without the Level 2 Selector key ("Shift key") active yields the decimal digit, while the same key actuated with the Level 2 selector key active yields the according hexadecimal digit A...F.

Valid ISO/IEC 10646 characters must have hexadecimal values between 0 and 10FFFF. Also, their value must not be in the intervals D800...DFFF (ISO/IEC 10646 surrogate points) and FDD0...FDEF (ISO/IEC 10646 noncharacters), and their value modulo hexadecimal 10000 must not be FFFE or FFFF (values guaranteed not to be a ISO/IEC 10646 character at all by ISO/IEC 10646). — The operating system may provide more restrictions, e.g. usage of a code position in a specific version of ISO/IEC 10646.

## 8 The special mode "IPA"

This mode is to enter IPA characters (i.e. characters of the International Phonetic Alphabet; see the reference in Clause 4 which is furthermore referred to as the "Handbook") as defined in the Appendix 2 of the Handbook (IPA numbers 100 to 599 and 901 to 911).

Regarding the IPA characters 217-219, 517-518, 908-909, and the later added IPA character 184, new mappings to ISO/IEC 10646 code points due to the development of ISO/IEC 10646 since the release date of the Handbook are taken into account.

NOTE 1: The "Extensions of the IPA: The ExtIPA chart" for the transcription of disordered speech (IPA numbers 601 to 799), as defined in Appendix 3 of the Handbook, are not covered by this standard.

This mode works as follows:

Each IPA character can be entered by a sequence of two keys.

For a "Phonetic consonant/vowel symbol code" (IPA numbers 101 to 399), this is a sequence of a letter key followed by a digit key, which selects the character according to the table presented in Annex C. On a compact

keyboard, the digit key may be pressed without actuating any group or level selector which would otherwise be necessary to select the digit as such.

The table in Annex C also presents such key sequences for some other frequent IPA characters.

NOTE 2 By this means, "ordinary schoolbook phonetics" which do not use other suprasegmentals than length marks and vertical strokes to indicate stress can be typed completely by using such sequences of a letter key + a digit key.

- Invalid key sequences of letter and digit keys (i.e. either two keys where the first one is a digit key or the second one is a letter key, or a sequence of a letter key and a digit key referring to an empty entry in the table in Annex C) yield the sequence of the two characters associated with these keys.
- The Enter key terminates the special mode "IPA"; it will not be processed further. If the Enter key is actuated after the entering of a letter key the letter associated with that key is yielded before.
- All keys other than letter and number keys work the same as when the special mode "IPA" is not selected. If such a key is actuated after the entering of a letter key the letter associated with that key is yielded before.

NOTE 3 Thus, a space is entered simply by actuating the Space key.

Especially, it is possible to latch to other groups by using the "Superselect" function in the usual way. Using "Superselect" to latch to the groups DI or DJ, all other IPA characters (i.e. "Phonetic diacritic and suprasegmental symbol codes" with IPA numbers 400 to 599, and "Transcription delimitation characters" with IPA numbers 901 to 911) can be selected.

NOTE 4 As the IPA characters 529 to 533 are not mapped onto single ISO/IEC 10646 characters, they will have to be entered as sequences of IPA characters 519 to 523 according to the ISO/IEC 10646 Standard (reference see Clause 4), p.251-252:

- for IPA 529 (rising contour), enter IPA 523 then IPA 519,
- for IPA 530 (falling contour), enter IPA 519 then IPA 523
- for IPA 531 (high rising contour), enter IPA 521 then IPA 519
- for IPA 532 (low rising contour), enter IPA 523 then IPA 521
- for IPA 533 (rising-falling contour), enter IPA 523 then IPA 521 then IPA 523.

On a full keyboard, the following additional input simplifications apply:

- A sequence of a dot followed by a letter key shall yield the character associated with the letter key in Group DI Level 1.
- A sequence of a comma followed a letter shall yield the character associated with the letter key in Group DI Level 2, without having to actuate any level 2 selector.
- A sequence of a dash followed by a letter shall yield the character associated with the letter key in Group DJ Level 1.
- A sequence of a key associated with any of the symbols "#", "+", "/", or "\", which is not also associated with a letter, digit, comma, dot, or dash, and a letter key shall yield the character associated with the letter key in Group DJ Level 2, without having to actuate any level 2 selector.
- If a letter key is followed by a letter key, the first letter key shall the associated letter, and the second letter key is treated as the first letter of a new sequence of a letter key followed by a digit key.
- If a digit key is actuated not as the second key of a sequence of a letter key followed by a digit key, it shall yield the digit directly.

## 9 References to characters not contained in ISO/IEC 10646:2012

**Table 4 — List of the characters referenced in this standard which are not defined in ISO/IEC 10646:2011, together with code points from the PUA (Private Use Area) of ISO/IEC 10646 by which they are referenced in several tables in the appendices of this standard**

U+EF0C	Latin letter small capital q
U+EF11	Latin letter small capital x
U+EF35	Latin subscript small letter b
U+EF36	Latin subscript small letter c
U+EF37	Latin subscript small letter d
U+EF38	Latin subscript small letter f
U+EF39	Latin subscript small letter g
U+EF3C	Latin subscript small letter q
U+EF43	Latin subscript small letter w
U+EF46	Latin subscript small letter y
U+EF48	Latin subscript small letter z
U+EF66	modifier letter small q
U+EF76	modifier letter capital c
U+EF77	modifier letter capital f
U+EF7B	modifier letter capital q
U+EF7C	modifier letter capital s
U+EF85	modifier letter capital x
U+EF86	modifier letter capital y
U+EF87	modifier letter capital z
U+F858	Latin capital letter chi
U+F859	Latin small letter chi
U+F87C	Latin capital letter theta
U+F87D	Latin small letter theta
U+F891	Latin small letter lambda
U+F898	Latin capital letter lambda

U+F899	Latin capital letter lambda with stroke
U+F89E	modifier letter capital theta
U+F8C4	Latin capital letter African eng
U+F8C6	Latin small letter African eng

NOTE 1 The names given here are composed of lowercase letters, to distinguish them from names from ISO/IEC 10646 which are composed of uppercase letters.

NOTE 2 The PUA code points are selected in a way that they harmonize with some widespread character collections used by linguists, like MUF1 (see <http://www.mufi.info>). Regarding the characters used by North American indigenous languages, the PUA code points are harmonized with the collection used by the Indigenous Language Institute, Santa FE, NM, USA (see <http://www.languagegeek.com>).

Implementations of this standard which refer to characters by ISO/IEC 10646 code points shall use the code points listed in table 9.1 for characters not contained in ISO/IEC 10646:2012, unless they make use of encodings of these characters defined in later editions of ISO/IEC 10646 than ISO/IEC 10646:2012.

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## Annex A (informative)

### General information

The following character collections are mentioned in the Annex

- MES-1 (Multilingual European Subset 1):  
collection 281 (titled MES-1) as specified in ISO/IEC 10646:2012
- MES-2 (Multilingual European Subset 2):  
collection 282 (titled MES-2) as specified in ISO/IEC 10646:2012
- MLS (Multilingual Latin Subset):  
collection 288 (titled MLS) as specified in ISO/IEC 10646:2012
- WGL4 (Windows Glyph List Version 4.0)  
a set defined by Microsoft corporation; see <http://www.microsoft.com/typography/otspec/WGL4.htm>

#### A.1 Synopsis

This part of ISO/IEC 9995 intends to standardize a way to enable any users of any national keyboard adhering to that standard to enter all letters of their language (as long as it is written in a script supported by the current version and its amendments), not confined to European languages.

Moreover, it includes the input of other characters and symbols used in business, educational, academic, legal, administrative and personal use.

It contains all characters contained in MES-1, MES-2, MLS, and WGL4 (without being restricted to these sets), except characters only used for output (e.g. box drawing characters) and some obsolete characters (mostly of these are mapped to other characters by ISO/IEC 10646 canonical equivalence). It also contains the Latin characters used in contemporary languages outside Europe, including these for transliterating into Latin from languages using other scripts.

It relies on existing national keyboard layouts and does not define or recommend a worldwide or Pan-European layout. It is explicitly not intended to make national keyboard layouts or carefully designed keyboard layouts for any language superfluous.

It requires a set of distinctive keys associated with the 26 basic letters A...Z, a Space key, and a function to select Level 2 (usually a "shift key").

Thus, it is applicable to "compact" keyboards like these of PDAs, UMPCs (Ultra Mobile Personal Computers), Blackberry® devices.

Of course, it is also applicable to full keyboards like standard PC keyboards, which have separate keys for associated with the 10 digits.

NOTE "Associated with" means that there is a way to identify a key by the character (usually having the character engraved on the key). It does not necessarily mean that the character is the basic one typed by that key (e.g. on Greek or Cyrillic keyboards where Latin letters are reached by a special Shift or function key).

All other characters can be entered by the way specified in this part of 9995. This may include a duplication for some characters which are already contained in the national keyboard layout.

All additional characters are organized into groups (except some IPA characters which are entered using the special mode "IPA"). Thus, each of those characters is described by three values: – its group, – its association to a basic key [A]...[Z], [0]...[9], [space], – its level (1 = unshifted, 2 = shifted).

*EXAMPLE* The œ/Œ is in group LE ("Latin, Extra letters"), level 1 (unshifted) for œ, level 2 (shifted) for Œ. The group LE is selected by the special key or key combination "Superselect" (which may be the combination AltGr+Tab or another function specified by the national layout) + "E", followed by "O" to select the œ itself.

*EXAMPLE* The Hausa hooktop k̄ is a letter which is encoded in ISO/IEC 10646 as a composed form. It will be entered as "Superselect" + W (thus latching to the Group LW "Latin letters with hook above and related special characters"), following by "k".

Additionally, modes are specified to enter any valid ISO/IEC 10646 character (see Clause 7), to provide a standard way for this rather than relying unstandardized special functions of operating systems or any text processing software.

Especially, this standard shows a means for travellers using publicly available terminals (like at Internet Cafés) to enter any text in their native languages anywhere. They have to remember only the group and key associations for the special letters of their own languages (which are usually few, about 5 or 10).

## A.2 The character repertoire of this standard

The character repertoire as specified implicitly by this document (consisting of all characters listed as associated with any key) is designed to meet the following main requirements.

- a. All current languages which use the Latin script are covered.
- b. To enable writing of proper names (e.g. in reference lists) and geographical names correctly, all transliteration systems for major current non-Latin languages into Latin should be covered.
- c. All symbols and punctuation marks which occur in good typography are covered. This includes ZWNJ, e.g. to prevent the f-l ligature in German »Schilfinsel« according to the orthographic rules, unlike the Soft Hyphen, which must not prevent a f-f ligature in »Affe« when applied within the »ff«.
- d. All symbols which occur in business correspondence should be covered.

Additionally, it meets the following:

- e. It contains the few letters and symbols (long s, long r, Tironian et) needed for the script variants Gaelic and Fraktur, which despite to their historical appeal also have some contemporary use.
- f. It contains a small selection of historic letters (e.g. for Old English) and transliteration letters for historic scripts (for Egyptian hieroglyphs and Gothic), as these may be used in popular texts and texts for school use.
- g. It contains some characters for compatibility reasons.
- h. It contains the main characters for several other scripts (i.e. these which are needed for common languages using these scripts).
- i. It contains all IPA characters (except the specialized characters used for recording of disordered speech).
- j. It contains a basic mathematic character set for "everyday use" (while an extensive character set which would be needed for mathematical publications is not covered).

## A.3 The design of an international keyboard extension

The goal of ISO/IEC 9995-9 is to provide a possibility to type the additional character repertoire using any keyboard which adheres to some prerequisites, without referring to the actual layout.

Especially, it is required that there are the Latin letters (either as primary or as a secondary group), together with some other universal characters (like digits).

Rather than relying on physical positions, this standard relies to the positions which the specific characters have on the basic layout. It seems far easier to communicate "to type æ, type AltGr+a" regardless whether the basic layout is QWERTY or AZERTY, rather than "to type æ, type AltGr together with the second key in the third row".

#### A.4 Layout Principles

- Diacritical marks to be applied above the base letters are associated to level 1 (unshifted) positions (as these are the most frequent ones); such marks applied below the base letters are associated to level 2 (shifted) positions. This also corresponds to the fact that the low line U+005F is found on a shifted position on some common keyboard layouts.
- The fact that only a limited character set is required for the base layout (see Clause 3) may lead to a certain duplication of graphic characters between the base layouts and the layout of the additional groups specified here. However, it allows the graphic characters of the groups specified here and their allocation to keys to be always the same for their use with any established Latin group layout.

#### A.5 Transliteration standards considered in this standard

Transliteration standards:

- ISO 9 — Cyrillic
- ISO 233, DIN 31635 — Arabic
- ISO 259 — Hebrew
- ISO 843 — Greek
- ISO 3602 — Japanese
- ISO 7098 — Chinese
- ISO 9984 — Georgian
- ISO 9985 — Armenian
- ISO 11940 — Thai
- ISO/TR 11941 — Korean Hangeul
- ISO 15919 — Indic scripts

Other standards:

- ISO 5426 — bibliographic information interchange

## A.6 Notes on single Groups:

### A.6.1 Groups A (Arabic), AE (Arabic Extra letters):

**Group A** contains all letters needed for the Arabic language. The layout is based on the standard Arabic keyboard; letters that in this standard keyboard layout are associated with key positions which are not associated with basic Latin letters were moved to places where the Arabic keyboard has standard punctuation marks on keys associated with Latin letters.

Level 1 of Group AE adds all letters needed for Persian and Urdu.

Level 2 of Group AE adds all letters needed for Pashto. This includes letters used for several other languages spoken in Central Asia.

**NOTE** A peculiarity of the Arabic group is that some characters there are represented in ISO/IEC 10646 by a sequence of two atomic characters which combine into the selected characters by the rules of the Arabic script as handled by ISO/IEC 10646. As an example, the Arabic lam-alef is represented in ISO/IEC by a sequence of a lam and an alef, as these two characters (as long as no third character like an invisible "zero-width non-joiner" is interspersed) ligate in any case to a lam-alef.

### A.6.2 Groups C (Cyrillic), CE (Cyrillic Extra letters), CX (Cyrillic Additional Extra Letters), Group CZ (Cyrillic Church Slavonic Letters):

As the Cyrillic alphabet consists of more than 26 letters, not all letters could be assigned within **Group C** which can take 26 letters (each with lower and upper case variants as in Latin). Therefore, some letters are assigned within **Group CE**, preferably those which are not used in all languages or which are in some ways variants of other letters.

Covering the letters needed for modern Russian, Bulgarian, Serbian, Macedonian, Belarussian, Ukrainian, Mongolian, Kazakh, Kyrgyz, and Uzbek, there are a total of 51 letters needing to be distributed on two groups (C and CE). The resulting gap of one letter in Group CE is filled with the precomposed letter Ъ, thus Russian can be written without recurring to diacritical letters at all (as long as you do not want to use the letter Ё, which can be entered using diacritics as usual). The users of the other mentioned languages find their needed diacritics in Group DD.

**Group CX** contains letters needed for several minority languages of the former Soviet Union (including Abkhaz and Bashkir).

**Group CZ** contains historic letters, thus complementing the groups C and CE to cover the whole Cyrillic alphabet. These letters are needed for pre-1918 Russian orthography and for Church Slavonic (which is contemporarily used by scientists, hobbyists and in religious context). Letter variants which are separately encoded in ISO/IEC 10646 are included as separate letters (zemlya, dzelo, monograph uk, yeru with back yer, iotified a).

### A.6.3 Group DD (Diacritics):

**Group DD** can be latched to by Superselect+A.

Level 1 contains diacritical marks which are placed above the base letter ("accents") for Latin, Greek, and contemporary Cyrillic.

Level 2 contains diacritical marks which are placed below the base letter for Latin and Greek. Also, it contains overstriking diacritics, and diacritics for Church Slavonic (although these are placed above the base letter).

#### A.6.4 Group DI (Diacritics for IPA):

**Group DI** contains all combining diacritics contained in IPA and will be selected by Superselect+A in the same way as and instead of Group DD when the special mode "IPA" is active. All diacritics contained in both groups DD and DI are selected by the same key combination.

#### A.6.5 Group DJ (Spacing Diacritics and Symbols for IPA):

**Group DJ** contains all IPA characters which are not letters (and thus are entered in the special mode "IPA" by sequences of a letter key + a digit key) and not combining diacritics (and thus contained in Group DI).

Especially, all "transcription delimitation characters" (IPA characters 901 to 911) are doubled in this group even if they are already contained in another group like Group YS.

#### A.6.6 Group DS (Spacing Diacritics); Group DM (Modifier Letters):

**Group DS** contains the spacing versions of the diacritics contained in Group DD at the same key combinations, as far as such spacing versions exists. Most of such characters act as modifier letters.

Modifier letters which do not correspond to a combining diacritic are contained in Group DM, which also contains the Khoisan click letters.

As an exception, at the 5 key combinations which denote Old Cyrillic (Church Slavonic) diacritics in Group DD, there the Group DS contains 4 Chinantec tone marks, and the combining subscript letter "r" needed for some languages of Indonesia (which is a singleton in the character repertoire defined by this standard).

#### A.6.7 Groups G (Greek), GE (Greek Extra Letters):

**Group G** can be latched to by Superselect+G (to enter single Greek letters as symbols) or switched to by Superselect+G (to enter Greek text).

Group G is modelled after the standard Greek keyboard. As the classical (Attic) and the modern Greek alphabet contains 25 letters (24 proper letters + the final sigma), the Group G contains all letters for classical and modern Greek. The needed diacritical marks are all contained in Group DD. However, the three diacritical marks which are not contained in the secondary group specified in ISO/IEC 9995-3:2010 are duplicated; thus, on keyboard layout using this secondary group, the group DD does not to be used at all to type classical Greek.

**Group GE** contains some pre-classical and Byzantine letters and symbols, and letter variants preferred by some when using Greek letters as mathematical symbols.

#### A.6.8 Groups H (Hebrew), HE (Hebrew Extra letters):

The Hebrew alphabet originally consists of 22 letters, 5 of them having special final forms, thus yielding 27 letters to be selectable for keyboard input. The Hebrew standard keyboard has the complete set of upper case Latin characters A...Z in the shifted position (i.e. Level 2) of the base layout (i.e. Group 1), resembling the standard QWERTY layout. 26 of the 27 Hebrew letters are associated with these keys (24 of them in the position of the Hebrew standard keyboard). Thus, one Hebrew letter (the final tsadi) is left in a shifted position.

Also, there are three extra letters to write the Yiddish language, which are reached on the Hebrew Standard keyboard by simultaneous AltGr pressing (i.e., they are in Group 2).

**Group H**, as it is confined to the keys associated with the Latin letters A...Z, reorders the final tsadi into the shifted position of the tsadi.

Thus, if Group H is switched to on a Hebrew standard keyboard (e.g. to get access to the common niqqud including the rafe for Yiddish, or to the "true Hebrew punctuation"), all Hebrew letters are retained in their place (the final pe, tav, and final tsadi are simply duplicated).

The three Yiddish letters are retained in their position from the Hebrew standard keyboard, but are in Group H on the shifted position (i.e. Level 2).

Also, Group H contains the common niqqud and Hebrew punctuation (maqaf, pasuq and paseq), as well as the "new sheqel" symbol. Thus, Hebrew can be written with its specific punctuation marks (rather than recurring to the similar standard punctuation dash, colon, and vertical line, as it is required when using the standard Hebrew keyboard).

**Group HE** (Hebrew Extra letters) contains the rest of the niqqud, the nun hafukha, and all cantillation marks included in ISO/IEC 10646. Thus, any biblical or Torah text can be written in all details.

For special use of the meteg and for combinations of cantillation marks, the ZWNJ, ZWJ, and CGJ (duplicated from Group YP) are included also. See the Unicode 5.0 Standard, section 8.1, p.266/267.

### A.6.9 Group K (Korean Hangul):

The modern Korean Hangul consists of 51 *jamo*. 24 of *jamo* are equivalent to letters of the Latin alphabet. The other 27 *jamo* are clusters of two or sometimes three of these letters. The Korean Hangul standard keyboard contains 14 simple consonant letters, 5 double letters (glottalized), and 6 simple vowel letters, 4 simple iotized vowel letters (semi consonant-semi vowel) and 4 diphthongs, which are distributed onto 26 keys corresponding to a A...Z letter key on a QWERTY keyboard. Consonants occupy the left side of the layout, while vowels are on the right. The 26 letters are in Level 1 and the 7 letters are in Level 2 where are reached by Shift key.

### A.6.10 Group L (Latin):

**Group L** maps the letters 1:1 and therefore is not listed in Annex B.

### A.6.11 Group LR (Latin, Raised):

Some raised letters are in fact used in some orthographies, e.g. <sup>ˆ</sup> in Minnan, <sup>ˆ</sup> in some First Nation languages of British Columbia (Canada).

### A.6.12 Group LS (Latin Supplement):

**Group LS** is devised for keyboards which have a Supplementary Group according to ISO/IEC 9995-3:2010, and does not double the characters addressed there. It does not need to be implemented for keyboard layouts which do not have such a secondary group, as for these keyboards, accessing of additional characters using the other Latin groups (especially LE) is more appropriate.

This group, while containing characters which also are contained in other groups like LE or LQ, is introduced to enable an US standard keyboard augmented by ISO/IEC 9995-3 to cover all African languages and all North American indigenous languages using the Latin script (and English historic orthographies) by additionally accessing Groups LS, LR, LW and LQ only. Especially, this avoids the duplication of character input sequences, as Group LS—unlike e.g. Group LE—does (with few exceptions) not contain characters which also are contained in the secondary group defined by ISO/IEC 9995-3.

Especially, Group LS is suited to be engraved as tertiary group on keyboards showing the secondary group according to ISO/IEC 9995-3.

### A.6.13 Group Q (Georgian):

The modern Georgian alphabet (Mkhreduli) consists of 33 letters without a distinction between upper and lower case. The Georgian standard keyboard contains these together with 6 archaic letters which are distributed onto 33 keys, 7 of these do not correspond to a A...Z letter key on a QWERTY keyboard. The modern letters are in Level 1, where the archaic letters are reached by Alt Gr (thus, the Level 2 key ("Shift key") is not used for letters).

In this part of 9995, the 7 modern letters which are beyond the QWERTY letter positions on the standard keyboard are reordered into Level 2, together with the 6 archaic letters (retaining their key associations as far as possible). Additionally, some special letters for minority languages and some special punctuation are included in level 2.

### A.6.14 Groups W (Armenian), WE (Armenian extra letters):

The Armenian alphabet contains 38 characters occurring in lower and upper case. The layout of this group is based on the Eastern Armenian keyboard layout (which is preferred in the country of Armenia itself, while the Western Armenian layout is preferred in the Armenian diaspora). The 12 letters not corresponding to an A...Z letter key of the QWERTY layout are grouped in the Group WE (Armenian Extra letters). This group contains also some ligatures and special punctuation (including U+2024 ONE DOT LEADER as Armenian semicolon).

### A.6.15 Group YC (Currency symbols):

There is intentionally much space left in this group for currency symbols invented in the future. The US dollar symbol ("\$") is not contained in this group as it acts not only as a currency symbol but also as a special symbol in several programming languages (and is accordingly regarded as an universal symbol).

The key [f] Level 1 currently doubles the Latin small letter f with hook which is assigned to Group LQ, also key [f] Level 1, as this character is used as the Florin symbol also in ISO/IEC 10646:2012. If the relevant committees decide to disunify the Florin symbol from the Latin small letter f with hook, the [f] Level 1 shall yield the code for Florin symbol in Group YC and the code for the Latin small letter f with hook in Group LQ.

### A.6.16 Group YM (Mathematical and extra symbols):

This group contains mathematical and other symbols which are contained in MES-2 and are not contained in other groups defined in this standard, plus some additions according to recent use. Also, for some characters a typographically more pleasant alternative is included (e.g., as the square root symbol (U+221A) is often used as a check mark, a "real" check mark (U+2713) is included).

Some notable additions are U+2423 as a Space symbol and U+21B2 as a Return symbol to describe keyboard input.

The Arabic ornate parentheses (U+FD3E, U+FD3F) are included as they are used by some to indicate citations from Koran translations in Latin text also.

### A.6.17 Group YP (Punctuation):

**Group YP** contains (besides several other characters) the different quotes. The more frequent double quotes are located on Level 1, while the corresponding single quotes are located on Level 2 of the same key. Thus, the "typographical apostrophe", which is the same character as the English right single quote (U+2019), is located on Level 2 of the ['] key.

### A.6.18 Group YS (Symbols):

**Group YS** contains symbols with frequent business, private, and educational use.

Also, it contains typographically preferable variants of some common "ASCII" characters whose appearance is usually hampered by their universal use.

If any symbol is based on a letter it is associated with that letter and the appropriate level (e.g. ® is on [R] level 2).

### A.6.19 Group YU (Universal compatibility):

This group contains the 20 "ASCII" characters which are contained in all national variants of ISO 646. As such, they can be expected to be enterable on any keyboard (at least on any full keyboard), but presenting them in this group enables any user to enter these characters in an uniform way on all keyboards conforming to this standard, without having to search them for on any national keyboard not familiar to the user.

These 20 "universal ASCII symbols" are: U+0021 ... U+0022, U+0025 ... U+002F, U+003A ... U+003F, U+005F, i.e.: ! " % & ' ( ) \* + , - . / : ; < = > ? \_

### A.6.20 Group YY (Compatibility characters and symbols):

Group YY contains some characters and symbols (especially outdated combined letters, and geometrical shapes) present in other standards, standard keyboards, common fonts, or character sets used by specific user groups, which are included in this standard only for this reason.

NOTE: Regarding the ligatures fi and fl contained in this group, see the note at the end of the following notes on "Fraktur".

## A.7 Notes on the Latin script variant "Fraktur" (Blackletter)

It is possible to enter Fraktur (Bl $\alpha$ letter) when using a correctly designed ISO/IEC-10646-compatible font (which does not hold for almost all Fraktur fonts currently available). The two characters needed beyond the usual Latin letters are s (the long s, U+017F, in Group LE at [s] Level 1) and the "Tironian et" (used only in the abbreviation  $\text{£}$ . "etc."; U+204A, in Group YS at [M] Level 2).

NOTE 1 The "Tironian et" is often misnamed "r rotunda" as it has developed a similar form in Fraktur. For Fraktur fonts which misrepresent the "Tironian et" as "r rotunda", or which supply a real "r rotunda" (U+A75B) like  $\text{z}$  to use as "r" after o (o), this character is supplied as "compatibility character" in Group YY at [r] Level 1.

Also, the hyphen - (U+2010, in Group YP at [b] Level 1) and the minus sign – (U+2212, in Group YS at [y] Level 1) have a definitely different appearance in Fraktur, and the "ASCII" hyphen-minus (U+002D, "dash") has to have the appearance of the hyphen - in Fraktur fonts due to its prevalent use, while the inclusion of the separate minus sign – (U+2212) is advisable for such fonts.

The German typesetting rules for Fraktur contain obligate ligatures, namely c, %, >, |, <sup>3</sup>, ®, §, ¥, @, <, #, {. This ligatures may not be applied e.g. at the compound borders of compound words, e.g. in Brotzeit ("Brotzeit" = "bread time" = a kind of snack) the tz ligature { is not allowed, while it is required in Ka{e ("Katze" = cat).

Correctly designed ISO/IEC-10646-compatible fonts generate such ligatures automatically if the text contains the underlying character sequences, as it is mandatory anyway for other scripts like Arabic or Devanagari. As it is the case for these scripts, ISO/IEC 10646 supplies the special invisible character ZWNJ (zero width non-joiner, U+200C, in Group YP at [X] level 1) which is to be inserted at the places where ligating may not occur. Thus, for the example above, Brotzeit is to be typed "Brot[ZWNJ]zeit" (as long as no automatic spelling correction is active).

NOTE 2 The same applies also outside Fraktur, e.g. the German typesetting rules allow no "fi" ligature in "Schilfinsel" ("reed island") which therefore has to be entered as "Schilf[ZWNJ]insel" when using a "smart font". As it is expected that such "smart fonts" become standard for Latin as they already are for Arabic and Devanagari, supplying separate characters for ligatures like fi and fl is considered obsolete anyway.

## A.8 Notes on the special mode "IPA":

The table in Annex C is organized such that usually all variants of a Latin letter are selected by that letter first.

The digit (the second character of the input sequence for an IPA character) intentionally selects:

- 0: the base letter itself
- 1: a raised form
- 2: a capitalized form
- 3: a turned form
- 4: a hooktop form
- 5: a Greek form
- 6: a tailed form
- 7: a barred form
- 8: a variant form (e.g. with curl)
- 9: a ligated form

This is only used as an outline, as the IPA characters are not organized this way. Therefore, most numbers select similar or completely different variants.

Furthermore, there are some exceptions to the rule that variants of a letter are selected by the base letters:

- Click letters are filed under the letter "f".
- Glottal stop and variants based on that letterform are filed under the letter "q".
- As there are more than 10 variants given for the letter "t", three ligated forms of "t" are filed under "x".

Besides the official IPA characters, the table contains the 6 characters of the ISO/IEC 10646 IPA Extensions block which do not correspond to an IPA numbered character (U+0256, U+025D, U+027F, U+0285, U+02AE, U+02AF), and 3 letters commonly used by sinologists while not being official IPA characters (U+0234, U+0235, U+0236).

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## Annex B (normative)

### Group definition tables

Rather than recurring to absolute positions on the keyboard, the additional characters are assigned to the 37 keys mentioned in Clause 3 which are denoted by the associated character enclosed in brackets, namely to [A] ... [Z], [0] ... [9], and [Space].

This implies that this standard defines a means to identify the keys needed for the additional characters, rather than to define absolute locations.

For some characters, there is provided (in parentheses) one example of the languages which use it (such language examples are not intended to denote the only or most prominent of such languages) or another explanation of the use of that character.

**NOTE** The tables of Annex B and the complete texts of the subsequent Annexes C through E are generated by a special software which has the group definitions and IPA mode tables incorporated. The original data is contained in that software; thus, any changes in the subsequent text must be incorporated in that software.

