

Ponomar Project
Slavonic Computing Initiative

Private Use Area (PUA) Allocation Policy

version 3.0 (November 4, 2016)

Aleksandr Andreev, Nikita Simmons and Yuri Shardt*

1. Problem Description

Unicode is a computing industry standard for the encoding of text in the world's writing systems, and provides for the consistent encoding of Cyrillic, Glagolitic, and other characters used by researchers studying Church Slavic, liturgics, musicology, and related disciplines. The Unicode Standard has been adopted by the Ponomar Project as the method for encoding text. However, although Unicode resolves many of the limitations of legacy 8-bit encoding schemes, it still has some limitations of its own.

First, Unicode is a complex and evolving system. Not all characters necessary for the work of the Ponomar Project or for use by researchers are yet available in Unicode. The process of adding additional characters or entire scripts to the Unicode standard is protracted and requires considerable documentation. In the meantime, a temporary standard for encoding is necessary, both to facilitate the process of adding the characters to Unicode and to allow for standardized data interchange in the short term.

In addition to the characters that have not yet been included in Unicode, there is also the issue of characters that will never be encoded in the standard. As a matter of policy, the Unicode standard encodes *characters*, not *glyphs*. But in many settings, several glyphs may be needed to represent a given character. These different glyphs may be:

- **Contextual alternatives** (glyphs used in a specific context), such as the different glyphs for Uk in writing Ѹ vs. Ѹ (the latter form used for writing e.g. Ѹ). These glyphs are normally selected at the font level via advanced font features.
- **Stylistic alternatives** (glyphs of a different style), such as the different versions of the Symbol for Mark's Chapter (Ѹ, Ѹ, Ѹ, etc.) These glyphs are normally selected via the use of the stylistic alternatives and stylistic sets features in OpenType or via the custom features of SIL Graphite.
- **Ligatures**, such as Ѹ. Ligatures are properly encoded in Unicode by entering the character U+200D ZERO WIDTH JOINER between adjoining ligature components. The glyph substitution is handled via the *ccmp* feature in OpenType. In addition, there are stylistic ligatures, such as the ligature ff in Latin. These are handled via the *liga* and *dlig* features.

* Corresponding author. E-mail: aleksandr.andreev@gmail.com.

While all of these characters are properly accessed by use of OpenType and SIL Graphite features, not all software (especially on legacy systems) supports such features. Hence, a situation may arise when such glyphs need to be accessed in a software / platform setting where advanced font features are not available. Or, the glyphs may need to be accessed directly by computer software (and not by the end user) in ways that require not relying on advanced font features. In many cases, software may manipulate glyphs directly but will still provide Unicode-encoded data to the user as final output.

In addition, there needs to be a way to access nonce glyphs, hypothetical constructions, technical codes, and other miscellaneous “characters” that are not part of any writing system and will never be encoded in Unicode, but are still used in the Ponomar Project, in documentation, or by researchers. Luckily, the Unicode standard provides for a standardized solution to the problem of locally encoding characters not encoded in the standard.

2. The Unicode PUA

The Unicode Private Use Area (PUA) is a set of three ranges of codepoints (U+E000 to U+F8FF, Plane 15 and Plane 16) that are guaranteed to never be assigned to characters by the Unicode Consortium and can be used by third parties to define their own characters. The PUA need not be “private” in the strict sense, but some agreement between users with similar objectives can be achieved. For example, various industry leaders, including Microsoft and SIL International, have successfully established policies for using the PUA in their fonts.

In principle, the PUA may be allocated in any way. In practice, we wish to produce a coherent allocation that facilitates future expansion and data interchange. Other industry standards for the PUA also exist, and the Ponomar Project will keep these in mind in order to ensure that fonts produced by Ponomar (and those who wish to follow this standard) are compatible with other fonts used in the industry, as far as this is possible.

The following should be kept in mind:

A. The region U+F000 to U+F0FF is used by Microsoft in Windows fonts for symbols. Thus, this region will be unallocated by Ponomar.

B. The region U+F100 to U+F8FF has been allocated by SIL International in its PUA standard. Of this region, the codepoints U+F100 to U+F33F are currently used; this region will be unallocated by Ponomar to allow compatibility with SIL fonts. If a given character has already been mapped to the PUA by SIL, it will be mapped by Ponomar to the same codepoint. The remainder of this region (U+F340 to U+F8FF) is allocated by SIL for future characters from writing systems not used by Ponomar and related projects. This region will remain unallocated by Ponomar for use as a “really private” subset of the PUA: an open range used by font developers to map their own private characters not specified by the Ponomar PUA Policy.

C. We keep in mind also the Standard Music Font Layout (SMuFL), a specification that allocates musical symbols to PUA codepoints. Any musical symbols used in Ponomar fonts that are already mapped to the PUA in the SMuFL will be mapped in the Ponomar PUA allocation to the same codepoints. In particular, the Kievan musical symbols have been mapped in SMuFL to U+EC30 – U+EC3F. This assures that any fonts produced by the Ponomar Project may be reliably used by music notation software.

The present Ponomar Project PUA Policy explains how the Ponomar Project will allocate codepoints in the Private Use Area for encoding the additional characters and glyphs described above. We hope that the devised system is both flexible and logical, and may come to be used not only by our project, but by other similar projects and other designers of Church Slavic fonts. Accepting this PUA Policy as a local agreement between researchers and font designers would provide for a convergence of font design and encoding methodologies, easily allowing for broader cooperation and compatibility between projects and collaboration between researchers.

3. Applying the PUA to Encoding of Church Slavic

In order to better understand the typographical needs of the Church Slavic language as written in the Cyrillic and Glagolitic scripts, as well as related writing systems, it is important to identify the distinctive eras of its development. We identify five distinct forms of Church Slavic Cyrillic script that should be considered: Ustav (the earliest form of uncial writing found in Slavonic manuscripts through the 15th century); Poluustav (semi-uncial) writing (found in manuscripts in the 15th-17th centuries) and type (in printed editions through the late 17th century); Slavonic Incunabula (the earliest South Slavic and West Slavic printed editions); Synodal era type; and Skoropis (semi-cursive) writing. We call these forms “recensions.” See UTN 41¹ for more details. There are also a number of ornamental styles of lettering, such as “Vyaz” and “Bukvitsa,” which are traditionally used for chapter titling and decorative initials and “drop caps”; these typically include only a subset of the Cyrillic or Glagolitic character range as needed, but may include many variant letter forms. For simplicity, we include these ornamental script styles in the term “recension,” although technically they are not “recensions” but rather “styles of writing.”

Unfortunately, only three of the recensions have been sufficiently studied: the Ustav manuscript tradition, the Poluustav printed tradition, and the Kievan and Synodal printed traditions. While we can feel confident that most of the known character variants and glyph presentations for these recensions have been documented, the Skoropis script, and the Manuscript Poluustav and Printed Incunabula recensions have not yet been adequately assessed. In addition to the fact that these recensions have not been sufficiently well researched by palaeographers, there is the further problem that almost no fonts exist for working with texts of these recensions on the computer.

As a result, we must accept that our PUA allocation is an evolving policy. Additional research is required, searching through a large sampling of Slavonic manuscripts from all eras, as well as printed incunabula editions. Although it will be both impossible and unfeasible to attempt to

¹ See Andreev, Simmons and Shardt. *Church Slavic Typography in the Unicode Standard*. 2015. Unicode Technical Note #41.

document every single anomaly found in the manuscript tradition, a policy will be in place to include additional glyphs and characters in the PUA allocation as they are identified. See the Section 7, below, for more information. Because the PUA Allocation Policy is an evolving document, some Zones (see below) are labeled as being in “research stage”; character mappings in those Zones are presently unstable and may change in a subsequent version of the Policy. Users should only rely on the stability of those codepoints that are in Zones labeled as “stable.”

While UTN 41 discusses Slavonic typography using the Cyrillic script only, in this document we also consider typography using the Glagolitic script. Similar to the various styles of Cyrillic text and ornamental script styles, Glagolitic uses four analogous forms: Round Glagolitic (body text), Square Glagolitic (formal, titling, capitalization and initial text), Semicursive/Skoropis Glagolitic (informal handwriting), and Decorative/Ornamental Glagolitic (chapter titling and drop caps). Moreover, just like the Cyrillic script, the Glagolitic script has superscript characters (which have recently been encoded in Unicode), as well as character variants and an extensive collection of ligatures, all of which need to be encoded in the PUA.

4. Usage Guidelines for Font Developers

Each script recension (both Cyrillic and Glagolitic) has significantly different character ranges and approaches to orthography and typography, which are frequently incompatible with one another. As we articulated in UTN 41 (see *Section 4, Font Design and Development*), since fonts are by definition character set and typeface specific, a font should only provide a typeface that reproduces one particular recension of Church Slavic writing. As a general rule, font developers should respect the established conventions for the various recensions and should not include anachronistic glyphs in their fonts.

In order to facilitate proper implementation of the PUA by font developers, we provide sufficient documentation on the required and recommended character ranges for each recension – and, therefore, for each recension-specific font family – both in the standard Unicode character ranges (see Section 2 of UTN 41) and in the PUA. To accomplish this, we create specialized “font family profiles” based upon the recensions of Church Slavic writing, where each profile describes the required, optional, and disallowed characters for a recension-specific font, their codepoints and standard representations (see the accompanying database file). Thus we will have separate profiles for Ustav, Incunabula, Manuscript Poluustav, Printed Poluustav (Kievan and Synodal), Skoropis, and Glagolitic fonts. (It is currently suggested that the Glagolitic scripts should be not differentiated, since the glyph repertoire for Glagolitic is significantly more limited than for Cyrillic font families; we could reconsider this after further research is done.)

Due to their specialized uses, it should be noted that ornamental scripts are not necessarily confined to the character ranges delineated in the font family profiles; these fonts are somewhat independent of the textual recensions.

5. Ponomar PUA Allocations: Primary Divisions

Broadly, two categories of glyphs are being mapped to the PUA:

A. Permanent assignment of characters that will never be encoded in Unicode because they are stylistic or contextual glyph variants or ligatures. These characters will be mapped to codepoints in the PUA to facilitate standardization of fonts and to allow for their use on legacy systems or by computer software. These codepoint assignments are guaranteed by this Policy to remain stable for the entire lifetime of the Unicode standard once the Zone to which they are assigned is labeled as “stable.”

B. Temporary allocation of characters that are not yet available in Unicode but will be proposed for inclusion in a future version of the Unicode standard. Since the process of encoding new characters (especially entire scripts) is lengthy, these characters may not become available in Unicode for many years. Providing places in the PUA for these characters allows data interchange to take place in the meantime at the local level.

Once these characters are officially encoded in Unicode, their mappings in the PUA will be deprecated. However, following the example set by SIL International in their PUA Policy, deprecated positions will not be reassigned, but will remain permanently unallocated, allowing users to continue to use data that used characters encoded in the PUA during the development and proposal stages, though the deprecated status is intended to motivate users to convert data to use the approved codepoints.

Assignment of these temporary characters into the PUA is not a permanent feature. Mapping in the PUA is **not** standardization and the Ponomar Project is **not** a standards body. Mapping in the PUA only assures that characters are temporarily available in a locally standard way. Mapping into the PUA should be pursued in addition to, not as an alternative for, standardization through the relevant UTC and WG2 procedures.

6. Ponomar PUA Zones

In each of the two Primary Divisions, we organize all of the glyphs into a system of categories or **Zones**, based on how they are used and classified. Whenever possible, we use the sort order of glyphs within each of the Zones (according to the collation order for Church Slavic as defined in Section 5 of UTN 41), with a sufficient amount of unused spaces (i.e. “padding”) reserved for future placement of newly-identified glyphs; however, it must be acknowledged that any future additions cannot be guaranteed placement according to a strictly logical order.

The most logical and practical allocation of blocks in the PUA Zones is according to a 32-slot grid. In this system, a 32-slot unit (or occasionally a 16-slot unit) will be the allocation size for each Zone; Zones that require more positions will be a multiple of 32. (It will not be a given fact that all of the allocated slots will be used, but a successive Zone will not generally begin in the middle of a 32-slot unit, unless necessary.) At first glance, one may get the impression that a lot of positions are left unallocated, but this strategy intentionally leaves space for newly-identified glyphs to be entered into the appropriate Zone.

Since characters in the PUA do not have well-defined character properties, software cannot rely on character properties to determine how the character should be interpreted (for example, to determine if the character is a combining mark or base glyph for positioning purposes, or to determine if it is a punctuation symbol or letter for line-breaking purposes). We group the PUA

Zones together in such a way so that characters with similar behavior are placed next to each other. This would allow software to determine how to interpret the character by its codepoint. Thus, for example, all combining marks are placed next to each other. Note that this only applies to Permanent Zones; in the Temporary Allocation, characters are organized by research project, and thus characters with different properties may appear next to each other.

Please note that the specific placement of glyphs in Zones which are currently in the research stage may change as this PUA Policy continues to develop. Zones marked below as “stable” are finalized; the glyphs in these Zones will never be moved to other positions, although new glyphs may be added following the procedure described below.

A) Permanent PUA Zones:

1) **Combining (Superscript) Character Variants** [This is displayed in the BLUE ZONE in PUA charts, documentation and FontForge files and templates.]

a) **Standard Diacritical Marks**, variants and ligatures [16 slots starting at U+E000] *(Stable)*

b) **Variant Abbreviation Marks** (general titlo, vzmety, etc.) [16 slots starting at U+E010] *(Stable)*

c) **Variant Diacritical Marks**, all ligated [32 slots starting at U+E020] *(Stable)*

d) **Superscript (Letter Titlo) Variants** [160 slots starting at U+E040] *This section is currently in the research stage. (Unstable)*

2) **Base Character Variants** [GREEN ZONE]

a) **Truncated Variants** [32 slots starting at U+E0E0] – These have appeared in a great number of printed editions (mostly in Poluustav publications from the earliest period right up to Kievan editions on the eve of the Russian revolution). The truncated variants were used in manual typesetting to avoid visual conflicts in instances where ascenders, descenders and diacritical marks would collide or intersect; it was an entirely *ad hoc* “artistic” process which it is impossible to implement by using computer-generated algorithms. *(Stable)*

b) **Ornamental Character Variants** [1248 slots starting at U+E100] – This is the largest portion of the PUA; we have assigned it the region from U+E100 to U+E5DF. The vast majority of these glyphs represent character variations found in the various manuscript traditions, although a small number of them have been found in early printed literature when there was a considerable amount of stylistic diversity in character form and usage from one printing house to another. *(Unstable)*

3) **Ligatures** [YELLOW ZONE]

a) **Ornamental Ligatures** [768 slots starting at U+E5E0] – These are a repertoire of glyphs that can be found in Ustav and Poluustav manuscripts. Though their use in typography allows for the accurate reproduction of period texts, they are not required. These were originally intended as space-saving devices, and occasionally used for the presentation of various stereotypical forms of words, including *nomina sacra*. In this Zone there are some strictly upper case ligatures, which are found in book and chapter titling. Like the Ornamental Character Variants, the vast majority of these glyphs are found in the various manuscript traditions, while a small number of them have been found in early printed literature. *(Unstable)*

b) **Contextual Ligatures** [96 starting at U+E8E0] – Contextual ligatures are necessary for correct typographical presentation of texts. These are precomposed combinations of a character and a diacritical mark, where the base character *usually* does not change its shape. In some cases, however, the shaping of the base character has been altered in order to better fit or display the diacritical mark. The presentation of these precomposed glyphs here serves to display all the various historical placements of diacritical marks for vowels, for use in educational and reference materials for typographers. *(Stable)*

c) **Compound Ligatures** [192 starting at U+E940] – These include several items seen in various Poluustav manuscripts: a selection of the most commonly found ligated capital letters used in titling (but by no means comprehensive, as this is far beyond the scope of the PUA Policy), the ligated M-P-K in the work “имярек,” the cursive Greek “аминь” seen in manuscripts of the same era, the words “сѣро” and “ѣже,” and several other words or portions of words. This also includes Compound Punctuation, which was used extensively in the entire range of the manuscript tradition, as well as in a few early editions of the Gospels. *This section is currently in the research stage. (Unstable)*

4) **Znamenny Chant Glyph Variants and Ligatures** [ORANGE ZONE; 512 slots starting at U+EA00] – These are Znamenny and related neumatic notation characters that will never be encoded in Unicode because they are variant forms or ligatures. *This section is currently in the research stage. (Unstable)*

5) **Miscellaneous Glyph Sets** [RED ZONE]

a) **Hypothetical constructions, nonce glyphs and questionable characters** [48 slots starting at U+EC00] – Hypothetical constructions include, for example, the Soft Er and Soft Es that apparently do not exist in the writing system but are used by scholars as “hypothetical letters.” Nonce characters are glyphs that occur once or twice in a source and are not used elsewhere, mostly scribal errors and the like. This Zone also includes a number of “questionable characters”: undocumented or undocumentable characters and glyphs, early period marginalia symbols, decorative paragraphos symbols (paragraph ending indicators), and line fillers. (Some of these may qualify for inclusion in Unicode at a later time, at least in

principle, but until we have more substantial evidence that they are valid characters, we will present them here.) *This section is currently in the research stage. (Unstable)*

b) **Kievan Musical Notation Glyphs** [16 starting at U+EC30] – Here we accommodate the Standard Music Font Layout (SMuFL),² a specification that allocates musical symbols to PUA codepoints. Any musical symbols used in Ponomar fonts that are already mapped to a PUA codepoint in the SMuFL will be mapped in the Ponomar PUA standard to the same codepoints. In particular, the musical symbols used in Kievan square notation have been mapped in SMuFL to U+EC30 – U+EC3F. This assures that any fonts produced by the Ponomar Project may be reliably used by music notation software that relies on SMuFL. *(Stable)*

c) **Miscellaneous Technical** [32 slots starting at U+EC40] – These are control code pictures – the square blocks that say WJ, ZWJ, etc., used in documentation. *(Stable)*

6) **Glagolitic Characters** [MAGENTA ZONE] *This entire Zone is currently in the research stage. (Unstable)*

a) **Glagolitic Variant Characters** [64 slots starting at U+EC60] – Although this Zone is still under research, the repertoire of Glagolitic glyphs found in existing fonts suggests that 64 slots will be sufficient for Variant Characters.

b) **Glagolitic Ligatures** [64 slots starting at U+ECA0] – This Zone contains both Round Script and Square Script variants and has yet to be thoroughly researched.

c) **Glagolitic Extended B** [32 slots starting at U+ECE0] – Used for encoding additional Glagolitic characters that may or may not be encoded in Unicode.

