Compendium

of Voice-Leading Patterns from the 17th and 18th Centuries to Play, Sing, and Transpose at the Keyboard

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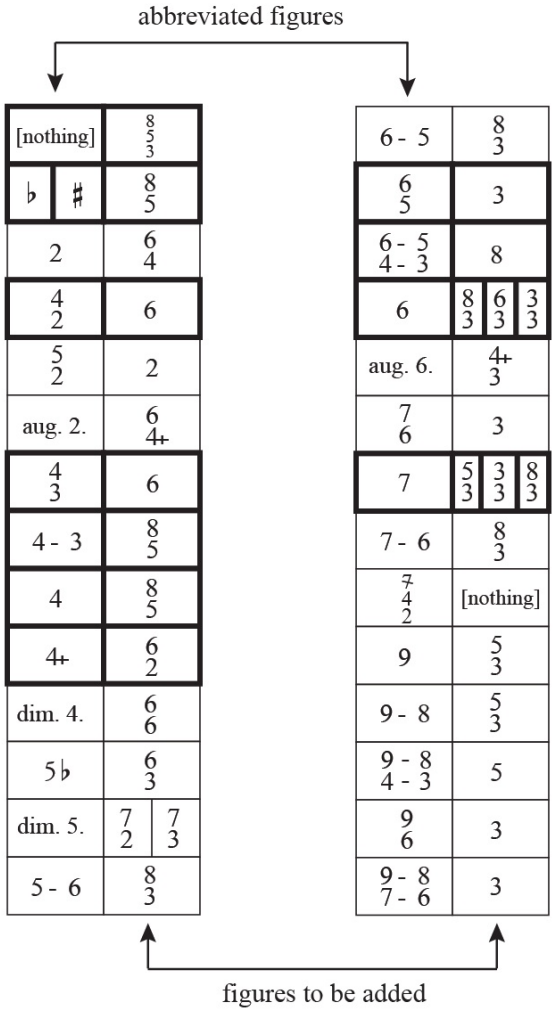
Thoroughbass Abbreviations and the Figures to Add

The most common figures are in bold boxes.



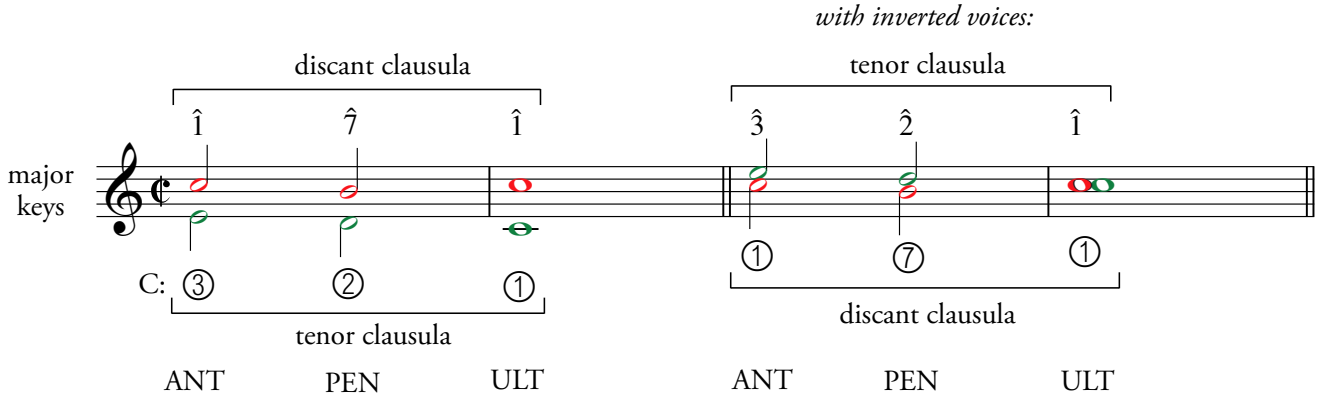
Graphic based on:
David Kellner, *Treulicher Unterricht im General-Bass* (1732, 28)

What figures to play in four-, three-, and two-voice textures

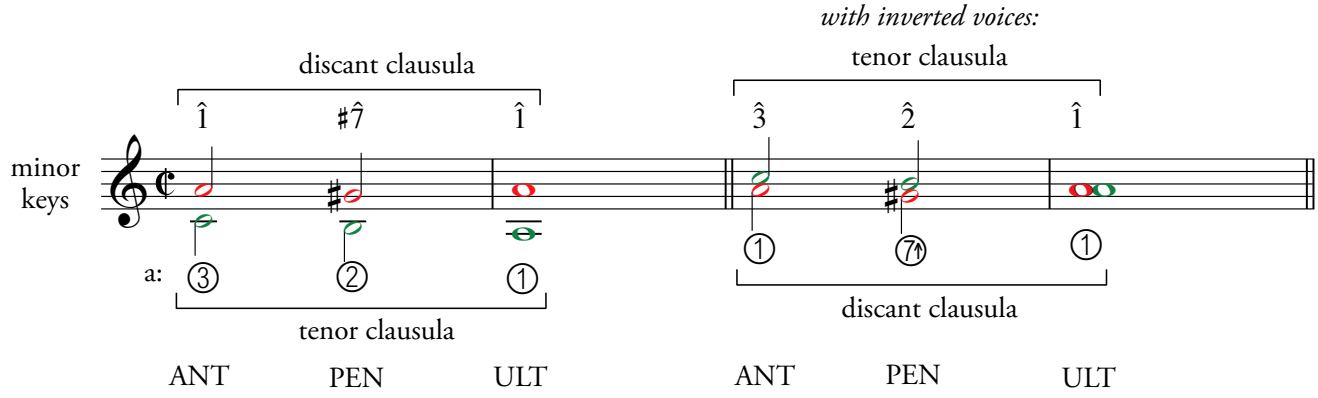
4-voice Figuring	**3-voice Figuring**	**2-voice Figuring**
8/5/3	5/3 or 8/3	3
8/6/3 or 6/6/3 or 6/3/3	6/3	6
8/6/4	6/4	none
7/5/3 or 8/7/3	7/3	7
6/5/3	6/5	none
6/4/3	none	none
6/4/2	4/2	2
8/5/4	5/4	none
9/5/4	9/4	none
9/7/3	9/7	none

Simple Cadences in Two Voices

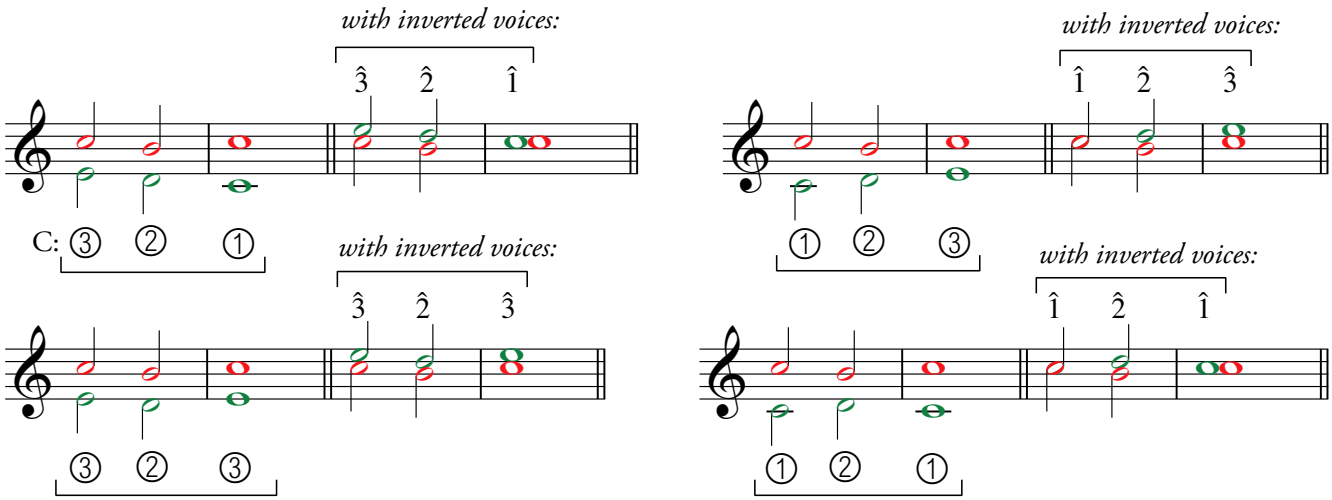
Bass scale degrees are indicated with ①, ②, etc. Upper voices are indicated with $\hat{1}$, $\hat{2}$, etc.
"Simple" means "only consonances." Consonant intervals are unison, 3, perfect 5, 6, and 8.
The unison, perfect 5, and 8 are perfect consonances; 3 and 6 are imperfect consonances.
A simple cadence in two voices requires the tenor and discant clausulae.
Clausulae are stereotypical melodic segments used to make various kinds of cadences.
The tenor clausula (TC) uses the degrees ③ ② ①, and is always colored green here.
The discant clausula (DC) uses the degrees ① ⑦ ①, and is always colored red here.
Clausulae maintain their names regardless of which voice they are placed in.
For example, the discant clausula could be placed in the top, middle, or lowest voice.
Traditionally the three pitches in clausulae are named Ultima (ULT), Penultima (PEN), and Antepenultima (ANT), meaning "last," "2nd-to-last," and "3rd-to-last," respectively.



In minor-key cadences, the seventh degree must be chromatically raised to make a leading tone: ⑦↑.



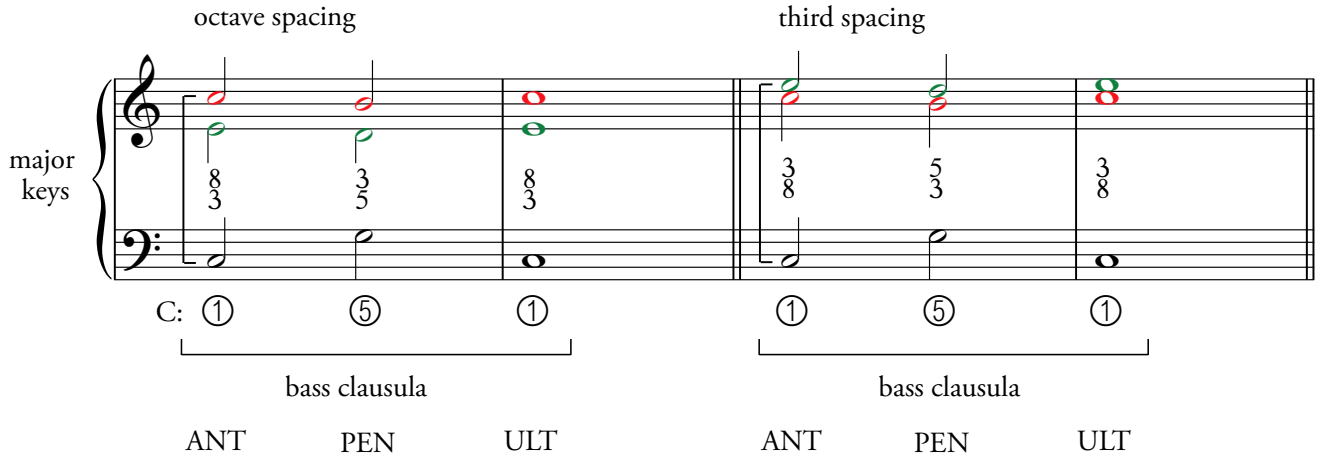
In practice, the tenor clausula may also begin on ① or end on ③, but always has ② at PEN.
Below are all eight possible simple cadences in two voices. The discant clausula is always the same.



Simple Cadences in Three Voices

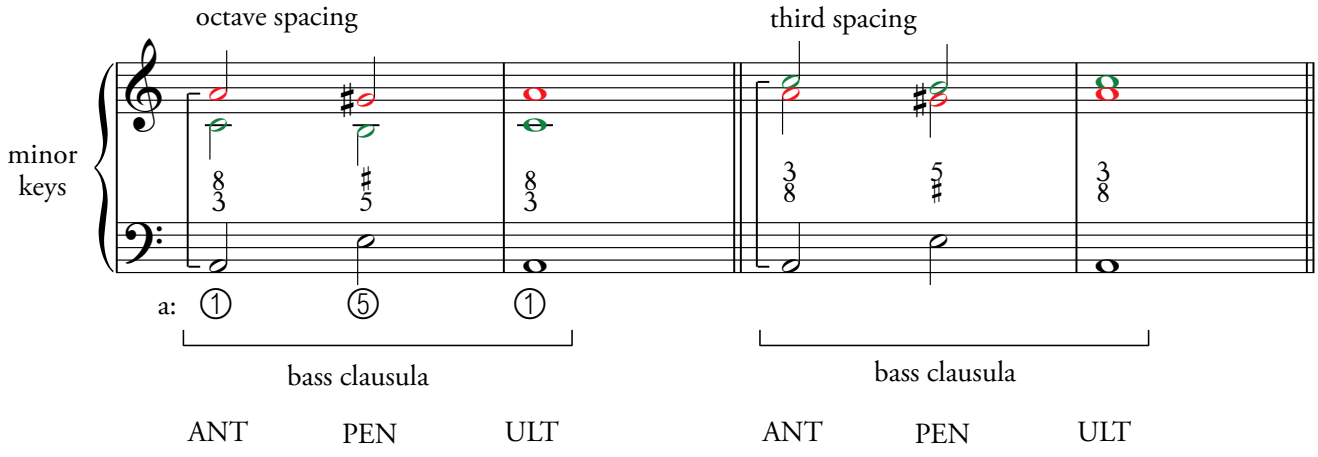
A simple cadence in three voices adds the bass clausula (① ⑤ ①) to the TC/DC pair.
Unlike the other clausulae, the bass clausula may only appear in the bass voice.
All four versions of the tenor clausulae are possible (see bottom of page three).
Thoroughbass figures are included between the staves.
Thoroughbass figures indicate the intervals of the upper parts as measured from the bass.
The ordering of the figures does not always correspond to the ordering of the upper voices.
A "spacing" or "position" indicates the starting interval between the outer voices.

with inverted upper voices:



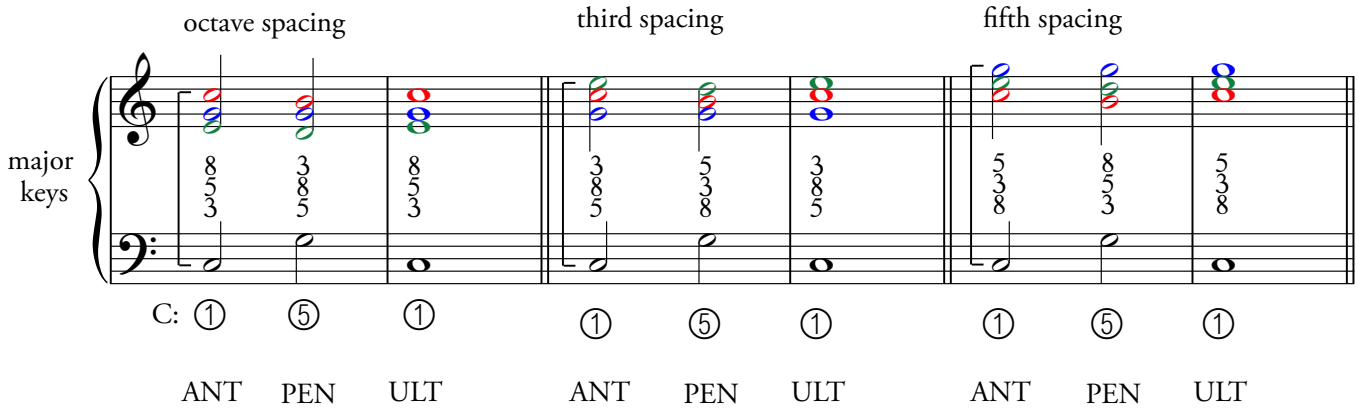
In minor-key cadences, the seventh degree must be chromatically raised to make a leading tone.
Accidentals in thoroughbass refer to a third above the bass (i.e. here G becomes G♯).

with inverted upper voices:

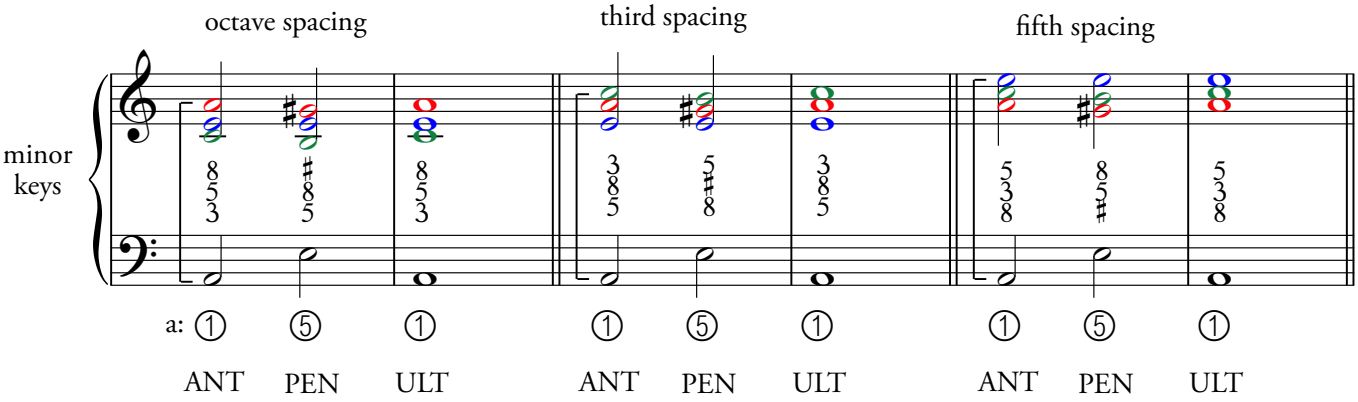


Simple Cadences in Four Voices

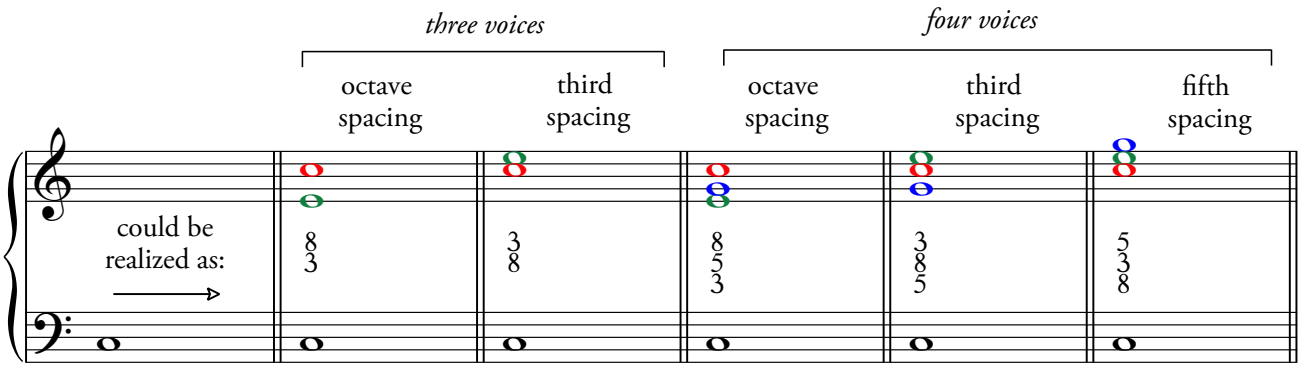
A simple cadence in four voices adds the alto clausula (⑤ ⑤ ⑤), to the three-part cadence.
As before, the upper voices can be inverted to create the different spacings based on the starting interval.
The parts in a four-voice texture are named (from top down): soprano (or discant), alto, tenor, and bass.
These names are used even when the composition is for one or more instruments (not singers).
In practice, composers usually preferred not to end a piece with the fifth in the top voice.



In minor-key cadences, the seventh degree must be chromatically raised to make a leading tone.
Accidentals in thoroughbass refer to a third above the bass (i.e. here G becomes G♯).

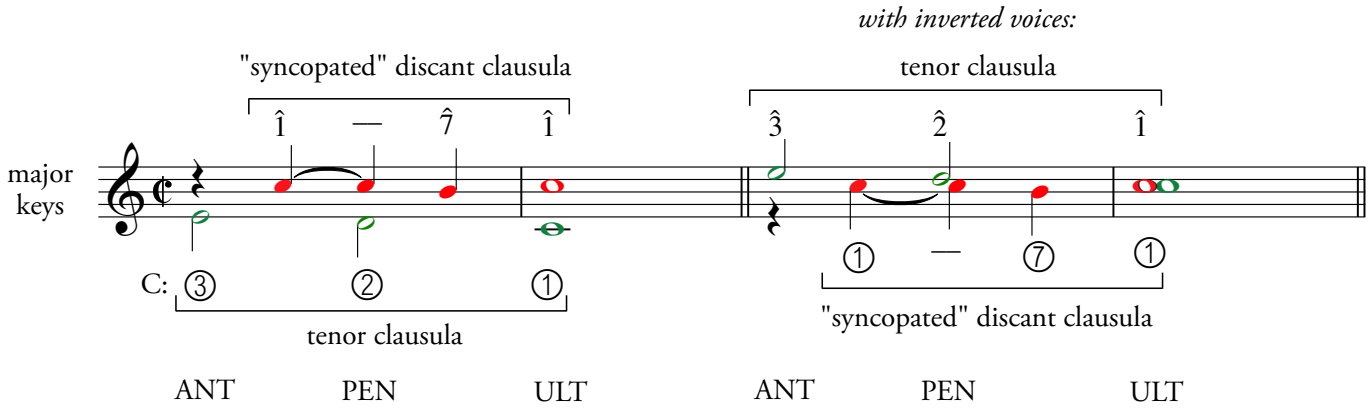


In practice, baroque composers saved time in two ways: (1) rather than indicate the order of the upper voices via the figures (as above), composer would simply write the figures from highest to lowest and let the player "realize" the spacing as desired; (2) composers would abbreviate figures. Learn the abbreviations by using the tables on page two. For instance, if 8/5/3 were written, the player could realize this in the octave, third, or fifth spacing. But the 5/3 chord was so common that if nothing was written, the player assumed a 5/3 chord and realized the figure in as many or as few voices as required by the situation at hand.

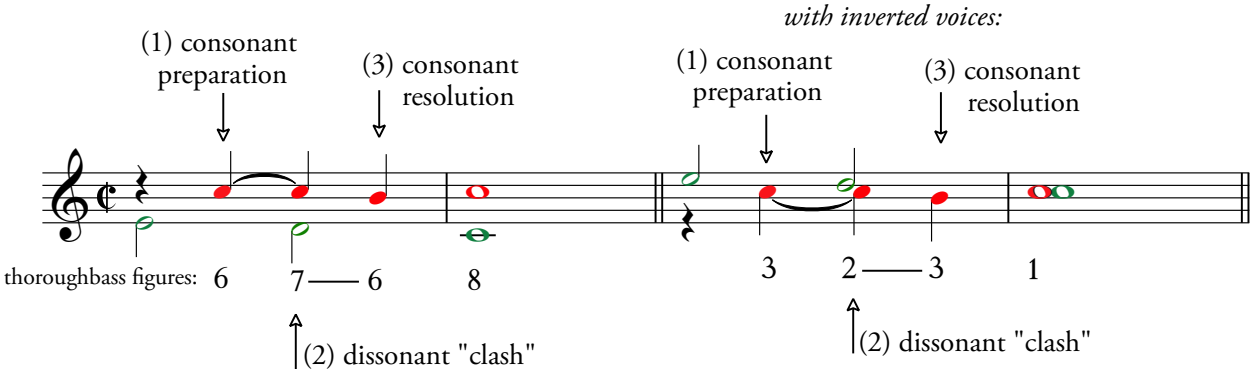


Compound Cadences in Two Voices

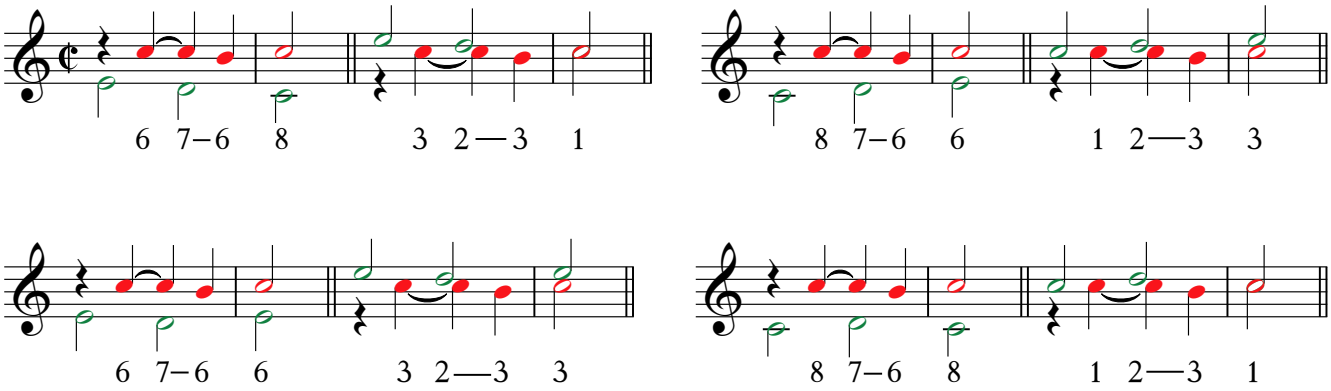
"Compound" means that there is a dissonance in the form of a syncopatio (i.e. suspension). Whereas the modern term "suspension" implies the delay of a *chord tone*, the historical term "syncopatio" implies the syncopated delay of an *interval*. In the baroque era, the two-voice cadence occurred most often with a syncopatio dissonance. The syncopatio dissonance arises by "delaying" the arrival of ⑦ in the discant clausula. This delay splits the PEN position into two parts, which is where the name "compound" comes from.



A syncopatio has 3 parts: (1) consonant preparation, (2) dissonant "clash," and (3) consonant resolution. After Giovanni Artusi (c.1540-1613), the tied ("delayed") voice is the *patient*, the moving voice the *agent*. In a cadence, the discant clausula is always the patient, while the tenor clausula is always the agent. Memory aid: the *patient* is *passive* (tied); the *agent* is *active* (it moves to make the dissonant "clash").



Here are the same eight two-voice cadences as on page three, but with syncopatio dissonances. Sometimes a dash between two thoroughbass figures indicates the resolution of a syncopatio.

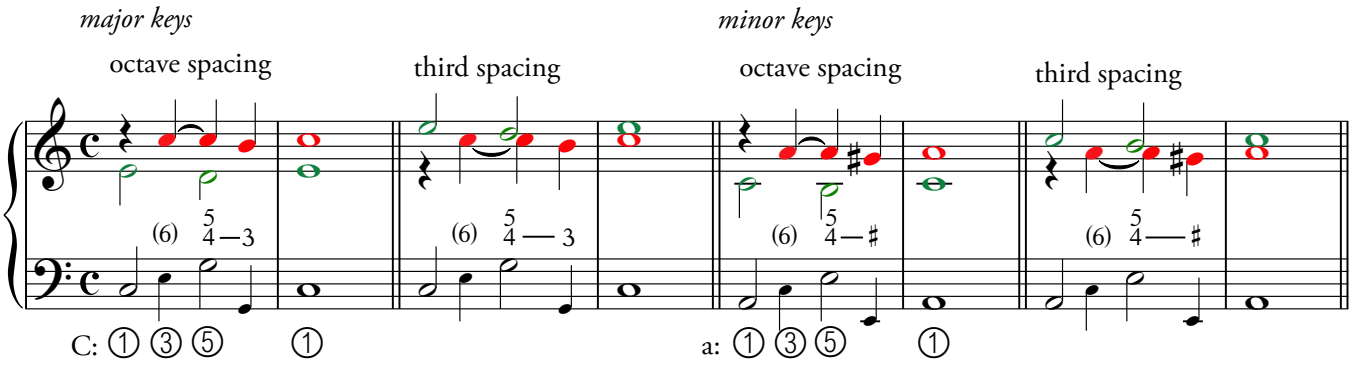


Compound Cadences in Three Voices

Compound cadences in three voices come in three variants: 5/4, 6/5, and 6/4.
As in the simple cadence in three voices, one adds the bass clausula (① ⑤ ①) to the DC/TC pair.
All four versions of the tenor clausula are possible. The small notes in the bass are optional.
The discant clausula is shown here in its syncopated form.
Memory aid: in a compound cadence, one voice always has the "delayed" DC: ① ⑦ ① .

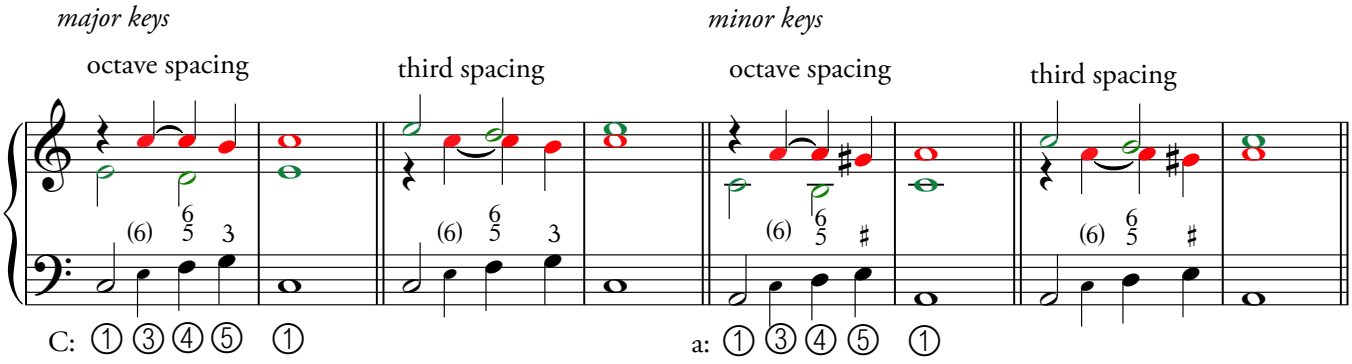
Compound cadence with 5/4

This compound cadence has a 5/4-chord at PEN. The dissonant 4 in a 5/4 chord must always be prepared.



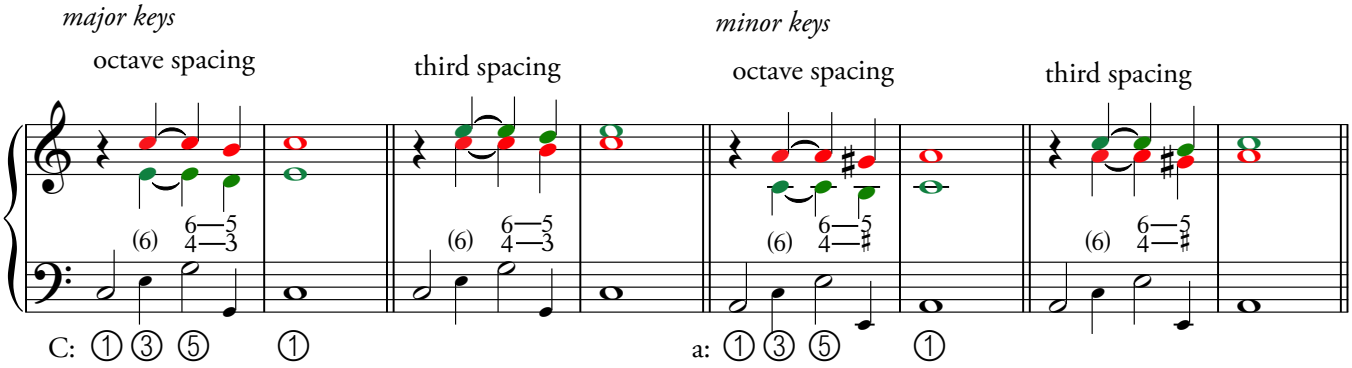
Compound cadence with 6/5

This compound cadence has a 6/5 chord at PEN. Only the bass is different from the 5/4 version. This bassline is considered a variant on the bass clausula, since it still ends with ⑤ ① . The 5 in a 6/5 chord acts like a dissonance, even though it is a consonant perfect 5. Thus, if the 5 can be prepared (tied by common tone), it should be. Ironically the dissonant diminished 5 may enter unprepared in a 6/5 chord, though.



