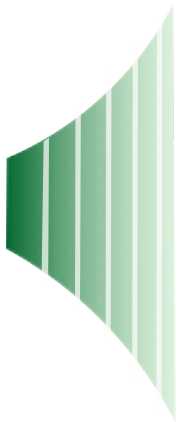


CHAPTER 10

MODULATIONS

Essential Concepts / Skills covered in chapter 10



- **Modulations by interval (half-step, whole-step, P4th), pivot chords**
- **Modulations between parallel keys**
- **Modulations between relative keys**
- **Songwriting devices for creating focal points**
- **Ear training examples with modulations**

Modulations by Interval

Most pop & rock songs stay in the same key throughout the entire piece. However, of the 3,500 songs analyzed for this book, about 20% do have at least one key change (also called a “modulation”). Sometimes the modulation is simple and abrupt - like moving up a half step or a whole step from a tonic I chord to a new tonic chord. Other times the key change can be more indirect or subtle, involving several other chords of the key (especially the V) over several transitional measures. Either way, the effect is usually to change the mood or add energy and interest.

HALF – STEP MODULATIONS

Half-step modulations from tonic chord to new tonic are usually quite obvious, like simply flipping a switch or shifting gears (hence the common term “truck-driver modulation”). The direction is almost always up, which adds excitement and gives the song an extra shot of emotion. The following Kenny Rodgers hit “The Gambler” changes key at the **1:36** mark, moving from an Eb major chord (tonic I) up a half step to E major (new tonic I). To establish the first key of Eb major in your ears, **START LISTENING AT THE BEGINNING OF THE CHORUS (1:10)**.

“The Gambler” — Kenny Rogers — 1979



For AUDIO, see the “Song Examples” playlist in the right sidebar, and click on track 1 song title. To navigate within the audio track, slide the progress bar forward to the desired starting point.

- **1:10** (chorus) **key of Eb major** Chorus ends on the I chord.
- **1:36** (verse) **MODULATION up half-step** **key of E major** Verse starts on the new I chord.

Here’s another example of a half-step modulation from tonic chord to new tonic. You will notice that the verse is based on the **circular I - IV - V - IV progression** discussed in Chapter Two. **START LISTENING AT 0:47**

“I Do” — J. Geils Band — 1982



- **0:47** (verse) **key of G major** Verse ends on the I chord.
- **1:16** (inst. verse) **MODULATION up half-step** **key of Ab major**
Instrumental verse starts on the new I chord.

This Jimmie Rodgers song has not one, but **four modulations**. The song is basically the story of a man's life, outlined in chronological order. As the verses progress from boyhood to marriage, then family and grandchildren, the key goes up a half-step on each verse, like turning a page to the next chapter in the singer's life. Once again, the movement is from tonic chord to new tonic at all the key changes.

"Kisses Sweeter Than Wine" - Jimmie Rodgers - 1957



- 0:01 (verse) key of F# major
- 0:27 (verse) MODULATION up half-step key of G major
- 0:52 (verse) MODULATION up half-step key of Ab major
- 1:18 (verse) MODULATION up half-step key of A major
- 1:44 (verse) MODULATION up half-step key of Bb major

The verse of the next 1965 hit features both variations of the **doowop progression** discussed in Chapter Two (I - VIIm - IIIm - V two times, and I - VIIm - IV - V two times). START LISTENING AT (0:44) to establish the first key in your ears. You will notice that this time the verse ends on the dominant V chord before moving to the I chord of the new key.

"Silhouettes" — Herman's Hermits — 1965



- 0:44 (end of verse) key of G major instrumental verse ends on the **V chord**.
- 1:13 (interlude) MODULATION up half-step key of Ab major
Four-bar instrumental interlude (I - VIIm - IV - V) starts on the new I chord.
- 1:17 (vocal verse) Continues in key of Ab major.

Additional songs with HALF-STEP MODULATION

1957	<i>Honeycomb</i>	Jimmie Rodgers	F#, G, Ab major
1961	<i>Big Bad John</i>	Jimmy Dean	G, Ab mixo
1963	<i>Denise</i>	Randy & The Rainbows	G, Ab major
1965	<i>King of the Road</i>	Roger Miller	Bb, B major
1966	<i>Groovy Kind of Love</i>	Mindbenders	A, Bb major
1976	<i>Turn the Beat Around</i>	Vicki Sue Robinson	F#, G minor
2000	<i>I Knew I Loved You</i>	Savage Garden	A, Bb major

WHOLE – STEP MODULATIONS

This early 60s instrumental hit features a whole-step modulation from tonic chord to new tonic.

"Wheels" – String-A-Longs – 1961



— **0:15** (2nd verse) key of F major Verse ends on the I chord.

— **0:46** (verse) **MODULATION up whole-step** key of G major Verse starts on the new I chord.

