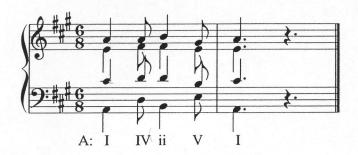
## The supertonic triad

Play through the progressions shown below. You will hear (and see) that the first system is similar to the second. In each progression, only one pitch is altered in the second system (in both cases it's circled). Both times the subdominant triad is replaced by the supertonic triad in first inversion. This is the way that the supertonic triad is used most frequently: in first inversion, as a substitute for the subdominant.



Aside from the information given above, these progressions are typical in other ways:

- the ii chord is a minor triad when the music's in a major key; it's a diminished triad when the music's in a minor key. When in minor, the O sign must be included with the Roman numeral.
- the *third* of the ii<sup>6</sup> (or ii<sup>0</sup>6, when in minor) chord is doubled.
- when progressing from the supertonic to the dominant (a very typical progression, by the way), it's necessary to use *contrary motion* between the bass and the upper voices.
- while you'll sometimes find the root position ii chord when in a major key, the root position ii (when in minor) is rare. This fits in with a larger principle: diminished triads are usually found in first inversion.



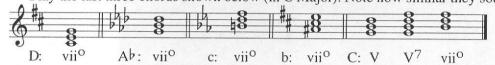
Some notes about the progression shown above:

- when in root position, the *root* of the ii chord is doubled.
- note the progression from IV to ii. This is the first time we've encountered **root movement by third**. When two triads are a third apart the voice leading is simple, because there will always be **two common tones** (here, D4 and F\$4) between them.
- note that IV progresses to ii (and not vice versa). This is typical, and is another example of a larger principle: the *primary triads* I and IV usually progress to their "secondary triad substitutes" (vi and ii, respectively); the reverse (vi → I and/or ii → IV) is very rare.

1. Play through the following three progressions. You'll hear that they sound quite similar.



- When used in its most typical fashion (shown above), the vii<sup>o</sup>6—a dominant functioning chord—is simply another passing chord between I and I<sup>6</sup>. Think of it as substituting for V or V<sup>7</sup>.
- 2. Some vii<sup>o</sup> triads (in root position) are shown below. The vii<sup>o</sup> triad includes scale degrees 7, 2, and 4 (that's ti, re, and fa). Note that an accidental is necessary when writing ti (the leading tone) when in minor.
  Play the last three chords shown below (in C Major). Note how similar they sound (and function, too).



- 3. While a root-position vii<sup>o</sup> is possible, it's pretty rare (with one exception which we'll discuss next week). The **first inversion** (vii<sup>o</sup>6) is far more common. Second inversion (vii<sup>o</sup>4) basically *never* occurs.
  - When writing vii<sup>o</sup>6 for SATB, one should generally double the bass note (the third of the chord).
  - The guiding principle: don't double a note which is a member of a tritone, since the tritone is so unstable.
  - When writing I vii<sup>o</sup>6 I<sup>6</sup> (and the reverse), fa will usually resolve up to sol.



Eb:  $vii^{\circ}6$  f\*:  $vii^{\circ}6$  Bb: I  $vii^{\circ}6$  I<sup>6</sup> e: i  $vii^{\circ}6$  i<sup>6</sup>

**4**. The vii<sup>o</sup>6 chord very occasionally is used as part of a weak cadence; it harmonizes a soprano melody which moves *la-ti-do*. The progression most typically is IV - vii<sup>o</sup>6 - I.



G: IV vii<sup>o</sup>6 I

A: IV vii<sup>o</sup>6 I

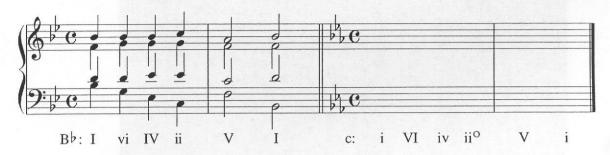
- Note that we've added yet another possibility for harmonizing re in the bassline. The possibilities now include V<sub>4</sub><sup>6</sup>, V<sub>3</sub><sup>4</sup>, vii<sup>0</sup>6, and ii. The first three function similarly; the last is different.
   Always consider context when determining how to harmonize a bassline (or soprano) melody.
- So: vii<sup>o</sup>6 is approached by I or IV (occasionally by ii). It almost always resolves to tonic.
- When in minor, there can be a major triad built on te (it's labeled VII). We'll discuss it next week.

