SMuFL

Standard Music Font Layout

Version 0.5 (2013-07-12)

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http://www.unicode.org/charts/fonts.html

Version history

Version 0.1 (2013-01-31)

- Initial version.

Version 0.2 (2013-02-08)

- Added **Tick barline** (U+E036).
- Changed names of time signature, tuplet and figured bass digit glyphs to ensure that they are unique.
- Add upside-down and reversed G, F and C clefs for canzicrans and inverted canons (U+E074–U+E078).
- Added **Time signature +** (U+E08C) and **Time signature fraction slash** (U+E08D) glyphs.
- Added **Black diamond notehead** (U+E0BC), **White diamond notehead** (U+E0BD), **Half-filled diamond notehead** (U+E0BE), **Black circled notehead** (U+E0BF), **White circled notehead** (U+E0C0) glyphs.
- Added 256th and 512th note glyphs (U+E110–U+E113).
- All symbols shown on combining stems now also exist as separate symbols.
- Added reversed sharp, natural, double flat and inverted flat and double flat glyphs (U+E172–U+E176) for canzicrans and inverted canons.
- Added trill wiggle segment (U+E214), glissando wiggle segment (U+E596) and arpeggiato wiggle segment (U+E47D) glyphs.
- Added string **Half-harmonic** (U+E2A3), **Overpressure down bow** (U+E2A9) and **Overpressure up bow** (U+E2AA) glyphs.
- Added **Breath mark** (U+E2D0) glyph.
- Added angled beater pictograms for xylophone, timpani and yarn beaters.
- Added alternative glyph for **Half-open** (U+E445), per Weinberg.
- Added **Scrape from rim to center** (U+E46A) and **Scrape around rim** (U+E46B) glyphs.
- Added **Start of stimme** (U+E4B2) glyph.
- Added colon for tuplet ratios (U+E502).
- Added stem down versions of mensural notes (U+E575 etc.), and signum congruentia and custos glyphs.
- Added three additional mensuration signs (U+E5B3, U+E5B7, U+E5BA).
- Added Riemann function symbols glyphs (U+E630–U+E652).

Version 0.3 (2013-03-11):

- Moved combining flags glyphs U+E14A and U+E14B to U+E14E and U+E14F to accommodate glyphs for 256th note stem up (U+E14A), 256th note stem down (U+E14B), 512th note stem up (U+E14C) and 512th note stem down (U+E14D).

Version 0.4 (2013-05-16):

- Added range for Arel-Ezgi-Uzdilek (AEU) accidentals for Turkish maqam music (U+E660–U+E667).
- Added equals sign (U+E08E) and open time signature (U+E08F) glyphs.

Version 0.5 (2013-07-08):

- Many existing code points have been changed, as a result of hundreds of new glyphs being added, plus a number of new ranges.
- Added long (U+E008) and very long (U+E009) system dividers for very large scores.
- Added heavy (U+E034), double heavy (U+E035) and dotted (U+E037) barlines.
- Added square coda (U+E047) and small repeat signs for repeats within bars (U+E04A, U+E04B).
- Added recommended stylistic alternates for segno (U+E045) and coda (U+E046) for the appearance preferred by Japanese publishers.
- Added quindicesima bassa G clef (U+E061) and F clef (U+E070), G clef combined with C clef (U+E066), G clefs designed to be ligated with numbers below and above to show the transposition of an instrument (U+E067, U+E068), plus recommended ligatures for G and F clefs with numbers above and below; also added G, C and F clefs with arrows up and down, which may be used either as alternatives for octave clefs or to represent the extremes of register on an instrument (U+E069, U+E06A, U+E06C, U+E06D, U+E074, U+E075), and semi-pitched percussion clefs (U+E078, U+E079), plus a bridge clef (U+E085).
- Removed "tall" versions of 6- and 4-string tab clefs, and instead made them recommended stylistic alternates, together with versions that use letterforms with serifs.
- Added +, -, X (multiply), comma, parentheses glyphs for time signatures (U+E09C–U+E0A6), plus basic fractions (U+E0A7–U+E0AB), and Penderecki-style open time signature (U+E0AD).
- Added specific noteheads for double whole note (U+E100) and whole note (U+E101) to the noteheads range rather than relying on the glyphs in the pre-composed notes range.
- Added shaped noteheads for specific note values (double whole note, whole note, half note, and quarter note and shorter); also added large up- and down-pointing triangles for highest/lowest notes played by an instrument (U+E102–U+E109).

- Added large slashed circular noteheads (U+E136–U+E139) as used by Stockhausen for notating gong/tam-tam hits.
- Added combining glyphs for note clusters of specific note values (U+E154–U+E171).
- Added noteheads with solfège and chromatic note names embedded within them, as seen in "EZ-Play" educational scores (U+E180–U+E1D9).
- Added specific range of noteheads for sacred harp shape note singing (U+E1E0–U+E1EF).
- Added pre-composed 1024th notes (U+E214–U+E215), tails (U+E28E–U+E28F) and rest (U+E52C).
- Added range for typing simple beamed groups of notes in text-based applications, (U+E220–U+E233). Designed to be used in conjunction with pre-composed notes (U+E200–U+E216), and allowing beamed groups with rhythmic values between 8th notes and 64th notes, plus ties and triplets.
- Added combining stems for multiphonics, damp, sussurando, Saunders vibrato pulse accent (U+E248–U+E24D).
- Added four- and five-stroke tremolos (U+E263–U+E264, U+E268–U+E269) plus Wieniawski-style unmeasured tremolo glyphs (U+E26C–U+26D).
- Added stylistic alternates for flags (U+E280–U+E28F): straight flags; and shorter stem-up flags to avoid collisions with augmentation dots.
- Separated accidentals into several discrete ranges based around the various accidental systems, including 12-EDO, 24-EDO, the system of up- and down-pointing arrows favoured by Gould, Stein-Zimmermann (also known as Tartini-Couper), Sims (also known as Maneri-Sims, due to the adoption of Ezra Sims' accidentals by Joe Maneri of the Boston Microtonal Society), Ben Johnston, Marc Sabat and Wolfgang von Schweinitz's Extended Helmholtz-Ellis Just Intonation Pitch Notation.
- Added George Secor and Dave Keenan's Sagittal system of accidentals (U+E360–U+E47F).
- Added accidentals used in Turkish folk music (U+E4C8–U+E4CF).
- Added Persian accidentals (U+E4D0–U+E4D1).
- Added staccatissimo wedge (U+E4E5–U+E4E6) and stroke (U+E4E7–U+E4E8) glyphs.
- Added very short (U+E502–U+E503) and very long (U+E508–U+E509) fermatas, plus short caesura (U+E50D).
- Added left and right halves of multirest H-bars (U+E52E–U+E52F) and old-style quarter rest as seen in e.g. Novello editions (U+E530).

- Added *ventiduesima* (three octaves, "22") glyphs to octaves range (U+E557–U+E559).
- Added precomposed glyphs for common dynamics (U+E567–U+E57B) and *niente* circle for hairpins (U+E57E).
- Added schleifer (long mordent, U+E5AA) and Haydn ornament (U+E5D1).
- Added additional brass techniques, including short, medium and long versions of lift, doit, lip fall, smooth fall, rough fall, plus jazz turn (U+E5E0–U+E5FB).
- Added range of glyphs for embouchure tightness (U+E61B–U+E623), reed position (U+E624–U+E626), multiphonics (U+E627–U+E629), and stylistic alternates for double- and triple-tonguing with no slurs.
- Added further overpressure glyphs (U+E64B–U+E64D), plus *jété*, *fouetté*, Rebecca Saunders's "vibrato pulse" accent, thumb position and indeterminate bow direction (U+E64E–U+E653) to string techniques range.
- Added plectrum pictogram (U+E669) and combining damp glyph for note stems (U+E66A) to plucked techniques range.
- Added arrows for breathing and intonation, plus combining *sussurando* glyph for note stems (U+E687–U+E68B), to vocal techniques range.
- Added pedal pictograms, *sostenuto* pedal symbols, and half-pedal marks (U+E6A5–U+E6AC) to keyboard techniques range.
- Added pictograms for metal rod (U+E6CF) and tuning key (U+E6D0) to harp techniques range.
- Added Smith Brindle's pictograms for tuned percussion instruments (U+E6E5–U+E6E8).
- Added pictogram for Indian table (U+E720), plus stylistic alternate for tambourine (U+E718) as used by Stockhausen.
- Added pictogram for football rattle (U+E735), plus Smith Brindle's pictogram for castanets (U+E738) as a stylistic alternate.
- Added pictogram for handbell (U+E765), plus stylistic alternates for cow bell (from Berio) and sleigh bell (from Smith Brindle).
- Added pictogram for Chinese cymbal (U+E776).
- Added pictogram for tam-tam with beater from Smith Brindle (U+E791).
- Added pictogram for maracas (U+E7A2), rainstick (U+E7A7), plus stylistic alternate for maraca from Smith Brindle (U+E7A1).
- Added pictogram for megaphone (U+E7B9).
- Added soft and hard glockenspiel beaters (U+E7F0–U+E7F7), superball beaters (U+E81C–U+E81F), wound beaters with hard and soft cores (U+E821–U+E828), plus soft, medium and hard gum beaters (U+E829–U+E834).
- Added pluck lift (U+E887) to handbells range.

- Added "Theme" indicators to analytics range (U+E8E4–U+E8E9).
- Added minor (minus sign) glyph (U+E904) to chord symbols range.
- Added mensural proportion glyphs (U+E9DB–U+E9DF).
- Added combining raise and lower glyphs (U+EA2C–U+EA2D) to figured bass range.
- Added repetition, angle brackets, and prefix + and ring glyphs to function symbols range (U+EA63–U+EA68).
- Added new range for multi-segment lines, including moving all of the various "wiggle" glyphs (for trill, glissando, arpeggiando, vibrato, etc.) plus the 11 ornament strokes from the Unicode Musical Symbols range into this range, and adding further glyphs for variable speed trills, alternate arpeggiato ending glyphs, wavy lines, squaretooth and sawtooth lines, group glissando, circular motion, and variable speed and intensity of vibrato (U+EA80–U+EAD0).
- Added new range of pictograms for electronic music, including microphone, loudspeaker, transport controls, volume level and MIDI controller level (U+EAE0–U+EAF5).
- Added new "do not copy" glyphs (U+EB02–U+EB03), eyeglasses (U+EB04) and choral divide arrows (U+EB05–U+EB07) glyphs to the miscellaneous symbols range.
- Adjusted the registration of many glyphs (e.g. noteheads, accidentals, time signatures, flags, rests) in Bravura in line with the interim guidelines for metrics and registration for SMuFL-compliant fonts intended for use with scoring applications.

Contents

About SMuFL

A brief history of music fonts

Computer software has been displaying musical symbols of various kinds since the 1960s, but the first font for musical symbols did not arrive until 1985, when Cleo Huggins designed Sonata for Adobe.[1]

Sonata mapped the musical symbols onto keys on the standard QWERTY keyboard, using some simple mnemonics (the treble G clef, for example, was mapped onto the **&** key, and the sharp sign onto **#**). Most music fonts developed since then, including Steve Peha's Petrucci (the first music font for Finale, dating from 1988[2]) and Jonathan Finn's Opus (the first music font for Sibelius, dating from 1993), have followed Sonata's layout.

However, since Sonata includes fewer than 200 glyphs, and even conventional music notation[3] requires many more symbols than that, individual vendors have devised their own mappings for glyphs beyond Sonata's initial set.

By 2013, for example, the Opus font family that is still Sibelius's default font set contains no fewer than 18 fonts with more than 600 glyphs between them.

In 1998, Perry Roland of the University of Virginia drafted a proposal for a new range of musical symbols to be incorporated into the Unicode Standard[4]. This range of 220 glyphs was duly accepted into the Unicode Standard, and those symbols are found at code points U+1D100–U+1D1FF[5]. However, its repertoire of 220 symbols does not extend dramatically beyond the scope of the original 1985 version of Sonata, though it does add symbols for mensural and Gregorian notation.

To date the only commercially available music font that uses the Unicode mapping is Adobe Sonata Std, and its repertoire is incomplete.

How SMuFL is organized

The aim of the Standard Music Font Layout (SMuFL) is to provide the basis for music font mapping for the age of Unicode and OpenType fonts.

SMuFL uses the standard Private Use Area in the Basic Multilingual Plane (starting at code point U+E000), and currently includes nearly 1400 glyphs, plus just over 100 optional but recommended glyphs, primarily ligatures (i.e. two or more symbols drawn as a single glyph) and stylistic alternates (i.e. a different appearance for the same glyph

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[1] See http://www.identifont.com/show?12A
[2] See http://blog.finalemusic.com/post/2010/02/18/Meet-Steve-Peha-creator-of-Petrucci-Finales-first-music-font.aspx
[3] A term coined by Donald Byrd, Senior Scientist and Adjunct Associate Professor of Informatics at Indiana University.
[4] See http://www.lib.virginia.edu/artsandmedia/dmmc/Music/UnicodeMusic/
[5] See http://www.unicode.org/charts/PDF/U1D100.pdf

with equivalent meaning). SMuFL is a superset of the Unicode Musical Symbols range, and it is recommended that common glyphs are included both at code points in SMuFL and in the Unicode Musical Symbols range. In the tables of glyphs in this document, where glyphs are shared between SMuFL and the Unicode Musical Symbols range, the Unicode Musical Symbols code point is shown below the glyph description.

The groupings of glyphs within SMuFL are based on the groupings defined by Perry Roland in the Unicode Musical Symbols range, but with finer granularity. There are currently 72 groups of glyphs, proceeding roughly in order from least to most idiomatic, i.e. specific to particular instruments, types of music, or historical periods. The grouping has no significance other than acting as an attempt to provide an overview of the included glyphs.

Room for future expansion has been left in each group, with a minimum of 8 unused code points between groups in this initial version. Where a group already contains a larger number of glyphs, more room for future expansion has been left.

Mandatory and optional glyphs

One of the aims of SMuFL is to make it as simple as possible for developers both of fonts and of scoring software to implement support for a wide range of musical symbols. Although modern font technologies such as OpenType enable a great deal of sophistication in automatic substitution features[6], applications that wish to use SMuFL-compliant fonts are not obliged to support advanced OpenType features.

The basic requirements for the use of SMuFL-compliant fonts are the ability to access glyphs by their Unicode code point, to measure glyphs, and to scale them (e.g. by drawing the font at different point sizes). If applications are able to access OpenType features such as stylistic alternates and ligatures, then additional functionality may be enabled.

However, all glyphs that can be accessed via OpenType features are also accessible via an explicit code point. For example, a ligature for **mp** can be accessed by way of an OpenType font's **liga** feature table (where it is defined by name as **uniE561_uniE560**), but also by way of its explicit code point, which will be in the range U+F400–U+F8FF (in Bravura, for example, this ligature is encoded at U+F440).

Because optional glyphs for ligatures, stylistic alternates, etc. are not required, and different font developers may choose to provide different sets (e.g. several different appearances of tab clefs, or different sets of glyphs whose designs are optimized for drawing at different optical sizes), SMuFL does not make any specific recommendations

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[6] See http://www.adobe.com/devnet/opentype/afdko/topic_feature_file_syntax.html

for how these glyphs should be assigned explicit code points, except that they must be within the range U+F400–U+F8FF, which is reserved for this purpose and for any other private use required by font or application developers.

In summary, mandatory glyphs (i.e. the base set that a font should contain if it is to be SMuFL-compliant) are encoded from U+E000, with a nominal upper limit of U+F3FF (a total of 5120 possible glyphs), while optional glyphs (ligatures, stylistic alternates, etc.) are encoded from U+F400, with a nominal upper limit of U+F8FF (a total of 1280 possible glyphs).

Standard metrics

In addition to providing a standard approach to how musical symbols should be assigned to Unicode code points, SMuFL also aims to provide two sets of guidelines for the key metrics of music fonts, addressing the two most common use cases for fonts that contain musical symbols, i.e. use within dedicated scoring applications, and use within text-based applications (such as a word processors, desktop publishers, web pages, etc.).

Since it is helpful for scoring applications that all symbols in a font be scaled relative to each other as if drawn on a staff of a particular size, and conversely it is helpful for musical symbols to be drawn in-line with text to be scaled relative to the letterforms with which the musical symbols are paired, in general a single font cannot address these two use cases: the required metrics and relative scaling of glyphs are incompatible[7].

Therefore, it is recommended that font developers make clear whether a given font is intended for use by scoring applications or by text-based applications by appending "Text" to the name of the font intended for text-based applications; for example, "Bravura" is intended for use by scoring applications, and "Bravura Text" is intended for use by text-based applications (or indeed for writing musical symbols in free text within a scoring application).

Work on these guidelines for metrics and glyph registration is ongoing. At this stage, the following interim guidelines can be provided for fonts intended for use in scoring applications:

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[7] The main problem concerns line spacing: because most applications determine the line spacing required for a font based on a sum of the ascender, descender and line gap values in the font (for which different applications on different operating systems use different combinations of the three places this can be defined, once the **hhea** table and twice in the **OS/2** table), it is impractical to provide a font where all glyphs are scaled correctly relatively to another in such a way that all musical symbols can be drawn at a single scale factor that complements text fonts at the same point size. Many applications clip glyphs that exceed the calculated line spacing, so in order to have a single font in which e.g. a G clef is drawn without clipping and an eighth note is drawn at a corresponding scale factor (such that the clef is around twice as tall as the note), the line spacing would have to be so tall that it would greatly distort the line spacing of the text. For more information about this issue, see http://typophile.com/node/13081. Bravura, for what it's worth, uses very large line spacing (1.75 times its em square), such that 99% of glyphs are drawn without clipping in text-based applications, at the expense of making it practical to use the font mixed in-line with text.

- Dividing the em in four provides an analogue for a five-line staff: if a font uses 1000 upm (design units per em), as is conventional for a PostScript font, one staff space is equal to 250 design units; if a font uses 2048 upm, as is conventional for a TrueType font, one staff space is equal to 512 design units.

- The origin (bottom left corner of the em square, i.e. x = 0 and y = 0 in font design space) therefore represents the middle of the bottom staff line of a nominal five-line staff.

- All glyphs should be drawn at a scale consistent with the key measurement that one staff space = 0.25 em.

- Unless otherwise stated, all glyphs shall be horizontally registered so that their leftmost point coincides with x = 0.

- Unless otherwise stated, all glyphs shall have zero-width side bearings, i.e. no blank space to the left or right of the glyph.

- Glyphs that apply to a staff as a whole (e.g. barlines) shall be registered such that the font baseline lies at the nominal vertical position of the bottom line of a five-line staff. If the glyph is specific to a staff other than a regular five-line staff, then for registration purposes that staff's vertical center shall be exactly aligned with the vertical center of a five-line staff.

- Glyphs for movable notations that apply to some vertical staff position (e.g. note heads, accidentals) shall be registered such that the font baseline lies exactly at that position. For example, a typical notehead or accidental glyph is registered such that it is vertically centered on the baseline.