7) **Precomposed Archaic Cyrillic Numerals** [IVORY ZONE; 224 slots starting at U+ED00] – These are precomposed forms of numerals (particularly for large numbers). In many instances, providing numerals as a precomposed glyph is a more “foolproof” method than relying on glyph positioning. *Stable.*

8) **Ecphonetic Notation** [32 slots starting at U+EDE0] – Variant glyphs and ligatures used for Byzantine and early Slavic Ecphonetic Notation. *Unstable.*

B) Temporary Staging Zones:

9) **Znamenny Notation Symbols** [GOLD ZONE; 256 slots starting at U+EE00] – This is a temporary staging area for the research and development of a Znamenny musical notation font, a corresponding encoding model, and a character repertoire that will eventually be encoded in Unicode. The final repertoire will include Znamenny, Demestvenny, and Put’ Musical Notation characters covering all historical eras. *(Unstable)*

² See <http://www.smufl.org/> for more information.

10) **Additional Typicon Symbols** [CYAN ZONE; 128 slots starting at U+EF00] – This Zone includes the additional Typicon symbols used by Syrnikov, Dol'nitsky, and various liturgical guides, as well as in manuscripts of the Typica attributed to St. Gennadius of Novgorod. (*Stable*)

11) **Reserved for Temporary Staging** [DARK GREEN ZONE; 128 slots starting at U+EF80 and ending with U+EFFF] – This Zone is reserved for use for future encoding projects, which may include additional Byzantine Notation, Kondakarny Notation, ancient Georgian notation, etc.

C). Cyrillic PUA Expansion (Plane 15)

12) **Double and Ligated Letter Titla** (Superscript Characters) [224 slots starting at U+F0000] *Unstable*.

13) **Ornamental Symbols and Punctuation** [DARK GREEN ZONE; 128 slots starting at U+F00E0 and ending with U+F015F] *Unstable*. This Zone is divided into 3 subcategories:

a) **Marginal Ornaments and Swashes** (64 slots starting at U+F00E0) - These include marginal ornaments which are sometimes used to indicate quoted or highlighted text, as well as calligraphic swashes which are used to fill up empty space or provide ornamentation for the ends of paragraphs and chapters.

b) **Compound Ornamental Punctuation** (32 slots starting at U+F0120) - These are used as ornamentation at the ends of paragraphs and chapters. When used in the middle of a paragraph, they essentially split the text into sections and function like a paragraph break. (These are frequently encountered in manuscripts of the Gospels and Epistles to separate liturgical readings without disrupting the text of a chapter.)

c) **Ornamental Crosses and Figures** (32 slots starting at U+F0140) -These are typically used as ornamentation in side margins, top and bottom margins, and at the ends of chapters.

7. Future Updates to this Policy

It is planned that this standard will be evolving. Newly-identified glyphs will be mapped to currently unallocated spaces and, if necessary, additional zones may be allocated in Planes 15 and 16 in the future.

Any request for new allocations should be submitted by a Ponomar team member or researcher to the Ponomar PUA Committee, which consists of Aleksandr Andreev and Nikita Simmons. The Committee members meet either by teleconference or exchange opinions in writing, and must unanimously agree on the allocations. Once agreement has been reached, the PUA Policy and accompanying codecharts are updated. If only new characters are included, but no new Zones are added, no characters in unstable Zones are moved, and no other structural changes are made, the

PUA Policy’s minor version number is incremented (e.g., 1.0 → 1.1). If structural changes are made, unstable characters are moved, or new Zones are added, the Policy’s major version number is incremented (1.1 → 2.0). The new PUA Policy is published on the Ponomar website and an announcement is made on the sci-users mailing list (sci-users@ponomar.net). If necessary, fonts distributed by the SCI are updated to reflect the new PUA Policy within a reasonable timeframe.

Changes to the composition of the Ponomar PUA Committee and to the rules outlined in Section 7 of this Policy may be implemented with the unanimous consent of the current members of the Ponomar PUA Committee.

7.1 Policy for Glyph Inclusion

It must be acknowledged that in the manuscript tradition one finds considerable variation, and all such variation cannot be captured in the PUA because many of the variants do not meet our basic criterion: the proposed character for inclusion must be a clearly identifiable glyph. This criterion can be reformulated in the following manner: while the Unicode standard encodes “characters” and not “glyphs,” this PUA policy encodes in the PUA “glyphs,” but not “sorts.”

A “glyph” can be clearly described in words without referring to a particular scribe, manuscript, or font. Examples of glyphs: “Truncated Uk with Acute Accent on Left.” Examples of sorts (not valid as glyphs for encoding in the PUA): “Medial A as written by scribe N in ms. X” or “Round Ve Variant as used in the font Fooobar Regular.”

It is far beyond the scope of this Policy to document individual handwriting styles; instead, we have chosen to focus on documenting orthographic features of handwriting and printed text that appear again and again throughout the literary tradition(s) and were copied and passed down through generations as part of an established style (or “school”) of calligraphic (or typographic) and spelling conventions.

8. Summary of Changes Between Versions

Version 3.0 (November 4, 2016) – Certain Glyphs have been remapped. Three additional zones have been created (Ecphonetic Notation at U+EDE0 and two zones in Plane 15). The double and other compound titla have been moved to Plane 15.

Version 2.3 (November 4, 2015) – Added Glagolitic Extended. Added several ustav-era ligatures and digraphs.

Version 2.2 (August 12, 2015) – Added Znamenny notation temporary staging; marked for deprecation additional Typicon symbols accepted for encoding by UTC

Version 2.1 (July 12, 2015) – Added variants and ligatures for Poluustav print texts

Version 2.0 – Initial release of this policy

Zone Allocations

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
E0	Sdm	Vam	VarDM		Superscript Variants			Double and Ligated Titla				Truncated				
E1	Ornamental Character Variants															
E2																
E3																
E4																
E5	Ornamental Character Variants														Ornamental Ligatures	
E6	Ornamental Ligatures															
E7																
E8	Ornamental Ligatures														Contextual Ligatures	
E9	Contextual Ligatures			Compound Ligatures												
EA	Znamenny Glyph Variants and Ligatures															
EB																
EC	Hypothetical and nonce		Kiev an*	Misc. Technical	Glagolitic Variants			Glagolitic Ligatures			Glagolitic Ext. B					
ED	Precomposed Numerals														Ecphonetic	
EE	Znamenny Notation (temporary)															
EF	Typicon Symbols (temporary)								Future Use (temporary)							
F0	Windows Symbols (Microsoft)															
F1	Special (SIL)		Not used		Combining Marks (SIL)		Superscript Letters (SIL)						Not used			
F2	Latin (SIL)															
F3	Hebrew (SIL)		Cyrillic (SIL)		"Really Private" Use Area (Open Range)											
F4	"Really Private" Use Area (Open Range)															
F5																
F6																
F7																
F8																

Key

	Used by Microsoft and will not be allocated by Ponomar
	Used by SIL and will not be allocated by Ponomar
	Used by SMuFL and may not be reallocated by Ponomar

APPENDIX

Character Allocation Tables

1 BLUE ZONE - Combining (Superscript) Character Variants

	U+E00x	U+E01x	U+E02x	U+E03x
0	◌̇ E000	◌̇̈ E010	◌̇̈̈ E020	◌̇̈̈̈ E030
1	◌̇̈ E001	◌̇̈̈ E011	◌̇̈̈̈ E021	◌̇̈̈̈̈ E031
2	◌̇̈̈ E002	◌̇̈̈̈ E012	◌̇̈̈̈̈ E022	◌̇̈̈̈̈̈ E032
3	◌̇̈̈̈ E003	E013	◌̇̈̈̈̈̈ E023	◌̇̈̈̈̈̈̈ E033
4	◌̇̈̈̈̈ E004	E014	◌̇̈̈̈̈̈̈ E024	◌̇̈̈̈̈̈̈̈ E034
5	◌̇̈̈̈̈̈ E005	E015	◌̇̈̈̈̈̈̈̈ E025	E035
6	E006	◌̇̈̈̈̈̈̈ E016	◌̇̈̈̈̈̈̈̈̈ E026	E036
7	E007	E017	◌̇̈̈̈̈̈̈̈̈̈ E027	E037
8	E008	E018	◌̇̈̈̈̈̈̈̈̈̈̈ E028	E038
9	E009	E019	◌̇̈̈̈̈̈̈̈̈̈̈̈ E029	E039
A	E00A	E01A	◌̇̈̈̈̈̈̈̈̈̈̈̈̈ E02A	E03A
B	E00B	E01B	◌̇̈̈̈̈̈̈̈̈̈̈̈̈̈ E02B	E03B
C	E00C	E01C	◌̇̈̈̈̈̈̈̈̈̈̈̈̈̈̈ E02C	E03C
D	E00D	E01D	◌̇̈̈̈̈̈̈̈̈̈̈̈̈̈̈̈ E02D	E03D
E	E00E	E01E	◌̇̈̈̈̈̈̈̈̈̈̈̈̈̈̈̈̈ E02E	E03E
F	E00F	E01F	◌̇̈̈̈̈̈̈̈̈̈̈̈̈̈̈̈̈̈ E02F	E03F

BLUE ZONE - Combining (Superscript) Character Variants

E000	◌̐	Synodal Uppercase Psili Pneumata • Uppercase form of U+0486	E01B	<not used>
E001	◌̑	Ligature - Iso • Ligature of U+0486 U+0301	E01C	<not used>
E002	◌̒	Ligature – Synodal Uppercase Iso • Uppercase form of U+E001	E01D	<not used>
E003	◌̓	Ligature – Apostroph • Ligature of U+0486 U+0300	E01E	<not used>
E004	◌̔	Ligature – Synodal Uppercase Apostroph • Uppercase form of U+E003	E01F	<not used>
E005	◌̕	Ligature – Veliky Apostroph • Ligature of U+0486 U+0311	E020	◌̐ Combining Dasia Pneumata with Acute Accent • Ligature of U+0485 U+0301
E006		<not used>	E021	◌̑ Combining Dasia Pneumata with Grave Accent • Ligature of U+0485 U+0300
E007		<not used>	E022	◌̒ Combining Dasia Pneumata and Inverted Breve • Ligature of U+0485 U+0311
E008		<not used>	E023	◌̓ Combining Psili Pneumata with Inverted Breve • Ligature of U+0486 U+0311 stacked horizontally
E009		<not used>	E024	◌̔ Combining Double Dasia Pneumata • Ligature of U+0485 U+0485
E00A		<not used>	E025	◌̕ Combining Double Psili Pneumata • Ligature of U+0486 U+0486
E00B		<not used>	E026	◌̐ Combining Cyrillic Veliky Apostrof containing Dasia Pneumata • Ligature of U+0485 U+0311
E00C		<not used>	E027	◌̑ Combining Cyrillic Dasia Pneumata with Perispomene • Ligature of U+0485 U+0303
E00D		<not used>	E028	◌̒ Combining Cyrillic Psili Pneumata with Perispomene • Ligature of U+0485 U+0303
E00E		<not used>	E029	◌̓ Combining Dasia Pneumata with Circumflex Accent • Ligature of U+0485 U+0302
E00F		<not used>	E02A	◌̔ Combining Psili Pneumata with Circumflex Accent • Ligature of U+0486 U+0302
E010	◌̐̑	Combining Large Cyrillic Titlo Above • A large version of U+0483	E02B	◌̐ Combining Dot Above with Acute Accent • Ligature of U+0307 U+0301
E011	◌̐̑̑	Combining Large Flat Cyrillic Titlo Above • A large and flat version of U+0483	E02C	◌̑ Combining Dot Above with Grave Accent • Ligature of U+0307 U+0300

E012	◌͂	Combining Large Reversed Cyrillic Titlo Agove	E02D	◌̈́	Combining Diaeresis Above with Acute Accent
		• A reversed version of U+0483			• Ligature of U+0308 U+0301
E013		<not used>	E02E	◌̈̀	Combining Diaeresis Above with Grave Accent
					• Ligature of U+0308 U+0301
E014		<not used>	E02F	◌̊	Combining Dasia Pneumata with Psili Pneumata
					• Ligature of U+0485 U+0486
E015		<not used>	E030	◌̋	Combining Psili Pneumata with Dasia Pneumata
					• Ligature of U+0486 U+0485
E016	◌̓	Combining Cyrillic Double Titlo	E031	◌̃́	Combining Vertical Tilde with Acute Accent
		• This character combines over two characters			• Ligature of U+033E U+0301
E017		<not used>	E032	◌̃̀	Combining Vertical Tilde with Grave Accent
					• Ligature of U+033E U+0300
E018		<not used>	E033	◌̆́	Combining Payerok with Acute Accent
					• Ligature of U+A67D U+0301
E019		<not used>	E034	◌̆̀	Combining Payerok with Grave Accent
					• Ligature of U+A67D U+0300
E01A		<not used>	E035		<not used>

2 GREEN ZONE - Base Character Variants

	U+E0Ex	U+E0Fx	U+E10x	U+E11x	U+E12x	U+E13x	U+E14x
0	Ϛ E0E0	Ϟ E0F0	E100	E110	E120	E130	E140
1	ϛ E0E1	ϟ E0F1	E101	E111	E121	E131	E141
2	Ϝ E0E2	Ϡ E0F2	E102	E112	E122	E132	E142
3	ϝ E0E3	E0F3	E103	E113	E123	E133	E143
4	Ϟ E0E4	E0F4	E104	E114	E124	E134	E144
5	ϟ E0E5	ϡ E0F5	E105	E115	E125	E135	E145
6	Ϡ E0E6	E0F6	E106	E116	E126	E136	E146
7	ϡ E0E7	E0F7	E107	E117	E127	E137	E147
8	Ϣ E0E8	E0F8	E108	E118	E128	E138	E148
9	ϣ E0E9	E0F9	E109	E119	E129	E139	E149
A	Ϥ E0EA	E0FA	E10A	E11A	E12A	E13A	E14A
B	ϥ E0EB	E0FB	E10B	E11B	E12B	E13B	E14B
C	Ϧ E0EC	E0FC	E10C	E11C	E12C	E13C	E14C
D	ϧ E0ED	E0FD	E10D	E11D	E12D	E13D	E14D
E	Ϩ E0EE	E0FE	E10E	E11E	E12E	E13E	E14E
F	ϩ E0EF	E0FF	E10F	E11F	E12F	E13F	E14F

