

# LilyPond

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The music typesetter

## Music Glossary

### The LilyPond development team

This glossary provides definitions and translations of musical terms used in the documentation manuals for LilyPond version 2.18.2.

For more information about how this manual fits with the other documentation, or to read this manual in other formats, see [Section “Manuals” in \*General Information\*](#).

If you are missing any manuals, the complete documentation can be found at <http://www.lilypond.org/>.

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For LilyPond version 2.18.2

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# 1 Musical terms A-Z

Languages in this order.

- UK - British English (where it differs from American English)
- ES - Spanish
- I - Italian
- F - French
- D - German
- NL - Dutch
- DK - Danish
- S - Swedish
- FI - Finnish

## 1.1 A

- ES: la
- I: la
- F: la
- D: A, a
- NL: a
- DK: a
- S: a
- FI: A, a

### See also

Chapter 3 [Pitch names], page 86.

## 1.2 a due

ES: a dos, I: a due, F: à deux, D: ?, NL: ?, DK: ?, S: ?, FI: kahdelle.

Abbreviated *a2* or *a 2*. In orchestral scores, *a due* indicates that:

1. A single part notated on a single staff that normally carries parts for two players (e.g. first and second oboes) is to be played by both players.
2. Or conversely, that two pitches or parts notated on a staff that normally carries a single part (e.g. first violin) are to be played by different players, or groups of players ('desks').

### See also

No cross-references.

## 1.3 accelerando

ES: accelerando, I: accelerando, F: accelerando, en accélération, D: accelerando, schneller werden, NL: accelerando, DK: accelerando, S: accelerando, FI: accelerando, kiihdyttäen.

[Italian: 'speed up, accelerate']

An increase in the tempo, abbreviated *accel.*

### See also

No cross-references.

## 1.4 accent

ES: acento, I: accento, F: accent, D: Akzent, NL: accent, DK: accent, S: accent, FI: aksentti, korostus.

The stress of one tone over others.

### See also

No cross-references.

## 1.5 accessory

### See also

Section 1.223 [ornament], page 56.

## 1.6 acciaccatura

ES: mordente de una nota, I: acciaccatura, F: acciaccatura, appoggiature brève, D: Zusammenschlag, NL: samenslag, DK: ?, S: ?, FI: ?.

A grace note which takes its time from the rest or note preceding the principal note to which it is attached. The acciaccatura is drawn as a small eighth note (quaver) with a line drawn through the flag and stem.

### See also

Section 1.19 [appoggiatura], page 5, Section 1.143 [grace notes], page 35, Section 1.205 [mordent], page 52, Section 1.223 [ornament], page 56.

## 1.7 accidental

ES: alteración accidental, I: alterazione, accidente, F: altération accidentelle, D: Versetzungszeichen, Akzidenz, NL: toevallig (verplaatsings)teken, DK: løst fortegn, S: tillfälligt förtecken, FI: tilapäinen etumerkki.

An accidental alters a note by:

- Raising its pitch:
  - By two semitones—*double sharp*
  - By one semitone—*sharp*
- Lowering its pitch:
  - By one semitone—*flat*
  - By two semitones—*double flat*
- Or canceling the effects of the key signature or previous accidentals.



### See also

Section 1.12 [alteration], page 4, Section 1.265 [semitone], page 67, Section 1.335 [whole tone], page 81.

## 1.8 adagio

ES: adagio, lento, I: adagio, F: adagio, lent, D: Adagio, Langsam, NL: adagio, DK: adagio, S: adagio, FI: adagio, hitaasti.

[Italian: ‘comfortable, easy’]

- Slow tempo, slower – especially in even meter – than *andante* and faster than *largo*.
- A movement in slow tempo, especially the second (slow) movement of sonatas, symphonies, etc.

### See also

Section 1.18 [*andante*], page 5, Section 1.167 [*largo*], page 42, Section 1.281 [*sonata*], page 70.

## 1.9 al niente

ES: al niente, I: al niente, F: al niente, en mourant, D: ?, NL: ?, DK: ?, S: ?, FI: häviten olemattomiin.

[Italian: ‘to nothing’] Used with *decrescendo* to indicate that the sound should fade away to nothing.

*Al niente* is indicated by circling the tip of the hairpin:



or with the actual phrase *al niente*:



Since one does not crescendo *to* nothing, it is not correct to use *al niente* with *crescendo*. Instead, one should use *dal niente* (**from** nothing).

### See also

Section 1.72 [*crescendo*], page 19, Section 1.78 [*dal niente*], page 20, Section 1.80 [*decrescendo*], page 21, Section 1.148 [*hairpin*], page 36.

## 1.10 alla breve

ES: alla breve, I: alla breve, F: alla breve, à la brève, D: Allabreve, alla breve NL: ?, DK: ?, S: ?, FI: ?.

[Italian: ‘on the breve’] Twice as fast as the notation indicates.

Also called *in cut time*. The name derives from mensural notation, where the *tactus* (or beat) is counted on the semibreve (the modern whole note). Counting ‘on the breve’ shifts the *tactus* to the next longest note value, which (in modern usage) effectively halves all note values.

In mensural notation, breves and semibreves can have a ternary relationship, in which case *alla breve* means thrice (not twice) as fast. In practice, this complication may not have mattered, since Gaffurius’s system of multiplex proportions makes it easy to explicitly state which proportion is needed.

**See also**

Section 1.42 [breve], page 11, Section 1.154 [hemiola], page 38, Section 1.191 [mensural notation], page 46, Section 1.217 [note value], page 54, Section 1.244 [proportion], page 61, Section 1.333 [whole note], page 81.

**1.11 allegro**

ES: allegro, rápido, I: allegro, F: allegro, gaiement, D: Allegro, Schnell, Fröhlich, Lustig, NL: allegro, DK: allegro, S: allegro, FI: allegro, nopeasti.

[Italian: ‘cheerful’] Quick tempo. Also used as a title for pieces in a quick tempo, especially the first and last movements of a sonata.

**See also**

Section 1.281 [sonata], page 70.

**1.12 alteration**

ES: alteración, I: alterazione, F: altération, D: Alteration, NL: verhoging of verlaging, DK: Forandring, S: Förändring, FI: muunnettu.

An alteration is the modification, raising or lowering, of a note’s pitch. It is established by an accidental.

**See also**

Section 1.7 [accidental], page 2.

**1.13 alto**

ES: alto, I: contralto, F: alto, D: Alt, NL: alt, DK: alt, S: alt, FI: alto, matala naisääni.

A female voice of low range (*contralto*). Originally the alto was a high male voice (hence the name), which by castration or the use of falsetto reached the height of the natural female voice. This type of voice is also known as countertenor.

**See also**

Section 1.71 [countertenor], page 18.

**1.14 alto clef**

ES: clave de do en tercera, I: chiave di contralto, F: clef d’ut troisième ligne, D: Altschlüssel, Bratschenschlüssel, NL: alt sleutel, DK: altnøgle, S: altklav, FI: alttoavain.

C clef setting middle C on the middle line of the staff.

**See also**

Section 1.44 [C clef], page 11.

**1.15 ambitus**

ES: ámbito, I: ambitus, F: ambitus, tessiture, D: Ambitus, NL: ambitus, DK: ambitus, S: ambitus, FI: ambitus, ääniala, soitinala.

[Latin: past participle of *ambire*, ‘to go around’; plural: *ambitus*] Denotes a range of pitches for a given voice in a part of music. It may also denote the pitch range that a musical instrument is capable of playing. Sometimes anglicized to *ambit* (pl. *ambits*).

**See also**

No cross-references.

**1.16 anacrusis**

ES: anacrusa, I: anacrusi, F: anacrouse, levée, D: Auftakt, NL: opmaat, DK: optakt, S: upptakt, FI: kohotahti.

An anacrusis (also known as pickup or upbeat) is an incomplete measure of music before a section of music. It also refers to the initial note(s) of a melody occurring in that incomplete measure.

**See also**

Section 1.185 [measure], page 45, Section 1.193 [meter], page 48.

**1.17 ancient minor scale**

ES: escala menor natural, I: scala minore naturale, F: forme du mode mineur ancien, troisième mode, mode hellénique, D: reines Moll, natürliches Moll, NL: authentieke mineurtoonladder, DK: ren mol, S: ren mollskala, FI: luonnollinen molliasteikko.

Also called ‘natural minor scale’.

**See also**

Section 1.82 [diatonic scale], page 21.

**1.18 andante**

ES: andante, I: andante, F: andante, allant, D: Andante, Gehend, NL: andante, DK: andante, S: andante, FI: andante, käyden.

[Italian: present participle of *andare*, ‘to walk’]

Walking tempo/character.

**See also**

No cross-references.

**1.19 appoggiatura**

ES: apoyatura, I: appoggiatura, F: appoggiature, (port de voix), D: Vorschlag, Vorhalt NL: (korte) voorslag, DK: forslag, S: förslag, FI: appoggiatura, etuhele.

Ornamental note, usually a second, that is melodically connected with the main note following it. In music before the 19th century appoggiature were usually performed on the beat, after that mostly before the beat. While the short appoggiatura is performed as a short note regardless of the duration of the main note the duration of the long appoggiatura is proportional to that of the main note.



An appoggiatura may have more notes preceding the main note.



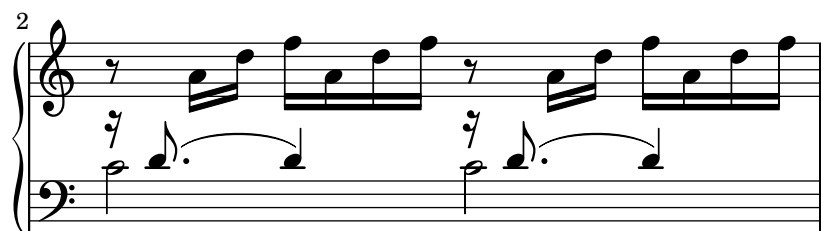
## See also

No cross-references.

## 1.20 arpeggio

ES: arpeggio, I: arpeggio, F: arpège, D: Arpeggio, Akkordbrechungen, gebrochener Akkord, NL: gebroken akoord, DK: arpeggio, akkordbrydning, S: arpeggio, FI: arpeggio, murtosointu.

[Italian: 'harp-like, played like a harp']



## See also

No cross-references.

## 1.21 articulation

ES: articulación, I: articolazione, F: articulation, D: Artikulation, NL: articulatie, DK: ?, S: ?, FI: artikulaatio, ilmaisu.

Articulation refers to notation which indicates how a note or notes should be played. Slurs, accents, staccato, and legato are all examples of articulation.

## See also

No cross-references.

## 1.22 ascending interval

ES: intervalo ascendente, I: intervallo ascendente, F: intervalle ascendant, D: steigendes Intervall, NL: stijgend interval, DK: stigende interval, S: stigande intervall, FI: nouseva intervalli.

A distance between a starting lower note and a higher ending note.

### See also

No cross-references.

## 1.23 augmentation

ES: auméntación, I: aumentazione, F: augmentation, D: Augmentation, NL: Augmentatio, DK: Forøgelse, S: Förstoring, FI: aika-arvojen pidentäminen.

This is a placeholder for augmentation (wrt mensural notation).

### See also

[Section 1.86 \[diminution\]](#), page 23, [Section 1.191 \[mensural notation\]](#), page 46.

## 1.24 augmented interval

ES: intervalo aumentado, I: intervallo aumentato, F: intervalle augmenté, D: übermäßiges Intervall, NL: overmatig interval, DK: forstørret interval, S: överstigande intervall, FI: ylinouseva intervalli.

### See also

[Section 1.159 \[interval\]](#), page 40.

## 1.25 autograph

ES: manuscrito, I: autografo, F: manuscrit, autographe D: Autograph, Handschrift, NL: manuscript, DK: håndskrift, autograf, S: handskrift, FI: käsinkirjoitettu nuotti.

- A manuscript written in the composer's own hand.
- Music prepared for photoreproduction by freehand drawing, with the aid of a straightedge ruler and T-square only, which attempts to emulate engraving. This required more skill than did engraving.

### See also

No cross-references.

## 1.26 B

- ES: si
- I: si
- F: si
- D: H, h
- NL: b
- DK: h
- S: h
- FI: H, h

### See also

[Section 1.147 \[H\]](#), page 36, [Chapter 3 \[Pitch names\]](#), page 86



## 1.27 backfall

### See also

Section 1.19 [appoggiatura], page 5.

## 1.28 bar

### See also

Section 1.185 [measure], page 45.

## 1.29 bar line

ES: barra, línea divisoria, I: stanghetta, barra (di divisione), F: barre (de mesure), D: Taktstrich, NL: maatstreep, DK: taktstreg, S: taktstreck, FI: tahtiviiva.

A vertical line through the staff (or through multiple staves) that separates measures. Used very infrequently during the Renaissance (mostly in secular music, or in sacred music to indicate congruences between parts in otherwise-unmetered music).

### See also

Section 1.185 [measure], page 45.

## 1.30 baritone

ES: barítono, I: baritono, F: bariton, D: Bariton, NL: bariton, DK: baryton, S: baryton, FI: baritoni, keskikorkuinen miesääni.

The male voice intermediate in pitch between the bass and the tenor.

### See also

Section 1.32 [bass], page 8, Section 1.304 [tenor], page 75.

## 1.31 baritone clef

ES: clave de fa en tercera, I: chiave di baritono, F: clef d'ut cinquième ligne, clef de fa troisième, D: Baritonschlüssel, NL: baritonsleutel, DK: barytonnøgle, S: barytonklav, FI: baritoniavain.

C or F clef setting middle C on the upper staff line.

### See also

Section 1.44 [C clef], page 11, Section 1.122 [F clef], page 30.

## 1.32 bass

ES: bajo, I: basso, F: basse, D: Bass, NL: bas, DK: bas, S: bas, FI: basso, matala miesääni.

- The lowest male voice.
- Sometimes, especially in jazz music, used as an abbreviation for double bass.

### See also

Section 1.290 [strings], page 72.

### 1.33 bass clef

ES: clave de fa en cuarta, I: chiave di basso, F: clef de fa quatrième ligne, D: Bassschlüssel, NL: bassleutel, DK: basnøgle, S: basklav, FI: bassoavain.

A clef setting with middle C on the first top ledger line.

#### See also

Section 1.122 [F clef], page 30.

### 1.34 beam

ES: barra (de corcheas), I: coda, F: ligature, barre (de croches), D: Balken, NL: waardestreep, DK: bjælke, S: balk, FI: palkki.

Line connecting a series of notes (shorter than a quarter note). The number of beams determines the note value of the connected notes.



#### See also

Section 1.124 [feathered beam], page 31.

### 1.35 beat

ES: tiempo, parte (de compás) I: tempi, F: temps, D: Takt, Taktschlag, Zeit (im Takt), NL: tel, DK: (takt)slag, S: taktslag, FI: aika-arvo.

Note value used for counting, most often half-, fourth-, and eighth notes. The base counting value and the number of them in each measure is indicated at the start of the music by the *time signature*.



#### See also

Section 1.313 [time signature], page 77.

### 1.36 beat repeat

#### See also

Section 1.228 [percent repeat], page 58.

### 1.37 bind

#### See also

Section 1.311 [tie], page 76.

### 1.38 brace

ES: llave, corchete, I: graffa, F: accolade, D: Klammer, Akkolade, NL: accolade, teksthaak, DK: klamme, S: klammer, FI: yhdistävä sulkumerkki.

Symbol at the start of a system connecting staves.

Curly braces are used for connecting piano staves, and sometimes for connecting the staves of like instruments in an orchestral score when written on different staves (e.g. first and second flutes):



Angular brackets for connecting parts in an orchestral or choral score:



#### See also

No cross-references.

### 1.39 bracket

ES: corchete, I: parentesi quadra, F: crochet, D: ?, NL: ?, DK: ?, S: ?, FI: sulkumerkki.

#### See also

[Section 1.38 \[brace\], page 10](#)

### 1.40 brass

ES: metales, I: ottoni, D: Blechbläser, NL: koper (blazers), F: cuivres, DK: messingblæsere, S: brassinstrument, mässingsinstrument, FI: vaskisoitin.

A family of blown musical instruments made of brass, all using a cup formed mouth piece. The brass instruments commonly used in a symphony orchestra are trumpet, trombone, French horn, and tuba. In marching bands, sousaphones and contrabass bugles are common.

#### See also

No cross-references.

### 1.41 breath mark

ES: respiración, I: respiro, F: respiration, D: Atemzeichen, Trennungszeichen, NL: repercussieteken, DK: vejtrækningstegn, S: andningstecken, FI: hengitysmerkki.

Indication of where to breathe in vocal and wind instrument parts.

#### See also

[Section 1.47 \[caesura\], page 12.](#)

## 1.42 breve

- US: breve, double-whole note
- ES: cuadrada, breve
- I: breve
- F: brève
- D: Brevis
- NL: brevis
- DK: brevis
- S: brevis
- FI: brevis, kaksoiskokonuotti

Note value: twice the length of a *whole note* (*semibreve*).

Mainly used in music from before 1650. In mensural notation, it was a note of fairly short duration—hence the name, which is Latin for ‘short’ or ‘of short duration’.



### See also

Section 1.191 [mensural notation], page 46, Section 1.217 [note value], page 54, Section 1.264 [semibreve], page 67.

## 1.43 C

- ES: do
- I: do
- F: ut, do
- D: C, c
- NL: c
- DK: c
- S: c
- FI: C, c

### See also

Chapter 3 [Pitch names], page 86.

## 1.44 C clef

ES: clave de do, I: chiave di do, F: clef d’ut, D: C-Schlüssel, NL: C-sleutel, DK: c-nøgle, S: c-klav, FI: C-avain.

Clef symbol indicating the position of the middle C. Used on all note lines.



### See also

No cross-references.

## 1.45 cadence

ES: cadencia, I: cadenza, F: cadence, D: Kadenz, NL: cadens, DK: kadence, S: kadens, FI: kadenssi, lopuke.

### See also

[Section 1.151 \[harmonic cadence\]](#), page 37, [Section 1.139 \[functional harmony\]](#), page 34.

## 1.46 cadenza

ES: cadenza, I: cadenza, F: cadence, D: Kadenz, NL: cadens, DK: kadence, S: kadens, FI: kadenssi, lopuke.

An extended, improvisatory style section inserted near the end of movement. The purpose of a cadenza is to give singers or players a chance to exhibit their technical skill and – not last – their ability to improvise. Since the middle of the 19th century, however, most cadenzas have been written down by the composer.

### See also

No cross-references.

## 1.47 caesura

ES: cesura, I: cesura, F: césure, D: Zäsur, NL: ?, DK: ?, S: ?, FI: välimerkki.

[Latin: from the supine of *caedere* ‘to cut down’]

The break between two musical phrases, sometimes (but not always) marked by a rest or a breath mark.

### See also

[Section 1.41 \[breath mark\]](#), page 10.