In the next example, the verse and chorus are based on the repeating **circular I - IV - V - IV progression**. The modulation happens directly from the final IV of the sequence up a whole step to the same sequence in the new key. START LISTENING AT **1:40**

"Dance into the Light" — Phil Collins — 1996



- **1:40** (chorus) **key of C major** Circular I - IV - V - IV progression ends on the IV chord.
- **1:56** (verse) **MODULATION up whole-step** **key of D major** Chorus starts on the new I chord, and the circular progression continues in the new key.

The following minor key example from the Scorpions has four modulations, including one unexpected twist. Each time a verse transitions to the chorus, the key ascends a whole step, giving all the choruses an extra boost of energy. However, after two modulations like this (Eb to F, then F to G) the song resets back to the original key (Eb) for the next verse before rising up once again to F for the final choruses (see list below).

Also of note is the unusual transition at the key changes, moving from the **bVII of the existing key to the Im of the new key**. The movement from bVII to new Im (for example, Db to Fm for the first modulation) makes for very dramatic and arresting entrances of the choruses. START LISTENING AT **0:35**

"Send Me an Angel" — Scorpions — 1990



- **0:35** (verses 1 & 2) **key of Eb minor** Verse ends on bVII chord.
- **1:11** (chorus) **MODULATION up whole-step** **key of F minor** Chorus starts on the new I chord.
- **1:47** (verse 3) Continues key of F minor. Verse ends on bVII chord.
- **2:05** (chorus) **MODULATION up whole-step** **key of G minor** Chorus starts on the new I chord.
- **2:22** (inst. solo) **MODULATION resets to original key** **key of Eb minor**
- **2:40** (repeat verses 1 & 2) Continue key of Eb minor. Verse ends on bVII chord.
- **3:16** (chorus) **MODULATION up whole-step** **key of F minor** Chorus starts on the new I chord.

Additional songs with WHOLE - STEP MODULATION

1964	<i>Don't Worry Baby</i>	Beach Boys	E major ver, F# major chor
1965	<i>My Girl</i>	Temptations	C, D major
1978	<i>I Wanna Be Sedated</i>	Ramones	E, F# major
1992	<i>I Will Always Love You</i>	Whitney Houston	A, B major
2000	<i>Show Me the Meaning</i>	Backstreet Boys	F#, G# minor
2003	<i>Hollywood</i>	Madonna	B, C# minor
2007	<i>Welcome to the Black Parade</i>	My Chemical Romance	G, A major

REVIEW OF SCALES & DIATONIC TRIADS

Before progressing on to various song examples with roman numeral analysis, it would be a good idea to briefly review some scale spellings and diatonic triads, using the kind of written exercises presented previously in Volume 1 (Chapters One thru Eight). This should help clarify our discussion when we start talking about parallel keys, relative keys, and perfect 4th modulations in the rest of this chapter.

NOTE: Scale spellings and diatonic chords are the foundation for virtually all concepts in the remaining chapters. For this reason, a brief review of scales and chords will be included in each chapter quiz. If you feel you need more practice with these moving forward, take some additional time with the written exercises and try using different keys.

WRITTEN EXERCISES

To practice spelling some common major, minor, and mixolydian scales, go to **Exercise 10.1** (see “Textbook Contents”/ “Volume 2”/ “Written Exercises”).

For practice with diatonic triads in major and minor keys, use **Exercise 10.2** (same location).

PERFECT 4th MODULATIONS

Modulating up a perfect 4th (C to F) or down a perfect 4th (C to G) means moving between **closely related keys** — ie. keys where only one sharp or one flat is different in the key signatures. Since these keys share many of the same scale notes, they also share some of the same diatonic chords. For example, if you look back at the diatonic chord chart in Chapter Two and compare the keys of C major and G major, you will notice that the C, Em, G, and Am chords all exist in both keys. The difference of course, is that the roman numerals assigned to each chord are different, depending on the key.

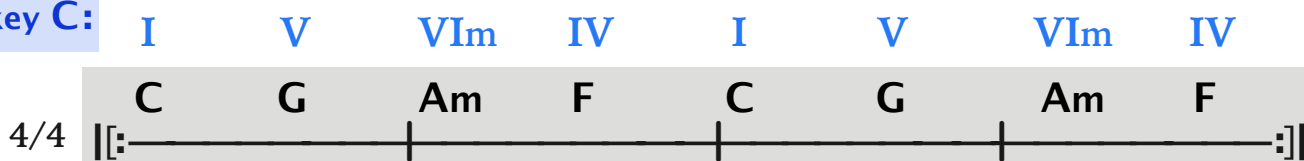
Due to these shared elements, modulations between closely related keys are usually more subtle than the sometimes abrupt half-step or whole step modulations heard earlier. In fact, one of the shared chords is often used as a **pivot chord** at the point of modulation, making the transition between keys even smoother.

