# LilyPond

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 2.21.4.

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://lilypond.org/`.

Copyright © 1999–2020 by the authors

Permission is granted to copy, distribute and/or modify this document under the terms of the GNU Free Documentation License, Version 1.1 or any later version published by the Free Software Foundation; with no Invariant Sections. A copy of the license is included in the section entitled “GNU Free Documentation License”.

For LilyPond version 2.21.4

# 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 87.

## 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 accélérant, 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 1.224 [ornament], page 57.

## 1.6 acciaccatura

ES: mordente de una nota, I: acciaccatura, F: acciaccature, 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

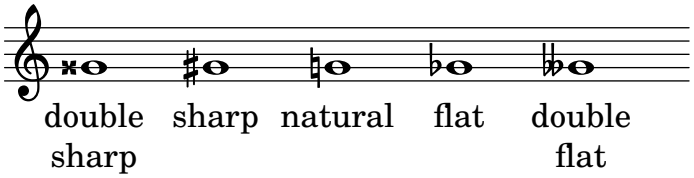
Section 1.19 [appoggiatura], page 5, Section 1.143 [grace notes], page 35, Section 1.206 [mordent], page 53, Section 1.224 [ornament], page 57.

## 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 1.266 [semitone], page 68, Section 1.337 [whole tone], page 83.

## 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
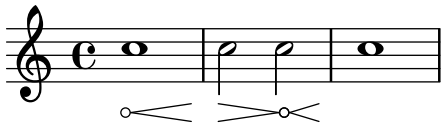
Section 1.18 [andante], page 5, Section 1.168 [largo], page 42, Section 1.282 [sonata], page 71.

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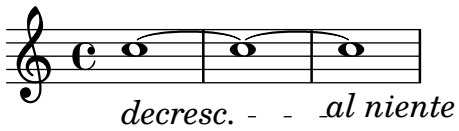
ES: al niente, I: al niente, F: al niente, en mourant, D: ?, NL: ?, DK: ?, S: ?, FI: häviten olemattomiin.

[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 1.192 [mensural notation], page 47, Section 1.218 [note value], page 55, Section 1.245 [proportion], page 62, Section 1.335 [whole note], page 82.

## 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 1.282 [sonata], page 71.

## 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: altto, 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*).
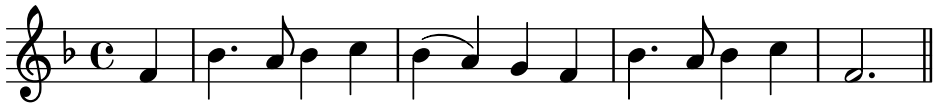
### See also

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.



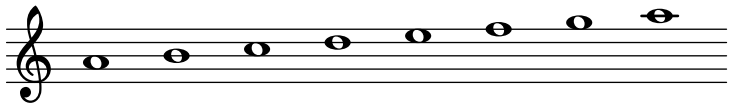
### See also

Section 1.186 [measure], page 46, Section 1.194 [meter], page 49.

## 1.17 ancient minor scale

ES: escala menor natural, I: scala minore naturale, F: forme du mode mineur ancien, troisème 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.

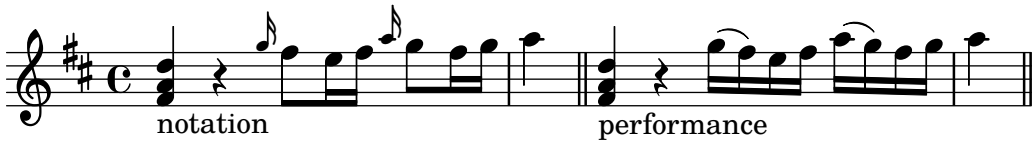
### See also

No cross-references.
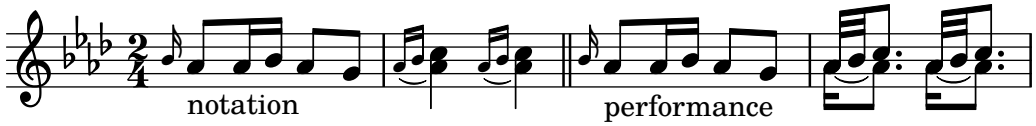
## 1.19 appoggiatura

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.



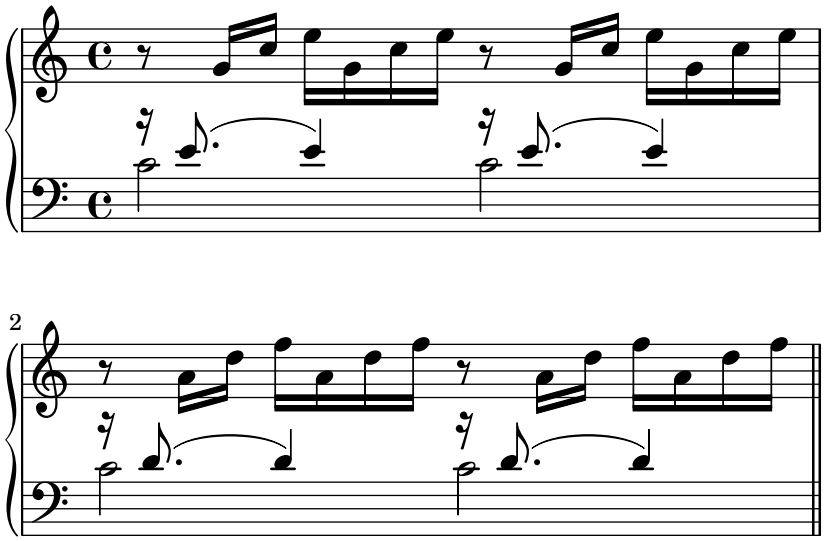

### See also

No cross-references.

## 1.20 arpeggio

ES: arpegio, 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: aumentación, 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 1.192 [mensural notation], page 47.

## 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 1.160 [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 87,

## 1.27 backfall

### See also

Section 1.19 [appoggiatura], page 5.

## 1.28 bar

### See also

Section 1.186 [measure], page 46.

## 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 1.186 [measure], page 46.

## 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 1.305 [tenor], page 76.

## 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 31.

## 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 1.291 [strings], page 73.

## 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.
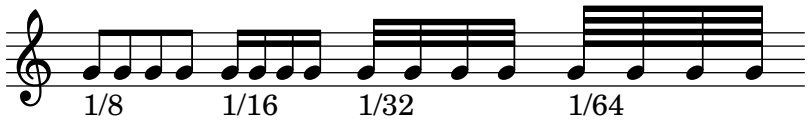
### See also

Section 1.122 [F clef], page 31, Section 1.155 [high bass clef], page 39.

## 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.



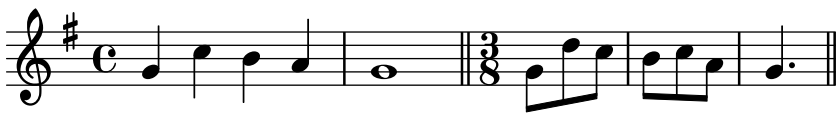

### See also

Section 1.124 [feathered beam], page 31.

## 1.35 beat

ES: tiempo, parte (de compás) I: tempi, F: temps, battue 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 1.314 [time signature], page 78.

## 1.36 beat repeat

### See also

Section 1.229 [percent repeat], page 58.

## 1.37 bind

### See also
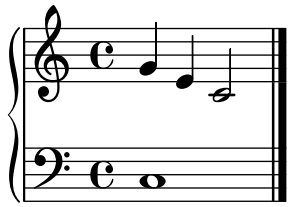
Section 1.312 [tie], page 77.

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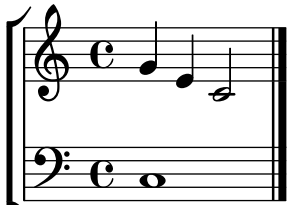
ES: llave, corchete, I: graffa, F: accolade, D: Klammer, Akkolade, NL: accolade, teksthaak, DK: klamme, S: klammer, FI: yhdistävä sulkumerkki.

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: vejrtrækningstegn, S: andningstecken, FI: hengitysmerkki.

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

### See also
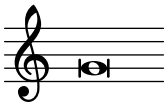
Section 1.47 [caesura], page 12.

## 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 1.192 [mensural notation], page 47, Section 1.218 [note value], page 55, Section 1.265 [semibreve], page 68.

## 1.43 C

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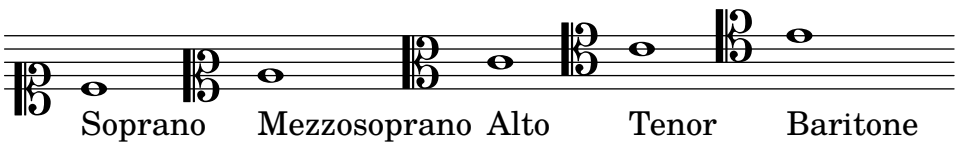
### See also

Chapter 3 [Pitch names], page 87.

## 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 1.266 [semitone], page 68.

## 1.50 central C
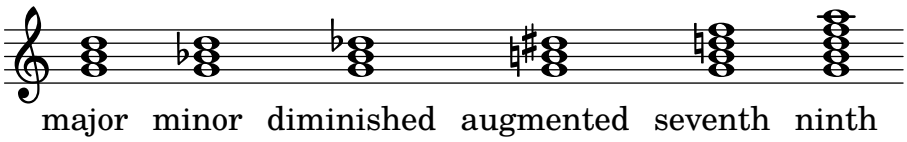
### See also

Section 1.200 [middle C], page 52.

## 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.
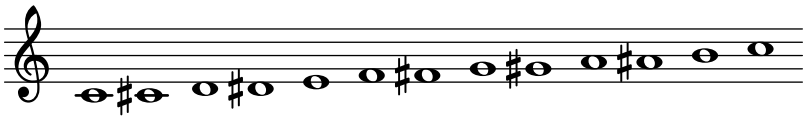



### See also

Section 1.139 [functional harmony], page 34, Section 1.160 [interval], page 40, Section 1.161 [inversion], page 41, Section 1.248 [quality], page 63, Section 1.308 [third], page 76.

## 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 1.266 [semitone], page 68.

## 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: Kirchentonart, NL: kerktoonladder, DK: kirketoneart, S: kyrkotonart, FI: moodi, kirkkosävellaji.

