

Obscure accidentals and figured-bass symbols

Gavin Jared Bala, gavin.jared, gmail.com

Kirk Miller, kirk.miller, gmail.com

2025 April 19

The symbols in this proposals are attested, but we have not found sufficient evidence of current need to formally propose them. We cover them in this document for information exchange and the possibility of a future proposal. If many of them are accepted, they would require a second supplemental block of musical symbols.

Additional figured bass digits

These were excluded from our proposal [L2/23-277 Unicode request for digits with slashes used in figured bass](#) because they are not needed in modern scores. However, they are used in historical sources, as well as in modern treatises discussing historical practice.

Arnold (1965) forms flattening figures by passing flat signs through the digit, i.e. <2_♭ 4_♭ 5[♭] 6[♭] 7[♭] 9_♭>, and mentions that natural signs were used in the same way (p. 885), though he does not illustrate the equivalent figures with naturals. Sharp signs were not used in this way, as a simple slash was substituted: <1 3 8>. The hooked slash seen in some flattening figures is simply a graphic variant of the flat sign that was used by 18th-century publishers such as Estienne Roger of Amsterdam.

- 1 MUSICAL SYMBOL DIGIT ONE WITH SLASH
- 3 MUSICAL SYMBOL DIGIT THREE WITH SLASH
- 8 MUSICAL SYMBOL DIGIT EIGHT WITH SLASH
- 2_♭ MUSICAL SYMBOL DIGIT TWO WITH FLAT
- 4_♭ MUSICAL SYMBOL DIGIT FOUR WITH FLAT
- 5[♭] MUSICAL SYMBOL DIGIT FIVE WITH FLAT
- 6[♭] MUSICAL SYMBOL DIGIT SIX WITH FLAT
- 7[♭] MUSICAL SYMBOL DIGIT SEVEN WITH FLAT
- 9_♭ MUSICAL SYMBOL DIGIT NINE WITH FLAT

Anmerkung: Die völlige Erläuterung über voriges findet man in folgender
 Liste des Sitzes aller Characterisirten Intervallen:

*1 oder 1: die übermäßige Prime auf I. oder V. in Dur.
 Also auch *8 oder 8.

2: die übermäßige Secunde auf VI. im Moll.
 Also auch 9.

3: die verminderte Terz auf der erhöhten VII. oder III. im Moll.
 *, oder *3: die große Terz auf V. beeder Tonarten.

8: die übermäßige Terz auf der erniedrigten II. im Moll.

4: die verminderte Quarte auf der erhöhten VII. im Moll.

4: die übermäßige Quarte auf III. in beeden Tonarten.

5: die verminderte Quinte (alleine angezeigt) auf springender {VII. im Dur.}
 {II. im Moll.}

5: die übermäßige Quinte auf III. im Moll.

6: die verminderte Sexte auf der erhöhten III. im Moll.

6: die übermäßige Sexte auf der VI. im Moll.

7: die verminderte Septime auf der erhöhten {VII.}
 {III.} im Moll.

8: die verminderte Octave auf der erhöhten III.

Fig. 1. Johannes Schröter, *Deutliche Anweisung zum General-Bass* (1772). J. H. Gross, Halberstadt, p. 37. 1-slash, 3-slash, and 8-slash all occur.

but after 2, 4, 5, 6, as in the figuring b_7^b . The idea was probably to put it where there was most room; it was the practice in some Basses (e.g. in many of the publications of Estienne Roger of Amsterdam) to let the accidental bisect the nearest approach to an horizontal stroke presented by the figure in question, as 2_b , 4_b , 5_b , 6_b , 7_b 9_b (the b being used in the same way, but the # generally replaced by a stroke through the figure); and it may well be that this practice helped to make it seem more natural, even to those who did not follow it—whether composers, printers, or engravers—to place the accidental on the same side of the figure as the said horizontal or obliquely curved stroke.

² In the seventeenth and eighteenth centuries an accidental was usually assumed to be contradicted unless it was repeated, but the practice of different composers varied greatly in this respect.

Fig. 2. F. T. Arnold (1965), *The Art of Accompaniment from a Thorough-Bass as Practiced in the XVIIth & XVIIIth Centuries*. Dover Publications, New York. p. 886.

Hába quarter-tone accidentals

These accidentals were used by a microtonal pioneer, Alois Hába (1893–1973), in his treatise *Neue Harmonielehre*, and are included in SMuFL. Hába also proposed twelfth-tone accidentals, but these conflict with Arabic accidentals and Wyschnegradsky’s accidentals, and have not come into general use. We show them in Figure 4 for reference.