## 1.48 canon

ES: canon, I: canone, F: canon, D: Kanon, NL: canon, DK: kanon, S: kanon, FI: kaanon, tarkka jäljittely.

### See also

[Section 1.70 \[counterpoint\]](#), page 18.

## 1.49 cent

ES: cent, I: cent, F: cent, D: Cent, NL: cent, DK: cent, S: cent, FI: sentti, puolisävelaskeleen sadasosa tasavireisessä viritysjärjestelmässä.

Logarithmic unit of measuring pitch differences. 1 cent is 1/1200 of an octave (1/100 of an equally tempered semitone).

### See also

[Section 1.118 \[equal temperament\]](#), page 29, [Section 1.265 \[semitone\]](#), page 67.

## 1.50 central C

### See also

[Section 1.199 \[middle C\]](#), page 51.

## 1.51 chord

ES: acorde, I: accordo, F: accord, D: Akkord, NL: akkoord, DK: akkord, S: ackord, FI: sointu.

Two or more tones sounding simultaneously. In traditional European music the base chord is a *triad* consisting of two thirds. *Major* (major + minor third) as well as *minor* (minor + major third) chords may be extended with more thirds. Four-tone *seventh chords* and five-tone *ninth* major chords are most often used as dominants (functional harmony). Chords having no third above the lower notes to define their mood are a special case called ‘open chords’. The lack of the middle third means their quality is ambivalent – neither major nor minor.



### See also

Section 1.139 [functional harmony], page 34, Section 1.159 [interval], page 40, Section 1.160 [inversion], page 40, Section 1.247 [quality], page 62, Section 1.307 [third], page 75.

## 1.52 chromatic scale

ES: escala cromática, I: scala cromatica, F: gamme chromatique, D: chromatische Tonleiter, NL: chromatische toonladder, DK: kromatisk skala, S: kromatisk skala, FI: kromaattinen asteikko.

A scale consisting of all 12 semitones.



### See also

Section 1.265 [semitone], page 67.

## 1.53 chromaticism

ES: cromatismo, I: cromatismo, F: chromatisme, D: Chromatik, NL: chromatiek, DK: kromatik, S: kromatik, FI: kromatiikka.

Using tones extraneous to a diatonic scale (minor, major).

### See also

Section 1.82 [diatonic scale], page 21.

## 1.54 church mode

ES: modo eclesiástico, I: modo ecclesiastico, F: mode ecclésiastique, mode d'église, D: Kirchen-tonart, NL: kerktoonladder, DK: kirketoneart, S: kyrkotonart, FI: moodi, kirkkosävellaji.

### See also

Section 1.82 [diatonic scale], page 21.

## 1.55 clef

ES: clave, I: chiave, F: clé, clef, D: Schlüssel, Notenschlüssel, NL: sleutel, DK: nøgle, S: klav, FI: avain, nuottiavain.

The clef indicates which lines of the staff correspond to which pitches. The three clef symbols in common use are:

The Treble or G clef: 

The Bass or F clef: 

The Alto or C clef: 

Imagine a large staff of 11 lines centered on middle C, sometimes called a ‘grand staff’, with the bottom line representing low G and the top line high F:



Staves of five lines are usually used, and the clef superimposed on them indicates which five lines have been selected from this *grand staff*. For example, the treble or G clef indicates that the top five lines have been selected:



The ‘curl’ of the G clef is centered on the line that represents the pitch G.

In the same way, the bass or F clef indicates that the bottom five lines have been selected from the *grand staff*, and the alto or C clef indicates the middle five lines have been selected. This relationship is shown below, where the notes show an arpeggio on a C major chord.



See also

Section 1.44 [C clef], page 11, Section 1.122 [F clef], page 30, Section 1.141 [G clef], page 35.

## 1.56 cluster

ES: racimo, I: cluster, F: cluster, D: Cluster, NL: ?, DK: ?, S: ?, FI: klusteri, cluster.

A *cluster* is a range of simultaneously sounding pitches that may change over time. The set of available pitches to apply usually depends on the acoustic source. Thus, in piano music, a cluster typically consists of a continuous range of the semitones as provided by the piano's fixed set of a chromatic scale. In choral music, each singer of the choir typically may sing an arbitrary pitch within the cluster's range that is not bound to any diatonic, chromatic or other scale. In electronic music, a cluster (theoretically) may even cover a continuous range of pitches, thus resulting in colored noise, such as pink noise.

Clusters can be denoted in the context of ordinary staff notation by engraving simple geometrical shapes that replace ordinary notation of notes. Ordinary notes as musical events specify starting time and duration of pitches; however, the duration of a note is expressed by the shape of the note head rather than by the horizontal graphical extent of the note symbol. In contrast, the shape of a cluster geometrically describes the development of a range of pitches (vertical extent) over time (horizontal extent). Still, the geometrical shape of a cluster covers the area in which any single pitch contained in the cluster would be notated as an ordinary note.



### See also

No cross-references.

## 1.57 comma

ES: coma, comma, I: comma, F: comma, D: Komma, NL: komma, DK: komma, S: komma, FI: komma, korvinkuultava ero äänenkorkeudessa.

Difference in pitch between a note derived from pure tuning and the same note derived from some other tuning method.

### See also

Section 1.83 [didymic comma], page 23, Section 1.245 [Pythagorean comma], page 62, Section 1.300 [syntonic comma], page 74, Section 1.302 [temperament], page 75.

## 1.58 common meter

Another name for [Section 1.60 \[common time\]](#), page 16.

### See also

[Section 1.60 \[common time\]](#), page 16, [Section 1.193 \[meter\]](#), page 48.

## 1.59 Common Practice Period

ES: ?, I: Periodo di pratica comune, F: ?, D: Kunstmusik, NL: ?, DK: ?, S: ?, FI: ?.

This is a stub for Common Practice Period (CPP).

### See also

[Section “Note names in other languages” in \*Notation Reference\*.](#)



## 1.60 common time

ES: compasillo, I: tempo semplice, F: mesure à 4/4, D: ?, NL: ?, DK: ?, S: ?, FI: C-merkintä.  
4/4 time. The symbol, which resembles a capital letter C, comes from mensural notation.

### See also

Section 1.191 [mensural notation], page 46, Section 1.193 [meter], page 48.

## 1.61 complement

ES: intervalo invertido, I: rivolto, F: intervalle complémentaire, D: Komplementärintervall, NL: complementair interval, DK: komplementærinterval, S: komplementärintervall (?), FI: täydentävä intervalli.

### See also

Section 1.161 [inverted interval], page 41.

## 1.62 compound interval

ES: intervalo compuesto, I: intervallo composto, F: intervalle composé, D: weites Intervall, NL: samengesteld interval, DK: sammensat interval, S: sammansatt intervall, FI: oktaavia laajempi intervalli.

Intervals larger than an octave.

### See also

Section 1.159 [interval], page 40.

## 1.63 compound meter

ES: compás compuesto, compás de subdivisión ternaria, I: tempo composto, F: mesure composée, D: Dreiertakt, NL: ?, DK: ?, S: ?, FI: kolmijakoinen tahtilaji.

A meter that includes a triplet subdivision within the beat, such as 6/8, 9/8, 12/8.

### See also

Section 1.193 [meter], page 48, Section 1.272 [simple meter], page 68.

## 1.64 compound time

ES: compás compuesto, compás de amalgama (def. 2), I: tempo misto, F: temps composé, D: zusammengesetzte Taktart, NL: ?, DK: ?, S: ?, FI: yhdistetty tahtilajiosoitus.

1. A meter that includes a triplet subdivision within the beat: see Section 1.63 [compound meter], page 16.
2. A time signature that additively combines two or more unequal meters, e.g., '3/8 + 2/8' instead of '5/8'. Sometimes called additive time signatures.

```
\relative c' {
  \key f \major
  \compoundMeter #'((3 8) (2 8) (3 8))
  c8 d e f4 d8 c bes
  c4 g'8 e c f4.
  \bar "||"
}
```



### See also

Section 1.63 [compound meter], page 16, Section 1.193 [meter], page 48, Section 1.239 [poly-metric time signature], page 60.

## 1.65 concert pitch

ES: en Do, tono de concierto, I: intonazione reale, F: tonalité de concert, en ut, D: Kammerton, NL: ?, DK: ?, S: ?, FI: konserttikorkeus.

The pitch at which the piano and other nontransposing instruments play: such instruments are said to be ‘in C’. The following list includes some (but not all) instruments that play in concert pitch:

### WoodwindsStrings

- flute      • violin
- oboe      • viola
- bassoon • violoncello

Instruments that play ‘in C’ but in a different octave than what is written are, technically speaking, *transposing instruments*:

- piccolo (plays an octave higher than written)
- celesta (plays an octave higher than written)
- classical guitar (plays an octave lower than written)
- double bass (plays an octave lower than written)

### See also

Section 1.316 [transposing instrument], page 77.

## 1.66 conjunct movement

ES: movimiento conjunto, I: moto congiunto, F: mouvement conjoint, D: schrittweise, stufenweise Bewegung, NL: stapsgewijze, trapsgewijze beweging, DK: trinvis bevægelse, S: stegvis rörelse, FI: asteittainen liike.

Progressing melodically by intervals of a second, as contrasted with *disjunct movement*.



### See also

Section 1.88 [disjunct movement], page 23.

## 1.67 consonance

ES: consonancia, I: consonanza, F: consonance, D: Konsonanz, NL: consonant, DK: konsonans, S: konsonans, FI: konsonanssi, sopusointi.

**See also**

Section 1.153 [harmony], page 38.

**1.68 contralto**

ES: contralto, I: contralto, F: contralto, D: Alt, NL: contralto, DK: alt, S: alt, FI: kontra-altto.

**See also**

Section 1.13 [alto], page 4.

**1.69 copying music**

A music copyist did fast freehand scores and parts on preprinted staff lines for performance. Some of their conventions (e.g., the placement of note heads on stems) varied slightly from those of engravers. Some of their working methods were superior and could well be adopted by music typesetters.

**See also**

No cross-references.

**1.70 counterpoint**

ES: contrapunto, I: contrappunto, F: contrepunt, D: Kontrapunkt, NL: contrapunt, DK: kontrapunkt, S: kontrapunkt, FI: kontrapunkti, ääni ääntä vastaan.

From Latin *punctus contra punctum*, note against note. The combination into a single musical fabric of lines or parts which have distinct melodic significance. A frequently used polyphonic technique is imitation, in its strictest form found in the canon needing only one part to be written down while the other parts are performed with a given displacement. Imitation is also the contrapuntal technique used in the *fugue* which, since the music of the baroque era, has been one of the most popular polyphonic composition methods.

**See also**

No cross-references.

**1.71 countertenor**

ES: contratenor, I: controtenore, F: contre-tenor, D: Countertenor, Kontratenor, NL: contratenor, DK: kontratenor, S: kontratenor, counter tenor, FI: kontratenori.

**See also**

Section 1.68 [contralto], page 18.

## 1.72 crescendo

ES: crescendo, I: crescendo, F: crescendo, D: Crescendo, lauter werden, NL: crescendo, DK: crescendo, S: crescendo, FI: cresendo, voimistuen.

Increasing volume. Indicated by a rightwards opening horizontal wedge (hairpin) or the abbreviation *cresc.*



See also

Section 1.80 [decrescendo], page 21, Section 1.148 [hairpin], page 36.

## 1.73 cue-notes

ES: notas guía, I: notine, F: petites notes précédant l'entrée d'un instrument, réplique, 'à défaut', D: Stichnoten, NL: stichnoten, DK: stiknoder, S: inprickningar, FI: vihjenuotit.

Notes belonging to one part printed in another to hint when to start playing. Usually printed in a smaller type.

See also

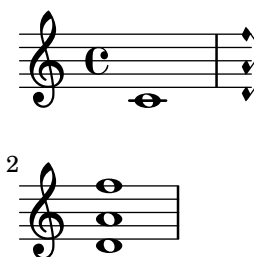
Compare: Section 1.224 [ossia], page 57.

## 1.74 custos

ES: custos, I: custos, guida, F: guidon, D: Notenzeiger, Custos, NL: ?, DK: ?, S: ?, FI: vihje.

A custos (plural: custodes) is a staff symbol that appears at the end of a staff line with monophonic musical contents (i.e., with a single voice). It anticipates the pitch of the first note of the following line and thus helps the player or singer to manage line breaks during performance, which enhances the readability of a score.

Custodes were frequently used in music notation until the 16th century. There were different appearances for different notation styles. Nowadays, they have survived only in special forms of musical notation such as the *Editio Vaticana*, dating from the beginning of the 20th century



See also

No cross-references.

## 1.75 cut time

See also

Section 1.10 [alla breve], page 3.

## 1.76 D

- ES: re
- I: re
- F: ré
- D: D, d
- NL: d
- DK: d
- S: d
- FI: D, d

### See also

Chapter 3 [Pitch names], page 86

## 1.77 da capo

ES: da capo, I: da capo, F: da capo, depuis le commencement, D: da capo, von Anfang, NL: da capo, DK: da capo, S: da capo, FI: da capo, alusta.

Abbreviated *D.C.* Indicates that the piece is to be repeated from the beginning to the end or to a certain place marked *fine*.

### See also

No cross-references.

## 1.78 dal niente

ES: dal niente, de la nada, I: dal niente, F: partant de rien, D: aus dem Nichts, dal niente, NL: ?, DK: ?, S: ?, FI: tyhjästä ilmaantuen.

[Italian: ‘from nothing’] Used with *crescendo* to indicate that the sound should gradually increase from nothing.

### See also

Section 1.9 [al niente], page 3.

## 1.79 dal segno

ES: dal segno, I: dal segno, F: dal segno, depuis le signe, D: dal segno, ab dem Zeichen, NL: dal segno, DK: dal segno, S: dal segno, FI: dal segno, lähtien merkistä.

Abbreviated *D.S.* Repetition, not from the beginning, but from another place frequently near the beginning marked by a sign (*segno*):



### See also

No cross-references.

## 1.80 decrescendo

ES: decrescendo, I: decrescendo, D: Decrescendo, leiser werden, NL: decrescendo, DK: decrescendo, S: decrescendo, FI: decrescendo, hiljentyen.

Decreasing tone volume. Indicated by a leftwards opening horizontal wedge (hairpin) or the abbreviation *decresc.*



### See also

Section 1.72 [crescendo], page 19, Section 1.85 [diminuendo], page 23, Section 1.148 [hairpin], page 36.

## 1.81 descending interval

ES: intervalo descendente, I: intervallo discendente, F: intervalle descendant, D: fallendes Intervall, absteigendes Intervall, NL: dalend interval, DK: faldende interval, S: fallande intervall, FI: laskeva intervalli.

A distance between a starting higher note and a lower ending note.

### See also

No cross-references.

## 1.82 diatonic scale

ES: escala diatónica, I: scala diatonica, F: gamme diatonique, D: diatonische Tonleiter, NL: diatonische toonladder, DK: diatonisk skala, S: diatonisk skala, FI: diatoninen asteikko.

A scale consisting of 5 whole tones and 2 semitones (S). Scales played on the white keys of a piano keyboard are diatonic. These scales are sometimes called, somewhat inaccurately, ‘church modes’).

These *modes* are used in Gregorian chant and in pre-baroque early music but also to some extent in newer jazz music.





From the beginning of the 17th century the scales used in European compositional music are primarily the major and the minor scales. In the harmonic minor scale type an augmented second (A) occurs between the 6th and 7th tone.



See also

Section 1.265 [semitone], page 67, Section 1.335 [whole tone], page 81.

### 1.83 didymic comma

#### See also

Section 1.300 [syntonic comma], page 74.

### 1.84 diminished interval

ES: intervalo disminuido, I: intervallo diminuito, F: intervalle diminué, D: vermindertes Intervall, NL: verminderd interval, DK: formindsket interval, S: förminskat intervall, FI: vähennetty intervalli.

#### See also

Section 1.159 [interval], page 40.

### 1.85 diminuendo

ES: diminuendo, I: diminuendo, F: diminuendo, en diminuant, D: diminuendo, NL: diminuendo, DK: diminuendo, S: diminuendo, FI: diminuendo, hiljentyen.

Abbreviated *dim.* It indicates a decrease in tone volume.

#### See also

Section 1.80 [decrescendo], page 21.

### 1.86 diminution

ES: disminución, I: diminuzione, F: diminution, D: Diminution, NL: ?, DK: ?, S: ?, FI: aika-arvojen tihennys.

This is a stub for diminution (*wrt* mensural notation).

#### See also

Section 1.23 [augmentation], page 7, Section 1.191 [mensural notation], page 46.

### 1.87 direct

ES: directo, I: ?, F: ?, D: Weiser, Zeiger, NL: ?, DK: ?, S: ?, FI: suora.

#### See also

Section 1.74 [custos], page 19.

### 1.88 disjunct movement

ES: movimiento disjunto, I: moto disgiunto, F: mouvement disjoint, D: sprunghafte Bewegung, NL: sprongsgewijze beweging, DK: springende bevægelse, S: hoppande rörelse, FI: melodian hyppivä liike.

Progressing melodically by intervals larger than a major second, as contrasted with conjunct movement.



#### See also

Section 1.66 [conjunct movement], page 17.



## 1.89 dissonance

Another name for [Section 1.90 \[dissonant interval\]](#), page 24.

### See also

[Section 1.90 \[dissonant interval\]](#), page 24, [Section 1.153 \[harmony\]](#), page 38.

## 1.90 dissonant interval

ES: intervalo disonante, disonancia, I: intervallo dissonante, dissonanza, F: intervalle dissonant, dissonance, D: Dissonanz, NL: dissonant interval, dissonant, DK: dissonerende interval, dissonans, S: dissonans, FI: dissonanssi, dissonoiva intervalli, riitasointi.

### See also

[Section 1.153 \[harmony\]](#), page 38.

## 1.91 divisio

ES: división, I: divisio, F: ?, D: Divisio, NL: ?, DK: ?, S: ?, FI: jäsennysmerkki.

[Latin: ‘division’; pl. *divisiones*] In Gregorian chant, a vertical stroke through part or all of the staff that serves to structure a chant into phrases and sections. There are four types:

- *divisio minima*, a short pause
- *divisio maior*, a medium pause
- *divisio maxima*, a long pause
- *finalis*, to indicate the end of a chant, or the end of a section in a long antiphonal or responsorial chant.

TODO: musical example here?

### See also

No cross-references.

## 1.92 doit

ES: elevación [de tono], I: portamento indeterminato verso l’alto/l’acuto, F: saut, D: Glissando zu unbestimmter Tonhöhe, NL: ?, DK: ?, S: ?, FI: nousu.

Indicator for an indeterminately rising pitch bend. Compare with *glissando*, which has determinate starting and ending pitches.

### See also

[Section 1.123 \[fall\]](#), page 31, [Section 1.142 \[glissando\]](#), page 35.

## 1.93 dominant

ES: dominante, I: dominante, F: dominante, D: Dominante, NL: dominant, DK: dominant, S: dominant, FI: dominantti, huippusointu.