#### B.1 Group A: Arabic; Group AE: Arabic Extra letters

	Group A, Level 1	Group A, Level 2	Group AE, Level 1	Group AE, Level 2
[Q]	U+0636 ض (dad)	U+064E َ (fatha)	U+0651 + U+064E (shadda+fatha)	U+0654 ْ (hamza-above)
[W] ]	U+0635 ص (sad)	U+064B ِ (fathatan)	U+0651 + U+064B (shadda+fathatan)	U+0671 ِ (alef-wasla)
[E]	U+062B ث (theh)	U+064F ُ (damma)	U+0651 + U+064F (shadda+damma)	U+06D0 ِ (e)
[R]	U+0642 ق (qaf)	U+064C ُّ (dammatan)	U+0651 + U+064C (shadda+dammatan)	U+200E (LRM)
[T]	U+0641 ف (feh)	U+0644 + U+0625 (lam-alef+hamza-below)	U+06BE ٲ (heh- doachashmee)	U+200F (RLM)
[Y]	U+063A غ (ghain)	U+0625 ِ (alef+hamza-below)	U+06C1 ٲ (heh-goal)	U+0653 ٲ (maddah- above)
[U]	U+0639 ع (ain)	U+0630 ٲ (thal)	U+06C2 ٲ (heh- goal+hamza-above)	U+0659 ٲ (zwarakay)
[I]	U+0647 ه (heh)	U+062C ٲ (jeem)	U+06C0 ٲ (heh+yeh-above)	U+0670 ٲ (superscript- alef)
[O]	U+062E خ (khah)	U+062F د (dal)	U+0688 ٲ (ddal)	U+0681 ٲ (hah+hamza- above)

[P]	U+062D ح (hah)	U+061B ؛ (arab.semicolon)	U+0686 ع (tcheh)	U+0685 ء (hah+three-dots-above)
[A]	U+0634 ش (sheen)	U+0650 َ (kasra)	U+0651 + U+0650 (shadda+kasra)	U+069A ِ (seen+dot-below+dot-above)
[S]	U+0633 س (seen)	U+064D ِ (kasratan)	U+0651 + U+064D (shadda+kasratan)	U+06CD ى (yeh+tail)
[D]	U+064A ي (yeh)	U+0643 ك (kaf)	U+06CC ى (farsi-yeh)	U+06AB ڪ (kaf+ring)
[F]	U+0628 ب (beh)	U+0637 ط (tah)	U+067E پ (peh)	U+066D * (arab.star)
[G]	U+0644 ل (lam)	U+0644 + U+0623 (lam-alef+hamza-above)	U+06AF ګ (gaf)	U+06B7 َل (lam+three-dots-above)
[H]	U+0627 ا (alef)	U+0623 أ (alef+hamza-above)	U+06D3 َ (yeh-barree+hamza-above)	U+066C , (arab.thousand-s-separator)
[J]	U+062A ت (teh)	U+0640 ِ (tatweel)	U+0679 ث (tteh)	U+067C ٲ (teh+ring)
[K]	U+0646 ن (noon)	U+060C ٫ (arab.comma)	U+06BA ٺ (noon-gunna)	U+06BC ٺ (noon+ring)
[L]	U+0645 م (meem)	U+061F ؟ (arab.question mark)	U+06D2 َ (yeh-barree)	U+066B ٫ (arab.decimal-separator)
[Z]	U+0626 ِ (yeh+hamza-above)	U+0651 ّ (.shadda)	U+06D4 ٫ (arab.fullstop)	U+200D (ZWNJ)
[X]	U+0621 ء (hamza)	U+0652 ْ (.sukun)	U+066A ٪ (arab.percentsign)	U+200C (ZWJ)
[C]	U+0624 ِ (waw+hamza-above)	U+0648 و (waw)	U+0698 ِ (jeh)	U+06C7 ُ (u)
[V]	U+0631 ر (reh)	U+0632 ز (zain)	U+0691 ِ (rreh)	U+0696 ِ (reh+dot-below+dot-above)
[B]	U+0644 + U+0627 (lam-alef)	U+0644 + U+0622 (lam-alef+madda-above)	U+06D6 ِ (small-high-sad+lam+alef-maksura)	U+06C9 ُ (kirghiz yu)
[N]	U+0649 ِ (alef-maksura)	U+0622 آ (alef+madda-above)	U+06A9 ڪ (keheh)	U+0689 ِ (dal+ring)
[M]	U+0629 ِ (teh-marbuta)	U+0638 ظ (zah)	U+06C3 ِ (teh-marbuta-goal)	U+0693 ِ (reh+ring)

**B.2 Group C: Cyrillic; Group CE: Cyrillic Extra Letters;  
Group CX: Cyrillic Additional Extra Letters  
Group CZ: Cyrillic Characters for Church Slavonic**

	Gr. C, L.1	Gr. C, L.2	Gr. CE, L.1	Gr. CE, L.2	Gr. CX, L.1	Gr. CX, L.1	Gr. CZ, L.1	Gr. CZ, L.2
[Q]	U+0436 ж	U+0416 Ж	U+0439 й	U+0419 Й	U+0497 ж	U+0496 Ж	U+0481 ґ	U+0480 Ґ
[W]	U+0448 ш	U+0428 Ш	U+0449 ш	U+0429 Ш	U+04BF ѳ	U+04BE Ɔ	U+0461 ω	U+0460 Ɔ
[E]	U+0435 е	U+0415 Е	U+0454 е	U+0404 Є	U+0511 ε	U+0510 Ε	U+0463 ґ	U+0462 Ґ
[R]	U+0440 р	U+0420 Р	U+04D9 ә	U+04D8 Ә	U+04BD ƣ	U+04BC Ɔ	U+2056 ⋮	U+10FB ⋮
[T]	U+0442 т	U+0422 Т	U+044A ь	U+042A Ъ	U+04AD ƣ	U+04AC ƣ	U+2059 ⋮	U+2058 ⋮
[Y]	U+044B ы	U+042B Ы	U+044C ь	U+042C Ъ	U+04CF Ӏ	U+04C0 Ӏ	U+A651 ы	U+A650 Ы
[U]	U+0443 у	U+0423 У	U+044E ю	U+042E Ю	U+04A7 ӱ	U+04A6 ӱ	U+0479 oy	U+0478 Oy
[I]	U+0438 и	U+0418 И	U+0456 і	U+0406 І	U+0527 ӡ	U+0526 ӡ	U+0475 v	U+0474 V
[O]	U+043E о	U+041E О	U+04E9 ө	U+04E8 Ө	U+04F7 ӓ	U+04F6 ӓ	U+047B օ	U+047A օ
[P]	U+043F п	U+041F П	U+049D к	U+049C К	U+0525 ӥ	U+0524 ӥ	U+A64B ֆ	U+A64A ֆ
[A]	U+0430 а	U+0410 А	U+044F я	U+042F Я	U+04D5 æ	U+04D4 Æ	U+A657 ӏ	U+A656 Ӑ
[S]	U+0441 с	U+0421 С	U+0455 ҫ	U+0405 S	U+04AB ҫ	U+04AA ҫ	U+A643 ֆ	U+A642 ֆ
[D]	U+0434 д	U+0414 Д	U+0452 ҫ	U+0402 Ъ	U+04E1 ӓ	U+04E0 ӓ	U+0589 ֆ	U+00B7 ֆ
[F]	U+0444 ф	U+0424 Ф	U+04BB ӡ	U+04BA ӡ	U+04A1 ӡ	U+04A0 ӡ	U+0473 օ	U+0472 օ
[G]	U+0433 г	U+0413 Г	U+0491 ґ	U+0490 Ґ	U+0495 ӓ	U+0494 ӓ	U+0465 ӓ	U+0464 ӓ
[H]	U+0445 х	U+0425 Х	U+04B3 ӡ	U+04B2 ӡ	U+04A9 ӡ	U+04A8 ӡ	U+0467 ӡ	U+0466 ӡ
[J]	U+044D э	U+042D Э	U+0458 ӓ	U+0408 J	U+04C4 ӓ	U+04C3 ӓ	U+0469 ӡ	U+0468 ӡ
[K]	U+043A к	U+041A К	U+049B ӡ	U+049A ӡ	U+049F ӡ	U+049E ӡ	U+046B ӡ	U+046A ӡ
[L]	U+043B л	U+041B Л	U+0459 ӡ	U+0409 ӡ	U+0513 ӓ	U+0512 ӓ	U+046D ӡ	U+046C ӡ
[Z]	U+0437 з	U+0417 З	U+0493 ґ	U+0492 Ґ	U+0499 ӓ	U+0498 ӓ	U+A641 ӓ	U+A640 ӓ
[X]	U+0447 ч	U+0427 Ч	U+045B ӡ	U+040B ӡ	U+04B7 ӓ	U+04B6 ӓ	U+046F ӓ	U+046E ӓ
[C]	U+0446 ц	U+0426 Ц	U+045F ӡ	U+040F ӡ	U+04B5 ӡ	U+04B4 ӡ	U+0471 ӓ	U+0470 ӓ
[V]	U+0432 в	U+0412 В	U+04B1 ҫ	U+04B0 ҫ	U+04CC ӓ	U+04CB ӓ	U+0482 ӓ	U+20DD 〇
[B]	U+0431 б	U+0411 Б	U+04A3 ӡ	U+04A2 ӡ	U+04A5 ӡ	U+04A4 ӡ	U+0488 ӡ	U+0489 ӡ

[N]	U+043D Н	U+041D И	U+045A Ё	U+040A Ѓ	U+04C8 Ҁ	U+04C7 ҁ	U+047D Ӏ	U+047C ӑ
[M]	U+043C М	U+041C М	U+04AF Ү	U+04AE Ү	U+04B9 Ү	U+04B8 Ү	U+047F ӑ	U+047E ӑ

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### B.3 Group DD: Diacritics; Group DS: Spacing Diacritics

(for the group DM: see below)

	Group DD, Level 1	Group DD, Level 2	Group DS, Level 1	Group DS, Level 2
[Q]	U+0301 ´ acute accent	U+0347 = equals sign below	U+02CA ´ acute accent	
[W]	U+0300 ` grave accent	U+0328 ˘ ogonek ( <i>Polish</i> )	U+02CB ` grave accent	U+02DB ˘ ogonek
[E]	U+0308 ¨ diaeresis	U+0324 ˆ diaeresis below ( <i>Hakka</i> )	U+00A8 ¨ diaeresis	
[R]	U+0303 ~ tilde	U+0330 ˜ tilde below	U+02DC ˘ small tilde (not U+007E)	U+02F7 ˘
[T]	U+030B ˆ double acute accent	U+0329 ˆ vertical line below ( <i>Yorùbá</i> )	U+02DD ˆ double acute accent	U+02CC ˆ vertical line
[Y]	U+0306 ˘ breve	U+032E ˘ breve below ( <i>Arabic transliteration</i> )	U+02D8 ˘ breve	
[U]	U+030C ˇ caron	U+0332 ˘ low line ( <i>Comanche</i> )	U+02C7 ˇ caron	
[I]	U+0302 ^ circumflex accent	U+032D ˆ circumflex accent below ( <i>Venda</i> )	U+02C6 ^ circumflex (not U+005E)	U+A788 ˆ low circumflex accent
[O]	U+0309 ˘ hook above ( <i>hoi</i> )	U+0327 ˘ cedilla ( <i>Turkish</i> )		U+00B8 ˘ cedilla
[P]	U+030A ° ring above	U+0325 ˘ ring below	U+02DA ° ring above	U+02F3 ˘ low ring
[A]	U+031B ˘ horn ( <i>Vietnam; Thai transliteration</i> )	U+0326 ˘ comma below ( <i>Romanian</i> )		U+002C ˘ comma
[S]	U+0307 ˙ dot above	U+0323 ˙ dot below ( <i>Africa</i> )	U+02D9 ˙ dot above	U+002E ˙ full stop
[D]	U+0304 ˘ macron	U+0331 ˘ macron below ( <i>Africa</i> )	U+02C9 ˘ macron	U+02CD ˘ low macron
[F]	U+0312 ˘ turned comma above	U+0483 ˘	U+02BB ˘ turned comma	U+A717 ˘
[G]	U+0313 ˘ comma above ( <i>Minnan</i> )	U+0486 ˘	U+02BC ˘ apostrophe	U+A718 ˘
[H]	U+0314 ˘ reversed comma above	U+0485 ˘	U+02BD ˘ reversed comma	U+A719 ˘
[J]	U+030F ˘ double grave ( <i>Croatian poetry</i> )	U+0484 ˘		U+A71A ˘
[K]	U+0311 ˘ inverted	U+0487 ˘		U+1DCA ˘

	breve ( <i>Croatian poetry</i> )			
[L]	U+0360 ̄ double tilde	U+035F ̅ double macron below	U+2053 ~ swung dash	
[Z]	U+0361 ̆ double inverted breve	U+035C ̇ double breve below	U+2040 ˆ character tie	U+203F ̸ undertie
[X]	U+0358 ˙ dot above right ( <i>Minnan</i> )	U+0338 / long diagonal stroke		
[C]	U+0310 ̣ candrabindu	U+0337 ʹ short diagonal stroke		
[V]	U+030D ˊ vertical line above ( <i>Minnan</i> )	U+0336 ˉ long horizontal stroke	U+02C8 ˊ vertical line	
[B]	U+030E ˋ double vertical line above ( <i>Marshallese</i> )	U+0335 ˉ short horizontal stroke		
[N]		U+1DFD ̣		
[M]	U+0342 ˜ perispomeni ( <i>Greek</i> )	U+0345 ˘ iota subscriptum ( <i>Greek</i> )	U+1FC0 ˆ	U+037A ˘

**B.4 Group DI: Diacritics for IPA;  
Group DJ: Spacing Diacritics and Symbols for IPA**

(for the group DM: see below)

	Group DI, Level 1	Group DI, Level 2	Group DJ, Level 1	Group DJ, Level 2
[Q]	IPA 513: U+0301 ˊ	IPA 599: U+0317 ˊ	IPA 504: U+02D1 ˊ	IPA 599: U+02CF ˊ
[W]	IPA 515: U+0300 ˋ	IPA 598: U+0316 ˋ	IPA 503: U+02D0 ˋ	IPA 598: U+02CE ˋ
[E]	IPA 415: U+0308 ˝	IPA 405: U+0324 ˝		
[R]	IPA 424: U+0303 ˘	IPA 406: U+0330 ˘	IPA 419: U+02DE ˘	
[T]	IPA 512: U+030B ˝	IPA 431: U+0329 ˝	IPA 490: U+02F9 ˝	IPA 502: U+02CC ˝
[Y]	IPA 505: U+0306 ˘	IPA 414: U+0320 ˘	IPA 519: U+02E5 ˘	IPA 494: U+02D7 ˘
[U]	IPA 524: U+030C ˘	IPA 413: U+031F ˘	IPA 520: U+02E6 ˘	IPA 495: U+02D6 ˘
[I]	IPA 525: U+0302 ˆ	IPA 430: U+031E ˘	IPA 521: U+02E7 ˘	IPA 430: U+02D5 ˘
[O]	IPA 427: U+031A ˘	IPA 429: U+031D ˘	IPA 522: U+02E8 ˘	IPA 429: U+02D4 ˘
[P]	IPA 402: U+030A ˘	IPA 402: U+0325 ˘	IPA 523: U+02E9 ˘	
[A]	IPA 416: U+033D ˘	IPA 408: U+032A ˘		IPA 491: U+002C ˘
[S]	IPA 493: U+0307 ˘	IPA 497: U+0323 ˘		IPA 506: U+002E ˘

[D]	IPA 514: U+0304 <sup>ˆ</sup>	IPA 403: U+032C <sub>˘</sub>		
[F]		IPA 412: U+031C <sub>˘</sub>	IPA 492: U+02BB <sup>ˆ</sup>	
[G]		IPA 411: U+0339 <sub>˘</sub>	IPA 401: U+02BC <sup>ˆ</sup>	
[H]		IPA 418: U+0319 <sub>˘</sub>	IPA 901: U+005B [	IPA 910: U+007B {
[J]	IPA 516: U+030F <sup>ˆ</sup>	IPA 417: U+0318 <sub>˘</sub>	IPA 902: U+005D ]	IPA 911: U+007D }
[K]	IPA 595: U+0311 <sup>ˆ</sup>	IPA 432: U+032F <sub>˘</sub>	IPA 518: U+A71B <sup>ˆ</sup>	IPA 510: U+2197 ↗
[L]		IPA 409: U+033A <sub>˘</sub>	IPA 517: U+A71C <sup>ˆ</sup>	IPA 511: U+2198 ↘
[Z]	IPA 433: U+0361 <sup>ˆ</sup>	IPA 410: U+033B <sub>˘</sub>		IPA 509: U+203F <sub>˘</sub>
[X]		IPA 498: U+0321 <sub>˘</sub>	IPA 906: U+0028 (	IPA 908: U+2E28 ((
[C]		IPA 489: U+0322 <sub>˘</sub>	IPA 907: U+0029 )	IPA 909: U+2E29 ))
[V]		IPA 407: U+033C <sub>˘</sub>	IPA 501: U+02C8 <sup>ˆ</sup>	
[B]	IPA 526: U+1DC4 <sup>ˆ</sup>	IPA 428: U+0334 <sub>˘</sub>	IPA 903: U+002F /	
[N]	IPA 527: U+1DC5 <sup>ˆ</sup>		IPA 507: U+007C	
[M]	IPA 528: U+1DC8 <sup>ˆ</sup>	IPA 499: U+032B <sub>˘</sub>	IPA 508: U+2016	

### B.5 Group DM: Modifier letters

	Group DM, Level 1 ( <i>unshifted</i> )	Group DM, Level 2 ( <i>shifted</i> )
[1]	U+00B4 <sup>ˆ</sup>	U+01C0   ( <i>Khoisan click letter</i> )
[2]	U+02F4 <sup>ˆ</sup>	U+01C1   ( <i>Khoisan click letter</i> )
[3]	U+02EE <sup>ˆ</sup>	U+01C2 † ( <i>Khoisan click letter</i> )
[4]	U+00AF <sup>ˆ</sup>	U+01C3 ! ( <i>Khoisan click letter</i> )
[5]	U+02B9 <sup>ˆ</sup> ( <i>Cyrillic transliteration</i> )	U+0298 ○ ( <i>Khoisan click letter</i> )
[6]	U+02BA <sup>ˆ</sup> ( <i>Cyrillic transliteration</i> )	U+02EC <sub>˘</sub>
[7]	U+02BF <sup>ˆ</sup> ( <i>Arabic and Hebrew translit.</i> )	U+02C1 <sup>ˆ</sup>
[8]	U+02BE <sup>ˆ</sup> ( <i>Arabic and Hebrew translit.</i> )	U+02C0 <sup>ˆ</sup>
[9]	U+A789 : colon	U+02D0 : triangular colon
[0]	U+A78A = short equals sign	U+2E17 ≈ ( <i>Coptic transliteration</i> )

## B.6 Group G: Greek; Group GE: Greek extra letters

	Group G, Level 1	Group G, Level 2	Group GE, Level 1	Group GE, Level 2
[Q]	U+0345 ϰ	U+0342 ϱ	U+03D9 ϱ	U+03D8 ϱ
[W]	U+03C2 ϳ	U+0314 ϳ	U+03DD ϳ	U+03DC ϳ
[E]	U+03B5 ε	U+0395 Ε	U+03F5 ε	U+2059 ∴
[R]	U+03C1 ϱ	U+03A1 Ρ	U+03F1 ϱ	U+03FC ϱ
[T]	U+03C4 τ	U+03A4 Τ	U+03DF τ	U+03DE τ
[Y]	U+03C5 υ	U+03A5 Υ	U+03F6 υ	U+03D2 Υ
[U]	U+03B8 θ	U+0398 Θ	U+03D1 θ	U+03F4 Θ
[I]	U+03B9 ι	U+0399 Ι	U+037A ι	U+0375 ι
[O]	U+03BF ο	U+039F Ο	U+037B ο	U+03FD ο
[P]	U+03C0 π	U+03A0 Π	U+03D6 π	U+0374 π
[A]	U+03B1 α	U+0391 Α	U+037C α	U+03FE α
[S]	U+03C3 σ	U+03A3 Σ	U+03F2 σ	U+03F9 σ
[D]	U+03B4 δ	U+0394 Δ	U+037D δ	U+03FF δ
[F]	U+03C6 φ	U+03A6 Φ	U+03D5 φ	U+0384 φ
[G]	U+03B3 γ	U+0393 Γ	U+0377 γ	U+0376 γ
[H]	U+03B7 η	U+0397 Η	U+0371 η	U+0370 η
[J]	U+03BE ξ	U+039E Ξ	U+03F3 ξ	U+037F ξ
[K]	U+03BA κ	U+039A Κ	U+03F0 κ	U+1FFE κ
[L]	U+03BB λ	U+039B Λ	U+1FBD λ	U+1FBF λ
[Z]	U+03B6 ζ	U+0396 Ζ	U+0373 ζ	U+0372 ζ
[X]	U+03C7 χ	U+03A7 Χ	U+03E1 χ	U+03E0 χ
[C]	U+03C8 ψ	U+03A8 Ψ	U+03DB ψ	U+03DA ψ
[V]	U+03C9 ω	U+03A9 Ω	U+03FB ω	U+03FA ω
[B]	U+03B2 β	U+0392 Β	U+03D0 β	

[N]	U+03BD ן	U+039D N	U+03F8 ן	U+03F7 ן
[M]	U+03BC ן	U+039C M	U+03D7 ן	U+03CF ן

### B.7 Group H: Hebrew; Group HE: Hebrew extra letters

	Group H, Level 1	Group H, Level 2	Group HE, Level 1	Group HE, Level 2
[Q]	U+05E3 ף final pe	U+05F4 ף gershayim	U+0301 ˆ	U+0308 ˆ (number marker)
[W]	U+05EA ן tav	U+05F3 ן geresht	U+0300 ˘	U+0307 ˘ (number marker)
[E]	U+05E7 ן qof	U+05BB ן qubuts	U+0591 ˆ	U+05A9 ˆ
[R]	U+05E8 ן resh	U+05BF ˘ rafet	U+0592 ˆ	U+FB1E ˘ varika
[T]	U+05D0 א alef	U+05B0 ˘ sheva	U+0593 ˆ	U+FB4F ˘
[Y]	U+05D8 ט tet	U+05BD ˘ meteg	U+0594 ˆ	
[U]	U+05D5 ו vav	U+05F0 ו tsvey vovn	U+0595 ˆ	U+05AB ˆ
[I]	U+05DF ך final nun	U+05B4 ˘ hiriq	U+0596 ˆ	U+05AC ˆ
[O]	U+05DD ן final mem	U+05B5 ˘ tsere	U+0597 ˆ	U+05AD ˆ
[P]	U+05E4 ן pe	U+05B6 ˘ segol	U+0598 ˆ	U+05AE ˆ
[A]	U+05E9 ש shin	U+20AA ש new sheqel	U+0599 ˆ	U+002F /
[S]	U+05D3 ד dalet	U+05B7 ˘ patah	U+059A ˆ	U+0027 '
[D]	U+05D2 ג gimel	U+05B8 ˘ qamats	U+059B ˆ	U+05C7 ˘ qamats qatan
[F]	U+05DB כ kaf	U+05C2 ˘ sin dot	U+059C ˆ	U+05C5 ˘ p.ext. lower
[G]	U+05E2 ג ayin	U+05C1 ˘ shin dot	U+059D ˆ	U+05C4 ˘ p.ext. upper
[H]	U+05D9 י yod	U+05F2 י tsvey yudn	U+059E ˆ	
[J]	U+05D7 ח het	U+05F1 י vav yod	U+059F ˆ	
[K]	U+05DC ל lamed	U+05B9 ˘ holam	U+05A0 ˆ	U+05BA ˘ holam haser
[L]	U+05DA ך final kaf	U+05BC ˘ dagesh	U+05A1 ˆ	U+200C ZWNJ (for left meteg)

[Z]	U+05D6 ز zayin	U+05B1 هـ hataf segol	U+05A2 و	U+05AA و
[X]	U+05E1 خ samekh	U+05B2 هـ hataf patah	U+05A3 ح	U+200D ZWJ (for middle meteg)
[C]	U+05D1 ب bet	U+05B3 هـ hataf qamats	U+05A4 ك	U+034F CGJ (for right meteg)
[V]	U+05D4 ه he	U+05BE هـ maqaf	U+05A5 ل	U+FB29 ± alt. plus
[B]	U+05E0 ن nun	U+05C3 ن sof pasuq	U+05A6 م	U+05C6 ن nun hafukha
[N]	U+05DE م mem	U+05C0 م paseq	U+05A7 س	
[M]	U+05E6 ظ tsadi	U+05E5 ظ final tsadi	U+05A8 ع	U+05AF ع

### B.8 Group K: Korean Hangul

For Choseong characters, the according Jongseong character is listed following a slash.

	Group K, Level 1 (unshifted)	Group K, Level 2 (shifted)
[Q]	U+1107 / U+11B8 ㅑ	U+1108 ㅓ
[W]	U+110C / U+11BD ㅕ	U+110D ㅗ
[E]	U+1103 / U+11AE ㅓ	U+1104 ㅕ
[R]	U+1100 / U+11A8 ㅓ	U+1101 / U+11A9 ㅕ
[T]	U+1109 / U+11BA ㅓ	U+110A / U+11BB ㅕ
[Y]	U+116D ㅓ	
[U]	U+1167 ㅓ	
[I]	U+1163 ㅓ	
[O]	U+1162 ㅓ	U+1164 ㅓ
[P]	U+1166 ㅓ	U+1168 ㅓ
[A]	U+1106 / U+11B7 ㅓ	
[S]	U+1102 / U+11AB ㅓ	
[D]	U+110B / U+11BC ㅓ	
[F]	U+1105 / U+11AF ㅓ	

[G]	U+1112 / U+11C2 𐌲	
[H]	U+1169 𐌺	
[J]	U+1165 𐌿	
[K]	U+1161 𐌿	
[L]	U+1175 𐌻	
[Z]	U+110F / U+11BF 𐌿	
[X]	U+1110 / U+11C0 𐌿	
[C]	U+110E / U+11BE 𐌿	
[V]	U+1111 / U+11C1 𐌿	
[B]	U+1172 𐌿	
[N]	U+116E 𐌿	
[M]	U+1173 𐌿	

### B.9 Group LE: Latin extra letters

	Group LE, Level 1 ( <i>unshifted</i> )	Group LE, Level 2 ( <i>shifted</i> )
[Q]	U+0265 ƚ ( <i>Dan/Gio, Liberia</i> )	U+A78D Ɔ ( <i>Dan/Gio, Liberia</i> )
[W]	U+01DD ɜ ( <i>Nigeria</i> )	U+018E Ɔ ( <i>Nigeria</i> )
[E]	U+0259 ƚ ( <i>Azerbaijani</i> )	U+018F Ɔ ( <i>Azerbaijani</i> )
[R]	U+027C ƚ ( <i>Gaelic</i> )	U+0295 ƚ ( <i>transliteration</i> )
[T]	U+00FE ƚ ( <i>Icelandic</i> )	U+00DE ƚ ( <i>Icelandic</i> )
[Y]	U+00DF ƚ ( <i>German</i> )	U+1E9E ƚ ( <i>German special applications</i> )
[U]	U+0223 ƚ ( <i>Algonquin</i> )	U+0222 ƚ ( <i>Algonquin</i> )
[I]	U+0131 ı ( <i>Turkish</i> )	U+0130 İ ( <i>Turkish</i> )
[O]	U+0153 œ ( <i>French</i> )	U+0152 Œ ( <i>French</i> )
[P]	U+0242 ƚ ( <i>Chipewyan</i> )	U+0241 ƚ ( <i>Chipewyan</i> )
[A]	U+00E6 æ ( <i>Danish</i> )	U+00C6 Æ ( <i>Danish</i> )

[S]	U+017F ḟ ( <i>Gaelic, Fraktur</i> )	U+0294 ʔ ( <i>Nootka</i> )
[D]	U+00F0 ð ( <i>Icelandic</i> )	U+00D0 Ð ( <i>Icelandic</i> )
[F]	U+018B ɛ̃ ( <i>Africa</i> )	U+018C ɛ̂ ( <i>Africa</i> )
[G]	U+028C ʌ̃ ( <i>Temne</i> )	U+0245 ʌ̂ ( <i>Temne</i> )
[H]	U+0251 ɑ̃ ( <i>Fe'fe'</i> )	U+2C6D ɑ̂ ( <i>Fe'fe'</i> )
[J]	U+025B ɛ̃ ( <i>Nigeria</i> )	U+0190 ɛ̂ ( <i>Nigeria</i> )
[K]	U+0254 ɔ̃ ( <i>Nigeria</i> )	U+0186 ɔ̂ ( <i>Nigeria</i> )
[L]	U+028A ʊ̃ ( <i>Africa</i> )	U+01B1 ʊ̂ ( <i>Africa</i> )
[Z]	U+019E ɨ̃ ( <i>Lakota</i> )	U+0220 ɨ̂ ( <i>Lakota</i> )
[X]	U+A78C ' ( <i>small Saltillo (Mexico)</i> )	U+A78B ' ( <i>capital Saltillo (Mexico)</i> )
[C]	U+0292 ɜ̃ ( <i>Sami</i> )	U+01B7 ɜ̂ ( <i>Sami</i> )
[V]	U+01B9 ɛ̃ ( <i>Africa</i> )	U+01B8 ɛ̂ ( <i>Africa</i> )
[B]	U+0183 ɓ̃ ( <i>Dan/Gio, Liberia</i> )	U+0182 ɓ̂ ( <i>Dan/Gio, Liberia</i> )
[N]	U+014B ɨ̃ ( <i>Sami</i> )	U+014A ɨ̂ ( <i>Sami</i> )
[M]	U+0283 ɔ̃ ( <i>Africa</i> )	U+01A9 ɔ̂ ( <i>Africa</i> )

### B.10 Group LS: Latin supplement (for keyboards with ISO/IEC 9995-3 secondary group)

	Group LS, Level 1 ( <i>unshifted</i> )	Group LS, Level 2 ( <i>shifted</i> )
[Q]	U+2C61 †	U+2C60 ƚ
[W]	U+01BF p̃	U+01F7 P̃
[E]	U+025B ɛ̃	U+0190 ɛ̂
[R]	U+01DD ə̃	U+018E ɛ̂
[T]	U+01AD f̃	U+01AC T̃
[Y]	U+026C †	U+A7AD ƚ
[U]	U+F87D θ̃ Latin theta	U+F87C Θ̃
[I]	U+0269 ı̃	U+0196 ı̂

[O]	U+0254 ɔ	U+0186 ɔ
[P]	U+028C ʌ	U+0245 ʌ
[A]	U+0251 ɑ	U+2C6D ɑ
[S]	U+0283 ɟ	U+01A9 ɟ
[D]	U+0257 ɖ	U+018A ɖ
[F]	U+0295 ɣ	U+2116 №
[G]	U+0263 ɣ	U+0194 ɣ
[H]	U+0265 ɥ	U+A78D ɥ
[J]	U+021D ɜ	U+021C ɜ
[K]	U+019B ʌ	U+F899
[L]	U+F891 Latin lambda	U+F898
[Z]	U+01B9 ɛ	U+01B8 ɛ
[X]	U+F859 ɣ Latin chi	U+F858
[C]	U+026B ɛ	U+2C62 ɛ
[V]	U+028B ʋ	U+01B2 ʋ
[B]	U+028A ʊ	U+01B1 ʊ
[N]	U+F8C6 ɲ African eng	U+F8C4 ɲ
[M]	U+1DBF ɵ	U+F89E

### B.11 Group LR: Latin letters raised; Group LL: Latin letters lowered

	Group LR, Level 1	Group LR, Level 2	Gr. LL, L.1	Gr. LL, L.2
[Q]	U+EF66	U+EF7B	U+EF3C	U+EF0C
[W]	U+02B7 <sup>w</sup> (Canada)	U+1D42 <sup>w</sup>	U+EF43	U+1D21 <sup>w</sup>
[E]	U+1D49 <sup>e</sup>	U+1D31 <sup>ɛ</sup>	U+2091 <sub>e</sub>	U+1D07 <sub>ɛ</sub>
[R]	U+02B3 <sup>r</sup>	U+1D3F <sup>ɾ</sup>	U+1D63 <sub>r</sub>	U+0280 <sub>ɾ</sub>
[T]	U+1D57 <sup>t</sup>	U+1D40 <sup>ɾ</sup>	U+209C <sub>t</sub>	U+1D1B <sub>ɾ</sub>
[Y]	U+02B8 <sup>y</sup>	U+EF86	U+EF46	U+028F <sub>y</sub>

