To modulate means to change keys. When leading worship or performing in a Christian concert, it is often desirable to create a sense of flow between pieces. This is especially true in contemporary worship where two to six worship choruses/hymns may need to be connected seamlessly. Modulations are often indispensible to effect smooth transitions.

This chapter addresses basic ways to create simple, short modulations: three different V chords are employed to propel songs into the new key. For example, to establish the key of C, you would need one of these V chords — V7, Vsus, or IV/5.

Example 31.1

<table>
<thead>
<tr>
<th>G7</th>
<th>Gsus</th>
<th>F/G</th>
</tr>
</thead>
<tbody>
<tr>
<td>V7</td>
<td>Vsus</td>
<td>IV/5</td>
</tr>
</tbody>
</table>

This chapter explores modulations within and between pieces, modulations in different meters, ways of walking the bass up or down, ensuring that entrances are secure, and modulations up a half or whole step, since they occur most frequently.

The next chapter focuses on creating smoother, longer, and more emotional modulations.

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<td></td>
<td>Be Thou My Vision → Joyful Joyful</td>
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</table>
Modulations with No Transition

Sometimes it's preferable to change keys directly without any connecting material. Below, a no-transition modulation from C to D occurs. If you are working with guitarists, whole step modulations from C-D, D-E, F-G, and G-A are most feasible. Half step modulations are more difficult for them, though an E to F modulation is doable even for the novice. Keyboardists, however, can perform any sort of modulation.

Example 31.2 *God is So Good* (last 4 measures, & first 2 measures of first repetition)

```
C F C G C # D Em

God is so good he's so good to me. I praise His Name
```

Finding the V Chord & its Alternatives

**Principle.** The easiest way to modulate is to find the V chord of the new key.

For example, to modulate to the key of C, we will need the "pivot" chord based on the 5th degree of the C scale—G major chord—to effect the modulation. Similarly, to modulate to the key of G, the pivot chord D would propel us into the new key.

Example 31.3 Locating the V Chord (Pivot) in C major and G major

```
Key of C
1 2 3 4 5

Key of G
1 2 3 4 5
```
The V chord can be determined from the clock-wise circle of fifths (I→ V), or more importantly for us, the counter clock-wise circle of fifths (V→ I).

**Fill-in-the-Blanks**

1. In modulating from Bb to B, the V of B = ______
2. In modulating from Eb to F, the V of F = ______
3. In modulating from Db to Bb, the V of Bb = ______
4. In modulating from Bb to C, the V of C = ______
5. in modulating from G to A, the V of A = ______

If you lead a band, remember—"V of the new key."

Since the V chord is so important, we will want to "color" it in different ways depending on the situation. See below some possibilities involving triad and sus chord shapes.

Example 31.4  V Chord Alternatives with the Root in the Soprano

![Example 31.4 V Chord Alternatives with the Root in the Soprano](image)

Example 31.5  V Chord Alternatives with the Fifth and Third in the Soprano

![Example 31.5 V Chord Alternatives with the Fifth and Third in the Soprano](image)

Eventually, we will want to be able to find each alternative quickly and effortlessly in all the keys. We'll begin with simple versions of the V chord first.

**Half Step Modulations**

*Idea.* One way to modulate up a half step is to hang onto the note in the soprano (the C). See the common tone retained in the Ab7 chord (the third) below. The C in the soprano
becomes the leading tone (seventh degree) of the key of Db. The soprano movement then is C, C, Db.

The Ab7 chord (V7 of Db) propels our ears into the new key. After hearing the V7 chord, a I chord in Db sounds logical and inevitable.

Example 31.6 Modulation from C to Db

This common tone spacing is idiomatic for keyboardists. Modulations up a half or whole step can give a song a "lift" and stimulate congregational response.

Example 31.7 Modulation from C to Db (God is so Good)

Write in three possible sus chords for the desired modulation. You need the sus chord of the new key and the root must be in the soprano. Label with pop symbols and roman numerals, as below. The last phrase of the song is displayed, followed by the new key. See the demonstration below. Then do the exercises.

Example 31.8 God is So Good (modulation from G to Ab major)
Example 31.9 **Try it! Be Thou My Vision** (complete modulate from E to F major)

Example 31.10 **Try it! Open our Eyies** (complete modulate from D to Eb)

Example 31.11 Try it! **The Joy of the Lord is My Strength**

Create contrasting harmonizations for the melody. In at least one variation include a series of descending fifths. Provide pop symbols above, Nashville Numbers below. Be prepared to perform your harmonizations in class.
Example 31.12  Try it! Provide the Needed Modulation.