Compound cadence with 6/4

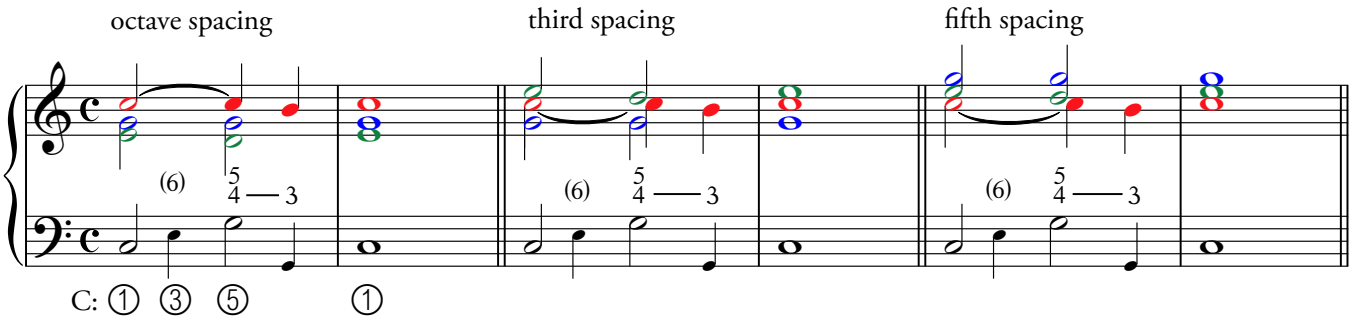
The compound cadence with 6/4 "syncopates" the TC, resulting in a double syncopatio with the DC.
Though the 4 is a dissonance, it may enter unprepared in a 6/4 chord (see page ten).



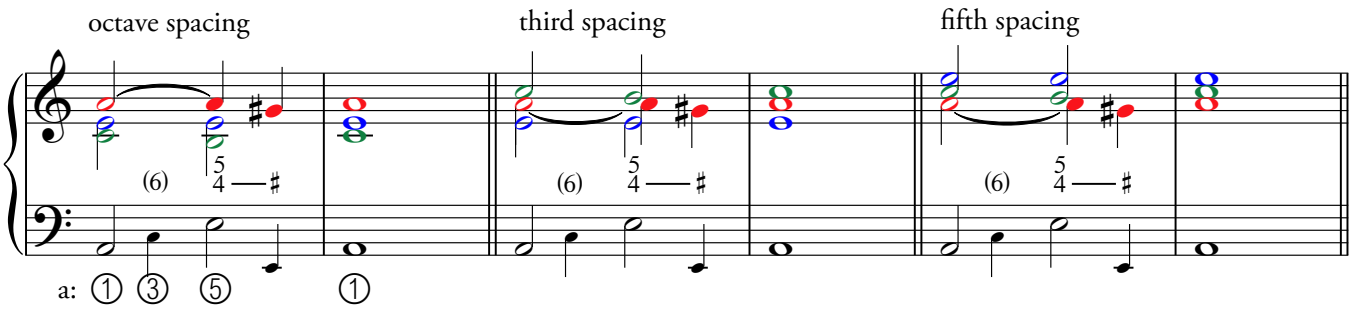
Compound Cadences with 5/4 in Four Voices

This compound cadence adds the alto clausula to the three-part compound cadence with 5/4. You may also syncopate the entry of the red discant clausula. Small bass notes are optional. As noted already, the 4 must be prepared in a 5/4 chord, but not in a 6/4 chord.

major keys



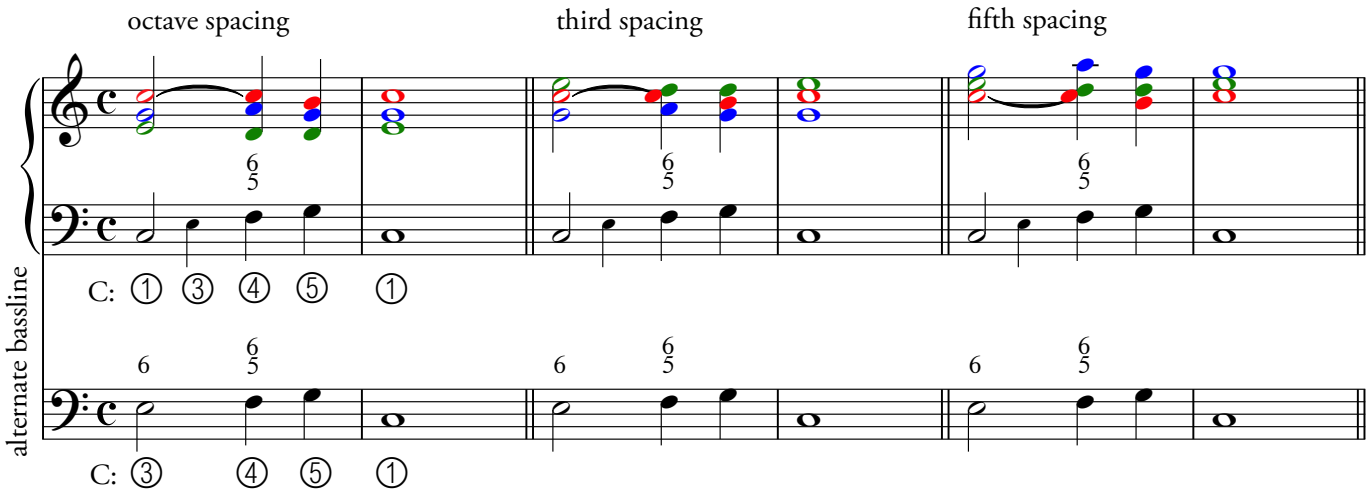
minor keys



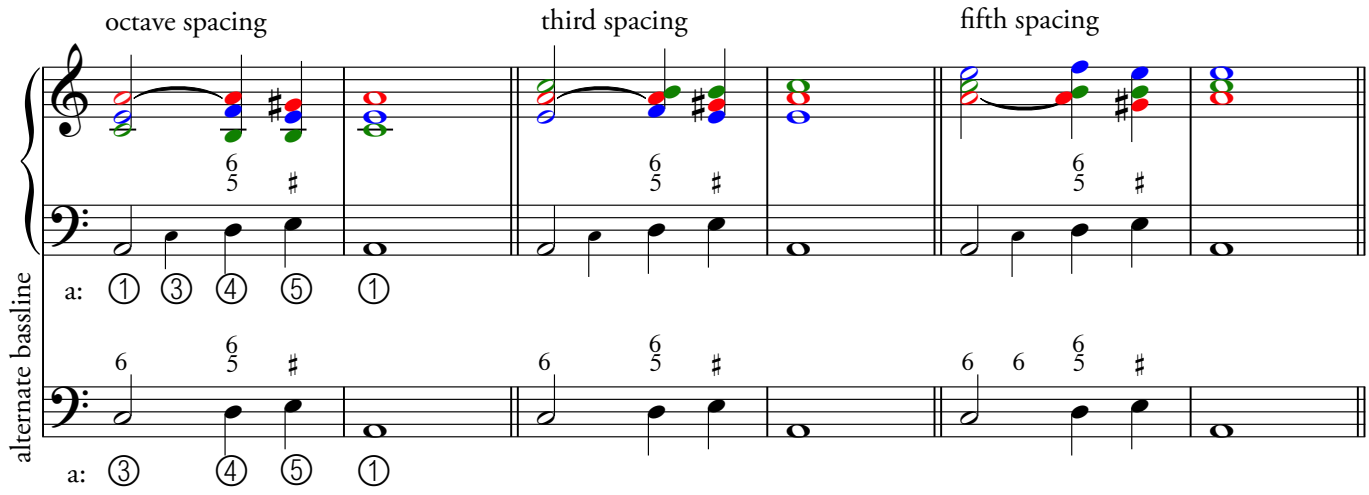
Compound Cadences with 6/5 in Four Voices

This compound cadence adds the blue voice to the three-part compound cadence with 6/5.
This is considered a variant on the alto clausula because it still ends with ⑤ ⑤.
In reality, the alto and bass clausulae are flexible filler voices to the DC/TC pair.
You may also syncopate the entry of the red discant clausula. Small bass notes are optional.
As noted already, the 5 in a 6/5 chord should be prepared, if possible. (The perfect 5 must be prepared, but the diminished 5 may enter unprepared in a 6/5 chord.)

major keys



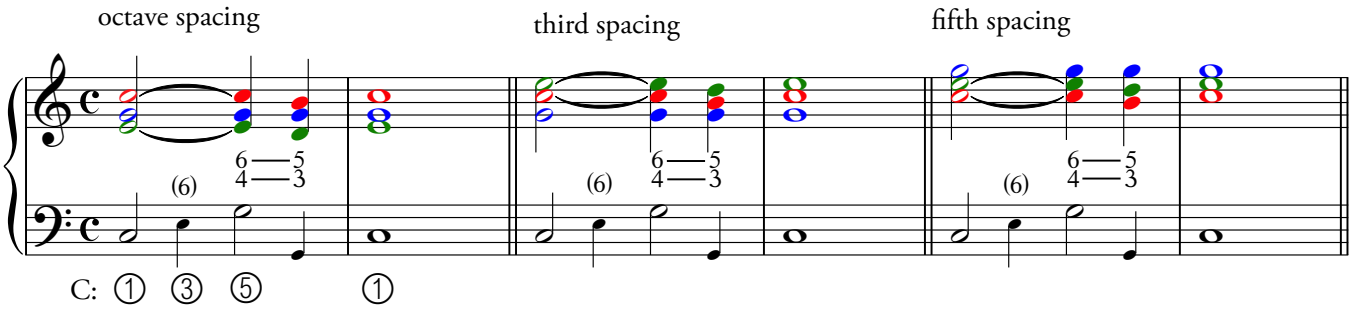
minor keys



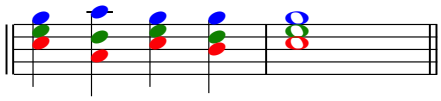
Compound Cadences with 6/4 in Four Voices

This compound cadence adds the alto clausula to the three-part compound cadence with 6/4.
You may also syncopate the entry of the DC and TC, as on page seven. Small bass notes are optional.

major keys

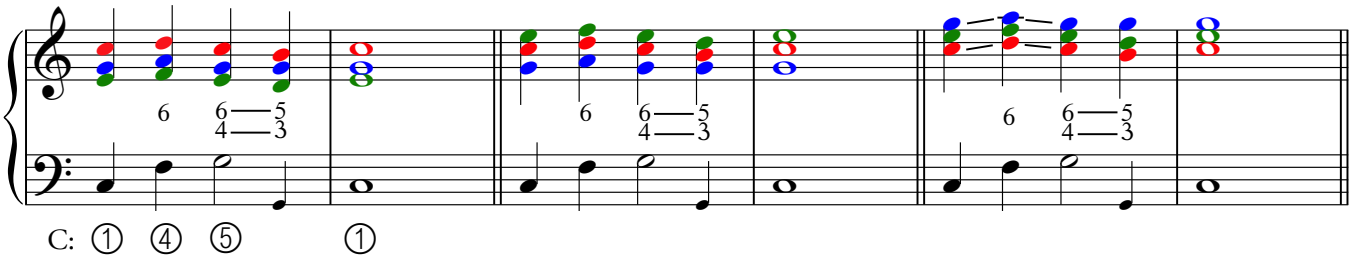


parallel fifths can be avoided thus:

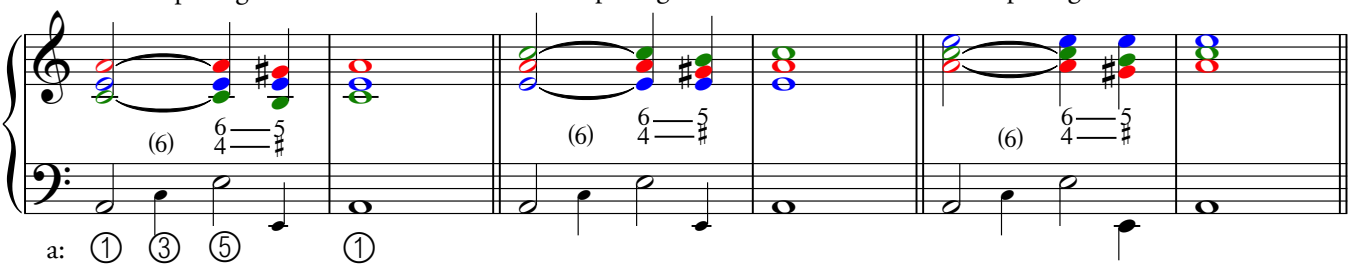


Though the 4 is a dissonance, it may enter unprepared in a 6/4 chord, but not in a 5/4 chord.

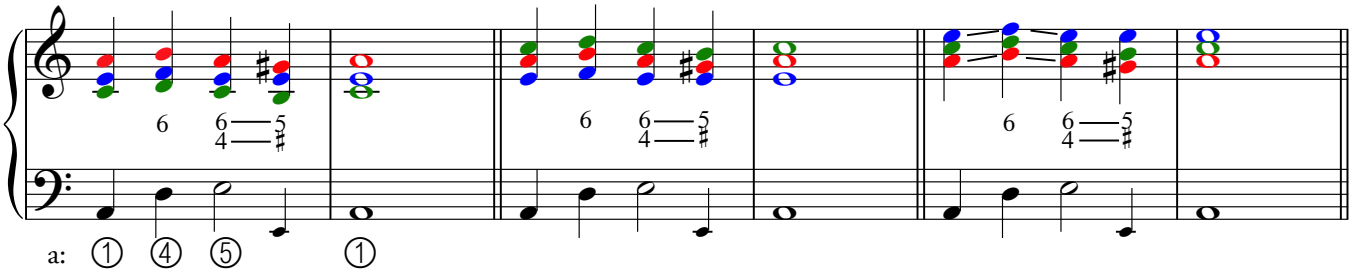
parallel fourths invert to parallel fifths!



minor keys

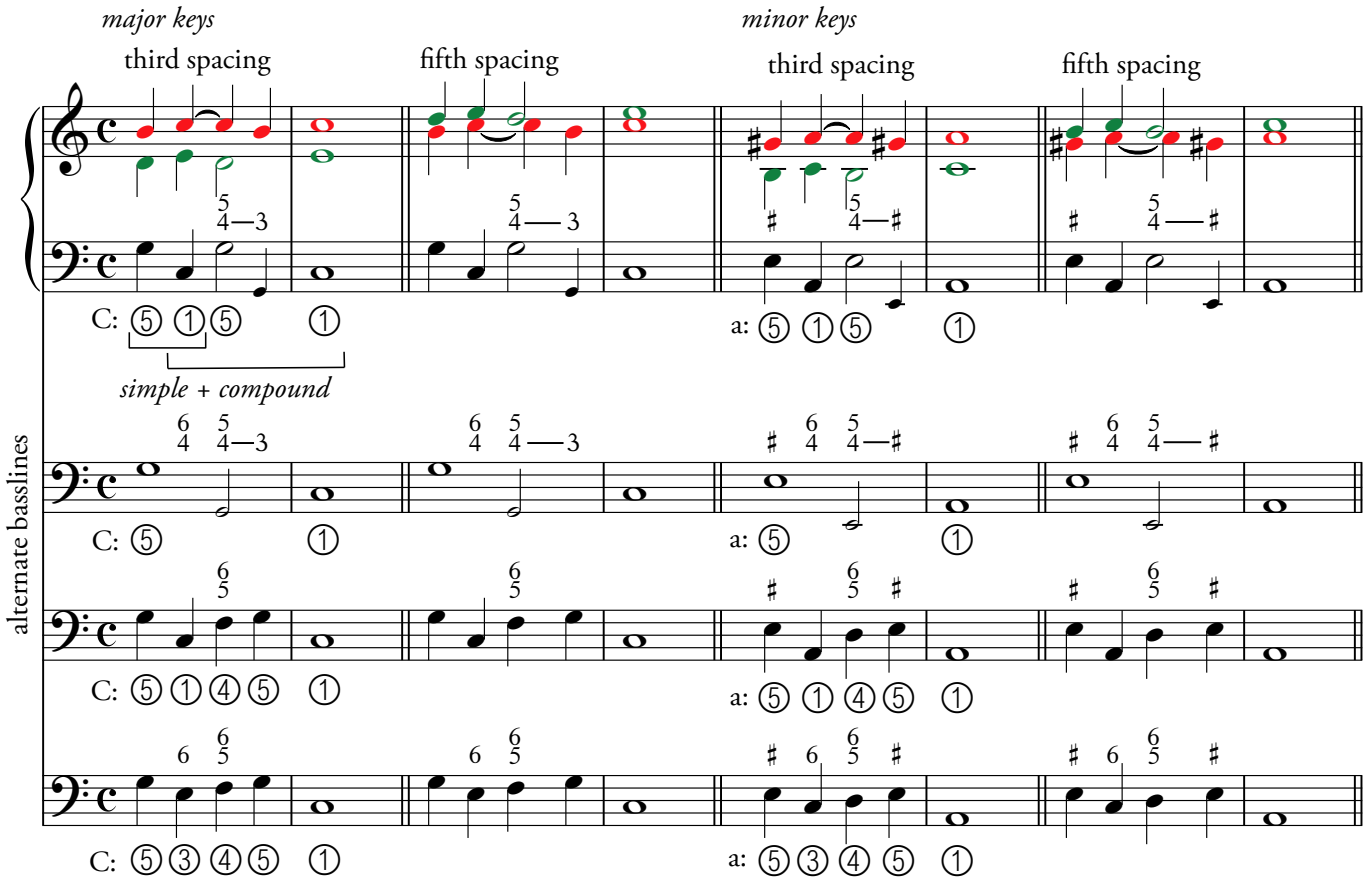


Perfect 5ths may move to dim. 5ths. But dim. 5ths are a dissonance and need to resolve to a third. Thus, dim. 5ths do not usually progress to perfect 5ths, but this is nevertheless allowable if (1) it is not in the outer voices and (2) there are three or more voices.

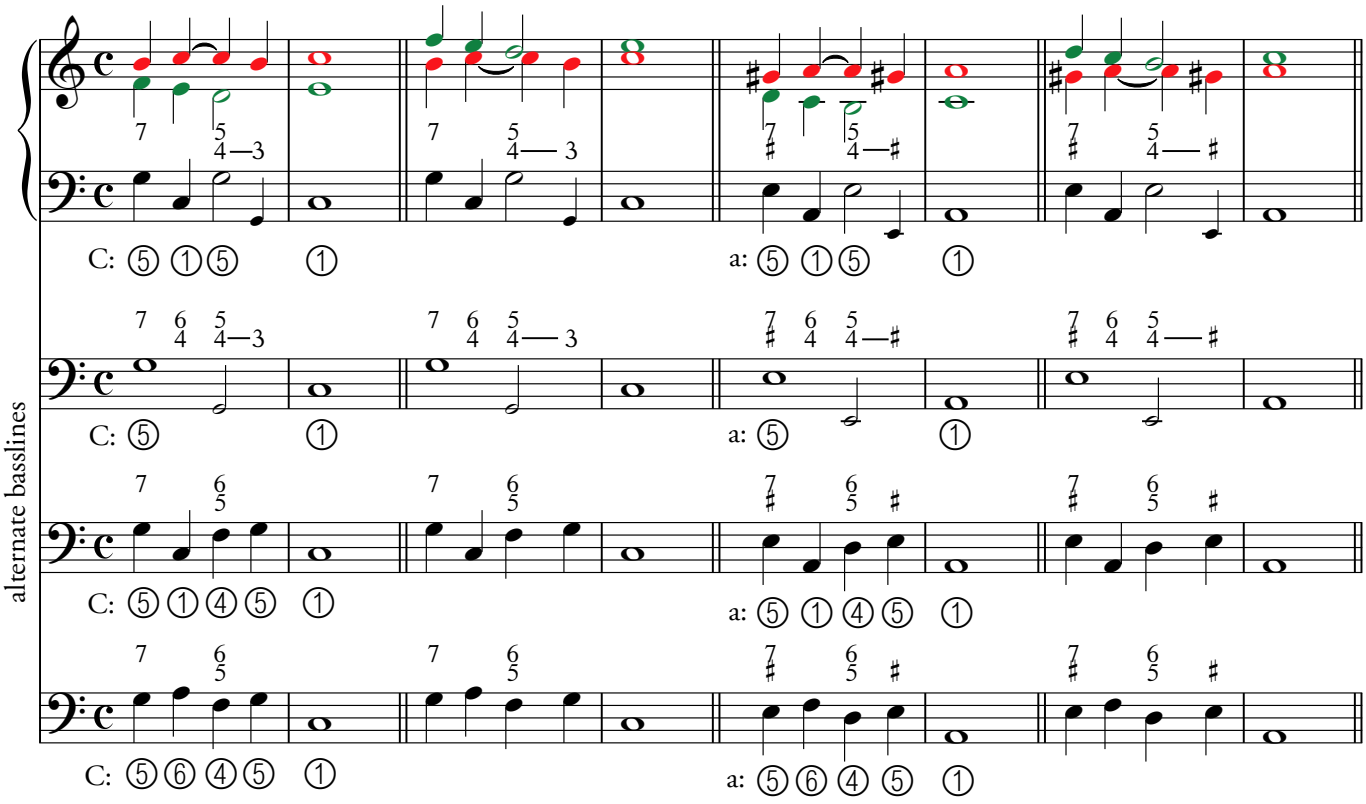


Double Cadences in Three Voices

A double cadence combines the simple and compound cadences, as shown in the first example.
There are two main types of double cadences: with 5/4 and with 6/5 (depending on the bassline).
Memory aid: one voice always has the "syncopated" DC preceded by an extra ⑦: ⑦ ① ⑦ ①.

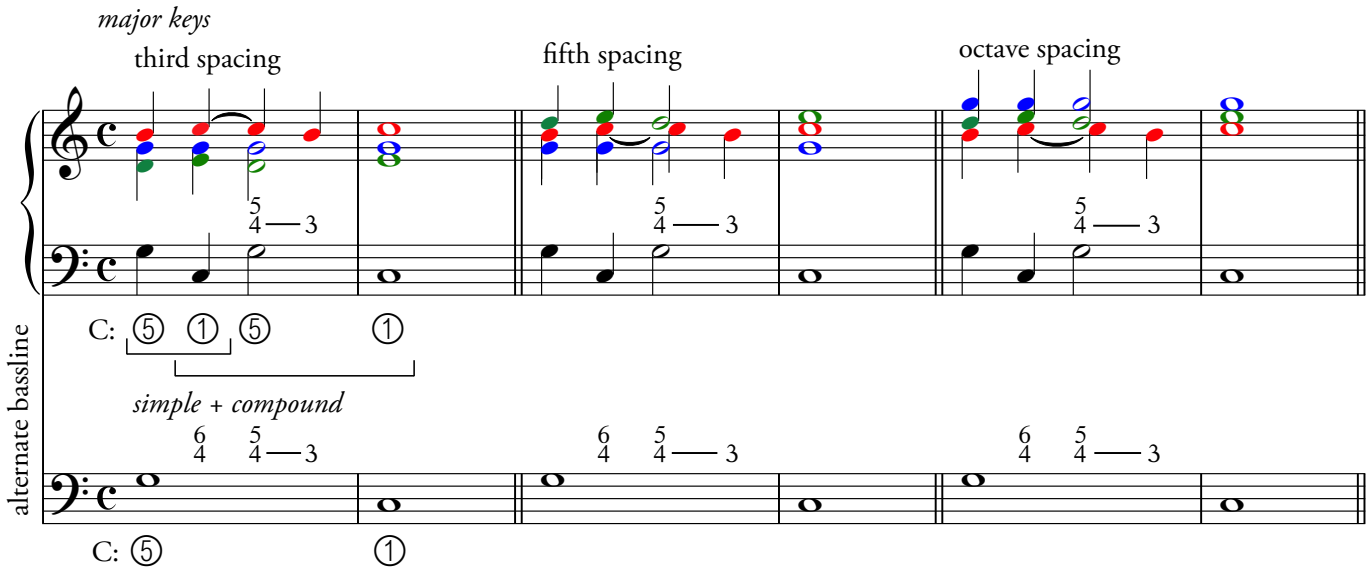


Here the first pitch of the TC is changed, making a 7 chord. The final bassline below is also slightly different.

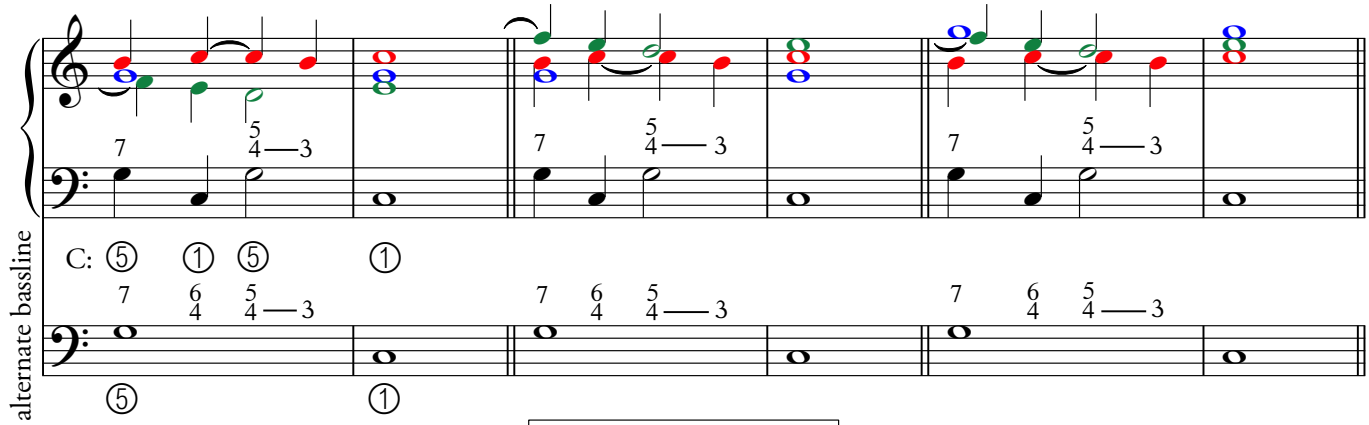


Double Cadences in Four Voices

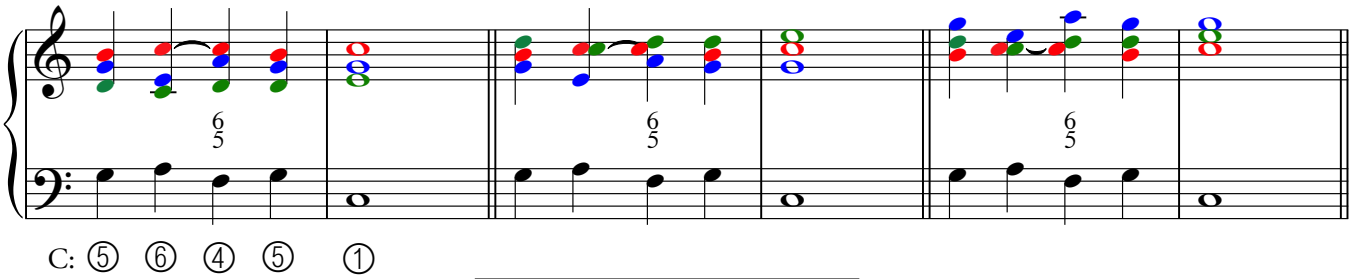
This version merely adds the flexible alto clausula to the three-voice double cadence.
To save space, only major-key versions are shown here. Don't forget to use ⑦↑ in minor.



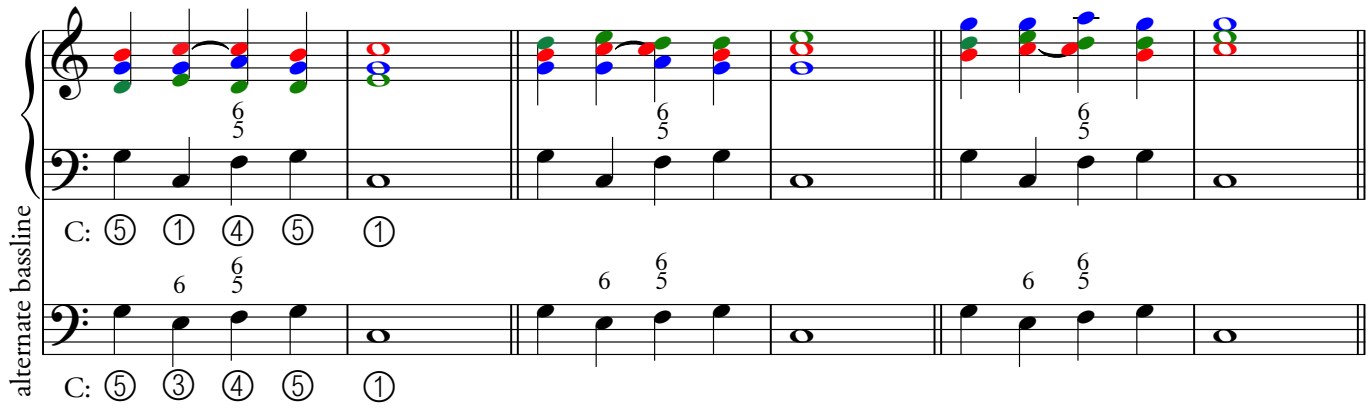
The same as above, but starting with a 7 instead of 5/3.



Variant with a 6/5-chord.



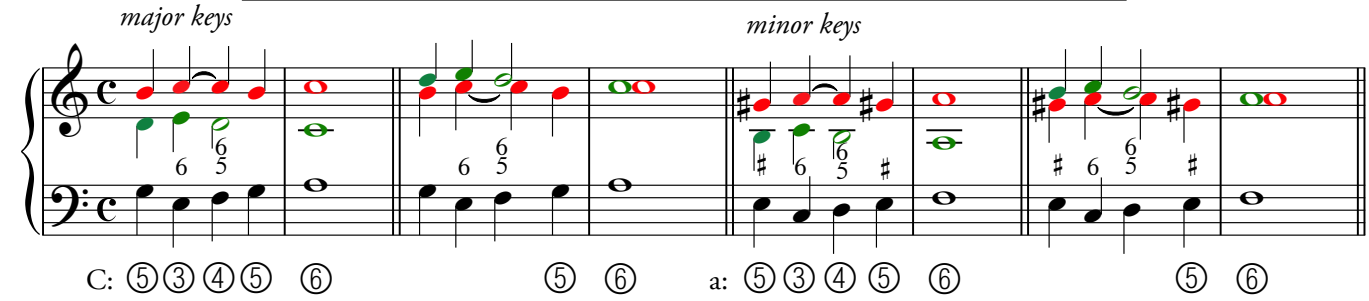
Mores variants with 6/5-chords.



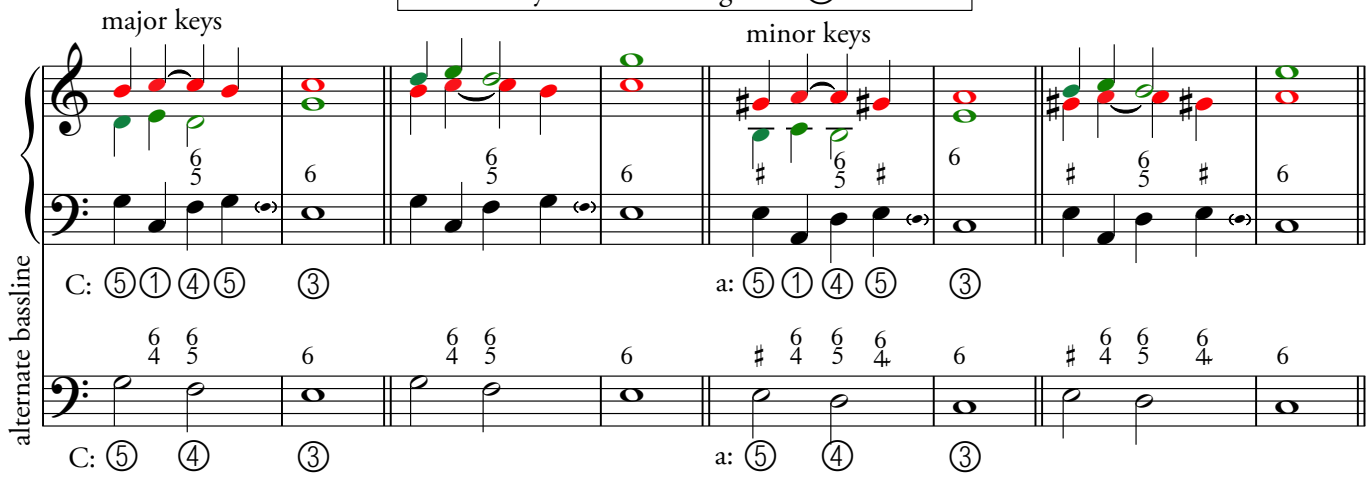
Evaded Cadences in Three Voices

A cadence is "evaded" if the impression is given of ending with ⑤ ① in the bass, but then something else happens. Here are three common evasive strategies (with a fourth shown on the next page).