- Clefs should be positioned that the pitch the clef refers to is on the baseline (e.g. the F clef is placed such that the upper dot is above and the lower dot below the baseline). If a clef does not refer specifically to a pitch, it should be vertically centered around the baseline.

- Noteheads should be positioned as if on the bottom line of the staff (except for complete clusters representing intervals of a second or third, which should be positioned as if in the bottom space of the staff).

- Pre-composed stems should be positioned as if they are pointing upwards and attached to a notehead on the bottom line of the staff.

- Accidentals should be positioned as if they apply to a notehead on the bottom line of the staff.

- Pre-composed notes should be positioned as if on the bottom line of the staff.

- All flags shall be vertically positioned so that the stem attachment point lies exactly on the font baseline at x = 0.

- Rests are relative to an imaginary staff position, typographically speaking (usually the center line of a five-line staff in which the rest assumes its default position). The font baseline should represent this staff position, with the exception of the whole note (semibreve) rest, which should hang from the font baseline.

- Letters for dynamics (and for D.C./D.S. in the repeats range) should be scaled such that the caps height is around 0.75 em, and the x-height is around 0.5 em.

- Digits for time signatures should be scaled such that each digit is two staff spaces tall, i.e. 0.5 em, and vertically centered on the baseline. Although some glyphs in the time signatures range (such as the large + sign, common and cut time glyphs, etc.) apply to the whole staff, these should likewise be vertically centered on the baseline.

Many of these guidelines are based on the conventions established by Adobe's Sonata font and carried through by most other fonts designed for use in scoring applications, for the sake of making it as easy as possible for font and application developers to transition their existing fonts and software to supporting SMuFL-compliant fonts.

Implementations

To date the only implementation of SMuFL is in Bravura, an OpenType font released under the SIL Open Font License that can be downloaded from the SMuFL web site at http://www.smufl.org/fonts

The example glyphs in this document are all taken from Bravura, with the exception of the Sagittal accidentals, which are taken from the Sagittal font.

Sources for symbols

In addition to surveying the music fonts supplied with Sibelius, Finale and other scoring applications, the following texts were consulted as sources for musical symbols:

- Balestrieri, Donald. *Registers of the Standard Stradella Keyboard*. USA: Accord Magazine, 1979.[8]

- Doty, David B. *The Just Intonation Primer*. San Francisco, USA: The Just Intonation Network, 1993.

- Draugsvoll, Geir & Højsgaard, Erik (translated Borregaard, Andreas). *Handbook on Accordion Notation*. Copenhagen: The Royal Danish Academy of Music in Copenhagen, 2001.[9]

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[8] See http://www.accordions.com/articles/stradella.aspx

- Gould, Elaine. *Behind Bars.* London: Faber Music, 2011.

- Inglefield, Ruth & Neill, Lou Anne. *Writing for the Pedal Harp: Standardized Manual for Composers and Harpists.* University of California Press, 1985.

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- "Ornaments", Grove Music Online, ed. L. Macy (accessed January 24 2013)

- *AGEHR Handbell and Handchime Notation Booklet, 8th ed.* Dayton: Lorenz, 2010.[10]

Other contributors

Grateful thanks are also extended to the following, all of whom have contributed their time and expertise to identifying further sources of glyphs for inclusion in SMuFL: Mark Adler, Stephen Begley, Michael Good, Mark Johnson, Dave Keenan, Alexander Plötz, Emil Wojtacki, Werner Wolff.

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[9] See http://www.rednoteensemble.com/Calls_for_Scores_files/Handbook%20on%20Accordion%20Notation.pdf
[10] A summary of the main notations prescribed in this book can be found at
http://www.handbellworld.com/music/HandbellNotation.cfm

Thanks also to Joe Berkovitz for his contribution towards the interim guidelines for font metrics and glyph registration for fonts intended for use with scoring applications.

Missing symbols?

If you know of any commonly used symbols that are not included in SMuFL, please post your suggestions to the **smufl-discuss** mailing list (see www.smufl.org/discuss).

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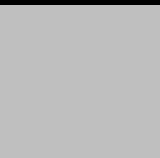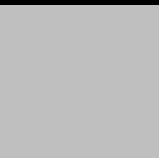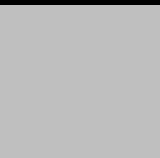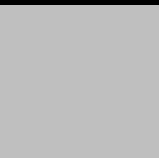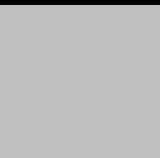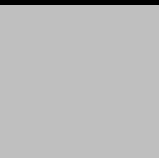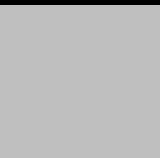
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Staff brackets (U+E000–U+E01F)

U+E000	U+E001	U+E002	U+E003	U+E004	U+E005	U+E006	U+E007
Brace	Reversed Brace	Bracket	Bracket top	Bracket bottom	Reversed bracket top	Reversed bracket bottom	System divider
Also U+1D114		*Also U+1D115*					

U+E008	U+E009	U+E00A	U+E00B	U+E00C	U+E00D	U+E00E	U+E00F
Long system divider	Extra long system divider	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E010	U+E011	U+E012	U+E013	U+E014	U+E015	U+E016	U+E017
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E018	U+E019	U+E01A	U+E01B	U+E01C	U+E01D	U+E01E	U+E01F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

The brace glyph (U+E000) should be scaled vertically in a scoring application to the appropriate height of the two or more staves it encompasses.

U+E002 (i.e. U+1D115) is a complete bracket of a fixed height useful for displaying brackets in text-based documents or applications.

To display a bracket of variable height in a scoring application, use U+E003 and U+E004 as the top and bottom terminals of a bracket drawn using a stroked line or filled rectangle of the appropriate width.

Staves (U+E020–U+E02F)

U+E020	U+E021	U+E022	U+E023	U+E024	U+E025	U+E026	U+E027
1-line staff	2-line staff	3-line staff	4-line staff	5-line staff	6-line staff	*Unused*	*Unused*
Also U+1D116	*Also U+1D117*	*Also U+1D118*	*Also U+1D119*	*Also U+1D11A*	*Also U+1D11B*		

U+E028	U+E029	U+E02A	U+E02B	U+E02C	U+E02D	U+E02E	U+E02F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

Scoring programs should draw their own staff lines using primitives, not use the glyphs in this range.

Barlines (U+E030–U+E03F)

U+E030	U+E031	U+E032	U+E033	U+E034	U+E035	U+E036	U+E037
Single barline	Double barline	Final barline	Reverse final barline	Heavy barline	Double heavy barline	Dashed barline	Dotted barline
Also U+1D100	*Also U+1D101*	*Also U+1D102*	*Also U+1D103*			*Also U+1D104*	

U+E038	U+E039	U+E03A	U+E03B	U+E03C	U+E03D	U+E03E	U+E03F
Short barline	Tick barline	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
Also U+1D105							

Implementation notes

Scoring programs should draw their own barlines using primitives, not use the glyphs in this range.

Repeats (U+E040–U+E05F)

U+E040	U+E041	U+E042	U+E043	U+E044	U+E045	U+E046	U+E047
𝄆	𝄇	:	D.S.	D.C.	𝄋	⊕	⊞
Left repeat sign	Right repeat sign	Repeat dots	Dal segno	Da capo	Segno	Coda	Square coda
Also U+1D106	*Also U+1D107*	*Also U+1D108*	*Also U+1D109*	*Also U+1D10A*	*Also U+1D10B*	*Also U+1D10C*	

U+E048	U+E049	U+E04A	U+E04B	U+E04C	U+E04D	U+E04E	U+E04F
§	§	𝄆	𝄇				
Segno (serpent)	Segno (serpent with vertical lines)	Left repeat sign within bar	Right repeat sign within bar	*Unused*	*Unused*	*Unused*	*Unused*

U+E050	U+E051	U+E052	U+E053	U+E054	U+E055	U+E056	U+E057
Unused	*Unused*	Unused	Unused	Unused	Unused	Unused	Unused

U+E058	U+E059	U+E05A	U+E05B	U+E05C	U+E05D	U+E05E	U+E05F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Recommended stylistic alternates

U+E045	U+E046						
𝄋	⊕						
Segno (Japanese)	Coda (Japanese)						

Implementation notes

Scoring programs should draw their own repeat barlines using primitives to draw the thick and thin lines and U+E042 to draw the dots, not use the precomposed glyphs U+E040 or U+E041.

U+E043 and U+E044 are provided for compatibility with the Unicode Musical Symbols range. Scoring applications should allow the user to specify the appearance of the *da capo* and *dal segno* instructions using any regular text font.

Clefs (U+E060–U+E08F)

U+E060	U+E061	U+E062	U+E063	U+E064	U+E065	U+E066	U+E067
G clef *Also U+1D11E*	G clef quindicesima bassa	G clef ottava bassa *Also U+1D120*	G clef ottava alta *Also U+1D11F*	G clef quindicesima alta	G clef ottava bassa (old style)	G clef ottava bassa with C clef	Combining G clef, number below

U+E068	U+E069	U+E06A	U+E06B	U+E06C	U+E06D	U+E06E	U+E06F
Combining G clef, number above	G clef, arrow up	G clef, arrow down	C clef *Also U+1D121*	C clef, arrow up	C clef, arrow down	Combining C clef	F clef *Also U+1D122*

U+E070	U+E071	U+E072	U+E073	U+E074	U+E075	U+E076	U+E077
F clef quindicesima bassa	F clef ottava bassa *Also U+1D124*	F clef ottava alta *Also U+1D123*	F clef quindicesima alta	F clef, arrow up	F clef, arrow down	Percussion clef 1 *Also U+1D125*	Percussion clef 2 *Also U+1D126*

U+E078	U+E079	U+E07A	U+E07B	U+E07C	U+E07D	U+E07E	U+E07F
Semi-pitched percussion clef 1	Semi-pitched percussion clef 2	6-string tab clef	4-string tab clef	Triangular C clef	Triangular F clef	C clef to F clef	F clef to C clef

U+E080	U+E081	U+E082	U+E083	U+E084	U+E085	U+E086	U+E087
Reversed G clef	Upside-down G clef	Reversed C clef	Reversed F clef	Upside-down F clef	Bridge clef	*Unused*	*Unused*

U+E088	U+E089	U+E08A	U+E08B	U+E08C	U+E08D	U+E08E	U+E08F
Unused	*Unused*	Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Recommended stylistic alternates

U+E073	U+E073	U+E074	U+E074				
T A B	T A B	T A B	T A B				
6-string tab clef (tall)	6-string tab clef (serif)	4-string tab clef (tall)	4-string tab clef (serif)				

Recommended ligatures

uniE067_ uniE910	uniE067_ uniE2A0_ uniE911	uniE067_ uniE2A0_ uniE912	uniE067_ uniE2A1_ uniE912	uniE067_ uniE912	uniE067_ uniE2A0_ uniE913	uniE067_ uniE2A1_ uniE913	uniE067_ uniE913
G clef, 0 below	G clef, flat 1 below	G clef, flat 2 below	G clef, natural 2 below	G clef, 2 below	G clef, flat 3 below	G clef, natural 3 below	G clef, 3 below

uniE067_ uniE2A0_ uniE914	uniE067_ uniE914	uniE067_ uniE915	uniE067_ uniE2A2_ uniE915	uniE067_ uniE2A0_ uniE916	uniE067_ uniE2A1_ uniE916	uniE067_ uniE916	uniE067_ uniE2A0_ uniE917
G clef, flat 4 below	G clef, 4 below	G clef, 5 below	G clef, sharp 5 below	G clef, flat 6 below	G clef, natural 6 below	G clef, 6 below	G clef, flat 7 below

uniE067_ uniE917	uniE067_ uniE918	uniE067_ uniE2A0_ uniE919	uniE067_ uniE2A1_ uniE919	uniE067_ uniE919	uniE067_ uniE911_ uniE910_ uniE2A0	uniE067_ uniE911_ uniE910_ uniE2A1	uniE067_ uniE911_ uniE910
G clef, 7 below	G clef, 8 below	G clef, flat 9 below	G clef, natural 9 below	G clef, 9 below	G clef, flat 10 below	G clef, natural 10 below	G clef, 10 below

uniE067_ uniE911_ uniE911_ uniE2A0	uniE067_ uniE911_ uniE911	uniE067_ uniE911_ uniE912	uniE067_ uniE911_ uniE912_ uniE2A2	uniE067_ uniE911_ uniE913_ uniE2A0	uniE067_ uniE911_ uniE913_ uniE2A1	uniE067_ uniE911_ uniE913	uniE067_ uniE911_ uniE914_ uniE2A0
G clef, flat 11 below	G clef, 11 below	G clef, 12 below	G clef, sharp 12 below	G clef, flat 13 below	G clef, natural 13 below	G clef, 13 below	G clef, flat 14 below
uniE067_ uniE911_ uniE914	uniE067_ uniE911_ uniE915_ uniE2A0	uniE067_ uniE911_ uniE915	uniE067_ uniE911_ uniE916_ uniE2A0	uniE067_ uniE911_ uniE916	uniE067_ uniE911_ uniE917_ uniE2A1	uniE067_ uniE911_ uniE917	uniE068_ uniE911_ uniE2A2
G clef, 14 below	G clef, flat 15 below	G clef, 15 below	G clef, flat 16 below	G clef, 16 below	G clef, natural 17 below	G clef, 17 below	G clef, sharp 1 above
uniE068_ uniE912_ uniE2A0	uniE068_ uniE912_ uniE2A1	uniE068_ uniE912	uniE068_ uniE913_ uniE2A0	uniE068_ uniE913_ uniE2A1	uniE068_ uniE913	uniE068_ uniE914	uniE068_ uniE914_ uniE2A2
G clef, flat 2 above	G clef, natural 2 above	G clef, 2 above	G clef, flat 3 above	G clef, natural 3 above	G clef, 3 above	G clef, 4 above	G clef, sharp 4 above
uniE068_ uniE915_ uniE2A0	uniE068_ uniE915	uniE068_ uniE916_ uniE2A0	uniE068_ uniE916_ uniE2A1	uniE068_ uniE916	uniE068_ uniE917_ uniE2A0	uniE068_ uniE917_ uniE2A1	uniE068_ uniE917
G clef, flat 5 above	G clef, 5 above	G clef, flat 6 above	G clef, natural 6 above	G clef, 6 above	G clef, flat 7 above	G clef, natural 7 ebove	G clef, 7 above
uniE068_ uniE918_ uniE2A0	uniE068_ uniE919_ uniE2A0	uniE068_ uniE919_ uniE2A1	uniE068_ uniE919	uniE06F_ uniE915			
G clef, flat 8 above	G clef, flat 9 above	G clef, natural 9 above	G clef, 9 above	F clef, 5 below			

Implementation notes

Scoring applications may choose to create e.g. *ottava alta* and *ottava bassa* versions of the G clef and F clef by combining U+E060 and U+E06F with U+E550 (8) and U+E554 (15) rather than using the precomposed glyphs.

The basic G clef, F clef and C clef symbols can be positioned at different vertical positions relative to the staff as required (e.g. the C clef can be positioned to create an alto or tenor clef).

Time signatures (U+E090–U+E0AF)

U+E090	U+E091	U+E092	U+E093	U+E094	U+E095	U+E096	U+E097
0	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Time signature 0	Time signature 1	Time signature 2	Time signature 3	Time signature 4	Time signature 5	Time signature 6	Time signature 7

U+E098	U+E099	U+E09A	U+E09B	U+E09C	U+E09D	U+E09E	U+E09F
8	**9**	**C**	**₵**	**+**	**+**	╱	**=**
Time signature 8	Time signature 9	Common time *Also U+1D134*	Cut time *Also U+1D135*	Time signature +	Time signature + for numerator only	Time signature fraction slash	Time signature equals

U+E0A0	U+E0A1	U+E0A2	U+E0A3	U+E0A4	U+E0A5	U+E0A6	U+E0A7
—	**✕**	**(**	**)**	**(**	**)**	**,**	**¼**
Time signature minus	Time signature multiply	Left parenthesis for numerator only	Right parenthesis for numerator only	Left parenthesis for whole time signature	Right parenthesis for whole time signature	Time signature comma	Time signature fraction ¼

U+E0A8	U+E0A9	U+E0AA	U+E0AB	U+E0AC	U+E0AD	U+E0AE	U+E0AF
½	**¾**	**⅓**	**⅔**	**Ж**	**∼**		
Time signature fraction ½	Time signature fraction ¾	Time signature fraction ⅓	Time signature fraction ⅔	Open time signature	Open time signature (Penderecki)	*Unused*	*Unused*

Noteheads (U+E0C0–U+E11F)

U+E0C0	U+E0C1	U+E0C2	U+E0C3	U+E0C4	U+E0C5	U+E0C6	U+E0C7
Double whole notehead	Whole notehead	Half notehead *Also U+1D157*	Black notehead *Also U+1D158*	Null notehead *Also U+1D159*	X notehead double whole	X notehead whole	X notehead half

U+E0C8	U+E0C9	U+E0CA	U+E0CB	U+E0CC	U+E0CD	U+E0CE	U+E0CF
X notehead black *Also U+1D143*	Ornate X notehead	Plus notehead double whole	Plus notehead whole	Plus notehead half	Plus notehead *Also U+1D144*	Circle X double whole	Circle X whole

U+E0D0	U+E0D1	U+E0D2	U+E0D3	U+E0D4	U+E0D5	U+E0D6	U+E0D7
Circle X half	Circle X notehead *Also U+1D145*	Double whole notehead with X	Whole notehead with X	Half notehead with X	Void notehead with X	Square notehead white *Also U+1D146*	Square notehead black *Also U+1D147*

U+E0D8	U+E0D9	U+E0DA	U+E0DB	U+E0DC	U+E0DD	U+E0DE	U+E0DF
Triangle notehead up double whole	Triangle notehead up whole	Triangle notehead up half	Triangle notehead up white *Also U+1D148*	Triangle notehead up black *Also U+1D149*	Triangle notehead left white *Also U+1D14A*	Triangle notehead left black *Also U+1D14B*	Triangle notehead right white *Also U+1D14C*

U+E0E0	U+E0E1	U+E0E2	U+E0E3	U+E0E4	U+E0E5	U+E0E6	U+E0E7
Triangle notehead right black *Also U+1D14D*	Triangle notehead down double whole	Triangle notehead down whole	Triangle notehead down half	Triangle notehead down white *Also U+1D14E*	Triangle notehead down black *Also U+1D14F*	Triangle notehead up right white *Also U+1D150*	Triangle notehead up right black *Also U+1D151*

U+E0E8	U+E0E9	U+E0EA	U+E0EB	U+E0EC	U+E0ED	U+E0EE	U+E0EF
Moon notehead white *Also U+1D152*	Moon notehead black *Also U+1D153*	Triangle-round notehead down white *Also U+1D154*	Triangle-round notehead down black *Also U+1D155*	Parenthesis notehead *Also U+1D156*	Slashed black notehead (bottom left to top right)	Slashed black notehead (top left to bottom right)	Slashed white notehead (bottom left to top right)