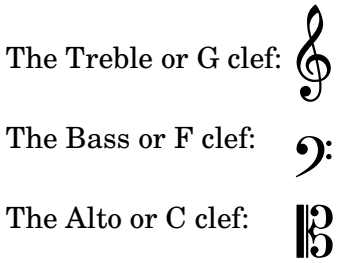
### See also

Section 1.82 [diatonic scale], page 21.

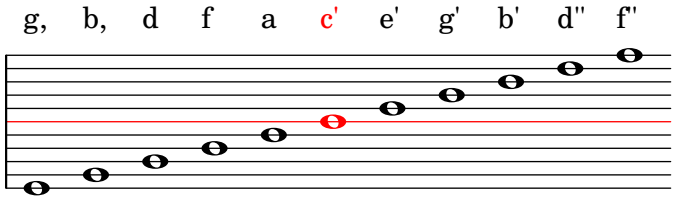
## 1.55 clef

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

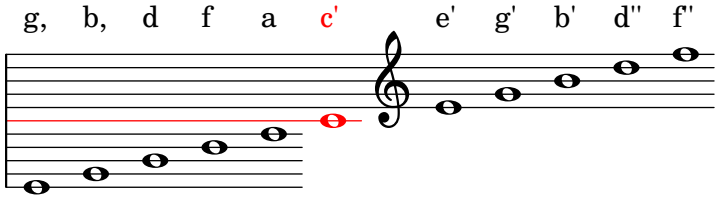
The clef indicates which lines of the staff correspond to which pitches. The three clef symbols in common use are:




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:

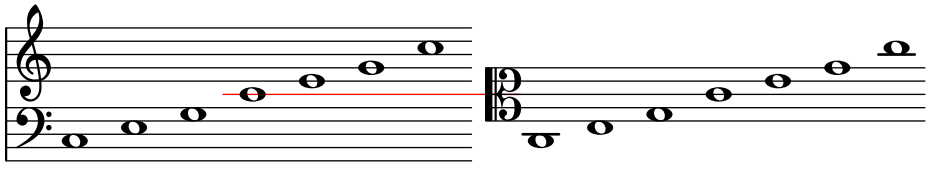



Staves of five lines are usually used, and the clef superimposed on them indicates which five lines have been selected from this *grand staff*. For example, the treble or G clef indicates that the top five lines have been selected:




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 31, 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 1.246 [Pythagorean comma], page 63, Section 1.301 [syntonic comma], page 75, Section 1.303 [temperament], page 76.

## 1.58 common meter

Another name for Section 1.60 [common time], page 16.

### See also

Section 1.60 [common time], page 16, Section 1.194 [meter], page 49.

## 1.59 Common Practice Period

ES: ?, I: Periodo di pratica comune, F: musique classique moderne, 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 1.192 [mensural notation], page 47, Section 1.194 [meter], page 49.

## 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 1.162 [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 1.160 [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
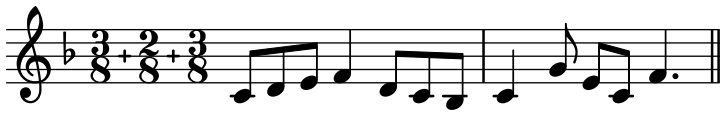
Section 1.194 [meter], page 49, Section 1.273 [simple meter], page 69.

## 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 1.194 [meter], page 49, Section 1.240 [polymetric time signature], page 61.

## 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
- oboe
- bassoon
- violin
- viola
- 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)
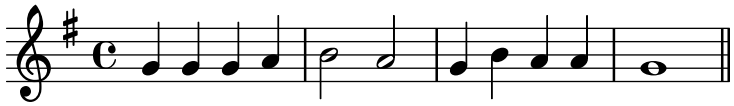
## See also

Section 1.317 [transposing instrument], page 78.

## 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, consonnance, 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.
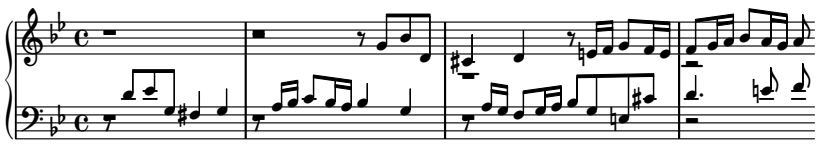
### See also

No cross-references.

## 1.70 counterpoint

ES: contrapunto, I: contrappunto, F: contrepoint, 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.
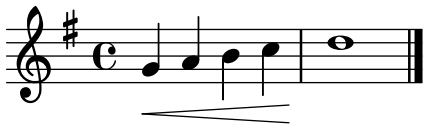
### See also

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

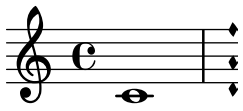
Compare: Section 1.225 [ossia], page 58.
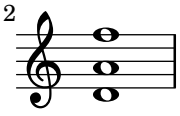
## 1.74 custos

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 87,

## 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.
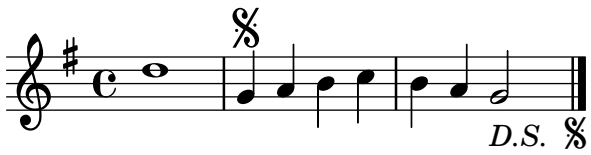
### See also

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*):
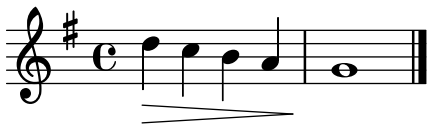



### See also

No cross-references.

## 1.80 decrescendo

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

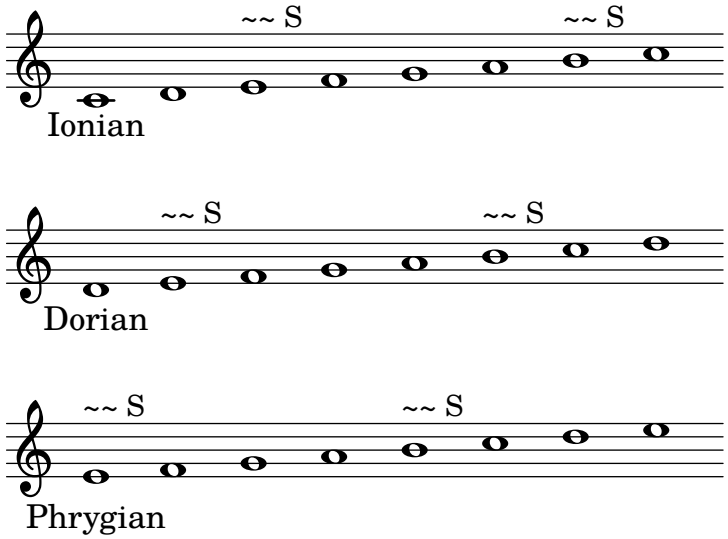
No cross-references.

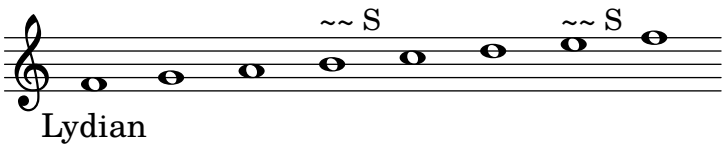
## 1.82 diatonic scale

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

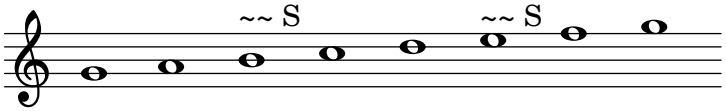
A scale consisting of 5 whole tones and 2 semitones (S). Scales played on the white keys of a piano keyboard are diatonic. These scales are sometimes called, somewhat inaccurately, 'church modes').

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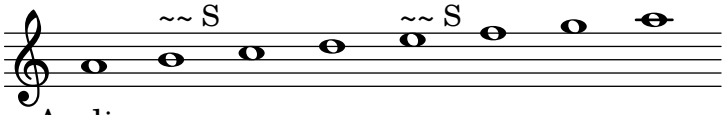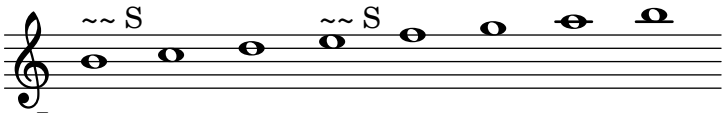





Lydian




Mixolydian

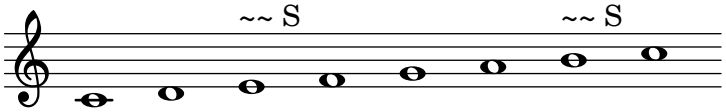



Aeolian
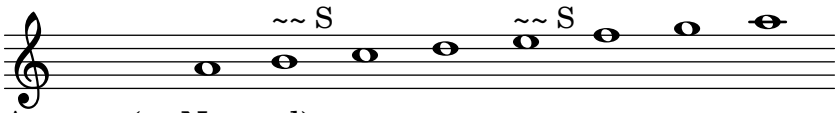



Locrian

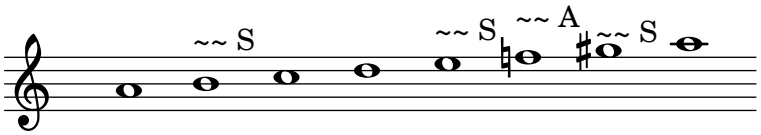
From the beginning of the 17th century the scales used in European compositional music are primarily the major and the minor scales. In the harmonic minor scale type an augmented second (A) occurs between the 6th and 7th tone.



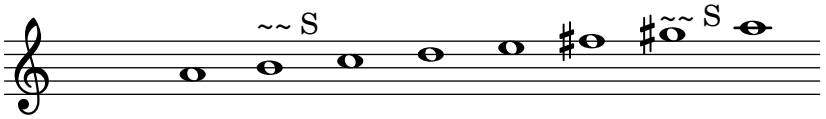

Major
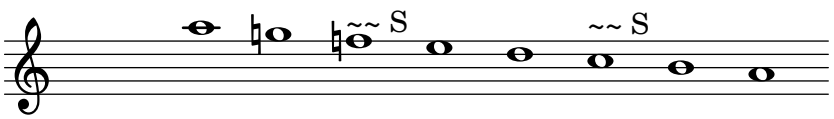



Ancient (or Natural) minor




Harmonic minor




Melodic minor ascending




Melodic minor descending

## See also

Section 1.266 [semitone], page 68, Section 1.337 [whole tone], page 83.