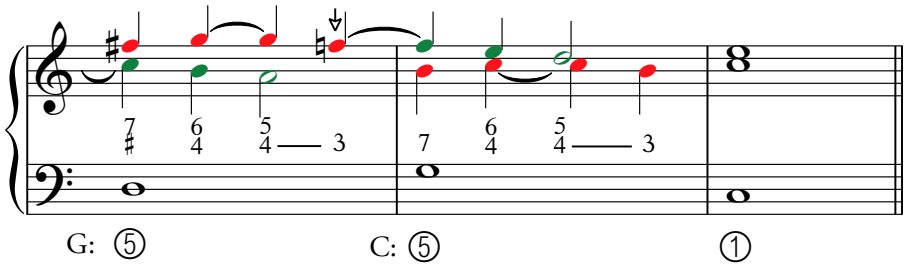
Form 1: any cadence ending with ⑥ in the bass (i.e. a "deceptive" cadence)



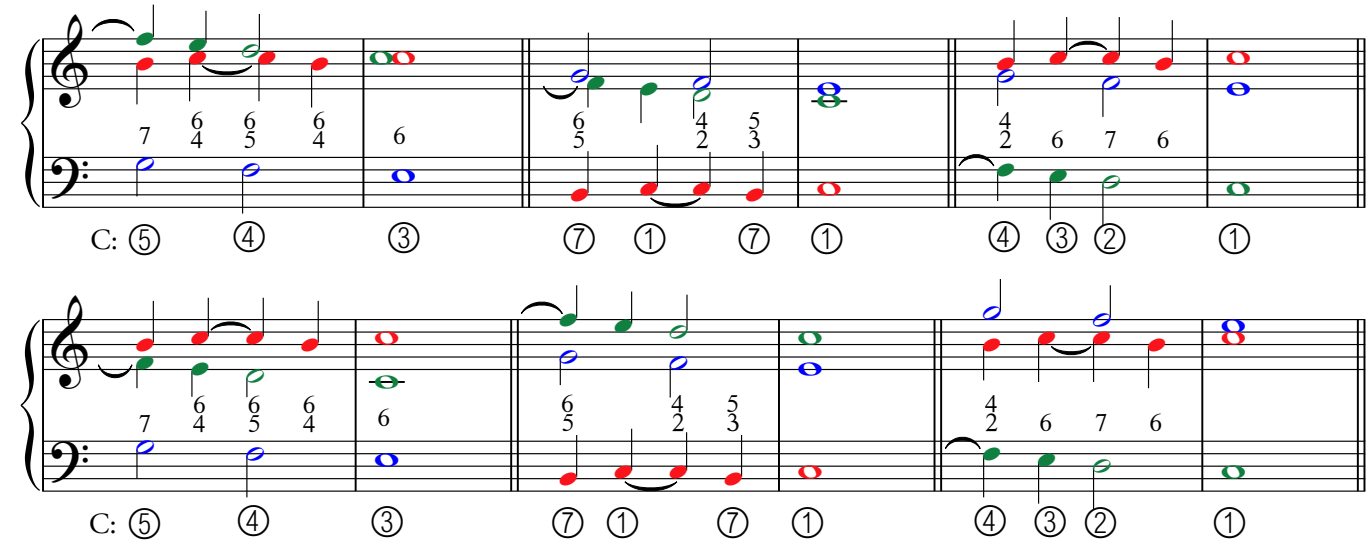
Form 2: any cadence ending with ③ in the bass



Form 3: DC resolves to ♮$\hat{7}$ (actually $\hat{4}$ in new key), modulating down a fifth (see arrow): *motivo di cadenza*.



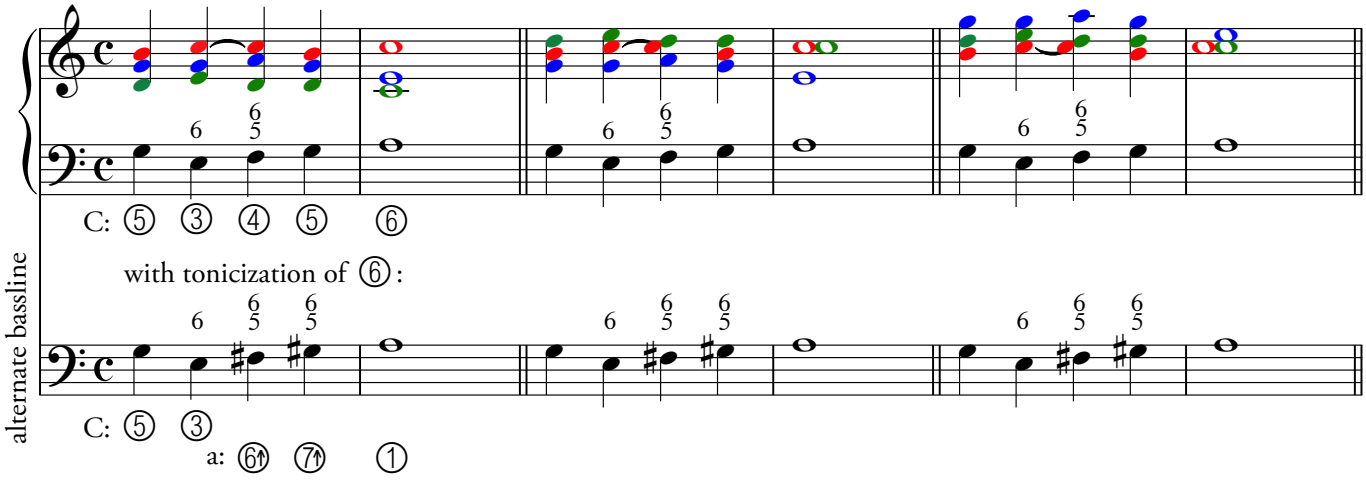
In the first evaded double cadence given below, all three voices can be inverted,making 6 combinations total. This is called triple invertible counterpoint. green = TC (agent); red = DC (patient); blue = alto clausula (auxiliary)



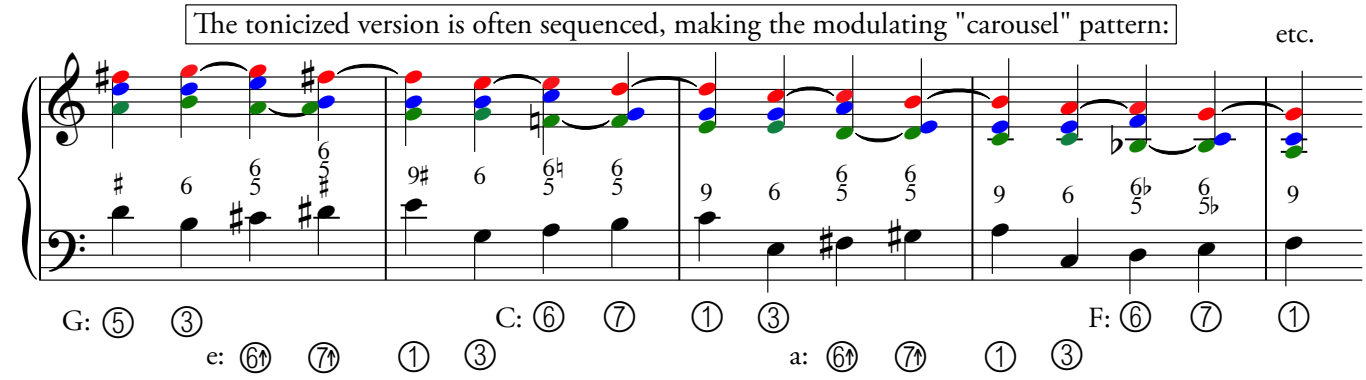
Evaded Cadences in Four Voices

The flexible alto clausula is added, plus a new variant with toniziation. Minor-key versions are not shown.

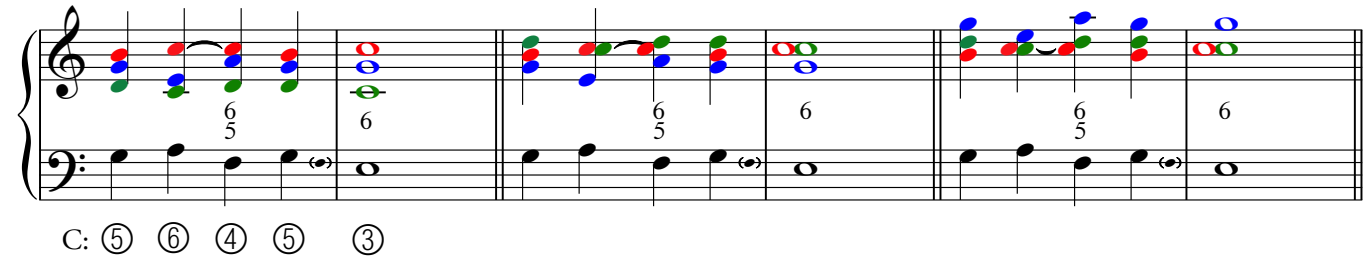
Form 1: any cadence ending with ⑥ in the bass (i.e. a "deceptive" cadence)



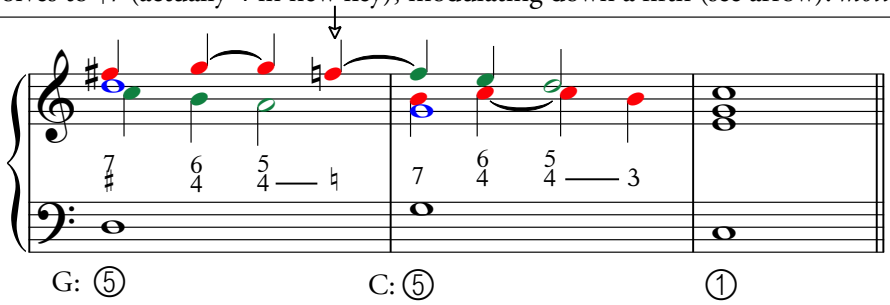
The tonicized version is often sequenced, making the modulating "carousel" pattern:



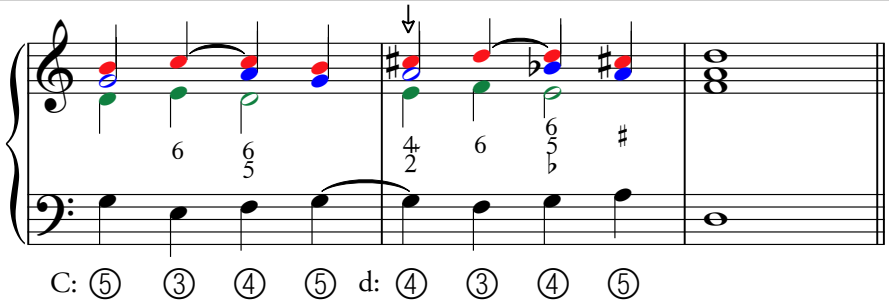
Form 2: any cadence ending with ③ in the bass



Form 3: DC resolves to ♮$\hat{7}$ (actually $\hat{4}$ in new key), modulating down a fifth (see arrow): *motivo di cadenza*.



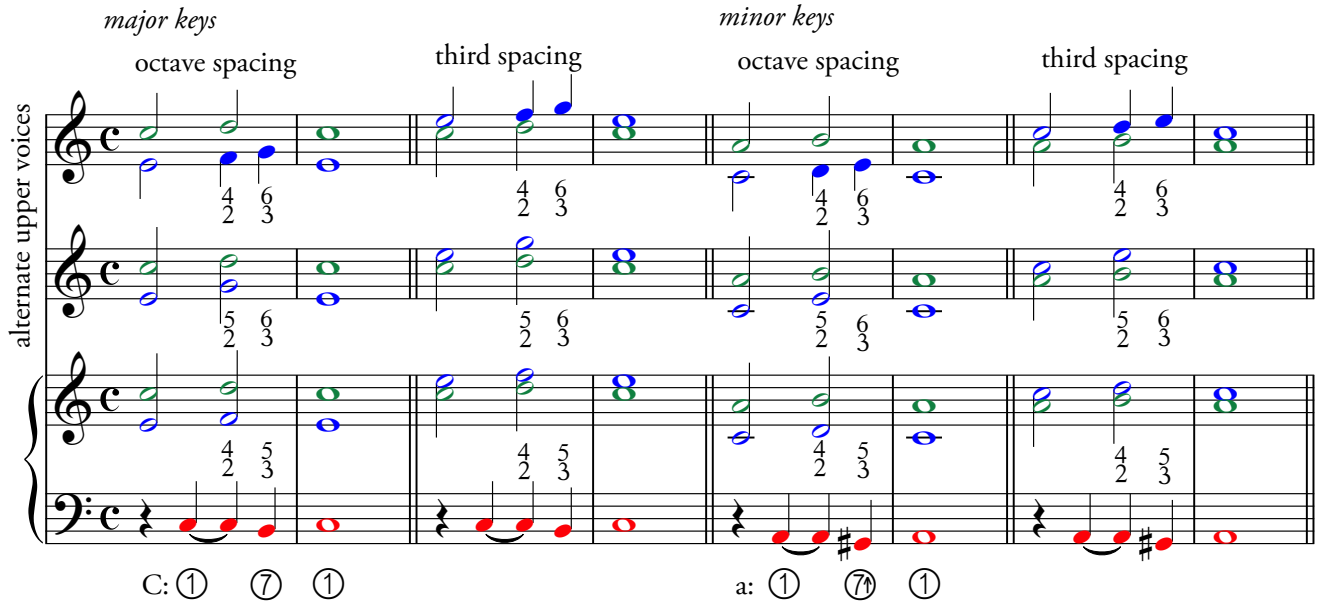
Form 4: DC moves to ♯$\hat{1}$, which becomes ♯$\hat{7}$ (leading tone) in the key a step higher (see arrow)



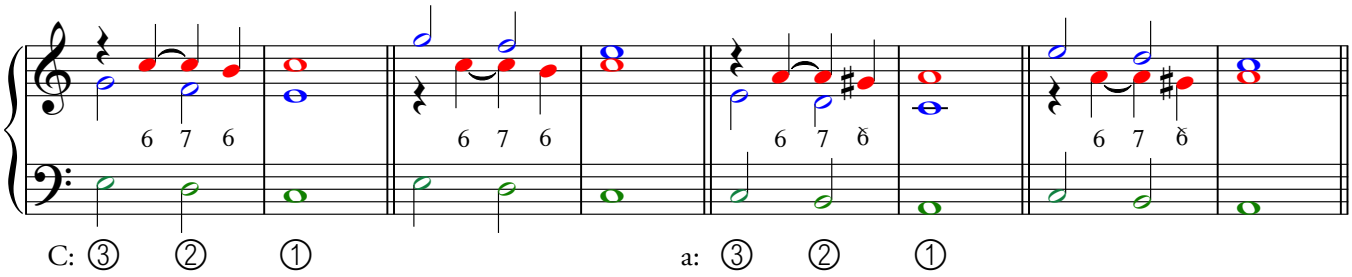
Tenor or Discant Clausulae in the Bass in Three Voices

The DC and TC can also appear in the bass. They are less conclusive than cadences that end with ⑤ ①. The blue voice, which resembles an alto clausula, is merely an auxiliary to the DC/TC pair.

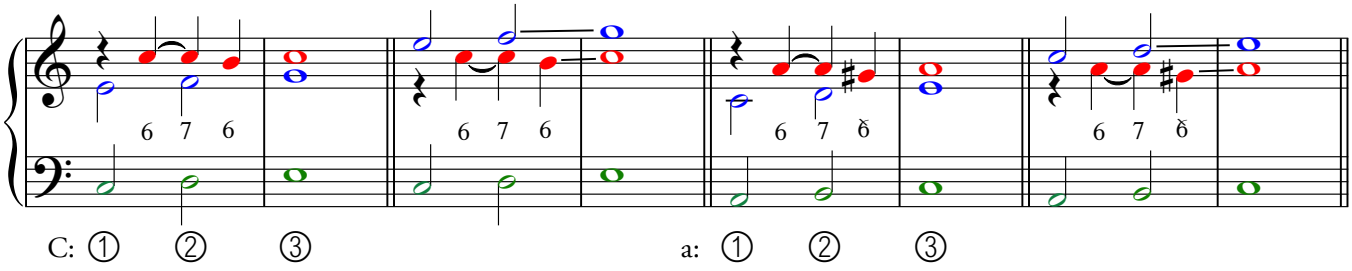
Discant clausula in the bass:



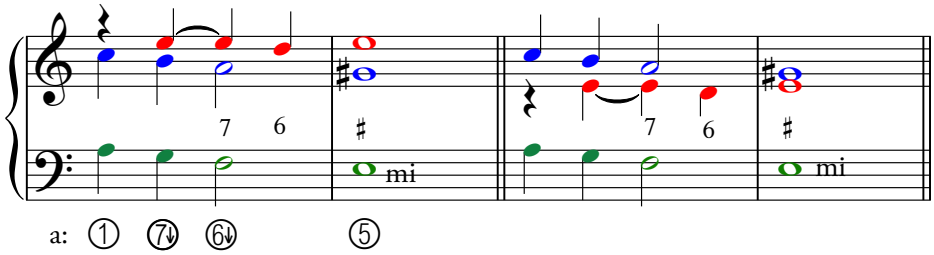
With a tenor clausula in the bass: ③ ② ①



With another tenor clausula in the bass: ① ② ③. Notice that the third spacing ends with a dim. 5 moving to perfect 5, which is allowable if it involves a middle voice.



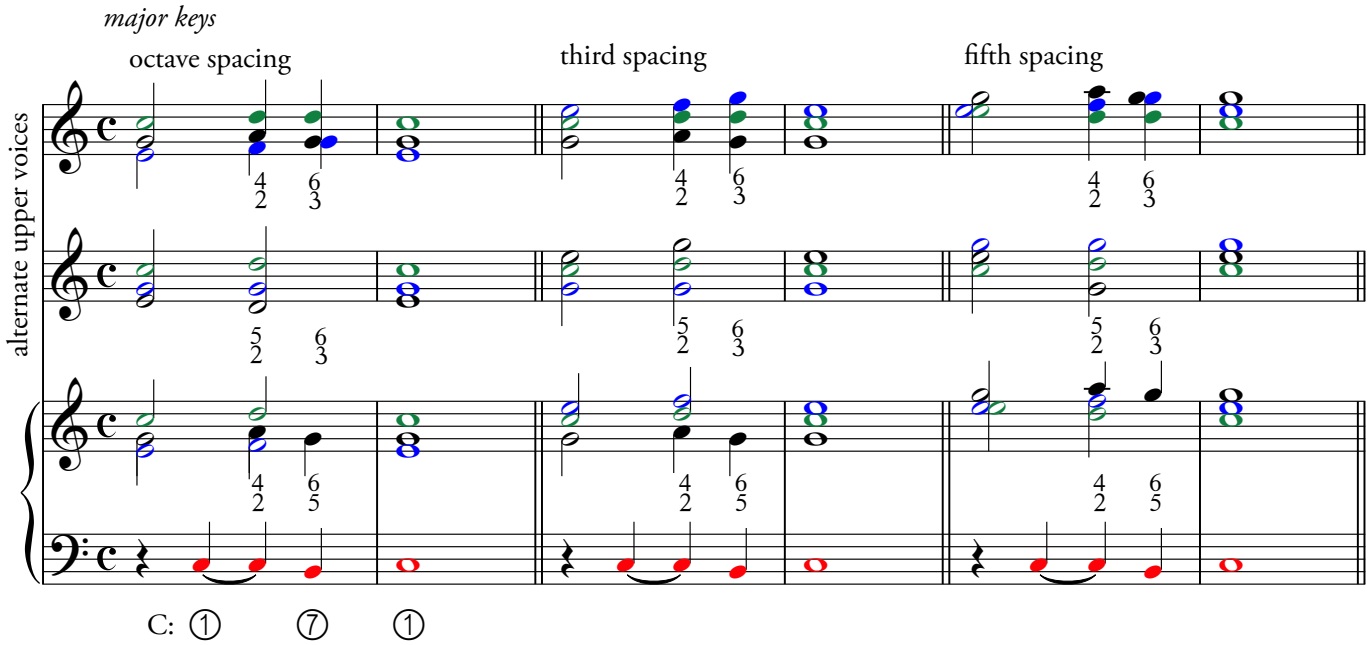
In this compendium, clausulae have been identified via scale degrees. This works most of the time. But there is another TC/DC pair—the "mi-cadence"—that ends on ⑤ in the bass (solfège syllable "mi" in hexachordal solmization). Here the TC ends with a half step (F-E) and the DC with a whole step (D-E). When conceived in terms of the major/minor system, a mi-cadence is equivalent to a half cadence.



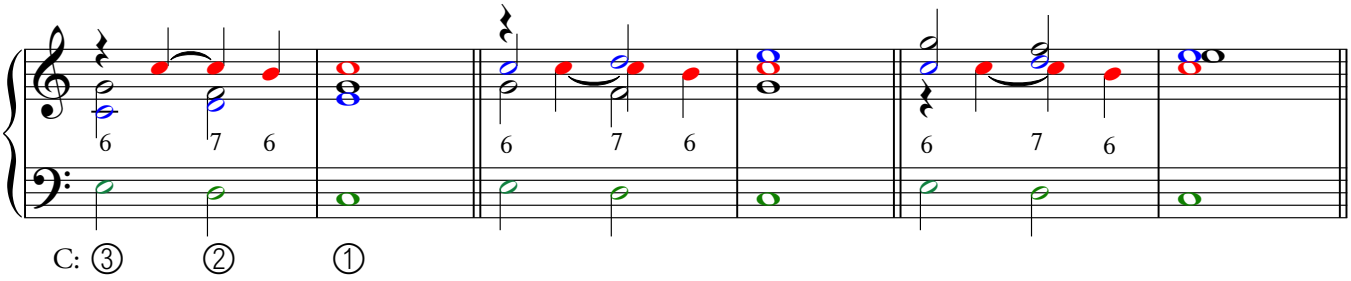
Tenor or Discant Clausulae in the Bass in Four Voices

Compare the four-voice versions here with the three-voice versions on the previous page. The black and blue voices are auxiliaries to the DC/TC pair. To save space, minor-key versions are not shown.

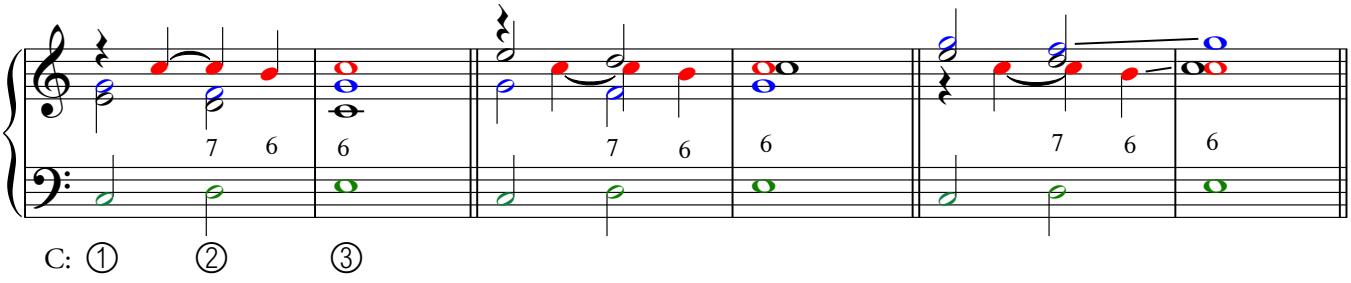
Discant clausula in the bass. To avoid parallel 5ths, the upper voices are not always invertible.

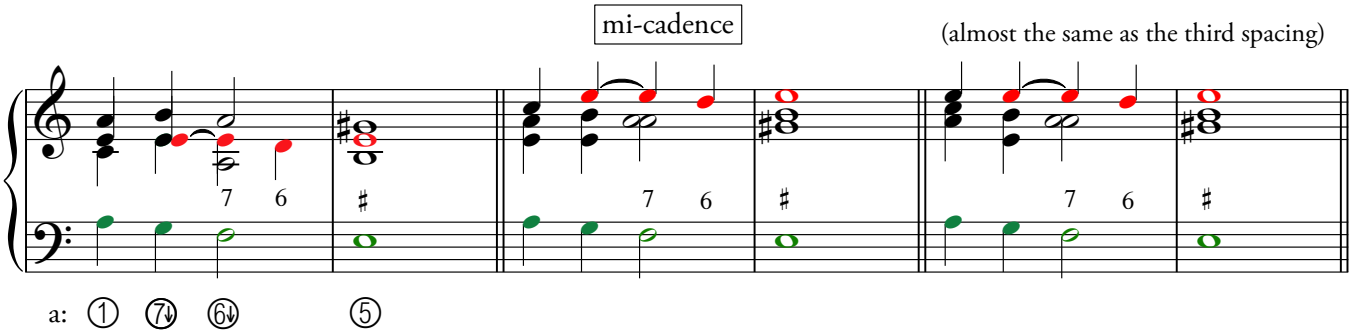


With a tenor clausula in the bass: ③ ② ① . Notice that in a 7-6 suspension, one usually avoids adding 5 to the 7 (i.e. double 3 or 8 instead). This progression is much easier in three voices than four.



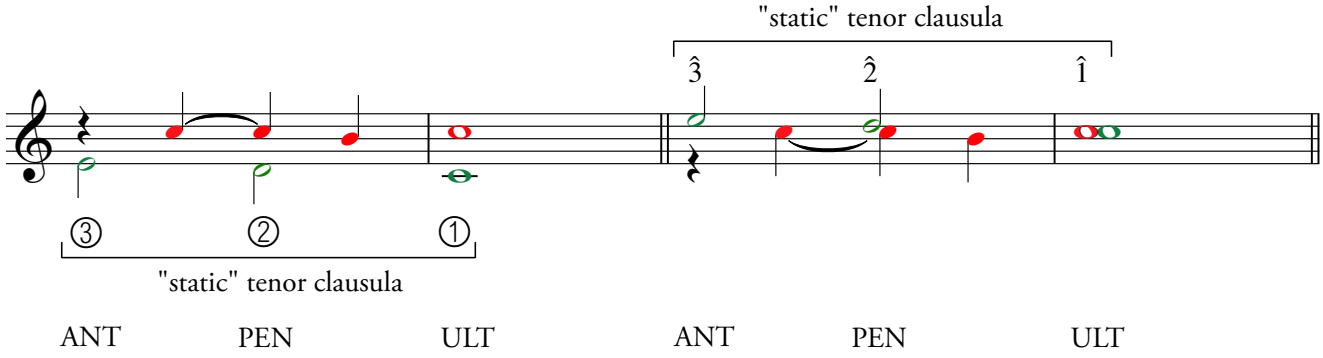
With another tenor clausula in the bass: ① ② ③ . Dim.5-perf.5 is allowable if involving a middle voice.



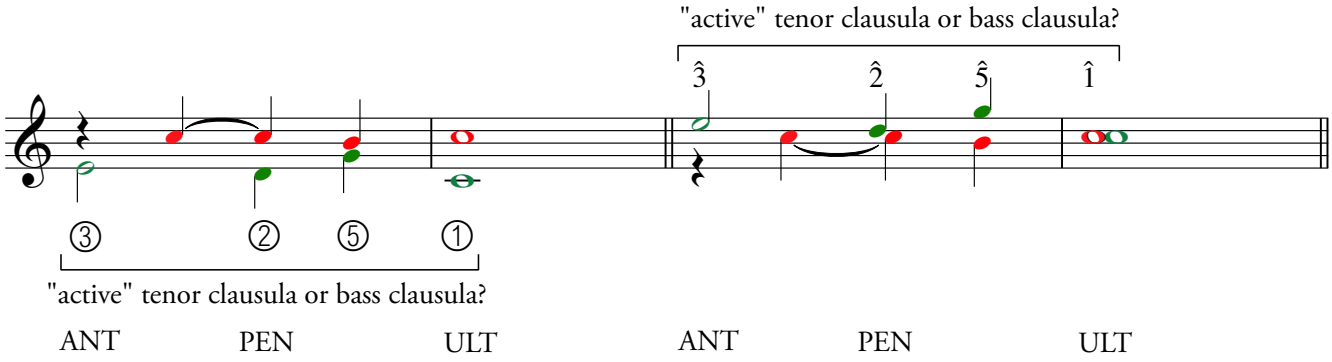


Cadences with an "Active" Tenor Clausula

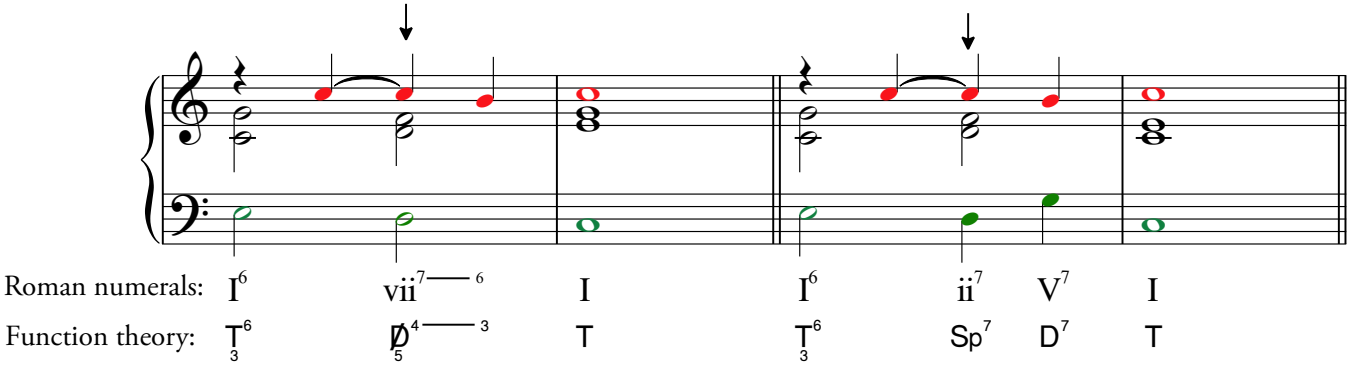
Up until now, we only examined situations where the TC remains held during the resolution of the *syncopatio* dissonance in the DC (a "static" TC), as shown below.



But the TC (indeed, any agent voice in a *syncopatio*) may also move to a different consonance after the dissonant "clash" at the PEN position, but before the ULT position, like when the TC leaps to ⑤ on beat four, as shown below. But this creates ambiguity regarding the clausulae. Is the green voice a tenor or a bass clausula? It has ② at the PEN position, like a tenor clausula, but it also ends with ⑤ ①, like a bass clausula. Ultimately, it doesn't matter what we call it if we recognize the underlying contrapuntal processes: clausulae.



However, theories that track root motion (e.g. Roman numerals and function theory) draw a largely arbitrary distinction between the "active" and "static" tenor clausulae shown above. For example, why should the two chords at the arrows below be analyzed differently, when the overall voice-leading patterns are so similar? The reason is that, if you are working within a theory that assumes that (1) all chords have roots (even dissonant ones), and that (2) root motion between chords is syntactically meaningful, then you must analyze these two chords differently. But if you emphasize the underlying contrapuntal similarities in the clausulae, then you can view these two progressions as quite similar. Throughout the seventeenth century and up until around 1750, very few musicians thought in terms of chordal roots as we understand them today. Rather, these ideas emerged in the early 18th century and first gained widespread adoption in the second half of the 18th century.

