

FIGURED-BASS NOTATION

General

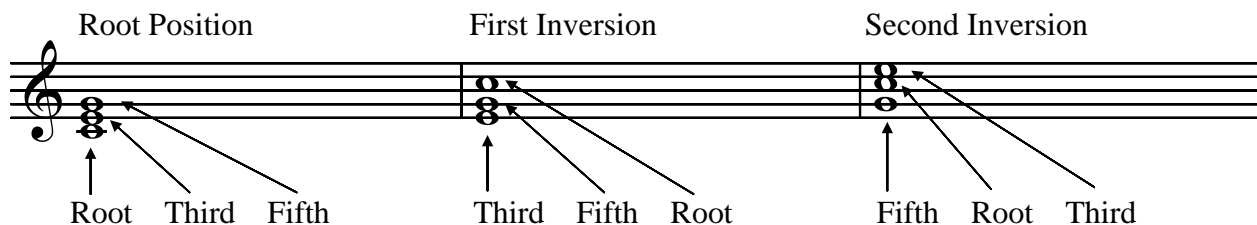
In common-practice tonal music, chords are generally understood in two different ways.

On the one hand, they can be seen as triadic structures emanating from a generative **root**. In this system, a root-position triad is understood as the "ideal" or "original" form, and other forms are understood as inversions, where the root has been placed above one of the other chord tones. This approach emphasizes the structural similarity of chords that share a common root (a first-inversion C major triad and a root-position C major triad are both C major triads). This type of thinking is represented analytically in the practice of applying **Roman numerals** to various chords within a given key - all chords with allegiance to the same Roman numeral are understood to be related, regardless of inversion and voicing, texture, etc.

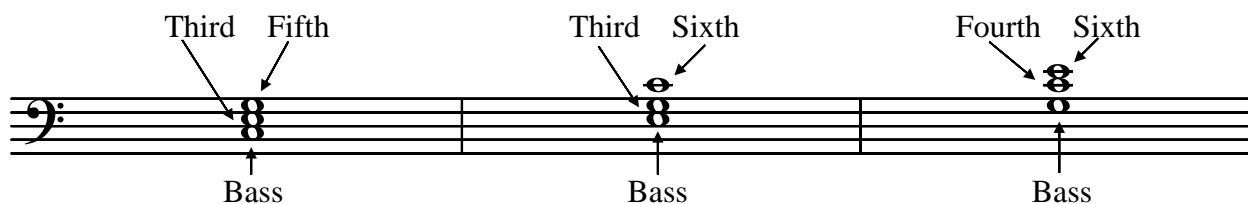
On the other hand, chords can be understood as vertical arrangements of tones above a given **bass**. This system is not based on a judgment as to the primacy of any particular chordal arrangement over another. Rather, it is simply a descriptive mechanism, for identifying what notes are present in addition to the bass. In this regime, chords are described in terms of the simplest possible arrangement of those notes as intervals above the bass. The intervals are represented as Arabic numerals (figures), and the resulting nomenclatural system is known as **figured bass**.

Terminological Distinctions Between Roman Numeral Versus Figured Bass Approaches

When dealing with Roman numerals, everything is understood in relation to the root; therefore, the components of a triad are the root, the third, and the fifth. The *actual notes* referred to by these descriptors remain constant regardless of what position the chord is in.



When dealing with figures, everything is understood in relation to the bass. For example, in the case of a root position triad, we speak of the third and the fifth *above the bass*.



Note that (for example), whereas the note C is always the *root* of a C major triad; in figured-bass parlance the note C is:

- The *bass* of a root-position C major;
- The *sixth* above the bass of a 1st-inversion C major;
- The *fourth* above the bass of a 2nd-inversion C major.

Abstract Description of Figured Bass Terminology

Before subjecting this system to the particularities of a given key, we can describe simple triadic structures in abstract terms.

Therefore: A root-position triad is described as being in "five-three position"

- The root, being in the bass, is not accounted for in the figures
- The third of the triad is represented by the number 3
- The fifth of the triad is represented by the number 5

A 1st-inversion triad is described as being in "six-three position"

- Here, the third of the triad is in the bass
- The fifth of the triad is a 3rd above the bass (3)
- The root of the triad is a 6th above the bass (6)

A 2nd-inversion triad is described as being in "six-four position"

- The fifth of the triad is in the bass
- The root of the triad is a 4th above the bass (4)
- The third of the triad is a 6th above the bass (6)

A Few Conventions

Regardless of the registral dispersal of the notes in real musical space, they are described in figured-bass terms in simplified form.

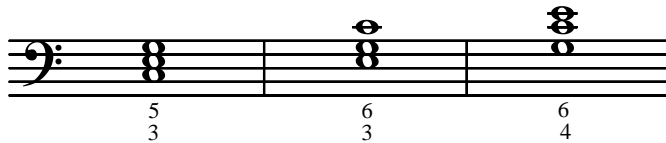
A few "five three" chords

A few "six three" chords

A few "six four" chords



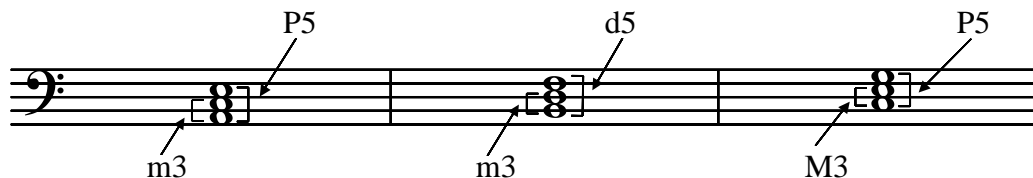
Similarly, for reasons of clarity and consistency the "figures" in figured bass are always listed in order from higher to lower. This is related to the manner in which figures are deployed in actual music - the higher number above the lower - where the arrangement coheres with musical intuitions regarding the potential arrangement of the tones in the simplest (i.e., most compact) manner.