## 1.83 didymic comma

### See also

Section 1.301 [syntonic comma], page 75.

## 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 1.160 [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: aikaarvojen tihennys.

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

### See also

Section 1.23 [augmentation], page 7, Section 1.192 [mensural notation], page 47.

## 1.87 direct

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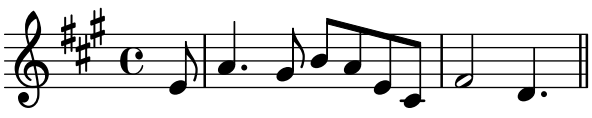
### See also

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: division, 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 1.261 [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 1.218 [note value], page 55.

## 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 1.218 [note value], page 55.

## 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: kaksoisappoggiatura, kaksoisetuhele.

### 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 1.218 [note value], page 55.

## 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: mesure composée, métrique composée, D: zusammengesetzte Taktart, NL: ?, DK: ?, S: ?, FI: kaksois-aika-arvomerkintä.

### See also

Section 1.240 [polymetric time signature], page 61.

## 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 1.194 [meter], page 49.

## 1.107 duplet

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

### See also

Section 1.218 [note value], page 55.

## 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 1.218 [note value], page 55.

## 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 1.234 [piano], page 60, 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 87,

## 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: ottendedelsnode
- S: åttondelsnot
- FI: kahdeksasosanuotti

### See also

Section 1.218 [note value], page 55.

## 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: åttonddelspaus
- FI: kahdeksasosatauko

### See also

Section 1.218 [note value], page 55.

## 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. $\sigma\upsilon\nu\alpha\lambda o\iota\phi\eta$, from Greek $\sigma\upsilon\nu\alpha\lambda o\iota\phi\eta\nu$ '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 1.180 [lyric tie], page 45.

## 1.115 embellishment

### See also

Section 1.224 [ornament], page 57.

## 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.
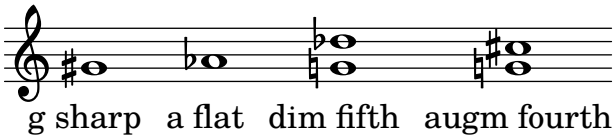
### See also

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 1.266 [semitone], page 68, Section 1.303 [temperament], page 76.

## 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: nyanssiosoitus, 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: pidennysviiva.

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 (`http://www.dolmetsch.com/defse1.htm`).
- 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 1.189 [melisma], page 47, Section 1.296 [sul G], page 74, Section 1.311 [thorough bass], page 77, Section 1.221 [octave mark], page 56, Section 1.222 [octave marking], page 57.

## 1.121 F

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

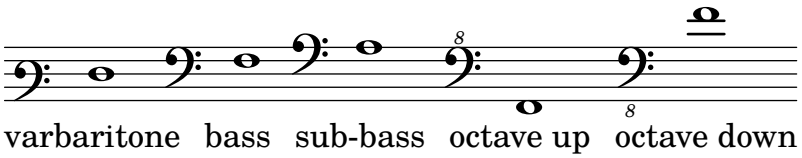
### See also

Chapter 3 [Pitch names], page 87,

## 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 1.291 [strings], page 73.

## 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.
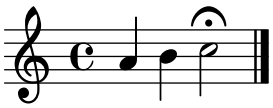
### See also

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

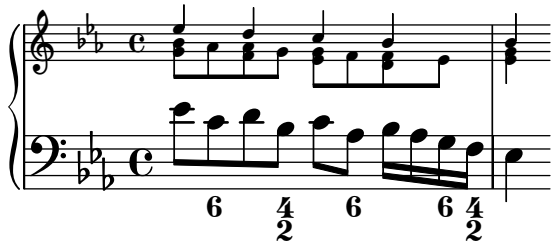
Section 1.160 [interval], page 40.

## 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 1.160 [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.
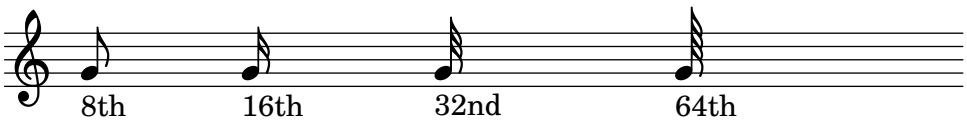
### See also

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 1.218 [note value], page 55.

## 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 38.

## 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: kwart, DK: kvart, S: kvart, FI: kvartti.

### See also

Section 1.160 [interval], page 40.

## 1.135 Frenched score

ES: partitura a la francesa, I: partitura senza i righi vuoti, F: partition à la française, 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: portée à la française, 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 1.225 [ossia], page 58.

## 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

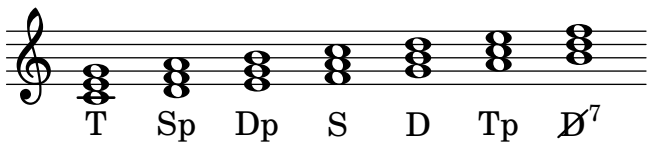
Section 1.70 [counterpoint], page 18.

## 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 1.159 [incomplete dominant seventh chord], page 40, Section 1.293 [subdominant], page 73, Section 1.316 [tonic], page 78.

## 1.140 G

- ES: sol
- I: sol
- F: sol
- D: G, g

- NL: g
- DK: g
- S: g
- FI: G, g

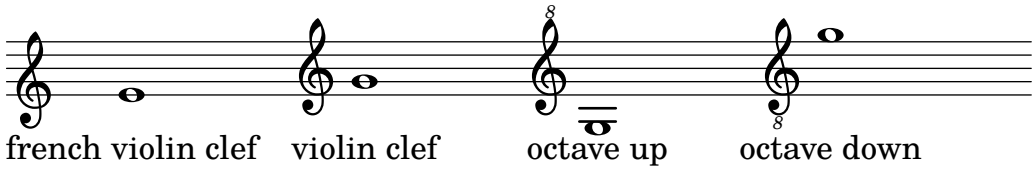
### See also

Chapter 3 [Pitch names], page 87,

## 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, liukuen.

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: korunuotit.

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 1.206 [mordent], page 53, Section 1.224 [ornament], page 57.

## 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 1.328 [turn], page 81.

## 1.147 H

- ES: si
- I: si
- F: si
- D: H, h
- NL: b
- DK: h
- S: h
- FI: H, h
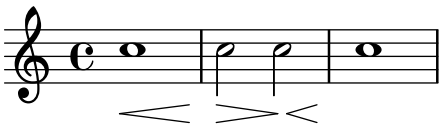
Letter name used for *B natural* in German and Scandinavian usage. In the standard usage of these countries, *B* means *B flat*.

### See also

Chapter 3 [Pitch names], page 87, 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 1.218 [note value], page 55.

## 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.

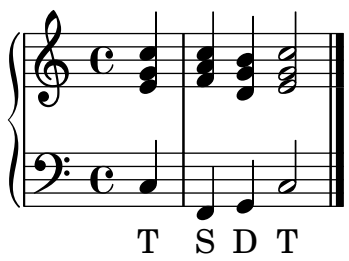
### See also

Section 1.218 [note value], page 55.

## 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: Flageolett-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

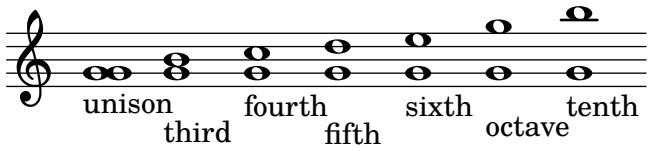
No cross-references.

## 1.153 harmony

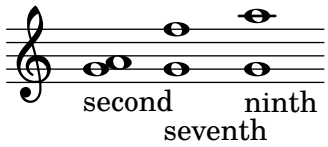
ES: armonía, I: armonia, F: harmonie, D: Harmonie, Zusammenklang, NL: harmonie, DK: samklang, S: samklang, FI: harmonia, yhteissointi.

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.
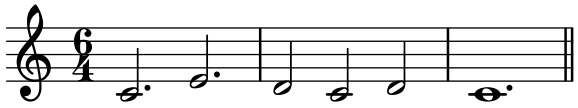
## 1.154 hemiola

ES: hemiolia, I: emiolia, (rarely hemiola or emiola), F: hémiole, D: Hemiole, NL: ?, DK: ?, S: ?, FI: hemioli, 3/2 -suhde.
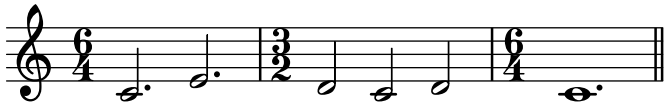
[Greek: in Latin, *sesquialtera*] The ratio 3:2.

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 1.192 [mensural notation], page 47, Section 1.194 [meter], page 49, Section 1.238 [polymeter], page 60, Section 1.245 [proportion], page 62.

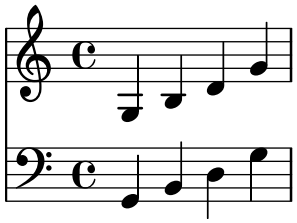
## 1.155 high bass clef

ES: ?, I: ?, F: clef de basse haute, D: hoher Bassschlüssel, NL: ?, DK: ?, S: ?, FI: ?.

Beginning in 18th century the high bass clef used in French Horn parts for the lowest pitches. This usage of the F clef was then passed down from the French Horn to the Basset Horn and then to the Bass Clarinet. It looks identical to the standard bass clef, but is pitched an octave higher – octavation indicators on clefs appeared at the beginning of the 20th Century.

In LilyPond, the most straightforward way to make a high bass clef is to print the modern version `\clef "bass^8"` but without the `8`;

```
<<
  \new Staff {
    \clef treble { g4 b d' g' }
  }
  \new Staff \with { \omit ClefModifier }
  { \clef "bass^8" { g4 b d' g' } }
>>
```



### See also

Section 1.122 [F clef], page 31, Section 1.33 [bass clef], page 9.