MUSICAL SYMBOL HABA QUARTER TONE SHARP [SMuFL U+EE64]

MUSICAL SYMBOL HABA ALTERNATE QUARTER TONE SHARP [SMuFL U+EE65]

MUSICAL SYMBOL HABA THREE QUARTER TONE SHARP [SMuFL U+EE66]

MUSICAL SYMBOL HABA QUARTER TONE FLAT [SMuFL U+EE67]

MUSICAL SYMBOL HABA ALTERNATE QUARTER TONE FLAT [SMuFL U+EE68]

MUSICAL SYMBOL HABA THREE QUARTER TONE FLAT [SMuFL U+EE69]



Ex. 3. Descending scale.



Sharpening by a quarter tone is notated with ♭ or ♮, sharpening by a 3/4 tone with ♯, flattening a quarter tone with ♮ or ♯, and flattening by a 3/4 tone with ♭. The regular signs, ♮, ♭, ♭♭, ♯, and ✕ are used in the traditional way.

The quarter-tone scale can also be notated with the help of only two of the new signs (♭ and ♮):

Fig. 3. Hába, *Neue Harmonielehre*. Translation by Suzette Battan (urresearch.rochester.edu), p. 204.

For reference, we reproduce Hába's twelfth-tone accidentals below.

↑	Sharping by a twelfth tone
↑↑	Sharping by a sixth tone (two twelfth tones)
↑↑↑	Sharping by a quarter tone (three twelfth tones)
↑↑↑↑	Sharping by a third tone (four twelfth tones)
↑↑↑↑↑	Sharping by a 5/12 tone
↑↑↑↑↑↑	Sharping by a half tone
↑↑↑↑↑↑↑	Sharping by a 7/12 tone
↑↑↑↑↑↑↑↑	Sharping by a 2/3 tone
↑↑↑↑↑↑↑↑↑	Sharping by a 3/4 tone
↑↑↑↑↑↑↑↑↑↑	Sharping by a 5/6 tone
↑↑↑↑↑↑↑↑↑↑↑	Sharping by a 11/12 tone
↓	Flatting by a twelfth tone
↓↓	Flatting by a sixth tone
↓↓↓	Flatting by a quarter tone
↓↓↓↓	Flatting by a third tone
↓↓↓↓↓	Flatting by a 5/12 tone
↓↓↓↓↓↑	Flatting by a half tone

Fig. 4. Ibid, p. 285

Wyschnegradsky twelfth-tone accidentals

These symbols were invented by another microtonal pioneer, Ivan Wyschnegradsky (1893–1979), for 72 equal temperament (i.e. twelfth-tones). The quarter-tone sharp symbols overlap with the Stein-Zimmermann accidentals (provisionally assigned to U+1D1EB..1D1F6). The flats past a semitone are best treated as atomic characters, analogous to the double flat. We follow Wyschnegradsky’s order.

MUSICAL SYMBOL WYSCHNEGRADSKY TWELFTH TONE SHARP [SMuFL U+E420]
MUSICAL SYMBOL WYSCHNEGRADSKY SIXTH TONE SHARP [SMuFL U+E421]
MUSICAL SYMBOL WYSCHNEGRADSKY THIRD TONE SHARP [SMuFL U+E423]
MUSICAL SYMBOL WYSCHNEGRADSKY FIVE TWELFTH TONE SHARP [SMuFL U+E424]
MUSICAL SYMBOL WYSCHNEGRADSKY SEVEN TWELFTH TONE SHARP [SMuFL U+E426]
MUSICAL SYMBOL WYSCHNEGRADSKY TWO THIRD TONE SHARP [SMuFL U+E427]
MUSICAL SYMBOL WYSCHNEGRADSKY FIVE SIXTH TONE SHARP [SMuFL U+E429]
MUSICAL SYMBOL WYSCHNEGRADSKY ELEVEN TWELFTH TONE SHARP [SMuFL U+E42A]
MUSICAL SYMBOL WYSCHNEGRADSKY TWELFTH TONE FLAT [SMuFL U+E42B]
MUSICAL SYMBOL WYSCHNEGRADSKY SIXTH TONE FLAT [SMuFL U+E42C]
MUSICAL SYMBOL WYSCHNEGRADSKY QUARTER TONE FLAT [SMuFL U+E42D]
MUSICAL SYMBOL WYSCHNEGRADSKY THIRD TONE FLAT [SMuFL U+E42E]
MUSICAL SYMBOL WYSCHNEGRADSKY FIVE TWELFTH TONE FLAT [SMuFL U+E42F]
MUSICAL SYMBOL WYSCHNEGRADSKY SEVEN TWELFTH TONE FLAT [SMuFL U+E431]
MUSICAL SYMBOL WYSCHNEGRADSKY TWO THIRD TONE FLAT [SMuFL U+E432]
MUSICAL SYMBOL WYSCHNEGRADSKY THREE QUARTER TONE FLAT [SMuFL U+E433]
MUSICAL SYMBOL WYSCHNEGRADSKY FIVE SIXTH TONE FLAT [SMuFL U+E434]
MUSICAL SYMBOL WYSCHNEGRADSKY ELEVEN TWELFTH TONE FLAT [SMuFL U+E435]
















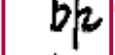

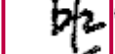

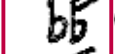


Gould arrow quarter-tone accidentals

Most Gould arrow symbols are supported, but double sharp and double flat with arrows are not. Two of these are attested in current use (Figure 7), though not in composition.