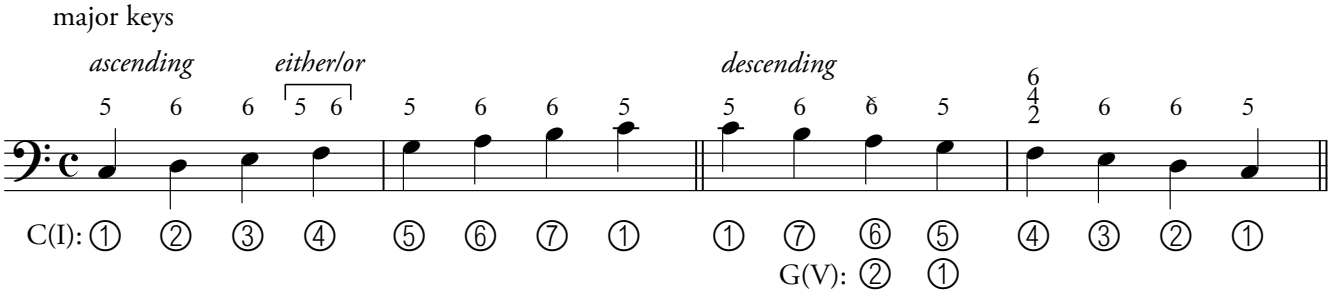


Overview: Rules of the Octave
(Non-Sequential Stepwise Bass Harmonizations)

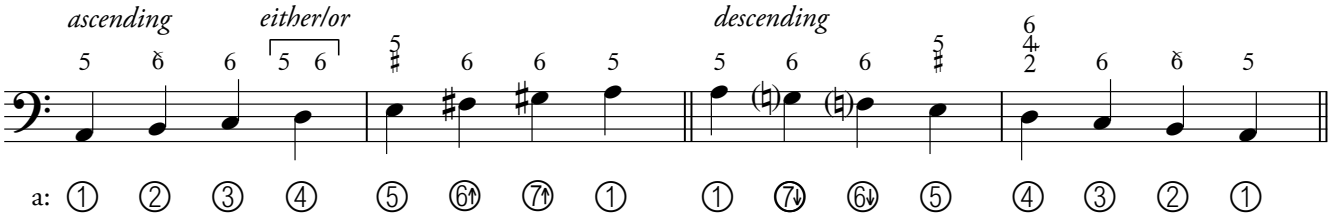
Rule of the Octave (Basic Form)

The Rule of the Octave (RO) determines the normative harmonies for each bass degree.
"Basic" means that this RO only has 5/3 and 6/3 chords (exception: ④ descending).
A line through a figure means that this interval is raised chromatically.
"5" serves merely as a reminder that the given bass degree takes a 5/3 chord.
Notice that, in major, the descending RO tonicizes the dominant key (key of V).

major keys



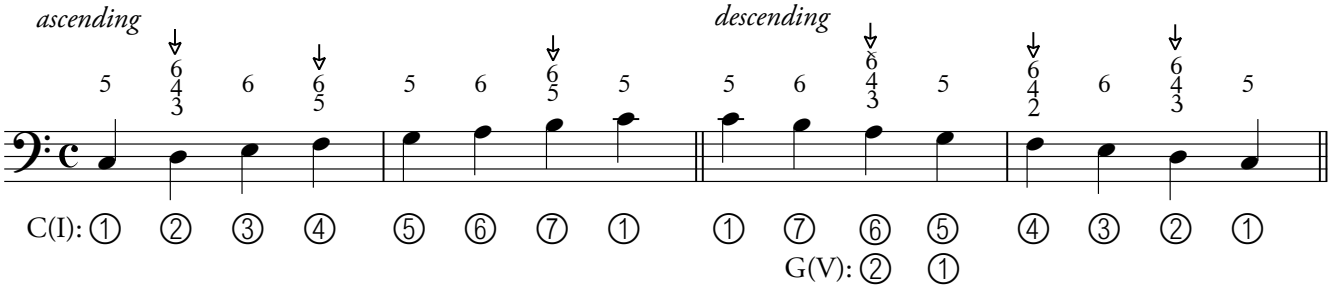
minor keys



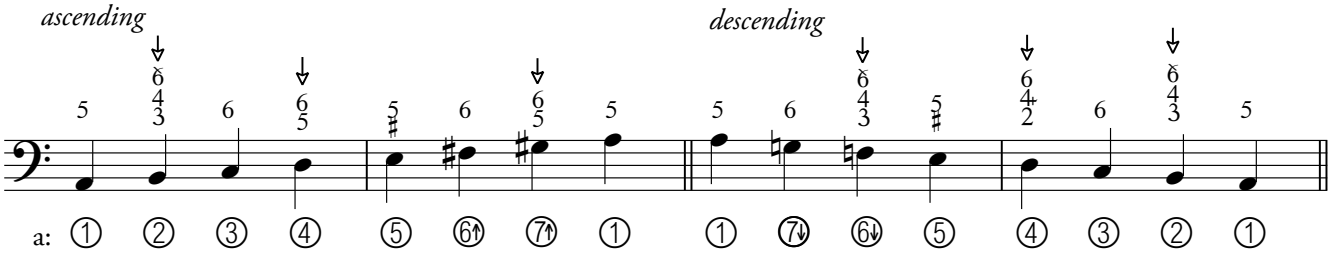
Rule of the Octave (Advanced Form)

"Advanced" means that this RO contains dissonant harmonies (i.e. chords other than 5/3 and 6/3). See arrows.

major keys

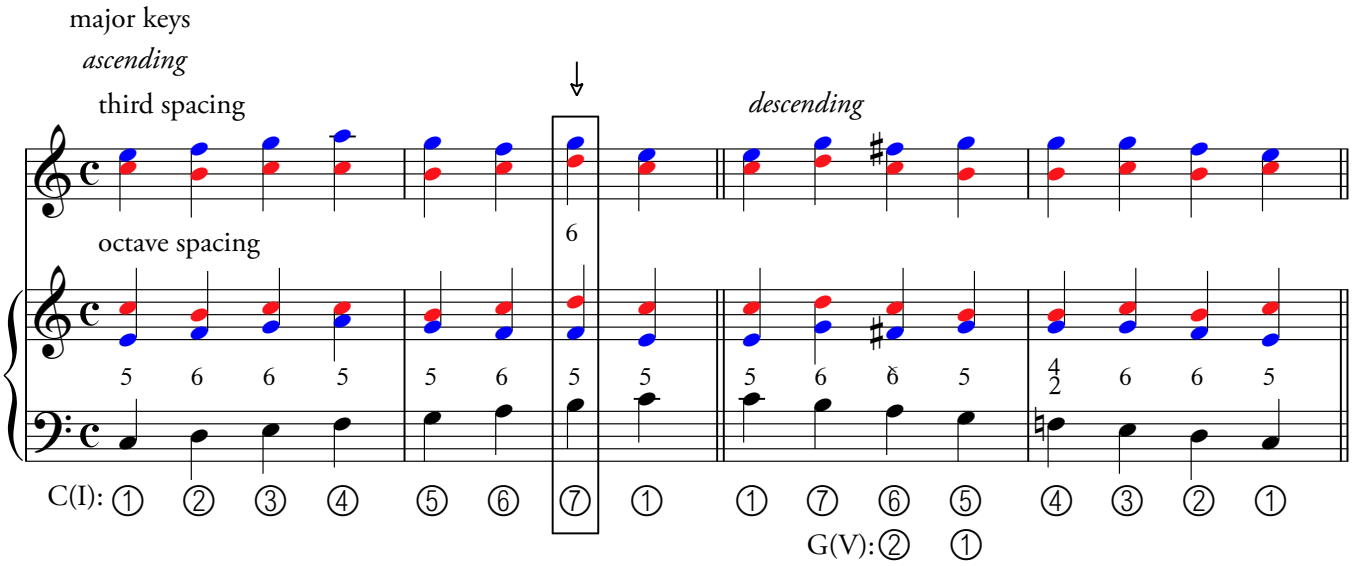


minor keys

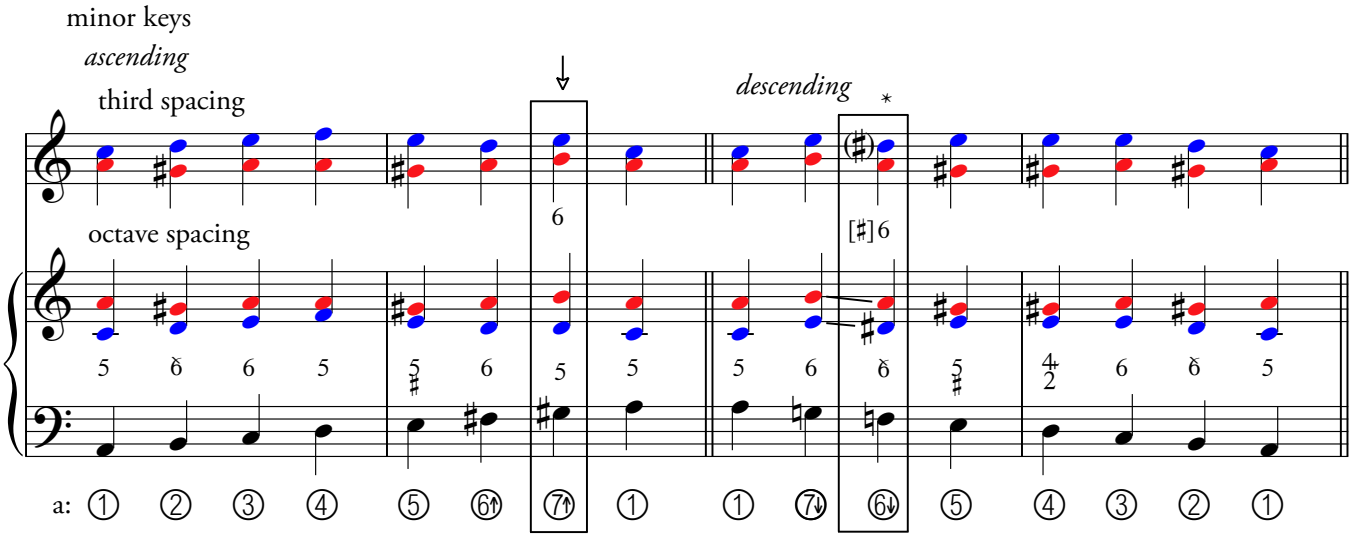


Basic Rule of the Octave in Three Voices

To avoid parallel perfect fifths in the octave spacing, ⑦ ascending only has a 5/3 chord instead of the normative 6/3 chord (see arrow).

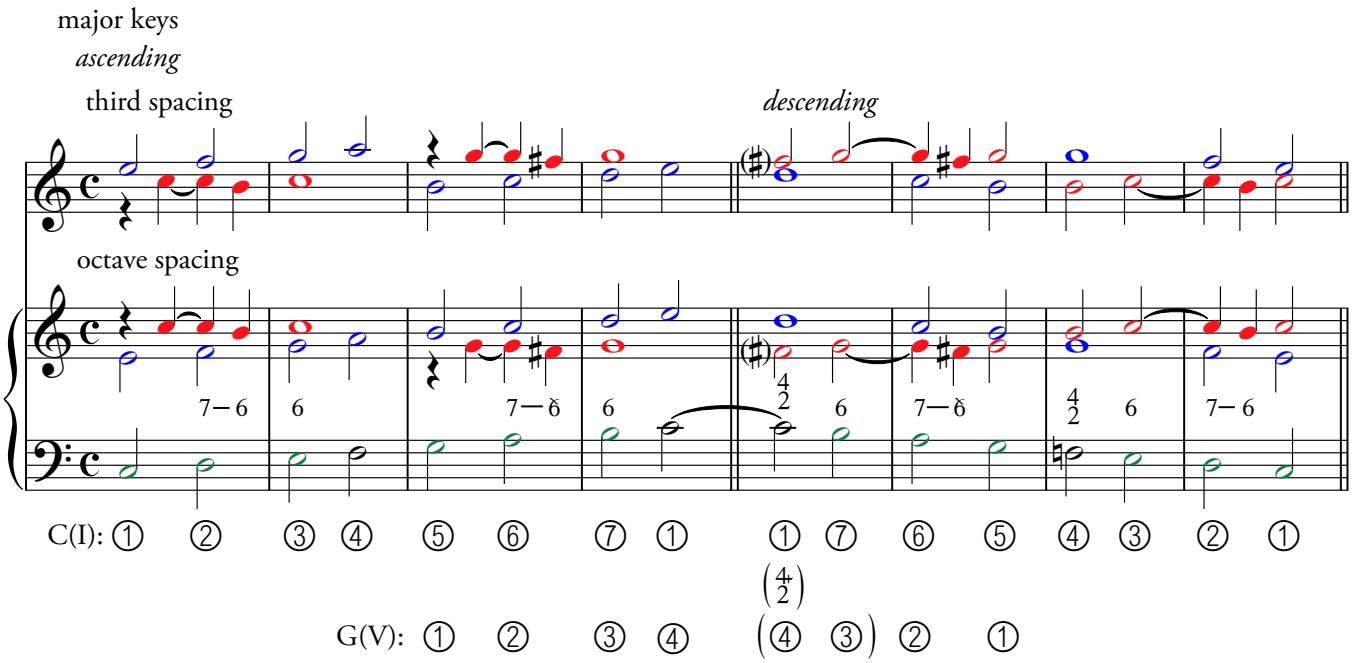


To avoid parallel perfect fifths in the octave spacing, ⑥ descending can take an augmented sixth (a dissonance). See the asterisk.

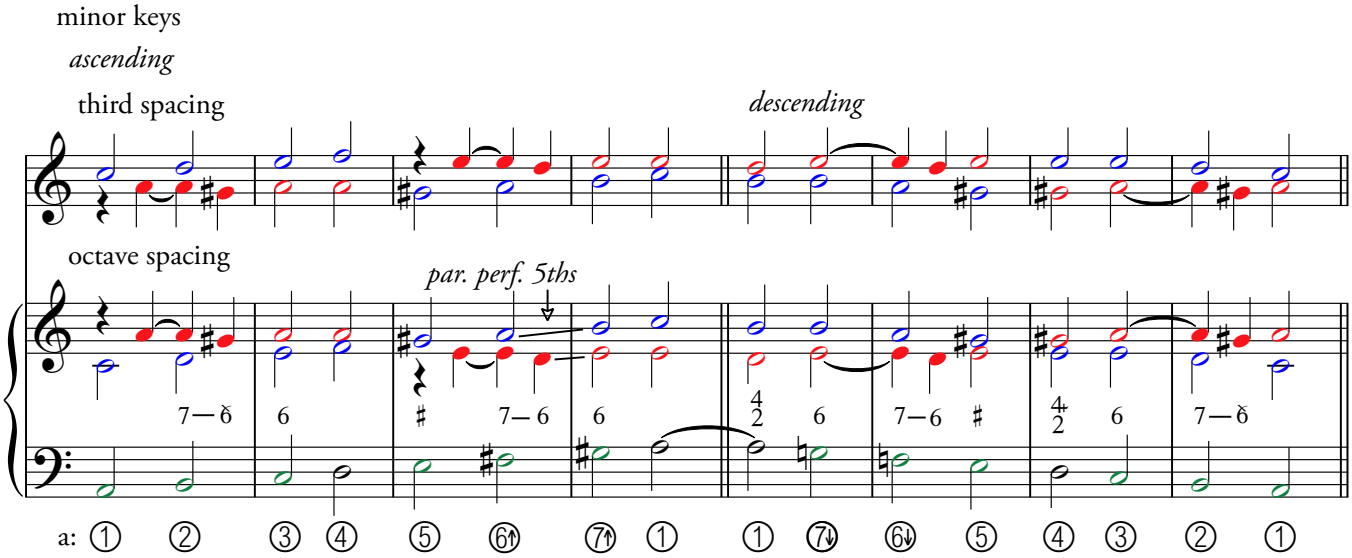


Basic Rule of the Octave as Clausulae

Here we see how even a stepwise bassline can be conceived as a series of cadences. Notice how each tetrachord (i.e. four-note bass segment) has invertible upper voices. A 4/2-chord appears on ① descending, which makes the bass into an incomplete DC (① ⑦ ⑥ instead of ① ⑦ ①). The TC is in the bass in green notes.



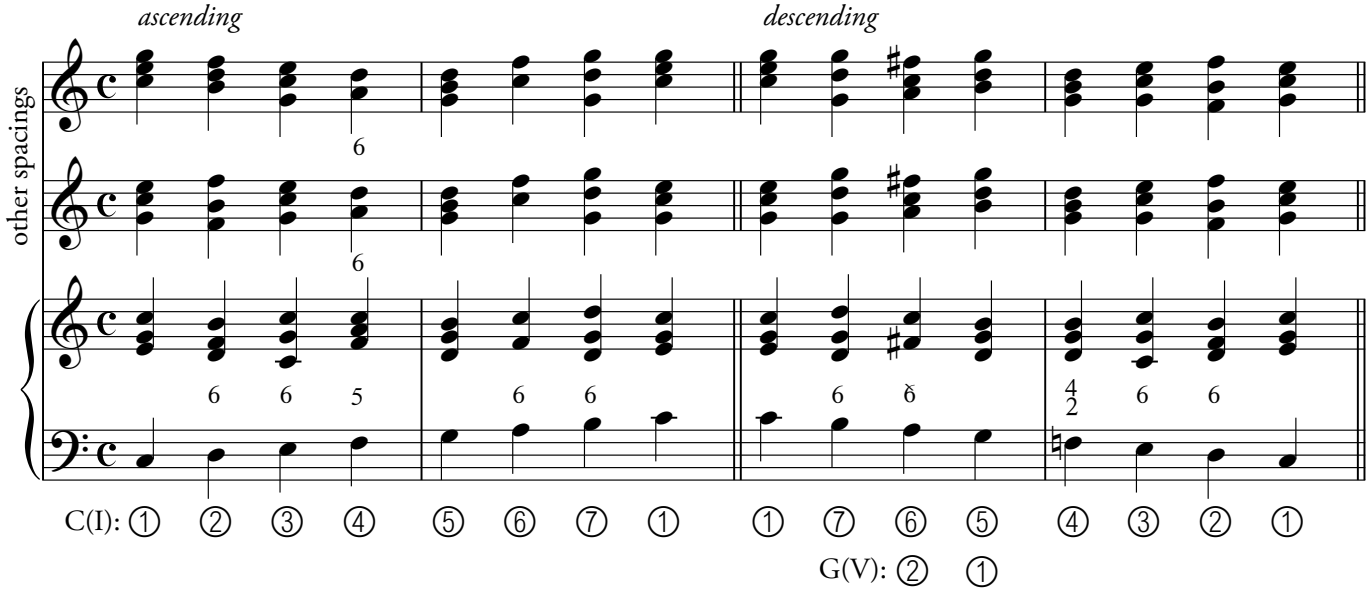
Notice the parallel perfect 5ths in the ascending version. At least they are not between the outer voices!



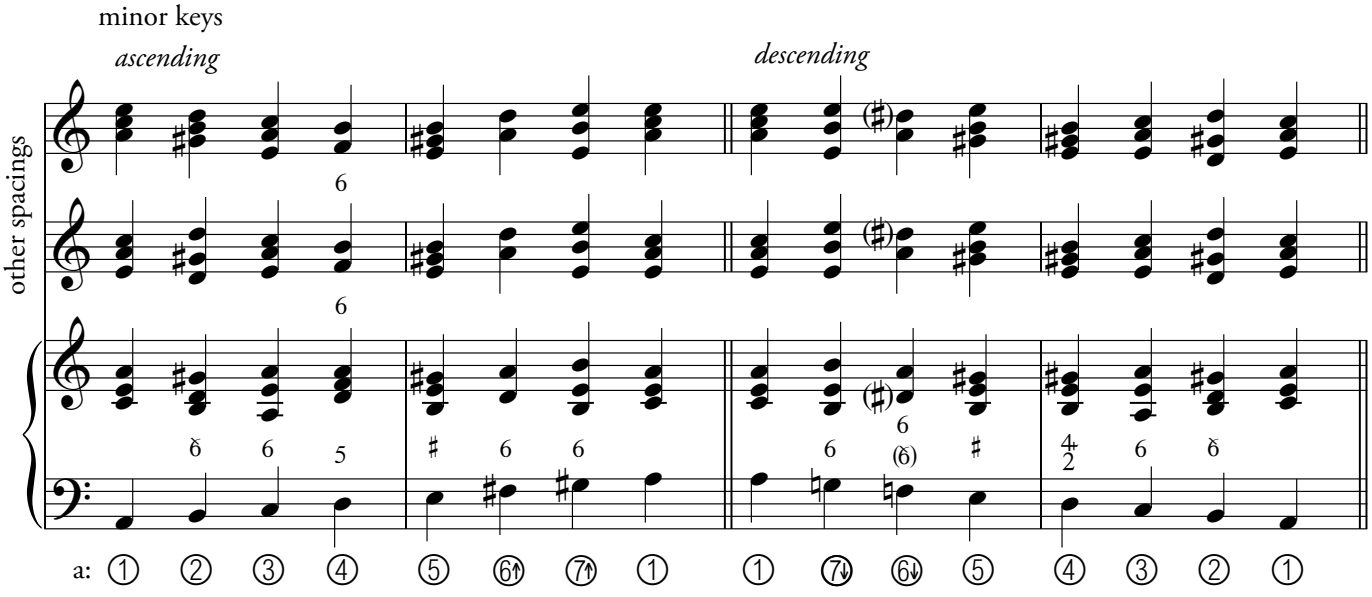
Basic Rule of the Octave in Four Voices (Complete)

Some variation in the voice-leading is possible.
Notice how similar the fifth spacing is to the third spacing.
A few three-note chords are necessary to avoid voice-leading errors.
Both C. P. E. Bach and J. D. Heinichen allow for the player to
occasionally add or subtract a voice from the prevailing four-voice texture.

major keys

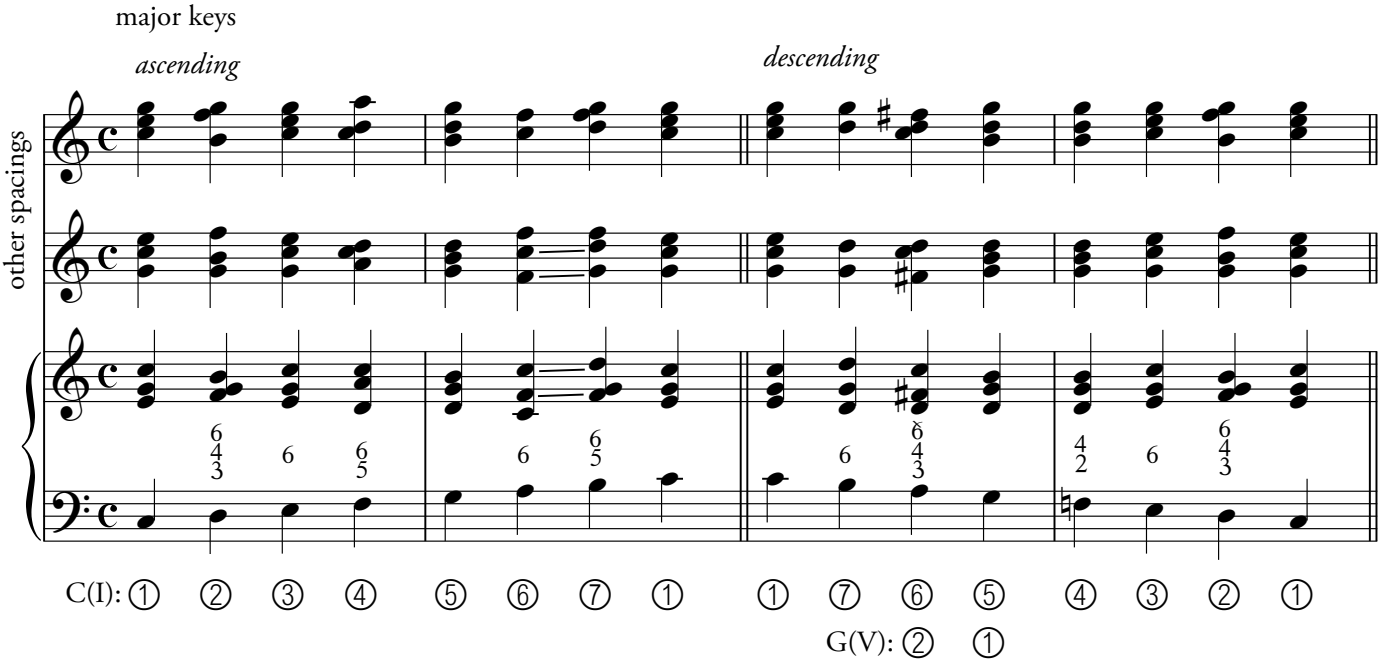


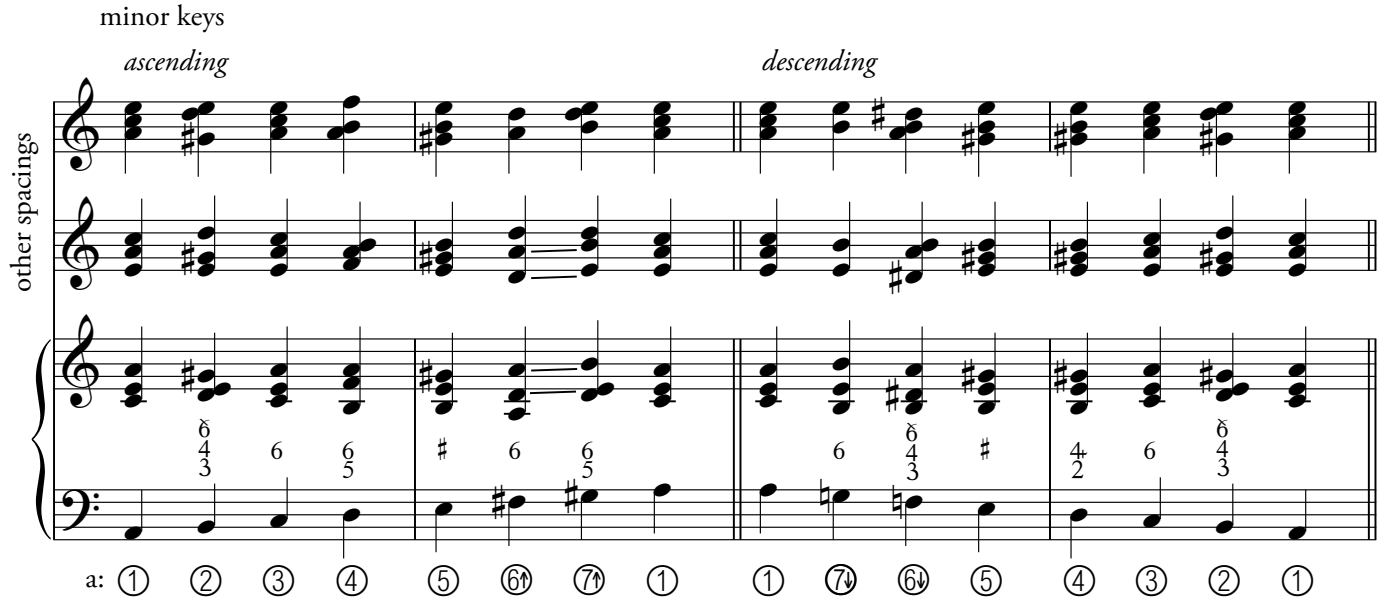
minor keys



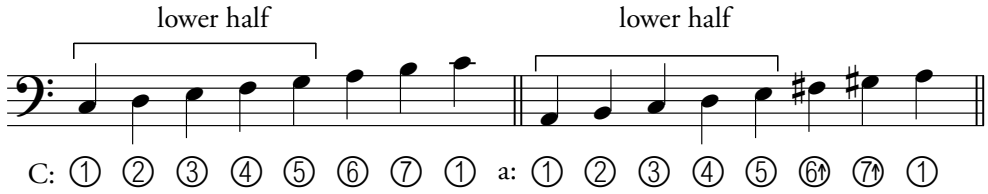
Advanced Rule of the Octave in Four Voices (Complete)

The advanced RO is not possible in only three parts.
Some variation in the voice-leading is possible.
A few three-note chords are necessary to avoid voice-leading errors.
Both C. P. E. Bach and J. D. Heinichen allow for the player to
occasionally add or subtract a voice from the prevailing four-voice texture.

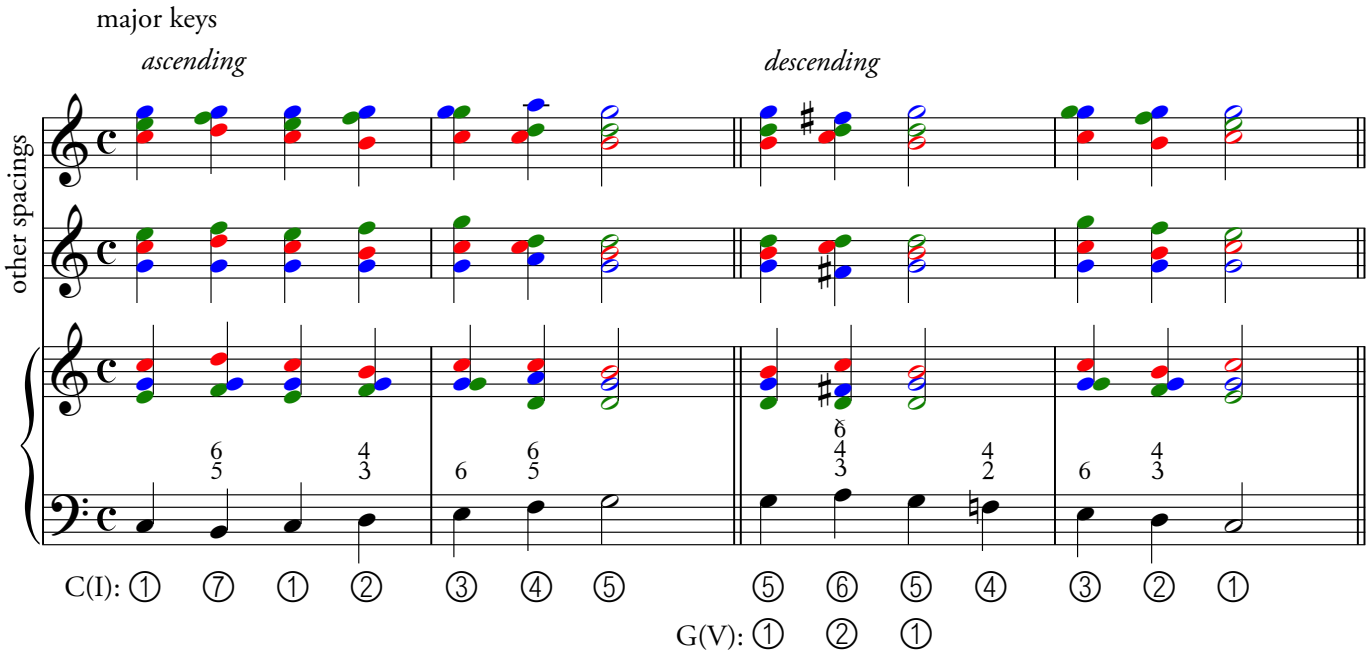


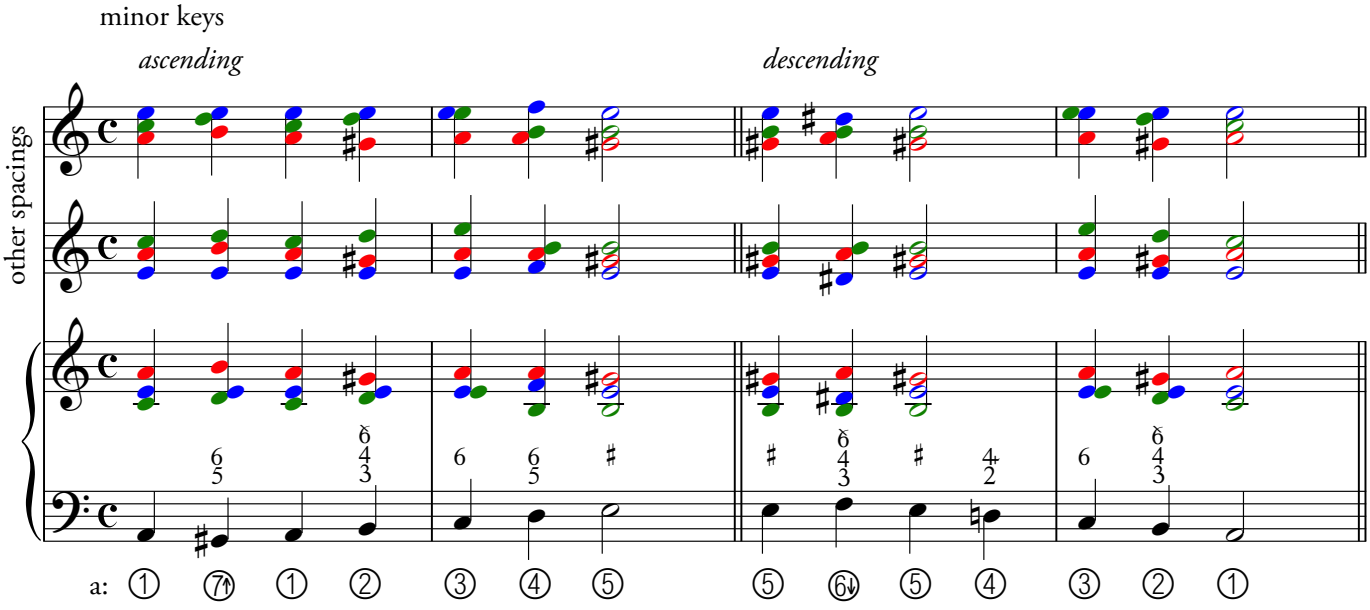


Advanced Rule of the Octave in Four Voices (Lower Half)

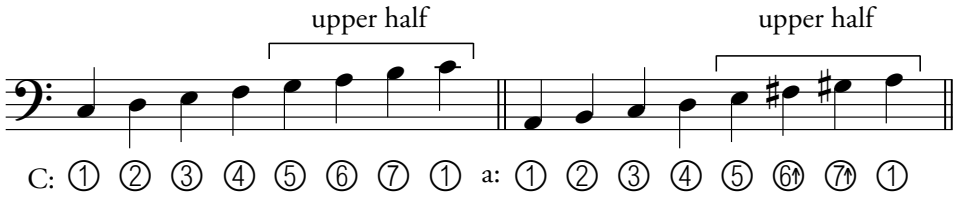


The RO is often more useful when conceived in two halves (with neighbor tones on each side)
All three upper voices are invertible, as shown by the colors. The colors do not relate to clausulae.