## Notes on the vi (VI) chord

In a major key: it's spelled  $\hat{6}$ ,  $\hat{1}$ ,  $\hat{3}$  (la, do, mi); it's a minor triad, symbolized vi.

In a minor key: it's spelled  $\hat{6}$ ,  $\hat{1}$ ,  $\hat{3}$  (le, do, me); it's a major triad, symbolized vi. No accidentals used. Almost always in root position; occasionally first inversion; basically never second inversion. The **root** is usually **doubled**, with an important exception discussed below. The vi chord is almost always an **extension of**—or **substitute for**—the **tonic** chord.

1. *Extension of* the tonic: the progression I to vi may be said to "extend" the tonic chord. The prototypical progression is I vi IV ii V I [in minor, i VI iv ii<sup>o</sup> (or ii<sup>o</sup>6) V i]. Notice the **root movement**: at first, it *descends by thirds*. Connecting two triads which are a third apart is simple: retain *two* common tones.



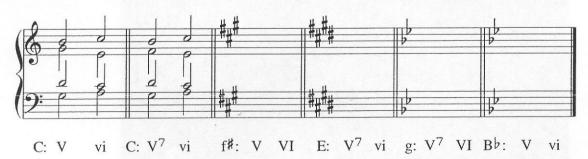
2. The example below again shows the vi chord as an extension of the tonic. Here, however, you can see strong root movement by fifths and fourths (vi to ii, ii to V, V to I). Actually, this is a partial "circle of fifths." It's easiest to use contrary motion to connect chords which are a fifth apart.



3. Substitution for the tonic: the prototype here is the progression V to vi (also V<sup>7</sup> to vi). This is called a deceptive resolution of the V or V<sup>7</sup> chord; you expect V to resolve to I and then are deceived when it resolves to vi. If this occurs at the end of a phrase, it's called a deceptive cadence.

**Doubling** and **voice leading** go hand in hand here. The *THIRD* of the vi chord is doubled here, mostly as a result of voice leading. As you can see below, sol (in the bass) resolves up to la, ti resolves as expected (up to do), and re resolves as expected (down to do). The doubled sol in the V chord (or the fa in the  $V^7$ ) resolves down to mi (or me if in minor).

**Doubling summary**: here, double the *third* of the vi chord. This means that you're doubling *do*. **Voice leading summary**: sol - la  $(\hat{5} - \hat{6})$  in the bass; upper voices move ti - do  $(\hat{7} - \hat{1})$ , re - do  $(\hat{2} - \hat{1})$ , and sol - mi  $(\hat{5} - \hat{3})$ . If it's V<sup>7</sup> to vi, this voice will move fa - mi  $(\hat{4} - \hat{3})$ . If you prefer, think of it this way: use **contrary motion** (bass up, others **down**) **EXCEPT** that ti resolves up to do  $(\hat{7}$  up to  $\hat{1}$ ).



The iii chord is spelled 3, \$, \$. When in a major key: it's mi, sol, ti; it's a minor triad. When in a minor key: it's me, sol, te; it's a major triad. Almost always in root position; root is usually doubled. Usually progresses to IV or to vi; the latter is especially common as it is part of the circle of fifths harmonic paradigm (see below). See the first three examples below (in EbM, gm, DM)

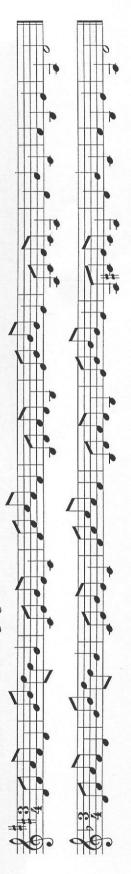


the subtonic note (te). The notation b VII doesn't really mean "flat VII" so much as "lowered VII," or "VII built on the note a half-step lower than usual." If you examine the final three examples above (am, cm, g\*m), you'll see a triad labeled b VII. This triad occurs in a minor key; it's a major triad built on

sum total of which creates the progression. You simply must memorize this progression. A trick which might work for you: think of it as a telephone because the root movement is entirely by descending fifths (all P5 except for one tritone). Notice that each voice has some kind of sequence, the The examples below show one of the single most important harmonic sequences in ALL of tonal music: the circle of fifths, so called number: 1-473-6251



Some circle of fifths mantras for class singing:



Used a lot in "western art music": Baroque, Classic, Romantic periods (c. 1650 - late 1800s).
 Vivaldi's "The Four Seasons":



Rachmaninov's Symphony no. 3 (no score—just listening)

• Used very frequently in jazz (called "ii-V-I" or "turnaround").