U+E0F0	U+E0F1	U+E0F2	U+E0F3	U+E0F4	U+E0F5	U+E0F6	U+E0F7
Slashed white notehead (top left to bottom right)	Slashed whole notehead (bottom left to top right)	Slashed whole notehead (top left to bottom right)	Slashed double whole notehead (bottom left to top right)	Slashed double whole notehead (top left to bottom right)	Diamond double whole notehead	Diamond whole notehead	Diamond half notehead

U+E0EF	U+E0F9	U+E0FA	U+E0FB	U+E0FC	U+E0FD	U+E0FE	U+E0FF
Diamond black notehead	Diamond double whole notehead (old)	Diamond whole notehead (old)	White diamond notehead	Black diamond notehead	Half-filled diamond notehead	Circled black notehead	Circled half notehead

U+E100	U+E101	U+E102	U+E103	U+E104	U+E105	U+E106	U+E107
Circled whole notehead	Circled double whole notehead	Large arrow up (highest pitch) double whole	Large arrow up (highest pitch) whole notehead	Large arrow up (highest pitch) half notehead	Large arrow up (highest pitch) black notehead	Large arrow down (lowest pitch) double whole	Large arrow down (lowest pitch) whole notehead

U+E108	U+E109	U+E10A	U+E10B	U+E10C	U+E10D	U+E10E	U+E10F
Large arrow down (lowest pitch) half notehead	Large arrow down (lowest pitch) black notehead	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E110	U+E111	U+E112	U+E113	U+E114	U+E115	U+E116	U+E117
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E118	U+E119	U+E11A	U+E11B	U+E11C	U+E11D	U+E11E	U+E11F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

These noteheads should be combined with stems and flags as necessary to create complete notes. In text-based applications, per the Unicode Musical Symbols documentation:
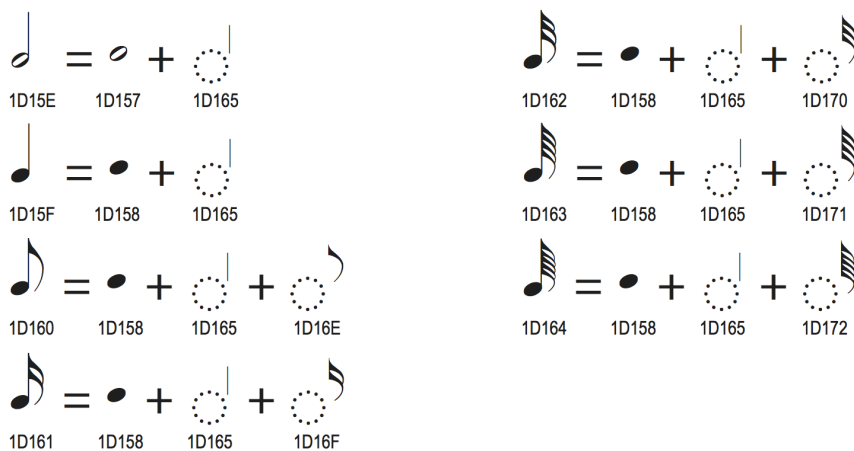
Scoring applications should draw stems using primitives, rather than using U+E240 (i.e. U+1D165 as shown in the above image[11]), so that they can be drawn to the correct length.

See also the implementation notes for flags (U+E280–U+E28F).

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[11] From Chapter 15 "Symbols", *The Unicode Standard, Version 6.2.* Ed. Julie D. Allen et al. Mountain View; The Unicode Consortium, 2012.
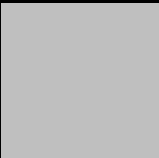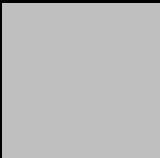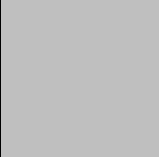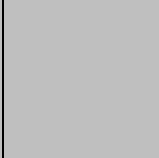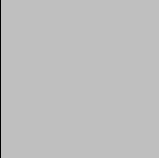
Slash noteheads (U+E120–U+E12F)

U+E120	U+E121	U+E122	U+E123	U+E124	U+E125	U+E126	U+E127
╱	╱	⫽	◇	╱	✕		
Slash with vertical ends	Slash with horizontal ends *Also U+1D10D*	White slash	Large white diamond	Small slash with vertical ends	Large X notehead	*Unused*	*Unused*

U+E128	U+E129	U+E12A	U+E12B	U+E1@C	U+E12D	U+E12E	U+E12F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

See the implementation notes for noteheads (U+E0C0–U+E11F).

Round and square noteheads (U+E130–U+E14F)

U+E130	U+E131	U+E132	U+E133	U+E134	U+E135	U+E136	U+E137
●	○	⊙	●	○	⊙	⬤⁄	⊘
Large round black notehead	Large round white notehead	Large round white notehead with dot	Round black notehead	Round white notehead	Round white notehead with dot	Large round black notehead, slashed	Large round white notehead, slashed

U+E138	U+E139	U+E13A	U+E13B	U+E13C	U+E13D	U+E13E	U+E13F
●	⊘	■	□				
Round black notehead, slashed	Round white notehead, slashed	Large square black notehead	Large square white notehead	*Unused*	*Unused*	*Unused*	*Unused*

U+E140	U+E141	U+E142	U+E143	U+E144	U+E145	U+E146	U+E147
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E148	U+E149	U+E14A	U+E14B	U+E14C	U+E14D	U+E14E	U+E14F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

See the implementation notes for noteheads (U+E0C0–U+E11F).

Note clusters (U+E150–U+E17F)

U+E150	U+E151	U+E152	U+E153	U+E154	U+E155	U+E156	U+E157
Cluster notehead white (square) *Also U+1D15A*	Cluster notehead black (square) *Also U+1D15B*	Cluster notehead white (round)	Cluster notehead black (round)	Double whole note cluster, 2nd	Whole note cluster, 2nd	Half note cluster, 2nd	Quarter note cluster, 2nd

U+E158	U+E159	U+E15A	U+E15B	U+E15C	U+E15D	U+E15E	U+E15F
Double whole note cluster, 3rd	Whole note cluster, 3rd	Half note cluster, 3rd	Quarter note cluster, 3rd	Combining double whole note cluster, top	Combining double whole note cluster, middle	Combining double whole note cluster, bottom	Combining whole note cluster, top

U+E160	U+E161	U+E162	U+E163	U+E164	U+E165	U+E166	U+E167
Combining whole note cluster, middle	Combining whole note cluster, bottom	Combining half note cluster, top	Combining half note cluster, middle	Combining half note cluster, bottom	Combining quarter note cluster, top	Combining quarter note cluster, middle	Combining quarter note cluster, bottom

U+E168	U+E169	U+E16A	U+E16B	U+E16C	U+E16D	U+E16E	U+E16F
White diamond cluster, 2nd	Black diamond cluster, 2nd	White diamond cluster, 3rd	Black diamond cluster, 3rd	Combining white diamond cluster, top	Combining white diamond cluster, middle	Combining white diamond cluster, bottom	Combining black diamond cluster, top

U+E170	U+E171	U+E172	U+E173	U+E174	U+E175	U+E176	U+E177
Combining black diamond cluster, middle	Combining black diamond cluster, bottom	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E178	U+E179	U+E17A	U+E17B	U+E17C	U+E17D	U+E17E	U+E17F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

Scoring applications should draw simple note clusters (i.e. those that look like U+E150–U+E153) directly using primitives rather than using these glyphs, so that the clusters can be drawn spanning the correct interval.

The combining glyphs for note clusters (U+E15C–U+E171) are designed to allow the creation of clusters of any size, with a scoring application inserting the appropriate number of "middle" segments between a single instance of the "top" and "bottom" segments:
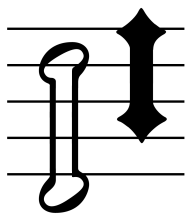
The left-hand cluster is a stack (top to bottom) of 1 x U+E162, 3 x U+E163, 1 x U+E164; the right-hand cluster is 1 x U+E16F, 2 x U+E170, 1 x U+E171.

See also the implementation notes for noteheads (U+E0C0–U+E11F).

Note name noteheads (U+E180–U+E1DF)

U+E180	U+E181	U+E182	U+E183	U+E184	U+E185	U+E186	U+E187
Ⓓ	Ⓡ	Ⓜ	Ⓕ	Ⓢ	Ⓛ	Ⓣ	Ⓓ
Do (whole note)	Re (whole note)	Mi (whole note)	Fa (whole note)	So (whole note)	La (whole note)	Ti (whole note)	Do (half note)

U+E188	U+E189	U+E18A	U+E18B	U+E18C	U+E18D	U+E18E	U+E18F
Ⓡ	Ⓜ	Ⓕ	Ⓢ	Ⓛ	Ⓣ	Ⓓ	Ⓡ
Re (half note)	Mi (half note)	Fa (half note)	So (half note)	La (half note)	Ti (half note)	Do (black note)	Re (black note)

U+E190	U+E191	U+E192	U+E193	U+E194	U+E195	U+E196	U+E197
Ⓜ	Ⓕ	Ⓢ	Ⓛ	Ⓣ	Ⓐ♭	Ⓐ	Ⓐ♯
Mi (black note)	Fa (black note)	So (black note)	La (black note)	Ti (black note)	A flat (whole note)	A (whole note)	A sharp (whole note)

U+E198	U+E199	U+E19A	U+E19B	U+E19C	U+E19D	U+E19E	U+E19F
Ⓑ♭	Ⓑ	Ⓑ♯	Ⓒ♭	Ⓒ	Ⓒ♯	Ⓓ♭	Ⓓ
B flat (whole note)	B (whole note)	B sharp (whole note)	C flat (whole note)	C (whole note)	C sharp (whole note)	D flat (whole note)	D (whole note)

U+E1A0	U+E1A1	U+E1A2	U+E1A3	U+E1A4	U+E1A5	U+E1A6	U+E1A7
Ⓓ♯	Ⓔ♭	Ⓔ	Ⓔ♯	Ⓕ♭	Ⓕ	Ⓕ♯	Ⓖ♭
D sharp (whole note)	E flat (whole note)	E (whole note)	E sharp (whole note)	F flat (whole note)	F (whole note)	F sharp (whole note)	G flat (whole note)

U+E1A8	U+E1A9	U+E1AA	U+E1AB	U+E1AC	U+E1AD	U+E1AE	U+E1AF
G	G♯	H	A♭	A	A♯	B♭	B
G (whole note)	G sharp (whole note)	H (whole note)	A flat (half note)	A (half note)	A sharp (half note)	B flat (half note)	B (half note)

U+E1B0	U+E1B1	U+E1B2	U+E1B3	U+E1B4	U+E1B5	U+E1B6	U+E1B7
B♯	C♭	C	C♯	D♭	D	D♯	E♭
B sharp (half note)	C flat (half note)	C (half note)	C sharp (half note)	D flat (half note)	D (half note)	D sharp (half note)	E flat (half note)

U+E1B8	U+E1B9	U+E1BA	U+E1BB	U+E1BC	U+E1BD	U+E1BE	U+E1BF
E	E♯	F♭	F	F♯	G♭	G	G♯
E (half note)	E sharp (half note)	F flat (half note)	F (half note)	F sharp (half note)	G flat (half note)	G (half note)	G sharp (half note)

U+E1C0	U+E1C1	U+E1C2	U+E1C3	U+E1C4	U+E1C5	U+E1C6	U+E1C7
H	A♭	A	A♯	B♭	B	B♯	C♭
H (half note)	A flat (black note)	A (black note)	A sharp (black note)	B flat (black note)	B (black note)	B sharp (black note)	C flat (black note)

U+E1C8	U+E1C9	U+E1CA	U+E1CB	U+E1CC	U+E1CD	U+E1CE	U+E1CF
C	C♯	D♭	D	D♯	E♭	E	E♯
C (black note)	C sharp (black note)	D flat (black note)	D (black note)	D sharp (black note)	E flat (black note)	E (black note)	E sharp (black note)

U+E1D0	U+E1D1	U+E1D2	U+E1D3	U+E1D4	U+E1D5	U+E1D6	U+E1D7
F♭	F	F♯	G♭	G	G♯	H	○
F flat (black note)	F (black note)	F sharp (black note)	G flat (black note)	G (black note)	G sharp (black note)	H (black note)	Empty whole note

U+E1D8	U+E1D9	U+E1DA	U+E1DB	U+E1DC	U+E1DD	U+E1DE	U+E1DF
⟲	⬮						
Empty half note	Empty black note	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

These noteheads are designed for use by scoring applications to render music where the names of notes are shown inside noteheads. For practical use, scoring applications should provide a means of automatically substituting regular noteheads for the appropriate note name notehead glyph according to the pitch of each note.

See also the implementation notes for noteheads (U+E0C0–U+E11F).

Sacred harp shape notes (U+E1E0–U+E1FF)

U+E1E0	U+E1E1	U+E1E2	U+E1E3	U+E1E4	U+E1E5	U+E1E6	U+E1E7
Round white (four-shape sol; seven-shape so)	Round black (four-shape sol; seven-shape so)	Square white (four-shape la; seven-shape la)	Square black (four-shape la; seven-shape la)	Triangle right white (stem down; 4-shape fa; 7-shape fa)	Triangle right black (stem down; 4-shape fa; 7-shape fa)	Triangle left white (stem up; 4-shape fa; 7-shape fa)	Triangle left black (stem up; 4-shape fa; 7-shape fa)

U+E1E8	U+E1E9	U+E1EA	U+E1EB	U+E1EC	U+E1ED	U+E1EE	U+E1EF
Diamond white (four-shape mi; seven-shape mi)	Diamond black (four-shape mi; seven-shape mi)	Triangle up white (seven-shape do)	Triangle up black (seven-shape do)	Moon white (seven-shape re)	Moon black (seven-shape re)	Triangle-round white (seven-shape ti)	Triangle-round black (seven-shape ti)

U+E1F0	U+E1F1	U+E1F2	U+E1F3	U+E1F4	U+E1F5	U+E1F6	U+E1F7
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E1F8	U+E1F9	U+E1FA	U+E1FB	U+E1FC	U+E1FD	U+E1FE	U+E1FF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

For practical use, scoring applications should provide a means of automatically substituting regular noteheads for the appropriate shape note notehead glyph according to the pitch of each note.

See also the implementation notes for noteheads (U+E0C0–U+E11F).

Individual notes (U+E200–U+E21F)

U+E200	U+E201	U+E202	U+E203	U+E204	U+E205	U+E206	U+E207
Double whole note (breve) *Also U+1D15C*	Whole note (semibreve) *Also U+1D15D*	Half note (minim) stem up *Also U+1D15E*	Half note (minim) stem down	Quarter note (crotchet) stem up *Also U+1D15F*	Quarter note (crotchet) stem down	Eighth note (quaver) stem up *Also U+1D160*	Eighth note (quaver) stem down

U+E208	U+E209	U+E20A	U+E20B	U+E20C	U+E20D	U+E20E	U+E20F
16th note stem up *Also U+1D161*	16th note stem down	32nd note stem up *Also U+1D162*	32nd note stem down	64th note stem up *Also U+1D163*	64th note stem down	128th note stem up *Also U+1D164*	128th note stem down

U+E210	U+E211	U+E212	U+E213	U+E214	U+E215	U+E216	U+E217
256th note stem up	256th note stem down	512th note stem up	512th note stem down	1024th stem up	1024th stem down	Augmentation dot *Also U+1D16D*	*Unused*

U+E218	U+E219	U+E21A	U+E21B	U+E21C	U+E21D	U+E21E	U+E21F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Recommended stylistic alternates

U+E200							
Double whole note (breve), single vertical stroke							

Implementation notes

This range is most useful in fonts intended for text-based applications, with metrics that are compatible for mixing musical symbols with text.

In such a font, the precomposed note glyphs between U+E202 and U+E215 may be used for displaying metronome marks and simple metric modulations. More complex metric modulations and *l'istesso tempo* directions may be drawn using these glyphs in conjunction with the range between U+E220–U+E23F.

Scoring applications should draw all notes by combining notehead glyphs — e.g. U+E0C3 for quarter notes (crotchets) and shorter notes, U+E0C2 for half notes (minims) — with stems drawn using primitives.

Beamed groups of notes (U+E220–U+E23F)

U+E220	U+E221	U+E222	U+E223	U+E224	U+E225	U+E226	U+E227
Black note, short stem	Black note, long stem	Black note, fractional 8th beam, short stem	Black note, factional 8th beam, long stem	Black note, fractional 16th beam, short stem	Black note, fractional 16th beam, long stem	Black note, fractional 32nd beam, long stem	Continuing 8th beam for short stem

U+E228	U+E229	U+E22A	U+E22B	U+E22C	U+E22D	U+E22E	U+E22F
Continuing 8th beam for long stem	Continuing 16th beam for short stem	Continuing 16th beam for long stem	Continuing 32nd beam for long stem	Augmentation dot	Tie	Tuplet bracket start for short stem	Tuplet number 3 for short stem

U+E230	U+E231	U+E232	U+E233	U+E234	U+E235	U+E236	U+E237
Tuplet bracket end for short stem	Tuplet bracket start for long stem	Tuplet number 3 for long stem	Tuplet bracket end for long stem	*Unused*	*Unused*	*Unused*	*Unused*

U+E238	U+E239	U+E23A	U+E23B	U+E23C	U+E23D	U+E23E	U+E23F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

This range is most useful in fonts intended for text-based applications, with metrics that are compatible for mixing musical symbols with text.

In such a font, these glyphs may be used for displaying complex metric modulations and *l'istesso tempo* directions in conjunction with the precomposed note glyphs between U+E202 and U+E215.

By way of example:

U+E220, U+E228, space, U+E222, U+E229, space, U+E224
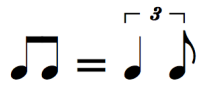
U+E220, U+E228, space, U+E222, space, =, U+E231, U+E220, U+E232, space, U+E233, U+E206

U+E220, U+E228, U+E22C, space, U+E228, U+E224

Stems (U+E240–U+E25F)

U+E240	U+E241	U+E242	U+E243	U+E244	U+E245	U+E246	U+E247
Stem *Also U+1D165*	Sprechgesang stem *Also U+1D166*	Swished stem	Penderecki unmeasured tremolo stem	Sul ponticello (bow behind bridge) stem	Bow on bridge stem	Bow on tailpiece stem	Buzz roll stem

U+E248	U+E249	U+E24A	U+E24B	U+E24C	U+E24D	U+E24E	U+E24F
Combining damp stem	Combining vibrato pulse accent (Saunders) stem	Combining multiphonics (black) stem	Combining multiphonics (white) stem	Combining multiphonics (black and white) stem	Combining sussurando stem	Combining rim shot stem	*Unused*

U+E250	U+E251	U+E252	U+E253	U+E254	U+E255	U+E256	U+E257
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E258	U+E259	U+E25A	U+E25B	U+E25C	U+E25D	U+E25E	U+E25F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

The glyphs shown here may be combined with noteheads to produce precomposed glyphs with a fixed stem length.