Include the contrasting harmonies you created above.
Be prepared to perform the above in class.

Guitarists. Half step modulations result in difficult keys for guitarists. The easiest half step modulation is from E to F major. So let's proceed to whole step modulations.

**Whole Step Modulation**

*Put 3rd of V chord in Soprano.* If you are modulating up a whole step, the C in the soprano can rise a half step to C#. The C# is both the third of the A7 chord and the leading note (scale degree seven) of the new key of D. The soprano movement then is C, C#, D.

Example 31.13 Modulation C to D

This spacing is idiomatic for keyboardists. Let's put this modulation in a musical context. See below.
Example 31.4 Modulation C to D  (*God is So Good*)

\[
\begin{align*}
&\text{C} \quad \text{G} \quad G^9_{\text{sus}} \quad C \quad A^7 \quad \text{D} \\
&\text{God is so good, He's so good to me.} \quad \text{God is so }
\end{align*}
\]

Example 31.15 Play Through the Octave. Perform it!  (for keyboardists)

\[
\text{V7}
\]

**Assignment.** Play the above by memory. Play it again starting in the key of Db. Try using a V13 in place of the V7. Now play *God is So Good*, modulating from D to E, F to G, and G to A.

**Another alternative: place the Root of V in the Soprano.** When modulating from C to D major, instead of maintaining a C→C#→D movement in the soprano, we could use the root of the A7 chord (A). It looks like this.

Example 31.16  *God is So Good*

\[
\begin{align*}
&\text{C} \quad \text{F} \quad \text{C} \quad \text{G} \quad \text{C} \quad \text{A} \quad \text{D} \quad \text{Em} \\
&\text{I} \quad \text{D:V} \quad \text{I} \quad \text{ii}
\end{align*}
\]

Written out, the above looks like this (below) when the root of V7 is in the soprano.
Example 31.17 Use of a V7

Example 31.18 A9sus Substitution

\textit{Compare V7 versus V9sus}. Compare the sound of the V7 chord versus the V9sus carefully. Play both several times. Do you agree that the V7 sounds bolder, and that it sticks out of the texture more than the V9sus? The V9sus has a less harsh, warmer, mellow sound, right? There is a technical reason for this: the sus9 does not contain the dissonant tri-tone interval (in A7, the interval from C# to G) whereas the V7 does. Also, because the sus chord lacks the third of the chord (here, A-C#), it has a more ambiguous, floating quality. In addition, the V9sus seems to adapt and fit into situations less obtrusively and connects more smoothly than the bolder and more dissonant V7. In most situations, the V9sus is a better pivot chord for modulations.

\textbf{Vsus, Vsus7, Vsus9 as Modulation Chord}

\textit{Write in three possible sus chords for the desired modulation}. You need the sus chord of the new key and the root must be in the soprano. Label with pop symbols and roman numerals, as below. The last phrase of the song is displayed, followed by the new key.
Example 31.19 *God is so Good* (modulate from G to A major)

![Musical notation for God is so Good](image)

Continue writing the examples below. Put the Pop symbols above the score and the Roman numerals and key designation below. The top of the V9sus chord (placed in the soprano part) should be the root of the chord. Include accidentals as needed.

Example 31.20 **Try it!** *Amazing Grace* (modulate from F to G major)

![Musical notation for Amazing Grace](image)

Example 31.21 **Try it!** *Amazing Grace* (modulate from D to E major)

![Musical notation for Amazing Grace](image)

**Short V9sus Modulations Between Pieces**

It's often desirable for the segue between two songs with fast tempos to be very short so that the rhythmic momentum can be maintained. In the two examples below, the segue consists of a single, V9sus chord. The tempos are the same, and so are the meters (4/4 and 6/8 time, respectively).
Example 31.22 We Bring a Sacrifice of Praise (E) to I will Enter His Gates (D)

Example 31.23 He is Exalted (Eb) to Great is the Lord (C)
Below, two consecutive sus chords can kick a song into a higher key, even in mid stream.

Example 31.24  Play it! Amazing Grace  (F to G)

Above, in measures three and four, two consecutive sus13 chords are used to effect a dramatic modulation up a whole step from F to G major.

Example 31.25  Five Alternatives for the Pivot Chord (Modulation from G to A)

1. Play Open Our Eyes, Lord, modulating from D to Eb to E.
2. Play Amazing Grace, modulating from C to D, and G to A.

Four over Five: Simplifying the Sus9

Many musicians in a worship team will not understand the symbol A9sus or IV/5. Is there a simpler way to express this sound? Yes. In the key of D, for example, the symbol
G/A is a good substitute for an A9sus or a IV/5. The only note missing is the fifth (E, below), a non-essential tone. But if you must have E (the fifth), write "G6/A."