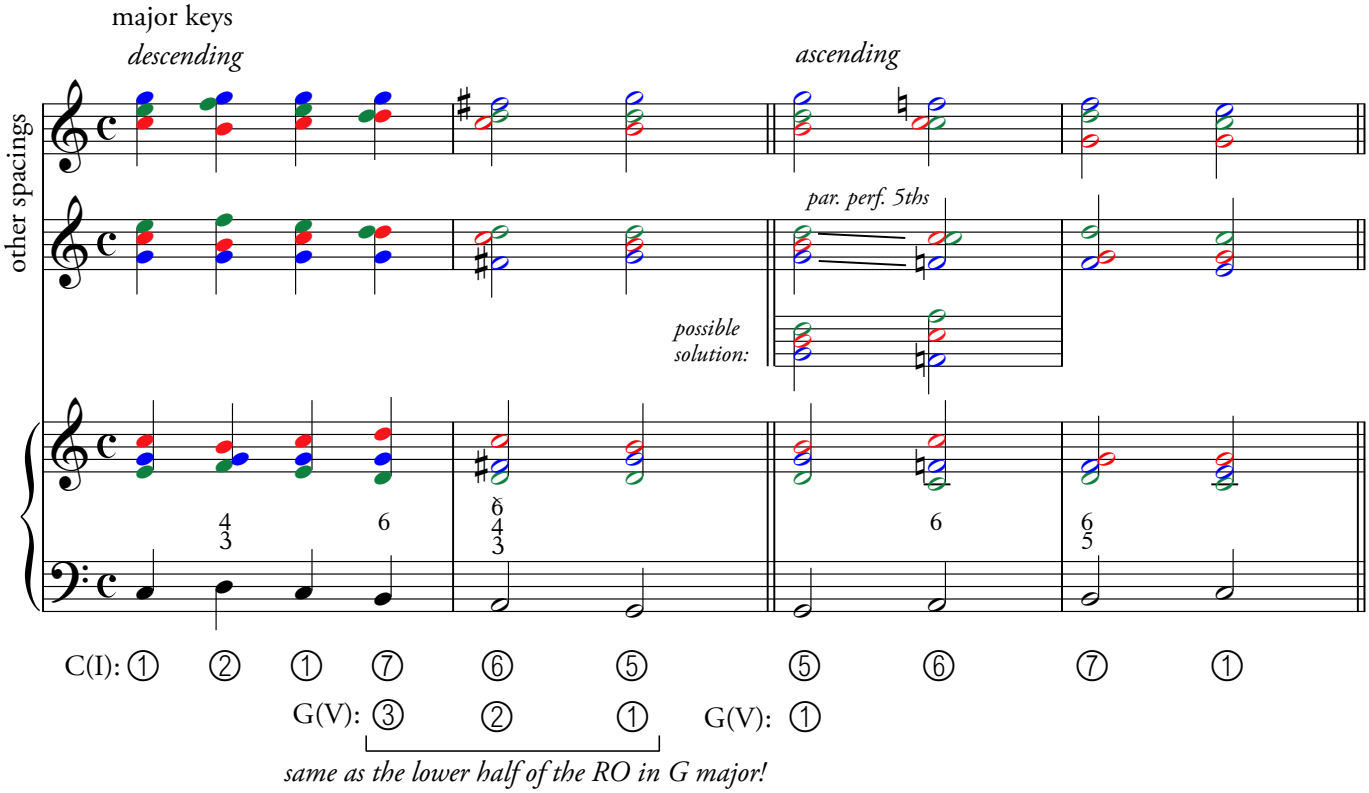


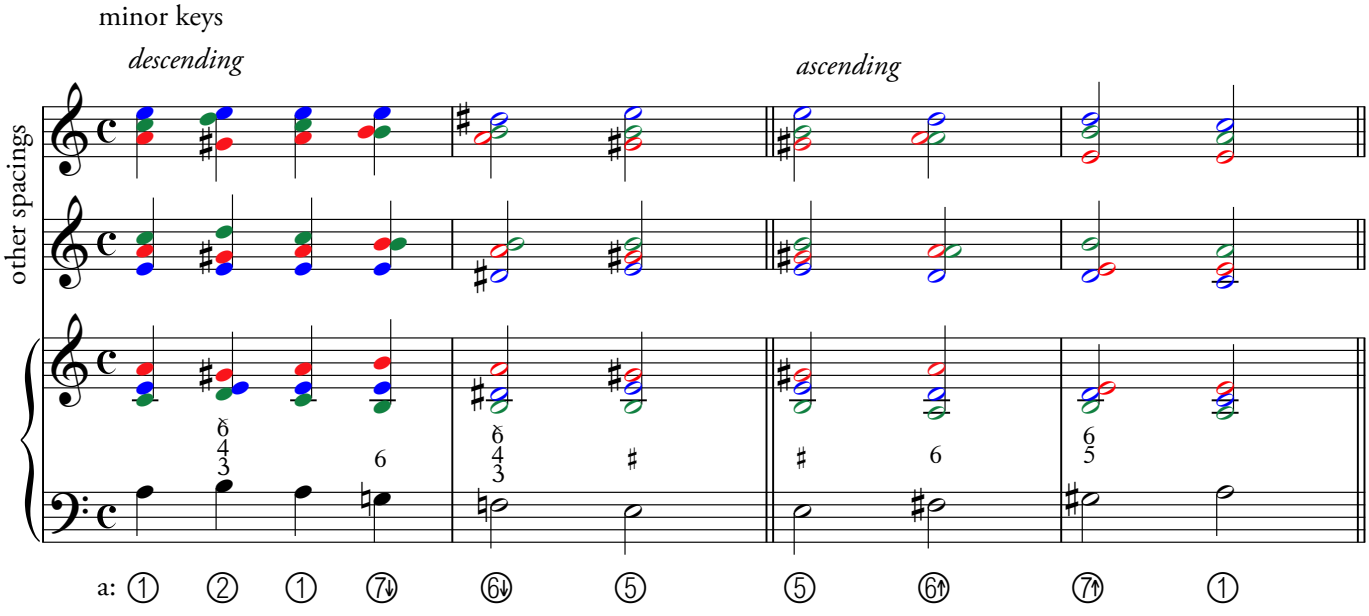


Advanced Rule of the Octave in Four Voices (Upper Half)



The RO is often more useful when conceived in two halves (with neighbor tones on each side)
All three upper voices are invertible, as shown by the colors. The colors do not relate to clausulae.





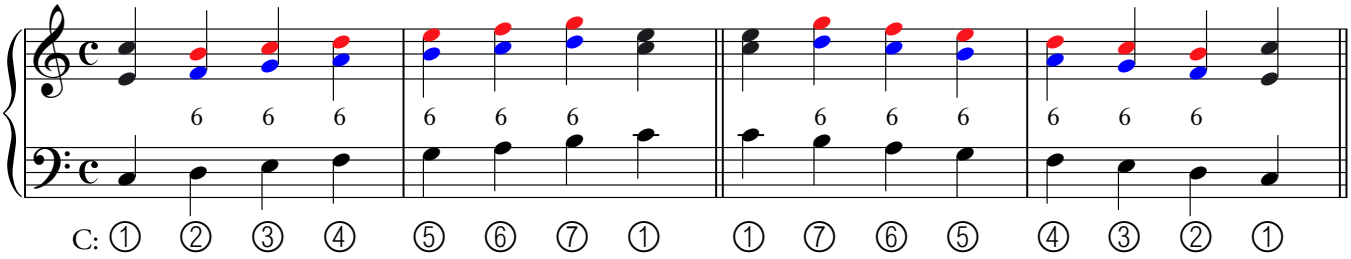
Stepwise Bass: Parallel 6/3 Chords

Fauxbourdon refers to a series of 6/3 chords whose bass moves in stepwise motion.
In order to avoid parallel fifths between the upper voices, the 6 has to be in the top voice.
Parallel 6/3 chord are usually realized in three voices, since the voice-leading is simpler than in four.

Three voices

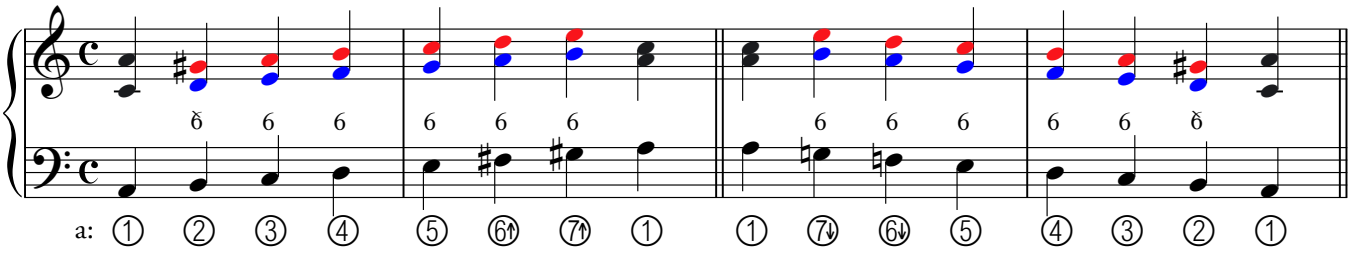
major keys

ascending *descending*



minor keys

ascending *descending*

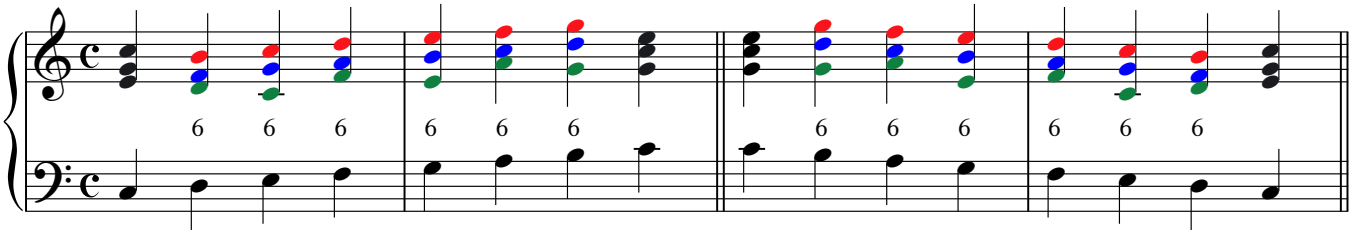


In four voices, a filler-voice (green) is added that must move in a zig-zag to avoid parallels.
The filler voice alternates between doubling the bass and the sixth of each chord.

Four voices

major keys

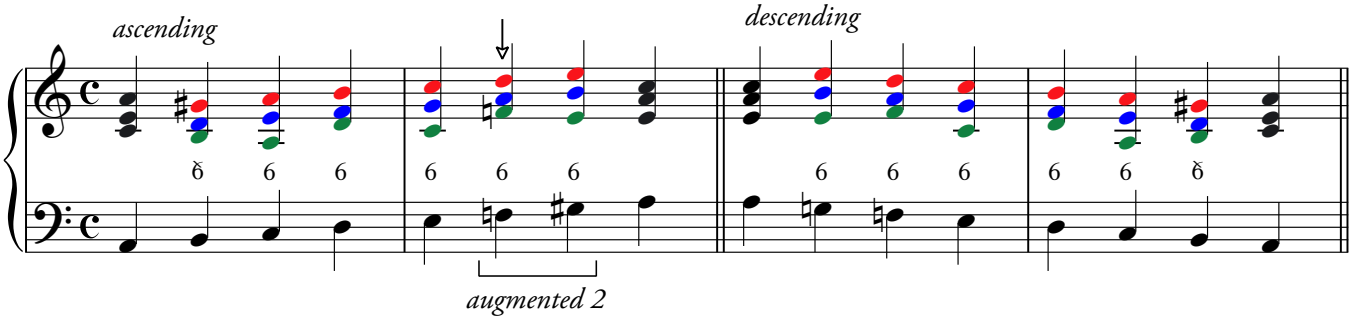
ascending *descending*



F♮ (see arrow) avoids a tritone leap in the tenor (c1-f♯1),
but also creates an augmented second in the bass (f♮-g♯).

minor keys

ascending *descending*



Stepwise Bass: Ascending 5-6 & Descending 7-6 Sequences

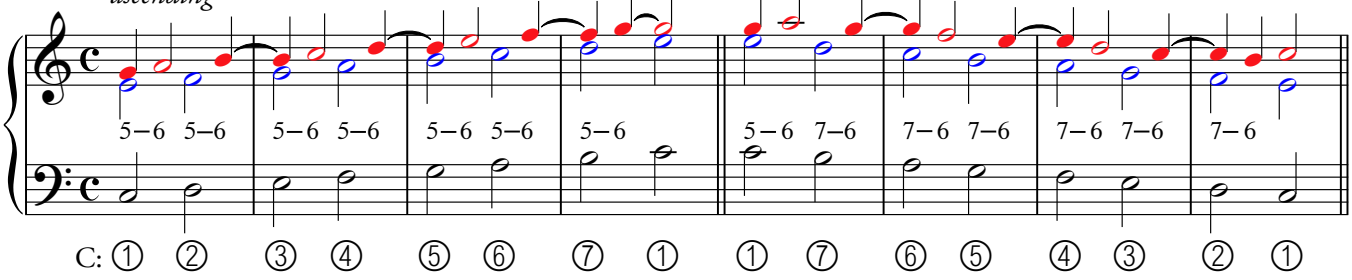
An ascending stepwise bass can also be harmonized by a 5-6 sequence.
The 7-6 is the analogue for descending stepwise basslines.
As in *fauxbourdon*, the voice leading is simpler in three voices than in four.

Three voices

major keys

ascending

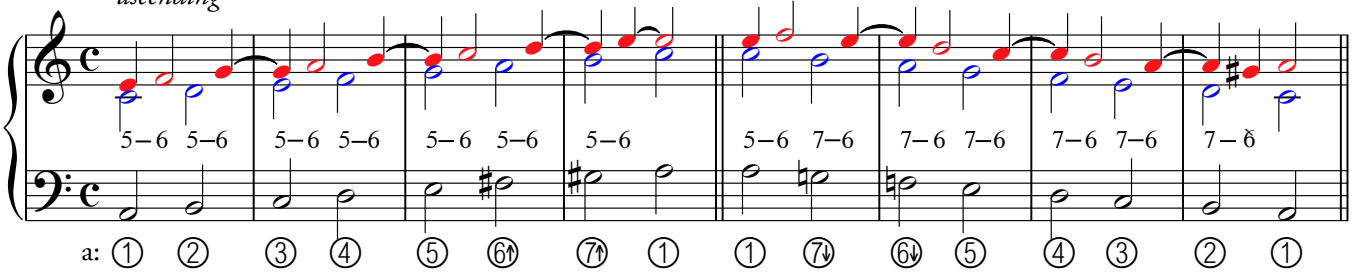
descending



minor keys

ascending

descending

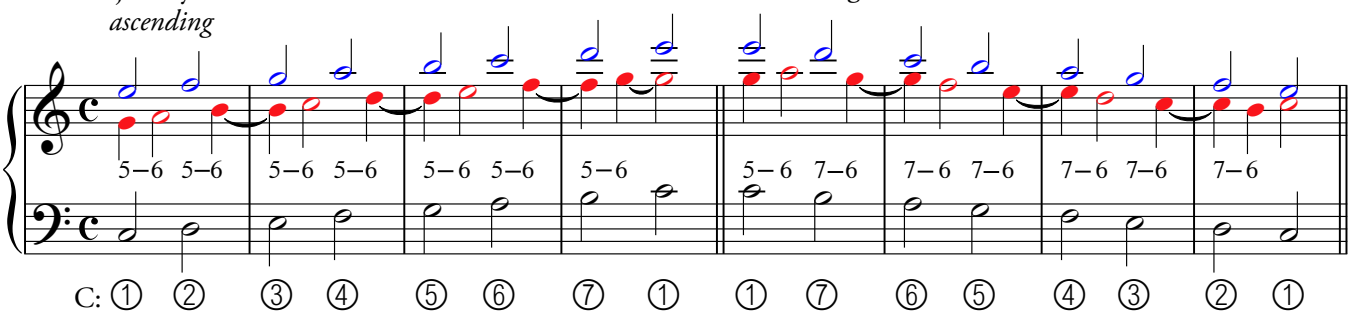


with inverted voices

major keys

ascending

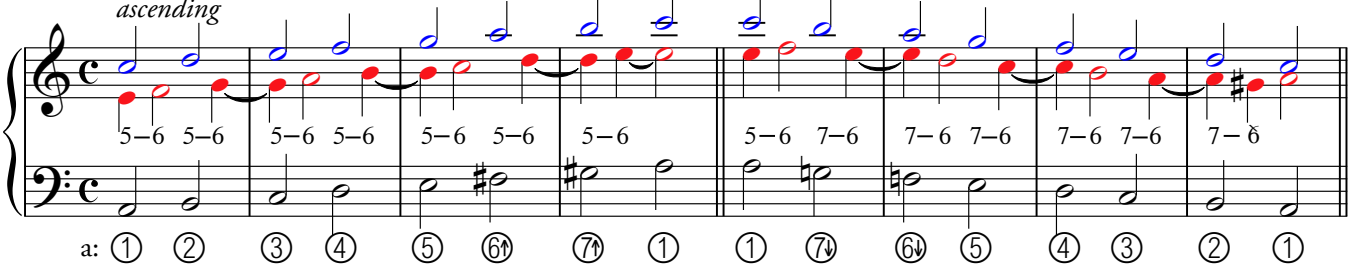
descending



minor keys

ascending

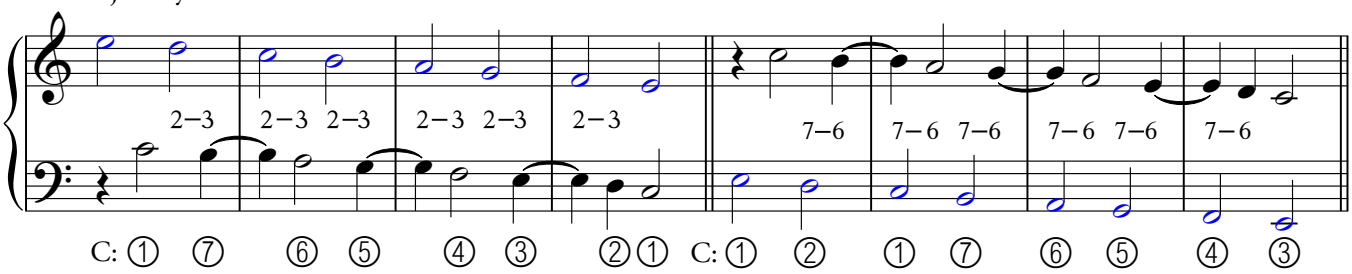
descending



Stepwise Bass: Syncopated-Bass Sequence in Two Voices

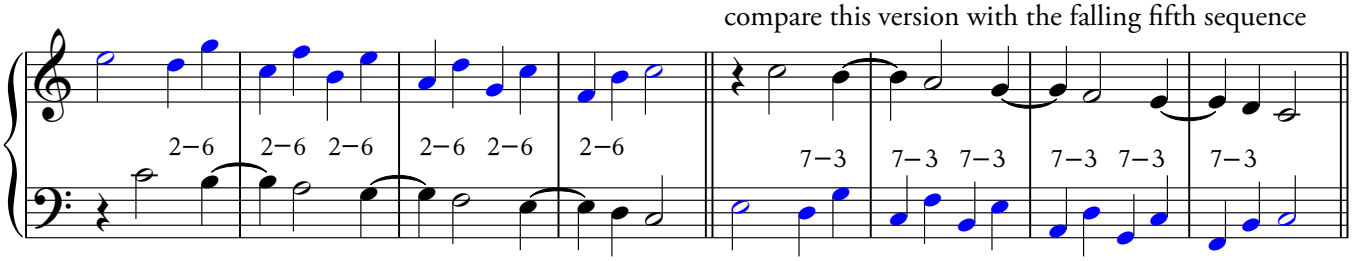
with "static" agent voice (blue)

major keys



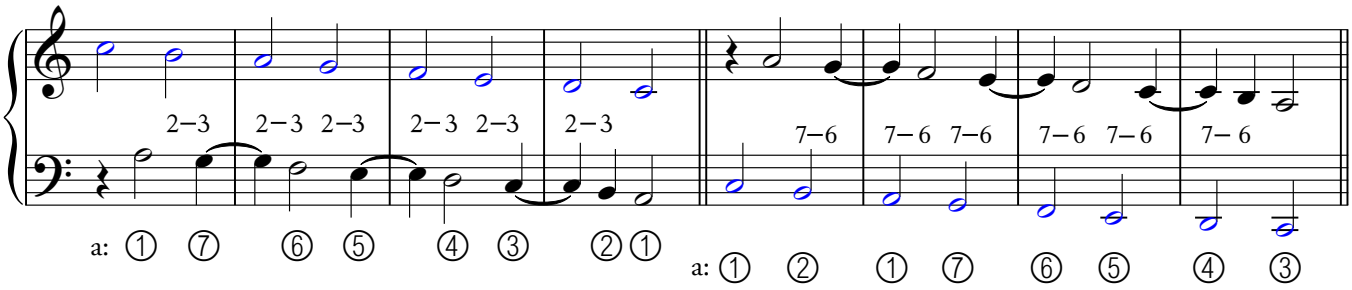
with "active" agent voice (blue)

compare this version with the falling fifth sequence



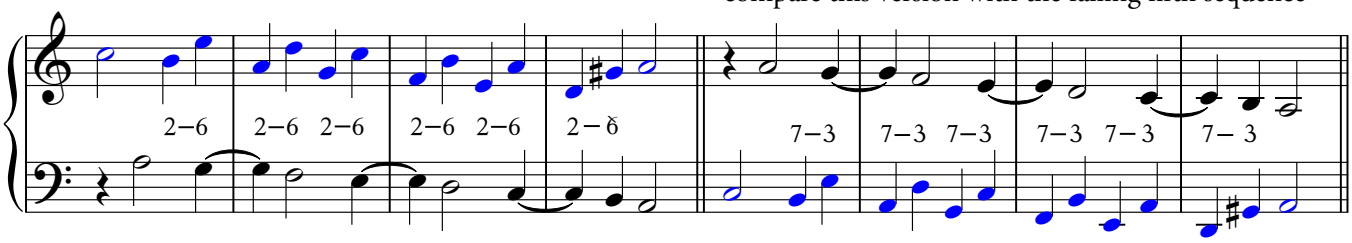
minor keys

with "static" agent voice (blue)



with "active" agent voice (blue)

compare this version with the falling fifth sequence



Stepwise Bass: Syncopated-Bass Sequence (with 6/3 Chords)

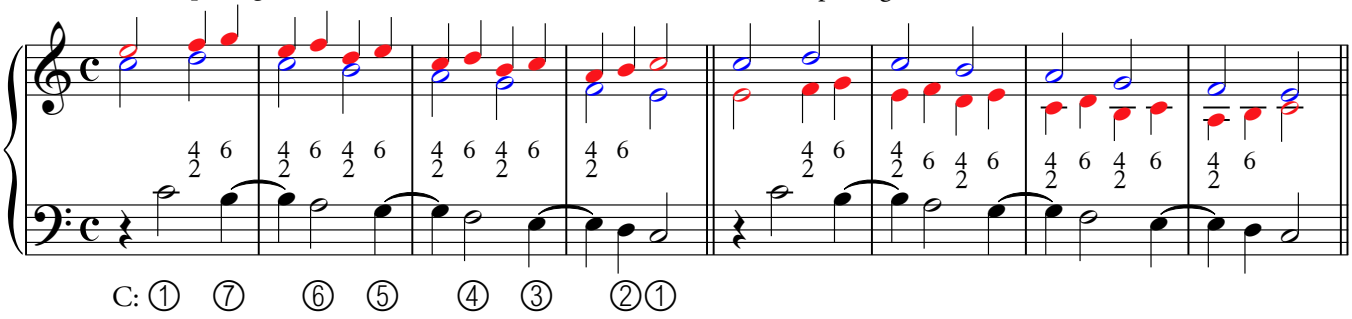
The 4/2 sequence is one of the most common sequences of the baroque period.
It is important to know that the bass voice is the patient in the *syncopatio*.

Three voices

major keys

third spacing

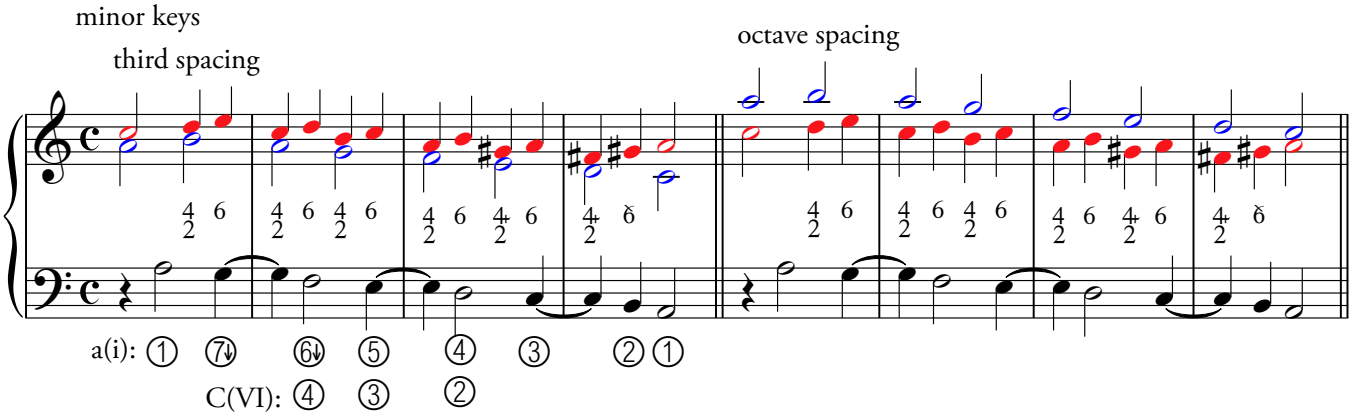
octave spacing



minor keys

third spacing

octave spacing

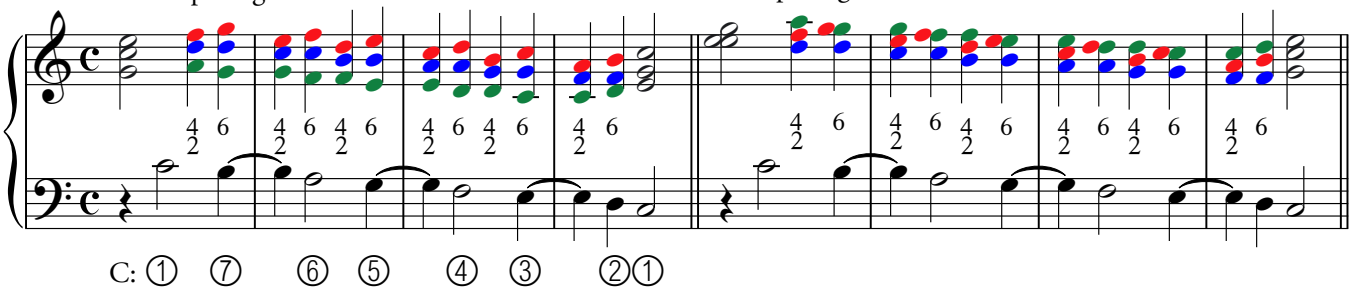


Four voices

major keys

third spacing

fifth spacing

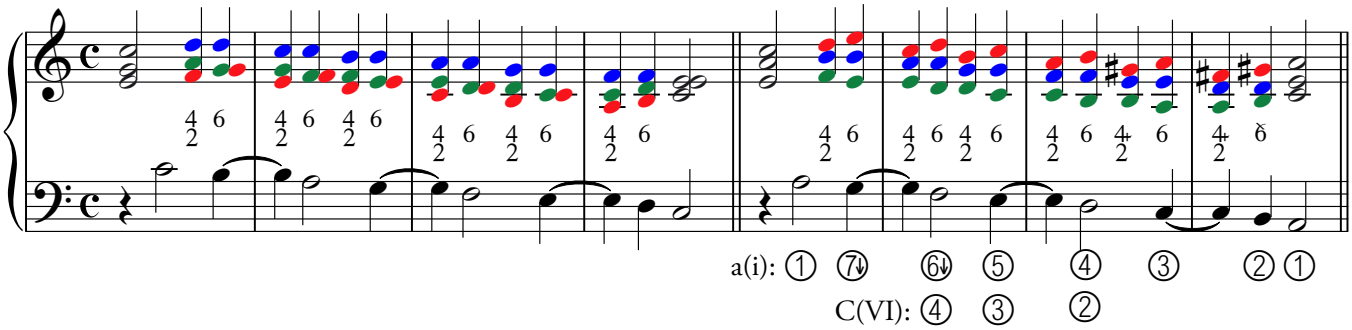


octave spacing

minor key

third spacing

[The third and fifth spacings are not shown.]



Stepwise Bass: Syncopated-Bass Sequence (with 6/5 Chords)

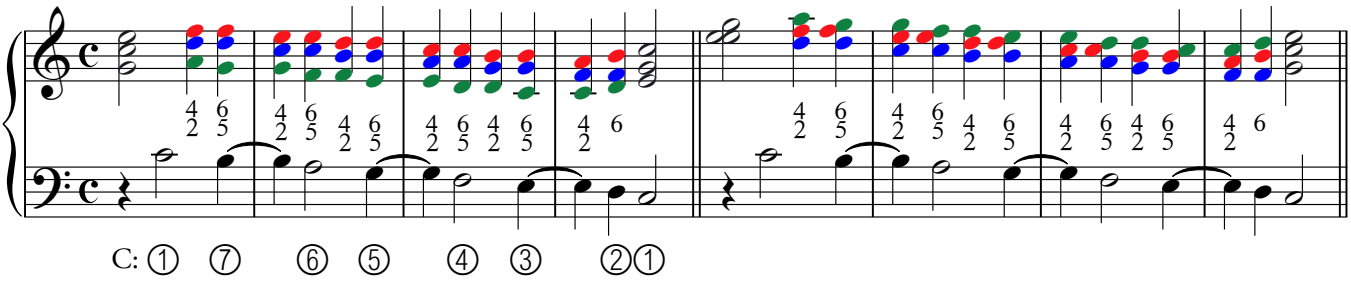
The 4/2 sequence is one of the most common sequences of the baroque period.
Both the bass and the red voice are syncopated in alternation with one another.