[U]	U+1D58 <sup>u</sup>	U+1D41 <sup>u</sup>	U+1D64 <sub>u</sub>	U+1D1C <sub>u</sub>
[I]	U+2071 <sup>i</sup>	U+1D35 <sup>i</sup>	U+1D62 <sub>i</sub>	U+026A <sub>I</sub>
[O]	U+1D52 <sup>o</sup>	U+1D3C <sup>o</sup>	U+2092 <sub>o</sub>	U+1D0F <sub>o</sub>
[P]	U+1D56 <sup>p</sup>	U+1D3E <sup>p</sup>	U+209A <sub>pp</sub>	U+1D18 <sub>P</sub>
[A]	U+1D43 <sup>a</sup>	U+1D2C <sup>A</sup>	U+2090 <sub>a</sub>	U+1D00 <sub>A</sub>
[S]	U+02E2 <sup>s</sup>	U+EF7C	U+209B <sub>ss</sub>	U+A731 <sub>s</sub>
[D]	U+1D48 <sup>d</sup>	U+1D30 <sup>D</sup>	U+EF37	U+1D05 <sub>D</sub>
[F]	U+1DA0 <sup>f</sup>	U+A7F1	U+EF38	U+A730 <sub>F</sub>
[G]	U+1D4D <sup>g</sup>	U+EF77 <sup>G</sup>	U+EF39	U+0262 <sub>G</sub>
[H]	U+02B0 <sup>h</sup>	U+1D34 <sup>H</sup>	U+2095 <sub>hh</sub>	U+029C <sub>H</sub>
[J]	U+02B2 <sup>j</sup>	U+1D36 <sup>J</sup>	U+2C7C <sub>j</sub>	U+1D0A <sub>J</sub>
[K]	U+1D4F <sup>k</sup>	U+1D37 <sup>K</sup>	U+2096 <sub>kk</sub>	U+1D0B <sub>K</sub>
[L]	U+02E1 <sup>l</sup>	U+1D38 <sup>L</sup>	U+2097 <sub>ll</sub>	U+029F <sub>L</sub>
[Z]	U+1DBB <sup>z</sup>	U+EF87	U+EF48	U+1D22 <sub>Z</sub>
[X]	U+02E3 <sup>x</sup>	U+EF85	U+2093 <sub>x</sub>	U+EF11
[C]	U+1D9C <sup>c</sup>	U+EF76	U+EF36	U+1D04 <sub>C</sub>
[V]	U+1D5B <sup>v</sup>	U+2C7D <sup>V</sup>	U+1D65 <sub>v</sub>	U+1D20 <sub>V</sub>
[B]	U+1D47 <sup>b</sup>	U+1D2E <sup>B</sup>	U+EF35	U+0299 <sub>B</sub>
[N]	U+207F <sup>n</sup> ( <i>Minnan</i> )	U+1D3A <sup>N</sup>	U+2099 <sub>nn</sub>	U+0274 <sub>N</sub>
[M]	U+1D50 <sup>m</sup>	U+1D39 <sup>M</sup>	U+2098 <sub>mm</sub>	U+1D0D <sub>M</sub>

**B.12 Group LQ: Latin letters with hook below and related special characters**  
**Group LW: Latin letters with hook above and related special characters**

	Group LQ, Level 1	Group LQ, Level 2	Group LW, Level 1	Group LW, Level 2
[Q]	U+024B <sub>q</sub> ( <i>Africa</i> )	U+024A <sub>Q</sub> ( <i>Africa</i> )		
[W]	U+01BF <sub>p</sub> ( <i>Old English</i> )	U+01F7 <sub>P</sub> ( <i>Old English</i> )	U+2C73 <sub>w</sub> ( <i>Africa</i> )	U+2C72 <sub>W</sub> ( <i>Africa</i> )
[E]			U+1D4A <sup>ɶ</sup>	

[R]	U+027D ɾ ( <i>Africa</i> )	U+2C64 ʀ ( <i>Africa</i> )	U+0280 ʀ ( <i>Old Norse</i> )	U+01A6 ʀ ( <i>Old Norse</i> )
[T]	U+0288 ɿ ( <i>Africa</i> )	U+01AE Ƨ ( <i>Africa</i> )	U+01AD Ƨ ( <i>Africa</i> )	U+01AC Ƨ ( <i>Africa</i> )
[Y]	U+0195 Ƨ ( <i>Gothic</i> )	U+01F6 Ƨ ( <i>Gothic</i> )	U+01B4 Ƨ ( <i>Africa</i> )	U+01B3 Ƨ ( <i>Africa</i> )
[U]	U+026F Ƨ ( <i>Africa</i> )	U+019C Ƨ ( <i>Africa</i> )		
[I]	U+0269 ɿ ( <i>Africa</i> )	U+0196 ɿ ( <i>Africa</i> )	U+026A ɿ ( <i>Africa</i> )	
[O]				
[P]			U+01A5 ɸ ( <i>Africa</i> )	U+01A4 ɸ ( <i>Africa</i> )
[A]			U+A723 ʒ ( <i>Egypt hieroglyph ...</i> )	U+A722 ʒ (... transliteration)
[S]				
[D]	U+0256 ɖ ( <i>Africa</i> )	U+0189 ɖ ( <i>Africa</i> )	U+0257 ɖ ( <i>Africa</i> )	U+018A ɖ ( <i>Africa</i> )
[F]	U+0192 Ƨ ( <i>Africa</i> )	U+0191 Ƨ ( <i>Africa</i> )		
[G]	U+01A2 Ƨ ( <i>Tatar (old)</i> )	U+01A3 Ƨ ( <i>Tatar (old)</i> )	U+0260 Ƨ ( <i>Africa</i> )	U+0193 Ƨ ( <i>Africa</i> )
[H]	U+A727 ɿ ( <i>Judeo-Tat</i> )	U+A726 ɿ ( <i>Judeo-Tat</i> )	U+0266 ɿ ( <i>Nawdm, Togo</i> )	U+A7AA ɿ
[J]	U+021D Ƨ ( <i>Old English</i> )	U+021C Ƨ ( <i>Old English</i> )	U+A725 Ƨ ( <i>Egypt hieroglyph ...</i> )	U+A724 Ƨ (... transliteration)
[K]	U+0138 Ƨ ( <i>Greenlandic (old)</i> )		U+0199 Ƨ ( <i>Africa</i> )	U+0198 Ƨ ( <i>Africa</i> )
[L]	U+2C61 ɿ	U+2C60 ɿ	U+026B ɿ	U+2C62 ɿ
[Z]	U+0225 Ƨ ( <i>Middle High German</i> )	U+0224 Ƨ ( <i>Middle High German</i> )		
[X]				
[C]	U+A791 Ƨ ( <i>Tatar (old)</i> )	U+A790 Ƨ ( <i>Tatar (old)</i> )	U+0188 Ƨ ( <i>Africa</i> )	U+0187 Ƨ ( <i>Africa</i> )
[V]	U+0263 Ƨ ( <i>Africa</i> )	U+0194 Ƨ ( <i>Africa</i> )	U+028B Ƨ ( <i>Africa</i> )	U+01B2 Ƨ ( <i>Africa</i> )
[B]	U+A797 ( <i>African eng</i> )	U+A796 ( <i>African eng</i> )	U+0253 Ƨ ( <i>Africa</i> )	U+0181 Ƨ ( <i>Africa</i> )
[N]	U+0272 Ƨ ( <i>Africa</i> )	U+019D Ƨ ( <i>Africa</i> )		
[M]	U+0271 Ƨ ( <i>Africa</i> )	U+2C6E Ƨ ( <i>Africa</i> )		

**B.13 Group LX: Latin letters with diagonal stroke;  
Group LZ: Latin letters with horizontal stroke**

	Group LX, Level 1	Group LX, Level 2	Group LZ, Level 1	Group LZ, Level 2
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[Q]				
[W]				
[E]	U+0247 ě	U+0246 Ě		
[R]	U+A7A7 ŗ ( <i>Latvian (old)</i> )	U+A7A6 R	U+024D ɣ	U+024C R
[T]	U+2C66 Ț ( <i>Scn̄c̄oten</i> )	U+023E Ț	U+0167 ɥ ( <i>Sami</i> )	U+0166 T
[Y]			U+024F y	U+024E Y
[U]			U+0289 ɥ ( <i>Comanche</i> )	U+0244 Ƴ
[I]			U+0268 ɨ ( <i>Africa</i> )	U+0197 ɨ
[O]	U+00F8 ø ( <i>Danish</i> )	U+00D8 Ø	U+0275 ɛ ( <i>Africa</i> )	U+019F Ɔ
[P]			U+1D7D p̣	U+2C63 P̣
[A]	U+2C65 ȧ ( <i>Scn̄c̄oten</i> )	U+023A Å		
[S]	U+A7A9 ṣ ( <i>Latvian (old)</i> )	U+A7A8 Ṣ		
[D]			U+0111 đ ( <i>Croatian</i> )	U+0110 Đ
[F]				
[G]	U+A7A1 g̣ ( <i>Latvian (old)</i> )	U+A7A0 Ģ	U+01E5 g̣ ( <i>Sami</i> )	U+01E4 G̣
[H]			U+0127 ħ ( <i>Maltese</i> )	U+0126 Ħ
[J]			U+0249 j̣	U+0248 J̣
[K]	U+A7A3 ḳ ( <i>Latvian (old)</i> )	U+A7A2 Ķ		
[L]	U+0142 ł ( <i>Polish</i> )	U+0141 Ł	U+019A ɨ ( <i>Scn̄c̄oten</i> )	U+023D Ł
[Z]			U+01B6 ẓ	U+01B5 Ẓ
[X]				
[C]	U+023C ċ ( <i>Scn̄c̄oten</i> )	U+023B Ć		
[V]				
[B]			U+0180 ƀ ( <i>OldSaxon</i> )	U+0243 Ḅ
[N]	U+A7A5 ņ ( <i>Latvian (old)</i> )	U+A7A4 Ṇ		
[M]	U+20A5 ṃ			

## B.14 Group Q: Georgian

	Group Q, Level 1 ( <i>unshifted</i> )	Group Q, Level 2 ( <i>shifted</i> )
[Q]	U+10E6 ლ	U+10F7 ზ
[W]	U+10EF ჳ	U+10F8 უ
[E]	U+10E3 ე	U+10F9 ი
[R]	U+10D9 რ	U+10FA Ⴀ
[T]	U+10D4 ტ	U+10F1 ზ
[Y]	U+10DC ყ	U+10FC <sup>6</sup>
[U]	U+10D2 უ	
[I]	U+10E8 ი	U+10EE ბ
[O]	U+10EC ი	U+10EA ა
[P]	U+10D6 პ	U+10F4 ჳ
[A]	U+10E4 ა	U+10F6 ე
[S]	U+10EB ბ	U+10FD ს
[D]	U+10D5 დ	U+10F3 ვ
[F]	U+10D7 თ	U+10FE თ
[G]	U+10D0 გ	U+10FF ო
[H]	U+10DE დ	
[J]	U+10E0 ე	
[K]	U+10DD ძ	U+10D3 ძ
[L]	U+10DA ლ	U+10DF ჳ
[Z]	U+10ED ჟ	U+0589 :
[X]	U+10E9 ხ	U+10FB Ⴁ
[C]	U+10E7 ე	U+10E5 ე
[V]	U+10E1 ს	U+10D1 ს
[B]	U+10DB ბ	U+10F0 ჳ

[N]	U+10D8 ո	U+10F2 զ
[M]	U+10E2 ժ	U+10F5 թ

**B.15 Group W: Armenian; Group WE: Armenian extra letters**

	Group W, Level 1	Group W, Level 2	Group WE, Level 1	Group WE, Level 2
[Q]	U+056D լւ	U+053D Լւ	U+055F փ	
[W]	U+0582 լ	U+0552 Լ	U+055B ք	
[E]	U+0567 է	U+0537 Է	U+0587 և	
[R]	U+0580 ր	U+0550 Ր	U+057C ռ	U+054C Ռ
[T]	U+057F տ	U+054F Տ	U+0569 թ	U+0539 Թ
[Y]	U+0565 ե	U+0535 Ե	U+0575 յ	U+0545 Յ
[U]	U+0568 ը	U+0538 Ը	U+058A ձ	
[I]	U+056B ի	U+053B Ի	U+FB15 լի	
[O]	U+0578 ո	U+0548 Ո	U+0585 օ	U+0555 Օ
[P]	U+057A պ	U+054A Պ	U+0583 լի	U+0553 Փ
[A]	U+0561 ա	U+0531 Ա	U+2024 .	U+055A ք
[S]	U+057D ս	U+054D Ս	U+0577 ղ	U+0547 Շ
[D]	U+0564 դ	U+0534 Դ	U+055C ք	U+058F ք
[F]	U+0586 ֆ	U+0556 Ֆ	U+055E օ	
[G]	U+0584 ք	U+0554 Ք	U+0572 ղ	U+0542 Ղ
[H]	U+0570 հ	U+0540 Հ	U+057B ղ	U+054B Ջ
[J]	U+0573 ճ	U+0543 Ճ	U+0571 ձ	U+0541 Ձ
[K]	U+056F կ	U+053F Կ	U+055D ք	
[L]	U+056C լ	U+053C Լ	U+0589 :	
[Z]	U+0566 զ	U+0536 Զ	U+056A ժ	U+053A Ժ
[X]	U+0581 ց	U+0551 Յ	U+0579 շ	U+0549 Չ

[C]	U+0563 q	U+0533 Ɔ	U+056E ɔ	U+053E ɔ̄
[V]	U+057E ɹ	U+054E ɻ	U+FB16 ɹ̄	
[B]	U+0562 ƚ	U+0532 Ɔ̄	U+FB17 ɹ̄	
[N]	U+0576 ɹ̄	U+0546 ɻ̄	U+FB13 ɹ̄	
[M]	U+0574 ɹ̄	U+0544 ɻ̄	U+FB14 ɹ̄	

## B.16 Group YC: Currency symbols

	Group YC, Level 1 ( <i>unshifted</i> )	Group YC, Level 2 ( <i>shifted</i> )
[Q]	U+20A1 ₧	U+20A7 ₧̄
[W]	U+20A9 ₩	
[E]	U+20AC €	U+20A0 €̄
[R]	U+20B9 ₹	U+20A8 ₹̄
[T]	U+20AE ₹	U+20B8 ₹̄
[Y]	U+00A5 ¥	
[U]		
[I]		
[O]		
[P]	U+20B0 ₪	U+20B1 ₪̄
[A]	U+20B3 ₴	
[S]	U+20AA ₺	
[D]	U+20AB ₠	U+20AF ₠̄
[F]	U+0192 f	U+20A3 F
[G]	U+20B2 ₡	
[H]	U+20B4 ₢	
[J]		
[K]	U+20AD ₱	

[L]	U+00A3 £	U+20A4 ₣
[Z]		
[X]	U+20A2 ¢	
[C]	U+00A2 ¢	U+20B5 ¢
[V]		
[B]	U+0E3F ₪	
[N]	U+20A6 ₦	
[M]	U+20A5 ₮	U+2133 ™

### B.17 Group YU: Universal compatibility; Group YT: Digits raised and lowered

(for the group YM: see below)

	Group YU, Level 1	Group YU, Level 2	Group YT, Level 1	Group YT, Level 2
[1]	U+0027 '	U+0021 !	U+00B9 <sup>1</sup>	U+2081 <sub>1</sub>
[2]	U+0022 "	U+003F ?	U+00B2 <sup>2</sup>	U+2082 <sub>2</sub>
[3]	U+002F /	U+003C <	U+00B3 <sup>3</sup>	U+2083 <sub>3</sub>
[4]	U+002D -	U+003E >	U+2074 <sup>4</sup>	U+2084 <sub>4</sub>
[5]	U+002B +	U+0025 %	U+2075 <sup>5</sup>	U+2085 <sub>5</sub>
[6]	U+003B ;	U+003D =	U+2076 <sup>6</sup>	U+2086 <sub>6</sub>
[7]	U+003A :	U+0026 &	U+2077 <sup>7</sup>	U+2087 <sub>7</sub>
[8]	U+002C ,	U+002A *	U+2078 <sup>8</sup>	U+2088 <sub>8</sub>
[9]	U+002E .	U+0028 (	U+2079 <sup>9</sup>	U+2089 <sub>9</sub>
[0]	U+005F _	U+0029 )	U+2070 <sup>0</sup>	U+2080 <sub>0</sub>

### B.18 Group YP: Punctuation

	Group YP, Level 1 ( <i>unshifted</i> )	Group YP, Level 2 ( <i>shifted</i> )
[Q]	U+0023 #	U+2027 · hyphenation point
[W]	U+0060 `	U+2E3A — two-em dash

[E]	U+005C \	U+2E3B — three-em dash
[R]	U+007C	U+00BC ¼
[T]	U+005B [	U+00BD ½
[Y]	U+005D ]	U+00BE ¾
[U]	U+007B {	U+215B ⅛
[I]	U+007D }	U+215C ⅜
[O]	U+007E ~	U+215D ⅝
[P]	U+005E ^	U+215E ⅞
[A]	U+0040 @	U+27E8 ( left angle bracket
[S]	U+0024 \$	U+27E9 ) right angle bracket
[D]	U+00B7 · middle dot	U+2026 …
[F]	U+2036 `	U+2035 ` reverse prime
[G]	U+2033 ”	U+2032 ’
[H]	U+201E „	U+201A ,
[J]	U+201C “	U+2018 ’
[K]	U+201D ”	U+2019 ’ (also typographical apostrophe)
[L]	U+00AB «	U+2039 <
[Z]	U+00BB »	U+203A >
[X]	U+200C ZWNJ (zero width non-joiner)	U+200D ZWJ (zero width joiner)
[C]	U+034F CGJ (combining grapheme joiner)	U+FFFD  (substitution for wrong input)
[V]	U+2011 - non-breaking hyphen	U+00AD soft hyphen
[B]	U+2010 - typographical hyphen	U+2E4E = double hyphen
[N]	U+2013 – en dash	U+2012 – numeric dash
[M]	U+2014 — em dash	U+2015 — horizontal bar

### B.19 Group YS: Symbols; Group YM: Mathematical and extra symbols

	Group YS, Level 1	Group YS, Level 2	Gr. YM, L.1	Gr. YM, L.2

[Q]	U+00B1 ±	U+2766 ∞	U+221E ∞	U+266A ♪
[W]	U+00A1 ¡	U+2767 ∞	U+2423 □	U+266B ♫
[E]	U+00BF ¿	U+2619 ∞	U+212E e	U+2208 €
[R]	U+00B0 °	U+00AE ®	U+2713 ✓	U+221A √
[T]	U+2300 ∅ diameter	U+2122 ™	U+2205 ∅	U+2022 •
[Y]	U+2212 − minus sign	U+2052 ∕	U+25CB ○	U+25CF ●
[U]	U+2248 ≈	U+223C ~ typographical tilde	U+25CC ◌	U+25C9 ◐
[I]	U+00A7 §	U+2030 ‰	U+2261 ≡	U+222B ∫
[O]	U+00BA °	U+2126 Ω	U+2295 ⊕	U+2297 ⊗
[P]	U+00B6 ¶	U+2117 ©	U+2259 ≙	U+220F ∏
[A]	U+00AA ª	U+214D Å/s (Norwegian)	U+2200 ∇	U+2203 ∃
[S]	U+263A ☺	U+2120 ™ service mark	U+2639 ☹	U+2211 ∑
[D]	U+2020 †	U+2021 ‡	U+2202 ∂	U+2206 Δ
[F]	U+2264 ≤	U+2260 ≠	U+226A ≪	U+2640 ♀
[G]	U+2265 ≥	U+00F7 ÷	U+226B ≫	U+221F ℒ
[H]	U+2190 ←	U+203B ✖	U+27EA ≪	U+FD3E {
[J]	U+2192 →	U+00A4 ¤	U+27EB ≫	U+FD3F }
[K]	U+2191 ↑	U+2197 ↗	U+2016 ∥	U+00A6 ¦
[L]	U+2193 ↓	U+2198 ↘	U+21B2 ↯	U+2194 ↔
[Z]	U+2215 / typographical slash	U+2044 / fraction slash	U+2AFD //	U+25CA ◇
[X]	U+00D7 ×	U+2217 * typographical asterisk not-raised	U+2E28 ((	U+2282 c
[C]	U+2105 %	U+00A9 ©	U+2E29 ))	U+2283 ∃
[V]	U+203D ?	U+2E18 ¡	U+2228 v	U+222A u
[B]	U+266D ♭ musical flat sign (for music titles)	U+266F ♯ musical sharp sign (for music titles)	U+2227 Λ	U+2229 n
[N]	U+25E6 °	U+2116 №	U+00AC ¬	U+2310 ¬

[M]	U+00B5 μ	U+204A 7 Tironian et	U+2E2E ?	U+2642 ♂
[space]	U+00A0 NBSP (no-break space)	U+202F NNBS (narrow no-break space)	U+2007 figure space	U+2009 thin space

## B.20 Group YY: Compatibility Characters and Symbols

	Group YY, Level 1 ( <i>unshifted</i> )	Group YY, Level 2 ( <i>shifted</i> )
[Q]	U+25A3 ■	U+25C8 ◆
[W]	U+2302 △	U+25B2 ▲
[E]	U+2195 †	U+21A8 ‡
[R]	U+A75B ƚ	U+211B ℞
[T]	U+2034 ”	U+203C !!
[Y]	U+203E ¯	U+2017 =
[U]	U+263C ※	U+2756 ❖
[I]	U+0133 ij	U+0132 IJ
[O]	U+037E ;	U+2023 ►
[P]	U+0387 ·	U+260E ☎
[A]	U+2219 •	U+25C4 ◀
[S]	U+263B ☺	U+25BC ▼
[D]	U+2114 fb	U+25BA ►
[F]	U+FB01 fi	U+2663 ♣
[G]	U+FB02 fl	U+2666 ◆
[H]	U+2661 ♥	U+2665 ♡
[J]	U+1FBE ,	U+2660 ♠
[K]	U+2137 ]	U+205E †
[L]	U+0140 l̄	U+013F L̄
[Z]	U+2113 ℓ	U+2311 □
[X]	U+1FEF `	U+261E ☞

[C]	U+1FFD ´	U+261C 𐀔
[V]	U+25AB □	U+25AA ■
[B]	U+25A1 □	U+25A0 ■
[N]	U+0149 ´n	U+25AC ■
[M]	U+201B ´	U+201F “

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## Annex C (normative)

### Table for special mode "IPA"

See Clause 8.

The row index is the letter to be entered first.

The column index is the digit to be entered second.

	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
[a]	IPA 304: U+0061 a			IPA 324: U+0250 v		IPA 305: U+0251 a	IPA 313: U+0252 b			IPA 325: U+00E6 æ
[b]	IPA 102: U+0062 b		IPA 121: U+0299 B		IPA 160: U+0253 b	IPA 127: U+03B2 β			IPA 901: U+005B [	IPA 902: U+005D ]
[c]	IPA 107: U+0063 c				IPA 163: U+0188 c	IPA 138: U+00E7 ç	IPA 202: U+0297 ç		IPA 182: U+0255 c	
[d]	IPA 104: U+0064 d		IPA 219: U+1D91 d		IPA 162: U+0257 d	IPA 131: U+00F0 ð	U+0256 d	IPA 212: U+02A3 dz	IPA 214: U+02A4 dz	IPA 216: U+02A5 dz
[e]	IPA 302: U+0065 e	IPA 218: U+1D4A e	U+025D e	IPA 322: U+0259 e	IPA 327: U+025A e	IPA 303: U+025B e	IPA 326: U+025C e	IPA 395: U+025E e	IPA 396: U+029A e	IPA 397: U+0258 e
[f]	IPA 128: U+0066 f	IPA 177: U+01C0 l	IPA 180: U+01C1 l	IPA 179: U+01C2 l	IPA 178: U+01C3 l	IPA 176: U+0298 o		IPA 126: U+0278 φ		
[g]	IPA 210: U+0067 g		IPA 112: U+0262 g		IPA 166: U+0260 g	IPA 141: U+0263 γ	IPA 110: U+0261 g	IPA 168: U+029B g	IPA 315: U+0264 x	IPA 422: U+02E0 y
[h]	IPA 146: U+0068 h	IPA 404: U+02B0 h	IPA 172: U+029C h	IPA 171: U+0265 q	IPA 147: U+0266 h	U+A7F8 H	IPA 175: U+0267 f	IPA 144: U+0127 h	U+02AE q	U+02AF y
[i]	IPA 301: U+0069 i		IPA 319: U+026A i			IPA 399: U+0269 i		IPA 317: U+0268 i	IPA 504: U+02D1 i	IPA 503: U+02D0 i
[j]	IPA 153: U+006A j	IPA 421: U+02B2 j					IPA 139: U+029D j	IPA 108: U+025F j	IPA 164: U+0284 j	IPA 509: U+203F j
[k]	IPA 109: U+006B k			IPA 291: U+029E x	IPA 165: U+0199 k					
[l]	IPA 155: U+006C l	IPA 426: U+02E1 l	IPA 158: U+029F l	IPA 294: U+019B x	IPA 148: U+026C l	IPA 295: U+03BB λ	IPA 156: U+026D l	IPA 209: U+026B l	U+0234 l	IPA 149: U+026E l
[m]	IPA 114: U+006D m			IPA 316: U+026F w			IPA 115: U+0271 m		IPA 154: U+0270 u	
[n]	IPA 116:	IPA 425:	IPA 120:			IPA 117:	IPA 119:	IPA 293:		IPA 118:

	U+006E <sub>n</sub>	U+207F <sub>n</sub>	U+0274 <sub>N</sub>			U+0273 <sub>η</sub>	U+014B <sub>η</sub>	U+019E <sub>η</sub>	U+0235 <sub>η</sub>	U+0272 <sub>η</sub>
[o]	IPA 307: U+006F <sub>o</sub>		IPA 312: U+0276 <sub>œ</sub>			IPA 398: U+0277 <sub>ω</sub>	IPA 306: U+0254 <sub>ο</sub>	IPA 323: U+0275 <sub>ε</sub>	IPA 310: U+00F8 <sub>ο</sub>	IPA 311: U+0153 <sub>œ</sub>
[p]	IPA 101: U+0070 <sub>p</sub>				IPA 159: U+01A5 <sub>β</sub>					
[q]	IPA 111: U+0071 <sub>q</sub>	IPA 423: U+02E4 <sub>ς</sub>			IPA 167: U+02A0 <sub>ǰ</sub>	IPA 113: U+0294 <sub>ʔ</sub>	IPA 145: U+0295 <sub>ʕ</sub>	IPA 173: U+02A1 <sub>ʔ</sub>	IPA 174: U+02A2 <sub>ʕ</sub>	IPA 203: U+0296 <sub>ʒ</sub>
[r]	IPA 122: U+0072 <sub>r</sub>	U+027F <sub>ɹ</sub>	IPA 123: U+0280 <sub>ʀ</sub>	IPA 151: U+0279 <sub>ɹ</sub>	IPA 124: U+027E <sub>ɹ</sub>	IPA 143: U+0281 <sub>ʀ</sub>	IPA 125: U+027D <sub>ɹ</sub>	IPA 152: U+027B <sub>ɹ</sub>	IPA 181: U+027A <sub>ɹ</sub>	IPA 206: U+027C <sub>ɹ</sub>
[s]	IPA 132: U+0073 <sub>s</sub>	IPA 207: U+02E2 <sub>s</sub>		U+0285 <sub>ɹ</sub>			IPA 134: U+0283 <sub>ʂ</sub>	IPA 136: U+0282 <sub>ʂ</sub>	IPA 204: U+0286 <sub>ʂ</sub>	
[t]	IPA 103: U+0074 <sub>t</sub>			IPA 201: U+0287 <sub>ɹ</sub>	IPA 161: U+01AD <sub>f</sub>	IPA 130: U+03B8 <sub>θ</sub>	IPA 105: U+0288 <sub>ʈ</sub>	IPA 208: U+01AB <sub>ʈ</sub>	U+0236 <sub>ʈ</sub>	IPA 217: U+1DBF <sub>θ</sub>
[u]	IPA 308: U+0075 <sub>u</sub>							IPA 318: U+0289 <sub>ʉ</sub>	IPA 502: U+02CC <sub>ʉ</sub>	IPA 501: U+02C8 <sub>ʉ</sub>
[v]	IPA 129: U+0076 <sub>v</sub>			IPA 314: U+028C <sub>ʌ</sub>	IPA 184: U+2C71 <sub>ʋ</sub>	IPA 150: U+028B <sub>ʋ</sub>			IPA 507: U+007C <sub>ɪ</sub>	IPA 508: U+2016 <sub>ɪ</sub>
[w]	IPA 170: U+0077 <sub>w</sub>	IPA 420: U+02B7 <sub>w</sub>		IPA 169: U+028D <sub>ʌ</sub>						
[x]	IPA 140: U+0078 <sub>x</sub>	IPA 292: U+02E3 <sub>x</sub>				IPA 142: U+03C7 <sub>χ</sub>		IPA 211: U+02A6 <sub>ʈs</sub>	IPA 213: U+02A7 <sub>ʈf</sub>	IPA 215: U+02A8 <sub>ʈc</sub>
[y]	IPA 309: U+0079 <sub>y</sub>	IPA 496: U+02B8 <sub>y</sub>	IPA 320: U+028F <sub>ʏ</sub>	IPA 157: U+028E <sub>x</sub>		IPA 321: U+028A <sub>ο</sub>				
[z]	IPA 133: U+007A <sub>z</sub>					IPA 135: U+0292 <sub>ʒ</sub>	IPA 137: U+0290 <sub>ʒ</sub>	IPA 290: U+01BB <sub>ʒ</sub>	IPA 183: U+0291 <sub>ʒ</sub>	IPA 205: U+0293 <sub>ʒ</sub>

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## Annex D (informative)