Jazz standard "Autumn Leaves":



Jazz standard "All the Things You Are":



See reverse for "Take Five" by Paul Desmond.

· Used in popular music.

An "oldie": Lionel Ritchie's "Hello" (no score—just listening).





## Harmonic sequence (other than the circle of fifths)

- 1. Remember that harmonic sequence often goes hand in hand with melodic sequence.
- 2. Remember, too, that the circle of fifths progression is the most important harmonic sequence.
- 3. The "retrogressive sequential" pattern:  $I V_i v_i iii_i IV I$ 
  - The best-known example of this harmonic pattern is probably Pachelbel's Canon in D Major:

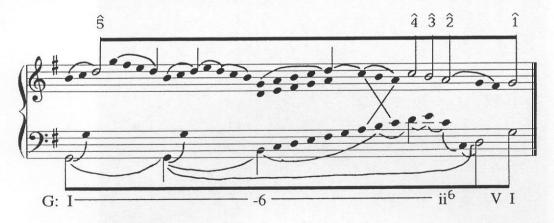


• An excerpt from Chopin's Mazurka in F Major, Op. 68, no. 3:



- 4. Chains of parallel first inversion triads aren't technically "sequence," but the topic fits well here.
  - See p. 68 in *Music Sources* (Mozart example). The tonic triad (and scale degree 1) is prolonged in mm. 1-8. The bassline leap down to B2 in m. 9 (harmonized with a I<sup>6</sup> chord) initiates a chain of parallel  $\frac{6}{3}$  chords; note that the bassline ascends an octave (B2 up to B3) in mm. 9-16, then it moves *beyond* the B3, up to middle C. The ascent from B2 to B3 forms a harmonic "package," in a sense.

Below, a reduction of this passage, constructed along the lines of reductive analyses done by Heinrich Schenker (Viennese theorist, 1868-1935).



### First inversion triads

As you know, triads aren't always in root position. When the third of the triad is the lowest sounding note (in the bass in SATB writing), the triad is said to be in **first inversion**. Notice that we now have an important distinction: "root" and "bass note" are *not* the same thing. Keep the two separate in your mind.

Which triads may occur in first inversion? Any of them—but for now we will focus on tonic, subdominant, and dominant only.

How they sound: they often have a "lighter," less stable quality than root position triads.

**How they're symbolized—Roman numerals**: as you probably know, the Roman numeral symbols for first inversion triads look as follows:  $I^6 \ V^6 \ i^6 \ iv^6$  and so forth. What you may not know is that  $\frac{6}{3}$  is actually the complete figured bass symbol for the first inversion triad; the figure  $\frac{6}{3}$  simply is a universally used shorthand.

How they're symbolized—jazz/pop symbols: first inversion triads are one example of "slash chords," meaning chords whose jazz/pop symbol includes a slash in it. The jazz/pop symbol is as follows: chord symbol / bass note. Examples: a C Major triad in first inversion would be C/E; a B Major triad in first inversion would be B/D $\sharp$ , a G Minor triad in first inversion would be G-/B $\flat$ , an F diminished triad in first inversion would be F $^{\circ}$ /A $\flat$ , and so forth.

**Doubling:** remember the general principle of doubling whatever is in the bass? Well, the doubling for  $I^6$   $IV^6$  and  $V^6$  is an *exception* to this principle—*do not* double the bass note! In other words, it's best to **double the root or fifth** of these chords. That's not to say that you'll *never* see a doubled third, but it's not commonly done. Another important point: **never**, *ever* **double the leading tone**, because its tendency to resolve up to the tonic note is strong that doubling it would just be overwhelming.

The **point**: as long as you double the root or fifth (not the bass note) of  $I^6$   $IV^6$  and  $V^6$ , you'll be fine.