Example 31.26 Substitution for A9sus: G/A, G6/A

Four over Five. The symbol IV/5, our invention, is extremely useful for teaching and/or giving directions to performers. Why? In contrast to Pop symbols— but more like Roman Numerals or Nashville Numbers—IV/5 is applicable to any key and therefore allows us to conceptualize the chord. It allows us talk about it "generically" as a concept. That's powerful! When we say "play four over five," not only are the actual notes clearly delineated for any key, but the chord function is simultaneously expressed. This is important, because it helps improvisers "think in music" and apply concepts to various situations and keys.

Here, then, is the meaning of IV/5. The Roman numeral IV indicates a chord on the fourth degree of the scale. The Arabic number 5 indicates a single bass note on the fifth degree of the scale. Let's do some conversion exercises. Below, write the chord and provide the pop symbol.

Example 31.27 Assignment. Write the V9sus Chord and Convert it to a IV/5.

The four over five chord can be substituted for the V7 or Vsus.
Example 31.28  God is So Good (Modulation Up a Major Second via IV/5)

The IV/5 chord can be used in combination with a V7 chord, as below.

Example 31.29  God is So Good (Modulation Up a Major Second via IV/5 and V7)

Similarly, modulation up a minor second works well by means of the IV/5 chord.

Example 31.30  God is So Good (Modulation Up a Minor Second via IV/5)
Example 31.31 **Exercise:** Amazing Grace (Create Modulation using IV/5 chord)

A Major Problem! In Praise and Worship music today, sometimes we see a piece set in a very low key that is then sung an octave higher as a way of creating dynamic intensity. For example, *Your Love Never Fails* has been recorded in a low key (B major) where the lowest not is G#. Then it is sung an octave higher, where there are many high F#'s (extremely high notes to sing). This may be fine for a recording artist. But in a congregational setting, neither the low key (too low) nor the high notes when sung an octave higher (too high) are suited for congregational singing (see excerpt immediately below).

Example 31.32 Excerpt of *Your Love Never Fails* (Low Key, then Octave Higher)

The problem of "too many high notes" could be solved by creating modulations (see below). But for now, see the melody transposed to C major (still a low key, but not quite as low), followed by three repetitions (immediately below).

**Assignment.** Create three harmonic variations of the line below. At least one variation should consist of descending fifths. Include the Pop Symbols above the staff and Nashville Numbers below the staff. Make four copies. **Be prepared to play your versions in class, one after another without interruption in a continual flow.**

Example 31.33 Create Harmonic Variations of the First Line (*Your Love Never Fails*)
In contemporary praise and worship, modulations do not occur frequently — perhaps because leaders do not know how to create them. Modulations can provide a dynamic "lift" to songs. Instead of jumping an octave we could modulate up a major second (C-D, D-E) or a minor second (E-F), provide a dynamic lift and yet and yet keep the piece within the congregation's singing range.

Example 31.34 Using IV/5, Modulate from D to E, E to F.

Create two modulations: D to E, and E to F (the first one, C to D, is give to you). Use a IV/5 chord to propel the melody into the new key. Indicate the Pop Symbols above the staff and Nashville Numbers below the staff. Use you harmonic variations (from previous exercise) to vary the harmonies. Can you make it sound good? Be prepared to perform your solution in class.
In an actual worship service, you would not perform the modulations consecutively (as above) without a break. In fact, you may want only one modulation (e.g., D-E). However, the melody can now be placed in a good singing range for the people.

Example 31.35 Alternative Modulations (His Love Never Fails)

Let’s assume a different problem. Let’s say that you wanted to modulate from D to E, or D to F, or D to G. How could that be accomplished? Our starting point here is the V chord of D (an A chord). See below.

Example 31.36 Creating Modulations in Glory to God Forever

The IV/5 chord can be used to create modulations of any size. Create two modulations from E to G, and G to A. Indicate the Pop Symbols above the staff and Nashville Numbers below the staff. Be prepared to perform your solution in class.
Glory to God Forever has been recorded in B major, a very high key for congregational singing. The vocal range for the entire song is a ninth: D# (lowest note) to E (highest note) in B major.

In the above example, the key of E may be too low (you judge).
In the key of G, the lowest note is B, the highest note is C.
In the key of A, the lowest note is C#, the highest note is D.

Therefore, a modulation from G to A major might serve the congregation best.

