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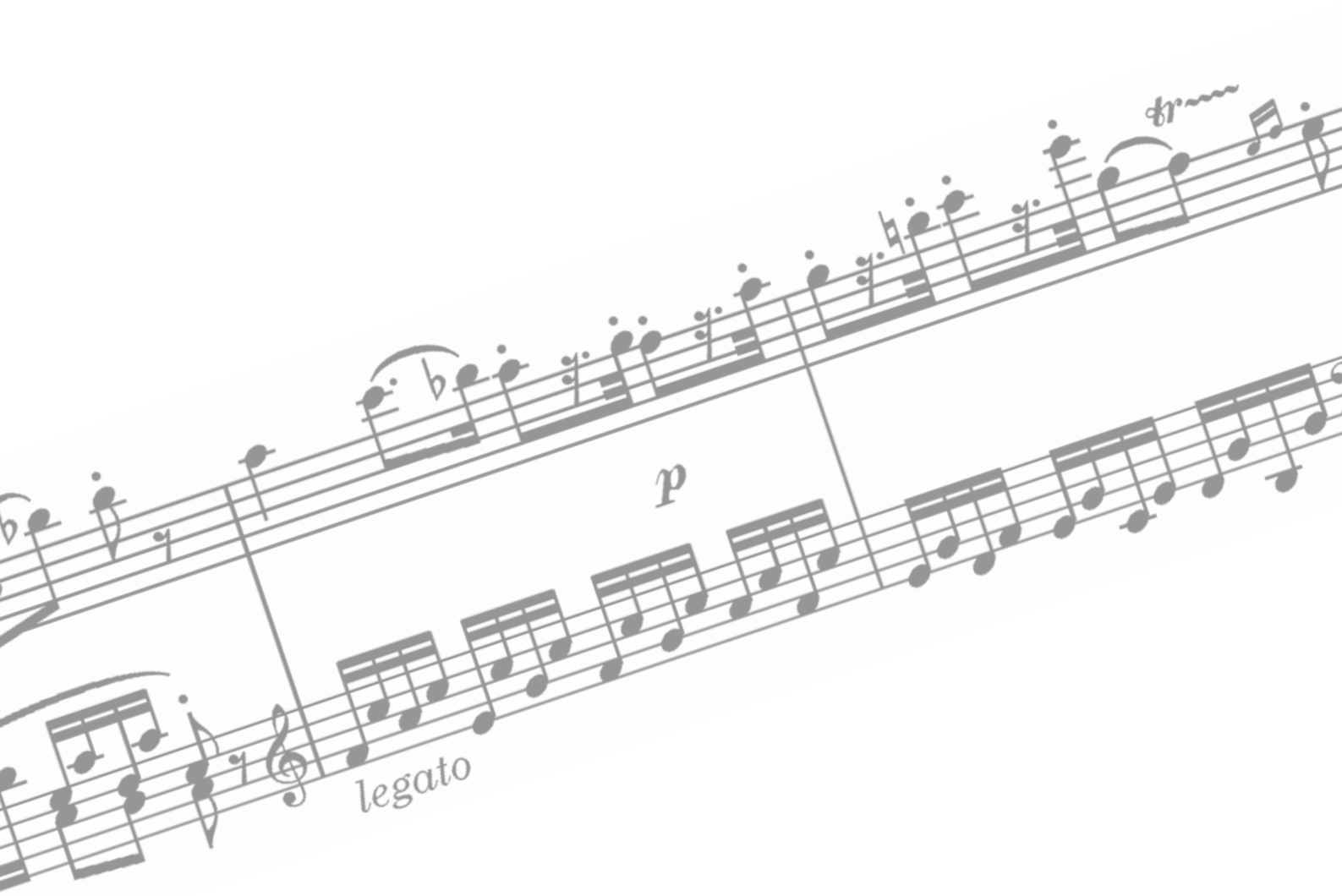

SMuFL

Standard Music Font Layout

Version 0.9 (2014-04-17)

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Version history

Version 0.1 (2013-01-31)

- Initial version.

Version 0.2 (2013-02-08)

- Added tick barline.
- 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 cancrizans and inverted canons.
- Added **Time signature +** and **Time signature fraction slash** glyphs.
- Added **Black diamond notehead**, **White diamond notehead**, **Half-filled diamond notehead**, **Black circled notehead**, **White circled notehead** glyphs.
- Added 256th and 512th note glyphs.
- 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 for cancrizans and inverted canons.
- Added trill wiggle segment, glissando wiggle segment and arpeggiato wiggle segment glyphs.
- Added string **Half-harmonic**, **Overpressure down bow** and **Overpressure up bow** glyphs.
- Added **Breath mark** glyph.
- Added angled beater pictograms for xylophone, timpani and yarn beaters.
- Added alternative glyph for **Half-open**, per Weinberg.
- Added **Scrape from rim to center** and **Scrape around rim** glyphs.
- Added **Start of stimme** glyph.
- Added colon for tuplet ratios.
- Added stem down versions of mensural notes, and signum congruentia and custos glyphs.
- Added three additional mensuration signs.
- Added Riemann Function theorys glyphs.

Version 0.3 (2013-03-11):

- Moved combining flags glyphs to accommodate glyphs for 256th note stem up, 256th note stem down, 512th note stem up and 512th note stem down.

Version 0.4 (2013-05-16):

- Added range for Arel-Ezgi-Uzdilek (AEU) accidentals for Turkish maqam music.
- Added equals sign and open time signature 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 and very long system dividers for very large scores.
- Added heavy, double heavy and dotted barlines.
- Added square coda and small repeat signs for repeats within bars.
- Added recommended stylistic alternates for segno and coda for the appearance preferred by Japanese publishers.
- Added quindicesima bassa G clef and F clef, G clef combined with C clef, G clefs designed to be ligated with numbers below and above to show the transposition of an instrument, 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, and semi-pitched percussion clefs, plus a bridge clef.
- 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, plus basic fractions, and Penderecki-style open time signature.
- Added specific noteheads for double whole note and whole note 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.
- Added large slashed circular noteheads as used by Stockhausen for notating gong/tam-tam hits.
- Added combining glyphs for note clusters of specific note values.
- Added noteheads with *solfège* and chromatic note names embedded within them, as seen in "EZ-Play" educational scores.
- Added specific range of noteheads for sacred harp shape note singing.
- Added pre-composed 1024th notes, tails and rest.
- Added range for typing simple beamed groups of notes in text-based applications,. Designed to be used in conjunction with pre-composed notes, 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.
- Added four- and five-stroke tremolos plus Wieniawski-style unmeasured tremolo glyphs.
- Added stylistic alternates for flags: 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.
- Added accidentals used in Turkish folk music.
- Added Persian accidentals.
- Added staccatissimo wedge and stroke glyphs.
- Added very short and very long fermatas, plus short caesura.
- Added left and right halves of multirest H-bars and old-style quarter rest as seen in e.g. Novello editions.
- Added *ventiduesima* (three octaves, "22") glyphs to octaves range.
- Added precomposed glyphs for common dynamics and *niente* circle for hairpins.
- Added *schleifer* (long mordent) and Haydn ornament.
- Added additional brass techniques, including short, medium and long versions of lift, doit, lip fall, smooth fall, rough fall, plus jazz turn.
- Added range of glyphs for embouchure tightness, reed position, multiphonics, and stylistic alternates for double- and triple-tonguing with no slurs.
- Added further overpressure glyphs, plus *jété*, *fouetté*, Rebecca Saunders's "vibrato pulse" accent, thumb position and indeterminate bow direction to string techniques range.
- Added plectrum pictogram and combining damp glyph for note stems to plucked techniques range.
- Added arrows for breathing and intonation, plus combining *sussurando* glyph for note stems, to vocal techniques range.
- Added pedal pictograms, *sostenuto* pedal symbols, and half-pedal marks to keyboard techniques range.
- Added pictograms for metal rod and tuning key to harp techniques range.
- Added Smith Brindle's pictograms for tuned percussion instruments.
- Added pictogram for Indian table, plus stylistic alternate for tambourine as used by Stockhausen.

- Added pictogram for football rattle, plus Smith Brindle's pictogram for castanets as a stylistic alternate.
- Added pictogram for handbell, plus stylistic alternates for cow bell (from Berio) and sleigh bell (from Smith Brindle).
- Added pictogram for Chinese cymbal.
- Added pictogram for tam-tam with beater from Smith Brindle.
- Added pictogram for maracas, rainstick, plus stylistic alternate for maraca from Smith Brindle.
- Added pictogram for megaphone.
- Added soft and hard glockenspiel beaters, superball beaters, wound beaters with hard and soft cores, plus soft, medium and hard gum beaters.
- Added pluck lift to handbells range.
- Added "Theme" indicators to analytics range.
- Added minor (minus sign) glyph to chord symbols range.
- Added mensural proportion glyphs.
- Added combining raise and lower glyphs to figured bass range.
- Added repetition, angle brackets, and prefix + and ring glyphs to Function theorys range.
- 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.
- Added new range of pictograms for electronic music, including microphone, loudspeaker, transport controls, volume level and MIDI controller level.
- Added new "do not copy" glyphs, eyeglasses and choral divide arrows 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.

Version 0.6 (2013-07-29):

- Added opening parenthesis and closing parenthesis for noteheads, circled slash notehead, heavy X and heavy X with hat noteheads, as used in Dante Agostini's drum method.
- Added muted slash noteheads.
- Added "si" note name noteheads for French solfège, and H sharp note name noteheads for German.
- Added combining rim shot stem.

- Added “sharp sharp” accidental for compatibility with MusicXML.
- Added extended Stein-Zimmermann accidentals with arrows.
- Added one-third-tone sharp and two-third-tones sharp accidentals as used by Xenakis.
- Significant revision to the ornaments range, including splitting into separate ranges (common ornaments, other baroque ornaments, combining strokes for trills/mordents, precomposed trills/mordents). A small number of glyphs from previous versions of SMuFL have been removed to make way for symbols drawn from Frederick Neumann’s authoritative book on baroque ornamentation.
- Added left hand pizzicato.
- Added recommended stylistic alternates for Bartok pizzicato above/below.
- Added recommended stylistic alternates for ‘Ped.’ and ‘Sost.’ that do not include terminal dots.
- Added choke cymbal glyph from Weinberg.
- Added open, half-open and closed wah/volume pedals, left- and right-hand tapping glyphs for guitar.
- Added new range for arrows and arrowheads, including moving the up/down/right/left arrows from the vocal techniques into this new range.

Version 0.7 (2013-11-27):

- Introduced canonical names for every recommended glyph, which are intended to be immutable. Code points, on the other hand, may change as required to accommodate insertions or deletions of glyphs.
- New **Notes for implementers** section with expanded guidelines for glyph registration, with changes for precomposed stems and stem decorations (which should now be centered around x=0) and flags (which should be positioned vertically relative to the end of a stem of normal length at y=0).
- Added specification for JSON metadata files for SMuFL and for SMuFL-compliant fonts, developed in conjunction with Joe Berkovitz.
- Significantly expanded the repertoire of glyphs for Medieval and Renaissance notation, with new ranges for clefs, accidentals and ligatures, plus considerable reworking of the notes and prolations ranges, expansion of the repertoire of glyphs for plainchant notation (with new ranges for staves, divisions, clefs and articulations, and a wider range of neumes).
- Added range for Daseian notation, as found in the ninth century treatises *Musica enchiriadis* and *Scolica enchiriadis*.
- Added new range of control characters for adjusting the staff position of staff-relative glyphs, intended for fonts designed for text-based applications.
- Added narrow and wide staff line glyphs, intended for fonts designed for text-based applications.

- Added C clef *ottava bassa*, and recommended stylistic alternate for G clef *ottava bassa* with parentheses around the 8.
- Added control characters for time signature digits to allow digits to be stacked vertically, intended for fonts designed for text-based applications.
- Added square double whole note (breve) notehead.
- Added new combining harp string noise for stem glyph, and corresponding precomposed stem glyph.
- Added four further quarter-tone accidental symbols to "other microtonal accidentals" group.
- Added some percussion playing technique symbols from Dante Agostini's method books.
- Added a *golpe* (tap the pick guard) glyph from Claude Worm's flamenco guitar method book.
- Added short and long fermata glyphs as used by Henze.
- Added combining glyphs for accordion couplers, allowing the creation of any coupler diagram not explicitly encoded.
- Added "pf" dynamic.

Version 0.8 (2014-02-03):

- Based on community feedback, added clarification that code points for glyphs may change until SMuFL reaches version 1.0, after which point existing code points will become immutable.
- Glyphs in SMuFL encoded in the primary range of U+E000–U+F3FF are no longer considered "mandatory", but rather they are "recommended": in order to be considered SMuFL-compliant, a font need not implement every recommended glyph, just as a text font need not implement every Unicode code point in order to be considered Unicode-compliant. Fonts need only implement those glyphs that are appropriate for their intended use at the correct SMuFL code points in order to be considered SMuFL-compliant.
- Changed guidelines for metrics of text-like glyphs (e.g. dynamics, D.C./D.S. markings in repeats) in fonts intended for use in scoring applications, such that it is recommended that the x-height of such glyphs is around 1 staff space (0.25 em).
- Added Ivan Wyschnegradsky's system of 72-EDO accidentals.
- Added Bosanquet's comma up/down.
- Dispersed the glyphs formerly in the Sagittal-compatible accidentals range to other ranges, and revised the canonical glyph names for Sagittal accidentals that describe specific ratios in order to make those ratios clearer.
- Added slashed sharp/flat accidentals used by John Tavener in his Byzantine-inspired choral works.
- Added left/right parentheses for accidentals.

- Added new ranges for Renaissance lute tablature, covering French/English, Italian/Spanish and German conventions.
- Added new ranges for fingering charts for flute, oboe, clarinet, bassoon, saxophone and recorder, as used in educational materials such as instructional or method books.
- Added Britten's curlew sign for a pause of an indeterminate length.
- Added push/pull signs for accordion.
- Added separate noteheads for white mensural notation.
- Added inverted signum congruentiae.
- Added combined tenuto-accent articulation.
- Added quasi-random wiggly lines (**wiggleRandom1**, **wiggleRandom2**, **wiggleRandom3**, **wiggleRandom4**) to multi-segment lines range.
- Added flipped and large versions of constant circular motion (**wiggleCircularConstantFlipped**, **wiggleCircularConstantLarge**, **wiggleCircularConstantFlippedLarge**) to multi-segment lines range.
- Added combining top/middle/bottom segments for black and white rectangular note clusters.
- Added 2, 3, 4 and 6-dot divisi indicators for measured tremolos (**tremoloDivisiDots2**, **tremoloDivisiDots3**, etc.) to tremolos range.
- Added clavichord bebung glyphs for 2, 3, and 4 finger movements (**keyboardBebung2DotsAbove**, **keyboardBebung3DotsBelow**, etc.) to the keyboard techniques range.
- Added double-height parentheses and brackets (**csymParensLeftTall**, **csymParensRightTall**, **csymBracketLeftTall**, **csymBracketRightTall**) to the chord symbols range.
- Added recommendation for stylistic alternates for time signature digits 0–9 suitable for use as large time signatures shown above/between staves (**timeSig0Large** through **timeSig9Large**).
- Added *sfzp* (sforzato-piano) dynamic and ligature.
- Added Penderecki's quarter-flat and Busotti's three-quarter sharp accidentals.
- Added six further accordion coupler diagrams for right-hand three-rank accordions, and accordion ricochet glyphs.

Version 0.85 (2014-03-09):

- Updated glyph registration guidelines for articulations, such that articulations above the note should be positioned sitting on the baseline, and articulations below the note should be positioned hanging from the baseline.
- Quite a few changes to canonical glyph names, especially for accidentals, with the aim of making the names clarify the actual interval represented by each accidental (where that is unambiguous) in terms of fractions of a tone.
- Added whole and half rests with leger lines, i.e. as if displayed outside the staff.

- Added clef for diatonic accordion.
- Added recommended stylistic alternates for C and F clef forms used in 18th century French music, and for an F clef form used in 19th century music across Europe.
- Added recommended ligature for G clef with ligated 8 above.
- Added half-brackets for keyboard notation to show notes that should be played by the other hand.
- Moved staff divide arrows from the **Miscellaneous symbols** range to the (now renamed) **Staff brackets and dividers** range.
- Moved the percussion swish arrow from the **Miscellaneous symbols** range to the **Percussion playing techniques pictograms** range.
- Moved all the glyphs from the **Quartertone accidentals (24-EDO)** range to the (now renamed) **Other accidentals** range, eliminating the former range and moving the latter to the very end of all of the ranges of accidentals.
- Further revisions to the plainchant ranges, including adding reversed *virga*, smaller version of *punctum inclinatum*, moving the *punctum mora* to the plainchant articulations range, and eliminating the precomposed *podatus* and *clivis* glyphs in favour of individual components that provide the means to construct these easily for any interval. Also added *strophicus*, *strophicus auctus*, *punctum inclinatum auctum* to the single-note forms range.
- Added new range for Kievian square notation, as used for liturgical chant in the Russian Orthodox Church.
- Added new glyphs for tabling one handbell and tabling a pair of handbells.
- Added alternative pedal heel glyph and pedal heel or toe glyph to **Keyboard techniques** range.
- Added recommended stylistic alternates for braces designed for use across different sizes of gaps, designed to be scaled uniformly rather than simply stretched vertically.
- Added many new electronic music pictograms, including speaker configurations, more transport controls, additional hardware devices, and so on.
- Added guitar fade in, fade out and swell glyphs.
- Added the glyphs used in the Corpus Monodicum project to the **Medieval and Renaissance plainchant in CMN** range.
- Added notes on the currently-defined classes in the JSON metadata file to the **Notes for implementers** section.

Version 0.9 (2014-04-17):

- Expanded the specification of font-specific metadata to include new structures to describe stylistic alternates, stylistic sets and ligatures present in fonts for applications that cannot access advanced font features.

- Defined new values for the "glyphs" structure in font-specific metadata to describe cut-outs from the four corners of a glyph's bounding box, in order to allow better kerning or interlocking of glyphs in some circumstances, e.g. when stacking accidentals; also renamed this structure to "glyphsWithAnchors" to clarify its purpose.
- Defined specification for new **ranges.json** file, which provides information about the ranges of glyphs described in this specification in a machine-readable fashion.
- Added initial glyph registration and font metrics guidelines for fonts intended for use in text-based applications.
- Added new range for Kodály solfège hand signs.
- Added new range for Peter Hayes George's Simplified Music Notation.
- Added narrow and wide versions of the sine wave, square wave and sawtooth wavy lines in the **Multi-segment lines** range.
- Added wide versions of the black and white diamond noteheads, as used in some handbells music.
- Added turned (i.e. inverted) versions of up bow and down bow marks.
- Added *oriscus liquescens* to the **Medieval and Renaissance plainchant single-note forms** range, and moved *punctum auctum inclinatum* and *punctum auctum diminutum* to this range.
- Added *strophicus liquescens* (for intervals of a second up to a fifth) to the **Medieval and Renaissance plainchant multiple-note forms** range.
- Added oblique ligature forms for mensural notes describing intervals of a second up to a fifth for black, void, black and void, and white noteheads to a new **Medieval and Renaissance oblique forms** range.
- Added single glyph for right and left repeat barlines to the **Repeats** range, and a recommended stylistic alternate using thick-thick rather than thin-thick-thin barlines.
- Added reversed versions of brackets to denote play with right/left hand in the **Keyboard techniques** range, to allow the demarcation of the end of a passage to be played with the other hand.
- Added more recommended stylistic alternates for display on smaller staff sizes: time signature digits; G, C and F clef; black, half, whole and double whole noteheads; standard articulations; dynamics letter forms.
- Added recommended ligatures for standard noteheads and accidentals in parentheses.
- Added open arrowheads and arrows.
- Added Kievan half note on space, and Kievan beam.
- Added new percussion pictograms from the books by Sevsay and Peinkofer/Tannigel, plus new combining glyphs for stems showing the "crush" rudiment, "dead" notes, and to instruct the performer to turn the instrument.

- Added five further mensural proportion signs, from Apel's book.
- Added 12 new pre-composed trills and mordents, based on Bach's ornamentation chart and ornaments found in the Emmentaler font.
- Added **restHBarMiddle** glyph, for text-based applications to construct H-bar multirests of variable width.
- Added **noteheadWholeFilled** and **noteheadHalfFilled**, for modern transcriptions of coloration in Medieval and Renaissance music.
- Consolidated breath marks into a single range, and added a new upbow-like breath mark (as used in music from Russia).
- Added range of glyphs for lyrics, including three lengths of elision undertie, and baseline hyphen (as used in music from Russia).
- Added a wider slash notehead, for whole note (semibreve) duration.
- Added more shape note noteheads to support the 7-shape conventions of Joseph Funk and William Walker.
- Added maxima rest, and double whole (breve) rest with leger lines above and below.
- Added curved caesura.
- Added separate glyphs for the 'e', 'd' and dot in keyboard pedal marks, plus a curved hyphen to be used along with the 'P' to show start/end pedal in some editions.
- Added new mensural C clef, plus variations of the Petrucci C clef for different staff positions.
- Added different custos for different staff positions.
- Added stylistic alternates for the Medieval and Renaissance "soft b" flat accidental.
- Added dedicated glyphs for C, G, and F clef changes, plus new combining clef change character to produce other clef change glyphs by way of glyph substitution.
- Added one- and two-third tones sharp and flat accidentals as used by Brian Ferneyhough.
- Added "just air" open diamond notehead as used by Brian Ferneyhough.
- Added white and wide white diamond noteheads.
- Added a range of glyphs for denoting accel./rit. beam lines above the staff.
- Added normal, wide and narrow leger line glyphs.

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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 some 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 more than 2550 recommended glyphs, plus several hundred further optional but recommended glyphs, primarily ligatures (i.e. two or more symbols drawn as a single glyph) and stylistic alternates (i.e. a

[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] The original proposal (http://www.lib.virginia.edu/artsandmedia/dmmc/Music/UnicodeMusic/) is no longer available, but an archived version can be found at http://archive.is/PzkaT
[5] See http://www.unicode.org/charts/PDF/U1D100.pdf

different appearance for the same glyph 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 following the SMuFL code point.

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 108 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 generally been left in each group, so code points are not contiguous. Until SMuFL reaches version 1.0, code points may also change between revisions to accommodate the insertion or deletion of individual glyphs and groups of glyphs. However, every glyph in SMuFL also has a canonical name, intended to be immutable, which makes it possible for software developers to minimize the impact of code points changing in the short term. Once SMuFL reaches version 1.0, the code points of existing glyphs will not change in future revisions.

Recommended 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 sets 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 stylistic alternate for the sharp accidental designed to have a clearer appearance when reproduced at a small size can be accessed as a stylistic alternate for **accidentalSharp**, but also by way of its explicit code point, which will be in the range U+F400–U+F8FF.

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

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

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 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, recommended glyphs 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).

In order for a font to be considered SMuFL-compliant, it should implement as many of the recommended glyphs as are appropriate for the intended use of the font, at the specified code points. Fonts need not implement every recommended glyph, and need not implement any optional glyphs, in order to be considered SMuFL-compliant.

Implementations

To date the only available font that implements SMuFL is 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.

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:

- Agostini, Dante. *Methode de Batterie*. France: Carisch Musicom, 2009.
- Apel, Willi. *The Notation of Polyphonic Music 900–1600, Fourth Edition*. Cambridge, MA, USA: The Medieval Academy of America, 1953.
- Bach, J.S. (ed. Palmer, Willard). *J.S. Bach: Inventions and Sinfonias, 2nd Edition*. Van Nuys, CA, USA: Alfred Publishing Co., 1991.
- Balestrieri, Donald. *Registers of the Standard Stradella Keyboard Accordion*. USA: Accord Magazine, 1979.[7]
- Davis, Roger E. *The Organists' Manual*. New York: W. W. Norton, 1985.
- Doty, David B. *The Just Intonation Primer*. San Francisco, USA: The Just Intonation Network, 1993.

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

- Draugsvoll, Geir & Højsgaard, Erik (translated Borregaard, Andreas). *Handbook on Accordion Notation*. Copenhagen: The Royal Danish Academy of Music in Copenhagen, 2001.[8]
- Drobner, Mieczysław. *Instrumentoznawstwo i akustyka* (Musical Instruments and Acoustics). Cracow: PWM Edition, 1960 (7th Edition, 2008).
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- 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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- McCarty, Frank. *Notational Standards for Percussion: A Report on the Ghent Conference* (from *The Instrumentalist, xxix*). Northfield, IL: The Instrumentalist Publishing Co., 1975.
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- Peinkofer, Karl & Tannigel, Fritz: *Handbuch des Schlagzeugs. Praxis und Technik.* Mainz: Schott, 1981.
- Poulton, Diana. *A Tutor for the Renaissance Lute*. London, UK: Schott, 1991.
- Read, Gardner. *Twentieth-Century Microtonal Notation*. USA: Praeger, 1990.
- Roland, Perry. *Proposal for Encoding Western Music Symbols in ISO/IEC 10646*. Virginia: University of Virginia, 1998.
- Sabat, Marc. *The Extended Helmholtz-Ellis JI Pitch Notation.* Plainsound Music Edition, 2005.
- Salzedo, Carlos. *Modern Study of the Harp*. London: G. Schirmer, 1921.
- Secor, George & Keenan, David. *Sagittal – A Microtonal Notation System*. Xenharmonikôn, An Informal Journal of Experimental Music, Volume 18, 2006. www.sagittal.org, 2004.
- Sevsay, Ertugrul: *Handbuch der Instrumentationspraxis.* Kassel: Bärenreiter, 2005
- Simmons, Nikita. *A Primer of Kievian Square-Note (Quadratic or Synodal) Notation*. www.synaxis.info, 2004.
- Smith Brindle, Reginald. *Contemporary Percussion*. New York: Oxford University Press, 1991.

[8] See http://www.rednoteensemble.com/Calls_for_Scores_files/Handbook%20on%20Accordion%20Notation.pdf

- Stiller, Andrew. *Handbook of Instrumentation*. Philadelphia: Kallisti Music Press, 1994.
- Stone, Kurt. *Music Notation in the Twentieth Century: A Practical Guidebook*. New York: W.W. Norton, 1980.
- Weinberg, Norman. *Guide to Standardized Drumset Notation*. Lawton: Percussive Arts Society, Inc., 1998.
- "Ornaments", Grove Music Online, ed. L. Macy (accessed January 24 2013)
- *AGEHR Handbell and Handchime Notation Booklet, 8th ed.* Dayton: Lorenz, 2010.[9]

Other contributors

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Thanks also to Joe Berkovitz for his contribution towards the guidelines for font metrics and glyph registration for fonts intended for use with scoring applications, and the design of the font metadata JSON files.

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).

License

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[9] A summary of the main notations prescribed in this book can be found at http://www.handbellworld.com/music/HandbellNotation.cfm

Notes for implementers

This section provides guidelines and recommendations for metrics, glyph registration and font metadata, and is intended for font designers who want to design SMuFL-compliant fonts, and for software developers who want to build applications that can consume SMuFL-compliant fonts.

Metadata for SMuFL glyphs and ranges

To aid software developers in implementing SMuFL-compliant fonts, three support files in JSON format are available. For more information about the JSON format, see www.json.org.

It is strongly recommended that software developers should refer to specific glyphs within SMuFL by name rather than by Unicode code point. While SMuFL is still under active development, it cannot be guaranteed that code points will remain unchanged from one revision to the next, whereas every effort will be made to keep glyph names consistent between revisions.

glyphnames.json maps code points to canonical glyph names, which by convention use lower camel case, a convenient format for most programming languages. Here is an excerpt of this file:

```
{
    ...
    "barlineDashed": {
        "alternateCodepoint": "U+1D104",
        "codepoint": "U+E036",
        "description": "Dashed barline"
    },
    "barlineDotted": {
        "codepoint": "U+E037"
        "description": "Dotted barline"
    },
    "barlineDouble": {
        "alternateCodepoint": "U+1D101",
        "codepoint": "U+E031"
        "description": "Double barline"
    },
    "barlineFinal": {
        "alternateCodepoint": "U+1D102",
        "codepoint": "U+E032"
        "description": "Final barline"
    },
    "barlineHeavy": {
        "codepoint": "U+E034"
        "description": "Heavy barline"
    },
```

```
    ...
}
```

The file is keyed using the glyph names, with the SMuFL code point provided as the value for the "codepoint" key, and the Unicode Musical Symbols range code point (if applicable) provided as the value for the "alternateCodepoint" key. The "description" key contains the glyph's description, as it appears in this specification.

classes.json groups glyphs together into classes, so that software developers can handle similar glyphs (e.g. noteheads, clefs, flags, etc.) in a similar fashion. Here is an excerpt of this file:

```
{
    "clefs": [
          "gClef",
          "gClef15mb",
          "gClef8vb",
          "gClef8va",
          "gClef15ma",
          "gClef8vbOld",
          "gClef8vbCclef",
          ...
    ],
    "noteheads": [
          "noteheadDoubleWhole",
          "noteheadWhole",
          "noteheadHalf",
          "noteheadBlack",
          "noteheadNull",
          ...
    ],
    "flags": [
          "flag8thUp",
          "flag8thDown",
          "flag16thUp",
          "flag16thDown",
          "flag32ndUp",
          "flag32ndDown",
          ...
    ],
    ...
}
```

Glyphs are listed within their classes using the names specified in **glyphnames.json**. Not all glyphs are contained within classes, and the same glyph can theoretically appear in multiple classes (though, as of the current version, none do).

The classes defined at present are as follows:

Class name	*Description*
accidentals	Contains all glyphs in all accidentals ranges.
accidentalsPersian accidentals53EDOTurkish accidentalsAEU accidentals72EDOWyschnegradsky accidentalsSagittalDiacritics accidentalsSagittalPromethean accidentalsSagittalTrojan accidentalsSagittalAthenian accidentalsSagittalPure accidentalsSagittalMixed accidentalsHelmholtzEllis accidentalsJohnston accidentalsSims accidentalsSteinZimmermann accidentals24EDOArrows accidentalsStandard	These classes contain useful subsets of accidentals, each class essentially providing all of the accidentals glyphs required for a given convention or system.
articulations	Contains all articulations, regardless of whether they are intended to be positioned above or below the note/staff.
articulationsBelow articulationsAbove	Contains only those articulations that are positioned either above or below the note/staff, as appropriate.
combiningStaffPositions	Contains glyphs that are available in ligatures with the **Combining staff position** glyphs, in fonts intended for use in text-based applications. (N.B. not implemented in the current Bravura font, which is intended for scoring applications.)
dynamics	Contains the glyphs in the **Dynamics** range, which should be scaled differently to other glyphs in fonts designed for use in text-based applications.
forTextBasedApplications	Contains glyphs that scoring applications can generally ignore, i.e. these are useful for text-based applications (or for runs of normal text in scoring applications). This contains glyphs like the **Beamed groups of notes** range, pre-composed stems, pre-composed staff lines, etc.
multiGlyphForms	Contains all glyphs that are designed to be used in combination to produce larger forms, e.g. ornaments, wiggly lines, etc.
noteheads	Contains all glyphs in all noteheads ranges.

Class name	*Description*
noteheadSetSacredHarp noteheadSetNamesPitch noteheadSetNamesSolfege noteheadSetSquare noteheadSetRoundSmall noteheadSetRoundLarge noteheadSetSlashHorizontalEnds noteheadSetSlashVerticalEnds parenthesesNotehead noteheadSetHeavyX noteheadSetLargeArrowDown noteheadSetLargeArrowUp noteheadSetCircled noteheadSetDiamondOld noteheadSetDiamond noteheadSetSlashed2 noteheadSetSlashed1 noteheadSetTriangleDown noteheadSetTriangleRight noteheadSetTriangleLeft noteheadSetTriangleUp noteheadSetWithX noteheadSetCircleX noteheadSetPlus noteheadSetX noteheadSetDefault	These classes contain useful subsets of noteheads, each class providing a set of noteheads, e.g. the notehead to be used for quarter notes and shorter, for half notes, for whole notes, etc., for different conventions.
ornaments	Contains all pre-composed ornament glyphs, excluding the component parts in the **Combining strokes for trills and mordents** range.
pauses	Contains all fermatas/caesuras, regardless of whether they are intended to be positioned above or below the note/staff.
pausesBelow pausesAbove	Contains only those fermatas that are positioned either above or below the note/staff, as appropriate.
rests	Contains all rests glyphs.
stemDecorations	Contains glyphs that are designed to be positioned on stems. This is a useful class, because the individual glyphs that are intended to be drawn on stems are dotted around various ranges.

Class name	*Description*
wigglesQuasiRandom wigglesVibratoVariable wigglesCircularMotion wigglesVibrato wigglesArpeggiato wigglesArpeggiatoDown wigglesArpeggiatoUp wigglesTrill	These classes contain useful subsets of the **Multi-segment lines** range.
zeroWidth	Glyphs that should have zero width in fonts designed for use in text-based applications.

ranges.json provides information about the way glyphs are presented in discrete ranges in this specification. Here is an excerpt of this file:

```
{
    ...
    "analytics": {
        "description": "Analytics",
        "glyphs": [
            "analyticsHauptstimme",
            "analyticsNebenstimme",
            "analyticsStartStimme",
            "analyticsEndStimme",
            "analyticsTheme",
            "analyticsThemeRetrograde",
            "analyticsThemeRetrogradeInversion",
            "analyticsThemeInversion",
            "analyticsTheme1",
            "analyticsInversion1"
        ],
        "range_end": "U+E86F",
        "range_start": "U+E860"
    }
    ...
}
```

This file uses a unique identifier for each range as the primary key, and within each structure the “description” specifies the human-readable range name (as it appears in this specification), “glyphs” is an array listing the canonical names of the glyphs contained within the range, and the “range_start” and “range_end” key/value pairs specify the first and last code point allocated to this range respectively.

The current versions of **glyphnames.json**, **classes.json** and **ranges.json** are available for download at www.smufl.org/download.

It is further recommended that SMuFL-compliant fonts also contain font-specific metadata JSON files, which are described below.

Designing for scoring applications and text-based applications

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 metrics and glyph registration, 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[10].

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 mixing musical symbols with free text within a scoring application).

Metrics and glyph registration for scoring applications

The following guidelines are provided for fonts intended for use in scoring applications:

- 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, and y = 1 em represents the middle of the top staff line of that same five-line staff.

[10] 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.

- 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 such 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, its y=0 should coincide with the center staff line on a five-line staff, or the visual center for staves with more or fewer than five lines (e.g. tablature staves).
- 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. The center of the stem should be at x=0.
- Combining glyphs that are designed to be superimposed on stems (stem decorations) should be registered such that the point that should sit in the center of the stem (i.e. typically the visual center of the symbol) should be at x=0 and y=0.
- Accidentals should be positioned as if they apply to a notehead on the bottom line of the staff.
- Articulations to be positioned above a note or chord should be positioned such that they sit on the baseline (y=0), while articulations to be positioned below a note or chord should be positioned such that they hang from the baseline.
- Pre-composed notes should be positioned as if on the bottom line of the staff.

- Flags are positioned such that y=0 corresponds to the end of a stem of normal length, and such that x=0 corresponds to the left-hand side of the stem.
- 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.
- Bracket ends are positioned such that the point at which they connect to the top or bottom of a vertical bracket is at y=0.
- Letters for dynamics (and for D.C./D.S. in the repeats range) should be scaled such that the caps height is around 0.5 em, and the x-height is around 0.25 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.

Metadata for SMuFL-compliant fonts

To help software developers integrate SMuFL-compliant fonts, it is recommended that font designers provide a font-specific metadata file, in JSON format, in the distribution package for their fonts.

The metadata file allows the designer to provide information that cannot easily (or in some cases at all) be encoded within or retrieved from the font software itself, including recommendations for how to draw the elements of music notation not provided directly by the font itself (such as staff lines, barlines, hairpins, etc.) in a manner complementary to the design of the font, and important glyph-specific metrics, such as the precise coordinates at which a stem should connect to a notehead.

Glyph names may be supplied either using their Unicode code point or their canonical glyph name (as defined in the **glyphnames.json** file – see above). Measurements are specified in staff spaces, using floating point numbers to any desired level of precision.

The following key/value pairs are mandatory:

Key name	*Description*
"fontName"	The name of the font to which the metadata applies
"fontVersion"	The version number of the font to which the metadata applies

All other key/value pairs are optional.

engravingDefaults

The "engravingDefaults" structure contains key/value pairs defining recommended defaults for line widths etc., as follows, with all measurements expressed in staff spaces:

Key name	*Description*
"staffLineThickness"	The thickness of each staff line
"stemThickness"	The thickness of a stem
"beamThickness"	The thickness of a beam
"beamSpacing"	The distance between the inner edge of the primary and outer edge of subsequent secondary beams
"legerLineThickness"	The thickness of a leger line (normally somewhat thicker than a staff line)
"legerLineExtension"	The amount by which a leger line should extend either side of a notehead
"slurEndpointThickness"	The thickness of the end of a slur
"slurMidpointThickness"	The thickness of the mid-point of a slur (i.e. its thickest point)
"tieEndpointThickness"	The thickness of the end of a tie
"tieMidpointThickness"	The thickness of the mid-point of a tie
"thinBarlineThickness"	The thickness of a thin barline, e.g. a normal barline, or each of the lines of a double barline
"thickBarlineThickness"	The thickness of a thick barline, e.g. in a final barline or a repeat barline
"dashedBarlineThickness"	The thickness of a dashed barline
"dashedBarlineDashLength"	The length of the dashes to be used in a dashed barline
"dashedBarlineGapLength"	The length of the gap between dashes in a dashed barline
"barlineSeparation"	The default distance between multiple barlines when locked together, e.g. between two thin barlines making a double barline, or a thin and a thick barline making a final barline, measured from the right-hand edge of the left barline to the left-hand edge of the right barline.

Key name	*Description*
"repeatBarlineDotSeparation"	The default horizontal distance between the dots and the inner barline of a repeat barline, measured from the edge of the dots to the edge of the barline.
"bracketThickness"	The thickness of the vertical line of a bracket grouping staves together
"subBracketThickness"	The thickness of the vertical line of a sub-bracket grouping staves belonging to the same instrument together
"hairpinThickness"	The thickness of a *crescendo*/*diminuendo* hairpin
"octaveLineThickness"	The thickness of the dashed line used for an octave line
"pedalLineThickness"	The thickness of the line used for piano pedaling
"repeatEndingLineThickness"	The thickness of the brackets drawn to indicate repeat endings
"arrowShaftThickness"	The thickness of the line used for the shaft of an arrow
"lyricLineThickness"	The thickness of the lyric extension line to indicate a melisma in vocal music
"textEnclosureThickness"	The thickness of a box drawn around text instructions (e.g. rehearsal marks)
"tupletBracketThickness"	The thickness of the brackets drawn either side of tuplet numbers

Below is a dummy "engravingDefaults" structure, with some of the values filled in:

```
{
    ...
    "engravingDefaults": {
          "staffLineThickness": 0.1,
          "stemThickness": 0.1,
          "beamThickness": 0.5,
          "beamSpacing": 0.25,
          "legerLineThickness": 0.2,
          "legerLineExtension": 0.2,
          ...
    },
    ...
}
```

glyphsWithAnchors

The "glyphsWithAnchors" structure contains a structure for each glyph for which metadata is supplied, with the canonical glyph name or its Unicode code point as the key. Each glyph may define any of the following key/value pairs:

Key name	*Description*
"stemUpSE"	The exact position at which the bottom right-hand (south-east) corner of an upward-pointing stem rectangle should start, relative to the glyph origin, expressed as Cartesian coordinates in staff spaces.
"stemDownNW"	The exact position at which the top left-hand (north-west) corner of a downward-pointing stem rectangle should start, relative to the glyph origin, expressed as Cartesian coordinates in staff spaces.
"stemUpNW"	The amount by which an up-stem should be lengthened from its nominal unmodified length in order to ensure a good connection with a flag, in spaces.[11]
"stemDownSW"	The amount by which a down-stem should be lengthened from its nominal unmodified length in order to ensure a good connection with a flag, in spaces.
"nominalWidth"	The width in staff spaces of a given glyph that should be used for e.g. positioning leger lines correctly.[12]
"numeralTop"	The position in staff spaces that should be used to position numerals relative to clefs with ligated numbers where those numbers hang from the bottom of the clef, corresponding horizontally to the center of the numeral's bounding box.
"numeralBottom"	The position in staff spaces that should be used to position numerals relative to clefs with ligatured numbers where those numbers sit on the baseline or at the north-east corner of the G clef, corresponding horizontally to the center of the numeral's bounding box.
"cutOutNE"	The Cartesian coordinates in staff spaces of the bottom left corner of a nominal rectangle that intersects the top right corner of the glyph's bounding box. This rectangle, together with those in the other four corners of the glyph's bounding box, can be cut out to produce a more detailed bounding box (of abutting rectangles), useful for kerning or interlocking symbols such as accidentals.

[11] It is typical for noteheads and flags to be drawn using font glyphs, while stems themselves are drawn using primitive lines or rectangles. Flag glyphs in SMuFL-compliant fonts are registered such that y=0 represents the end of a stem drawn at its normal length, i.e. typically 3.5 staff spaces, so for simple drawing, any flag can be drawn at the same position relative to the stem and give the correct visual stem length. Modern drawing APIs typically provide sub-pixel RGB anti-aliasing for font glyphs, but may only provide grayscale anti-aliasing for primitive shapes. If the stem is drawn at its normal length with a flag glyph continuing beyond the end of the stem, there may be a poor visual appearance resulting from the primitive stem using standard anti-aliasing and the flag glyph using sub-pixel anti-aliasing. Therefore, it is recommended to extend the stem by the additional height of the flag such that the primitive stem stops at the end (or just short of the end) of the flag. Because the amount by which the stem should be extended is highly dependent on the design of the flag in a particular font, this value should be specified for each flag glyph in the metadata JSON file.

[12] Certain fonts, for example those that mimic music calligraphy, may include glyphs that are asymmetric by design, and where a simple calculation of the glyph's bounding box will not provide the correct result for registering that glyph with other primitives. For example, a whole rest may be slightly oblique if mimicking a chisel nib pen, and for precise registration it may be necessary to specify its width independent of the glyph's actual bounding box.

Key name	*Description*
"cutOutSE"	The Cartesian coordinates in staff spaces of the top left corner of a nominal rectangle that intersects the bottom right corner of the glyph's bounding box.
"cutOutSW"	The Cartesian coordinates in staff spaces of the top right corner of a nominal rectangle that intersects the bottom left corner of the glyph's bounding box.
"cutOutNW"	The Cartesian coordinates in staff spaces of the bottom right corner of a nominal rectangle that intersects the top left corner of the glyph's bounding box.

Below is an excerpt of a dummy font metadata file for the Bravura font, with some of the "glyphs" structure filled in:

```
{
    ...
    "glyphs": {
          "noteheadBlack": {
                "stemDownNW": [
                      0.0,
                      -0.184
                ],
                "stemUpSE": [
                      1.328,
                      0.184
                ]
          },
            ...
    },
    ...
}
```

glyphsWithAlternates

The "glyphsWithAlternates" structure contains a list of the glyphs in the font for which stylistic alternates are provided, together with their name and code point. Applications that cannot access advanced font features like OpenType stylistic alternates can instead determine the presence of an alternate for a given glyph, and its code point, using this data.

Below is an excerpt from a dummy font metadata file for Bravura, with a section of the "glyphsWithAlternates" structure filled in:

```
{
    ...
    "glyphsWithAlternates": {
        "flag8thUp": {
            "alternates": [
                {
```

```
                    "codepoint": "U+F410",
                    "name": "flag8thUpStraight"
                },
                {
                    "codepoint": "U+F411",
                    "name": "flag8thUpShort"
                }
            ]
        },
        "gClef": {
            "alternates": [
                {
                    "codepoint": "U+F470",
                    "name": "gClefSmall"
                }
            ]
        },
        ...
}
```

For each recommended glyph for which one or more alternates is provided, the "alternates" structure provides an array containing the name and code point of each alternate. Font designers are encouraged to use a consistent naming scheme for alternates.

glyphBBoxes

The optional "glyphBBoxes" structure contains information about the actual bounding box for each glyph.[13] The glyph bounding box is defined as the smallest rectangle that encloses every part of the glyph's path, and is described as a pair of coordinates for the bottom-left (or southwest) and top-right (or northeast) corners of the rectangle, expressed staff spaces to any required degree of precision, relative to the glyph origin.

Below is an excerpt from a dummy font metadata file for Bravura, with a section of the "glyphBBoxes" structure filled in:

```
{
    ...
    "glyphBBoxes": [
        {
            "name": "brace",
            "bBoxSW": [
                0.008,
                0.0
            ],
```

[13] This data is provided primarily for MakeMusic Finale (www.finalemusic.com), which requires bounding box data for certain graphical and spacing calculations performed by the software. This information is stored in a per-font data file called a Font Annotation (FAN) file, and can be edited directly within Finale in the Font Annotation dialog. Font designers who choose to provide this information for SMuFL-compliant fonts can save end users the steps of creating Font Annotation files in Finale, as future versions of Finale may be able to consume this metadata directly and automatically produce the required Font Annotation file.

```
            "bBoxNE": [
                0.328,
                3.988
            ]
        },
        {
            "name": "reversedBrace",
            "bBoxSW": [
                0.032,
                0.0
            ],
            "bBoxNE": [
                0.352,
                3.988
            ]
        },
        ...
    }
}
```

For each glyph, the "glyphBBoxes" structure provides the glyph's name (key **name**) and the coordinates of the opposite corners of the bounding rectangle (keys **bBoxSW** and **bBoxNW**).

ligatures

The "ligatures" structure contains a list of ligatures defined in the font. Applications that cannot access advanced font features like OpenType ligatures can instead determine the presence of a ligature that joins together a number of recommended glyphs, and its code point, using this data.

Below is an excerpt from a dummy font metadata file for Bravura, with a section of the "ligatures" structure filled in:

```
{
    ...
    "ligatures": {
        "accidentalDoubleFlatParens": {
            "codepoint": "U+F530",
            "componentGlyphs": [
                "accidentalParensLeft",
                "accidentalDoubleFlat",
                "accidentalParensRight"
            ]
        },
    ...
}
```

The structure uses the name of the ligature as its key, and the values include its code point, and its component glyphs. The component glyphs should be listed in an array

called "componentGlyphs", in the same order as they are listed in e.g. the liga OpenType table.

sets

The "sets" structure contains a list of stylistic sets defined in the font. Applications that cannot access advanced font features like OpenType stylistic sets can instead determine the presence of sets in a font, the purpose of each set, and the name and code point of each glyph in each set, using this data.