GREEN ZONE - Base Character Variants

E0E0	ѣ	Cyrillic Letter Zemlya with Truncated Descender • Truncation of U+A641	E111	<not used>
E0E1	ѐ	Cyrillic Letter Er with Truncated Descender • Truncation of U+0440	E112	<not used>
E0E2	ѣ̇	Cyrillic Letter Monograph Uk with Short Left Branch • Truncation of U+A64B	E113	<not used>
E0E3	ѣ̈	Cyrillic Letter Monograph Uk with Short Right Branch • Truncation of U+A64B	E114	<not used>
E0E4	ѣ̉	Cyrillic Letter Monograph Uk with Short Branches • Truncation of U+A64B	E115	<not used>
E0E5	ѣ̊	Cyrillic Letter Ef with Truncated Descender • Truncation of U+0444	E116	<not used>
E0E6	ѣ̋	Cyrillic Letter Ef with Truncated Ascender • Truncation of U+0444	E117	<not used>
E0E7	ѣ̌	Cyrillic Letter Kha with Truncated Left Descender • Truncation of U+0445	E118	<not used>
E0E8	ѣ̍	Cyrillic Letter Kha with Truncated Right Descender • Truncation of U+0445	E119	<not used>
E0E9	ѣ̎	Cyrillic Letter Kha with Truncated Descenders • Truncation of U+0445	E11A	<not used>
E0EA	ѣ̏	Cyrillic Letter Tse with Truncated Descender • Truncation of U+0446	E11B	<not used>
E0EB	ѣ̐	Cyrillic Letter Shche with Truncated Descender • Truncation of U+0449	E11C	<not used>
E0EC	ѣ̑	Cyrillic Letter Yat with Truncated Ascender • Truncation of U+0463	E11D	<not used>
E0ED	ѣ̒	Cyrillic Letter Psi with Truncated Ascender • Truncation of U+0471	E11E	<not used>
E0EE	ѣ̓	Cyrillic Letter Psi with Truncated Descender • Truncation of U+0471	E11F	<not used>
E0EF	ѣ̔	Cyrillic Letter U with Truncated Descender • Truncation of U+0443	E120	<not used>

E0F0	Ѡ	Cyrillic Letter Iotified Yat with Truncated Ascender • Truncation of U+A653	E121	<not used>
E0F1	ѡ	Cyrillic Letter Yat with Anchor with Truncated Ascender • Truncation of U+E48F	E122	<not used>
E0F2	Ѣ	Cyrillic Letter Capital Yat with Truncated Ascender • Truncation of U+0462	E123	<not used>
E0F3		<not used>	E124	<not used>
E0F4		<not used>	E125	<not used>
E0F5	Ѥ	Cyrillic Letter Je without Dot • U+0458 with dot removed for diacritic positioning	E126	<not used>
E0F6		<not used>	E127	<not used>
E0F7		<not used>	E128	<not used>
E0F8		<not used>	E129	<not used>
E0F9		<not used>	E12A	<not used>
E0FA		<not used>	E12B	<not used>
E0FB		<not used>	E12C	<not used>
E0FC		<not used>	E12D	<not used>
E0FD		<not used>	E12E	<not used>
E0FE		<not used>	E12F	<not used>
E0FF		<not used>	E130	<not used>
E100		<not used>	E131	<not used>
E101		<not used>	E132	<not used>
E102		<not used>	E133	<not used>
E103		<not used>	E134	<not used>
E104		<not used>	E135	<not used>
E105		<not used>	E136	<not used>
E106		<not used>	E137	<not used>
E107		<not used>	E138	<not used>
E108		<not used>	E139	<not used>
E109		<not used>	E13A	<not used>
E10A		<not used>	E13B	<not used>
E10B		<not used>	E13C	<not used>
E10C		<not used>	E13D	<not used>
E10D		<not used>	E13E	<not used>
E10E		<not used>	E13F	<not used>
E10F		<not used>	E140	<not used>
E110		<not used>	E141	<not used>

	U+E15x	U+E16x	U+E17x	U+E18x	U+E19x	U+E1Ax
0	E150	E160	E170	E180	E190	E1A0
1	E151	E161	E171	E181	E191	E1A1
2	E152	E162	E172	E182	E192	E1A2
3	E153	E163	E173	E183	E193	E1A3
4	E154	E164	E174	E184	E194	E1A4
5	E155	E165	E175	E185	E195	€ E1A5
6	E156	E166	E176	E186	E196	E1A6
7	E157	E167	E177	E187	E197	E1A7
8	E158	E168	E178	E188	E198	E1A8
9	E159	E169	E179	E189	E199	E1A9
A	E15A	E16A	E17A	E18A	E19A	E1AA
B	E15B	E16B	E17B	E18B	E19B	E1AB
C	E15C	E16C	E17C	E18C	E19C	E1AC
D	E15D	E16D	E17D	E18D	E19D	E1AD
E	E15E	ŕ E16E	E17E	E18E	E19E	E1AE
F	E15F	E16F	E17F	E18F	E19F	E1AF

GREEN ZONE - Base Character Variants

E150	<not used>	E179	<not used>
E151	<not used>	E17A	<not used>
E152	<not used>	E17B	<not used>
E153	<not used>	E17C	<not used>
E154	<not used>	E17D	<not used>
E155	<not used>	E17E	<not used>
E156	<not used>	E17F	<not used>
E157	<not used>	E180	<not used>
E158	<not used>	E181	<not used>
E159	<not used>	E182	<not used>
E15A	<not used>	E183	<not used>
E15B	<not used>	E184	<not used>
E15C	<not used>	E185	<not used>
E15D	<not used>	E186	<not used>
E15E	<not used>	E187	<not used>
E15F	<not used>	E188	<not used>
E160	<not used>	E189	<not used>
E161	<not used>	E18A	<not used>
E162	<not used>	E18B	<not used>
E163	<not used>	E18C	<not used>
E164	<not used>	E18D	<not used>
E165	<not used>	E18E	<not used>
E166	<not used>	E18F	<not used>
E167	<not used>	E190	<not used>
E168	<not used>	E191	<not used>
E169	<not used>	E192	<not used>
E16A	<not used>	E193	<not used>
E16B	<not used>	E194	<not used>
E16C	<not used>	E195	<not used>
E16D	<not used>	E196	<not used>
E16E	r Cyrillic Lowercase Letter Ghe with Upturn Ukrainian Variant • Variant of U+0491	E197	<not used>
E16F	<not used>	E198	<not used>
E170	<not used>	E199	<not used>
E171	<not used>	E19A	<not used>
E172	<not used>	E19B	<not used>
E173	<not used>	E19C	<not used>
E174	<not used>	E19D	<not used>
E175	<not used>	E19E	<not used>
E176	<not used>	E19F	<not used>
E177	<not used>	E1A0	<not used>
E178	<not used>	E1A1	<not used>

	U+E2Dx	U+E2Ex	U+E2Fx	U+E30x	U+E31x	U+E32x
0	E2D0	E2E0	E2F0	E300	E310	E320
1	E2D1	E2E1	0 E2F1	E301	E311	E321
2	E2D2	E2E2	E2F2	E302	E312	E322
3	E2D3	E2E3	E2F3	E303	E313	E323
4	E2D4	E2E4	E2F4	E304	E314	E324
5	E2D5	E2E5	E2F5	E305	E315	E325
6	E2D6	E2E6	E2F6	E306	E316	E326
7	E2D7	E2E7	E2F7	E307	E317	E327
8	E2D8	E2E8	E2F8	E308	E318	E328
9	E2D9	E2E9	E2F9	E309	E319	E329
A	E2DA	E2EA	E2FA	E30A	E31A	E32A
B	E2DB	E2EB	E2FB	E30B	E31B	E32B
C	E2DC	E2EC	E2FC	E30C	E31C	E32C
D	E2DD	E2ED	E2FD	E30D	E31D	E32D
E	E2DE	E2EE	E2FE	E30E	E31E	E32E
F	E2DF	E2EF	E2FF	E30F	E31F	E32F

GREEN ZONE - Base Character Variants

E2D0	<not used>	E2F9	<not used>
E2D1	<not used>	E2FA	<not used>
E2D2	<not used>	E2FB	<not used>
E2D3	<not used>	E2FC	<not used>
E2D4	<not used>	E2FD	<not used>
E2D5	<not used>	E2FE	<not used>
E2D6	<not used>	E2FF	<not used>
E2D7	<not used>	E300	<not used>
E2D8	<not used>	E301	<not used>
E2D9	<not used>	E302	<not used>
E2DA	<not used>	E303	<not used>
E2DB	<not used>	E304	<not used>
E2DC	<not used>	E305	<not used>
E2DD	<not used>	E306	<not used>
E2DE	<not used>	E307	<not used>
E2DF	<not used>	E308	<not used>
E2E0	<not used>	E309	<not used>
E2E1	<not used>	E30A	<not used>
E2E2	<not used>	E30B	<not used>
E2E3	<not used>	E30C	<not used>
E2E4	<not used>	E30D	<not used>
E2E5	<not used>	E30E	<not used>
E2E6	<not used>	E30F	<not used>
E2E7	<not used>	E310	<not used>
E2E8	<not used>	E311	<not used>
E2E9	<not used>	E312	<not used>
E2EA	<not used>	E313	<not used>
E2EB	<not used>	E314	<not used>
E2EC	<not used>	E315	<not used>
E2ED	<not used>	E316	<not used>
E2EE	<not used>	E317	<not used>
E2EF	<not used>	E318	<not used>
E2F0	<not used>	E319	<not used>
E2F1	◊ Cyrillic Capital Narrow O	E31A	<not used>
	• Variant of U+041E; see also: U+1C82		
E2F2	<not used>	E31B	<not used>
E2F3	<not used>	E31C	<not used>
E2F4	<not used>	E31D	<not used>
E2F5	<not used>	E31E	<not used>
E2F6	<not used>	E31F	<not used>
E2F7	<not used>	E320	<not used>
E2F8	<not used>	E321	<not used>

	U+E39x	U+E3Ax	U+E3Bx	U+E3Cx	U+E3Dx	U+E3Ex
0	E390	E3A0	E3B0	E3C0	E3D0	E3E0
1	E391	E3A1	E3B1	E3C1	E3D1	E3E1
2	E392	E3A2	E3B2	E3C2	E3D2	E3E2
3	E393	E3A3	E3B3	E3C3	E3D3	E3E3
4	E394	E3A4	E3B4	E3C4	E3D4	E3E4
5	E395	E3A5	E3B5	E3C5	E3D5	E3E5
6	E396	E3A6	E3B6	E3C6	E3D6	E3E6
7	E397	E3A7	E3B7	E3C7	E3D7	E3E7
8	E398	E3A8	E3B8	E3C8	E3D8	E3E8
9	E399	E3A9	E3B9	E3C9	E3D9	E3E9
A	E39A	E3AA	E3BA	E3CA	E3DA	E3EA
B	E39B	E3AB	E3BB	E3CB	E3DB	E3EB
C	E39C	E3AC	E3BC	E3CC	E3DC	E3EC
D	E39D	E3AD	E3BD	E3CD	E3DD	E3ED
E	E39E	E3AE	Ÿ E3BE	E3CE	E3DE	E3EE
F	E39F	E3AF	Ÿ E3BF	E3CF	E3DF	E3EF

GREEN ZONE - Base Character Variants

E390	<not used>	E3B9	<not used>
E391	<not used>	E3BA	<not used>
E392	<not used>	E3BB	<not used>
E393	<not used>	E3BC	<not used>
E394	<not used>	E3BD	<not used>
E395	<not used>	E3BE	Ѹ Cyrillic Capital Letter U Variant with Circular Bottom • Variant of U+0423 that looks like U+A64A
E396	<not used>	E3BF	ѹ Cyrillic Capital Letter Short U Variant with Circular Bottom • Variant of U+040E with base that looks like U+A64A
E397	<not used>	E3C0	<not used>
E398	<not used>	E3C1	<not used>
E399	<not used>	E3C2	<not used>
E39A	<not used>	E3C3	<not used>
E39B	<not used>	E3C4	<not used>
E39C	<not used>	E3C5	<not used>
E39D	<not used>	E3C6	<not used>
E39E	<not used>	E3C7	<not used>
E39F	<not used>	E3C8	<not used>
E3A0	<not used>	E3C9	<not used>
E3A1	<not used>	E3CA	Ѻ <not used>
E3A2	<not used>	E3CB	<not used>
E3A3	<not used>	E3CC	<not used>
E3A4	<not used>	E3CD	<not used>
E3A5	<not used>	E3CE	<not used>
E3A6	<not used>	E3CF	<not used>
E3A7	<not used>	E3D0	<not used>
E3A8	<not used>	E3D1	<not used>
E3A9	<not used>	E3D2	<not used>
E3AA	<not used>	E3D3	<not used>
E3AB	<not used>	E3D4	<not used>
E3AC	<not used>	E3D5	<not used>
E3AD	<not used>	E3D6	<not used>
E3AE	<not used>	E3D7	<not used>
E3AF	<not used>	E3D8	<not used>
E3B0	<not used>	E3D9	<not used>
E3B1	<not used>	E3DA	<not used>
E3B2	<not used>	E3DB	<not used>
E3B3	<not used>	E3DC	<not used>
E3B4	<not used>	E3DD	<not used>
E3B5	<not used>	E3DE	<not used>
E3B6	<not used>	E3DF	<not used>
E3B7	<not used>	E3E0	<not used>
E3B8	<not used>	E3E1	<not used>

	U+E3Fx	U+E40x	U+E41x	U+E42x	U+E43x	U+E44x
0	Ɔ E3F0	E400	E410	Ƴ E420	E430	E440
1	Ɔ̄ E3F1	E401	E411	Ƴ̄ E421	E431	E441
2	E3F2	E402	E412	E422	E432	E442
3	E3F3	E403	E413	E423	E433	E443
4	E3F4	E404	E414	E424	E434	E444
5	E3F5	E405	E415	E425	E435	E445
6	E3F6	E406	E416	E426	E436	E446
7	E3F7	Ц E407	E417	E427	Ц̄ E437	E447
8	E3F8	E408	E418	E428	Ц̄ E438	E448
9	E3F9	E409	E419	E429	E439	E449
A	E3FA	E40A	E41A	E42A	E43A	E44A
B	E3FB	E40B	E41B	E42B	E43B	E44B
C	E3FC	E40C	E41C	E42C	E43C	E44C
D	E3FD	E40D	E41D	E42D	E43D	E44D
E	E3FE	E40E	E41E	E42E	E43E	E44E
F	E3FF	E40F	E41F	E42F	E43F	E44F

GREEN ZONE - Base Character Variants

E3F0	Ѳ	Cyrillic Capital Letter Broad Ot • Variant of U+047E	E419	<not used>
E3F1	ѳ	Cyrillic Small Letter Broad Ot • Variant of U+047F	E41A	<not used>
E3F2		<not used>	E41B	<not used>
E3F3		<not used>	E41C	<not used>
E3F4		<not used>	E41D	<not used>
E3F5		<not used>	E41E	<not used>
E3F6		<not used>	E41F	<not used>
E3F7		<not used>	E420	Ү Cyrillic Capital Letter Che with Middle Descender • Variant of U+0427
E3F8		<not used>	E421	ү Cyrillic Small Letter Che with Middle Descender • Variant of U+0447
E3F9		<not used>	E422	<not used>
E3FA		<not used>	E423	<not used>
E3FB		<not used>	E424	<not used>
E3FC		<not used>	E425	<not used>
E3FD		<not used>	E426	<not used>
E3FE		<not used>	E427	<not used>
E3FF		<not used>	E428	<not used>
E400		<not used>	E429	<not used>
E401		<not used>	E42A	<not used>
E402		<not used>	E42B	<not used>
E403		<not used>	E42C	<not used>
E404		<not used>	E42D	<not used>
E405		<not used>	E42E	<not used>
E406		<not used>	E42F	<not used>
E407	Ѳ	Cyrillic Capital Letter Tse with Vertical Descender • Variant of U+0426	E430	<not used>
E408		<not used>	E431	<not used>
E409		<not used>	E432	<not used>
E40A		<not used>	E433	<not used>
E40B		<not used>	E434	<not used>
E40C		<not used>	E435	<not used>
E40D		<not used>	E436	<not used>
E40E		<not used>	E437	Ш Cyrillic Capital Letter Shche with Right Descender • Modern version of U+0429
E40F		<not used>	E438	ш Cyrillic Small Letter Shche with Right Descender • Modern version of U+0449
E410		<not used>	E439	<not used>
E411		<not used>	E43A	<not used>
E412		<not used>	E43B	<not used>

