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## Chapter 10: First Inversions of Primary Triads

### 10.1 Definition and Notation

We know that the first inversion of a triad is called a sixth chord. The notation for a sixth chord is to add a number 6 below the functional marking, for example,  $T_6$ ,  $S_6$ ,  $D_6$

### 10.2 Doubling and Spacing of Sixth Chord

First inversions of primary triads can double the root or the fifth. It is best to avoid doubling the third, though it can be done under certain conditions (see Section 9). The spacing of sixth chords can be classified into three types: close, open, and mixed. As the name suggests, in a mixed spacing, one pair of voices in the upper voices forms a close spacing (unison or fourth), while the other pair forms an open spacing (fifth or octave).

#### Example 10-117

Mixed Spacing

C Major

$D_6$   $D_6$   $T_6$   $S_6$   $S_6$

### 10.3 Application of the Sixth Chord

The sixth chord is not as stable as the original triad in terms of its sound, so it is mainly used in the middle of the structure to make the statement more fluent. Generally speaking, any termination used to end a phrase or section does not use the sixth chord as the ending chord.

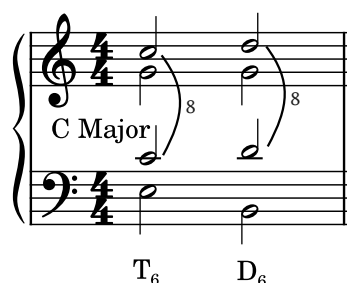
If the sixth chord is placed before the ending chord of a structure, it will turn the original authentic cadence, plagal cadence, or perfect cadence into an imperfect cadence. Therefore, it is best used in the beginning of the structure (such as the first phrase).

### 10.4 Voice Leading: Parallel Octaves (Unisons)

Due to the greater freedom in doubling and spacing the tones of the sixth chord, its potential connections with both third and sixth chords become more diverse.

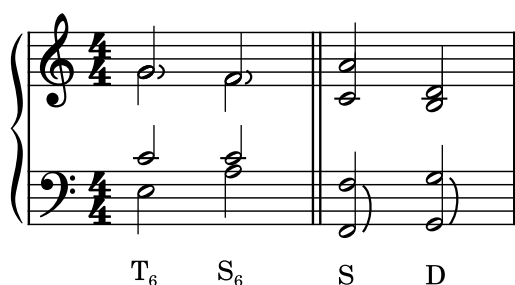
In the voice leading, some new relationships and characteristics have also appeared as a result. As follows:

### Example 10-118



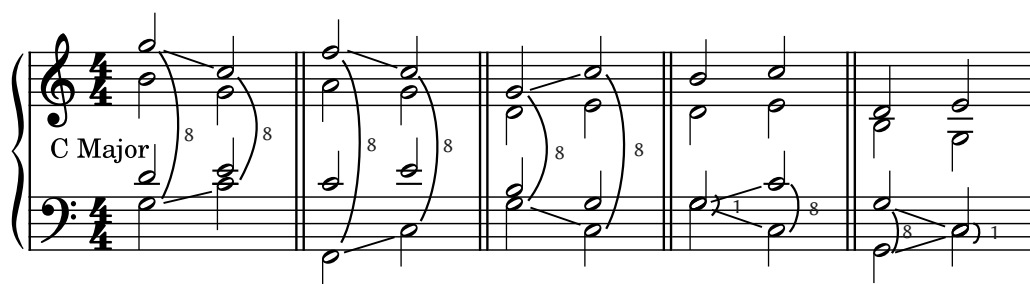
If we look at each voice individually, it seems that each voice is proceeding correctly, following all the rules of voice leading. There are no problems with the doubling or spacing of the two chords. However if the bass, alto, soprano voices each have their own independent voice leading here, the tenor voice is repeating the soprano voice one octave lower. This overlap is caused by the parallel octave (or unison) between the two voices. Parallel octaves (or unisons) destroy the independence of voice leading, so they are prohibited in four-part harmony. Parallel octaves (or unisons) are not allowed between any two voices.