## 1.156 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 1.241 [polyphony], page 61.

## 1.157 hook

### See also

Section 1.129 [flag], page 32.

## 1.158 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.

## 1.159 incomplete dominant seventh chord

ES: ?, I: accordo di settima dominante incompleto, F: accord de septième de dominante incomplet, 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.
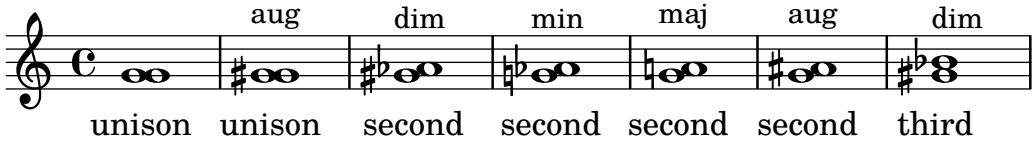
### See also

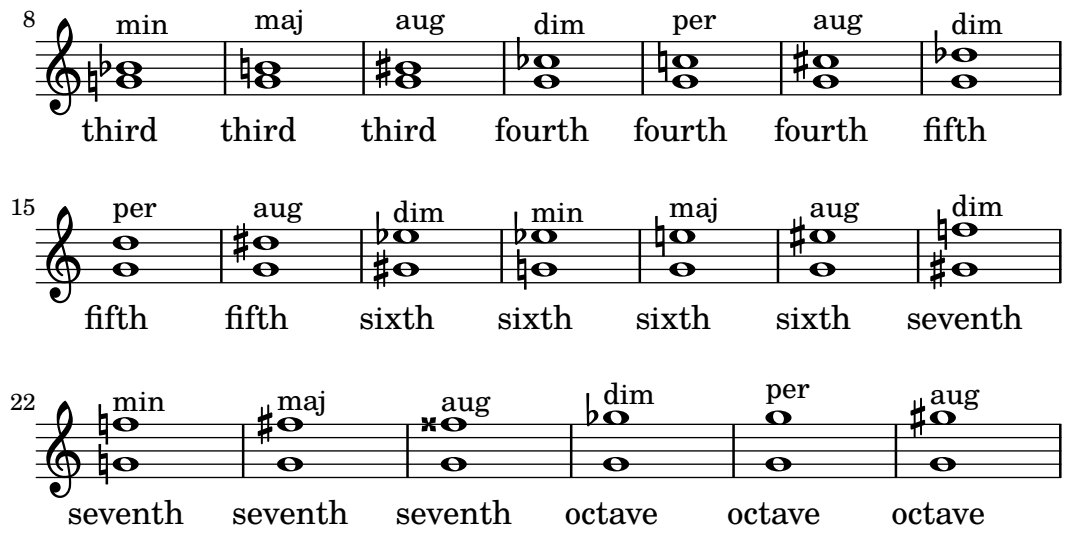
Section 1.51 [chord], page 13, Section 1.95 [dominant seventh chord], page 25, Section 1.139 [functional harmony], page 34.

## 1.160 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.






### See also

Section 1.117 [enharmonic], page 29, Section 1.337 [whole tone], page 83.

## 1.161 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.

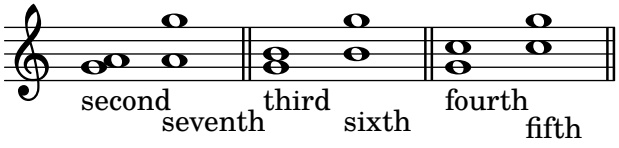
### See also

No cross-references.

## 1.162 inverted interval

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

The difference between an interval and an octave.



### See also

No cross-references.

## 1.163 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 1.303 [temperament], page 76.

## 1.164 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 1.165 [key signature], page 42.

## 1.165 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: sävellajiosoitus.

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.

## 1.166 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.

## 1.167 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.

## 1.168 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.

## 1.169 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.

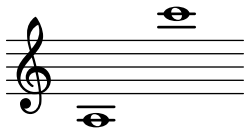
### See also

Section 1.261 [scale degree], page 66, Section 1.266 [semitone], page 68.

## 1.170 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.



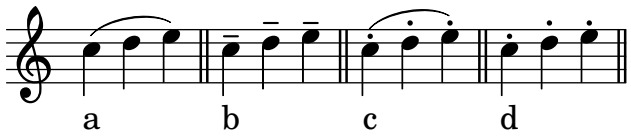
### See also

No cross-references.

## 1.171 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 1.286 [staccato], page 72.

## 1.172 legato curve

### See also

Section 1.280 [slur], page 71, Section 1.171 [legato], page 43.

## 1.173 leger line

### See also

Section 1.170 [ledger line], page 43.

## 1.174 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 1.192 [mensural notation], page 47.

## 1.175 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.

## 1.176 line

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

### See also

Section 1.287 [staff], page 72.

## 1.177 loco

ES: en su lugar, I: loco, F: loco, 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 1.221 [octave mark], page 56, Section 1.222 [octave marking], page 57.

## 1.178 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
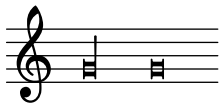
Section 1.19 [appoggiatura], page 5.

## 1.179 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 1.218 [note value], page 55.

## 1.180 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.

## 1.181 lyrics

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

### See also

No cross-references.

## 1.182 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.

## 1.183 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 1.160 [interval], page 40.

## 1.184 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 84, Section 1.179 [longa], page 44, Section 1.218 [note value], page 55.

## 1.185 meantone temperament

ES: afinación mesotónica, I: accordatura mesotonica, F: tempérament mésotonique, D: mitteltönige 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 1.303 [temperament], page 76.

## 1.186 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 1.194 [meter], page 49.

## 1.187 measure repeat

### See also

Section 1.229 [percent repeat], page 58.

## 1.188 mediant

ES: mediante, I: mediante, modale, F: médiante, NL: mediant, D: Mediante, 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 1.254 [relative key], page 65.

## 1.189 melisma

ES: melisma, I: melisma, F: mélisme, vocalise, 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.

## 1.190 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.

## 1.191 melodic cadence

### See also

Section 1.46 [cadenza], page 12.

## 1.192 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 betwixt 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 1.174 [ligature], page 44, Section 1.245 [proportion], page 62.

## 1.193 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 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 1.245 [proportion], page 62, Section 1.314 [time signature], page 78.

## 1.194 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.
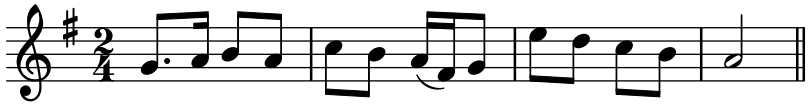
Other than triple meter and its subdivided variants (see below), meters that feature odd groupings of beats (e.g. quintuple or septuple meter) are not frequently used prior to the 20th Century.

**By subdividing the primary beat**:
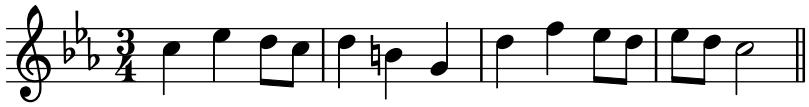
- simple: subdivided in groups of two.
  - duple: 2/2, 2/4, 2/8
  - triple: 3/2, 3/4, 3/8
  - quadruple: 4/2, 4/4 (also called common time), 4/8
- compound: subdivided in groups of three.
  - duple: 6/8
  - triple: 9/8
  - quadruple: 12/8

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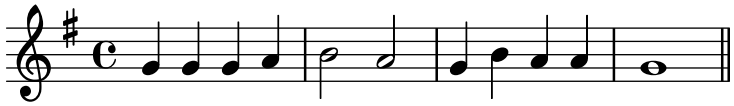
Simple duple meter (F.J. Haydn, 1732-1809; or a Croatian folk tune):
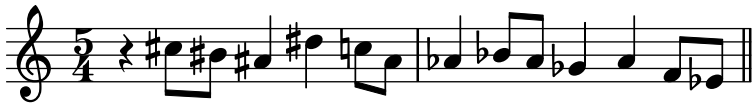


Simple triple meter:



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



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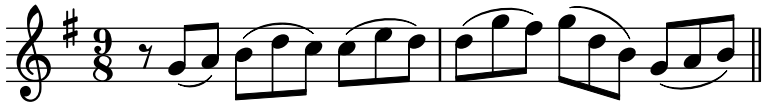


(Aside: this is an example of *Augenmusik*: the accidentals are thus in the source, with sharps in the accompaniment where the voice has flats and *vice versa*.)

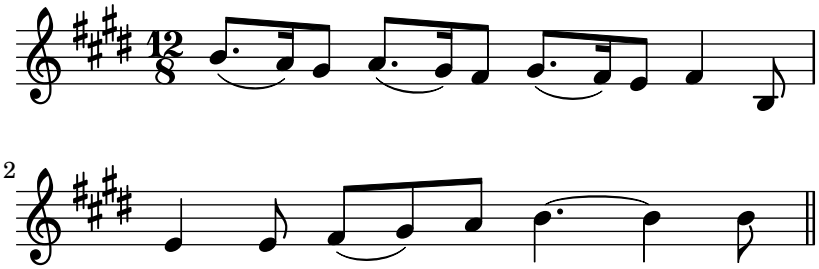
Compound duple meter (unknown):



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 1.218 [note value], page 55, Section 1.314 [time signature], page 78,

## 1.195 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 1.196 [metronome mark], page 51.

## 1.196 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 1.195 [metronome], page 51,

## 1.197 metronomic indication

### See also

Section 1.196 [metronome mark], page 51,

## 1.198 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.

## 1.199 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.

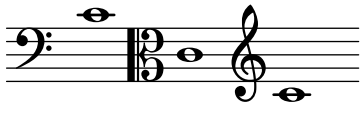
### See also

Section 1.285 [soprano], page 72, Section 1.68 [contralto], page 18.

## 1.200 middle C

ES: do central, I: do centrale, F: do central, do 3, D: eingestrichenes 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.

## 1.201 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.

## 1.202 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 1.160 [interval], page 40.

## 1.203 mixolydian mode

### See also

Section 1.82 [diatonic scale], page 21.