And now for some *theory*: why first inversion triads? Where do they come from? What are they good for? First inversion triads (remember that for now we're just dealing with  $I^6$   $IV^6$  and  $V^6$ ) arise for several reasons, usually associated with the bassline: 1) bassline arpeggiation; 2) neighboring motion in the bassline; and 3) passing motion in the bassline. Let's examine each of these possibilities.

### I. Bassline arpeggiation

Bassline arpeggiation simply means the statement and restatement of a triad, but in different inversions. The example below shows the simplest version of this principle: the progression on the left is elaborated on the right by the insertion of first inversion triads. The bassline thus exemplifies arpeggiations within the I, IV, and V chords. Note that the jazz/pop symbols are shown above the chords and the Roman numeral analysis is shown below, as usual.



Arpeggiation can also be from first inversion to root position—the opposite of what's shown above.

### II. Neighboring motion in the bassline

First inversion triads may arise from neighboring motion in the bassline. The example below shows the simplest version of this principle: the progression on the left is elaborated on the right by the insertion of first inversion triads. In the first, second, and third measures, the bassline moves to a lower (or upper) neighbor and then back to the primary note. The neighbor notes are then harmonized; note the added neighboring motions in the upper voices, too.



In the penultimate measure above, you might have noticed a V chord moving to a iv<sup>6</sup>. This seeming "broken harmonic rule" is permissible here because the iv<sup>6</sup> really is just a hierarchically subordinate collection of neighbor notes; the V chords which surround it are really "the" structural chords.

### III. Passing motion in the bassline

First inversion triads may also arise from passing motion in the bassline, the most common of which is filling in the gap from do down to sol (î down to ŝ). The first two progressions below show this stereotypical motion. Three significant points: 1) note that the motion from  $V^6$  to  $IV^6$  (iv in minor) is subordinate to the general motion of tonic (first chord) to dominant (final chord); 2) note that *contrary motion* is essential to make the voice leading work; and 3) note the use of the *minor dominant* (the  $v^6$  chord) in the second progression. This is *the only instance* where you may use the minor dominant—as a  $v^6$  in a passing motion from i down to V.

The third progression shows that V may occasionally resolve to  $IV^6$  as part of an unusual deceptive cadence ("unusual" because the usual deceptive cadence is V resolving to vi).



In summary, then: first inversion triads usually arise from arpeggiation, neighboring motion, or passing motion in the bassline. They are often used to create a more interesting, smoother bassline—compare the two basslines shown below.



# Melody harmonization

The ability to harmonize a melody is an important skill to develop. More than any other "part-writing technique," harmonizing a melody requires a clear, precise understanding of *harmonic syntax*—the way that chords fit into a logical, *musical* harmonic progression. This handout covers two different types of melody harmonization: harmonizing a *bassline melody* (often called harmonizing an *unfigured bass*) and harmonizing a *soprano melody* (the traditional type of "melody harmonization").

## Harmonizing a bassline melody

- *Plan* the entire progression—the complete harmonization—using Roman numerals *before* you begin to write it out in four parts.
- Begin planning by analyzing the melody for key and mode, cadences, and potential nonchord tones.
- The basic idea is to examine the possibilities for each bass note—make a brief list of the possible harmonizations of each note in the passage in question. After finding *all* of the possibilities, you then narrow down your harmonization to what you feel is the *best* progression.
- At the same time, don't get so bogged down in individual notes that you lose a sense of *grouping*. As you refine your technique, you'll begin to see groups of notes and how to harmonize them.
- The most important groups are those at cadences—learn the bassline and harmonic stereotypes at *cadences* and begin your harmonization by working them out.
- When harmonizing a bassline melody, you will have to take *chord inversions* into account as you consider the possible harmonization of each note. Remember that inversions are often related to harmonic groups.
- Be aware that basslines may still contain a few nonchord tones; NT and PT are by far the most common.
- Here, then, is a summary of what to think about:
  - 1. Analyze the bassline melody for key and mode (major or minor);
  - 2. Analyze the cadence(s) and nonchord tones, if present;
  - 3. Sketch out RN possibilities for each note, but don't be too myopic—be sure to:
  - 4. Think about harmonic groups wherever possible;
  - 5. Work out the best progression after you've sketched the possibilities; and
  - 6. After the entire progression is worked out, write it out in four parts (SATB).