The purpose of each set is specified by the "type" key, which can have any of the following values:

Value	*Description*
"opticalVariantsSmall"	Glyphs designed for use on smaller staff sizes.
"flagsShort"	Alternate shorter flags for notes with augmentation dots.
"flagsStraight"	Alternate flags that are straight rather than curved.

The current list of values for "type" are based on the sets present in Bravura, which is the only SMuFL-compliant font at the time of writing. If you are a font designer and wish to add other sets to your own font, please propose a new value and description for the "type" key to the SMuFL community so that it can be discussed and subsequently added to the above list in a future revision.

Below is an excerpt from a dummy font metadata file for Bravura, with a section of the "sets" structure filled in:

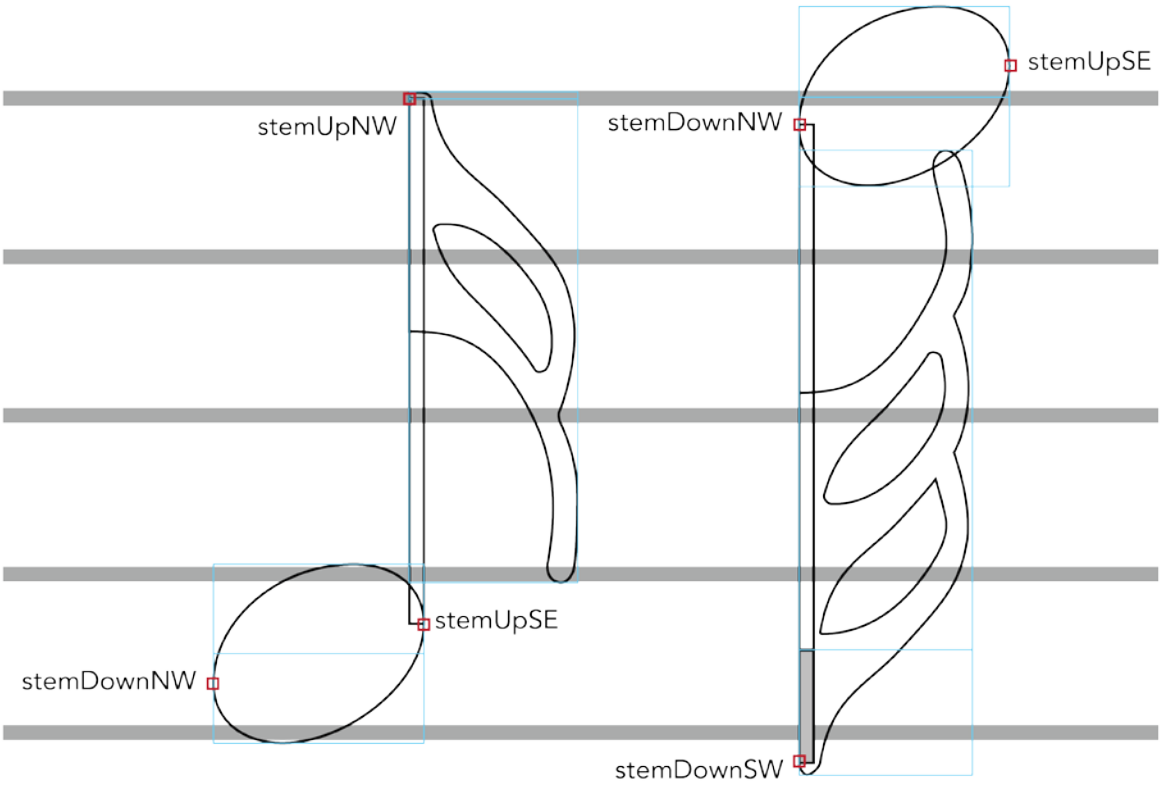
```
{
    ...
    "sets": {
        "ss01": {
            "type": "opticalVariantsSmall",
            "glyphs": [
                {
                    "codepoint": "U+F428",
                    "name": "accidentalFlatSmall"
                },
                {
                    "codepoint": "U+F429",
                    "name": "accidentalNaturalSmall"
                },
                {
                    "codepoint": "U+F42A",
                    "name": "accidentalSharpSmall"
                },
                      ...
            ],
        },
```

```
        "ss02": {
            "type": "FlagsShort",
            "glyphs": [
                {
                    "codepoint": "U+F411",
                    "name": "flag8thUpShort"
                },
                {
                    "codepoint": "U+F414",
                    "name": "flag16thUpShort"
                },
                      ...
            ],
        },
        ...
    }
    ...
}
```

Example of glyph registration for notes with flags

The figure below shows how font-specific metadata may be used in conjunction with the conventions of glyph registration to construct two notes: an up-stem 16th note (semiquaver), and a down-stem 32nd (demisemiquaver).

- The horizontal grey lines denote staff lines, for scale.
- The light blue boxes show glyph bounding boxes, with the left-hand side of the box corresponding to x=0, while the horizontal lines bisecting the blue boxes show the origin for each glyph, i.e. y=0.
- The red boxes show the locations of the glyph attachment points, as specified in the font metadata JSON file.
- The shaded area on the down-stem note shows the amount by which a stem of standard length (i.e. the unfilled portion of the stem) should be extended in order to ensure good on-screen appearance at all zoom levels.



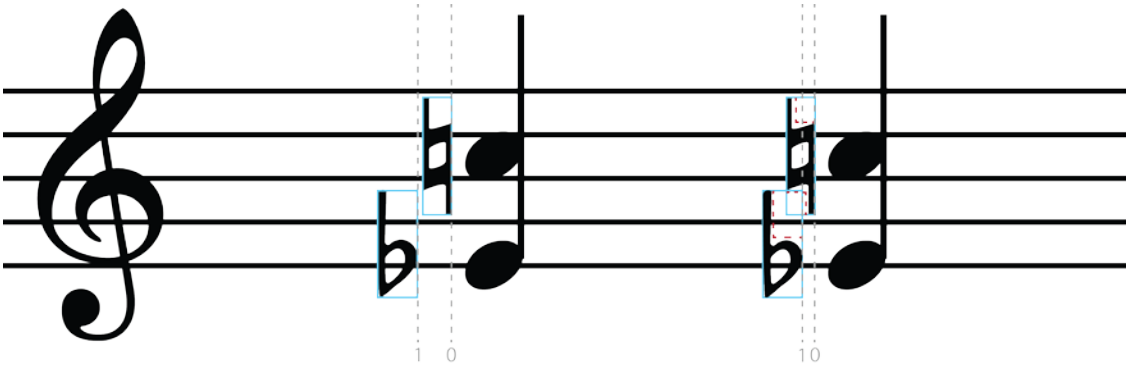
Note that the **stemUpSE** attachment point corresponds to the bottom right-hand (or south-east) corner of the stem, while **stemDownNW** corresponds to the top left-hand (or north-west) corner of the stem. Likewise, for correct alignment, the flag glyphs must always be aligned precisely to the left-hand side of the stem, with the glyph origin positioned vertically at the end of the normal stem length.

Bounding box cut-outs

The four points **cutOutNE**, **cutOutSE**, **cutOutSW** and **cutOutNW** describe rectangular cut-outs from the four corners of a glyph's rectangular bounding box. The bounding box is the box with the smallest area that encloses every part of the path of a glyph.

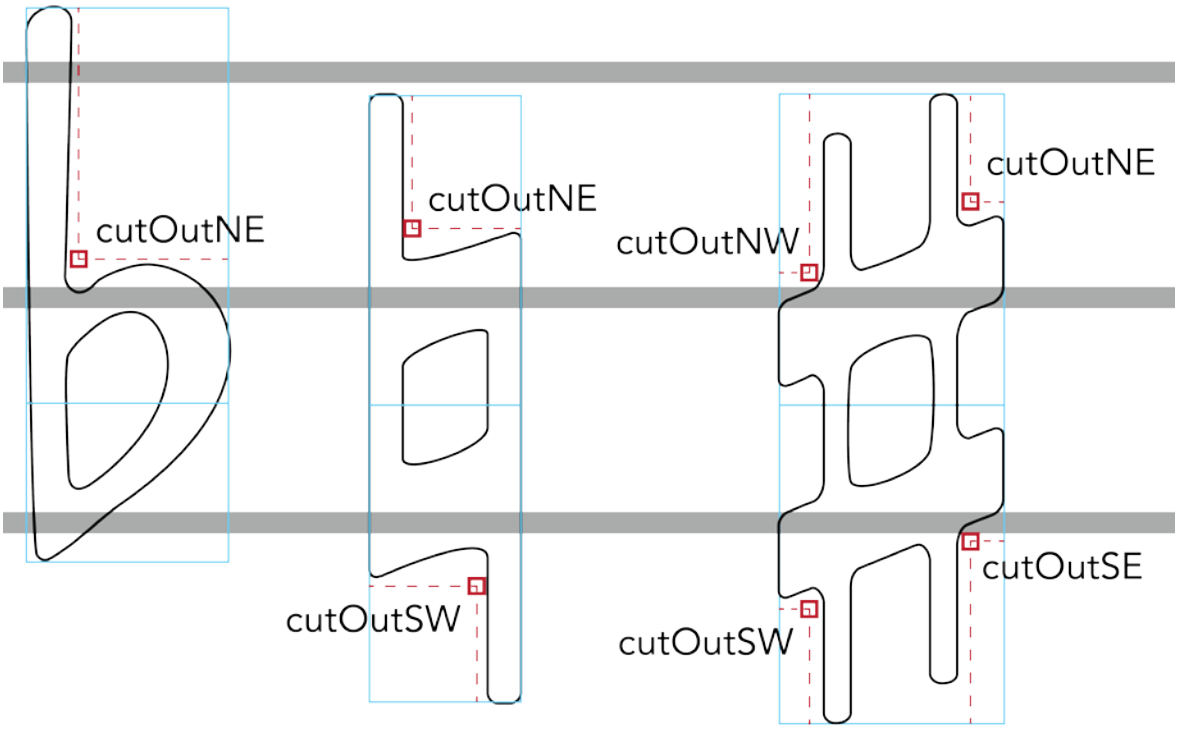
Because a glyph may not occupy every part of its bounding box, it can be useful to have an extra level of detail about the shape of the glyph, but at a coarser level than directly examining the path of the glyph to determine which areas of the bounding box are occupied and which are empty.

For example, when stacking accidentals to the left of a chord, accidentals are arranged into columns, where accidentals belonging to notes separated by a wide interval (normally a seventh or more) are aligned in the same column, i.e. at the same horizontal position. Successive columns of accidentals are laid out from right to left to the left of a chord, and depending on the accidentals that are present, it may be possible to interlock or kern those columns. The figure below shows a simple example:



In the first chord above, the two columns of accidentals (numbered 0 and 1) are positioned almost as close as the bounding boxes of the accidentals (shown in light blue) in each column will allow. In the second chord, column 1 is allowed to interlock with column 0 because the cut-outs in the bounding boxes of the two accidentals (shown as dashed red lines) are removed: the bounding boxes of the accidentals can overlap, provided it is only the cut-outs that overlap.

Font designers can specify four cut-outs to the bounding box, one in each corner, as illustrated in the figure below:



Each cut-out is specified as a pair of X,Y coordinates (in spaces), describing the innermost corner of a nominal rectangle that intersects the bounding box. For example, **cutOutNE** specifies the bottom left corner of a rectangle that intersects the top right corner of the bounding box of the glyph. The positions of each of the other corners of the cut-out rectangle are calculated using the bounding box of the glyph.

Metrics and glyph registration for text-based applications

The following guidelines are provided for fonts intended for use in text-based applications, such as word processors, desktop publishers and other text editors.

Upper case letters in a text font do not typically occupy the whole height of the em square: instead, they typically occupy around 75–80% of the height of the em square, with the key metrics for ascender and caps height both falling within this range. In order for the line spacing of a font containing music characters to be equivalent to that of a text font, its key metrics must match, i.e. the ascender, caps height and descender must be very similar. Glyphs with unusually large ascenders and descenders (such as notes of short duration with multiple flags) should not be scaled individually in order to fit within the ascender height, as they will not then fit with the other glyphs at the same point size; however, the behavior of glyphs that extend beyond the font's ascender and descender metrics is highly variable between different applications.

Leading on from the premise that a SMuFL-compliant font for text-based applications should use metrics compatible with regular text fonts, specific guidelines are as follows:

- Dividing 80% of the height of 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, the height of a five-line staff is 800 design units, or 0.8 em; therefore, one staff space height is 200 design units, or 0.2 em. If a font uses 2048 upm, as is conventional for a TrueType font, the height of a five-line staff is 1640 design units, and one staff space is 410 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, and y = 0.8 em represents the middle of the top staff line of that same five-line staff.
- All glyphs should be drawn at a scale consistent with the key measurement that one staff space = 0.2 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.
- Staff line and leger line glyphs (in the class **zeroWidth**) should have an advance width of zero, so that other glyphs can be drawn on top of them easily.
- Time signature digits should also have an advance width of zero, so that they can be positioned above each other (using the **timeSigCombNumerator** and **timeSigCombDenominator** ligatures).

- Clefs should be positioned such that they are aligned with the five-line staff glyphs (e.g. **staff5lines**) at their most usual staff position: G clefs (in the class **clefsG**) should be positioned such that the bottom loop is aligned with the bottom staff line (0.2 em higher than the position in a SMuFL-compliant font for a scoring application); F clefs (in the class **clefsF**) should be positioned such that the second-highest staff line passes between the two dots (0.6 em higher than in a font for a scoring application); and C clefs (in the class **clefsC**) should be positioned such that the middle staff line passes through the middle of the clef (0.4 em higher than in a font for a scoring application).[14]
- Glyphs that can appear at different staff positions, e.g. noteheads, notes, accidentals, etc. (in class **combiningStaffPositions**), should be positioned such that they are centered around the middle staff line of the five-line staff glyphs (i.e. centered vertically around y = 0.4 em).
- To enable the positioning of glyphs at different staff positions, fonts should support the combination of combining staff position control characters and glyphs in the class **combiningStaffPositions** using a glyph substitution feature such as OpenType ligatures. This allows the end user to position e.g. a black notehead on the second-highest staff line by using a ligature of **staffPosRaise2** and **noteheadBlack**.

[14] The recommended default placement for C clefs is on the middle staff line, i.e. as an alto clef. Positioning the C clef such that it is centered around the second-highest staff line, i.e. as a tenor clef, can be achieved using the combining staff position control characters, if the font implements ligatures or other glyph substitution features.

Staff brackets and dividers (U+E000–U+E00F)

U+E000 (and U+1D114)

brace

Brace

U+E001

reversedBrace

Reversed brace

U+E002 (and U+1D115)

bracket

Bracket

U+E003

bracketTop

Bracket top

U+E004

bracketBottom

Bracket bottom

U+E005

reversedBracketTop

Reversed bracket top

U+E006

reversedBracketBottom

Reversed bracket bottom

U+E007

systemDivider

System divider

U+E008

systemDividerLong

Long system divider

U+E009

systemDividerExtraLong

Extra long system divider

U+E00A

splitBarDivider

Split bar divider (bar spans a system break)

U+E00B

staffDivideArrowDown

Staff divide arrow down

U+E00C

staffDivideArrowUp

Staff divide arrow up

U+E00D

staffDivideArrowUpDown

Staff divide arrows

Recommended stylistic alternates

uniE000.salt01

braceSmall

Brace (small)

uniE000.salt02

braceLarge

Brace (large)

uniE000.salt03

braceLarger

Brace (larger)

uniE000.salt04

braceFlat

Brace (flat)

Implementation notes

The **brace** glyph should be scaled vertically in a scoring application to the appropriate height of the two or more staves it encompasses.

bracket 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 **bracketTop** and **bracketBottom** as the top and bottom terminals of a bracket drawn using a stroked line or filled rectangle of the appropriate width.

Staves (U+E010–U+E02F)

U+E010 (and U+1D116)

staff1Line

1-line staff

U+E011 (and U+1D117)

staff2Lines

2-line staff

U+E012 (and U+1D118)

staff3Lines

3-line staff

U+E013 (and U+1D119)

staff4Lines

4-line staff

U+E014 (and U+1D11A)

staff5Lines

5-line staff

U+E015 (and U+1D11B)

staff6Lines

6-line staff

U+E016

staff1LineWide

1-line staff (wide)

U+E017

staff2LinesWide

2-line staff (wide)

U+E018

staff3LinesWide

3-line staff (wide)

U+E019

staff4LinesWide

4-line staff (wide)

U+E01A

staff5LinesWide

5-line staff (wide)

U+E01B

staff6LinesWide

6-line staff (wide)

U+E01C

staff1LineNarrow

1-line staff (narrow)

U+E01D

staff2LinesNarrow

2-line staff (narrow)

U+E01E

staff3LinesNarrow

3-line staff (narrow)

U+E01F

staff4LinesNarrow

4-line staff (narrow)

U+E020

staff5LinesNarrow

5-line staff (narrow)

U+E021

staff6LinesNarrow

6-line staff (narrow)

U+E022

legerLine

Leger line

U+E023

legerLineWide

Leger line (wide)

U+E024

legerLineNarrow

Leger line (narrow)

Implementation notes

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

Narrow and wide versions are provided for use in fonts intended for use in text-based applications. These glyphs should be zero-width in such fonts.

Barlines (U+E030–U+E03F)

U+E030 (and U+1D100)
barlineSingle
Single barline

U+E031 (and U+1D101)
barlineDouble
Double barline

U+E032 (and U+1D102)
barlineFinal
Final barline

U+E033 (and U+1D103)
barlineReverseFinal
Reverse final barline

U+E034
barlineHeavy
Heavy barline

U+E035
barlineHeavyHeavy
Heavy double barline

U+E036 (and U+1D104)
barlineDashed
Dashed barline

U+E037
barlineDotted
Dotted barline

U+E038 (and U+1D105)
barlineShort
Short barline

U+E039
barlineTick
Tick barline

Implementation notes

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

Repeats (U+E040–U+E04F)

U+E040 (and U+1D106)
repeatLeft
Left (start) repeat sign

U+E041 (and U+1D107)
repeatRight
Right (end) repeat sign

U+E042
repeatRightLeft
Right and left repeat sign

U+E043 (and U+1D108)
repeatDots
Repeat dots

U+E044
repeatDot
Single repeat dot

U+E045 (and U+1D109)
dalSegno
Dal segno

U+E046 (and U+1D10A)
daCapo
Da capo

U+E047 (and U+1D10B)
segno
Segno

U+E048 (and U+1D10C)
coda
Coda

U+E049
codaSquare
Square coda

U+E04A
segnoSerpent1
Segno (serpent)

U+E04B
segnoSerpent2
Segno (serpent with vertical lines)

U+E04C
leftRepeatSmall
Left repeat sign within bar

U+E04D
rightRepeatSmall
Right repeat sign within bar

Recommended stylistic alternates

uniE042.salt01
repeatRightLeftThick
RIght and left repeat sign (thick-thick)

uniE047.salt01
segnoJapanese
Segno (Japanese style, rotated)

uniE048.salt01

codaJapanese

Coda (Japanese style, serif)

Implementation notes

Scoring programs should draw their own repeat barlines using primitives to draw the thick and thin lines and **repeatDots** to draw the dots, not use the precomposed glyphs **leftRepeat** or **rightRepeat**.

dalSegno and **daCapo** 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+E050–U+E07F)

U+E050 (and U+1D11E)

gClef

G clef

U+E051

gClef15mb

G clef quindicesima bassa

U+E052 (and U+1D120)

gClef8vb

G clef ottava bassa

U+E053 (and U+1D11F)

gClef8va

G clef ottava alta

U+E054

gClef15ma

G clef quindicesima alta

U+E055

gClef8vbOld

G clef ottava bassa (old style)

U+E056

gClef8vbCClef

G clef ottava bassa with C clef

U+E057

gClefLigatedNumberBelow

Combining G clef, number below

U+E058

gClefLigatedNumberAbove

Combining G clef, number above

U+E059

gClefArrowUp

G clef, arrow up

U+E05A

gClefArrowDown

G clef, arrow down

U+E05B (and U+1D121)

cClef

C clef

U+E05C

cClef8vb

C clef ottava bassa

U+E05D

cClefArrowUp

C clef, arrow up

U+E05E

cClefArrowDown

C clef, arrow down

U+E05F

cClefSquare

C clef (19th century)

U+E060

cClefCombining

Combining C clef

U+E061 (and U+1D122)

fClef

F clef

U+E062

fClef15mb

F clef quindicesima bassa

U+E063 (and U+1D124)

fClef8vb

F clef ottava bassa

U+E064 (and U+1D123)

fClef8va

F clef ottava alta

U+E065

fClef15ma

F clef quindicesima alta

U+E066

fClefArrowUp

F clef, arrow up

U+E067

fClefArrowDown

F clef, arrow down

U+E068 (and U+1D125)

unpitchedPercussionClef1

Unpitched percussion clef 1

U+E069 (and U+1D126)

unpitchedPercussionClef2

Unpitched percussion clef 2

U+E06A

semipitchedPercussionClef1

Semi-pitched percussion clef 1

U+E06B

semipitchedPercussionClef2

Semi-pitched percussion clef 2

U+E06C

6stringTabClef

6-string tab clef

U+E06D

4stringTabClef

4-string tab clef

U+E06E

cClefTriangular

Triangular C clef

U+E06F

fClefTriangular

Triangular F clef

U+E070

cClefTriangularToFClef

C clef to F clef change

U+E071

fClefTriangularToCClef

F clef to C clef change

U+E072

gClefReversed

Reversed G clef

U+E073

gClefTurned

Turned G clef

U+E074

cClefReversed

Reversed C clef

U+E075

fClefReversed

Reversed F clef

U+E076

fClefTurned

Turned F clef

U+E077

bridgeClef

Bridge clef

U+E078

accdnDiatonicClef

Diatonic accordion clef

U+E079

gClefChange

G clef change

U+E07A

cClefChange

C clef change

U+E07B

fClefChange

F clef change

U+E07C

clefChangeCombining

Combining clef change

Recommended stylistic alternates

uniE050.ss01

gClefSmall

G clef (small staff)

uniE052.salt01

gClef8vbParens

G clef ottava bassa (8)

uniE05B.salt01

cClefFrench

C clef (French, 18th century)

uniE05B.ss01

cClefSmall

C clef (small staff)

uniE061.salt01

fClefFrench

F clef (French, 18th century)

uniE061.salt02

fClef19thCentury

F clef (19th century)

uniE061.ss01

fClefSmall

F clef (small staff)

uniE068.salt01

unpitchedPercussionClef1Alt

Unpitched percussion clef 1 (thick-thin)

uniE06C.salt01

6stringTabClefTall

6-string tab clef (tall)

uniE06C.salt02

6stringTabClefSerif

6-string tab clef (serif)

uniE06D.salt01

4stringTabClefTall

4-string tab clef (tall)

uniE06D.salt02

4stringTabClefSerif

4-string tab clef (serif)

Recommended ligatures

uniE061_uniE885

fClef5Below

F clef, 5 below

uniE057_uniE880

gClef0Below

G clef, 0 below

uniE057_uniE881_uniE880

gClef10Below

G clef, 10 below

uniE057_uniE881_uniE881

gClef11Below

G clef, 11 below

uniE057_uniE881_uniE882

gClef12Below

G clef, 12 below

uniE057_uniE881_uniE883

gClef13Below

G clef, 13 below

uniE057_uniE881_uniE884

gClef14Below

G clef, 14 below

uniE057_uniE881_uniE885

gClef15Below

G clef, 15 below

uniE057_uniE881_uniE886

gClef16Below

G clef, 16 below

uniE057_uniE881_uniE887

gClef17Below

G clef, 17 below

uniE058_uniE882

gClef2Above

G clef, 2 above

uniE057_uniE882

gClef2Below

G clef, 2 below

uniE058_uniE883

gClef3Above

G clef, 3 above

uniE057_uniE883

gClef3Below

G clef, 3 below

uniE058_uniE884

gClef4Above

G clef, 4 above

uniE058_uniE885

gClef5Above

G clef, 5 above

uniE058_uniE886

gClef6Above

G clef, 6 above

uniE058_uniE887

gClef7Above

G clef, 7 above

uniE058_uniE888

gClef8Above

G clef, 8 above

uniE058_uniE889

gClef9Above

G clef, 9 above

uniE057_uniE881_uniE880_uniE260

gClefFlat10Below

G clef, flat 10 below

uniE057_uniE881_uniE883_uniE260

gClefFlat13Below

G clef, flat 13 below

uniE057_uniE881_uniE885_uniE260

gClefFlat15Below

G clef, flat 15 below

uniE057_uniE884

gClef4Below

G clef, 4 below

uniE057_uniE885

gClef5Below

G clef, 5 below

uniE057_uniE886

gClef6Below

G clef, 6 below

uniE057_uniE887

gClef7Below

G clef, 7 below

uniE057_uniE888

gClef8Below

G clef, 8 below

uniE057_uniE889

gClef9Below

G clef, 9 below

uniE057_uniE881_uniE881_uniE260

gClefFlat11Below

G clef, flat 11 below

uniE057_uniE881_uniE884_uniE260

gClefFlat14Below

G clef, flat 14 below

uniE057_uniE881_uniE886_uniE260

gClefFlat16Below

G clef, flat 16 below

uniE057_uniE260_uniE881

gClefFlat1Below

G clef, flat 1 below

uniE057_uniE260_uniE882

gClefFlat2Below

G clef, flat 2 below

uniE057_uniE260_uniE883

gClefFlat3Below

G clef, flat 3 below

uniE058_uniE885_uniE260

gClefFlat5Above

G clef, flat 5 above

uniE057_uniE260_uniE886

gClefFlat6Below

G clef, flat 6 below

uniE057_uniE260_uniE887

gClefFlat7Below

G clef, flat 7 below

uniE058_uniE889_uniE260

gClefFlat9Above

G clef, flat 9 above

uniE057_uniE261_uniE882

gClefNat2Below

G clef, natural 2 below

uniE057_uniE881_uniE883_uniE261

gClefNatural13Below

G clef, natural 13 below

uniE058_uniE882_uniE260

gClefFlat2Above

G clef, flat 2 above

uniE058_uniE883_uniE260

gClefFlat3Above

G clef, flat 3 above

uniE057_uniE260_uniE884

gClefFlat4Below

G clef, flat 4 below

uniE058_uniE886_uniE260

gClefFlat6Above

G clef, flat 6 above

uniE058_uniE887_uniE260

gClefFlat7Above

G clef, flat 7 above

uniE058_uniE888_uniE260

gClefFlat8Above

G clef, flat 8 above

uniE057_uniE260_uniE889

gClefFlat9Below

G clef, flat 9 below

uniE057_uniE881_uniE880_uniE261

gClefNatural10Below

G clef, natural 10 below

uniE057_uniE881_uniE887_uniE261

gClefNatural17Below

G clef, natural 17 below

uniE058_uniE882_uniE261

gClefNatural2Above

G clef, natural 2 above

uniE058_uniE883_uniE261

gClefNatural3Above

G clef, natural 3 above

uniE057_uniE261_uniE883

gClefNatural3Below

G clef, natural 3 below

uniE058_uniE886_uniE261

gClefNatural6Above

G clef, natural 6 above

uniE057_uniE261_uniE886

gClefNatural6Below

G clef, natural 6 below

uniE058_uniE887_uniE261

gClefNatural7Above

G clef, natural 7 above

uniE058_uniE889_uniE261

gClefNatural9Above

G clef, natural 9 above

uniE057_uniE261_uniE889

gClefNatural9Below

G clef, natural 9 below

uniE057_uniE881_uniE882_uniE262

gClefSharp12Below

G clef, sharp 12 below

uniE058_uniE881_uniE262

gClefSharp1Above

G clef, sharp 1 above

uniE058_uniE884_uniE262

gClefSharp4Above

G clef, sharp 4 above

uniE057_uniE262_uniE885

gClefSharp5Below

G clef, sharp 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 **gClef** and **fClef** with **ottava** and **quindicesima** 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).

Clef changes are normally drawn at two-thirds the size of clefs at the beginning of the system[15], but different publishers and engravers may prefer to use a different size. Dedicated glyphs for drawing a clef change are provided for the three most commonly-used clefs (**gClefChange**, **cClefChange**, and **fClefChange**), together with a combining control character (**clefChangeCombining**) that font designers may use to

[15] Gould, *ibid.*, page 7.

produce smaller versions of less commonly-used clefs by way of glyph substitution (such as OpenType ligatures). Scoring applications may choose to use these dedicated clef change glyphs if they do not provide the end user with control over the size of clef changes. Otherwise, scoring applications should draw clef changes by using the regular clef glyphs at a smaller point size, either fixed at two-thirds the size of normal clefs, or at a size of the end user's choosing.

Time signatures (U+E080–U+E09F)

U+E080
timeSig0
𝟎 Time signature 0

U+E081
timeSig1
𝟏 Time signature 1

U+E082
timeSig2
𝟐 Time signature 2

U+E083
timeSig3
𝟑 Time signature 3

U+E084
timeSig4
𝟒 Time signature 4

U+E085
timeSig5
𝟓 Time signature 5

U+E086
timeSig6
𝟔 Time signature 6

U+E087
timeSig7
𝟕 Time signature 7

U+E088
timeSig8
𝟖 Time signature 8

U+E089
timeSig9
𝟗 Time signature 9

U+E08A (and U+1D134)
timeSigCommon
𝐜 Common time

U+E08B (and U+1D135)
timeSigCutCommon
𝐜̸ Cut time

U+E08C
timeSigPlus
+ Time signature +

U+E08D
timeSigPlusSmall
+ Time signature + (for numerators)

U+E08E
timeSigFractionalSlash
⁄ Time signature fraction slash

U+E08F
timeSigEquals
= Time signature equals

U+E090
timeSigMinus
− Time signature minus

U+E091
timeSigMultiply
× Time signature multiply

U+E092

timeSigParensLeftSmall

Left parenthesis for numerator only

U+E093

timeSigParensRightSmall

Right parenthesis for numerator only

U+E094

timeSigParensLeft

Left parenthesis for whole time signature

U+E095

timeSigParensRight

Right parenthesis for whole time signature

U+E096

timeSigComma

Time signature comma

U+E097

timeSigFractionQuarter

Time signature fraction ¼

U+E098

timeSigFractionHalf

Time signature fraction ½

U+E099

timeSigFractionThreeQuarters

Time signature fraction ¾

U+E09A

timeSigFractionOneThird

Time signature fraction ⅓

U+E09B

timeSigFractionTwoThirds

Time signature fraction ⅔

U+E09C

timeSigX

Open time signature

U+E09D

timeSigOpenPenderecki

Open time signature (Penderecki)

U+E09E

timeSigCombNumerator

Control character for numerator digit

U+E09F

timeSigCombDenominator

Control character for denominator digit

Recommended stylistic alternates

uniE080.salt01

timeSig0Large

Time signature 0 (outside staff)

uniE080.ss01

timeSig0Small

Time signature 0 (small staff)

uniE081.salt01

timeSig1Large

Time signature 1 (outside staff)

uniE081.ss01

timeSig1Small

Time signature 1 (small staff)

uniE082.salt01

timeSig2Large

Time signature 2 (outside staff)

uniE082.ss01

timeSig2Small

Time signature 2 (small staff)

uniE083.salt01

timeSig3Large

Time signature 3 (outside staff)

uniE083.ss01

timeSig3Small

Time signature 3 (small staff)

uniE084.salt01

timeSig4Large

Time signature 4 (outside staff)

uniE084.ss01

timeSig4Small

Time signature 4 (small staff)

uniE085.salt01

timeSig5Large

Time signature 5 (outside staff)

uniE085.ss01

timeSig5Small

Time signature 5 (small staff)

uniE086.salt01

timeSig6Large

Time signature 6 (outside staff)

uniE086.ss01

timeSig6Small

Time signature 6 (small staff)

uniE087.salt01

timeSig7Large

Time signature 7 (outside staff)

uniE087.ss01

timeSig7Small

Time signature 7 (small staff)

uniE088.salt01

timeSig8Large

Time signature 8 (outside staff)

uniE088.ss01

timeSig8Small

Time signature 8 (small staff)

uniE089.salt01

timeSig9Large

Time signature 9 (outside staff)

uniE089.ss01

timeSig9Small

Time signature 9 (small staff)

Recommended ligatures

uniE09F_uniE080
timeSig0Denominator
Time signature 0 (denominator)

uniE09E_uniE080
timeSig0Numerator
Time signature 0 (numerator)

uniE09F_uniE081
timeSig1Denominator
Time signature 1 (denominator)

uniE09E_uniE081
timeSig1Numerator
Time signature 1 (numerator)

uniE09F_uniE082
timeSig2Denominator
Time signature 2 (denominator)

uniE09E_uniE082
timeSig2Numerator
Time signature 2 (numerator)

uniE09F_uniE083
timeSig3Denominator
Time signature 3 (denominator)

uniE09E_uniE083
timeSig3Numerator
Time signature 3 (numerator)

uniE09F_uniE084
timeSig4Denominator
Time signature 4 (denominator)

uniE09E_uniE084
timeSig4Numerator
Time signature 4 (numerator)

uniE09F_uniE085
timeSig5Denominator
Time signature 5 (denominator)

uniE09E_uniE085
timeSig5Numerator
Time signature 5 (numerator)

uniE09F_uniE086
timeSig6Denominator
Time signature 6 (denominator)

uniE09E_uniE086
timeSig6Numerator
Time signature 6 (numerator)

uniE09F_uniE087
timeSig7Denominator
Time signature 7 (denominator)

uniE09E_uniE087
timeSig7Numerator
Time signature 7 (numerator)

uniE09F_uniE088
timeSig8Denominator
Time signature 8 (denominator)

uniE09E_uniE088
timeSig8Numerator
Time signature 8 (numerator)

uniE09F_uniE089

timeSig9Denominator

Time signature 9 (denominator)

uniE09E_uniE089

timeSig9Numerator

Time signature 9 (numerator)

Implementation notes

timeSigCombNumerator and timeSigCombDenominator are control characters designed to be combined with the time signature digits (by way of glyph substitution, such as OpenType ligatures) to shift them vertically into position suitable for drawing as the numerator and denominator of a time signature. These control characters are intended for fonts to be used in text-based applications, since scoring applications should position the numerator and denominator of time signatures independently.

Noteheads (U+E0A0–U+E0FF)

U+E0A0

noteheadDoubleWhole

Double whole (breve) notehead

U+E0A1

noteheadDoubleWholeSquare

Double whole (breve) notehead (square)

U+E0A2

noteheadWhole

Whole (semibreve) notehead

U+E0A3 (and U+1D157)

noteheadHalf

Half (minim) notehead

U+E0A4 (and U+1D158)

noteheadBlack

Black notehead

U+E0A5 (and U+1D159)

noteheadNull

Null notehead

U+E0A6

noteheadXDoubleWhole

X notehead double whole

U+E0A7

noteheadXWhole

X notehead whole

U+E0A8

noteheadXHalf

X notehead half

U+E0A9 (and U+1D143)

noteheadXBlack

X notehead black

U+E0AA

noteheadXOrnate

Ornate X notehead

U+E0AB

noteheadPlusDoubleWhole

Plus notehead double whole

U+E0AC

noteheadPlusWhole

Plus notehead whole

U+E0AD

noteheadPlusHalf

Plus notehead half

U+E0AE (and U+1D144)

noteheadPlusBlack

Plus notehead black

U+E0AF

noteheadCircleXDoubleWhole

Circle X double whole

U+E0B0

noteheadCircleXWhole

Circle X whole

U+E0B1

noteheadCircleXHalf

Circle X half

U+E0B2 (and U+1D145)
noteheadCircleX
 Circle X notehead

U+E0B3
noteheadDoubleWholeWithX
 Double whole notehead with X

U+E0B4
noteheadWholeWithX
 Whole notehead with X

U+E0B5
noteheadHalfWithX
 Half notehead with X

U+E0B6
noteheadVoidWithX
 Void notehead with X

U+E0B7 (and U+1D146)
noteheadSquareWhite
 Square notehead white

U+E0B8 (and U+1D147)
noteheadSquareBlack
 Square notehead black

U+E0B9
noteheadTriangleUpDoubleWhole
 Triangle notehead up double whole

U+E0BA
noteheadTriangleUpWhole
 Triangle notehead up whole

U+E0BB
noteheadTriangleUpHalf
 Triangle notehead up half

U+E0BC (and U+1D148)
noteheadTriangleUpWhite
 Triangle notehead up white

U+E0BD (and U+1D149)
noteheadTriangleUpBlack
 Triangle notehead up black

U+E0BE (and U+1D14A)
noteheadTriangleLeftWhite
 Triangle notehead left white

U+E0BF (and U+1D14B)
noteheadTriangleLeftBlack
 Triangle notehead left black

U+E0C0 (and U+1D14C)
noteheadTriangleRightWhite
 Triangle notehead right white

U+E0C1 (and U+1D14D)
noteheadTriangleRightBlack
 Triangle notehead right black

U+E0C2
noteheadTriangleDownDoubleWhole
 Triangle notehead down double whole

U+E0C3
noteheadTriangleDownWhole
 Triangle notehead down whole

U+E0C4

noteheadTriangleDownHalf

Triangle notehead down half

U+E0C5 (and U+1D14E)

noteheadTriangleDownWhite

Triangle notehead down white

U+E0C6 (and U+1D14F)

noteheadTriangleDownBlack

Triangle notehead down black

U+E0C7 (and U+1D150)

noteheadTriangleUpRightWhite

Triangle notehead up right white

U+E0C8 (and U+1D151)

noteheadTriangleUpRightBlack

Triangle notehead up right black

U+E0C9 (and U+1D152)

noteheadMoonWhite

Moon notehead white

U+E0CA (and U+1D153)

noteheadMoonBlack

Moon notehead black

U+E0CB (and U+1D154)

noteheadTriangleRoundDownWhite

Triangle-round notehead down white

U+E0CC (and U+1D155)

noteheadTriangleRoundDownBlack

Triangle-round notehead down black

U+E0CD (and U+1D156)

noteheadParenthesis

Parenthesis notehead

U+E0CE

noteheadSlashedBlack1

Slashed black notehead (bottom left to top right)

U+E0CF

noteheadSlashedBlack2

Slashed black notehead (top left to bottom right)

U+E0D0

noteheadSlashedHalf1

Slashed half notehead (bottom left to top right)

U+E0D1

noteheadSlashedHalf2

Slashed half notehead (top left to bottom right)

U+E0D2

noteheadSlashedWhole1

Slashed whole notehead (bottom left to top right)

U+E0D3

noteheadSlashedWhole2

Slashed whole notehead (top left to bottom right)

U+E0D4

noteheadSlashedDoubleWhole1

Slashed double whole notehead (bottom left to top right)

U+E0D5

noteheadSlashedDoubleWhole2

Slashed double whole notehead (top left to bottom right)

U+E0D6

noteheadDiamondDoubleWhole

Diamond double whole notehead

U+E0D7

noteheadDiamondWhole

Diamond whole notehead

U+E0D8

noteheadDiamondHalf

Diamond half notehead

U+E0D9

noteheadDiamondHalfWide

Diamond half notehead (wide)

U+E0DA

noteheadDiamondBlack

Diamond black notehead

U+E0DB

noteheadDiamondBlackWide

Diamond black notehead (wide)

U+E0DC

noteheadDiamondWhite

Diamond white notehead

U+E0DD

noteheadDiamondWhiteWide

Diamond white notehead (wide)

U+E0DE

noteheadDiamondDoubleWholeOld

Diamond double whole notehead (old)

U+E0DF

noteheadDiamondWholeOld

Diamond whole notehead (old)

U+E0E0

noteheadDiamondHalfOld

Diamond half notehead (old)

U+E0E1

noteheadDiamondBlackOld

Diamond black notehead (old)

U+E0E2

noteheadDiamondHalfFilled

Half-filled diamond notehead

U+E0E3

noteheadCircledBlack

Circled black notehead

U+E0E4

noteheadCircledHalf

Circled half notehead

U+E0E5

noteheadCircledWhole

Circled whole notehead

U+E0E6

noteheadCircledDoubleWhole

Circled double whole notehead

U+E0E7

noteheadLargeArrowUpDoubleWhole

Large arrow up (highest pitch) double whole notehead

U+E0E8

noteheadLargeArrowUpWhole

Large arrow up (highest pitch) whole notehead

U+E0E9

noteheadLargeArrowUpHalf

Large arrow up (highest pitch) half notehead

U+E0EA

noteheadLargeArrowUpBlack

Large arrow up (highest pitch) black notehead

U+E0EB

noteheadLargeArrowDownDoubleWhole

Large arrow down (lowest pitch) double whole notehead

U+E0EC

noteheadLargeArrowDownWhole

Large arrow down (lowest pitch) whole notehead

U+E0ED

noteheadLargeArrowDownHalf

Large arrow down (lowest pitch) half notehead

U+E0EE

noteheadLargeArrowDownBlack

Large arrow down (lowest pitch) black notehead

U+E0EF

noteheadParenthesisLeft

Opening parenthesis

U+E0F0

noteheadParenthesisRight

Closing parenthesis

U+E0F1

noteheadCircleSlash

Circle slash notehead

U+E0F2

noteheadHeavyX

Heavy X notehead

U+E0F3

noteheadHeavyXHat

Heavy X with hat notehead

U+E0F4

noteheadWholeFilled

Filled whole (semibreve) notehead

U+E0F5

noteheadHalfFilled

Filled half (minim) notehead

U+E0F6

noteheadDiamondOpen

Open diamond notehead

Recommended stylistic alternates

uniE0A0.salt01

noteheadDoubleWholeAlt

Double whole note (breve), single vertical strokes

uniE0A0.ss01

noteheadDoubleWholeSmall

Double whole note (breve) (small staff)

uniE0A2.ss01

noteheadWholeSmall

Whole notehead (small staff)

uniE0A3.ss01

noteheadHalfSmall

Half (minim) notehead (small staff)

uniE0A4.ss01

noteheadBlackSmall

Black notehead (small staff)

Recommended ligatures

uniE0EF_uniE0A4_uniE0F0

noteheadBlackParens

Parenthesised black notehead

uniE0EF_uniE0A3_uniE0F0

noteheadHalfParens

Parenthesised half notehead

uniE0EF_uniE0A2_uniE0F0

noteheadWholeParens

Parenthesised whole (semibreve) notehead

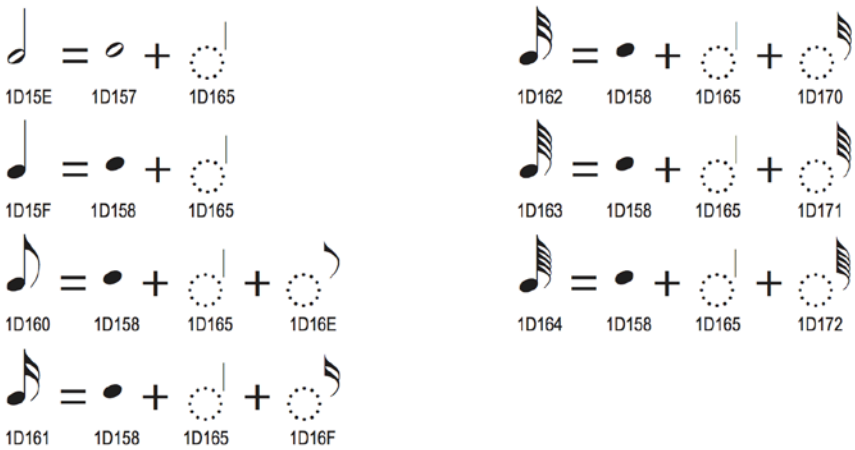
uniE0EF_uniE0A0_uniE0F0

noteheadDoubleWholeParens

Parenthesised double whole (breve) notehead

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 **stem** (i.e. U+1D165 as shown in the above image[16]), so that they can be drawn to the correct length.

See also the implementation notes for flags.

[16] 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+E100–U+E10F)

U+E100

noteheadSlashVerticalEnds

Slash with vertical ends

U+E101 (and U+1D10D)

noteheadSlashHorizontalEnds

Slash with horizontal ends

U+E102

noteheadSlashWhiteWhole

White slash whole

U+E103

noteheadSlashWhiteHalf

White slash half

U+E104

noteheadSlashDiamondWhite

Large white diamond

U+E105

noteheadSlashVerticalEndsSmall

Small slash with vertical ends

U+E106

noteheadSlashX

Large X notehead

U+E107

noteheadSlashVerticalEndsMuted

Muted slash with vertical ends

U+E108

noteheadSlashHorizontalEndsMuted

Muted slash with horizontal ends

U+E109

noteheadSlashWhiteMuted

Muted white slash

Implementation notes

See the implementation notes for noteheads.