The fifth *scale degree* in *functional harmony*.

### See also

[Section 1.139 \[functional harmony\]](#), page 34, [Section 1.260 \[scale degree\]](#), page 66.

### 1.94 dominant ninth chord

ES: acorde de novena de dominante, I: accordo di nona di dominante, F: accord de neuvième de dominante, D: Dominantnonenakkord, NL: dominant noon akkoord, DK: dominantnoneakkord, S: dominantnonackord, FI: dominanttinoonisointu.

#### See also

[Section 1.51 \[chord\]](#), page 13, [Section 1.139 \[functional harmony\]](#), page 34.

### 1.95 dominant seventh chord

ES: acorde de séptima de dominante, I: accordo di settima di dominante, F: accord de septième de dominante, D: Dominantseptakkord, NL: dominant septiem akkoord, DK: dominantseptimakkord, S: dominantseptimackord, FI: dominanttiseptimisointu.

#### See also

[Section 1.51 \[chord\]](#), page 13, [Section 1.139 \[functional harmony\]](#), page 34.

### 1.96 dorian mode

ES: modo dórico, I: modo dorico, F: mode dorien, D: dorisch, dorischer Kirchenton, NL: dorische toonladder, DK: dorisk skala, S: dorisk tonart, FI: doorinen moodi.

#### See also

[Section 1.82 \[diatonic scale\]](#), page 21.

### 1.97 dot (augmentation dot)

ES: puntillo, I: punto (di valore), F: point, D: Punkt (Verlängerungspunkt), NL: punt, DK: punkt, S: punkt, FI: piste.

#### See also

[Section 1.98 \[dotted note\]](#), page 25, [Section 1.217 \[note value\]](#), page 54.

### 1.98 dotted note

ES: nota con puntillo, I: nota puntata, F: note pointée, D: punktierte Note, NL: gepuncteerde noot, DK: punkteret node, S: punkterad not, FI: pisteellinen nuotti.

#### See also

[Section 1.217 \[note value\]](#), page 54.

### 1.99 double appoggiatura

ES: apoyatura doble, I: appoggiatura doppia, F: appoggiature double, D: doppelter Vorschlag, NL: dubbele voorslag, DK: dobbelt forslag, S: dubbelslag, FI: kaksoisappogiatura, kaksoistuhele.

#### See also

[Section 1.19 \[appoggiatura\]](#), page 5.

### 1.100 double bar line

ES: doble barra, I: doppia barra, F: double barre, D: Doppelstrich, NL: dubbele maatstreep, DK: dobbeltstreg, S: dubbelstreck, FI: kaksoistahtiviiva.

Indicates the end of a section within a movement.

#### See also

No cross-references.

### 1.101 double dotted note

ES: nota con doble puntillo, I: nota doppiamente puntata, F: note doublement pointée, D: doppelt punktierte Note, NL: dubbelgepuncteerde noot, DK: dobbeltpunkteret node, S: dubbelpunkterad not, FI: kaksoispisteellinen nuotti.

#### See also

[Section 1.217 \[note value\]](#), page 54.

### 1.102 double flat

ES: doble bemol, I: doppio bemolle, F: double bémol, D: Doppel-B, NL: dubbelmol, DK: dobbelt-b, S: dubbelbe, FI: kaksoisalennusmerkki.

#### See also

[Section 1.7 \[accidental\]](#), page 2.

### 1.103 double sharp

ES: doble sostenido, I: doppio diesis, F: double dièse, D: Doppelkreuz, NL: dubbelkruis, DK: dobbeltkryds, S: dubbelkors, FI: kaksoisylennysmerkki.

#### See also

[Section 1.7 \[accidental\]](#), page 2.

### 1.104 double time signature

ES: compás polimétrico, I: indicazione di tempo doppia/polimetrica, F: ?, D: zusammengesetzte Taktart, NL: ?, DK: ?, S: ?, FI: kaksois-aika-arvomerkinä.

#### See also

[Section 1.239 \[polymetric time signature\]](#), page 60.

### 1.105 double trill

ES: trino doble, I: doppio trillo, F: trille double, D: Doppeltriller, NL: dubbele triller, DK: dobbelttrille, S: dubbeldrill, FI: kaksoistrilli.

A simultaneous trill on two notes, usually in the distance of a third.

#### See also

No cross-references.

## 1.106 duple meter

ES: tiempo binario, I: tempo binario, F: métrique binaire, D: in zwei, grader Takt, NL: tweedelige maatsoort, DK: todelt takt, S: tvåtakt, FI: kaksoistempo.

### See also

[Section 1.193 \[meter\]](#), page 48.

## 1.107 duplet

ES: dosillo, I: duina, F: duolet, D: Duole, NL: duool, DK: duol, S: duol, FI: duoli.

### See also

[Section 1.217 \[note value\]](#), page 54.

## 1.108 duration

ES: duración, I: durata, F: durée, D: Dauer, Länge, NL: duur, lengte, DK: varighed, S: tonlängd, FI: kesto, aika-arvo.

### See also

[Section 1.217 \[note value\]](#), page 54.

## 1.109 dynamics

ES: dinámica, matices, I: dinamica, F: nuances, D: Dynamik, Lautstärke, NL: ?, DK: ?, S: ?, FI: äänen voimakkuusvaihtelu, dynamiikka.

The aspect of music relating to degrees of loudness, or changes from one degree to another. The terms, abbreviations, and symbols used to indicate this information are called dynamic marks.

### See also

[Section 1.233 \[piano\]](#), page 59, [Section 1.133 \[forte\]](#), page 33, [Section 1.72 \[crescendo\]](#), page 19, [Section 1.80 \[decrescendo\]](#), page 21, [Section 1.85 \[diminuendo\]](#), page 23.

## 1.110 E

- ES: mi
- I: mi
- F: mi
- D: E, e
- NL: e
- DK: e
- S: e
- FI: E, e

### See also

[Chapter 3 \[Pitch names\]](#), page 86

## 1.111 ecclesiastical mode

### See also

[Section 1.54 \[church mode\]](#), page 13, [Section 1.82 \[diatonic scale\]](#), page 21.

### 1.112 eighth note

- UK: quaver
- ES: corchea
- I: croma
- F: croche
- D: Achtel, Achtelnote
- NL: achtste noot
- DK: ottendedelsnote
- S: åttondelsnot
- FI: kahdeksasosanuotti

#### See also

Section 1.217 [note value], page 54.

### 1.113 eighth rest

- UK: quaver rest
- ES: silencio de corchea
- I: pausa di croma
- F: demi-soupir
- D: Achtelpause
- NL: achtste rust
- DK: ottendedelspause
- S: åttondeldspaus
- FI: kahdeksasosatauko

#### See also

Section 1.217 [note value], page 54.

### 1.114 elision

ES: sinalefa, I: elisione, F: élision, D: Elision, NL: ?, DK: ?, S: ?, FI: tavujen yhdistäminen yhteen ääneen.

More properly *synalepha* [New Lat. > Gr. , from Greek ‘to smear together’].

The singing of several syllables on a single note. Elision may be indicated by a lyric tie, which looks like (and serves the same function) as a musical tie.

#### See also

Section 1.179 [lyric tie], page 44.

### 1.115 embellishment

#### See also

Section 1.223 [ornament], page 56.

### 1.116 engraving

ES: grabado, I: incisione, F: gravure, D: Notenstich, Notendruck NL: steken, DK: nodestik, S: nottryck, FI: painatus.

Engraving means incising or etching a metal plate for printing. Photoengraving means drawing music with ink in a manner similar to drafting or engineering drawing, using similar tools.

The traditional process of music printing is done through cutting in a plate of metal. Now also the term for the art of music typesetting.

#### See also

No cross-references.

### 1.117 enharmonic

ES: enarmónico, I: enarmonico, F: enharmonique, D: enharmonisch, NL: enharmonisch, DK: enharmonisk, S: enharmonisk, FI: enharmoninen.

Two notes, intervals, or scales are enharmonic if they have different names but equal pitch.



#### See also

No cross-references.

### 1.118 equal temperament

ES: temperamento igual, I: temperamento equabile, F: tempérament égal, D: gleichschwebende Stimmung, NL: gelijkzwevende temperatuur, DK: ligesvævende temperatur, S: liksvävande temperatur, FI: tasavireinen.

A tuning system that divides the octave into 12 equal semitones (each of which is precisely equal to 100 cents).

#### See also

Section 1.49 [cent], page 12, Section 1.265 [semitone], page 67, Section 1.302 [temperament], page 75.

### 1.119 expression mark

ES: expresión, I: segno d'espressione, F: signe d'expression, indication de nuance, D: Vortragszeichen, NL: voordrachtsteken, DK: foredragsbetegnelse, S: föredragsbeteckning, FI: nyanssioitus, esitysmerkki.

Performance indications concerning:

- volume, dynamics (for example, *forte*, *crescendo*),
- tempo (for example, *andante*, *allegro*).

#### See also

Section 1.11 [allegro], page 4, Section 1.18 [andante], page 5, Section 1.72 [crescendo], page 19, Section 1.133 [forte], page 33.

## 1.120 extender line

ES: línea de extensión [de melisma, de bajo cifrado, etc.], I: linea di estensione, F: ligne d'extension [de mélisme, de basse chiffrée, etc.], D: Fülllinie, NL: ?, DK: ?, S: ?, FI: piden-nysviiva.

The generic term (in LilyPond) for a line (or dash) of arbitrary length that extends text (without indicating the musical *function* of that text).

Used in many contexts, for example:

- In vocal music to indicate the syllable for a melisma. Called ‘extension’ in the [Dolmetsch Online Music Dictionary](#).
- In figured bass to indicate that:
  - The extended note should be held through a change in harmony, when applied to one figure –OR–
  - The chord thus represented should be held above a moving bass line, when applied to more than one figure.
  - These uses were not completely standardized, and some composers used a single extender line to indicate the latter case.
- In string music to indicate that all notes in the passage thus indicated should be played on the same string. On the violin, for example, a series of notes to be played on the G string would be indicated *sul G*, another series to be played on the D string would be indicated *sul D*, and so on.
- With an octave mark to indicate that a passage is to be played higher or lower by the given number of octaves.

## See also

[Section 1.188 \[melisma\]](#), page 46, [Section 1.295 \[sul G\]](#), page 73, [Section 1.310 \[thorough bass\]](#), page 76, [Section 1.220 \[octave mark\]](#), page 55, [Section 1.221 \[octave marking\]](#), page 56.

## 1.121 F

- ES: fa
- I: fa
- F: fa
- D: F, f
- NL: f
- DK: f
- S: f
- FI: F, f

## See also

[Chapter 3 \[Pitch names\]](#), page 86

## 1.122 F clef

ES: clave de fa, I: chiave di fa, F: clef de fa, D: F-Schlüssel, NL: F-sleutel, DK: F-nøgle, S: f-klav, FI: F-avain.

The position between the dots of the key symbol is the line of the F below central C. Used on the third, fourth and fifth note line. A digit 8 above the clef symbol indicates that the notes

must be played an octave higher (for example, bass recorder) while 8 below the clef symbol indicates playing an octave lower (for example, on the Double Bass).



See also

Section 1.31 [baritone clef], page 8, Section 1.290 [strings], page 72.

### 1.123 fall

ES: caída [de tono], I: portamento indeterminato verso il basso/il grave, F: chute, D: Glissando zu unbestimmter Tonhöhe nach unten, NL: ?, DK: ?, S: ?, FI: lasku.

Indicator for an indeterminately falling pitch bend. Compare with *glissando*, which has determinate starting and ending pitches.

See also

Section 1.92 [doit], page 24, Section 1.142 [glissando], page 35.

### 1.124 feathered beam

ES: barra progresiva, I: travatura convergente/divergente, F: ligature en soufflet, lien de croches en soufflet, D: gespreizter Balken, NL: ?, DK: ?, S: ?, FI: kiilapalkki.

A type of beam used to indicate that a small group of notes should be played at an increasing or decreasing tempo – depending on the direction of ‘feathering’ – but without changing the overall tempo of the piece.

See also

Internals Reference: Section “Manual beams” in *Notation Reference*

### 1.125 fermata

ES: calderón, I: corona, F: point d’orgue, point d’arrêt, D: Fermate, NL: fermate, DK: fermat, S: fermat, FI: fermaatti, pidäke.

Prolonged note or rest of indefinite duration.



See also

No cross-references.

### 1.126 fifth

ES: quinta, I: quinta, F: quinte, D: Quinte, NL: kwint, DK: kvint, S: kvint, FI: kvintti.

See also

Section 1.159 [interval], page 40.



### 1.127 figured bass

ES: bajo cifrado, I: basso continuo, basso numerato, F: basse chiffrée, basse continue, D: Generalbass, bezifferter Bass, NL: basso continuo, becijferde bas DK: generalbas, S: generalbas, FI: kenraalibasso, numeroitu basso.

Also called ‘thorough bass’.

A method of indicating an accompaniment part by the bass notes only, together with figures designating the chief intervals and chords to be played above the bass notes.



See also

[Section 1.51 \[chord\], page 13](#), [Section 1.159 \[interval\], page 40](#).

### 1.128 fingering

ES: digitación, I: diteggiatura, F: doigté, D: Fingersatz, NL: vingerzetting, DK: fingersætning, S: fingersättning, FI: sormitus.

Figures to the side or above the note that methodically indicate which fingers to use while playing a passage.

See also

No cross-references.

### 1.129 flag

ES: corchete, I: coda (uncinata), bandiera, F: crochet, D: Fahne, Fähnchen, NL: vlaggetje, DK: fane, S: flagga, FI: lippu, viiri.

Ornament at the end of the stem of a note used for notes with values less than a quarter note. The number of flags determines the note value.



See also

[Section 1.217 \[note value\], page 54](#).

### 1.130 flageolet

ES: armónico, I: armonico, F: flageolet, D: Flageolett, NL: ?, DK: ?, S: ?, FI: flageolet-ääni.

An articulation for string players that means the note or passage is to be played in harmonics.

Also:

- A duct flute similar to the recorder.
- An organ stop of flute scale at 1' or 2' pitch.

**See also**

[Section 1.21 \[articulation\]](#), page 6, [Section 1.152 \[harmonics\]](#), page 37.

**1.131 flat**

ES: bemol, I: bemolle, F: bémol, D: B, NL: mol, DK: b, S: beförtecken, FI: alennusmerkki.

**See also**

[Section 1.7 \[accidental\]](#), page 2.

**1.132 forefall****See also**

[Section 1.19 \[appoggiatura\]](#), page 5.

**1.133 forte**

ES: forte, fuerte, I: forte, F: forte, D: forte, laut, NL: forte, DK: forte, S: forte, FI: forte, voimakkaasti.

[Italian: ‘loud’]

Abbreviated **f**. Variants include:

- *mezzo forte*, medium loud (notated **mf**),
- *fortissimo*, very loud (notated **ff**).

**See also**

No cross-references.

**1.134 fourth**

ES: cuarta, I: quarta, F: quarte, D: Quarte, NL: kuart, DK: kvart, S: kvart, FI: kvartti.

**See also**

[Section 1.159 \[interval\]](#), page 40.

**1.135 Frenched score**

ES: partitura a la francesa, I: partitura senza i righi vuoti, F: ?, D: Orchesterpartitur ohne leere Systeme, NL: ?, DK: ?, S: ?, FI: partituuri ilman tyhjiä nuottiviivastoja.

A ‘condensed’ score, produced by omitting staves for instruments that are not playing at the moment, and by moving up additional systems from following pages to take up the space thus liberated, which reduces the total number of pages used to print the work.

The specific rules for ‘frenching’ a score differ from publisher to publisher. If you are producing scores for eventual publication by a commercial publisher, you may wish to procure a copy of their style manual.

**See also**

[Section 1.136 \[Frenched staff\]](#), page 34.

### 1.136 Frenched staff

ES: pentagrama a la francesa, I: rigo temporaneo, F: ?, D: zeitweiliges Notensystem, NL: ?, DK: ?, S: ?, FI: karsittu nuotinnus.

[Pl. *Frenched staves*] Analogous to Frenched scores (*q.v.*), a Frenched staff has unneeded measures or sections removed. This is useful for producing, for example, an *ossia* staff.

#### See also

Section 1.224 [*ossia*], page 57.

### 1.137 Frenched staves

Plural of Section 1.136 [*Frenched staff*], page 34.

### 1.138 fugue

ES: fuga, I: fuga, F: fugue, D: Fuge, NL: fuga, DK: fuga, S: fuga, FI: fuuga.

#### See also

Section 1.70 [*counterpoint*], page 18.

### 1.139 functional harmony

ES: armonía funcional, I: armonia funzionale, F: étude des functions, D: Funktionslehre, NL: functionele harmonie, DK: funktionsanalyse, funktionsharmonik, S: funktionslära, FI: harmoniajärjestelmä.

A system of harmonic analysis.

It is based on the idea that, in a given key, there are only three functionally different chords: tonic (T, the chord on the first note of the scale), subdominant (S, the chord on the fourth note), and dominant (D, the chord on the fifth note). Others are considered to be variants of the base chords. A few examples among many others are the tonic, subdominant or dominant of the parallel minor scale, or the incomplete dominant seventh chord.



#### See also

Section 1.93 [*dominant*], page 24, Section 1.158 [*incomplete dominant seventh chord*], page 39, Section 1.292 [*subdominant*], page 72, Section 1.315 [*tonic*], page 77.

### 1.140 G

- ES: sol
- I: sol
- F: sol
- D: G, g
- NL: g
- DK: g
- S: g
- FI: G, g

**See also**

Chapter 3 [Pitch names], page 86

**1.141 G clef**

ES: clave de sol, I: chiave di sol, F: clef de sol, D: G-Schlüssel, Violinschlüssel, NL: G-sleutel, DK: g-nøgle, S: g-klav, FI: G-avain.

A clef symbol that indicates G above middle C. Used on the first and second note lines. A digit 8 above the clef symbol indicates that the notes must be played an octave higher while 8 below the clef symbol indicates playing or singing an octave lower (used most frequently to notate the tenor part in modern choral scores).

**See also**

No cross-references.

**1.142 glissando**

ES: glissando, I: glissando, F: glissando, D: Glissando, NL: glissando, DK: glissando, S: glissando, FI: glissando, liuku.

Letting the pitch slide fluently from one note to the other.

**See also**

No cross-references.

**1.143 grace notes**

ES: notas de adorno, I: abbellimenti, F: ornement, fioriture, D: Verzierungen, Vorschläge, Vorschlagsnoten, NL: versieringen, DK: forsiringer, S: ornament, FI: korunnotit.

Notes printed in small types to indicate that their time values are not counted in the rhythm of the bar.

**See also**

Section 1.6 [acciaccatura], page 2, Section 1.19 [appoggiatura], page 5, Section 1.205 [mordent], page 52, Section 1.223 [ornament], page 56.