E413	<not used>	E43C	<not used>
E414	<not used>	E43D	<not used>
E415	<not used>	E43E	<not used>
E416	<not used>	E43F	<not used>
E417	<not used>	E440	<not used>
E418	<not used>	E441	<not used>

	U+E45x	U+E46x	U+E47x	U+E48x	U+E49x	U+E4Ax
0	E450	E460	E470	E480	E490	E4A0
1	E451	E461	E471	E481	E491	E4A1
2	E452	E462	E472	E482	E492	E4A2
3	E453	E463	E473	E483	E493	E4A3
4	E454	E464	E474	E484	E494	E4A4
5	E455	E465	E475	E485	E495	E4A5
6	E456	E466	E476	E486	E496	E4A6
7	E457	E467	kl E477	E487	E497	E4A7
8	E458	E468	E478	E488	E498	E4A8
9	E459	E469	E479	E489	E499	E4A9
A	E45A	kl E46A	E47A	E48A	E49A	E4AA
B	E45B	E46B	E47B	E48B	E49B	E4AB
C	E45C	E46C	E47C	E48C	E49C	E4AC
D	E45D	E46D	E47D	E48D	E49D	E4AD
E	E45E	E46E	E47E	E48E	E49E	E4AE
F	E45F	E46F	E47F	rk E48F	E49F	E4AF

GREEN ZONE - Base Character Variants

E450	<not used>	E479	<not used>
E451	<not used>	E47A	<not used>
E452	<not used>	E47B	<not used>
E453	<not used>	E47C	<not used>
E454	<not used>	E47D	<not used>
E455	<not used>	E47E	<not used>
E456	<not used>	E47F	<not used>
E457	<not used>	E480	<not used>
E458	<not used>	E481	<not used>
E459	<not used>	E482	<not used>
E45A	<not used>	E483	<not used>
E45B	<not used>	E484	<not used>
E45C	<not used>	E485	<not used>
E45D	<not used>	E486	<not used>
E45E	<not used>	E487	<not used>
E45F	<not used>	E488	<not used>
E460	<not used>	E489	<not used>
E461	<not used>	E48A	<not used>
E462	<not used>	E48B	<not used>
E463	<not used>	E48C	<not used>
E464	<not used>	E48D	<not used>
E465	<not used>	E48E	<not used>
E466	<not used>	E48F	ѣ Cyrillic Small Letter Yat with Anchor • Variant of U+0463
E467	<not used>	E490	<not used>
E468	<not used>	E491	<not used>
E469	<not used>	E492	<not used>
E46A	Ѣ Cyrillic Small Letter Yeru with Back Yer with Connector • Variant of U+A651	E493	<not used>
E46B	<not used>	E494	<not used>
E46C	<not used>	E495	<not used>
E46D	<not used>	E496	<not used>
E46E	<not used>	E497	<not used>
E46F	<not used>	E498	<not used>
E470	<not used>	E499	<not used>
E471	<not used>	E49A	<not used>
E472	<not used>	E49B	<not used>
E473	<not used>	E49C	<not used>
E474	<not used>	E49D	<not used>
E475	<not used>	E49E	<not used>
E476	<not used>	E49F	<not used>
E477	Ѧ Cyrillic Small Letter Yeru with Connector • Variant of U+044B	E4A0	<not used>
E478	<not used>	E4A1	<not used>


	U+E51x	U+E52x	U+E53x	U+E54x	U+E55x	U+E56x
0	E510	E520	E530	☺ E540	E550	E560
1	E511	E521	E531	E541	E551	E561
2	E512	E522	E532	E542	E552	E562
3	E513	E523	E533	E543	E553	E563
4	E514	E524	E534	E544	E554	E564
5	E515	E525	E535	E545	E555	E565
6	E516	E526	E536	E546	E556	E566
7	E517	E527	E537	E547	E557	E567
8	E518	E528	E538	E548	E558	E568
9	E519	E529	E539	E549	E559	E569
A	E51A	E52A	E53A	E54A	E55A	E56A
B	E51B	E52B	E53B	E54B	E55B	E56B
C	E51C	E52C	E53C	E54C	E55C	E56C
D	E51D	E52D	E53D	E54D	E55D	E56D
E	E51E	E52E	E53E	E54E	E55E	E56E
F	E51F	E52F	E53F	E54F	E55F	E56F










GREEN ZONE - Base Character Variants

E510	<not used>	E539	<not used>
E511	<not used>	E53A	<not used>
E512	<not used>	E53B	<not used>
E513	<not used>	E53C	<not used>
E514	<not used>	E53D	<not used>
E515	<not used>	E53E	<not used>
E516	<not used>	E53F	<not used>
E517	<not used>	E540	␣ Cyrillic Capital Letter Broad Omega Round Variant
			• Variant of U+A64C
E518	<not used>	E541	<not used>
E519	<not used>	E542	<not used>
E51A	<not used>	E543	<not used>
E51B	<not used>	E544	<not used>
E51C	<not used>	E545	<not used>
E51D	<not used>	E546	<not used>
E51E	<not used>	E547	<not used>
E51F	<not used>	E548	<not used>
E520	<not used>	E549	<not used>
E521	<not used>	E54A	<not used>
E522	<not used>	E54B	<not used>
E523	<not used>	E54C	<not used>
E524	<not used>	E54D	<not used>
E525	<not used>	E54E	<not used>
E526	<not used>	E54F	<not used>
E527	<not used>	E550	<not used>
E528	<not used>	E551	<not used>
E529	<not used>	E552	<not used>
E52A	<not used>	E553	<not used>
E52B	<not used>	E554	<not used>
E52C	<not used>	E555	<not used>
E52D	<not used>	E556	<not used>
E52E	<not used>	E557	<not used>
E52F	<not used>	E558	<not used>
E530	<not used>	E559	<not used>
E531	<not used>	E55A	<not used>
E532	<not used>	E55B	<not used>
E533	<not used>	E55C	<not used>
E534	<not used>	E55D	<not used>
E535	<not used>	E55E	<not used>
E536	<not used>	E55F	<not used>
E537	<not used>	E560	<not used>
E538	<not used>	E561	<not used>










	U+E57x	U+E58x	U+E59x	U+E5Ax	U+E5Bx	U+E5Cx
0	E570	E580	E590	E5A0	E5B0	E5C0
1	E571	E581	E591	E5A1	ᳵ E5B1	E5C1
2	E572	E582	E592	E5A2	E5B2	E5C2
3	E573	E583	E593	E5A3	E5B3	E5C3
4	E574	E584	E594	E5A4	E5B4	E5C4
5	E575	E585	E595	E5A5	E5B5	E5C5
6	E576	E586	E596	E5A6	E5B6	E5C6
7	E577	E587	E597	E5A7	E5B7	E5C7
8	E578	E588	E598	E5A8	E5B8	E5C8
9	E579	E589	E599	E5A9	E5B9	E5C9
A	E57A	E58A	E59A	E5AA	E5BA	E5CA
B	E57B	E58B	E59B	E5AB	E5BB	E5CB
C	E57C	E58C	E59C	E5AC	E5BC	E5CC
D	E57D	E58D	E59D	E5AD	E5BD	E5CD
E	E57E	E58E	E59E	E5AE	E5BE	E5CE
F	E57F	E58F	E59F	E5AF	E5BF	E5CF

GREEN ZONE - Base Character Variants

E570	<not used>	E599	<not used>
E571	<not used>	E59A	<not used>
E572	<not used>	E59B	<not used>
E573	<not used>	E59C	<not used>
E574	<not used>	E59D	<not used>
E575	<not used>	E59E	<not used>
E576	<not used>	E59F	<not used>
E577	<not used>	E5A0	<not used>
E578	<not used>	E5A1	<not used>
E579	<not used>	E5A2	<not used>
E57A	<not used>	E5A3	<not used>
E57B	<not used>	E5A4	<not used>
E57C	<not used>	E5A5	<not used>
E57D	<not used>	E5A6	<not used>
E57E	<not used>	E5A7	<not used>
E57F	<not used>	E5A8	<not used>
E580	<not used>	E5A9	<not used>
E581	<not used>	E5AA	<not used>
E582	<not used>	E5AB	<not used>
E583	<not used>	E5AC	<not used>
E584	<not used>	E5AD	<not used>
E585	<not used>	E5AE	<not used>
E586	<not used>	E5AF	<not used>
E587	<not used>	E5B0	<not used>
E588	<not used>	E5B1	 Cyrillic Capital Letter Omega with Titlo Round Variant <ul style="list-style-type: none"> • Variant of U+047C; Despite its name, this character does not contain a titlo
E589	<not used>	E5B2	<not used>
E58A	<not used>	E5B3	<not used>
E58B	<not used>	E5B4	<not used>
E58C	<not used>	E5B5	<not used>
E58D	<not used>	E5B6	<not used>
E58E	<not used>	E5B7	<not used>
E58F	<not used>	E5B8	<not used>
E590	<not used>	E5B9	<not used>
E591	<not used>	E5BA	<not used>
E592	<not used>	E5BB	<not used>
E593	<not used>	E5BC	<not used>
E594	<not used>	E5BD	<not used>
E595	<not used>	E5BE	<not used>
E596	<not used>	E5BF	<not used>
E597	<not used>	E5C0	<not used>
E598	<not used>	E5C1	<not used>

	U+E5Dx	U+E5Ex	U+E5Fx	U+E60x	U+E61x	U+E62x
0	 E5D0	E5E0	E5F0	E600	E610	E620
1	 E5D1	E5E1	E5F1	E601	E611	E621
2	 E5D2	E5E2	E5F2	E602	E612	E622
3	 E5D3	E5E3	E5F3	E603	E613	E623
4	 E5D4	E5E4	E5F4	E604	E614	E624
5	 E5D5	E5E5	E5F5	E605	E615	E625
6	 E5D6	E5E6	E5F6	E606	E616	E626
7	 E5D7	E5E7	E5F7	E607	E617	E627
8	 E5D8	E5E8	E5F8	E608	E618	E628
9	E5D9	E5E9	E5F9	E609	E619	E629
A	E5DA	E5EA	E5FA	E60A	E61A	E62A
B	E5DB	E5EB	E5FB	E60B	E61B	E62B
C	E5DC	E5EC	E5FC	E60C	E61C	E62C
D	E5DD	E5ED	E5FD	E60D	E61D	E62D
E	E5DE	E5EE	E5FE	E60E	E61E	E62E
F	E5DF	E5EF	E5FF	E60F	E61F	E62F

GREEN ZONE - Base Character Variants

E5D0		Symbol for Marks Chapter Variant with Superscript Ka-Er • Variant of U+1F545	E5F9	<not used>
E5D1		Symbol for Marks Chapter Variant with Ligature Em-Ka and Super Er • Variant of U+1F545	E5FA	<not used>
E5D2		Symbol for Marks Chapter Variant with Superscript Er and Subscript Ka • Variant of U+1F545	E5FB	<not used>
E5D3		Symbol for Marks Chapter Variant with Subscript Ka • Variant of U+1F545	E5FC	<not used>
E5D4		Symbol for Marks Chapter Variant «Marko» • Variant of U+1F545	E5FD	<not used>
E5D5		Symbol for Marks Chapter Variant with Middlecase Em and Super Er • Variant of U+1F545	E5FE	<not used>
E5D6		Symbol for Marks Chapter Variant with Middlecase Em and Super Er-Ka • Variant of U+1F545	E5FF	<not used>
E5D7		Symbol for Marks Chapter Variant Em-Er-Ka in Leaf Shape • Variant of U+1F545	E600	<not used>
E5D8		Symbol for Marks Chapter Baroque Variant • Variant of U+1F545	E601	<not used>
E5D9	<not used>		E602	<not used>
E5DA	<not used>		E603	<not used>
E5DB	<not used>		E604	<not used>
E5DC	<not used>		E605	<not used>
E5DD	<not used>		E606	<not used>
E5DE	<not used>		E607	<not used>
E5DF	<not used>		E608	<not used>
E5E0	<not used>		E609	<not used>
E5E1	<not used>		E60A	<not used>
E5E2	<not used>		E60B	<not used>
E5E3	<not used>		E60C	<not used>
E5E4	<not used>		E60D	<not used>
E5E5	<not used>		E60E	<not used>
E5E6	<not used>		E60F	<not used>
E5E7	<not used>		E610	<not used>
E5E8	<not used>		E611	<not used>
E5E9	<not used>		E612	<not used>
E5EA	<not used>		E613	<not used>
E5EB	<not used>		E614	<not used>
E5EC	<not used>		E615	<not used>

E5ED	<not used>	E616	<not used>
E5EE	<not used>	E617	<not used>
E5EF	<not used>	E618	<not used>
E5F0	<not used>	E619	<not used>
E5F1	<not used>	E61A	<not used>
E5F2	<not used>	E61B	<not used>
E5F3	<not used>	E61C	<not used>
E5F4	<not used>	E61D	<not used>
E5F5	<not used>	E61E	<not used>
E5F6	<not used>	E61F	<not used>
E5F7	<not used>	E620	<not used>
E5F8	<not used>	E621	<not used>

3 YELLOW ZONE - Ligatures

	U+E5Ex	U+E5Fx	U+E60x	U+E61x	U+E62x	U+E63x	U+E64x
0	E5E0	<i>Œ</i> E5F0	E600	E610	E620	E630	E640
1	E5E1	E5F1	E601	E611	E621	E631	E641
2	E5E2	E5F2	E602	<i>Ɔ</i> E612	E622	E632	E642
3	E5E3	E5F3	E603	<i>Œ</i> E613	E623	E633	E643
4	E5E4	E5F4	E604	E614	E624	E634	E644
5	E5E5	E5F5	E605	E615	E625	E635	E645
6	E5E6	E5F6	E606	E616	E626	E636	E646
7	E5E7	E5F7	E607	E617	E627	E637	E647
8	E5E8	E5F8	E608	E618	E628	E638	E648
9	E5E9	E5F9	E609	E619	E629	E639	E649
A	E5EA	E5FA	E60A	E61A	E62A	E63A	E64A
B	E5EB	E5FB	E60B	E61B	E62B	E63B	E64B
C	E5EC	E5FC	E60C	E61C	E62C	E63C	E64C
D	E5ED	E5FD	E60D	E61D	E62D	E63D	E64D
E	E5EE	E5FE	E60E	E61E	E62E	E63E	E64E
F	<i>Œ</i> E5EF	E5FF	<i>Ɔ</i> E60F	E61F	E62F	E63F	E64F