Round and square noteheads (U+E110–U+E11F)

U+E110

noteheadRoundBlackLarge

Large round black notehead

U+E111

noteheadRoundWhiteLarge

Large round white notehead

U+E112

noteheadRoundWhiteWithDotLarge

Large round white notehead with dot

U+E113

noteheadRoundBlack

Round black notehead

U+E114

noteheadRoundWhite

Round white notehead

U+E115

noteheadRoundWhiteWithDot

Round white notehead with dot

U+E116

noteheadRoundBlackSlashedLarge

Large round black notehead, slashed

U+E117

noteheadRoundWhiteSlashedLarge

Large round white notehead, slashed

U+E118

noteheadRoundBlackSlashed

Round black notehead, slashed

U+E119

noteheadRoundWhiteSlashed

Round white notehead, slashed

U+E11A

noteheadSquareBlackLarge

Large square black notehead

U+E11B

noteheadSquareBlackWhite

Large square white notehead

Note clusters (U+E120–U+E14F)

U+E120 (and U+1D15A)

noteheadClusterSquareWhite

Cluster notehead white (square)

U+E121 (and U+1D15B)

noteheadClusterSquareBlack

Cluster notehead black (square)

U+E122

noteheadClusterRoundWhite

Cluster notehead white (round)

U+E123

noteheadClusterRoundBlack

Cluster notehead black (round)

U+E124

noteheadClusterDoubleWhole2nd

Double whole note cluster, 2nd

U+E125

noteheadClusterWhole2nd

Whole note cluster, 2nd

U+E126

noteheadClusterHalf2nd

Half note cluster, 2nd

U+E127

noteheadClusterQuarter2nd

Quarter note cluster, 2nd

U+E128

noteheadClusterDoubleWhole3rd

Double whole note cluster, 3rd

U+E129

noteheadClusterWhole3rd

Whole note cluster, 3rd

U+E12A

noteheadClusterHalf3rd

Half note cluster, 3rd

U+E12B

noteheadClusterQuarter3rd

Quarter note cluster, 3rd

U+E12C

noteheadClusterDoubleWholeTop

Combining double whole note cluster, top

U+E12D

noteheadClusterDoubleWholeMiddle

Combining double whole note cluster, middle

U+E12E

noteheadClusterDoubleWholeBottom

Combining double whole note cluster, bottom

U+E12F

noteheadClusterWholeTop

Combining whole note cluster, top

U+E130

noteheadClusterWholeMiddle

Combining whole note cluster, middle

U+E131

noteheadClusterWholeBottom

Combining whole note cluster, bottom

U+E132

noteheadClusterHalfTop

Combining half note cluster, top

U+E133

noteheadClusterHalfMiddle

Combining half note cluster, middle

U+E134

noteheadClusterHalfBottom

Combining half note cluster, bottom

U+E135

noteheadClusterQuarterTop

Combining quarter note cluster, top

U+E136

noteheadClusterQuarterMiddle

Combining quarter note cluster, middle

U+E137

noteheadClusterQuarterBottom

Combining quarter note cluster, bottom

U+E138

noteheadDiamondClusterWhite2nd

White diamond cluster, 2nd

U+E139

noteheadDiamondClusterBlack2nd

Black diamond cluster, 2nd

U+E13A

noteheadDiamondClusterWhite3rd

White diamond cluster, 3rd

U+E13B

noteheadDiamondClusterBlack3rd

Black diamond cluster, 3rd

U+E13C

noteheadDiamondClusterWhiteTop

Combining white diamond cluster, top

U+E13D

noteheadDiamondClusterWhiteMiddle

Combining white diamond cluster, middle

U+E13E

noteheadDiamondClusterWhiteBottom

Combining white diamond cluster, bottom

U+E13F

noteheadDiamondClusterBlackTop

Combining black diamond cluster, top

U+E140

noteheadDiamondClusterBlackMiddle

Combining black diamond cluster, middle

U+E141

noteheadDiamondClusterBlackBottom

Combining black diamond cluster, bottom

U+E142

noteheadRectangularClusterBlackTop

Combining black rectangular cluster, top

U+E143

noteheadRectangularClusterBlackMiddle

Combining black rectangular cluster, middle

U+E144

noteheadRectangularClusterBlackBottom

Combining black rectangular cluster, bottom

U+E145

noteheadRectangularClusterWhiteTop

Combining white rectangular cluster, top

U+E146

noteheadRectangularClusterWhiteMiddle

Combining white rectangular cluster, middle

U+E147

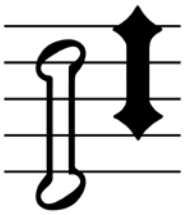
noteheadRectangularClusterWhiteBottom

Combining white rectangular cluster, bottom

Implementation notes

Scoring applications should draw simple note clusters (e.g. **noteheadClusterSquareWhite**, **noteheadClusterRoundBlack**) 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 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 **noteheadClusterHalfTop**, 3 x **noteheadClusterHalfMiddle**, 1 x **noteheadClusterHalfBottom**; the right-hand cluster is 1 x **noteheadDiamondClusterBlackTop**, 2 x **noteheadDiamondClusterBlackMiddle**, 1 x **noteheadDiamondClusterBlackBottom**.

See also the implementation notes for noteheads.

Note name noteheads (U+E150–U+E1AF)

U+E150
noteDoWhole

Do (whole note)

U+E151
noteReWhole

Re (whole note)

U+E152
noteMiWhole

Mi (whole note)

U+E153
noteFaWhole

Fa (whole note)

U+E154
noteSoWhole

So (whole note)

U+E155
noteLaWhole

La (whole note)

U+E156
noteTiWhole

Ti (whole note)

U+E157
noteSiWhole

Si (whole note)

U+E158
noteDoHalf

Do (half note)

U+E159
noteReHalf

Re (half note)

U+E15A
noteMiHalf

Mi (half note)

U+E15B
noteFaHalf

Fa (half note)

U+E15C
noteSoHalf

So (half note)

U+E15D
noteLaHalf

La (half note)

U+E15E
noteTiHalf

Ti (half note)

U+E15F
noteSiHalf

Si (half note)

U+E160
noteDoBlack

Do (black note)

U+E161
noteReBlack

Re (black note)

U+E162

noteMiBlack

Mi (black note)

U+E163

noteFaBlack

Fa (black note)

U+E164

noteSoBlack

So (black note)

U+E165

noteLaBlack

La (black note)

U+E166

noteTiBlack

Ti (black note)

U+E167

noteSiBlack

Si (black note)

U+E168

noteAFlatWhole

A flat (whole note)

U+E169

noteAWhole

A (whole note)

U+E16A

noteASharpWhole

A sharp (whole note)

U+E16B

noteBFlatWhole

B flat (whole note)

U+E16C

noteBWhole

B (whole note)

U+E16D

noteBSharpWhole

B sharp (whole note)

U+E16E

noteCFlatWhole

C flat (whole note)

U+E16F

noteCWhole

C (whole note)

U+E170

noteCSharpWhole

C sharp (whole note)

U+E171

noteDFlatWhole

D flat (whole note)

U+E172

noteDWhole

D (whole note)

U+E173

noteDSharpWhole

D sharp (whole note)

U+E174

noteEFlatWhole

E flat (whole note)

U+E175

noteEWhole

E (whole note)

U+E176

noteESharpWhole

E sharp (whole note)

U+E177

noteFFlatWhole

F flat (whole note)

U+E178

noteFWhole

F (whole note)

U+E179

noteFSharpWhole

F sharp (whole note)

U+E17A

noteGFlatWhole

G flat (whole note)

U+E17B

noteGWhole

G (whole note)

U+E17C

noteGSharpWhole

G sharp (whole note)

U+E17D

noteHWhole

H (whole note)

U+E17E

noteHSharpWhole

H sharp (whole note)

U+E17F

noteAFlatHalf

A flat (half note)

U+E180

noteAHalf

A (half note)

U+E181

noteASharpHalf

A sharp (half note)

U+E182

noteBFlatHalf

B flat (half note)

U+E183

noteBHalf

B (half note)

U+E184

noteBSharpHalf

B sharp (half note)

U+E185

noteCFlatHalf

C flat (half note)

U+E186

noteCHalf

C (half note)

U+E187

noteCSharpHalf

C sharp (half note)

U+E188

noteDFlatHalf

D flat (half note)

U+E189

noteDHalf

D (half note)

U+E18A

noteDSharpHalf

D sharp (half note)

U+E18B

noteEFlatHalf

E flat (half note)

U+E18C

noteEHalf

 E (half note)

U+E18D

noteESharpHalf

 E sharp (half note)

U+E18E

noteFFlatHalf

 F flat (half note)

U+E18F

noteFHalf

 F (half note)

U+E190

noteFSharpHalf

 F sharp (half note)

U+E191

noteGFlatHalf

 G flat (half note)

U+E192

noteGHalf

 G (half note)

U+E193

noteGSharpHalf

 G sharp (half note)

U+E194

noteHHalf

 H (half note)

U+E195

noteHSharpHalf

 H sharp (half note)

U+E196

noteAFlatBlack

 A flat (black note)

U+E197

noteABlack

 A (black note)

U+E198

noteASharpBlack

A sharp (black note)

U+E199

noteBFlatBlack

B flat (black note)

U+E19A

noteBBlack

B (black note)

U+E19B

noteBSharpBlack

B sharp (black note)

U+E19C

noteCFlatBlack

C flat (black note)

U+E19D

noteCBlack

C (black note)

U+E19E

noteCSharpBlack

C sharp (black note)

U+E19F

noteDFlatBlack

D flat (black note)

U+E1A0

noteDBlack

D (black note)

U+E1A1

noteDSharpBlack

D sharp (black note)

U+E1A2

noteEFlatBlack

E flat (black note)

U+E1A3

noteEBlack

E (black note)

U+E1A4

noteESharpBlack

E sharp (black note)

U+E1A5

noteFFlatBlack

F flat (black note)

U+E1A6

noteFBlack

F (black note)

U+E1A7

noteFSharpBlack

F sharp (black note)

U+E1A8

noteGFlatBlack

G flat (black note)

U+E1A9

noteGBlack

G (black note)

U+E1AA

noteGSharpBlack

G sharp (black note)

U+E1AB

noteHBlack

H (black note)

U+E1AC

noteHSharpBlack

H sharp (black note)

U+E1AD

noteEmptyWhole

Empty whole note

U+E1AE

noteEmptyHalf

Empty half note

U+E1AF

noteEmptyBlack

Empty black note

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.

Shape note noteheads (U+E1B0–U+E1CF)

U+E1B0

noteShapeRoundWhite

Round white (4-shape sol; 7-shape so)

U+E1B1

noteShapeRoundBlack

Round black (4-shape sol; 7-shape so)

U+E1B2

noteShapeSquareWhite

Square white (4-shape la; Aiken 7-shape la)

U+E1B3

noteShapeSquareBlack

Square black (4-shape la; Aiken 7-shape la)

U+E1B4

noteShapeTriangleRightWhite

Triangle right white (stem down; 4-shape fa; 7-shape fa)

U+E1B5

noteShapeTriangleRightBlack

Triangle right black (stem down; 4-shape fa; 7-shape fa)

U+E1B6

noteShapeTriangleLeftWhite

Triangle left white (stem up; 4-shape fa; 7-shape fa)

U+E1B7

noteShapeTriangleLeftBlack

Triangle left black (stem up; 4-shape fa; 7-shape fa)

U+E1B8

noteShapeDiamondWhite

Diamond white (4-shape mi; 7-shape mi)

U+E1B9

noteShapeDiamondBlack

Diamond black (4-shape mi; 7-shape mi)

U+E1BA

noteShapeTriangleUpWhite

Triangle up white (Aikin 7-shape do)

U+E1BB

noteShapeTriangleUpBlack

Triangle up black (Aikin 7-shape do)

U+E1BC

noteShapeMoonWhite

Moon white (Aikin 7-shape re)

U+E1BD

noteShapeMoonBlack

Moon black (Aikin 7-shape re)

U+E1BE

noteShapeTriangleRoundWhite

Triangle-round white (Aikin 7-shape ti)

U+E1BF

noteShapeTriangleRoundBlack

Triangle-round black (Aikin 7-shape ti)

U+E1C0

noteShapeKeystoneWhite

Inverted keystone white (Walker 7-shape do)

U+E1C1

noteShapeKeystoneBlack

Inverted keystone black (Walker 7-shape do)

U+E1C2

noteShapeQuarterMoonWhite

Quarter moon white (Walker 7-shape re)

U+E1C3

noteShapeQuarterMoonBlack

Quarter moon black (Walker 7-shape re)

U+E1C4

noteShapeIsoscelesTriangleWhite

Isosceles triangle white (Walker 7-shape ti)

U+E1C5

noteShapeIsoscelesTriangleBlack

Isosceles triangle black (Walker 7-shape ti)

U+E1C6

noteShapeMoonLeftWhite

Moon left white (Funk 7-shape do)

U+E1C7

noteShapeMoonLeftBlack

Moon left black (Funk 7-shape do)

U+E1C8

noteShapeArrowheadLeftWhite

Arrowhead left white (Funk 7-shape re)

U+E1C9

noteShapeArrowheadLeftBlack

Arrowhead left black (Funk 7-shape re)

U+E1CA

noteShapeTriangleRoundLeftWhite

Triangle-round left white (Funk 7-shape ti)

U+E1CB

noteShapeTriangleRoundLeftBlack

Triangle-round left black (Funk 7-shape ti)

Implementation notes

A number of different shape note traditions remain in common use in the shape note community. SMuFL encodes the noteheads required for four such systems: one four-shape system; and three seven-shape systems (Walker, Funk, and Aikin). All three seven-shape systems also use the four shapes of the four-shape system, each introducing three additional shapes.

The four-shape system, used in books such as William Walker's *Southern Harmony* (1835), uses a form of solmization where the syllables *fa*, *so*, *la*, *fa*, *so*, *la*, *mi* are assigned to the seven notes of an ascending major scale. Each syllable has its own note shape:

Syllable	*Half notes and longer*	*Quarter notes and shorter*
fa (or *faw*)	Stem down: **noteShapeTriangleRightWhite** Stem up: **noteShapeTriangleLeftWhite**	Stem down: **noteShapeTriangleRightBlack** Stem up: **noteShapeTriangleLeftBlack**
so (or *sol*)	**noteShapeRoundWhite**	**noteShapeRoundBlack**
la (or *law*)	**noteShapeSquareWhite**	**noteShapeSquareBlack**
mi	**noteShapeDiamondWhite**	**noteShapeDiamondBlack**

Joseph Funk devised his seven-shape system, building upon the existing four-shape system, for his book *Harmonia Sacra* (1851), adding to the four-shape system by adding the syllables *do*, *re* and *ti* (sometimes *si*), so the ascending major scale would use the syllables *do*, *re*, *mi*, *fa*, *so*, *la*, *ti*. The note shapes for each syllable are as follows:

Syllable	*Half notes and longer*	*Quarter notes and shorter*
do	**noteShapeMoonLeftWhite**	**noteShapeMoonLeftBlack**
re	**noteShapeArrowheadLeftWhite**	**noteShapeArrowheadLeftBlack**
mi	**noteShapeDiamondWhite**	**noteShapeDiamondBlack**
fa (or *faw*)	Stem down: **noteShapeTriangleRightWhite** Stem up: **noteShapeTriangleLeftWhite**	Stem down: **noteShapeTriangleRightBlack** Stem up: **noteShapeTriangleLeftBlack**
so (or *sol*)	**noteShapeRoundWhite**	**noteShapeRoundBlack**
la (or *law*)	**noteShapeSquareWhite**	**noteShapeSquareBlack**
ti (or *si*)	**noteShapeTriangleRoundLeftWhite**	**noteShapeTriangleRoundLeftBlack**

In addition to being the composer of *Southern Harmony*, William Walker also later devised his own seven-shape system for the book *Christian Harmony* (1867), using the same solmization as Funk. The note shapes for each syllable are as follows:

Syllable	*Half notes and longer*	*Quarter notes and shorter*

do	noteShapeKeystoneWhite	noteShapeKeystoneBlack
re	noteShapeQuarterMoonWhite	noteShapeQuarterMoonBlack
mi	noteShapeDiamondWhite	noteShapeDiamondBlack
fa (or *faw*)	Stem down: noteShapeTriangleRightWhite Stem up: noteShapeTriangleLeftWhite	Stem down: noteShapeTriangleRightBlack Stem up: noteShapeTriangleLeftBlack
so (or *sol*)	noteShapeRoundWhite	noteShapeRoundBlack
la (or *law*)	noteShapeSquareWhite	noteShapeSquareBlack
ti (or *si*)	noteShapeIsoscelesTriangleWhite	noteShapeIsoscelesTriangleBlack

Perhaps the most commonly-used seven-shape system, however, is that devised by Jesse B. Aikin, though his system is sometimes incorrectly referred to as the "Aiken" system due to an error made by the musicologist George Pullen Jackson. Aikin introduced his system in *The Christian Minstrel* (1846), and after his shapes were adopted by the influential Ruebush & Kieffer Publishing Company in the late 19th century they have become increasingly widely used. Again using the same solmization as both Funk and Walker, the note shapes for each syllable are as follows:

Syllable	*Half notes and longer*	*Quarter notes and shorter*
do	noteShapeTriangleUpWhite	noteShapeTriangleUpBlack
re	noteShapeMoonWhite	noteShapeMoonBlack
mi	noteShapeDiamondWhite	noteShapeDiamondBlack
fa (or *faw*)	Stem down: noteShapeTriangleRightWhite Stem up: noteShapeTriangleLeftWhite	Stem down: noteShapeTriangleRightBlack Stem up: noteShapeTriangleLeftBlack
so (or *sol*)	noteShapeRoundWhite	noteShapeRoundBlack
la (or *law*)	noteShapeSquareWhite	noteShapeSquareBlack
ti (or *si*)	noteShapeTriangleRoundWhite	noteShapeTriangleRoundBlack

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.

Individual notes (U+E1D0–U+E1EF)

U+E1D0 (and U+1D15C)
noteDoubleWhole

Double whole note (breve)

U+E1D1
noteDoubleWholeSquare

Double whole note (square)

U+E1D2 (and U+1D15D)
noteWhole

Whole note (semibreve)

U+E1D3 (and U+1D15E)
noteHalfUp

Half note (minim) stem up

U+E1D4
noteHalfDown

Half note (minim) stem down

U+E1D5 (and U+1D15F)
noteQuarterUp

Quarter note (crotchet) stem up

U+E1D6
noteQuarterDown

Quarter note (crotchet) stem down

U+E1D7 (and U+1D160)
note8thUp

Eighth note (quaver) stem up

U+E1D8
note8thDown

Eighth note (quaver) stem down

U+E1D9 (and U+1D161)
note16thUp

16th note (semiquaver) stem up

U+E1DA
note16thDown

16th note (semiquaver) stem down

U+E1DB (and U+1D162)
note32ndUp

32nd note (demisemiquaver) stem up

U+E1DC
note32ndDown

32nd note (demisemiquaver) stem down

U+E1DD (and U+1D163)
note64thUp

64th note (hemidemisemiquaver) stem up

U+E1DE
note64thDown

64th note (hemidemisemiquaver) stem down

U+E1DF (and U+1D164)
note128thUp

128th note (semihemidemisemiquaver) stem up

U+E1E0
note128thDown

128th note (semihemidemisemiquaver) stem down

U+E1E1
note256thUp

256th note (demisemihemidemisemiquaver) stem up

U+E1E2

note256thDown

256th note (demisemihemidemisemiquaver) stem down

U+E1E3

note512thUp

512th note (hemidemisemihemidemisemiquaver) stem up

U+E1E4

note512thDown

512th note (hemidemisemihemidemisemiquaver) stem down

U+E1E5

note1024thUp

1024th note (semihemidemisemihemidemisemiquaver) stem up

U+E1E6

note1024thDown

1024th note (semihemidemisemihemidemisemiquaver) stem down

U+E1E7 (and U+1D16D)

augmentationDot

- Augmentation dot

Recommended stylistic alternates

uniE1D0.salt01

noteDoubleWholeAlt

Double whole note (breve), single vertical strokes

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 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 **Beamed groups of notes** range.

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

Beamed groups of notes (U+E1F0–U+E20F)

U+E1F0

textBlackNoteShortStem

Black note, short stem

U+E1F1

textBlackNoteLongStem

Black note, long stem

U+E1F2

textBlackNoteFrac8thShortStem

Black note, fractional 8th beam, short stem

U+E1F3

textBlackNoteFrac8thLongStem

Black note, fractional 8th beam, long stem

U+E1F4

textBlackNoteFrac16thShortStem

Black note, fractional 16th beam, short stem

U+E1F5

textBlackNoteFrac16thLongStem

Black note, fractional 16th beam, long stem

U+E1F6

textBlackNoteFrac32ndLongStem

Black note, fractional 32nd beam, long stem

U+E1F7

textCont8thBeamShortStem

Continuing 8th beam for short stem

U+E1F8

textCont8thBeamLongStem

Continuing 8th beam for long stem

U+E1F9

textCont16thBeamShortStem

Continuing 16th beam for short stem

U+E1FA

textCont16thBeamLongStem

Continuing 16th beam for long stem

U+E1FB

textCont32ndBeamLongStem

Continuing 32nd beam for long stem

U+E1FC

textAugmentationDot

Augmentation dot

U+E1FD

textTie

Tie

U+E1FE

textTupletBracketStartShortStem

Tuplet bracket start for short stem

U+E1FF

textTuplet3ShortStem

Tuplet number 3 for short stem

U+E200

textTupletBracketEndShortStem

Tuplet bracket end for short stem

U+E201

textTupletBracketStartLongStem

Tuplet bracket start for long stem

U+E202

textTuplet3LongStem

Tuplet number 3 for long stem

U+E203

textTupletBracketEndLongStem

Tuplet bracket end for long stem

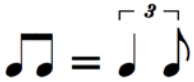
Implementation notes

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 in the **Individual notes** range.

By way of example:

textBlackNoteShortStem, textCont8thBeamShortStem, space, textBlackNoteFrac8thShortStem, textCont16thBeamShortStem, space, textBlackNoteFrac16thShortStem



textBlackNoteShortStem, textCont8thBeamShortStem, space, textBlackNoteFract8thShortStem, space, =, textTupletBracketStartLongStem, textBlackNoteShortStem, textTuplet3LongStem, space, textTupletBracketEndLongStem, note8thUp

textBlackNoteShortStem, textCont8thBeamShortStem, textAugmentationDot, space, textCont8thBeamShortStem, textBlackNoteFrac16thShortStem

Stems (U+E210–U+E21F)

U+E210 (and U+1D165)

stem

Combining stem

U+E211 (and U+1D166)

stemSprechgesang

Combining sprechgesang stem

U+E212

stemSwished

Combining swished stem

U+E213

stemPendereckiTremolo

Combining Penderecki unmeasured tremolo stem

U+E214

stemSulPonticello

Combining sul ponticello (bow behind bridge) stem

U+E215

stemBowOnBridge

Combining bow on bridge stem

U+E216

stemBowOnTailpiece

Combining bow on tailpiece stem

U+E217

stemBuzzRoll

Combining buzz roll stem

U+E218

stemDamp

Combining damp stem

U+E219

stemVibratoPulse

Combining vibrato pulse accent (Saunders) stem

U+E21A

stemMultiphonicsBlack

Combining multiphonics (black) stem

U+E21B

stemMultiphonicsWhite

Combining multiphonics (white) stem

U+E21C

stemMultiphonicsBlackWhite

Combining multiphonics (black and white) stem

U+E21D

stemSussurando

Combining sussurando stem

U+E21E

stemRimShot

Combining rim shot stem

U+E21F

stemHarpStringNoise

Combining harp string noise stem

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 (**vocalSprechgesang**)
- Swish (**pictSwish**)
- Penderecki unmeasured tremolo (**pendereckiTremolo**)
- Sul ponticello (**stringsBowBehindBridge**)
- Bow on bridge (**stringsBowOnBridge**)
- Bow on tailpiece (**stringsBowOnTailpiece**)
- Buzz roll (**buzzRoll**)
- Damp (**pluckedDampOnStem**)
- Vibrato pulse accent (**stringsVibratoPulse**)
- Multiphonics (**windMultiphonicsBlackStem**, **windMultiphonicsWhiteStem**, **windMultiphonicsBlackWhiteStem**)
- Sussurando (**vocalsSussurando**)
- Rim shot (**pictRimShotOnStem**)
- Harp string noise (**harpStringNoiseStem**)

Tremolos (U+E220–U+E23F)

U+E220 (and U+1D167)

tremolo1

Combining tremolo 1

U+E221 (and U+1D168)

tremolo2

Combining tremolo 2

U+E222 (and U+1D169)

tremolo3

Combining tremolo 3

U+E223

tremolo4

Combining tremolo 4

U+E224

tremolo5

Combining tremolo 5

U+E225 (and U+1D16A)

tremoloFingered1

Fingered tremolo 1

U+E226 (and U+1D16B)

tremoloFingered2

Fingered tremolo 2

U+E227 (and U+1D16C)

tremoloFingered3

Fingered tremolo 3

U+E228

tremoloFingered4

Fingered tremolo 4

U+E229

tremoloFingered5

Fingered tremolo 5

U+E22A

buzzRoll

Buzz roll

U+E22B

pendereckiTremolo

Penderecki unmeasured tremolo

U+E22C

unmeasuredTremolo

Wieniawski unmeasured tremolo

U+E22D

unmeasuredTremoloSimple

Wieniawski unmeasured tremolo (simpler)

U+E22E

tremoloDivisiDots2

Divide measured tremolo by 2

U+E22F

tremoloDivisiDots3

Divide measured tremolo by 3

U+E230

tremoloDivisiDots4

Divide measured tremolo by 4

U+E231

tremoloDivisiDots6

Divide measured tremolo by 6

Implementation notes

Scoring applications may simply use multiple instances of **tremolo1** imposed on note stems to draw one-note tremolos with different numbers of slashes.

The fingered tremolo glyphs 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+E240–U+E25F)

U+E240 (and U+1D16E)
flag8thUp
Combining flag 1 (8th) above

U+E241
flag8thDown
Combining flag 1 (8th) below

U+E242 (and U+1D16F)
flag16thUp
Combining flag 2 (16th) above

U+E243
flag16thDown
Combining flag 2 (16th) below

U+E244 (and U+1D170)
flag32ndUp
Combining flag 3 (32nd) above

U+E245
flag32ndDown
Combining flag 3 (32nd) below

U+E246 (and U+1D171)
flag64thUp
Combining flag 4 (64th) above

U+E247
flag64thDown
Combining flag 4 (64th) below

U+E248 (and U+1D172)
flag128thUp
Combining flag 5 (128th) above

U+E249
flag128thDown
Combining flag 5 (128th) below

U+E24A
flag256thUp
Combining flag 6 (256th) above

U+E24B
flag256thDown
Combining flag 6 (256th) below

U+E24C
flag512thUp
Combining flag 7 (512th) above

U+E24D
flag512thDown
Combining flag 7 (512th) below

U+E24E
flag1024thUp
Combining flag 8 (1024th) above

U+E24F
flag1024thDown
Combining flag 8 (1024th) below

U+E250
flagInternalUp
Internal combining flag above

U+E251
flagInternalDown
Internal combining flag below

Recommended stylistic alternates

uniE240.ss03

flag8thUpStraight

Combining flag 1 (8th) above (straight)

uniE240.salt03

flag8thUpSmall

Combining flag 1 (8th) above (small staff)

uniE241.salt02

flag8thDownSmall

Combining flag 1 (8th) below (small staff)

uniE242.ss02

flag16thUpShort

Combining flag 2 (16th) above (short)

uniE243.ss03

flag16thDownStraight

Combining flag 2 (16th) below (straight)

uniE244.ss03

flag32ndUpStraight

Combining flag 3 (32nd) above (straight)

uniE244.salt03

flag32ndUpSmall

Combining flag 3 (32nd) above (small staff)

uniE245.salt02

flag32ndDownSmall

Combining flag 3 (32nd) below (small staff)

uniE246.ss02

flag64thUpShort

Combining flag 4 (64th) above (short)

uniE240.ss02

flag8thUpShort

Combining flag 1 (8th) above (short)

uniE241.ss03

flag8thDownStraight

Combining flag 1 (8th) below (straight)

uniE242.ss03

flag16thUpStraight

Combining flag 2 (16th) above (straight)

uniE242.salt03

flag16thUpSmall

Combining flag 2 (16th) above (small staff)

uniE243.salt02

flag16thDownSmall

Combining flag 2 (16th) below (small staff)

uniE244.ss02

flag32ndUpShort

Combining flag 3 (32nd) above (short)

uniE245.ss03

flag32ndDownStraight

Combining flag 3 (32nd) below (straight)

uniE246.ss03

flag64thUpStraight

Combining flag 4 (64th) above (straight)

uniE246.salt03

flag64thUpSmall

Combining flag 4 (64th) above (small staff)

uniE247.ss03

flag64thDownStraight

Combining flag 4 (64th) below (straight)

uniE248.ss03

flag128thUpStraight

Combining flag 5 (128th) above (straight)

uniE248.salt03

flag128thUpSmall

Combining flag 5 (128th) above (small staff)

uniE249.salt02

flag128thDownSmall

Combining flag 5 (128th) below (small staff)

uniE24A.ss02

flag256thUpShort

Combining flag 6 (256th) above (short)

uniE24B.ss03

flag256thDownStraight

Combining flag 6 (256th) below (straight)

uniE24C.ss03

flag512thUpStraight

Combining flag 7 (512th) above (straight)

uniE24C.salt03

flag512thUpSmall

Combining flag 7 (512th) above (small staff)

uniE24D.salt02

flag512thDownSmall

Combining flag 7 (512th) below (small staff)

uniE247.salt02

flag64thDownSmall

Combining flag 4 (64th) below (small staff)

uniE248.ss02

flag128thUpShort

Combining flag 5 (128th) above (short)

uniE249.ss03

flag128thDownStraight

Combining flag 5 (128th) below (straight)

uniE24A.ss03

flag256thUpStraight

Combining flag 6 (256th) above (straight)

uniE24A.salt03

flag256thUpSmall

Combining flag 6 (256th) above (small staff)

uniE24B.salt02

flag256thDownSmall

Combining flag 6 (256th) below (small staff)

uniE24C.ss02

flag512thUpShort

Combining flag 7 (512th) above (short)

uniE24D.ss03

flag512thDownStraight

Combining flag 7 (512th) below (straight)

uniE24E.ss03

flag1024thUpStraight

Combining flag 8 (1024th) above (straight)

uniE24E.ss02

flag1024thUpShort

Combining flag 8 (1024th) above (short)

uniE24F.ss03

flag1024thDownStraight

Combining flag 8 (1024th) below (straight)

uniE24E.salt03

flag102thUpSmall

Combining flag 8 (1024th) above (small staff)

uniE24F.salt02

flag1024thDownSmall

Combining flag 8 (1024th) below (small staff)

Implementation notes

Scoring applications may create groups of flags for notes shorter than 16th notes (semiquavers) by combining **flag16thUp** with the required number of **flagInternalUp** for stem up notes, or **flag16thDown** with the required number of **flagInternalDown** for stem down notes, stacking **flagInternalUp** above or **flagInternalDown** 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+E260–U+E26F)

U+E260 (and 266D)
accidentalFlat
Flat

U+E261 (and 266E)
accidentalNatural
Natural

U+E262 (and 266F)
accidentalSharp
Sharp

U+E263 (and U+1D12A)
accidentalDoubleSharp
Double sharp

U+E264 (and U+1D12B)
accidentalDoubleFlat
Double flat

U+E265
accidentalTripleSharp
Triple sharp

U+E266
accidentalTripleFlat
Triple flat

U+E267
accidentalNaturalFlat
Natural flat

U+E268
accidentalNaturalSharp
Natural sharp

U+E269
accidentalSharpSharp
Sharp sharp

U+E26A
accidentalParensLeft
Accidental parenthesis, left

U+E26B
accidentalParensRight
Accidental parenthesis, right

Recommended stylistic alternates

uniE260.ss01
accidentalFlatSmall
Flat (for small staves)

uniE261.ss01
accidentalNaturalSmall
Natural (for small staves)

uniE262.ss01
accidentalSharpSmall
Sharp (for small staves)

uniE264.salt01
accidentalDoubleFlatJoinedStems
Double flat (joined stems)

uniE266.salt01

accidentalTripleFlatJoinedStems

Triple flat (joined stems)

Recommended ligatures

uniE26A_uniE260_uniE26B

accidentalFlatParens

Parenthesised flat

uniE26A_uniE261_uniE26B

accidentalNaturalParens

Parenthesised natural

uniE26A_uniE262_uniE26B

accidentalSharpParens

Parenthesised sharp

uniE26A_uniE263_uniE26B

accidentalDoubleSharpParens

Parenthesised double sharp

uniE26A_uniE264_uniE26B

accidentalDoubleFlatParens

Parenthesised double flat

Implementation notes

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

Gould arrow quartertone accidentals (24-EDO) (U+E270–U+E27F)

U+E270 (and U+1D12C)

accidentalQuarterToneFlatArrowUp

Quarter-tone flat

U+E271 (and U+1D12D)

accidentalThreeQuarterTonesFlatArrowDown

Three-quarter-tones flat

U+E272 (and U+1D12E)

accidentalQuarterToneSharpNaturalArrowUp

Quarter-tone sharp

U+E273 (and U+1D12F)

accidentalQuarterToneFlatNaturalArrowDown

Quarter-tone flat

U+E274 (and U+1D130)

accidentalThreeQuarterTonesSharpArrowUp

Three-quarter-tones sharp

U+E275 (and U+1D131)

accidentalQuarterToneSharpArrowDown

Quarter-tone flat

U+E276

accidentalFiveQuarterTonesSharpArrowUp

Five-quarter-tones sharp

U+E277

accidentalThreeQuarterTonesSharpArrowDown

Three-quarter-tones sharp

U+E278

accidentalThreeQuarterTonesFlatArrowUp

Three-quarter-tones flat

U+E279

accidentalFiveQuarterTonesFlatArrowDown

Five-quarter-tones flat

U+E27A

accidentalArrowUp

Arrow up (raise by one quarter-tone)

U+E27B

accidentalArrowDown

Arrow down (lower by one quarter-tone)

Stein-Zimmermann accidentals (24-EDO) (U+E280–U+E28F)

U+E280

accidentalQuarterToneFlatStein

Reversed flat (quarter-tone flat) (Stein)

U+E281

accidentalThreeQuarterTonesFlatZimmermann

Reversed flat and flat (three-quarter-tones flat) (Zimmermann)

U+E282

accidentalQuarterToneSharpStein

Half sharp (quarter-tone sharp) (Stein)

U+E283

accidentalThreeQuarterTonesSharpStein

One and a half sharps (three-quarter-tones sharp) (Stein)

U+E284

accidentalNarrowReversedFlat

Narrow reversed flat(quarter-tone flat)

U+E285

accidentalNarrowReversedFlatAndFlat

Narrow reversed flat and flat(three-quarter-tones flat)

Extended Stein-Zimmermann accidentals (U+E290–U+E29F)

U+E290

accidentalReversedFlatArrowUp

Reversed flat with arrow up

U+E291

accidentalReversedFlatArrowDown

Reversed flat with arrow down

U+E292

accidentalFilledReversedFlatArrowUp

Filled reversed flat with arrow up

U+E293

accidentalFilledReversedFlatArrowDown

Filled reversed flat with arrow down

U+E294

accidentalReversedFlatAndFlatArrowUp

Reversed flat and flat with arrow up

U+E295

accidentalReversedFlatAndFlatArrowDown

Reversed flat and flat with arrow down

U+E296

accidentalFilledReversedFlatAndFlat

Filled reversed flat and flat

U+E297

accidentalFilledReversedFlatAndFlatArrowUp

Filled reversed flat and flat with arrow up

U+E298

accidentalFilledReversedFlatAndFlatArrowDown

Filled reversed flat and flat with arrow down

U+E299

accidentalHalfSharpArrowUp

Half sharp with arrow up

U+E29A

accidentalHalfSharpArrowDown

Half sharp with arrow down

U+E29B

accidentalOneAndAHalfSharpsArrowUp

One and a half sharps with arrow up

U+E29C

accidentalOneAndAHalfSharpsArrowDown

One and a half sharps with arrow down

Implementation notes

These accidentals were not actually proposed by Richard Stein or Bernd Zimmermann, but are instead logical extensions of their symbols adding arrows to provide options for notating slight pitch modifications[17].

[17] Gould, *ibid.*, page 96 acknowledges the Stein-Zimmermann accidentals as the most commonly-used symbols with fixed meanings; however, the extensions provided here do not have fixed meanings.

Sims accidentals (72-EDO) (U+E2A0–U+E2AF)

U+E2A0

accidentalSims12Down

1/12 tone low

U+E2A1

accidentalSims6Down

1/6 tone low

U+E2A2

accidentalSims4Down

1/4 tone low

U+E2A3

accidentalSims12Up

1/12 tone high

U+E2A4

accidentalSims6Up

1/6 tone high

U+E2A5

accidentalSims4Up

1/4 tone high

Implementation notes

These glyphs may be used alone and to the left of the standard 12-EDO accidentals.

Johnston accidentals (just intonation) (U+E2B0–U+E2BF)

U+E2B0

accidentalJohnstonPlus

Plus (raise by 81:80)

U+E2B1

accidentalJohnstonMinus

Minus (lower by 81:80)

U+E2B2

accidentalJohnstonEl

Inverted seven (raise by 36:35)

U+E2B3

accidentalJohnstonSeven

Seven (lower by 36:35)

U+E2B4

accidentalJohnstonUp

Up arrow (raise by 33:32)

U+E2B5

accidentalJohnstonDown

Down arrow (lower by 33:32)

U+E2B6

accidentalJohnston13

Thirteen (raise by 65:64~)

U+E2B7

accidentalJohnston31

Inverted 13 (lower by 65:64)

Implementation notes

These glyphs are intended for combining with the standard 12-EDO accidentals.

Extended Helmholtz-Ellis accidentals (just intonation) (U+E2C0–U+E2FF)

U+E2C0

accidentalDoubleFlatOneArrowDown

Double flat lowered by one syntonic comma

U+E2C1

accidentalFlatOneArrowDown

Flat lowered by one syntonic comma

U+E2C2

accidentalNaturalOneArrowDown

Natural lowered by one syntonic comma

U+E2C3

accidentalSharpOneArrowDown

Sharp lowered by one syntonic comma

U+E2C4

accidentalDoubleSharpOneArrowDown

Double sharp lowered by one syntonic comma

U+E2C5

accidentalDoubleFlatOneArrowUp

Double flat raised by one syntonic comma

U+E2C6

accidentalFlatOneArrowUp

Flat raised by one syntonic comma

U+E2C7

accidentalNaturalOneArrowUp

Natural raised by one syntonic comma

U+E2C8

accidentalSharpOneArrowUp

Sharp raised by one syntonic comma

U+E2C9

accidentalDoubleSharpOneArrowUp

Double sharp raised by one syntonic comma

U+E2CA

accidentalDoubleFlatTwoArrowsDown

Double flat lowered by two syntonic commas

U+E2CB

accidentalFlatTwoArrowsDown

Flat lowered by two syntonic commas

U+E2CC

accidentalNaturalTwoArrowsDown

Natural lowered by two syntonic commas

U+E2CD

accidentalSharpTwoArrowsDown

Sharp lowered by two syntonic commas

U+E2CE

accidentalDoubleSharpTwoArrowsDown

Double sharp lowered by two syntonic commas

U+E2CF

accidentalDoubleFlatTwoArrowsUp

Double flat raised by two syntonic commas

U+E2D0

accidentalFlatTwoArrowsUp

Flat raised by two syntonic commas

U+E2D1

accidentalNaturalTwoArrowsUp

Natural raised by two syntonic commas

U+E2D2

accidentalSharpTwoArrowsUp

Sharp raised by two syntonic commas

U+E2D3

accidentalDoubleSharpTwoArrowsUp

Double sharp raised by two syntonic commas

U+E2D4

accidentalDoubleFlatThreeArrowsDown

Double flat lowered by three syntonic commas

U+E2D5

accidentalFlatThreeArrowsDown

Flat lowered by three syntonic commas

U+E2D6

accidentalNaturalThreeArrowsDown

Natural lowered by three syntonic commas

U+E2D7

accidentalSharpThreeArrowsDown

Sharp lowered by three syntonic commas

U+E2D8

accidentalDoubleSharpThreeArrowsDown

Double sharp lowered by three syntonic commas

U+E2D9

accidentalDoubleFlatThreeArrowsUp

Double flat raised by three syntonic commas

U+E2DA

accidentalFlatThreeArrowsUp

Flat raised by three syntonic commas

U+E2DB

accidentalNaturalThreeArrowsUp

Natural raised by three syntonic commas

U+E2DC

accidentalSharpThreeArrowsUp

Sharp raised by three syntonic commas

U+E2DD

accidentalDoubleSharpThreeArrowsUp

Double sharp raised by three syntonic commas

U+E2DE

accidentalLowerOneSeptimalComma

Lower by one septimal comma

U+E2DF

accidentalRaiseOneSeptimalComma

Raise by one septimal comma

U+E2E0

accidentalLowerTwoSeptimalCommas

Lower by two septimal commas

U+E2E1

accidentalRaiseTwoSeptimalCommas

Raise by two septimal commas

U+E2E2

accidentalLowerOneUndecimalQuartertone

Lower by one undecimal quartertone

U+E2E3

accidentalRaiseOneUndecimalQuartertone

Raise by one undecimal quartertone

U+E2E4

accidentalLowerOneTridecimalQuartertone

Lower by one tridecimal quartertone

U+E2E5

accidentalRaiseOneTridecimalQuartertone

Raise by one tridecimal quartertone

U+E2E6

accidentalCombiningLower17Schisma

Combining lower by one 17-limit schisma

U+E2E7

accidentalCombiningRaise17Schisma

Combining raise by one 17-limit schisma

U+E2E8

accidentalCombiningLower19Schisma

Combining lower by one 19-limit schisma

U+E2E9

accidentalCombiningRaise19Schisma

Combining raise by one 19-limit schisma

U+E2EA

accidentalCombiningLower23Limit29LimitComma

Combining lower by one 23-limit comma or 29-limit comma

U+E2EB

accidentalCombiningRaise23Limit29LimitComma

Combining raise by one 23-limit comma or 29-limit comma

U+E2EC

accidentalCombiningLower31Schisma

Combining lower by one 31-limit schisma

U+E2ED

accidentalCombiningRaise31Schisma

Combining raise by one 31-limit schisma

U+E2EE

accidentalCombiningOpenCurlyBrace

Combining open curly brace

U+E2EF

accidentalCombiningCloseCurlyBrace

Combining close curly brace

U+E2F0

accidentalDoubleFlatEqualTempered

Double flat equal tempered semitone

U+E2F1

accidentalFlatEqualTempered

Flat equal tempered semitone

U+E2F2

accidentalNaturalEqualTempered

Natural equal tempered semitone

U+E2F3

accidentalSharpEqualTempered

Sharp equal tempered semitone

U+E2F4

accidentalDoubleSharpEqualTempered

Double sharp equal tempered semitone

Spartan Sagittal single-shaft accidentals (U+E300–U+E30F)

U+E300

accSagittal5v7KleismaUp

5:7 kleisma up, (5:7k, ~11:13k, 7C less 5C)

U+E301

accSagittal5v7KleismaDown

5:7 kleisma down

U+E302

accSagittal5CommaUp

5 comma up, (5C), 1° up [22 27 29 34 41 46 53 96 EDOs], 1/12-tone up

U+E303

accSagittal5CommaDown

5 comma down, 1° down [22 27 29 34 41 46 53 96 EDOs], 1/12-tone down

U+E304

accSagittal7CommaUp

7 comma up, (7C), 1° up [43 EDO], 2° up [72 EDO], 1/6-tone up

U+E305

accSagittal7CommaDown

7 comma down, 1° down [43 EDO], 2° down [72 EDO], 1/6-tone down

U+E306

accSagittal25SmallDiesisUp

25 small diesis up, (25S, ~5:13S, ~37S, 5C plus 5C), 2° up [53 EDO]

U+E307

accSagittal25SmallDiesisDown

25 small diesis down, 2° down [53 EDO]

U+E308

accSagittal35MediumDiesisUp

35 medium diesis up, (35M, ~13M, ~125M, 5C plus 7C), 2/9-tone up

U+E309

accSagittal35MediumDiesisDown

35 medium diesis down, 1°[50] 2°[27] down, 2/9-tone down

U+E30A

accSagittal11MediumDiesisUp

11 medium diesis up, (11M), 1°[17 31] 2°46 up, 1/4-tone up

U+E30B

accSagittal11MediumDiesisDown

11 medium diesis down, 1°[17 31] 2°46 down, 1/4-tone down

U+E30C

accSagittal11LargeDiesisUp

11 large diesis up, (11L), (sharp less 11M), 3° up [46 EDO]

U+E30D

accSagittal11LargeDiesisDown

11 large diesis down, 3° down [46 EDO]

U+E30E

accSagittal35LargeDiesisUp

35 large diesis up, (35L, ~13L, ~125L, sharp less 35M), 2°50 up

U+E30F

accSagittal35LargeDiesisDown

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 **accidentalDoubleFlat**, **accidentalFlat**, **accidentalSharp**, and the almost-standard **accidentalLargeDoubleSharp**. 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 **accidentalNatural** 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.

Other Sagittal-compatible accidentals are **accidentalQuarterToneSharpStein** and **accidentalThreeQuarterTonesSharpStein** which may be substituted for **accSagittal11MediumDiesisUp** and **accSagittalSharp11MUp**; the **accidentalNarrowReversedFlat** and **accidentalNarrowReversedFlatAndFlat** which may be substituted for **accSagittal11MediumDiesisDown** and **accSagittalFlat11MDown**; and the **accidentalWilsonPlus** and **accidentalWilsonMinus** which may be substituted for the **accSagittal5CommaUp** and **accSagittal5CommaDown**.