Four voices

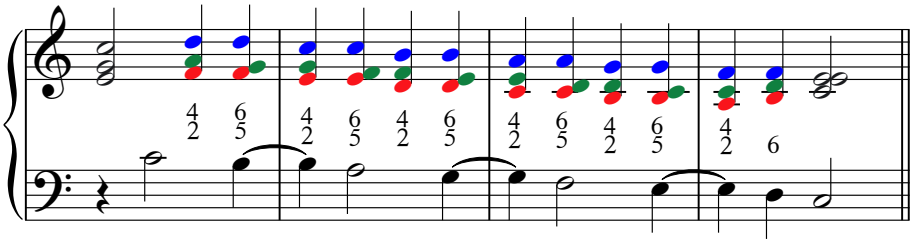
major keys

third spacing

fifth spacing



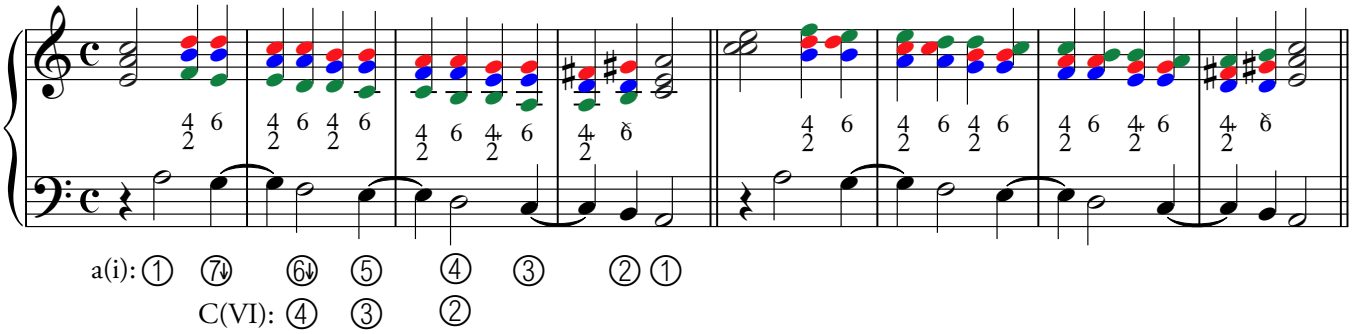
octave spacing



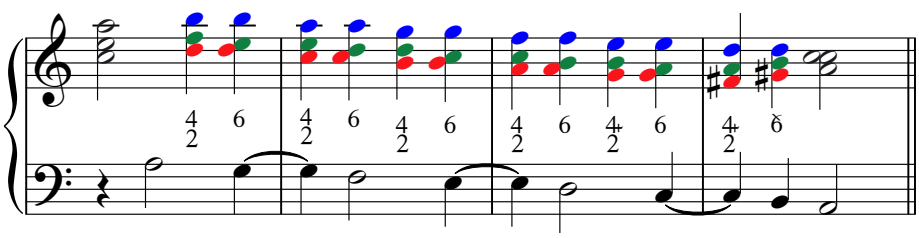
minor keys

third spacing

fifth spacing



octave spacing

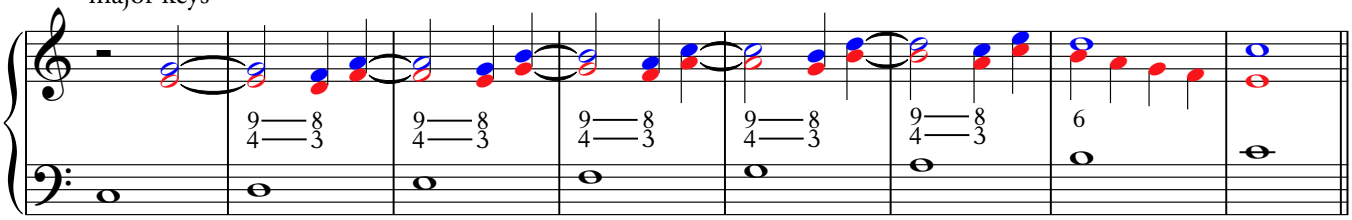


Stepwise Bass: Ascending Sequences

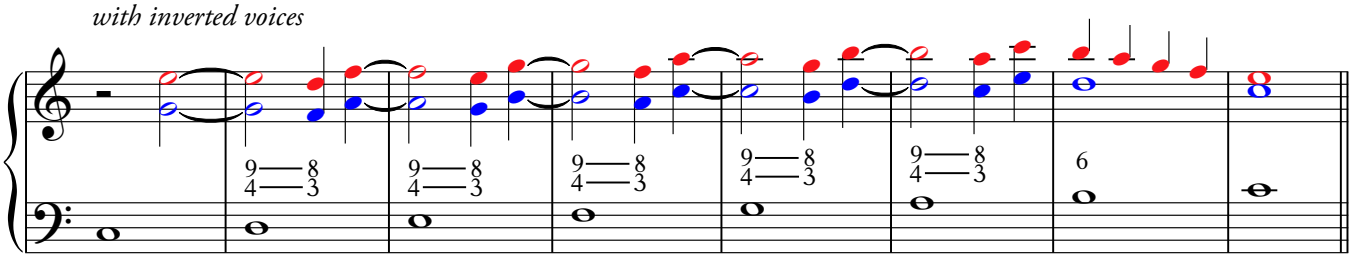
This sequence has the patient in the upper voice always reset to form the preparation of the next *sycnopatio*. Although it can occur with only one of the upper voices, it is more common with two upper voices moving in parallel thirds or sixths. For reasons of space, minor-key versions are not shown.

with 9/4-8/3 *syncopatio* chain

major keys

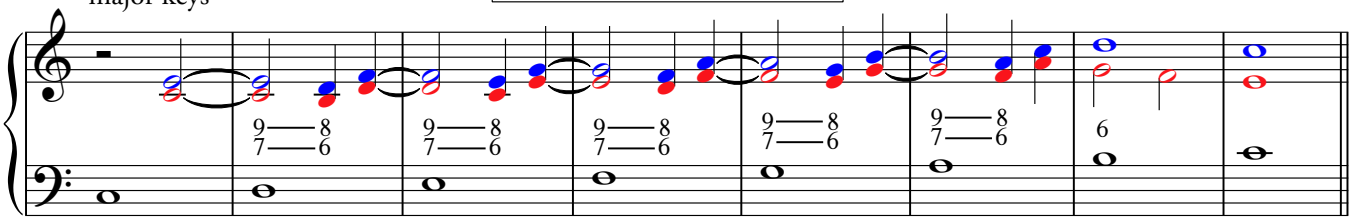


with inverted voices

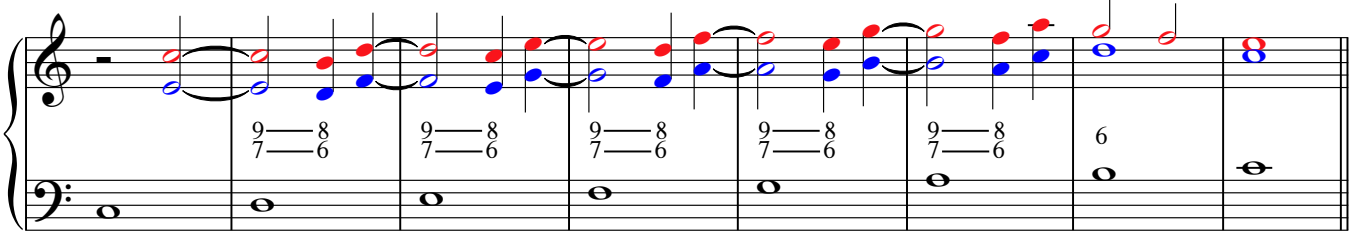


with 9/7-8/6 *syncopatio* chain

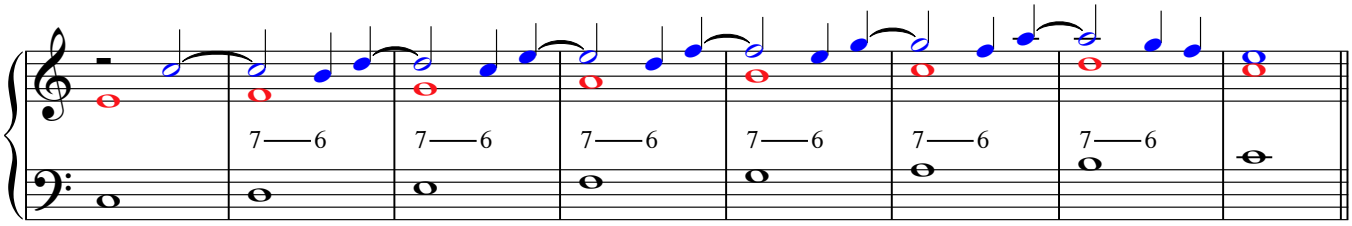
major keys



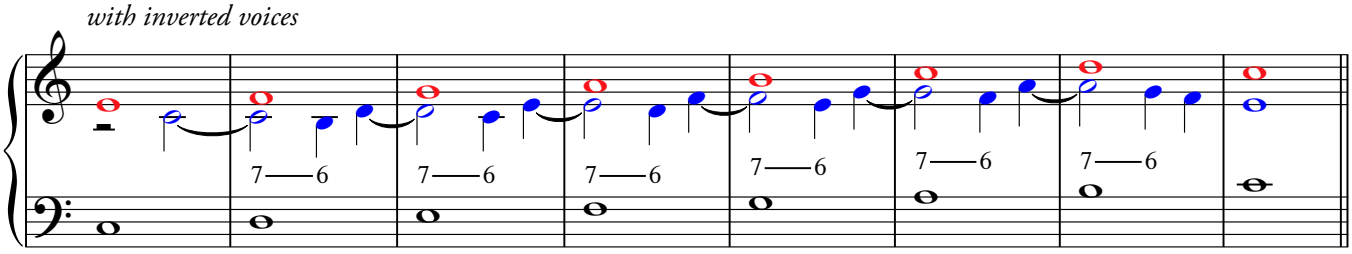
with inverted voices



another variant with 7-6 suspensions



with inverted voices

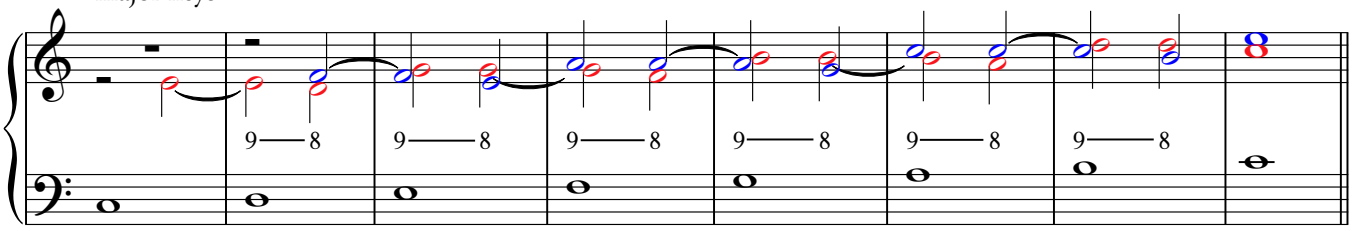


Stepwise Bass: Ascending "Leapfrog" Sequences

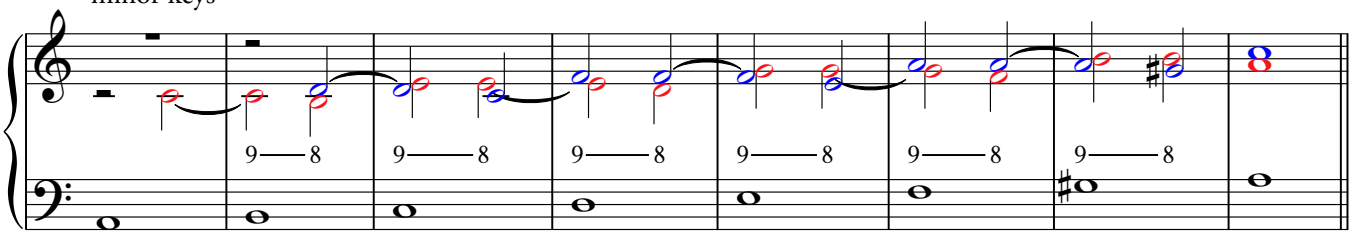
This "leapfrog" sequence gives the impression of a continuous ascending *syncopatio* chain by having each patient leap up a fourth after its resolution, becoming the agent of the next *syncopatio*.
The inverted versions do not occur as often, because the two upper voices end up quite far apart.

with 9-8 *syncopatio* chain

major keys

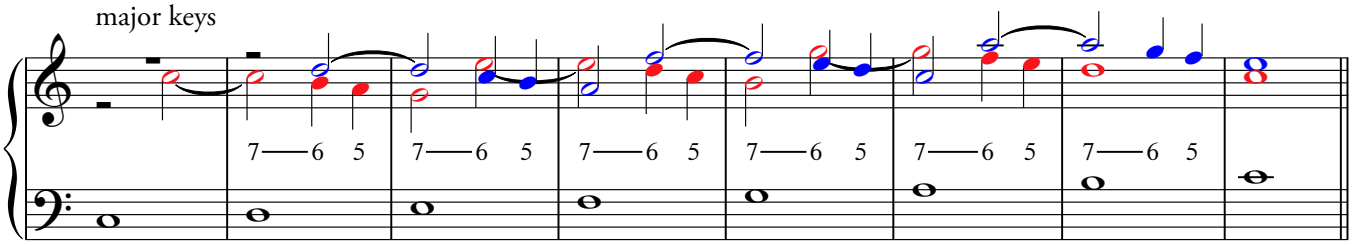


minor keys

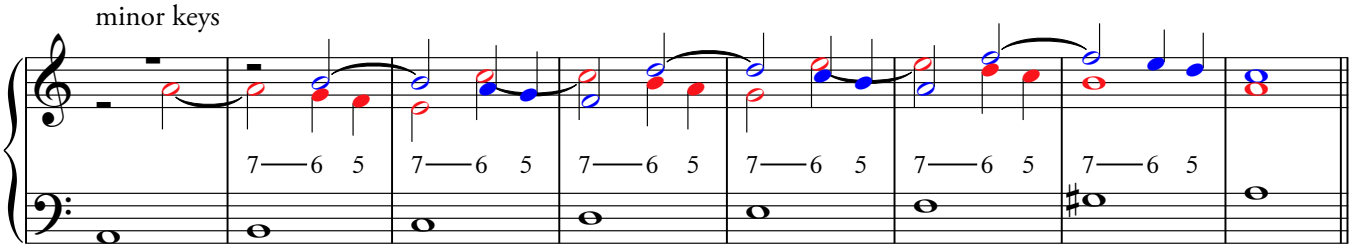


with 7-6 *syncopatio* chain

major keys



minor keys



Leaping Bass: ↓3 ↑2 Sequence with 6/3 Chords

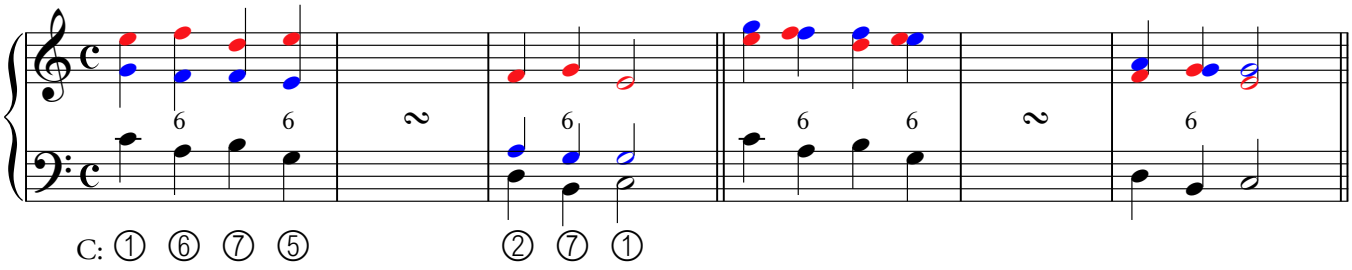
The falling thirds sequence is one of the most common sequences of the baroque period.
To save space, only the beginning and end of each sequence is shown here.
You should fill in the missing measures by continuing the sequential pattern.

Three voices

major keys

third spacing

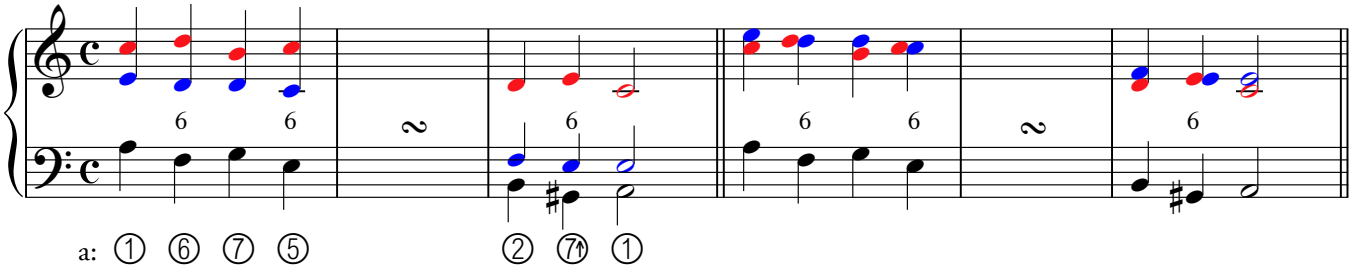
fifth spacing



minor keys

third spacing

fifth spacing



Yet another three-voice version would arise by omitting the tenor voice, leaving only red and green voices below.

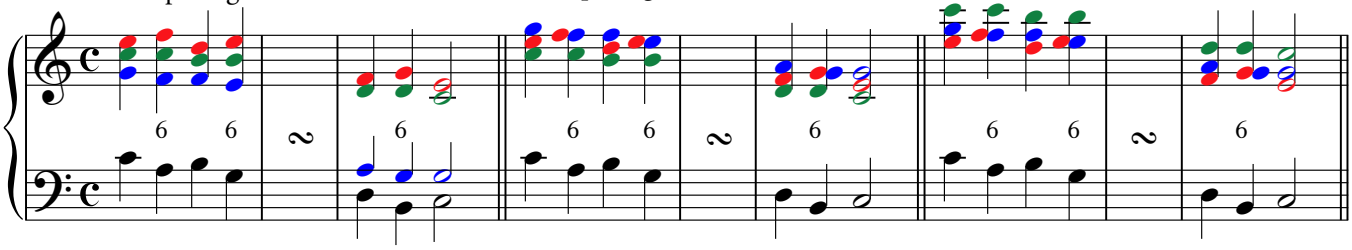
Four voices

major keys

third spacing

fifth spacing

octave spacing

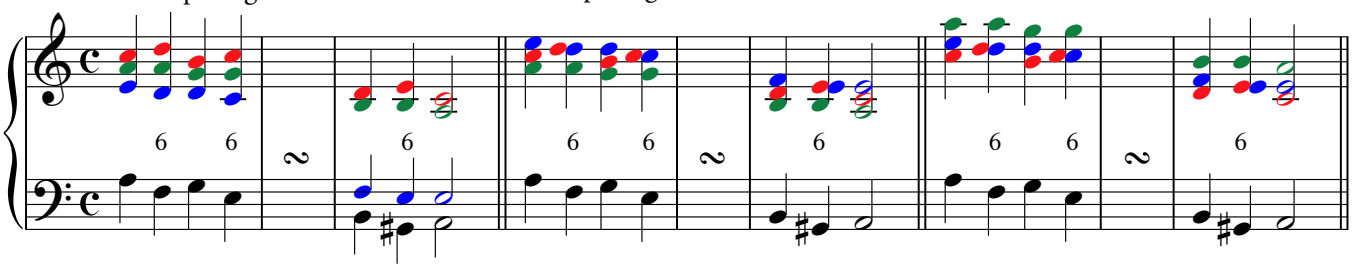


minor keys

third spacing

fifth spacing

octave spacing



Leaping Bass: ↓3 ↑2 Sequence with 6/5 Chords

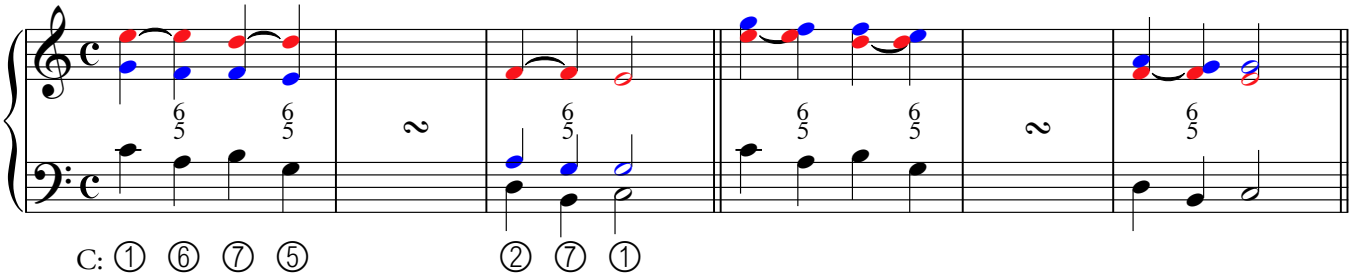
The falling thirds sequence is one of the most common sequences of the baroque period.
Since the 5 in a 6/5 chord is treated like a dissonance, it must therefore be prepared and resolved down by step.
To save space, only the beginning and end of each sequence are shown here.
You should fill in the missing measures by continuing the sequential pattern.

Three voices

major keys

third spacing

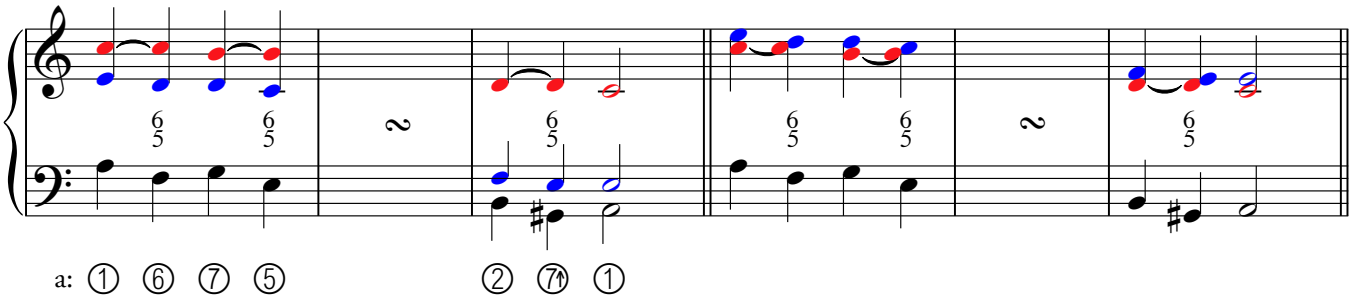
fifth spacing



minor keys

third spacing

fifth spacing



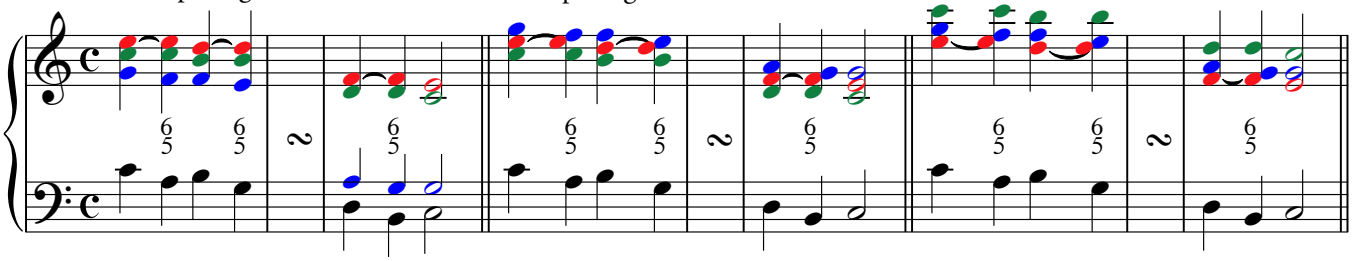
Four voices

major keys

third spacing

fifth spacing

octave spacing

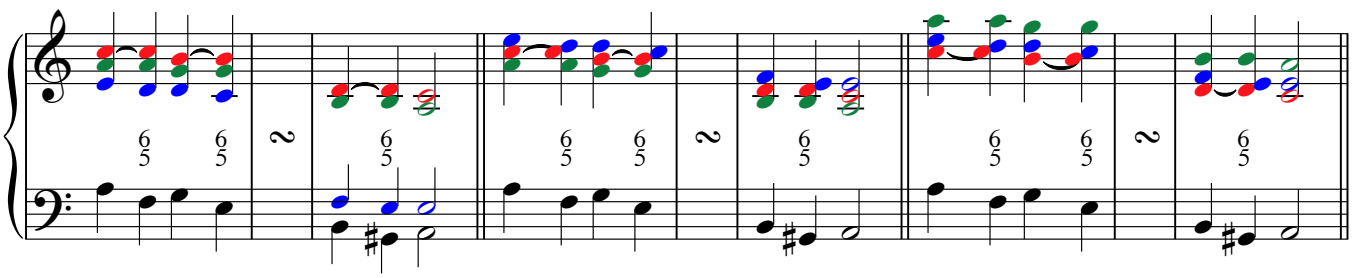


minor keys

third spacing

fifth spacing

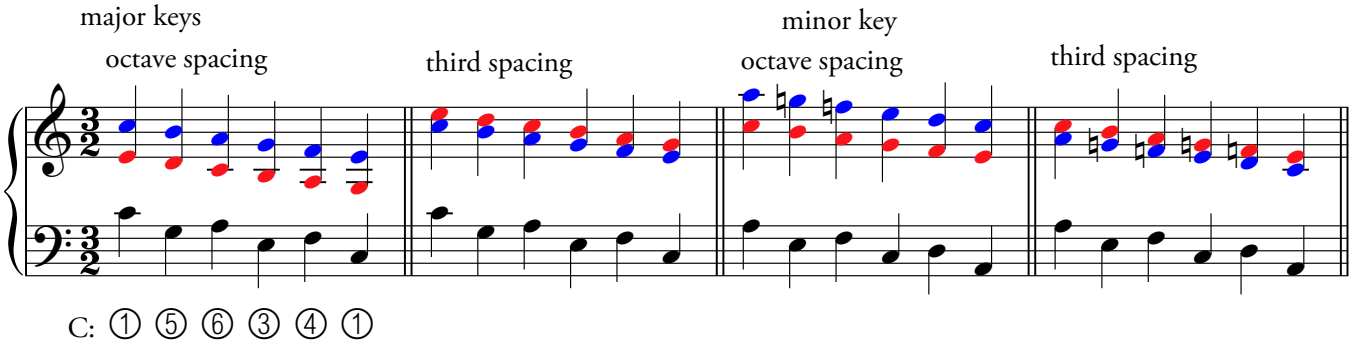
octave spacing



Leaping Bass: ↓4 ↑2 Sequence

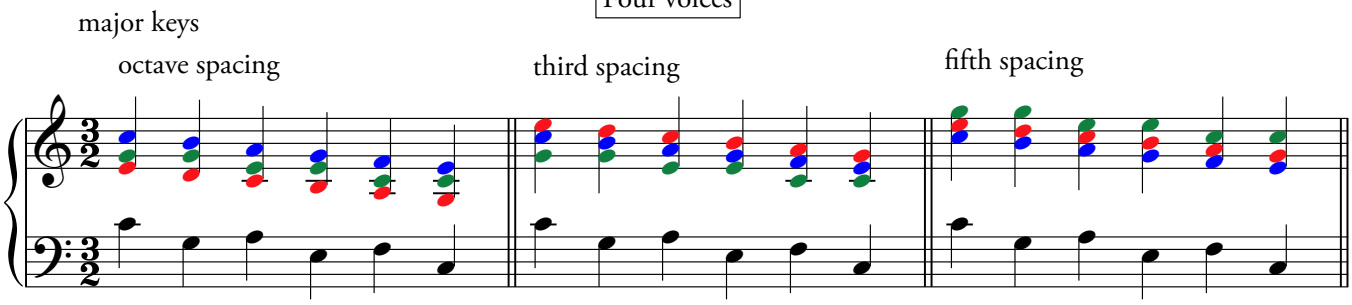
This sequence is famous from Pachelbel's "Canon in D." It is also called a "Romanesca" after the baroque dance.

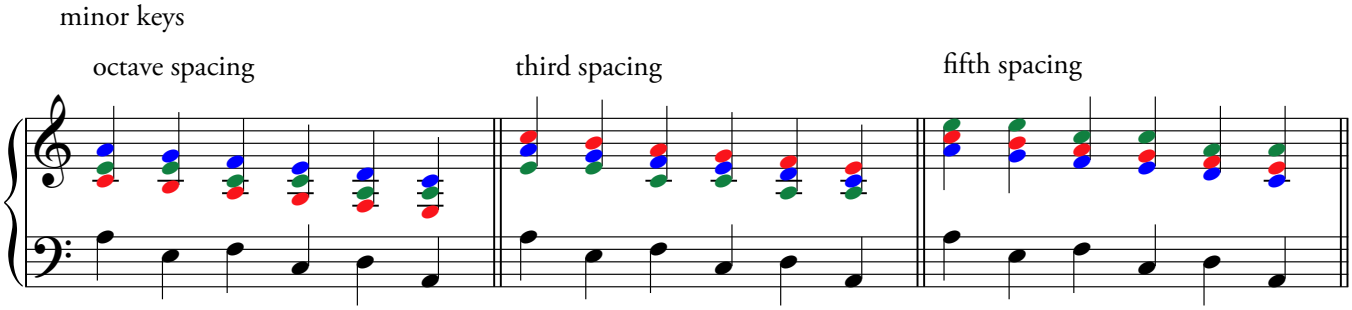
Three voices



C: ① ⑤ ⑥ ③ ④ ①

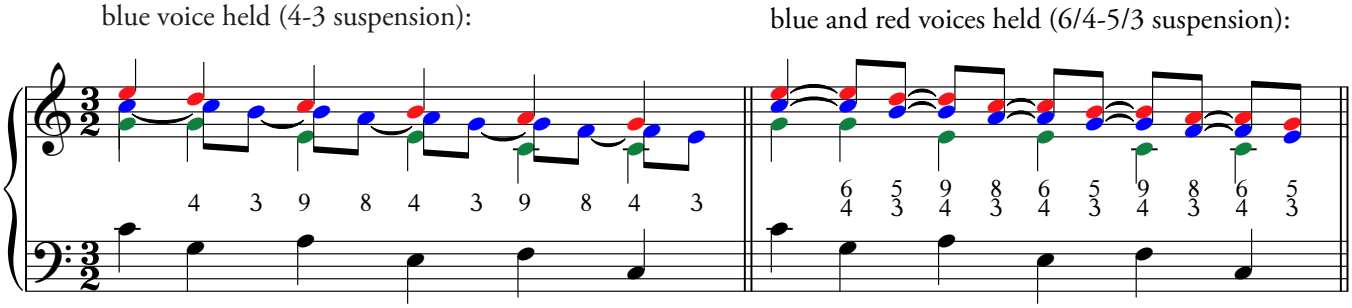
Four voices





c: ① ⑤ ⑥ ③ ④ ①

Syncopatio dissonances can be added by holding over (1) the blue voice, or (2) the blue and red voices.



Leaping Bass: ↑4 ↓2 Sequence

This sequence is repeated either up by step or up by third. It may be played with or without tonicization (the sharps). To save space, only major-key versions are shown.