### Summary of ISO/IEC 10646 characters

#### D.1 ISO/IEC 10646 characters contained in any group, by code point

0020-007E	03A3-03A9	06CC-06CD	207F-2089	2660-2661
00A0-00BF	03B1-03C9	06D0	2090-2093	2663
00C6	03CF-03D2	06D2-06D4	2095-209C	2665-2666
00D0	03D5-03E1	06D6	20A0-20B5	266A-266B
00D7-00D8	03F0-03FF	0E3F	20B8-20B9	266D
00DE-00DF	0402	10D0-1112	20DD	266F
00E6-00E7	0404-0406	1161-1163	2105	2713
00F0	0408-040B	1165-1169	2113-2114	2756
00F7-00F8	040F-044F	116D-116E	2116-2117	2766-2767
00FE	0452	1172-1173	211B	27E8-27EB
0110-0111	0454-0456	1175	2120	2AFD
0126-0127	0458-045B	1D00	2122	2C60-2C66
0130-0133	045F-0475	1D04-1D05	2126	2C6D-2C6E
0138	0478-0489	1D07	212E	2C71-2C73
013F-0142	0490-04C0	1D0A-1D0B	2133	2C7C-2C7D
0149-014B	04C3-04C4	1D0D	2137	2E17-2E18
0152-0153	04C7-04C8	1D0F	214D	2E28-2E29
0166-0167	04CB-04CC	1D18	215B-215E	2E2E
017F-0183	04CF	1D1B-1D1C	2190-2195	2E3A-2E3B
0186-018C	04D4-04D5	1D20-1D22	2197-2198	2E4E
018E-019F	04D8-04D9	1D2C	21A8	A640-A643
01A2-01A6	04E0-04E1	1D2E	21B2	A64A-A64B
01A9	04E8-04E9	1D30-1D31	2200	A650-A651
01AB-01AE	04F6-04F7	1D33-1D3A	2202-2203	A656-A657
01B1-01B9	0510-0513	1D3C	2205-2206	A717-A71C
01BB	0524-0527	1D3E-1D43	2208	A722-A727
01BF-01C3	0531-0556	1D47-1D4A	220F	A730-A731
01DD	055A-055F	1D4D	2211-2212	A75B
01E4-01E5	0561-0587	1D4F-1D50	2215	A788-A78D
01F6-01F7	0589-058A	1D52	2217	A790-A791
021C-021D	058F	1D56-1D58	2219-221A	A796-A797
0220	0591-05C7	1D5B	221E-221F	A7A0-A7AA
0222-0225	05D0-05EA	1D62-1D65	2227-222B	A7AD
0234-0236	05F0-05F4	1D7D	223C	A7F8
023A-023E	060C	1D91	2248	EF0C
0241-02A8	061B	1D9C	2259	EF11
02AE-02B0	061F	1DA0	2260-2261	EF35-EF39
02B2-02B3	0621-063A	1DBB	2264-2265	EF3C
02B7-02C1	0640-0654	1DBF	226A-226B	EF43
02C6-02D1	0659	1DC4-1DC5	2282-2283	EF46
02D4-02DE	066A-066D	1DC8	2295	EF48
02E0-02E9	0670-0671	1DCA	2297	EF66
02EC	0679	1DFD	2300	EF76-EF77
02EE	067C	1E9E	2302	EF7B-EF7C
02F3-02F4	067E	1FBD-1FC0	2310-2311	EF85-EF87
02F7	0681	1FEF	2423	F858-F859
02F9	0685-0686	1FFD-1FFE	25A0-25A1	F87C-F87D

## ISO/IEC 9995-9:2016(E)

0300-0304	0688-0689	2000	25A3	F891
0306-0314	0691	2007	25AA-25AC	F898-F899
0316-0332	0693	2009	25B2	F89E
0334-033D	0696	200C-2024	25BA	F8C4
0342	0698	2026-2027	25BC	F8C6
0345	069A	202F-2030	25C4	FB01-FB02
0347	06A9	2032-2036	25C8-25CC	FB13-FB17
034F	06AB	2039-2040	25CF	FB1E
0358	06AF	2044	25E6	FB29
035C	06B7	204A	260E	FB4F
035F-0361	06BA	2052-2053	2619	FD3E-FD3F
0370-0377	06BC	2056	261C	FFFD
037A-037F	06BE	2058-2059	261E	
0384	06C0-06C3	205E	2639-263C	
0387	06C7	2070-2071	2640	
0391-03A1	06C9	2074-2079	2642	

## D.2 ISO/IEC 10646 characters contained in any group and precomposed characters enterable by diacritic sequences

NOTE These lists excludes characters included only for compatibility (Group YY) by code point

### D.2.1 Digits, punctuation and symbols

0020-0026	2018-201A	2117	2217	25E6
0028-002E	201C-201E	2120	221A	2619
0030-0040	2020-2022	2122	221E-221F	2639-263A
005B-0060	2026-2027	2126	2227-222B	2640
007B-007E	202F-2030	212B	223C	2642
00A0-00AE	2032-2033	212E	2241	266A-266B
00B0-00B3	2035-2036	2133	2248-2249	266D
00B5-00BF	2039-203B	214D	2259	266F
00D7	203D	215B-215E	2260-2262	2713
00F7	203F-2040	2190-2194	2264-2265	2766-2767
02C8	2044	2197-2198	226A-226B	27E8-27EB
02CC-02CD	204A	219A-219B	226E-2271	2AFD
02D0	2052-2053	21AE	2282-2285	2E18
03A9	2070	21B2	2295	2E28-2E29
0E3F	2074-2079	2200	2297	2E2E
10FD-10FF	2080-2089	2202-2206	2300	2E3A-2E3B
2000	20A0-20A4	2208-2209	2310	2E4E
2007	20A6-20B5	220F	2423	FD3E-FD3F
2009	20B8-20B9	2211-2212	25C9-25CC	FFFD
2010-2016	2105	2215	25CF	

### D.2.2 Latin

0041-005A	0262-0263	0300-0304	1D4D	2E17
0061-007A	0265-0266	0306-0314	1D4F-1D50	A717-A71A
00AF	0268-026C	031B	1D52	A722-A727
00B4	026F	0323-0329	1D56-1D58	A730-A731
00C0-00D6	0271-0272	032D-032E	1D5B	A788-A78D
00D8-00E6	0274-0275	0330-0332	1D62-1D65	A790-A791
00E8-00F6	027C-027D	0335-0338	1D7D	A796-A797
00F8-0131	0280	0347	1D9C	A7A0-A7AA
0134-013E	0283	0358	1DA0	A7AD
0141-0148	0288-028C	035C	1DBB	EF0C

014A-0183	028F	035F-0361	1DBF	EF11
0186-018C	0292	1D00	1DCA	EF35-EF39
018E-01A6	0294-0295	1D04-1D05	1DFD	EF3C
01A9	0298-0299	1D07	1E00-1E99	EF43
01AC-01B9	029C	1D0A-1D0B	1E9B	EF46
01BF-01C3	029F	1D0D	1E9E	EF48
01CD-01F0	02B0	1D0F	1EA0-1EF9	EF66
01F4-0220	02B2-02B3	1D18	2071	EF76-EF77
0222-0233	02B7-02C1	1D1B-1D1C	207F	EF7B-EF7C
023A-023E	02C6-02C7	1D20-1D22	2090-2093	EF85-EF87
0241-024F	02C9-02CB	1D2C	2095-209C	F858-F859
0251	02D8-02DD	1D2E	20A5	F87C-F87D
0253-0254	02E1-02E3	1D30-1D31	2116	F891
0256-0257	02EC	1D33-1D3A	2C60-2C66	F898-F899
0259	02EE	1D3C	2C6D-2C6E	F89E
025B	02F3-02F4	1D3E-1D43	2C72-2C73	F8C4
0260	02F7	1D47-1D4A	2C7C-2C7D	F8C6

### D.2.3 Greek

0300-0301	037F	1F00-1F15	1F5D	1FDD-1FEE
0308	0384-0386	1F18-1F1D	1F5F-1F7D	1FF2-1FF4
0313-0314	0388-038A	1F20-1F45	1F80-1FB4	1FF6-1FFC
0342	038C	1F48-1F4D	1FB6-1FBD	1FFE
0344-0345	038E-03A1	1F50-1F57	1FBF-1FC4	2059
0370-0377	03A3-03E1	1F59	1FC6-1FD3	
037A-037D	03F0-03FF	1F5B	1FD6-1FDB	

### D.2.4 Cyrillic

0300-0301	030F	04CF-04F9	2056	A650-A651
0304	0400-0489	0510-0513	2058-2059	A656-A657
0306	0490-04C4	0524-0527	20DD	
0308	04C7-04C8	0589	A640-A643	
030B	04CB-04CC	10FB	A64A-A64B	

### D.2.5 Armenian

0531-0556	0561-0587	058F	FB13-FB17
055A-055F	0589-058A	2024	

### D.2.6 Georgian

0589	10D0-10FC
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### D.2.7 Hebrew

0027	034F	200C-200D	FB3E
002F	0591-05C7	FB1D-FB1F	FB40-FB41
0300-0301	05D0-05EA	FB29-FB36	FB43-FB44
0307-0308	05F0-05F4	FB38-FB3C	FB46-FB4F

**D.2.8 Arabic**

060C	0670-0671	0691	06AF	06C9
061B	0679	0693	06B7	06CC-06CD
061F	067C	0696	06BA	06D0
0621-063A	067E	0698	06BC	06D2-06D4
0640-0654	0681	069A	06BE	06D6
0659	0685-0686	06A9	06C0-06C3	200C-200F
066A-066D	0688-0689	06AB	06C7	

**D.2.9 Korean**

1100-1112	1165-1169	1172-1173
1161-1163	116D-116E	1175

**D.2.10 IPA**

0028-0029	0199	02BB-02BC	0316-031A	1DBF
002C	019B	02C8	031C-0325	1DC4-1DC5
002E-002F	019E	02CC	0329-032C	1DC8
005B	01A5	02CE-02D1	032F-0330	2016
005D	01AB	02D4-02D7	0334	203F
0061-007D	01AD	02DE	0339-033D	207F
00E6-00E7	01BB	02E0-02E9	0361	2197-2198
00F0	01C0-01C3	02F9	03B2	2C71
00F8	0234-0236	0300-0304	03B8	2E28-2E29
0127	0250-02A8	0306-0308	03BB	A71B-A71C
014B	02AE-02B0	030A-030C	03C7	A7F8
0153	02B2	030F	1D4A	
0188	02B7-02B8	0311	1D91	

NOTE Regarding tone letters U+02E5-02E9, the combinations listed on p.252 of the printed Unicode Standard 5.0 is possible.

**D.2.11 Included only for compatibility reasons**

0132-0133	201B	2137	25B2	2660-2661
013F-0140	201F	2195	25BA	2663
0149	2023	21A8	25BC	2665-2666
037E	2034	2219	25C4	2756
0387	203C	2302	25C8	A75B
1FBE	203E	2311	260E	FB01-FB02
1FEF	205E	25A0-25A1	261C	
1FFD	2113-2114	25A3	261E	
2017	211B	25AA-25AC	263B-263C	

## Annex E (informative)

### List of enterable ISO/IEC 10646 characters

- Column IPA: IPA code (if any). - Column "U+...": ISO/IEC 10646 value.
- Characters deliberately not included as enterable are marked by "x".
- Characters replaced by their ISO/IEC 10646 decomposition are marked by "=".
- Characters included only for compatibility (Group YY) are marked by "y".
- Other characters contained in MES-1, MES-2, WGL4 but not enterable are marked with an asterisk.
- Column "124X": Character contained in MES-1, MES-2, WGL4, or in a special script (L=Latin, G=Greek, c=Cyrillic, Q=Armenian, W=Georgian, H=Hebrew, A=Arabic, K=Korean)
- Column "Entered by": Group + Level digit + "-" + Key ("#" means SPACE);
- Alternatives denoted by ";", sequences denoted by ""
- IPA input (Special Mode "I") denoted by "i~" + letter + digit;
- Column "Name": ISO/IEC 10646 name (followed by a remark if deliberately not enterable) followed by IPA name and purpose (if applicable).

IPA	U+...	124X	Entered by	Name
0020	124-	L1-#; L2-#	.....	SPACE
0021	124-	YU2-1	.....	EXCLAMATION MARK
0022	124-	YU1-2	.....	QUOTATION MARK
0023	124-	YP1-q	.....	NUMBER SIGN
0024	124-	YP1-s	.....	DOLLAR SIGN
0025	124-	YU2-5	.....	PERCENT SIGN
0026	124-	YU2-7	.....	AMPERSAND
0027	124H	HE2-S; YU1-1	.....	APOSTROPHE
906 0028	124-	DJ1-x; YU2-9	.....	LEFT PARENTHESIS
				Left parenthesis; Silent articulation
(Mouthing)				
907 0029	124-	DJ1-c; YU2-0	.....	RIGHT PARENTHESIS
				Right parenthesis; Silent articulation
(Mouthing)				
002A	124-	YU2-8	.....	ASTERISK
002B	124-	YU1-5	.....	PLUS SIGN
491 002C	124-	DS2-A; DJ2-A; YU1-8	.....	COMMA
				Comma; Pause (comma)
002D	124-	YU1-4	.....	HYPHEN-MINUS
506 002E	124-	DS2-S; DJ2-S; YU1-9	.....	FULL STOP
				Period; Syllable break
903 002F	124H	DJ1-b; HE2-A; YU1-3	.....	SOLIDUS
				Slash; Begin/ end phonemic transcription
0030	124-	L1-0	.....	DIGIT ZERO

0031	124-	L1-1	....	....	....	....	DIGIT ONE
0032	124-	L1-2	....	....	....	....	DIGIT TWO
0033	124-	L1-3	....	....	....	....	DIGIT THREE
0034	124-	L1-4	....	....	....	....	DIGIT FOUR
0035	124-	L1-5	....	....	....	....	DIGIT FIVE
0036	124-	L1-6	....	....	....	....	DIGIT SIX
0037	124-	L1-7	....	....	....	....	DIGIT SEVEN
0038	124-	L1-8	....	....	....	....	DIGIT EIGHT
0039	124-	L1-9	....	....	....	....	DIGIT NINE
003A	124-	YU1-7	....	....	....	....	COLON
003B	124-	YU1-6	....	....	....	....	SEMICOLON
003C	124-	YU2-3	....	....	....	....	LESS-THAN SIGN
003D	124-	YU2-6	....	....	....	....	EQUALS SIGN
003E	124-	YU2-4	....	....	....	....	GREATER-THAN SIGN
003F	124-	YU2-2	....	....	....	....	QUESTION MARK
0040	124-	YP1-a	....	....	....	....	COMMERCIAL AT
0041	124L	L2-A	....	....	....	....	LATIN CAPITAL LETTER A
0042	124L	L2-B	....	....	....	....	LATIN CAPITAL LETTER B
0043	124L	L2-C	....	....	....	....	LATIN CAPITAL LETTER C
0044	124L	L2-D	....	....	....	....	LATIN CAPITAL LETTER D
0045	124L	L2-E	....	....	....	....	LATIN CAPITAL LETTER E
0046	124L	L2-F	....	....	....	....	LATIN CAPITAL LETTER F
0047	124L	L2-G	....	....	....	....	LATIN CAPITAL LETTER G
0048	124L	L2-H	....	....	....	....	LATIN CAPITAL LETTER H
0049	124L	L2-I	....	....	....	....	LATIN CAPITAL LETTER I
004A	124L	L2-J	....	....	....	....	LATIN CAPITAL LETTER J
004B	124L	L2-K	....	....	....	....	LATIN CAPITAL LETTER K
004C	124L	L2-L	....	....	....	....	LATIN CAPITAL LETTER L
004D	124L	L2-M	....	....	....	....	LATIN CAPITAL LETTER M
004E	124L	L2-N	....	....	....	....	LATIN CAPITAL LETTER N
004F	124L	L2-O	....	....	....	....	LATIN CAPITAL LETTER O
0050	124L	L2-P	....	....	....	....	LATIN CAPITAL LETTER P
0051	124L	L2-Q	....	....	....	....	LATIN CAPITAL LETTER Q
0052	124L	L2-R	....	....	....	....	LATIN CAPITAL LETTER R
0053	124L	L2-S	....	....	....	....	LATIN CAPITAL LETTER S
0054	124L	L2-T	....	....	....	....	LATIN CAPITAL LETTER T
0055	124L	L2-U	....	....	....	....	LATIN CAPITAL LETTER U
0056	124L	L2-V	....	....	....	....	LATIN CAPITAL LETTER V
0057	124L	L2-W	....	....	....	....	LATIN CAPITAL LETTER W
0058	124L	L2-X	....	....	....	....	LATIN CAPITAL LETTER X
0059	124L	L2-Y	....	....	....	....	LATIN CAPITAL LETTER Y
005A	124L	L2-Z	....	....	....	....	LATIN CAPITAL LETTER Z
901	005B	124-	DJ1-h; YP1-t; i~b8	....	....	....	LEFT SQUARE BRACKET Left square bracket; Begin phonetic transcription
902	005D	124-	DJ1-j; YP1-y; i~b9	....	....	....	RIGHT SQUARE BRACKET Right square bracket; End phonetic transcription
005E	124-	YP1-p	....	....	....	....	CIRCUMFLEX ACCENT
005F	124-	YU1-0	....	....	....	....	LOW LINE
0060	124-	YP1-w	....	....	....	....	GRAVE ACCENT
304	0061	124L	L1-a; i~a0	....	....	....	LATIN SMALL LETTER A Lower-case A; Open front unrounded vowel
102	0062	124L	L1-b; i~b0	....	....	....	LATIN SMALL LETTER B Lower-case B; Voiced bilabial plosive
107	0063	124L	L1-c; i~c0	....	....	....	LATIN SMALL LETTER C Lower-case C; Voiceless palatal plosive
104	0064	124L	K2-0; L1-d; i~d0	....	....	....	LATIN SMALL LETTER D Lower-case D; Voiced dental or alveolar plosive
302	0065	124L	L1-e; i~e0	....	....	....	LATIN SMALL LETTER E Lower-case E; Close-mid front unrounded vowel
128	0066	124L	L1-f; i~f0	....	....	....	LATIN SMALL LETTER F Lower-case F; Voiceless labiodental fricative

210	0067	124L	L1-g;	i~g0	....	....	....	LATIN SMALL LETTER G Looptail G; Voiced velar plosive
146	0068	124L	L1-h;	i~h0	....	....	....	LATIN SMALL LETTER H Lower-case H; Voiceless glottal fricative
301	0069	124L	L1-i;	i~i0	....	....	....	LATIN SMALL LETTER I Lower-case I; Close front unrounded vowel
153	006A	124L	L1-j;	i~j0	....	....	....	LATIN SMALL LETTER J Lower-case J; Voiced palatal approximant
109	006B	124L	L1-k;	i~k0	....	....	....	LATIN SMALL LETTER K Lower-case K; Voiceless velar plosive
155	006C	124L	L1-l;	i~l0	....	....	....	LATIN SMALL LETTER L Lower-case L; Voiced dental or alveolar lateral approximant
114	006D	124L	L1-m;	i~m0	....	....	....	LATIN SMALL LETTER M Lower-case M; Voiced bilabial nasal
116	006E	124L	L1-n;	i~n0	....	....	....	LATIN SMALL LETTER N Lower-case N; Voiced dental or alveolar nasal
307	006F	124L	L1-o;	i~o0	....	....	....	LATIN SMALL LETTER O Lower-case O; Close mid back rounded vowel
101	0070	124L	L1-p;	i~p0	....	....	....	LATIN SMALL LETTER P Lower-case P; Voiceless bilabial plosive
111	0071	124L	L1-q;	i~q0	....	....	....	LATIN SMALL LETTER Q Lower-case Q; Voiceless uvular plosive
122	0072	124L	L1-r;	i~r0	....	....	....	LATIN SMALL LETTER R Lower-case R; Voiced dental or alveolar trill
132	0073	124L	L1-s;	i~s0	....	....	....	LATIN SMALL LETTER S Lower-case S; Voiceless alveolar fricative
103	0074	124L	L1-t;	i~t0	....	....	....	LATIN SMALL LETTER T Lower-case T; Voiceless dental or alveolar plosive
308	0075	124L	L1-u;	i~u0	....	....	....	LATIN SMALL LETTER U Lower-case U; Close back rounded vowel
129	0076	124L	L1-v;	i~v0	....	....	....	LATIN SMALL LETTER V Lower-case V; Voiced labiodental fricative
170	0077	124L	L1-w;	i~w0	....	....	....	LATIN SMALL LETTER W Lower-case W; Voiced labial-velar approximant
140	0078	124L	L1-x;	i~x0	....	....	....	LATIN SMALL LETTER X Lower-case X; Voiceless velar fricative
309	0079	124L	L1-y;	i~y0	....	....	....	LATIN SMALL LETTER Y Lower-case Y; Close front rounded vowel
133	007A	124L	L1-z;	i~z0	....	....	....	LATIN SMALL LETTER Z Lower-case Z; Voiced alveolar fricative
910	007B	124-	DJ2-H;	YP1-u	....	....	....	LEFT CURLY BRACKET Left brace; Begin prosodic notation
507	007C	124-	DJ1-n;	YP1-r;	i~v8	....	....	VERTICAL LINE Vertical line (thick); Minor (foot) group
911	007D	124-	DJ2-J;	YP1-i	....	....	....	RIGHT CURLY BRACKET Right brace; End prosodic notation
007E	124-	YP1-o	....	....	....	....	....	TILDE
00A0	124-	YS1-#	....	....	....	....	....	NO-BREAK SPACE
00A1	124-	YS1-w	....	....	....	....	....	INVERTED EXCLAMATION MARK
00A2	124-	YC1-c	....	....	....	....	....	CENT SIGN
00A3	124-	YC1-l	....	....	....	....	....	POUND SIGN
00A4	124-	YS2-J	....	....	....	....	....	CURRENCY SIGN
00A5	124-	YC1-y	....	....	....	....	....	YEN SIGN
00A6	124-	YM2-K	....	....	....	....	....	BROKEN BAR
00A7	124-	YS1-i	....	....	....	....	....	SECTION SIGN
00A8	124-	DS1-e	....	....	....	....	....	DIAERESIS
00A9	124-	YS2-C	....	....	....	....	....	COPYRIGHT SIGN
00AA	124-	YS1-a	....	....	....	....	....	FEMININE ORDINAL INDICATOR
00AB	124-	YP1-l	....	....	....	....	....	LEFT-POINTING DOUBLE ANGLE QUOTATION MARK
00AC	124-	YM1-n	....	....	....	....	....	NOT SIGN
00AD	124-	YP2-V	....	....	....	....	....	SOFT HYPHEN
00AE	124-	YS2-R	....	....	....	....	....	REGISTERED SIGN
00AF	124L	DM1-4	....	....	....	....	....	MACRON

00B0	124-	YS1-r	....	....	....	....	DEGREE SIGN
00B1	124-	YS1-q	....	....	....	....	PLUS-MINUS SIGN
00B2	124-	YT1-2	....	....	....	....	SUPERSCRIP TWO
00B3	124-	YT1-3	....	....	....	....	SUPERSCRIP THREE
00B4	124L	DM1-1	....	....	....	....	ACUTE ACCENT
00B5	124-	YS1-m	....	....	....	....	MICRO SIGN
00B6	124-	YS1-p	....	....	....	....	PILCROW SIGN
00B7	124-	CZ2-D; YP1-d	....	....	....	....	MIDDLE DOT
00B8	124-	DS2-0	....	....	....	....	CEDILLA
00B9	124-	YT1-1	....	....	....	....	SUPERSCRIP ONE
00BA	124-	YS1-o	....	....	....	....	MASCULINE ORDINAL INDICATOR
00BB	124-	YP1-z	....	....	....	....	RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK
00BC	124-	YP2-R	....	....	....	....	VULGAR FRACTION ONE QUARTER
00BD	124-	YP2-T	....	....	....	....	VULGAR FRACTION ONE HALF
00BE	124-	YP2-Y	....	....	....	....	VULGAR FRACTION THREE QUARTERS
00BF	124-	YS1-e	....	....	....	....	INVERTED QUESTION MARK
00C0	124L	....	L2-A'	DD1-w	....	....	LATIN CAPITAL LETTER A WITH GRAVE
00C1	124L	....	L2-A'	DD1-q	....	....	LATIN CAPITAL LETTER A WITH ACUTE
00C2	124L	....	L2-A'	DD1-i	....	....	LATIN CAPITAL LETTER A WITH CIRCUMFLEX
00C3	124L	....	L2-A'	DD1-r	....	....	LATIN CAPITAL LETTER A WITH TILDE
00C4	124L	....	L2-A'	DD1-e	....	....	LATIN CAPITAL LETTER A WITH DIAERESIS
00C5	124L	....	L2-A'	DD1-p	....	....	LATIN CAPITAL LETTER A WITH RING ABOVE
00C6	124L	LE2-A	....	....	....	....	LATIN CAPITAL LETTER AE
00C7	124L	....	L2-C'	DD2-0	....	....	LATIN CAPITAL LETTER C WITH CEDILLA
00C8	124L	....	L2-E'	DD1-w	....	....	LATIN CAPITAL LETTER E WITH GRAVE
00C9	124L	....	L2-E'	DD1-q	....	....	LATIN CAPITAL LETTER E WITH ACUTE
00CA	124L	....	L2-E'	DD1-i	....	....	LATIN CAPITAL LETTER E WITH CIRCUMFLEX
00CB	124L	....	L2-E'	DD1-e	....	....	LATIN CAPITAL LETTER E WITH DIAERESIS
00CC	124L	....	L2-I'	DD1-w	....	....	LATIN CAPITAL LETTER I WITH GRAVE
00CD	124L	....	L2-I'	DD1-q	....	....	LATIN CAPITAL LETTER I WITH ACUTE
00CE	124L	....	L2-I'	DD1-i	....	....	LATIN CAPITAL LETTER I WITH CIRCUMFLEX
00CF	124L	....	L2-I'	DD1-e	....	....	LATIN CAPITAL LETTER I WITH DIAERESIS
00D0	124L	LE2-D	....	....	....	....	LATIN CAPITAL LETTER ETH
00D1	124L	....	L2-N'	DD1-r	....	....	LATIN CAPITAL LETTER N WITH TILDE
00D2	124L	....	L2-O'	DD1-w	....	....	LATIN CAPITAL LETTER O WITH GRAVE
00D3	124L	....	L2-O'	DD1-q	....	....	LATIN CAPITAL LETTER O WITH ACUTE
00D4	124L	....	L2-O'	DD1-i	....	....	LATIN CAPITAL LETTER O WITH CIRCUMFLEX
00D5	124L	....	L2-O'	DD1-r	....	....	LATIN CAPITAL LETTER O WITH TILDE
00D6	124L	....	L2-O'	DD1-e	....	....	LATIN CAPITAL LETTER O WITH DIAERESIS
00D7	124-	YS1-x	....	....	....	....	MULTIPLICATION SIGN
00D8	124L	LX2-0	....	....	....	....	LATIN CAPITAL LETTER O WITH STROKE
00D9	124L	....	L2-U'	DD1-w	....	....	LATIN CAPITAL LETTER U WITH GRAVE
00DA	124L	....	L2-U'	DD1-q	....	....	LATIN CAPITAL LETTER U WITH ACUTE
00DB	124L	....	L2-U'	DD1-i	....	....	LATIN CAPITAL LETTER U WITH CIRCUMFLEX
00DC	124L	....	L2-U'	DD1-e	....	....	LATIN CAPITAL LETTER U WITH DIAERESIS
00DD	124L	....	L2-Y'	DD1-q	....	....	LATIN CAPITAL LETTER Y WITH ACUTE
00DE	124L	LE2-T	....	....	....	....	LATIN CAPITAL LETTER THORN
00DF	124L	LE1-y	....	....	....	....	LATIN SMALL LETTER SHARP S
00E0	124L	....	L1-a'	DD1-w	....	....	LATIN SMALL LETTER A WITH GRAVE
00E1	124L	....	L1-a'	DD1-q	....	....	LATIN SMALL LETTER A WITH ACUTE
00E2	124L	....	L1-a'	DD1-i	....	....	LATIN SMALL LETTER A WITH CIRCUMFLEX
00E3	124L	....	L1-a'	DD1-r	....	....	LATIN SMALL LETTER A WITH TILDE
00E4	124L	....	L1-a'	DD1-e	....	....	LATIN SMALL LETTER A WITH DIAERESIS
00E5	124L	....	L1-a'	DD1-p	....	....	LATIN SMALL LETTER A WITH RING ABOVE
325 00E6	124L	LE1-a; i~a9	....	....	....	....	LATIN SMALL LETTER AE Ash, Lower-case A-E ligature; Near-open front
unrounded vowel							
138 00E7	124L	L1-c'	DD2-0'	i~c5	....	....	LATIN SMALL LETTER C WITH CEDILLA C cedilla; Voiceless palatal fricative
00E8	124L	....	L1-e'	DD1-w	....	....	LATIN SMALL LETTER E WITH GRAVE
00E9	124L	....	L1-e'	DD1-q	....	....	LATIN SMALL LETTER E WITH ACUTE
00EA	124L	....	L1-e'	DD1-i	....	....	LATIN SMALL LETTER E WITH CIRCUMFLEX
00EB	124L	....	L1-e'	DD1-e	....	....	LATIN SMALL LETTER E WITH DIAERESIS
00EC	124L	....	L1-i'	DD1-w	....	....	LATIN SMALL LETTER I WITH GRAVE
00ED	124L	....	L1-i'	DD1-q	....	....	LATIN SMALL LETTER I WITH ACUTE