Spartan Sagittal multi-shaft accidentals (U+E310–U+E33F)

U+E310

accSagittalSharp25SDown

Sharp 25S-down, 3° up [53 EDO]

U+E311

accSagittalFlat25SUp

Flat 25S-up, 3° down [53 EDO]

U+E312

accSagittalSharp7CDown

Sharp 7C-down, 2° up [43 EDO], 4° up [72 EDO], 1/3-tone up

U+E313

accSagittalFlat7CUp

Flat 7C-up, 2° down [43 EDO], 4° down [72 EDO], 1/3-tone down

U+E314

accSagittalSharp5CDown

Sharp 5C-down, 2°[22 29] 3°[34 41] 4°[46 53 60] up, 5/12-tone up

U+E315

accSagittalFlat5CUp

Flat 5C-up, 2°[22,29] 3°[34 41] 4°[46 53 60] down, 5/12-tone down

U+E316

accSagittalSharp5v7kDown

Sharp 5:7k-down

U+E317

accSagittalFlat5v7kUp

Flat 5:7k-up

U+E318

accSagittalSharp

Sharp, (apotome up)[almost all EDOs], 1/2-tone up

U+E319

accSagittalFlat

Flat, (apotome down)[almost all EDOs], 1/2-tone down

U+E31A

accSagittalUnused1

Unused

U+E31B

accSagittalUnused2

Unused

U+E31C

accSagittalSharp5v7kUp

Sharp 5:7k-up

U+E31D

accSagittalFlat5v7kDown

Flat 5:7k-down

U+E31E

accSagittalSharp5CUp

Sharp 5C-up, 4°[22 29] 5°[27 34 41] 6°[39 46 53] up, 7/12-tone up

U+E31F

accSagittalFlat5CDown

Flat 5C-down, 4°[22 29] 5°[27 34 41] 6°[39 46 53] down, 7/12-tone down

U+E320

accSagittalSharp7CUp

Sharp 7C-up, 4° up [43 EDO], 8° up [72 EDO], 2/3-tone up

U+E321

accSagittalFlat7CDown

Flat 7C-down, 4° down [43 EDO], 8° down [72 EDO], 2/3-tone down

U+E322

accSagittalSharp25SUp

Sharp 25S-up, 7° up [53 EDO]

U+E323

accSagittalFlat25SDown

Flat 25S-down, 7° down [53 EDO]

U+E324

accSagittalSharp35MUp

Sharp 35M-up, 4° up [50 EDO], 6° up [27 EDO], 13/18-tone up

U+E325

accSagittalFlat35MDown

Flat 35M-down, 4° down [50 EDO], 6° down [27 EDO], 13/18-tone down

U+E326

accSagittalSharp11MUp

Sharp 11M-up, 3° up [17 31 EDOs], 7° up [46 EDO], 3/4-tone up

U+E327

accSagittalFlat11MDown

Flat 11M-down, 3° down [17 31 EDOs], 7° down [46 EDO], 3/4-tone down

U+E328

accSagittalSharp11LUp

Sharp 11L-up, 8° up [46 EDO]

U+E329

accSagittalFlat11LDown

Flat 11L-down, 8° up [46 EDO]

U+E32A

accSagittalSharp35LUp

Sharp 35L-up, 5° up [50 EDO]

U+E32B

accSagittalFlat35LDown

Flat 35L-down, 5° down [50 EDO]

U+E32C

accSagittalDoubleSharp25SDown

Double sharp 25S-down, 8°up [53 EDO]

U+E32D

accSagittalDoubleFlat25SUp

Double flat 25S-up, 8°down [53 EDO]

U+E32E

accSagittalDoubleSharp7CDown

Double sharp 7C-down, 5°[43] 10°[72] up, 5/6-tone up

U+E32F

accSagittalDoubleFlat7CUp

Double flat 7C-up, 5° down [43 EDO], 10° down [72 EDO], 5/6-tone down

U+E330

accSagittalDoubleSharp5CDown

Double sharp 5C-down, 5°[22 29] 7°[34 41] 9°53 up, 11/12 tone up

U+E331

accSagittalDoubleFlat5CUp

Double flat 5C-up, 5°[22 29] 7°[34 41] 9°53 down, 11/12 tone down

U+E332

accSagittalDoubleSharp5v7kDown

Double sharp 5:7k-down

U+E333

accSagittalDoubleFlat5v7kUp

Double flat 5:7k-up

U+E334

accSagittalDoubleSharp

Double sharp, (2 apotomes up)[almost all EDOs], whole-tone

U+E335

accSagittalDoubleFlat

Double flat, (2 apotomes down)[almost all EDOs], whole-

Athenian Sagittal extension (medium precision) accidentals (U+E340–U+E36F)

U+E340

accSagittal7v11KleismaUp

7:11 kleisma up, (7:11k, ~29k)

U+E341

accSagittal7v11KleismaDown

7:11 kleisma down

U+E342

accSagittal17CommaUp

17 comma up, (17C)

U+E343

accSagittal17CommaDown

17 comma down

U+E344

accSagittal55CommaUp

55 comma up, (55C, 11M less 5C), 3°up [96 EDO], 3/16-tone up

U+E345

accSagittal55CommaDown

55 comma down, 3° down [96 EDO], 3/16-tone down

U+E346

accSagittal7v11CommaUp

7:11 comma up, (7:11C, ~13:17S, ~29S, 11L less 7C), 1° up [60 EDO]

U+E347

accSagittal7v11CommaDown

7:11 comma down, 1° down [60 EDO], 1/10-tone down

U+E348

accSagittal5v11SmallDiesisUp

5:11 small diesis up, (5:11S, ~7:13S, ~11:17S, 5:7k plus 7:11C)

U+E349

accSagittal5v11SmallDiesisDown

5:11 small diesis down

U+E34A

accSagittalSharp5v11SDown

Sharp 5:11S-down

U+E34B

accSagittalFlat5v11SUp

Flat 5:11S-up

U+E34C

accSagittalSharp7v11CDown

Sharp 7:11C-down, 4° up [60 EDO], 2/5-tone up

U+E34D

accSagittalFlat7v11CUp

Flat 7:11C-up, 4° down [60 EDO], 2/5-tone down

U+E34E

accSagittalSharp55CDown

Sharp 55C-down, 5° up [96 EDO], 5/16-tone up

U+E34F

accSagittalFlat55CUp

Flat 55C-up, 5° down [96 EDO], 5/16-tone down

U+E350

accSagittalSharp17CDown

Sharp 17C-down

U+E351

accSagittalFlat17CUp

Flat 17C-up

U+E352

accSagittalSharp7v11kDown

Sharp 7:11k-down

U+E353

accSagittalFlat7v11kUp

Flat 7:11k-up

U+E354

accSagittalSharp7v11kUp

Sharp 7:11k-up

U+E355

accSagittalFlat7v11kDown

Flat 7:11k-down

U+E356

accSagittalSharp17CUp

Sharp 17C-up

U+E357

accSagittalFlat17CDown

Flat 17C-down

U+E358

accSagittalSharp55CUp

Sharp 55C-up, 11° up [96 EDO], 11/16-tone up

U+E359

accSagittalFlat55CDown

Flat 55C-down, 11° down [96 EDO], 11/16-tone down

U+E35A

accSagittalSharp7v11CUp

Sharp 7:11C-up, 6° up [60 EDO], 3/5- tone up

U+E35B

accSagittalFlat7v11CDown

Flat 7:11C-down, 6° down [60 EDO], 3/5- tone down

U+E35C

accSagittalSharp5v11SUp

Sharp 5:11S-up

U+E35D

accSagittalFlat5v11SDown

Flat 5:11S-down

U+E35E

accSagittalDoubleSharp5v11SDown

Double sharp 5:11S-down

U+E35F

accSagittalDoubleFlat5v11SUp

Double flat 5:11S-up

U+E360

accSagittalDoubleSharp7v11CDown

Double sharp 7:11C-down, 9° up [60 EDO], 9/10-tone up

U+E361

accSagittalDoubleFlat7v11CUp

Double flat 7:11C-up, 9° down [60 EDO], 9/10-tone down

U+E362

accSagittalDoubleSharp55CDown

Double sharp 55C-down, 13° up [96 EDO], 13/16-tone up

U+E363

accSagittalDoubleFlat55CUp

Double flat 55C-up, 13° down [96 EDO], 13/16-tone down

U+E364

accSagittalDoubleSharp17CDown

Double sharp 17C-down

U+E365

accSagittalDoubleFlat17CUp

Double flat 17C-up

U+E366

accSagittalDoubleSharp7v11kDown

Double sharp 7:11k-down

U+E367

accSagittalDoubleFlat7v11kUp

Double flat 7:11k-up

Trojan Sagittal extension (12-EDO relative) accidentals (U+E370–U+E38F)

U+E370

accSagittal23CommaUp

23 comma up, (23C), 2° up [96 EDO], 1/8-tone up

U+E371

accSagittal23CommaDown

23 comma down, 2° down [96 EDO], 1/8-tone down

U+E372

accSagittal5v19CommaUp

5:19 comma up, (5:19C, 5C plus 19s), 1/20-tone up

U+E373

accSagittal5v19CommaDown

5:19 comma down, 1/20-tone down

U+E374

accSagittal5v23SmallDiesisUp

5:23 small diesis up, (5:23S, 5C plus 23C), 2° up [60 EDO], 1/5-tone

U+E375

accSagittal5v23SmallDiesisDown

5:23 small diesis down, 2° down [60 EDO], 1/5-tone down

U+E376

accSagittalSharp5v23SDown

Sharp 5:23S-down, 3° up [60 EDO], 3/10-tone up

U+E377

accSagittalFlat5v23SUp

Flat 5:23S-up, 3° down [60 EDO], 3/10-tone down

U+E378

accSagittalSharp5v19CDown

Sharp 5:19C-down, 9/20-tone up

U+E379

accSagittalFlat5v19CUp

Flat 5:19C-up, 9/20-tone down

U+E37A

accSagittalSharp23CDown

Sharp 23C-down, 6° up [96 EDO], 3/8-tone up

U+E37B

accSagittalFlat23CUp

Flat 23C-up, 6° down [96 EDO], 3/8-tone down

U+E37C

accSagittalSharp23CUp

Sharp 23C-up, 10° up [96 EDO], 5/8-tone up

U+E37D

accSagittalFlat23CDown

Flat 23C-down, 10° down [96 EDO], 5/8-tone down

U+E37E

accSagittalSharp5v19CUp

Sharp 5:19C-up, 11/20-tone up

U+E37F

accSagittalFlat5v19CDown

Flat 5:19C-down, 11/20-tone down

U+E380

accSagittalSharp5v23SUp

Sharp 5:23S-up, 7° up [60 EDO], 7/10-tone up

U+E381

accSagittalFlat5v23SDown

Flat 5:23S-down, 7° down [60 EDO], 7/10-tone down

U+E382

accSagittalDoubleSharp5v23SDown

Double sharp 5:23S-down, 8° up [60 EDO], 4/5-tone up

U+E383

accSagittalDoubleFlat5v23SUp

Double flat 5:23S-up, 8° down [60 EDO], 4/5-tone down

U+E384

accSagittalDoubleSharp5v19CDown

Double sharp 5:19C-down, 19/20-tone up

U+E385

accSagittalDoubleFlat5v19CUp

Double flat 5:19C-up, 19/20-tone down

U+E386

accSagittalDoubleSharp23CDown

Double sharp 23C-down, 14°up [96 EDO], 7/8-tone up

U+E387

accSagittalDoubleFlat23CUp

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+E390–U+E3AF)

U+E390

accSagittal19SchismaUp

19 schisma up, (19s)

U+E391

accSagittal19SchismaDown

19 schisma down

U+E392

accSagittal17KleismaUp

17 kleisma up, (17k)

U+E393

accSagittal17KleismaDown

17 kleisma down

U+E394

accSagittal143CommaUp

143 comma up, (143C, 13L less 11M)

U+E395

accSagittal143CommaDown

143 comma down

U+E396

accSagittal11v49CommaUp

11:49 comma up, (11:49C, 11M less 49C)

U+E397

accSagittal11v49CommaDown

11:49 comma down

U+E398

accSagittal19CommaUp

19 comma up, (19C)

U+E399

accSagittal19CommaDown

19 comma down

U+E39A

accSagittal7v19CommaUp

7:19 comma up, (7:19C, 7C less 19s)

U+E39B

accSagittal7v19CommaDown

7:19 comma down

U+E39C

accSagittal49SmallDiesisUp

49 small diesis up, (49S, ~31S)

U+E39D

accSagittal49SmallDiesisDown

49 small diesis down

U+E39E

accSagittal23SmallDiesisUp

23 small diesis up, (23S)

U+E39F

accSagittal23SmallDiesisDown

23 small diesis down

U+E3A0

accSagittal5v13MediumDiesisUp

5:13 medium diesis up, (5:13M, ~37M, 5C plus 13C)

U+E3A1

accSagittal5v13MediumDiesisDown

5:13 medium diesis down

U+E3A2

accSagittal11v19MediumDiesisUp

11:19 medium diesis up, (11:19M, 11M plus 19s)

U+E3A3

accSagittal11v19MediumDiesisDown

11:19 medium diesis down

U+E3A4

accSagittal49MediumDiesisUp

49 medium diesis up, (49M, ~31M, 7C plus 7C)

U+E3A5

accSagittal49MediumDiesisDown

49 medium diesis down

U+E3A6

accSagittal5v49MediumDiesisUp

5:49 medium diesis up, (5:49M, half apotome)

U+E3A7

accSagittal5v49MediumDiesisDown

5:49 medium diesis down

U+E3A8

accSagittal49LargeDiesisUp

49 large diesis up, (49L, ~31L, apotome less 49M)

U+E3A9

accSagittal49LargeDiesisDown

49 large diesis down

U+E3AA

accSagittal11v19LargeDiesisUp

11:19 large diesis up, (11:19L, apotome less 11:19M)

U+E3AB

accSagittal11v19LargeDiesisDown

11:19 large diesis down

U+E3AC

accSagittal5v13LargeDiesisUp

5:13 large diesis up, (5:13L, ~37L, apotome less 5:13M)

U+E3AD

accSagittal5v13LargeDiesisDown

5:13 large diesis down

Promethean Sagittal extension (high precision) multi-shaft accidentals (U+E3B0–U+E3EF)

U+E3B0

accSagittalSharp23SDown

Sharp 23S-down

U+E3B1

accSagittalFlat23SUp

Flat 23S-up

U+E3B2

accSagittalSharp49SDown

Sharp 49S-down

U+E3B3

accSagittalFlat49SUp

Flat 49S-up

U+E3B4

accSagittalSharp7v19CDown

Sharp 7:19C-down

U+E3B5

accSagittalFlat7v19CUp

Flat 7:19C-up

U+E3B6

accSagittalSharp19CDown

Sharp 19C-down

U+E3B7

accSagittalFlat19CUp

Flat 19C-up

U+E3B8

accSagittalSharp11v49CDown

Sharp 11:49C-down

U+E3B9

accSagittalFlat11v49CUp

Flat 11:49C-up

U+E3BA

accSagittalSharp143CDown

Sharp 143C-down

U+E3BB

accSagittalFlat143CUp

Flat 143C-up

U+E3BC

accSagittalSharp17kDown

Sharp 17k-down

U+E3BD

accSagittalFlat17kUp

Flat 17k-up

U+E3BE

accSagittalSharp19sDown

Sharp 19s-down

U+E3BF

accSagittalFlat19sUp

Flat 19s-up

U+E3C0
accSagittalSharp19sUp

Sharp 19s-up

U+E3C1
accSagittalFlat19sDown

Flat 19s-down

U+E3C2
accSagittalSharp17kUp

Sharp 17k-up

U+E3C3
accSagittalFlat17kDown

Flat 17k-down

U+E3C4
accSagittalSharp143CUp

Sharp 143C-up

U+E3C5
accSagittalFlat143CDown

Flat 143C-down

U+E3C6
accSagittalSharp11v49CUp

Sharp 11:49C-up

U+E3C7
accSagittalFlat11v49CDown

Flat 11:49C-down

U+E3C8
accSagittalSharp19CUp

Sharp 19C-up

U+E3C9
accSagittalFlat19CDown

Flat 19C-down

U+E3CA
accSagittalSharp7v19CUp

Sharp 7:19C-up

U+E3CB
accSagittalFlat7v19CDown

Flat 7:19C-down

U+E3CC
accSagittalSharp49SUp

Sharp 49S-up

U+E3CD
accSagittalFlat49SDown

Flat 49S-down

U+E3CE
accSagittalSharp23SUp

Sharp 23S-up

U+E3CF
accSagittalFlat23SDown

Flat 23S-down

U+E3D0
accSagittalSharp5v13MUp

Sharp 5:13M-up

U+E3D1
accSagittalFlat5v13MDown

Flat 5:13M-down

U+E3D2

accSagittalSharp11v19MUp

Sharp 11:19M-up

U+E3D3

accSagittalFlat11v19MDown

Flat 11:19M-down

U+E3D4

accSagittalSharp49MUp

Sharp 49M-up

U+E3D5

accSagittalFlat49MDown

Flat 49M-down

U+E3D6

accSagittalSharp5v49MUp

Sharp 5:49M-up, (one and a half apotomes)

U+E3D7

accSagittalFlat5v49MDown

Flat 5:49M-down

U+E3D8

accSagittalSharp49LUp

Sharp 49L-up

U+E3D9

accSagittalFlat49LDown

Flat 49L-down

U+E3DA

accSagittalSharp11v19LUp

Sharp 11:19L-up

U+E3DB

accSagittalFlat11v19LDown

Flat 11:19L-down

U+E3DC

accSagittalSharp5v13LUp

Sharp 5:13L-up

U+E3DD

accSagittalFlat5v13LDown

Flat 5:13L-down

U+E3DE

accSagittalUnused3

Unused

U+E3DF

accSagittalUnused4

Unused

U+E3E0

accSagittalDoubleSharp23SDown

Double sharp 23S-down

U+E3E1

accSagittalDoubleFlat23SUp

Double flat 23S-up

U+E3E2

accSagittalDoubleSharp49SDown

Double sharp 49S-down

U+E3E3

accSagittalDoubleFlat49SUp

Double flat 49S-up

U+E3E4

accSagittalDoubleSharp7v19CDown

Double sharp 7:19C-down

U+E3E5

accSagittalDoubleFlat7v19CUp

Double flat 7:19C-up

U+E3E6

accSagittalDoubleSharp19CDown

Double sharp 19C-down

U+E3E7

accSagittalDoubleFlat19CUp

Double flat 19C-up

U+E3E8

accSagittalDoubleSharp11v49CDown

Double sharp 11:49C-down

U+E3E9

accSagittalDoubleFlat11v49CUp

Double flat 11:49C-up

U+E3EA

accSagittalDoubleSharp143CDown

Double sharp 143C-down

U+E3EB

accSagittalDoubleFlat143CUp

Double flat 143C-up

U+E3EC

accSagittalDoubleSharp17kDown

Double sharp 17k-down

U+E3ED

accSagittalDoubleFlat17kUp

Double flat 17k-up

U+E3EE

accSagittalDoubleSharp19sDown

Double sharp 19s-down

U+E3EF

accSagittalDoubleFlat19sUp

Double flat 19s-up

Herculean Sagittal extension (very high precision) accidental diacritics (U+E3F0–U+E3FF)

U+E3F0

accSagittalShaftUp

Shaft up, (natural for use with only diacritics up)

U+E3F1

accSagittalShaftDown

Shaft down, (natural for use with only diacritics down)

U+E3F2

accSagittalAcute

Acute, 5 schisma up (5s), 2 cents up

U+E3F3

accSagittalGrave

Grave, 5 schisma down, 2 cents down

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 (accSagittalShaftUp or accSagittalShaftDown); whichever one represents the direction of the sum of the diacritic alterations.

Olympian Sagittal extension (extreme precision) accidental diacritics (U+E400–U+E40F)

Reserved for future use.

Implementation notes

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

Magrathean Sagittal extension (insane precision) accidental diacritics (U+E410–U+E41F)

Reserved for future use.

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.

Wyschnegradsky accidentals (72-EDO) (U+E420–U+E43F)

U+E420

accidentalWyschnegradsky1TwelfthsSharp

1/12 tone sharp

U+E421

accidentalWyschnegradsky2TwelfthsSharp

1/6 tone sharp

U+E422

accidentalWyschnegradsky3TwelfthsSharp

1/4 tone sharp

U+E423

accidentalWyschnegradsky4TwelfthsSharp

1/3 tone sharp

U+E424

accidentalWyschnegradsky5TwelfthsSharp

5/12 tone sharp

U+E425

accidentalWyschnegradsky6TwelfthsSharp

1/2 tone sharp

U+E426

accidentalWyschnegradsky7TwelfthsSharp

7/12 tone sharp

U+E427

accidentalWyschnegradsky8TwelfthsSharp

2/3 tone sharp

U+E428

accidentalWyschnegradsky9TwelfthsSharp

3/4 tone sharp

U+E429

accidentalWyschnegradsky10TwelfthsSharp

5/6 tone sharp

U+E42A

accidentalWyschnegradsky11TwelfthsSharp

11/12 tone sharp

U+E42B

accidentalWyschnegradsky1TwelfthsFlat

1/12 tone flat

U+E42C

accidentalWyschnegradsky2TwelfthsFlat

1/6 tone flat

U+E42D

accidentalWyschnegradsky3TwelfthsFlat

1/4 tone flat

U+E42E

accidentalWyschnegradsky4TwelfthsFlat

1/3 tone flat

U+E42F

accidentalWyschnegradsky5TwelfthsFlat

5/12 tone flat

U+E430

accidentalWyschnegradsky6TwelfthsFlat

1/2 tone flat

U+E431

accidentalWyschnegradsky7TwelfthsFlat

7/12 tone flat

U+E432

accidentalWyschnegradsky8TwelfthsFlat

2/3 tone flat

U+E433

accidentalWyschnegradsky9TwelfthsFlat

3/4 tone flat

U+E434

accidentalWyschnegradsky10TwelfthsFlat

5/6 tone flat

U+E435

accidentalWyschnegradsky11TwelfthsFlat

11/12 tone flat

Arel-Ezgi-Uzdilek (AEU) accidentals (U+E440–U+E44F)

U+E440

accidentalBuyukMucennebFlat

Büyük mücenneb (flat)

U+E441

accidentalKucukMucennebFlat

Küçük mücenneb (flat)

U+E442

accidentalBakiyeFlat

Bakiye (flat)

U+E443

accidentalKomaFlat

Koma (flat)

U+E444

accidentalKomaSharp

Koma (sharp)

U+E445

accidentalBakiyeSharp

Bakiye (sharp)

U+E446

accidentalKucukMucennebSharp

Küçük mücenneb (sharp)

U+E447

accidentalBuyukMucennebSharp

Büyük mücenneb (sharp)

Turkish folk music accidentals (U+E450–U+E45F)

U+E450

accidental1CommaSharp

1-comma sharp

U+E451

accidental2CommaSharp

2-comma sharp

U+E452

accidental3CommaSharp

3-comma sharp

U+E453

accidental5CommaSharp

5-comma sharp

U+E454

accidental1CommaFlat

1-comma flat

U+E455

accidental2CommaFlat

2-comma flat

U+E456

accidental3CommaFlat

3-comma flat

U+E457

accidental4CommaFlat

4-comma flat

Persian accidentals (U+E460–U+E46F)

U+E460

accidentalKoron

Koron (quarter tone flat)

U+E461

accidentalSori

Sori (quarter tone sharp)

Other accidentals (U+E470–U+E49F)

U+E470

accidentalXenakisOneThirdToneSharp

One-third-tone sharp (Xenakis)

U+E471

accidentalXenakisTwoThirdTonesSharp

Two-third-tones sharp (Xenakis)

U+E472

accidentalQuarterToneSharpBusotti

Quarter tone sharp (Busotti)

U+E473

accidentalSharpOneHorizontalStroke

One or three quarter tones sharp

U+E474

accidentalThreeQuarterTonesSharpBusotti

Three quarter tones sharp (Busotti)

U+E475

accidentalQuarterToneSharpWiggle

Quarter tone sharp with wiggly tail

U+E476

accidentalTavenerSharp

Byzantine-style slashed sharp (Tavener)

U+E477

accidentalTavenerFlat

Byzantine-style slashed flat (Tavener)

U+E478

accidentalQuarterToneFlatPenderecki

Quarter tone flat (Penderecki)

U+E479

accidentalCommaSlashUp

Syntonic/Didymus comma (80:81) up (Bosanquet)

U+E47A

accidentalCommaSlashDown

Syntonic/Didymus comma (80:81) down (Bosanquet)

U+E47B

accidentalWilsonPlus

Wilson plus (5 comma up)

U+E47C

accidentalWilsonMinus

Wilson minus (5 comma down)

U+E47D

accidentalLargeDoubleSharp

Large double sharp

U+E47E (and U+1D132)

accidentalQuarterToneSharp4

Quarter-tone sharp

U+E47F (and U+1D133)

accidentalQuarterToneFlat4

Quarter-tone flat

U+E480

accidentalQuarterToneFlatFilledReversed

Filled reversed flat (quarter-tone flat)

U+E481

accidentalSharpReversed

Reversed sharp

U+E482

accidentalNaturalReversed

Reversed natural

U+E483

accidentalDoubleFlatReversed

Reversed double flat

U+E484

accidentalFlatTurned

Turned flat

U+E485

accidentalDoubleFlatTurned

Turned double flat

U+E486

accidentalThreeQuarterTonesFlatGrisey

Three-quarter-tones flat (Grisey)

U+E487

accidentalThreeQuarterTonesFlatTartini

Three-quarter-tones flat (Tartini)

U+E488

accidentalQuarterToneFlatVanBlankenburg

Quarter-tone flat (van Blankenburg)

U+E489

accidentalThreeQuarterTonesFlatCouper

Three-quarter-tones flat (Couper)

U+E48A

accidentalOneThirdToneSharpFerneyhough

One-third-tone sharp (Ferneyhough)

U+E48B

accidentalOneThirdToneFlatFerneyhough

One-third-tone flat (Ferneyhough)

U+E48C

accidentalTwoThirdTonesSharpFerneyhough

Two-third-tones sharp (Ferneyhough)

U+E48D

accidentalTwoThirdTonesFlatFerneyhough

Two-third-tones flat (Ferneyhough)

Articulation (U+E4A0–U+E4BF)

U+E4A0 (and U+1D17B)
articAccentAbove
Accent above

U+E4A1
articAccentBelow
Accent below

U+E4A2 (and U+1D17C)
articStaccatoAbove
Staccato above

U+E4A3
articStaccatoBelow
Staccato below

U+E4A4 (and U+1D17D)
articTenutoAbove
Tenuto above

U+E4A5
articTenutoBelow
Tenuto below

U+E4A6 (and U+1D17E)
articStaccatissimoAbove
Staccatissimo above

U+E4A7
articStaccatissimoBelow
Staccatissimo below

U+E4A8
articStaccatissimoWedgeAbove
Staccatissimo wedge above

U+E4A9
articStaccatissimoWedgeBelow
Staccatissimo wedge below

U+E4AA
articStaccatissimoStrokeAbove
Staccatissimo stroke above

U+E4AB
articStaccatissimoStrokeBelow
Staccatissimo stroke below

U+E4AC (and U+1D17F)
articMarcatoAbove
Marcato above

U+E4AD
articMarcatoBelow
Marcato below

U+E4AE (and U+1D180)
articMarcatoStaccatoAbove
Marcato-staccato above

U+E4AF
articMarcatoStaccatoBelow
Marcato-staccato below

U+E4B0 (and U+1D181)
articAccentStaccatoAbove
Accent-staccato above

U+E4B1
articAccentStaccatoBelow
Accent-staccato below

U+E4B2 (and U+1D182)
articTenutoStaccatoAbove

Louré (tenuto-staccato) above

U+E4B3
articTenutoStaccatoBelow

Louré (tenuto-staccato) below

U+E4B4
articTenutoAccentAbove

Tenuto-accent above

U+E4B5
articTenutoAccentBelow

Tenuto-accent below

U+E4B6
articStressAbove

Stress above

U+E4B7
articStressBelow

Stress below

U+E4B8
articUnstressAbove

Unstress above

U+E4B9
articUnstressBelow

Unstress below

U+E4BA
articLaissezVibrerAbove

Laissez vibrer (l.v.) above

U+E4BB
articLaissezVibrerBelow

Laissez vibrer (l.v.) below

Recommended stylistic alternates

uniE4A0.salt01
articAccentAboveLarge

Large accent above

uniE4A0.ss01
articAccentAboveSmall

Accent above (small staff)

uniE4A1.salt01
articAccentBelowLarge

Large accent below

uniE4A1.ss01
articAccentBelowSmall

Accent below (small staff)

uniE4A2.ss01
articStaccatoAboveSmall

Staccato above (small staff)

uniE4A3.ss01
articStaccatoBelowSmall

Staccato below (small staff)

uniE4A4.ss01
articTenutoAboveSmall

Tenuto above (small staff)

uniE4A5.ss01
articTenutoBelowSmall

Tenuto below (small staff)

uniE4A6.ss01

articStaccatissimoAboveSmall

Staccatissimo above (small staff)

uniE4A7.ss01

articStaccatissimoBelowSmall

Staccatissimo below (small staff)

uniE4A8.ss01

articStaccatissimoWedgeAboveSmall

Staccatissimo wedge above (small staff)

uniE4A9.ss01

articStaccatissimoWedgeBelowSmall

Staccatissimo wedge below (small staff)

uniE4AA.ss01

articStaccatissimoStrokeAboveSmall

Staccatissimo stroke above (small staff)

uniE4AB.ss01

articStaccatissimoStrokeBelowSmall

Staccatissimo stroke below (small staff)

uniE4AC.ss01

articMarcatoAboveSmall

Marcato above (small staff)

uniE4AD.ss01

articMarcatoBelowSmall

Marcato below (small staff)

uniE4AE.ss01

articMarcatoStaccatoAboveSmall

Marcato-staccato above (small staff)

uniE4AF.ss01

articMarcatoStaccatoBelowSmall

Marcato-staccato below (small staff)

uniE4B0.ss01

articAccentStaccatoAboveSmall

Accent-staccato above (small staff)

uniE4B1.ss01

articAccentStaccatoBelowSmall

Accent-staccato below (small staff)

uniE4B2.ss01

articTenutoStaccatoAboveSmall

Louré (tenuto-staccato) above (small staff)

uniE4B3.ss01

articTenutoStaccatoBelowSmall

Louré (tenuto-staccato) below (small staff)

uniE4B4.ss01

articTenutoAccentAboveSmall

Tenuto-accent above (small staff)

uniE4B5.ss01

articTenutoAccentBelowSmall

Tenuto-accent below (small staff)

Holds and pauses (U+E4C0–U+E4DF)

U+E4C0 (and U+1D110)
fermataAbove
Fermata above

U+E4C1 (and U+1D111)
fermataBelow
Fermata below

U+E4C2
fermataVeryShortAbove
Very short fermata above

U+E4C3
fermataVeryShortBelow
Very short fermata below

U+E4C4
fermataShortAbove
Short fermata above

U+E4C5
fermataShortBelow
Short fermata below

U+E4C6
fermataLongAbove
Long fermata above

U+E4C7
fermataLongBelow
Long fermata below

U+E4C8
fermataVeryLongAbove
Very long fermata above

U+E4C9
fermataVeryLongBelow
Very long fermata below

U+E4CA
fermataLongHenzeAbove
Long fermata (Henze) above

U+E4CB
fermataLongHenzeBelow
Long fermata (Henze) below

U+E4CC
fermataShortHenzeAbove
Short fermata (Henze) above

U+E4CD
fermataShortHenzeBelow
Short fermata (Henze) below

U+E4CE (and U+1D112)
breathMarkComma
Breath mark (comma)

U+E4CF
breathMarkTick
Breath mark (tick-like)

U+E4D0
breathMarkUpbow
Breath mark (upbow-like)

U+E4D1 (and U+1D113)
caesura
Caesura

U+E4D2

caesuraThick

Thick caesura

U+E4D3

caesuraShort

Short caesura

U+E4D4

caesuraCurved

Curved caesura

U+E4D5

breathMarkSalzedo

Breath mark (Salzedo)

U+E4D6

curlewSign

Curlew (Britten)

Recommended stylistic alternates

uniE4D1.salt01

caesuraSingleStroke

Caesura (single stroke)

Rests (U+E4E0–U+E4FF)

U+E4E0

restMaxima

Maxima rest

U+E4E1

restLonga

Longa rest

U+E4E2 (and U+1D13A)

restDoubleWhole

Double whole (breve) rest

U+E4E3 (and U+1D13B)

restWhole

Whole (semibreve) rest

U+E4E4 (and U+1D13C)

restHalf

Half (minim) rest

U+E4E5 (and U+1D13D)

restQuarter

Quarter (crotchet) rest

U+E4E6 (and U+1D13E)

rest8th

Eighth (quaver) rest

U+E4E7 (and U+1D13F)

rest16th

16th (semiquaver) rest

U+E4E8 (and U+1D140)

rest32nd

32nd (demisemiquaver) rest

U+E4E9 (and U+1D141)

rest64th

64th (hemidemisemiquaver) rest

U+E4EA (and U+1D142)

rest128th

128th (semihemidemisemiquaver) rest

U+E4EB

rest256th

256th rest

U+E4EC

rest512th

512th rest

U+E4ED

rest1024th

1024th rest

U+E4EE (and U+1D129)

restHBar

Multiple measure rest

U+E4EF

restHBarLeft

H-bar, left half

U+E4F0

restHBarMiddle

H-bar, middle

U+E4F1

restHBarRight

H-bar, right half

U+E4F2

restQuarterOld

Old-style quarter (crotchet) rest

U+E4F3

restDoubleWholeLegerLine

Double whole rest on leger lines

U+E4F4

restWholeLegerLine

Whole rest on leger line

U+E4F5

restHalfLegerLine

Half rest on leger line

Implementation notes

Scoring applications should draw multiple measure rests using primitives to provide variable width and line thickness rather than using **restHBar**.

"Old style" multiple measure rests can be created by laying out **restLonga** (four bars), **restDoubleWhole** (two bars) and **restWhole** (one bar) next to each other.

For dotted rests, the augmentation dot glyph **augmentationDot** should be used.

Bar repeats (U+E500–U+E50F)

U+E500 (and U+1D10E)

repeat1Bar

Repeat last bar

U+E501 (and U+1D10F)

repeat2Bars

Repeat last two bars

U+E502

repeat4Bars

Repeat last four bars

Octaves (U+E510–U+E51F)

U+E510
ottava
Ottava

U+E511 (and U+1D136)
ottavaAlta
Ottava alta

U+E512 (and U+1D137)
ottavaBassa
Ottava bassa

U+E513
ottavaBassaBa
Ottava bassa (ba)

U+E514
quindicesima
Quindicesima

U+E515 (and U+1D138)
quindicesimaAlta
Quindicesima alta

U+E516 (and U+1D139)
quindicesimaBassa
Quindicesima bassa

U+E517
ventiduesima
Ventiduesima

U+E518
ventiduesimaAlta
Ventiduesima alta

U+E519
ventiduesimaBassa
Ventiduesima bassa

U+E51A
octaveParensLeft
Left parenthesis for octave signs

U+E51B
octaveParensRight
Right parenthesis for octave signs

Implementation notes

See the implementation notes for clefs.

Dynamics (U+E520–U+E54F)

U+E520 (and U+1D18F)
dynamicPiano
Piano

U+E521 (and U+1D190)
dynamicMezzo
Mezzo

U+E522 (and U+1D191)
dynamicForte
Forte

U+E523 (and U+1D18C)
dynamicRinforzando
Rinforzando

U+E524 (and U+1D18D)
dynamicSforzando
Sforzando

U+E525 (and U+1D18E)
dynamicZ
Z

U+E526
dynamicNiente
Niente

U+E527
dynamicPPPPPP
pppppp

U+E528
dynamicPPPPP
ppppp

U+E529
dynamicPPPP
pppp

U+E52A
dynamicPPP
ppp

U+E52B
dynamicPP
pp

U+E52C
dynamicMP
mp

U+E52D
dynamicMF
mf

U+E52E
dynamicPF
pf

U+E52F
dynamicFF
ff

U+E530
dynamicFFF
fff

U+E531
dynamicFFFF
ffff

U+E532
dynamicFFFFF
fffff

U+E533
dynamicFFFFFF
ffffff

U+E534
dynamicFortePiano
Forte-piano

U+E535
dynamicForzando
Forzando

U+E536
dynamicSforzando1
Sforzando 1

U+E537
dynamicSforzandoPiano
Sforzando-piano

U+E538
dynamicSforzandoPianissimo
Sforzando-pianissimo

U+E539
dynamicSforzato
Sforzato

U+E53A
dynamicSforzatoPiano
Sforzato-piano

U+E53B
dynamicSforzatoFF
Sforzatissimo

U+E53C
dynamicRinforzando1
Rinforzando 1

U+E53D
dynamicRinforzando2
Rinforzando 2

U+E53E (and U+1D192)
dynamicCrescendoHairpin
Crescendo

U+E53F (and U+1D193)
dynamicDiminuendoHairpin
Diminuendo

U+E540
dynamicMessaDiVoce
Messa di voce

U+E541
dynamicNienteForHairpin
Niente (for hairpins)

Recommended stylistic alternates

uniE520.ss01
dynamicPianoSmall
Piano (small staff)

uniE521.ss01
dynamicMezzoSmall
Mezzo (small staff)

uniE522.ss01

dynamicForteSmall

Forte (small staff)

uniE523.ss01

dynamicRinforzandoSmall

Rinforzando (small staff)

uniE524.ss01

dynamicSforzandoSmall

Sforzando (small staff)

uniE525.ss01

dynamicZSmall

Z (small staff)

uniE526.ss01

dynamicNienteSmall

Niente (small staff)

Implementation notes

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

Ligatures should be defined for common combinations of dynamics, such as . 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 dynamicForte for) or using the pre-composed glyph (e.g. 1 x dynamicFFF for).

Lyrics (U+E550–U+E55F)

U+E550

lyricsElisionNarrow

Narrow elision

U+E551

lyricsElision

Elision

U+E552

lyricsElisionWide

Wide elision

U+E553

lyricsHyphenBaseline

Baseline hyphen

U+E554

lyricsHyphenBaselineNonBreaking

Non-breaking baseline hyphen

Common ornaments (U+E560–U+E56F)

U+E560 (and U+1D194)
graceNoteAcciaccaturaStemUp
Slashed grace note stem up

U+E561
graceNoteAcciaccaturaStemDown
Slashed grace note stem down

U+E562 (and U+1D195)
graceNoteAppoggiaturaStemUp
Grace note stem up

U+E563
graceNoteAppoggiaturaStemDown
Grace note stem down

U+E564
graceNoteSlashStemUp
Slash for stem up grace note

U+E565
graceNoteSlashStemDown
Slash for stem down grace note

U+E566 (and U+1D196)
ornamentTrill
Trill

U+E567 (and U+1D197)
ornamentTurn
Turn

U+E568 (and U+1D198)
ornamentTurnInverted
Inverted turn

U+E569 (and U+1D199)
ornamentTurnSlash
Turn with slash

U+E56A (and U+1D19A)
ornamentTurnUp
Turn up

U+E56B
ornamentTurnUpS
Inverted turn up

U+E56C
ornamentMordent
Mordent

U+E56D
ornamentMordentInverted
Inverted mordent

U+E56E
ornamentTremblement
Tremblement

U+E56F
ornamentHaydn
Haydn ornament

Recommended ligatures

uniE260_uniE566

ornamentTrillFlatAbove

Trill, flat above

uniE261_uniE566

ornamentTrillNaturalAbove

Trill, natural above

uniE262_uniE566

ornamentTrillSharpAbove

Trill, sharp above

uniE260_uniE567

ornamentTurnFlatAbove

Turn, flat above

uniE260_uniE567_uniE262

ornamentTurnFlatAboveSharpBelow

Turn, flat above, sharp below

uniE567_uniE260

ornamentTurnFlatBelow

Turn, flat below

uniE261_uniE567

ornamentTurnNaturalAbove

Turn, natural above

uniE567_uniE261

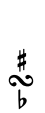
ornamentTurnNaturalBelow

Turn, natural below

uniE262_uniE567

ornamentTurnSharpAbove

Turn, sharp above



uniE262_uniE567_uniE260

ornamentTurnSharpAboveFlatBelow

Turn, sharp above, flat below

uniE567_uniE262

ornamentTurnSharpBelow

Turn, sharp below

Implementation notes

Scoring applications should draw grace notes in the same way as they draw regular notes, rather than using the precomposed glyphs.

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

Other baroque ornaments (U+E570–U+E58F)

U+E570

ornamentPortDeVoixV

Port de voix

U+E571

ornamentRightFacingHalfCircle

Right-facing half circle

U+E572

ornamentLeftFacingHalfCircle

Left-facing half circle

U+E573

ornamentRightFacingHook

Right-facing hook

U+E574

ornamentLeftFacingHook

Left-facing hook

U+E575

ornamentHookBeforeNote

Hook before note

U+E576

ornamentHookAfterNote

Hook after note

U+E577

ornamentUpCurve

Curve above

U+E578

ornamentDownCurve

Curve below

U+E579

ornamentShortObliqueLineBeforeNote

Short oblique straight line SW-NE

U+E57A

ornamentShortObliqueLineAfterNote

Short oblique straight line NW-SE

U+E57B

ornamentObliqueLineBeforeNote

Oblique straight line SW-NE

U+E57C

ornamentObliqueLineAfterNote

Oblique straight line NW-SE

U+E57D

ornamentDoubleObliqueLinesBeforeNote

Double oblique straight lines SW-NE

U+E57E

ornamentDoubleObliqueLinesAfterNote

Double oblique straight lines NW-SE

U+E57F

ornamentObliqueLineHorizBeforeNote

Oblique straight line tilted SW-NE

U+E580

ornamentObliqueLineHorizAfterNote

Oblique straight line tilted NW-SE

U+E581

ornamentComma

Comma

U+E582

ornamentShake3

Shake

U+E583

ornamentVerticalLine

Vertical line

U+E584

ornamentShakeMuffat1

Shake (Muffat)

U+E585 (and U+1D1B1)

glissandoUp

Glissando up

U+E586 (and U+1D1B2)

glissandoDown

Glissando down

U+E587

ornamentSchleifer

Schleifer (long mordent)

Implementation notes

There is little agreement over the meaning, or indeed the naming, of ornaments beyond those that have survived into modern usage. The glyphs included in this range are the shapes that are used by a wide variety of composers, particularly in the baroque period. For information about the uses and interpretations of individual symbols in this range, consult Neumann (ibid.).

Combining strokes for trills and mordents (U+E590–U+E5AF)

U+E590
ornamentTopLeftConcaveStroke
Ornament top left concave stroke

U+E591 (and U+1D1A5)
ornamentTopLeftConvexStroke
Ornament top left convex stroke

U+E592
ornamentHighLeftConcaveStroke
Ornament high left concave stroke

U+E593 (and U+1D1A2)
ornamentHighLeftConvexStroke
Ornament high left convex stroke

U+E594 (and U+1D19B)
ornamentLeftVerticalStroke
Ornament left vertical stroke

U+E595
ornamentLeftVerticalStrokeWithCross
Ornament left vertical stroke with cross (+)

U+E596
ornamentLeftShakeT
Ornament left shake t

U+E597
ornamentLeftPlus
Ornament left +

U+E598
ornamentLowLeftConcaveStroke
Ornament low left concave stroke

U+E599 (and U+1D1A4)
ornamentLowLeftConvexStroke
Ornament low left convex stroke

U+E59A
ornamentBottomLeftConcaveStroke
Ornament bottom left concave stroke

U+E59B (and U+1D1A1)
ornamentBottomLeftConcaveStrokeLarge
Ornament bottom left concave stroke, large

U+E59C
ornamentBottomLeftConvexStroke
Ornament bottom left convex stroke

U+E59D (and U+1D19C)
ornamentZigZagLineNoRightEnd
Ornament zig-zag line without right-hand end

U+E59E (and U+1D19D)
ornamentZigZagLineWithRightEnd
Ornament zig-zag line with right-hand end

U+E59F (and U+1D1A0)
ornamentMiddleVerticalStroke
Ornament middle vertical stroke

U+E5A0

ornamentTopRightConcaveStroke

Ornament top right concave stroke

U+E5A1 (and U+1D19E)

ornamentTopRightConvexStroke

Ornament top right convex stroke

U+E5A2

ornamentHighRightConcaveStroke

Ornament high right concave stroke

U+E5A3

ornamentHighRightConvexStroke

Ornament high right convex stroke

U+E5A4

ornamentRightVerticalStroke

Ornament right vertical stroke

U+E5A5 (and U+1D1A3)

ornamentLowRightConcaveStroke

Ornament low right concave stroke

U+E5A6

ornamentLowRightConvexStroke

Ornament low right convex stroke

U+E5A7 (and U+1D19F)

ornamentBottomRightConcaveStroke

Ornament bottom right concave stroke

U+E5A8

ornamentBottomRightConvexStroke

Ornament bottom right convex stroke

Implementation notes

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:[18]

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

	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

This range expands upon the repertoire of 11 strokes in the Unicode Musical Symbols range.

The side-bearings for the glyphs in this range must be adjusted carefully to ensure correct positioning. (Kerning pairs may also be used.)

Glyphs between **ornamentTopLeftConcaveStroke** and **ornamentBottomLeftConvexStroke** are designed to be positioned immediately to the left of and to join seamlessly to **ornamentZigZagLineNoRightEnd**. **ornamentZigZagLineWithRightEnd** and glyphs between **ornamentTopRightConcaveStroke** and **ornamentBottomRightConvexStroke** are designed to be positioned immediately to the right of and to join seamlessly to **ornamentZigZagLineNoRightEnd**. **ornamentMiddleVerticalStroke** should be used immediately to the left of either **ornamentZigZagLineNoRightEnd** or **ornamentZigZagLineWithRightEnd** to provide correct positioning of the vertical stroke across the zig-zag line.