YELLOW ZONE - Ligatures

E5EF	Ѧ	Cyrillic Capital Ligature A-Te	E620	<not used>
		• Ligature of U+0410 U+200D and U+0422		
E5F0	Ѧ	Cyrillic Capital Ligature A-U	E621	<not used>
		• Ligature of U+0410 U+200D and U+0423		
E5F1		<not used>	E622	<not used>
E5F2		<not used>	E623	<not used>
E5F3		<not used>	E624	<not used>
E5F4		<not used>	E625	<not used>
E5F5		<not used>	E626	<not used>
E5F6		<not used>	E627	<not used>
E5F7		<not used>	E628	<not used>
E5F8		<not used>	E629	<not used>
E5F9		<not used>	E62A	<not used>
E5FA		<not used>	E62B	<not used>
E5FB		<not used>	E62C	<not used>
E5FC		<not used>	E62D	<not used>
E5FD		<not used>	E62E	<not used>
E5FE		<not used>	E62F	<not used>
E5FF		<not used>	E630	<not used>
E600		<not used>	E631	<not used>
E601		<not used>	E632	<not used>
E602		<not used>	E633	<not used>
E603		<not used>	E634	<not used>
E604		<not used>	E635	<not used>
E605		<not used>	E636	<not used>
E606		<not used>	E637	<not used>
E607		<not used>	E638	<not used>
E608		<not used>	E639	<not used>
E609		<not used>	E63A	<not used>
E60A		<not used>	E63B	<not used>
E60B		<not used>	E63C	<not used>
E60C		<not used>	E63D	<not used>
E60D		<not used>	E63E	<not used>
E60E		<not used>	E63F	<not used>
E60F	Ѧ	Cyrillic Small Ligature A-Te	E640	<not used>
		• Ligature of U+0430 U+200D and U+0442		
E610		<not used>	E641	<not used>
E611		<not used>	E642	<not used>
E612	Ѧ	Cyrillic Small Ligature A-U	E643	<not used>
		• Ligature of U+0430 U+200D and U+0443		
E613	Ѧ	Cyrillic Small Ligature A-Izhitsa	E644	<not used>
		• Ligature of U+0430 U+200D and U+0475		

E614	<not used>	E645	<not used>
E615	<not used>	E646	<not used>
E616	<not used>	E647	<not used>
E617	<not used>	E648	<not used>
E618	<not used>	E649	<not used>
E619	<not used>	E64A	<not used>
E61A	<not used>	E64B	<not used>
E61B	<not used>	E64C	<not used>
E61C	<not used>	E64D	<not used>
E61D	<not used>	E64E	<not used>
E61E	<not used>	E64F	<not used>
E61F	<not used>	E650	<not used>

	U+E6Bx	U+E6Cx	U+E6Dx	U+E6Ex	U+E6Fx	U+E70x
0	E6B0	E6C0	E6D0	E6E0	E6F0	Ɱ E700
1	E6B1	E6C1	E6D1	E6E1	E6F1	E701
2	E6B2	E6C2	E6D2	E6E2	E6F2	E702
3	E6B3	E6C3	E6D3	E6E3	E6F3	E703
4	E6B4	E6C4	E6D4	E6E4	E6F4	E704
5	E6B5	E6C5	E6D5	E6E5	E6F5	E705
6	E6B6	E6C6	E6D6	E6E6	E6F6	E706
7	E6B7	E6C7	E6D7	E6E7	E6F7	E707
8	E6B8	E6C8	E6D8	E6E8	E6F8	E708
9	E6B9	E6C9	E6D9	E6E9	E6F9	E709
A	E6BA	E6CA	E6DA	E6EA	E6FA	E70A
B	E6BB	E6CB	Ɱ E6DB	E6EB	E6FB	Ɱ E70B
C	E6BC	E6CC	E6DC	E6EC	E6FC	E70C
D	E6BD	E6CD	E6DD	E6ED	E6FD	E70D
E	E6BE	E6CE	E6DE	E6EE	E6FE	E70E
F	E6BF	E6CF	E6DF	E6EF	E6FF	E70F

YELLOW ZONE - Ligatures

E6BF	<not used>	E6E8	<not used>
E6C0	<not used>	E6E9	<not used>
E6C1	<not used>	E6EA	<not used>
E6C2	<not used>	E6EB	<not used>
E6C3	<not used>	E6EC	<not used>
E6C4	<not used>	E6ED	<not used>
E6C5	<not used>	E6EE	<not used>
E6C6	<not used>	E6EF	<not used>
E6C7	<not used>	E6F0	<not used>
E6C8	<not used>	E6F1	<not used>
E6C9	<not used>	E6F2	<not used>
E6CA	<not used>	E6F3	<not used>
E6CB	<not used>	E6F4	<not used>
E6CC	<not used>	E6F5	<not used>
E6CD	<not used>	E6F6	<not used>
E6CE	<not used>	E6F7	<not used>
E6CF	<not used>	E6F8	<not used>
E6D0	<not used>	E6F9	<not used>
E6D1	<not used>	E6FA	<not used>
E6D2	<not used>	E6FB	<not used>
E6D3	<not used>	E6FC	<not used>
E6D4	<not used>	E6FD	<not used>
E6D5	<not used>	E6FE	<not used>
E6D6	<not used>	E6FF	<not used>
E6D7	<not used>	E700	Ѡ Cyrillic Capital Ligature El-Ge • Ligature of U+041B U+200D and U+0413; see also: U+A664
E6D8	<not used>	E701	<not used>
E6D9	<not used>	E702	<not used>
E6DA	<not used>	E703	<not used>
E6DB	Ѣ Cyrillic Small Ligature I-Ye • Ligature of U+0438 U+200D and U+0435	E704	<not used>
E6DC	<not used>	E705	<not used>
E6DD	<not used>	E706	<not used>
E6DE	<not used>	E707	<not used>
E6DF	<not used>	E708	<not used>
E6E0	<not used>	E709	<not used>
E6E1	<not used>	E70A	<not used>
E6E2	<not used>	E70B	ѣ Cyrillic Small Ligature El-Ge • Ligature of U+043B U+200D and U+0433; see also: U+A665
E6E3	<not used>	E70C	<not used>
E6E4	<not used>	E70D	<not used>
E6E5	<not used>	E70E	<not used>
E6E6	<not used>	E70F	<not used>
E6E7	<not used>	E710	<not used>

	U+E71x	U+E72x	U+E73x	U+E74x	U+E75x	U+E76x
0	E710	E720	E730	E740	Ŧ E750	E760
1	E711	E721	E731	E741	E751	E761
2	E712	E722	E732	E742	E752	E762
3	E713	E723	E733	Ŧ E743	E753	E763
4	Ŧ E714	E724	E734	E744	E754	E764
5	Ŧ E715	E725	E735	E745	E755	E765
6	E716	E726	E736	E746	E756	E766
7	E717	E727	E737	E747	E757	E767
8	E718	E728	E738	Ŧ E748	E758	E768
9	E719	E729	E739	E749	E759	E769
A	E71A	E72A	E73A	E74A	E75A	E76A
B	E71B	E72B	E73B	Ŧ E74B	E75B	E76B
C	E71C	E72C	E73C	E74C	E75C	E76C
D	E71D	E72D	E73D	E74D	E75D	E76D
E	E71E	E72E	E73E	E74E	E75E	E76E
F	E71F	E72F	E73F	E74F	E75F	E76F

YELLOW ZONE - Ligatures

E71F	<not used>	E748	HA	Cyrillic Capital Ligature En-Yus • Ligature of U+041D U+200D and U+0466
E720	<not used>	E749		<not used>
E721	<not used>	E74A		<not used>
E722	<not used>	E74B	HH	Cyrillic Small Ligature En-I • Ligature of U+043D U+200D and U+0438
E723	<not used>	E74C		<not used>
E724	<not used>	E74D		<not used>
E725	<not used>	E74E		<not used>
E726	<not used>	E74F		<not used>
E727	<not used>	E750	HY	Cyrillic Small Ligature En-Yus • Ligature of U+043D U+200D and U+0467
E728	<not used>	E751		<not used>
E729	<not used>	E752		<not used>
E72A	<not used>	E753		<not used>
E72B	<not used>	E754		<not used>
E72C	<not used>	E755		<not used>
E72D	<not used>	E756		<not used>
E72E	<not used>	E757		<not used>
E72F	<not used>	E758		<not used>
E730	<not used>	E759		<not used>
E731	<not used>	E75A		<not used>
E732	<not used>	E75B		<not used>
E733	<not used>	E75C		<not used>
E734	<not used>	E75D		<not used>
E735	<not used>	E75E		<not used>
E736	<not used>	E75F		<not used>
E737	<not used>	E760		<not used>
E738	<not used>	E761		<not used>
E739	<not used>	E762		<not used>
E73A	<not used>	E763		<not used>
E73B	<not used>	E764		<not used>
E73C	<not used>	E765		<not used>
E73D	<not used>	E766		<not used>
E73E	<not used>	E767		<not used>
E73F	<not used>	E768		<not used>
E740	<not used>	E769		<not used>
E741	<not used>	E76A		<not used>
E742	<not used>	E76B		<not used>
E743	HH Cyrillic Capital Ligature En-I • Ligature of U+041D U+200D and U+0418	E76C		<not used>
E744	<not used>	E76D		<not used>
E745	<not used>	E76E		<not used>

E746 <not used>
E747 <not used>

E76F <not used>
E770 <not used>

	U+E77x	U+E78x	U+E79x	U+E7Ax	U+E7Bx	U+E7Cx
0	E770	E780	E790	E7A0	E7B0	Ⓒ E7C0
1	E771	E781	E791	E7A1	E7B1	E7C1
2	E772	E782	E792	E7A2	E7B2	E7C2
3	E773	E783	E793	E7A3	E7B3	E7C3
4	E774	E784	E794	E7A4	Ⓣ E7B4	E7C4
5	E775	E785	E795	E7A5	E7B5	E7C5
6	E776	E786	E796	E7A6	E7B6	E7C6
7	E777	E787	E797	E7A7	E7B7	E7C7
8	E778	E788	E798	E7A8	E7B8	E7C8
9	E779	E789	E799	E7A9	E7B9	E7C9
A	E77A	E78A	E79A	E7AA	E7BA	E7CA
B	E77B	E78B	E79B	E7AB	E7BB	Ⓒ E7CB
C	E77C	E78C	E79C	E7AC	E7BC	E7CC
D	E77D	E78D	E79D	E7AD	E7BD	E7CD
E	E77E	E78E	E79E	E7AE	E7BE	E7CE
F	E77F	E78F	E79F	E7AF	E7BF	E7CF

YELLOW ZONE - Ligatures

E77F	<not used>	E7A8	<not used>
E780	<not used>	E7A9	<not used>
E781	<not used>	E7AA	<not used>
E782	<not used>	E7AB	<not used>
E783	<not used>	E7AC	<not used>
E784	<not used>	E7AD	<not used>
E785	<not used>	E7AE	<not used>
E786	<not used>	E7AF	<not used>
E787	<not used>	E7B0	<not used>
E788	<not used>	E7B1	<not used>
E789	<not used>	E7B2	<not used>
E78A	<not used>	E7B3	<not used>
E78B	<not used>	E7B4	ѣ Cyrillic Ligature Er-Yat • Ligature of U+0440, U+200D and U+0463
E78C	<not used>	E7B5	<not used>
E78D	<not used>	E7B6	<not used>
E78E	<not used>	E7B7	<not used>
E78F	<not used>	E7B8	<not used>
E790	<not used>	E7B9	<not used>
E791	<not used>	E7BA	<not used>
E792	<not used>	E7BB	<not used>
E793	<not used>	E7BC	<not used>
E794	<not used>	E7BD	<not used>
E795	<not used>	E7BE	<not used>
E796	<not used>	E7BF	<not used>
E797	<not used>	E7C0	Ѹ Cyrillic Capital Ligature Es-Ve • Ligature of U+0421 U+200D and U+0412
E798	<not used>	E7C1	<not used>
E799	<not used>	E7C2	<not used>
E79A	<not used>	E7C3	<not used>
E79B	<not used>	E7C4	<not used>
E79C	<not used>	E7C5	<not used>
E79D	<not used>	E7C6	<not used>
E79E	<not used>	E7C7	<not used>
E79F	<not used>	E7C8	<not used>
E7A0	<not used>	E7C9	<not used>
E7A1	<not used>	E7CA	<not used>
E7A2	<not used>	E7CB	ѷ Cyrillic Small Ligature Es-Ve • Ligature of U+0441 U+200D and U+0432
E7A3	<not used>	E7CC	<not used>
E7A4	<not used>	E7CD	<not used>
E7A5	<not used>	E7CE	<not used>
E7A6	<not used>	E7CF	<not used>
E7A7	<not used>	E7D0	<not used>

	U+E7Dx	U+E7Ex	U+E7Fx	U+E80x	U+E81x	U+E82x
0	E7D0	Ѐ E7E0	Ё E7F0	Ђ E800	Ѓ E810	Є E820
1	E7D1	Ђ E7E1	Ѓ E7F1	Є E801	Ѕ E811	І E821
2	E7D2	Ѕ E7E2	І E7F2	Ї E802	Ї E812	Ї E822
3	E7D3	Ї E7E3	Ї E7F3	Ї E803	Ї E813	Ї E823
4	E7D4	Ї E7E4	Ї E7F4	Ї E804	Ї E814	Ї E824
5	E7D5	Ї E7E5	Ї E7F5	Ї E805	Ї E815	Ї E825
6	E7D6	Ї E7E6	Ї E7F6	Ї E806	Ї E816	Ї E826
7	E7D7	Ї E7E7	Ї E7F7	Ї E807	Ї E817	Ї E827
8	E7D8	Ї E7E8	Ї E7F8	Ї E808	Ї E818	Ї E828
9	E7D9	Ї E7E9	Ї E7F9	Ї E809	Ї E819	Ї E829
A	E7DA	Ї E7EA	Ї E7FA	Ї E80A	Ї E81A	Ї E82A
B	E7DB	Ї E7EB	Ї E7FB	Ї E80B	Ї E81B	Ї E82B
C	E7DC	Ї E7EC	Ї E7FC	Ї E80C	Ї E81C	Ї E82C
D	E7DD	Ї E7ED	Ї E7FD	Ї E80D	Ї E81D	Ї E82D
E	E7DE	Ї E7EE	Ї E7FE	Ї E80E	Ї E81E	Ї E82E
F	E7DF	Ї E7EF	Ї E7FF	Ї E80F	Ї E81F	Ї E82F

YELLOW ZONE - Ligatures

E7DF	<not used>	E808	<not used>
E7E0	Ⱨ Cyrillic Capital Ligature Te-Ve • Ligature of U+0422 U+200D and U+0412	E809	ⱨ Cyrillic Small Ligature Te-I • Ligature of U+0442, U+200D and U+0438
E7E1	Ⱪ Cyrillic Capital Ligature Te-I • Ligature of U+0422 U+200D and U+0418	E80A	<not used>
E7E2	<not used>	E80B	<not used>
E7E3	ⱪ Cyrillic Capital Ligature Te-Er • Ligature of U+0422 U+200D and U+0420	E80C	<not used>
E7E4	<not used>	E80D	<not used>
E7E5	<not used>	E80E	<not used>
E7E6	<not used>	E80F	<not used>
E7E7	<not used>	E810	<not used>
E7E8	<not used>	E811	ⱪ Cyrillic Small Ligature Te-Er • Ligature of U+0442, U+200D and U+0440
E7E9	<not used>	E812	<not used>
E7EA	Ⱬ Cyrillic Capital Ligature Te-Soft Sign • Ligature of U+0422 U+200D and U+042C	E813	<not used>
E7EB	<not used>	E814	<not used>
E7EC	<not used>	E815	<not used>
E7ED	<not used>	E816	<not used>
E7EE	<not used>	E817	<not used>
E7EF	<not used>	E818	<not used>
E7F0	<not used>	E819	<not used>
E7F1	<not used>	E81A	ⱬ Cyrillic Small Ligature Te-Soft Sign • Ligature of U+0442, U+200D and U+044C
E7F2	<not used>	E81B	Ɑ Cyrillic Small Ligature Te-A • Ligature of U+0442 U+200D and U+0410
E7F3	<not used>	E81C	<not used>
E7F4	<not used>	E81D	<not used>
E7F5	<not used>	E81E	<not used>
E7F6	<not used>	E81F	<not used>
E7F7	<not used>	E820	<not used>
E7F8	<not used>	E821	<not used>
E7F9	<not used>	E822	<not used>
E7FA	<not used>	E823	<not used>
E7FB	<not used>	E824	<not used>
E7FC	<not used>	E825	<not used>
E7FD	<not used>	E826	<not used>
E7FE	<not used>	E827	<not used>
E7FF	<not used>	E828	<not used>
E800	Ɱ Cyrillic Small Ligature Te-Ve	E829	<not used>

• Ligature of U+0442, U+200D and U+0432

E801	<not used>	E82A	<not used>
E802	<not used>	E82B	<not used>
E803	<not used>	E82C	<not used>
E804	<not used>	E82D	<not used>
E805	<not used>	E82E	<not used>
E806	<not used>	E82F	<not used>
E807	<not used>	E830	<not used>