	00EE	124L	....	L1-i'	DD1-i	....	....	LATIN SMALL LETTER I WITH CIRCUMFLEX
	00EF	124L	....	L1-i'	DD1-e	....	....	LATIN SMALL LETTER I WITH DIAERESIS
131	00F0	124L	LE1-d;	i~d5	....	....	....	LATIN SMALL LETTER ETH Eth; Voiced dental fricative
	00F1	124L	....	L1-n'	DD1-r	....	....	LATIN SMALL LETTER N WITH TILDE
	00F2	124L	....	L1-o'	DD1-w	....	....	LATIN SMALL LETTER O WITH GRAVE
	00F3	124L	....	L1-o'	DD1-q	....	....	LATIN SMALL LETTER O WITH ACUTE
	00F4	124L	....	L1-o'	DD1-i	....	....	LATIN SMALL LETTER O WITH CIRCUMFLEX
	00F5	124L	....	L1-o'	DD1-r	....	....	LATIN SMALL LETTER O WITH TILDE
	00F6	124L	....	L1-o'	DD1-e	....	....	LATIN SMALL LETTER O WITH DIAERESIS
	00F7	124-	YS2-G	....	....	....	....	DIVISION SIGN
310	00F8	124L	LX1-o;	i~o8	....	....	....	LATIN SMALL LETTER O WITH STROKE Slashed O; Close-mid front rounded vowel
	00F9	124L	....	L1-u'	DD1-w	....	....	LATIN SMALL LETTER U WITH GRAVE
	00FA	124L	....	L1-u'	DD1-q	....	....	LATIN SMALL LETTER U WITH ACUTE
	00FB	124L	....	L1-u'	DD1-i	....	....	LATIN SMALL LETTER U WITH CIRCUMFLEX
	00FC	124L	....	L1-u'	DD1-e	....	....	LATIN SMALL LETTER U WITH DIAERESIS
	00FD	124L	....	L1-y'	DD1-q	....	....	LATIN SMALL LETTER Y WITH ACUTE
	00FE	124L	LE1-t	....	....	....	....	LATIN SMALL LETTER THORN
	00FF	124L	....	L1-y'	DD1-e	....	....	LATIN SMALL LETTER Y WITH DIAERESIS
	0100	124L	....	L2-A'	DD1-d	....	....	LATIN CAPITAL LETTER A WITH MACRON
	0101	124L	....	L1-a'	DD1-d	....	....	LATIN SMALL LETTER A WITH MACRON
	0102	124L	....	L2-A'	DD1-y	....	....	LATIN CAPITAL LETTER A WITH BREVE
	0103	124L	....	L1-a'	DD1-y	....	....	LATIN SMALL LETTER A WITH BREVE
	0104	124L	....	L2-A'	DD2-w	....	....	LATIN CAPITAL LETTER A WITH OGONEK
	0105	124L	....	L1-a'	DD2-w	....	....	LATIN SMALL LETTER A WITH OGONEK
	0106	124L	....	L2-C'	DD1-q	....	....	LATIN CAPITAL LETTER C WITH ACUTE
	0107	124L	....	L1-c'	DD1-q	....	....	LATIN SMALL LETTER C WITH ACUTE
	0108	124L	....	L2-C'	DD1-i	....	....	LATIN CAPITAL LETTER C WITH CIRCUMFLEX
	0109	124L	....	L1-c'	DD1-i	....	....	LATIN SMALL LETTER C WITH CIRCUMFLEX
	010A	124L	....	L2-C'	DD1-s	....	....	LATIN CAPITAL LETTER C WITH DOT ABOVE
	010B	124L	....	L1-c'	DD1-s	....	....	LATIN SMALL LETTER C WITH DOT ABOVE
	010C	124L	....	L2-C'	DD1-u	....	....	LATIN CAPITAL LETTER C WITH CARON
	010D	124L	....	L1-c'	DD1-u	....	....	LATIN SMALL LETTER C WITH CARON
	010E	124L	....	L2-D'	DD1-u	....	....	LATIN CAPITAL LETTER D WITH CARON
	010F	124L	....	K2-O'	DD1-u	....	....	LATIN SMALL LETTER D WITH CARON
	0110	124L	LZ2-D	....	....	....	....	LATIN CAPITAL LETTER D WITH STROKE
	0111	124L	LZ1-d	....	....	....	....	LATIN SMALL LETTER D WITH STROKE
	0112	124L	....	L2-E'	DD1-d	....	....	LATIN CAPITAL LETTER E WITH MACRON
	0113	124L	....	L1-e'	DD1-d	....	....	LATIN SMALL LETTER E WITH MACRON
	0114	-24L	....	L2-E'	DD1-y	....	....	LATIN CAPITAL LETTER E WITH BREVE
	0115	-24L	....	L1-e'	DD1-y	....	....	LATIN SMALL LETTER E WITH BREVE
	0116	124L	....	L2-E'	DD1-s	....	....	LATIN CAPITAL LETTER E WITH DOT ABOVE
	0117	124L	....	L1-e'	DD1-s	....	....	LATIN SMALL LETTER E WITH DOT ABOVE
	0118	124L	....	L2-E'	DD2-w	....	....	LATIN CAPITAL LETTER E WITH OGONEK
	0119	124L	....	L1-e'	DD2-w	....	....	LATIN SMALL LETTER E WITH OGONEK
	011A	124L	....	L2-E'	DD1-u	....	....	LATIN CAPITAL LETTER E WITH CARON
	011B	124L	....	L1-e'	DD1-u	....	....	LATIN SMALL LETTER E WITH CARON
	011C	124L	....	L2-G'	DD1-i	....	....	LATIN CAPITAL LETTER G WITH CIRCUMFLEX
	011D	124L	....	L1-g'	DD1-i	....	....	LATIN SMALL LETTER G WITH CIRCUMFLEX
	011E	124L	....	L2-G'	DD1-y	....	....	LATIN CAPITAL LETTER G WITH BREVE
	011F	124L	....	L1-g'	DD1-y	....	....	LATIN SMALL LETTER G WITH BREVE
	0120	124L	....	L2-G'	DD1-s	....	....	LATIN CAPITAL LETTER G WITH DOT ABOVE
	0121	124L	....	L1-g'	DD1-s	....	....	LATIN SMALL LETTER G WITH DOT ABOVE
	0122	124L	....	L2-G'	DD2-0	....	....	LATIN CAPITAL LETTER G WITH CEDILLA
	0123	124L	....	L1-g'	DD2-0	....	....	LATIN SMALL LETTER G WITH CEDILLA
	0124	124L	....	L2-H'	DD1-i	....	....	LATIN CAPITAL LETTER H WITH CIRCUMFLEX
	0125	124L	....	L1-h'	DD1-i	....	....	LATIN SMALL LETTER H WITH CIRCUMFLEX
	0126	124L	LZ2-H	....	....	....	....	LATIN CAPITAL LETTER H WITH STROKE
144	0127	124L	LZ1-h;	i~h7	....	....	....	LATIN SMALL LETTER H WITH STROKE Barred H; Voiceless pharyngeal fricative
	0128	124L	....	L2-I'	DD1-r	....	....	LATIN CAPITAL LETTER I WITH TILDE
	0129	124L	....	L1-i'	DD1-r	....	....	LATIN SMALL LETTER I WITH TILDE
	012A	124L	....	L2-I'	DD1-d	....	....	LATIN CAPITAL LETTER I WITH MACRON
	012B	124L	....	L1-i'	DD1-d	....	....	LATIN SMALL LETTER I WITH MACRON

012C	-24L	....	L2-I'	DD1-y	....	....	LATIN CAPITAL LETTER I WITH BREVE
012D	-24L	....	L1-i'	DD1-y	....	....	LATIN SMALL LETTER I WITH BREVE
012E	124L	....	L2-I'	DD2-W	....	....	LATIN CAPITAL LETTER I WITH OGONEK
012F	124L	....	L1-i'	DD2-W	....	....	LATIN SMALL LETTER I WITH OGONEK
0130	124L	LE2-I;	L2-I'	DD1-s	....	....	LATIN CAPITAL LETTER I WITH DOT ABOVE
0131	124L	LE1-i	....	....	....	....	LATIN SMALL LETTER DOTLESS I
0132y	124L	YY2-I	....	....	....	....	LATIN CAPITAL LIGATURE IJ
0133y	124L	YY1-i	....	....	....	....	LATIN SMALL LIGATURE IJ
0134	124L	....	L2-J'	DD1-i	....	....	LATIN CAPITAL LETTER J WITH CIRCUMFLEX
0135	124L	....	L1-j'	DD1-i	....	....	LATIN SMALL LETTER J WITH CIRCUMFLEX
0136	124L	....	L2-K'	DD2-0	....	....	LATIN CAPITAL LETTER K WITH CEDILLA
0137	124L	....	L1-k'	DD2-0	....	....	LATIN SMALL LETTER K WITH CEDILLA
0138	124L	LQ1-k	....	....	....	....	LATIN SMALL LETTER KRA
0139	124L	....	L2-L'	DD1-q	....	....	LATIN CAPITAL LETTER L WITH ACUTE
013A	124L	....	L1-l'	DD1-q	....	....	LATIN SMALL LETTER L WITH ACUTE
013B	124L	....	L2-L'	DD2-0	....	....	LATIN CAPITAL LETTER L WITH CEDILLA
013C	124L	....	L1-l'	DD2-0	....	....	LATIN SMALL LETTER L WITH CEDILLA
013D	124L	....	L2-L'	DD1-u	....	....	LATIN CAPITAL LETTER L WITH CARON
013E	124L	....	L1-l'	DD1-u	....	....	LATIN SMALL LETTER L WITH CARON
013Fy	124L	YY2-L	....	....	....	....	LATIN CAPITAL LETTER L WITH MIDDLE DOT
0140y	124L	YY1-l	....	....	....	....	LATIN SMALL LETTER L WITH MIDDLE DOT
0141	124L	LX2-L	....	....	....	....	LATIN CAPITAL LETTER L WITH STROKE
0142	124L	LX1-l	....	....	....	....	LATIN SMALL LETTER L WITH STROKE
0143	124L	....	L2-N'	DD1-q	....	....	LATIN CAPITAL LETTER N WITH ACUTE
0144	124L	....	L1-n'	DD1-q	....	....	LATIN SMALL LETTER N WITH ACUTE
0145	124L	....	L2-N'	DD2-0	....	....	LATIN CAPITAL LETTER N WITH CEDILLA
0146	124L	....	L1-n'	DD2-0	....	....	LATIN SMALL LETTER N WITH CEDILLA
0147	124L	....	L2-N'	DD1-u	....	....	LATIN CAPITAL LETTER N WITH CARON
0148	124L	....	L1-n'	DD1-u	....	....	LATIN SMALL LETTER N WITH CARON
0149y	124L	YY1-n	....	....	....	....	LATIN SMALL LETTER N PRECEDED BY APOSTROPHE
014A	124L	LE2-N	....	....	....	....	LATIN CAPITAL LETTER ENG
119 014B	124L	LE1-n;	i~n6	....	....	....	LATIN SMALL LETTER ENG Eng; Voiced velar nasal
014C	124L	....	L2-O'	DD1-d	....	....	LATIN CAPITAL LETTER O WITH MACRON
014D	124L	....	L1-o'	DD1-d	....	....	LATIN SMALL LETTER O WITH MACRON
014E	-24L	....	L2-O'	DD1-y	....	....	LATIN CAPITAL LETTER O WITH BREVE
014F	-24L	....	L1-o'	DD1-y	....	....	LATIN SMALL LETTER O WITH BREVE
0150	124L	....	L2-O'	DD1-t	....	....	LATIN CAPITAL LETTER O WITH DOUBLE ACUTE
0151	124L	....	L1-o'	DD1-t	....	....	LATIN SMALL LETTER O WITH DOUBLE ACUTE
0152	124L	LE2-0	....	....	....	....	LATIN CAPITAL LIGATURE OE
311 0153	124L	LE1-o;	i~o9	....	....	....	LATIN SMALL LIGATURE OE Lower-case O-E ligature; Open-mid front
rounded vowel							
0154	124L	....	L2-R'	DD1-q	....	....	LATIN CAPITAL LETTER R WITH ACUTE
0155	124L	....	L1-r'	DD1-q	....	....	LATIN SMALL LETTER R WITH ACUTE
0156	124L	....	L2-R'	DD2-0	....	....	LATIN CAPITAL LETTER R WITH CEDILLA
0157	124L	....	L1-r'	DD2-0	....	....	LATIN SMALL LETTER R WITH CEDILLA
0158	124L	....	L2-R'	DD1-u	....	....	LATIN CAPITAL LETTER R WITH CARON
0159	124L	....	L1-r'	DD1-u	....	....	LATIN SMALL LETTER R WITH CARON
015A	124L	....	L2-S'	DD1-q	....	....	LATIN CAPITAL LETTER S WITH ACUTE
015B	124L	....	L1-s'	DD1-q	....	....	LATIN SMALL LETTER S WITH ACUTE
015C	124L	....	L2-S'	DD1-i	....	....	LATIN CAPITAL LETTER S WITH CIRCUMFLEX
015D	124L	....	L1-s'	DD1-i	....	....	LATIN SMALL LETTER S WITH CIRCUMFLEX
015E	124L	....	L2-S'	DD2-0	....	....	LATIN CAPITAL LETTER S WITH CEDILLA
015F	124L	....	L1-s'	DD2-0	....	....	LATIN SMALL LETTER S WITH CEDILLA
0160	124L	....	L2-S'	DD1-u	....	....	LATIN CAPITAL LETTER S WITH CARON
0161	124L	....	L1-s'	DD1-u	....	....	LATIN SMALL LETTER S WITH CARON
0162	124L	....	L2-T'	DD2-0	....	....	LATIN CAPITAL LETTER T WITH CEDILLA
0163	124L	....	L1-t'	DD2-0	....	....	LATIN SMALL LETTER T WITH CEDILLA
0164	124L	....	L2-T'	DD1-u	....	....	LATIN CAPITAL LETTER T WITH CARON
0165	124L	....	L1-t'	DD1-u	....	....	LATIN SMALL LETTER T WITH CARON
0166	124L	LZ2-T	....	....	....	....	LATIN CAPITAL LETTER T WITH STROKE
0167	124L	LZ1-t	....	....	....	....	LATIN SMALL LETTER T WITH STROKE
0168	124L	....	L2-U'	DD1-r	....	....	LATIN CAPITAL LETTER U WITH TILDE
0169	124L	....	L1-u'	DD1-r	....	....	LATIN SMALL LETTER U WITH TILDE

016A	124L	....	L2-U'	DD1-d	....	....	LATIN CAPITAL LETTER U WITH MACRON
016B	124L	....	L1-u'	DD1-d	....	....	LATIN SMALL LETTER U WITH MACRON
016C	124L	....	L2-U'	DD1-y	....	....	LATIN CAPITAL LETTER U WITH BREVE
016D	124L	....	L1-u'	DD1-y	....	....	LATIN SMALL LETTER U WITH BREVE
016E	124L	....	L2-U'	DD1-p	....	....	LATIN CAPITAL LETTER U WITH RING ABOVE
016F	124L	....	L1-u'	DD1-p	....	....	LATIN SMALL LETTER U WITH RING ABOVE
0170	124L	....	L2-U'	DD1-t	....	....	LATIN CAPITAL LETTER U WITH DOUBLE ACUTE
0171	124L	....	L1-u'	DD1-t	....	....	LATIN SMALL LETTER U WITH DOUBLE ACUTE
0172	124L	....	L2-U'	DD2-w	....	....	LATIN CAPITAL LETTER U WITH OGONEK
0173	124L	....	L1-u'	DD2-w	....	....	LATIN SMALL LETTER U WITH OGONEK
0174	124L	....	L2-W'	DD1-i	....	....	LATIN CAPITAL LETTER W WITH CIRCUMFLEX
0175	124L	....	L1-w'	DD1-i	....	....	LATIN SMALL LETTER W WITH CIRCUMFLEX
0176	124L	....	L2-Y'	DD1-i	....	....	LATIN CAPITAL LETTER Y WITH CIRCUMFLEX
0177	124L	....	L1-y'	DD1-i	....	....	LATIN SMALL LETTER Y WITH CIRCUMFLEX
0178	124L	....	L2-Y'	DD1-e	....	....	LATIN CAPITAL LETTER Y WITH DIAERESIS
0179	124L	....	L2-Z'	DD1-q	....	....	LATIN CAPITAL LETTER Z WITH ACUTE
017A	124L	....	L1-z'	DD1-q	....	....	LATIN SMALL LETTER Z WITH ACUTE
017B	124L	....	L2-Z'	DD1-s	....	....	LATIN CAPITAL LETTER Z WITH DOT ABOVE
017C	124L	....	L1-z'	DD1-s	....	....	LATIN SMALL LETTER Z WITH DOT ABOVE
017D	124L	....	L2-Z'	DD1-u	....	....	LATIN CAPITAL LETTER Z WITH CARON
017E	124L	....	L1-z'	DD1-u	....	....	LATIN SMALL LETTER Z WITH CARON
017F	-24L	LE1-s	....	....	....	....	LATIN SMALL LETTER LONG S
0180	---L	LZ1-b	....	....	....	....	LATIN SMALL LETTER B WITH STROKE
0181	---L	LW2-B	....	....	....	....	LATIN CAPITAL LETTER B WITH HOOK
0182	---L	LE2-B	....	....	....	....	LATIN CAPITAL LETTER B WITH TOPBAR
0183	---L	LE1-b	....	....	....	....	LATIN SMALL LETTER B WITH TOPBAR
0186	---L	LE2-K; LS2-0	....	....	....	....	LATIN CAPITAL LETTER OPEN O
0187	---L	LW2-C	....	....	....	....	LATIN CAPITAL LETTER C WITH HOOK
163 0188	---L	LW1-c; i~c4	....	....	....	....	LATIN SMALL LETTER C WITH HOOK Hooktop C; Voiceless palatal implosive
0189	---L	LQ2-D	....	....	....	....	LATIN CAPITAL LETTER AFRICAN D
018A	---L	LS2-D; LW2-D	....	....	....	....	LATIN CAPITAL LETTER D WITH HOOK
018B	---L	LE1-f	....	....	....	....	LATIN CAPITAL LETTER D WITH TOPBAR
018C	---L	LE2-F	....	....	....	....	LATIN SMALL LETTER D WITH TOPBAR
018E	---L	LE2-W; LS2-R	....	....	....	....	LATIN CAPITAL LETTER REVERSED E
018F	-2-L	LE2-E	....	....	....	....	LATIN CAPITAL LETTER SCHWA
0190	---L	LE2-J; LS2-E	....	....	....	....	LATIN CAPITAL LETTER OPEN E
0191	---L	LQ2-F	....	....	....	....	LATIN CAPITAL LETTER F WITH HOOK
0192	-24L	LQ1-f; YC1-f	....	....	....	....	LATIN SMALL LETTER F WITH HOOK
0193	---L	LW2-G	....	....	....	....	LATIN CAPITAL LETTER G WITH HOOK
0194	---L	LS2-G; LQ2-V	....	....	....	....	LATIN CAPITAL LETTER GAMMA
0195	---L	LQ1-y	....	....	....	....	LATIN SMALL LETTER HV
0196	---L	LS2-I; LQ2-I	....	....	....	....	LATIN CAPITAL LETTER IOTA
0197	---L	LZ2-I	....	....	....	....	LATIN CAPITAL LETTER I WITH STROKE
0198	---L	LW2-k	....	....	....	....	LATIN CAPITAL LETTER K WITH HOOK
165 0199	---L	LW1-k; i~k4	....	....	....	....	LATIN SMALL LETTER K WITH HOOK Hooktop K; Voiceless velar implosive
019A	---L	LZ1-l	....	....	....	....	LATIN SMALL LETTER L WITH BAR
294 019B	---L	LS1-k; i~l3	....	....	....	....	LATIN SMALL LETTER LAMBDA WITH STROKE Barred lambda; Voiceless dental or alveolar
lateral affricate							
019C	---L	LQ2-U	....	....	....	....	LATIN CAPITAL LETTER TURNED M
019D	---L	LQ2-N	....	....	....	....	LATIN CAPITAL LETTER N WITH LEFT HOOK
293 019E	---L	LE1-z; i~n7	....	....	....	....	LATIN SMALL LETTER N WITH LONG RIGHT LEG N, right leg; Syllabic nasal
019F	---L	LZ2-0	....	....	....	....	LATIN CAPITAL LETTER O WITH MIDDLE TILDE
01A0	---L	....	L2-O'	DD1-a	....	....	LATIN CAPITAL LETTER O WITH HORN
01A1	---L	....	L1-o'	DD1-a	....	....	LATIN SMALL LETTER O WITH HORN
01A2	---L	LQ1-g	....	....	....	....	LATIN CAPITAL LETTER OI
01A3	---L	LQ2-G	....	....	....	....	LATIN SMALL LETTER OI
01A4	---L	LW2-P	....	....	....	....	LATIN CAPITAL LETTER P WITH HOOK
159 01A5	---L	LW1-p; i~p4	....	....	....	....	LATIN SMALL LETTER P WITH HOOK Hooktop P; Voiceless bilabial implosive
01A6	---L	LW2-R	....	....	....	....	LATIN LETTER YR
01A9	---L	LE2-M; LS2-S	....	....	....	....	LATIN CAPITAL LETTER ESH

208	01AB	---	L	i~t7	....	....	....	....	LATIN SMALL LETTER T WITH PALATAL HOOK Left-hook T; Palatalized voiceless dental or
alveolar plosive									
	01AC	---	L	LS2-T; LW2-T	....	....	....	....	LATIN CAPITAL LETTER T WITH HOOK
161	01AD	---	L	LS1-t; LW1-t; i~t4	....	....	....	....	LATIN SMALL LETTER T WITH HOOK Hooktop T; Voiceless dental or alveolar
implosive									
	01AE	---	L	LQ2-T	....	....	....	....	LATIN CAPITAL LETTER T WITH RETROFLEX HOOK
	01AF	---	L	.... L2-U'	DD1-a	....	....	....	LATIN CAPITAL LETTER U WITH HORN
	01B0	---	L	.... L1-u'	DD1-a	....	....	....	LATIN SMALL LETTER U WITH HORN
	01B1	---	L	LE2-L; LS2-B	....	....	....	....	LATIN CAPITAL LETTER UPSILON
	01B2	---	L	LS2-V; LW2-V	....	....	....	....	LATIN CAPITAL LETTER V WITH HOOK
	01B3	---	L	LW2-Y	....	....	....	....	LATIN CAPITAL LETTER Y WITH HOOK
	01B4	---	L	LW1-y	....	....	....	....	LATIN SMALL LETTER Y WITH HOOK
	01B5	---	L	LZ2-Z	....	....	....	....	LATIN CAPITAL LETTER Z WITH STROKE
	01B6	---	L	LZ1-z	....	....	....	....	LATIN SMALL LETTER Z WITH STROKE
	01B7	-2-	L	LE2-C	....	....	....	....	LATIN CAPITAL LETTER EZH
	01B8	---	L	LE2-V; LS2-Z	....	....	....	....	LATIN CAPITAL LETTER EZH REVERSED
	01B9	---	L	LE1-v; LS1-z	....	....	....	....	LATIN SMALL LETTER EZH REVERSED
290	01BB	---	L	i~z7	....	....	....	....	LATIN LETTER TWO WITH STROKE Barred two
	01BF	---	L	LS1-w; LQ1-w	....	....	....	....	LATIN LETTER WYNN
177	01C0	---	L	DM2-1; i~f1	....	....	....	....	LATIN LETTER DENTAL CLICK Pipe; Dental click
180	01C1	---	L	DM2-2; i~f2	....	....	....	....	LATIN LETTER LATERAL CLICK Double pipe; Alveolar lateral click
179	01C2	---	L	DM2-3; i~f3	....	....	....	....	LATIN LETTER ALVEOLAR CLICK Double-barred pipe; Palatoalveolar click
178	01C3	---	L	DM2-4; i~f4	....	....	....	....	LATIN LETTER RETROFLEX CLICK Exclamation point; (Post)alveolar click
	01CD	---	L	.... L2-A'	DD1-u	....	....	....	LATIN CAPITAL LETTER A WITH CARON
	01CE	---	L	.... L1-a'	DD1-u	....	....	....	LATIN SMALL LETTER A WITH CARON
	01CF	---	L	.... L2-I'	DD1-u	....	....	....	LATIN CAPITAL LETTER I WITH CARON
	01D0	---	L	.... L1-i'	DD1-u	....	....	....	LATIN SMALL LETTER I WITH CARON
	01D1	---	L	.... L2-O'	DD1-u	....	....	....	LATIN CAPITAL LETTER O WITH CARON
	01D2	---	L	.... L1-o'	DD1-u	....	....	....	LATIN SMALL LETTER O WITH CARON
	01D3	---	L	.... L2-U'	DD1-u	....	....	....	LATIN CAPITAL LETTER U WITH CARON
	01D4	---	L	.... L1-u'	DD1-u	....	....	....	LATIN SMALL LETTER U WITH CARON
	01D5	---	L	.... L2-U'	DD1-e'	DD1-d	....	....	LATIN CAPITAL LETTER U WITH DIAERESIS AND MACRON
	01D6	---	L	.... L1-u'	DD1-e'	DD1-d	....	....	LATIN SMALL LETTER U WITH DIAERESIS AND MACRON
	01D7	---	L	.... L2-U'	DD1-e'	DD1-q	....	....	LATIN CAPITAL LETTER U WITH DIAERESIS AND ACUTE
	01D8	---	L	.... L1-u'	DD1-e'	DD1-q	....	....	LATIN SMALL LETTER U WITH DIAERESIS AND ACUTE
	01D9	---	L	.... L2-U'	DD1-e'	DD1-u	....	....	LATIN CAPITAL LETTER U WITH DIAERESIS AND CARON
	01DA	---	L	.... L1-u'	DD1-e'	DD1-u	....	....	LATIN SMALL LETTER U WITH DIAERESIS AND CARON
	01DB	---	L	.... L2-U'	DD1-e'	DD1-w	....	....	LATIN CAPITAL LETTER U WITH DIAERESIS AND GRAVE
	01DC	---	L	.... L1-u'	DD1-e'	DD1-w	....	....	LATIN SMALL LETTER U WITH DIAERESIS AND GRAVE
	01DD	---	L	LE1-w; LS1-r	....	....	....	....	LATIN SMALL LETTER TURNED E
	01DE	-2-	L	.... L2-A'	DD1-e'	DD1-d	....	....	LATIN CAPITAL LETTER A WITH DIAERESIS AND MACRON
	01DF	-2-	L	.... L1-a'	DD1-e'	DD1-d	....	....	LATIN SMALL LETTER A WITH DIAERESIS AND MACRON
	01E0	-2-	L	.... L2-A'	DD1-s'	DD1-d	....	....	LATIN CAPITAL LETTER A WITH DOT ABOVE AND MACRON
	01E1	-2-	L	.... L1-a'	DD1-s'	DD1-d	....	....	LATIN SMALL LETTER A WITH DOT ABOVE AND MACRON
	01E2	-2-	L	.... LE2-A'	DD1-d	....	....	....	LATIN CAPITAL LETTER AE WITH MACRON
	01E3	-2-	L	.... LE1-a'	DD1-d	....	....	....	LATIN SMALL LETTER AE WITH MACRON
	01E4	-2-	L	LZ2-G	....	....	....	....	LATIN CAPITAL LETTER G WITH STROKE
	01E5	-2-	L	LZ1-g	....	....	....	....	LATIN SMALL LETTER G WITH STROKE
	01E6	-2-	L	.... L2-G'	DD1-u	....	....	....	LATIN CAPITAL LETTER G WITH CARON
	01E7	-2-	L	.... L1-g'	DD1-u	....	....	....	LATIN SMALL LETTER G WITH CARON
	01E8	-2-	L	.... L2-K'	DD1-u	....	....	....	LATIN CAPITAL LETTER K WITH CARON
	01E9	-2-	L	.... L1-k'	DD1-u	....	....	....	LATIN SMALL LETTER K WITH CARON
	01EA	-2-	L	.... L2-O'	DD2-W	....	....	....	LATIN CAPITAL LETTER O WITH OGONEK
	01EB	-2-	L	.... L1-o'	DD2-W	....	....	....	LATIN SMALL LETTER O WITH OGONEK
	01EC	-2-	L	.... L2-O'	DD2-W'	DD1-d	....	....	LATIN CAPITAL LETTER O WITH OGONEK AND MACRON
	01ED	-2-	L	.... L1-o'	DD2-W'	DD1-d	....	....	LATIN SMALL LETTER O WITH OGONEK AND MACRON
	01EE	-2-	L	.... LE2-C'	DD1-u	....	....	....	LATIN CAPITAL LETTER EZH WITH CARON
	01EF	-2-	L	.... LE1-c'	DD1-u	....	....	....	LATIN SMALL LETTER EZH WITH CARON

01F0	---	L	....	L1-j'	DD1-u	....	....	LATIN SMALL LETTER J WITH CARON
01F4	---	L	....	L2-G'	DD1-q	....	....	LATIN CAPITAL LETTER G WITH ACUTE
01F5	---	L	....	L1-g'	DD1-q	....	....	LATIN SMALL LETTER G WITH ACUTE
01F6	---	L	LQ2-Y	....	....	....	....	LATIN CAPITAL LETTER HWAIR
01F7	---	L	LS2-W;	LQ2-W	....	....	....	LATIN CAPITAL LETTER WYNN
01F8	---	L	....	L2-N'	DD1-w	....	....	LATIN CAPITAL LETTER N WITH GRAVE
01F9	---	L	....	L1-n'	DD1-w	....	....	LATIN SMALL LETTER N WITH GRAVE
01FA	-24L	....	....	L2-A'	DD1-p'	DD1-q	....	LATIN CAPITAL LETTER A WITH RING ABOVE AND ACUTE
01FB	-24L	....	....	L1-a'	DD1-p'	DD1-q	....	LATIN SMALL LETTER A WITH RING ABOVE AND ACUTE
01FC	-24L	....	....	LE2-A'	DD1-q	....	....	LATIN CAPITAL LETTER AE WITH ACUTE
01FD	-24L	....	....	LE1-a'	DD1-q	....	....	LATIN SMALL LETTER AE WITH ACUTE
01FE	-24L	....	....	LX2-O'	DD1-q	....	....	LATIN CAPITAL LETTER O WITH STROKE AND ACUTE
01FF	-24L	....	....	LX1-o'	DD1-q	....	....	LATIN SMALL LETTER O WITH STROKE AND ACUTE
0200	---	L	....	L2-A'	DD1-j	....	....	LATIN CAPITAL LETTER A WITH DOUBLE GRAVE
0201	---	L	....	L1-a'	DD1-j	....	....	LATIN SMALL LETTER A WITH DOUBLE GRAVE
0202	---	L	....	L2-A'	DD1-k	....	....	LATIN CAPITAL LETTER A WITH INVERTED BREVE
0203	---	L	....	L1-a'	DD1-k	....	....	LATIN SMALL LETTER A WITH INVERTED BREVE
0204	---	L	....	L2-E'	DD1-j	....	....	LATIN CAPITAL LETTER E WITH DOUBLE GRAVE
0205	---	L	....	L1-e'	DD1-j	....	....	LATIN SMALL LETTER E WITH DOUBLE GRAVE
0206	---	L	....	L2-E'	DD1-k	....	....	LATIN CAPITAL LETTER E WITH INVERTED BREVE
0207	---	L	....	L1-e'	DD1-k	....	....	LATIN SMALL LETTER E WITH INVERTED BREVE
0208	---	L	....	L2-I'	DD1-j	....	....	LATIN CAPITAL LETTER I WITH DOUBLE GRAVE
0209	---	L	....	L1-i'	DD1-j	....	....	LATIN SMALL LETTER I WITH DOUBLE GRAVE
020A	---	L	....	L2-I'	DD1-k	....	....	LATIN CAPITAL LETTER I WITH INVERTED BREVE
020B	---	L	....	L1-i'	DD1-k	....	....	LATIN SMALL LETTER I WITH INVERTED BREVE
020C	---	L	....	L2-O'	DD1-j	....	....	LATIN CAPITAL LETTER O WITH DOUBLE GRAVE
020D	---	L	....	L1-o'	DD1-j	....	....	LATIN SMALL LETTER O WITH DOUBLE GRAVE
020E	---	L	....	L2-O'	DD1-k	....	....	LATIN CAPITAL LETTER O WITH INVERTED BREVE
020F	---	L	....	L1-o'	DD1-k	....	....	LATIN SMALL LETTER O WITH INVERTED BREVE
0210	---	L	....	L2-R'	DD1-j	....	....	LATIN CAPITAL LETTER R WITH DOUBLE GRAVE
0211	---	L	....	L1-r'	DD1-j	....	....	LATIN SMALL LETTER R WITH DOUBLE GRAVE
0212	---	L	....	L2-R'	DD1-k	....	....	LATIN CAPITAL LETTER R WITH INVERTED BREVE
0213	---	L	....	L1-r'	DD1-k	....	....	LATIN SMALL LETTER R WITH INVERTED BREVE
0214	---	L	....	L2-U'	DD1-j	....	....	LATIN CAPITAL LETTER U WITH DOUBLE GRAVE
0215	---	L	....	L1-u'	DD1-j	....	....	LATIN SMALL LETTER U WITH DOUBLE GRAVE
0216	---	L	....	L2-U'	DD1-k	....	....	LATIN CAPITAL LETTER U WITH INVERTED BREVE
0217	---	L	....	L1-u'	DD1-k	....	....	LATIN SMALL LETTER U WITH INVERTED BREVE
0218	-2-L	....	....	L2-S'	DD2-A	....	....	LATIN CAPITAL LETTER S WITH COMMA BELOW
0219	-2-L	....	....	L1-s'	DD2-A	....	....	LATIN SMALL LETTER S WITH COMMA BELOW
021A	-2-L	....	....	L2-T'	DD2-A	....	....	LATIN CAPITAL LETTER T WITH COMMA BELOW
021B	-2-L	....	....	L1-t'	DD2-A	....	....	LATIN SMALL LETTER T WITH COMMA BELOW
021C	---	L	LS2-J;	LQ2-J	....	....	....	LATIN CAPITAL LETTER YOGH
021D	---	L	LS1-j;	LQ1-j	....	....	....	LATIN SMALL LETTER YOGH
021E	-2-L	....	....	L2-H'	DD1-u	....	....	LATIN CAPITAL LETTER H WITH CARON
021F	-2-L	....	....	L1-h'	DD1-u	....	....	LATIN SMALL LETTER H WITH CARON
0220	---	L	LE2-Z	....	....	....	....	LATIN CAPITAL LETTER N WITH LONG RIGHT LEG
0222	---	L	LE2-U	....	....	....	....	LATIN CAPITAL LETTER OU
0223	---	L	LE1-u	....	....	....	....	LATIN SMALL LETTER OU
0224	---	L	LQ2-Z	....	....	....	....	LATIN CAPITAL LETTER Z WITH HOOK
0225	---	L	LQ1-z	....	....	....	....	LATIN SMALL LETTER Z WITH HOOK
0226	---	L	....	L2-A'	DD1-s	....	....	LATIN CAPITAL LETTER A WITH DOT ABOVE
0227	---	L	....	L1-a'	DD1-s	....	....	LATIN SMALL LETTER A WITH DOT ABOVE
0228	---	L	....	L2-E'	DD2-0	....	....	LATIN CAPITAL LETTER E WITH CEDILLA
0229	---	L	....	L1-e'	DD2-0	....	....	LATIN SMALL LETTER E WITH CEDILLA
022A	---	L	....	L2-O'	DD1-e'	DD1-d	....	LATIN CAPITAL LETTER O WITH DIAERESIS AND MACRON
022B	---	L	....	L1-o'	DD1-e'	DD1-d	....	LATIN SMALL LETTER O WITH DIAERESIS AND MACRON
022C	---	L	....	L2-O'	DD1-r'	DD1-d	....	LATIN CAPITAL LETTER O WITH TILDE AND MACRON
022D	---	L	....	L1-o'	DD1-r'	DD1-d	....	LATIN SMALL LETTER O WITH TILDE AND MACRON
022E	---	L	....	L2-O'	DD1-s	....	....	LATIN CAPITAL LETTER O WITH DOT ABOVE
022F	---	L	....	L1-o'	DD1-s	....	....	LATIN SMALL LETTER O WITH DOT ABOVE
0230	---	L	....	L2-O'	DD1-s'	DD1-d	....	LATIN CAPITAL LETTER O WITH DOT ABOVE AND MACRON
0231	---	L	....	L1-o'	DD1-s'	DD1-d	....	LATIN SMALL LETTER O WITH DOT ABOVE AND MACRON
0232	---	L	....	L2-Y'	DD1-d	....	....	LATIN CAPITAL LETTER Y WITH MACRON
0233	---	L	....	L1-y'	DD1-d	....	....	LATIN SMALL LETTER Y WITH MACRON
? 0234	---	L	i~18	....	....	....	....	LATIN SMALL LETTER L WITH CURL