**1.144 grand staff**

ES: sistema de piano, I: accollatura, F: système [de portées], accolade, D: Akkolade, Klaviersystem, NL: piano systeem, DK: klaversystem, S: ackolad, böjd klammer, FI: kaksoisnuottiviivasto.

A combination of two staves with a brace. Usually used for piano music.

**See also**

Section 1.38 [brace], page 10.

## 1.145 grave

ES: grave, I: grave, F: grave, lent, D: Grave, Langsam, NL: grave, ernstig, DK: grave, S: grave, FI: grave, raskaasti.

[Italian] Slow, solemn.

### See also

No cross-references.

## 1.146 gruppetto

### See also

Section 1.327 [turn], page 80.

## 1.147 H

- ES: si
- I: si
- F: si
- D: H, h
- NL: b
- DK: h
- S: h
- FI: H, h

Letter name used for *B natural* in German and Scandinavian usage. In the standard usage of these countries, *B* means *B flat*.

### See also

Chapter 3 [Pitch names], page 86, Section 1.26 [B], page 7.

## 1.148 hairpin

Graphical version of the *crescendo* and *decrescendo* dynamic marks.



### See also

Section 1.72 [crescendo], page 19, Section 1.80 [decrescendo], page 21.

## 1.149 half note

- UK: minim,
- ES: blanca,
- I: minima,
- F: blanche,
- D: Halbe, halbe Note,

- NL: halve noot,
- DK: halvnode,
- S: halvnot,
- FI: puolinuotti.

### See also

Section 1.217 [note value], page 54.

## 1.150 half rest

- UK: minim rest,
- ES: silencio de blanca,
- I: pausa di minima,
- F: demi-pause,
- D: halbe Pause,
- NL: halve, rust,
- DK: halvnodespause,
- S: halvpaus,
- FI: puolitauko.

### See also

Section 1.217 [note value], page 54.

## 1.151 harmonic cadence

ES: cadencia (armónica), I: cadenza (armonica), F: cadence harmonique, D: Schlusskadenz, NL: harmonische cadens, DK: harmonisk kadence, S: (harmonisk) kadens, FI: harmoninen kadenssi.

A sequence of chords that terminates a musical phrase or section.



### See also

Section 1.139 [functional harmony], page 34.

## 1.152 harmonics

ES: armónicos, sonidos aflautados, I: armonici, F: flageolet, sons harmoniques, D: Flageolet-Töne, NL: ?, DK: ?, S: ?, FI: harmoniset äänet, huiluäänet.

The general class of pitches produced by sounding the second or higher harmonic of a tone producer: string, column of air, and so on.

On stringed instruments, these pitches sound rather flute-like; hence, their name in languages other than English. They are produced by lightly touching the string at a node for the desired mode of vibration while it is being bowed or plucked.

For instruments of the violin family, there are two types of harmonics: natural harmonics, which are those played on the open string; and artificial harmonics, which are produced on stopped strings.

## See also

No cross-references.

### 1.153 harmony

ES: armonía, I: armonia, F: harmonie, D: Harmonie, Zusammenklang, NL: harmonie, DK: samklang, S: samklang, FI: harmonia, yhteissointi.

Tones sounding simultaneously. Two note harmonies fall into the categories *consonances* and *dissonances*.

Consonances:



Dissonances:



For harmony that uses three or more notes, see [Section 1.51 \[chord\]](#), page 13.

## See also

[Section 1.51 \[chord\]](#), page 13.

### 1.154 hemiola

ES: hemiolia, I: emiolia, (rarely hemiola or emiola), F: hémiole, D: Hemiole, NL: ?, DK: ?, S: ?, FI: hemioli, 3/2 -suhde.

[Greek: in Latin, *sesquialtera*] The ratio 3:2.

Most frequently, a proportion (*q.v.*) of three notes of equal value in the time normally occupied by two. The resulting rhythm can be expressed in modern terms as a substitution (for example) of a bar in 3/2 for one of 6/4, or of a bar in 3/4 for one of 6/8. During the Baroque era, hemiola is most frequently as a special effect (or *affect*) at cadences.

For example, this phrase in 6/4 time



may be thought of having alternating time signatures



and is therefore a polymeter (second definition) of considerable antiquity.

**See also**

Section 1.191 [mensural notation], page 46, Section 1.193 [meter], page 48, Section 1.237 [polymeter], page 60, Section 1.244 [proportion], page 61.

**1.155 homophony**

ES: homofonía, I: omofonia, F: homophonie, D: Homophonie, NL: homofonie, DK: homofoni, S: homofoni, FI: homofonia, yksiäänisyys.

Music in which one voice leads melodically supported by the other voices in the same rhythm (more or less). In contrast to *polyphony*.

**See also**

Section 1.240 [polyphony], page 60.

**1.156 hook****See also**

Section 1.129 [flag], page 32.

**1.157 hymn meter**

ES: ?, I: metrica dell'inno, F: ?, D: Silbenanzahl, NL: ?, DK: ?, S: ?, FI: säkeiden tavumäärät.

A group or list of numbers that indicate the number of syllables in a line of a hymn's verse. Different hymnals have different ways of noting the hymn meter: for example, consider a hymn that has four lines in two couplets alternating regularly between eight and seven syllables. The *English Hymnal* notes this as 87. 87. Other hymnals may note it as 8787, 87.87, or 8 7 8 7.

Some frequently-used hymn meters have traditional names:

- 66.86 is called Short Meter (abbreviated SM or S.M.)
- 86.86 is called Common Meter (CM or C.M.)
- 88.88 is called Long Meter (LM or L.M.)

Some hymns and their tunes are doubled versions of a simpler meter: for easier reading, a hymn with a meter of 87.87.87.87 is usually written 87.87D. The traditional names above also have doubled versions:

- 66.86.66.86 is Double Short Meter (DSM or D.S.M.)
- 86.86.86.86 is Double Common Meter (DCM or D.C.M.)
- 88.88.88.88 is Double Long Meter (DLM or D.L.M.)

**See also**

No cross-references.

**1.158 incomplete dominant seventh chord**

ES: ?, I: accordo di settima dominante incompleto, F: ?, D: verkürzter Dominantseptakkord, NL: ?, DK: ?, S: ?, FI: ?.

A dominant seventh chord where the root tone is removed. The remaining three tones build a diminished triad.

**See also**

Section 1.51 [chord], page 13, Section 1.95 [dominant seventh chord], page 25, Section 1.139 [functional harmony], page 34.



## 1.159 interval

ES: intervalo, I: intervallo, F: intervalle, D: Intervall, NL: interval, DK: interval, S: intervall, FI: intervalli, kahden sävelen korkeusero.

Difference in pitch between two notes. Intervals may be diminished, minor, perfect, major, or augmented. The augmented fourth and the diminished fifth are identical (or *enharmonic*) on an equal-tempered twelve-tone scale and are called *tritonus* because they consist of three whole tones. The addition of such two intervals forms an octave.

unison unison second second second second

7 third third third third fourth fourth fourth

14 fifth fifth fifth sixth sixth sixth sixth

21 seventh seventh seventh seventh octave octave octave

See also

Section 1.117 [enharmonic], page 29, Section 1.335 [whole tone], page 81.

## 1.160 inversion

ES: inversión, I: rivolto, F: renversement, D: Umkehrung, NL: ?, DK: ?, S: ?, FI: käännös.

When a chord sounds with a bass note that differs from the root of the chord, it is said to be *inverted*. The number of inversions that a chord can have is one fewer than the number of constituent notes. For example, triads (which have three constituent notes) can have three positions, two of which are inversions:

### Root position

The root note is in the bass, and above that are the third and the fifth. A triad built on the first scale degree, for example, is marked *I*.

### First inversion

The third is in the bass, and above it are the fifth and the root. This creates an interval of a sixth and a third above the bass note, and so is marked in figured Roman notation as *6/3*. This is commonly abbreviated to *I6* (or *Ib*) since the sixth is the characteristic interval of the inversion, and so always implies *6/3*.

### Second inversion

The fifth is in the bass, and above it are the root and the third. This creates an interval of a sixth and a fourth above the bass note, and so is marked as *I6/4* or *Ic*. Second inversion is the most unstable chord position.

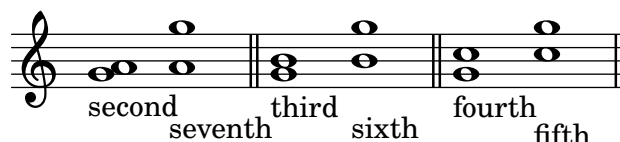
**See also**

No cross-references.

**1.161 inverted interval**

ES: intervalo invertido, I: intervallo rivolto, F: intervalle renversé, D: umgekehrtes Intervall, NL: interval inversie, DK: omvendingsinterval, S: intervalllets omvändning, FI: käänteisintervalli.

The difference between an interval and an octave.

**See also**

No cross-references.

**1.162 just intonation**

ES: entonación justa, I: intonazione giusta, F: intonation juste, D: reine Stimmung, NL: reine stemming, DK: ren stemning, S: ren stämning, FI: puhdas viritys.

Tuning system in which the notes are obtained by adding and subtracting natural fifths and thirds.

**See also**

[Section 1.302 \[temperament\], page 75.](#)

**1.163 key**

ES: tonalidad, I: tonalità, F: tonalité, D: Tonart, NL: toonsoort, DK: toneart, S: tonart, FI: tonaliteetti.

According to the 12 tones of the *chromatic scale* there are 12 keys, one on c, one on c-sharp, etc.

**See also**

[Section 1.52 \[chromatic scale\], page 13](#), [Section 1.164 \[key signature\], page 41.](#)

**1.164 key signature**

ES: armadura (de la clave), I: armatura di chiave, F: armure, armature [de la clé], D: Vorzeichen, Tonart, NL: toonsoort (voortekens), DK: faste fortegn, S: tonartssignatur, FI: sävellajiositus.

The sharps or flats appearing at the beginning of each staff indicating the key of the music.

**See also**

[Section 1.7 \[accidental\], page 2.](#)

**1.165 kievan notation**

A form of medieval music notation used predominantly in the chantbooks of the Russian Orthodox Church as well as Carpatho-Russian and Ukrainian jurisdictions of Orthodoxy and Byzantine-rite Catholicism. It is characterized by the square shape of its noteheads.

### 1.166 laissez vibrer

ES: dejar vibrar, I: laissez vibrer, F: laissez vibrer, D: Laissez vibrer, schwingen lassen, NL: ?, DK: ?, S: ?, FI: antaa väristä.

[French: ‘Let vibrate’] Most frequently associated with harp parts. Marked *l.v.* in the score.

#### See also

No cross-references.

### 1.167 largo

ES: largo, I: largo, F: largo, large, ample, D: Largo, Langsam, Breit, NL: largo, DK: largo, S: largo, FI: largo, hitaasti, leveästi.

[Italian: ‘wide’.] Very slow in tempo, usually combined with great expressiveness. *Larghetto* is less slow than largo.

### 1.168 leading note

ES: sensible, I: sensibile, F: (note) sensible, D: Leitton, NL: leidtoon, DK: ledetone, S: ledton, FI: johtosävel.

The seventh *scale degree*, a *semitone* below the tonic; so called because of its strong tendency to ‘lead up’ (resolve upwards) to the tonic scale degree.

#### See also

[Section 1.260 \[scale degree\]](#), [page 66](#), [Section 1.265 \[semitone\]](#), [page 67](#).

### 1.169 ledger line

ES: línea adicional, I: tagli addizionali, F: ligne supplémentaire, D: Hilfslinie, NL: hulplijntje, DK: hjælpelinie, S: hjälplinje, FI: apuviiva.

A ledger line is an extension of the staff.



#### See also

No cross-references.

### 1.170 legato

ES: legato, I: legato, F: legato, lié, D: legato, gebunden, NL: legato, DK: legato, S: legato, FI: legato, sitoen.

To be performed (a) without any perceptible interruption between the notes, unlike (b) *leggiero* or *non-legato*, (c) *portato*, or (d) *staccato*.



#### See also

[Section 1.285 \[staccato\]](#), [page 71](#).

## 1.171 legato curve

### See also

Section 1.279 [slur], page 70, Section 1.170 [legato], page 42.

## 1.172 leger line

### See also

Section 1.169 [ledger line], page 42.

## 1.173 ligature

ES: ligadura, I: ligatura, F: ligature, DE: Ligatur, NL: ?, DK: ?, S: ?, FI: ligatuura.

A ligature is a coherent graphical symbol that represents at least two distinct notes. Ligatures originally appeared in the manuscripts of Gregorian chant notation around the 9th century to denote ascending or descending sequences of notes. In early notation, ligatures were used for monophonic tunes (Gregorian chant) and very soon denoted also the way of performance in the sense of articulation. With the invention of the metric system of the white mensural notation, the need for ligatures to denote such patterns disappeared.

### See also

Section 1.191 [mensural notation], page 46.

## 1.174 lilypond

UK: lily pond, ES: estanque de nenúfares, I: stagno del giglio, F: étang de nénuphars, étang de nymphéas, D: Seerosenteich, NL: lelievijver, DK: liliedam, S: liljedamm, FI: liljalampi.

A pond with lilies floating in it.

Also, the name of a music typesetting program.

### See also

No cross-references.

## 1.175 line

ES: línea, I: linea, F: ligne, D: Linie, Notenlinie, NL: lijn, DK: nodelinie, S: notlinje, FI: viiva, nuottiviiva.

### See also

Section 1.286 [staff], page 71.

## 1.176 loco

ES: en su lugar, I: loco, F: ?, D: loco, NL: ?, DK: ?, S: ?, FI: kirjoitetussa äänenkorkeudessa.

[Italian: ‘place’] Instruction to play the following passage at the written pitch. Cancels octave mark (q.v.).

### See also

Section 1.220 [octave mark], page 55, Section 1.221 [octave marking], page 56.

## 1.177 long appoggiatura

ES: apoyatura larga, I: appoggiatura lunga, F: appoggiature longue, D: Vorhalt, NL: Lange voorslag, DK: langt forslag, S: långt förslag, FI: pitkä appoggiatura, pitkä etuhele.

### See also

Section 1.19 [appoggiatura], page 5.

## 1.178 longa

- US: long, longa,
- ES: longa,
- I: longa,
- F: longa, longue,
- D: Longa,
- NL: longa,
- DK: longa,
- S: longa,
- FI: longa.

Note value: twice the length of a *breve*.



### See also

Section 1.42 [breve], page 11, Section 1.217 [note value], page 54.

## 1.179 lyric tie

ES: ligadura de letra, I: legatura del testo, F: ligature de mots, D: Textbindung, NL: ?, DK: ?, S: ?, FI: sidonta sanoituksessa.

### See also

Section 1.114 [elision], page 28.

## 1.180 lyrics

ES: letra (de la canción), I: testo, F: paroles, D: Liedtext, Gesangstext, NL: liedtekst, DK: ?, S: ?, FI: sanoitus.

### See also

No cross-references.

## 1.181 major

ES: mayor, I: maggiore, F: [mode] majeur, D: Dur, NL: majeur, DK: dur, S: dur, FI: duuri.

### See also

Section 1.82 [diatonic scale], page 21.

## 1.182 major interval

ES: intervalo mayor, I: intervallo maggiore, F: intervalle majeur, D: großes Intervall, NL: groot interval, DK: stort interval, S: stort intervall, FI: suuri intervalli.

### See also

Section 1.159 [interval], page 40.

## 1.183 maxima

ES: máxima, I: maxima, F: maxima, maxime, D: Maxima, NL: ?, DK: ?, S: ?, FI: maxima.

Note value: twice the length of a *longa*.

The maxima is the largest duration in use during the 15th and 16th centuries. Like the *longa*, the maxima can be either two or three times as long as the *longa* (called *binary* and *ternary*, respectively). By the late 15th century, most composers used the smaller proportion by default.

### See also

Chapter 2 [Duration names notes and rests], page 83, Section 1.178 [*longa*], page 44, Section 1.217 [note value], page 54.

## 1.184 meantone temperament

ES: afinación mesotónica, I: accordatura mesotonica, F: tempérament mésotonique, D: mit-teltönige Stimmung, NL: middenstemming, middentoonstemming, DK: middeltonetemperatur, S: medeltonstemperatur, FI: keskisävelviritys.

Temperament yielding acoustically pure thirds by decreasing the natural fifth by 16 cents. Due to the non-circular character of this temperament only a limited set of keys are playable. Used for tuning keyboard instruments for performance of pre-1650 music.

### See also

Section 1.49 [cent], page 12, Section 1.302 [temperament], page 75.

## 1.185 measure

ES: compás, I: misura, battuta, F: mesure, D: Takt, NL: maat, DK: takt, S: takt, FI: tahti.

A group of beats (units of musical time) the first of which bears an accent. Such groups in numbers of two or more recur consistently throughout the composition and are separated from each other by bar lines.

### See also

Section 1.29 [bar line], page 8, Section 1.35 [beat], page 9, Section 1.193 [meter], page 48.

## 1.186 measure repeat

### See also

Section 1.228 [percent repeat], page 58.

## 1.187 mediant

ES: mediente, I: mediente, modale, F: médiate, NL: mediant, D: Mediente, DK: mediant, S: mediant, FI: keskisävel.

- The third **scale degree**.

- A *chord* having its base tone a third from that of another chord. For example, the tonic chord may be replaced by its lower mediant (variant tonic).

### See also

Section 1.51 [chord], page 13, Section 1.139 [functional harmony], page 34, Section 1.253 [relative key], page 64.

## 1.188 melisma

ES: melisma, I: melisma, F: mélisme, tenue, D: Melisma, NL: melisma, DK: ?, S: ?, FI: melisma, laulettavan tavun sävelkuvio.

A melisma (Greek: plural *melismata*) is a group of notes or tones sung on one syllable, especially as applied to liturgical chant.

### See also

No cross-references.

## 1.189 melisma line

ES: línea de melisma, I: linea del melisma, F: trait de mélisme, trait de tenue, D: Fülllinie, NL: ?, DK: ?, S: ?, FI: melismaviiva.

### See also

Section 1.120 [extender line], page 30.

## 1.190 melodic cadence

### See also

Section 1.46 [cadenza], page 12.

## 1.191 mensural notation

ES: notación mensural, I: notazione mensurale, F: notation mensurale, D: Mensuralnotation, NL: ?, DK: ?, S: ?, FI: mensuraalinuotinnus.

A system of duration notation whose principles were first established in the mid-13th century, and that (with various changes) remained in use until about 1600. As such, it is the basis for the notation of rhythms in Western musical notation.

Franco of Cologne (ca. 1250) is credited with the first systematic explanation of the notation's principles, so the notation of this earliest period is called 'Franconian'. Franco's system made use of three note values – long, breve, and semibreve – each of which was normally equivalent to three of the next lower note value.

Then, in the first half of the 14th century, Philippe de Vitry and Jehan de Murs added several note values (the minim, semiminim and fusa) and extended Franco's principles to govern the relationship between these values. They also put the duple division of note values on an equal footing with the earlier (preferred) triple division.

TODO: continue description of French and Italian black notation, and the relationship between them.