Precomposed trills and mordents (U+E5B0–U+E5CF)

U+E5B0

ornamentPrecompSlide

Slide

U+E5B1

ornamentPrecompDescendingSlide

Descending slide

U+E5B2

ornamentPrecompAppoggTrill

Supported appoggiatura trill

U+E5B3

ornamentPrecompAppoggTrillSuffix

Supported appoggiatura trill with two-note suffix

U+E5B4

ornamentPrecompTurnTrillDAnglebert

Turn-trill (D'Anglebert)

U+E5B5

ornamentPrecompSlideTrillDAnglebert

Slide-trill (D'Anglebert)

U+E5B6

ornamentPrecompSlideTrillMarpurg

Slide-trill with one-note suffix (Marpurg)

U+E5B7

ornamentPrecompTurnTrillBach

Turn-trill with two-note suffix (J.S. Bach)

U+E5B8

ornamentPrecompSlideTrillBach

Slide-trill with two-note suffix (J.S. Bach)

U+E5B9

ornamentPrecompSlideTrillMuffat

Slide-trill (Muffat)

U+E5BA

ornamentPrecompSlideTrillSuffixMuffat

Slide-trill with two-note suffix (Muffat)

U+E5BB

ornamentPrecompTrillSuffixDandrieu

Trill with two-note suffix (Dandrieu)

U+E5BC

ornamentPrecompPortDeVoixMordent

Pre-beat port de voix follwed by multiple mordent (Dandrieu)

U+E5BD

ornamentPrecompTrillWithMordent

Trill with mordent

U+E5BE

ornamentPrecompCadence

Cadence

U+E5BF

ornamentPrecompCadenceWithTurn

Cadence with turn

U+E5C0

ornamentPrecompDoubleCadenceLowerPrefix

Double cadence with lower prefix

U+E5C1

ornamentPrecompCadenceUpperPrefix

Cadence with upper prefix

U+E5C2

ornamentPrecompCadenceUpperPrefixTurn

Cadence with upper prefix and turn

U+E5C3

ornamentPrecompDoubleCadenceUpperPrefix

Double cadence with upper prefix

U+E5C4

ornamentPrecompDoubleCadenceUpperPrefixTurn

Double cadence with upper prefix and turn

U+E5C5

ornamentPrecompMordentRelease

Mordent with release

U+E5C6

ornamentPrecompMordentUpperPrefix

Mordent with upper prefix

U+E5C7

ornamentPrecompInvertedMordentUpperPrefix

Inverted mordent with upper prefix

U+E5C8

ornamentPrecompTrillLowerSuffix

Trill with lower suffix

Implementation notes

The glyphs in this range show how the glyphs in the preceding range can be combined, based on examples from the "Selective Glossary of Terms and Symbols" in Neumann (*ibid.*), and other charts of Baroque ornamentation.

ornamentPrecompSlide	2 x ornamentZigZagLineNoRightEnd + ornamentHighRightConcaveStroke
ornamentPrecompDescendingSlide	2 x ornamentZigZagLineNoRightEnd + ornamentBottomRightConvexStroke
ornamentPrecompAppoggTrill	ornamentLeftVerticalStroke + 2 x ornamentZigZagLineNoRightEnd + ornamentZigZagLineWithRightEnd
ornamentPrecompAppoggTrillSuffix	ornamentLeftVerticalStroke + 2 x ornamentZigZagLineNoRightEnd + ornamentRightVerticalStroke
ornamentPrecompTurnTrillDAnglebert	ornamentHighLeftConvexStroke + 3 x ornamentZigZagLineNoRightEnd + ornamentTopRightConcaveStroke

ornamentPrecompSlideTrillDAnglebert	ornamentBottomLeftConcaveStrokeLarge + ornamentZigZagLineNoRightEnd + ornamentZigZagLineWithRightEnd
ornamentPrecompSlideTrillMarpurg	ornamentBottomLeftConcaveStrokeLarge + 2 x ornamentZigZagLineNoRightEnd + ornamentTopRightConvexStroke
ornamentPrecompTurnTrillBach	ornamentHighLeftConvexStroke + 3 x ornamentZigZagLineNoRightEnd + ornamentMiddleVerticalStroke + ornamentZigZagLineWithRightEnd
ornamentPrecompSlideTrillBach	ornamentBottomLeftConcaveStroke + 2 x ornamentZigZagLineNoRightEnd + ornamentMiddleVerticalStroke + ornamentZigZagLineWithRightEnd
ornamentPrecompSlideTrillMuffat	ornamentBottomLeftConvexStroke + 2 x ornamentZigZagLineNoRightEnd + ornamentTopRightConcaveStroke
ornamentPrecompSlideTrillSuffixMuffat	ornamentBottomLeftConvexStroke + 2 x ornamentZigZagLineNoRightEnd + ornamentTopRightConvexStroke
ornamentPrecompTrillSuffixDandrieu	3 x ornamentZigZagLineNoRightEnd + ornamentZigZagLineWithRightEnd
ornamentPrecompPortDeVoixMordent	ornamentLowLeftConcaveStroke + 2 x ornamentZigZagLineNoRightEnd + ornamentMiddleVerticalStroke + ornamentZigZagLineWithRightEnd
ornamentPrecompTrillWithMordent	2 x ornamentZigZagLineNoRightEnd + ornamentMiddleVerticalStroke + ornamentZigZagLineWithRightEnd
ornamentPrecompCadence	ornamentHighLeftConcaveStroke + ornamentZigZagLineNoRightEnd + ornamentZigZagLineWithRightEnd
ornamentPrecompCadenceWithTurn	ornamentHighLeftConcaveStroke + ornamentZigZagLineNoRightEnd + ornamentMiddleVerticalStroke + ornamentZigZagLineWithRightEnd
ornamentPrecompDoubleCadenceLowerPrefix	ornamentLowLeftConvexStroke + 2 x ornamentZigZagLineNoRightEnd + ornamentZigZagLineWithRightEnd
ornamentPrecompCadenceUpperPrefix	ornamentLowLeftConvexStroke + ornamentZigZagLineNoRightEnd + ornamentZigZagLineWithRightEnd

ornamentPrecompCadenceUpperPrefixTurn	ornamentLowLeftConvexStroke + ornamentZigZagLineNoRightEnd + ornamentMiddleVerticalStroke + ornamentZigZagLineWithRightEnd
ornamentPrecompDoubleCadenceUpperPrefix	ornamentLowLeftConvexStroke + 2 x ornamentZigZagLineNoRightEnd + ornamentZigZagLineWithRightEnd
ornamentPrecompDoubleCadenceUpperPrefixTurn	ornamentLowLeftConvexStroke + 2 x ornamentZigZagLineNoRightEnd + ornamentMiddleVerticalStroke + ornamentZigZagLineWithRightEnd
ornamentPrecompMordentRelease	ornamentZigZagLineNoRightEnd + ornamentTopRightConvexStroke
ornamentPrecompMordentUpperPrefix	ornamentTopLeftConvexStroke + 2x ornamentZigZagLineNoRightEnd + ornamentZigZagLineWithRightEnd
ornamentPrecompInvertedMordentUpperPrefix	ornamentTopLeftConvexStroke + 2x ornamentZigZagLineNoRightEnd + ornamentMiddleVerticalStroke + ornamentZigZagLineWithRightEnd
ornamentPrecompTrillLowerSuffix	2 x ornamentZigZagLineNoRightEnd + ornamentBottomRightConcaveStroke

Brass techniques (U+E5D0–U+E5EF)

U+E5D0
brassScoop
Scoop

U+E5D1
brassLiftShort
Lift, short

U+E5D2
brassLiftMedium
Lift, medium

U+E5D3
brassLiftLong
Lift, long

U+E5D4 (and U+1D185)
brassDoitShort
Doit, short

U+E5D5
brassDoitMedium
Doit, medium

U+E5D6
brassDoitLong
Doit, long

U+E5D7 (and U+1D186)
brassFallLipShort
Lip fall, short

U+E5D8
brassFallLipMedium
Lip fall, medium

U+E5D9
brassFallLipLong
Lip fall, long

U+E5DA
brassFallSmoothShort
Smooth fall, short

U+E5DB
brassFallSmoothMedium
Smooth fall, medium

U+E5DC
brassFallSmoothLong
Smooth fall, long

U+E5DD
brassFallRoughShort
Rough fall, short

U+E5DE
brassFallRoughMedium
Rough fall, medium

U+E5DF
brassFallRoughLong
Rough fall, long

U+E5E0
brassPlop
Plop

U+E5E1 (and U+1D187)
brassFlip
Flip

U+E5E2 (and U+1D188)

brassSmear

Smear

U+E5E3 (and U+1D189)

brassBend

Bend

U+E5E4

brassJazzTurn

Jazz turn

U+E5E5

brassMuteClosed

Muted (closed)

U+E5E6

brassMuteHalfClosed

Half-muted (half-closed)

U+E5E7

brassMuteOpen

Open

U+E5E8

brassHarmonMuteClosed

Harmon mute, closed

U+E5E9

brassHarmonMuteStemHalfLeft

Harmon mute, stem-cup half-closed, left

U+E5EA

brassHarmonMuteStemHalfRight

Harmon mute, stem-cup half-closed, right

U+E5EB

brassHarmonMuteStemOpen

Harmon mute, stem-cup open

Wind techniques (U+E5F0–U+E60F)

U+E5F0 (and U+1D18A)
doubleTongueAbove
Double-tongue above

U+E5F1
doubleTongueBelow
Double-tongue below

U+E5F2 (and U+1D18B)
tripleTongueAbove
Triple-tongue above

U+E5F3
tripleTongueBelow
Triple-tongue below

U+E5F4
windClosedHole
Closed hole

U+E5F5
windThreeQuartersClosedHole
Three-quarters closed hole

U+E5F6
windHalfClosedHole1
Half-closed hole

U+E5F7
windHalfClosedHole2
Half-closed hole 2

U+E5F8
windHalfClosedHole3
Half-open hole

U+E5F9
windOpenHole
Open hole

U+E5FA
windTrillKey
Trill key

U+E5FB
windFlatEmbouchure
Sharper embouchure

U+E5FC
windSharpEmbouchure
Flatter embouchure

U+E5FD
windRelaxedEmbouchure
Relaxed embouchure

U+E5FE
windLessRelaxedEmbouchure
Somewhat relaxed embouchure

U+E5FF
windTightEmbouchure
Tight embouchure

U+E600
windLessTightEmbouchure
Somewhat tight embouchure

U+E601
windVeryTightEmbouchure
Very tight embouchure

U+E602

windWeakAirPressure

Very relaxed embouchure / weak air-pressure

U+E603

windStrongAirPressure

Very tight embouchure / strong air pressure

U+E604

windReedPositionNormal

Normal reed position

U+E605

windReedPositionOut

Very little reed (pull outwards)

U+E606

windReedPositionIn

Much more reed (push inwards)

U+E607

windMultiphonicsBlackStem

Combining multiphonics (black) for stem

U+E608

windMultiphonicsWhiteStem

Combining multiphonics (white) for stem

U+E609

windMultiphonicsBlackWhiteStem

Combining multiphonics (black and white) for stem

Recommended stylistic alternates

uniE5F0.salt01

doubleTongueAboveNoSlur

Double-tongue above (no slur)

uniE5F1.salt01

doubleTongueBelowNoSlur

Double-tongue below (no slur)

uniE5F2.salt01

tripleTongueAboveNoSlur

Triple-tongue above (no slur)

uniE5F3.salt01

tripleTongueBelowNoSlur

Triple-tongue below (no slur)

String techniques (U+E610–U+E62F)

U+E610 (and U+1D1AA)

stringsDownBow

Down bow

U+E611

stringsDownBowTurned

Turned down bow

U+E612 (and U+1D1AB)

stringsUpBow

Up bow

U+E613

stringsUpBowTurned

Turned up bow

U+E614 (and U+1D1AC)

stringsHarmonic

Harmonic

U+E615

stringsHalfHarmonic

Half-harmonic

U+E616

stringsMuteOn

Mute on

U+E617

stringsMuteOff

Mute off

U+E618

stringsBowBehindBridge

Bow behind bridge (sul ponticello)

U+E619

stringsBowOnBridge

Bow on top of bridge

U+E61A

stringsBowOnTailpiece

Bow on tailpiece

U+E61B

stringsOverpressureDownBow

Overpressure, down bow

U+E61C

stringsOverpressureUpBow

Overpressure, up bow

U+E61D

stringsOverpressurePossibileDownBow

Overpressure possibile, down bow

U+E61E

stringsOverpressurePossibileUpBow

Overpressure possibile, up bow

U+E61F

stringsOverpressureNoDirection

Overpressure, no bow direction

U+E620

stringsJeteAbove

Jeté (gettato) above

U+E621

stringsJeteBelow

Jeté (gettato) below

U+E622

stringsFouette

Fouetté

U+E623

stringsVibratoPulse

Vibrato pulse accent (Saunders) for stem

U+E624

stringsThumbPosition

Thumb position

U+E625

stringsChangeBowDirection

Change bow direction, indeterminate

Recommended stylistic alternates

uniE625.salt01

stringsChangeBowDirectionLiga

Change bow direction, indeterminate (Pricope)

uniE625.salt02

stringsChangeBowDirectionImposed

Change bow direction, indeterminate (Plötz)

Implementation notes

Scoring applications should not use the precomposed glyphs that include stems but instead draw the stems using primitives and impose the symbols upon them to ensure optimal positioning.

Plucked techniques (U+E630–U+E63F)

U+E630 (and U+1D1AD)
pluckedSnapPizzicatoBelow
Snap pizzicato below

U+E631
pluckedSnapPizzicatoAbove
Snap pizzicato above

U+E632
pluckedBuzzPizzicato
Buzz pizzicato

U+E633
pluckedLeftHandPizzicato
Left-hand pizzicato

U+E634 (and U+1D183)
arpeggiatoUp
Arpeggiato up

U+E635 (and U+1D184)
arpeggiatoDown
Arpeggiato down

U+E636 (and U+1D1B3)
pluckedWithFingernails
With fingernails

U+E637
pluckedFingernailFlick
Fingernail flick

U+E638 (and U+1D1B4)
pluckedDamp
Damp

U+E639 (and U+1D1B5)
pluckedDampAll
Damp all

U+E63A
pluckedPlectrum
Plectrum

U+E63B
pluckedDampOnStem
Damp (on stem)

Recommended stylistic alternates

uniE630.salt01
pluckedSnapPizzicatoBelowGerman
Snap pizzicato below (German)

uniE631.salt01
pluckedSnapPizzicatoAboveGerman
Snap pizzicato above (German)

Implementation notes

Scoring applications should draw arpeggiato markings using multiple instances of the appropriate wiggly line segment glyphs (in the **Multi-segment lines** range) rather than the precomposed glyphs (**arpeggiatoUp** and **arpeggiatoDown**) to allow variable length.

Vocal techniques (U+E640–U+E64F)

U+E640

vocalMouthClosed

Mouth closed

U+E641

vocalMouthSlightlyOpen

Mouth slightly open

U+E642

vocalMouthOpen

Mouth open

U+E643

vocalMouthWideOpen

Mouth wide open

U+E644

vocalMouthPursed

Mouth pursed

U+E645

vocalSprechgesang

Sprechgesang

U+E646

vocalsSussurando

Combining sussurando for stem

Keyboard techniques (U+E650–U+E67F)

U+E650 (and U+1D1AE)
keyboardPedalPed
Pedal mark

U+E651
keyboardPedalP
Pedal P

U+E652
keyboardPedalE
Pedal e

U+E653
keyboardPedalD
Pedal d

U+E654
keyboardPedalDot
Pedal dot

U+E655 (and U+1D1AF)
keyboardPedalUp
Pedal up mark

U+E656 (and U+1D1B0)
keyboardPedalHalf
Half-pedal mark

U+E657
keyboardPedalUpNotch
Pedal up notch

U+E658
keyboardPedalHyphen
Pedal hyphen

U+E659
keyboardPedalSost
Sostenuto pedal mark

U+E65A
keyboardPedalS
Pedal S

U+E65B
keyboardPedalHalf2
Half pedal mark 1

U+E65C
keyboardPedalHalf3
Half pedal mark 2

U+E65D
keyboardPedalUpSpecial
Pedal up special

U+E65E
keyboardLeftPedalPictogram
Left pedal pictogram

U+E65F
keyboardMiddlePedalPictogram
Middle pedal pictogram

U+E660
keyboardRightPedalPictogram
Right pedal pictogram

U+E661
keyboardPedalHeel1
Pedal heel 1

U+E662

keyboardPedalHeel2

Pedal heel 2

U+E663

keyboardPedalHeel3

Pedal heel 3 (Davis)

U+E664

keyboardPedalToe1

Pedal toe 1

U+E665

keyboardPedalToe2

Pedal toe 2

U+E666

keyboardPedalHeelToe

Pedal heel or toe

U+E667

keyboardPluckInside

Pluck strings inside piano (Maderna)

U+E668

keyboardBebung2DotsAbove

Clavichord bebung, 2 finger movements (above)

U+E669

keyboardBebung2DotsBelow

Clavichord bebung, 2 finger movements (below)

U+E66A

keyboardBebung3DotsAbove

Clavichord bebung, 3 finger movements (above)

U+E66B

keyboardBebung3DotsBelow

Clavichord bebung, 3 finger movements (below)

U+E66C

keyboardBebung4DotsAbove

Clavichord bebung, 4 finger movements (above)

U+E66D

keyboardBebung4DotsBelow

Clavichord bebung, 4 finger movements (below)

U+E66E

keyboardPlayWithRH

Play with right hand

U+E66F

keyboardPlayWithRHEnd

Play with right hand (end)

U+E670

keyboardPlayWithLH

Play with left hand

U+E671

keyboardPlayWithLHEnd

Play with left hand (end)

Recommended stylistic alternates

uniE650.salt01

keyboardPedalPedNoDot

Pedal mark (no dot)

uniE659.salt01

keyboardPedalSostNoDot

Sostenuto pedal mark (no dot)

Harp techniques (U+E680–U+E69F)

U+E680

harpPedalRaised

Harp pedal raised (flat)

U+E681

harpPedalCentered

Harp pedal centered (natural)

U+E682

harpPedalLowered

Harp pedal lowered (sharp)

U+E683

harpPedalDivider

Harp pedal divider

U+E684

harpSalzedoSlideWithSuppleness

Slide with suppleness (Salzedo)

U+E685

harpSalzedoOboicFlux

Oboic flux (Salzedo)

U+E686

harpSalzedoThunderEffect

Thunder effect (Salzedo)

U+E687

harpSalzedoWhistlingSounds

Whistling sounds (Salzedo)

U+E688

harpSalzedoMetallicSounds

Metallic sounds (Salzedo)

U+E689

harpSalzedoTamTamSounds

Tam-tam sounds (Salzedo)

U+E68A

harpSalzedoPlayUpperEnd

Play at upper end of strings (Salzedo)

U+E68B

harpSalzedoTimpanicSounds

Timpanic sounds (Salzedo)

U+E68C

harpSalzedoMuffleTotally

Muffle totally (Salzedo)

U+E68D

harpSalzedoFluidicSoundsLeft

Fluidic sounds, left hand (Salzedo)

U+E68E

harpSalzedoFluidicSoundsRight

Fluidic sounds, right hand (Salzedo)

U+E68F

harpMetalRod

Metal rod pictogram

U+E690

harpTuningKey

Tuning key pictogram

U+E691

harpTuningKeyHandle

Use handle of tuning key pictogram

U+E692

harpTuningKeyShank

Use shank of tuning key pictogram

U+E693

harpTuningKeyGlissando

Retune strings for glissando

U+E694

harpStringNoiseStem

Combining string noise for stem

Recommended stylistic alternates

uniE68F.salt01

harpMetalRodAlt

Metal rod pictogram (alternative)

uniE690.salt01

harpTuningKeyAlt

Tuning key pictogram (alternative)

Implementation notes

harpSalzedoFluidicSoundsLeft and harpSalzedoFluidicSoundsRight are similar in function to noteheads, and should be positioned relative to note stems in the same way.

harpSalzedoOboicFlux and harpSalzedoPlayUpperEnd may be repeated to create a continuing line, indicating the duration of the technique.

Tuned mallet percussion pictograms (U+E6A0–U+E6BF)

U+E6A0

pictGlsp

Glockenspiel

U+E6A1

pictXyl

Xylophone

U+E6A2

pictXylTenor

Tenor xylophone

U+E6A3

pictXylBass

Bass xylophone

U+E6A4

pictXylTrough

Trough xylophone

U+E6A5

pictXylTenorTrough

Trough tenor xylophone

U+E6A6

pictMar

Marimba

U+E6A7

pictVib

Vibraphone

U+E6A8

pictVibMotorOff

Metallophone (vibraphone motor off)

U+E6A9

pictEmptyTrap

Empty trapezoid

U+E6AA

pictGlspSmithBrindle

Glockenspiel (Smith Brindle)

U+E6AB

pictXylSmithBrindle

Xylophone (Smith Brindle)

U+E6AC

pictMarSmithBrindle

Marimba (Smith Brindle)

U+E6AD

pictVibSmithBrindle

Vibraphone (Smith Brindle)

U+E6AE

pictCrotales

Crotales

U+E6AF

pictSteelDrums

Steel drums

U+E6B0

pictCelesta

Celesta

U+E6B1

pictLithophone

Lithophone

U+E6B2

pictTubaphone

Tubaphone

Recommended stylistic alternates

uniE6A0.salt01

pictGlspPeinkofer

Glockenspiel (Peinkofer/Tannigel)

uniE6A1.salt01

pictXylPeinkofer

Xylophone (Peinkofer/Tannigel)

uniE6A2.salt01

pictXylTenorPeinkofer

Tenor xylophone (Peinkofer/Tannigel)

uniE6A3.salt01

pictXylBassPeinkofer

Bass xyklophone (Peinkofer/Tannigel)

uniE6A6.salt01

pictMarPeinkofer

Marimba (Peinkofer/Tannigel)

uniE6A7.salt01

pictVibPeinkofer

Vibraphone (Peinkofer/Tannigel)

uniE6A8.salt01

pictVibMotorOffPeinkofer

Metallophone (vibraphone motor off) (Peinkofer/Tannigel)

uniE6B1.salt01

pictLithophonePeinkofer

Lithophone (Peinkofer/Tannigel)

uniE6B2.salt01

pictTubaphonePeinkofer

Tubaphone (Peinkofer/Tannigel)

Chimes pictograms (U+E6C0–U+E6CF)

U+E6C0

pictTubularBells

Tubular bells

U+E6C1

pictWindChimesGlass

Wind chimes (glass)

U+E6C2

pictChimes

Chimes

U+E6C3

pictBambooChimes

Bamboo tube chimes

U+E6C4

pictShellChimes

Shell chimes

U+E6C5

pictGlassTubeChimes

Glass tube chimes

U+E6C6

pictGlassPlateChimes

Glass plate chimes

U+E6C7

pictMetalTubeChimes

Metal tube chimes

U+E6C8

pictMetalPlateChimes

Metal plate chimes

Drums pictograms (U+E6D0–U+E6EF)

U+E6D0

pictTimpani

Timpani

U+E6D1

pictSnareDrum

Snare drum

U+E6D2

pictSnareDrumSnaresOff

Snare drum, snares off

U+E6D3

pictSnareDrumMilitary

Military snare drum

U+E6D4

pictBassDrum

Bass drum

U+E6D5

pictBassDrumOnSide

Bass drum on side

U+E6D6

pictTenorDrum

Tenor drum

U+E6D7

pictTomTom

Tom-tom

U+E6D8

pictTomTomChinese

Chinese tom-tom

U+E6D9

pictTomTomJapanese

Japanese tom-tom

U+E6DA

pictTomTomIndoAmerican

Indo-American tom tom

U+E6DB

pictTambourine

Tambourine

U+E6DC

pictTimbales

Timbales

U+E6DD

pictBongos

Bongos

U+E6DE

pictConga

Conga

U+E6DF

pictLogDrum

Log drum

U+E6E0

pictSlitDrum

Slit drum

U+E6E1

pictBrakeDrum

Brake drum

U+E6E2

pictGobletDrum

Goblet drum (djembe, dumbek)

U+E6E3

pictTabla

Indian tabla

U+E6E4

pictCuica

Cuica

Recommended stylistic alternates

uniE6D0.salt01

pictTimpaniPeinkofer

Timpani (Peinkofer/Tannigel)

uniE6D4.salt01

pictBassDrumPeinkofer

Bass drum (Peinkofer/Tannigel)

uniE6D7.salt01

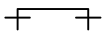
pictTomTomPeinkofer

Tom-tom (Peinkofer/Tannigel)

uniE6D8.salt01

pictTomTomChinesePeinkofer

Chinese tom-tom (Peinkofer/Tannigel)



uniE6DB.salt01

pictTambourineStockhausen

Tambourine (Stockhausen)

uniE6DC.salt01

pictTimbalesPeinkofer

Timbales (Peinkofer/Tannigel)

uniE6DD.salt01

pictBongosPeinkofer

Bongos (Peinkofer/Tannigel)

uniE6DE.salt01

pictCongaPeinkofer

Conga (Peinkofer/Tannigel)

Wooden struck or scraped percussion pictograms (U+E6F0–U+E6FF)

U+E6F0
pictWoodBlock
Wood block

U+E6F1
pictTempleBlocks
Temple blocks

U+E6F2
pictClaves
Claves

U+E6F3
pictGuiro
Guiro

U+E6F4
pictRatchet
Ratchet

U+E6F5
pictFootballRatchet
Football rattle

U+E6F6
pictWhip
Whip

U+E6F7
pictBoardClapper
Board clapper

U+E6F8
pictCastanets
Castanets

U+E6F9
pictCastanetsWithHandle
Castanets with handle

U+E6FA
pictQuijada
Quijada (jawbone)

U+E6FB
pictBambooScraper
Bamboo scraper

U+E6FC
pictRecoReco
Reco-reco

Recommended stylistic alternates

uniE6F3.salt01
pictGuiroSevsay
Guiro (Sevsay)

uniE6F3.salt02
pictGuiroPeinkofer
Guiro (Peinkofer/Tannigel)

uniE6F8.salt01

pictCastanetsSmithBrindle

Castanets (Smith Brindle)

Metallic struck percussion pictograms (U+E700–U+E70F)

U+E700

pictTriangle

Triangle

U+E701

pictAnvil

Anvil

Bells pictograms (U+E710–U+E71F)

U+E710
pictSleighBell
Sleigh bell

U+E711
pictCowBell
Cow bell

U+E712
pictAlmglocken
Almglocken

U+E713
pictBellPlate
Bell plate

U+E714
pictBell
Bell

U+E715
pictHandbell
Handbell

U+E716
pictCencerro
Cencerro

U+E717
pictAgogo
Agogo

U+E718
pictShellBells
Shell bells

U+E719
pictJingleBells
Jingle bells

U+E71A
pictBellTree
Bell tree

Recommended stylistic alternates

uniE710.salt01
pictSleighBellSmithBrindle
Sleigh bell (Smith Brindle)

uniE711.salt01
pictCowBellBerio
Cow bell (Berio)

Cymbals pictograms (U+E720–U+E72F)

U+E720

pictCrashCymbals

Crash cymbals

U+E721

pictSuspendedCymbal

Suspended cymbal

U+E722

pictHiHat

Hi-hat

U+E723

pictHiHatOnStand

Hi-hat cymbals on stand

U+E724

pictSizzleCymbal

Sizzle cymbal

U+E725

pictVietnameseHat

Vietnamese hat cymbal

U+E726

pictChineseCymbal

Chinese cymbal

U+E727

pictFingerCymbals

Finger cymbals

U+E728

pictCymbalTongs

Cymbal tongs

U+E729

pictBellOfCymbal

Edge of cymbal

U+E72A

pictEdgeOfCymbal

Bell of cymbal

Gongs pictograms (U+E730–U+E73F)

U+E730

pictTamTam

Tam-tam

U+E731

pictTamTamWithBeater

Tam-tam with beater (Smith Brindle)

U+E732

pictGong

Gong

U+E733

pictGongWithButton

Gong with button (nipple)

U+E734

pictSlideBrushOnGong

Slide brush on gong

Shakers or rattles pictograms (U+E740–U+E74F)

U+E740

pictFlexatone

Flexatone

U+E741

pictMaraca

Maraca

U+E742

pictMaracas

Maracas

U+E743

pictCabasa

Cabasa

U+E744

pictThundersheet

Thundersheet

U+E745

pictVibraslap

Vibraslap

U+E746

pictSistrum

Sistrum

U+E747

pictRainstick

Rainstick

U+E748

pictChainRattle

Chain rattle

Recommended stylistic alternates

uniE740.salt01

pictFlexatonePeinkofer

Flexatone (Peinkofer/Tannigel)

uniE741.salt01

pictMaracaSmithBrindle

Maraca (Smith Brindle)

Whistles and aerophones pictograms (U+E750–U+E75F)

U+E750
pictSlideWhistle
Slide whistle

U+E751
pictBirdWhistle
Bird whistle

U+E752
pictPoliceWhistle
Police whistle

U+E753
pictSiren
Siren

U+E754
pictWindMachine
Wind machine

U+E755
pictCarHorn
Car horn

U+E756
pictKlaxonHorn
Klaxon horn

U+E757
pictDuckCall
Duck call

U+E758
pictWindWhistle
Wind whistle (or mouth siren)

U+E759
pictMegaphone
Megaphone

U+E75A
pictLotusFlute
Lotus flute

Recommended stylistic alternates

uniE75A.salt01
pictLotusFlutePeinkofer
Lotus flute (Peinkofer/Tannigel)

Miscellaneous percussion instrument pictograms (U+E760–U+E76F)

U+E760

pictPistolShot

Pistol shot

U+E761

pictCannon

Cannon

U+E762

pictSandpaperBlocks

Sandpaper blocks

U+E763

pictLionsRoar

Lion's roar

U+E764

pictGlassHarp

Glass harp

U+E765

pictGlassHarmonica

Glass harmonica

U+E766

pictMusicalSaw

Musical saw

U+E767

pictJawHarp

Jaw harp

Recommended stylistic alternates

uniE766.salt01

pictMusicalSawPeinkofer

Musical saw (Peinkofer/Tannigel)

Beaters pictograms (U+E770–U+E7EF)

U+E770

pictBeaterSoftXylophoneUp

Soft xylophone stick up

U+E771

pictBeaterSoftXylophoneDown

Soft xylophone stick down

U+E772

pictBeaterSoftXylophoneRight

Soft xylophone stick right

U+E773

pictBeaterSoftXylophoneLeft

Soft xylophone stick left

U+E774

pictBeaterMediumXylophoneUp

Medium xylophone stick up

U+E775

pictBeaterMediumXylophoneDown

Medium xylophone stick down

U+E776

pictBeaterMediumXylophoneRight

Medium xylophone stick right

U+E777

pictBeaterMediumXylophoneLeft

Medium xylophone stick left

U+E778

pictBeaterHardXylophoneUp

Hard xylophone stick up

U+E779

pictBeaterHardXylophoneDown

Hard xylophone stick down

U+E77A

pictBeaterHardXylophoneRight

Hard xylophone stick right

U+E77B

pictBeaterHardXylophoneLeft

Hard xylophone stick left

U+E77C

pictBeaterWoodXylophoneUp

Wood xylophone stick up

U+E77D

pictBeaterWoodXylophoneDown

Wood xylophone stick down

U+E77E

pictBeaterWoodXylophoneRight

Wood xylophone stick right

U+E77F

pictBeaterWoodXylophoneLeft

Wood xylophone stick left

U+E780

pictBeaterSoftGlockenspielUp

Soft glockenspiel stick up

U+E781

pictBeaterSoftGlockenspielDown

Soft glockenspiel stick down

U+E782

pictBeaterSoftGlockenspielRight

Soft glockenspiel stick right

U+E783

pictBeaterSoftGlockenspielLeft

Soft glockenspiel stick left

U+E784

pictBeaterHardGlockenspielUp

Hard glockenspiel stick up

U+E785

pictBeaterHardGlockenspielDown

Hard glockenspiel stick down

U+E786

pictBeaterHardGlockenspielRight

Hard glockenspiel stick right

U+E787

pictBeaterHardGlockenspielLeft

Hard glockenspiel stick left

U+E788

pictBeaterSoftTimpaniUp

Soft timpani stick up

U+E789

pictBeaterSoftTimpaniDown

Soft timpani stick down

U+E78A

pictBeaterSoftTimpaniRight

Soft timpani stick right

U+E78B

pictBeaterSoftTimpaniLeft

Soft timpani stick left

U+E78C

pictBeaterMediumTimpaniUp

Medium timpani stick up

U+E78D

pictBeaterMediumTimpaniDown

Medium timpani stick down

U+E78E

pictBeaterMediumTimpaniRight

Medium timpani stick right

U+E78F

pictBeaterMediumTimpaniLeft

Medium timpani stick left

U+E790

pictBeaterHardTimpaniUp

Hard timpani stick up

U+E791

pictBeaterHardTimpaniDown

Hard timpani stick down

U+E792

pictBeaterHardTimpaniRight

Hard timpani stick right

U+E793

pictBeaterHardTimpaniLeft

Hard timpani stick left

U+E794

pictBeaterWoodTimpaniUp

Wood timpani stick up

U+E795

pictBeaterWoodTimpaniDown

Wood timpani stick down

U+E796

pictBeaterWoodTimpaniRight

Wood timpani stick right

U+E797

pictBeaterWoodTimpaniLeft

Wood timpani stick left

U+E798

pictBeaterSoftBassDrumUp

Soft bass drum stick up

U+E799

pictBeaterSoftBassDrumDown

Soft bass drum stick down

U+E79A

pictBeaterMediumBassDrumUp

Medium bass drum stick up

U+E79B

pictBeaterMediumBassDrumDown

Medium bass drum stick down

U+E79C

pictBeaterHardBassDrumUp

Hard bass drum stick up

U+E79D

pictBeaterHardBassDrumDown

Hard bass drum stick down

U+E79E

pictBeaterMetalBassDrumUp

Metal bass drum stick up

U+E79F

pictBeaterMetalBassDrumDown

Metal bass drum stick down

U+E7A0

pictBeaterDoubleBassDrumUp

Double bass drum stick up

U+E7A1

pictBeaterDoubleBassDrumDown

Double bass drum stick down

U+E7A2

pictBeaterSoftYarnUp

Soft yarn beater up

U+E7A3

pictBeaterSoftYarnDown

Soft yarn beater down

U+E7A4

pictBeaterSoftYarnRight

Soft yarn beater right

U+E7A5

pictBeaterSoftYarnLeft

Soft yarn beater left

U+E7A6

pictBeaterMediumYarnUp

Medium yarn beater up

U+E7A7

pictBeaterMediumYarnDown

Medium yarn beater down

U+E7A8

pictBeaterMediumYarnRight

Medium yarn beater right

U+E7A9

pictBeaterMediumYarnLeft

Medium yarn beater left

U+E7AA

pictBeaterHardYarnUp

Hard yarn beater up

U+E7AB

pictBeaterHardYarnDown

Hard yarn beater down

U+E7AC

pictBeaterHardYarnRight

Hard yarn beater right

U+E7AD

pictBeaterHardYarnLeft

Hard yarn beater left

U+E7AE

pictBeaterSuperballUp

Superball beater up

U+E7AF

pictBeaterSuperballDown

Superball beater down

U+E7B0

pictBeaterSuperballRight

Superball beater right

U+E7B1

pictBeaterSuperballLeft

Superball beater left

U+E7B2

pictSuperball

Superball

U+E7B3

pictWoundHardUp

Wound beater, hard core up

U+E7B4

pictWoundHardDown

Wound beater, hard core down

U+E7B5

pictWoundHardRight

Wound beater, hard core right

U+E7B6

pictWoundHardLeft

Wound beater, hard core left

U+E7B7

pictWoundSoftUp

Wound beater, soft core up

U+E7B8

pictWoundSoftDown

Wound beater, soft core down

U+E7B9

pictWoundSoftRight

Wound beater, soft core right

U+E7BA

pictWoundSoftLeft

Wound beater, soft core left

U+E7BB

pictGumSoftUp

Soft gum beater, up

U+E7BC

pictGumSoftDown

Soft gum beater, down

U+E7BD

pictGumSoftRight

Soft gum beater, right

U+E7BE

pictGumSoftLeft

Soft gum beater, left

U+E7BF

pictGumMediumUp

Medium gum beater, up

U+E7C0

pictGumMediumDown

Medium gum beater, down

U+E7C1

pictGumMediumRight

Medium gum beater, right

U+E7C2

pictGumMediumLeft

Medium gum beater, left

U+E7C3

pictGumHardUp

Hard gum beater, up

U+E7C4

pictGumHardDown

Hard gum beater, down

U+E7C5

pictGumHardRight

Hard gum beater, right

U+E7C6

pictGumHardLeft

Hard gum beater, left

U+E7C7

pictBeaterMetalUp

Metal beater, up

U+E7C8

pictBeaterMetalDown

Metal beater down

U+E7C9

pictBeaterMetalRight

Metal beater, right

U+E7CA

pictBeaterMetalLeft

Metal beater, left

U+E7CB

pictBeaterHammerWoodUp

Wooden hammer, up

U+E7CC

pictBeaterHammerWoodDown

Wooden hammer, down

U+E7CD

pictBeaterHammerPlasticUp

Plastic hammer, up

U+E7CE

pictBeaterHammerPlasticDown

Plastic hammer, down

U+E7CF

pictBeaterHammerMetalUp

Metal hammer, up

U+E7D0

pictBeaterHammerMetalDown

Metal hammer, down

U+E7D1

pictBeaterSnareSticksUp

Snare sticks up

U+E7D2

pictBeaterSnareSticksDown

Snare sticks down

U+E7D3

pictBeaterJazzSticksUp

Jazz sticks up

U+E7D4

pictBeaterJazzSticksDown

Jazz sticks down

U+E7D5

pictBeaterTriangleUp

Triangle beater up

U+E7D6

pictBeaterTriangleDown

Triangle beater down

U+E7D7

pictBeaterWireBrushesUp

Wire brushes up

U+E7D8

pictBeaterWireBrushesDown

Wire brushes down

U+E7D9

pictBeaterBrassMalletsUp

Brass mallets up

U+E7DA

pictBeaterBrassMalletsDown

Brass mallets down

U+E7DB

pictBeaterSoftXylophone

Soft xylophone beaters

U+E7DC

pictBeaterSpoonWoodenMallet

Spoon-shaped wooden mallet

U+E7DD

pictBeaterGuiroScraper

Guiro scraper

U+E7DE

pictBeaterBow

Bow

U+E7DF

pictBeaterMallet

Chime hammer

U+E7E0

pictBeaterMetalHammer

Metal hammer

U+E7E1

pictBeaterHammer

Hammer

U+E7E2

pictBeaterKnittingNeedle

Knitting needle

U+E7E3

pictBeaterHand

Hand

U+E7E4

pictBeaterFinger

Finger

U+E7E5

pictBeaterFist

Fist

U+E7E6

pictBeaterFingernails

Fingernails

U+E7E7

pictCoins

Coins

U+E7E8

pictDrumStick

Drum stick

( )

U+E7E9

pictBeaterCombiningParentheses

Combining parentheses for round beaters (padded)

U+E7EA

pictBeaterCombiningDashedCircle

Combining dashed circle for round beaters (plated)

Percussion playing technique pictograms (U+E7F0–U+E80F)

U+E7F0

pictStickShot

Stick shot

U+E7F1

pictScrapeCenterToEdge

Scrape from center to edge

U+E7F2

pictScrapeEdgeToCenter

Scrape from edge to center

U+E7F3

pictScrapeAroundRim

Scrape around rim

U+E7F4

pictOnRim

On rim

U+E7F5

pictOpenRimShot

Closed / rim shot

U+E7F6

pictHalfOpen1

Half-open

U+E7F7

pictHalfOpen2

Half-open 2 (Weinberg)

U+E7F8

pictOpen

Open

U+E7F9

pictDamp1

Damp

U+E7FA

pictDamp2

Damp 2

U+E7FB

pictDamp3

Damp 3

U+E7FC

pictDamp4

Damp 4

U+E7FD

pictRimShotOnStem

Rim shot (on stem)

U+E7FE

pictCenter1

Center (Weinberg)

U+E7FF

pictCenter2

Center (Ghent)

U+E800

pictCenter3

Center (Caltabiano)

U+E801

pictRim1

Rim or edge (Weinberg)

U+E802

pictRim2

Rim (Ghent)

U+E803

pictRim3

Rim (Caltabiano)

U+E804

pictNormalPosition

Normal position (Caltabiano)

U+E805

pictChokeCymbal

Choke (Weinberg)

U+E806

pictRightHandSquare

Left hand (Agostini)

U+E807

pictLeftHandCircle

Right hand (Agostini)

U+E808

pictSwishStem

Combining swish for stem

U+E809

pictTurnRightStem

Combining turn right for stem

U+E80A

pictTurnLeftStem

Combining turn left for stem

U+E80B

pictTurnRightLeftStem

Combining turn left or right for stem

U+E80C

pictCrushStem

Combining crush for stem

U+E80D

pictDeadNoteStem

Combining X for stem (dead note)

Handbells (U+E810–U+E82F)

U+E810

handbellsMartellato

Martellato

U+E811

handbellsMartellatoLift

Martellato lift

U+E812

handbellsHandMartellato

Hand martellato

U+E813

handbellsMutedMartellato

Muted martellato

U+E814

handbellsMalletBellSuspended

Mallet, bell suspended

U+E815

handbellsMalletBellOnTable

Mallet, bell on table

U+E816

handbellsMalletLft

Mallet lift

U+E817

handbellsPluckLift

Pluck lift

U+E818

handbellsSwingUp

Swing up

U+E819

handbellsSwingDown

Swing down

U+E81A

handbellsSwing

Swing

U+E81B

handbellsEcho1

Echo

U+E81C

handbellsEcho2

Echo 2

U+E81D

handbellsGyro

Gyro

U+E81E

handbellsDamp3

Damp 3

U+E81F

handbellsBelltree

Belltree

U+E820

handbellsTableSingleBell

Table single handbell

U+E821

handbellsTablePairBells

Table pair of handbells

Guitar (U+E830–U+E84F)

U+E830

guitarVibratoBarScoop

Guitar vibrato bar scoop

U+E831

guitarVibratoBarDip

Guitar vibrato bar dip

U+E832

guitarShake

Guitar shake

U+E833

guitarString0

String number 0

U+E834

guitarString1

String number 1

U+E835

guitarString2

String number 2

U+E836

guitarString3

String number 3

U+E837

guitarString4

String number 4

U+E838

guitarString5

String number 5

U+E839

guitarString6

String number 6

U+E83A

guitarString7

String number 7

U+E83B

guitarString8

String number 8

U+E83C

guitarString9

String number 9

U+E83D

guitarOpenPedal

Open wah/volume pedal

U+E83E

guitarHalfOpenPedal

Half-open wah/volume pedal

U+E83F

guitarClosePedal

Closed wah/volume pedal

U+E840

guitarLeftHandTapping

Left-hand tapping

U+E841

guitarRightHandTapping

Right-hand tapping

U+E842

guitarGolpe

Golpe (tapping the pick guard)

U+E843

guitarFadeIn

Fade in

U+E844

guitarFadeOut

Fade out

U+E845

guitarVolumeSwell

Volume swell

Chord diagrams (U+E850–U+E85F)

U+E850

fretboard3String

3-string fretboard

U+E851

fretboard3StringNut

3-string fretboard at nut

U+E852 (and U+1D11D)

fretboard4String

4-string fretboard

U+E853

fretboard4StringNut

4-string fretboard at nut

U+E854

fretboard5String

5-string fretboard

U+E855

fretboard5StringNut

5-string fretboard at nut

U+E856 (and U+1D11C)

fretboard6String

6-string fretboard

U+E857

fretboard6StringNut

6-string fretboard at nut

U+E858

fretboardFilledCircle

• Fingered fret (filled circle)

U+E859

fretboardX

× String not played (X)

U+E85A

fretboard0

° Open string (O)

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+E860–U+E86F)

U+E860 (and U+1D1A6)
analyticsHauptstimme
Hauptstimme

U+E861 (and U+1D1A7)
analyticsNebenstimme
Nebenstimme

U+E862
analyticsStartStimme
Start of stimme

U+E863 (and U+1D1A8)
analyticsEndStimme
End of stimme

U+E864
analyticsTheme
Theme

U+E865
analyticsThemeRetrograde
Retrograde of theme

U+E866
analyticsThemeRetrogradeInversion
Retrograde inversion of theme

U+E867
analyticsThemeInversion
Inversion of theme

U+E868
analyticsTheme1
Theme 1

U+E869
analyticsInversion1
Inversion 1

Chord symbols (U+E870–U+E87F)

U+E870 (and U+1D1A9)
csymDiminished
Diminished

U+E871
csymHalfDiminished
Half-diminished

U+E872
csymAugmented
Augmented

U+E873
csymMajorSeventh
Major seventh

U+E874
csymMinor
Minor

U+E875
csymParensLeftTall
Double-height left parenthesis

U+E876
csymParensRightTall
Double-height right parenthesis

U+E877
csymBracketLeftTall
Double-height left bracket

U+E878
csymBracketRightTall
Double-height right bracket

Implementation notes

These symbols are designed to combine with accidental symbols (**accidentalSharp** and **accidentalFlat**) 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+E880–U+E88F)

U+E880

tuplet0

Tuplet 0

U+E881

tuplet1

Tuplet 1

U+E882

tuplet2

Tuplet 2

U+E883

tuplet3

Tuplet 3

U+E884

tuplet4

Tuplet 4

U+E885

tuplet5

Tuplet 5

U+E886

tuplet6

Tuplet 6

U+E887

tuplet7

Tuplet 7

U+E888

tuplet8

Tuplet 8

U+E889

tuplet9

Tuplet 9

U+E88A

tupletColon

Tuplet colon

Implementation notes

This range provides glyphs for tuplet numbers. These digits may also be used in ligatures with clefs to indicate the interval by which a transposing instrument transposes, used in some scores in C.

Scoring applications should use primitives to draw tuplet brackets.

Simple triplets (including brackets) can be written in fonts intended for use in text-based applications using the glyphs in the **Beamed groups of notes** range.

