

FIGURED

BASS

HARMONIZATION

Introduction

This document is intended to introduce the basic of baroque and classical figured bass, and to visualize the rules of its harmonization by examples with comments below (if needed). The examples does not belong to me, neither most of the comments. The book I used to elaborate this document was the book of Dr. Lőrinc Keszler, ex-professor of the Hungarian Liszt Ferenc Academy of Music.

<http://www.kotta.info/en/product/1184/KESZTLER-LORINC-Oesszhangzattan>

The document goes through on the basics of figured bass harmonization, not including the altered harmonics theory. It may be published later, but if you are interested, please contact me, and I will send you the sample files to make the look consistent (in Finale 2012).

About the examples:

These examples does not negotiate the formal notations, symbols and numbering of the figured bass harmonization. If you are not proficient, I recommend to read these first:

[https://en.wikipedia.org/wiki/Triad_\(music\)](https://en.wikipedia.org/wiki/Triad_(music))

[https://en.wikipedia.org/wiki/Inversion_\(music\)](https://en.wikipedia.org/wiki/Inversion_(music))

https://en.wikipedia.org/wiki/Figured_bass

... and keep on browsing...

All of the examples are in C major / A minor in order to make it easy to read for beginners, and easy to transpose for experts. Further examples I may publish in the future in various keys.

You may also note:

Finale 2012 (the program I use) does not support top- and lower indexes. To clarify this “problem”, I used ‘/’ symbols to substitute the “missing index levels”.

For example:

$I_{6/4}$ means $I^6/4$ means I^6_4 means... and so on (including more complicated expressions like #-s, multi-level fractions, etc.)

About me:

My native language is not English, but I owe an advanced level exam of it, not professional. That means, I did my best, when I translated my notes to English, to find the corresponding translation of the professional words (*note, tone, inversion, position, beat, etc.*). If any mistake, typo, bad translation or contradiction are noticed, please do contact me at the following address:

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Thank you for reading my “masterclass”, I hope it can lend you the help you were looking for! Bests!

Mark Szabó

1.

Basic triads in Major

The first system of musical notation consists of two staves, treble and bass, joined by a brace. The treble staff contains seven triads in C major: C major (C4, E4, G4), E minor (E4, G4, B3), G major (G4, B4, D5), F major (F4, A4, C5), D major (D4, F4, A4), B minor (B3, D4, F4), and C major (C4, E4, G4). The bass staff contains seven single notes: C2, E2, G2, B1, D2, F2, and C2. The key signature is one sharp (F#) and the time signature is common time (C).

I III V VI IV V I

The second system of musical notation consists of two staves, treble and bass, joined by a brace. The treble staff contains six triads in C major: C major (C4, E4, G4), E minor (E4, G4, B3), G major (G4, B4, D5), F major (F4, A4, C5), D major (D4, F4, A4), and C major (C4, E4, G4). The bass staff contains six single notes: C2, E2, G2, B1, D2, and F2. The key signature is one sharp (F#) and the time signature is common time (C).

I VI IV II V I

The third system of musical notation consists of two staves, treble and bass, joined by a brace. The treble staff contains nine triads in C major: C major (C4, E4, G4), E minor (E4, G4, B3), G major (G4, B4, D5), F major (F4, A4, C5), D major (D4, F4, A4), C major (C4, E4, G4), E minor (E4, G4, B3), G major (G4, B4, D5), and F major (F4, A4, C5). The bass staff contains nine single notes: C2, E2, G2, B1, D2, F2, C2, E2, and G2. The key signature is one sharp (F#) and the time signature is common time (C).

I III IV V VI IV II V I

2.

V - VI connection in Minor

First system of musical notation (measures 1-7) showing the V - VI connection in Minor. The notation is in C major (one sharp, F#) and 4/4 time. The bass line consists of whole notes: C2, D2, E2, F2, G2, A2, B2. The treble line consists of chords: C4-E4-G4 (I), F4-A4-C5 (IV), D4-F#4-A4 (V#), E4-G4-B4 (VI), F4-A4-C5 (IV), D4-F#4-A4 (V#), and E4-G4-B4 (I). The measure numbers I, IV, V#, VI, IV, V#, and I are written below the bass line.