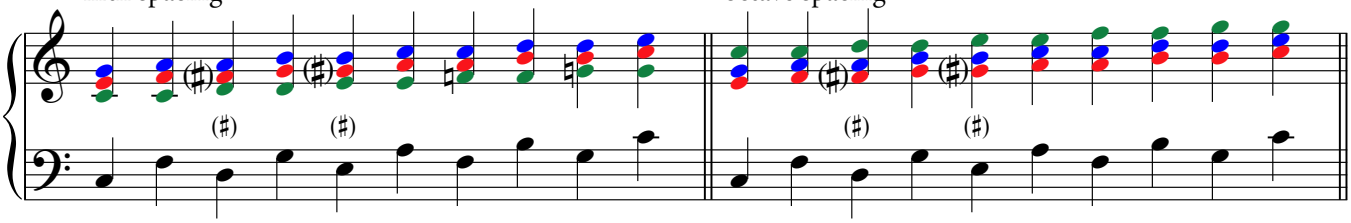
sequenced up by step

major keys

Four voices

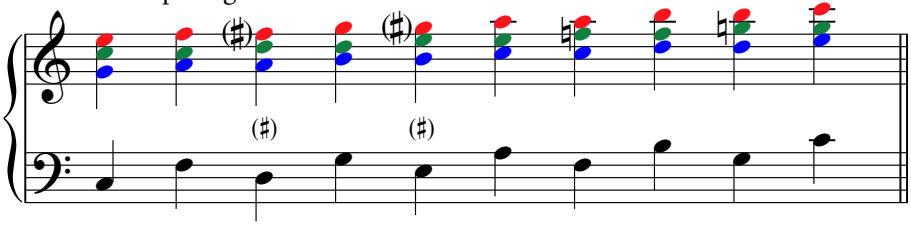
fifth spacing

octave spacing



C: ① ④ ④ ⑦ ⑤ ①
F: ⑤ ①
G: ⑤ ①
a: ⑤ ①

third spacing



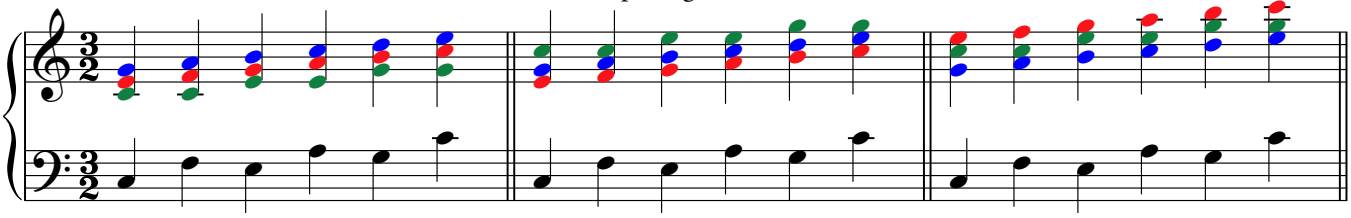
sequenced up by third

major keys

fifth spacing

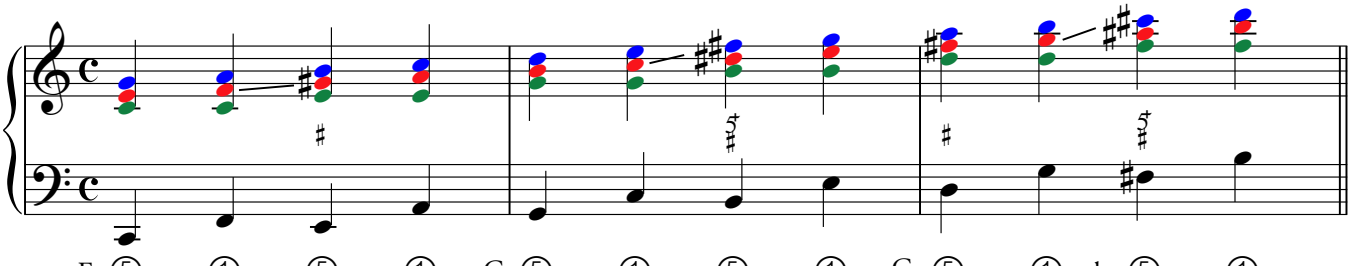
octave spacing

third spacing



C: ① ④ ③ ⑥ ⑤ ①

sequenced up by third (modulating), with leaps of an augmented 2 in the red voice



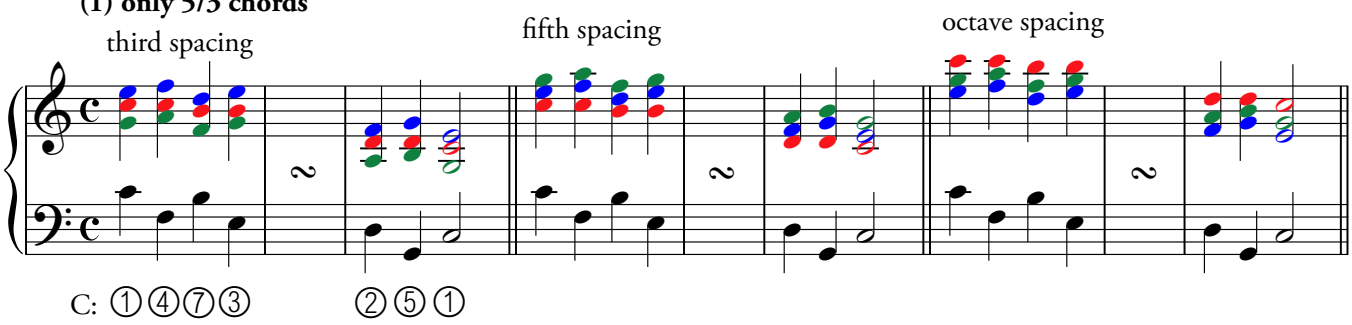
F: ⑤ ① a: ⑤ ① C: ⑤ ① e: ⑤ ① G: ⑤ ① b: ⑤ ①

Leaping Bass: ↓5 ↑4 Sequence

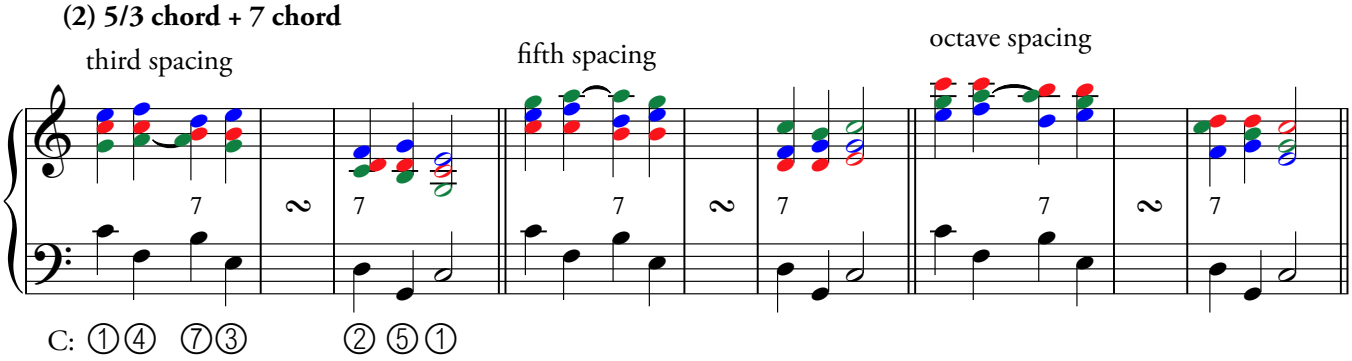
The falling fifths ("circle of fifths") sequence is one of the most common in the baroque period.
It occurs in three forms: (1) only 5/3 chords, (2) alternating 5/3 and 7 chords, (3) vice versa, or (4) only 7 chords.
Notice how the dissonant 7 is always prepared (tied over) by common tone in the same voice before it occurs.
To save space, only the beginning and end of each sequence is shown in major and in four voices.

Four voices

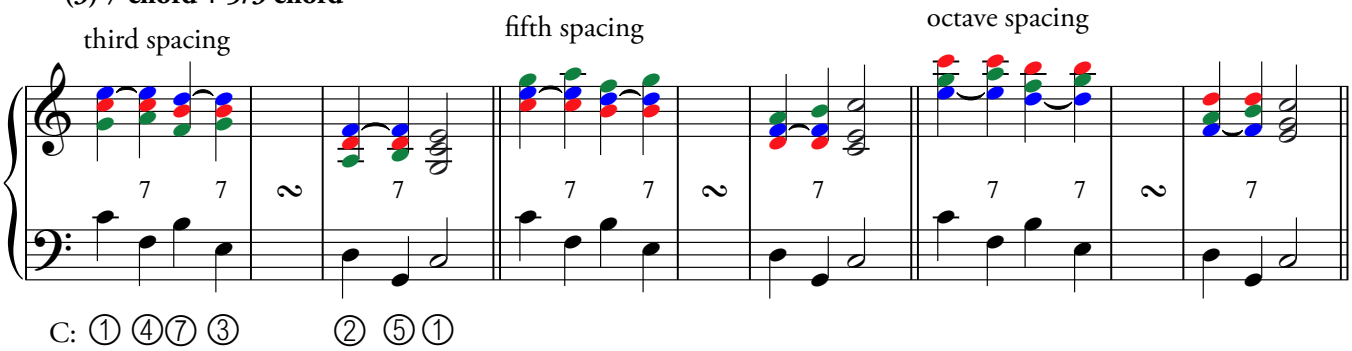
(1) only 5/3 chords



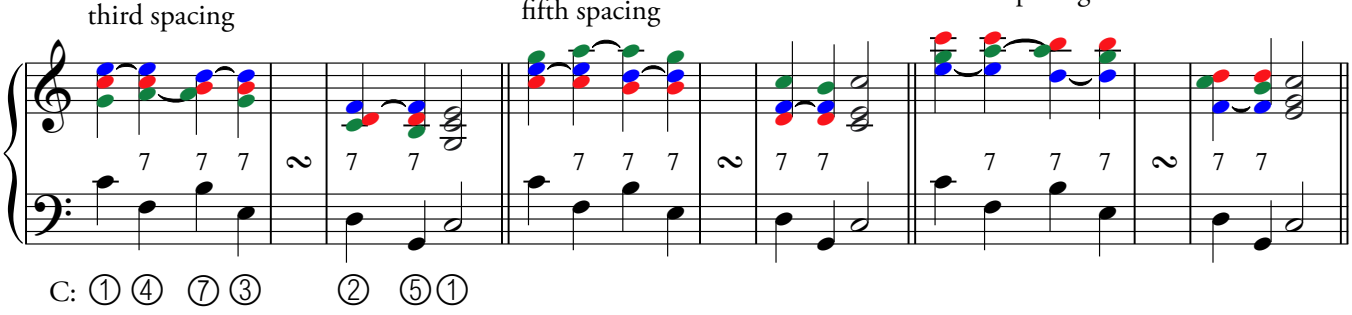
(2) 5/3 chord + 7 chord



(3) 7 chord + 5/3 chord



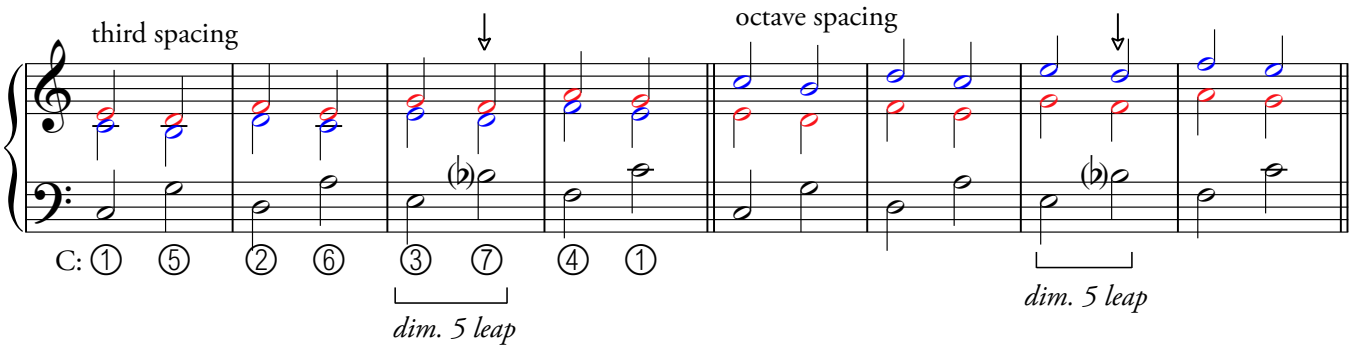
(4) only 7 chords



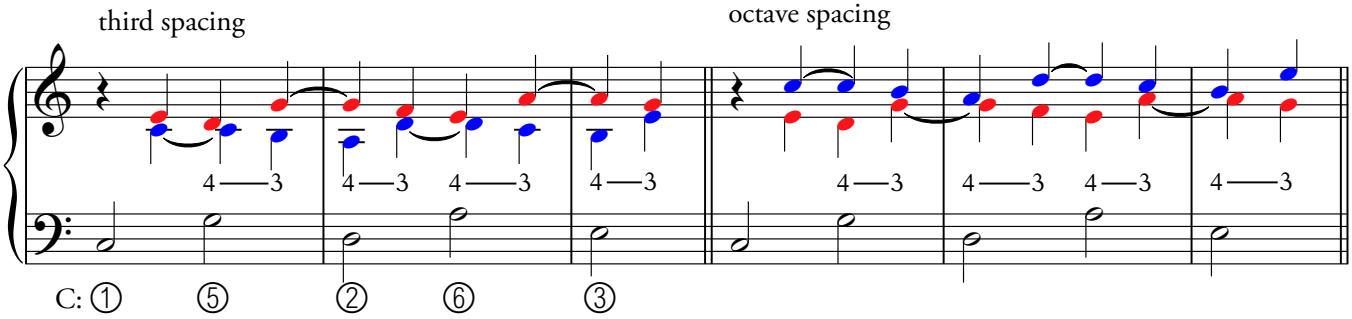
Leaping Bass: ↑5 ↓4 Sequence

This sequence is best used on those bass degrees that have a perfect fifth above them. Arrows indicate dim.5ths. One can lower the bass note chromatically to solve this, but this creates a dissonant bass leap and cross relation. A cross relation is an augmented or diminished interval occuring in different voices in consecutive harmonies, in this case the augmented unison between B♮ and B♭. To save space, only major-key versions are shown.

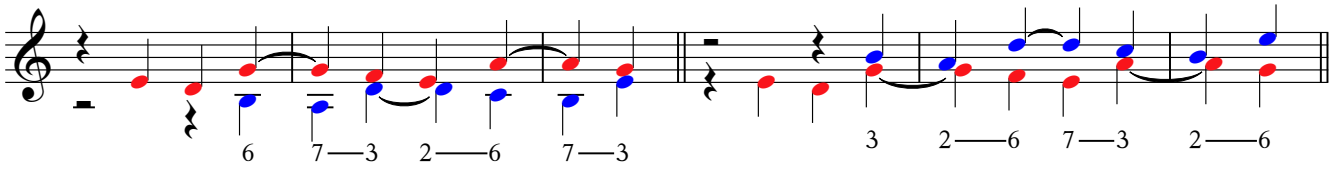
Three voices



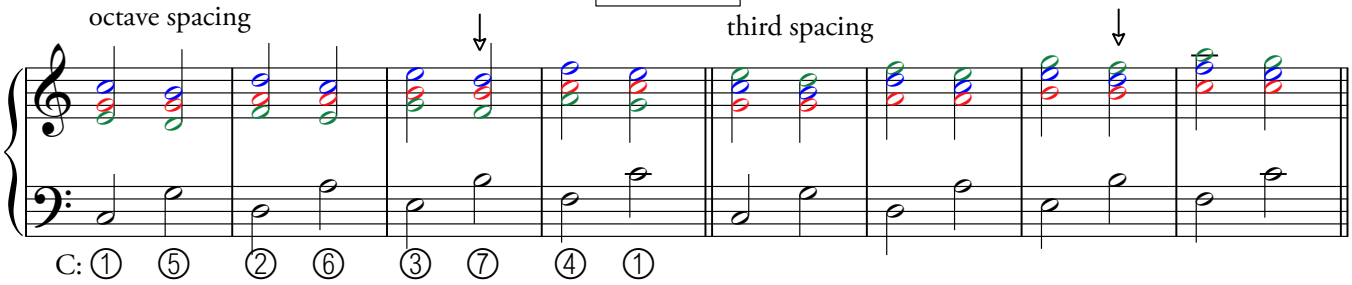
This sequence has a typical three-voice solution with 4-3 syncopatio dissonances.

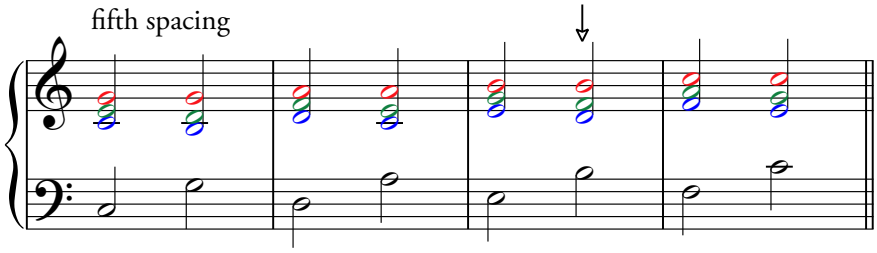


The upper voices of this sequence often appear on their own, sometimes as a canon:



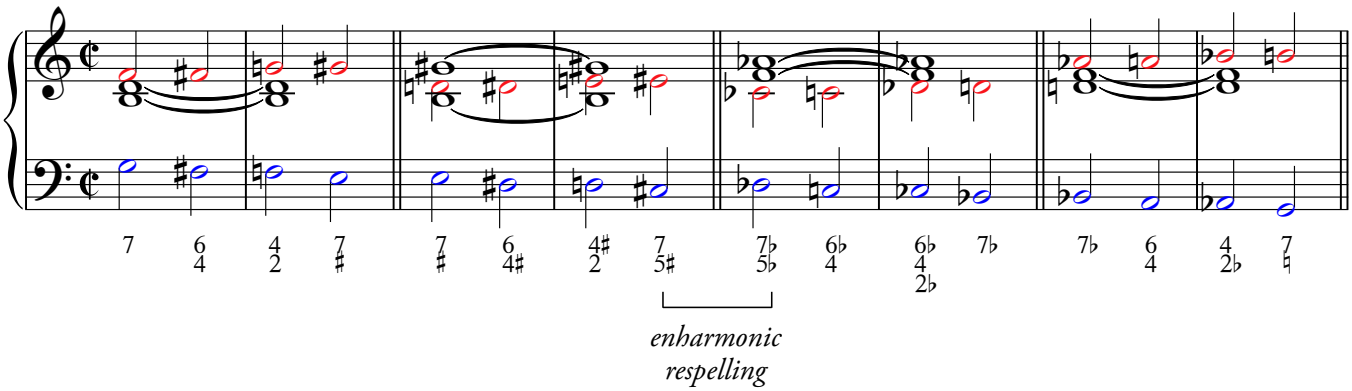
Four voices

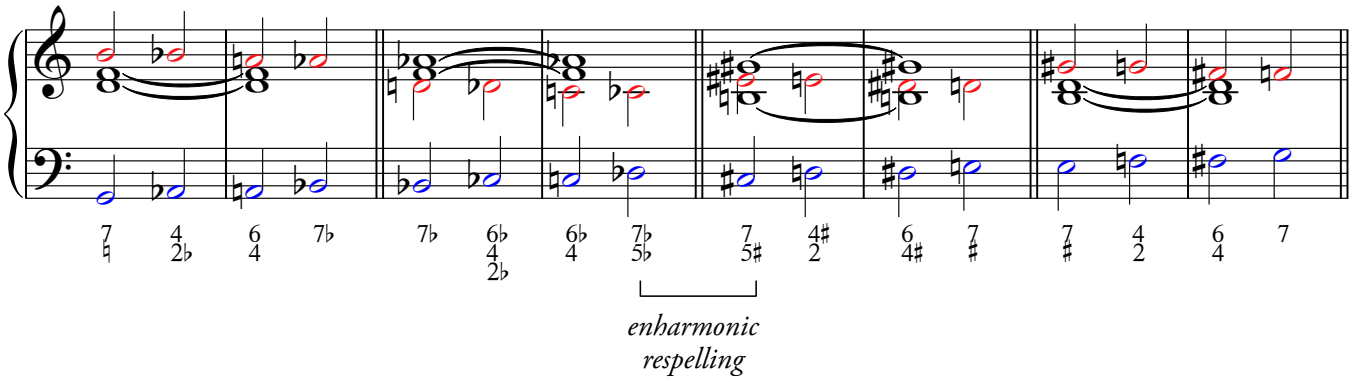




Chromatic Bass: Omnibus Sequence

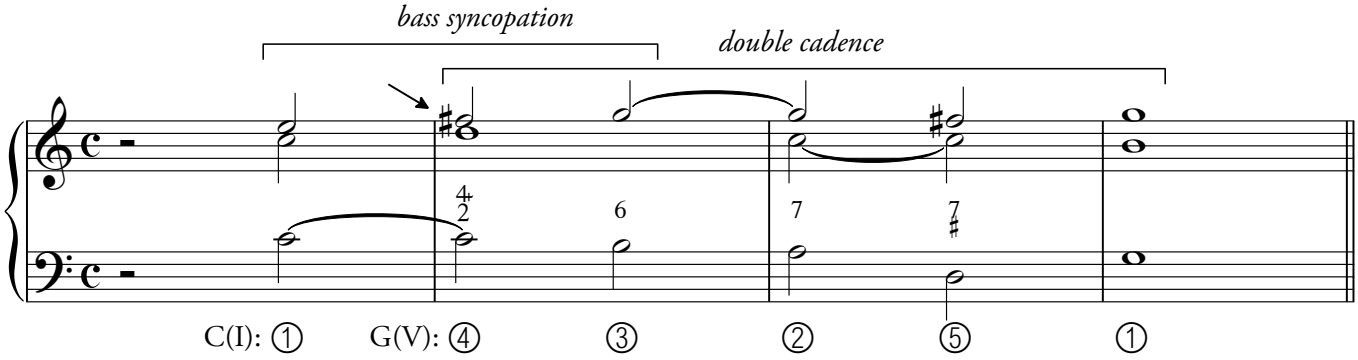
The omnibus sequence or progression is usually more associated with the 19th century, but it first emerged in the late 18th century. Composers only use a segment of the entire sequence. Notice how two voices hold while the other two move chromatically in contrary motion. The harmonies also repeat after each group of four chords. The entire progression is reversible. The omnibus is thus a special case of "wedge" voice leading, or when two parts move contrary by step. It is difficult to decipher the key of the omnibus sequence, since it is so chromatic. Therefore, no bass scale degrees have been added. In practice, any chord can be taken as the start of a key. Thus, one function of the omnibus sequence is to modulate quickly to distantly related keys.



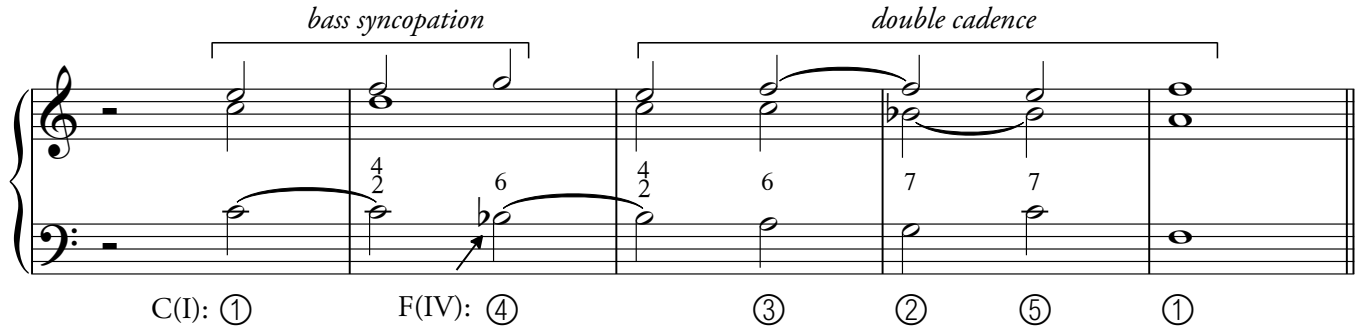


Appendix 1: Common Modulation Strategies

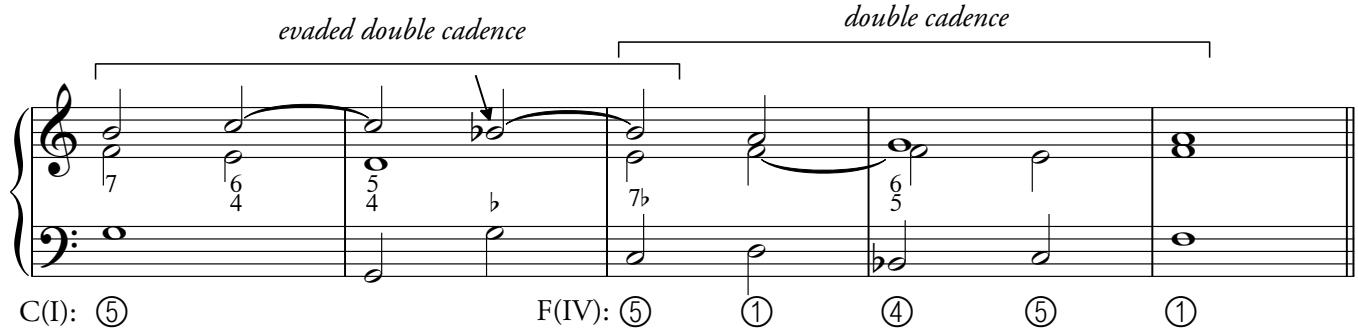
modulation up a fifth via bass syncopation and ♯4/2



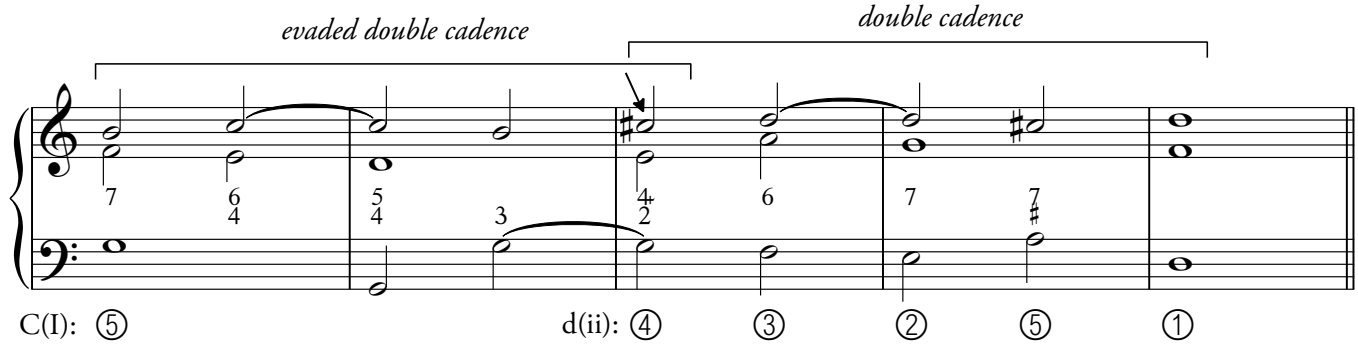
modulation down a fifth via *motivo di cadenza* (see p. 13)



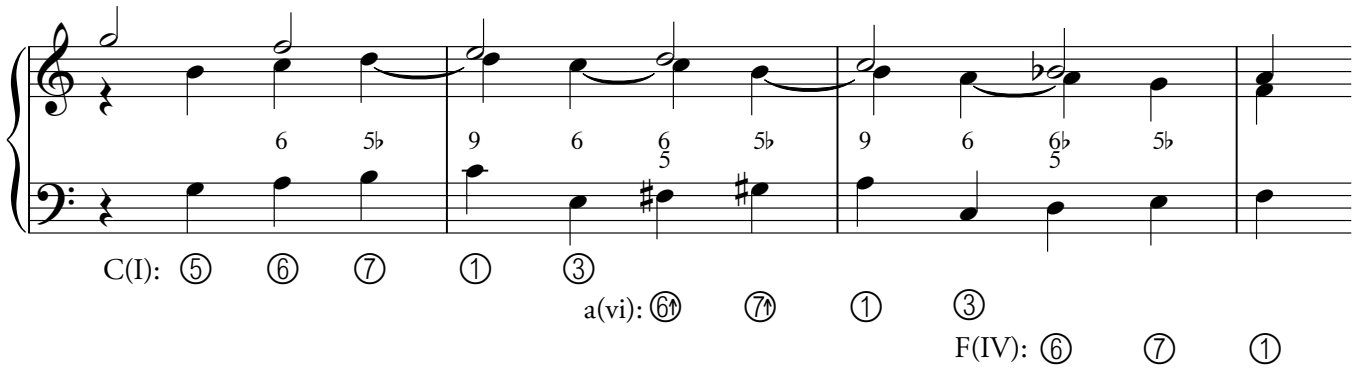
modulation down a fifth via *motivo di cadenza* (see p. 13)



modulation up a second (see page 14)



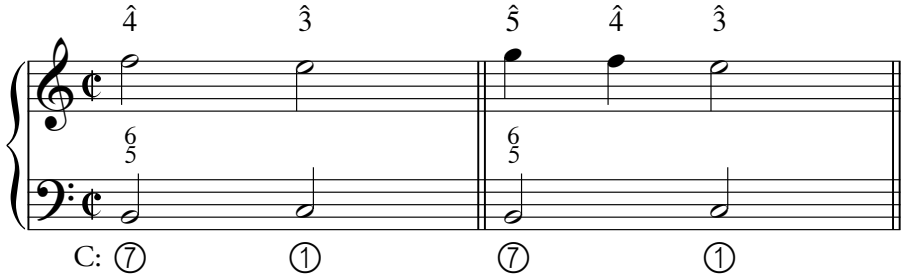
modulation down a third each time (see "carousel" on p. 14)



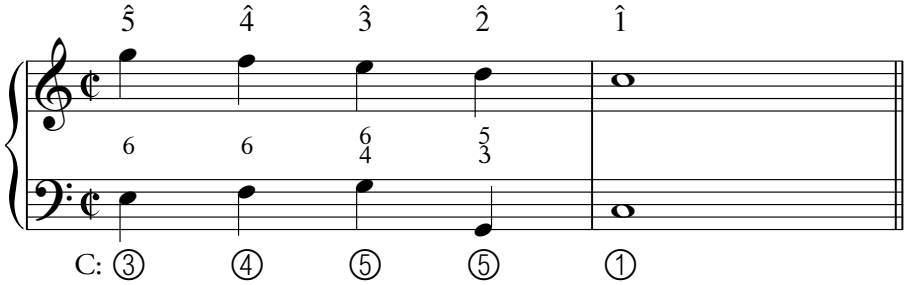
Appendix 2: Alphabetical List of Schemata

The vocabulary of schemata (singular: schema) analysis is mostly a product of recent music theory scholarship—that is, it is for the most part not historical in origin. Schemata are best identified in terms of outer-voice scale degrees in a given rhythmic pattern of strong and weak beats. That is, the key and time signatures given here are somewhat arbitrary. In context, schemata are varied and ornamented in countless ways. Roman numerals indicate the relationship of tonicized keys to the main key of C major. Not all schemata can be transferred to the minor mode. Because middle voices are subordinate, they are only indicated as thoroughbass figures. Parenthesis show possible variations. Schemata can most clearly be seen in galant and classical works (i.e. after c.1720 into the early 19th century). The schemata are labelled according to where they most often occur—beginning, middle, or end of a phrase—but some variation is possible.