Scoring applications should produce this effect by imposing the required symbol on a stem drawn using a primitive line, rather than using these precomposed stem glyphs:

- Sprechgesang (U+E686)
- Swish (U+EB01)
- Penderecki unmeasured tremolo (U+E26B)

- Sul ponticello (U+E244)

- Bow on bridge (U+E245)

- Bow on tailpiece (U+E246)

- Buzz roll (U+E247)

- Damp (U+E64B)

- Vibrato pulse accent (U+E651)

- Multiphonics (U+E627–U+E629)

- Sussurando (U+E68B)

Tremolos (U+E260–U+E27F)

U+E260	U+E261	U+E262	U+E263	U+E264	U+E265	U+E266	U+E267
Combining tremolo 1 *Also U+1D167*	Combining tremolo 2 *Also U+1D168*	Combining tremolo 3 *Also U+1D169*	Combining tremolo 4	Combining tremolo 5	Fingered tremolo 1 *Also U+1D16A*	Fingered tremolo 2 *Also U+1D16B*	Fingered tremolo 3 *Also U+1D16C*

U+E268	U+E269	U+E26A	U+E26B	U+E26C	U+E26D	U+E26E	U+E26F
Fingered tremolo 4	Fingered tremolo 5	Buzz roll	Penderecki unmeasured tremolo	Wieniawski unmeasured tremolo	Wieniawksi unmeasured tremolo (simpler)	*Unused*	*Unused*

U+E270	U+E271	U+E272	U+E273	U+E274	U+E275	U+E276	U+E277
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E278	U+E279	U+E27A	U+E27B	U+E27C	U+E27D	U+E27E	U+E27F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

Scoring applications may simply use multiple instances of U+E260 imposed on note stems to draw one-note tremolos with different numbers of slashes.

The fingered tremolo glyphs (U+E265–U+E269) are for two-note tremolos. Scoring applications should draw two-note tremolos using the same primitives used for drawing beams, rather than using these glyphs.

Flags (U+E280–U+E29F)

U+E280	U+E281	U+E282	U+E283	U+E284	U+E285	U+E286	U+E287
Combining flag 1 (8th) above *Also U+1D16E*	Combining flag 1 (8th) below	Combining flag 2 (16th) above *Also U+1D16F*	Combining flag 2 (16th) below	Combining flag 3 (32nd) above *Also U+1D170*	Combining flag 3 (32nd) below	Combining flag 4 (64th) above *Also U+1D171*	Combining flag 4 (64th) below

U+E288	U+E289	U+E28A	U+E28B	U+E28C	U+E28D	U+E28E	U+E28F
Combining flag 5 (128th) above *Also U+1D172*	Combining flag 5 (128th) below	Combining flag 6 (256th) above	Combining flag 6 (256th) below	Combining flag 7 (512th) above	Combining flag 7 (512th) below	Combining flag 8 (1024th) above	Combining flag 8 (1024th) below

U+E290	U+E291	U+E292	U+E293	U+E294	U+E295	U+E296	U+E297
Internal combining flag above	Internal combining flag below	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E298	U+E299	U+E29A	U+E29B	U+E29C	U+E29D	U+E29E	U+E29F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Recommended stylistic alternates

| U+E280	U+E281	U+E282	U+E283	U+E284	U+E285	U+E286	U+E287
Combining flag 1 above (straight)	Combining flag 1 below (straight)	Combining flag 2 above (straight)	Combining flag 2 below (straight)	Combining flag 3 above (straight)	Combining flag 3 below (straight)	Combining flag 4 above (straight)	Combining flag 4 below (straight)

U+E288	U+E289	U+E28A	U+E28B	U+E28C	U+E28D	U+E28E	U+E28F
Combining flag 5 above (straight)	Combining flag 5 below (straight)	Combining flag 6 above (straight)	Combining flag 6 below (straight)	Combining flag 7 above (straight)	Combining flag 7 below (straight)	Combining flag 8 above (straight)	Combining flag 8 below (straight)

U+E280	U+E281	U+E282	U+E283	U+E284	U+E285	U+E26E	U+E287
Combining flag 1 above (short)	Combining flag 2 above (short)	Combining flag 3 above (short)	Combining flag 4 above (short)	Combining flag 5 above (short)	Combining flag 6 above (short)	Combining flag 7 above (short)	Combining flag 8 above (short)

Implementation notes

Scoring applications may create groups of flags for notes shorter than 16th notes (semiquavers) by combining U+E282 with the required number of U+E290 for stem up notes, or U+E283 with the required number of U+E291 for stem down notes, stacking U+E290 above or U+E291 below respectively, ensuring even spacing.

The set of stylistic alternates for shorter flags may be substituted by a scoring application in the case of a dotted note with an upward stem, to avoid collisions between the augmentation dot and the flag.

Standard accidentals (12-EDO) (U+E2A0–U+E2AF)

U+E2A0	U+E2A1	U+E2A2	U+E2A3	U+E2A4	U+E2A5	U+E2A6	U+E2A7
♭	♮	♯	𝄪	♭♭	♯	♭♭♭	♭♭
Flat	Natural	Sharp	Double sharp	Double flat	Triple sharp	Triple flat	Natural flat
Also U+0266D	*Also U+0266E*	*Also U+0266F*	*Also U+1D12A*	*Also U+1D12B*			

U+E2A8	U+E2A9	U+E2AA	U+E2AB	U+E2AC	U+E2AD	U+E2AE	U+E2AF
♮♯							
Natural sharp	*Unused*	*Unused*	*Unused*	*Unused*	Unused	Unused	Unused

Recommended stylistic alternates

U+E2A0	U+E2A1	U+E2A2					
♭	♮	♯					
Flat (for small staves)	Natural (for small staves)	Sharp (for small staves)					

Implementation notes

Scoring applications may choose to substitute stylistic alternate versions of the common accidentals glyphs for a better appearance on smaller staves.

Quartertone accidentals (24-EDO) (U+E2B0–U+E2CF)

U+E2B0	U+E2B1	U+E2B2	U+E2B3	U+E2B4	U+E2B5	U+E2B6	U+E2B7
Quarter-tone sharp *Also U+1D132*	Quarter-tone flat *Also U+1D133*	Filled reversed flat (quarter-tone flat)	Reversed sharp	Reversed natural	Reversed double flat	Inverted flat	Inverted double flat

U+E2B8	U+E2B9	U+E2BA	U+E2BB	U+E2BC	U+E2BD	U+E2BE	U+E2BF
Three-quarter-tones flat (Grisey)	Three-quarter-tones flat (Tartini)	Quarter-tone flat (van Blankenburg)	Three-quarter-tones flat (Couper)	*Unused*	*Unused*	*Unused*	*Unused*

U+E2C0	U+E2C1	U+E2C2	U+E2C3	U+E2C4	U+E2C5	U+E2C6	U+E2C7
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E2C8	U+E2C9	U+E2CA	U+E2CB	U+E2CC	U+E2CD	U+E2CE	U+E2CF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Gould arrow quartertone accidentals (24-EDO) (U+E2D0–U+E2EF)

U+E2D0	U+E2D1	U+E2D2	U+E2D3	U+E2D4	U+E2D5	U+E2D6	U+E2D7
Quarter-tone flat

Also U+1D12C | Three-quarter-tones flat

Also U+1D12D | Quarter-tone sharp

Also U+1D12E | Quarter-tone flat

Also U+1D12F | Three-quarter-tones sharp

Also U+1D130 | Quarter-tone flat

Also U+1D131 | Five-quarter-tones sharp | Three-quarter-tones sharp |

U+E2D8	U+E2D9	U+E2DA	U+E2DB	U+E2DC	U+E2DD	U+E2DE	U+E2DF
Three-quarter-tones flat	Five-quarter-tones flat	Arrow up (sharpen by one quarter-tone)	Arrow down (flatten by one quarter-tone)	*Unused*	*Unused*	*Unused*	*Unused*

U+E2E0	U+E2E1	U+E2E2	U+E2E3	U+E2E4	U+E2E5	U+E2E6	U+E2E7
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E2E8	U+E2E9	U+E2EA	U+E2EB	U+E2EC	U+E2ED	U+E2EE	U+E2EF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Stein-Zimmermann accidentals (24-EDO) (U+E2F0–U+E2FF)

U+E2F0	U+E2F1	U+E2F2	U+E2F3	U+E2F4	U+E2F5	U+E2F6	U+E2F7
ꝱ	ꝱꝱ	♯	♯				
Reversed flat (quarter-tone flat) (Stein)	Reversed flat and flat (three-quarter-tones flat) (Zimmermann)	Half sharp (quarter-tone sharp) (Stein)	One and a half sharps (three-quarter-tones sharp) (Stein)	*Unused*	*Unused*	*Unused*	*Unused*

U+E2F8	U+E2F9	U+E2FA	U+E2FB	U+E2FC	U+E2FD	U+E2FE	U+E2FF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Sims accidentals (72-EDO) (U+E300–U+E30F)

U+E300	U+E301	U+E302	U+E303	U+E304	U+E305	U+E306	U+E307
↓	↘	⌐	↑	↖	⌐		
1/12 tone low	1/6 tone low	1/4 tone low	1/12 tone high	1/6 tone high	1/4 tone high	*Unused*	*Unused*

U+E308	U+E309	U+E30A	U+E30B	U+E30C	U+E30D	U+E30E	U+E30F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

These glyphs may be used alone and to the left of the standard 12-EDO accidentals (U+E2A0–U+E2AF).

Johnston accidentals (just intonation) (U+E310–U+E31F)

U+E310	U+E311	U+E312	U+E313	U+E314	U+E315	U+E316	U+E317
+	−	⌐	⌐	↑	↓	Ɛ	Ɛ
Plus (raise by 81:80)	Minus (lower by 81:80)	Inverted seven (raise by 36:35)	Seven (lower by 36:35)	Up arrow (raise by 33:32)	Down arrow (lower by 33:32)	Thirteen (raise by 65:64)	Inverted 13 (lower by 65:64)

U+E318	U+E319	U+E31A	U+E31B	U+E31C	U+E31D	U+E31E	U+E31F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

These glyphs are intended for combining with the standard 12-EDO accidentals (U+E2A0–U+E2AF).

Extended Helmholtz-Ellis accidentals (just intonation) (U+E320–U+E35F)

U+E320	U+E321	U+E322	U+E323	U+E324	U+E325	U+E326	U+E327
Double flat lowered by one syntonic comma	Flat lowered by one syntonic comma	Natural lowered by one syntonic comma	Sharp lowered by one syntonic comma	Double sharp lowered by one syntonic comma	Double flat raised by one syntonic comma	Flat raised by one syntonic comma	Natural raised by one syntonic comma

U+E328	U+E329	U+E32A	U+E32B	U+E32C	U+E32D	U+E32E	U+E32F
Sharp raised by one syntonic comma	Double sharp raised by one syntonic comma	Double flat lowered by two syntonic commas	Flat lowered by two syntonic commas	Natural lowered by two syntonic commas	Sharp lowered by two syntonic commas	Double sharp lowered by two syntonic commas	Double flat raised by two syntonic commas

U+E330	U+E331	U+E332	U+E333	U+E334	U+E335	U+E336	U+E337
Flat raised by two syntonic commas	Natural raised by two syntonic commas	Sharp raised by two syntonic commas	Double sharp raised by two syntonic commas	Double flat lowered by three syntonic commas	Flat lowered by three syntonic commas	Natural lowered by three syntonic commas	Sharp lowered by three syntonic commas

U+E338	U+E339	U+E33A	U+E33B	U+E33C	U+E33D	U+E33E	U+E33F
Double sharp lowered by three syntonic commas	Double flat raised by three syntonic commas	Flat raised by three syntonic commas	Natural raised by three syntonic commas	Sharp raised by three syntonic commas	Double sharp raised by three syntonic commas	Lower by one septimal comma	Raise by one septimal comma

U+E340	U+E341	U+E342	U+E343	U+E344	U+E345	U+E346	U+E347
Lower by two septimal commas	Raise by two septimal commas	Lower by one undecimal quartertone	Raise by one undecimal quartertone	Lower by one tridecimal quartertone	Raise by one tridecimal quartertone	Combining lower by one 17-limit schisma	Combining raise by one 17-limit schisma

U+E348	U+E349	U+E34A	U+E34B	U+E34C	U+E34D	U+E34E	U+E34F
`	´	↑	↓	−	+	{	}
Lower by one 19-limit schisma	Raise by one 19-limit schisma	Lower by one 23-limit comma or 29-limit comma	Raise by one 23-limit comma or 29-limit comma	Lower by one 31-limit schisma	Raise by one 31-limit schisma	Open curly brace	Close curly brace

U+E350	U+E351	U+E352	U+E353	U+E354	U+E355	U+E356	U+E357
♭♭	♭	♮	♯	𝄪			
Double flat equal tempered semitone	Flat equal tempered semitone	Natural equal tempered semitone	Sharp equal tempered semitone	Double sharp equal tempered semitone	*Unused*	*Unused*	*Unused*

U+E358	U+E359	U+E35A	U+E35B	U+E35C	U+E35D	U+E35E	U+E35F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Spartan Sagittal single-shaft accidentals (U+E360–U+E36F)

U+E360	U+E361	U+E362	U+E363	U+E364	U+E365	U+E366	U+E367
⊦	⊢	⊿	⊲	⊓	⊔	⊐	⊏
5:7 kleisma up (5:7k, ~11:13k, 7C less 5C)	5:7 kleisma down	5 comma up (5C) 1° up [22 27 29 34 41 46 53 96 EDOs] 1/12-tone up	5 comma down 1° dn [22 27 29 34 41 46 53 96 EDOs] 1/12-tone down	7 comma up (7C) 1° up [43 EDO] 2° up [72 EDO] 1/6-tone up	7 comma down 1° down [43 EDO] 2° down [72 EDO] 1/6-tone down	25 small diesis up (25S, ~5:13S, ~37S, 5C plus 5C) 2° up [53 EDO]	25 small diesis down 2° down [53 EDO]

U+E368	U+E369	U+E36A	U+E36B	U+E36C	U+E36D	U+E36E	U+E36F
⋀	⋁	⋀	⋁	⊓	⊔	⊓	⊔
35 medium diesis up (35M, ~13M, ~125M, 5C plus 7C)	35 medium diesis down 1°[50] 2°[27] dn 2/9-tone down	11 medium diesis up (11M) 1°[17 31] 2°46 up 1/4-tone up	11 medium diesis down 1°[17 31] 2°46 dn 1/4-tone down	11 large diesis up (11L) (sharp less 11M) 3° up [46 EDO]	11 large diesis down 3° down [46 EDO]	35 large diesis up (35L, ~13L, ~125L, sharp less 35M) 2° down [50 EDO]	35 large diesis down 2° down [50 EDO] 5/18-tone down

Implementation notes

It is not necessary to implement the complete Sagittal microtonal notation system. The Spartan set is sufficient to notate 13-limit just intonation (JI), 1/12-tones, 50 common equal divisions of the octave (EDOs), and their related linear temperaments.

The eight pairs of single-shaft accidentals above are sufficient to provide these capabilities when used alone, and to the left of the standard double-flat, flat, sharp and large double-sharp (U+E2A4, U+E2A0, U+E2A2, U+E43C). This is called "mixed Sagittal."

As an alternative, the following group (the multi-shaft Spartans) provides a complete set of stand-alone accidentals to replace each of the above combinations of a single-shaft Sagittal with a standard accidental. This is called "pure Sagittal." The standard natural (U+E2A1) is used alone in both mixed and pure variants, but only to cancel a previous accidental.

Sagittal accidentals are not intended to be combined with one another, inasmuch as symbols representing useful combinations and powers of primes are already provided. An accidental can often be used to represent alternative commas that differ by 2 cents or less. In such cases the intended comma ratio may be determined by the note to which it is applied, or by the musical context. Alternatively, diacritics (from the Herculean and subsequent extensions) may be added to distinguish these commas.

Commas which require diacritics for exact representation are preceded by a tilde "~" in the glyph descriptions.

Sagittal extensions following Spartan allow notation of JI ratios with primes beyond 13, and more combinations of lower primes, as well as finer tone-fractions, degrees of larger EDOs, and more complex temperaments, all with single Sagittal accidentals. The same choice of mixed versus pure is available with each extension. See http://sagittal.org for more information.