	U+E89x	U+E8Ax	U+E8Bx	U+E8Cx	U+E8Dx	U+E8Ex
0	E890	E8A0	E8B0	E8C0	E8D0	ḡ E8E0
1	E891	E8A1	E8B1	E8C1	E8D1	ḡ E8E1
2	E892	E8A2	E8B2	E8C2	E8D2	ḡ E8E2
3	E893	E8A3	E8B3	E8C3	E8D3	ḡ E8E3
4	E894	E8A4	E8B4	E8C4	E8D4	ḡ E8E4
5	E895	E8A5	E8B5	E8C5	E8D5	ḡ E8E5
6	E896	E8A6	E8B6	E8C6	E8D6	ḡ E8E6
7	E897	E8A7	E8B7	E8C7	E8D7	ḡ E8E7
8	E898	E8A8	E8B8	E8C8	E8D8	ḡ E8E8
9	E899	E8A9	E8B9	E8C9	E8D9	ḡ E8E9
A	E89A	E8AA	E8BA	E8CA	E8DA	ḡ E8EA
B	E89B	E8AB	E8BB	E8CB	E8DB	ḡ E8EB
C	E89C	E8AC	E8BC	E8CC	E8DC	ḡ E8EC
D	E89D	E8AD	E8BD	E8CD	E8DD	ḡ E8ED
E	E89E	E8AE	E8BE	E8CE	E8DE	ḡ E8EE
F	E89F	E8AF	E8BF	E8CF	E8DF	ḡ E8EF

YELLOW ZONE - Ligatures

E89F	<not used>	E8C8	<not used>
E8A0	<not used>	E8C9	<not used>
E8A1	<not used>	E8CA	<not used>
E8A2	<not used>	E8CB	<not used>
E8A3	<not used>	E8CC	<not used>
E8A4	<not used>	E8CD	<not used>
E8A5	<not used>	E8CE	<not used>
E8A6	<not used>	E8CF	<not used>
E8A7	<not used>	E8D0	<not used>
E8A8	<not used>	E8D1	<not used>
E8A9	<not used>	E8D2	<not used>
E8AA	<not used>	E8D3	<not used>
E8AB	<not used>	E8D4	<not used>
E8AC	<not used>	E8D5	<not used>
E8AD	<not used>	E8D6	<not used>
E8AE	<not used>	E8D7	<not used>
E8AF	<not used>	E8D8	<not used>
E8B0	<not used>	E8D9	<not used>
E8B1	<not used>	E8DA	<not used>
E8B2	<not used>	E8DB	<not used>
E8B3	<not used>	E8DC	<not used>
E8B4	<not used>	E8DD	<not used>
E8B5	<not used>	E8DE	<not used>
E8B6	<not used>	E8DF	<not used>
E8B7	<not used>	E8E0	Ѹ Cyrillic Letter Monograph Uk with Psili Pneumata • Ligature of U+A64B and U+0486
E8B8	<not used>	E8E1	ѹ Cyrillic Letter Monograph Uk with Acute on Top • Ligature of U+A64B and U+0301
E8B9	<not used>	E8E2	Ѻ Cyrillic Letter Monograph Uk with Acute on Left • Ligature of U+A64B and U+0301
E8BA	<not used>	E8E3	ѻ Cyrillic Letter Monograph Uk with Grave on Top • Ligature of U+A64B and U+0300
E8BB	<not used>	E8E4	Ѽ Cyrillic Letter Monograph Uk with Grave on Left • Ligature of U+A64B and U+0300
E8BC	<not used>	E8E5	ѽ Cyrillic Letter Monograph Uk with Inverted Breve on Top • Ligature of U+A64B and U+0311
E8BD	<not used>	E8E6	Ѿ Cyrillic Letter Monograph Uk with Inverted Breve on Left • Ligature of U+A64B and U+0311
E8BE	<not used>	E8E7	ѿ Cyrillic Letter Monograph Uk with Iso

E8BF	<not used>			<ul style="list-style-type: none"> • Ligature of U+A64B, U+0486 and U+0301
E8C0	<not used>	E8E8	Ѹ	Cyrillic Left-Truncated Monograph Uk with Psili Pneumata <ul style="list-style-type: none"> • Ligature of U+E0E2 and U+0486
E8C1	<not used>	E8E9	ѹ	Cyrillic Left-Truncated Monograph Uk with Acute <ul style="list-style-type: none"> • Ligature of U+E0E2 and U+0301
E8C2	<not used>	E8EA	Ѻ	Cyrillic Left-Truncated Monograph Uk with Grave <ul style="list-style-type: none"> • Ligature of U+E0E2 and U+0300
E8C3	<not used>	E8EB	ѻ	Cyrillic Left-Truncated Monograph Uk with Inverted Breve <ul style="list-style-type: none"> • Ligature of U+E0E2 and U+0311
E8C4	<not used>	E8EC	Ѽ	Cyrillic Right-Truncated Monograph Uk with Psili Pneumata <ul style="list-style-type: none"> • Ligature of U+E0E3 and U+0486
E8C5	<not used>	E8ED	ѽ	Cyrillic Right-Truncated Monograph Uk with Acute <ul style="list-style-type: none"> • Ligature of U+E0E3 and U+0301
E8C6	<not used>	E8EE	Ѿ	Cyrillic Right-Truncated Monograph Uk with Grave <ul style="list-style-type: none"> • Ligature of U+E0E3 and U+0300
E8C7	<not used>	E8EF	ѿ	Cyrillic Right-Truncated Monograph Uk with Inverted Breve <ul style="list-style-type: none"> • Ligature of U+E0E3 and U+0311
		E8F0	Ѻ	Cyrillic Right-Truncated Monograph Uk with Iso <ul style="list-style-type: none"> • Ligature of U+E0E3, U+0486 and U+0301
























	U+E8Fx	U+E90x	U+E91x	U+E92x	U+E93x	U+E94x
0	Ꞥ E8F0	ꞥ E900	Ꞧ E910	ꞧ E920	Ꞩ E930	ꞩ E940
1	Ɦ E8F1	Ɜ E901	Ɡ E911	Ɬ E921	Ɪ E931	ꞯ E941
2	Ʞ E8F2	Ʇ E902	Ʝ E912	Ꭓ E922	Ꞵ E932	ꞵ E942
3	ꞷ E8F3	Ꞹ E903	ꞹ E913	Ꞻ E923	ꞻ E933	Ꞽ E943
4	ꞽ E8F4	Ꞿ E904	ꞿ E914	글 E924	긁 E934	긂 E944
5	긄 E8F5	긅 E905	긆 E915	긇 E925	금 E935	급 E945
6	긊 E8F6	긋 E906	긌 E916	긍 E926	긎 E936	긏 E946
7	긒 E8F7	긓 E907	긔 E917	긕 E927	긖 E937	긗 E947
8	긙 E8F8	긚 E908	긛 E918	긜 E928	긝 E938	긞 E948
9	긠 E8F9	긡 E909	긢 E919	긣 E929	긤 E939	긥 E949
A	긦 E8FA	긧 E90A	긨 E91A	긩 E92A	긪 E93A	긫 E94A
B	긬 E8FB	긭 E90B	긮 E91B	긯 E92B	기 E93B	긱 E94B
C	긳 E8FC	긴 E90C	긵 E91C	긶 E92C	긷 E93C	길 E94C
D	긼 E8FD	긽 E90D	긾 E91D	긿 E92D	김 E93D	깁 E94D
E	깄 E8FE	깅 E90E	깆 E91E	깇 E92E	깈 E93E	깉 E94E
F	깊 E8FF	깋 E90F	까 E91F	깍 E92F	깎 E93F	깏 E94F

YELLOW ZONE - Ligatures


























E8FF	<not used>	E928	Ѡ	Cyrillic Letter Yeru with Inverted Breve • Ligature of U+044B and U+0311
E900	Ѣ • Ligature of U+0463 and U+0486	E929	<not used>	
E901	ѣ • Ligature of U+0463 and U+0301	E92A	Ѣ́	Cyrillic Capital Letter Ot with Acute • Ligature of U+047E and U+0301
E902	ѣ́ • Ligature of U+0463 and U+0301	E92B	ѣ́	Cyrillic Lowercase Letter Ot with Acute • Ligature of U+047F and U+0301
E903	ѣ̄ • Ligature of U+0463 and U+0300	E92C	Ѣ̄	Cyrillic Capital Letter Ot with Grave • Ligature of U+047E and U+0300
E904	Ѣ̄ • Ligature of U+0463 and U+0311	E92D	ѣ̄	Cyrillic Letter Izhitsa with Cedilla • Ligature of U+0475 and U+0327; Used by Syrnikov
E905	ѣ̄́ • Ligature of U+0463 and U+0311	E92E	ѣ̄́	Cyrillic Letter Psi with Cedilla • Ligature of U+0471 and U+0327; Used by Syrnikov
E906	ѣ̄̄ • Ligature of U+0463 and U+0311	E92F	<not used>	
E907	Ѣ̄̄ • Ligature of U+0463, U+0486 and U+0301	E930	Ѣ̄̄	Cyrillic Capital Letter Broad Omega with Apostrof • Ligature of U+A64C, U+0486 and U+0300
E908	<not used>	E931	ѣ̄̄	Cyrillic Lowercase Letter Broad Omega with Apostrof • Ligature of U+A64D, U+0486 and U+0300
E909	Ѣ̄̄ • Ligature of U+E0EC and U+0486	E932	<not used>	
E90A	ѣ̄̄́ • Ligature of U+E0EC and U+0301	E933	<not used>	
E90B	ѣ̄̄̄ • Ligature of U+E0EC and U+0300	E934	<not used>	
E90C	Ѣ̄̄̄ • Ligature of U+E0EC and U+0311	E935	<not used>	
E90D	Ѣ̄̄̄̄ • Ligature of U+E0EC, U+0486 and U+0301	E936	<not used>	
E90E	<not used>	E937	<not used>	
E90F	<not used>	E938	<not used>	
E910	<not used>	E939	<not used>	
E911	<not used>	E93A	<not used>	
E912	<not used>	E93B	<not used>	
E913	<not used>	E93C	<not used>	

E914	<not used>	E93D	<not used>
E915	<not used>	E93E	<not used>
E916	<not used>	E93F	<not used>
E917	<not used>	E940	<not used>
E918	<not used>	E941	<not used>
E919	<not used>	E942	<not used>
E91A	<not used>	E943	<not used>
E91B	<not used>	E944	<not used>
E91C	<not used>	E945	<not used>
E91D	<not used>	E946	<not used>
E91E	<not used>	E947	<not used>
E91F	<not used>	E948	<not used>
E920	<not used>	E949	<not used>
E921	<not used>	E94A	<not used>
E922	<not used>	E94B	<not used>
E923	<not used>	E94C	<not used>
E924	<not used>	E94D	<not used>
E925	<not used>	E94E	<not used>
E926	i Cyrillic Letter Belorussian / Ukrainian I with Dot • Ligature of U+0456 and U+0307; Used in Ukrainian	E94F	<not used>
E927	<not used>	E950	<not used>









4 RED ZONE – Miscellaneous Characters and Pictographs

	U+EC3x	U+EC4x	U+EC5x
0	 EC30	EC40	 EC50
1	 EC31	EC41	EC51
2	 EC32	EC42	EC52
3	 EC33	EC43	EC53
4	 EC34	EC44	EC54
5	 EC35	 EC45	EC55
6	 EC36	 EC46	EC56
7	 EC37	 EC47	EC57
8	 EC38	 EC48	EC58
9	 EC39	 EC49	EC59
A	 EC3A	 EC4A	EC5A
B	 EC3B	 EC4B	EC5B
C	 EC3C	- EC4C	EC5C
D	 EC3D	- EC4D	EC5D
E	 EC3E	EC4E	EC5E
F	EC3F	EC4F	EC5F

RED ZONE – Miscellaneous Characters and Pictographs

EC30		Musical Symbol Kievan C Clef • See U+1D1DE	EC41	<not used>
EC31		Musical Symbol Kievan End of Piece • See U+1D1DF	EC42	<not used>
EC32		Musical Symbol Kievan Recitative Mark • See U+1D1E1	EC43	<not used>
EC33		Musical Symbol Kievan Whole Note • See U+1D1E2	EC44	<not used>
EC34		Musical Symbol Kievan Final Note • See U+1D1E0	EC45	 Pictograph for Combining Grapheme Joiner • Picture for U+034F
EC35		Musical Symbol Kievan Half Note • See U+1D1E3	EC46	 Pictograph for Zero Width Joiner • Picture for U+200D
EC36		Musical Symbol Kievan Half Note Variant • Variant of U+1D1E3 used in staff space	EC47	 Pictograph for Zero Width Non-joiner • Picture for U+200C
EC37		Musical Symbol Kievan Quarter Note Stem Up • See U+1D1E5	EC48	 Pictograph for Word Joiner • Picture for U+2060
EC38		Musical Symbol Kievan Quarter Note Stem Down • See U+1D1E4	EC49	 Pictograph for Narrow No-break Space • Picture for U+202F
EC39		Musical Symbol Kievan Eighth Note Stem Up • See U+1D1E7	EC4A	 Pictograph for Space • Picture for U+0020
EC3A		Musical Symbol Kievan Eighth Note Stem Down • See U+1D1E6	EC4B	 Pictograph for Soft Hyphen • Picture for U+00AD
EC3B		Musical Symbol Kievan Beam • Part of ligature	EC4C	 Three-Quarters Hyphen • Width is 0.75 of U+005F
EC3C		Musical Symbol Kievan Augmentation Dot • Variant of U+1D16D	EC4D	 Half Hyphen • Width is 0.5 of U+005F
EC3D		Musical Symbol Kievan Sharp Sign • Variant of U+266F	EC4E	<not used>
EC3E		Musical Symbol Kievan Flat Sign • See U+1D1E8	EC4F	<not used>
EC3F	<not used>		EC50	 Pictograph for No-break Space • Picture for U+00A0
EC40	<not used>		EC51	<not used>

5 MAGENTA ZONE - Glagolitic Characters

	U+ECEX
0	 ECE0
1	 ECE1
2	 ECE2
3	 ECE3
4	 ECE4
5	 ECE5
6	 ECE6
7	 ECE7
8	ECE8
9	ECE9
A	ECEA
B	ECEB
C	ECEC
D	ECED
E	ECEE
F	ECEF

MAGENTA ZONE - Glagolitic Characters

ECE0	◌ ^o	Combining Glagolitic Letter Dzelo	ECE4	◌ ^e	Combining Glagolitic Letter Small Yus with Tail
		<ul style="list-style-type: none">• Combining form of U+2C38; unat-tested			<ul style="list-style-type: none">• Combining form of U+2C55; unat-tested
ECE1	◌ ^o	Combining Glagolitic Letter Otu	ECE5	◌ ^h	Combining Glagolitic Letter Izhitsa
		<ul style="list-style-type: none">• Combining form of U+2C49; unat-tested			<ul style="list-style-type: none">• Combining form of U+2C5B; unat-tested
ECE2	◌ ^l	Combining Glagolitic Letter Pe	ECE6	Ǿ	Glagolitic Capital Letter Broad Onu
		<ul style="list-style-type: none">• Combining form of U+2C4A; unat-tested			<ul style="list-style-type: none">• Occurs in Euch. Sin. (Stankovska, 2000)
ECE3	◌ ^h	Combining Glagolitic Letter Spidery Ha	ECE7	ǿ	Glagolitic Small Letter Broad Onu
		<ul style="list-style-type: none">• Combining form of U+2C52; unat-tested			<ul style="list-style-type: none">• Occurs in Euch. Sin. (Stankovska, 2000)

6 Ecphonetic Notation





















































	U+EDEx
0	‡ EDE0
1	· EDE1
2	EDE2
3	EDE3
4	EDE4
5	EDE5
6	EDE6
7	EDE7
8	EDE8
9	EDE9
A	EDEA
B	EDEB
C	EDEC
D	EDED
E	EDEE
F	EDEF

Ecphonetic Notation

EDE0 * Byzantine Musical Symbol Teleia with
Combining Bridge Below EDE1 . <not used>