?	0235	---	L	i~n8	....	....	....	....	LATIN SMALL LETTER N WITH CURL
?	0236	---	L	i~t8	....	....	....	....	LATIN SMALL LETTER T WITH CURL
	023A	---	L	LX2-A	....	....	....	....	LATIN CAPITAL LETTER A WITH STROKE
	023B	---	L	LX2-C	....	....	....	....	LATIN CAPITAL LETTER C WITH STROKE
	023C	---	L	LX1-c	....	....	....	....	LATIN SMALL LETTER C WITH STROKE
	023D	---	L	LZ2-L	....	....	....	....	LATIN CAPITAL LETTER L WITH BAR
	023E	---	L	LX2-T	....	....	....	....	LATIN CAPITAL LETTER T WITH DIAGONAL STROKE
	0241	---	L	LE2-P	....	....	....	....	LATIN CAPITAL LETTER GLOTTAL STOP
	0242	---	L	LE1-p	....	....	....	....	LATIN SMALL LETTER GLOTTAL STOP
	0243	---	L	LZ2-B	....	....	....	....	LATIN CAPITAL LETTER B WITH STROKE
	0244	---	L	LZ2-U	....	....	....	....	LATIN CAPITAL LETTER U BAR
	0245	---	L	LE2-G; LS2-P	....	....	....	....	LATIN CAPITAL LETTER TURNED V
	0246	---	L	LX2-E	....	....	....	....	LATIN CAPITAL LETTER E WITH STROKE
	0247	---	L	LX1-e	....	....	....	....	LATIN SMALL LETTER E WITH STROKE
	0248	---	L	LZ2-J	....	....	....	....	LATIN CAPITAL LETTER J WITH STROKE
	0249	---	L	LZ1-j	....	....	....	....	LATIN SMALL LETTER J WITH STROKE
	024A	---	L	LQ2-Q	....	....	....	....	LATIN CAPITAL LETTER SMALL Q WITH HOOK TAIL
	024B	---	L	LQ1-q	....	....	....	....	LATIN SMALL LETTER Q WITH HOOK TAIL
	024C	---	L	LZ2-R	....	....	....	....	LATIN CAPITAL LETTER R WITH STROKE
	024D	---	L	LZ1-r	....	....	....	....	LATIN SMALL LETTER R WITH STROKE
	024E	---	L	LZ2-Y	....	....	....	....	LATIN CAPITAL LETTER Y WITH STROKE
	024F	---	L	LZ1-y	....	....	....	....	LATIN SMALL LETTER Y WITH STROKE
324	0250	----		i~a3	....	....	....	....	LATIN SMALL LETTER TURNED A Turned A; Near-Open central vowel
305	0251	---	L	LE1-h; LS1-a; i~a5	....	....	....	....	LATIN SMALL LETTER ALPHA Script A; Open back unrounded vowel
313	0252	----		i~a6	....	....	....	....	LATIN SMALL LETTER TURNED ALPHA Turned script A; Open back rounded vowel
160	0253	---	L	LW1-b; i~b4	....	....	....	....	LATIN SMALL LETTER B WITH HOOK Hooktop B; Voiced bilabial implosive
306	0254	---	L	LE1-k; LS1-o; i~o6	....	....	....	....	LATIN SMALL LETTER OPEN O Open O; Open-mid back rounded vowel
182	0255	----		i~c8	....	....	....	....	LATIN SMALL LETTER C WITH CURL Curly-tail C; Voiceless alveolo-palatal
fricative									
?	0256	---	L	LQ1-d; i~d6	....	....	....	....	LATIN SMALL LETTER D WITH TAIL voiced retroflex stop
162	0257	---	L	LS1-d; LW1-d; i~d4	....	....	....	....	LATIN SMALL LETTER D WITH HOOK Hooktop D; Voiced dental or alveolar implosive
397	0258	----		i~e9	....	....	....	....	LATIN SMALL LETTER REVERSED E Reversed E; Close-mid central unrounded vowel
322	0259	-2-	L	LE1-e; i~e3	....	....	....	....	LATIN SMALL LETTER SCHWA Schwa; Mid central vowel
327	025A	----		i~e4	....	....	....	....	LATIN SMALL LETTER SCHWA WITH HOOK Right-hook schwa; R-coloured mid central vowel
303	025B	---	L	LE1-j; LS1-e; i~e5	....	....	....	....	LATIN SMALL LETTER OPEN E Epsilon; Open-mid front unrounded vowel
326	025C	----		i~e6	....	....	....	....	LATIN SMALL LETTER REVERSED OPEN E Reversed epsilon; Open-mid central unrounded
vowel									
?	025D	----		i~e2	....	....	....	....	LATIN SMALL LETTER REVERSED OPEN E WITH HOOK rhotacized lower-mid central vowel
395	025E	----		i~e7	....	....	....	....	LATIN SMALL LETTER CLOSED REVERSED OPEN E Closed reversed epsilon; Open-mid central
rounded vowel									
108	025F	----		i~j7	....	....	....	....	LATIN SMALL LETTER DOTLESS J WITH STROKE Barred-dotless J; Voiced palatal plosive
166	0260	---	L	LW1-g; i~g4	....	....	....	....	LATIN SMALL LETTER G WITH HOOK Hooktop G; Voiced velar implosive
110	0261	----		i~g6	....	....	....	....	LATIN SMALL LETTER SCRIPT G Opentail G; Voiced velar plosive
112	0262	---	L	LL2-G; i~g2	....	....	....	....	LATIN LETTER SMALL CAPITAL G Small-capital G; Voiced uvular plosive
141	0263	---	L	LS1-g; LQ1-v; i~g5	....	....	....	....	LATIN SMALL LETTER GAMMA Gamma; Voiced velar fricative

315	0264	----	i~g8	....	....	....	....	LATIN SMALL LETTER RAMS HORN Ram's horns; Close-mid back unrounded vowel
171	0265	---L	LE1-q; LS1-h; i~h3	....	....	....	....	LATIN SMALL LETTER TURNED H Turned H; Voiced labial-palatal approximant
147	0266	---L	LW1-h; i~h4	....	....	....	....	LATIN SMALL LETTER H WITH HOOK Hooktop H; Voiced glottal fricative
175	0267	----	i~h6	....	....	....	....	LATIN SMALL LETTER HENG WITH HOOK Hooktop heng; Simultaneous voiceless postalveolar and velar fricative
317	0268	---L	LZ1-i; i~i7	....	....	....	....	LATIN SMALL LETTER I WITH STROKE Barred I; Close central unrounded vowel
399	0269	---L	LS1-i; LQ1-i; i~i5	....	....	....	....	LATIN SMALL LETTER IOTA Iota; Near-close near-front unrounded vowel
319	026A	---L	LL2-I; LW1-i; i~i2	....	....	....	....	LATIN LETTER SMALL CAPITAL I Small capital I; Near-close near-front unrounded vowel
209	026B	---L	LS1-c; LW1-l; i~l7	....	....	....	....	LATIN SMALL LETTER L WITH MIDDLE TILDE L with tilde; Velarized voiced dental or alveolar lateral approximant
148	026C	---L	LS1-y; i~l4	....	....	....	....	LATIN SMALL LETTER L WITH BELT Belted L; Voiceless dental or alveolar lateral fricative
156	026D	----	i~l6	....	....	....	....	LATIN SMALL LETTER L WITH RETROFLEX HOOK Right-tail L; Voiced retroflex lateral approximant
149	026E	----	i~l9	....	....	....	....	LATIN SMALL LETTER LEZH L-Ezh ligature; Voiced dental or alveolar lateral fricative
316	026F	---L	LQ1-u; i~m3	....	....	....	....	LATIN SMALL LETTER TURNED M Turned M; Close back unrounded vowel
154	0270	----	i~m8	....	....	....	....	LATIN SMALL LETTER TURNED M WITH LONG LEG Turned M, right leg; Voiced velar approximant
115	0271	---L	LQ1-m; i~m6	....	....	....	....	LATIN SMALL LETTER M WITH HOOK Left-tail M (at right); Voiced labiodental nasal
118	0272	---L	LQ1-n; i~n9	....	....	....	....	LATIN SMALL LETTER N WITH LEFT HOOK Left-tail N (at left); Voiced palatal nasal
117	0273	----	i~n5	....	....	....	....	LATIN SMALL LETTER N WITH RETROFLEX HOOK Right-tail N; Voiced retroflex nasal
120	0274	---L	LL2-N; i~n2	....	....	....	....	LATIN LETTER SMALL CAPITAL N Small capital N; Voiced uvular nasal
323	0275	---L	LZ1-o; i~o7	....	....	....	....	LATIN SMALL LETTER BARRED O Barred O; Close-mid central rounded vowel
312	0276	----	i~o2	....	....	....	....	LATIN LETTER SMALL CAPITAL OE Small capital O-E ligature; Open front rounded vowel
398	0277	----	i~o5	....	....	....	....	LATIN SMALL LETTER CLOSED OMEGA Closed omega; Near-close near-back rounded vowel
126	0278	----	i~f7	....	....	....	....	LATIN SMALL LETTER PHI Phi; Voiceless bilabial fricative
151	0279	----	i~r3	....	....	....	....	LATIN SMALL LETTER TURNED R Turned R; Voiced dental or alveolar approximant
181	027A	----	i~r8	....	....	....	....	LATIN SMALL LETTER TURNED R WITH LONG LEG Turned long-leg R; Voiced alveolar lateral flap
152	027B	----	i~r7	....	....	....	....	LATIN SMALL LETTER TURNED R WITH HOOK Turned R, right tail; Voiced retroflex approximant
206	027C	-2-L	LE1-r; i~r9	....	....	....	....	LATIN SMALL LETTER R WITH LONG LEG Long-leg R
125	027D	---L	LQ1-r; i~r6	....	....	....	....	LATIN SMALL LETTER R WITH TAIL Right-tail R; Voiced retroflex flap
124	027E	----	i~r4	....	....	....	....	LATIN SMALL LETTER R WITH FISHHOOK

									Fish-hook R; Voiced dental or alveolar tap
?	027F	----	i~r1	....	....	....	....	....	LATIN SMALL LETTER REVERSED R WITH FISHHOOK apical dental vowel
123	0280	---L	LL2-R; LW1-r;	i~r2	....	....	....	....	LATIN LETTER SMALL CAPITAL R Small capital R; Voiced uvular trill
143	0281	----	i~r5	....	....	....	....	....	LATIN LETTER SMALL CAPITAL INVERTED R Inverted small capital R; Voiced uvular
fricative									
136	0282	----	i~s7	....	....	....	....	....	LATIN SMALL LETTER S WITH HOOK Right-tail S (at left); Voiceless retroflex
fricative									
134	0283	---L	LE1-m; LS1-s;	i~s6	....	....	....	....	LATIN SMALL LETTER ESH Esh; Voiceless postalveolar fricative
164	0284	----	i~j8	....	....	....	....	....	LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK Hooktop barred dotless J; Voiced palatal
implosive									
?	0285	----	i~s3	....	....	....	....	....	LATIN SMALL LETTER SQUAT REVERSED ESH apical retroflex vowel
204	0286	----	i~s8	....	....	....	....	....	LATIN SMALL LETTER ESH WITH CURL Curly-tail esh
201	0287	----	i~t3	....	....	....	....	....	LATIN SMALL LETTER TURNED T Turned T; Dental click
105	0288	---L	LQ1-t;	i~t6	....	....	....	....	LATIN SMALL LETTER T WITH RETROFLEX HOOK Right-tail T; Voiceless retroflex plosive
318	0289	---L	LZ1-u;	i~u7	....	....	....	....	LATIN SMALL LETTER U BAR Barred U; Close central rounded vowel
321	028A	---L	LE1-l; LS1-b;	i~y5	....	....	....	....	LATIN SMALL LETTER UPSILON Upsilon; Near-close near-back rounded vowel
150	028B	---L	LS1-v; LW1-v;	i~v5	....	....	....	....	LATIN SMALL LETTER V WITH HOOK Cursive V; Voiced labiodental approximant
314	028C	---L	LE1-g; LS1-p;	i~v3	....	....	....	....	LATIN SMALL LETTER TURNED V Turned V; Open-mid back unrounded vowel
169	028D	----	i~w3	....	....	....	....	....	LATIN SMALL LETTER TURNED W Turned W; Voiceless labial-velar fricative
157	028E	----	i~y3	....	....	....	....	....	LATIN SMALL LETTER TURNED Y Turned Y; Voiced palatal lateral approximant
320	028F	---L	LL2-Y;	i~y2	....	....	....	....	LATIN LETTER SMALL CAPITAL Y Small capital Y; Near-close near-front rounded
vowel									
137	0290	----	i~z6	....	....	....	....	....	LATIN SMALL LETTER Z WITH RETROFLEX HOOK Right-tail Z; Voiced retroflex fricative
183	0291	----	i~z8	....	....	....	....	....	LATIN SMALL LETTER Z WITH CURL Curly-tail Z; Voiced alveolo-palatal fricative
135	0292	-2-L	LE1-c;	i~z5	....	....	....	....	LATIN SMALL LETTER EZH Ezh, Tailed Z; Voiced postalveolar fricative
205	0293	----	i~z9	....	....	....	....	....	LATIN SMALL LETTER EZH WITH CURL Curly-tail ezh
113	0294	---L	LE2-S;	i~q5	....	....	....	....	LATIN LETTER GLOTTAL STOP Glottal stop; Glottal plosiv
145	0295	---L	LE2-R; LS1-f;	i~q6	....	....	....	....	LATIN LETTER PHARYNGEAL VOICED FRICATIVE Reversed glottal stop; Voiced pharyngeal
fricative or approximant									
203	0296	----	i~q9	....	....	....	....	....	LATIN LETTER INVERTED GLOTTAL STOP Inverted glottal stop; Alveolar lateral click
202	0297	----	i~c6	....	....	....	....	....	LATIN LETTER STRETCHED C Stretched C; Postalveolar click
176	0298	---L	DM2-5;	i~f5	....	....	....	....	LATIN LETTER BILABIAL CLICK Bull's eye; Bilabial click
121	0299	---L	LL2-B;	i~b2	....	....	....	....	LATIN LETTER SMALL CAPITAL B Small capital B; Voiced bilabial trill
396	029A	----	i~e8	....	....	....	....	....	LATIN SMALL LETTER CLOSED OPEN E Closed epsilon
168	029B	----	i~g7	....	....	....	....	....	LATIN LETTER SMALL CAPITAL G WITH HOOK

								Hooktop small capital G; Voiced uvular
imlosive								
172 029C	---L	LL2-H;	i~h2	....	....	....	....	LATIN LETTER SMALL CAPITAL H Small capital H; Voiceless epiglottal
fricative								
139 029D	----		i~j6	....	....	....	....	LATIN SMALL LETTER J WITH CROSSED-TAIL Curly-tail J; Voiced palatal fricative
291 029E	----		i~k3	....	....	....	....	LATIN SMALL LETTER TURNED K Turned K
158 029F	---L	LL2-L;	i~l2	....	....	....	....	LATIN LETTER SMALL CAPITAL L Small capital L; Voiced velar lateral
approximant								
167 02A0	----		i~q4	....	....	....	....	LATIN SMALL LETTER Q WITH HOOK Hooktop Q; Voiceless uvular implosive
173 02A1	----		i~q7	....	....	....	....	LATIN LETTER GLOTTAL STOP WITH STROKE Barred glottal stop; Epiglottal plosive
174 02A2	----		i~q8	....	....	....	....	LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE Barred reversed glottal stop; Voiced
epiglottal fricative or approximant								
212 02A3	----		i~d7	....	....	....	....	LATIN SMALL LETTER DZ DIGRAPH D-Z ligature; Voiced alveolar affricate
214 02A4	----		i~d8	....	....	....	....	LATIN SMALL LETTER DEZH DIGRAPH D-Ezh ligature; Voiced postalveolar affricate
216 02A5	----		i~d9	....	....	....	....	LATIN SMALL LETTER DZ DIGRAPH WITH CURL D-Curly-tail-Z ligature; Voiced alveolo-
palatal affricate								
211 02A6	----		i~x7	....	....	....	....	LATIN SMALL LETTER TS DIGRAPH T-S ligature; Voiceless dental or alveolar
affricate								
213 02A7	----		i~x8	....	....	....	....	LATIN SMALL LETTER TESH DIGRAPH T-Esh ligature; Voiceless postalveolar
affricate								
215 02A8	----		i~x9	....	....	....	....	LATIN SMALL LETTER TC DIGRAPH WITH CURL T-Curly-tail-C ligature; Voiceless alveolo-
palatal affricate								
? 02AE	----		i~h8	....	....	....	....	LATIN SMALL LETTER TURNED H WITH FISHHOOK
? 02AF	----		i~h9	....	....	....	....	LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL
404 02B0	---L	LR1-h;	i~h1	....	....	....	....	MODIFIER LETTER SMALL H Superscript H; Aspirated
421 02B2	---L	LR1-j;	i~j1	....	....	....	....	MODIFIER LETTER SMALL J Superscript J; Palatalized
02B3	---L	LR1-r	....	....	....	....	....	MODIFIER LETTER SMALL R
420 02B7	---L	LR1-w;	i~w1	....	....	....	....	MODIFIER LETTER SMALL W Superscript W; Labialized
496 02B8	---L	LR1-y;	i~y1	....	....	....	....	MODIFIER LETTER SMALL Y Superscript Y; High-front rounding/
palatalized								
02B9	---L	DM1-5	....	....	....	....	....	MODIFIER LETTER PRIME
02BA	---L	DM1-6	....	....	....	....	....	MODIFIER LETTER DOUBLE PRIME
492 02BB	-2-L	DS1-f; DJ1-f	....	....	....	....	....	MODIFIER LETTER TURNED COMMA Reversed apostrophe; Weak aspiration
401 02BC	-2-L	DS1-g; DJ1-g	....	....	....	....	....	MODIFIER LETTER APOSTROPHE Apostrophe; Ejective
02BD	-2-L	DS1-h	....	....	....	....	....	MODIFIER LETTER REVERSED COMMA
02BE	---L	DM1-8	....	....	....	....	....	MODIFIER LETTER RIGHT HALF RING
02BF	---L	DM1-7	....	....	....	....	....	MODIFIER LETTER LEFT HALF RING
02C0	---L	DM2-8	....	....	....	....	....	MODIFIER LETTER GLOTTAL STOP
02C1	---L	DM2-7	....	....	....	....	....	MODIFIER LETTER REVERSED GLOTTAL STOP
02C6	-24L	DS1-i	....	....	....	....	....	MODIFIER LETTER CIRCUMFLEX ACCENT
02C7	124L	DS1-u	....	....	....	....	....	CARON
501 02C8	----	DS1-v; DJ1-v;	i~u9	....	....	....	....	MODIFIER LETTER VERTICAL LINE Vertical stroke (Superior); Primary stress
02C9	-24L	DS1-d	....	....	....	....	....	MODIFIER LETTER MACRON
02CA	---L	DS1-q	....	....	....	....	....	MODIFIER LETTER ACUTE ACCENT

02CB	---	L	DS1-w	....	....	....	....	....	MODIFIER LETTER GRAVE ACCENT
502 02CC	----		DS2-T; DJ2-T;	i~u8	....	....	....	....	MODIFIER LETTER LOW VERTICAL LINE Vertical stroke (Inferior); Secondary stress
02CD	----		DS2-D	....	....	....	....	....	MODIFIER LETTER LOW MACRON
598 02CE*	----		DJ2-W	....	....	....	....	....	MODIFIER LETTER LOW GRAVE ACCENT Subscript grave accent; Low falling tone
599 02CF*	----		DJ2-Q	....	....	....	....	....	MODIFIER LETTER LOW ACUTE ACCENT Subscript acute accent; Low rising tone
503 02D0	----		DJ1-w; DM2-9;	i~i9	....	....	....	....	MODIFIER LETTER TRIANGULAR COLON Length mark; Long
504 02D1	----		DJ1-q;	i~i8	....	....	....	....	MODIFIER LETTER HALF TRIANGULAR COLON Half-length mark; Half-long
429 02D4*	----		DJ2-0	....	....	....	....	....	MODIFIER LETTER UP TACK Raising sign; Raised
430 02D5*	----		DJ2-I	....	....	....	....	....	MODIFIER LETTER DOWN TACK Lowering sign; Lowered
495 02D6*	----		DJ2-U	....	....	....	....	....	MODIFIER LETTER PLUS SIGN Plus sign; Advanced variety (fronted)
494 02D7*	----		DJ2-Y	....	....	....	....	....	MODIFIER LETTER MINUS SIGN Minus sign; Retraced variety (backed)
02D8	124L		DS1-y	....	....	....	....	....	BREVE
02D9	124L		DS1-s	....	....	....	....	....	DOT ABOVE
02DA	124L		DS1-p	....	....	....	....	....	RING ABOVE
02DB	124L		DS2-W	....	....	....	....	....	OGONEK
02DC	-24L		DS1-r	....	....	....	....	....	SMALL TILDE
02DD	124L		DS1-t	....	....	....	....	....	DOUBLE ACUTE ACCENT
419 02DE*	----		DJ1-r	....	....	....	....	....	MODIFIER LETTER RHOTIC HOOK Right hook; Rhoticity
422 02E0	----		i~g9	....	....	....	....	....	MODIFIER LETTER SMALL GAMMA Superscript gamma; Velarized
426 02E1	---	L	LR1-l;	i~l1	....	....	....	....	MODIFIER LETTER SMALL L Superscript L; Lateral release
207 02E2	---	L	LR1-s;	i~s1	....	....	....	....	MODIFIER LETTER SMALL S Superscript S
292 02E3	---	L	LR1-x;	i~x1	....	....	....	....	MODIFIER LETTER SMALL X Superscript X; Voiceless velar fricative
release									
423 02E4	----		i~q1	....	....	....	....	....	MODIFIER LETTER SMALL REVERSED GLOTTAL STOP Superscript reversed glottal stop;
Pharyngeslized									
519 02E5*	----		DJ1-y	....	....	....	....	....	MODIFIER LETTER EXTRA-HIGH TONE BAR Extra-high tone letter; Extra high level
520 02E6*	----		DJ1-u	....	....	....	....	....	MODIFIER LETTER HIGH TONE BAR High tone letter; High level
521 02E7*	----		DJ1-i	....	....	....	....	....	MODIFIER LETTER MID TONE BAR Mid tone letter; Mid level
522 02E8*	----		DJ1-o	....	....	....	....	....	MODIFIER LETTER LOW TONE BAR Low tone letter; Low level
523 02E9*	----		DJ1-p	....	....	....	....	....	MODIFIER LETTER EXTRA-LOW TONE BAR Extra-low tone letter; Extra low level
02EC	---	L	DM2-6	....	....	....	....	....	MODIFIER LETTER VOICING
02EE	-2-L		DM1-3	....	....	....	....	....	MODIFIER LETTER DOUBLE APOSTROPHE
02F3	---	L	DS2-P	....	....	....	....	....	MODIFIER LETTER LOW RING
02F4	---	L	DM1-2	....	....	....	....	....	MODIFIER LETTER MIDDLE GRAVE ACCENT
02F7	---	L	DS2-R	....	....	....	....	....	MODIFIER LETTER LOW TILDE
490 02F9*	----		DJ1-t	....	....	....	....	....	MODIFIER LETTER BEGIN HIGH TONE Open corner; Release/ burst
515 0300	---	L	DD1-w; DI1-w; HE1-w	....	....	....	....	....	COMBINING GRAVE ACCENT Grave accent (over); Low level
513 0301	---	L	DD1-q; DI1-q; HE1-q	....	....	....	....	....	COMBINING ACUTE ACCENT Acute accent (over); High level
525 0302	---	L	DD1-i; DI1-i	....	....	....	....	....	COMBINING CIRCUMFLEX ACCENT Circumflex; Falling contour
424 0303	---	L	DD1-r; DI1-r	....	....	....	....	....	COMBINING TILDE Superscript tilde; Nasalized

514	0304	---L	DD1-d; DI1-d	....	....	....	COMBINING MACRON Macron; Mid level
505	0306	---L	DD1-y; DI1-y	....	....	....	COMBINING BREVE Breve; Extra-short
493	0307	---L	DD1-s; DI1-s; HE2-W	....	....	....	COMBINING DOT ABOVE Over-dot; Palatalization/ centralization
415	0308	---L	DD1-e; DI1-e; HE2-Q	....	....	....	COMBINING DIAERESIS Umlaut; Centralized
	0309	---L	DD1-o	....	....	....	COMBINING HOOK ABOVE
402	030A	---L	DD1-p; DI1-p	....	....	....	COMBINING RING ABOVE Over-ring; Voiceless
512	030B	---L	DD1-t; DI1-t	....	....	....	COMBINING DOUBLE ACUTE ACCENT Double acute accent (over); Extra high level
524	030C	---L	DD1-u; DI1-u	....	....	....	COMBINING CARON "Wedge; hacek"; Rising contour
	030D	---L	DD1-v	....	....	....	COMBINING VERTICAL LINE ABOVE
	030E	---L	DD1-b	....	....	....	COMBINING DOUBLE VERTICAL LINE ABOVE
516	030F	---L	DD1-j; DI1-j	....	....	....	COMBINING DOUBLE GRAVE ACCENT Double grave accent (over); Extra low level
	0310	---L	DD1-c	....	....	....	COMBINING CANDRABINDU
595	0311	---L	DD1-k; DI1-k	....	....	....	COMBINING INVERTED BREVE Superscript arch; Long falling tone/ advanced/
palatal							
	0312	---L	DD1-f	....	....	....	COMBINING TURNED COMMA ABOVE
	0313	---L	DD1-g	....	....	....	COMBINING COMMA ABOVE
	0314	---L	DD1-h; G2-W	....	....	....	COMBINING REVERSED COMMA ABOVE
598	0316*	----	DI2-W	....	....	....	COMBINING GRAVE ACCENT BELOW Subscript grave accent; Low falling tone
599	0317*	----	DI2-Q	....	....	....	COMBINING ACUTE ACCENT BELOW Subscript acute accent; Low rising tone
417	0318*	----	DI2-J	....	....	....	COMBINING LEFT TACK BELOW Advancing sign; Advanced tongue root
418	0319*	----	DI2-H	....	....	....	COMBINING RIGHT TACK BELOW Retracing sign; Retraced tongue root
427	031A*	----	DI1-o	....	....	....	COMBINING LEFT ANGLE ABOVE Corner; No audible release
	031B	---L	DD1-a	....	....	....	COMBINING HORN
412	031C*	----	DI2-F	....	....	....	COMBINING LEFT HALF RING BELOW Subscript left half-ring; Less rounded
429	031D*	----	DI2-O	....	....	....	COMBINING UP TACK BELOW Raising sign; Raised
430	031E*	----	DI2-I	....	....	....	COMBINING DOWN TACK BELOW Lowering sign; Lowered
413	031F*	----	DI2-U	....	....	....	COMBINING PLUS SIGN BELOW Subscript plus; Advanced
414	0320*	----	DI2-Y	....	....	....	COMBINING MINUS SIGN BELOW Under-bar; Retraced
498	0321*	----	DI2-X	....	....	....	COMBINING PALATALIZED HOOK BELOW Subscript left hook; Palatalized
489	0322*	----	DI2-C	....	....	....	COMBINING RETROFLEX HOOK BELOW Subscript right hook; Rhoticity
497	0323	---L	DD2-S; DI2-S	....	....	....	COMBINING DOT BELOW Under-dot; Closer variety/ fricative
405	0324	---L	DD2-E; DI2-E	....	....	....	COMBINING DIAERESIS BELOW Subscript umlaut; Breathy voiced
402	0325	---L	DD2-P; DI2-P	....	....	....	COMBINING RING BELOW Under-ring; Voiceless
	0326	---L	DD2-A	....	....	....	COMBINING COMMA BELOW
	0327	---L	DD2-O	....	....	....	COMBINING CEDILLA
	0328	---L	DD2-W	....	....	....	COMBINING OGONEK
431	0329	---L	DD2-T; DI2-T	....	....	....	COMBINING VERTICAL LINE BELOW Syllabicity mark; Syllabic
408	032A*	----	DI2-A	....	....	....	COMBINING BRIDGE BELOW Subscript bridge; Dental
499	032B*	----	DI2-M	....	....	....	COMBINING INVERTED DOUBLE ARCH BELOW