Spartan Sagittal multi-shaft accidentals (U+E370–U+E397)

U+E370	U+E371	U+E372	U+E373	U+E374	U+E375	U+E376	U+E377
Sharp 25S-down 3° up [53 EDO]	Flat 25S-up 3° down [53 EDO]	Sharp 7C-down 2° up [43 EDO] 4° up [72 EDO] 1/3-tone up	Flat 7C-up 2° down [43 EDO] 4° down [72 EDO] 1/3-tone down	Sharp 5C-down 2°[22 29] 3°[34 41] 4°[46 53 60] u 5/12-tone up	Flat 5C-up 2°[22,29] 3°[34 41] 4°[46 53 60] d 5/12-tone down	Sharp 5:7k-down	Flat 5:7k-up

U+E378	U+E379	U+E37A	U+E37B	U+E37C	U+E37D	U+E37E	U+E37F
Sharp (apotome up) [almost all EDOs] 1/2-tone up	Flat (apotome down) [almost all EDOs] 1/2-tone down	*Unused*	*Unused*	Sharp 5:7k-up	Flat 5:7k-down	Sharp 5C-up 4°[22 29] 5°[27 34 41] 6°[39 46 53] u 7/12-tone up	Flat 5C-down 4°[22 29] 5°[27 34 41] 6°[39 46 53] d 7/12-tone down

U+E380	U+E381	U+E382	U+E383	U+E384	U+E385	U+E386	U+E387
Sharp 7C-up 4° up [43 EDO] 8° up [72 EDO] 2/3-tone up	Flat 7C-down 4° down [43 EDO] 8° down [72 EDO] 2/3-tone down	Sharp 25S-up 7° up [53 EDO]	Flat 25S-down 7° down [53 EDO]	Sharp 35M up 4° up [50 EDO] 6° up [27 EDO] 13/18-tone up	Flat 35M down 4° down [50 EDO] 6° down [27 EDO] 13/18-tone down	Sharp 11M up 3° up [17 31 EDOs] 7° up [46 EDO] 3/4-tone up	Flat 11M down 3° dn [17 31 EDOs] 7° down [46 EDO] 3/4-tone down

U+E388	U+E389	U+E38A	U+E38B	U+E38C	U+E38D	U+E38E	U+E38F
Sharp 11L up 8° up [46 EDO]	Flat 11L down 8° up [46 EDO]	Sharp 35L up 5° up [50 EDO]	Flat 35L down 5° down [50 EDO]	Double sharp 25S down 8°up [53 EDO]	Double flat 25S down 8°down [53 EDO]	Double sharp 7C down 5°[43] 10°[72] up 5/6-tone up	Double flat 7C up 5° down [43 EDO] 10° down [72 EDO]

U+E390	U+E391	U+E392	U+E393	U+E394	U+E395	U+E396	U+E397
Double sharp 5C-down, 5°[22 29] 7°[34 41] 9°53 up 11/12 tone down	Double flat 5C-up 5°[22 29] 7°[34 41] 9°[53] down 11/12 tone down	Double sharp 5:7k-down	Double flat 5:7k up	Double sharp (2 apotomes up) [almost all EDOs] whole-tone up	Double flat (2 apotomes down) [almost all EDOs] whole-tone down	*Unused*	*Unused*

Athenian Sagittal extension (medium precision) accidentals (U+E398–U+E3BF)

U+E398	U+E399	U+E39A	U+E39B	U+E39C	U+E39D	U+E39E	U+E39F
7:11 kleisma up (7:11k , ~29k)	7:11 kleisma down	17 comma up (17C)	17 comma down	55 comma up (55C, 11M less 5C) 3°up [96 EDO] 3/16-tone up	55 comma down 3° down [96 EDO] 3/16-tone down	7:11 comma up (7:11C, ~13:17S, ~29S, 11L less 7C) 1° up [60 EDO]	7:11 comma down 1° down [60 EDO] 1/10- tone down

U+E3A0	U+E3A1	U+E3A2	U+E3A3	U+E3A4	U+E3A5	U+E3A6	U+E3A7
5:11 small diesis up (5:11S, ~7:13S, ~11:17S, 5:7k plus 7:11C)	5:11 small diesis down	Sharp 5:11S-down	Flat 5:11S-up	Sharp 7:11C-down 4° up [60 EDO] 2/5-tone up	Flat 7:11C-up 4° down [60 EDO] 2/5-tone down	Sharp 55C down 5° up [96 EDO] 5/16-tone up	Flat 55C-up 5° down [96 EDO] 5/16-tone down

U+E3A8	U+E3A9	U+E3AA	U+E3AB	U+E3AC	U+E3AD	U+E3AE	U+E3AF
Sharp 17C-down	Flat 17C-up	Sharp 7:11k-down	Flat 7:11k-up	Sharp 7:11k-up	Flat 7:11k-down	Sharp 17C-up	Flat 17C-down

U+E3B0	U+E3B1	U+E3B2	U+E3B3	U+E3B4	U+E3B5	U+E3B6	U+E3B7
Sharp 55C-up 11° up [96 EDO] 11/16-tone up	Flat 55C-down 11° down [96 EDO] 11/16-tone down	Sharp 7:11C-up 6° up [60 EDO] 3/5- tone up	Flat 7:11C-down 6° down [60 EDO] 3/5- tone down	Sharp 5:11S-up	Flat 5:11S-down	Double sharp 5:11S-down	Double flat 5:11S-up

U+E3B8	U+E3B9	U+E3BA	U+E3BB	U+E3BC	U+E3BD	U+E3BE	U+E3BF
Double sharp 7:11C-down 9° up [60 EDO] 9/10-tone up	Double flat 7:11C-up 9° down [60 EDO] 9/10-tone down	Double sharp 55C-down 13° up [96 EDO] 13/16-tone up	Double flat 55C-up 13° down [96 EDO] 13/16-tone down	Double sharp 17C-down	Double flat 17C up	Double sharp 7:11k-down	Double flat 7:11k-up

Trojan Sagittal extension (12-EDO relative) accidentals (U+E3C0–U+E3D7)

U+E3C0	U+E3C1	U+E3C2	U+E3C3	U+E3C4	U+E3C5	U+E3C6	U+E3C7
⼘	⼙	⼚	⼛	⼜	⼝	⼞	⼟
23 comma up (23C) 2° up [96 EDO] 1/8-tone up	23 comma down 2° down [96 EDO] 1/8-tone down	5:19 comma up (5:19C , 5C plus 19s) 1/20-tone up	5:19 comma down 1/20-tone down	5:23 small diesis up (5:23S, 5C plus 23C) 2° up [60 EDO]	5:23 small diesis down 2° down [60 EDO] 1/5-tone down	Sharp 5:23S-down 3° up [60 EDO] 3/10-tone up	Flat 5:23S-up 3° down [60 EDO] 3/10-tone down

U+E3C8	U+E3C9	U+E3CA	U+E3CB	U+E3CC	U+E3CD	U+E3CE	U+E3CF
⼘	⼙	⼚	⼛	⼜	⼝	⼞	⼟
Sharp 5:19C-down 9/20-tone up	Flat 5:19C-up 9/20-tone down	Sharp 23C-down 6° up [96 EDO] 3/8-tone up	Flat 23C-up 6° down [96 EDO] 3/8-tone down	Sharp 23C-up 10° up [96 EDO] 5/8-tone up	Flat 23C-down 10° down [96 EDO] 5/8-tone down	Sharp 5:19C-up 11/20-tone up	Flat 5:19C-down 11/20-tone down

U+E3D0	U+E3D1	U+E3D2	U+E3D3	U+E3D4	U+E3D5	U+E3D6	U+E3D7
⼘	⼙	⼚	⼛	⼜	⼝	⼞	⼟
Sharp 5:23S-up 7° up [60 EDO] 7/10-tone up	Flat 5:23S-down 7° down [60 EDO] 7/10-tone down	Double sharp 5:23S-down 8° up [60 EDO] 4/5-tone up	Double flat 5:23S-up 8° down [60 EDO] 4/5-tone down	Double sharp 5:19C-down 19/20-tone up	Double flat 5:19C-down 19/20-tone down	Double sharp 23C-down 14°up [96 EDO] 7/8-tone up	Double flat 23C-up 14° down [96 EDO] 7/8-tone down

Implementation notes

The Trojan (or tone-fraction) set is not strictly-speaking an extension of Athenian, as there are a few Athenians (including Spartans) that are not Trojan. Those are the glyphs whose descriptions include "5:7k", "7:11k", "5:11S", "25S" or "11L" and do not include a tone-fraction.

The descriptions below the Sagittal glyphs do not include all possible uses, only a selection of the most common. To determine which of these glyphs to use for tone-fractions not listed here (as well as for JI ratios and degrees of EDOs that are not listed here) please see http://sagittal.org.

Promethean Sagittal extension (high precision) single-shaft accidentals (U+E3D8–U+E3F7)

U+E3D8	U+E3D9	U+E3DA	U+E3DB	U+E3DC	U+E3DD	U+E3DE	U+E3DF
ꟼ	ꟼ	ꟼ	ꟼ	ꟼ	ꟼ	ꟼ	ꟼ
19 schisma up (19s)	19 schisma down	17 kleisma up (17k)	17 kleisma down	143 comma up (143C , 13L less 11M)	143 comma down	11:49 comma up (11:49C, 11M less 49C)	11:49 comma down

U+E3E0	U+E3E1	U+E3E2	U+E3E3	U+E3E4	U+E3E5	U+E3E6	U+E3E7
ꟼ	ꟼ	ꟼ	ꟼ	ꟼ	ꟼ	ꟼ	ꟼ
19 comma up (19C)	19 comma down	7:19 comma up (7:19C, 7C less 19s)	7:19 comma down	49 small diesis up (49S, ~31S)	49 small diesis down	23 small diesis up (23S)	23 small diesis down

U+E3E8	U+E3E9	U+E3EA	U+E3EB	U+E3EC	U+E3ED	U+E3EE	U+E3EF
ꟼ	ꟼ	ꟼ	ꟼ	ꟼ	ꟼ	ꟼ	ꟼ
5:13 medium diesis up (5:13M, ~37M, 5C plus 13C)	5:13 medium diesis down	11:19 medium diesis up (11:19M , 11M plus 19s)	11:19 medium diesis down	49 medium diesis up (49M, ~31M, 7C plus 7C)	49 medium diesis down	5:49 medium diesis up (5:49M, half apotome)	5:49 medium diesis down

U+E3F0	U+E3F1	U+E3F2	U+E3F3	U+E3F4	U+E3F5	U+E3F6	U+E3F7
ꟼ	ꟼ	ꟼ	ꟼ	ꟼ	ꟼ		
49 large diesis up (49L, ~31L , apotome less 49M)	49 large diesis down	11:19 large diesis up (11:19L , apotome less 11:19M)	11:19 large diesis down	5:13 large diesis up (5:13L, ~37L , apotome less 5:13M)	5:13 large diesis down	*Unused*	*Unused*

Promethean Sagittal extension (high precision) multi-shaft accidentals (U+E3F8–U+E437)

U+E3F8	U+E3F9	U+E3FA	U+E3FB	U+E3FC	U+E3FD	U+E3FE	U+E3FF
Sharp 23S-down	Flat 23S-up	Sharp 49S-down	Flat 49S-up	Sharp 7:19C-down	Flat 7:19C-up	Sharp 19C-down	Flat 19C-up

U+E400	U+E401	U+E402	U+E403	U+E404	U+E405	U+E406	U+E407
Sharp 11:49C-down	Flat 11:49C-up	Sharp 143C-down	Flat 143C-up	Sharp 17k-down	Flat 17k-up	Sharp 19s-down	Flat 19s-up

U+E408	U+E409	U+E40A	U+E40B	U+E40C	U+E40D	U+E40E	U+E40F
Sharp 19s-up	Flat 19s-down	Sharp 17k-up	Flat 17k-down	Sharp 143C-up	Flat 143C-down	Sharp 11:49C-up	Flat 11:49C-down

U+E410	U+E411	U+E412	U+E413	U+E414	U+E415	U+E416	U+E417
Sharp 19C-up	Flat 19C-down	Sharp 7:19C-up	Flat 7:19C-down	Sharp 49S-up	Flat 49S-down	Sharp 23S-up	Flat 23S-down

U+E418	U+E419	U+E41A	U+E41B	U+E41C	U+E41D	U+E41E	U+E41F
Sharp 5:13M-up	Flat 5:13M-down	Sharp 11:19M-up	Flat 11:19M-down	Sharp 49M-up	Flat 49M-down	Sharp 5:49M-up (one and a half apotomes)	Flat 5:49M down

U+E420	U+E421	U+E422	U+E423	U+E424	U+E425	U+E426	U+E427
Sharp 49L-up	Flat 49L-down	Sharp 11:19L-up	Flat 11:19L-down	Sharp 5:13L-up	Flat 5:13L-down	*Unused*	*Unused*

U+E428	U+E429	U+E42A	U+E42B	U+E42C	U+E42D	U+E42E	U+E42F
Double sharp 23S-down	Double flat 23S-up	Double sharp 49S-down	Double flat 49S-up	Double sharp 7:19C-down	Double flat 7:19C-up	Double sharp 19C-down	Double flat 19C-up

U+E430	U+E431	U+E432	U+E433	U+E434	U+E435	U+E436	U+E437
Double sharp 11:49C-down	Double flat 11:49C-up	Double sharp 143C-down	Double flat 143C-up	Double sharp 17k-down	Double flat 17k-up	Double sharp 19s-down	Double flat 19s-up

Sagittal-compatible accidentals (U+E438–U+E447)

U+E438	U+E439	U+E43A	U+E43B	U+E43C	U+E43D	U+E43E	U+E43F
✗	＼	ɗ	⣔	✖			
Wilson plus (5 comma up)	Wilson minus (5 comma down)	Narrow reversed flat (quarter-tone flat)	Narrow reversed flat and flat (three-quarter-tones flat)	Large double sharp	*Unused*	*Unused*	*Unused*

U+E440	U+E441	U+E442	U+E443	U+E444	U+E445	U+E446	U+E447
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

Other Sagittal-compatible accidentals are the standard double-flat, flat, natural and sharp (U+E2A4, U+E2A0, U+E2A1 and U+E2A2) and the Stein half-sharp and one-and-a-half-sharps (U+E2F2 and U+E2F3).

Herculean Sagittal extension (very high precision) accidental diacritics (U+E448–U+E44F)

U+E448	U+E449	U+E44A	U+E44B	U+E44C	U+E44D	U+E44E	U+E44F
Shaft up (natural for use with only diacritics up)	Shaft down (natural for use with only diacritics down)	Acute 5 schisma up (5s) 2 cents up	Grave 5 schisma down 2 cents down	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

Sagittal diacritics are placed to the left of Sagittal accidentals if required; at most one diacritic from each group. If there are multiple diacritics, those representing the larger alteration are placed closer to the accidental. If diacritics are directly altering the natural note, they should be placed to the left of, but not touching, one of the bare-shaft glyphs (U+E448 or U+E449); whichever one represents the direction of the sum of the diacritic alterations.

Olympian Sagittal extension (extreme precision) accidental diacritics (U+E450–U+E457)

U+E450	U+E451	U+E452	U+E453	U+E454	U+E455	U+E456	U+E457
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

This range is reserved for the future definition of four glyphs, representing alterations of one and two 455 or 65:77 schisminas. These schisminas are approximately 0.4 cents.

Magrathean Sagittal extension (insane precision) accidental diacritics (U+E458–U+E47F)

U+E458	U+E459	U+E45A	U+E45B	U+E45C	U+E45D	U+E45E	U+E45F
Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused

U+E460	U+E461	U+E462	U+E463	U+E464	U+E465	U+E466	U+E467
Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused

U+E468	U+E469	U+E46A	U+E46B	U+E46C	U+E46D	U+E46E	U+E46F
Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused

U+E470	U+E471	U+E472	U+E473	U+E474	U+E475	U+E476	U+E477
Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused

U+E478	U+E479	U+E47A	U+E47B	U+E47C	U+E47D	U+E47E	U+E47F
Unused	Unused	Unused	Unused	Unused	Unused	Unused	Unused

Implementation notes

This range is reserved for the future definition of 38 glyphs, representing alterations of a half to nine-and-a-half tinas. A tina is approximately 0.14 cents.

Arel-Ezgi-Uzdilek (AEU) accidentals (U+E4C0–U+E4C7)

U+E4C0	U+E4C1	U+E4C2	U+E4C3	U+E4C4	U+E4C5	U+E4C6	U+E4C7
𝄌	♭	𝄬	◖	♯	♯	♯	♯
Büyük mücenneb (flat)	Kücük mücenneb (flat)	Bakiye (flat)	Koma (flat)	Koma (sharp)	Bakiye (sharp)	Kücük mücenneb (sharp)	Büyük mücenneb (sharp)

Turkish folk music accidentals (U+E4C8–U+E4CF)

U+E4C8	U+E4C9	U+E4CA	U+E4CB	U+E4CC	U+E4CD	U+E4CE	U+E4CF
1-comma sharp	2-comma sharp	3-comma sharp	5-comma sharp	1-comma flat	2-comma flat	3-comma flat	4-comma flat

Persian accidentals (U+E4D0–U+E4D7)

U+E4D0	U+E4D1	U+E4D2	U+E4D3	U+E4D4	U+E4D5	U+E4D6	U+E4D7
�ⵏ	ⵌ						
Koron (quarter flat)	Sori (quarter sharp)	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E4D8	U+E4D9	U+E4DA	U+E4DB	U+E4DC	U+E4DD	U+E4DE	U+E4DF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Articulation (U+E4E0–U+E4FF)

U+E4E0	U+E4E1	U+E4E2	U+E4E3	U+E4E4	U+E4E5	U+E4E6	U+E4E7
>	.	⎯	❜	❘	❜	❘	❘
Accent *Also U+1D17B*	Staccato *Also U+1D17C*	Tenuto *Also U+1D17D*	Staccatissimo above *Also U+1D17E*	Staccatissimo below	Staccatissimo wedge above	Staccatissimo wedge below	Staccatissimo stroke above

U+E4E8	U+E4E9	U+E4EA	U+E4EB	U+E4EC	U+E4ED	U+E4EE	U+E4EF
❘	∧	∨	∧̣	v̇	>̣	>̇	⎯̣
Staccatissimo stroke below	Marcato above *Also U+1D17F*	Marcato below	Marcato-staccato above *Also U+1D180*	Marcato-staccato below	Accent-staccato above *Also U+1D181*	Accent-staccato below	Louré (tenuto-staccato) above *Also U+1D182*

U+E4F0	U+E4F1	U+E4F2	U+E4F3	U+E4F4	U+E4F5	U+E4F6	U+E4F7
⎯̇	╱	╲	⌣	⌢	⌒	⌣	
Louré (tenuto-staccato) below	Stress above	Stress below	Unstress above	Unstress below	Laissez vibrer (l.v.) above	Laissez vibrer (l.v.) below	*Unused*

U+E4F8	U+E4F9	U+E4FA	U+E4FB	U+E4FC	U+E4FD	U+E4FE	U+E4FF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Recommended stylistic alternates

U+E4E0							
>							
Large accent (for keyboard music)							

# Holds and pauses (U+E500–U+E51F)

U+E500	U+E501	U+E502	U+E503	U+E504	U+E505	U+E506	U+E507
⌢̇	⌣̇	⋀	⋁	⋀	⋁	⊓̇	⊔̇
Fermata above *Also U+1D110*	Fermata below *Also U+1D111*	Very short fermata above	Very short fermata below	Short fermata above	Short fermata below	Long fermata above	Long fermata below

U+E508	U+E509	U+E50A	U+E50B	U+E50C	U+E50D	U+E50E	U+E50F
⊓̇	⊔̇	,	//	//	‖	⌒̇	
Very long fermata above	Very long fermata below	Breath mark *Also U+1D112*	Caesura *Also U+1D113*	Thick caesura	Short caesura	Breath mark (Salzedo)	*Unused*

U+E510	U+E511	U+E512	U+E513	U+E514	U+E515	U+E516	U+E517
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E518	U+E519	U+E51A	U+E51B	U+E51C	U+E51D	U+E51E	U+E51F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Rests (U+E520–U+E53F)

U+E520	U+E521	U+E522	U+E523	U+E524	U+E525	U+E526	U+E527
Longa rest	Double whole (breve) rest *Also U+1D13A*	Whole (semibreve) rest *Also U+1D13B*	Half (minim) rest *Also U+1D13C*	Quarter (crotchet) rest *Also U+1D13D*	Eighth (quaver) rest *Also U+1D13E*	16th (semiquaver) rest *Also U+1D13F*	32nd (demisemi-quaver) rest *Also U+1D140*

U+E528	U+E529	U+E52A	U+E52B	U+E52C	U+E52D	U+E52E	U+E52F
64th (hemidemi-semiquaver) rest *Also U+1D141*	128th rest *Also U+1D142*	256th rest	512th rest	1024th rest	Multiple measure rest *Also U+1D129*	H-bar, left half	H-bar, right half

U+E530	U+E531	U+E532	U+E533	U+E534	U+E535	U+E536	U+E537
Old-style quarter (crotchet) rest	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E538	U+E539	U+E53A	U+E53B	U+E53C	U+E53D	U+E53E	U+E53F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

Scoring applications should draw multiple measure rests using primitives to provide variable width and line thickness rather than using U+E52D.

"Old style" multiple measure rests can be created by laying out U+E520 (four bars), U+E521 (two bars) and U+E522 (one bar) next to each other.