### White or void mensural notation

In the 15th century, hollow (or void) notes began to substitute for the earlier solid black ones, which were then free to assume the function of red (or colored) notes in the earlier notation. ...

TODO: add to definition (including summary info on proportional notation)

## See also

Section 1.23 [augmentation], page 7, Section 1.86 [diminution], page 23, Section 1.173 [ligature], page 43, Section 1.244 [proportion], page 61.

## 1.192 mensuration sign

ES: signo de mensuración, I: indicazione mensurale, F: signe de mensuration, D: Mensurzeichen, NL: ?, DK: ?, S: ?, FI: ?.

The ancestor of the time signature, mensuration signs were used to indicate the relationship between two sets of note durations—specifically, the ratio of breves to semibreves (called *tempus*), and of semibreves to minims (called *prolatio*).

Each ratio was represented with a single sign, and was either three-to-one (ternary) or two-to-one (binary), as in modern music notation. Unlike modern music notation, the *ternary* ratio was the preferred one—applied to the *tempus*, it was called *perfect*, and was represented by a complete circle; applied to the *prolatio*, it was called *major* and was represented by a dot in the middle of the sign. The binary ratio applied to the *tempus* was called *imperfect*, and was represented by an incomplete circle; applied to *prolatio*, it was called *minor* and was represented by the lack of an internal dot. There are four possible combinations, which can be represented in modern time signatures with and without reduction of note values. (These signs are hard-coded in LilyPond with reduction.)

### *perfect tempus with major prolatio*

Indicated by a complete circle with an internal dot. In modern time signatures, this equals:

- 9/4, with reduction or
- 9/2, without reduction

### *perfect tempus and minor prolatio*

Indicated by a complete circle without an internal dot. In modern time signatures, this equals:

- 3/2, with reduction or
- 3/1, without reduction

### *imperfect tempus and major prolatio*

Indicated by an incomplete circle with an internal dot. In modern time signatures, this equals:

- 6/4, with reduction or
- 6/2, without reduction

### *imperfect tempus and minor prolatio*

Indicated by an incomplete circle without an internal dot. In modern time signatures, this equals:

- 4/4, with reduction or
- 2/1, without reduction

The last mensuration sign *looks* like common-time because it *is*, with note values reduced from the original semibreve to a modern quarter note. Being doubly imperfect, this sign represented the (theoretically) least-preferred mensuration, but it was actually used fairly often.

This system extended to the ratio of longer note values to each other:

- maxima to longa, called:
  - *modus maximorum*,
  - *modus major*, or



- *maximodus*)
- longa to breve, called:
  - *modus longarum*,
  - *modus minor*, or
  - *modus*

In the absence of any other indication, these modes were assumed to be binary. The mensuration signs only indicated tempus and prolatio, so composers needed another way to indicate these longer ratios (called modes. Around the middle of the 15th century started to use groups of rests at the beginning of the staff, preceding the mensuration sign.

Two mensuration signs have survived to the present day: the C-shaped sign, which originally designated *tempus imperfectum* and *prolatio minor* now stands for *common time*; and the slashed C, which designated the same with *diminution* now stands for *cut time* (essentially, it has not lost its original meaning).

## See also

Section 1.86 [diminution], page 23, Section 1.244 [proportion], page 61, Section 1.313 [time signature], page 77.

## 1.193 meter

ES: tiempo, compás, I: tempo, misura, F: indication de mesure, mesure, D: Taktart, Metrum, NL: maatsoort, DK: taktart, S: taktart, FI: aika-arvo.

The pattern of note values and accents in a composition or a section thereof. There are a couple ways to classify ‘traditional’ meter (i.e. not polymeter): by grouping beats and by subdividing the primary beat.

### By grouping beats:

- **duple**: groups of two.
- **triple**: groups of three.
- **quadruple**: groups of four. A special case of duple meter.
- **quintuple**: groups of five beats.
- **sextuple** meter: groups of six. A special case of:
  - duple meter, subdivided in three; or
  - triple meter, subdivided in two.
- **septuple** meter: groups of seven.
- and so on.

Other than triple meter and its subdivided variants (see below), meters that feature odd groupings of beats (e.g. quintuple or septuple meter) are not frequently used prior to the 20th Century.

### By subdividing the primary beat:

- simple: subdivided in groups of two.
  - duple: 2/2, 2/4, 2/8
  - triple: 3/2, 3/4, 3/8
  - quadruple: 4/2, 4/4 (also called common time), 4/8
- compound: subdivided in groups of three.
  - duple: 6/8
  - triple: 9/8

- quadruple: 12/8

Time signatures are placed at the beginning of a composition (or section) to indicate the meter. For instance, a piece written in simple triple meter with a beat on each quarter note is conventionally written with a time signature of 3/4. Here are some combinations of the two classifications above:

Simple duple meter (F.J. Haydn, 1732-1809; or a Croatian folk tune):



Simple triple meter:



Simple quadruple meter (French folk tune, *Au clair de la lune*):



Simple quintuple meter (B. Marcello, 1686-1739):



(Aside: this is an example of *Augenmusik*: the accidentals are thus in the source, with sharps in the accompaniment where the voice has flats and *vice versa*.)

Compound duple meter (unknown):



Compound triple meter (J.S. Bach, 1685-1750):



Compound quadruple meter (P. Yon, 1886-1943):



**See also**

Section 1.4 [accent], page 2, Section 1.154 [hemiola], page 38, Section 1.217 [note value], page 54, Section 1.313 [time signature], page 77

**1.194 metronome**

ES: metrónomo, I: metronomo, F: métronome, D: Metronom, NL: metronoom, DK: metronom, S: metronom, FI: metronomi.

Device used to indicate the exact tempo of a piece.

Invented ca. 1812 by Dietrich Nikolaus Winkler of Amsterdam, but takes its name from Johann Nepomuk Mälzel, who copied the device, added a scale of tempo divisions, and patented it as a ‘metronome’. The inevitable lawsuit that followed acknowledged Winkler as the creator, but by then Mälzel had already sold many of them, and people had taken to calling it a Mälzel Metronome.

**See also**

Section 1.195 [metronome mark], page 50.

**1.195 metronome mark**

ES: indicación metronómica, I: indicazione metronomica, F: indication métronomique, D: Metronomangabe, NL: metronoom aanduiding, DK: metronomtal, S: metronomangivelse, FI: metronomiosoitus.

Exact tempo indication (in beats per minute). Abbreviated *M.M.* or *MM*, which is short for Mälzels Metronom (or Mälzel’s Mark, *anglice*).

**See also**

Section 1.194 [metronome], page 50

**1.196 metronomic indication****See also**

Section 1.195 [metronome mark], page 50

**1.197 mezzo**

ES: mezzo, I: mezzo, F: mezzo, D: mezzo, etwas, NL: ?, DK: ?, S: ?, FI: kohtalaisen, melko.

[Italian: ‘medium’]

Used to qualify other indications, such as:

- Dynamics
  - *mezzo piano* is ‘medium quiet’ (that is, not as quiet as *piano*)
  - *mezzo forte* is ‘medium loud’ (that is, not as loud as *forte*)
- Voice
  - Pitchwise, a mezzo-soprano’s voice lies between that of contraltos and sopranos

**See also**

No cross-references.

## 1.198 mezzo-soprano

ES: mezzosoprano, I: mezzo-soprano, F: mezzo-soprano, D: Mezzosopran, NL: mezzosopraan, DK: mezzosopran, S: mezzosopran, FI: mezzosopraano.

The female voice between soprano and contralto.

### See also

[Section 1.284 \[soprano\]](#), page 71, [Section 1.68 \[contralto\]](#), page 18.

## 1.199 middle C

ES: do central, I: do centrale, F: do central, do 3 D: zweigestrichenes c, NL: centrale c, DK: enstreget c, S: ettstruket c, FI: keski-C.

First C below the 440 Hz A.



### See also

No cross-references.

## 1.200 minor

ES: menor, I: minore, F: (mode) mineur, D: Moll, NL: mineur, DK: mol, S: moll, FI: molli.

### See also

[Section 1.82 \[diatonic scale\]](#), page 21.

## 1.201 minor interval

ES: intervalo menor, I: intervallo minore, F: intervalle mineur, D: kleines Intervall, NL: klein interval, DK: lille interval, S: litet intervall, FI: pieni intervalli.

### See also

[Section 1.159 \[interval\]](#), page 40.

## 1.202 mixolydian mode

### See also

[Section 1.82 \[diatonic scale\]](#), page 21.

## 1.203 mode

ES: modo, I: modo, F: mode, D: Kirchentonart, Modus, NL: modus, DK: skala, S: modus, skala, FI: moodi, kirkkosävelasteikko.

### See also

[Section 1.54 \[church mode\]](#), page 13, [Section 1.82 \[diatonic scale\]](#), page 21.

## 1.204 modulation

ES: modulaci3n, I: modulazione, F: modulation, D: Modulation, NL: modulatie, DK: modulation, S: modulering, FI: modulaatio, s3vellaajin vaihdos.

Moving from one [Section 1.163 \[key\]](#), page 41 to another. For example, the second subject of a [Section 1.282 \[sonata form\]](#), page 70 movement modulates to the dominant key if the key is major and to the [Section 1.253 \[relative key\]](#), page 64 if the key is minor.

### See also

No cross-references.

## 1.205 mordent

I: mordente, F: mordant, D: Mordent, NL: mordent, DK: mordent, S: mordent, FI: mordent, korukuvio.

### See also

[Section 1.6 \[acciaccatura\]](#), page 2, [Section 1.19 \[appoggiatura\]](#), page 5, [Section 1.143 \[grace notes\]](#), page 35, [Section 1.223 \[ornament\]](#), page 56.

## 1.206 motif

### See also

[Section 1.207 \[motive\]](#), page 52.

## 1.207 motive

ES: motivo, I: inciso, F: motif, incise, D: Motiv, NL: motief, DK: motiv, S: motiv, FI: teema, s3velaihe.

The briefest intelligible and self-contained fragment of a musical theme or subject.



### See also

No cross-references.

## 1.208 movement

ES: movimiento, I: movimento, F: mouvement, D: Satz, NL: deel, DK: sats, S: sats, FI: osa.

Greater musical works like [Section 1.298 \[symphony\]](#), page 74 and [Section 1.281 \[sonata\]](#), page 70 most often consist of several – more or less – independent pieces called movements.

### See also

No cross-references.

## 1.209 multi-measure rest

ES: compases de espera, silencio multicompás, I: pausa multipla, F: pause multiple, mesure à compter, NL: meermaats rust, D: mehrtaktige Pause, Kirchenpause, DK: flertaktspause, S: flertaktspaus, FI: usean tahdin mittainen tauko.

Multi-measure rests are conventionally typeset with a combination of longa, breve and whole rests for shorter and a long horizontal bar for longer spans of rest, with a number above to indicate the duration (in measures) of the rest. The former style is called ‘Kirchenpausen’ in German, as a reminiscence of its use in Renaissance vocal polyphony.



See also

Section 1.178 [longa], page 44, Section 1.42 [breve], page 11.

## 1.210 natural

ES: becuadro, I: bequadro, F: bécarre, D: Auflösungszeichen, NL: herstellingsteken, DK: opløsningstegn, S: återställningstecken, FI: palautusmerkki.

See also

Section 1.7 [accidental], page 2.

## 1.211 neighbor tones

ES: tonos vecinos, I: nota di volta, F: tons voisins, D: ?, NL: ?, DK: ?, S: ?, FI: ?.

See also

Section 1.6 [acciaccatura], page 2, Section 1.19 [appoggiatura], page 5, Section 1.143 [grace notes], page 35, Section 1.205 [mordent], page 52, Section 1.223 [ornament], page 56.

## 1.212 ninth

ES: novena, I: nona, F: neuvième, D: None, NL: noon, DK: none, S: nona, FI: nooni.

See also

Section 1.159 [interval], page 40.

## 1.213 non-legato

See also

Section 1.170 [legato], page 42.

## 1.214 note

ES: nota, I: nota, F: note, D: Note, NL: noot, DK: node, S: not, FI: nuotti.

Notes are signs by means of which music is fixed in writing. The term is also used for the sound indicated by a note, and even for the key of the piano which produces the sound. However, a clear distinction between the terms tone and Section 1.214 [note], page 53 is strongly recommended. Briefly, one sees a note, and hears a tone.

**See also**

No cross-references.

**1.215 note head**

ES: cabeza, I: testa, testina, capocchia, F: tête de note, D: Notenkopf, NL: nootballetje, DK: nodehovede, S: nothuvud, FI: nuotin pää.

A head-like sign which indicates pitch by its position on a *staff* provided with a *clef*, and duration by a variety of shapes such as hollow or black heads with or without *stems*, *flags*, etc. For percussion instruments (often having no defined pitch) the note head may indicate the instrument.

**See also**

Section 1.55 [clef], page 14, Section 1.129 [flag], page 32, Section 1.286 [staff], page 71, Section 1.288 [stem], page 72.

**1.216 note names****See also**

Chapter 3 [Pitch names], page 86

**1.217 note value**

ES: valor, duración, I: valore, durata, F: durée, valeur (d'une note), D: Notenwert, NL: nootwaarde, DK: nodeværdi, S: notvärde, FI: nuotin aika-arvo.

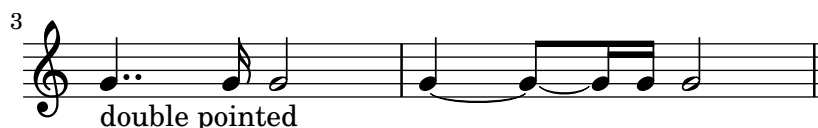
Note values (durations) are measured as fractions—in modern usage, one-half—of the next higher note value. The longest duration in current use is the *breve* (equal to two whole notes), but sometimes (especially in music dating from the Baroque era or earlier) the *longa* (four whole notes) or *maxima* (eight whole notes) may be found.

As used in mensural notation, this fraction was more flexible: it could also be one-third the higher note value. Composers indicated which proportions to use with various signs—two of which survive to the present day: the C-shaped sign for *common time*, and the slashed C for *alla breve* or *cut time*.

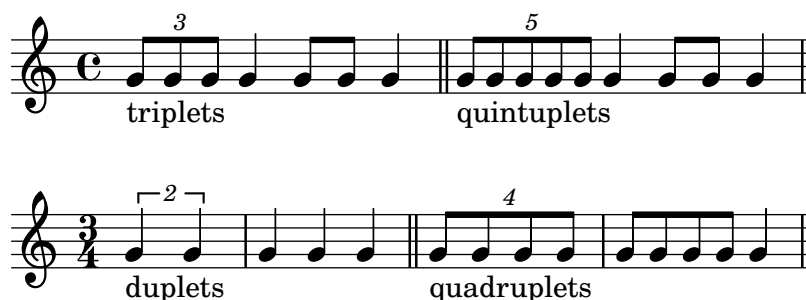


An augmentation dot after a note increases its duration by half; a second dot increases it by half of the first addition (that is, by a fourth of the original duration). More dots can be used to add further halved fractions of the original note value (1/8, 1/16, etc.), but they are not frequently encountered.





Alternatively note values may be subdivided by other ratios. Most common is subdivision by 3 (*triplets*) and 5 (*quintuplets*). Subdivisions by 2 (*duplets*) or 4 (*quadruplets*) of dotted notes are also frequently used.



See also

Section 1.60 [common time], page 16.

## 1.218 octavation

See also

Section 1.221 [octave marking], page 56.

## 1.219 octave

ES: octava, I: ottava, F: octave, D: Oktave, NL: octaaf, DK: oktav, S: oktav, FI: oktaavi.

The interval of an octave, sometimes abbreviated 8ve.

For uses like *all'ottava* or *8va* with an extender line or bracket, or *loco* see octave marking.

See also

Section 1.159 [interval], page 40, Section 1.221 [octave marking], page 56.

## 1.220 octave mark

ES: indicación de octava, I: segno di ottava, F: indication d'octave, D: Oktavierungszeichen, NL: ?, DK: ?, S: ?, FI: oktaavamerkki.

The phrase, abbreviation, or other mark used (with or without an extender line or bracket) to indicate that the music is to be played in a different octave:

- *15ma*: play two octaves higher
- *8va*: play one octave higher
- *8vb*: play one octave lower
- *8va* (written below the passage): unusual, same as *8vb*
- *15vb*: play two octaves lower
- *15va* (written below the passage): unusual, same as *15vb*

For longer passages, it may be more practical to mark the octave change at the beginning with a phrase (see the list below for examples), but without a bracket or extender line. Then, when the music returns to the written pitch, the octave change is canceled with the word *loco* (q.v.).

To parallel the list above:



- *15ma: alla quindicesima (alta)*
- *8va: all'ottava or ottava sopra*
- *8vb: all'ottava bassa, ottava sotto*
- *15vb: alla quindicesima (bassa)*

In the phrases above, *quindicesima* is sometimes replaced with *quindecima*, which is Latin.

The music on an entire staff can be marked to be played in a different octave by putting a small 8 or 15 above or below the clef at the beginning. This octave mark can be applied to any clef, but it is most frequently used with the G and F clefs.

## See also

Section 1.122 [F clef], page 30, Section 1.141 [G clef], page 35, Section 1.176 [loco], page 43, Section 1.221 [octave marking], page 56.

## 1.221 octave marking

ES: a la octava, I: all'ottava, F: octaviation, D: Oktavierung, NL: octaveren, DK: oktavering, S: oktavering, FI: oktaavamerkintä.

The practice of marking music – an entire staff, a passage, etc. – to indicate that it is to be played in a different octave. If applied to the clef at the beginning of the staff, all music on that staff is to played at the indicated octave.

For a list of the specific marks used, see Section 1.220 [octave mark], page 55.

## See also

Section 1.159 [interval], page 40, Section 1.176 [loco], page 43, Section 1.219 [octave], page 55, Section 1.220 [octave mark], page 55.

## 1.222 octave sign

## See also

Section 1.220 [octave mark], page 55.

## 1.223 ornament

ES: adorno, I: abbellimento, fioriture, F: agrément, ornement, D: Verzierung, Ornament, NL: versiering, DK: forsiring, S: ornament, FI: koru, hele.

Most commonly used is the *trill*, the rapid alternation of a given note with the diatonic [Section 1.263 \[second\]](#), page 66 above it. In the music from the middle of the 19th century and onwards the trill is performed with the main note first while in the music from the preceding baroque and classic periods the upper note is played first.



Other frequently used ornaments are the *turn*, the *mordent*, and the *prall* (inverted mordent).



### See also

Section 1.6 [acciaccatura], page 2, Section 1.19 [appoggiatura], page 5, Section 1.143 [grace notes], page 35, Section 1.205 [mordent], page 52.

## 1.224 ossia

ES: ossia, I: ossia, F: ossia, alternative, D: Ossia, NL: alternatief, DK: ossia, S: ossia, FI: ossia, vaihtoehtoinen esitystapa.