### Example 10-119



Reversed octaves, whether from unison to octave or from octave to unison, are also prohibited.<sup>①</sup>

### Example 10-120



<sup>①</sup> The most common exceptions will be discussed later.

Do not confuse parallel octaves with octave doublings within a single voice. In four-part harmony, each voice has its own independent line of motion. Any parallel octaves that occur are the result of poor voice leading and are artistically unjustified. On the other hand, octave doublings deliberately woven by the composer within a single part serve to reinforce that voice.

The use of octave doublings to reinforce one or two voices is a very common technique in four-part harmony. The following example clearly illustrates how octaves can be "added" to the melody and bass:

Example 10-121

Allegro un poco maestoso

舒曼《升f小调钢琴奏鸣曲》作品11末乐章

Four-part Harmony Formula of This Example

Example 10-122

塔涅耶夫《约安·达马斯金》第三乐章

## 10.5 Parallel Fifths

When connecting a triad and a sixth chord (and in other cases as well), another forbidden progression, parallel fifths and contrary fifths, may occur (if not careful). Parallel fifths are caused by the root and fifth of a chord (triad) proceeding to the root and fifth of another chord in the same pair of voices: ②

### Example 10-123

### Example 10-124

② Parallel fifths have been gradually disappearing from compositional practice since the 17th century due to their hollow sound. However, there are still cases in some musical works where parallel fifths are intentionally used to express a certain idea of the composer.

穆索尔斯基《特列帕克舞曲》

pp  
d minor

four-part harmony formula

This musical score is in 2/4 time and d minor. It illustrates a four-part harmony formula across two systems. The first system shows the initial chords with dashed lines indicating voice leading. The second system shows the continuation of the formula with solid lines and slurs. The bottom system includes a single treble clef staff at the end.

Example 10-125

Andantino mosso

普契尼《艺术家的生涯》第三幕

This musical score is in 2/4 time and C Major. It shows a sequence of chords: T, D<sub>6</sub>, T, S<sub>6</sub>, T<sub>6</sub>, D, T<sub>6</sub>, S, D<sub>6</sub>, T, S<sub>6</sub>, T. The chords are connected by smooth voice leading, with some slurs indicating phrasing. The bass line features a rhythmic pattern of eighth notes.

### 10.6 Connection of Sixth Chords with Triads of Fourth or Fifth Relationship

The connection of sixth chords with triads of fourth or fifth relationship uses the harmonic connection method, and the voices proceed smoothly without leaps:

Example 10-126

C Major

This musical score is in 2/4 time and C Major. It shows a sequence of chords: T, D<sub>6</sub>, T, S<sub>6</sub>, T<sub>6</sub>, D, T<sub>6</sub>, S, D<sub>6</sub>, T, S<sub>6</sub>, T. The chords are connected by smooth voice leading, with some slurs indicating phrasing. The bass line features a rhythmic pattern of eighth notes.

Example 10-127

**Allegro con spirito** 格林卡《鲁斯兰与柳德米拉》第二幕

D<sub>6</sub> T T<sub>6</sub> D

## 10.7 Connection of Sixth Chords with Triads of Second Relationship

When S<sub>6</sub>—D is connected, regardless of whether the root or fifth of the first chord is doubled, all voices must proceed smoothly.