Second system of musical notation (measures 5-7) showing the V - VI connection in Minor. The notation is in C major (one sharp, F#) and 4/4 time. The bass line consists of whole notes: C2, D2, E2, F2, G2, A2, B2. The treble line consists of chords: C4-E4-G4 (I), F4-A4-C5 (IV), D4-F#4-A4 (V#), E4-G4-B4 (VI), F4-A4-C5 (IV), D4-F#4-A4 (V#), and E4-G4-B4 (I). The measure numbers I, IV, V#, VI, IV, V#, and I are written below the bass line.

Third system of musical notation (measures 9-11) showing the V - VI connection in Minor. The notation is in C major (one sharp, F#) and 4/4 time. The bass line consists of whole notes: C2, D2, E2, F2, G2, A2, B2. The treble line consists of chords: C4-E4-G4 (I), F4-A4-C5 (IV), D4-F#4-A4 (V#), E4-G4-B4 (VI), F4-A4-C5 (IV), D4-F#4-A4 (V#), and E4-G4-B4 (I). The measure numbers I, IV, V#, VI, IV, V#, and I are written below the bass line.

3.

VI - V connection in Minor

Duplicated third tones in advance

First system of musical notation showing four measures: I, VI, V#, and I. The bass line has a single note in each measure, and the treble line has a duplicated third tone in each measure.

I

VI

V#

I

5

Second system of musical notation showing four measures: I, VI, V#, and I. The bass line has a single note in each measure, and the treble line has a duplicated third tone in each measure.

I

VI

V#

I

9

Third system of musical notation showing four measures: I, VI, V#, and I. The bass line has a single note in each measure, and the treble line has a duplicated third tone in each measure.

I

VI

V#

I

First inversion of principal triads (in Maj.)

4.

Duplication:

- Primarily base tone
- Secondly fifth tone
- Thirdly third tone

First system of musical notation (measures 1-9). The notation shows triads in first inversion (I6, IV, V) and their root position (I). The bass line provides a harmonic foundation with notes corresponding to the triads. The system is divided into three measures of three measures each.

I I6 IV V I I I6 IV V I I I6 IV V I

Second system of musical notation (measures 10-18). The notation shows triads in first inversion (I6, IV, V) and their root position (I). The bass line provides a harmonic foundation with notes corresponding to the triads. The system is divided into three measures of three measures each.

I I6 IV V I I I6 IV V I I I6 IV V I

Third system of musical notation (measures 19-27). The notation shows triads in first inversion (I6, IV, V) and their root position (I). The bass line provides a harmonic foundation with notes corresponding to the triads. The system is divided into three measures of three measures each.

I I6 IV V I I I6 IV V I I I6 IV V I

5.

First inversion of extracurricular triads

Duplication:

- Primarily third tone
- Secondly fifth tone

(ossia)

II6

I II6 (I)6/4 V I I II6 (I)6/4 V I I II6 (I)6/4 V I

10

no third position

VII6

I VII6 I6 II6 (I)6/4 V I I VII6 I6 II6 (I)6/4 V I

6.

The III6 Chord

in Major and in Minor

MAJ.

I IV III6-V7 VI II6 V I I IV III6-V7 VI II6 V I

9
MIN.

I IV III6/#-V7/#VI II6 V# I I IV III6/#-V7/#VI II6 V# I

7.

The VI6 Chord (rare occurrence) and occurrences in music

C: I VI6 G: (I)6/4 V I

Couperin: Les Moissonneurs

I IV I V IV V I VI6 (...)

L.W. Beethoven: Piano Sonata op. 14 No. 1

C: I VI6 e: (I)6/4 V#

J. des Prés: Missa Pange Lingua - Sanctus

I IV(-IV2) I VI6 I

8.