The next song from country-pop duo Thompson Square illustrates the use of a pivot chord when modulating at the end of the first chorus (circled at **0:59**). As shown below, the first verse is based on the four-chord sequence C - G - Am - F (I - V - VI^m - IV in the key of C major). The chorus finishes with two repetitions of the C - G - Am - F progression, then immediately starts the second verse on a G chord, using the same four-chord progression heard in the first verse, but transposed up a 4th (now G - D - Em - C). This opening G chord of the second verse is the pivot chord, representing the dominant V of the old key (C) and tonic I of the new key (G), making the transition fairly smooth between keys.

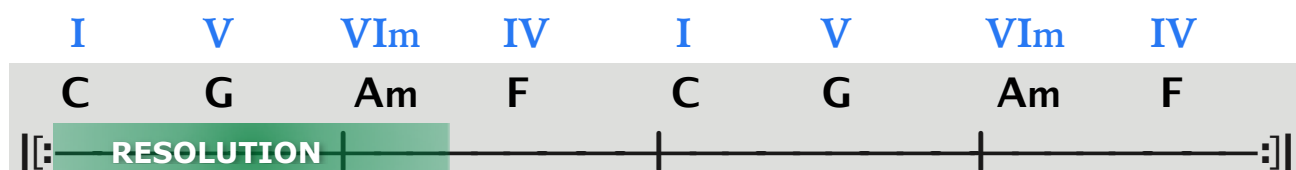
"Let's Fight" — Thompson Square — 2011



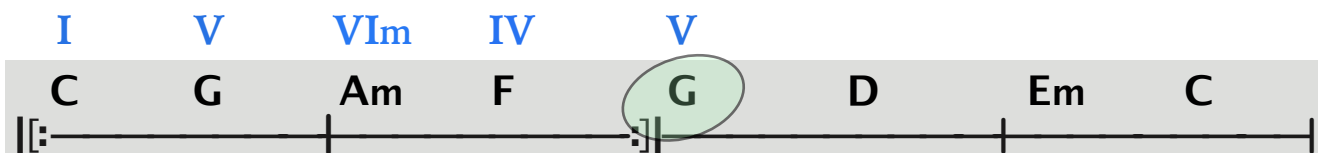
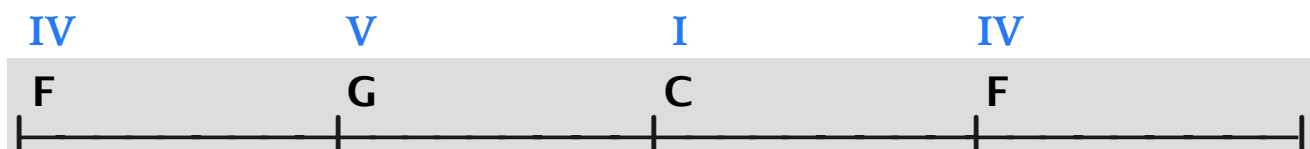
key C:



0:08 VERSE 1



0:30 CHORUS



new key G: I V VIIm IV

0:59 VERSE 2

You will note that this song also has a strong focal point (resolution) at the start of the chorus. Tension is created at the end of the verse by several of the **tension devices** discussed in previous chapters, as listed below:

Focal Point Devices on "Let's Fight"

- **V to I TENSION - RESOLUTION**, verse to chorus / title
- Last four bars of verse **AVOID the I CHORD**.
- **HARMONIC RHYTHM** (2 beats per chord) **TEMPORARILY SLOWED** at end of verse as F and G are stretched to 8 beats each.
- **INSTRUMENTAL GROOVE SUSPENDED** at end of verse on the F and G chord. Guitar strum changes from steady, choppy 8th notes to a single strum ringing for 8 beats on each chord.

Bastille's "Weight of Living" is another example of perfect 4th modulations, going back and forth between the verse in C major, and the chorus in G major. The song actually starts with a short introduction in G major, then modulates to the verse in C major, starting on F (the IV chord of the new key). The chorus in G major starts on a **pivot chord** G, which represents the dominant V of the old key (C) and I of the new key (G).