Ossia (otherwise) marks an alternative. It is an added staff or piano score, usually only a few measures long, which presents another version of the music, for example for small hands.

### See also

Compare: Section 1.73 [cue-notes], page 19.

## 1.225 part

ES: parte, particella, I: voce, parte, F: partie, D: Stimme, NL: partij, DK: stemme, S: stämman, FI: stemma, instrumenttiosuus.

- In instrumental or choral music, the music for a single instrument or voice.
- in contrapuntal music, a single melodic line in the contrapuntal web.

### See also

Section 1.70 [counterpoint], page 18

## 1.226 pause

### See also

Section 1.125 [fermata], page 31.

## 1.227 pennant

### See also

Section 1.129 [flag], page 32.

### 1.228 percent repeat

LilyPond-specific term to indicate the repetition of a musical expression on a single staff, as opposed to the more usual definition of repeat, which affects all parts. The musical expression can be anything from a single note or note pattern to one or more measures. There are other names for this symbol:

- simile mark
- slash mark, or slash repeat
- beat repeat
- measure (or multi-measure) repeat



#### See also

[Section 1.254 \[repeat\]](#), page 64, [University of Vermont Music Dictionary](#).

### 1.229 percussion

ES: percusión, I: percussioni, F: percussion, D: Schlagzeug, Schlagwerk, NL: slagwerk, DK: slagtøj, S: slagverk, FI: lyömäsoittimet.

A family of musical instruments which are played on by striking or shaking. Percussion instruments commonly used in a symphony orchestra are kettledrums (I: *timpani*, D: *Pauken*), snare drum, bass drum, tambourine, cymbals, Chinese gong (tam-tam), triangle, celesta, glockenspiel, and xylophone.

#### See also

No cross-references.

### 1.230 perfect interval

ES: intervalo justo, I: intervallo giusto, F: intervalle juste, D: reines Intervall, NL: rein interval, DK: rent interval, S: rent intervall, FI: puhdas intervalli.

#### See also

[Section 1.159 \[interval\]](#), page 40.

### 1.231 phrase

ES: frase, I: frase, F: phrase, D: Phrase, NL: frase, zin, DK: frase, S: fras, FI: fraasi, lause.

A natural division of the melodic line, comparable to a sentence of speech.

#### See also

[Section 1.47 \[caesura\]](#), page 12.

## 1.232 phrasing

ES: fraseo, I: fraseggio, F: phrasé, D: Phrasierung, NL: frasering, DK: frasering, S: frasering, FI: fraseeraus, jäsentäminen.

The clear rendering in musical performance of the *phrases* of the melody. Phrasing may be indicated by a *slur*.

### See also

Section 1.231 [phrase], page 58, Section 1.279 [slur], page 70.

## 1.233 piano

ES: piano, suave, I: piano, F: piano, D: piano, leise, NL: piano, DK: piano, S: piano, FI: piano, hiljaa.

*piano* (**p**) soft, *pianissimo* (**pp**) very soft, *mezzo piano* (**mp**) medium soft.

### See also

No cross-references.

## 1.234 pickup

ES: anacrusa, I: anacrusi, F: anacrouse, levée, D: Auftakt, NL: opmaat, DK: optakt, S: upptakt, FI: kohotahti.

### See also

Section 1.16 [anacrusis], page 5.

## 1.235 pitch

ES: altura, I: altezza, F: hauteur, D: Tonhöhe, NL: toonhoogte, DK: tonehøjde, S: tonhöjd, FI: sävelkorkeus.

1. The perceived quality of a sound that is primarily a function of its fundamental frequency.
2. [FR. ton; DE. Ton; ES. tono] Any point on the continuum of musical pitch.
3. [FR. diapason; DE. Kammerton, Stimmung; ES. diapasón] The standardized association of a particular frequency with a particular pitch name, e.g.,  $c' = 256$  Hz.

### See also

Chapter 3 [Pitch names], page 86.

## 1.236 pizzicato

ES: pizzicato, I: pizzicato, F: pizzicato, D: pizzicato, NL: pizzicato, getokkeld, DK: pizzicato, S: pizzicato, FI: pizzicato, näppäillen.

A technique for stringed instruments, abbr. *pizz.* To play by plucking the strings.

### See also

No cross-references.

## 1.237 polychord

ES: compás polimétrico, I: polimetria, F: polymétrie, D: Polymetrie, NL: ?, DK: ?, S: ?, FI: monia tahtiosoituksia sisältävä.

- The *simultaneous* use of two or more meters, in two or more parts.
- The *successive* use of different meters in one or more parts.

### See also

[Section 1.238 \[polymetric\], page 60](#) (adj.)

## 1.238 polymetric

ES: polimétrico, I: polimetrico, F: polymétrique, D: polymetrisch, NL: ?, DK: ?, S: ?, FI: monia tahtiosoituksia yhtäaikaan tai peräkkäin sisältävä.

Characterized by *polychord*: using two or more metric frameworks simultaneously or in alternation.

### See also

[Section 1.237 \[polychord\], page 60](#) (noun)

## 1.239 polymetric time signature

ES: indicación de compás polimétrico, I: tempo polimetrico, F: ?, D: zusammengesetzte Taktart, NL: ?, DK: ?, S: ?, FI: vaihtelevan tahtiosoitusmerkintä.

A time signature that indicates regularly alternating polymetric time.

### See also

[Section 1.238 \[polymetric\], page 60](#).

## 1.240 polyphony

ES: polifonía, I: polifonia, F: polyphonie, D: Polyphonie, Mehrstimmigkeit, NL: polyfonie, DK: polyfoni, S: polyfoni, FI: polyfonia, moniäänisyys.

Music written in a combination of several simultaneous voices (parts) of a more or less pronounced individuality.

### See also

[Section 1.70 \[counterpoint\], page 18](#).

## 1.241 portato

[Italian: past participle of *portare*, ‘to carry’]

A stroke in which each of several notes is separated slightly within a slur, without changing the bow’s direction. It is used for passages of a *cantabile* character.

### See also

[Section 1.170 \[legato\], page 42](#).

## 1.242 power chord

A chord containing only the root and the fifth (possibly in multiple octaves). Commonly used in guitar music, particularly with electric guitar and high distortion.

**See also**

Section 1.51 [chord], page 13.

**1.243 presto**

ES: presto, muy rápido, I: presto, F: presto, très rapide, enlevé, D: Presto, Sehr schnell, NL: presto, Sehr schnell, DK: presto, S: presto, FI: presto, hyvin nopeasti.

[Italian]

Very quick, i.e., quicker than Section 1.11 [allegro], page 4; *prestissimo* denotes the highest possible degree of speed.

**See also**

No cross-references.

**1.244 proportion**

ES: proporción, I: proporzione, F: proportion, D: Proportio, NL: ?, DK: ?, S: ?, FI: suhde.

[Latin: *proportio*] Described in great detail by Gaffurius, in *Practica musicae* (published in Milan in 1496). In mensural notation, proportion is:

1. A ratio that expresses the relationship between the note values that follow with those that precede;
2. A ratio between the note values of a passage and the ‘normal’ relationship of note values to the metrical pulse. (A special case of the first definition.)

The most common proportions are:

- 2:1 (or simply 2), expressed by a vertical line through the mensuration sign (the origin of the *alla breve* time signature), or by turning the sign backwards
- 3:1 (or simply 3)
- 3:2 (*sesquialtera*)

To ‘cancel’ any of these, the inverse proportion is applied. Thus:

- 1:2 cancels 2:1
- 1:3 cancels 3:1
- 2:3 cancels 3:2
- and so on.

Gaffurius enumerates five basic types of major:minor proportions and their inverses:

1. Multiplex, if the major number is an exact multiple of the minor (2:1, 3:1, 4:2, 6:3); and its inverse, Submultiplex (1:2, 1:3, 2:4, 3:6)
2. Epimoria or Superparticular [orig. *Epimoria seu Superparticularis*], if the major number is one more than the minor (3:2, 4:3, 5:4); and its inverse, Subsuperparticular (2:3, 3:4, 4:5)
3. Superpartiens, if the major number is one less than twice the minor (5:3, 7:4, 9:5, 11:6); and its inverse, subsuperpartiens (3:5, 4:7, 5:9, 6:11)
4. Multiplexsuperparticular, if the major number is one more than twice the minor (5:2, 7:3, 9:4); and its inverse, Submultiplexsuperparticular (2:5, 3:7, 4:9)
5. Multiplexsuperpartiens, if the major number is one less than some other multiple (usually three or four) of the minor (8:3, 11:4, 14:5, 11:3); and its inverse, Submultiplexsuperpartiens (3:8, 4:11, 5:14, 3:11)

He then continues to subdivide each type in various ways. For the multiplex proportions, for example, he indicates how many times greater the major number is than the minor:

- If two times greater, the proportion is *dupla*. If inverted, it's called *subdupla*. Examples: 2:1, 4:2, and 6:3.
- If three, *trippla*; and its inversion, *subtrippla*. Example: 3:1, 6:2, and 9:3.
- If four, *quadrupla*; and its inversion, *subquadrupla*. Example: 4:1, 8:2, and 12:3

Other proportions were possible, but whether they were frequently used is another question:

- 33:9, *triplassuperbipartientetertias*
- 51:15, *triplassuperbipartientequintas*

## See also

[Section 1.191 \[mensural notation\]](#), page 46.

## 1.245 Pythagorean comma

ES: coma pitagórica, I: comma pitagorico, F: comma pythagoricien, D: Pythagoräisches Komma, NL: komma van Pythagoras, DK: pythagoræisk komma, S: pytagoreiskt komma, FI: pythagorinen komma.

Originally, the interval by which the sum of six whole tones exceeds the octave –  $(9:8)^6 - 2:1 = 531441:524288$ , or 23.5 cents.

Modern acoustical theory defines it as the interval by which twelve fifths exceed seven octaves. To put it another way: A sequence of fifths that starts on C eventually circles back to C. However, this C is 23.5 [Section 1.49 \[cent\]](#), page 12s higher than the C obtained by adding 7 octaves. The difference between those two pitches is the Pythagorean comma.

## See also

[Section 1.49 \[cent\]](#), page 12, [Section 1.302 \[temperament\]](#), page 75.

## 1.246 quadruplet

ES: cuatrillo, I: quartina, F: quartolet, D: Quartole, NL: kwartool, DK: kvartol, S: kvartol, FI: kvartoli.

## See also

[Section 1.217 \[note value\]](#), page 54.

## 1.247 quality

ES: variante [de acorde o intervalo], I: qualità (?), F: qualité (?), D: Modus (Dur oder Moll), NL: ?, DK: ?, S: ?, FI: laatu.

The quality of a triad is determined by the precise arrangement of its intervals. Tertian triads can be described as a series of three notes. The first element is the root note (or simply 'root') of the chord, the second note is the 'third' of the chord, and the last note is the 'fifth' of the chord. These are described below:

Chord name	Component intervals	Example	Symbol
major triad	major third/perfect fifth	C-E-G	C, CM, Cma, Cmaj, C
minor triad	minor third/perfect fifth	C-E-G	Cm, Cmi, Cmin, C-
augmented triad	major third/augmented fifth	C-E-G	C+, C <sup>+</sup> , Caug

diminished triad	minor third/diminished fifth	C-E-G	Cm(5), C <sup>o</sup> , Cdim
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There are various types of seventh chords depending on the quality of the original chord and the quality of the seventh added.

Five common types of seventh chords have standard symbols. The chord quality indications are sometimes superscripted and sometimes not (e.g. Dm7, Dm<sup>7</sup>, and D<sup>m</sup>7 are all identical). The last three chords are not commonly used except in jazz.

### See also

[Section 1.51 \[chord\], page 13.](#)

## 1.248 quarter note

- UK: crotchet
- ES: negra
- I: semiminima, nera
- F: noire
- D: Viertel, Viertelnote
- NL: kwartnoot
- DK: fjærdedelsnote
- S: fjærdedelsnot
- FI: neljäsosanuotti

### See also

[Section 1.217 \[note value\], page 54.](#)

## 1.249 quarter rest

- UK: crotchet rest
- ES: silencio de negra
- I: pausa di semiminima
- F: soupir
- D: Viertelpause
- NL: kwartrust
- DK: fjærdedelspause
- S: fjærdedelspaus
- FI: neljäsosatauko

### See also

[Section 1.217 \[note value\], page 54.](#)

## 1.250 quarter tone

ES: cuarto de tono, I: quarto di tono, F: quart de ton, D: Viertelton, NL: kwart toon, DK: ?, S: kvartston, FI: neljännessävelaskel.

An interval equal to half a semitone.

### See also

[Section 1.159 \[interval\], page 40](#)



1.251 quintuplet

ES: cinquillo, quintillo, I: quintina, F: quintolet, D: Quintole, NL: kwintool, DK: kvintol, S: kvintol, FI: kvintoli.

See also

Section 1.217 [note value], page 54.

**1.252** **rallentando**

ES: rallentando, I: rallentando, F: rallentando, en ralentissant, D: rallentando, langsamer werden, NL: rallentando, DK: rallentando, S: rallentando, FI: rallerdando, hidastuen.

[Italian: ‘slowing down’]

Slackening in speed, more gradual than [Section 1.257 \[ritardando\]](#), page 65. Abbreviated to *rall.*

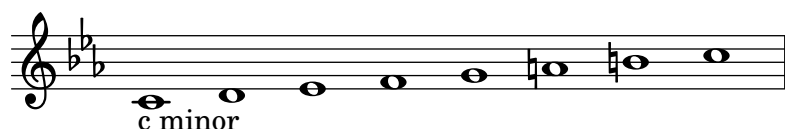
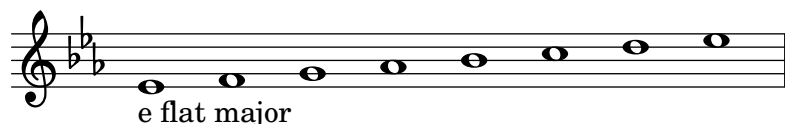
See also

Section 1.257 [ritardando], page 65.

**1.253** relative key

ES: tono relativo, I: tonalità relativa, F: tonalité relative, D: Paralleltonart, NL: paralleltoonsoort, DK: paralleltoneart, S: parallelltonart, FI: rinnakkaissävellaji.

Major and minor keys that have the same key signature.



See also

Section 1.163 [key], page 41, Section 1.164 [key signature], page 41, Section 1.181 [major], page 44, Section 1.200 [minor], page 51.

1.254 repeat

ES: repetición, I: ripetizione, F: barre de reprise, D: Wiederholung, NL: herhaling, DK: gentagelse, S: repris, FI: toisto.



See also

No cross-references.

## 1.255 rest

ES: silencio, I: pausa, F: silence, D: Pause, NL: rust, DK: pause, S: paus, FI: tauko.

### See also

[Section 1.217 \[note value\]](#), page 54.

## 1.256 rhythm

ES: ritmo, I: ritmo, F: rythme, D: Rhythmus, NL: ritme, DK: rytme, S: rytm, FI: rytmi.

- Metrical rhythm in which every time value is a multiple or fraction of a fixed unit of time, called *beat*, and in which the normal *accent* recurs in regular intervals, called *measure*. The basic scheme of time values is called *meter*.
- Measured rhythm which lacks regularly recurrent accent. In modern notation such music appears as a free alternation of different measures.
- Free rhythm, i.e., the use of temporal values having no common metrical unit (beat).

### See also

[Section 1.4 \[accent\]](#), page 2, [Section 1.35 \[beat\]](#), page 9, [Section 1.185 \[measure\]](#), page 45, [Section 1.193 \[meter\]](#), page 48.

## 1.257 ritardando

ES: ritardando, retardando, I: ritardando, F: ritardando, en ralentissant, D: ritardando, langsamer werden, NL: ritardando, DK: ritardando, S: ritardando, FI: ritardando, hidastuen, [Italian: ‘lagging’]

Gradual slowing down, more pronounced than [Section 1.252 \[rallentando\]](#), page 64. Mostly abbreviated to *rit.* or *ritard.*

### See also

[Section 1.252 \[rallentando\]](#), page 64.

## 1.258 ritenuto

ES: ritenuto, reteniendo, I: ritenuto, F: ritenuto, en retenant, D: ritenuto, NL: ritenuto, DK: ritenuto, S: ritenuto, FI: ritenuto, hidastaen.

Immediate reduction of speed.

### See also

No cross-references.

## 1.259 scale

ES: escala, I: scala, F: gamme, D: Tonleiter, NL: toonladder, DK: Skala, S: skala, FI: asteikko, sävelasteikko.

### See also

[Section 1.82 \[diatonic scale\]](#), page 21.

## 1.260 scale degree

ES: grado (de la escala), I: grado della scala, F: degré [de la gamme], D: Tonleiterstufe, NL: trap [van de toonladder], DK: skalatrin, S: skalsteg (?), FI: sävelaste, asteikon sävel.

Names and symbols used in harmonic analysis to denote tones of the scale as roots of chords. The most important are degrees I = tonic (T), IV = subdominant (S) and V = dominant (D).



### See also

[Section 1.139 \[functional harmony\], page 34.](#)

## 1.261 scordatura

ES: encordado, I: scordatura, F: à cordes ravallées, D: Skordatur, NL: ?, DK: ?, S: ?, FI: epätavallinen viritys.

[Italian: *scordare*, ‘to mistune’] Unconventional tuning of stringed instruments, particularly lutes or violins. Used to:

- facilitate pitch combinations that would otherwise be difficult or impossible
- alter the characteristic timbre of the instrument, for example, to increase brilliance
- reinforce certain sonorities or tonalities by making them available on open strings
- imitate other instruments
- etc.

Tunings that could be called *scordatura* first appeared early in the 16th Century and became commonplace in the 17th.

### See also

No cross-references.

## 1.262 score

ES: partitura, I: partitura, F: partition, conducteur (full score), D: Partitur (full score), Klavierauszug (vocal score), NL: partituur, DK: partitur, S: partitur, FI: partituuri.

A copy of orchestral, choral, or chamber music showing what each instrument is to play, each voice to sing, having each part arranged one underneath the other on different staves [Section 1.286 \[staff\], page 71.](#)

### See also

No cross-references.

## 1.263 second

ES: segunda, I: seconda, F: seconde, D: Sekunde, NL: secunde, DK: sekund, S: sekund, FI: sekunti.

The interval between two neighboring tones of a scale. A diatonic scale consists of alternating semitones and whole tones, hence the size of a second depends on the scale degrees in question.

**See also**

Section 1.82 [diatonic scale], page 21, Section 1.159 [interval], page 40, Section 1.265 [semitone], page 67, Section 1.335 [whole tone], page 81.

**1.264 semibreve**

- US: whole note,
- ES: redonda,
- I: semibreve,
- F: ronde,
- D: Ganze, ganze Note, Semibrevis,
- NL: hele noot,
- DK: helnode,
- S: helnot,
- FI: kokonuotti.

Note value: called *whole note* in the US.

The semibreve is the basis for the *tactus* in mensural notation (i.e. music written before ca. 1600).