Practical Applications of Figured Bass Notation

Figured bass notation operates within keys. This is why it is sufficient to describe intervals in a generic rather than specific manner. A "five three" chord contains whichever 5th (perfect, or diminished) is within the key signature - that is, what you would get without altering any accidentals.

Three "different" five three chords:



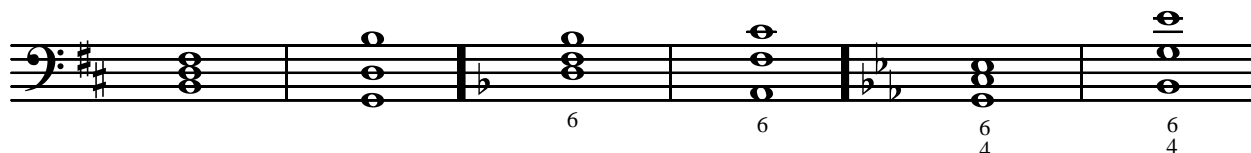
Abbreviations and Alterations

For the sake of eliminating clutter, figured bass practice abbreviates figures in the following manner:

$\frac{5}{3}$ => [nothing] : a note without any figures indicates a root-position triad;

$\frac{6}{3}$ => 6 : a first-inversion triad;

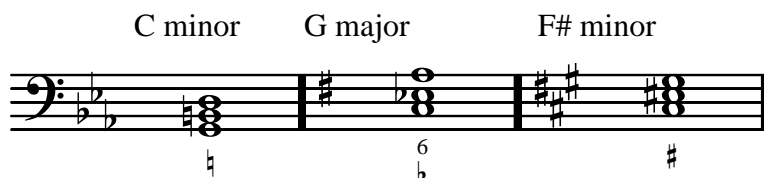
$\frac{6}{4}$ (a second inversion triad) includes both numerals to distinguish it from 6.



The following symbols are used to alter a pitch (i.e., to do something outside of the key signature):

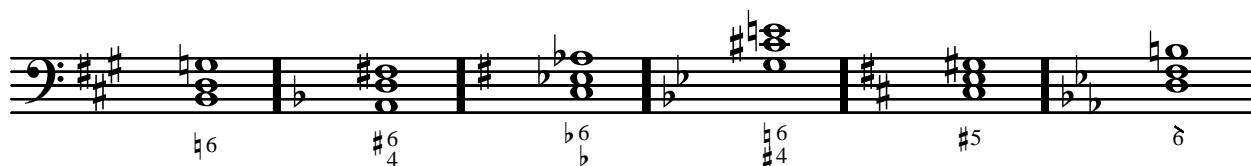


Taken alone, they refer to the 3rd above the bass:

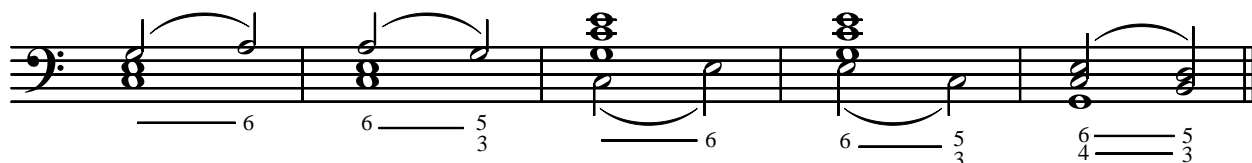


Otherwise, they accompany a figure and mean "do this to that note."

A slash through a numeral (usually 6) means "raise."



A horizontal line indicates a change of voicing or a change of harmony. This may take place over a stable or an active bass. Note that in this situation it is customary not to abbreviate a five-three chord.



The following table summarizes various figured-bass symbols and explains their meaning:

[no notation]	=	$\frac{5}{3}$; root-position triad
6	=	$\frac{6}{3}$; first-inversion triad
$\frac{6}{4}$	=	$\frac{6}{4}$; second-inversion triad
7	=	$\frac{7}{3}$; root-position seventh chord
$\frac{6}{5}$	=	$\frac{6}{5}$; first-inversion seventh chord
$\frac{4}{3}$	=	$\frac{6}{4}$; second-inversion seventh chord
2	=	$\frac{6}{4}$; third-inversion seventh chord
4	=	$\frac{5}{4}$; suspended fourth within root-position triad
#	=	alone:	"sharpen" (raise) the third above the bass
		with numeral:	"sharpen the appropriate note above the bass
b	=	alone:	"flatten" (lower) the third above the bass
		with numeral:	"flatten" the appropriate note above the bass
♮	=	alone:	"naturalize" (may mean raise or lower, depending on context) the third above the bass
		with numeral:	"naturalize the appropriate note above the bass