## 1.204 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.

## 1.205 modulation

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

Moving from one Section 1.164 [key], page 42, to another. For example, the second subject of a Section 1.283 [sonata form], page 71, movement modulates to the dominant key if the key is major and to the Section 1.254 [relative key], page 65, if the key is minor.

### See also

No cross-references.

## 1.206 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 1.224 [ornament], page 57.

## 1.207 motif
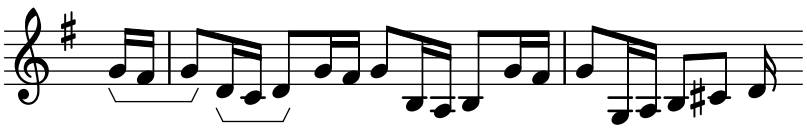
### See also

Section 1.208 [motive], page 53.

## 1.208 motive

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

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



### See also

No cross-references.

## 1.209 movement

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

Greater musical works like Section 1.299 [symphony], page 75, and Section 1.282 [sonata], page 71, most often consist of several – more or less – independent pieces called movements.

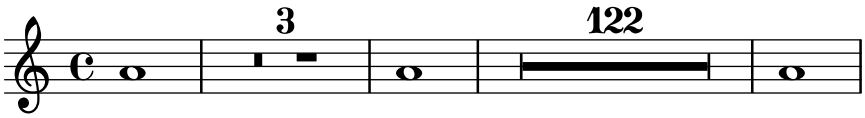
### See also

No cross-references.

## 1.210 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 1.179 [longa], page 44, Section 1.42 [breve], page 11.

## 1.211 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.

## 1.212 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 1.206 [mordent], page 53, Section 1.224 [ornament], page 57.

## 1.213 ninth

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

### See also

Section 1.160 [interval], page 40.

## 1.214 non-legato

### See also

Section 1.171 [legato], page 43.

## 1.215 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 1.215 [note], page 54, is strongly recommended. Briefly, one sees a note, and hears a tone.

### See also

No cross-references.

## 1.216 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 1.287 [staff], page 72, Section 1.289 [stem], page 73.

## 1.217 note names

### See also

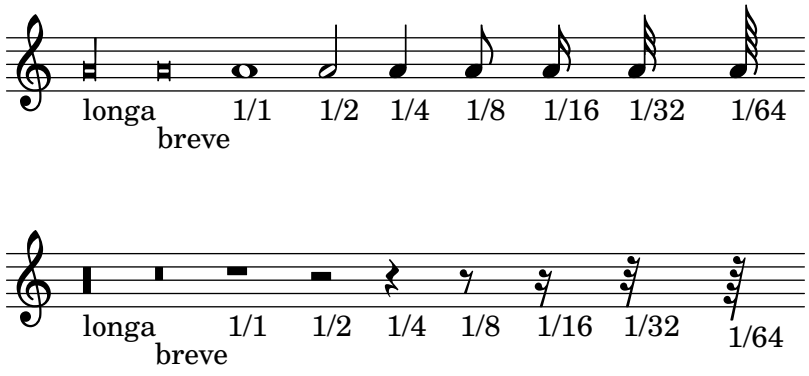
Chapter 3 [Pitch names], page 87,

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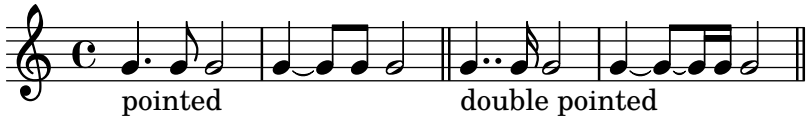
ES: valor, duración, I: valore, durata, F: durée, valeur (d'une note), D: Notenwert, NL: nootwaarde, DK nodeværdi, S: notvärde, FI: nuotin aika-arvo.

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.

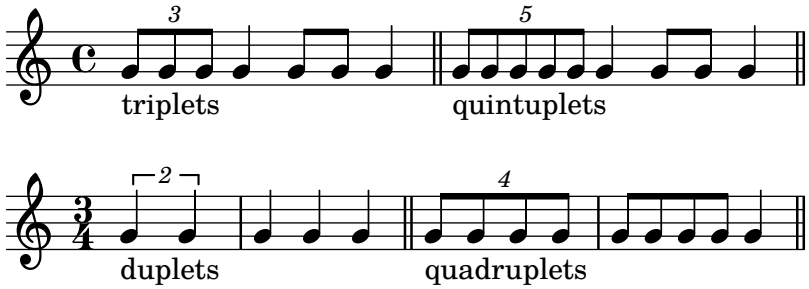
As used in mensural notation, this fraction was more flexible: it could also be one-third the higher note value. Composers indicated which proportions to use with various signs—two of which survive to the present day: the C-shaped sign for *common time*, and the slashed C for *alla breve* or *cut time*.




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.

## 1.219 octavation

### See also

Section 1.222 [octave marking], page 57.

## 1.220 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 1.160 [interval], page 40, Section 1.222 [octave marking], page 57.

## 1.221 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 31, Section 1.141 [G clef], page 35, Section 1.177 [loco], page 44, Section 1.222 [octave marking], page 57.

## 1.222 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 1.221 [octave mark], page 56.

### See also

Section 1.160 [interval], page 40, Section 1.177 [loco], page 44, Section 1.220 [octave], page 56, Section 1.221 [octave mark], page 56.

## 1.223 octave sign

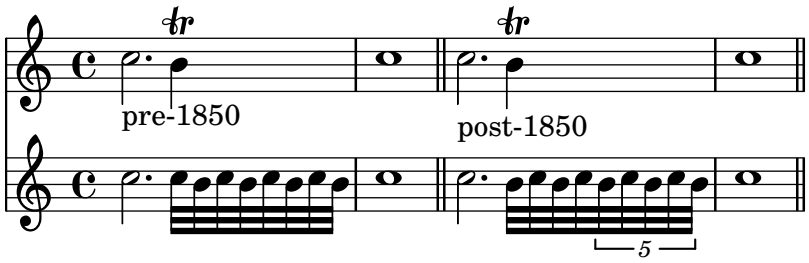
### See also

Section 1.221 [octave mark], page 56.

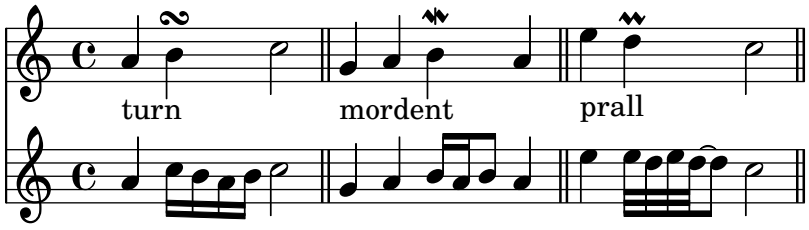
## 1.224 ornament

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 1.264 [second], page 67, 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 1.206 [mordent], page 53.

## 1.225 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.

## 1.226 part

ES: parte, particella, I: voce, parte, F: partie, D: Stimme, NL: partij, DK: stemme, S: stämma, 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,

## 1.227 pause

### See also

Section 1.125 [fermata], page 31.

## 1.228 pennant

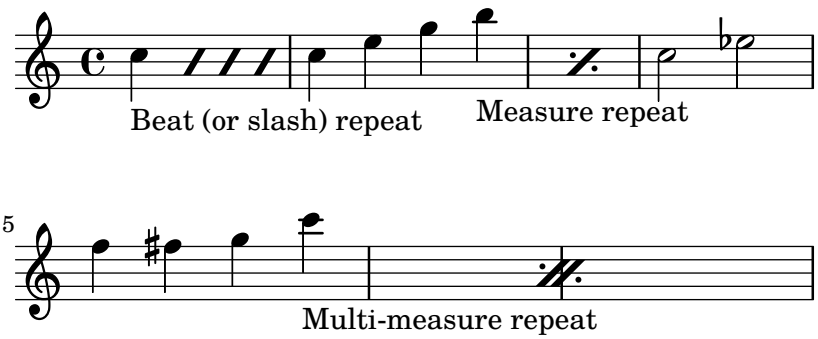
### See also

Section 1.129 [flag], page 32.

## 1.229 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 1.255 [repeat], page 65, University of Vermont Music Dictionary (`http://www.music.vt.edu/musicdictionary/textr/Repeat.html`).

## 1.230 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.

## 1.231 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 1.160 [interval], page 40.

## 1.232 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.

## 1.233 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 1.232 [phrase], page 59, Section 1.280 [slur], page 71.

## 1.234 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.

## 1.235 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.

## 1.236 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 87.

## 1.237 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.

## 1.238 polymeter

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 1.239 [polymetric], page 61, (adj.)

## 1.239 polymetric

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

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

### See also

Section 1.238 [polymeter], page 60, (noun)

## 1.240 polymetric time signature

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

A time signature that indicates regularly alternating polymetric time.

### See also

Section 1.239 [polymetric], page 61.

## 1.241 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.

## 1.242 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 1.171 [legato], page 43.

## 1.243 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.

## 1.244 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.

## 1.245 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, *tripla*; and its inversion, *subtripla*. 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, *triplasuperbipartientetertias*
- 51:15, *triplasuperbipartientequintas*

### See also

Section 1.192 [mensural notation], page 47.

## 1.246 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: pytagorinen 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 1.303 [temperament], page 76.

## 1.247 quadruplet

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

### See also

Section 1.218 [note value], page 55.

## 1.248 quality

ES: variante [de acorde o intervalo], I: qualità (?), F: qualité [d'accord ou d'intervalle], 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$\Delta$ |
| minor triad | minor third/perfect fifth | C-E♭-G | Cm, Cmi, Cmin, C- |
| augmented triad | major third/augmented fifth | C-E-G♯ | C+, C^+, Caug |
| diminished triad | minor third/diminished fifth | C-E♭-G♭ | Cm(♭5), C$^{o}$, Cdim |

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^7, and D^m7 are all identical). The last three chords are not commonly used except in jazz.

### See also

Section 1.51 [chord], page 13.

## 1.249 quarter note

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

### See also

Section 1.218 [note value], page 55.

## 1.250 quarter rest

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

### See also

Section 1.218 [note value], page 55.

## 1.251 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 1.160 [interval], page 40,

## 1.252 quintuplet

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

### See also

Section 1.218 [note value], page 55.