**See also**

Section 1.191 [mensural notation], page 46, Section 1.217 [note value], page 54.

**1.265 semitone**

ES: semitono, I: semitono, F: demi-ton, D: Halbton, NL: halve toon, DK: halvtone, S: halvton, FI: puolisävel.

The interval of a minor second. The (usually) smallest interval in European composed music. The interval between two neighboring tones on the piano keyboard – including black and white keys – is a semitone. An octave may be divided into 12 semitones.

**See also**

Section 1.159 [interval], page 40, Section 1.52 [chromatic scale], page 13.

**1.266 seventh**

ES: séptima, I: settima, F: septième, D: Septime, NL: septiem, DK: septim, S: septim, FI: septimi.

**See also**

Section 1.159 [interval], page 40.

**1.267 sextolet****See also**

Section 1.268 [sextuplet], page 68, Section 1.217 [note value], page 54.

## 1.268 sextuplet

ES: seisillo, I: sestina, F: sextolet, D: Sextole, NL: sextool, DK: sekstol, S: sextol, FI: sekstoli.

### See also

[Section 1.217 \[note value\]](#), page 54.

## 1.269 shake

### See also

[Section 1.321 \[trill\]](#), page 79.

## 1.270 sharp

ES: sostenido, I: diesis, F: dièse, D: Kreuz, NL: kruis, DK: kryds, S: korsförtecken, FI: korotusmerkki.

### See also

[Section 1.7 \[accidental\]](#), page 2.

## 1.271 simile

ES: simile, similar, I: simile, F: simile, D: simile, gleichartig, NL: ?, DK: ?, S: ?, FI: samoin.

[Italian: ‘in the same manner’] Performance direction: the music thus marked is to be played in the same manner (i.e. with the same articulations, dynamics, etc.) as the music that precedes it.

### See also

TODO: Where else could I refer the reader?

## 1.272 simple meter

ES: compás simple, compás de subdivisión binaria, I: tempo semplice, F: mesure binaire, D: grader Takt, NL: ?, DK: ?, S: ?, FI: kaksijakoinen tahtiosoitus.

A meter in which the basic beat is subdivided in two: that is, a meter that does not include triplet subdivision of the beat.

### See also

[Section 1.63 \[compound meter\]](#), page 16, [Section 1.193 \[meter\]](#), page 48.

## 1.273 sixteenth note

- UK: semiquaver
- ES: semicorchea
- I: semicroma
- F: double croche
- D: Sechzehntel, Sechzehntelnote
- NL: zestiende noot
- DK: sekstendedelsnote
- S: sextondelsnot
- FI: kuudestoistaosanuotti

**See also**

[Section 1.217 \[note value\]](#), page 54.

**1.274 sixteenth rest**

- UK: semiquaver rest
- ES: silencio de semicorchea
- I: pausa di semicroma
- F: quart de soupir
- D: Sechzehntelpause
- NL: zestiende rust
- DK: sekstendedelspause
- S: sextondelspaus
- FI: kuudestoistaosatauko

**See also**

[Section 1.217 \[note value\]](#), page 54.

**1.275 sixth**

ES: sexta, I: sesta, F: sixte, D: Sexte, NL: sext, DK: sekst, S: sext, FI: seksti.

**See also**

[Section 1.159 \[interval\]](#), page 40.

**1.276 sixty-fourth note**

- UK: hemidemisemiquaver
- ES: semifusa
- I: semibiscroma
- F: quadruple croche
- D: Vierundsechzigstel, Vierundsechzigstelnote
- NL: vierenzestigste noot
- DK: fireogtredsindstyvendedelsnote
- S: sextiofjärdedelsnot
- FI: kuudeskymmenesneljäsosanuotti

**See also**

[Section 1.217 \[note value\]](#), page 54.

**1.277 sixty-fourth rest**

- UK: hemidemisemiquaver rest
- ES: silencio de semifusa
- I: pausa di semibiscroma
- F: seizième de soupir
- D: Vierundsechzigstelpause
- NL: vierenzestigste rust

- DK: fireogtredsindstyvendedelspause
- S: sextiofjärdedelspaus
- FI: kuudeskymmenesneljäsosatauko

## See also

[Section 1.217 \[note value\]](#), page 54.

## 1.278 slash repeat

## See also

[Section 1.228 \[percent repeat\]](#), page 58.

## 1.279 slur

ES: ligadura de expresión, I: legatura (di portamento o espressiva), F: liaison, coulé, D: Bogen (Legatobogen, Phrasierungsbogen), NL: fraseringsboog, legatoboog, streekboog, DK: legatobue, fraseringsbue, S: båge, FI: kaari.

A slur above or below a group of notes indicates that they are to be played [Section 1.170 \[legato\]](#), page 42, e.g., with one stroke of the violin bow or with one breath in singing.

## See also

No cross-references.

## 1.280 solmization

ES: solmisación, I: solmisazione, F: solmisation, D: Solmisation, NL: solmizatie, DK: solmisation, S: solmisation, FI: suhteelliset laulunimet.

General term for systems of designating the degrees of the *scale*, not by letters, but by syllables (*do (ut)*, *re*, *mi*, *fa*, *sol*, *la*, *si (ti)*).

## See also

[Section 1.259 \[scale\]](#), page 65, [Section 1.260 \[scale degree\]](#), page 66.

## 1.281 sonata

ES: sonata, I: sonata, F: sonate, D: Sonate, NL: sonate, DK: sonate, S: sonat, FI: sonaatti.

In its present-day meaning a sonata denotes an instrumental composition for piano or for some other instrument with piano accompaniment, which consists of three or four independent pieces, called movements.

## See also

No cross-references.

## 1.282 sonata form

ES: forma sonata, I: forma sonata, F: [en] forme de sonate, D: Sonatenform, NL: hoofdvorm, sonatevorm, DK: sonateform, S: sonatform, FI: sonaattimuoto.

A form used frequently for single movements of the *sonata*, *symphony*, quartet, etc. A movement written in sonata form falls into three sections called *exposition*, *development* and *recapitulation*. In the exposition the composer introduces some musical ideas, consisting of a number of themes; in the development section the composer *develops* this material, and in the

recapitulation the composer repeats the exposition, with certain modifications. The exposition contains a number of themes that fall into two groups, often called first and second subject. Other melodies occurring in each group are considered as continuations of these two. The second theme is in another key, normally in the key of the *dominant* if the *tonic* is *major*, and in the *relative key* if the tonic is *minor*.

### See also

Section 1.93 [dominant], page 24, Section 1.181 [major], page 44, Section 1.200 [minor], page 51, Section 1.253 [relative key], page 64, Section 1.281 [sonata], page 70, Section 1.298 [symphony], page 74, Section 1.315 [tonic], page 77.

## 1.283 song texts

### See also

Section 1.180 [lyrics], page 44.

## 1.284 soprano

ES: soprano, I: soprano, F: soprano, D: Sopran, NL: sopraan, DK: sopran, S: sopran, FI: sopraano, korkea naisääni.

The highest female voice.

### See also

No cross-references.

## 1.285 staccato

ES: picado, I: staccato, F: staccato, piqué, détaché, D: staccato, NL: staccato, DK: staccato, S: staccato, FI: staccato, lyhyesti, terävästi.

Playing the note(s) short. Staccato is indicated by a dot above or below the note head.



### See also

No cross-references.

## 1.286 staff

UK: stave, ES: pentagrama, pauta, I: pentagramma, rigo (musicale), F: portée, D: Notensystem, Notenzeile, NL: (noten)balk, partij, DK: nodesystem, S: notsystem, FI: nuottiviivasto.

A staff (plural: staves) is a series of (normally five) horizontal lines upon and between which the musical notes are written, thus indicating (in connection with a [Section 1.55 \[clef\]](#), page 14) their pitch. Staves for [Section 1.229 \[percussion\]](#), page 58 instruments may have fewer lines.



### See also

Section 1.301 [system], page 74.



## 1.287 staves

### See also

Section 1.286 [staff], page 71.

## 1.288 stem

ES: plica, I: gamba, F: hampe, D: Hals, Notenhals, Stiel, NL: stok, DK: hals, S: skaft, FI: nuottipalkki.

Vertical line above or below a Section 1.215 [note head], page 54 shorter than a whole note.



### See also

Section 1.34 [beam], page 9.

## 1.289 stringendo

ES: stringendo, acelerando, I: stringendo, F: stringendo, en accélé rant, D: stringendo, NL: ?, DK: ?, S: ?, FI: kiihdyttäen, nopeuttaen.

[Italian: ‘pressing’] Pressing, urging, or hastening the time, as to a climax.

### See also

Section 1.3 [accelerando], page 1.

## 1.290 strings

ES: arcos, cuerdas, I: archi, F: cordes, D: Streicher, NL: strijkers, DK: strygere, S: stråkar, FI: jouset.

A family of stringed musical instruments played with a bow. Strings commonly used in a symphony orchestra are violin, viola, violoncello, and double bass.

### See also

No cross-references.

## 1.291 strong beat

ES: tiempo fuerte, I: tempo forte, F: temps fort, D: betonter Taktteil oder Taktschlag, NL: thesis, D: betonet taktslag, S: betonat taktslag, FI: tahdin vahva isku.

### See also

Section 1.35 [beat], page 9, Section 1.4 [accent], page 2, Section 1.185 [measure], page 45, Section 1.256 [rhythm], page 65.

## 1.292 subdominant

ES: subdominante, I: sottodominante, F: sous-dominante, D: Subdominante, NL: subdominant, DK: subdominant, S: subdominant, FI: subdominantti, alidominantti.

The fourth *scale degree*.

**See also**

Section 1.139 [functional harmony], page 34, Section 1.260 [scale degree], page 66.

**1.293 submediant**

ES: submediante, I: sopradominante, F: sous-médiane, D: Submediante, NL: submediant, DK: Submediant, S: submediant, FI: alikeskisävel.

The sixth *scale degree*.

**See also**

Section 1.139 [functional harmony], page 34, Section 1.260 [scale degree], page 66, Section 1.296 [superdominant], page 73.

**1.294 subtonic**

ES: subtónica, I: sottotonica, F: sous-tonique, D: Subtonika, NL: subtonica, DK: Subtonika, S: subtonika, FI: subtoonika, alitoonika.

The seventh Section 1.260 [scale degree], page 66.

**See also**

Section 1.139 [functional harmony], page 34, Section 1.260 [scale degree], page 66.

**1.295 sul G**

ES: sobre la cuerda de Sol, I: sul Sol, F: sur la G, D: auf G, auf der G-Saite, NL: ?, DK: ?, S: ?, FI: G-kielellä.

Indicates that the indicated passage (or note) should be played on the G string.

**See also**

No cross-references.

**1.296 superdominant**

ES: superdominante, I: sopradominante, F: sus-dominante, D: Superdominante, NL: superdominant, DK: superdominant, S: superdominant, FI: ylidominantti.

The sixth Section 1.260 [scale degree], page 66. Equivalent to the submediant, q.v.

**See also**

Section 1.139 [functional harmony], page 34, Section 1.260 [scale degree], page 66, Section 1.293 [submediant], page 73.

**1.297 supertonic**

ES: supertónica, I: sopratonica, F: sus-tonique, D: Supertonika, NL: supertonica, DK: supertonika, S: supertonika, FI: ylitoonika.

The second Section 1.260 [scale degree], page 66.

**See also**

Section 1.139 [functional harmony], page 34, Section 1.260 [scale degree], page 66.

## 1.298 symphony

ES: sinfonía, I: sinfonia, F: symphonie, D: Sinfonie, Symphonie, NL: symfonie, DK: symfoni, S: symfoni, FI: sinfonia.

A symphony may be defined as a *sonata* for orchestra.

### See also

Section 1.281 [sonata], page 70.

## 1.299 syncopation

ES: síncopa, I: sincope, F: syncope, D: Synkope, NL: syncope, DK: synkope, S: synkop, FI: synkooppi.

Any deliberate upsetting of the normal pulse of Section 1.193 [meter], page 48, Section 1.4 [accent], page 2, and Section 1.256 [rhythm], page 65. The occidental system of musical rhythm rests upon the grouping of equal beats into groups of two or three, with a regularly recurrent accent on the first beat of each group. Any deviation from this scheme is felt as a disturbance or contradiction between the underlaying (normal) pulse and the actual (abnormal) rhythm.



### See also

No cross-references.

## 1.300 syntonic comma

ES: coma sintónica, coma de Dídimo, I: comma sintonico (o didimico), F: comma syntonique, D: syntonisches Komma, NL: syntonische komma, DK: syntonisk komma, S: syntoniskt komma, FI: syntoninen komma, terssien taajuusero luonnollisessa ja Pythagorisessa viritysjärjestelmässä.

Named after Ptolemy's syntonic diatonic genus. Originally, the difference by which the ditone exceeds the pure major third obtained by Pythagorean tuning –  $(9:8)^2 - 5:4 = 81:80$ , or 21.5 cents.

Modern acoustical theory defines it as the interval by which four fifths exceed the sum of two octaves plus a major third.  $(3:2)^4 - (2:1)^2 + (5:4)$

This comma is also known as the comma of Didymus, or didymic comma.

### See also

Section 1.245 [Pythagorean comma], page 62

## 1.301 system

ES: sistema, I: sistema, F: système, D: Notensystem, Partitur, NL: systeem, DK: system, S: system, FI: nuottiviivasto.

The collection of staves (*staff*), two or more, as used for writing down keyboard, chamber, choral, or orchestral music; a section of the score spanning the width of a single page.

### See also

Section 1.286 [staff], page 71.

## 1.302 temperament

ES: temperamento, I: temperamento, F: tempérament, D: Stimmung, Temperatur, NL: stemming, temperatuur, DK: temperatur, S: temperatur, FI: viritysjärjestelmä.

Systems of tuning in which the intervals deviate from the acoustically pure intervals.

### See also

[Section 1.184 \[meantone temperament\]](#), page 45, [Section 1.118 \[equal temperament\]](#), page 29.

## 1.303 tempo indication

ES: indicación de tempo, I: indicazione di tempo, F: indication de tempo, D: Zeitmaß, Tempobezeichnung, NL: tempo aanduiding, DK: tempobetegelse, S: tempobeteckning, FI: tempomerkintä.

The rate of speed of a composition or a section thereof, ranging from the slowest to the quickest, as is indicated by tempo marks as *largo*, *adagio*, *andante*, *allegro*, and *presto*.

### See also

[Section 1.8 \[adagio\]](#), page 3, [Section 1.11 \[allegro\]](#), page 4, [Section 1.18 \[andante\]](#), page 5, [Section 1.167 \[largo\]](#), page 42, [Section 1.243 \[presto\]](#), page 61.

## 1.304 tenor

ES: tenor, I: tenore, F: ténor, D: Tenor, NL: tenor, DK: tenor, S: tenor, FI: tenori, korkea miesääni.

The highest ‘natural’ male voice (apart from *countertenor*).

### See also

[Section 1.71 \[countertenor\]](#), page 18.

## 1.305 tenth

ES: décima, I: decima, F: dixième, D: Dezime, NL: deciem, DK: decim, S: decima, FI: desimi.

### See also

[Section 1.217 \[note value\]](#), page 54.

## 1.306 tenuto

ES: subrayado (tenuto), I: tenuto, F: tenue, tenuto, D: gehalten, tenuo, NL: tenuto, DK: tenuto, S: tenuto, FI: viiva, tenuto.

An indication that a particular note should be held for the whole length, although this can vary depending on the composer and era.

### See also

No cross-references.

## 1.307 third

ES: tercera, I: terza, F: tierce, D: Terz, NL: terts, DK: terts, S: ters, FI: terssi.

### See also

[Section 1.159 \[interval\]](#), page 40.

1.308 thirty-second note

- UK: demisemi-quaver
- ES: fusa
- I: biscroma
- F: triple croche
- D: Zweiunddreissigstel, Zweiunddreissigstelnote
- NL: tweependertigste (32e) noot
- DK: toogtredivtedelsnote
- S: trettiofva'ndelsnot
- FI: kolmaskymmeneskahdesosanuotti

See also

Section 1.217 [note value], page 54.

1.309 thirty-second rest

- UK: demisemiquaver rest
- ES: silencio de fusa
- I: pausa di biscroma
- F: huitième de soupir
- D: Zweiunddreissigstelpause
- NL: tweeendertigste (32e) rust
- DK: togtredivtedelspause
- S: trettiotvåondelspaus
- FI: kolmaskymmeneskahdesosatauko

See also

Section 1.217 [note value], page 54.

1.310 thorough bass

See also

Section 1.127 [figured bass], page 32.

1.311 tie

ES: ligadura de unión (o de prolongación), I: legatura (di valore), F: liaison (de tenue), D: Haltebogen, Bindebogen, NL: overbinding, bindingsboog, DK: bindebue, S: bindebåge, överbindning, FI: sitominen.

A curved line, identical in appearance with the [Section 1.279 \[slur\]](#), page 70, which connects two successive notes of the same pitch, and which has the function of uniting them into a single sound (tone) equal to the combined durations.



## 1.312 time

### See also

Section 1.193 [meter], page 48.

## 1.313 time signature

ES: indicación de compás, I: segni di tempo, F: métrique, chiffrage (chiffres indicateurs), indication de mesure, D: Taktangabe, Angabe der Taktart, NL: maatsoort, DK: taktangivelse, S: taktartssignatur, FI: tahtiosoitus.

The sign placed at the beginning of a composition to indicate its meter. It most often takes the form of a fraction, but a few signs derived from mensural notation and proportions are also employed.

### See also

Section 1.191 [mensural notation], page 46, Section 1.192 [mensuration sign], page 47, Section 1.193 [meter], page 48.

## 1.314 tone

ES: tono, I: suono, F: ton, son, D: Ton, NL: toon, DK: tone, S: ton, FI: ääni.

A sound of definite pitch and duration, as distinct from *noise*. Tone is a primary building material of music.

### See also

No cross-references.

## 1.315 tonic

ES: tónica, I: tonica, F: tonique, D: Tonika, NL: tonica, DK: tonika, S: tonika, FI: toonika.

The first *scale degree*.

### See also

Section 1.139 [functional harmony], page 34, Section 1.260 [scale degree], page 66.

## 1.316 transposing instrument

ES: instrumento transpositor, I: strumento traspositore, F: instrument transpositeur, D: transponierende Instrumente, NL: ?, DK: ?, S: ?, FI: transponoitava soitin.

Instruments whose notated pitch is different from their sounded pitch. Except for those whose notated and sounding pitches differ by one or more octaves (to reduce the number of ledger lines needed), most such instruments are identified by the letter name of the pitch class of their fundamental. The pitch class is the note that *sounds* (disregarding the octave in which it sounds) when the instrument plays a notated C.

For example: when played on the B-flat clarinet, the note middle C *sounds* the B-flat one tone lower. If played on the A clarinet, the same written note sounds the A (one and half tones – a minor third – lower).