Bar repeats (U+E540–U+E54F)

U+E540	U+E541	U+E542	U+E543	U+E544	U+E545	U+E546	U+E547
Repeat last bar Also U+1D10E	Repeat last two bars Also U+1D10F	Repeat last four bars	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E548	U+E549	U+E54A	U+E54B	U+E54C	U+E54D	U+E54E	U+E54F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Octaves (U+E550–U+E55F)

U+E550	U+E551	U+E552	U+E553	U+E554	U+E555	U+E556	U+E557
8	8va	8vb	8^{ba}	15	15ma	15^{mb}	22
Ottava	Ottava alta *Also U+1D136*	Ottava bassa *Also U+1D137*	Ottava bassa (ba)	Quindicesima	Quindicesima alta *Also U+1D138*	Quindicesima bassa *Also U+1D139*	Ventiduesima

U+E558	U+E559	U+E55A	U+E55B	U+E55C	U+E55D	U+E55E	U+E55F
22ma	22^{mb}						
Ventiduesima alta	Ventiduesima bassa	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

See the implementation notes for clefs (U+E060–U+E08F).

Dynamics (U+E560–U+E58F)

U+E560	U+E561	U+E562	U+E563	U+E564	U+E565	U+E566	U+E567
p	*m*	*f*	*r*	*s*	*z*	*n*	*pppppp*
Piano *Also U+1D18F*	Mezzo *Also U+1D190*	Forte *Also U+1D191*	Rinforzando *Also U+1D18C*	Subito *Also U+1D18D*	Z *Also U+1D18E*	Niente	pppppp

U+E568	U+E569	U+E56A	U+E56B	U+E56C	U+E56D	U+E56E	U+E56F
ppppp	*pppp*	*ppp*	*pp*	*mp*	*mf*	*ff*	*fff*
ppppp	pppp	ppp	pp	mp	mf	ff	fff

U+E570	U+E571	U+E572	U+E573	U+E574	U+E575	U+E576	U+E577
ffff	*fffff*	*ffffff*	*fp*	*fz*	*sf*	*sfp*	*sfpp*
ffff	fffff	ffffff	Forte-piano	Forzando	Sforzando	Sforzando-piano	Sforzando-pianissimo

U+E578	U+E579	U+E57A	U+E57B	U+E57C	U+E57D	U+E57E	U+E57F
sfz	*sffz*	*rf*	*rfz*	*<*	*>*	°	
Sforzato	Sforzatissimo	Rinforzando 1	Rinforzando 2	Crescendo *Also U+1D192*	Diminuendo *Also U+1D193*	Niente (for hairpins)	*Unused*

U+E580	U+E581	U+E582	U+E583	U+E584	U+E585	U+E586	U+E587
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E588	U+E589	U+E58A	U+E58B	U+E58C	U+E58D	U+E58E	U+E58F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Recommended ligatures

uniE561_uniE560							
mp							
Mezzo-piano							

Implementation notes

Scoring applications should draw *crescendo* and *diminuendo* hairpins using primitives rather than U+E57C and U+E57D in order to provide variable width, line thickness, angle and aperture.

Ligatures should be defined for common combinations of dynamics, such as *mp*. Special attention should be paid to kerning pairs for these glyphs.

Scoring applications may choose to draw dynamics either using multiple glyphs (e.g. 3 x U+E562 for **fff**) or using the pre-composed glyph (e.g. 1 x U+E570 for **fff**).

Ornaments (U+E590–U+E5DF)

U+E590	U+E591	U+E592	U+E593	U+E594	U+E595	U+E596	U+E597
Slashed grace note *Also U+1D194*	Grace note *Also U+1D195*	Grace note slash	Trill *Also U+1D196*	Turn *Also U+1D197*	Inverted turn *Also U+1D198*	Turn with slash *Also U+1D199*	Turn up *Also U+1D19A*

U+E598	U+E599	U+E59A	U+E59B	U+E59C	U+E59D	U+E59E	U+E59F
Mordent	Inverted mordent	Glissando up *Also U+1D1B1*	Glissando down *Also U+1D1B2*	Tremblement simple	Double cadence	Double cadence-mordent	Cadence

U+E5A0	U+E5A1	U+E5A2	U+E5A3	U+E5A4	U+E5A5	U+E5A6	U+E5A7
Cadence	Cadence	Cadence	Cadence	Pincé (battement)	Tremblement simple	Cadence	Cadence

U+E5A8	U+E5A9	U+E5AA	U+E5AB	U+E5AC	U+E5AD	U+E5AE	U+E5AF
Tremblement	Mordent	Schleifer (long mordent)	Port de voix (simple)	Coulé (coulement)	Pincé (d'Anglebert)	Cheute et pincé	Accent (J.S. Bach)

U+E5B0	U+E5B1	U+E5B2	U+E5B3	U+E5B4	U+E5B5	U+E5B6	U+E5B7
Port de voix double	Port de voix	Port de voix	Forefall (Purcell)	Backfall (Purcell)	Shake	Shake	Plain note and shake

U+E5B8	U+E5B9	U+E5BA	U+E5BB	U+E5BC	U+E5BD	U+E5BE	U+E5BF
Tremblement et pincé	Pincé (Rameau)	Pincé et port de voix	Battement	Vertical line	Shake (Muffat)	Shake (Muffat)	Shake (Muffat)

U+E5C0	U+E5C1	U+E5C2	U+E5C3	U+E5C4	U+E5C5	U+E5C6	U+E5C7
Coulé montant	Coulé descendant	Cadence (J.S. Bach)	Cadence (C.P.E. Bach)	Double cadence	Tramblement appuyé	Double cadence coupée	Tour de chant

U+E5C8	U+E5C9	U+E5CA	U+E5CB	U+E5CC	U+E5CD	U+E5CE	U+E5CF
Balkan	Balkan	Port de voix doublé	Port de voix doublé	Shake	Shake	Quilisma 3	Quilisma 4

U+E5D0	U+E5D1	U+E5D2	U+E5D3	U+E5D4	U+E5D5	U+E5D6	U+E5D7
Oriscus	Haydn ornament	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E5D8	U+E5D9	U+E5DA	U+E5DB	U+E5DC	U+E5DD	U+E5DE	U+E5DF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

There is little agreement over the meaning, or indeed the naming, of ornaments beyond those that have survived into modern usage (trill, turn, mordent). When designing the Unicode Musical Symbols range, Perry Roland elected to develop a scheme for creating complex ornaments using a series of glyphs rather than defining precomposed glyphs for every ornament, as shown below:[12]

	1D19C STROKE-2 + 1D19D STROKE-3
	1D19C STROKE-2 + 1D1A0 STROKE-6 + 1D19D STROKE-3
	1D1A0 STROKE-6 + 1D19C STROKE-2 + 1D19C STROKE-2 + 1D19D STROKE-3
	1D19C STROKE-2 + 1D19C STROKE-2 + 1D1A0 STROKE-6 + 1D19D STROKE-3
	1D19C STROKE-2 + 1D19C STROKE-2 + 1D1A3 STROKE-9
	1D1A1 STROKE-7 + 1D19C STROKE-2 + 1D19C STROKE-2 + 1D19D STROKE-3
	1D1A2 STROKE-8 + 1D19C STROKE-2 + 1D19C STROKE-2 + 1D19D STROKE-3
	1D19C STROKE-2 + 1D19C STROKE-2 + 1D19D STROKE-3 + 1D19F STROKE-5
	1D1A1 STROKE-7 + 1D19C STROKE-2 + 1D19C STROKE-2 + 1D1A0 STROKE-6 + 1D19D STROKE-3
	1D1A1 STROKE-7 + 1D19C STROKE-2 + 1D19C STROKE-2 + 1D19D STROKE-3 + 1D19F STROKE-5
	1D1A2 STROKE-8 + 1D19C STROKE-2 + 1D19C STROKE-2 + 1D1A0 STROKE-6 + 1D19D STROKE-3
	1D19B STROKE-1 + 1D19C STROKE-2 + 1D19C STROKE-2 + 1D19D STROKE-3
	1D19B STROKE-1 + 1D19C STROKE-2 + 1D19C STROKE-2 + 1D19D STROKE-3 + 1D19E STROKE-4
	1D19C STROKE-2 + 1D19D STROKE-3 + 1D19E STROKE-4

Scoring applications should draw grace notes in the same way as they draw regular notes, rather than using the precomposed glyphs (U+E59A and U+E59B).

Likewise, scoring applications should draw *glissandi* using multiple instances of a wiggly line segment (e.g. U+EA8F), not the precomposed glyphs, to provide variable length and angle.

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
[12] *Ibid.*, Allen, page 539.

Brass techniques (U+E5E0–U+E60F)

U+E5E0	U+E5E1	U+E5E2	U+E5E3	U+E5E4	U+E5E5	U+E5E6	U+E5E7
Scoop	Lift, short	Lift, medium	Lift, long	Doit, short *Also U+1D185*	Doit, medium	Doit, long	Lip fall, short *Also U+1D186*

U+E5E8	U+E5E9	U+E5EA	U+E5EB	U+E5EC	U+E5ED	U+E5EE	U+E5EF
Lip fall, medium	Lip fall, long	Smooth fall, short	Smooth fall, medium	Smooth fall, long	Rough fall, short	Rough fall, medium	Rough fall, long

U+E5F0	U+E5F1	U+E5F2	U+E5F3	U+E5F4	U+E5F5	U+E5F6	U+E5F7
Plop	Flip *Also U+1D187*	Smear *Also U+1D188*	Bend *Also U+1D189*	Jazz turn	Muted (closed)	Half-muted (half-closed)	Open

U+E5F8	U+E5F9	U+E5FA	U+E5FB	U+E5FC	U+E5FD	U+E5FE	U+E5FF
Harmon mute, closed	Harmon mute, stem-cup half-closed, left	Harmon mute, stem-cup half-closed, right	Harmon mute, stem-cup open	*Unused*	*Unused*	*Unused*	*Unused*

U+E600	U+E601	U+E602	U+E603	U+E604	U+E605	U+E606	U+E607
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E608	U+E609	U+E60A	U+E60B	U+E60C	U+E60D	U+E60E	U+E60F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Wind techniques (U+E610–U+E63F)

U+E610	U+E611	U+E612	U+E613	U+E614	U+E615	U+E616	U+E617
Double-tongue above *Also U+1D18A*	Double-tongue below	Triple-tongue above *Also U+1D18B*	Triple-tongue below	Closed hole	Three-quarters closed hole	Half-closed hole	Half-closed hole 2

U+E618	U+E619	U+E61A	U+E61B	U+E61C	U+E61D	U+E61E	U+E61F
Half-closed hole 3	Open hole	Trill key	Flatter embouchure	Sharper embouchure	Relaxed embouchure	Somewhat relaxed embouchure	Tight embouchure

| U+E620	U+E621	U+E622	U+E623	U+E624	U+E625	U+E626	U+E627
Somewhat tight embouchure	Very tight embouchure	Very relaxed embouchure / weak air-pressure	Very tight embouchure / strong air-pressure	Normal reed position	Very little reed (pull outwards)	Much more reed (push inwards)	Combining multiphonics (black) for stem

U+E628	U+E629	U+E62A	U+E62B	U+E62C	U+E62D	U+E62E	U+E62F
Combining multiphonics (white) for stem	Combining multiphonics (black & white) for stem	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E628	U+E629	U+E62A	U+E62B	U+E62C	U+E62D	U+E62E	U+E62F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Recommended stylistic alternates

U+E610	U+E611	U+E612	U+E613				
••	••	•••	•••				
Double-tongue above (no slur)	Double-tongue below (no slur)	Triple-tongue above (no slur)	Triple-tongue below (no slur)				

String techniques (U+E640–U+E65F)

U+E640	U+E641	U+E642	U+E643	U+E644	U+E645	U+E646	U+E647
⊓	V	○	◑	⊓	Ш	⌒	⌓
Down bow *Also U+1D1AA*	Up bow *Also U+1D1AB*	Harmonic *Also U+1D1AC*	Half-harmonic	Mute on	Mute off	Bow behind bridge (sul ponticello)	Bow on top of bridge

U+E648	U+E649	U+E64A	U+E64B	U+E64C	U+E64D	U+E64E	U+E64F
▭	⊓	⩔	⊓	⩔	▶	⌣	⌣
Bow on tailpiece	Overpressure, down bow	Overpressure, up bow	Overpressure possibile, down bow	Overpressure possibile, up bow	Overpressure, no bow direction	Jeté (gettato) above	Jeté (gettato) below

U+E650	U+E651	U+E652	U+E653	U+E654	U+E655	U+E656	U+E657
↳	∿	⚲	(⊓V)				
Fouetté	Vibrato pulse accent (Saunders)	Thumb position	Change bow direction, indeterminate	*Unused*	*Unused*	*Unused*	*Unused*

U+E658	U+E659	U+E65A	U+E65B	U+E65C	U+E65D	U+E65E	U+E65F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

Scoring applications should not use the precomposed glyphs that include stems (U+E240–U+E25F) but instead draw the stems using primitives and impose the symbols upon them to ensure optimal positioning.

Plucked techniques (U+E660–U+E67F)

U+E660	U+E661	U+E662	U+E663	U+E664	U+E665	U+E666	U+E667
♀	♂	⊶			⌢	☾	⊕
Snap pizzicato below *Also U+1D1AD*	Snap pizzicato above	Buzz pizzicato	Arpeggiato up *Also U+1D183*	Arpeggiato down *Also U+1D184*	With fingernails *Also U+1D1B3*	Fingernail flick	Damp *Also U+1D1B4*

U+E668	U+E669	U+E66A	U+E66B	U+E66C	U+E66D	U+E66E	U+E66F
⊕	◯	⊖					
Damp all *Also U+1D1B5*	Plectrum	Damp (on stem)	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E670	U+E671	U+E672	U+E673	U+E674	U+E675	U+E676	U+E677
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E678	U+E679	U+E67A	U+E67B	U+E67C	U+E67D	U+E67E	U+E67F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

Scoring applications should draw arpeggiato markings using multiple instances of the appropriate wiggly line segment glyphs (U+EA89–U+EA8E) rather than the precomposed glyphs (U+E663 and U+E664) to allow variable length.

Vocal techniques (U+E680–U+E69F)

| U+E680	U+E681	U+E682	U+E683	U+E684	U+E685	U+E686	U+E687
✓	▬	▭	▭	▭	▭	✕	←
Breath mark	Mouth closed	Mouth slightly open	Mouth open	Mouth wide open	Mouth pursed	Sprechgesang	Breathe in

U+E688	U+E689	U+E68A	U+E68B	U+E68C	U+E68D	U+E68E	U+E68F
→	↑	↓	S				
Breathe out	Sharper intonation	Flatter intonation	Combining sussurando for stem	*Unused*	*Unused*	*Unused*	*Unused*

U+E690	U+E691	U+E692	U+E693	U+E694	U+E695	U+E696	U+E697
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E698	U+E699	U+E69A	U+E69B	U+E69C	U+E69D	U+E69E	U+E69F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Keyboard techniques (U+E6A0–U+E6BF)

U+E6A0	U+E6A1	U+E6A2	U+E6A3	U+E6A4	U+E6A5	U+E6A6	U+E6A7
Pedal mark *Also U+1D1AE*	Pedal P	Pedal up mark *Also U+1D1AF*	Half-pedal mark *Also U+1D180*	Pedal up notch	Sostenuto pedal mark	Pedal S	Half-pedal mark 1

U+E6A8	U+E6A9	U+E6AA	U+E6AB	U+E6AC	U+E6AD	U+E6AE	U+E6AF
Half-pedal mark 2	Pedal up special	Left pedal pictogram	Middle pedal pictogram	Right pedal pictogram	Pedal heel 1	Pedal heel 2	Pedal toe 1

U+E6B0	U+E6B1	U+E6B2	U+E6B3	U+E6B4	U+E6B5	U+E6B6	U+E6B7
Pedal toe 2	Pluck strings inside piano (Maderna)	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E6B8	U+E6B9	U+E6BA	U+E6BB	U+E6BC	U+E6BD	U+E6BE	U+E6BF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Harp techniques (U+E6C0–U+E6DF)

U+E6C0	U+E6C1	U+E6C2	U+E6C3	U+E6C4	U+E6C5	U+E6C6	U+E6C7
Harp pedal raised (flat)	Harp pedal centered (natural)	Harp pedal lowered (sharp)	Harp pedal divider	Slide with suppleness (Salzedo)	Oboic flux (Salzedo)	Thunder effect (Salzedo)	Whistling sounds (Salzedo)

U+E6C8	U+E6C9	U+E6CA	U+E6CB	U+E6CC	U+E6CD	U+E6CE	U+E6CF
Metallic sounds (Salzedo)	Tam-tam sounds (Salzedo)	Play at upper end of strings (Salzedo)	Timpanic sounds (Salzedo)	Muffle totally (Salzedo)	Fluidic sounds, left hand (Salzedo)	Fluidic sounds, right hand (Salzedo)	Metal rod pictogram

U+E6D0	U+E6D1	U+E6D2	U+E6D3	U+E6D4	U+E6D5	U+E6D6	U+E6D7
Tuning key pictogram	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E6D8	U+E6D9	U+E6DA	U+E6DB	U+E6DC	U+E6DD	U+E6DE	U+E6DF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

U+E6CD and U+E6CE are similar in function to noteheads, and should be positioned relative to note stems in the same way.

U+E6C5 and U+E6CA may be repeated to create a continuing line, indicating the duration of the technique.