## 1.253 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 1.258 [ritardando], page 66. Abbreviated to *rall.*

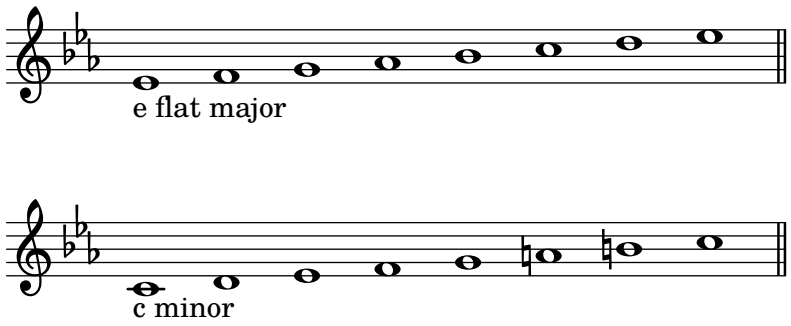
### See also

Section 1.258 [ritardando], page 66.

## 1.254 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.
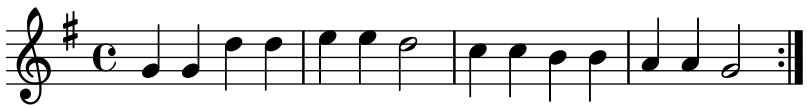



### See also

Section 1.164 [key], page 42, Section 1.165 [key signature], page 42, Section 1.182 [major], page 45, Section 1.201 [minor], page 52.

## 1.255 repeat

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



### See also

No cross-references.

## 1.256 rest

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

### See also

Section 1.218 [note value], page 55.

## 1.257 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 1.186 [measure], page 46, Section 1.194 [meter], page 49.

## 1.258 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 1.253 [rallentando], page 65. Mostly abbreviated to *rit.* or *ritard.*

### See also

Section 1.253 [rallentando], page 65.

## 1.259 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.

## 1.260 scale

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

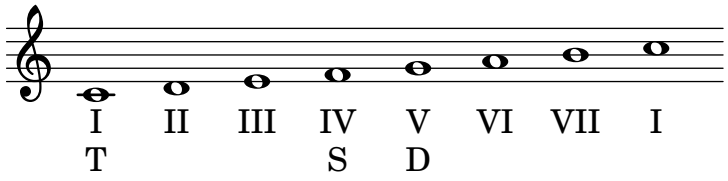
### See also

Section 1.82 [diatonic scale], page 21.

## 1.261 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.

## 1.262 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.

## 1.263 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 1.287 [staff], page 72.

### See also

No cross-references.

## 1.264 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 1.160 [interval], page 40, Section 1.266 [semitone], page 68, Section 1.337 [whole tone], page 83.

## 1.265 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).
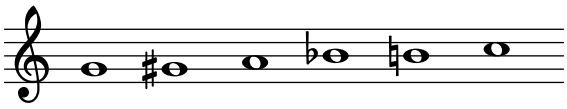
### See also

Section 1.192 [mensural notation], page 47, Section 1.218 [note value], page 55.

## 1.266 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 1.160 [interval], page 40, Section 1.52 [chromatic scale], page 13.

## 1.267 seventh

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

### See also

Section 1.160 [interval], page 40.

## 1.268 sextolet

### See also

Section 1.269 [sextuplet], page 69, Section 1.218 [note value], page 55.

## 1.269 sextuplet

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

### See also

Section 1.218 [note value], page 55.

## 1.270 shake

### See also

Section 1.322 [trill], page 80.

## 1.271 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.

## 1.272 simile

ES: simile, similar, I: simile, F: simile, de façon identique, 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?

## 1.273 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 1.194 [meter], page 49.

## 1.274 sixteenth note

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

### See also

Section 1.218 [note value], page 55.

## 1.275 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 1.218 [note value], page 55.

## 1.276 sixth

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

### See also

Section 1.160 [interval], page 40.

## 1.277 sixty-fourth note

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

### See also

Section 1.218 [note value], page 55.

## 1.278 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 1.218 [note value], page 55.

## 1.279 slash repeat

### See also

Section 1.229 [percent repeat], page 58.

## 1.280 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 1.171 [legato], page 43, e.g., with one stroke of the violin bow or with one breath in singing.

### See also

No cross-references.

## 1.281 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 1.260 [scale], page 66, Section 1.261 [scale degree], page 66.

## 1.282 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.

## 1.283 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 1.182 [major], page 45, Section 1.201 [minor], page 52, Section 1.254 [relative key], page 65, Section 1.282 [sonata], page 71, Section 1.299 [symphony], page 75, Section 1.316 [tonic], page 78.

## 1.284 song texts

### See also

Section 1.181 [lyrics], page 45.

## 1.285 soprano

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

The highest female voice.
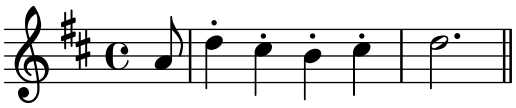
### See also

No cross-references.

## 1.286 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.
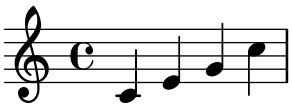


### See also

No cross-references.

## 1.287 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 1.230 [percussion], page 59, instruments may have fewer lines.



### See also

Section 1.302 [system], page 75.

## 1.288 staves
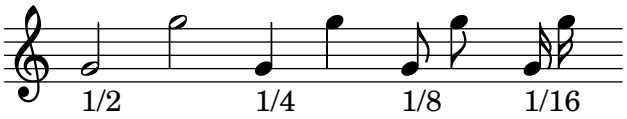
### See also

Section 1.287 [staff], page 72.

## 1.289 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 1.216 [note head], page 55, shorter than a whole note.




### See also

Section 1.34 [beam], page 9.

## 1.290 stringendo

ES: stringendo, acelerando, I: stringendo, F: stringendo, en accélérant, 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.

## 1.291 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.

## 1.292 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 1.186 [measure], page 46, Section 1.257 [rhythm], page 66.

## 1.293 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 1.261 [scale degree], page 66.

## 1.294 submediant

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

The sixth *scale degree*.

### See also

Section 1.139 [functional harmony], page 34, Section 1.261 [scale degree], page 66, Section 1.297 [superdominant], page 74.

## 1.295 subtonic

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

The seventh Section 1.261 [scale degree], page 66.

### See also

Section 1.139 [functional harmony], page 34, Section 1.261 [scale degree], page 66.

## 1.296 sul G

ES: sobre la cuerda de Sol, I: sul Sol, F: sur la corde de sol, 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.

## 1.297 superdominant

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

The sixth Section 1.261 [scale degree], page 66. Equivalent to the submediant, q.v.

### See also

Section 1.139 [functional harmony], page 34, Section 1.261 [scale degree], page 66, Section 1.294 [submediant], page 74.

## 1.298 supertonic

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

The second Section 1.261 [scale degree], page 66.

### See also

Section 1.139 [functional harmony], page 34, Section 1.261 [scale degree], page 66.

## 1.299 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.
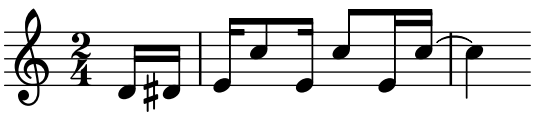
### See also

Section 1.282 [sonata], page 71.

## 1.300 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 1.194 [meter], page 49, Section 1.4 [accent], page 2, and Section 1.257 [rhythm], page 66. 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.

## 1.301 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 Pytagorisessa 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 1.246 [Pythagorean comma], page 63,

## 1.302 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 1.287 [staff], page 72.

## 1.303 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 1.185 [meantone temperament], page 46, Section 1.118 [equal temperament], page 29.

## 1.304 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 1.168 [largo], page 42, Section 1.244 [presto], page 61.

## 1.305 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.

## 1.306 tenth

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

### See also

Section 1.218 [note value], page 55.

## 1.307 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.

## 1.308 third

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

### See also

Section 1.160 [interval], page 40.

## 1.309 thirty-second note

- UK: demisemiquaver
- ES: fusa
- I: biscroma
- F: triple croche
- D: Zweiunddreissigstel, Zweiunddreissigstelnote
- NL: tweeendertigste (32e) noot
- DK: toogtredivtedelsnode
- S: trettiotvåondelsnot
- FI: kolmaskymmeneskahdesosanuotti

### See also

Section 1.218 [note value], page 55.

## 1.310 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: toogtredivtedelspause
- S: trettiotvåondelspaus
- FI: kolmaskymmeneskahdesosatauko

### See also

Section 1.218 [note value], page 55.

## 1.311 thorough bass
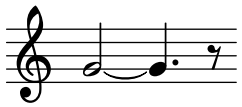
### See also

Section 1.127 [figured bass], page 32.

## 1.312 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 1.280 [slur], page 71, which connects two succesive notes of the same pitch, and which has the function of uniting them into a single sound (tone) equal to the combined durations.



## 1.313 time

### See also

Section 1.194 [meter], page 49.

## 1.314 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 1.192 [mensural notation], page 47, Section 1.193 [mensuration sign], page 48, Section 1.194 [meter], page 49.

## 1.315 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.

## 1.316 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 1.261 [scale degree], page 66.

## 1.317 transposing instrument

ES: instrumento transpositor, I: strumento trasportore, 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)
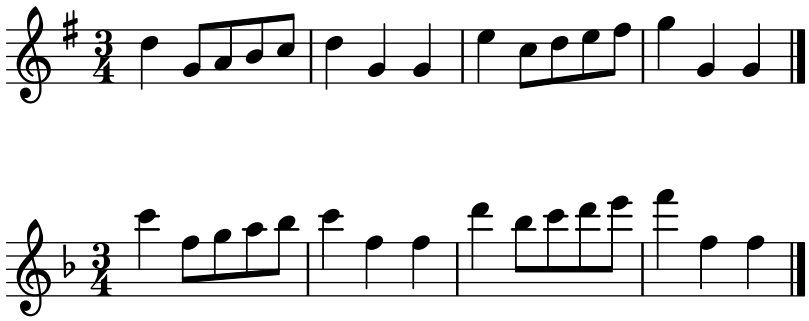
### See also

Section 1.65 [concert pitch], page 17.