Not all transposing instruments include the pitch class in their name:

- Alto flute (in G)
- English horn (in F)
- Saxophones (in B-flat or E-flat)

**See also**

Section 1.65 [concert pitch], page 17.

**1.317 transposition**

ES: transporte, transposición, I: trasposizione, F: transposition, D: Transposition, NL: transpositie, DK: transposition, S: transponering, FI: transponointi.

Shifting a melody up or down in pitch, while keeping the same relative pitches.

**See also**

No cross-references.

**1.318 treble clef**

ES: clave de sol en segunda, I: chiave di violino, F: clef de sol, D: Violinschlüssel, Sopranschlüssel, NL: viool sleutel, DK: diskantnøgle, S: diskantklav, FI: diskanttiaivain.

**See also**

Section 1.141 [G clef], page 35.

**1.319 tremolo**

ES: trémolo, I: tremolo, F: trémolo, D: Tremolo, NL: tremolo, DK: tremolo, S: tremolo, FI: tremolo.

On stringed instruments:

1. The quick reiteration of the same tone, produced by a rapid up-and-down movement of the bow.
2. Or, the rapid alternation between two notes of a Section 1.51 [chord], page 13, usually in the distance of a third (Section 1.159 [interval], page 40).

**See also**

Section 1.290 [strings], page 72

### 1.320 triad

ES: tríada, I: triade, F: triade, accord parfait, accord de trois sons, D: Dreiklang, NL: drieklank, DK: treklang, S: treklang, FI: kolmisointu.

#### See also

Section 1.51 [chord], page 13.

### 1.321 trill

ES: trino, I: trillo, F: trille, tremblement, battement (cadence), D: Triller, NL: triller, DK: trille, S: drill, FI: trilli.

#### See also

Section 1.223 [ornament], page 56.

### 1.322 triple meter

ES: compás ternario, I: tempo ternario, F: mesure ternaire, D: Dreiertakt, ungerader Takt, NL: drielidige maatsoort, DK: tredelt takt, S: tretakt, FI: kolmijakoinen.

#### See also

Section 1.193 [meter], page 48.

### 1.323 triplet

ES: tresillo, I: terzina, F: triolet, D: Triole, NL: trioool, DK: triol, S: triol, FI: trioli.

#### See also

Section 1.217 [note value], page 54.

### 1.324 tritone

ES: tritono, I: tritono, F: triton, D: Tritonus, NL: tritoon, DK: tritonus, S: tritonus, FI: tritonus.

#### See also

Section 1.159 [interval], page 40.

### 1.325 tuning fork

ES: diapasón [de horquilla], I: diapason, corista, F: diapason, D: Stimmgabel, NL: stemvork, DK: stemmegaffel, S: stämgaffel, FI: viritysavain, äänirauta.

A two-pronged piece of steel used to indicate an absolute pitch, usually for *A* above middle C (440 cps/Hz), which is the international tuning standard. Tuning forks for other pitches are available.

#### See also

Section 1.199 [middle C], page 51.

### 1.326 tuplet

ES: grupo de valoración especial, I: gruppi irregolari, F: ?, D: N-tole, NL: Antimetrische figuur, DK: ?, S: ?, FI: ?.

A non-standard subdivision of a beat or part of a beat, usually indicated with a bracket and a number indicating the number of subdivisions.



**See also**

[Section 1.323 \[triplet\]](#), page 79, [Section 1.217 \[note value\]](#), page 54.

**1.327 turn**

ES: grupeto (circular), I: gruppetto, F: grupetto, D: Doppelschlag, NL: dubbelslag, DK: dobbeltslag, S: dubbelslag, FI: korukuvio.

**See also**

[Section 1.223 \[ornament\]](#), page 56.

**1.328 unison**

ES: unísono, I: unisono, F: unisson, D: unisono, NL: unisono, DK: unison, S: unison, FI: unisono, yksiaänisesti.

Playing of the same notes or the same melody by various instruments (voices) or by the whole orchestra (choir), either at exactly the same pitch or in a different octave.

**See also**

No cross-references.

**1.329 upbeat**

ES: anacrusa, I: anacrusi, F: anacrouse, levée, D: Auftakt, NL: opmaat, DK: optakt, S: upptakt, FI: kohotahti.

**See also**

[Section 1.16 \[anacrusis\]](#), page 5

**1.330 voice**

ES: voz, I: voce, F: voix, D: Stimme, NL: stem, DK: stemme, S: stämma, FI: ääni, lauluääni.

- Human voices:
  - [Section 1.284 \[soprano\]](#), page 71
  - [Section 1.198 \[mezzo-soprano\]](#), page 51
  - [Section 1.68 \[contralto\]](#), page 18
  - [Section 1.304 \[tenor\]](#), page 75
  - [Section 1.30 \[baritone\]](#), page 8
  - [Section 1.32 \[bass\]](#), page 8
- A melodic layer or part of a polyphonic composition.

**See also**

No cross-references.

**1.331 volta**

ES: vez, primera y segunda vez, I: volta, F: volta, fois, D: volta-Klammer, Wiederholungsklammer, NL: ?, DK: ?, S: ?, FI: yksi kertauksen maaleista.

[Italian: ‘time’ (instance, not duration)] An ending, such as a first or second ending. LilyPond extends this idea to any number, and allows any text (not just a number) – to serve as the *volta* text.

**See also**

No cross-references.

**1.332 weak beat**

ES: tiempo débil, I: tempo debole, arsi, F: temps faible, D: unbetonter Taktteil oder Taktschlag, NL: arsis, DK: ubetonet taktslag, S: obetonat taktslag, FI: tahdin heikko isku.

**See also**

[Section 1.35 \[beat\], page 9](#), [Section 1.185 \[measure\], page 45](#), [Section 1.256 \[rhythm\], page 65](#).

**1.333 whole note**

- UK: semibreve
- ES: redonda
- I: semibreve
- F: ronde
- D: Ganze, ganze Note
- NL: hele noot
- DK: helnode
- S: helnot
- FI: kokonuotti

**See also**

[Section 1.217 \[note value\], page 54](#).

**1.334 whole rest**

- UK: semibreve rest
- ES: silencio de redonda
- I: pausa di semibreve
- F: pause
- D: ganze Pause, ganztaktige Pause
- NL: hele rust
- DK: helnodespause
- S: helpaus
- FI: kokotauko

**See also**

[Section 1.217 \[note value\], page 54](#).

**1.335 whole tone**

ES: tono (entero), I: tono intero, F: ton entier, D: Ganzton, NL: hele toon, DK: heltone, S: helton, FI: kokoaskel.

The interval of a major second. The interval between two tones on the piano keyboard with exactly one key between them – including black and white keys – is a whole tone.

**See also**

[Section 1.159 \[interval\], page 40](#).

### **1.336 woodwind**

ES: maderas, I: legni, F: les bois, D: Holzbläser, NL: houtblazers, DK træblæsere, S: träblåsare, FI: puupuhaltimet.

A family of blown wooden musical instruments. Today some of these instruments are actually made from metal. The woodwind instruments commonly used in a symphony orchestra are flute, oboe, clarinet, saxophone, and bassoon.

#### **See also**

No cross-references.

## 2 Duration names notes and rests

Lang.	note name	rest name	note name	rest name
US	long	long rest	breve	breve rest
UK	longa	longa rest	breve	breve rest
ES	longa	silencio de longa	cuadrada	silencio de cuadrada
IT	longa	pausa di longa	breve	pausa di breve
FR	longa	quadruple-pause	brève	double-pause
DE	Longa	longa Pause	Brevis	brevis Pause
NL	longa	longa rust	brevis	brevis rust
DK	longa	longanodespause	brevis	brevis(nodes)pause
SE	longa	longapaus	brevis	brevispaus
FI	longa-nuotti	longa-tauko	brevis-nuotti, kaksoiskokonuotti	brevis-tauko, kaksoiskokotauko

Lang.	note name	rest name	note name	rest name
US	whole note	whole rest	half note	half rest
UK	semibreve	semibreve rest	minim	minim rest
ES	redonda	silencio de redonda	blanca	silencio de blanca
IT	semibreve	pause di semibreve	minima	pausa di minima
FR	ronde	pause	blanche	demi-pause
DE	ganze Note	ganze Pause	halbe Note	halbe Pause
NL	hele noot	hele rust	halve noot	halve rust
DK	helnode	helnodespause	halvnode	halvnodespause
SE	helnot	helpaus	halvnot	halvpaus
FI	kokonuotti	kokotauko	puolinuotti	puolitauko

Lang.	note name	rest name	note name	rest name
US	quarter note	quarter rest	eighth note	eighth rest
UK	crotchet	crotchet rest	quaver	quaver rest
ES	negra	silencio de negra	corchea	silencio de corchea
IT	semiminima, nera	pausa di semiminima, pausa di nera	croma	pausa di croma
FR	noire	soupir*	croche*	demi-soupir
DE	Viertelnote	Viertelpause	Achtelnote	Achtelpause
NL	kwartnoot	kwartrust	achtste noot	achtste rust
DK	fjerdedelsnode	fjerdedelspause	ottendedelsnode	ottendedelspause
SE	fjärdedelsnot	fjärdedelspaus	åttondelsnot	åttondelspaus
FI	neljäsošanuotti	neljäsoсатаuko	kahdeksasosa-nuotti	kahdeksasosatauko

\* About the French naming system: *croche* refers to the note's 'hook'. Therefore, from the eighth note on, the note names mean 'hook', 'doubled hook', 'trebled hook', and so on.

The rest names are based on the *soupir*, or quarter rest. Subsequent rests are expressed as fractions thereof: half a *soupir*, a quarter of a *soupir*, and so on.

Each of the following tables contains one type of note and its matching rest, with abbreviations that apply to both notes and rests. Just switch the part that means ‘note’ with the part that means ‘rest’, for example:

- English: 16th **note**, 16th **rest**
- German: 32tel-**Note**, 32tel-**Pause**
- Finnish: 64-osanuotti, 64-osatauko

Editor’s note: I put a dash ‘-’ when I could not find a language-specific abbreviation for a duration name. If you know of one that I missed, please send it to me, care of the lilypond-user discussion list.

Lang.	Note name	Rest name	Abbr.
US	sixteenth note	sixteenth rest	16th note
UK	semiquaver	semiquaver rest	-
ES	semicorchea	silencio de semicorchea	-
IT	semicroma	pausa di semicroma	-
FR	double croche	quart de soupir	-
DE	Sechzehntelnote	Sechzehntelpause	16tel-Note
NL	zestiende noot	zestiende rust	16e noot
DK	sekstendedelsnode	sekstendedelspause	-
SE	sextondelsnot	sextondelspaus	-
FI	kuudestoistaosanuotti	kuudestoistaosatauko	16-osanuotti

Lang.	Note name	Rest name	Abbr.
US	thirty-second note	thirty-second rest	32nd note
UK	demisemiquaver	demisemiquaver rest	-
ES	fusa	silencio de fusa	-
IT	biscroma	pausa di biscroma	-
FR	triple croche	huitième de soupir	-
DE	Zweiunddreißigstelnote	Zweiunddreißigstelpause	32tel-Note
NL	tweeendertigste noot	tweeendertigste rust	32e noot
DK	toogtredivtedelsnode	toogtredivtedelspause	-
SE	trettiotvåondelsnot	trettiotvåondelspaus	-
FI	kolmaskymmeneskahdesosanuotti	kolmaskymmeneskahdesosatauko	32-osanuotti

Lang.	Note name	Rest name	Abbr.
US	sixty-fourth note	sixty-fourth rest	64th note
UK	hemidemisemiquaver	hemidemisemiquaver rest	-
ES	semifusa	silencio de semifusa	-
IT	semibiscroma	pausa di semibiscroma	-
FR	quadruple croche	seizième de soupir	-
DE	Vierundsechzigstelnote	Vierundsechzigstelpause	64tel-Note
NL	vierenzestigste noot	vierenzestigste rust	64e noot
DK	fireogtredsindstyvendelsnode	fireogtredsindstyvendelspause	-
SE	sextiofjärdedelsnot	sextiofjärdedelspaus	-
FI	kuudeskymmenesneljäsosanuotti	kuudeskymmenesneljäsosatauko	64-osanuotti

<b>Lang.</b>	<b>Note name</b>	<b>Rest name</b>	<b>Abbr.</b>
<b>US</b>	one-hundred-twenty-eighth note	one-hundred-twenty-eighth rest	128th note
<b>UK</b>	semihemidemisemi-quaver	semihemidemisemi-quaver rest	-
<b>ES</b>	garrapatea	silencio de garrapatea	-
<b>IT</b>	fusa	pausa di fusa	-
<b>FR</b>	quintuple croche	trente-deuxième de soupir	-
<b>DE</b>	Hundertachtundzwanzigstel-note	Hundertachtundzwanzigstel-pause	128tel-Note
<b>NL</b>	honderdachtentwintigste noot	honderdachtentwintigste rust	128e noot
<b>DK</b>	hundredeotteogtyvendedels-node	hundredeotteogtyvendedels-pause	-
<b>SE</b>	hundratjugoåttondelsnot	hundratjugoåttondelspau	-
<b>FI</b>	sadaskahdeskymmenes-kahdeksasosanuotti	sadaskahdeskymmenes-kahdeksasosatauko	128-osanuotti
<b>Lang.</b>	<b>Note name</b>	<b>Rest name</b>	<b>Abbr.</b>
<b>US</b>	two-hundred-fifty-sixth note	two-hundred-fifty-sixth rest	256th note
<b>UK</b>	demisemihemidemisemi-quaver	demisemihemidemisemi-quaver rest	-
<b>ES</b>	semigarrapatea	silencio de semigarrapatea	-
<b>IT</b>	semifusa	pausa di semifusa	-
<b>FR</b>	sextuple croche	soixante-quatrième de soupir	-
<b>DE</b>	Zweihundert-sechsfünzigstelnote	Zweihundert-sechsfünzigstelpause	256tel-Note
<b>NL</b>	tweehonderdzesenvijftigste noot	tweehonderdzesenvijftigste rust	256e noot
<b>DK</b>	tohundredeseksog-halvtredsendedelsnode	tohundredeseksog-halvtredsendedelspause	-
<b>SE</b>	tvåhundrafemtiosjättedelsnot	tvåhundrafemtiosjättedelspau	-
<b>FI</b>	kahdessadasviideskymmenes-kuudesosanuotti	kahdessadasviideskymmenes-kuudesosatauko	256-osanuotti

See also

[Section 1.191 \[mensural notation\], page 46](#)

### 3 Pitch names

EN	ES	I	F	D	NL	DK	S	FI
<b>c</b>	do	do	ut	C	c	c	c	c
<b>c-sharp</b>	do sostenido	do diesis	ut dièse	Cis	cis	cis	ciss	cis
<b>d-flat</b>	re bemol	re bemolle	ré bémol	Des	des	des	dess	des
<b>d</b>	re	re	ré	D	d	d	d	d
<b>d-sharp</b>	re sostenido	re diesis	re dièse	Dis	dis	dis	diss	dis
<b>e-flat</b>	mi bemol	mi bemolle	mi bémol	Es	es	es	ess	es
<b>e</b>	mi	mi	mi	E	e	e	e	e
<b>f-flat</b> = e	fa bemol	fa bemolle	fa bémol	Fes	fes	fes	fess	fes
<b>f</b>	fa	fa	fa	F	f	f	f	f
<b>e-sharp</b> = f	mi sostenido	mi diesis	mi dièse	Eis	eis	eis	eiss	eis
<b>f-sharp</b>	fa sostenido	fa diesis	fa dièse	Fis	fis	fis	fiss	fis
<b>g-flat</b>	sol bemol	sol bemolle	sol bémol	Ges	ges	ges	gess	ges
<b>g</b>	sol	sol	sol	G	g	g	g	g
<b>g-sharp</b>	sol sostenido	sol diesis	sol dièse	Gis	gis	gis	giss	gis
<b>a-flat</b>	la bemol	la bemolle	la bémol	As	as	as	ass	as
<b>a</b>	la	la	la	A	a	a	a	a
<b>a-sharp</b>	la sostenido	la diesis	la dièse	Ais	ais	ais	aiss	ais
<b>b-flat</b>	si bemol	si bemolle	si bémol	B	bes	b	b	b
<b>b</b>	si	si	si	H	b	h	h	h
<b>c-flat</b> = b	do bemol	do bemolle	ut bémol	Ces	ces	ces	cess	ces
<b>b-sharp</b> = c	si sostenido	si diesis	si dièse	His	bis	his	hiss	his

## 4 Non-Western terms A-Z

### 4.1 bayati

This is a stub for bayati.

#### See also

Notation Reference: [Section “Arabic key signatures”](#) in *Notation Reference*.

### 4.2 iraq

This is a stub for iraq.

#### See also

Notation Reference: [Section “Arabic key signatures”](#) in *Notation Reference*.

### 4.3 kurd

This is a stub for kurd.

#### See also

Notation Reference: [Section “Arabic key signatures”](#) in *Notation Reference*.

### 4.4 makam

This is a stub for makam.

#### See also

Notation Reference: [Section “Turkish classical music”](#) in *Notation Reference*.

### 4.5 makamlar

This is a stub for makamlar.

#### See also

Notation Reference: [Section “Turkish classical music”](#) in *Notation Reference*.

### 4.6 maqam

This is a stub for maqam.

#### See also

Notation Reference: [Section “Arabic music”](#) in *Notation Reference*, [Section “Arabic key signatures”](#) in *Notation Reference*.

### 4.7 rast

This is a stub for rast.

#### See also

Notation Reference: [Section “Arabic key signatures”](#) in *Notation Reference*.



## 4.8 semai

This is a stub for **semai**.

### See also

Notation Reference: [Section “Arabic key signatures”](#) in *Notation Reference*.

## 4.9 sikaḥ

This is a stub for **sikaḥ**.

### See also

Notation Reference: [Section “Arabic key signatures”](#) in *Notation Reference*.

## 4.10 taqasim

This is a stub for **taqasim**.

### See also

Notation Reference: [Section “Arabic key signatures”](#) in *Notation Reference*.

## Appendix A Literature used

- Apel, Willi, ed. *The Harvard Dictionary of Music*. Cambridge: Belknap Press (Harvard University Press), 1944.
- Krohn, Felix. *Lyhyt musiikkioppi*. Porvoo, Helsinki, Finland: WSOY, 1976.
- Leuchtmann, Horst, ed. *Polyglottes Wörterbuch der musikalischen Terminologie*. Kassel, 1980.
- Hornby, Albert Sydney. *Oxford Advanced Learner's Dictionary of Current English*, 3rd ed. London: Oxford University Press, 1974.
- Porter, Noah. *Webster's Revised Unabridged Dictionary*. Springfield, Massachusetts: G. & C. Merriam Company, 1913.
- Randall, Don, ed. *The New Harvard Dictionary of Music*. Cambridge: Belknap Press (Harvard University Press), 1986.
- Riemann, Hugo. *Musik-lexicon*. Berlin, 1929.

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