Tuned mallet percussion pictograms (U+E6E0–U+E6FF)

U+E6E0	U+E6E1	U+E6E2	U+E6E3	U+E6E4	U+E6E5	U+E6E6	U+E6E7
Glockenspiel	Xylophone	Marimba	Vibraphone	Empty trapezoid	Glockenspiel (Smith Brindle)	Xylophone (Smith Brindle)	Marimba (Smith Brindle)

U+E6E8	U+E6E9	U+E6EA	U+E6EB	U+E6EC	U+E6ED	U+E6EE	U+E6EF
Vibraphone (Smith Brindle)	Crotales	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E6F0	U+E6F1	U+E6F2	U+E6F3	U+E6F4	U+E6F5	U+E6F6	U+E6F7
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E6F8	U+E6F9	U+E6FA	U+E6FB	U+E6FC	U+E6FD	U+E6FE	U+E6FF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Chimes pictograms (U+E700–U+E70F)

U+E700	U+E701	U+E702	U+E703	U+E704	U+E705	U+E706	U+E707
Tubular bells	Wind chimes (glass)	Chimes	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E708	U+E709	U+E70A	U+E70B	U+E70C	U+E70D	U+E70E	U+E70F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Drums pictograms (U+E710–U+E72F)

U+E710	U+E711	U+E712	U+E713	U+E714	U+E715	U+E716	U+E717
Timpani	Snare drum	Snare drum, snares off	Military snare drum	Bass drum	Bass drum on side	Tenor drum	Tom-tom

U+E718	U+E719	U+E71A	U+E71B	U+E71C	U+E71D	U+E71E	U+E71F
Tambourine	Timbales	Bongos	Conga	Log drum	Slit drum	Brake drum	Goblet drum (djembe, dumbek)

U+E720	U+E721	U+E722	U+E723	U+E724	U+E725	U+E726	U+E727
Indian tabla	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E728	U+E729	U+E72A	U+E72B	U+E72C	U+E72D	U+E7@E	U+E72F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Recommended stylistic alternates

U+E718							
Tambourine (Stockhausen)							

Wooden struck or scraped percussion pictograms (U+E730–U+E74F)

U+E730	U+E731	U+E732	U+E733	U+E734	U+E735	U+E736	U+E737
Wood block	Temple blocks	Claves	Guiro	Ratchet	Football rattle	Whip	Board clapper

U+E738	U+E739	U+E73A	U+E73B	U+E73C	U+E73D	U+E73E	U+E73F
Castanets	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E740	U+E741	U+E742	U+E743	U+E744	U+E745	U+E746	U+E747
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E748	U+E749	U+E74A	U+E74B	U+E74C	U+E74D	U+E74E	U+E74F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Recommended stylistic alternates

U+E738							
Castanets (Smith Brindle)							

Metallic struck percussion pictograms (U+E750–U+E75F)

U+E750	U+E751	U+E752	U+E753	U+E754	U+E755	U+E756	U+E757
Triangle	Anvil	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E758	U+E759	U+E75A	U+E75B	U+E75C	U+E75D	U+E75E	U+E75F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Bells pictograms (U+E760–U+E76F)

U+E760	U+E761	U+E762	U+E763	U+E764	U+E765	U+E766	U+E767
Sleigh bell	Cow bell	Almglocken	Bell plate	Bell	Handbell	*Unused*	*Unused*

U+E768	U+E769	U+E76A	U+E76B	U+E76C	U+E76D	U+E76E	U+E76F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Recommended stylistic alternates

U+E760	U+E761					
Sleigh bell (Smith Brindle)	Cow bell (Berio)					

Cymbals pictograms (U+E770–U+E77F)

U+E770	U+E771	U+E772	U+E773	U+E774	U+E775	U+E776	U+E777
Crash cymbals	Suspended cymbal	Hi-hat	Hi-hat cymbal on stand	Sizzle cymbal	Vietnamese hat cymbal	Chinese cymbal	Finger cymbals

U+E778	U+E779	U+E77A	U+E77B	U+E77C	U+E77D	U+E77E	U+E77F
Cymbal tongs	Edge of cymbal	Bell of cymbal	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E780	U+E781	U+E782	U+E783	U+E784	U+E785	U+E786	U+E787
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E788	U+E789	U+E78A	U+E78B	U+E78C	U+E78D	U+E78E	U+E78F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Gongs pictograms (U+E790–U+E79F)
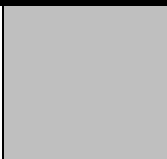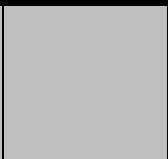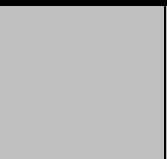
U+E790	U+E791	U+E792	U+E793	U+E794	U+E795	U+E796	U+E797
Tam-tam	Tam-tam with beater (Smith Brindle)	Gong	Gong with button (nipple)	Slide brush on gong	*Unused*	*Unused*	*Unused*

U+E798	U+E799	U+E79A	U+E79B	U+E79C	U+E79D	U+E79E	U+E79F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Shakers or rattles pictograms (U+E7A0–E7AF)

U+E7A0	U+E7A1	U+E7A2	U+E7A3	U+E7A4	U+E7A5	U+E7A6	U+E7A7
Flexatone	Maraca	Maracas	Cabasa	Thundersheet	Vibraslap	Sistrum	Rainstick

U+E7A8	U+E7A9	U+E7AA	U+E7AB	U+E7AC	U+E7AD	U+E7AE	U+E7AF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Recommended stylistic alternates

U+E7A1							
Maraca (Smith Brindle)							

Whistles and aerophones pictograms (U+E7B0–U+E7CF)

U+E7B0	U+E7B1	U+E7B2	U+E7B3	U+E7B4	U+E7B5	U+E7B6	U+E7B7
Slide whistle	Bird whistle	Police whistle	Siren	Wind machine	Car horn	Klaxon horn	Duck call

U+E7B8	U+E7B9	U+E7BA	U+E7BB	U+E7BC	U+E7BD	U+E7BE	U+E7BF
Wind whistle (or mouth siren)	Megaphone	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E7C0	U+E7C1	U+E7C2	U+E7C3	U+E7C4	U+E7C5	U+E7C6	U+E7C7
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E7C8	U+E7C9	U+E7CA	U+E7CB	U+E7CC	U+E7CD	U+E7CE	U+E7CF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Miscellaneous percussion instrument pictograms (U+E7D0–U+E7DF)

U+E7D0	U+E7D1	U+E7D2	U+E7D3	U+E7D4	U+E7D5	U+E7D6	U+E7D7
Pistol shot	Cannon	Sandpaper blocks	Lion's roar	*Unused*	*Unused*	*Unused*	*Unused*

U+E7D8	U+E7D9	U+E7DA	U+E7DB	U+E7DC	U+E7DD	U+E7DE	U+E7DF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Beaters pictograms (U+E7E0–U+E85F)

U+E7E0	U+E7E1	U+E7E2	U+E7E3	U+E7E4	U+E7E5	U+E7E6	U+E7E7
Soft xylophone stick up	Soft xylophone stick down	Soft xylophone stick right	Soft xylophone stick left	Medium xylophone stick up	Medium xylophone stick down	Medium xylophone stick right	Medium xylophone stick left

U+E7E8	U+E7E9	U+E7EA	U+E7EB	U+E7EC	U+E7ED	U+E7EE	U+E7EF
Hard xylophone stick up	Hard xylophone stick down	Hard xylophone stick right	Hard xylophone stick left	Wood xylophone stick up	Wood xylophone stick down	Wood xylophone stick right	Wood xylophone stick left

U+E7F0	U+E7F1	U+E7F2	U+E7F3	U+E7F4	U+E7F5	U+E7F6	U+E7F7
Soft glockenspiel stick up	Soft glockenspiel stick down	Soft glockenspiel stick right	Soft glockenspiel stick left	Hard glockenspiel stick up	Hard glockenspiel stick down	Hard glockenspiel stick right	Hard glockenspiel stick left

U+E7F8	U+E7F9	U+E7FA	U+E7FB	U+E7FC	U+E7FD	U+E7FE	U+E7FF
Soft timpani stick up	Soft timpani stick down	Soft timpani stick right	Soft timpani stick left	Medium timpani stick up	Medium timpani stick down	Medium timpani stick right	Medium timpani stick left

U+E800	U+E801	U+E802	U+E803	U+E804	U+E805	U+E806	U+E807
Hard timpani stick up	Hard timpani stick down	Hard timpani stick right	Hard timpani stick left	Wood timpani stick up	Wood timpani stick down	Wood timpani stick right	Wood timpani stick left

U+E808	U+E809	U+E80A	U+E80B	U+E80C	U+E80D	U+E80E	U+E80F
Soft bass drum stick up	Soft bass drum stick down	Medium bass drum stick up	Medium bass drum stick down	Hard bass drum stick up	Hard bass drum stick down	Double bass drum stick up	Double bass drum stick down

U+E810	U+E811	U+E812	U+E813	U+E814	U+E815	U+E816	U+E817
Soft yarn beater up	Soft yarn beater down	Soft yarn beater right	Soft yarn beater left	Medium yarn beater up	Medium yarn beater down	Medium yarn beater right	Medium yarn beater left

U+E818	U+E819	U+E81A	U+E81B	U+E81C	U+E81D	U+E81E	U+E81F
Hard yarn beater up	Hard yarn beater down	Hard yarn beater right	Hard yarn beater left	Superball beater up	Superball beater down	Superball beater right	Superball beater left

U+E820	U+E821	U+E822	U+E823	U+E824	U+E825	U+E826	U+E827
Superball	Wound beater, hard core up	Wound beater, hard core down	Wound beater, hard core right	Wound beater, hard core left	Wound beater, soft core up	Wound beater, soft core down	Wound beater, soft core right

U+E828	U+E829	U+E82A	U+E82B	U+E82C	U+E82D	U+E82E	U+E82F
Wound beater, soft core left	Soft gum beater, up	Soft gum beater, down	Soft gum beater, right	Soft gum beater, left	Medium gum beater, up	Medium gum beater, down	Medium gum beater, right

U+E830	U+E831	U+E832	U+E833	U+E834	U+E835	U+E836	U+E837
Medium gum beater, left	Hard gum beater, up	Hard gum beater, down	Hard gum beater, right	Hard gum beater, left	Snare sticks up	Snare sticks down	Jazz sticks up

U+E838	U+E839	U+E83A	U+E83B	U+E83C	U+E83D	U+E83E	U+E83F
Jazz sticks down	Triangle beater up	Triangle beater down	Wire brushes up	Wire brushes down	Brass mallets up	Brass mallets down	Soft xylophone beaters

U+E840	U+E841	U+E842	U+E843	U+E844	U+E845	U+E846	U+E847
Spoon-shaped wooden mallet	Guiro scraper	Bow	Chime hammer	Metal hammer	Hammer	Knitting needle	Hand

U+E848	U+E849	U+E84A	U+E84B	U+E84C	U+E84D	U+E84E	U+E84F
Finger	Fist	Fingernails	Coins	Drum stick	*Unused*	*Unused*	*Unused*

U+E850	U+E851	U+E852	U+E853	U+E854	U+E855	U+E856	U+E857
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E858	U+E859	U+E85A	U+E85B	U+E85C	U+E85D	U+E85E	U+E85F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Percussion playing technique pictograms (U+E860–U+E87F)

U+E860	U+E861	U+E862	U+E863	U+E864	U+E865	U+E866	U+E867
✳	⟳	⟲	↻	■	+	⊕	φ
Stick shot	Scrape from center to edge	Scrape from edge to center	Scrape around rim	On rim	Closed / rim shot	Half-open	Half-open 2 (Weinberg)

U+E868	U+E869	U+E86A	U+E86B	U+E86C	U+E86D	U+E86E	U+E86F
○	⊕	✛	⊕	⊕	✖	⊗	⊙
Open	Damp	Damp 2	Damp 3	Damp 4	Rim shot (on stem)	Center (Weinberg)	Center (Ghent)

U+E870	U+E871	U+E872	U+E873	U+E874	U+E875	U+E876	U+E877
©	⊗	⊙	®	Ⓝ			
Center (Caltabiano)	Rim or edge (Weinberg)	Rim (Ghent)	Rim (Caltabiano)	Normal position (Caltabiano)	*Unused*	*Unused*	*Unused*

U+E878	U+E879	U+E87A	U+E87B	U+E87C	U+E87D	U+E87E	U+E87F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Handbells (U+E880–U+E89F)

U+E880	U+E881	U+E882	U+E883	U+E884	U+E885	U+E886	U+E887
▼	▼↑	▼̂	⊙	+	⊹	⊹↑	·↑
Martellato	Martellato lift	Hand martellato	Muted martellato	Mallet, bell suspended	Mallet, bell on table	Mallet lift	Pluck lift

U+E888	U+E889	U+E88A	U+E88B	U+E88C	U+E88D	U+E88E	U+E88F
↑	↓	↑↓	↵	↕	↻	⊕	⋙
Swing up	Swing down	Swing	Echo	Echo 2	Gyro	Damp 3	Belltree

U+E890	U+E891	U+E892	U+E893	U+E894	U+E895	U+E896	U+E897
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E898	U+E899	U+E89A	U+E89B	U+E89C	U+E89D	U+E89E	U+E89F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Guitar (U+E8A0–U+E8BF)

U+E8A0	U+E8A1	U+E8A2	U+E8A3	U+E8A4	U+E8A5	U+E8A6	U+E8A7
✓	⋁	⩕⩕	⓪	①	②	③	④
Guitar vibrato bar scoop	Guitar vibrato bar dip	Guitar shake	String number 0	String number 1 *Also U+2460*	String number 2 *Also U+2461*	String number 3 *Also U+2462*	String number 4 *Also U+2463*

U+E8A8	U+E8A9	U+E8AA	U+E8AB	U+E8AC	U+E8AD	U+E8AE	U+E8AF
⑤	⑥	⑦	⑧	⑨			
String number 5 *Also U+2464*	String number 6 *Also U+2465*	String number 7 *Also U+2466*	String number 8 *Also U+2467*	String number 9 *Also U+2468*	*Unused*	*Unused*	*Unused*

U+E8B0	U+E8B1	U+E8B2	U+E8B3	U+E8B4	U+E8B5	U+E8B6	U+E8B7
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E8B8	U+E8B9	U+E8BA	U+E8BB	U+E8BC	U+E8BD	U+E8BE	U+E8BF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Chord diagrams (U+E8C0–U+E8CF)

U+E8C0	U+E8C1	U+E8C2	U+E8C3	U+E8C4	U+E8C5	U+E8C6	U+E8C7
3-string fretboard	3-string fretboard at nut	4-string fretboard *Also U+1D11D*	4-string fretboard at nut	5-string fretboard	5-string fretboard at nut	6-string fretboard *Also U+1D11C*	6-string fretboard at nut

U+E8C8	U+E8C9	U+E8CA	U+E8CB	U+E8CC	U+E8CD	U+E8CE	U+E8CF
•	×	o					
Fingered fret (filled circle)	String not played (X)	Open string (O)	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E8D0	U+E8D1	U+E8D2	U+E8D3	U+E8D4	U+E8D5	U+E8D6	U+E8D7
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E8D8	U+E8D9	U+E8DA	U+E8DB	U+E8DC	U+E8DD	U+E8DE	U+E8DF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

Scoring applications may choose to draw chord diagram fretboards using primitives in order to provide the end user with control over grid spacing and line thickness relative to size.

Analytics (U+E8E0–U+E8FF)

U+E8E0	U+E8E1	U+E8E2	U+E8E3	U+E8E4	U+E8E5	U+E8E6	U+E8E7
Ħ	N	⌐	¬	Th	⅂Th	ꙄⱢ	Ɫᴾ
Hauptstimme *Also U+1D1A6*	Nebenstimme *Also U+1D1A7*	Start of stimme	End of stimme *Also U+1D1A8*	Theme	Retrograde of theme	Retrograde inversion of theme	Inversion of theme

U+E8E8	U+E8E9	U+E8EA	U+E8EB	U+E8EC	U+E8ED	U+E8EE	U+E8EF
T	⟂						
Theme 1	Inversion 1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E8F0	U+E8F1	U+E8F2	U+E8F3	U+E8F4	U+E8F5	U+E8F6	U+E8F7
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E8CF	U+E8F9	U+E8FA	U+E8FB	U+E8FC	U+E8FD	U+E8FE	U+E8FF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Chord symbols (U+E900–U+E90F)

U+E900	U+E901	U+E902	U+E903	U+E904	U+E905	U+E906	U+E907
○	∅	+	△	—			
Half-diminished *Also U+1D1A9*	Diminished	Augmented	Major seventh	Minor	*Unused*	*Unused*	*Unused*

U+E908	U+E909	U+E90A	U+E90B	U+E90C	U+E90D	U+E90E	U+E90F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

These symbols are designed to combine with accidental symbols (U+E2A2 for sharp and U+E2A0 for flat) from the music font and the letters A–G (for root and bass alterations), lower case letters (for chord qualities, e.g. "maj" and "min") and numbers (for chord extensions or tensions) from any standard text font to produce complete chord symbols.

Scoring applications should be able to create strings with complex formatting, e.g. superscript and subscript characters, small digits stacked on top of each other, and scale these symbols to any arbitrary size in order to produce satisfactory chord symbols with a wide variety of visual appearances.

Tuplets (U+E910–U+E92F)

U+E910	U+E911	U+E912	U+E913	U+E914	U+E915	U+E916	U+E917
0	*1*	*2*	*3*	*4*	*5*	*6*	*7*
Tuplet 0	Tuplet 1	Tuplet 2	Tuplet 3	Tuplet 4	Tuplet 5	Tuplet 6	Tuplet 7

U+E918	U+E919	U+E91A	U+E91B	U+E91C	U+E91D	U+E91E	U+E91F
8	*9*	*:*					
Tuplet 8	Tuplet 9	Tuplet colon	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E920	U+E921	U+E922	U+E923	U+E924	U+E925	U+E926	U+E927
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E928	U+E929	U+E92A	U+E92B	U+E92C	U+E92D	U+E92E	U+E92F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Conductor symbols (U+E930–U+E94F)

U+E930	U+E931	U+E932	U+E933	U+E934	U+E935	U+E936	U+E937
↓	↓	↓	↓	⊓	△	⊓	⚠
Strong beat or cue	Left-hand beat or cue	Right-hand beat or cue	Weak beat or cue	Beat 2, simple time	Beat 3, simple time	Beat 4, simple time	Beat 2, compound time

U+E938	U+E939	U+E93A	U+E93B	U+E93C	U+E93D	U+E93E	U+E93F
□	▣						
Beat 3, compound time	Beat 4, compound time	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E940	U+E941	U+E942	U+E943	U+E944	U+E945	U+E946	U+E947
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E948	U+E949	U+E94A	U+E94B	U+E94C	U+E94D	U+E94E	U+E94F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
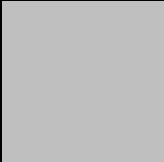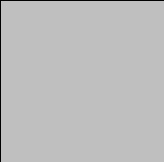
Accordion (U+E950–U+E97F)

U+E950	U+E951	U+E952	U+E953	U+E954	U+E955	U+E956	U+E957
Right hand, 3 ranks, 4' stop (Piccolo)	Right hand, 3 ranks, 8' stop (Clarinet)	Right hand, 3 ranks, upper tremolo 8' stop	Right hand, 3 ranks, lower tremolo 8' stop	Right hand, 3 ranks, 16' stop (Bassoon)	Right hand, 3 ranks, 4' stop + 8' stop (Oboe)	Right hand, 3 ranks, 8' + upper tremolo 8' (Violin)	RH, 3 ranks, 4'+ 8' + upper tremolo 8' (imitation musette)

U+E958	U+E959	U+E95A	U+E95B	U+E95C	U+E95D	U+E95E	U+E95F
RH, 3 r, lower trem. 8' + 8' + upper trem. 8' (authentic musette)	Right hand, 3 ranks, 4' stop + 16' stop (Organ)	Right hand, 3 ranks, 4' + 8' + 16' (Harmonium)	Right hand, 3 ranks, 8' + 16' (Bandoneòn)	RH, 3 ranks, 8' + upper tremolo 8' + 16' (Accordion)	RH, 3 ranks, 4' + lower trem. 8' + upper trem. 8' + 16' (Master)	Right hand, 4 ranks, soprano	Right hand, 4 ranks, alto

U+E960	U+E961	U+E962	U+E963	U+E964	U+E965	U+E966	U+E967
Right hand, 4 ranks, tenor	Right hand, 4 ranks, master	Right hand, 4 ranks, soft bass	Right hand, 4 ranks, soft tenor	Right hand, 4 ranks, bass/alto	Left hand, 2 ranks, 8' stop (round)	Left hand, 2 ranks, 16' stop (round)	Left hand, 2 ranks, 8' stop + 16' stop (round)

U+E968	U+E969	U+E96A	U+E96B	U+E96C	U+E96D	U+E96E	U+E96F
Left hand, 2 ranks, master (round)	Left hand, 2 ranks, master + 16' stop (round)	Left hand, 2 ranks, full master (round)	Left hand, 3 ranks, 8' stop (square)	Left hand, 3 ranks, 2' stop (square)	Left hand, 3 ranks, double 8' stop (square)	Left hand, 3 ranks, 2' stop + 8' stop (square)	Left hand, 3 ranks, 2' stop + double 8' stop (tutti) (square)

U+E970	U+E971	U+E972	U+E973	U+E974	U+E975	U+E976	U+E977
Unused	*Unused*	Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E978	U+E979	U+E97A	U+E97B	U+E97C	U+E97D	U+E97E	U+E97F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Beams and slurs (U+E980–U+E98F)

U+E980	U+E981	U+E982	U+E983	U+E984	U+E985	U+E986	U+E987
BEGIN BEAM	END BEAM	BEGIN TIE	END TIE	BEGIN SLUR	END SLUR	BEGIN PHR.	END PHR.
Begin beam	End beam	Begin tie	End tie	Begin slur	End slur	Begin phrase	End phrase
Also U+1D173	*Also U+1D174*	*Also U+1D175*	*Also U+1D176*	*Also U+1D177*	*Also U+1D178*	*Also U+1D179*	*Also U+1D17A*

U+E988	U+E989	U+E98A	U+E98B	U+E98C	U+E98D	U+E98E	U+E98F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

These are format characters as defined in the Unicode Standard[13]:

> Extensive ligature-like beams are used frequently in musical notation between groups of notes having short values. The practice is widespread and very predictable, so it is therefore amenable to algorithmic handling. The format characters U+1D173 musical symbol begin beam and U+1D174 musical symbol end beam can be used to indicate the extents of beam groupings. In some exceptional cases, beams are left unclosed on one end. This status can be indicated with a U+1D159 musical symbol null notehead character if no stem is to appear at the end of the beam.