Cadential (Appoggiatura) six-four chord

I II₆ (I)_{6/4} V I I IV (I)_{6/4} V I

The six-four inversion of the Tonic is not independent.

It is being created by the third and the fifth tone of the V (dominant), both delayed (sounds on emphasis instead of accent).

The cadential six-four chord can only exist on emphasis (not on unaccented)!

This melodical figuration is called "delay".

In fact it is not Tonic chord, but a figuration of the Dominant chord, therefore:

- by functionality, it is Dominant,
- as a delay, it sounds on unaccented,
- it's fifth tone is duplicated.

9. Complete and deficient Dominant seventh chord

MAJ.

MAJ. chord progression in C major, measures 1-12. The progression is: II6 (F4-A4-C5), (I)6/4 (C4-E4-G4), V7 (F4-A4-C5), I (C4-E4-G4). This sequence is repeated three times, separated by bar lines. The bass line consists of half notes: F4, E4, D4, C4, F4, E4, D4, C4, F4, E4, D4, C4.

II6 (I)6/4 V7 I I IV (I)6/4 V7 I I IV (I)6/4 V7 I

MIN. (Deficient in the following cases, complete analogous to MAJ. above)

9

MIN. chord progression in C minor, measures 1-12. The progression is: I (C4-Eb4-Gb4), IV (F4-Ab4-Cb5), V7/# (F4-Ab4-Cb5). This sequence is repeated three times, separated by bar lines. The bass line consists of half notes: C4, Eb4, F4, Gb4, C4, Eb4, F4, Gb4, C4, Eb4, F4, Gb4.

I IV V7/# I I IV V7/# I I IV V7/# I

15

MIN. chord progression in C minor, measures 1-12. The progression is: I (C4-Eb4-Gb4), II6 (D4-F4-Ab4), V7/# (F4-Ab4-Cb5). This sequence is repeated three times, separated by bar lines. The bass line consists of half notes: C4, Eb4, F4, Gb4, C4, Eb4, F4, Gb4, C4, Eb4, F4, Gb4.

I II6 V7/# I I II6 V7/# I I II6 V7/# I

Inversions of the Dominant seventh chord (MAJ)

FIRST INVERSION (six-five)

I V_{6/5} I IV₆ (I)_{6/4} V₈₋₇ I I V_{6/5} I II₆ (I)_{6/4} V₇ I I V_{6/5} I II₆ (I)_{6/4} V₈₋₇ I

SECOND INVERSION (three-four)

13

I V_{4/3} I₆ IV (I)_{6/4} V₇ I I V_{4/3} I₆ II₆ (I)_{6/4} V₈₋₇ I I V_{4/3} I₆ II₆ (I)_{6/4} V₈₋₇ I

THIRD INVERSION (second [2])

25

I V -2 I₆ IV (I)_{6/4} V₇ I I V₂ I₆ II₆ (I)_{6/4} V₇ I I V -2 I₆ II₆ (I)_{6/4} V₈₋₇ I

The inversions of the Dominant seventh chord are complete, their resolution is dual:

- seventh tone resolves downwards
- leading tone resolves upwards

11.

Extracurricular sevenths in Minor

VII7 III7 II7

VII7

I VII7/# V6/5/# I II6V8-7/# I I VII7/# V6/5/# I II6V8-7/# I

III 7/5#

I V# III7/5# VI II6V8-7/# I I V# III7/5# VI IVV8-7/# I

II7

I II7 V8-7/# VI II7V8-7/# I I II7 V8-7/# VI II7 V8-7/# I

I II7 V8-7/# VI II7 V# I

12.

Extracurricular sevenths in Major

by Sequences

With seventh chords

V I⁷ IV VII⁷ III VI⁷ II V⁷ I IV⁷ VII III⁷ VI II⁷ V I

With six-five chords (first inv.)

V I^{6/5} IV² VII^{6/5} III VI^{6/5} II V^{6/5} I IV^{6/5} VII III^{6/5} VI II^{6/5} V⁸⁻⁷ I

With "second" chords (third inv.)