Conductor symbols (U+E890–U+E89F)

U+E890

conductorStrongBeat

Strong beat or cue

U+E891

conductorLeftBeat

Left-hand beat or cue

U+E892

conductorRightBeat

Right-hand beat or cue

U+E893

conductorWeakBeat

Weak beat or cue

U+E894

conductorBeat2Simple

Beat 2, simple time

U+E895

conductorBeat3Simple

Beat 3, simple time

U+E896

conductorBeat4Simple

Beat 4, simple time

U+E897

conductorBeat2Compound

Beat 2, compound time

U+E898

conductorBeat3Compound

Beat 3, compound time

U+E899

conductorBeat4Compound

Beat 4, compound time

Accordion (U+E8A0–U+E8DF)

U+E8A0

accdnRH3RanksPiccolo

Right hand, 3 ranks, 4' stop (piccolo)

U+E8A1

accdnRH3RanksClarinet

Right hand, 3 ranks, 8' stop (clarinet)

U+E8A2

accdnRH3RanksUpperTremolo8

Right hand, 3 ranks, upper tremolo 8' stop

U+E8A3

accdnRH3RanksLowerTremolo8

Right hand, 3 ranks, lower tremolo 8' stop

U+E8A4

accdnRH3RanksBassoon

Right hand, 3 ranks, 16' stop (bassoon)

U+E8A5

accdnRH3RanksOboe

Right hand, 3 ranks, 4' stop + 8' stop (oboe)

U+E8A6

accdnRH3RanksViolin

Right hand, 3 ranks, 8' stop + upper tremolo 8' stop (violin)

U+E8A7

accdnRH3RanksImitationMusette

Right hand, 3 ranks, 4' stop + 8' stop + upper tremolo 8' stop (imitation musette)

U+E8A8

accdnRH3RanksAuthenticMusette

Right hand, 3 ranks, lower tremolo 8' stop + 8' stop + upper tremolo 8' stop (authentic musette)

U+E8A9

accdnRH3RanksOrgan

Right hand, 3 ranks, 4' stop + 16' stop (organ)

U+E8AA

accdnRH3RanksHarmonium

Right hand, 3 ranks, 4' stop + 8' stop + 16' stop (harmonium)

U+E8AB

accdnRH3RanksBandoneon

Right hand, 3 ranks, 8' stop + 16' stop (bandoneón)

U+E8AC

accdnRH3RanksAccordion

Right hand, 3 ranks, 8' stop + upper tremolo 8' stop + 16' stop (accordion)

U+E8AD

accdnRH3RanksMaster

Right hand, 3 ranks, 4' stop + lower tremolo 8' stop + upper tremolo 8' stop + 16' stop (master)

U+E8AE

accdnRH3RanksTwoChoirs

Right hand, 3 ranks, lower tremolo 8' stop + upper tremolo 8' stop

U+E8AF

accdnRH3RanksTremoloLower8ve

Right hand, 3 ranks, lower tremolo 8' stop + upper tremolo 8' stop + 16' stop

U+E8B0

accdnRH3RanksTremoloUpper8ve

Right hand, 3 ranks, 4' stop + lower tremolo 8' stop + upper tremolo 8' stop

U+E8B1

accdnRH3RanksDoubleTremoloLower8ve

Right hand, 3 ranks, lower tremolo 8' stop + 8' stop + upper tremolo 8' stop + 16' stop

U+E8B2

accdnRH3RanksDoubleTremoloUpper8ve

Right hand, 3 ranks, 4' stop + lower tremolo 8' stop + 8' stop + upper tremolo 8' stop

U+E8B3

accdnRH3RanksFullFactory

Right hand, 3 ranks, 4' stop + lower tremolo 8' stop + 8' stop + upper tremolo 8' stop + 16' stop

U+E8B4

accdnRH4RanksSoprano

Right hand, 4 ranks, soprano

U+E8B5

accdnRH4RanksAlto

Right hand, 4 ranks, alto

U+E8B6

accdnRH4RanksTenor

Right hand, 4 ranks, tenor

U+E8B7

accdnRH4RanksMaster

Right hand, 4 ranks, master

U+E8B8

accdnRH4RanksSoftBass

Right hand, 4 ranks, soft bass

U+E8B9

accdnRH4RanksSoftTenor

Right hand, 4 ranks, soft tenor

U+E8BA

accdnRH4RanksBassAlto

Right hand, 4 ranks, bass/alto

U+E8BB

accdnLH2Ranks8Round

Left hand, 2 ranks, 8' stop (round)

U+E8BC

accdnLH2Ranks16Round

Left hand, 2 ranks, 16' stop (round)

U+E8BD

accdnLH2Ranks8Plus16Round

Left hand, 2 ranks, 8' stop + 16' stop (round)

U+E8BE

accdnLH2RanksMasterRound

Left hand, 2 ranks, master (round)

U+E8BF

accdnLH2RanksMasterPlus16Round

Left hand, 2 ranks, master + 16' stop (round)

U+E8C0

accdnLH2RanksFullMasterRound

Left hand, 2 ranks, full master (round)

U+E8C1

accdnLH3Ranks8Square

Left hand, 3 ranks, 8' stop (square)

U+E8C2

accdnLH3Ranks2Square

Left hand, 3 ranks, 2' stop (square)

U+E8C3

accdnLH3RanksDouble8Square

Left hand, 3 ranks, double 8' stop (square)

U+E8C4

accdnLH3Ranks2Plus8Square

Left hand, 3 ranks, 2' stop + 8' stop (square)

U+E8C5

accdnLH3RanksTuttiSquare

Left hand, 3 ranks, 2' stop + double 8' stop (tutti) (square)

U+E8C6

accdnCombRH3RanksEmpty

Combining right hand, 3 ranks, empty

U+E8C7

accdnCombRH4RanksEmpty

Combining right hand, 4 ranks, empty

U+E8C8

accdnCombLH2RanksEmpty

Combining left hand, 2 ranks, empty

U+E8C9

accdnCombLH3RanksEmptySquare

Combining left hand, 3 ranks, empty (square)

U+E8CA

accdnCombDot

Combining accordion coupler dot

U+E8CB

accdnPush

Push

U+E8CC

accdnPull

Pull

U+E8CD

accdnRicochet2

Ricochet (2 tones)

U+E8CE

accdnRicochet3

Ricochet (3 tones)

U+E8CF

accdnRicochet4

Ricochet (4 tones)

U+E8D0

accdnRicochet5

Ricochet (5 tones)

U+E8D1

accdnRicochet6

Ricochet (6 tones)

U+E8D2

accdnRicochetStem2

Combining ricochet for stem (2 tones)

U+E8D3

accdnRicochetStem3

Combining ricochet for stem (3 tones)

U+E8D4

accdnRicochetStem4

Combining ricochet for stem (4 tones)

U+E8D5

accdnRicochetStem5

Combining ricochet for stem (5 tones)

U+E8D6

accdnRicochetStem6

Combining ricochet for stem (6 tones)

Recommended stylistic alternates

uniE8CB.salt01

accdnPushAlt

Push (Draugsvoll & Højsgaard)

Beams and slurs (U+E8E0–U+E8EF)

U+E8E0 (and U+1D173)
controlBeginBeam
Begin beam

U+E8E1 (and U+1D174)
controlEndBeam
End beam

U+E8E2 (and U+1D175)
controlBeginTie
Begin tie

U+E8E3 (and U+1D176)
controlEndTie
End tie

U+E8E4 (and U+1D177)
controlBeginSlur
Begin slur

U+E8E5 (and U+1D178)
controlEndSlur
End slur

U+E8E6 (and U+1D179)
controlBeginPhrase
Begin phrase

U+E8E7 (and U+1D17A)
controlEndPhrase
End phrase

Implementation notes

These are format characters as defined in the Unicode Standard[19]:

> 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.

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

Medieval and Renaissance staves (U+E8F0–U+E8FF)

U+E8F0

chantStaff

Plainchant staff

U+E8F1

chantStaffWide

Plainchant staff (wide)

U+E8F2

chantStaffNarrow

Plainchant staff (narrow)

U+E8F3

chantDivisioMinima

Divisio minima

U+E8F4

chantDivisioMaior

Divisio maior

U+E8F5

chantDivisioMaxima

Divisio maxima

U+E8F6

chantDivisioFinalis

Divisio finalis

U+E8F7

chantVirgula

Virgula

U+E8F8

chantCaesura

Caesura

Medieval and Renaissance clefs (U+E900–U+E90F)

U+E900

mensuralGclef

Mensural G clef

U+E901

mensuralGclefPetrucci

Petrucci G clef

U+E902

chantFclef

Plainchant F clef

U+E903

mensuralFclef

Mensural F clef

U+E904

mensuralFclefPetrucci

Petrucci F clef

U+E905

mensuralCclef

Mensural C clef

U+E906

chantCclef

Plainchant C clef

U+E907

mensuralCclefPetrucciPosLowest

Petrucci C clef, lowest position

U+E908

mensuralCclefPetrucciPosLow

Petrucci C clef, low position

U+E909

mensuralCclefPetrucciPosMiddle

Petrucci C clef, middle position

U+E90A

mensuralCclefPetrucciPosHigh

Petrucci C clef, high position

U+E90B

mensuralCclefPetrucciPosHighest

Petrucci C clef, highest position

Recommended stylistic alternates

uniE902.salt01

chantFclefHufnagel

Plainchant F clef (Hufnagel)

uniE905.salt02

mensuralCclefVoid

Void mensural C clef

uniE905.salt02

mensuralCclefBlack

Black mensural C clef

uniE906.salt01

chantCclefHufnagel

Plainchant C clef (Hufnagel)

Medieval and Renaissance prolations (U+E910–U+E92F)

U+E910 (and U+1D1C7)

mensuralProlation1

Tempus perfectum cum prolatione perfecta (9/8)

U+E911 (and U+1D1C8)

mensuralProlation2

Tempus perfectum cum prolatione imperfecta (3/4)

U+E912 (and U+1D1C9)

mensuralProlation3

Tempus perfectum cum prolatione imperfecta diminution 1 (3/8)

U+E913

mensuralProlation4

Tempus perfectum cum prolatione perfecta diminution 2 (9/16)

U+E914 (and U+1D1CA)

mensuralProlation5

Tempus imperfectum cum prolatione perfecta (6/8)

U+E915 (and U+1D1CB)

mensuralProlation6

Tempus imperfectum cum prolatione imperfecta (2/4)

U+E916 (and U+1D1CC)

mensuralProlation7

Tempus imperfectum cum prolatione imperfecta diminution 1 (3/2)

U+E917

mensuralProlation8

Tempus imperfectum cum prolatione imperfecta diminution 2 (4/14)

U+E918 (and U+1D1CD)

mensuralProlation9

Tempus imperfectum cum prolatione imperfecta diminution 3 (3/2)

U+E919 (and U+1D1CE)

mensuralProlation10

Tempus imperfectum cum prolatione imperfecta diminution 4

U+E91A

mensuralProlation11

Tempus imperfectum cum prolatione imperfecta diminution 5

U+E91B

mensuralProportionTempusPerfectum

Tempus perfectum

U+E91C

mensuralProportionProportioDupla1

Proportio dupla 1

U+E91D

mensuralProportionProportioDupla2

Proportio dupla 2

U+E91E

mensuralProportionProportioTripla

Proportio tripla

U+E91F

mensuralProportionProportioQuadrupla

Proportio quadrupla

U+E920

mensuralProlationCombiningDot

Combining dot

U+E921

mensuralProlationCombiningTwoDots

Combining two dots

U+E922

mensuralProlationCombiningThreeDots

Combining three dots horizontal

U+E923

mensuralProlationCombiningThreeDotsTri

Combining three dots triangular

U+E924

mensuralProlationCombiningDotVoid

Combining void dot

U+E925

mensuralProlationCombiningStroke

Combining vertical stroke

U+E926

mensuralProportion1

Mensural proportion 1

U+E927

mensuralProportion2

Mensural proportion 2

U+E928

mensuralProportion3

Mensural proportion 3

U+E929

mensuralProportion4

Mensural proportion 4

U+E92A

mensuralProportionMinor

Mensural proportion minor

U+E92B

mensuralProportionMajor

Mensural proportion major

U+E92C

mensuralModusPerfectumVert

Modus perfectum, vertical

U+E92D

mensuralModusImperfectumVert

Modus imperfectum, vertical

U+E92E

mensuralTempusPerfectumHoriz

Tempus perfectum, horizontal

U+E92F

mensuralTempusImperfectumHoriz

Tempus imperfectum, horizontal

Recommended stylistic alternates

uniE929.salt01

mensuralProportion4Old

Mensural proportion 4 (old)

Medieval and Renaissance noteheads and stems (U+E930–U+E94F)

U+E930
mensuralNoteheadMaximaBlack

Maxima notehead, black

U+E931 (and U+1D1B6)
mensuralNoteheadMaximaVoid

Maxima notehead, void

U+E932
mensuralNoteheadMaximaBlackVoid

Maxima notehead, black and void

U+E933
mensuralNoteheadMaximaWhite

Maxima notehead, white

U+E934
mensuralNoteheadLongaBlack

Longa/brevis notehead, black

U+E935 (and U+1D1B7)
mensuralNoteheadLongaVoid

Longa/brevis notehead, void

U+E936
mensuralNoteheadLongaBlackVoid

Longa/brevis notehead, black and void

U+E937
mensuralNoteheadLongaWhite

Longa/brevis notehead, white

U+E938 (and U+1D1BA)
mensuralNoteheadSemibrevisBlack

Semibrevis notehead, black

U+E939 (and U+1D1B9)
mensuralNoteheadSemibrevisVoid

Semibrevis notehead, void

U+E93A
mensuralNoteheadSemibrevisBlackVoid

Semibrevis notehead, black and void

U+E93B
mensuralNoteheadSemibrevisBlackVoidTurned

Semibrevis notehead, black and void (turned)

U+E93C
mensuralNoteheadMinimaWhite

Minima notehead, white

U+E93D
mensuralNoteheadSemiminimaWhite

Semiminima/fusa notehead, white

U+E93E
mensuralCombStemUp

Combining stem up

U+E93F
mensuralCombStemDown

Combining stem down

U+E940

mensuralCombStemDiagonal

Combining stem diagonal

U+E941

mensuralCombStemUpFlagRight

Combining stem with flag right up

U+E942

mensuralCombStemDownFlagRight

Combining stem with flag right down

U+E943

mensuralCombStemUpFlagLeft

Combining stem with flag left up

U+E944

mensuralCombStemDownFlagLeft

Combining stem with flag left down

U+E945

mensuralCombStemUpFlagFlared

Combining stem with flared flag up

U+E946

mensuralCombStemDownFlagFlared

Combining stem with flared flag down

U+E947

mensuralCombStemUpFlagExtended

Combining stem with extended flag up

U+E948

mensuralCombStemDownFlagExtended

Combining stem with extended flag down

U+E949

mensuralCombStemUpFlagSemiminima

Combining stem with semiminima flag up

U+E94A

mensuralCombStemDownFlagSemiminima

Combining stem with semiminima flag down

U+E94B

mensuralCombStemUpFlagFusa

Combining stem with fusa flag up

U+E94C

mensuralCombStemDownFlagFusa

Combining stem with fusa flag down

Recommended ligatures

uniE938_uniE94C

mensuralFusaBlackStemDown

Fusa black, stem down

uniE938_uniE94B

mensuralFusaBlackStemUp

Fusa black, stem up

uniE93A_uniE94C

mensuralFusaBlackVoidStemDown

Fusa black and void, stem down

uniE93A_uniE94B

mensuralFusaBlackVoidStemUp

Fusa black and void, stem up

uniE939_uniE94C

mensuralFusaVoidStemDown

Fusa void, stem down

uniE939_uniE94B

mensuralFusaVoidStemUp

Fusa void, stem up

uniE93F_uniE934

mensuralLongaBlackStemDownLeft

Longa black, stem down left

uniE934_uniE93F

mensuralLongaBlackStemDownRight

Longa black, stem down right

uniE93E_uniE934

mensuralLongaBlackStemUpLeft

Longa black, stem up left

uniE934_uniE93E

mensuralLongaBlackStemUpRight

Longa black, stem up right

uniE93F_uniE936

mensuralLongaBlackVoidStemDownLeft

Longa black and void, stem down left

uniE936_uniE93F

mensuralLongaBlackVoidStemDownRight

Longa black and void, stem down right

uniE93E_uniE936

mensuralLongaBlackVoidStemUpLeft

Longa black and void, stem up left

uniE936_uniE93E

mensuralLongaBlackVoidStemUpRight

Longa black and void, stem up right

uniE93F_uniE935

mensuralLongaVoidStemDownLeft

Longa void, stem down left

uniE935_uniE93F

mensuralLongaVoidStemDownRight

Longa void, stem down right

uniE93E_uniE935

mensuralLongaVoidStemUpLeft

Longa void, stem up left

uniE935_uniE93E

mensuralLongaVoidStemUpRight

Longa void, stem up right

uniE93F_uniE930

mensuralMaximaBlackStemDownLeft

Maxima black, stem down left

uniE930_uniE93F

mensuralMaximaBlackStemDownRight

Maxima black, stem down right

uniE93E_uniE930

mensuralMaximaBlackStemUpLeft

Maxima black, stem up left

uniE930_uniE93E

mensuralMaximaBlackStemUpRight

Maxima black, stem up right

uniE93F_uniE932

mensuralMaximaBlackVoidStemDownLeft

Maxima black and void, stem down left

uniE932_uniE93F

mensuralMaximaBlackVoidStemDownRight

Maxima black and void, stem down right

uniE93E_uniE932

mensuralMaximaBlackVoidStemUpLeft

Maxima black and void, stem up left

uniE932_uniE93E

mensuralMaximaBlackVoidStemUpRight

Maxima black and void, stem up right

uniE93F_uniE931

mensuralMaximaVoidStemDownLeft

Maxima void, stem down left

uniE931_uniE93F

mensuralMaximaVoidStemDownRight

Maxima void, stem down right

uniE93E_uniE931

mensuralMaximaVoidStemUpLeft

Maxima void, stem up left

uniE931_uniE93E

mensuralMaximaVoidStemUpRight

Maxima void, stem up right

uniE938_uniE93F

mensuralMinimaBlackStemDown

Minima black, stem down

uniE938_uniE948

mensuralMinimaBlackStemDownExtendedFlag

Minima black, stem down with extended flag

uniE938_uniE944

mensuralMinimaBlackStemDownFlagLeft

Minima black, stem down with flag left

uniE938_uniE942

mensuralMinimaBlackStemDownFlagRight

Minima black, stem down with flag right

uniE938_uniE946

mensuralMinimaBlackStemDownFlaredFlag

Minima black, stem down with flared flag

uniE938_uniE93E

mensuralMinimaBlackStemUp

Minima black, stem up

uniE938_uniE947

mensuralMinimaBlackStemUpExtendedFlag

Minima black, stem up with extended flag

uniE938_uniE943

mensuralMinimaBlackStemUpFlagLeft

Minima black, stem up with flag left

uniE938_uniE941

mensuralMinimaBlackStemUpFlagRight

Minima black, stem up with flag right

uniE938_uniE945

mensuralMinimaBlackStemUpFlaredFlag

Minima black, stem up with flared flag

uniE93A_uniE93F

mensuralMinimaBlackVoidStemDown

Minima black and void, stem down

uniE93A_uniE944

mensuralMinimaBlackVoidStemDownFlagLeft

Minima black and void, stem down with flag left

uniE93A_uniE946

mensuralMinimaBlackVoidStemDownFlaredFlag

Minima black and void, stem down with flared flag

uniE93A_uniE947

mensuralMinimaBlackVoidStemUpExtendedFlag

Minima black and void, stem up with extended flag

uniE93A_uniE941

mensuralMinimaBlackVoidStemUpFlagRight

Minima black and void, stem up with flag right

uniE939_uniE93F

mensuralMinimaVoidStemDown

Minima void, stem down

uniE939_uniE944

mensuralMinimaVoidStemDownFlagLeft

Minima void, stem down with flag left

uniE939_uniE946

mensuralMinimaVoidStemDownFlaredFlag

Minima void, stem down with flared flag

uniE939_uniE93E

mensuralMinimaVoidStemUp

Minima void, stem up

uniE93A_uniE948

mensuralMinimaBlackVoidStemDownExtendedFlag

Minima black and void, stem down with extended flag

uniE93A_uniE942

mensuralMinimaBlackVoidStemDownFlagRight

Minima black and void, stem down with flag right

uniE93A_uniE93E

mensuralMinimaBlackVoidStemUp

Minima black and void, stem up

uniE93A_uniE943

mensuralMinimaBlackVoidStemUpFlagLeft

Minima black and void, stem up with flag left

uniE93A_uniE945

mensuralMinimaBlackVoidStemUpFlaredFlag

Minima black and void, stem up with flared flag

uniE939_uniE948

mensuralMinimaVoidStemDownExtendedFlag

Minima void, stem down with extended flag

uniE939_uniE942

mensuralMinimaVoidStemDownFlagRight

Minima void, stem down with flag right

uniE939_uniE947

mensuralMinimaVoidStemUpExtendedFlag

Minima void, stem up with extended flag

uniE939_uniE943

mensuralMinimaVoidStemUpFlagLeft

Minima void, stem up with flag left

uniE939_uniE941

mensuralMinimaVoidStemUpFlagRight

Minima void, stem up with flag right

uniE938_uniE94A

mensuralSemiminimaBlackStemDown

Semiminima black, stem down

uniE93A_uniE94A

mensuralSemiminimaBlackVoidStemDown

Semiminima black and void, stem down

uniE939_uniE94A

mensuralSemiminimaVoidStemDown

Semiminima void, stem down

uniE939_uniE945

mensuralMinimaVoidStemUpFlaredFlag

Minima void, stem up with flared flag

uniE938_uniE949

mensuralSemiminimaBlackStemUp

Semiminima black, stem up

uniE93A_uniE949

mensuralSemiminimaBlackVoidStemUp

Semiminima black and void, stem up

uniE939_uniE949

mensuralSemiminimaVoidStemUp

Semiminima void, stem up

Medieval and Renaissance individual notes (U+E950–U+E96F)

U+E950

mensuralBlackMaxima

Black mensural maxima

U+E951

mensuralBlackLonga

Black mensural longa

U+E952

mensuralBlackBrevis

Black mensural brevis

U+E953 (and U+1D1BA)

mensuralBlackSemibrevis

Black mensural semibrevis

U+E954 (and U+1D1BC)

mensuralBlackMinima

Black mensural minima

U+E955

mensuralBlackSemiminima

Black mensural semiminima

U+E956

mensuralBlackBrevisVoid

Black mensural void brevis

U+E957 (and U+1D1B9)

mensuralBlackSemibrevisVoid

Black mensural void semibrevis

U+E958 (and U+1D1BB)

mensuralBlackMinimaVoid

Black mensural void minima

U+E959

mensuralBlackSemibrevisCaudata

Black mensural semibrevis caudata

U+E95A

mensuralBlackDragma

Black mensural dragma

U+E95B

mensuralBlackSemibrevisOblique

Black mensural oblique semibrevis

U+E95C (and U+1D1B6)

mensuralWhiteMaxima

White mensural maxima

U+E95D (and U+1D1B7)

mensuralWhiteLonga

White mensural longa

U+E95E (and U+1D1B8)

mensuralWhiteBrevis

White mensural brevis

U+E95F

mensuralWhiteMinima

White mensural minima

U+E960 (and U+1D1BE)

mensuralWhiteSemiminima

White mensural semiminima

U+E961 (and U+1D1BE)

mensuralWhiteFusa

White mensural fusa

Medieval and Renaissance oblique forms (U+E970–U+E98F)

U+E970

mensuralObliqueAsc2ndBlack

Oblique form, ascending 2nd, black

U+E971

mensuralObliqueAsc2ndVoid

Oblique form, ascending 2nd, void

U+E972

mensuralObliqueAsc2ndBlackVoid

Oblique form, ascending 2nd, black and void

U+E973

mensuralObliqueAsc2ndWhite

Oblique form, ascending 2nd, white

U+E974

mensuralObliqueAsc3rdBlack

Oblique form, ascending 3rd, black

U+E975

mensuralObliqueAsc3rdVoid

Oblique form, ascending 3rd, void

U+E976

mensuralObliqueAsc3rdBlackVoid

Oblique form, ascending 3rd, black and void

U+E977

mensuralObliqueAsc3rdWhite

Oblique form, ascending 3rd, white

U+E978

mensuralObliqueAsc4thBlack

Oblique form, ascending 4th, black

U+E979

mensuralObliqueAsc4thVoid

Oblique form, ascending 4th, void

U+E97A

mensuralObliqueAsc4thBlackVoid

Oblique form, ascending 4th, black and void

U+E97B

mensuralObliqueAsc4thWhite

Oblique form, ascending 4th, white

U+E97C

mensuralObliqueAsc5thBlack

Oblique form, ascending 5th, black

U+E97D

mensuralObliqueAsc5thVoid

Oblique form, ascending 5th, void

U+E97E

mensuralObliqueAsc5thBlackVoid

Oblique form, ascending 5th, black and void

U+E97F

mensuralObliqueAsc5thWhite

Oblique form, ascending 5th, white

U+E980

mensuralObliqueDesc2ndBlack

Oblique form, descending 2nd, black

U+E981

mensuralObliqueDesc2ndVoid

Oblique form, descending 2nd, void

U+E982

mensuralObliqueDesc2ndBlackVoid

Oblique form, descending 2nd, black and void

U+E983

mensuralObliqueDesc2ndWhite

Oblique form, descending 2nd, white

U+E984

mensuralObliqueDesc3rdBlack

Oblique form, descending 3rd, black

U+E985

mensuralObliqueDesc3rdVoid

Oblique form, descending 3rd, void

U+E986

mensuralObliqueDesc3rdBlackVoid

Oblique form, descending 3rd, black and void

U+E987

mensuralObliqueDesc3rdWhite

Oblique form, descending 3rd, white

U+E988

mensuralObliqueDesc4thBlack

Oblique form, descending 4th, black

U+E989

mensuralObliqueDesc4thVoid

Oblique form, descending 4th, void

U+E98A

mensuralObliqueDesc4thBlackVoid

Oblique form, descending 4th, black and void

U+E98B

mensuralObliqueDesc4thWhite

Oblique form, descending 4th, white

U+E98C

mensuralObliqueDesc5thBlack

Oblique form, descending 5th, black

U+E98D

mensuralObliqueDesc5thVoid

Oblique form, descending 5th, void

U+E98E

mensuralObliqueDesc5thBlackVoid

Oblique form, descending 5th, black and void

U+E98F

mensuralObliqueDesc5thWhite

Oblique form, descending 5th, white

Medieval and Renaissance plainchant single-note forms (U+E990–U+E9AF)

U+E990
chantPunctum

Punctum

U+E991
chantPunctumInclinatum

Punctum inclinatum

U+E992
chantPunctumInclinatumAuctum

Punctum inclinatum auctum

U+E993
chantPunctumInclinatumDeminutum

Punctum inclinatum deminutum

U+E994
chantAuctumAsc

Punctum auctum, ascending

U+E995
chantAuctumDesc

Punctum auctum, descending

U+E996 (and U+1D1D3)
chantPunctumVirga

Punctum virga

U+E997
chantPunctumVirgaReversed

Punctum virga, reversed

U+E998
chantPunctumCavum

Punctum cavum

U+E999
chantPunctumLinea

Punctum linea

U+E99A
chantPunctumLineaCavum

Punctum linea cavum

U+E99B
chantQuilisma

Quilisma

U+E99C
chantOriscusAscending

Oriscus ascending

U+E99D
chantOriscusDescending

Oriscus descending

U+E99E
chantOriscusLiquescens

Oriscus liquescens

U+E99F
chantStrophicus

Strophicus

U+E9A0

chantStrophicusAuctus

Strophicus auctus

Medieval and Renaissance plainchant multiple-note forms (U+E9B0–U+E9CF)

U+E9B0
chantPodatusLower
Podatus, lower

U+E9B1 (and U+1D1D4)
chantPodatusUpper
Podatus, upper

U+E9B2
chantDeminutumUpper
Punctum deminutum, upper

U+E9B3
chantDeminutumLower
Punctum deminutum, lower

U+E9B4
chantEntryLineAsc2nd
Entry line, ascending 2nd

U+E9B5
chantEntryLineAsc3rd
Entry line, ascending 3rd

U+E9B6
chantEntryLineAsc4th
Entry line, ascending 4th

U+E9B7
chantEntryLineAsc5th
Entry line, ascending 5th

U+E9B8
chantEntryLineAsc6th
Entry line, ascending 6th

U+E9B9
chantLigaturaDesc2nd
Ligated stroke, descending 2nd

U+E9BA
chantLigaturaDesc3rd
Ligated stroke, descending 3rd

U+E9BB
chantLigaturaDesc4th
Ligated stroke, descending 4th

U+E9BC
chantLigaturaDesc5th
Ligated stroke, descending 5th

U+E9BD
chantConnectingLineAsc2nd
Connecting line, ascending 2nd

U+E9BE
chantConnectingLineAsc3rd
Connecting line, ascending 3rd

U+E9BF
chantConnectingLineAsc4th
Connecting line, ascending 4th

U+E9C0

chantConnectingLineAsc5th

Connecting line, ascending 5th

U+E9C1

chantConnectingLineAsc6th

Connecting line, ascending 6th

U+E9C2

chantStrophicusLiquescens2nd

Strophicus liquescens, 2nd

U+E9C3

chantStrophicusLiquescens3rd

Strophicus liquescens, 3rd

U+E9C4

chantStrophicusLiquescens4th

Strophicus liquescens, 4th

U+E9C5

chantStrophicusLiquescens5th

Strophicus liquescens, 5th

Implementation notes

To produce ligatures of three or more notes, some of the glyphs in this range have to be combined.

Glyphs should be positioned relative to their starting pitch: for example, the **chantLigaturaDesc3rd** glyph, which describes a downwards progression by an interval of a third, should be positioned on the staff line or space of the starting note of the downwards pattern; the connecting lines (e.g. **chantConnectingLineAsc3rd**) should likewise be positioned on the staff line or space corresponding to the bottom of the line; for an ascending liquescent, position **chantAuctumAsc** on the starting staff position, and **chantDeminutemUpper** on the ending staff position, with the appropriate length of connecting line between them.

Scoring applications should position these glyphs like any other notehead, i.e. moving them vertically according to the desired starting staff position. Fonts intended for use in text-based applications should include glyphs that present these symbols at different staff positions, and a means to easily choose between them; one possible implementation would be to define OpenType ligatures of each of the glyphs in the **Combining staff positions** range with each of the glyphs in this range.

The table below shows how to produce some common ligatures, and describes which glyphs should be used; glyphs whose names appear in parentheses are control characters that move the following glyph vertically to a different staff position, as might be used in a font that employs OpenType ligatures.

Podatus, ascending 3rd: **chantPodatusLower** + **chantConnectingLineAsc3rd** + (**staffPosRaise3**) + **chantPodatusUpper**

Clivis, descending 4th: **chantPunctumVirgaReversed** + (staffPosLower4) **chantConnectingLineAsc4th** + (staffPosLower4) + **chantPunctum**

Salicus: **chantPunctum** + (staffPosRaise1) + **chantPodatusLower** + (staffPosRaise1) + **chantConnectingLineAsc2nd** + (staffPosRaise2) + **chantPodatusUpper**

Climacus: **chantPunctumVirga** + (staffPosLower1) + **chantPunctumInclinatum** + (staffPosLower2) + **chantPunctumInclinatum**

Torculus: **chantPunctum** + (staffPosRaise1) + **chantPunctum** + **chantPunctum**

Porrectus: **chantEntryLineAsc5th** + (staffPosRaise5) + **chantLigaturaDesc4th** + (staffPosRaise1) + **chantConnectingLineAsc3rd** + (staffPosRaise4) + **chantPunctum**

Scandicus flexus: **chantPodatusLower** + (staffPosRaise1) + **chantConnectingLineAsc2nd** + (staffPosRaise2) + **chantPodatusUpper** + **chantPunctumVirga** + **chantConnectingLineAsc3rd** + **chantPunctum**

Porrectus flexus: **chantConnectingLineAsc3rd** + (staffPosRaise3) + **chantLigaturaDesc3rd** + **chantPunctumVirga** + **chantConnectingLineAsc3rd** + **chantPunctum**

Climacus resupinus: **chantPunctumVirga** + (staffPosRaise1) + **chantPunctumInclinatum** + **chantPunctumInclinatum** + (staffPosRaise1) + **chantPunctum**

Torculus resupinus: **chantPunctum** + (staffPosRaise1) + **chantPunctum** + **chantPunctum** + (staffPosRaise1) + **chantPunctumVirga**

Pes subbipunctus: **chantPodatusLower** + (staffPosRaise1) + **chantConnectingLineAsc2nd** + (staffPosRaise2) + **chantPodatusUpper** + **chantPunctumInclinatum** + (staffPosLower1) + **chantPunctumInclinatum**

Virga praetripunctis: **chantPodatusLower** + (staffPosRaise1) + **chantConnectingLineAsc3rd** + (staffPosRaise3) + **chantPodatusUpper** **chantPodatus3rd** + (staffPosRaise4) + **chantPodatusLower** + (staffPosRaise5) + **chantConnectingLineAsc2nd** + (staffPosRaise6) + **chantPodatusUpper**

Epiphonus (liquescent podatus): **chantAuctumAsc** + (staffPosRaise1) + **chantDeminutemUpper**

Cephalicus (liquescent flexa): **chantConnectingLineAsc3rd** + (staffPosRaise3) + **chantAuctumDesc** + (staffPosRaise2) + **chantDeminutemLower**

Pinnosa (liquescent torculus): **chantPunctum** + **chantConnectingLineAsc4th** + (staffPosRaise4) + **chantAuctumDesc** + (staffPosRaise3) + **chantDeminutemLower**

Porrectus liquescens: **chantPunctumVirgaReversed** + (**staffPosLower1**) + **chantAuctumAsc** + (**staffPosRaise1**) + **chantDeminutemUpper**

Scandicus liquescens: **chantPunctum** + (**staffPosRaise1**) + **chantAuctumAsc** + + (**staffPosRaise1**) + **chantConnectingLineAsc3rd** + (**staffPosRaise4**) + **chantDeminutemUpper**

Medieval and Renaissance plainchant articulations (U+E9D0–U+E9DF)

U+E9D0
chantIctusAbove
Ictus above

U+E9D1
chantIctusBelow
Ictus below

U+E9D2
chantCirculusAbove
Circulus above

U+E9D3
chantCirculusBelow
Circulus below

U+E9D4
chantSemicirculusAbove
Semicirculus above

U+E9D5
chantSemicirculusBelow
Semicirculus below

U+E9D6
chantAccentusAbove
Accentus above

U+E9D7
chantAccentusBelow
Accentus below

U+E9D8
chantEpisema
Episema

U+E9D9
chantAugmentum
Augmentum (mora)

Medieval and Renaissance accidentals (U+E9E0–U+E9EF)

U+E9E0

medRenFlatSoftB

Flat, soft b (fa)

U+E9E1

medRenFlatHardB

Natural, hard b (mi)

U+E9E2

medRenNatural

Natural

U+E9E3 (and U+1D1CF)

medRenSharpCroix

Croix

U+E9E4

medRenFlatWithDot

Flat with dot

U+E9E5

medRenNaturalWithCross

Natural with interrupted cross

Recommended stylistic alternates

uniE9E0.salt01

medRenFlatSoftBOld

Flat (old)

uniE9E0.salt02

medRenFlatSoftBHufnagel

Flat (Hufnagel)

Medieval and Renaissance rests (U+E9F0–U+E9FF)

U+E9F0
mensuralRestMaxima
Maxima rest

U+E9F1 (and U+1D1C1)
mensuralRestLongaPerfecta
Longa perfecta rest

U+E9F2 (and U+1D1C2)
mensuralRestLongaImperfecta
Longa imperfecta rest

U+E9F3 (and U+1D1C3)
mensuralRestBrevis
Brevis rest

U+E9F4 (and U+1D1C4)
mensuralRestSemibrevis
Semibrevis rest

U+E9F5 (and U+1D1C5)
mensuralRestMinima
Minima rest

U+E9F6 (and U+1D1C6)
mensuralRestSemiminima
Semiminima rest

U+E9F7
mensuralRestFusa
Fusa rest

U+E9F8
mensuralRestSemifusa
Semifusa rest

Medieval and Renaissance miscellany (U+EA00–U+EA1F)

U+EA00

mensuralSignumUp

Signum congruentiae up

U+EA01

mensuralSignumDown

Signum congruentiae down

U+EA02

mensuralCustosUp

Mensural custos up

U+EA03

mensuralCustosDown

Mensural custos down

U+EA04

chantCustosStemUpPosLowest

Plainchant custos, stem up, lowest position

U+EA05

chantCustosStemUpPosLow

Plainchant custos, stem up, low position

U+EA06

chantCustosStemUpPosMiddle

Plainchant custos, stem up, middle position

U+EA07

chantCustosStemDownPosMiddle

Plainchant custos, stem down, middle position

U+EA08

chantCustosStemDownPosHigh

Plainchant custos, stem down, high position

U+EA09

chantCustosStemDownPosHighest

Plainchant custos, stem down, highest position

U+EA0A

mensuralCustosCheckmark

Checkmark custos

U+EA0B

mensuralCustosTurn

Turn-like custos

U+EA0C

mensuralColorationStartSquare

Coloration start, square

U+EA0D

mensuralColorationEndSquare

Coloration end, square

U+EA0E

mensuralColorationStartRound

Coloration start, round

U+EA0F

mensuralColorationEndRound

Coloration end, round

U+EA10

mensuralAlterationSign

Alteration sign

Medieval and Renaissance symbols in CMN (U+EA20–U+EA2F)

U+EA20

ornamentQuilisma

Quilisma

U+EA21

ornamentOriscus

Oriscus

U+EA22

medRenLiquescenceCMN

Liquescence

U+EA23

medRenPlicaCMN

Plica

U+EA24

medRenGClefCMN

G clef (Corpus Monodicum)

U+EA25

medRenPunctumCMN

Punctum (Corpus Monodicum)

U+EA26

medRenLiquescentAscCMN

Liquescent ascending (Corpus Monodicum)

U+EA27

medRenLiquescentDescCMN

Liquescent descending (Corpus Monodicum)

U+EA28

medRenQuilismaCMN

Quilisma (Corpus Monodicum)

U+EA29

medRenStrophicusCMN

Strophicus (Corpus Monodicum)

U+EA2A

medRenOriscusCMN

Oriscus (Corpus Monodicum)

Daseian notation (U+EA30–U+EA4F)

U+EA30

daseianGraves1

Daseian graves 1

U+EA31

daseianGraves2

Daseian graves 2

U+EA32

daseianGraves3

Daseian graves 3

U+EA33

daseianGraves4

Daseian graves 4

U+EA34

daseianFinales1

Daseian finales 1

U+EA35

daseianFinales2

Daseian finales 2

U+EA36

daseianFinales3

Daseian finales 3

U+EA37

daseianFinales4

Daseian finales 4

U+EA38

daseianSuperiores1

Daseian superiores 1

U+EA39

daseianSuperiores2

Daseian superiores 2

U+EA3A

daseianSuperiores3

Daseian superiores 3

U+EA3B

daseianSuperiores4

Daseian superiores 4

U+EA3C

daseianExcellentes1

Daseian excellentes 1

U+EA3D

daseianExcellentes2

Daseian excellentes 2

U+EA3E

daseianExcellentes3

Daseian excellentes 3

U+EA3F

daseianExcellentes4

Daseian excellentes 4

U+EA40

daseianResidua1

Daseian residua 1

U+EA41

daseianResidua2

Daseian residua 2

Figured bass (U+EA50–U+EA6F)

U+EA50

figbass0

Figured bass 0

U+EA51

figbass1

Figured bass 1

U+EA52

figbass2

Figured bass 2

U+EA53

figbass2Raised

Figured bass 2 raised by half-step

U+EA54

figbass3

Figured bass 3

U+EA55

figbass4

Figured bass 4

U+EA56

figbass4Raised

Figured bass 4 raised by half-step

U+EA57

figbass5

Figured bass 5

U+EA58

figbass5Raised1

Figured bass 5 raised by half-step

U+EA59

figbass5Raised2

Figured bass 5 raised by half-step 2

U+EA5A

figbass5Raised3

Figured bass diminished 5

U+EA5B

figbass6

Figured bass 6

U+EA5C

figbass6Raised

Figured bass 6 raised by half-step

U+EA5D

figbass7

Figured bass 7

U+EA5E

figbass7Raised

Figured bass 7 raised by half-step

U+EA5F

figbass8

Figured bass 8

U+EA60

figbass9

Figured bass 9

U+EA61

figbass9Raised

Figured bass 9 raised by half-step

U+EA62

figbassDoubleFlat

Figured bass double flat

U+EA63

figbassFlat

Figured bass flat

U+EA64

figbassNatural

Figured bass natural

U+EA65

figbassSharp

Figured bass sharp

U+EA66

figbassDoubleSharp

Figured bass double sharp

U+EA67

figbassBracketLeft

Figured bass [

U+EA68

figbassBracketRight

Figured bass]

U+EA69

figbassParensLeft

Figured bass (

U+EA6A

figbassParensRight

Figured bass)

U+EA6B

figbassPlus

Figured bass +

U+EA6C

figbassCombiningRaising

Combining raise

U+EA6D

figbassCombiningLowering

Combining lower

Function theory symbols (U+EA70–U+EA9F)

0

U+EA70

functionZero

Function theory 0

1

U+EA71

functionOne

Function theory 1

2

U+EA72

functionTwo

Function theory 2

3

U+EA73

functionThree

Function theory 3

4

U+EA74

functionFour

Function theory 4

5

U+EA75

functionFive

Function theory 5

6

U+EA76

functionSix

Function theory 6

7

U+EA77

functionSeven

Function theory 7

8

U+EA78

functionEight

Function theory 8

9

U+EA79

functionNine

Function theory 9

<

U+EA7A

functionLessThan

Function theory less than

-

U+EA7B

functionMinus

Function theory minus

>

U+EA7C

functionGreaterThan

Function theory greater than

SS

U+EA7D

functionSSUpper

Function theory major subdominant of subdominant

ss

U+EA7E

functionSSLower

Function theory minor subdominant of subdominant

D

U+EA7F

functionDUpper

Function theory major dominant

d

U+EA80

functionDLower

Function theory minor dominant

DD

U+EA81

functionDD

Function theory dominant of dominant

U+EA82

functionSlashedDD

Function theory double dominant seventh

G

U+EA83

functionGUpper

Function theory G

g

U+EA84

functionGLower

Function theory g

N

U+EA85

functionNUpper

Function theory N

n

U+EA86

functionNLower

Function theory n

P

U+EA87

functionPUpper

Function theory P

p

U+EA88

functionPLower

Function theory p

S

U+EA89

functionSUpper

Function theory major subdominant

s

U+EA8A

functionSLower

Function theory minor subdominant

T

U+EA8B

functionTUpper

Function theory tonic

t

U+EA8C

functionTLower

Function theory minor tonic

V

U+EA8D

functionVUpper

Function theory V

v

U+EA8E

functionVLower

Function theory v

[

U+EA8F

functionBracketLeft

Function theory bracket left

]

U+EA90

functionBracketRight

Function theory bracket right

(

U+EA91

functionParensLeft

Function theory parenthesis left

)

U+EA92

functionParensRight

Function theory parenthesis right

〈

U+EA93

functionAngleLeft

Function theory angle bracket left

U+EA94

functionAngleRight

Function theory angle bracket right

U+EA95

functionRepetition1

Function theory repetition 1

U+EA96

functionRepetition2

Function theory repetition 2

U+EA97

functionRing

Function theory prefix ring

U+EA98

functionPlus

Function theory prefix plus

Multi-segment lines (U+EAA0–U+EB0F)

U+EAA0

wiggleTrillFastest

Trill wiggle segment, fastest

U+EAA1

wiggleTrillFasterStill

Trill wiggle segment, faster still

U+EAA2

wiggleTrillFaster

Trill wiggle segment, faster

U+EAA3

wiggleTrillFast

Trill wiggle segment, fast

U+EAA4

wiggleTrill

Trill wiggle segment

U+EAA5

wiggleTrillSlow

Trill wiggle segment, slow

U+EAA6

wiggleTrillSlower

Trill wiggle segment, slower

U+EAA7

wiggleTrillSlowerStill

Trill wiggle segment, slower still

U+EAA8

wiggleTrillSlowest

Trill wiggle segment, slowest

U+EAA9

wiggleArpeggiatoUp

Arpeggiato wiggle segment, upwards

U+EAAA

wiggleArpeggiatoDown

Arpeggiato wiggle segment, downwards

U+EAAB

wiggleArpeggiatoUpSwash

Arpeggiato upward swash

U+EAAC

wiggleArpeggiatoDownSwash

Arpeggiato downward swash

U+EAAD

wiggleArpeggiatoUpArrow

Arpeggiato arrowhead up

U+EAAE

wiggleArpeggiatoDownArrow

Arpeggiato arrowhead down

U+EAAF

wiggleGlissando

Glissando wiggle segment

U+EAB0

wiggleVibrato

Vibrato / shake wiggle segment

U+EAB1

wiggleVibratoWide

Wide vibrato / shake wiggle segment

U+EAB2

guitarVibratoStroke

Vibrato wiggle segment

U+EAB3

guitarWideVibratoStroke

Wide vibrato wiggle segment

U+EAB4

wiggleWavyNarrow

Narrow wavy line segment

U+EAB5

wiggleWavy

Wavy line segment

U+EAB6

wiggleWavyWide

Wide wavy line segment

U+EAB7

wiggleSquareWaveNarrow

Narrow square wave line segment

U+EAB8

wiggleSquareWave

Square wave line segment

U+EAB9

wiggleSquareWaveWide

Wide square wave line segment

U+EABA

wiggleSawtoothNarrow

Narrow sawtooth line segment

U+EABB

wiggleSawtooth

Sawtooth line segment

U+EABC

wiggleSawtoothWide

Wide sawtooth line segment

U+EABD

wiggleGlissandoGroup1

Group glissando 1

U+EABE

wiggleGlissandoGroup2

Group glissando 2

U+EABF

wiggleGlissandoGroup3

Group glissando 3

U+EAC0

wiggleCircularConstant

Constant circular motion segment

U+EAC1

wiggleCircularConstantFlipped

Constant circular motion segment (flipped)

U+EAC2

wiggleCircularConstantLarge

Constant circular motion segment (large)

U+EAC3

wiggleCircularConstantFlippedLarge

Constant circular motion segment (flipped, large)

U+EAC4

wiggleCircularStart

Circular motion start

U+EAC5

wiggleCircularLargest

Circular motion segment, largest

U+EAC6

wiggleCircularLargerStill

Circular motion segment, larger still

U+EAC7

wiggleCircularLarger

Circular motion segment, larger

U+EAC8

wiggleCircularLarge

Circular motion segment, large

U+EAC9

wiggleCircular

Circular motion segment

U+EACA

wiggleCircularSmall

Circular motion segment, small

U+EACB

wiggleCircularEnd

Circular motion end

U+EACC

wiggleVibratoStart

Vibrato start

U+EACD

wiggleVibratoSmallestFastest

Vibrato smallest, fastest

U+EACE

wiggleVibratoSmallestFasterStill

Vibrato smallest, faster still

U+EACF

wiggleVibratoSmallestFaster

Vibrato smallest, faster

U+EAD0

wiggleVibratoSmallestFast

Vibrato smallest, fast

U+EAD1

wiggleVibratoSmallestSlow

Vibrato smallest, slow

U+EAD2

wiggleVibratoSmallestSlower

Vibrato smallest, slower

U+EAD3

wiggleVibratoSmallestSlowest

Vibrato smallest, slowest

U+EAD4

wiggleVibratoSmallFastest

Vibrato small, fastest

U+EAD5

wiggleVibratoSmallFasterStill

Vibrato small, faster still

U+EAD6
wiggleVibratoSmallFaster

Vibrato small, faster

U+EAD7
wiggleVibratoSmallFast

Vibrato small, fast

U+EAD8
wiggleVibratoSmallSlow

Vibrato small, slow

U+EAD9
wiggleVibratoSmallSlower

Vibrato small, slower

U+EADA
wiggleVibratoSmallSlowest

Vibrato small, slowest

U+EADB
wiggleVibratoMediumFastest

Vibrato medium, fastest

U+EADC
wiggleVibratoMediumFasterStill

Vibrato medium, faster still

U+EADD
wiggleVibratoMediumFaster

Vibrato medium, faster

U+EADE
wiggleVibratoMediumFast

Vibrato medium, fast

U+EADF
wiggleVibratoMediumSlow

Vibrato medium, slow

U+EAE0
wiggleVIbratoMediumSlower

Vibrato medium, slower

U+EAE1
wiggleVibratoMediumSlowest

Vibrato medium, slowest

U+EAE2
wiggleVibratoLargeFastest

Vibrato large, fastest

U+EAE3
wiggleVibratoLargeFasterStill

Vibrato large, faster still

U+EAE4
wiggleVibratoLargeFaster

Vibrato large, faster

U+EAE5
wiggleVibratoLargeFast

Vibrato large, fast

U+EAE6
wiggleVibratoLargeSlow

Vibrato large, slow

U+EAE7
wiggleVibratoLargeSlower

Vibrato large, slower

U+EAE8

wiggleVibratoLargeSlowest

Vibrato large, slowest

U+EAE9

wiggleVibratoLargestFastest

Vibrato largest, fastest

U+EAEA

wiggleVibratoLargestFasterStill

Vibrato largest, faster still

U+EAEB

wiggleVibratoLargestFaster

Vibrato largest, faster

U+EAEC

wiggleVibratoLargestFast

Vibrato largest, fast

U+EAED

wiggleVibratoLargestSlow

Vibrato largest, slow

U+EAEE

wiggleVIbratoLargestSlower

Vibrato largest, slower

U+EAEF

wiggleVibratoLargestSlowest

Vibrato largest, slowest

U+EAF0

wiggleRandom1

Quasi-random squiggle 1

U+EAF1

wiggleRandom2

Quasi-random squiggle 2

U+EAF2

wiggleRandom3

Quasi-random squiggle 3

U+EAF3

wiggleRandom4

Quasi-random squiggle 4

U+EAF4

beamAccelRit1

Accel./rit. beam 1 (widest)

U+EAF5

beamAccelRit2

Accel./rit. beam 2

U+EAF6

beamAccelRit3

Accel./rit. beam 3

U+EAF7

beamAccelRit4

Accel./rit. beam 4

U+EAF8

beamAccelRit5

Accel./rit. beam 5

U+EAF9

beamAccelRit6

Accel./rit. beam 6

U+EAFA

beamAccelRit7

Accel./rit. beam 7

U+EAFB

beamAccelRit8

Accel./rit. beam 8

U+EAFC

beamAccelRit9

Accel./rit. beam 9

U+EAFD

beamAccelRit10

Accel./rit. beam 10

U+EAFE

beamAccelRit11

Accel./rit. beam 11

U+EAFF

beamAccelRit12

Accel./rit. beam 12

U+EB00

beamAccelRit13

Accel./rit. beam 13

U+EB01

beamAccelRit14

Accel./rit. beam 14

U+EB02

beamAccelRit15

Accel./rit. beam 15 (narrowest)

U+EB03

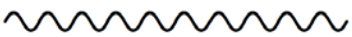
beamAccelRitFinal

Accel./rit. beam terminating line

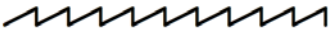
Implementation notes

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

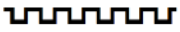
ornamentTrill + wiggleTrillFastest + wiggleTrillFasterStill + wiggleTrillFaster + wiggleTrillFast + wiggleTrill + wiggleTrillSlower + wiggleTrillSlowerStill + wiggleTrill + wiggleTrillFaster + wiggleTrillFasterStill



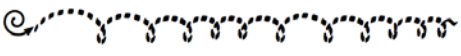
10 x wiggleWavy



10 x wiggleSawtooth



6 x wiggleSquaretooth



wiggleCircularStart + wiggleCircularLargest + wiggleCircularLargerStill + wiggleCircularLarger + wiggleCircularLarge + wiggleCircularEnd

wiggleVibratoStart + wiggleVibratoSmallestFastest + wiggleVibratoMediumSlower + wiggleVibratoMediumSlowest + wiggleVibratoMediumFaster + wiggleVibratoMediumFasterStill, etc.