- Ligature of U+1D00F and U+032A; occurs in Ostromirovo Gospel

7 GOLD ZONE - Znamenny Notation Symbols

	U+EE0x	U+EE1x	U+EE2x	U+EE3x	U+EE4x	U+EE5x	U+EE6x
0	 EE00	 EE10	EE20	 EE30	EE40	 EE50	 EE60
1	 EE01	 EE11	EE21	 EE31	EE41	 EE51	 EE61
2	 EE02	 EE12	EE22	 EE32	EE42	 EE52	 EE62
3	 EE03	 EE13	EE23	 EE33	EE43	 EE53	 EE63
4	 EE04	 EE14	EE24	 EE34	EE44	 EE54	EE64
5	 EE05	 EE15	EE25	 EE35	EE45	 EE55	EE65
6	 EE06	 EE16	EE26	 EE36	EE46	 EE56	EE66
7	 EE07	 EE17	EE27	 EE37	EE47	 EE57	EE67
8	 EE08	EE18	EE28	 EE38	EE48	 EE58	 EE68
9	 EE09	EE19	EE29	 EE39	EE49	 EE59	 EE69
A	 EE0A	EE1A	EE2A	 EE3A	EE4A	 EE5A	EE6A
B	 EE0B	EE1B	EE2B	 EE3B	EE4B	 EE5B	EE6B
C	EE0C	EE1C	EE2C	 EE3C	EE4C	EE5C	EE6C
D	EE0D	EE1D	EE2D	EE3D	EE4D	EE5D	EE6D
E	EE0E	EE1E	EE2E	EE3E	EE4E	EE5E	EE6E
F	EE0F	 EE1F	EE2F	EE3F	EE4F	EE5F	EE6F

































































































GOLD ZONE - Znamenny Notation Symbols

EE00	☞	Combining Red Mark Gorazdo Nizko s Kryzhem • Decomposition: U+EE03 U+EE1F	EE31	☞	Combining Red Mark On •
EE01	☞	Combining Red Mark Nizko s Kryzhem • Decomposition: U+EE04 U+EE1F	EE32	☞	Combining Red Mark Ravno •
EE02	☞	Combining Red Mark Tsata •	EE33	☞	Combining Red Mark Tikhaya •
EE03	☞	Combining Red Mark Gorazdo Nizko •	EE34	☞	Combining Red Mark Borzaya •
EE04	☞	Combining Red Mark Nizko •	EE35	☞	Combining Red Mark Udarka •
EE05	☞	Combining Red Mark Stroka •	EE36	☞	Combining Red Mark Podvertka •
EE06	☞	Combining Red Mark Malo Povyshe •	EE37	☞	Combining Red Mark Lomka •
EE07	☞	Combining Red Mark Povyshe •	EE38	☞	Combining Red Mark Kupnaya •
EE08	☞	Combining Red Mark Vysoko •	EE39	☞	Combining Red Mark Kachka •
EE09	☞	Combining Red Mark Malo Povyshe s Khokhlom •	EE3A	☞	Combining Red Mark Zevok •
EE0A	☞	Combining Red Mark Povyshe s Khokhlom •	EE3B	☞	Combining Red Mark Skoba •
EE0B	☞	Combining Red Mark Vysoko s Khokhlom •	EE3C	☞	Combining Red Mark Razseka •
EE0C		<not used>	EE3D		<not used>
EE0D		<not used>	EE3E		<not used>
EE0E		<not used>	EE3F		<not used>
EE0F		<not used>	EE40		<not used>
EE10	☞	Combining Red Mark Tsata s Kryzhem • Decomposition: U+EE03 U+EE1F	EE41		<not used>
EE11	☞	Combining Red Mark Malo Povyshe s Kryzhem • Decomposition: U+EE06 U+EE1F	EE42		<not used>
EE12	☞	Combining Red Mark Stranno Malo Povyshe •	EE43		<not used>
EE13	☞	Combining Red Mark Povyshe s Kryzhem • Decomposition: U+EE07 U+EE1F	EE44		<not used>
EE14	☞	Combining Red Mark Povyshe Stranno •	EE45		<not used>
EE15	☞	Combining Red Mark Vysoko s Kryzhem • Decomposition: U+EE08 U+EE1F	EE46		<not used>
EE16	☞	Combining Red Mark Malo Povyshe Stranno	EE47		<not used>

EE17	☉	Combining Red Mark Gorazdo Vysoko	EE48	<not used>
EE18		<not used>	EE49	<not used>
EE19		<not used>	EE4A	<not used>
EE1A		<not used>	EE4B	<not used>
EE1B		<not used>	EE4C	<not used>
EE1C		<not used>	EE4D	<not used>
EE1D		<not used>	EE4E	<not used>
EE1E		<not used>	EE4F	<not used>
EE1F	☉	Combining Red Mark Kryzh	EE50	☉ Combining Black Tonal Range Mark Mrachno
EE20		<not used>	EE51	☉ Combining Black Tonal Range Mark Svetlo
EE21		<not used>	EE52	☉ Combining Black Tonal Range Mark Tresvetlo
EE22		<not used>	EE53	☉ Combining Black Modifier Mark Zaderzhka • Alias: Ottyazhka
EE23		<not used>	EE54	☉ Combining Black Modifier Mark Otsechka
EE24		<not used>	EE55	☉ Combining Black Modifier Mark Podchashie
EE25		<not used>	EE56	☉ Combining Black Modifier Mark Chashka
EE26		<not used>	EE57	☉ Combining Black Modifier Mark Polnaya Chashka
EE27		<not used>	EE58	☉ Combining Black Modifier Mark Oblachko
EE28		<not used>	EE59	☉ Combining Black Modifier Mark Soroच्या Nozhka • Alias: Sokolik
EE29		<not used>	EE5A	☉ Combining Black Modifier Mark Tochka
EE2A		<not used>	EE5B	☉ Combining Black Modifier Mark Dvoyetochiye
EE2B		<not used>	EE5C	<not used>
EE2C		<not used>	EE5D	<not used>
EE2D		<not used>	EE5E	<not used>
EE2E		<not used>	EE5F	<not used>
EE2F		<not used>	EE60	☉ Znamenny Component Oxeia

EE30 ◉ Combining Red Mark Zelo
•

EE61 ◈ Znamenny Component Oko
•






	U+EE7x	U+EE8x	U+EE9x	U+EEAx	U+EEBx	U+EECx
0	 EE70	 EE80	 EE90	 EEA0	 EEB0	 EEC0
1	 EE71	 EE81	 EE91	 EEA1	 EEB1	 EEC1
2	 EE72	 EE82	 EE92	 EEA2	 EEB2	 EEC2
3	 EE73	 EE83	 EE93	 EEA3	 EEB3	 EEC3
4	 EE74	 EE84	 EE94	 EEA4	 EEB4	 EEC4
5	 EE75	 EE85	 EE95	 EEA5	 EEB5	 EEC5
6	 EE76	 EE86	 EE96	 EEA6	 EEB6	 EEC6
7	 EE77	 EE87	 EE97	 EEA7	 EEB7	 EEC7
8	 EE78	 EE88	 EE98	 EEA8	 EEB8	 EEC8
9	 EE79	 EE89	 EE99	 EEA9	 EEB9	 EEC9
A	 EE7A	 EE8A	 EE9A	 EEAA	 EEBA	 EECA
B	 EE7B	 EE8B	 EE9B	 EEAB	 EEBC	 EECC
C	 EE7C	 EE8C	 EE9C	 EEAC	 EEBC	 EECC
D	 EE7D	 EE8D	 EE9D	 EEAD	 EEBD	 EECD
E	 EE7E	 EE8E	 EE9E	 EEAE	 EEBE	 EECE
F	 EE7F	 EE8F	 EE9F	 EEAF	 EEBF	 EECF

GOLD ZONE - Znamenny Notation Symbols

EE70	✓	Znamenny Neume Kryuk •	EE99	<not used>
EE71	✓	Znamenny Neume Kryuk Tikhy •	EE9A	✓ Znamenny Neume Strela Prostaya •
EE72	✓	Znamenny Neume Paraklit •	EE9B	✓ Znamenny Neume Strela Mrachnotikhaya •
EE73	✓	Znamenny Neume Dva v Chelnu •	EE9C	✓ Znamenny Neume Strela Kryzhevaya • Alias: Strela Polukryzhevaya
EE74	✓	Znamenny Neume Klyuch • Demestvenny Neume Kryuk Klyuchevoy	EE9D	✓ Znamenny Neume Strela Povodnaya •
EE75	✓	Znamenny Neume Stopitsa •	EE9E	✓ Znamenny Neume Strela Gromnaya •
EE76	✓	Znamenny Neume Perevodka •	EE9F	✓ Znamenny Neume Strela Gromopovodnaya •
EE77	✓	Znamenny Neume Chelyustka •	EEA0	✓ Znamenny Neume Strela Gromokryzhevaya •
EE78	✓	Znamenny Neume Palka •	EEA1	✓ Znamenny Neume Strela Gromomrchnaya s Kryzhem •
EE79	✓	Znamenny Neume Vozdernutaya Palka • Decomposition: U+EE78 U+EE5B	EEA2	✓ Znamenny Neume Strela Tryasoglasnaya •
EE7A	✓	Znamenny Neume Zapyataya •	EEA3	✓ Znamenny Neume Strela Tryasopovodnaya •
EE7B	✓	Znamenny Neume Zapyataya s Kryzhem •	EEA4	✓ Znamenny Neume Strela Tryasostrelnaya •
EE7C		<not used>	EEA5	✓ Znamenny Neume Mechik •
EE7D	✓	Znamenny Neume Golubchik Tikhy •	EEA6	✓ Znamenny Neume Strela Gromnaya with Single Zapyatya •
EE7E	✓	Znamenny Neume Derbitsa •	EEA7	✓ Znamenny Neume Strela Gromopovodnaya with Single Zapyatya •
EE7F	✓	Znamenny Neume Khamilo •	EEA8	✓ Znamenny Neume Strela Gromopovodnaya with Double Zapyataya •
EE80	✓	Znamenny Neume Chashka •	EEA9	<not used>
EE81	✓	Znamenny Neume Chashka Polnaya • Decomposition: U+EE80 U+EE5A	EEAA	✓ Znamenny Neume Osoka •
EE82	✓	Znamenny Neume Podchashie	EEAB	✓ Znamenny Neume Truba

EE83	✓	Znamenny Neume Skameitsa Mrachnaya	EEAC	✓	Znamenny Neume Duda
		•			• Decomposition: U+EE61 U+EE94
EE84	✓	Znamenny Neume Skameitsa Svetlaya	EEAD	✓	Znamenny Neume Nemka
		•			• Decomposition: U+EE61 U+EE90
EE85	✓	Znamenny Neume Skameitsa Tresvetlaya	EEAE	✓	Znamenny Neume Pauk
		•			
EE86	✓	Znamenny Neume Skameitsa Tikhaya	EEAF	✓	Znamenny Neume Pauk Bolshoi
		•			• Decomposition: U+EE8F U+EEA4
EE87	✓	Znamenny Neume Slozhitiya	EEB0	✓	Znamenny Neume Strela Kryukovaya
		•			
EE88	✓	Znamenny Neume Slozhitiya s Zapyatoy	EEB1	✓	Znamenny Neume Strela Kryukovaya Mrachnaya
		•			
EE89	✓	Znamenny Neume Kryzh	EEB2	✓	Znamenny Neume Strela Kryukovaya Gromanaya
		•			
EE8A	✓	Znamenny Neume Rog	EEB3	✓	Znamenny Neume Strela Kryukovaya Gromopovdnaya
		•			
EE8B	✓	Znamenny Neume Fita	EEB4	✓	Znamenny Neume Strela Kryukovaya Gromokryzhevaya
		•			
EE8C	✓	Znamenny Neume Kobyla	EEB5	✓	Znamenny Neume Strela Kryukovaya Tryaska
		•			
EE8D	✓	Znamenny Neume Zmeitsa	EEB6	✓	Znamenny Neume Strela Kryukovaya Gromnaya with Single Zapyataya
		•			
EE8E	✓	Znamenny Neume Zmeitsa so Statyey	EEB7	✓	Znamenny Neume Strela Kryukovaya Gromopovdnaya with Single Zapyataya
		•			
EE8F	✓	Znamenny Neume Statya	EEB8	✓	Znamenny Neume Strela Kryukovaya Gromopovdnaya with Double Zapyataya
		•			• Decomposition: U+EE8F U+EE8D
EE90	✓	Znamenny Neume Statya s Zapyatoy	EEB9		<not used>
		•			
EE91	✓	Znamenny Neume Statya s Kryzhem	EEBA	✓	Znamenny Neume Osoka with Two Tochki
		•			
EE92	✓	Znamenny Neume Statya s Zapyatoy i Kryzhem	EEBB	✓	Znamenny Neume Osoka Kryukovaya
		•			
EE93	✓	Znamenny Neume Statya Zakrytaya	EEBC	✓	Znamenny Neume Osoka Kryukovaya with Two Tochki
		•			

EE94	~	Znamenny Neume Statya Zakrytaya s Zapyatoy	EEBD	↗	Znamenny Neume Archaic Rozhek
		•			•
EE95	~	Znamenny Neume Statya s Rogom	EEBE	↗	Znamenny Neume Archaic Rozhek with Zapyataya Modifier
		•			•
EE96	~	Znamenny Neume Statya with Double Zapyataya	EEBF	↗	Znamenny Neume Archaic Oblachko
		•			•
EE97	~	Znamenny Neume Statya with Zapyataya and Chashka	EEC0	↗	Demestvenny Neume Zanozhok
		•			•
EE98	~	Znamenny Neume Polkulizmy	EEC1	↘	Demestvenny Neume Stopitsa with Soroच्या Nozhka
		• This is not a decomposable character			•

	U+EEDx	U+EEEx	U+EEFx	U+EF0x	U+EF1x	U+EF2x
0	 EED0	 EEE0	EEF0	EF00	EF10	EF20
1	 EED1	 EEE1	EEF1	EF01	EF11	EF21
2	 EED2	 EEE2	EEF2	EF02	EF12	EF22
3	 EED3	 EEE3	EEF3	EF03	EF13	EF23
4	EED4	 EEE4	EEF4	EF04	EF14	EF24
5	EED5	EEE5	EEF5	EF05	EF15	EF25
6	EED6	EEE6	EEF6	EF06	EF16	EF26
7	EED7	EEE7	EEF7	EF07	EF17	EF27
8	 EED8	EEE8	EEF8	EF08	EF18	EF28
9	 EED9	EEE9	EEF9	EF09	EF19	EF29
A	 EEDA	EEEA	EEFA	EF0A	EF1A	EF2A
B	EEDB	EEEB	EEFB	EF0B	EF1B	EF2B
C	EEDC	EEEC	EEFC	EF0C	EF1C	EF2C
D	EEDD	EEED	EEFD	EF0D	EF1D	EF2D
E	EEDE	EEEE	EEFE	EF0E	EF1E	EF2E
F	EEDF	EEEF	EEFF	EF0F	EF1F	EF2F

GOLD ZONE - Znamenny Notation Symbols

EED0	✍	Demestvenny Neume Strela Tikhaya	EEF9	<not used>
		•		
EED1	✍	Demestvenny Neume Strela Dvoyechelnaya	EEFA	<not used>
		•		
EED2	✍	Demestvenny Neume Strela Polupovodnaya	EEFB	<not used>
		•		
EED3	✍	Demestvenny Neume Strela Nepostoyannaya	EEFC	<not used>
		•		
EED4		<not used>	EEFD	<not used>
EED5		<not used>	EEFE	<not used>
EED6		<not used>	EEFF	<not used>
EED7		<not used>	EF00	<not used>
EED8	✍	Demestvenny Neume Mechik Klyuchevoy	EF01	<not used>
		•		
EED9	✍	Demestvenny Neume Mechik Klyuchepovodny	EF02	<not used>
		•		
EEDA	✍	Demestvenny Neume Mechik Klyuchenepostoyanny	EF03	<not used>
		•		
EEDB		<not used>	EF04	<not used>
EEDC		<not used>	EF05	<not used>
EEDD		<not used>	EF06	<not used>
EEDE		<not used>	EF07	<not used>
EEDF		<not used>	EF08	<not used>
EEE0	☐	Znamenny Priznak Modifier Level 1	EF09	<not used>
		• Control Character		
EEE1	☐	Znamenny Priznak Modifier Level 2	EF0A	<not used>
		• Control Character		
EEE2	☐	Znamenny Priznak Modifier Direction Flip	EF0B	<not used>
		• Control Character		
EEE3	☐	Put Priznak Modifier Kryzh	EF0C	<not used>
		• Control Character		
EEE4	☐	Put Priznak Modifier Rog	EF0D	<not used>
		• Control Character		
EEE5		<not used>	EF0E	<not used>
EEE6		<not used>	EF0F	<not used>
EEE7		<not used>	EF10	<not used>
EEE8		<not used>	EF11	<not used>
EEE9		<not used>	EF12	<not used>
EEEE		<not used>	EF13	<not used>
EEEE		<not used>	EF14	<not used>
EEEE		<not used>	EF15	<not used>