### Bassline melodies for discussion

### Unit I (I, IV, and V in root position and first inversion):

- I may progress to anything; IV may progress to I or to V; V may progress to I (or occasionally to IV<sup>6</sup>); avoid moving from V to IV.
- Remember that first inversion triads often arise from arpeggiation, neighboring motion, or passing motion in the bassline.



## Unit II (add second inversion I, IV, and/or V; add V<sup>7</sup>; and add ii):

- Same tips as above, plus:
- Carefully review how second inversion chords are used—they're very specifically limited to the cadential, passing, and neighboring (or pedal)  $\frac{6}{4}$ .
- Temporarily use just the dominant triad, then change it into the dominant 7th where applicable.
- When V and V<sup>7</sup> (or inversions thereof) are used next to one another, the triad comes first.
- The diminished triad (on 2 in minor) should only be used in first inversion (i.e., ii<sup>o</sup>6).



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### Unit III (add vii<sup>o</sup>6, vi, iii, harmonic sequence, mode mixture):

· Same tips as before, plus:

• Remember that diminished triads usually occur in first inversion (this now includes vii<sup>o</sup>6).

Remember that vi is often an extension of—or substitute for—the tonic.

• Remember that iii is not used all that often.

• Be aware of potential harmonic sequences (especially the circle of fifths).

• If you must include mode mixture, work out the progression without any borrowed chords first, then substitute them where they'd fit.



## Harmonizing a soprano melody

• Many of these tips are the same as those for a bassline melody harmonization.

• *Plan* the entire progression—the complete harmonization—using Roman numerals *before* you begin to write it out in four parts.

• Begin planning by analyzing the melody for key and mode, cadences, and potential nonchord tones.

• The basic idea is to examine the possibilities for each note—make a brief list of the possible harmonizations of each note in the passage in question.

An important difference from bassline melody harmonization: begin checking out possibilities using just root position chords—don't worry about inversions at first.

• After finding *all* of the possibilities, you then narrow down your harmonization to what you feel is the *best* progression

Sketch the *bassline* of this best progression using just root position chords, *then* go back and work out inversions. Remember how inverted chords function within the context of harmonic groups.

Don't get so bogged down in individual notes that you lose a sense of *grouping*. As you refine your technique, you'll begin to see groups of notes and how to harmonize them.

• The most important groups are those at cadences—learn the stereotypes at *cadences* and begin your harmonization by working them out.

• Here, then, is a summary of what to think about:

1. Analyze the melody for key and mode (major or minor);

2. Analyze the cadence(s) and nonchord tones;

3. Sketch out RN possibilities for each note (just think root position), but don't be too myopic—be sure to:

4. Think about harmonic groups wherever possible;

5. Sketch the bassline of the *best* progression—at first all in root position—after you've sketched all possibilities;

6. Add chord inversions, being sure to avoid parallels (|| 5, || 8) between the melody and bassline; and

7. After the entire progression is worked out, write it out in four parts (SATB).

#### Melodies for discussion

### Unit I (I, IV, and V in root position and first inversion):

Same tips as for the unit I bassline melody.

• Remember: work out the progression in root position first, sketch out the bassline, then add inversions where they'll work.

• Strive for a good counterpoint between the melody and the bassline—good use of contrary motion, avoid undesirable parallels, and so forth.



## Unit II (add second inversion I, IV, and/or V; add V7; and add ii):

- Same tips as for the unit II bassline melody, plus:
- Think carefully about doubling in the ii<sup>o</sup>6 chord.
- Consider changing chords when a melody note is repeated (or sustained).



## Unit III (add vii<sup>o</sup>6, vi, iii, harmonic sequence, mode mixture):

- Same tips as for the unit III bassline melody, plus:
- Remember that where there's *melodic* sequence, there's often *harmonic* sequence.



Some bassline gestures (in c minor) and a few (not all) stereotypical harmonizations



Some melodic gestures (in D Major) and a few (not all) stereotypical harmonizations



# 6 chords (triads in second inversion)

**Notice** first of all that this handout is limited to second inversion I, IV, and V triads (i, iv, and V in minor). You will **rarely if ever** have to write any other second inversion triads, nor will you encounter very many of them in analysis.