Electronic music pictograms (U+EB10–U+EB5F)

U+EB10
elecMicrophone
Microphone

U+EB11
elecHeadphones
Headphones

U+EB12
elecHeadset
Headset

U+EB13
elecDisc
Disc

U+EB14
elecTape
Tape

U+EB15
elecMixingConsole
Mixing console

U+EB16
elecUSB
USB connection

U+EB17
elecVideoCamera
Video camera

U+EB18
elecMonitor
Monitor

U+EB19
elecProjector
Projector

U+EB1A
elecLoudspeaker
Loudspeaker

U+EB1B
elecCamera
Camera

U+EB1C
elecPlay
Play

U+EB1D
elecStop
Stop

U+EB1E
elecPause
Pause

U+EB1F
elecFastForward
Fast-forward

U+EB20
elecRewind
Rewind

U+EB21
elecSkipForwards
Skip forwards

U+EB22

elecSkipBackwards

Skip backwards

U+EB23

elecLoop

Loop

U+EB24

elecReplay

Replay

U+EB25

elecShuffle

Shuffle

U+EB26

elecMute

Mute

U+EB27

elecUnmute

Unmute

U+EB28

elecMicrophoneMute

Mute microphone

U+EB29

elecMicrophoneUnmute

Unmute microphone

U+EB2A

elecPowerOnOff

Power on/off

U+EB2B

elecEject

Eject

U+EB2C

elecVolumeFader

Combining volume fader

U+EB2D

elecVolumeFaderThumb

Combining volume fader thumb

U+EB2E

elecVolumeLevel0

Volume level 0%

U+EB2F

elecVolumeLevel20

Volume level 20%

U+EB30

elecVolumeLevel40

Volume level 40%

U+EB31

elecVolumeLevel60

Volume level 60%

U+EB32

elecVolumeLevel80

Volume level 80%

U+EB33

elecVolumeLevel100

Volume level 100%

U+EB34

elecMIDIIn

MIDI in

U+EB35

elecMIDIOut

MIDI out

U+EB36

elecMIDIController0

MIDI controller 0%

U+EB37

elecMIDIController20

MIDI controller 20%

U+EB38

elecMIDIController40

MIDI controller 40%

U+EB39

elecMIDIController60

MIDI controller 60%

U+EB3A

elecMIDIController80

MIDI controller 80%

U+EB3B

elecMIDIController100

MIDI controller 100%

U+EB3C

elecAudioMono

Mono audio setup

U+EB3D

elecAudioStereo

Stereo audio setup

U+EB3E

elecAudioChannelsOne

One channel (mono)

U+EB3F

elecAudioChannelsTwo

Two channels (stereo)

U+EB40

elecAudioChannelsThreeFrontal

Three channels (frontal)

U+EB41

elecAudioChannelsThreeSurround

Three channels (surround)

U+EB42

elecAudioChannelsFour

Four channels

U+EB43

elecAudioChannelsFive

Five channels

U+EB44

elecAudioChannelsSix

Six channels (5.1 surround)

U+EB45

elecAudioChannelsSeven

Seven channels

U+EB46

elecAudioChannelsEight

Eight channels (7.1 surround)

U+EB47

elecLineIn

Line in

U+EB48

elecLineOut

Line out

U+EB49

elecAudioIn

Audio in

U+EB4A

elecAudioOut

Audio out

U+EB4B

elecVideoIn

Video in

U+EB4C

elecVideoOut

Video out

U+EB4D

elecDataIn

Data in

U+EB4E

elecDataOut

Data out

U+EB4F

elecDownload

Download

U+EB50

elecUpload

Upload

Arrows and arrowheads (U+EB60–U+EB8F)

U+EB60

arrowBlackUp

Black arrow up (N)

U+EB61

arrowBlackUpRight

Black arrow up-right (NE)

U+EB62

arrowBlackRight

Black arrow right (E)

U+EB63

arrowBlackDownRight

Black arrow down-right (SE)

U+EB64

arrowBlackDown

Black arrow down (S)

U+EB65

arrowBlackDownLeft

Black arrow down-left (SW)

U+EB66

arrowBlackLeft

Black arrow left (W)

U+EB67

arrowBlackUpLeft

Black arrow up-left (NW)

U+EB68

arrowWhiteUp

White arrow up (N)

U+EB69

arrowWhiteUpRight

White arrow up-right (NE)

U+EB6A

arrowWhiteRight

White arrow right (E)

U+EB6B

arrowWhiteDownRight

White arrow down-right (SE)

U+EB6C

arrowWhiteDown

White arrow down (S)

U+EB6D

arrowWhiteDownLeft

White arrow down-left (SW)

U+EB6E

arrowWhiteLeft

White arrow left (W)

U+EB6F

arrowWhiteUpLeft

White arrow up-left (NW)

U+EB70

arrowOpenUp

Open arrow up (N)

U+EB71

arrowOpenUpRight

Open arrow up-right (NE)

U+EB72

arrowOpenRight

Open arrow right (E)

U+EB73

arrowOpenDownRight

Open arrow down-right (SE)

U+EB74

arrowOpenDown

Open arrow down (S)

U+EB75

arrowOpenDownLeft

Open arrow down-left (SW)

U+EB76

arrowOpenLeft

Open arrow left (W)

U+EB77

arrowOpenUpLeft

Open arrow up-left (NW)

U+EB78

arrowheadBlackUp

Black arrowhead up (N)

U+EB79

arrowheadBlackUpRight

Black arrowhead up-right (NE)

U+EB7A

arrowheadBlackRight

Black arrowhead right (E)

U+EB7B

arrowheadBlackDownRight

Black arrowhead down-right (SE)

U+EB7C

arrowheadBlackDown

Black arrowhead down (S)

U+EB7D

arrowheadBlackDownLeft

Black arrowhead down-left (SW)

U+EB7E

arrowheadBlackLeft

Black arrowhead left (W)

U+EB7F

arrowheadBlackUpLeft

Black arrowhead up-left (NW)

U+EB80

arrowheadWhiteUp

White arrowhead up (N)

U+EB81

arrowheadWhiteUpRight

White arrowhead up-right (NE)

U+EB82

arrowheadWhiteRight

White arrowhead right (E)

U+EB83

arrowheadWhiteDownRight

White arrowhead down-right (SE)

U+EB84

arrowheadWhiteDown

White arrowhead down (S)

U+EB85

arrowheadWhiteDownLeft

White arrowhead down-left (SW)

U+EB86

arrowheadWhiteLeft

White arrowhead left (W)

U+EB87

arrowheadWhiteUpLeft

White arrowhead up-left (NW)

U+EB88

arrowheadOpenUp

Open arrowhead up (N)

U+EB89

arrowheadOpenUpRight

Open arrowhead up-right (NE)

U+EB8A

arrowheadOpenRight

Open arrowhead right (E)

U+EB8B

arrowheadOpenDownRight

Open arrowhead down-right (SE)

U+EB8C

arrowheadOpenDown

Open arrowhead down (S)

U+EB8D

arrowheadOpenDownLeft

Open arrowhead down-left (SW)

U+EB8E

arrowheadOpenLeft

Open arrowhead left (W)

U+EB8F

arrowheadOpenUpLeft

Open arrowhead up-left (NW)

Combining staff positions (U+EB90–U+EB9F)

U+EB90
staffPosRaise1
Raise 1 staff position

U+EB91
staffPosRaise2
Raise 2 staff positions

U+EB92
staffPosRaise3
Raise 3 staff positions

U+EB93
staffPosRaise4
Raise 4 staff positions

U+EB94
staffPosRaise5
Raise 5 staff positions

U+EB95
staffPosRaise6
Raise 6 staff positions

U+EB96
staffPosRaise7
Raise 7 staff positions

U+EB97
staffPosRaise8
Raise 8 staff positions

U+EB98
staffPosLower1
Lower 1 staff position

U+EB99
staffPosLower2
Lower 2 staff positions

U+EB9A
staffPosLower3
Lower 3 staff positions

U+EB9B
staffPosLower4
Lower 4 staff positions

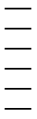
U+EB9C
staffPosLower5
Lower 5 staff positions

U+EB9D
staffPosLower6
Lower 6 staff positions

U+EB9E
staffPosLower7
Lower 7 staff positions

U+EB9F
staffPosLower8
Lower 8 staff positions

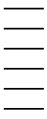
Renaissance lute tablature (U+EBA0–U+EBBF)



U+EBA0

luteStaff6Lines

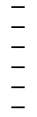
Lute tablature staff, 6 courses



U+EBA1

luteStaff6LinesWide

Lute tablature staff, 6 courses (wide)



U+EBA2

luteStaff6LinesNarrow

Lute tablature staff, 6 courses (narrow)

U+EBA3

luteBarlineStartRepeat

Lute tablature start repeat barline

U+EBA4

luteBarlineEndRepeat

Lute tablature end repeat barline

U+EBA5

luteBarlineFinal

Lute tablature final barline

U+EBA6

luteDurationDoubleWhole

Double whole note (breve) duration sign

U+EBA7

luteDurationWhole

Whole note (semibreve) duration sign

U+EBA8

luteDurationHalf

Half note (minim) duration sign

U+EBA9

luteDurationQuarter

Quarter note (crotchet) duration sign

U+EBAA

luteDuration8th

Eighth note (quaver) duration sign

U+EBAB

luteDuration16th

16th note (semiquaver) duration sign

U+EBAC

luteDuration32nd

32nd note (demisemiquaver) duration sign

U+EBAD

luteFingeringRHThumb

Right-hand fingering, thumb

U+EBAE

luteFingeringRHFirst

Right-hand fingering, first finger

U+EBAF

luteFingeringRHSecond

Right-hand fingering, second finger

U+EBB0

luteFingeringRHThird

Right-hand fingering, third finger

Recommended stylistic alternates

uniEBB0.salt01

luteFingeringRHThirdAlt

Right-hand fingering, third finger (alternate)

French and English Renaissance lute tablature (U+EBC0–U+EBDF)

U+EBC0

luteFrenchFretA

Open string (a)

U+EBC1

luteFrenchFretB

First fret (b)

U+EBC2

luteFrenchFretC

Second fret (c)

U+EBC3

luteFrenchFretD

Third fret (d)

U+EBC4

luteFrenchFretE

Fourth fret (e)

U+EBC5

luteFrenchFretF

Fifth fret (f)

U+EBC6

luteFrenchFretG

Sixth fret (g)

U+EBC7

luteFrenchFretH

Seventh fret (h)

U+EBC8

luteFrenchFretI

Eighth fret (i)

U+EBC9

luteFrenchFretK

Ninth fret (k)

U+EBCA

luteFrenchFretL

10th fret (l)

U+EBCB

luteFrenchFretM

11th fret (m)

U+EBCC

luteFrenchFretN

12th fret (n)

U+EBCD

luteFrench7thCourse

Seventh course (diapason)

U+EBCE

luteFrench8thCourse

Eighth course (diapason)

U+EBCF

luteFrench9thCourse

Ninth course (diapason)

U+EBD0

luteFrench10thCourse

10th course (diapason)

U+EBD1

luteFrenchMordentUpper

Mordent with upper auxiliary

U+EBD2

luteFrenchMordentLower

Mordent with lower auxiliary

U+EBD3

luteFrenchMordentInverted

Inverted mordent

U+EBD4

luteFrenchAppoggiaturaBelow

Appoggiatura from below

U+EBD5

luteFrenchAppoggiaturaAbove

Appoggiatura from above

Recommended stylistic alternates

uniEBC2.salt01

luteFrenchFretCAlt

Second fret (c), alternate appearance

uniEBCD.salt01

luteFrench7thCourseStrikethru

Seventh course (diapason), strikethrough

uniEBCD.salt02

luteFrench7thCourseUnderline

Seventh course (diapason), underline

uniEBCD.salt03

luteFrench7thCourseRight

Seventh course (diapason), right

uniEBCE.salt01

luteFrench8thCourseStrikethru

Eighth course (diapason), strikethrough

uniEBCE.salt02

luteFrench8thCourseUnderline

Eighth course (diapason), underlined

uniEBCE.salt03

luteFrench8thCourseRight

Eighth course (diapason), right

uniEBCF.salt01

luteFrench9thCourseStrikethru

Ninth course (diapason), strikethrough

uniEBCF.salt02

luteFrench9thCourseUnderline

Ninth course (diapason), underlined

uniEBCF.salt03

luteFrench9thCourseRight

Ninth course (diapason), right

uniEBD0.salt01

luteFrench10thCourseStrikethru

10th course (diapason), strikethrough

uniEBD0.salt02

luteFrench10thCourseUnderline

10th course (diapason), underlined

uniEBD0.salt03

luteFrench10thCourseRight

𝒂/// 10th course (diapason), right

Italian and Spanish Renaissance lute tablature (U+EBE0–U+EBFF)

U+EBE0

luteItalianFret0

Open string (0)

U+EBE1

luteItalianFret1

First fret (1)

U+EBE2

luteItalianFret2

Second fret (2)

U+EBE3

luteItalianFret3

Third fret (3)

U+EBE4

luteItalianFret4

Fourth fret (4)

U+EBE5

luteItalianFret5

Fifth fret (5)

U+EBE6

luteItalianFret6

Sixth fret (6)

U+EBE7

luteItalianFret7

Seventh fret (7)

U+EBE8

luteItalianFret8

Eighth fret (8)

U+EBE9

luteItalianFret9

Ninth fret (9)

U+EBEA

luteItalianTempoFast

Fast tempo indication (de Mudarra)

U+EBEB

luteItalianTempoSomewhatFast

Somewhat fast tempo indication (de Narvaez)

U+EBEC

luteItalianTempoNeitherFastNorSlow

Neither fast nor slow tempo indication (de Mudarra)

U+EBED

luteItalianTempoSlow

Slow tempo indication (de Mudarra)

U+EBEE

luteItalianTempoVerySlow

Very slow indication (de Narvaez)

U+EBEF

luteItalianTimeTriple

Triple time indication

U+EBF0

luteItalianClefFFaUt

F fa ut clef

U+EBF1

luteItalianClefCSolFaUt

C sol fa ut clef

U+EBF2

luteItalianTremolo

Single-finger tremolo or mordent

U+EBF3

luteItalianHoldNote

Hold note

U+EBF4

luteItalianHoldFinger

Hold finger in place

U+EBF5

luteItalianReleaseFinger

Release finger

U+EBF6

luteItalianVibrato

Vibrato (verre cassé)

German Renaissance lute tablature (U+EC00–U+EC2F)

U+EC00

luteGermanALower

5th course, 1st fret (a)

U+EC01

luteGermanBLower

4th course, 1st fret (b)

U+EC02

luteGermanCLower

3rd course, 1st fret (c)

U+EC03

luteGermanDLower

2nd course, 1st fret (d)

U+EC04

luteGermanELower

1st course, 1st fret (e)

U+EC05

luteGermanFLower

5th course, 2nd fret (f)

U+EC06

luteGermanGLower

4th course, 2nd fret (g)

U+EC07

luteGermanHLower

3rd course, 2nd fret (h)

U+EC08

luteGermanILower

2nd course, 2nd fret (i)

U+EC09

luteGermanKLower

1st course, 2nd fret (k)

U+EC0A

luteGermanLLower

5th course, 3rd fret (l)

U+EC0B

luteGermanMLower

4th course, 3rd fret (m)

U+EC0C

luteGermanNLower

3rd course, 3rd fret (n)

U+EC0D

luteGermanOLower

2nd course, 3rd fret (o)

U+EC0E

luteGermanPLower

1st course, 3rd fret (p)

U+EC0F

luteGermanQLower

5th course, 4th fret (q)

U+EC10

luteGermanRLower

4th course, 4th fret (r)

U+EC11

luteGermanSLower

3rd course, 4th fret (s)

U+EC12

luteGermanTLower

2nd course, 4th fret (t)

U+EC13

luteGermanVLower

1st course, 4th fret (v)

U+EC14

luteGermanXLower

5th course, 5th fret (x)

U+EC15

luteGermanYLower

4th course, 5th fret (y)

U+EC16

luteGermanZLower

3rd course, 5th fret (z)

U+EC17

luteGermanAUpper

6th course, 1st fret (A)

U+EC18

luteGermanBUpper

6th course, 2nd fret (B)

U+EC19

luteGermanCUpper

6th course, 3rd fret (C)

U+EC1A

luteGermanDUpper

6th course, 4th fret (D)

U+EC1B

luteGermanEUpper

6th course, 5th fret (E)

U+EC1C

luteGermanFUpper

6th course, 6th fret (F)

U+EC1D

luteGermanGUpper

6th course, 7th fret (G)

U+EC1E

luteGermanHUpper

6th course, 8th fret (H)

U+EC1F

luteGermanIUpper

6th course, 9th fret (I)

U+EC20

luteGermanKUpper

6th course, 10th fret (K)

U+EC21

luteGermanLUpper

6th course, 11th fret (L)

U+EC22

luteGermanMUpper

6th course, 12th fret (M)

U+EC23

luteGermanNUpper

6th course, 13th fret (N)

Kievan square notation (U+EC30–U+EC3F)

U+EC30 (and U+1D1DE)
kievanCClef

Kievan C clef (tse-fa-ut)

U+EC31 (and U+1D1DF)
kievanEndingSymbol

Kievan ending symbol

U+EC32 (and U+1D1E1)
kievanNoteReciting

Kievan reciting note

U+EC33 (and U+1D1E2)
kievanNoteWhole

Kievan whole note

U+EC34 (and U+1D1E0)
kievanNoteWholeFinal

Kievan final whole note

U+EC35 (and U+1D1E3)
kievanNoteHalfStaffLine

Kievan half note (on staff line)

U+EC36
kievanNoteHalfStaffSpace

Kievan half note (in staff space)

U+EC37 (and U+1D1E5)
kievanNoteQuarterStemUp

Kievan quarter note, stem up

U+EC38 (and U+1D1E4)
kievanNoteQuarterStemDown

Kievan quarter note, stem down

U+EC39 (and U+1D1E7)
kievanNote8thStemUp

Kievan eighth note, stem up

U+EC3A (and U+1D1E6)
kievanNote8thStemDown

Kievan eighth note, stem down

U+EC3B
kievanNoteBeam

Kievan beam

U+EC3C
kievanAugmentationDot

Kievan augmentation dot

U+EC3D
kievanAccidentalSharp

Kievan sharp

U+EC3E (and U+1D1E8)
kievanAccidentalFlat

Kievan flat

Implementation notes

This range of Kievan square notation glyphs will be encoded in Unicode 8.0 at the code points U+1D1DE–U+1D1E8.

For **kievanNoteWholeFinal** and **kievanNoteReciting**, the symbol is positioned on the staff such that for a note on a staff line, the staff line passes between the two thick horizontal lines. For **kievanNoteWhole** on a staff line, the staff line passes between the two diamonds. For **kievanNote8thStemDown** on a staff line, the staff line passes through the top diamond.

In the type of Kievan notation used in modern chant books of the Russian Orthodox Church, the symbol for half note has two variants: the variant with the long tail down (**kievanNoteHalfStemDown**) is used when the note occurs on a staff line, and the variant with the long tail up (**kievanNoteHalfStemUp**) is used when the note occurs in a space. Only the first of these characters is encoded in Unicode, while the second character is to be selected programmatically via font features; SMuFL encodes both characters at separate code points.

Kievan notes may be beamed, with stems up or stems down. These ligatures are not encoded explicitly either in Unicode or in SMuFL, but it is recommended that fonts provide ligatures. They may also be available in Unicode fonts via ligature substitution by entering, e.g., the following character sequence: U+1D1E4 Musical Symbol Kievan Quarter Note Stem Down, U+1D173 Musical Symbol Begin Beam, U+1D1E4 Musical Symbol Kievan Quarter Note Stem Down, U+1D174 Musical Symbol End Beam.

Fingering chart for flute (U+EC40–U+EC7F)

U+EC40

fingeringFluteChart

Flute fingering chart, piccolo all open

U+EC41

fingeringFluteCFoot

Flute fingering chart, flute low C foot all open

U+EC42

fingeringFluteBFoot

Flute fingering chart, flute low B foot all open

U+EC43

fingeringFluteLHThumbBFlatClosed

Flute fingering chart, left-hand thumb B flat closed

U+EC44

fingeringFluteLHThumbBClosed

Flute fingering chart, left-hand thumb B closed

U+EC45

fingeringFluteLH1stFingerClosed

Flute fingering chart, left-hand 1st finger closed

U+EC46

fingeringFluteLH2ndFingerClosed

Flute fingering chart, left-hand 2nd finger closed

U+EC47

fingeringFluteLH3rdFingerClosed

Flute fingering chart, left-hand 3rd finger closed

U+EC48

fluteFingeringLHGSharpClosed

Flute fingering chart, left-hand G sharp closed

U+EC49

fingeringFluteRHBFlatTrillClosed

Flute fingering chart, right-hand B flat trill closed

U+EC4A

fingeringFluteRH1stFingerClosed

Flute fingering chart, right-hand 1st finger closed

U+EC4B

fingeringFluteRHDTrillClosed

Flute fingering chart, right-hand D trill closed

U+EC4C

fingeringFluteRH2ndFingerClosed

Flute fingering chart, right-hand 2nd finger closed

U+EC4D

fingeringFluteRHDSharpTrillClosed

Flute fingering chart, right-hand D sharp trill closed

U+EC4E

fingeringFluteRH3rdFingerClosed

Flute fingering chart, right-hand 3rd finger closed

U+EC4F

fingeringFluteRHEFlatPaddleClosed

Flute fingering chart, right-hand E flat paddle closed

U+EC50

fingeringFluteRHLowCSharpClosed

Flute fingering chart, right-hand low C sharp closed

U+EC51

fingeringFluteRHLowCClosed

Flute fingering chart, right-hand low C closed

U+EC52

fingeringFluteRHLowBClosed

Flute fingering chart, right-hand low B closed

U+EC53

fingeringFluteRHGizmoClosed

Flute fingering chart, right-hand gizmo closed

U+EC54

fingeringFluteLH1stFingerHalfClosedLeft

Flute fingering chart, left-hand 1st finger half-closed (left)

U+EC55

fingeringFluteLH2ndFingerHalfClosedLeft

Flute fingering chart, left-hand 2nd finger half-closed (left)

U+EC56

fingeringFluteLH3rdFingerHalfClosedLeft

Flute fingering chart, left-hand 3rd finger half-closed (left)

U+EC57

fingeringFluteRH1stFingerHalfClosedLeft

Flute fingering chart, right-hand 1st finger half-closed (left)

U+EC58

fingeringFluteRH2ndFingerHalfClosedLeft

Flute fingering chart, right-hand 2nd finger half-closed (left)

U+EC59

fingeringFluteRH3rdFingerHalfClosedLeft

Flute fingering chart, right-hand 3rd finger half-closed (left)

U+EC5A

fingeringFluteLH1stFingerHalfClosedRight

Flute fingering chart, left-hand 1st finger half-closed (right)

U+EC5B

fingeringFluteLH2ndFingerHalfClosedRight

Flute fingering chart, left-hand 2nd finger half-closed (right)

U+EC5C

fingeringFluteLH3rdFingerHalfClosedRight

Flute fingering chart, left-hand 3rd finger half-closed (right)

U+EC5D

fingeringFluteRH1stFingerHalfClosedRight

Flute fingering chart, right-hand 1st finger half-closed (right)

U+EC5E

fingeringFluteRH2ndFingerHalfClosedRight

Flute fingering chart, right-hand 2nd finger half-closed (right)

U+EC5F

fingeringFluteRH3rdFingerHalfClosedRight

Flute fingering chart, right-hand 3rd finger half-closed (right)

U+EC60

fingeringFluteLH1stFingerQuarterClosedLeft

Flute fingering chart, left-hand 1st finger quarter-closed (left)

U+EC61

fingeringFluteLH2ndFingerQuarterClosedLeft

Flute fingering chart, left-hand 2nd finger quarter-closed (left)

U+EC62

fingeringFluteLH3rdFingerQuarterClosedLeft

Flute fingering chart, left-hand 3rd finger quarter-closed (left)

U+EC63

fingeringFluteRH1stFingerQuarterClosedLeft

Flute fingering chart, right-hand 1st finger quarter-closed (left)

U+EC64

fingeringFluteRH2ndFingerQuarterClosedLeft

Flute fingering chart, right-hand 2nd finger quarter-closed (left)

U+EC65

fingeringFluteRH3rdFingerQuarterClosedLeft

Flute fingering chart, right-hand 3rd finger quarter-closed (left)

U+EC66

fingeringFluteLH1stFingerQuarterClosedRight

Flute fingering chart, left-hand 1st finger quarter-closed (right)

U+EC67

fingeringFluteLH2ndFingerQuarterClosedRight

Flute fingering chart, left-hand 2nd finger quarter-closed (right)

U+EC68

fingeringFluteLH3rdFingerQuarterClosedRight

Flute fingering chart, left-hand 3rd finger quarter-closed (right)

U+EC69

fingeringFluteRH1stFingerQuarterClosedRight

Flute fingering chart, right-hand 1st finger quarter-closed (right)

U+EC6A

fingeringFluteRH2ndFingerQuarterClosedRight

Flute fingering chart, right-hand 2nd finger quarter-closed (right)

U+EC6B

fingeringFluteRH3rdFingerQuarterClosedRight

Flute fingering chart, right-hand 3rd finger quarter-closed (right)

U+EC6C

fingeringFluteLHThumbBFlatTrill

Flute fingering chart, left-hand thumb B flat trill

U+EC6D

fingeringFluteLHThumbBTrill

Flute fingering chart, left-hand thumb B trill

U+EC6E

fingeringFluteLH1stFingerTrill

Flute fingering chart, left-hand 1st finger trill

U+EC6F

fingeringFluteLH2ndFingerTrill

Flute fingering chart, left-hand 2nd finger trill

U+EC70

fingeringFluteLH3rdFingerTrill

Flute fingering chart, left-hand 3rd finger trill

U+EC71

fluteFingeringLHGSharpTrill

Flute fingering chart, left-hand G sharp trill

U+EC72

fingeringFluteRHBFlatTrillTrill

Flute fingering chart, right-hand B flat trill key trill

U+EC73

fingeringFluteRH1stFingerTrill

Flute fingering chart, right-hand 1st finger trill

U+EC74

fingeringFluteRHDTrillTrill

Flute fingering chart, right-hand D trill key trill

U+EC75

fingeringFluteRH2ndFingerTrill

Flute fingering chart, right-hand 2nd finger trill

U+EC76

fingeringFluteRHDSharpTrillTrill

Flute fingering chart, right-hand D sharp trill key trill

U+EC77

fingeringFluteRH3rdFingerTrill

Flute fingering chart, right-hand 3rd finger trill

U+EC78

fingeringFluteRHEFlatPaddleTrill

Flute fingering chart, right-hand E flat paddle trill

U+EC79

fingeringFluteRHLowCSharpTrill

Flute fingering chart, right-hand low C sharp trill

U+EC7A

fingeringFluteRHLowCTrill

Flute fingering chart, right-hand low C trill

U+EC7B

fingeringFluteRHLowBTrill

Flute fingering chart, right-hand low B trill

U+EC7C

fingeringFluteRHGizmoTrill

Flute fingering chart, right-hand gizmo trill

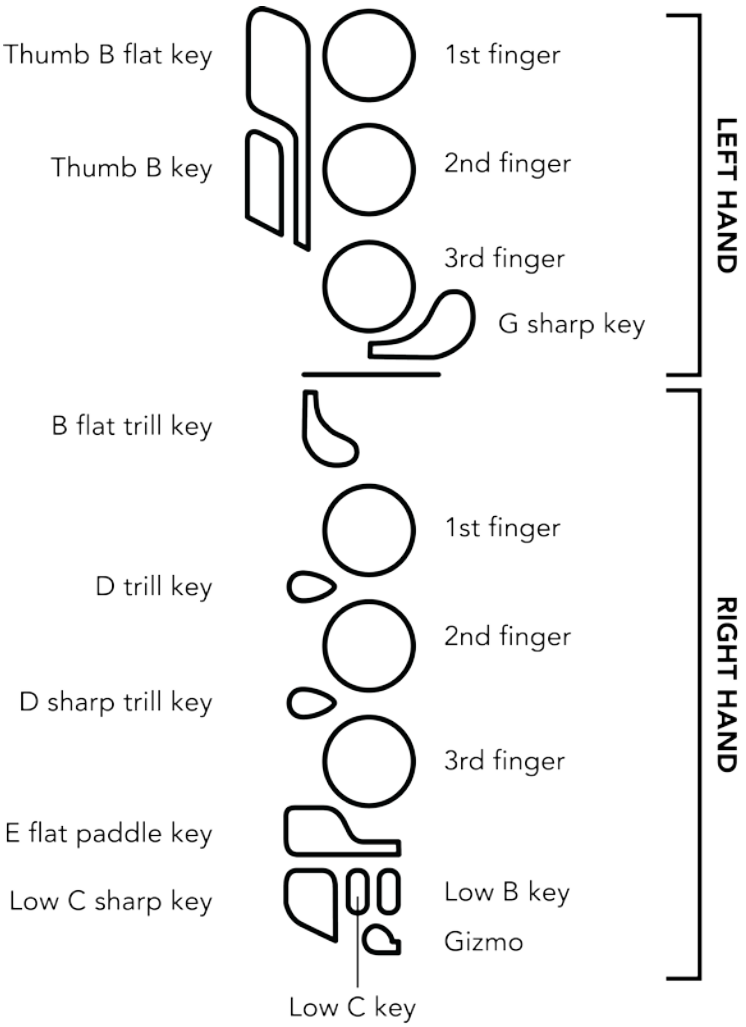
Implementation notes

All of the glyphs in this range should have zero width, with all glyphs registered so that they overlay correctly (see examples below).

To construct a fingering chart, first use **fingeringFluteChart** to produce an empty chart for piccolo with all keys open; add **fingeringFluteCFoot** to add the low keys from a C foot flute, and add **fingeringFluteBFoot** to add the additional low B key if necessary.

To add closed, half-closed, quarter-closed or trill keys to the chart, simply add the relevant glyphs at the same position.

The following diagram shows the disposition of keys in the blank chart.



Here are a couple of examples of complete fingering charts. Note that they have been rotated counter-clockwise by 90 degrees:

C: fingeringFluteChart, fingeringFluteCFoot, fingeringFluteBFoot, fingeringFluteLHThumbBClosed, fingeringFluteLH1stFingerClosed, fingeringFluteLH2ndFingerClosed, fingeringFluteLH3rdFingerClosed, fingeringFluteRH1stFingerClosed, fingeringFluteRH2ndFingerClosed, fingeringFluteRH3rdFingerClosed, fingeringFluteRHCSharpClosed, fingeringFluteRHLowCClosed

E: fingeringFluteChart, fingeringFluteCFoot, fingeringFluteBFoot, fingeringFluteLHThumbBClosed, fingeringFluteLH1stFingerClosed, fingeringFluteLH2ndFingerClosed, fingeringFluteLH3rdFingerClosed, fingeringFluteRH1stFingerClosed, fingeringFluteRH2ndFingerClosed, fingeringFluteRHEFlatPaddleClosed

Fingering chart for clarinet (U+EC80–U+ECDF)

U+EC80

fingeringClarChart

Clarinet fingering chart, all open

U+EC81

fingeringClarBassEFlatOpen

Clarinet fingering chart, bass clarinet E flat open

U+EC82

fingeringClarRegisterClosed

Clarinet fingering chart, register closed

U+EC83

fingeringClarLHThumbClosed

Clarinet fingering chart, left-hand thumb closed

U+EC84

fingeringClarLHAClosed

Clarinet fingering chart, left-hand A closed

U+EC85

fingeringClarLHGSharpClosed

Clarinet fingering chart, left-hand G sharp closed

U+EC86

fingeringClarLH1stFingerClosed

Clarinet fingering chart, left-hand 1st finger closed

U+EC87

fingeringClarLH2ndFingerClosed

Clarinet fingering chart, left-hand 2nd finger closed

U+EC88

fingeringClarLHEFlatClosed

Clarinet fingering chart, left-hand E flat closed

U+EC89

fingeringClarLH3rdFingerClosed

Clarinet fingering chart, left-hand 3rd finger closed

U+EC8A

fingeringClarLHCSharpClosed

Clarinet fingering chart, left-hand C sharp closed

U+EC8B

fingeringClarLHFClosed

Clarinet fingering chart, left-hand F closed

U+EC8C

fingeringClarLHGSharpAltClosed

Clarinet fingering chart, left-hand G sharp alt. closed

U+EC8D

fingeringClarLHEClosed

Clarinet fingering chart, left-hand E closed

U+EC8E

fingeringClarRH1stSideClosed

Clarinet fingering chart, right-hand 1st side closed

U+EC8F

fingeringClarRH2ndSideClosed

Clarinet fingering chart, right-hand 2nd side closed

U+EC90

fingeringClarRH3rdSideClosed

Clarinet fingering chart, right-hand 3rd side closed

U+EC91

fingeringClarRH4thSideClosed

Clarinet fingering chart, right-hand 4th side closed

U+EC92

fingeringClarRH1stFingerClosed

Clarinet fingering chart, right-hand 1st finger closed

U+EC93

fingeringClarRH2ndFingerClosed

Clarinet fingering chart, right-hand 2nd finger closed

U+EC94

fingeringClarRHBClosed

Clarinet fingering chart, right-hand B closed

U+EC95

fingeringClarRH3rdFingerClosed

Clarinet fingering chart, right-hand 3rd finger closed

U+EC96

fingeringClarRHFSharpClosed

Clarinet fingering chart, right-hand F sharp closed

U+EC97

fingeringClarRHGSharpClosed

Clarinet fingering chart, right-hand G sharp closed

U+EC98

fingeringClarRHEClosed

Clarinet fingering chart, right-hand E closed

U+EC99

fingeringClarRHFClosed

Clarinet fingering chart, right-hand F closed

U+EC9A

fingeringClarBassEFlatClosed

Clarinet fingering chart, bass clarinet E flat closed

U+EC9B

fingeringClarLH1stFingerRingOnly

Clarinet fingering chart, left-hand 1st finger ring only

U+EC9C

fingeringClarLH2ndFingerRingOnly

Clarinet fingering chart, left-hand 2nd finger ring only

U+EC9D

fingeringClarLH3rdFingerRingOnly

Clarinet fingering chart, left-hand 3rd finger ring only

U+EC9E

fingeringClarRH1stFingerRingOnly

Clarinet fingering chart, right-hand 1st finger ring only

U+EC9F

fingeringClarRH2ndFingerRingOnly

Clarinet fingering chart, right-hand 2nd finger ring only

U+ECA0

fingeringClarRH3rdFingerRingOnly

Clarinet fingering chart, right-hand 3rd finger ring only

U+ECA1

fingeringClarLH1stFingerHalfClosedLeft

Clarinet fingering chart, left-hand 1st finger half-closed left

U+ECA2

fingeringClarLH2ndFingerHalfClosedLeft

Clarinet fingering chart, left-hand 2nd finger half-closed left

U+ECA3

fingeringClarLH3rdFingerHalfClosedLeft

Clarinet fingering chart, left-hand 3rd finger half-closed left

U+ECA4

fingeringClarRH1stFingerHalfClosedLeft

Clarinet fingering chart, right-hand 1st finger half-closed left

U+ECA5

fingeringClarRH2ndFingerHalfClosedLeft

Clarinet fingering chart, right-hand 2nd finger half-closed left

U+ECA6

fingeringClarRH3rdFingerHalfClosedLeft

Clarinet fingering chart, right-hand 3rd finger half-closed left

U+ECA7

fingeringClarLH1stFingerHalfClosedRight

Clarinet fingering chart, left-hand 1st finger half-closed right

U+ECA8

fingeringClarLH2ndFingerHalfClosedRight

Clarinet fingering chart, left-hand 2nd finger half-closed right

U+ECA9

fingeringClarLH3rdFingerHalfClosedRight

Clarinet fingering chart, left-hand 3rd finger half-closed right

U+ECAA

fingeringClarRH1stFingerHalfClosedRight

Clarinet fingering chart, right-hand 1st finger half-closed right

U+ECAB

fingeringClarRH2ndFingerHalfClosedRight

Clarinet fingering chart, right-hand 2nd finger half-closed right

U+ECAC

fingeringClarRH3rdFingerHalfClosedRight

Clarinet fingering chart, right-hand 3rd finger half-closed right

U+ECAD

fingeringClarLH1stFingerQuarterClosedLeft

Clarinet fingering chart, left-hand 1st finger quarter-closed left

U+ECAE

fingeringClarLH2ndFingerQuarterClosedLeft

Clarinet fingering chart, left-hand 2nd finger quarter-closed left

U+ECAF

fingeringClarLH3rdFingerQuarterClosedLeft

Clarinet fingering chart, left-hand 3rd finger quarter-closed left

U+ECB0

fingeringClarRH1stFingerQuarterClosedLeft

Clarinet fingering chart, right-hand 1st finger quarter-closed left

U+ECB1

fingeringClarRH2ndFingerQuarterClosedLeft

Clarinet fingering chart, right-hand 2nd finger quarter-closed left

U+ECB2

fingeringClarRH3rdFingerQuarterClosedLeft

Clarinet fingering chart, right-hand 3rd finger quarter-closed left

U+ECB3

fingeringClarLH1stFingerQuarterClosedRight

Clarinet fingering chart, left-hand 1st finger quarter-closed right

U+ECB4

fingeringClarLH2ndFingerQuarterClosedRight

Clarinet fingering chart, left-hand 2nd finger quarter-closed right

U+ECB5

fingeringClarLH3rdFingerQuarterClosedRight

Clarinet fingering chart, left-hand 3rd finger quarter-closed right

U+ECB6

fingeringClarRH1stFingerQuarterClosedRight

Clarinet fingering chart, right-hand 1st finger quarter-closed right

U+ECB7

fingeringClarRH2ndFingerQuarterClosedRight

Clarinet fingering chart, right-hand 2nd finger quarter-closed right

U+ECB8

fingeringClarRH3rdFingerQuarterClosedRight

Clarinet fingering chart, right-hand 3rd finger quarter-closed right

U+ECB9

fingeringClarRegisterTrill

Clarinet fingering chart, register trill

U+ECBA

fingeringClarLHThumbTrill

Clarinet fingering chart, left-hand thumb trill

U+ECBB

fingeringClarLHATrill

Clarinet fingering chart, left-hand A trill

U+ECBC

fingeringClarLHGSharpTrill

Clarinet fingering chart, left-hand G sharp trill

U+ECBD

fingeringClarLH1stFingerTrill

Clarinet fingering chart, left-hand 1st finger trill

U+ECBE

fingeringClarLH2ndFingerTrill

Clarinet fingering chart, left-hand 2nd finger trill

U+ECBF

fingeringClarLHEFlatTrill

Clarinet fingering chart, left-hand E flat trill

U+ECC0

fingeringClarLH3rdFingerTrill

Clarinet fingering chart, left-hand 3rd finger trill

U+ECC1

fingeringClarLHCSharpTrill

Clarinet fingering chart, left-hand C sharp trill

U+ECC2

fingeringClarLHFTrill

Clarinet fingering chart, left-hand F trill

U+ECC3

fingeringClarLHGSharpAltTrill

Clarinet fingering chart, left-hand G sharp alt. trill

U+ECC4

fingeringClarLHETrill

Clarinet fingering chart, left-hand E trill

U+ECC5

fingeringClarRH1stSideTrill

Clarinet fingering chart, right-hand 1st side trill

U+ECC6

fingeringClarRH2ndSideTrill

Clarinet fingering chart, right-hand 2nd side trill

U+ECC7

fingeringClarRH3rdSideTrill

Clarinet fingering chart, right-hand 3rd side trill

U+ECC8

fingeringClarRH4thSideTrill

Clarinet fingering chart, right-hand 4th side trill

U+ECC9

fingeringClarRH1stFingerTrill

Clarinet fingering chart, right-hand 1st finger trill

U+ECCA

fingeringClarRH2ndFingerTrill

Clarinet fingering chart, right-hand 2nd finger trill

U+ECCB

fingeringClarRHBTrill

Clarinet fingering chart, right-hand B trill

U+ECCC

fingeringClarRH3rdFingerTrill

Clarinet fingering chart, right-hand 3rd finger trill

U+ECCD

fingeringClarRHFSharpTrill

Clarinet fingering chart, right-hand F sharp trill

U+ECCE

fingeringClarRHGSharpTrill

Clarinet fingering chart, right-hand G sharp trill

U+ECCF

fingeringClarRHETrill

Clarinet fingering chart, right-hand E trill

U+ECD0

fingeringClarRHFTrill

Clarinet fingering chart, right-hand F trill

U+ECD1

fingeringClarBassEFlatTrill

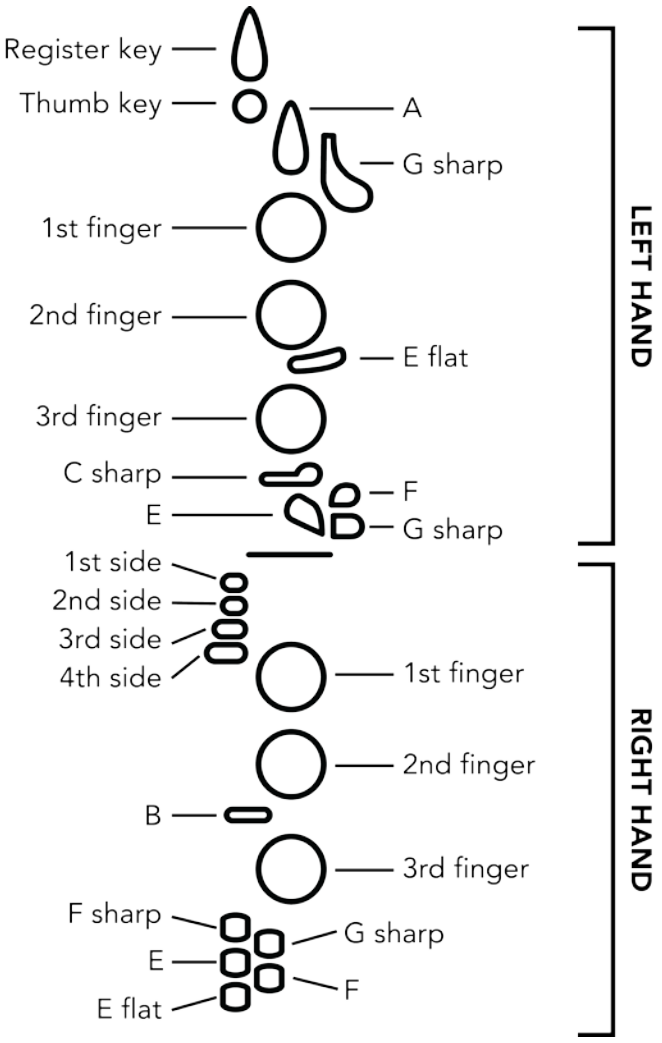
Clarinet fingering chart, bass clarinet E flat trill

Implementation notes

All of the glyphs in this range should have zero width, with all glyphs registered so that they overlay correctly (see examples below).