403	032C*	----	DI2-D	....	....	....	....	Subscript W ; Labialized COMBINING CARON BELOW
	032D	---L	DD2-I	....	....	....	....	Subscript wedge; Voiced COMBINING CIRCUMFLEX ACCENT BELOW
	032E	---L	DD2-Y	....	....	....	....	COMBINING BREVE BELOW
432	032F*	----	DI2-K	....	....	....	....	COMBINING INVERTED BREVE BELOW
406	0330	---L	DD2-R; DI2-R	....	....	....	....	Subscript arch; Non-syllabic COMBINING TILDE BELOW
	0331	---L	DD2-D	....	....	....	....	Subscript tilde; Creaky voiced COMBINING MACRON BELOW
	0332	---L	DD2-U	....	....	....	....	COMBINING LOW LINE
428	0334*	----	DI2-B	....	....	....	....	COMBINING TILDE OVERLAY Superimposed tilde; Velarized or
pharyngealized								
	0335	---L	DD2-B	....	....	....	....	COMBINING SHORT STROKE OVERLAY
	0336	---L	DD2-V	....	....	....	....	COMBINING LONG STROKE OVERLAY
	0337	---L	DD2-C	....	....	....	....	COMBINING SHORT SOLIDUS OVERLAY
	0338	---L	DD2-X	....	....	....	....	COMBINING LONG SOLIDUS OVERLAY
411	0339*	----	DI2-G	....	....	....	....	COMBINING RIGHT HALF RING BELOW Subscript right half-ring; More rounded
409	033A*	----	DI2-L	....	....	....	....	COMBINING INVERTED BRIDGE BELOW Inverted subscript bridge; Apical
410	033B*	----	DI2-Z	....	....	....	....	COMBINING SQUARE BELOW Subscript square; Laminal
407	033C*	----	DI2-V	....	....	....	....	COMBINING SEAGULL BELOW Subscript seagull; Linguolabial
416	033D*	----	DI1-a	....	....	....	....	COMBINING X ABOVE Over-cross; Mid-centralized
	0342	---G	DD1-m; G2-Q	....	....	....	....	COMBINING GREEK PERISPOMENI
	0344	---G	.... DD1-e' DD1-q	....	....	....	....	COMBINING GREEK DIALYTIKA TONOS
	0345	---G	DD2-M; G1-q	....	....	....	....	COMBINING GREEK YPOGEGRAMMENI
	0347	---L	DD2-Q	....	....	....	....	COMBINING EQUALS SIGN BELOW
	034F	---H	HE2-C; YP1-c	....	....	....	....	COMBINING GRAPHEME JOINER
	0358	---L	DD1-x	....	....	....	....	COMBINING DOT ABOVE RIGHT
	035C	---L	DD2-Z	....	....	....	....	COMBINING DOUBLE BREVE BELOW
	035F	---L	DD2-L	....	....	....	....	COMBINING DOUBLE MACRON BELOW
	0360	---L	DD1-1	....	....	....	....	COMBINING DOUBLE TILDE
433	0361	---L	DD1-z; DI1-z	....	....	....	....	COMBINING DOUBLE INVERTED BREVE Top tie bar; Affricate or double articulation
	0370	---G	GE2-H	....	....	....	....	GREEK CAPITAL LETTER HETA
	0371	---G	GE1-h	....	....	....	....	GREEK SMALL LETTER HETA
	0372	---G	GE2-Z	....	....	....	....	GREEK CAPITAL LETTER ARCHAIC SAMPI
	0373	---G	GE1-z	....	....	....	....	GREEK SMALL LETTER ARCHAIC SAMPI
	0374	-2-G	GE2-P; DM1-5	....	....	....	....	GREEK NUMERAL SIGN
	0375	-2-G	GE2-I	....	....	....	....	GREEK LOWER NUMERAL SIGN
	0376	---G	GE2-G	....	....	....	....	GREEK CAPITAL LETTER PAMPHYLIAN DIGAMMA
	0377	---G	GE1-g	....	....	....	....	GREEK SMALL LETTER PAMPHYLIAN DIGAMMA
	037A	-2-G	DS2-M; GE1-i	....	....	....	....	GREEK YPOGEGRAMMENI
	037B	---G	GE1-o	....	....	....	....	GREEK SMALL REVERSED LUNATE SIGMA SYMBOL
	037C	---G	GE1-a	....	....	....	....	GREEK SMALL DOTTED LUNATE SIGMA SYMBOL
	037D	---G	GE1-d	....	....	....	....	GREEK SMALL REVERSED DOTTED LUNATE SIGMA SYMBOL
	037Ey	-2-G	YY1-o; YU1-6	....	....	....	....	GREEK QUESTION MARK
	037F	---G	GE2-J	....	....	....	....	
	0384	-24G	GE2-F	....	....	....	....	GREEK TONOS
	0385	-24G	.... DS1-e' DD1-q	....	....	....	....	GREEK DIALYTIKA TONOS
	0386	-24G	.... G2-A' DD1-q	....	....	....	....	GREEK CAPITAL LETTER ALPHA WITH TONOS
	0387y	-24G	YY1-p; CZ2-D	....	....	....	....	GREEK ANO TELEIA
	0388	-24G	.... G2-E' DD1-q	....	....	....	....	GREEK CAPITAL LETTER EPSILON WITH TONOS
	0389	-24G	.... G2-H' DD1-q	....	....	....	....	GREEK CAPITAL LETTER ETA WITH TONOS
	038A	-24G	.... G2-I' DD1-q	....	....	....	....	GREEK CAPITAL LETTER IOTA WITH TONOS
	038C	-24G	.... G2-O' DD1-q	....	....	....	....	GREEK CAPITAL LETTER OMICRON WITH TONOS
	038E	-24G	.... G2-Y' DD1-q	....	....	....	....	GREEK CAPITAL LETTER UPSILON WITH TONOS
	038F	-24G	.... G2-V' DD1-q	....	....	....	....	GREEK CAPITAL LETTER OMEGA WITH TONOS
	0390	-24G	.... G1-i' DD1-e' DD1-q	....	....	....	....	GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS
	0391	-24G	G2-A	....	....	....	....	GREEK CAPITAL LETTER ALPHA

0392	-24G	G2-B	....	....	....	....	GREEK CAPITAL LETTER BETA
0393	-24G	G2-G	....	....	....	....	GREEK CAPITAL LETTER GAMMA
0394	-24G	G2-D	....	....	....	....	GREEK CAPITAL LETTER DELTA
0395	-24G	G2-E	....	....	....	....	GREEK CAPITAL LETTER EPSILON
0396	-24G	G2-Z	....	....	....	....	GREEK CAPITAL LETTER ZETA
0397	-24G	G2-H	....	....	....	....	GREEK CAPITAL LETTER ETA
0398	-24G	G2-U	....	....	....	....	GREEK CAPITAL LETTER THETA
0399	-24G	G2-I	....	....	....	....	GREEK CAPITAL LETTER IOTA
039A	-24G	G2-K	....	....	....	....	GREEK CAPITAL LETTER KAPPA
039B	-24G	G2-L	....	....	....	....	GREEK CAPITAL LETTER LAMDA
039C	-24G	G2-M	....	....	....	....	GREEK CAPITAL LETTER MU
039D	-24G	G2-N	....	....	....	....	GREEK CAPITAL LETTER NU
039E	-24G	G2-J	....	....	....	....	GREEK CAPITAL LETTER XI
039F	-24G	G2-O	....	....	....	....	GREEK CAPITAL LETTER OMICRON
03A0	-24G	G2-P	....	....	....	....	GREEK CAPITAL LETTER PI
03A1	-24G	G2-R	....	....	....	....	GREEK CAPITAL LETTER RHO
03A3	-24G	G2-S	....	....	....	....	GREEK CAPITAL LETTER SIGMA
03A4	-24G	G2-T	....	....	....	....	GREEK CAPITAL LETTER TAU
03A5	-24G	G2-Y	....	....	....	....	GREEK CAPITAL LETTER UPSILON
03A6	-24G	G2-F	....	....	....	....	GREEK CAPITAL LETTER PHI
03A7	-24G	G2-X	....	....	....	....	GREEK CAPITAL LETTER CHI
03A8	-24G	G2-C	....	....	....	....	GREEK CAPITAL LETTER PSI
03A9	-24G	G2-V	....	....	....	....	GREEK CAPITAL LETTER OMEGA
03AA	-24G	....	G2-I'	DD1-e	....	....	GREEK CAPITAL LETTER IOTA WITH DIALYTIKA
03AB	-24G	....	G2-Y'	DD1-e	....	....	GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA
03AC	-24G	....	G1-a'	DD1-q	....	....	GREEK SMALL LETTER ALPHA WITH TONOS
03AD	-24G	....	G1-e'	DD1-q	....	....	GREEK SMALL LETTER EPSILON WITH TONOS
03AE	-24G	....	G1-h'	DD1-q	....	....	GREEK SMALL LETTER ETA WITH TONOS
03AF	-24G	....	G1-i'	DD1-q	....	....	GREEK SMALL LETTER IOTA WITH TONOS
03B0	-24G	....	G1-y'	DD1-e'	DD1-q	....	GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND
TONOS							
03B1	-24G	G1-a	....	....	....	....	GREEK SMALL LETTER ALPHA
127 03B2	-24G	G1-b;	i~b5	....	....	....	GREEK SMALL LETTER BETA Beta; Voiced bilabial fricative
03B3	-24G	G1-g	....	....	....	....	GREEK SMALL LETTER GAMMA
03B4	-24G	G1-d	....	....	....	....	GREEK SMALL LETTER DELTA
03B5	-24G	G1-e	....	....	....	....	GREEK SMALL LETTER EPSILON
03B6	-24G	G1-z	....	....	....	....	GREEK SMALL LETTER ZETA
03B7	-24G	G1-h	....	....	....	....	GREEK SMALL LETTER ETA
130 03B8	-24G	G1-u;	i~t5	....	....	....	GREEK SMALL LETTER THETA Theta; Voiceless dental fricative
03B9	-24G	G1-i	....	....	....	....	GREEK SMALL LETTER IOTA
03BA	-24G	G1-k	....	....	....	....	GREEK SMALL LETTER KAPPA
295 03BB	-24G	G1-l;	i~l5	....	....	....	GREEK SMALL LETTER LAMDA Lambda; Voiceless dental or alveolar lateral
fricative							
03BC	-24G	G1-m	....	....	....	....	GREEK SMALL LETTER MU
03BD	-24G	G1-n	....	....	....	....	GREEK SMALL LETTER NU
03BE	-24G	G1-j	....	....	....	....	GREEK SMALL LETTER XI
03BF	-24G	G1-o	....	....	....	....	GREEK SMALL LETTER OMICRON
03C0	-24G	G1-p	....	....	....	....	GREEK SMALL LETTER PI
03C1	-24G	G1-r	....	....	....	....	GREEK SMALL LETTER RHO
03C2	-24G	G1-w	....	....	....	....	GREEK SMALL LETTER FINAL SIGMA
03C3	-24G	G1-s	....	....	....	....	GREEK SMALL LETTER SIGMA
03C4	-24G	G1-t	....	....	....	....	GREEK SMALL LETTER TAU
03C5	-24G	G1-y	....	....	....	....	GREEK SMALL LETTER UPSILON
03C6	-24G	G1-f	....	....	....	....	GREEK SMALL LETTER PHI
142 03C7	-24G	G1-x;	i~x5	....	....	....	GREEK SMALL LETTER CHI Chi; Voiceless uvular fricative
03C8	-24G	G1-c	....	....	....	....	GREEK SMALL LETTER PSI
03C9	-24G	G1-v	....	....	....	....	GREEK SMALL LETTER OMEGA
03CA	-24G	....	G1-i'	DD1-e	....	....	GREEK SMALL LETTER IOTA WITH DIALYTIKA
03CB	-24G	....	G1-y'	DD1-e	....	....	GREEK SMALL LETTER UPSILON WITH DIALYTIKA
03CC	-24G	....	G1-o'	DD1-q	....	....	GREEK SMALL LETTER OMICRON WITH TONOS
03CD	-24G	....	G1-y'	DD1-q	....	....	GREEK SMALL LETTER UPSILON WITH TONOS

03CE	-24G	....	G1-v'	DD1-q	....	....	GREEK SMALL LETTER OMEGA WITH TONOS
03CF	---G	GE2-M	....	....	....	....	GREEK CAPITAL KAI SYMBOL
03D0	---G	GE1-b	....	....	....	....	GREEK BETA SYMBOL
03D1	---G	GE1-u	....	....	....	....	GREEK THETA SYMBOL
03D2	---G	GE2-Y	....	....	....	....	GREEK UPSILON WITH HOOK SYMBOL
03D3	---G	....	GE2-Y'	DD1-q	....	....	GREEK UPSILON WITH ACUTE AND HOOK SYMBOL
03D4	---G	....	GE2-Y'	DD1-e	....	....	GREEK UPSILON WITH DIAERESIS AND HOOK SYMBOL
03D5	---G	GE1-f	....	....	....	....	GREEK PHI SYMBOL
03D6	---G	GE1-p	....	....	....	....	GREEK PI SYMBOL
03D7	-2-G	GE1-m	....	....	....	....	GREEK KAI SYMBOL
03D8	---G	GE2-Q	....	....	....	....	GREEK LETTER ARCHAIC KOPPA
03D9	---G	GE1-q	....	....	....	....	GREEK SMALL LETTER ARCHAIC KOPPA
03DA	-2-G	GE2-C	....	....	....	....	GREEK LETTER STIGMA
03DB	-2-G	GE1-c	....	....	....	....	GREEK SMALL LETTER STIGMA
03DC	-2-G	GE2-W	....	....	....	....	GREEK LETTER DIGAMMA
03DD	-2-G	GE1-w	....	....	....	....	GREEK SMALL LETTER DIGAMMA
03DE	-2-G	GE2-T	....	....	....	....	GREEK LETTER KOPPA
03DF	-2-G	GE1-t	....	....	....	....	GREEK SMALL LETTER KOPPA
03E0	-2-G	GE2-X	....	....	....	....	GREEK LETTER SAMPI
03E1	-2-G	GE1-x	....	....	....	....	GREEK SMALL LETTER SAMPI
03F0	---G	GE1-k	....	....	....	....	GREEK KAPPA SYMBOL
03F1	---G	GE1-r	....	....	....	....	GREEK RHO SYMBOL
03F2	---G	GE1-s	....	....	....	....	GREEK LUNATE SIGMA SYMBOL
03F3	---G	GE1-j	....	....	....	....	GREEK LETTER YOT
03F4	---G	GE2-U	....	....	....	....	GREEK CAPITAL THETA SYMBOL
03F5	---G	GE1-e	....	....	....	....	GREEK LUNATE EPSILON SYMBOL
03F6	---G	GE1-y	....	....	....	....	GREEK REVERSED LUNATE EPSILON SYMBOL
03F7	---G	GE2-N	....	....	....	....	GREEK CAPITAL LETTER SHO
03F8	---G	GE1-n	....	....	....	....	GREEK SMALL LETTER SHO
03F9	---G	GE2-S	....	....	....	....	GREEK CAPITAL LUNATE SIGMA SYMBOL
03FA	---G	GE2-V	....	....	....	....	GREEK CAPITAL LETTER SAN
03FB	---G	GE1-v	....	....	....	....	GREEK SMALL LETTER SAN
03FC	---G	GE2-R	....	....	....	....	GREEK RHO WITH STROKE SYMBOL
03FD	---G	GE2-O	....	....	....	....	GREEK CAPITAL REVERSED LUNATE SIGMA SYMBOL
03FE	---G	GE2-A	....	....	....	....	GREEK CAPITAL DOTTED LUNATE SIGMA SYMBOL
03FF	---G	GE2-D	....	....	....	....	GREEK CAPITAL REVERSED DOTTED LUNATE SIGMA
SYMBOL							
0400	-24c	....	C2-E'	DD1-w	....	....	CYRILLIC CAPITAL LETTER IE WITH GRAVE
0401	-24c	....	C2-E'	DD1-e	....	....	CYRILLIC CAPITAL LETTER IO
0402	-24c	CE2-D	....	....	....	....	CYRILLIC CAPITAL LETTER DJE
0403	-24c	....	C2-G'	DD1-q	....	....	CYRILLIC CAPITAL LETTER GJE
0404	-24c	CE2-E	....	....	....	....	CYRILLIC CAPITAL LETTER UKRAINIAN IE
0405	-24c	CE2-S	....	....	....	....	CYRILLIC CAPITAL LETTER DZE
0406	-24c	CE2-I	....	....	....	....	CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I
0407	-24c	....	CE2-I'	DD1-e	....	....	CYRILLIC CAPITAL LETTER YI
0408	-24c	CE2-J	....	....	....	....	CYRILLIC CAPITAL LETTER JE
0409	-24c	CE2-L	....	....	....	....	CYRILLIC CAPITAL LETTER LJE
040A	-24c	CE2-N	....	....	....	....	CYRILLIC CAPITAL LETTER NJE
040B	-24c	CE2-X	....	....	....	....	CYRILLIC CAPITAL LETTER TSHE
040C	-24c	....	C2-K'	DD1-q	....	....	CYRILLIC CAPITAL LETTER KJE
040D	-24c	....	C2-I'	DD1-w	....	....	CYRILLIC CAPITAL LETTER I WITH GRAVE
040E	-24c	....	C2-U'	DD1-y	....	....	CYRILLIC CAPITAL LETTER SHORT U
040F	-24c	CE2-C	....	....	....	....	CYRILLIC CAPITAL LETTER DZHE
0410	-24c	C2-A	....	....	....	....	CYRILLIC CAPITAL LETTER A
0411	-24c	C2-B	....	....	....	....	CYRILLIC CAPITAL LETTER BE
0412	-24c	C2-V	....	....	....	....	CYRILLIC CAPITAL LETTER VE
0413	-24c	C2-G	....	....	....	....	CYRILLIC CAPITAL LETTER GHE
0414	-24c	C2-D	....	....	....	....	CYRILLIC CAPITAL LETTER DE
0415	-24c	C2-E	....	....	....	....	CYRILLIC CAPITAL LETTER IE
0416	-24c	C2-Q	....	....	....	....	CYRILLIC CAPITAL LETTER ZHE
0417	-24c	C2-Z	....	....	....	....	CYRILLIC CAPITAL LETTER ZE
0418	-24c	C2-I	....	....	....	....	CYRILLIC CAPITAL LETTER I
0419	-24c	CE2-Q;	C2-I'	DD1-y	....	....	CYRILLIC CAPITAL LETTER SHORT I
041A	-24c	C2-K	....	....	....	....	CYRILLIC CAPITAL LETTER KA
041B	-24c	C2-L	....	....	....	....	CYRILLIC CAPITAL LETTER EL

041C	-24c	C2-M	....	....	....	....	CYRILLIC CAPITAL LETTER EM
041D	-24c	C2-N	....	....	....	....	CYRILLIC CAPITAL LETTER EN
041E	-24c	C2-O	....	....	....	....	CYRILLIC CAPITAL LETTER O
041F	-24c	C2-P	....	....	....	....	CYRILLIC CAPITAL LETTER PE
0420	-24c	C2-R	....	....	....	....	CYRILLIC CAPITAL LETTER ER
0421	-24c	C2-S	....	....	....	....	CYRILLIC CAPITAL LETTER ES
0422	-24c	C2-T	....	....	....	....	CYRILLIC CAPITAL LETTER TE
0423	-24c	C2-U	....	....	....	....	CYRILLIC CAPITAL LETTER U
0424	-24c	C2-F	....	....	....	....	CYRILLIC CAPITAL LETTER EF
0425	-24c	C2-H	....	....	....	....	CYRILLIC CAPITAL LETTER HA
0426	-24c	C2-C	....	....	....	....	CYRILLIC CAPITAL LETTER TSE
0427	-24c	C2-X	....	....	....	....	CYRILLIC CAPITAL LETTER CHE
0428	-24c	C2-W	....	....	....	....	CYRILLIC CAPITAL LETTER SHA
0429	-24c	CE2-W	....	....	....	....	CYRILLIC CAPITAL LETTER SHCHA
042A	-24c	CE2-T	....	....	....	....	CYRILLIC CAPITAL LETTER HARD SIGN
042B	-24c	C2-Y	....	....	....	....	CYRILLIC CAPITAL LETTER YERU
042C	-24c	CE2-Y	....	....	....	....	CYRILLIC CAPITAL LETTER SOFT SIGN
042D	-24c	C2-J	....	....	....	....	CYRILLIC CAPITAL LETTER E
042E	-24c	CE2-U	....	....	....	....	CYRILLIC CAPITAL LETTER YU
042F	-24c	CE2-A	....	....	....	....	CYRILLIC CAPITAL LETTER YA
0430	-24c	C1-a	....	....	....	....	CYRILLIC SMALL LETTER A
0431	-24c	C1-b	....	....	....	....	CYRILLIC SMALL LETTER BE
0432	-24c	C1-v	....	....	....	....	CYRILLIC SMALL LETTER VE
0433	-24c	C1-g	....	....	....	....	CYRILLIC SMALL LETTER GHE
0434	-24c	C1-d	....	....	....	....	CYRILLIC SMALL LETTER DE
0435	-24c	C1-e	....	....	....	....	CYRILLIC SMALL LETTER IE
0436	-24c	C1-q	....	....	....	....	CYRILLIC SMALL LETTER ZHE
0437	-24c	C1-z	....	....	....	....	CYRILLIC SMALL LETTER ZE
0438	-24c	C1-i	....	....	....	....	CYRILLIC SMALL LETTER I
0439	-24c	CE1-q; C1-i'	DD1-y	....	....	....	CYRILLIC SMALL LETTER SHORT I
043A	-24c	C1-k	....	....	....	....	CYRILLIC SMALL LETTER KA
043B	-24c	C1-l	....	....	....	....	CYRILLIC SMALL LETTER EL
043C	-24c	C1-m	....	....	....	....	CYRILLIC SMALL LETTER EM
043D	-24c	C1-n	....	....	....	....	CYRILLIC SMALL LETTER EN
043E	-24c	C1-o	....	....	....	....	CYRILLIC SMALL LETTER O
043F	-24c	C1-p	....	....	....	....	CYRILLIC SMALL LETTER PE
0440	-24c	C1-r	....	....	....	....	CYRILLIC SMALL LETTER ER
0441	-24c	C1-s	....	....	....	....	CYRILLIC SMALL LETTER ES
0442	-24c	C1-t	....	....	....	....	CYRILLIC SMALL LETTER TE
0443	-24c	C1-u	....	....	....	....	CYRILLIC SMALL LETTER U
0444	-24c	C1-f	....	....	....	....	CYRILLIC SMALL LETTER EF
0445	-24c	C1-h	....	....	....	....	CYRILLIC SMALL LETTER HA
0446	-24c	C1-c	....	....	....	....	CYRILLIC SMALL LETTER TSE
0447	-24c	C1-x	....	....	....	....	CYRILLIC SMALL LETTER CHE
0448	-24c	C1-w	....	....	....	....	CYRILLIC SMALL LETTER SHA
0449	-24c	CE1-w	....	....	....	....	CYRILLIC SMALL LETTER SHCHA
044A	-24c	CE1-t	....	....	....	....	CYRILLIC SMALL LETTER HARD SIGN
044B	-24c	C1-y	....	....	....	....	CYRILLIC SMALL LETTER YERU
044C	-24c	CE1-y	....	....	....	....	CYRILLIC SMALL LETTER SOFT SIGN
044D	-24c	C1-j	....	....	....	....	CYRILLIC SMALL LETTER E
044E	-24c	CE1-u	....	....	....	....	CYRILLIC SMALL LETTER YU
044F	-24c	CE1-a	....	....	....	....	CYRILLIC SMALL LETTER YA
0450	-24c	....	C1-e'	DD1-w	....	....	CYRILLIC SMALL LETTER IE WITH GRAVE
0451	-24c	....	C1-e'	DD1-e	....	....	CYRILLIC SMALL LETTER IO
0452	-24c	CE1-d	....	....	....	....	CYRILLIC SMALL LETTER DJE
0453	-24c	....	C1-g'	DD1-q	....	....	CYRILLIC SMALL LETTER GJE
0454	-24c	CE1-e	....	....	....	....	CYRILLIC SMALL LETTER UKRAINIAN IE
0455	-24c	CE1-s	....	....	....	....	CYRILLIC SMALL LETTER DZE
0456	-24c	CE1-i	....	....	....	....	CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I
0457	-24c	....	CE1-i'	DD1-e	....	....	CYRILLIC SMALL LETTER YI
0458	-24c	CE1-j	....	....	....	....	CYRILLIC SMALL LETTER JE
0459	-24c	CE1-l	....	....	....	....	CYRILLIC SMALL LETTER LJE
045A	-24c	CE1-n	....	....	....	....	CYRILLIC SMALL LETTER NJE
045B	-24c	CE1-x	....	....	....	....	CYRILLIC SMALL LETTER TSHE
045C	-24c	....	C1-k'	DD1-q	....	....	CYRILLIC SMALL LETTER KJE

045D	-24c	....	C1-i'	DD1-w	....	....	CYRILLIC SMALL LETTER I WITH GRAVE
045E	-24c	....	C1-u'	DD1-y	....	....	CYRILLIC SMALL LETTER SHORT U
045F	-24c	CE1-c	....	....	....	....	CYRILLIC SMALL LETTER DZHE
0460	---c	CZ2-W	....	....	....	....	CYRILLIC CAPITAL LETTER OMEGA
0461	---c	CZ1-w	....	....	....	....	CYRILLIC SMALL LETTER OMEGA
0462	---c	CZ2-E	....	....	....	....	CYRILLIC CAPITAL LETTER YAT
0463	---c	CZ1-e	....	....	....	....	CYRILLIC SMALL LETTER YAT
0464	---c	CZ2-G	....	....	....	....	CYRILLIC CAPITAL LETTER IOTIFIED E
0465	---c	CZ1-g	....	....	....	....	CYRILLIC SMALL LETTER IOTIFIED E
0466	---c	CZ2-H	....	....	....	....	CYRILLIC CAPITAL LETTER LITTLE YUS
0467	---c	CZ1-h	....	....	....	....	CYRILLIC SMALL LETTER LITTLE YUS
0468	---c	CZ2-J	....	....	....	....	CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS
0469	---c	CZ1-j	....	....	....	....	CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS
046A	---c	CZ2-K	....	....	....	....	CYRILLIC CAPITAL LETTER BIG YUS
046B	---c	CZ1-k	....	....	....	....	CYRILLIC SMALL LETTER BIG YUS
046C	---c	CZ2-L	....	....	....	....	CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS
046D	---c	CZ1-l	....	....	....	....	CYRILLIC SMALL LETTER IOTIFIED BIG YUS
046E	---c	CZ2-X	....	....	....	....	CYRILLIC CAPITAL LETTER KSI
046F	---c	CZ1-x	....	....	....	....	CYRILLIC SMALL LETTER KSI
0470	---c	CZ2-C	....	....	....	....	CYRILLIC CAPITAL LETTER PSI
0471	---c	CZ1-c	....	....	....	....	CYRILLIC SMALL LETTER PSI
0472	---c	CZ2-F	....	....	....	....	CYRILLIC CAPITAL LETTER FITA
0473	---c	CZ1-f	....	....	....	....	CYRILLIC SMALL LETTER FITA
0474	---c	CZ2-I	....	....	....	....	CYRILLIC CAPITAL LETTER IZHITSA
0475	---c	CZ1-i	....	....	....	....	CYRILLIC SMALL LETTER IZHITSA
0476	---c	....	CZ2-I'	DD1-j	....	....	CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT
0477	---c	....	CZ1-i'	DD1-j	....	....	CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT
0478	---c	CZ2-U	....	....	....	....	CYRILLIC CAPITAL LETTER UK
0479	---c	CZ1-u	....	....	....	....	CYRILLIC SMALL LETTER UK
047A	---c	CZ2-O	....	....	....	....	CYRILLIC CAPITAL LETTER ROUND OMEGA
047B	---c	CZ1-o	....	....	....	....	CYRILLIC SMALL LETTER ROUND OMEGA
047C	---c	CZ2-N	....	....	....	....	CYRILLIC CAPITAL LETTER OMEGA WITH TITLO
047D	---c	CZ1-n	....	....	....	....	CYRILLIC SMALL LETTER OMEGA WITH TITLO
047E	---c	CZ2-M	....	....	....	....	CYRILLIC CAPITAL LETTER OT
047F	---c	CZ1-m	....	....	....	....	CYRILLIC SMALL LETTER OT
0480	---c	CZ2-Q	....	....	....	....	CYRILLIC CAPITAL LETTER KOPPA
0481	---c	CZ1-q	....	....	....	....	CYRILLIC SMALL LETTER KOPPA
0482	---c	CZ1-v	....	....	....	....	CYRILLIC THOUSANDS SIGN
0483	---c	DD2-F	....	....	....	....	COMBINING CYRILLIC TITLO
0484	---c	DD2-J	....	....	....	....	COMBINING CYRILLIC PALATALIZATION
0485	---c	DD2-H	....	....	....	....	COMBINING CYRILLIC DASIA PNEUMATA
0486	---c	DD2-G	....	....	....	....	COMBINING CYRILLIC PSILI PNEUMATA
0487	---c	DD2-K	....	....	....	....	COMBINING CYRILLIC POKRYTIE
0488	---c	CZ1-b	....	....	....	....	COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
0489	---c	CZ2-B	....	....	....	....	COMBINING CYRILLIC MILLIONS SIGN
0490	-24c	CE2-G	....	....	....	....	CYRILLIC CAPITAL LETTER GHE WITH UPTURN
0491	-24c	CE1-g	....	....	....	....	CYRILLIC SMALL LETTER GHE WITH UPTURN
0492	-2-c	CE2-Z	....	....	....	....	CYRILLIC CAPITAL LETTER GHE WITH STROKE
0493	-2-c	CE1-z	....	....	....	....	CYRILLIC SMALL LETTER GHE WITH STROKE
0494	-2-c	CX2-G	....	....	....	....	CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK
0495	-2-c	CX1-g	....	....	....	....	CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK
0496	-2-c	CX2-Q	....	....	....	....	CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER
0497	-2-c	CX1-q	....	....	....	....	CYRILLIC SMALL LETTER ZHE WITH DESCENDER
0498	-2-c	CX2-Z	....	....	....	....	CYRILLIC CAPITAL LETTER ZE WITH DESCENDER
0499	-2-c	CX1-z	....	....	....	....	CYRILLIC SMALL LETTER ZE WITH DESCENDER
049A	-2-c	CE2-K	....	....	....	....	CYRILLIC CAPITAL LETTER KA WITH DESCENDER
049B	-2-c	CE1-k	....	....	....	....	CYRILLIC SMALL LETTER KA WITH DESCENDER
049C	-2-c	CE2-P	....	....	....	....	CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE
049D	-2-c	CE1-p	....	....	....	....	CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE
049E	-2-c	CX2-K	....	....	....	....	CYRILLIC CAPITAL LETTER KA WITH STROKE
049F	-2-c	CX1-k	....	....	....	....	CYRILLIC SMALL LETTER KA WITH STROKE
04A0	-2-c	CX2-F	....	....	....	....	CYRILLIC CAPITAL LETTER BASHKIR KA
04A1	-2-c	CX1-f	....	....	....	....	CYRILLIC SMALL LETTER BASHKIR KA