> Similarly, format characters have been provided for other connecting structures. The characters U+1D175 musical symbol begin tie, U+1D176 musical symbol end tie, U+1D177 musical symbol begin slur, U+1D178 musical symbol end slur, U+1D179 musical symbol begin phrase, and U+1D17A musical symbol end phrase indicate the extent of these features. Like beaming, these features are easily handled in an algorithmic fashion.

> These pairs of characters modify the layout and grouping of notes and phrases in full musical notation. When musical examples are written or rendered in plain text without special software, the start/end format characters may be rendered as brackets or left uninterpreted. To the extent possible, more sophisticated software that renders musical examples inline with natural-language text might interpret them in their actual format control capacity, rendering slurs, beams, and so forth, as appropriate.

Scoring applications may choose to implement these format characters for beams, slurs, phrase marks and ties or not, as they wish.

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[13] *Ibid.*, Allen, page 537.

Mensural notation (U+E990–U+E9BF)

U+E990	U+E991	U+E992	U+E993	U+E994	U+E995	U+E996	U+E997
Maxima, stem up right *Also U+1D1B6*	Maxima, stem down right	Maxima, stem up left	Maxima, stem down left	Longa, stem up right *Also U+1D1B7*	Longa, stem down right	Longa, stem up left	Longa, stem down left

U+E998	U+E999	U+E99A	U+E99B	U+E99C	U+E99D	U+E99E	U+E99F
Brevis *Also U+1D1B8*	Semibrevis white *Also U+1D1B9*	Semibrevis black *Also U+1D1BA*	Minima white stem up *Also U+1D1BB*	Minima white stem down	Minima black stem up *Also U+1D1BC*	Minima black stem down	Semiminima white stem up *Also U+1D1BD*

U+E9A0	U+E9A1	U+E9A2	U+E9A3	U+E9A4	U+E9A5	U+E9A6	U+E9A7
Semiminima white stem down	Semiminima black stem up *Also U+1D1BE*	Semiminima black stem down	Fusa white stem up *Also U+1D1BF*	Fusa white stem down	Fusa black stem up *Also U+1D1C0*	Fusa black stem down	Signum congruentia

U+E9A8	U+E9A9	U+E9AA	U+E9AB	U+E9AC	U+E9AD	U+E9AE	U+E9AF
Custos up	Custos down	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E9B0	U+E9B1	U+E9B2	U+E9B3	U+E9B4	U+E9B5	U+E9B6	U+E9B7
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E9B8	U+E9B9	U+E9BA	U+E9BB	U+E9BC	U+E9BD	U+E9BE	U+E9BF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Mensural rests (U+E9C0–U+E9CF)

U+E9C0	U+E9C1	U+E9C2	U+E9C3	U+E9C4	U+E9C5	U+E9C6	U+E9C7
Longa perfecta rest *Also U+1D1C1*	Longa imperfecta rest *Also U+1D1C2*	Brevis rest *Also U+1D1C3*	Semibrevis rest *Also U+1D1C4*	Minima rest *Also U+1D1C5*	Semiminima rest *Also U+1DC6*	*Unused*	*Unused*

U+E9C8	U+E9C9	U+E9CA	U+E9CB	U+E9CC	U+E9CD	U+E9CE	U+E9CF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Mensural prolations (U+E9D0–U+E9EF)

U+E9D0	U+E9D1	U+E9D2	U+E9D3	U+E9D4	U+E9D5	U+E9D6	U+E9D7
⊙	○	⊘	⊘	⊙	☾	☽	¢
Tempus perfectum cum prolatione perfecta *Also U+1D1C7*	Tempus perfectum cum prolatione imperfecta *Also U+1D1C8*	Tempus perfectum cum prolatione perfecta diminution 1 *Also U+1D1C9*	Tempus perfectum cum prolatione perfecta diminution 2	Tempus imperfectum cum prolatione perfecta *Also U+1D1CA*	Tempus imperfectum cum prolatione imperfecta *Also U+1D1CB*	Tempus imperfectum cum prolatione imperfecta diminution 1 *Also U+1D1CC*	Tempus imperfectum cum prolatione perfecta diminution 2

U+E9D8	U+E9D9	U+E9DA	U+E9DB	U+E9DC	U+E9DD	U+E9DE	U+E9DF
¢	⊘	⊙	1	2	3	4	℺
Tempus imperfectum cum prolatione imperfecta diminution 3 *Also U+1D1CD*	Tempus imperfectum cum prolatione imperfecta diminution 4 *Also U+1D1CE*	Tempus imperfectum cum prolatione imperfecta diminution 5	Mensural proportion 1	Mensural proportion 2	Mensural proportion 3	Mensural proportion 4	Mensural proportion 4 (old)

U+E9E0	U+E9E1	U+E9E2	U+E9E3	U+E9E4	U+E9E5	U+E9E6	U+E9E7
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+E9E8	U+E9E9	U+E9EA	U+E9EB	U+E9EC	U+E9ED	U+E9EE	U+E9EF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Gregorian notation (U+E9F0–U+EA0F)

U+E9F0	U+E9F1	U+E9F2	U+E9F3	U+E9F4	U+E9F5	U+E9F6	U+E9F7
Gregorian C clef	Gregorian F clef	Gregorian flat	Virga	Podatus	Clivis	Scandicus	Climacus
Also U+1D1D0	*Also U+1D1D1*	*Also U+1D1D2*	*Also U+1D1D3*	*Also U+1D1D4*	*Also U+1D1D5*	*Also U+1D1D6*	*Also U+1D1D7*

U+E9F8	U+E9F9	U+E9FA	U+E9FB	U+E9FC	U+E9FD	U+E9FE	U+E9FF
Torculus	Porrectus	Porrectus flexus	Scandicus flexus	Torculus resupinus	Pes subpunctis	*Unused*	*Unused*
Also U+1D1D8	*Also U+1D1D9*	*Also U+1D1DA*	*Also U+1D1DB*	*Also U+1D1DC*	*Also U+1D1DD*		

U+EA00	U+EA01	U+EA02	U+EA03	U+EA04	U+EA05	U+EA06	U+EA07
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+EA08	U+EA09	U+EA0A	U+EA0B	U+EA0C	U+EA0D	U+EA0E	U+EA0F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Figured bass (U+EA10–U+EA3F)

U+EA10	U+EA11	U+EA12	U+EA13	U+EA14	U+EA15	U+EA16	U+EA17
0	1	2	2	3	4	4	5
Figured bass 0	Figured bass 1	Figured bass 2	Figured bass 2 raised by half-step	Figured bass 3	Figured bass 4	Figured bass 4 raised by half-step	Figured bass 5

U+EA18	U+EA19	U+EA1A	U+EA1B	U+EA1C	U+EA1D	U+EA1E	U+EA1F
5	5	5	6	6	7	7	8
Figured bass 5 raised by half-step	Figured bass 5 raised by half-step 2	Figured bass diminished 5	Figured bass 6	Figured bass 6 raised by half-step	Figured bass 7	Figured bass 7 raised by half-step	Figured bass 8

U+EA20	U+EA21	U+EA22	U+EA23	U+EA24	U+EA25	U+EA26	U+EA27
9	9	♭♭	♭	♮	♯	𝄪	[
Figured bass 9	Figured bass 9 raised by half-step	Figured bass double flat	Figured bass flat	Figured bass natural	Figured bass sharp	Figured bass double sharp	Figured bass [

U+EA28	U+EA29	U+EA2A	U+EA2B	U+EA2C	U+EA2D	U+EA2E	U+EA2F
]	(	)	+	╱	╲		
Figured bass]	Figured bass (	Figured bass)	Figured bass +	Combining raise	Combining lower	*Unused*	*Unused*

U+EA30	U+EA31	U+EA32	U+EA33	U+EA34	U+EA35	U+EA36	U+EA37
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+EA38	U+EA39	U+EA3A	U+EA3B	U+EA3C	U+EA3D	U+EA3E	U+EA3F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Function theory symbols (U+EA40–U+EA7F)

U+EA40	U+EA41	U+EA42	U+EA43	U+EA44	U+EA45	U+EA46	U+EA47
0	1	2	3	4	5	6	7
Function theory 0	Function theory 1	Function theory 2	Function theory 3	Function theory 4	Function theory 5	Function theory 6	Function theory 7

U+EA48	U+EA49	U+EA4A	U+EA4B	U+EA4C	U+EA4D	U+EA4E	U+EA4F
8	9	<	-	>	Ss	Ss	D
Function theory 8	Function theory 9	Function theory less than	Function theory minus	Function theory greater than	Function theory major subdominant of subdominant	Function theory minor subdominant of subdominant	Function theory major dominant

U+EA50	U+EA51	U+EA52	U+EA53	U+EA54	U+EA55	U+EA56	U+EA57
d	DD	DD	G	g	N	n	P
Function theory minor dominant	Function theory dominant of dominant	Function theory double dominant seventh	Function theory G	Function theory g	Function symbol N	Function symbol n	Function symbol P

U+EA58	U+EA59	U+EA5A	U+EA5B	U+EA5C	U+EA5D	U+EA5E	U+EA5F
p	S	s	T	t	V	v	[
Function symbol p	Function symbol major subdominant	Function symbol minor subdominant	Function symbol tonic	Function symbol minor tonic	Function symbol V	Function symbol v	Function symbol bracket left

U+EA60	U+EA61	U+EA62	U+EA63	U+EA64	U+EA65	U+EA66	U+EA67
]	(	)	⟨	⟩	..	∴	°
Function symbol bracket right	Function symbol parenthesis left	Function symbol parenthesis right	Function symbol angle bracket left	Function symbol angle bracket right	Function symbol repetition 1	Function symbol repetition 2	Function symbol prefix ring

U+EA68	U+EA69	U+EA6A	U+EA6B	U+EA6C	U+EA6D	U+EA6E	U+EA6F
+							
Function symbol prefix plus	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+EA70	U+EA71	U+EA72	U+EA73	U+EA74	U+EA75	U+EA76	U+EA77
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

U+EA78	U+EA79	U+EA7B	U+EA&B	U+EA7C	U+EA7D	U+EA7E	U+EA7F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Multi-segment lines (U+EA80–U+EADF)

U+EA80	U+EA81	U+EA82	U+EA83	U+EA84	U+EA85	U+EA86	U+EA87
Trill wiggle segment, fastest	Trill wiggle segment, faster still	Trill wiggle segment, faster	Trill wiggle segment, fast	Trill wiggle segment	Trill wiggle segment, slow	Trill wiggle segment, slower	Trill wiggle segment, slower still

U+EA88	U+EA89	U+EA8A	U+EA8B	U+EA8C	U+EA8D	U+EA8E	U+EA8F
Trill wiggle segment, slowest	Arpeggiato wiggle segment, upwards	Arpeggiato wiggle segment, downwards	Arpeggiato upward swash	Arpeggiato downward swash	Arpeggiato arrowhead up	Arpeggiato arrowhead down	Glissando wiggle segment

U+EA90	U+EA91	U+EA92	U+EA93	U+EA94	U+EA95	U+EA96	U+EA97
Vibrato / shake wiggle segment	Wide vibrato / shake wiggle segment	Vibrato wiggle segment	Wide vibrato wiggle segment	Ornament stroke 1 *Also U+1D19B*	Ornament stroke 2 *Also U+1D19C*	Ornament stroke 3 *Also U+1D19D*	Ornament stroke 4 *Also U+1D19E*

U+EA98	U+EA99	U+EA9A	U+EA9B	U+EA9C	U+EA9D	U+EA9E	U+EA9F
Ornament stroke 5 *Also U+1D19F*	Ornament stroke 6 *Also U+1D1A0*	Ornament stroke 7 *Also U+1D1A1*	Ornament stroke 8 *Also U+1D1A2*	Ornament stroke 9 *Also U+1D1A3*	Ornament stroke 10 *Also U+1D1A4*	Ornament stroke 11 *Also U+1D1A5*	Wavy line segment

U+EAA0	U+EAA1	U+EAA2	U+EAA3	U+EAA4	U+EAA5	U+EAA6	U+EAA7
Squaretooth line segment	Sawtooth line segment	Group glissando 1	Group glissando 2	Group glissando 3	Constant circular motion segment	Circular motion start	Circular motion segment, largest

U+EAA8	U+EAA9	U+EAAA	U+EAAB	U+EAAC	U+EAAD	U+EAAE	U+EAAF
Circular motion segment, larger still	Circular motion segment, larger	Circular motion segment, large	Circular motion segment	Circular motion segment, small	Circular motion end	Vibrato start	Vibrato smallest, fastest

U+EAB0	U+EAB1	U+EAB2	U+EAB3	U+EAB4	U+EAB5	U+EAB6	U+EAB7
Vibrato smallest, faster still	Vibrato smallest, faster	Vibrato smallest, fast	Vibrato smallest, slow	Vibrato smallest, slower	Vibrato smallest, slowest	Vibrato small, fastest	Vibrato small, faster still

U+EAB8	U+EAB9	U+EABA	U+EABB	U+EABC	U+EABD	U+EABE	U+EABF
Vibrato small, faster	Vibrato small, fast	Vibrato small, slow	Vibrato small, slower	Vibrato small, slowest	Vibrato medium, fastest	Vibrato medium, faster still	Vibrato medium, faster

U+EAC0	U+EAC1	U+EAC2	U+EAC3	U+EAC4	U+EAC5	U+EAC6	U+EAC7
Vibrato medium, fast	Vibrato medium, slow	Vibrato medium, slower	Vibrato medium, slowest	Vibrato large, fastest	Vibrato large, faster still	Vibrato large, faster	Vibrato large, fast

U+EAC8	U+EAC9	U+EACA	U+EACB	U+EACC	U+EACD	U+EACE	U+EACF
Vibrato large, slow	Vibrato large, slower	Vibrato large, slowest	Vibrato largest, fastest	Vibrato largest, faster still	Vibrato largest, faster	Vibrato largest, fast	Vibrato largest, slow

U+EAD0	U+EAD1	U+EAD2	U+EAD3	U+EAD4	U+EAD5	U+EAD6	U+EAD7
Vibrato largest, slower	Vibrato largest, slowest	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

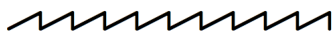| U+EAD8	U+EAD9	U+EADA	U+EADB	U+EADC	U+EADD	U+EADE	U+EADF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Implementation notes

Scoring applications can combine these glyphs to produce lines of varying lengths. By way of example:

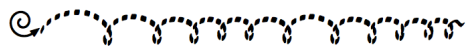U+E593, U+EA80, U+EA81, U+EA82, U+EA83, U+EA84, U+EA86, U+EA87, U+EA84, U+EA82, U+EA81

10 x U+EA9F

10 x U+EAA1

6 x U+EAA0

U+EAA6, U+EAA7, U+EAA8, U+EAA9, U+EAAA, U+EAAD

U+EAAD, U+EAAE, U+EAC0, U+EAC1, U+EABE, U+EABD, etc.

Electronic music pictograms (U+EAE0–U+EAFF)
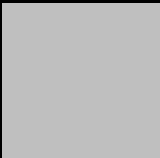
U+EAE0	U+EAE1	U+EAE2	U+EAE3	U+EAE4	U+EAE5	U+EAE6	U+EAE7
Microphone	Loudspeaker	Play	Stop	Pause	Skip forwards	Skip backwards	Loop

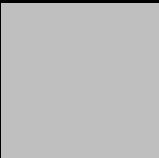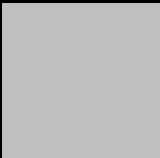| U+EAE8	U+EAE9	U+EAEA	U+EAEB	U+EAEC	U+EAED	U+EAEE	U+EAEF
Volume level 0%	Volume level 20%	Volume level 40%	Volume level 60%	Volume level 80%	Volume level 100%	MIDI in	MIDI out

U+EAF0	U+EAF1	U+EAF2	U+EAF3	U+EAF4	U+EAF5	U+EAF6	U+EAF7
MIDI controller 0%	MIDI controller 20%	MIDI controller 40%	MIDI controller 60%	MIDI controller 80%	MIDI controller 100%	*Unused*	*Unused*

U+EAF8	U+EAF9	U+EAFA	U+EAFB	U+EAFC	U+EAFD	U+EAFE	U+EAFF
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

Miscellaneous symbols (U+EB00–U+EB0F)

U+EB00	U+EB01	U+EB02	U+EB03	U+EB04	U+EB05	U+EB06	U+EB07
※	↗				↘	↗	
Croix *Also U+1D1CF*	Swish	Do not photocopy	Do not copy	Eyeglasses	Staff divide arrow down	Staff divide arrow up	Staff divide arrows

U+EB08	U+EB09	U+EB0A	U+EB0B	U+EB0C	U+EB0D	U+EB0E	U+EB0F
Unused	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*