Remember that a Roman numeral with no figure (say, IV) represents a root position triad and something like  $V^6$  stands for a first inversion triad (by the way--recall that  $V^6$  is really a shorthand for  $V_3^6$ ).  $_4^6$  is a figured bass symbol which means second inversion. Somewhere in the upper voices the notes which are a sixth and a fourth above the bass are present. The remaining upper voice will just about always **double the bass note** (the **fifth** of the chord).

## The cadential <sup>6</sup><sub>4</sub> chord:

This is **always** a  $I_4^6$  chord ( $i_4^6$  in minor), and is **followed** by V (or V<sup>7</sup>) at the cadence. The cadential  $I_4^6$  is on a **strong** beat relative to the V that follows it. Note that it **does not** really sound like a tonic chord--it precedes the dominant in such a way that it often sounds simply like a double suspension leading into V (as if  ${}_{4}^{6}$ - ${}_{3}^{5}$ ). When voice leading from  $I_4^6$  to V (or to V<sup>7</sup>), the upper voices should **never** leap, and they should all move **down** by step if at all possible.



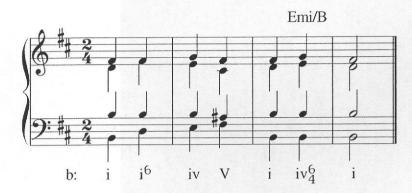
# The passing 6 chord:

This chord harmonizes passing motion in the bass, and it occurs within two different progressions: I  $V_4^6$  I<sup>6</sup> (or the opposite direction; and in minor) or IV I<sub>4</sub><sup>6</sup> IV<sup>6</sup> (or the opposite direction; and in minor). The passing  $_4^6$  is on a weak beat. Note that it sounds less structurally important than the chords surrounding it. As far as voice leading, remember to use smooth, stepwise motion, and notice the "voice exchange" in the examples—it is as if two voices (the bass and an upper one) exchange their notes, with the same passing tone in between.



# The **neighboring** <sup>6</sup><sub>4</sub> chord:

This chord usually occurs in the progression I IV $_4^6$  I or occasionally in the progression V I $_4^6$  V (for both, minor is also possible). The neighboring  $_4^6$  is on a **weak beat**. Note that it sounds **less structurally important** than the chords surrounding it. As far as voice leading, notice that the bass and one upper voice remain on the same note, while the other two upper voices **gently** move to their upper neighbors (hence the name "neighboring  $_4^6$ ") then back down. This chord is sometimes referred to as a pedal, embellishing, or auxiliary  $_4^6$ .



# Other <sup>6</sup><sub>4</sub> information:

Notice that the jazz/pop symbol for the  $iv_4^6$  chord is shown in the example above. Just as the first inversion triad includes a slash, so does the second inversion triad. The symbol to the left of the slash shows chord root and quality, while the symbol to the right shows the bass note.

The  $_4^6$  chord may also occur in the context of an arpeggiated bass (sometimes called an "arpeggiated  $_4^6$ "), or along with a melodic bass: if the bass has the most important melodic line in addition to fulfilling its usual harmonic support role, then any number of inverted chords may result.

Remember that you should adhere **assiduously** to the great ideal of smooth, stepwise voice leading when writing and resolving  $_4^6$  chords. The cadential one is on a strong beat relative the V or  $V^7$  which follows it, while the passing and neighboring  $_4^6$  chords are on weak beats relative to the structurally more important chords surrounding them.

A wise theorist (Dr. Richard Hoffman) once said: "there are four kinds of  $\frac{6}{4}$  chords: cadential, passing, neighboring, and wrong." One might additionally say that there are almost always just three triad functions which are privileged enough to earn a  $\frac{6}{4}$ : tonic, subdominant, and dominant.

## A final point to ponder:

Go back and play through all of the examples in this handout. All of the  $_4^6$  chords could be analyzed as vertical entities which are triads in second inversion (and they are shown that way beneath the examples). That's fine, but consider *this*: might all of the  $_4^6$  chords better be characterized as **horizontal voice leading entities**? That is, in all cases, what comes **before and after** the  $_4^6$  chord is **more structurally significant** than the  $_4^6$  itself--the  $_4^6$  chords almost function as voice leading bridges, connecting the chords which come before and after them.