MUSICAL SYMBOL DOUBLE SHARP UP [SMuFL U+E276]
MUSICAL SYMBOL DOUBLE SHARP DOWN [SMuFL U+E277]
MUSICAL SYMBOL DOUBLE FLAT UP [SMuFL U+E278]
MUSICAL SYMBOL DOUBLE FLAT DOWN [SMuFL U+E279]

Notation conventionnelle

Je propose pour la notation des $1/12^e$ de ton, les signes d'altération suivants :

Ascendants	Descendants
	
	
	
	
	
	
	
	
	
	
	

Ivan Wyschnegradsky's Symbols for 72-tone Equal Temperament

Fig. 5. Wyschnegradsky's proposal. <https://sagittal.org/gift/Episode1.htm>.

72edo

3

4

6

8

9

11

Fig. 6. Illustrative use of Wyschnegradsky accidentals. [reddit.com/r/microtonal/comments/ylozf5/you_have_ever_seen_this_notation_used_in_72tet/](https://www.reddit.com/r/microtonal/comments/ylozf5/you_have_ever_seen_this_notation_used_in_72tet/).

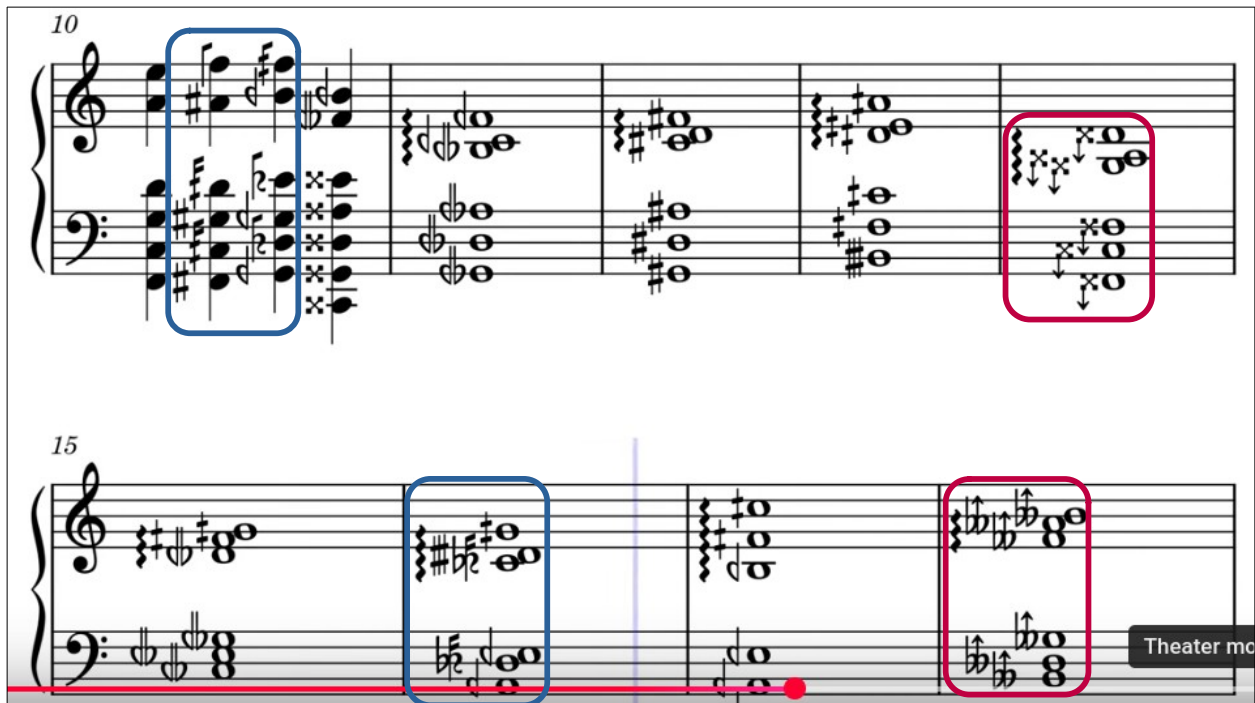


Fig. 7. 'Bassy,' *Study in Xenharmonics (31-36EDO)*, ca. 2025. [youtube.com/watch?v=U1E4FNAmwRA](https://www.youtube.com/watch?v=U1E4FNAmwRA). Modern use of the Wyschnegradsky accidentals (blue), supplemented by Gould arrow symbols double-sharp-down and double-flat-up (red) at t = 20 seconds. The remaining two symbols, double-sharp-up and double-flat-down, are probably less likely to be used. Though modern, these symbols are used to illustrate scales rather than to transcribe a composition.