**Use a modulation to highlight the text.** A modulation can help communicate the meaning of the text. For example, the words of the last stanza of *In Christ Alone*, "Then bursting forth in glorious day, up from the grave He arose," calls for a surge of musical intensity. A modulation up a half or whole step can provide that kind of "lift." And in fact, that is precisely what the Getty's (the authors) do when performing their hymn on their recording. They modulate from the key of C to Db, a somewhat low key for congregational singing. Instead, let's create a modulation from D to E.

Example 31.37 Create a Modulation in the Middle of a Stanza (*In Christ Alone*)

(Above) Provide Pop Symbols above the staff, and Nashville Numbers below the staff.
Bass Walks Down to the V9sus Chord

Modulations can sound very static if there is no movement. Let's add a bit of movement in the bass before playing the V9sus.

Example 31.38 Bass Passing Note in *God is So Good*

```
\begin{music}
\relative {d''} {
\relative {\d''} {
Dm & C/G & G7 & C & A_9sus & D & Em \\
| D/v9sus | I |
}

The modulation to D major could be delayed holding the C chord one full measure and the A chord one full measure.

Example 31.39 Slightly Longer Modulation (Same idea)

```

Complete the example below using the modulation pattern above. Label.

Example 31.40 **Try it! O Come All Ye Faithful** (F to G modulation)

```

O come let us a-dore him Christ the
Example 31.41 Three Rhythmic Variants to Walking Down

Example 31.42 Syncopated Modulation (He's Got the Whole World in His Hands)
Bass Walks Up to the New Key: Three Assignments

If you are creating the modulation for your worship team, your leader will want to know exactly when to come in after your modulation. One good way to obtain a secure feeling is to walk the bass up from the V chord to the I chord of the new key. Notice the 10ths between the bass and alto: B-D, C#-E, D-F#. If necessary, retard the tempo a little during the walk-up, then resume the tempo.

Example 31.43 *Seek Ye First* (walking up to the new key of D)

**Try it!** Above, walk up the bass while modulating from D to E.
Example 31.44 Try it! *O Come All Ye Faithful* (walking up to key of G)

Notice, we pitched it in F—lower than the published key (G)—then modulated up to G.

*Come Thou Almighty King* is in 3/4 time instead of 4/4. Assume it is used as the first hymn in a traditional, 8am Sunday morning service. Since the congregation's voice would need to warm up at that hour, the published key of G major (with several high D's in the melody) would be too high. Solution: pitch it a third lower in the key of E major. The high D's become more manageable B's. A better congregational response can result.

Example 31.45 Try it! *Come Thou Almighty King* (walk up to F)
Below, write in the walk-up bass and its associated harmony (as in the above example) for the hymn *Majesty*. Include a pop symbol and a Roman numeral analysis.

Example 31.46  **Try it!**  *Majesty* (walking up to the new key of A)

We can modulate to *any key* (not just those up a half or whole step) using the tried-and-true formula of V9sus-I of the new key. Modulate to a higher or lower key—it makes no difference. The result in some cases may be somewhat abrupt, but it will always work.

Example 31.47  *God is so Good* (modulating from E to Db)

**Timing the Entrance: Downbeats, Upbeats**

*Downbeat Entrances*. Some students typically have difficulty with the timing of the congregation's entrance in the new key. Usually the entrance note will need to come on a
downbeat (beat one). However, students often play the I chord on some other beat! This is confusing; it makes the entrance point unclear metrically.

Below, the congregation should enter on beat one of measure three—not on beat three of measure two, or beat two of measure three! Count out the beats as you practice your modulations. Is your tempo steady and secure?

Example 31.48 One Measure Modulation in 3/4 Time

\[ \text{Example 31.48 One Measure Modulation in 3/4 Time} \]

\[ \begin{array}{c}
\text{\textit{3/4}} \\
\text{C:I} \\
\text{Db:V7} \\
\text{I}
\end{array} \]

Below, the walking bass part makes the entrance on measure three more secure for the congregation. The bass walks up to the I chord (Ab, Bb, C) in measure two.

Example 31.49 Bass Walks Up on Measure Two

\[ \text{Example 31.49 Bass Walks Up on Measure Two} \]

\[ \begin{array}{c}
\text{\textit{3/4}} \\
\text{C:I} \\
\text{Db:V7} \\
\text{V7} \\
\text{V6} \\
\text{I}
\end{array} \]

Generally, in 3/4 time the V chord (or the V chord and its walking notes) will need to be at least one measure long.

Example 31.50 Two Beat and Four Beat Modulations in 4/4 Time

The displays show typical ways to handle short modulations in 4/4 time rhythmically. The V chord in line one is two beats long and occurs on beat three, a strong beat. The V chord in line two is four beats long and occurs on beat one. In line three the bass walks up to the I chord.

\[ \text{Example 31.50 Two Beat and Four Beat Modulations in 4/4 Time} \]

\[ \begin{array}{c}
\text{\textit{c}} \\
\text{C:I} \\
\text{Db:V7} \\
\text{I}
\end{array} \]

\[ \begin{array}{c}
\text{\textit{c}} \\
\text{C:I} \\
\text{Db:V7} \\
\text{I}
\end{array} \]
Now let's demonstrate a two and four beat modulation in 4/4 time in some actual songs. Notice (below) a vi chord precedes the V chord in the V area—an enhancing possibility.

Example 31.51 Very Abrupt, Two Beat Modulation for *Holy Holy Holy* (4/4 time)