## 1.318 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.

## 1.319 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: diskanttiavain.

### See also
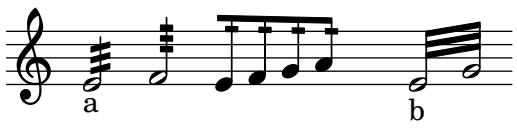
Section 1.141 [G clef], page 35.

## 1.320 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 1.160 [interval], page 40).




### See also

Section 1.291 [strings], page 73,

## 1.321 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.

## 1.322 trill

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

### See also

Section 1.224 [ornament], page 57.

## 1.323 triple meter

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

### See also

Section 1.194 [meter], page 49.

## 1.324 triplet

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

### See also

Section 1.218 [note value], page 55.

## 1.325 tritone

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

### See also

Section 1.160 [interval], page 40.

## 1.326 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 1.200 [middle C], page 52.

## 1.327 tuplet

ES: grupo de valoración especial, I: gruppi irregolari, F: N-olet, 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 1.324 [triplet], page 80, Section 1.218 [note value], page 55.

## 1.328 turn

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

### See also

Section 1.224 [ornament], page 57.

## 1.329 unison

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

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.

## 1.330 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,

## 1.331 voice

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

- Human voices:
  - Section 1.285 [soprano], page 72,
  - Section 1.199 [mezzo-soprano], page 52,
  - Section 1.68 [contralto], page 18,
  - Section 1.305 [tenor], page 76,
  - 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.

## 1.332 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.

## 1.333 vowel transition

ES: ?, I: ?, F: ?, D: Vokalwechsel, NL: ?, DK: ?, S: ?, FI: ?.

A gradual change of vowel or sustained consonant, usually indicated by an arrow between syllables (see Gould, pp. 452–453).

### See also

No cross-references.

## 1.334 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 1.186 [measure], page 46, Section 1.257 [rhythm], page 66.

## 1.335 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 1.218 [note value], page 55.

## 1.336 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 1.218 [note value], page 55.

## 1.337 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 1.160 [interval], page 40.

## 1.338 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** | neljäsosanuotti | neljäsosatauko | kahdeksasosa-nuotti | kahdeksasosa-tauko |

* 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-osa**nuotti**, 64-osa**tauko**

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** | kolmaskymmeneskahdesosa-nuotti | kolmaskymmeneskahdesosa-tauko | 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** | fireogtredsindstyven-dedelsnode | fireogtredsindstyven-dedelspause | - |
| **SE** | sextiofjärdedelsnot | sextiofjärdedelspaus | - |
| **FI** | kuudeskymmenesneljäsosa-nuotti | kuudeskymmenesneljäsosa-tauko | 64-osanuotti |

| Lang. | Note name | Rest name | Abbr. |
|---|---|---|---|
| **US** | one-hundred-twenty-eighth note | one-hundred-twenty-eighth rest | 128th note |
| **UK** | semihemidemisemiquaver | semihemidemisemiquaver rest | - |
| **ES** | garrapatea | silencio de garrapatea | - |
| **IT** | fusa | pausa di fusa | - |
| **FR** | quintuple croche | trente-deuxième de soupir | - |
| **DE** | Hundertachtundzwanzigstel-note | Hundertachtundzwanzigstel-pause | 128tel-Note |
| **NL** | honderdachtentwintigste noot | honderdachtentwintigste rust | 128e noot |
| **DK** | hundredeotteogtyvendedels-node | hundredeotteogtyvendedels-pause | - |
| **SE** | hundratjugoåttondelsnot | hundratjugoåttondelspaus | - |
| **FI** | sadaskahdeskymmenes-kahdeksasosanuotti | sadaskahdeskymmenes-kahdeksasosatauko | 128-osanuotti |

| Lang. | Note name | Rest name | Abbr. |
|---|---|---|---|
| **US** | two-hundred-fifty-sixth note | two-hundred-fifty-sixth rest | 256th note |
| **UK** | demisemihemidemisemiquaver | demisemihemidemisemiquaver rest | - |
| **ES** | semigarrapatea | silencio de semigarrapatea | - |
| **IT** | semifusa | pausa di semifusa | - |
| **FR** | sextuple croche | soixante-quatrième de soupir | - |
| **DE** | Zweihundert-sechsundfünfzigstelnote | Zweihundert-sechsundfünfzigstelpause | 256tel-Note |
| **NL** | tweehonderdzesenvijftigste noot | tweehonderdzesenvijftigste rust | 256e noot |
| **DK** | tohundredeseksog-halvtredsendedelsnode | tohundredeseksog-halvtredsendedelspause | - |
| **SE** | tvåhundrafemtiosjättedelsnot | tvåhundrafemtiosjättedelspaus | - |
| **FI** | kahdessadasviideskymmenes-kuudesosanuotti | kahdessadasviideskymmenes-kuudesosatauko | 256-osanuotti |

## See also

Section 1.192 [mensural notation], page 47,

# 3 Pitch names

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

This is a stub for `sikah`.

### 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.

# Appendix B GNU Free Documentation License

Version 1.3, 3 November 2008

Copyright © 2000, 2001, 2002, 2007, 2008 Free Software Foundation, Inc.
`https://fsf.org/`

Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

0. PREAMBLE

The purpose of this License is to make a manual, textbook, or other functional and useful document *free* in the sense of freedom: to assure everyone the effective freedom to copy and redistribute it, with or without modifying it, either commercially or noncommercially. Secondarily, this License preserves for the author and publisher a way to get credit for their work, while not being considered responsible for modifications made by others.

This License is a kind of "copyleft", which means that derivative works of the document must themselves be free in the same sense. It complements the GNU General Public License, which is a copyleft license designed for free software.

We have designed this License in order to use it for manuals for free software, because free software needs free documentation: a free program should come with manuals providing the same freedoms that the software does. But this License is not limited to software manuals; it can be used for any textual work, regardless of subject matter or whether it is published as a printed book. We recommend this License principally for works whose purpose is instruction or reference.

1. APPLICABILITY AND DEFINITIONS

This License applies to any manual or other work, in any medium, that contains a notice placed by the copyright holder saying it can be distributed under the terms of this License. Such a notice grants a world-wide, royalty-free license, unlimited in duration, to use that work under the conditions stated herein. The "Document", below, refers to any such manual or work. Any member of the public is a licensee, and is addressed as "you". You accept the license if you copy, modify or distribute the work in a way requiring permission under copyright law.

A "Modified Version" of the Document means any work containing the Document or a portion of it, either copied verbatim, or with modifications and/or translated into another language.

A "Secondary Section" is a named appendix or a front-matter section of the Document that deals exclusively with the relationship of the publishers or authors of the Document to the Document's overall subject (or to related matters) and contains nothing that could fall directly within that overall subject. (Thus, if the Document is in part a textbook of mathematics, a Secondary Section may not explain any mathematics.) The relationship could be a matter of historical connection with the subject or with related matters, or of legal, commercial, philosophical, ethical or political position regarding them.

The "Invariant Sections" are certain Secondary Sections whose titles are designated, as being those of Invariant Sections, in the notice that says that the Document is released under this License. If a section does not fit the above definition of Secondary then it is not allowed to be designated as Invariant. The Document may contain zero Invariant Sections. If the Document does not identify any Invariant Sections then there are none.

The "Cover Texts" are certain short passages of text that are listed, as Front-Cover Texts or Back-Cover Texts, in the notice that says that the Document is released under this License. A Front-Cover Text may be at most 5 words, and a Back-Cover Text may be at most 25 words.

A "Transparent" copy of the Document means a machine-readable copy, represented in a format whose specification is available to the general public, that is suitable for revising the document straightforwardly with generic text editors or (for images composed of pixels) generic paint programs or (for drawings) some widely available drawing editor, and that is suitable for input to text formatters or for automatic translation to a variety of formats suitable for input to text formatters. A copy made in an otherwise Transparent file format whose markup, or absence of markup, has been arranged to thwart or discourage subsequent modification by readers is not Transparent. An image format is not Transparent if used for any substantial amount of text. A copy that is not "Transparent" is called "Opaque".

Examples of suitable formats for Transparent copies include plain ASCII without markup, Texinfo input format, LaTeX input format, SGML or XML using a publicly available DTD, and standard-conforming simple HTML, PostScript or PDF designed for human modification. Examples of transparent image formats include PNG, XCF and JPG. Opaque formats include proprietary formats that can be read and edited only by proprietary word processors, SGML or XML for which the DTD and/or processing tools are not generally available, and the machine-generated HTML, PostScript or PDF produced by some word processors for output purposes only.

The "Title Page" means, for a printed book, the title page itself, plus such following pages as are needed to hold, legibly, the material this License requires to appear in the title page. For works in formats which do not have any title page as such, "Title Page" means the text near the most prominent appearance of the work's title, preceding the beginning of the body of the text.

The "publisher" means any person or entity that distributes copies of the Document to the public.

A section "Entitled XYZ" means a named subunit of the Document whose title either is precisely XYZ or contains XYZ in parentheses following text that translates XYZ in another language. (Here XYZ stands for a specific section name mentioned below, such as "Acknowledgements", "Dedications", "Endorsements", or "History".) To "Preserve the Title" of such a section when you modify the Document means that it remains a section "Entitled XYZ" according to this definition.

The Document may include Warranty Disclaimers next to the notice which states that this License applies to the Document. These Warranty Disclaimers are considered to be included by reference in this License, but only as regards disclaiming warranties: any other implication that these Warranty Disclaimers may have is void and has no effect on the meaning of this License.

2. VERBATIM COPYING

   You may copy and distribute the Document in any medium, either commercially or noncommercially, provided that this License, the copyright notices, and the license notice saying this License applies to the Document are reproduced in all copies, and that you add no other conditions whatsoever to those of this License. You may not use technical measures to obstruct or control the reading or further copying of the copies you make or distribute. However, you may accept compensation in exchange for copies. If you distribute a large enough number of copies you must also follow the conditions in section 3.

   You may also lend copies, under the same conditions stated above, and you may publicly display copies.