04A2	-2-c	CE2-B	....	....	....	....	CYRILLIC CAPITAL LETTER EN WITH DESCENDER
04A3	-2-c	CE1-b	....	....	....	....	CYRILLIC SMALL LETTER EN WITH DESCENDER
04A4	-2-c	CX2-B	....	....	....	....	CYRILLIC CAPITAL LIGATURE EN GHE
04A5	-2-c	CX1-b	....	....	....	....	CYRILLIC SMALL LIGATURE EN GHE
04A6	-2-c	CX2-U	....	....	....	....	CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK
04A7	-2-c	CX1-u	....	....	....	....	CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK
04A8	-2-c	CX2-H	....	....	....	....	CYRILLIC CAPITAL LETTER ABKHASIAN HA
04A9	-2-c	CX1-h	....	....	....	....	CYRILLIC SMALL LETTER ABKHASIAN HA
04AA	-2-c	CX2-S	....	....	....	....	CYRILLIC CAPITAL LETTER ES WITH DESCENDER
04AB	-2-c	CX1-s	....	....	....	....	CYRILLIC SMALL LETTER ES WITH DESCENDER
04AC	-2-c	CX2-T	....	....	....	....	CYRILLIC CAPITAL LETTER TE WITH DESCENDER
04AD	-2-c	CX1-t	....	....	....	....	CYRILLIC SMALL LETTER TE WITH DESCENDER
04AE	-2-c	CE2-M	....	....	....	....	CYRILLIC CAPITAL LETTER STRAIGHT U
04AF	-2-c	CE1-m	....	....	....	....	CYRILLIC SMALL LETTER STRAIGHT U
04B0	-2-c	CE2-V	....	....	....	....	CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE
04B1	-2-c	CE1-v	....	....	....	....	CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE
04B2	-2-c	CE2-H	....	....	....	....	CYRILLIC CAPITAL LETTER HA WITH DESCENDER
04B3	-2-c	CE1-h	....	....	....	....	CYRILLIC SMALL LETTER HA WITH DESCENDER
04B4	-2-c	CX2-C	....	....	....	....	CYRILLIC CAPITAL LIGATURE TE TSE
04B5	-2-c	CX1-c	....	....	....	....	CYRILLIC SMALL LIGATURE TE TSE
04B6	-2-c	CX2-X	....	....	....	....	CYRILLIC CAPITAL LETTER CHE WITH DESCENDER
04B7	-2-c	CX1-x	....	....	....	....	CYRILLIC SMALL LETTER CHE WITH DESCENDER
04B8	-2-c	CX2-M	....	....	....	....	CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE
04B9	-2-c	CX1-m	....	....	....	....	CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE
04BA	-2-c	CE2-F	....	....	....	....	CYRILLIC CAPITAL LETTER SHHA
04BB	-2-c	CE1-f	....	....	....	....	CYRILLIC SMALL LETTER SHHA
04BC	-2-c	CX2-R	....	....	....	....	CYRILLIC CAPITAL LETTER ABKHASIAN CHE
04BD	-2-c	CX1-r	....	....	....	....	CYRILLIC SMALL LETTER ABKHASIAN CHE
04BE	-2-c	CX2-W	....	....	....	....	CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH
DESCENDER							
04BF	-2-c	CX1-w	....	....	....	....	CYRILLIC SMALL LETTER ABKHASIAN CHE WITH
DESCENDER							
04C0	-2-c	CX2-Y	....	....	....	....	CYRILLIC LETTER PALOCHKA
04C1	-2-c	....	C2-Q'	DD1-y	....	....	CYRILLIC CAPITAL LETTER ZHE WITH BREVE
04C2	-2-c	....	C1-q'	DD1-y	....	....	CYRILLIC SMALL LETTER ZHE WITH BREVE
04C3	-2-c	CX2-J	....	....	....	....	CYRILLIC CAPITAL LETTER KA WITH HOOK
04C4	-2-c	CX1-j	....	....	....	....	CYRILLIC SMALL LETTER KA WITH HOOK
04C7	-2-c	CX2-N	....	....	....	....	CYRILLIC CAPITAL LETTER EN WITH HOOK
04C8	-2-c	CX1-n	....	....	....	....	CYRILLIC SMALL LETTER EN WITH HOOK
04CB	-2-c	CX2-V	....	....	....	....	CYRILLIC CAPITAL LETTER KHAKASSIAN CHE
04CC	-2-c	CX1-v	....	....	....	....	CYRILLIC SMALL LETTER KHAKASSIAN CHE
04CF	--c	CX1-y	....	....	....	....	CYRILLIC SMALL LETTER PALOCHKA
04D0	-2-c	....	C2-A'	DD1-y	....	....	CYRILLIC CAPITAL LETTER A WITH BREVE
04D1	-2-c	....	C1-a'	DD1-y	....	....	CYRILLIC SMALL LETTER A WITH BREVE
04D2	-2-c	....	C2-A'	DD1-e	....	....	CYRILLIC CAPITAL LETTER A WITH DIAERESIS
04D3	-2-c	....	C1-a'	DD1-e	....	....	CYRILLIC SMALL LETTER A WITH DIAERESIS
04D4	-2-c	CX2-A	....	....	....	....	CYRILLIC CAPITAL LIGATURE A IE
04D5	-2-c	CX1-a	....	....	....	....	CYRILLIC SMALL LIGATURE A IE
04D6	-2-c	....	C2-E'	DD1-y	....	....	CYRILLIC CAPITAL LETTER IE WITH BREVE
04D7	-2-c	....	C1-e'	DD1-y	....	....	CYRILLIC SMALL LETTER IE WITH BREVE
04D8	-2-c	CE2-R	....	....	....	....	CYRILLIC CAPITAL LETTER SCHWA
04D9	-2-c	CE1-r	....	....	....	....	CYRILLIC SMALL LETTER SCHWA
04DA	-2-c	....	CE2-R'	DD1-e	....	....	CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS
04DB	-2-c	....	CE1-r'	DD1-e	....	....	CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS
04DC	-2-c	....	C2-Q'	DD1-e	....	....	CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS
04DD	-2-c	....	C1-q'	DD1-e	....	....	CYRILLIC SMALL LETTER ZHE WITH DIAERESIS
04DE	-2-c	....	C2-Z'	DD1-e	....	....	CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS
04DF	-2-c	....	C1-z'	DD1-e	....	....	CYRILLIC SMALL LETTER ZE WITH DIAERESIS
04E0	-2-c	CX2-D	....	....	....	....	CYRILLIC CAPITAL LETTER ABKHASIAN DZE
04E1	-2-c	CX1-d	....	....	....	....	CYRILLIC SMALL LETTER ABKHASIAN DZE
04E2	-2-c	....	C2-I'	DD1-d	....	....	CYRILLIC CAPITAL LETTER I WITH MACRON
04E3	-2-c	....	C1-i'	DD1-d	....	....	CYRILLIC SMALL LETTER I WITH MACRON
04E4	-2-c	....	C2-I'	DD1-e	....	....	CYRILLIC CAPITAL LETTER I WITH DIAERESIS
04E5	-2-c	....	C1-i'	DD1-e	....	....	CYRILLIC SMALL LETTER I WITH DIAERESIS
04E6	-2-c	....	C2-O'	DD1-e	....	....	CYRILLIC CAPITAL LETTER O WITH DIAERESIS

04E7	-2-c	....	C1-o'	DD1-e	....	....	CYRILLIC SMALL LETTER O WITH DIAERESIS
04E8	-2-c	CE2-0	....	....	....	....	CYRILLIC CAPITAL LETTER BARRED O
04E9	-2-c	CE1-o	....	....	....	....	CYRILLIC SMALL LETTER BARRED O
04EA	-2-c	....	CE2-0'	DD1-e	....	....	CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS
04EB	-2-c	....	CE1-o'	DD1-e	....	....	CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS
04EC	---c	....	C2-J'	DD1-e	....	....	CYRILLIC CAPITAL LETTER E WITH DIAERESIS
04ED	---c	....	C1-j'	DD1-e	....	....	CYRILLIC SMALL LETTER E WITH DIAERESIS
04EE	-2-c	....	C2-U'	DD1-d	....	....	CYRILLIC CAPITAL LETTER U WITH MACRON
04EF	-2-c	....	C1-u'	DD1-d	....	....	CYRILLIC SMALL LETTER U WITH MACRON
04F0	-2-c	....	C2-U'	DD1-e	....	....	CYRILLIC CAPITAL LETTER U WITH DIAERESIS
04F1	-2-c	....	C1-u'	DD1-e	....	....	CYRILLIC SMALL LETTER U WITH DIAERESIS
04F2	-2-c	....	C2-U'	DD1-t	....	....	CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE
04F3	-2-c	....	C1-u'	DD1-t	....	....	CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE
04F4	-2-c	....	C2-X'	DD1-e	....	....	CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS
04F5	-2-c	....	C1-x'	DD1-e	....	....	CYRILLIC SMALL LETTER CHE WITH DIAERESIS
04F6	---c	CX2-0	....	....	....	....	CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
04F7	---c	CX1-o	....	....	....	....	CYRILLIC SMALL LETTER GHE WITH DESCENDER
04F8	-2-c	....	C2-Y'	DD1-e	....	....	CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS
04F9	-2-c	....	C1-y'	DD1-e	....	....	CYRILLIC SMALL LETTER YERU WITH DIAERESIS
0510	---c	CX2-E	....	....	....	....	CYRILLIC CAPITAL LETTER REVERSED ZE
0511	---c	CX1-e	....	....	....	....	CYRILLIC SMALL LETTER REVERSED ZE
0512	---c	CX2-L	....	....	....	....	CYRILLIC CAPITAL LETTER EL WITH HOOK
0513	---c	CX1-l	....	....	....	....	CYRILLIC SMALL LETTER EL WITH HOOK
0524	---c	CX2-P	....	....	....	....	CYRILLIC CAPITAL LETTER PE WITH DESCENDER
0525	---c	CX1-p	....	....	....	....	CYRILLIC SMALL LETTER PE WITH DESCENDER
0526	---c	CX2-I	....	....	....	....	CYRILLIC CAPITAL LETTER SHHA WITH DESCENDER
0527	---c	CX1-i	....	....	....	....	CYRILLIC SMALL LETTER SHHA WITH DESCENDER
0531	---W	W2-A	....	....	....	....	ARMENIAN CAPITAL LETTER AYB
0532	---W	W2-B	....	....	....	....	ARMENIAN CAPITAL LETTER BEN
0533	---W	W2-C	....	....	....	....	ARMENIAN CAPITAL LETTER GIM
0534	---W	W2-D	....	....	....	....	ARMENIAN CAPITAL LETTER DA
0535	---W	W2-Y	....	....	....	....	ARMENIAN CAPITAL LETTER ECH
0536	---W	W2-Z	....	....	....	....	ARMENIAN CAPITAL LETTER ZA
0537	---W	W2-E	....	....	....	....	ARMENIAN CAPITAL LETTER EH
0538	---W	W2-U	....	....	....	....	ARMENIAN CAPITAL LETTER ET
0539	---W	WE2-T	....	....	....	....	ARMENIAN CAPITAL LETTER TO
053A	---W	WE2-Z	....	....	....	....	ARMENIAN CAPITAL LETTER ZHE
053B	---W	W2-I	....	....	....	....	ARMENIAN CAPITAL LETTER INI
053C	---W	W2-L	....	....	....	....	ARMENIAN CAPITAL LETTER LIWN
053D	---W	W2-Q	....	....	....	....	ARMENIAN CAPITAL LETTER XEH
053E	---W	WE2-C	....	....	....	....	ARMENIAN CAPITAL LETTER CA
053F	---W	W2-K	....	....	....	....	ARMENIAN CAPITAL LETTER KEN
0540	---W	W2-H	....	....	....	....	ARMENIAN CAPITAL LETTER HO
0541	---W	WE2-J	....	....	....	....	ARMENIAN CAPITAL LETTER JA
0542	---W	WE2-G	....	....	....	....	ARMENIAN CAPITAL LETTER GHAD
0543	---W	W2-J	....	....	....	....	ARMENIAN CAPITAL LETTER CHEH
0544	---W	W2-M	....	....	....	....	ARMENIAN CAPITAL LETTER MEN
0545	---W	WE2-Y	....	....	....	....	ARMENIAN CAPITAL LETTER YI
0546	---W	W2-N	....	....	....	....	ARMENIAN CAPITAL LETTER NOW
0547	---W	WE2-S	....	....	....	....	ARMENIAN CAPITAL LETTER SHA
0548	---W	W2-O	....	....	....	....	ARMENIAN CAPITAL LETTER VO
0549	---W	WE2-X	....	....	....	....	ARMENIAN CAPITAL LETTER CHA
054A	---W	W2-P	....	....	....	....	ARMENIAN CAPITAL LETTER PEH
054B	---W	WE2-H	....	....	....	....	ARMENIAN CAPITAL LETTER JHEH
054C	---W	WE2-R	....	....	....	....	ARMENIAN CAPITAL LETTER RA
054D	---W	W2-S	....	....	....	....	ARMENIAN CAPITAL LETTER SEH
054E	---W	W2-V	....	....	....	....	ARMENIAN CAPITAL LETTER VEH
054F	---W	W2-T	....	....	....	....	ARMENIAN CAPITAL LETTER TIWN
0550	---W	W2-R	....	....	....	....	ARMENIAN CAPITAL LETTER REH
0551	---W	W2-X	....	....	....	....	ARMENIAN CAPITAL LETTER CO
0552	---W	W2-W	....	....	....	....	ARMENIAN CAPITAL LETTER YIWN
0553	---W	WE2-P	....	....	....	....	ARMENIAN CAPITAL LETTER PIWR
0554	---W	W2-G	....	....	....	....	ARMENIAN CAPITAL LETTER KEH
0555	---W	WE2-O	....	....	....	....	ARMENIAN CAPITAL LETTER OH
0556	---W	W2-F	....	....	....	....	ARMENIAN CAPITAL LETTER FEH

055A	---W	WE2-A	....	....	....	....	ARMENIAN APOSTROPHE
055B	---W	WE1-w	....	....	....	....	ARMENIAN EMPHASIS MARK
055C	---W	WE1-d	....	....	....	....	ARMENIAN EXCLAMATION MARK
055D	---W	WE1-k	....	....	....	....	ARMENIAN COMMA
055E	---W	WE1-f	....	....	....	....	ARMENIAN QUESTION MARK
055F	---W	WE1-q	....	....	....	....	ARMENIAN ABBREVIATION MARK
0561	---W	W1-a	....	....	....	....	ARMENIAN SMALL LETTER AYB
0562	---W	W1-b	....	....	....	....	ARMENIAN SMALL LETTER BEN
0563	---W	W1-c	....	....	....	....	ARMENIAN SMALL LETTER GIM
0564	---W	W1-d	....	....	....	....	ARMENIAN SMALL LETTER DA
0565	---W	W1-y	....	....	....	....	ARMENIAN SMALL LETTER ECH
0566	---W	W1-z	....	....	....	....	ARMENIAN SMALL LETTER ZA
0567	---W	W1-e	....	....	....	....	ARMENIAN SMALL LETTER EH
0568	---W	W1-u	....	....	....	....	ARMENIAN SMALL LETTER ET
0569	---W	WE1-t	....	....	....	....	ARMENIAN SMALL LETTER TO
056A	---W	WE1-z	....	....	....	....	ARMENIAN SMALL LETTER ZHE
056B	---W	W1-i	....	....	....	....	ARMENIAN SMALL LETTER INI
056C	---W	W1-l	....	....	....	....	ARMENIAN SMALL LETTER LIWN
056D	---W	W1-q	....	....	....	....	ARMENIAN SMALL LETTER XEH
056E	---W	WE1-c	....	....	....	....	ARMENIAN SMALL LETTER CA
056F	---W	W1-k	....	....	....	....	ARMENIAN SMALL LETTER KEN
0570	---W	W1-h	....	....	....	....	ARMENIAN SMALL LETTER HO
0571	---W	WE1-j	....	....	....	....	ARMENIAN SMALL LETTER JA
0572	---W	WE1-g	....	....	....	....	ARMENIAN SMALL LETTER GHAD
0573	---W	W1-j	....	....	....	....	ARMENIAN SMALL LETTER CHEH
0574	---W	W1-m	....	....	....	....	ARMENIAN SMALL LETTER MEN
0575	---W	WE1-y	....	....	....	....	ARMENIAN SMALL LETTER YI
0576	---W	W1-n	....	....	....	....	ARMENIAN SMALL LETTER NOW
0577	---W	WE1-s	....	....	....	....	ARMENIAN SMALL LETTER SHA
0578	---W	W1-o	....	....	....	....	ARMENIAN SMALL LETTER VO
0579	---W	WE1-x	....	....	....	....	ARMENIAN SMALL LETTER CHA
057A	---W	W1-p	....	....	....	....	ARMENIAN SMALL LETTER PEH
057B	---W	WE1-h	....	....	....	....	ARMENIAN SMALL LETTER JHEH
057C	---W	WE1-r	....	....	....	....	ARMENIAN SMALL LETTER RA
057D	---W	W1-s	....	....	....	....	ARMENIAN SMALL LETTER SEH
057E	---W	W1-v	....	....	....	....	ARMENIAN SMALL LETTER VEW
057F	---W	W1-t	....	....	....	....	ARMENIAN SMALL LETTER TIWN
0580	---W	W1-r	....	....	....	....	ARMENIAN SMALL LETTER REH
0581	---W	W1-x	....	....	....	....	ARMENIAN SMALL LETTER CO
0582	---W	W1-w	....	....	....	....	ARMENIAN SMALL LETTER YIWN
0583	---W	WE1-p	....	....	....	....	ARMENIAN SMALL LETTER PIWR
0584	---W	W1-g	....	....	....	....	ARMENIAN SMALL LETTER KEH
0585	---W	WE1-o	....	....	....	....	ARMENIAN SMALL LETTER OH
0586	---W	W1-f	....	....	....	....	ARMENIAN SMALL LETTER FEH
0587	---W	WE1-e	....	....	....	....	ARMENIAN SMALL LIGATURE ECH YIWN
0589	---W	CZ1-d; Q2-Z; WE1-l	....	....	....	....	ARMENIAN FULL STOP
058A	---W	WE1-u	....	....	....	....	ARMENIAN HYPHEN
058F	---W	WE2-D	....	....	....	....	ARMENIAN DRAM SIGN
0591	---H	HE1-e	....	....	....	....	HEBREW ACCENT ETNAHTA
0592	---H	HE1-r	....	....	....	....	HEBREW ACCENT SEGOL
0593	---H	HE1-t	....	....	....	....	HEBREW ACCENT SHALSHELET
0594	---H	HE1-y	....	....	....	....	HEBREW ACCENT ZAQEF QATAN
0595	---H	HE1-u	....	....	....	....	HEBREW ACCENT ZAQEF GADOL
0596	---H	HE1-i	....	....	....	....	HEBREW ACCENT TIPEHA
0597	---H	HE1-o	....	....	....	....	HEBREW ACCENT REVIA
0598	---H	HE1-p	....	....	....	....	HEBREW ACCENT ZARQA
0599	---H	HE1-a	....	....	....	....	HEBREW ACCENT PASHTA
059A	---H	HE1-s	....	....	....	....	HEBREW ACCENT YETIV
059B	---H	HE1-d	....	....	....	....	HEBREW ACCENT TEVIR
059C	---H	HE1-f	....	....	....	....	HEBREW ACCENT GERESH
059D	---H	HE1-g	....	....	....	....	HEBREW ACCENT GERESH MUQDAM
059E	---H	HE1-h	....	....	....	....	HEBREW ACCENT GERSHAYIM
059F	---H	HE1-j	....	....	....	....	HEBREW ACCENT QARNEY PARA
05A0	---H	HE1-k	....	....	....	....	HEBREW ACCENT TELISHA GEDOLA
05A1	---H	HE1-l	....	....	....	....	HEBREW ACCENT PAZER

05A2	---H	HE1-z	....	....	....	....	HEBREW ACCENT ATNAH HAFUKH
05A3	---H	HE1-x	....	....	....	....	HEBREW ACCENT MUNAH
05A4	---H	HE1-c	....	....	....	....	HEBREW ACCENT MAHAPAKH
05A5	---H	HE1-v	....	....	....	....	HEBREW ACCENT MERKHA
05A6	---H	HE1-b	....	....	....	....	HEBREW ACCENT MERKHA KEFULA
05A7	---H	HE1-n	....	....	....	....	HEBREW ACCENT DARGA
05A8	---H	HE1-m	....	....	....	....	HEBREW ACCENT QADMA
05A9	---H	HE2-E	....	....	....	....	HEBREW ACCENT TELISHA QETANA
05AA	---H	HE2-Z	....	....	....	....	HEBREW ACCENT YERAH BEN YOMO
05AB	---H	HE2-U	....	....	....	....	HEBREW ACCENT OLE
05AC	---H	HE2-I	....	....	....	....	HEBREW ACCENT ILUY
05AD	---H	HE2-O	....	....	....	....	HEBREW ACCENT DEHI
05AE	---H	HE2-P	....	....	....	....	HEBREW ACCENT ZINOR
05AF	---H	HE2-M	....	....	....	....	HEBREW MARK MASORA CIRCLE
05B0	---H	H2-T	....	....	....	....	HEBREW POINT SHEVA
05B1	---H	H2-Z	....	....	....	....	HEBREW POINT HATAF SEGOL
05B2	---H	H2-X	....	....	....	....	HEBREW POINT HATAF PATAH
05B3	---H	H2-C	....	....	....	....	HEBREW POINT HATAF QAMATS
05B4	---H	H2-I	....	....	....	....	HEBREW POINT HIRIQ
05B5	---H	H2-O	....	....	....	....	HEBREW POINT TSERE
05B6	---H	H2-P	....	....	....	....	HEBREW POINT SEGOL
05B7	---H	H2-S	....	....	....	....	HEBREW POINT PATAH
05B8	---H	H2-D	....	....	....	....	HEBREW POINT QAMATS
05B9	---H	H2-K	....	....	....	....	HEBREW POINT HOLAM
05BA	---H	HE2-K	....	....	....	....	HEBREW POINT HOLAM HASER FOR VAV
05BB	---H	H2-E	....	....	....	....	HEBREW POINT QUBUTS
05BC	---H	H2-L	....	....	....	....	HEBREW POINT DAGESH OR MAPIQ
05BD	---H	H2-Y	....	....	....	....	HEBREW POINT METEG
05BE	---H	H2-V	....	....	....	....	HEBREW PUNCTUATION MAQAF
05BF	---H	H2-R	....	....	....	....	HEBREW POINT RAFE
05C0	---H	H2-N	....	....	....	....	HEBREW PUNCTUATION PASEQ
05C1	---H	H2-G	....	....	....	....	HEBREW POINT SHIN DOT
05C2	---H	H2-F	....	....	....	....	HEBREW POINT SIN DOT
05C3	---H	H2-B	....	....	....	....	HEBREW PUNCTUATION SOF PASUQ
05C4	---H	HE2-G	....	....	....	....	HEBREW MARK UPPER DOT
05C5	---H	HE2-F	....	....	....	....	HEBREW MARK LOWER DOT
05C6	---H	HE2-B	....	....	....	....	HEBREW PUNCTUATION NUN HAFUKHA
05C7	---H	HE2-D	....	....	....	....	HEBREW POINT QAMATS QATAN
05D0	---H	H1-t	....	....	....	....	HEBREW LETTER ALEF
05D1	---H	H1-c	....	....	....	....	HEBREW LETTER BET
05D2	---H	H1-d	....	....	....	....	HEBREW LETTER GIMEL
05D3	---H	H1-s	....	....	....	....	HEBREW LETTER DALET
05D4	---H	H1-v	....	....	....	....	HEBREW LETTER HE
05D5	---H	H1-u	....	....	....	....	HEBREW LETTER VAV
05D6	---H	H1-z	....	....	....	....	HEBREW LETTER ZAYIN
05D7	---H	H1-j	....	....	....	....	HEBREW LETTER HET
05D8	---H	H1-y	....	....	....	....	HEBREW LETTER TET
05D9	---H	H1-h	....	....	....	....	HEBREW LETTER YOD
05DA	---H	H1-l	....	....	....	....	HEBREW LETTER FINAL KAF
05DB	---H	H1-f	....	....	....	....	HEBREW LETTER KAF
05DC	---H	H1-k	....	....	....	....	HEBREW LETTER LAMED
05DD	---H	H1-o	....	....	....	....	HEBREW LETTER FINAL MEM
05DE	---H	H1-n	....	....	....	....	HEBREW LETTER MEM
05DF	---H	H1-i	....	....	....	....	HEBREW LETTER FINAL NUN
05E0	---H	H1-b	....	....	....	....	HEBREW LETTER NUN
05E1	---H	H1-x	....	....	....	....	HEBREW LETTER SAMEKH
05E2	---H	H1-g	....	....	....	....	HEBREW LETTER AYIN
05E3	---H	H1-q	....	....	....	....	HEBREW LETTER FINAL PE
05E4	---H	H1-p	....	....	....	....	HEBREW LETTER PE
05E5	---H	H2-M	....	....	....	....	HEBREW LETTER FINAL TSADI
05E6	---H	H1-m	....	....	....	....	HEBREW LETTER TSADI
05E7	---H	H1-e	....	....	....	....	HEBREW LETTER QOF
05E8	---H	H1-r	....	....	....	....	HEBREW LETTER RESH
05E9	---H	H1-a	....	....	....	....	HEBREW LETTER SHIN
05EA	---H	H1-w	....	....	....	....	HEBREW LETTER TAV

05F0	---H	H2-U	....	....	....	....	HEBREW LIGATURE YIDDISH DOUBLE VAV
05F1	---H	H2-J	....	....	....	....	HEBREW LIGATURE YIDDISH VAV YOD
05F2	---H	H2-H	....	....	....	....	HEBREW LIGATURE YIDDISH DOUBLE YOD
05F3	---H	H2-W	....	....	....	....	HEBREW PUNCTUATION GERESH
05F4	---H	H2-Q	....	....	....	....	HEBREW PUNCTUATION GERSHAYIM
060C	---A	A2-K	....	....	....	....	ARABIC COMMA
061B	---A	A2-P	....	....	....	....	ARABIC SEMICOLON
061F	---A	A2-L	....	....	....	....	ARABIC QUESTION MARK
0621	---A	A1-x	....	....	....	....	ARABIC LETTER HAMZA
0622	---A	A2-B; A2-N; A1-h'	AE2-Y	....	....	....	ARABIC LETTER ALEF WITH MADDA ABOVE
0623	---A	A2-H; A1-h'	AE2-Q	....	....	....	ARABIC LETTER ALEF WITH HAMZA ABOVE
0624	---A	A1-c; A2-C'	AE2-Q	....	....	....	ARABIC LETTER WAW WITH HAMZA ABOVE
0625	---A	A2-Y; A1-h'	0655	....	....	....	ARABIC LETTER ALEF WITH HAMZA BELOW
0626	---A	A1-z; A1-d'	AE2-Q	....	....	....	ARABIC LETTER YEH WITH HAMZA ABOVE
0627	---A	A1-h	....	....	....	....	ARABIC LETTER ALEF
0628	---A	A1-f	....	....	....	....	ARABIC LETTER BEH
0629	---A	A1-m	....	....	....	....	ARABIC LETTER TEH MARBUTA
062A	---A	A1-j	....	....	....	....	ARABIC LETTER TEH
062B	---A	A1-e	....	....	....	....	ARABIC LETTER THEH
062C	---A	A2-I	....	....	....	....	ARABIC LETTER JEEM
062D	---A	A1-p	....	....	....	....	ARABIC LETTER HAH
062E	---A	A1-o	....	....	....	....	ARABIC LETTER KHAH
062F	---A	A2-O	....	....	....	....	ARABIC LETTER DAL
0630	---A	A2-U	....	....	....	....	ARABIC LETTER THAL
0631	---A	A1-v	....	....	....	....	ARABIC LETTER REH
0632	---A	A2-V	....	....	....	....	ARABIC LETTER ZAIN
0633	---A	A1-s	....	....	....	....	ARABIC LETTER SEEN
0634	---A	A1-a	....	....	....	....	ARABIC LETTER SHEEN
0635	---A	A1-w	....	....	....	....	ARABIC LETTER SAD
0636	---A	A1-q	....	....	....	....	ARABIC LETTER DAD
0637	---A	A2-F	....	....	....	....	ARABIC LETTER TAH
0638	---A	A2-M	....	....	....	....	ARABIC LETTER ZAH
0639	---A	A1-u	....	....	....	....	ARABIC LETTER AIN
063A	---A	A1-y	....	....	....	....	ARABIC LETTER GHAIN
0640	---A	A2-J	....	....	....	....	ARABIC TATWEEL
0641	---A	A1-t	....	....	....	....	ARABIC LETTER FEH
0642	---A	A1-r	....	....	....	....	ARABIC LETTER QAF
0643	---A	A2-D	....	....	....	....	ARABIC LETTER KAF
0644	---A	A2-T; A1-g; A2-G; A1-b	....	....	....	....	ARABIC LETTER LAM
0645	---A	A1-l	....	....	....	....	ARABIC LETTER MEEM
0646	---A	A1-k	....	....	....	....	ARABIC LETTER NOON
0647	---A	A1-i	....	....	....	....	ARABIC LETTER HEH
0648	---A	A2-C	....	....	....	....	ARABIC LETTER WAW
0649	---A	A1-n	....	....	....	....	ARABIC LETTER ALEF MAKSURA
064A	---A	A1-q	....	....	....	....	ARABIC LETTER YEH
064B	---A	A2-W	....	....	....	....	ARABIC FATHATAN
064C	---A	A2-R	....	....	....	....	ARABIC DAMMATAN
064D	---A	A2-S	....	....	....	....	ARABIC KASRATAN
064E	---A	A2-Q	....	....	....	....	ARABIC FATHA
064F	---A	A2-E	....	....	....	....	ARABIC DAMMA
0650	---A	A2-A	....	....	....	....	ARABIC KASRA
0651	---A	A2-Z; AE1-q; AE1-w; AE1-e; AE1-r	....	....	....	....	ARABIC SHADDA
0652	---A	A2-X	....	....	....	....	ARABIC SUKUN
0653	---A	AE2-Y	....	....	....	....	ARABIC MADDAH ABOVE
0654	---A	AE2-Q	....	....	....	....	ARABIC HAMZA ABOVE
0659	---A	AE2-U	....	....	....	....	ARABIC ZWARAKAY
066A	---A	AE1-x	....	....	....	....	ARABIC PERCENT SIGN
066B	---A	AE2-L	....	....	....	....	ARABIC DECIMAL SEPARATOR
066C	---A	AE2-H	....	....	....	....	ARABIC THOUSANDS SEPARATOR
066D	---A	AE2-F	....	....	....	....	ARABIC FIVE POINTED STAR
0670	---A	AE2-I	....	....	....	....	ARABIC LETTER SUPERScript ALEF
0671	---A	AE2-W	....	....	....	....	ARABIC LETTER ALEF WASLA
0679	---A	AE1-j	....	....	....	....	ARABIC LETTER TTEH
067C	---A	AE2-J	....	....	....	....	ARABIC LETTER TEH WITH RING
067E	---A	AE1-f	....	....	....	....	ARABIC LETTER PEH