EEED	<not used>	EF16	<not used>
EEEE	<not used>	EF17	<not used>
EEEF	<not used>	EF18	<not used>
EEF0	<not used>	EF19	<not used>
EEF1	<not used>	EF1A	<not used>
EEF2	<not used>	EF1B	<not used>
EEF3	<not used>	EF1C	<not used>
EEF4	<not used>	EF1D	<not used>
EEF5	<not used>	EF1E	<not used>
EEF6	<not used>	EF1F	<not used>
EEF7	<not used>	EF20	<not used>
EEF8	<not used>	EF21	<not used>

8 CYAN ZONE - Additional Typicon Symbols



	U+EF0x	U+EF1x	U+EF2x	U+EF3x
0	ˆ EF00	☾ EF10	⊕ EF20	⋮ EF30
1	⌘ EF01	☾ EF11	⊕ EF21	⋈ EF31
2	∩ EF02	☾ EF12	⋮ EF22	⋈ EF32
3	∩ EF03	☾ EF13	⋮ EF23	⋈ EF33
4	◌̇ EF04	☾ EF14	⋮ EF24	⋈ EF34
5	◌̇ EF05	☾ EF15	⋮ EF25	◌̇ EF35
6	◌̇ EF06	☾ EF16	⋮ EF26	⋮ EF36
7	◌̇ EF07	☾ EF17	⋮ EF27	EF37
8	⌘ EF08	EF18	⋮ EF28	EF38
9	⌘ EF09	EF19	⋮ EF29	EF39
A	⌘ EF0A	EF1A	⋮ EF2A	EF3A
B	◌̇ EF0B	EF1B	⋈ EF2B	EF3B
C	EF0C	EF1C	⋈ EF2C	EF3C
D	EF0D	EF1D	⋮ EF2D	EF3D
E	EF0E	EF1E	⋮ EF2E	EF3E
F	EF0F	EF1F	⋮ EF2F	EF3F

CYAN ZONE - Additional Typicon Symbols

EF00	ˆ	INVERTED LOW KAVYKA • Syrnikov symbol for Alleluia service; deprecated, use U+2E45	EF1C	<not used>
EF01	⌘	INVERTED LOW KAVYKA WITH KAVYKA ABOVE • Syrnikov Typicon symbol for Kontakion with no Ćcos and no Troparion; deprecated, use U+2E46	EF1D	<not used>
EF02	˘	LOW KAVYKA • Syrnikov Typicon symbol for Troparion and Kontakion but no Ćcos; deprecated, use U+2E47	EF1E	<not used>
EF03	˙	LOW KAVYKA WITH DOT • Syrnikov Typicon symbol for Troparion and Kontakion with Ćcos; deprecated, use U+2E48	EF1F	<not used>
EF04	⊙	COMBINING KAVYKA ABOVE RIGHT • Syrnikov Typicon symbol for Beatitudes; deprecated, use U+1DF6	EF20	⊕ CIRCLED GREEK CROSS • MDA 11 Symbol 1; appears in red
EF05	⊙	COMBINING KAVYKA ABOVE LEFT • Syrnikov Typicon symbol for Beatitudes; deprecated, use U+1DF7	EF21	⊕ GREEK CROSS WITH HALF-CIRCLE BELOW • MDA 11 Symbol 19; appears in red or with black cross and red half-circle
EF06	⊙	COMBINING DOT ABOVE LEFT • Syrnikov Typicon symbol for Beatitudes; deprecated, use U+1DF8	EF22	⊙ CIRCLE OVER DOT • MDA 11 Symbol 40; appears in red
EF07	⊙	COMBINING INVERTED WIDE BRIDGE BELOW • Syrnikov Typicon symbol for a Double Service with a joint Exapostilarion; deprecated, use U+1DF9	EF23	⊙ CIRCLE OVER THREE DOTS • MDA 11 Symbol 37; circle in red and dots in black
EF08	;	DOUBLE STACKED COMMA • Syrnikov Typicon symbol for no service; deprecated, use U+2E49	EF24	⊙ CIRCLE AND DOT OVER DOT • MDA 11 Symbol 38; appears in red
EF09	∩	DOWNWARD FACING HOOK • Syrnikov Typicon symbol for Forefeast or Afterfeast with Octoechos; deprecated, use U+1F908	EF25	⊙ CIRCLE OVER TWO DOTS • MDA 11 Symbol 41; appears in black
EF0A	∩	DOWNWARD FACING HOOK WITH NOTCH • Syrnikov Typicon symbol for Forefeast or Afterfeast with no Octoechos; deprecated, use U+1F909	EF26	:: CIRCLE AND DOT OVER TWO DOTS • MDA 11 Symbol 35; left part in black, right part in red
EF0B	⊙	COMBINING DOT OVERLAY • Symbol for Afterfeast with Kontakion; deprecated and replaced with U+1F90A and U+1F90B	EF27	⊙ CIRCLE AND DOT • MDA 252 Symbol 8; appears in black
EF0C		<not used>	EF28	⊙ CIRCLE AND CROSS • MDA 252 Symbol 10; circle in red, cross in black
EF0D		<not used>	EF29	⊙ DOT AND CIRCLE • MDA 252 Symbol 14; dot in black, circle in red

EF0E	<not used>	EF2A	::	DOT AND CIRCLE OVER TWO DOTS • MDA 252 Symbol 15; left side in red, right side in black
EF0F	<not used>	EF2B	⦚	TWO DOTS AND CIRCLE • MDA 252 Symbol 23; appears in red
EF10	◐ LEFT HALF CIRCLE • Dolnitsky symbol for Alleluia service; deprecated, use U+1F907	EF2C	⦚	THREE DOTS OVER CROSS • MDA 252 Symbol 26; two dots in red, cross in black
EF11	◑ LEFT HALF CIRCLE WITH DOT • Dolnitsky symbol for simple service; deprecated, use U+1F906	EF2D	◉	DOT INSIDE CIRCLE • MDA 252 Symbol 31; dot in red, circle in black
EF12	◒ LEFT HALF CIRCLE WITH TWO DOTS • Dolnitsky symbol for simple service with Epistle and Gospel lessons; deprecated, use U+1F905	EF2E	⦚	DOT WITH CROSS OVER THREE DOTS • MDA 252 Symbol 34; top and bottom dots in black, left and right in red
EF13	◓ LEFT HALF CIRCLE WITH THREE DOTS • Dolnitsky symbol for six stichera; deprecated, use U+1F904	EF2F	⦚	CYRILLIC LETTER ZELO WITH TWO DOTS OVERLAY • MDA 252 Symbol 39; Zelo in red, dots in black
EF14	◔ LEFT HALF CIRCLE WITH FOUR DOTS • Dolnitsky symbol for Doxology; deprecated, use U+1F903	EF30	⦚	CROSS OVER THREE HORIZONTAL DOTS • MDA 252 Symbol 51; appears in red
EF15	⊕ CIRCLED CROSS FORMEE • Dolnitsky symbol for Polyeleos; deprecated, use U+1F902	EF31	⦚	CROSS AND TWO VERTICAL DOTS ON RIGHT • MDA 252 Symbol 52; cross in red, dots in black
EF16	⊕ CIRCLED CROSS FORMEE WITH TWO DOTS • Dolnitsky symbol for Vigil; deprecated, use U+1F901	EF32	⦚	CROSS WITH DOT IN LOWER RIGHT CORNER • MDA 252 Symbol 56; appears in black
EF17	⊕ CIRCLED CROSS FORMEE WITH FOUR DOTS • Dolnitsky symbol for Vigil with Afterfeast; deprecated, use U+1F900	EF33	⦚	CROSS AND TWO VERTICAL DOTS ON LEFT • MDA 252 Symbol 62; dots in black, cross in red
EF18	<not used>	EF34	⦚	CYRILLIC LETTER CURVY IZHITSA • MDA 252 Symbol 35; appears in red
EF19	<not used>	EF35	◌	DOT OVER INCOMPLETE CIRCLE • MDA 252 Symbol 64; appears in red
EF1A	<not used>	EF36	⦚	CIRCLE AND TWO VERTICAL DOTS • MDA 252 Symbol 68; appears in red
EF1B	<not used>	EF37		<not used>

9 AQUA ZONE – Cyrillic Glyph Variants Extension

	U+F002x	U+F003x	U+F004x	U+F005x	U+F006x	U+F007x	U+F008x
0	F0020	 F0030	F0040	F0050	F0060	F0070	F0080
1	F0021	F0031	F0041	F0051	F0061	F0071	F0081
2	F0022	F0032	F0042	F0052	F0062	F0072	F0082
3	 F0023	F0033	F0043	F0053	F0063	F0073	F0083
4	F0024	F0034	F0044	F0054	F0064	F0074	F0084
5	F0025	F0035	F0045	F0055	F0065	F0075	F0085
6	F0026	F0036	F0046	F0056	F0066	F0076	F0086
7	F0027	F0037	F0047	F0057	F0067	F0077	F0087
8	F0028	F0038	F0048	F0058	F0068	F0078	F0088
9	F0029	F0039	F0049	F0059	F0069	F0079	F0089
A	F002A	F003A	F004A	F005A	F006A	F007A	F008A
B	F002B	F003B	F004B	F005B	F006B	F007B	F008B
C	F002C	F003C	F004C	F005C	F006C	F007C	F008C
D	F002D	F003D	F004D	F005D	F006D	F007D	F008D
E	F002E	F003E	F004E	F005E	F006E	F007E	F008E
F	F002F	F003F	F004F	F005F	F006F	F007F	F008F

AQUA ZONE – Cyrillic Glyph Variants Extension

F0023	☪ Combining Ligature De-I • Ligature of U+2DE3 and U+A675	F0054	<not used>
F0024	<not used>	F0055	<not used>
F0025	<not used>	F0056	<not used>
F0026	<not used>	F0057	<not used>
F0027	<not used>	F0058	<not used>
F0028	<not used>	F0059	<not used>
F0029	<not used>	F005A	<not used>
F002A	<not used>	F005B	<not used>
F002B	<not used>	F005C	<not used>
F002C	<not used>	F005D	<not used>
F002D	<not used>	F005E	<not used>
F002E	<not used>	F005F	<not used>
F002F	<not used>	F0060	<not used>
F0030	☪ Combining Ligature Zhe-Ie • Ligature of U+2DE4 and U+2DF7	F0061	<not used>
F0031	<not used>	F0062	<not used>
F0032	<not used>	F0063	<not used>
F0033	<not used>	F0064	<not used>
F0034	<not used>	F0065	<not used>
F0035	<not used>	F0066	<not used>
F0036	<not used>	F0067	<not used>
F0037	<not used>	F0068	<not used>
F0038	<not used>	F0069	<not used>
F0039	<not used>	F006A	<not used>
F003A	<not used>	F006B	<not used>
F003B	<not used>	F006C	<not used>
F003C	<not used>	F006D	<not used>
F003D	<not used>	F006E	<not used>
F003E	<not used>	F006F	<not used>
F003F	<not used>	F0070	<not used>
F0040	<not used>	F0071	<not used>
F0041	<not used>	F0072	<not used>
F0042	<not used>	F0073	<not used>
F0043	<not used>	F0074	<not used>
F0044	<not used>	F0075	<not used>
F0045	<not used>	F0076	<not used>
F0046	<not used>	F0077	<not used>
F0047	<not used>	F0078	<not used>
F0048	<not used>	F0079	<not used>
F0049	<not used>	F007A	<not used>
F004A	<not used>	F007B	<not used>
F004B	<not used>	F007C	<not used>
F004C	<not used>	F007D	<not used>
F004D	<not used>	F007E	<not used>
F004E	<not used>	F007F	<not used>

F004F	<not used>	F0080	<not used>
F0050	<not used>	F0081	<not used>
F0051	<not used>	F0082	<not used>
F0052	<not used>	F0083	<not used>
F0053	<not used>	F0084	<not used>

	U+F009x	U+F00Ax	U+F00Bx	U+F00Cx	U+F00Dx	U+F00Ex
0	F0090	F00A0	F00B0	F00C0	F00D0	F00E0
1	F0091	F00A1	F00B1	F00C1	F00D1	F00E1
2	F0092	F00A2	F00B2	F00C2	F00D2	F00E2
3	F0093	F00A3	F00B3	F00C3	F00D3	F00E3
4	F0094	F00A4	F00B4	F00C4	F00D4	F00E4
5	F0095	F00A5	F00B5	F00C5	F00D5	F00E5
6	F0096	F00A6	F00B6	F00C6	F00D6	F00E6
7	F0097	F00A7	F00B7	F00C7	F00D7	F00E7
8	F0098	F00A8	F00B8	F00C8	F00D8	F00E8
9	F0099	F00A9	F00B9	F00C9	F00D9	F00E9
A	F009A	F00AA	F00BA	F00CA	F00DA	F00EA
B	F009B	F00AB	F00BB	F00CB	F00DB	F00EB
C	F009C	F00AC	F00BC	F00CC	F00DC	F00EC
D	F009D	F00AD	F00BD	F00CD	F00DD	F00ED
E	F009E	F00AE	F00BE	F00CE	F00DE	F00EE
F	F009F	☹	F00BF	F00CF	F00DF	F00EF

AQUA ZONE – Cyrillic Glyph Variants Extension

F0093	<not used>	F00BC	<not used>
F0094	<not used>	F00BD	<not used>
F0095	<not used>	F00BE	<not used>
F0096	<not used>	F00BF	<not used>
F0097	<not used>	F00C0	<not used>
F0098	<not used>	F00C1	<not used>
F0099	<not used>	F00C2	<not used>
F009A	<not used>	F00C3	<not used>
F009B	<not used>	F00C4	<not used>
F009C	<not used>	F00C5	<not used>
F009D	<not used>	F00C6	<not used>
F009E	<not used>	F00C7	<not used>
F009F	<not used>	F00C8	<not used>
F00A0	<not used>	F00C9	<not used>
F00A1	<not used>	F00CA	<not used>
F00A2	<not used>	F00CB	<not used>
F00A3	<not used>	F00CC	<not used>
F00A4	<not used>	F00CD	<not used>
F00A5	<not used>	F00CE	<not used>
F00A6	<not used>	F00CF	<not used>
F00A7	<not used>	F00D0	<not used>
F00A8	<not used>	F00D1	<not used>
F00A9	<not used>	F00D2	<not used>
F00AA	<not used>	F00D3	<not used>
F00AB	<not used>	F00D4	<not used>
F00AC	<not used>	F00D5	<not used>
F00AD	<not used>	F00D6	<not used>
F00AE	<not used>	F00D7	<not used>
F00AF	☞ Combining Cyrillic Letter Te-l	F00D8	<not used>
	• Ligature of U+2DEE and U+A675		
F00B0	<not used>	F00D9	<not used>
F00B1	<not used>	F00DA	<not used>
F00B2	<not used>	F00DB	<not used>
F00B3	<not used>	F00DC	<not used>
F00B4	<not used>	F00DD	<not used>
F00B5	<not used>	F00DE	<not used>
F00B6	<not used>	F00DF	<not used>
F00B7	<not used>	F00E0	<not used>
F00B8	<not used>	F00E1	<not used>
F00B9	<not used>	F00E2	<not used>
F00BA	<not used>	F00E3	<not used>
F00BB	<not used>	F00E4	<not used>