### Example 10-128

C Major

S<sub>6</sub> D S<sub>6</sub> D S<sub>6</sub> D S<sub>6</sub> D S<sub>6</sub> D

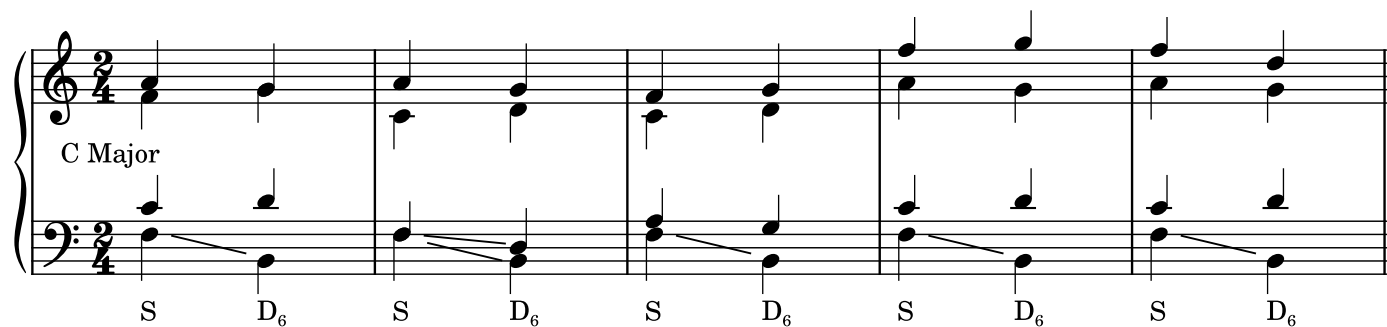
When S—D<sub>6</sub> is connected, the bass should descend by a diminished fifth rather than ascend by an augmented fourth. The bass should make an upward movement in the opposite direction after the diminished fifth leap. This can make the voice leading more natural. It is unnatural for the bass to continue in the same direction after making an augmented fourth leap upward, so it should be avoided when harmonizing a melody:

### Example 10-129

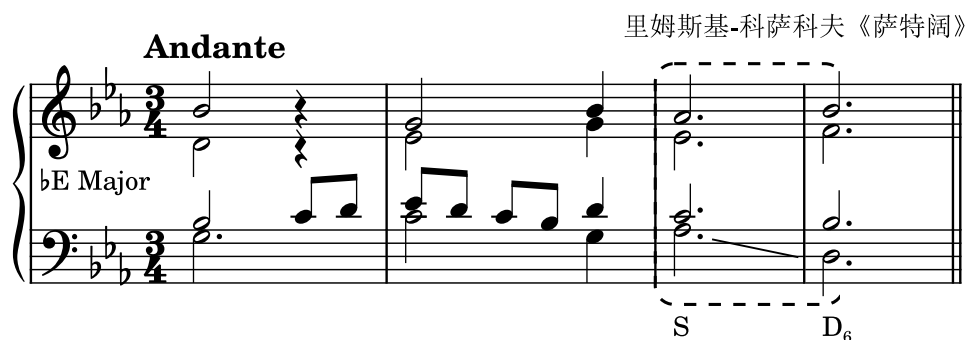
correct Progression in bassline incorrect

S D<sub>6</sub> T S D<sub>6</sub> T

### Example 10-130

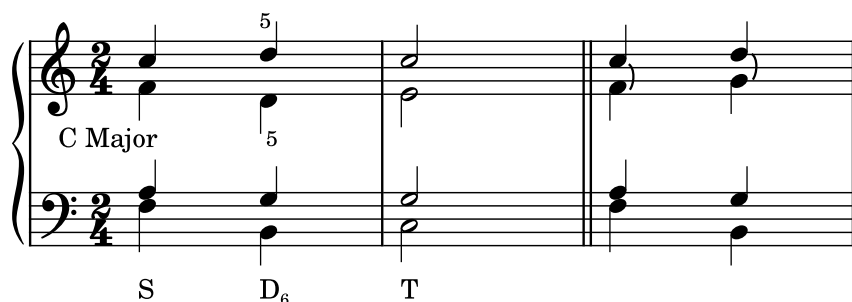


Example 10-131



In the S—D<sub>6</sub> progression, if the subdominant chord place the fifth tone on soprano position, then the sixth chord of the dominant chord must repeat the fifth to avoid parallel fifths:

Example 10-132

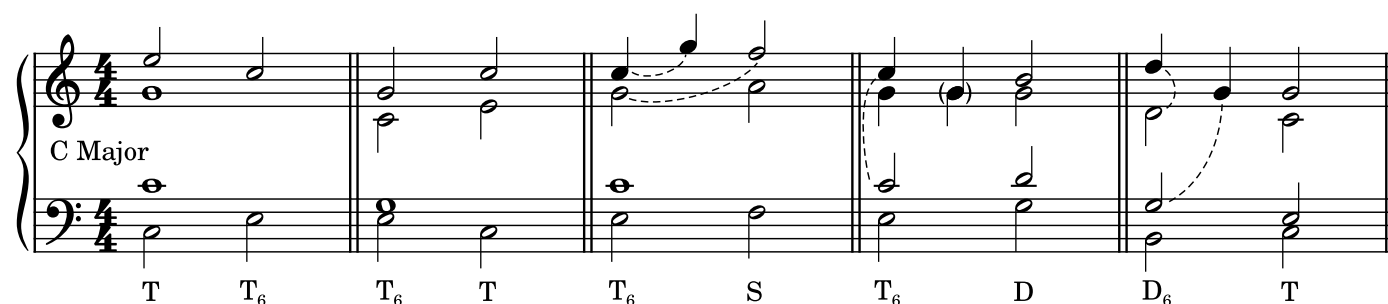


## 10.8 Transition

Another form of chord transition is the connection of a triad and a sixth chord (or a sixth chord and a triad) of the same function (e.g., T—T<sub>6</sub>, D—D<sub>6</sub>). The bass moves from the root to the third tone (or vice versa), while one of the upper voices (for example, the soprano) moves relatively from the third to the root (or vice versa). The sixth chord can also transit itself (without the participation of the root-position triad) by changing the soprano position, the spacing, or the repeated tone:

Example 10-133

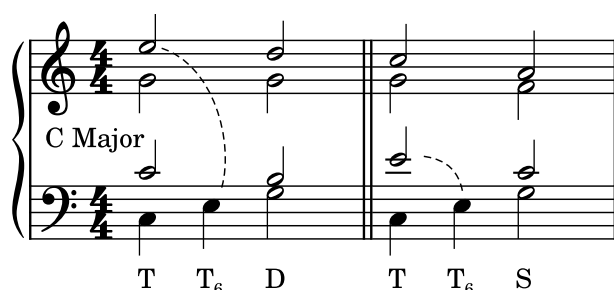




## 10.9 Repeating the Third Tone of the Sixth Chord

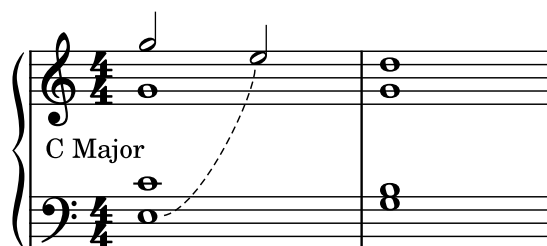
When the sixth chord follows its own triad (often with the upper voices remaining stationary), the third tone of the sixth chord can be repeated.

### Example 10-134



Sometimes, the third tone of the sixth chord can also be repeated when a sixth chord itself is transposed (see example 10-127).

### Example 10-135



In both cases, it is crucial to ensure that the independence of voice leading and to avoid the formation of parallel octaves resulting from the repetition of the third tone.

## 10.10 The Bassline

The application of sixth chords has significantly enriched and diversified the melodic line of the bass, which is second only to the soprano part in importance. Therefore, it is necessary to pay attention to the melodic line of the bass when harmonizing. To this end, the following should be done:

- Alternate between T, S, and D chords and their sixth chords.

- b. To meet the needs of cadence, reduce the use of root position triads.
- c. Avoid simultaneous leaps in the soprano and bass.
- d. In the second phrase, the root position tonic triad should be used only at the beginning and end of the phrase whenever possible.
- e. Have a comprehensive layout when harmonizing (this has been discussed earlier).

Examples of harmonizing:

### Example 10-136

Example 10-136 is a piano piece in 3/4 time, key of D minor. The score consists of 8 measures. The melody is in the right hand, and the accompaniment is in the left hand. The chords are labeled below the staff: t, D<sub>6</sub>, t, S<sub>6</sub>, D, t, —, S<sub>6</sub>, t<sub>4</sub>, D, S, —, D<sub>6</sub>, t, S, K<sub>4</sub>, —, D, t.