

Double accidental notation

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This tabulature is based on double accidentals that any notation software is supposed to provide and encode correctly in musicXML. This notation can describe actual pitch information (for example in 31ed2), or be used as a tabulature to reference keys on the Arciorgano keyboard, independently from the actual Arciorgano tuning. This document describes the use of this notation as a tabulature.

The basic principle of this notation follows a division of the octave in 31 equal intervals, so called 'diesis'. The whole tones (major seconds) are divided in 5 diesis. The accidentals raise or lower the root pitch of a note by a specific number of diesis:

- a sharp raises the pitch by 2 diesis.
- a double sharp raises the pitch by 4 diesis.
- a flat lowers the pitch by 2 diesis.
- a double flat lowers the pitch by 4 diesis.

These four types of accidentals are sufficient to reference any of the 31 pitches in an octave. Furthermore, it references the keys of the Arciorgano in an explicit way (assuming that the Arciorgano is tuned in 31ed2 or a close approximation of it). This fact enables this notation to be used as a tabulature, even if the Arciorgano tuning is not 31ed2.

The Arciorgano has 36 keys per octave, therefore this notation can't reference five keys per octave (the five 'sharp-keys' of the upper manual). If it is necessary to notate all the 36 keys per octave, it is recommended to use the quarter tone accidental notation. The quarter tone and double accidental notations are compatible and can be used within the same score.

The following example shows how to notate 31 pitches per octave. Blue noteheads reference keys on the lower manual, red noteheads reference keys on the upper manual.

The image displays a musical score in 4/4 time, consisting of four systems of staves. The first system shows a bass line with 31 notes, each marked with a double accidental (sharps, flats, double sharps, or double flats) and a blue notehead. The second system, starting at measure 9, continues the bass line with red noteheads for the upper manual and blue noteheads for the lower manual. The third system, starting at measure 17, shows the upper manual with red noteheads and the lower manual with blue noteheads. The fourth system, starting at measure 24, continues the upper manual with red noteheads. The score demonstrates how 31 pitches per octave can be notated using double accidentals, with blue noteheads for the lower manual and red noteheads for the upper manual.