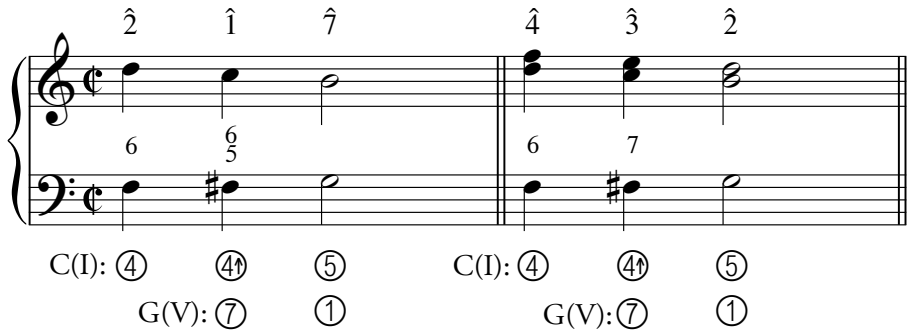
Comma (middle or end of phrase)



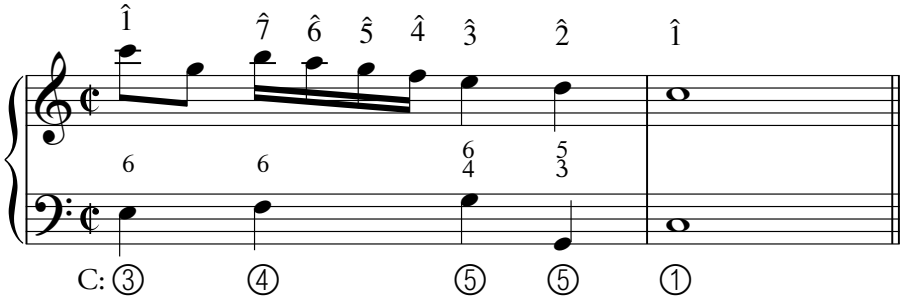
"Complete" Cadence (end of phrase)



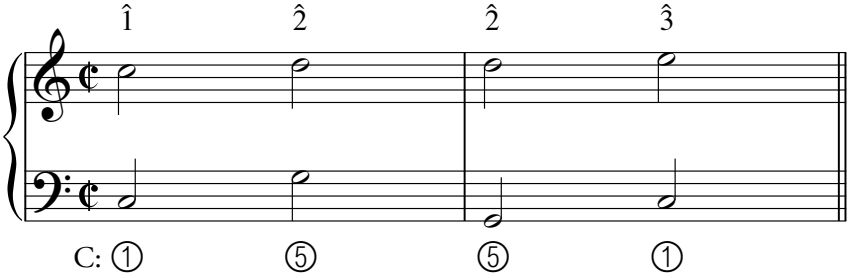
Converging Cadence (middle or end of phrase)



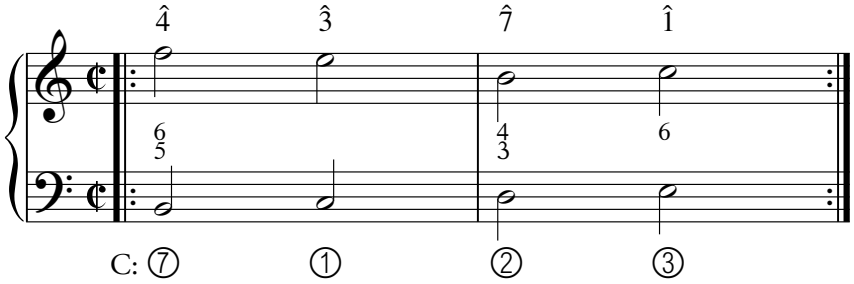
Cudworth Cadence (end of phrase)



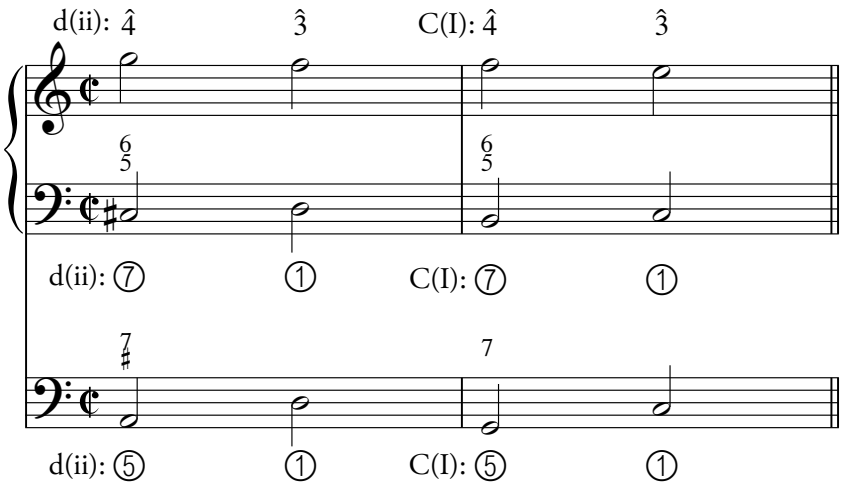
Do-Re-Mi (beginning of phrase)



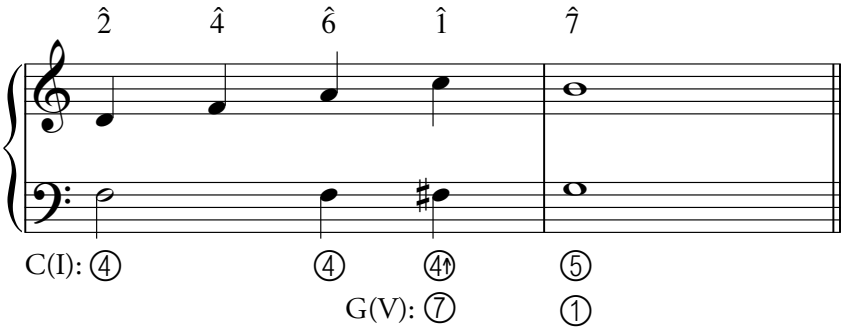
Fenaroli (middle of phrase); often *forte*, repeated *piano*



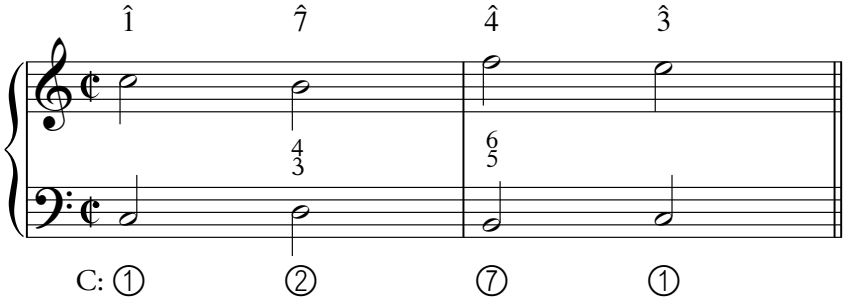
Fonte ("fountain"; beginning or middle of phrase)



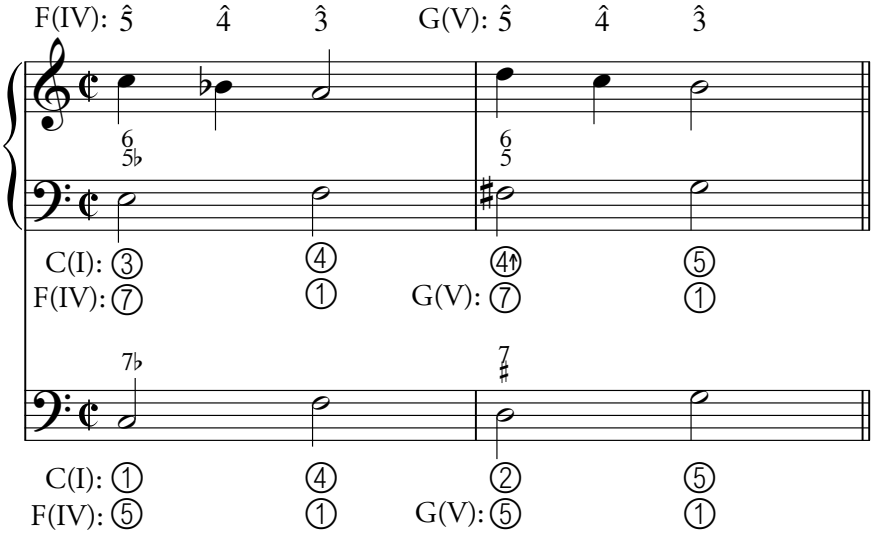
Indugio (middle of phrase)



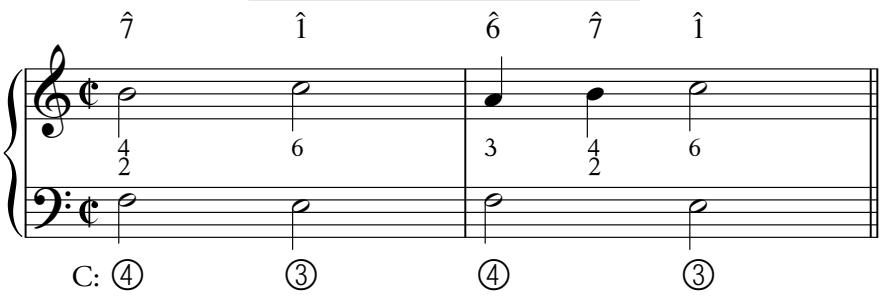
Meyer (beginning of phrase)



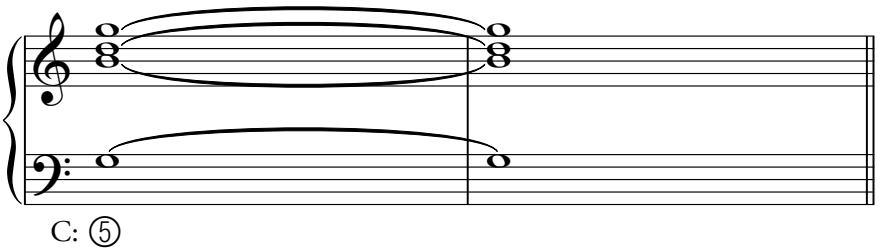
Monte ("mountain"; middle of phrase)



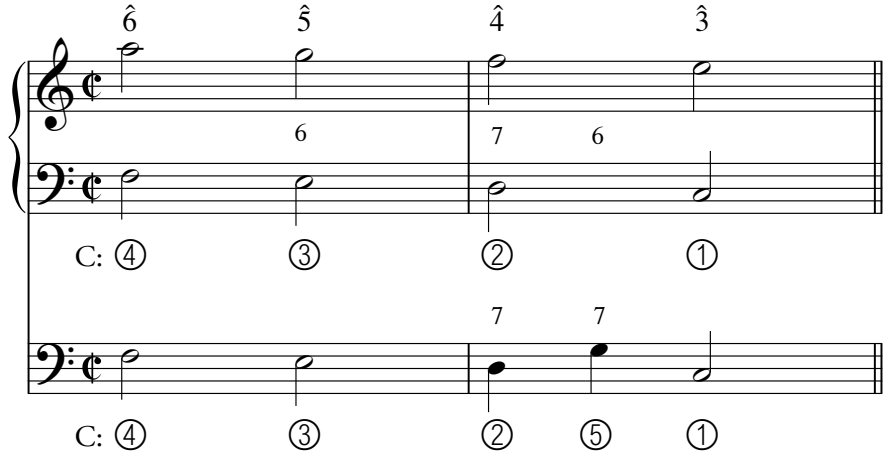
Passo Indietro (middle of phrase)



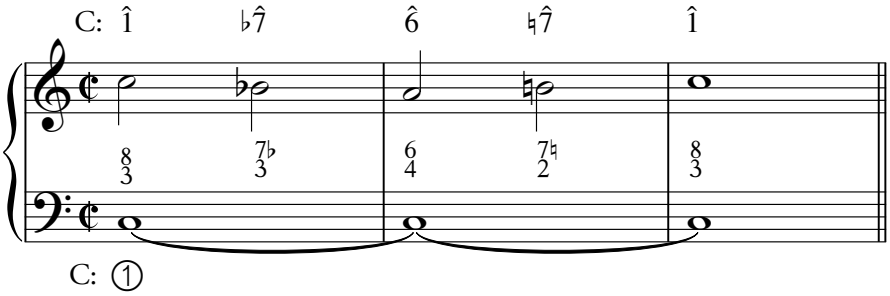
Ponte ("bridge"; beginning or middle of phrase) - any prolongation of ⑤ in the bass



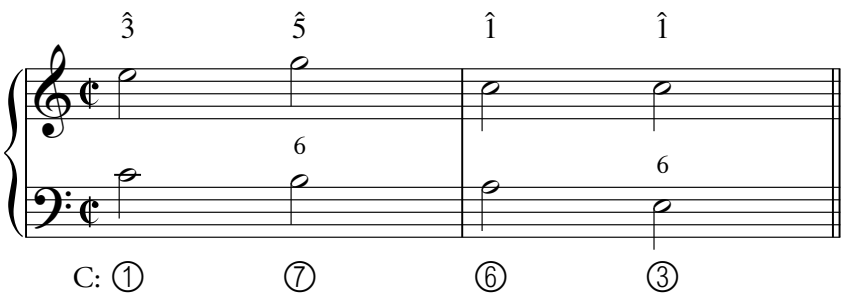
Prinner / La-Sol-Fa-Mi (middle of phrase)



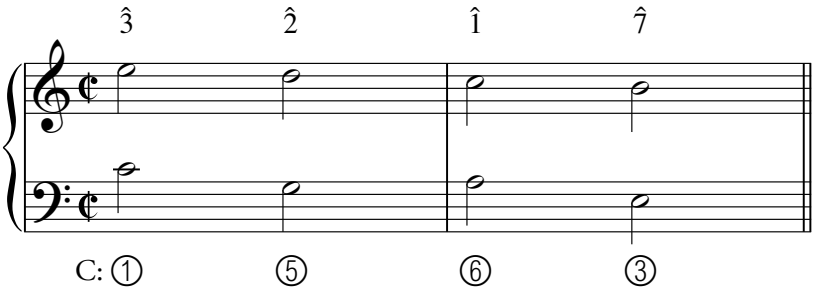
Quiescenza (beginning or end of phrase)



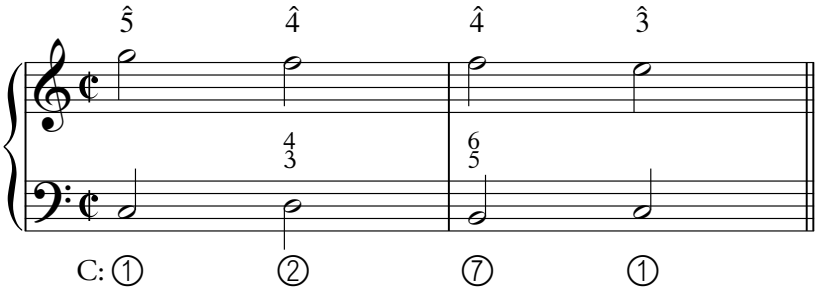
"New" Romanesca (beginning of phrase)



"Old" Romanesca / Pachelbel Canon in D (beginning of phrase)



Sol-Fa-Mi (beginning of phrase)



Select Bibliography

Primary Sources

Bach, Carl Philipp Emanuel. 1753–1762. *Versuch über die wahre Art das Clavier zu spielen*. 2 parts. Berlin: Author. Translated and edited by William J. Mitchell as *Essay on the True Art of Playing Keyboard Instruments*. New York: Norton, 1949.

Banchieri, Adriano. 1605. *L'Organo Suonarino*. Venice: Ricciardo Amadino. Editions with several modifications in 1611 and 1622 (the latter reprinted in 1638). Translated and edited by Donald Earl Marcase as "Adriano Banchieri, L'Organo Suonario: Translation, Transcription and Commentary." PhD Disseration, Indiana University, 1970. Translated and edited by Edoardo Bellotti. Latina: Il Levante Libreria Editrice, 2014.

Baudrexel, P. J.? 1689. *Kurzer jedoch Gründlicher Wegweiser*. Augsburg. Subsequent editions: 1693, 1696, 1698, 1700, 1708, 1718, 1731, and 1753. 1698 edition translated in six installments in Hewlett (1987–1988).

Bianciardi, Francesco. 1607. *Breve regola per imparar a sonare sopra il Basso con ogni sorte d'istrumento*. Siena.

Bononcini, Giovanni Maria. 1673. *Musico prattico che brevemente…* Bologna. Reprints in 1678 and 1688. Part II translated into German as *Musicus practicus, welcher in kürtze weiset die Art, wie man zu vollkommener Erkäntniß aller derjenigen Sachen… gelangen kan*. Stuttgart: Paul Treu, 1701. See also Karl Heinz Holler, Giovanni Maria Bononcini's *Musico Prattico: In seiner Bedeutung für die musikalische Satzlehre des 17. Jahrhunderts*. Strasbourg: Heitz, 1963.

Campion, François. 1716. *Traité d'Accompagnement et de Composition selon la règle des octaves de musique*. Paris: G. Adam. English translation in Luann Dragone, "François Campion's Treatise on Accompaniment: A Translation and Commentary." Theoria 6 [1992]: 135–162.
———. 1730. *Addition au Traité d'accompagnement et de composition par la règle de l'octave*. Paris.

Durante, Francesco. 2003. *Bassi e fughe. Un manuale inedito per riscoprire la vera prassie secutiva della Scuola Napoletana del Settecento*. Edited by Giuseppe A. Pastore. Padova: Armelin Musica.

Fenaroli, Fedele. 1978. *Partimenti ossia basso numerato. Bibliotheca musica Bononiensis*, Sezione 4, n. 61. Bologna: A. Forni. Originally published in Naples, 1775.

Gasparini, Francesco. 1708. *L'harmonico pratico al cimbalo. Venice: Antonio Bortoli*. Translated by Frank S. Stillings and edited by David L. Burrows as *The Practical Harmonist at the Harpsichord*. New Haven: Yale School of Music, 1963.

Gugl, Matthäus. 1719. *Fundamenta Partiturae in Compendio Data. Das ist: Kurzer und gründlicher Unterricht, den General-Bass, oder die Partitur nach den Regeln recht und wohl schlagen zu lernen*. Salzburg: Mayr. Subsequent editions in 1727, 1757, and 1777.

Gronau, Daniel Magnus. 2016. Ms. Akc. 4125 at the Danzig Library at the Polish Academy of Sciences. Modern edition: *Daniel Magnus Gronau (1699–1747): 517 Fugues*. 2 vols. Edited by Adrzej Mikolaj Szadejko. Gdansk: Akademia Muzyczna im. Stanisława Moniuszki w Gdańsku.

Haydn, Michael. 1833. *Partiturfundament*. Edited by Martin Bischofreiter. Salzburg: Oberer. See Flotzinger 1994.

Heinichen, Johann David. 1711. *Neu erfundene und Gründliche Anweisung*. Hamburg: Schiller. Translated by Benedikt Brillmayer and Casey Mongoven as *Johann David Heinichen's Gründliche Anweisung (1711)*. Harmonologia: Studies in Music Theory, No. 17. Hillsdale, NY: Pendragon Press, 2012.
———. 1728. *Der General-Bass in der Composition*. 2 vols. Freiberg: Christoph Matthai. Partial translation and commentary by George J. Buelow as T*horoughbass Accompaniment According to Johann David Heinichen*. Nebraska: University of Nebraska Press, 1966; revised edition 1986.

Kellner, David. 1732. *Treulicher Unterricht im General-Bass*. Hamburg: Kissner. 2nd Edition, Hamburg: Herold, 1737, with preface by G. P. Telemann. 2nd edition translated by Derek Remeš in vol. 1 of *Realizing Thoroughbass Chorales in the Circle of J. S. Bach*. Colfax, NC: Wayne Leupold Editions, 2019. 7th edition, published around 1788 (not 1787, as is usually stated) by Herold in Hamburg, with appendix including C. P. E. Bach's *Neue Melodien zu einigen Liedern des neuen Hamburgischen Gesangbuchs* (1787).

Maichelbeck, Franz Anton. 1736. *Die auf dem Clavier spielende, und das Gehör vergnügende Caecilia, das ist: VIII Sonaten, so nach der jetzigen Welschen Art, Regel und Gehörmässig ausgearbeitet, sowohl auf denen Kirchen als Zimmer-Clavieren zu gebrauchen…* opus 1. Augsburg: Lotter.
———. 1738. *Die auf dem Clavier lehrende Caecilia welche guten Unterricht ertheilet, wie man nicht allein im Partitur-Schlagen mit 3. und 4. Stimmen spielen, sondern auch, wie man aus der Partitur Schlag-Stück verfertigen, und allerhand Läuff erfinden könne...* opus 2. Augsburg. Facsimile, Stuttgart: Cornetto, 2008.

Niedt, Friedrich Erhard. 1700–1717. *Musicalische Handleitung*. 3 vols. Hamburg. Vol. 1 reissued 1710. Vol. 2 reissued in 1721, edited by Johann Mattheson. Hamburg. Vol. 3 published posthumously in 1717, edited by Mattheson. Translated as: *F. E. Niedt, The Musical Guide Parts I–III (1700–1721)*. Edited by Pamela Poulin and Irmgard Taylor. New York: Oxford University Press, 1989.

Pasquini, Bernardo. 2006–2009. Vol. 6: *Opere per tastiera, London, Bl Ms. Add. 31501, I*, edited by Edoardo Bellotti. Latina: Il Levante Libreria Editrice, 2006. Vol. 7: *London, Bl Ms. Add. 31501, II–III*, edited by Armando Carideo. Latina: Il Levante Libreria Editrice, 2006. Vol. 8: *Saggi di contrappunto / Regole…per ben accompagnare con il Cembalo*, edited by Armando Carideo. Latina: Il Levante Libreria Editrice, 2009.

Renwick, William, ed. 2001. *The Langloz Manuscript: Fugal Improvisation through Figured Bass*. New York: Rosen Publishing Group.

Spiridion a Monte Carmelo [Johann Nenning]. 1670–1677. *Nova Instructio pro pulsandis organis Spinettis Manuchordiis… pars prima* (Bamberg, 1670), pars secunda (Bamberg 1671), pars tertia & pars quarta (Würzburg, 1675–1677). Modern edition edited by Eduardo Bellotti as *Tastature Musiche intavolate per strumenti da tasto*, vols. 11 & 21. Vol. 1, Colledara: Andromeda, 2003. Vol. 2, Latina: Il Levante, 2007.

Vorschriften und Grundsätze zum vierstimmigen spielen des General-Bass oder Accompagnement für seine Scholaren in der Music. 1738. Bibliothèque du Conservatoire Royal de Musique, Brussels, ms. 27.224. Facsimile with English translation: *J. S. Bach's Precepts and Principles For Playing the Thorough-Bass or Accompanying in Four Parts, Leipzig, 1738*. Edited by Pamela L. Poulin. Oxford: Clarendon Press, 1994. Philipp Spitta, *Johann Sebastian Bach: His Work and Influence on the Music of Germany, 1685–1750*. Translated by Clara Bell and J. A. Fuller-Maitland, 3:315–347. London: Novello, 1899; reprint, New York: Dover, 1951. *Bach Reader: Revised Edition*. Edited by Hans T. David and Arthur Mendel, 392–398. New York: Norton, 1966. *Beiträge zur Generalbass- und Satzlehre, Kontrapunktstudien, Skizzen und Entwürfe*, 3–27. Edited by Peter Wollny. Neue Ausgabe sämtlicher Werke, Supplement. Kassel: Bärenreiter, 2011.

Walther, Johann Gottfried. 1708. *Praecepta der Musicalischen Composition*. Ms. D-WRtl. German edition edited by Peter Benary. Leipzig: Breitkopf & Härtel, 1955.
———. 1732. *Musicalisches Lexicon*. Leipzig: Wolffgang Deer. Preprint of letter "A" released in Weimar: Author, 1728.

Werckmeister, Andreas. 1698. *Die nothwendigsten Anmerckungen und Regeln*. Aschersleben: Gottlob Ernst Struntze. Reprinted 1715. Date appears in introduction to Werckmeister 1702.
———. 1702. *Harmonologia Musica oder Kurtze Anleitung Zur Musicalischen Composition*. Frankfurt and Leipzig: Calvisius.

Wiedeburg, Michael Johann Friedrich. 1765–1775. *Der sich selbst informirende Clavierspieler*. 3 vols. Halle & Leipzig: Verlag der Buchhandlung des Waisenhauses.

Wollny, Peter, ed. 2011. *Beiträge zur Generalbass- und Satzlehre, Kontrapunktstudien, Skizzen und Entwürfe*. Neue Ausgabe sämtlicher Werke, Supplement. Kassel: Bärenreiter.

Secondary Sources

Bellotti, Edoardo. 2017. "Composing at the keyboard: Banchieri and Spiridion, two complementary methods." In *Studies in Historical Improvisation: From Cantare super Librum to Partimenti*, edited by Massimiliano Guido, 115–130. New York: Routledge.

Budday, Wolfgang. 2002. *Harmonielehre Wiener Klassik*. Stuttgart: Berthold & Schwerdtner.

Byros, Vasili. 2015. "Prelude on a Partimento: Invention in the Compositional Pedagogy of the German States in the Time of J. S. Bach." *Music Theory Online* 21/3.

Callahan, Michael. 2010. "Improvising Motives: Applications of Michael Wiedeburg's Pedagogy of Modular Diminution." Intégral 24: 29–56.
———. 2012. "Teaching Baroque Counterpoint Through Improvisation: An Introductory Curriculum in Stylistic Fluency." *Journal of Music Theory Pedagogy* 26: 61–99.
———. 2015. "Teaching and Learning Undergraduate Music Theory at the Keyboard: Challenges, Solutions, and Impacts." *Music Theory Online* 21/3.

Diergarten, Felix. 2011. "Romantic Thoroughbass. Music Theory between Improvisation, Composition and Performance." *Theoria* 18: 5–36.
———. 2015. "Beyond 'Harmony': The Cadence in the Partitura Tradition." In *What Is a Cadence? Theoretical and Analytical Perspectives on Cadences in the Classical Repertoire*, edited by Markus Neuwirth and Pieter Bergé, 59–84. Leuven: Leuven University Press.
———. 2017a. "Editorial." Eighteenth-Century Music 14/1: 5–11.

Gingras, Bruno. 2008. "Partimento Fugue in Eighteenth-Century Germany: A Bridge Between Thoroughbass Lessons and Fugal Composition." *Eighteenth-Century Music* 51/1: 51–74.

Gjerdingen, Robert O. 2007a. *Music in the Gallant Style*. New York: Oxford University Press.
———. 2007b. "Partimento, que me veux-tu?" *Journal of Music Theory* 51/1: 85–137.
———. 2010. "Partimenti written to impart a knowledge of counterpoint and composition." In *Partimento and Continuo Playing in Theory and Practice*, edited by Dirk Moelants, 43–70. Leuven: Leuven University Press.
———. "Monuments of Partimenti." First in a Series, Presenting the Great Collections of Instrumental Music Intended for the Training of European Court Musicians. Edited by Robert Gjerdigen. http://faculty-web.at.northwestern.edu/music/gjerdingen/partimenti/.

Guido, Massimiliano, ed. 2017. *Studies in Historical Improvisation: From Cantare super Librum to Partimenti*. New York: Routledge.

Holtmeier, Ludwig, Johannes Menke, and Felix Diergarten, eds. 2008. *Giovanni Paisiello: Regole per bene accompagnare il partimento o sia il basso fondamentale sopra il Cembalo. Praxis und Theorie des Partimentospiels*. Wilhelmshaven: Noetzel.
———. 2012. *Solfeggi, Bassi e Fughe: Georg Friedrich Händels Übungen zur Satzlehre. Praxis und Theorie des Partimentospiels*. Wilhelmshaven: Noetzel.

Holtmeier, Ludwig. 2007. "Heinichen, Rameau, and the Italian Thoroughbass Tradition: Concepts of Tonality and Chord in the Rule of the Octave." *Journal of Music Theory* 51/1 (Spring): 5–49.
———. 2011a. "Funktionale Mehrdeutigkeut, Tonalität und arabische Stufen. Überlegungen zu einer Reform der harmonischen Analyse." *Zeitschrift der Gesellschaft für Musiktheorie* 8/3: 465–487. <http://www.gmth.de/zeitschrift/artikel/655.aspx>. Accessed Dec. 4, 2017.
———. 2011b. Review of "Robert O. Gjerdingen, Music in the Galant Style." *Eighteenth-Century Music* 8/2: 307–48.

Menke, Johannes. 2011. "Die Familie der cadenza doppia." *Zeitschrift der Gesellschaft für Musiktheorie* 8/3.
———. 2014a. "‚Ex centro' improvisation – Sketches for a theory of sound progressions in the early baroque." In *Improvising Early Music: The History of Musical Improvisation from the Late Middle Ages to the Early Baroque*, edited by Dirk Moelants, 69–92. Leuven: Leuven University Press.
———. 2015. *Kontrapunkt I: Die Musik der Renaissance*. Laaber: Laaber Musikwissen.
———. 2017. *Kontrapunkt II: Die Musik des Baroque*. Laaber: Laaber Musikwissen.

Remeš, Derek. 2017a. "J. S. Bach's Chorales: Reconstructing Eighteenth-Century German Figured-Bass Pedagogy in Light of a New Source." Theory and Practice 42: 29–53.
———. 2017b. "Chorales in J. S. Bach's Pedagogy: Recasting the First-Year Undergraduate Music Theory Curriculum in Light of a New Source." Journal of Music Theory Pedagogy 31: 65–92.
———. 2018a. "Teaching Figured-Bass with Keyboard Chorales and C. P. E. Bach's Neue Melodien zu einigen Liedern des neuen Hamburgischen Gesangbuchs (1787)." BACH: Journal of the Riemenschneider Bach Institute 49/2: 205–226.
———. 2018b. "Anweisung zum Fantasieren: Symposium zur Praxis und Theorie der Improvisation im 17. und 18. Jahrhundert, Schola Cantorum Basiliensis, Basel, 19–21 March 2018." Conference Report. Eighteenth-Century Music 16/1: 89–92.
———. 2018c. Review of Johann Menke's Kontrapunkt II: Musik des Barock. Music Theory and Analysis 5/2: 236–245.
———. 2019a. "Four Steps Toward Parnassus: Johann David Heinichen's Method of Keyboard Improvisation as a Model of Baroque Compositional Pedagogy." Eighteenth-Century Music 16/2: 133–154.
———. 2019b. "New Sources and Old Methods: Reconstructing the Theoretical Paratext of Johann Sebastian Bach's Pedagogy." Zeitschrift der Gesellschaft für Musiktheorie 16/2: 51–94.
———. 2019c. "Thoroughbass Pedagogy Near J. S. Bach: Translations of Four New Manuscript Sources." Zeitschrift der Gesellschaft für Musiktheorie 16/2: 95–165.
———. 2019d. "Compendium of Voice-Leading Patterns from the 17th and 18th Centuries to Play, Sing, and Transpose at the Keyboard." Journal of Music Theory Pedagogy. Resources section. Future updates available at <www.derekremes.com/teaching/historicalkeyboardimprovisation>. Accessed December 9, 2019.
———. 2019e. Realizing Thoroughbass Chorales in the Circle of J. S. Bach. Vol. 1: Sources from J. S. Bach, C. P. E. Bach, and D. Kellner, with a Primer by D. Remeš. Vol. 2: The Sibley Chorale Book. Colfax, NC: Wayne Leupold Editions.
———. 2020a. "Some (Dis)Assembly Required: Modularity in the Keyboard Improvisation Pedagogy of Jacob Adlung and Johann Vallade." Music Theory Online 26.1. Forthcoming.
———. 2020b. "Rethinking Bach's Chorale Pedagogy." In Rethinking Bach, ed. Bettina Varwig. Oxford: Oxford University Press. Forthcoming.
———. 2020c. "Harmonizing Chorales Systematically: A Translation of G. H. Stölzel's 'Kurzer und Gründlicher Unterricht' (c.1719–49)." Music Theory Online 26.2. Forthcoming.
———. 2020d. "A Translation of Johann Kuhnau's Manuscript Treatise, 'Fundamentals of Composition' (1703)." Zeitschrift der Gesellschaft für Musiktheorie. Forthcoming.
———. 2020e. "A Translation of Jacob Adlung's Manuscript Treatise, 'Anweisung zum Fantasieren' ('Instruction in Improvisation'), c.1726–1727." Early Music. Forthcoming.
———. 2020f. "Exploring the Contrapuntal Potential of Keyboard Thoroughbass in Today's Music Theory Classroom." In Das Universalinstrument: "Angewandtes Klavierspiel" aus historischer und zeitgenössischer Perspektive / The Universal Instrument: Historical and Contemporary Perspectives on "Applied Piano," ed. Philipp Teriete and Derek Remeš, 179–215. Schriften der Hochschule für Musik Freiburg, Band 9. Hildesheim: Olms.

Sanguinetti, Giorgio. 2007. "The Realization of Partimenti: An Introduction." *Journal of Music Theory* 51/1: 51–84.
———. 2010. "Partimento-fugue: the neapolitan angle." In *Partimento and Continuo Playing in Theory and Practice*, edited by Dirk Moelants, 71–118. Leuven: Leuven University Press.
———. 2012. *The Art of Partimento: History, Theory, and Practice*. New York: Oxford University Press.
———. 2013. "Diminution and Harmonic Counterpoint in Late-Eighteenth-Century Naples: Vincent Lavigna's Studies with Fedele Fenaroli." *Journal of Schenkerian Studies* 7: 1–31.

Schwenkreis, Markus, ed. 2018. *Compendium Improvisation: Fantasieren nach historischen Quellen des 17. und 18. Jahrhunderts*. Basel: Schwabe.