To construct a fingering chart, first use **fingeringClarChart** to produce an empty chart for clarinet. To add the low E flat key found on the bass clarinet, next use **fingeringClarBassEFlatOpen**. To add closed, half-closed, quarter-closed or trill keys to the chart, simply add the relevant glyphs at the same position.

The following diagram shows the disposition of keys in the blank chart.



Here are a couple of examples of complete fingering charts. Note that they have been rotated counter-clockwise by 90 degrees:

C: **fingeringClarChart**, **fingeringClarLHRegisterClosed**, **fingeringClarLH1stFingerClosed**, **fingeringClarLH2ndFingerClosed**, **fingeringClarLH3rdFingerClosed**

High E: **fingeringClarChart**, **fingeringClarLHThumbClosed**, **fingeringClarLHRegisterClosed**, **fingeringClarLH2ndFingerClosed**, **fingeringClarLH3rdFingerClosed**, **fingeringClarRHGSharpClosed**

Fingering chart for oboe (U+ECE0–U+ED2F)

U+ECE0

fingeringOboeChart

Oboe fingering chart, all open

U+ECE1

fingeringOboeLH3rdOctaveClosed

Oboe fingering chart, left-hand 3rd octave closed

U+ECE2

fingeringOboeLH1stOctaveClosed

Oboe fingering chart, left-hand 1st octave closed

U+ECE3

fingeringOboeLH1stFingerClosed

Oboe fingering chart, left-hand 1st finger closed

U+ECE4

fingeringOboeLH2ndOctaveClosed

Oboe fingering chart, left-hand 2nd octave closed

U+ECE5

fingeringOboeLHBTrillClosed

Oboe fingering chart, left-hand B trill closed

U+ECE6

fingeringOboeLHDTrillClosed

Oboe fingering chart, left-hand D trill closed

U+ECE7

fingeringOboeLH2ndFingerClosed

Oboe fingering chart, left-hand 2nd finger closed

U+ECE8

fingeringOboeLHCSharpTrillClosed

Oboe fingering chart, left-hand C sharp trill closed

U+ECE9

fingeringOboeLH3rdFingerClosed

Oboe fingering chart, left-hand 3rd finger closed

U+ECEA

fingeringOboeLHGSharpClosed

Oboe fingering chart, left-hand G sharp closed

U+ECEB

fingeringOboeLHLowBClosed

Oboe fingering chart, left-hand low B closed

U+ECEC

fingeringOboeLHEFlatClosed

Oboe fingering chart, left-hand E flat closed

U+ECED

fingeringOboeLHFClosed

Oboe fingering chart, left-hand F closed

U+ECEE

fingeringOboeLHLowBFlatClosed

Oboe fingering chart, left-hand low B flat closed

U+ECEF

fingeringOboeRHAClosed

Oboe fingering chart, right-hand A closed

U+ECF0

fingeringOboeRHGSharpClosed

Oboe fingering chart, right-hand G sharp closed

U+ECF1

fingeringOboeRH1stFingerClosed

Oboe fingering chart, right-hand 1st finger closed

U+ECF2

fingeringOboeRHDTrillClosed

Oboe fingering chart, right-hand D trill closed

U+ECF3

fingeringOboeRH2ndFingerClosed

Oboe fingering chart, right-hand 2nd finger closed

U+ECF4

fingeringOboeRHFClosed

Oboe fingering chart, right-hand F closed

U+ECF5

fingeringOboeRH3rdFingerClosed

Oboe fingering chart, right-hand 3rd finger closed

U+ECF6

fingeringOboeRHCBananaClosed

Oboe fingering chart, right-hand C banana closed

U+ECF7

fingeringOboeRHLowCClosed

Oboe fingering chart, right-hand low C closed

U+ECF8

fingeringOboeRHLowCSharpClosed

Oboe fingering chart, right-hand low C sharp closed

U+ECF9

fingeringOboeRHLowEFlatKeyClosed

Oboe fingering chart, right-hand low E flat key closed

U+ECFA

fingeringOboeLH1stFingerRingOnly

Oboe fingering chart, left-hand 1st finger ring only

U+ECFB

fingeringOboeLH2ndFingerRingOnly

Oboe fingering chart, left-hand 2nd finger ring only

U+ECFC

fingeringOboeLH3rdFingerRingOnly

Oboe fingering chart, left-hand 3rd finger ring only

U+ECFD

fingeringOboeRH1stFingerRingOnly

Oboe fingering chart, right-hand 1st finger ring only

U+ECFE

fingeringOboeRH2ndFingerRingOnly

Oboe fingering chart, right-hand 2nd finger ring only

U+ECFF

fingeringOboeRH3rdFingerRingOnly

Oboe fingering chart, right-hand 3rd finger ring only

U+ED00

fingeringOboeLH1stFingerHalfClosed

Oboe fingering chart, left-hand 1st finger half-closed

U+ED01

fingeringOboeLH2ndFingerHalfClosedLeft

Oboe fingering chart, left-hand 2nd finger half-closed (left)

U+ED02

fingeringOboeLH3rdFingerHalfClosedLeft

Oboe fingering chart, left-hand 3rd finger half-closed (left)

U+ED03

fingeringOboeRH1stFingerHalfClosedLeft

Oboe fingering chart, right-hand 1st finger half-closed (left)

U+ED04

fingeringOboeRH2ndFingerHalfClosedLeft

Oboe fingering chart, right-hand 2nd finger half-closed (left)

U+ED05

fingeringOboeRH3rdFingerHalfClosedLeft

Oboe fingering chart, right-hand 3rd finger half-closed (left)

U+ED06

fingeringOboeLH2ndFingerHalfClosedRight

Oboe fingering chart, left-hand 2nd finger half-closed (right)

U+ED07

fingeringOboeLH3rdFingerHalfClosedRight

Oboe fingering chart, left-hand 3rd finger half-closed (right)

U+ED08

fingeringOboeRH1stFingerHalfClosedRight

Oboe fingering chart, right-hand 1st finger half-closed (right)

U+ED09

fingeringOboeRH2ndFingerHalfClosedRight

Oboe fingering chart, right-hand 2nd finger half-closed right

U+ED0A

fingeringOboeRH3rdFingerHalfClosedRight

Oboe fingering chart, right-hand 3rd finger half-closed (right)

U+ED0B

fingeringOboeLH2ndFingerQuarterClosedLeft

Oboe fingering chart, left-hand 2nd finger quarter-closed (left)

U+ED0C

fingeringOboeLH3rdFingerQuarterClosedLeft

Oboe fingering chart, left-hand 3rd finger quarter-closed (left)

U+ED0D

fingeringOboeRH1stFingerQuarterClosedLeft

Oboe fingering chart, right-hand 1st finger quarter-closed (left)

U+ED0E

fingeringOboeRH2ndFingerQuarterClosedLeft

Oboe fingering chart, right-hand 2nd finger quarter-closed (left)

U+ED0F

fingeringOboeRH3rdFingerQuarterClosedLeft

Oboe fingering chart, right-hand 3rd finger quarter-closed (left)

U+ED10

fingeringOboeLH2ndFingerQuarterClosedRight

Oboe fingering chart, left-hand 2nd finger quarter-closed (right)

U+ED11

fingeringOboeLH3rdFingerQuarterClosedRight

Oboe fingering chart, left-hand 3rd finger quarter-closed (right)

U+ED12

fingeringOboeRH1stFingerQuarterClosedRight

Oboe fingering chart, right-hand 1st finger quarter-closed (right)

U+ED13

fingeringOboeRH2ndFingerQuarterClosedRight

Oboe fingering chart, right-hand 2nd finger quarter-closed (right)

U+ED14

fingeringOboeRH3rdFingerQuarterClosedRight

Oboe fingering chart, right-hand 3rd finger quarter-closed (right)

U+ED15

fingeringOboeLH3rdOctaveTrill

Oboe fingering chart, left-hand 3rd octave trill

U+ED16

fingeringOboeLH1stOctaveTrill

Oboe fingering chart, left-hand 1st octave trill

U+ED17

fingeringOboeLH1stFingerTrill

Oboe fingering chart, left-hand 1st finger trill

U+ED18

fingeringOboeLH2ndOctaveTrill

Oboe fingering chart, left-hand 2nd octave trill

U+ED19

fingeringOboeLHBTrillTrill

Oboe fingering chart, left-hand B trill key trill

U+ED1A

fingeringOboeLHDTrillTrill

Oboe fingering chart, left-hand D trill key trill

U+ED1B

fingeringOboeLH2ndFingerTrill

Oboe fingering chart, left-hand 2nd finger trill

U+ED1C

fingeringOboeLHCSharpTrillTrill

Oboe fingering chart, left-hand C sharp trill key trill

U+ED1D

fingeringOboeLH3rdFingerTrill

Oboe fingering chart, left-hand 3rd finger trill

U+ED1E

fingeringOboeLHGSharpTrill

Oboe fingering chart, left-hand G sharp trill

U+ED1F

fingeringOboeLHLowBTrill

Oboe fingering chart, left-hand low B trill

U+ED20

fingeringOboeLHEFlatTrill

Oboe fingering chart, left-hand E flat trill

U+ED21

fingeringOboeLHFTrill

Oboe fingering chart, left-hand F trill

U+ED22

fingeringOboeLHLowBFlatTrill

Oboe fingering chart, left-hand low B flat trill

U+ED23

fingeringOboeRHATrill

Oboe fingering chart, right-hand A trill

U+ED24

fingeringOboeRHGSharpTrill

Oboe fingering chart, right-hand G sharp trill

U+ED25

fingeringOboeRH1stFingerTrill

Oboe fingering chart, right-hand 1st finger trill

U+ED26

fingeringOboeRHDTrillTrill

Oboe fingering chart, right-hand D trill key trill

U+ED27

fingeringOboeRH2ndFingerTrill

Oboe fingering chart, right-hand 2nd finger trill

U+ED28

fingeringOboeRHFTrill

Oboe fingering chart, right-hand F trill

U+ED29

fingeringOboeRH3rdFingerTrill

Oboe fingering chart, right-hand 3rd finger trill

U+ED2A

fingeringOboeRHCBananaTrill

Oboe fingering chart, right-hand C banana trill

U+ED2B

fingeringOboeRHLowCTrill

Oboe fingering chart, right-hand low C trill

U+ED2C

fingeringOboeRHLowCSharpTrill

Oboe fingering chart, right-hand low C sharp trill

U+ED2D

fingeringOboeRHLowEFlatKeyTrill

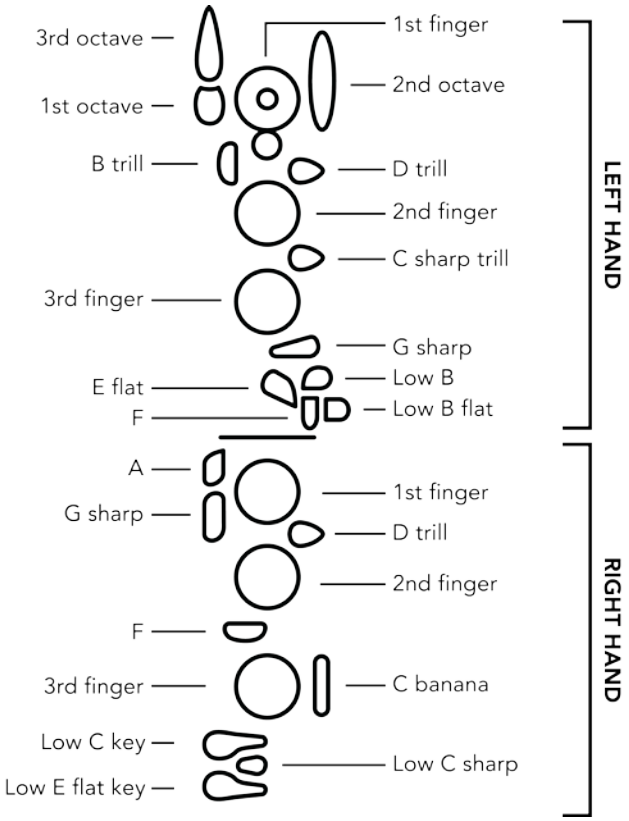
Oboe fingering chart, right-hand low E flat key trill

Implementation notes

All of the glyphs in this range should have zero width, with all glyphs registered so that they overlay correctly (see examples below).

To construct a fingering chart, first use **fingeringOboeChart** to produce an empty chart. To add closed, half-closed, quarter-closed or trill keys to the chart, simply add the relevant glyphs at the same position.

The following diagram shows the disposition of keys in the blank chart.



Here are a couple of examples of complete fingering charts. Note that they have been rotated counter-clockwise by 90 degrees:

G: **fingeringOboeChart**, **fingeringOboeLH1stFingerClosed**, **fingeringOboeLH2ndFingerClosed**, **fingeringOboeLH3rdFingerClosed**

E flat: **fingeringOboeChart**, **fingeringOboeLH1stFingerClosed**, **fingeringOboeLH2ndFingerClosed**, **fingeringOboeLH3rdFingerClosed**, **fingeringOboeLHEFlatClosed**, **fingeringOboeRH1stFingerClosed**, **fingeringOboeRH2ndFingerClosed**, **fingeringOboeRH3rdFingerClosed**

Fingering chart for bassoon (U+ED30–U+ED7F)

U+ED30

fingeringBsnChart

Bassoon fingering chart, all open

U+ED31

fingeringBsnChartThumbsHands

Bassoon fingering chart, thumb/hand separators

U+ED32

fingeringBsnLHHighEClosed

Bassoon fingering chart, left-hand high E closed

U+ED33

fingeringBsnLH1stFingerClosed

Bassoon fingering chart, left-hand 1st finger closed

U+ED34

fingeringBsnLHHighEFlatClosed

Bassoon fingering chart, left-hand high E flat closed

U+ED35

fingeringBsnLH2ndFingerClosed

Bassoon fingering chart, left-hand 2nd finger closed

U+ED36

fingeringBsnLH3rdFingerRingClosed

Bassoon fingering chart, left-hand 3rd finger ring closed

U+ED37

fingeringBsnLH3rdFingerClosed

Bassoon fingering chart, left-hand 3rd finger closed

U+ED38

fingeringBsnLHLowEFlatClosed

Bassoon fingering chart, left-hand low E flat closed

U+ED39

fingeringBsnLHLowDFlatClosed

Bassoon fingering chart, left-hand low D flat closed

U+ED3A

fingeringBsnRHCSharpTrillClosed

Bassoon fingering chart, right-hand C sharp trill key closed

U+ED3B

fingeringBsnRH1stFingerClosed

Bassoon fingering chart, right-hand 1st finger closed

U+ED3C

fingeringBsnRH2ndFingerRingClosed

Bassoon fingering chart, right-hand 2nd finger ring closed

U+ED3D

fingeringBsnRH2ndFingerClosed

Bassoon fingering chart, right-hand 2nd finger closed

U+ED3E

fingeringBsnRHBFlatTrillClosed

Bassoon fingering chart, right-hand B flat trill key closed

U+ED3F

fingeringBsnRHLowGClosed

Bassoon fingering chart, right-hand low G closed

U+ED40

fingeringBsnRHLowFClosed

Bassoon fingering chart, right-hand low F closed

U+ED41

fingeringBsnRHFSharpClosed

Bassoon fingering chart, right-hand alt. F sharp closed

U+ED42

fingeringBsnRHAFlatClosed

Bassoon fingering chart, right-hand A flat closed

U+ED43

fingeringBsnLTHighDClosed

Bassoon fingering chart, left thumb high D closed

U+ED44

fingeringBsnLTHighBClosed

Bassoon fingering chart, left thumb high B closed

U+ED45

fingeringBsnLTHighAClosed

Bassoon fingering chart, left thumb high A closed

U+ED46

fingeringBsnLTCSharpClosed

Bassoon fingering chart, left thumb C sharp closed

U+ED47

fingeringBsnLTWhisperKeyClosed

Bassoon fingering chart, left thumb whisper key closed

U+ED48

fingeringBsnLTLowBFlatClosed

Bassoon fingering chart, left thumb low B flat closed

U+ED49

fingeringBsnLTLowBClosed

Bassoon fingering chart, left thumb low B closed

U+ED4A

fingeringBsnLTLowCClosed

Bassoon fingering chart, left thumb low C closed

U+ED4B

fingeringBsnLTLowDClosed

Bassoon fingering chart, left thumb low D closed

U+ED4C

fingeringBsnRTBFlatClosed

Bassoon fingering chart, right thumb B flat closed

U+ED4D

fingeringBsnRTLowEClosed

Bassoon fingering chart, right thumb low E closed

U+ED4E

fingeringBsnRTLowFSharpClosed

Bassoon fingering chart, right thumb low F sharp closed

U+ED4F

fingeringBsnRTAFlatClosed

Bassoon fingering chart, right thumb A flat closed

U+ED50

fingeringBsnLH1stFingerHalfClosed

Bassoon fingering chart, left-hand 1st finger half-closed

U+ED51

fingeringBsnLH2ndFingerHalfClosed

Bassoon fingering chart, left-hand 2nd finger half-closed

U+ED52

fingeringBsnLH3rdFingerHalfClosed

Bassoon fingering chart, left-hand 3rd finger half-closed

U+ED53

fingeringBsnRH1stFingerHalfClosed

Bassoon fingering chart, right-hand 1st finger half-closed

U+ED54

fingeringBsnRH2ndFingerHalfClosed

Bassoon fingering chart, right-hand 2nd finger half-closed

U+ED55

fingeringBsnLH1stFingerQuarterClosed

Bassoon fingering chart, left-hand 1st finger quarter-closed

U+ED56

fingeringBsnLH2ndFingerQuarterClosed

Bassoon fingering chart, left-hand 2nd finger quarter-closed

U+ED57

fingeringBsnLH3rdFingerQuarterClosed

Bassoon fingering chart, left-hand 3rd finger quarter-closed

U+ED58

fingeringBsnRH1stFingerQuarterClosed

Bassoon fingering chart, right-hand 1st finger quarter-closed

U+ED59

fingeringBsnRH2ndFingerQuarterClosed

Bassoon fingering chart, right-hand 2nd finger quarter-closed

U+ED5A

fingeringBsnLH1stFingerThreeQuartersClosed

Bassoon fingering chart, left-hand 1st finger three-quarters closed

U+ED5B

fingeringBsnLH2ndFingerThreeQuartersClosed

Bassoon fingering chart, left-hand 2nd finger hole three-quarters closed

U+ED5C

fingeringBsnLH3rdFingerThreeQuartersClosed

Bassoon fingering chart, left-hand 3rd finger three-quarters closed

U+ED5D

fingeringBsnRH1stFingerThreeQuartersClosed

Bassoon fingering chart, right-hand 1st finger three-quarters closed

U+ED5E

fingeringBsnRH2ndFingerThreeQuartersClosed

Bassoon fingering chart, right-hand 2nd finger three-quarters closed

U+ED5F

fingeringBsnLHHighETrill

Bassoon fingering chart, left-hand high E trill

U+ED60

fingeringBsnLH1stFingerTrill

Bassoon fingering chart, left-hand 1st finger trill

U+ED61

fingeringBsnLHHighEFlatTrill

Bassoon fingering chart, left-hand high E flat trill

U+ED62

fingeringBsnLH2ndFingerTrill

Bassoon fingering chart, left-hand 2nd finger trill

U+ED63

fingeringBsnLH3rdFingerRingTrill

Bassoon fingering chart, left-hand 3rd finger ring trill

U+ED64

fingeringBsnLHLowEFlatTrill

Bassoon fingering chart, left-hand low E flat trill

U+ED65

fingeringBsnLHLowDFlatTrill

Bassoon fingering chart, left-hand low D flat trill

U+ED66

fingeringBsnRHCSharpTrillTrill

Bassoon fingering chart, right-hand C sharp trill key trill

U+ED67

fingeringBsnRH1stFingerTrill

Bassoon fingering chart, right-hand 1st finger trill

U+ED68

fingeringBsnRH2ndFingerTrill

Bassoon fingering chart, right-hand 2nd finger trill

U+ED69

fingeringBsnRHBFlatTrillTrill

Bassoon fingering chart, right-hand B flat trill key trill

U+ED6A

fingeringBsnRHLowGTrill

Bassoon fingering chart, right-hand low G trill

U+ED6B

fingeringBsnRHLowFTrill

Bassoon fingering chart, right-hand low F trill

U+ED6C

fingeringBsnRHFSharpTrill

Bassoon fingering chart, right-hand F sharp trill

U+ED6D

fingeringBsnRHAFlatTrill

Bassoon fingering chart, right-hand A flat trill

U+ED6E

fingeringBsnLTHighDTrill

Bassoon fingering chart, left thumb high D trill

U+ED6F

fingeringBsnLTHighBTrill

Bassoon fingering chart, left thumb high B trill

U+ED70

fingeringBsnLTHighATrill

Bassoon fingering chart, left thumb high A trill

U+ED71

fingeringBsnLTCSharpTrill

Bassoon fingering chart, left thumb C sharp trill

U+ED72

fingeringBsnLTWhisperKeyTrill

Bassoon fingering chart, left thumb whisper key trill

U+ED73

fingeringBsnLTLowBFlatTrill

Bassoon fingering chart, left thumb low B flat trill

U+ED74

fingeringBsnLTLowBTrill

Bassoon fingering chart, left thumb low B trill

U+ED75

fingeringBsnLTLowCTrill

Bassoon fingering chart, left thumb low C trill

U+ED76

fingeringBsnLTLowDTrill

Bassoon fingering chart, left thumb low D trill

U+ED77

fingeringBsnRTBFlatTrill

Bassoon fingering chart, right thumb B flat trill

U+ED78

fingeringBsnRTLowETrill

Bassoon fingering chart, right thumb low E trill

U+ED79

fingeringBsnRTLowFSharpTrill

Bassoon fingering chart, right thumb low F sharp trill

U+ED7A

fingeringBsnRTAFlatTrill

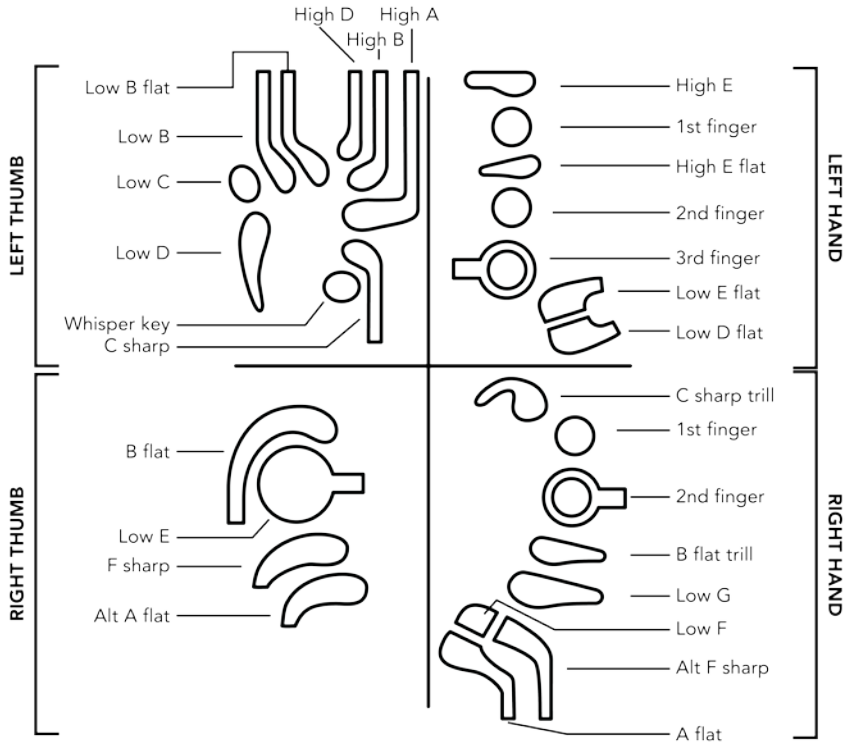
Bassoon fingering chart, right thumb A flat trill

Implementation notes

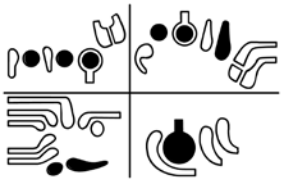
All of the glyphs in this range should have zero width, with all glyphs registered so that they overlay correctly (see examples below).

To construct a fingering chart, first use **fingeringBsnChart** to produce an empty chart. To add the vertical and horizontal separators for hands and thumbs, use **fingeringBsnChartThumbsHands**. To add closed, half-closed, quarter-closed or trill keys to the chart, simply add the relevant glyphs at the same position.

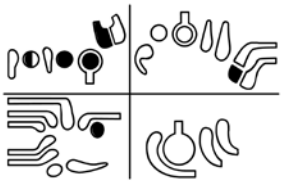
The following diagram shows the disposition of keys in the blank chart.



Here are a couple of examples of complete fingering charts. Note that they have been rotated counter-clockwise by 90 degrees:



C: fingeringBsnChart, fingeringBsnChartThumbsHands, fingeringBsnLH1stFingerClosed, fingeringBsnLH2ndFingerClosed, fingeringBsnLH3rdFingerClosed, fingeringBsnRH1stFingerClosed, fingeringBsnRH2ndFingerClosed, fingeringBsnRHLowGClosed, fingeringBsnLTLowCClosed, fingeringBsnLTLowDClosed, fingeringBsnRTLowEClosed



High G: fingeringBsnChart, fingeringBsnChartThumbsHands, fingeringBsnLH1stFingerHalfClosed, fingeringBsnLH2ndFingerClosed, fingeringBsnLH3rdFingerClosed, fingeringBsnLHLowEFlatClosed, fingeringBsnRH1stFingerClosed, fingeringBsnRHLowFClosed, fingeringBsnLTWhisperKeyClosed

Fingering chart for saxophone (U+ED80–U+EDBF)

U+ED80

fingeringSaxChart

Saxophone fingering chart, all open

U+ED81

fingeringSaxBariLowAOpen

Saxophone fingering chart, baritone low A open

U+ED82

fingeringSaxLHOctaveClosed

Saxophone fingering chart, left-hand octave closed

U+ED83

fingeringSaxLHFrontFClosed

Saxophone fingering chart, left-hand front F closed

U+ED84

fingeringSaxLH1stFingerClosed

Saxophone fingering chart, left-hand 1st finger closed

U+ED85

fingeringSaxLHBFlatClosed

Saxophone fingering chart, left-hand B flat closed

U+ED86

fingeringSaxLH2ndFingerClosed

Saxophone fingering chart, left-hand 2nd finger closed

U+ED87

fingeringSaxLH3rdFingerClosed

Saxophone fingering chart, left-hand 3rd finger closed

U+ED88

fingeringSaxLHEFlatPalmClosed

Saxophone fingering chart, left-hand E flat palm closed

U+ED89

fingeringSaxLHDPalmClosed

Saxophone fingering chart, left-hand D palm closed

U+ED8A

fingeringSaxLHFPalmClosed

Saxophone fingering chart, left-hand F palm closed

U+ED8B

fingeringSaxLHGSharpClosed

Saxophone fingering chart, left-hand G sharp closed

U+ED8C

fingeringSaxLHLowCSharpClosed

Saxophone fingering chart, left-hand low C sharp closed

U+ED8D

fingeringSaxLHLowBClosed

Saxophone fingering chart, left-hand low B closed

U+ED8E

fingeringSaxLHLowBFlatClosed

Saxophone fingering chart, left-hand low B flat closed

U+ED8F

fingeringSaxRHESideClosed

Saxophone fingering chart, right-hand E side closed

U+ED90

fingeringSaxRHCSideClosed

Saxophone fingering chart, right-hand C side closed

U+ED91

fingeringSaxRHBFlatSideClosed

Saxophone fingering chart, right-hand B flat side closed

U+ED92

fingeringSaxRHHighFSharpClosed

Saxophone fingering chart, right-hand high F sharp closed

U+ED93

fingeringSaxRH1stFingerClosed

Saxophone fingering chart, right-hand 1st finger closed

U+ED94

fingeringSaxRH2ndFingerClosed

Saxophone fingering chart, right-hand 2nd finger closed

U+ED95

fingeringSaxRHFSharpAlternateClosed

Saxophone fingering chart, right-hand F sharp alternate closed

U+ED96

fingeringSaxRH3rdFingerClosed

Saxophone fingering chart, right-hand 3rd finger closed

U+ED97

fingeringSaxRHLowEFlatClosed

Saxophone fingering chart, right-hand low E flat closed

U+ED98

fingeringSaxRHLowCClosed

Saxophone fingering chart, right-hand low C closed

U+ED99

fingeringSaxBariLowAClosed

Saxophone fingering chart, baritone low A closed

U+ED9A

fingeringSaxLH1stFingerHalfClosed

Saxophone fingering chart, left-hand 1st finger half-closed

U+ED9B

fingeringSaxLH2ndFingerHalfClosed

Saxophone fingering chart, left-hand 2nd finger half-closed

U+ED9C

fingeringSaxLH3rdFingerHalfClosed

Saxophone fingering chart, left-hand 3rd finger half-closed

U+ED9D

fingeringSaxRH1stFingerHalfClosed

Saxophone fingering chart, right-hand 1st finger half-closed

U+ED9E

fingeringSaxRH2ndFingerHalfClosed

Saxophone fingering chart, right-hand 2nd finger half-closed

U+ED9F

fingeringSaxRH3rdFingerHalfClosed

Saxophone fingering chart, right-hand 3rd finger half-closed

U+EDA0

fingeringSaxLHOctaveTrill

Saxophone fingering chart, left-hand octave trill

U+EDA1

fingeringSaxLHFrontFTrill

Saxophone fingering chart, left-hand front F trill

U+EDA2

fingeringSaxLH1stFingerTrill

Saxophone fingering chart, left-hand 1st finger trill

U+EDA3

fingeringSaxLHBFlatTrill

Saxophone fingering chart, left-hand B flat trill

U+EDA4

fingeringSaxLH2ndFingerTrill

Saxophone fingering chart, left-hand 2nd finger trill

U+EDA5

fingeringSaxLH3rdFingerTrill

Saxophone fingering chart, left-hand 3rd finger trill

U+EDA6

fingeringSaxLHEFlatPalmTrill

Saxophone fingering chart, left-hand E flat palm trill

U+EDA7

fingeringSaxLHDPalmTrill

Saxophone fingering chart, left-hand D palm trill

U+EDA8

fingeringSaxLHFPalmTrill

Saxophone fingering chart, left-hand F palm trill

U+EDA9

fingeringSaxLHGSharpTrill

Saxophone fingering chart, left-hand G sharp trill

U+EDAA

fingeringSaxLHLowCSharpTrill

Saxophone fingering chart, left-hand low C sharp trill

U+EDAB

fingeringSaxLHLowBTrill

Saxophone fingering chart, left-hand low B trill

U+EDAC

fingeringSaxLHLowBFlatTrill

Saxophone fingering chart, left-hand low B flat trill

U+EDAD

fingeringSaxRHESideTrill

Saxophone fingering chart, right-hand E side trill

U+EDAE

fingeringSaxRHCSideTrill

Saxophone fingering chart, right-hand C side trill

U+EDAF

fingeringSaxRHBFlatSideTrill

Saxophone fingering chart, right-hand B flat side trill

U+EDB0

fingeringSaxRHHighFSharpTrill

Saxophone fingering chart, right-hand high F sharp trill

U+EDB1

fingeringSaxRH1stFingerTrill

Saxophone fingering chart, right-hand 1st finger trill

U+EDB2

fingeringSaxRH2ndFingerTrill

Saxophone fingering chart, right-hand 2nd finger trill

U+EDB3

fingeringSaxRHFSharpAlternateTrill

Saxophone fingering chart, right-hand F sharp alternate trill

U+EDB4

fingeringSaxRH3rdFingerTrill

Saxophone fingering chart, right-hand 3rd finger trill

U+EDB5

fingeringSaxRHLowEFlatTrill

Saxophone fingering chart, right-hand low E flat trill

U+EDB6

fingeringSaxRHLowCTrill

Saxophone fingering chart, right-hand low C trill

U+EDB7

fingeringSaxBariLowATrill

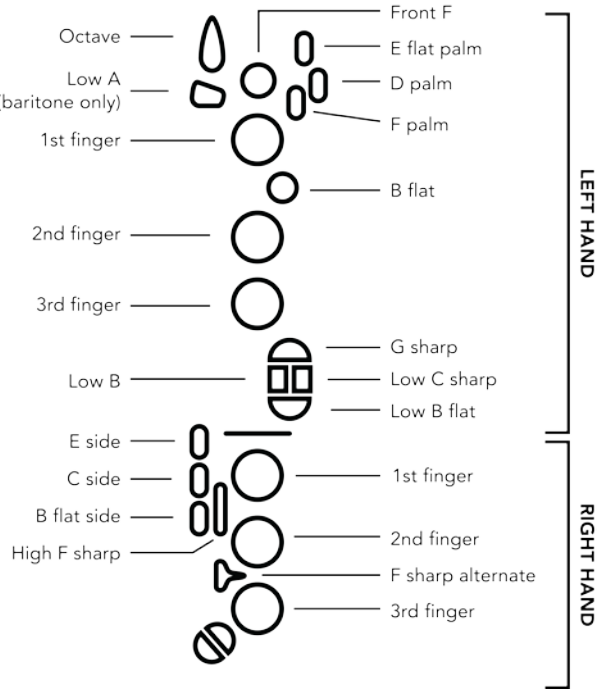
Saxophone fingering chart, baritone low A trill

Implementation notes

All of the glyphs in this range should have zero width, with all glyphs registered so that they overlay correctly (see examples below).

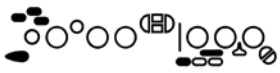
To construct a fingering chart, first use **fingeringSaxChart** to produce an empty chart for soprano, alto or tenor saxophone. To add the low A key found on a baritone saxophone, use **fingeringSaxBariLowAOpen**. To add closed, half-closed, quarter-closed or trill keys to the chart, simply add the relevant glyphs at the same position.

The following diagram shows the disposition of keys in the blank chart.



Here are a couple of examples of complete fingering charts. Note that they have been rotated counter-clockwise by 90 degrees:

D: **fingeringSaxChart**, **fingeringSaxLHOctaveClosed**, **fingeringSaxLH1stFingerClosed**, **fingeringSaxLH2ndFingerClosed**, **fingeringSaxLH3rdFingerClosed**, **fingeringSaxRH1stFingerClosed**, **fingeringSaxRH2ndFingerClosed**, **fingeringSaxRH3rdFingerClosed**



F sharp: **fingeringSaxChart**, **fingeringSaxLHOctaveClosed**, **fingeringSaxLHEFlatPalmClosed**, **fingeringSaxLHDPalmClosed**, **fingeringBsnLHFPalmClosed**, **fingeringSaxRHESideClosed**, **fingeringBsnRHHighFSharpClosed**

Fingering chart for recorder (U+EDC0–U+EDFF)

U+EDC0

fingeringRecChart

Recorder fingering chart, all open

U+EDC1

fingeringRecLHThumbClosed

Recorder fingering chart, left-hand thumb closed

U+EDC2

fingeringRecLH1stFingerClosed

Recorder fingering chart, left-hand 1st finger closed

U+EDC3

fingeringRecLH2ndFingerClosed

Recorder fingering chart, left-hand 2nd finger closed

U+EDC4

fingeringRecLH3rdFingerClosed

Recorder fingering chart, left-hand 3rd finger closed

U+EDC5

fingeringRecRH1stFingerClosed

Recorder fingering chart, right-hand 1st finger closed

U+EDC6

fingeringRecRH1stDoubleHoleLeftClosed

Recorder fingering chart, right-hand 1st double hole left closed

U+EDC7

fingeringRecRH1stDoubleHoleRightClosed

Recorder fingering chart, right-hand 1st double hole right closed

U+EDC8

fingeringRecRH2ndDoubleHoleLeftClosed

Recorder fingering chart, right-hand 2nd double hole left closed

U+EDC9

fingeringRecRH2ndDoubleHoleRightClosed

Recorder fingering chart, right-hand 2nd double hole right closed

U+EDCA

fingeringRecLHThumbHalfClosedLeft

Recorder fingering chart, left-hand thumb half-closed (left)

U+EDCB

fingeringRecLH1stFingerHalfClosedLeft

Recorder fingering chart, left-hand 1st finger half-closed (left)

U+EDCC

fingeringRecLH2ndFingerHalfClosedLeft

Recorder fingering chart, left-hand 2nd finger half-closed (left)

U+EDCD

fingeringRecLH3rdFingerHalfClosedLeft

Recorder fingering chart, left-hand 3rd finger half-closed (left)

U+EDCE

fingeringRecRH1stFingerHalfClosedLeft

Recorder fingering chart, right-hand 1st finger half-closed (left)

U+EDCF

fingeringRecRH1stDoubleHoleLeftHalfClosedLeft

Recorder fingering chart, right-hand 1st double hole left half-closed (left)

U+EDD0

fingeringRecRH1stDoubleHoleRightHalfClosedLeft

Recorder fingering chart, right-hand 1st double hole right half-closed (left)

U+EDD1

fingeringRecRH2ndDoubleHoleLeftHalfClosedLeft

Recorder fingering chart, right-hand 2nd double hole left half-closed (left)

U+EDD2

fingeringRecRH2ndDoubleHoleRightHalfClosedLeft

Recorder fingering chart, right-hand 2nd double hole right half-closed (left)

U+EDD3

fingeringRecLHThumbHalfClosedRight

Recorder fingering chart, left-hand thumb half-closed (right)

U+EDD4

fingeringRecLH1stFingerHalfClosedRight

Recorder fingering chart, left-hand 1st finger half-closed (right)

U+EDD5

fingeringRecLH2ndFingerHalfClosedRight

Recorder fingering chart, left-hand 2nd finger half-closed (right)

U+EDD6

fingeringRecLH3rdFingerHalfClosedRight

Recorder fingering chart, left-hand 3rd finger half-closed (right)

U+EDD7

fingeringRecRH1stFingerHalfClosedRight

Recorder fingering chart, right-hand 1st finger half-closed (right)

U+EDD8

fingeringRecRH1stDoubleHoleLeftHalfClosedRight

Recorder fingering chart, right-hand 1st double hole left half-closed (right)

U+EDD9

fingeringRecRH1stDoubleHoleRightHalfClosedRight

Recorder fingering chart, right-hand 1st double hole right half-closed (right)

U+EDDA

fingeringRecRH2ndDoubleHoleLeftHalfClosedRight

Recorder fingering chart, right-hand 2nd double hole left half-closed (right)

U+EDDB

fingeringRecRH2ndDoubleHoleRightHalfClosedRight

Recorder fingering chart, right-hand 2nd double hole right half-closed (right)

U+EDDC

fingeringRecLHThumbQuarterClosedLeft

Recorder fingering chart, left-hand thumb quarter-closed (left)

U+EDDD

fingeringRecLH1stFingerQuarterClosedLeft

Recorder fingering chart, left-hand 1st finger quarter-closed (left)

U+EDDE

fingeringRecLH2ndFingerQuarterClosedLeft

Recorder fingering chart, left-hand 2nd finger quarter-closed (left)

U+EDDF

fingeringRecLH3rdFingerQuarterClosedLeft

Recorder fingering chart, left-hand 3rd finger quarter-closed (left)

U+EDE0

fingeringRecRH1stFingerQuarterClosedLeft

Recorder fingering chart, right-hand 1st finger quarter-closed (left)

U+EDE1

fingeringRecRH1stDoubleHoleLeftQuarterClosedLeft

Recorder fingering chart, right-hand 1st double hole left quarter-closed (left)

U+EDE2

fingeringRecRH1stDoubleHoleRightQuarterClosedLeft

Recorder fingering chart, right-hand 1st double hole right quarter-closed (left)

U+EDE3

fingeringRecRH2ndDoubleHoleLeftQuarterClosedLeft

Recorder fingering chart, right-hand 2nd double hole left quarter-closed (left)

U+EDE4

fingeringRecRH2ndDoubleHoleRightQuarterClosedLeft

Recorder fingering chart, right-hand 2nd double hole right quarter-closed (left)

U+EDE5

fingeringRecLHThumbQuarterClosedRight

Recorder fingering chart, left-hand thumb quarter-closed (right)

U+EDE6

fingeringRecLH1stFingerQuarterClosedRight

Recorder fingering chart, left-hand 1st finger quarter-closed (right)

U+EDE7

fingeringRecLH2ndFingerQuarterClosedRight

Recorder fingering chart, left-hand 2nd finger quarter-closed (right)

U+EDE8

fingeringRecLH3rdFingerQuarterClosedRight

Recorder fingering chart, left-hand 3rd finger quarter-closed (right)

U+EDE9

fingeringRecRH1stFingerQuarterClosedRight

Recorder fingering chart, right-hand 1st finger quarter-closed (right)

U+EDEA

fingeringRecRH1stDoubleHoleLeftQuarterClosedRight

Recorder fingering chart, right-hand 1st double hole left quarter-closed (right)

U+EDEB

fingeringRecRH1stDoubleHoleRightQuarterClosedRight

Recorder fingering chart, right-hand 1st double hole right quarter-closed (right)

U+EDEC

fingeringRecRH2ndDoubleHoleLeftQuarterClosedRight

Recorder fingering chart, right-hand 2nd double hole left quarter-closed (right)

U+EDED

fingeringRecRH2ndDoubleHoleRightQuarterClosedRight

Recorder fingering chart, right-hand 2nd double hole right quarter-closed (right)

U+EDEE

fingeringRecLHThumbTrill

Recorder fingering chart, left-hand thumb trill

U+EDEF

fingeringRecLH1stFingerTrill

Recorder fingering chart, left-hand 1st finger trill

U+EDF0

fingeringRecLH2ndFingerTrill

Recorder fingering chart, left-hand 2nd finger trill

U+EDF1

fingeringRecLH3rdFingerTrill

Recorder fingering chart, left-hand 3rd finger trill

U+EDF2

fingeringRecRH1stFingerTrill

Recorder fingering chart, right-hand 1st finger trill

U+EDF3

fingeringRecRH1stDoubleHoleLeftTrill

Recorder fingering chart, right-hand 1st double hole left trill

U+EDF4

fingeringRecRH1stDoubleHoleRightTrill

Recorder fingering chart, right-hand 1st double hole right trill

U+EDF5

fingeringRecRH2ndDoubleHoleLeftTrill

Recorder fingering chart, right-hand 2nd double hole left trill

U+EDF6

fingeringRecRH2ndDoubleHoleRightTrill

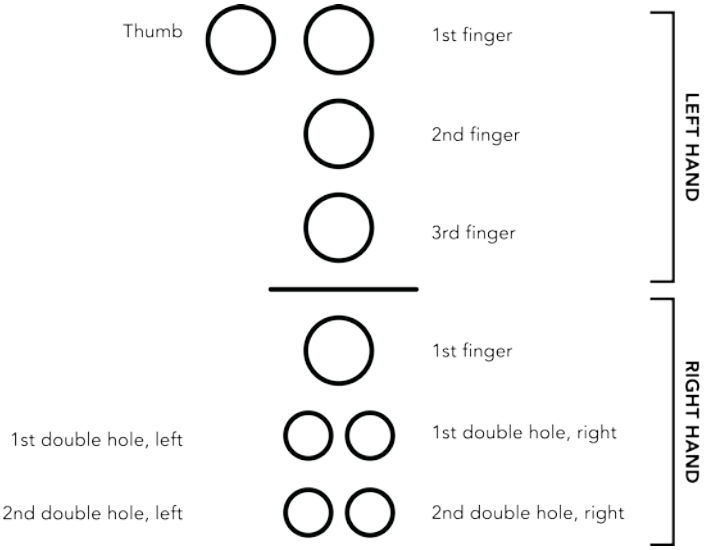
Recorder fingering chart, right-hand 2nd double hole right trill

Implementation notes

All of the glyphs in this range should have zero width, with all glyphs registered so that they overlay correctly (see examples below).

To construct a fingering chart, first use **fingeringRecChart** to produce an empty chart. To add closed, half-closed, quarter-closed or trill keys to the chart, simply add the relevant glyphs at the same position.

The following diagram shows the disposition of keys in the blank chart.



Here are a couple of examples of complete fingering charts. Note that they have been rotated counter-clockwise by 90 degrees:

C: **fingeringRecChart**, **fingeringRecLHThumbClosed**, **fingeringRecLH2ndFingerClosed**

G: **fingeringRecChart**, **fingeringRecLHThumbClosed**, **fingeringRecLH1stFingerClosed**, **fingeringRecLH2ndFingerClosed**, **fingeringRecLH3rdFingerClosed**

Kodály hand signs (U+EE00–U+EE0F)

U+EE00

kodalyHandDo

Do hand sign

U+EE01

kodalyHandRe

Re hand sign

U+EE02

kodalyHandMi

Mi hand sign

U+EE03

kodalyHandFa

Fa hand sign

U+EE04

kodalyHandSo

So hand sign

U+EE05

kodalyHandLa

La hand sign

U+EE06

kodalyHandTi

Ti hand sign

Simplified Music Notation (U+EE10–U+EE1F)

U+EE10

smnSharp

Sharp

U+EE11

smnSharpWhite

Sharp (white)

U+EE12

smnFlat

Flat

U+EE13

smnFlatWhite

Flat (white)

U+EE14

smnHistorySharp

Sharp history sign

U+EE15

smnHistoryDoubleSharp

Double sharp history sign

U+EE16

smnHistoryFlat

Flat history sign

U+EE17

smnHistoryDoubleFlat

Double flat history sign

U+EE18

smnNatural

Natural (N)

Implementation notes

Simplified Music Notation is a notation system in which the usual accidentals symbols are replaced with noteheads of different shapes. Double sharps, double flats and sharps and flats produced by playing white notes on the piano (e.g. B sharp and E sharp) are notated using “history signs.”

For more information about Simplified Music Notation, visit http://www.simplifiedmusicnotation.org/

Miscellaneous symbols (U+EE20–U+EE2F)

U+EE20

miscDoNotPhotocopy

Do not photocopy

U+EE21

miscDoNotCopy

Do not copy

U+EE22

miscEyeglasses

Eyeglasses