3. COPYING IN QUANTITY

   If you publish printed copies (or copies in media that commonly have printed covers) of the Document, numbering more than 100, and the Document's license notice requires Cover Texts, you must enclose the copies in covers that carry, clearly and legibly, all these Cover Texts: Front-Cover Texts on the front cover, and Back-Cover Texts on the back cover. Both

covers must also clearly and legibly identify you as the publisher of these copies. The front cover must present the full title with all words of the title equally prominent and visible. You may add other material on the covers in addition. Copying with changes limited to the covers, as long as they preserve the title of the Document and satisfy these conditions, can be treated as verbatim copying in other respects.

If the required texts for either cover are too voluminous to fit legibly, you should put the first ones listed (as many as fit reasonably) on the actual cover, and continue the rest onto adjacent pages.

If you publish or distribute Opaque copies of the Document numbering more than 100, you must either include a machine-readable Transparent copy along with each Opaque copy, or state in or with each Opaque copy a computer-network location from which the general network-using public has access to download using public-standard network protocols a complete Transparent copy of the Document, free of added material. If you use the latter option, you must take reasonably prudent steps, when you begin distribution of Opaque copies in quantity, to ensure that this Transparent copy will remain thus accessible at the stated location until at least one year after the last time you distribute an Opaque copy (directly or through your agents or retailers) of that edition to the public.

It is requested, but not required, that you contact the authors of the Document well before redistributing any large number of copies, to give them a chance to provide you with an updated version of the Document.

4. MODIFICATIONS

You may copy and distribute a Modified Version of the Document under the conditions of sections 2 and 3 above, provided that you release the Modified Version under precisely this License, with the Modified Version filling the role of the Document, thus licensing distribution and modification of the Modified Version to whoever possesses a copy of it. In addition, you must do these things in the Modified Version:

A. Use in the Title Page (and on the covers, if any) a title distinct from that of the Document, and from those of previous versions (which should, if there were any, be listed in the History section of the Document). You may use the same title as a previous version if the original publisher of that version gives permission.

B. List on the Title Page, as authors, one or more persons or entities responsible for authorship of the modifications in the Modified Version, together with at least five of the principal authors of the Document (all of its principal authors, if it has fewer than five), unless they release you from this requirement.

C. State on the Title page the name of the publisher of the Modified Version, as the publisher.

D. Preserve all the copyright notices of the Document.

E. Add an appropriate copyright notice for your modifications adjacent to the other copyright notices.

F. Include, immediately after the copyright notices, a license notice giving the public permission to use the Modified Version under the terms of this License, in the form shown in the Addendum below.

G. Preserve in that license notice the full lists of Invariant Sections and required Cover Texts given in the Document's license notice.

H. Include an unaltered copy of this License.

I. Preserve the section Entitled "History", Preserve its Title, and add to it an item stating at least the title, year, new authors, and publisher of the Modified Version as given on the Title Page. If there is no section Entitled "History" in the Document, create one stating the title, year, authors, and publisher of the Document as given on its

Title Page, then add an item describing the Modified Version as stated in the previous sentence.

J. Preserve the network location, if any, given in the Document for public access to a Transparent copy of the Document, and likewise the network locations given in the Document for previous versions it was based on. These may be placed in the "History" section. You may omit a network location for a work that was published at least four years before the Document itself, or if the original publisher of the version it refers to gives permission.

K. For any section Entitled "Acknowledgements" or "Dedications", Preserve the Title of the section, and preserve in the section all the substance and tone of each of the contributor acknowledgements and/or dedications given therein.

L. Preserve all the Invariant Sections of the Document, unaltered in their text and in their titles. Section numbers or the equivalent are not considered part of the section titles.

M. Delete any section Entitled "Endorsements". Such a section may not be included in the Modified Version.

N. Do not retitle any existing section to be Entitled "Endorsements" or to conflict in title with any Invariant Section.

O. Preserve any Warranty Disclaimers.

If the Modified Version includes new front-matter sections or appendices that qualify as Secondary Sections and contain no material copied from the Document, you may at your option designate some or all of these sections as invariant. To do this, add their titles to the list of Invariant Sections in the Modified Version's license notice. These titles must be distinct from any other section titles.

You may add a section Entitled "Endorsements", provided it contains nothing but endorsements of your Modified Version by various parties—for example, statements of peer review or that the text has been approved by an organization as the authoritative definition of a standard.

You may add a passage of up to five words as a Front-Cover Text, and a passage of up to 25 words as a Back-Cover Text, to the end of the list of Cover Texts in the Modified Version. Only one passage of Front-Cover Text and one of Back-Cover Text may be added by (or through arrangements made by) any one entity. If the Document already includes a cover text for the same cover, previously added by you or by arrangement made by the same entity you are acting on behalf of, you may not add another; but you may replace the old one, on explicit permission from the previous publisher that added the old one.

The author(s) and publisher(s) of the Document do not by this License give permission to use their names for publicity for or to assert or imply endorsement of any Modified Version.

5. COMBINING DOCUMENTS

You may combine the Document with other documents released under this License, under the terms defined in section 4 above for modified versions, provided that you include in the combination all of the Invariant Sections of all of the original documents, unmodified, and list them all as Invariant Sections of your combined work in its license notice, and that you preserve all their Warranty Disclaimers.

The combined work need only contain one copy of this License, and multiple identical Invariant Sections may be replaced with a single copy. If there are multiple Invariant Sections with the same name but different contents, make the title of each such section unique by adding at the end of it, in parentheses, the name of the original author or publisher of that section if known, or else a unique number. Make the same adjustment to the section titles in the list of Invariant Sections in the license notice of the combined work.

In the combination, you must combine any sections Entitled "History" in the various original documents, forming one section Entitled "History"; likewise combine any sections Entitled "Acknowledgements", and any sections Entitled "Dedications". You must delete all sections Entitled "Endorsements."

6. COLLECTIONS OF DOCUMENTS

   You may make a collection consisting of the Document and other documents released under this License, and replace the individual copies of this License in the various documents with a single copy that is included in the collection, provided that you follow the rules of this License for verbatim copying of each of the documents in all other respects.

   You may extract a single document from such a collection, and distribute it individually under this License, provided you insert a copy of this License into the extracted document, and follow this License in all other respects regarding verbatim copying of that document.

7. AGGREGATION WITH INDEPENDENT WORKS

   A compilation of the Document or its derivatives with other separate and independent documents or works, in or on a volume of a storage or distribution medium, is called an "aggregate" if the copyright resulting from the compilation is not used to limit the legal rights of the compilation's users beyond what the individual works permit. When the Document is included in an aggregate, this License does not apply to the other works in the aggregate which are not themselves derivative works of the Document.

   If the Cover Text requirement of section 3 is applicable to these copies of the Document, then if the Document is less than one half of the entire aggregate, the Document's Cover Texts may be placed on covers that bracket the Document within the aggregate, or the electronic equivalent of covers if the Document is in electronic form. Otherwise they must appear on printed covers that bracket the whole aggregate.

8. TRANSLATION

   Translation is considered a kind of modification, so you may distribute translations of the Document under the terms of section 4. Replacing Invariant Sections with translations requires special permission from their copyright holders, but you may include translations of some or all Invariant Sections in addition to the original versions of these Invariant Sections. You may include a translation of this License, and all the license notices in the Document, and any Warranty Disclaimers, provided that you also include the original English version of this License and the original versions of those notices and disclaimers. In case of a disagreement between the translation and the original version of this License or a notice or disclaimer, the original version will prevail.

   If a section in the Document is Entitled "Acknowledgements", "Dedications", or "History", the requirement (section 4) to Preserve its Title (section 1) will typically require changing the actual title.

9. TERMINATION

   You may not copy, modify, sublicense, or distribute the Document except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, or distribute it is void, and will automatically terminate your rights under this License.

   However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

   Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, receipt of a copy of some or all of the same material does not give you any rights to use it.

10. FUTURE REVISIONS OF THIS LICENSE

The Free Software Foundation may publish new, revised versions of the GNU Free Documentation License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns. See `https://www.gnu.org/copyleft/`.

Each version of the License is given a distinguishing version number. If the Document specifies that a particular numbered version of this License "or any later version" applies to it, you have the option of following the terms and conditions either of that specified version or of any later version that has been published (not as a draft) by the Free Software Foundation. If the Document does not specify a version number of this License, you may choose any version ever published (not as a draft) by the Free Software Foundation. If the Document specifies that a proxy can decide which future versions of this License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Document.

11. RELICENSING

"Massive Multiauthor Collaboration Site" (or "MMC Site") means any World Wide Web server that publishes copyrightable works and also provides prominent facilities for anybody to edit those works. A public wiki that anybody can edit is an example of such a server. A "Massive Multiauthor Collaboration" (or "MMC") contained in the site means any set of copyrightable works thus published on the MMC site.

"CC-BY-SA" means the Creative Commons Attribution-Share Alike 3.0 license published by Creative Commons Corporation, a not-for-profit corporation with a principal place of business in San Francisco, California, as well as future copyleft versions of that license published by that same organization.

"Incorporate" means to publish or republish a Document, in whole or in part, as part of another Document.

An MMC is "eligible for relicensing" if it is licensed under this License, and if all works that were first published under this License somewhere other than this MMC, and subsequently incorporated in whole or in part into the MMC, (1) had no cover texts or invariant sections, and (2) were thus incorporated prior to November 1, 2008.

The operator of an MMC Site may republish an MMC contained in the site under CC-BY-SA on the same site at any time before August 1, 2009, provided the MMC is eligible for relicensing.

## ADDENDUM: How to use this License for your documents

To use this License in a document you have written, include a copy of the License in the document and put the following copyright and license notices just after the title page:

```
Copyright (C)  year  your name.
Permission is granted to copy, distribute and/or modify this document
under the terms of the GNU Free Documentation License, Version 1.3
or any later version published by the Free Software Foundation;
with no Invariant Sections, no Front-Cover Texts, and no Back-Cover
Texts.  A copy of the license is included in the section entitled ``GNU
Free Documentation License''.
```

If you have Invariant Sections, Front-Cover Texts and Back-Cover Texts, replace the "with. . . Texts." line with this:

```
with the Invariant Sections being list their titles, with
the Front-Cover Texts being list, and with the Back-Cover Texts
being list.
```

If you have Invariant Sections without Cover Texts, or some other combination of the three, merge those two alternatives to suit the situation.

If your document contains nontrivial examples of program code, we recommend releasing these examples in parallel under your choice of free software license, such as the GNU General Public License, to permit their use in free software.