V⁶ I² IV⁶ VII² III⁶ VI² II⁶ V² I⁶ IV² VII⁶ III² VI⁶ II² V⁶ I

Combined example

V I^{6/5} IV² VII^{6/5} III² VI^{6/5} II² V^{6/5} I² IV^{6/5} VII² III^{6/5} VI² II^{6/5} V⁸⁻⁷ I

With three-four chords (second inv.)

36

V I⁴/₃ IV VII⁴/₃ III VI⁴/₃ II V⁴/₃ I IV⁴/₃ VII III⁴/₃ VI II⁴/₃ V I

Combined example:

45

V I⁷ IV⁴/₃ VII⁷ III⁴/₃ VI⁷ II⁴/₃ V⁷ I⁴/₃ IV⁷ VII⁴/₃ III⁷ VI⁴/₃ II⁷ V⁴/₃ I

With transient seventh tone:

54

V-2 I⁶ -6/5 IV -2 VII⁶ -6/5 III -2 VI⁶ -6/5 II -2 V⁶ -6/5 I -2

59

IV⁶ -6/5 VII -2 III⁶ -6/5 VI -2 II⁶ -6/5 V⁸ -7 I

13.

Seventh - Seventh connections

C: Complete
D: Deficient

MIN.

I V# III7/5# VI7 II7 V7/# I I V# III7/5# VI7 II7 V7/# I

9

MAJ.

I V III3 VI7 II7 V7 I I V III3 VI7 II7 V7 I

A seventh chord can resolve not only to a triad, but to another (new) seventh chord.

If many seventh chords are following each other in a row, a Complete-Deficient-Complete-Deficient-... alternation must be observed.

(To resolve and to prepare the seventh tone of the chord.)

The specialities of this phenomenon:

- The constant seventh tone presence causes a stronger connection between the chords.
- The dissonance and the resolution are present at the same time .

14.

The VI seventh chord

MOLL

I V# VI7 II6 (I)6/4 V8-7/# I I V# VI7 IV (I)6/4 V8-7/# I

9

I V# VI7 IV (I)6/4 V8-7/# I

DÚR

13

I V VI7 II6 (I)6/4 V8-7 I I V VI7 IV (I)6/4 V8-7 I

21

I V VI7 IV (I)6/4 V8-7 I

15.

The II seventh chord

I II7 V7 VI II7 V8-7 I I II7 V7 VI II7 V8-7 I

9

I II7 V7 VI II7 V8-7 I

13

I II7 I6 II7 (I)6/4 V VI II7 - V V6 I

COUNTEREXAMPLES

20

"Covered" paralel fifths *"Covered" paralel fifths* *Paralel fifths*

Weak... *Weak...* *BAD!*

I6 II7 VI II7 I II7

In Major the I - II7 connections are deficient (missing fifth tone) in every case.

16.

Transient I6/4 chord

First system of musical notation showing a progression of chords: I, VI, IV, I6/4, IV6, II6/5, V4, - 37, I. The I6/4 chord is the transient chord.

Second system of musical notation showing a progression of chords: I, VI, IV6, I6/4, IV, II6/5, V8-7, I. The I6/4 chord is the transient chord.

Types of I6/4:

- a.) Cadential (Appoggiatura): By functionality, it is Dominant (delayed as negotiated)
- b.) Transient: - Makes connection between two figures (mostly root and 1st inv.) of the IV chord (subdominant). By functionality, it is Tonic.
 - Duplicating the fifth tone is expedient, to make it more melodic.

17. Inversions of extracurricular seventh chords

MAJ.

II 6/5

I II6/5 (I)6/4 V8-7 I I II6/5 (I)6/4 V8-7 I I II6/5 (I)6/4 V7 I

10
II2

I II2 V6/5 I II6/5 V8-7 I I II2 V6/5 I II6/5 V8-7 I

18

I II2 V6/5 I II6/5 V8-7 I

22
II4/3

I II4/3 (I)6/5 V8-7 I I II4/3 (I)6/5 V8-7 I I II4/3 (I)6/5 V7 I