```
C:I  Db:V7  VI7  V6  I
```

The modulation seems too abrupt! The one below doubles the transition chord values.


```
C:I  Db:vi7  V7  I
```
Improvise! Play the two examples above, modulating from D to E.

Example 31.53 Improvise! What a Mighty God We Serve (Modulate C to D to E)

Upbeat Entrances. Some songs begin on an upbeat (beat 3 of 3/4 time, or beat 4 of 4/4 time) not the downbeat (beat 1). Blessed Assurance (below) begins on beat 7 of 9/8 time.
Occasionally, harmonic adjustments may have to be made on the V chord. Above, the change of harmony from V9sus to V13 is beneficial. Notice, the upbeat has a V13 chord, and the downbeat a I chord (in contrast to the hymnbook version which has a I chord on the upbeat). The revised I chord placement gives a firmer sense of arrival in the new key.

Make sure the V chord propelling the modulation is long enough to lead securely into the new key. In some cases it may be better to hold the modulatory V chord longer. Again we stress, do not violate the basic metrical pulse. Do not inadvertently shift the natural position of the downbeat to some other beat.

**Practicing Modulations Within Pieces**

Example 31.55

Practice modulating within pieces (any key to any key). Choose a key to modulate to. Include (1) the new key signature, (2) a double measure at the key change, (3) 2-3 melody notes in the new key, (4) the pick up to the melody in the new key (if needed), (5) and a Roman Numeral analysis.
A. *God is So Good*

```plaintext
Em  D/A  A7  D

He's so good to me.
```

```plaintext
ii  I6/4  V7  I
```

B. *Amazing Grace*

```plaintext
Dm  F/C  C7  F

Was blind but now I see.
```

```plaintext
vi  I6/4  V7  I
```

C. *Be Thou My Vision*

```plaintext
C/D  G

Thy presence my light.
```

```plaintext
IV/5  I
```

D. *Jesus, Name Above All Names*

```plaintext
Fm  Bb7

Bless-ed Redeemer, Living
```

```plaintext
ii  V7
```
E. See Ye First

Caution!

Modulations within pieces can be overdone and become impotent though overuse. Use modulations sparingly—only when they serve a valid purpose. Do you need some contrast, some new energy? Do the words call for it? Maybe not! On the other hand, three modulations up a half step for the worship chorus I Exalt Thee could be effective as each modulation provides a "lift" for the word "exalt."

Remember, flat keys are difficult for guitarists. Have the keyboardist play the flat-key modulations? The following modulations are relatively safe for guitarists: up a half step from E to F; up a whole step from C to D, D to E, F to G, G to A, D minor to E minor.

Finally, when putting together a seamless set (medley), you will want to nest together songs with a similar theme, and with tempos (generally) that are similar. Don’t yank your people around—from fast to slow to fast, and from soft to loud to soft—in every piece. Group several slow songs together, and fast songs together. Ensure that the lyrics lead logically and/or emotionally to one another. This takes much thought and crafting.

Rules of Action

1. Don’t cut off the last note of the song too quickly before modulating.
2. Use common tones and maintain smooth voice leading.
3. Build in contrary and oblique motion between the bass and soprano.
4. Be sure to maintain the pulse and the meter (e.g., 3/4 time should have 3 beats).
5. Ensure that the congregational entrance point for singing is obvious and clear.

Next Chapter

We have looked at elementary ways to perform modulations. But our approach so far has been merely functional. What if we want to create (1) modulations between pieces, (2) to create richer, more expressive modulations, (3) extended segues that lead to a musical climax, (4) or a time for personal reflection during the transition itself? How could we do that? We'll look at ways to accomplish that in the next chapter.

Have you heard of the three stages of learning?
Conscious incompetence
Conscious competence
Unconscious competence