"Weight of Living" — Bastille — 2013



key G: I Isus4

4/4 Gsus4

0:07 INTRO

new key C: IV I VIIm IV I

0:21 VERSE

Am F C G Em C

key G: I VIIm IV

0:44 CHORUS

The next song by Green Day features perfect 4th modulations between two mixolydian keys. The verses are in Eb mixo, and the choruses in Bb mixo. At the end of the chorus, when the song goes back to the verse, notice the **pivot chord Eb** that starts the second verse — it represents the IV of the old key (Bb) and I of the new key (Eb). START LISTENING AT 0:35

"Longview" — Green Day — 1994



key
Eb mix:

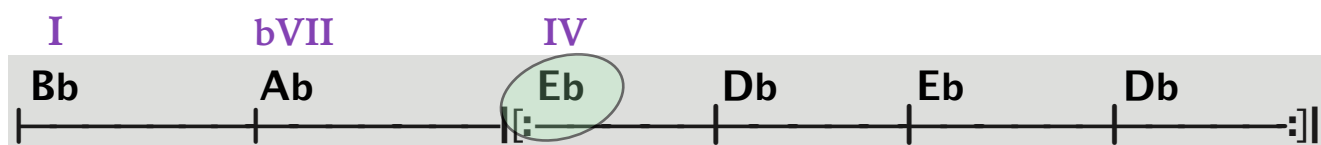


0:21 VERSE 1

new key
Bb mix:



0:49 CHORUS



key Eb mix:

1:02 VERSE 2

WRITTEN EXERCISE

Use **Exercise 10.3** (main menu / "Exercises" tab / "Written Exercises") to practice calculating modulations of a half step, whole step, and perfect 4th.

Parallel Keys

PARALLEL MINOR / MAJOR

Sometimes modulations will occur between two keys with the same letter name in the tonic (I) chord, such as the keys of C minor and C major. These are said to be **parallel** keys. In the case of minor and major, the keys have no naturally occurring shared chords.

Our first example of parallel minor / major modulation, “I’m Still Standing,” alternates between **verses in Bb major** and **choruses in Bb minor**. As you can see below, the intro is also in Bb minor, and the first modulation moves from the quick bVI - bVII combination (Gb - Ab) at the end of the intro to the new I chord (Bb) to start the verse. At the end of the verse, the music moves back to minor for the chorus, transitioning directly from tonic to tonic (Bb to Bbm).

“I’m Still Standing” — Elton John — 1983



key Bb min: 4/4

Im	IVm	V	bVI	bVII
Bbm	Ebm	F	Gb	Ab

0:00 INTRO

new key Bb maj:

I	IV	V	I	IV
Bb	Eb	F	Bb	Eb

0:11 VERSE

V	I	IV	I
F	Bb	Eb	Bb

key Bb min:

Im	IVm	bVI	bVII
Bbm	Ebm	Gb	Ab

0:38 CHORUS

As mentioned, there are no naturally occurring shared chords between parallel keys. However, we have seen in many songs that the V in the minor key is often changed to a major chord (borrowed from harmonic minor). When this happens, the V does become a shared chord, existing in both keys.

You may recall that the V appeared in both the verse and chorus of the previous example “I’m Still Standing.” However, it was never used as a transition chord between keys. In the next example — Del Shannon’s “Runaway” — the shared V chord is used to set up each key change, as the song alternates between verses in Bb minor, and choruses in Bb major. The verse uses the **descending stairstep to V progression** heard earlier in Chapter Six. Notice the extra boost of energy at the entrance of the chorus, as the music moves from the darker minor sound to the brighter major key. The transition to major is accentuated by the vocal melody, which starts on the natural 3rd (defining note of the major sound) at the beginning of the chorus.

“Runaway” — Del Shannon — 1961



key Bb min:

Im	bVII	bVI	V
Bbm	Ab	Gb	F

0:06 VERSE

new key Bb maj:

I	VIIm	I	VIIm
Bb	Gm	Bb	Gm

0:31 CHORUS

IV	V	I	IV	I	V
Eb	F	Bb	Eb	Bb	F

key Bb min:

Im	bVI	bVII	V
Bbm	Ab	Gb	F

1:08 INSTRUMENTAL VERSE

In “Back on the Chain Gang,” our final example for this section, the parallel modulation occurs a bit later in the song. At the **2:05** mark, the key of D major has been firmly established by two repetitions of the main verse / refrain. As the music takes a temporary detour into the release section, the key shifts to parallel D minor, providing a nice contrast in

terms of mood and flavor. Instead of returning to the original key of D major after this side-track, the music ramps up a whole step to E major for the final verse / refrain, providing an extra emotional lift. Also note the **extra 9th bar** at the end of the release, increasing the tension at the focal point. START LISTENING AT **1:48**

"Back on the Chain Gang" — Pretenders — 1961



key D maj : I V II^m7 VI^m IV

4/4 |[: D A Em7 Bm G 2x :]|

1:48 INSTRUMENTAL INTERLUDE

I

D D^m A7 D^m A7 5x

extra 9th bar

new key D min: I^m V7 I^m V7 **TENSION**

2:05 RELEASE

new key E maj : I V IV V V/3

E B A B B/D# 4x

RESOLUTION

2:37 LAST VERSE

Additional songs with PARALLEL MINOR / MAJOR MODULATION

1971	<i>When the Levee Breaks</i>	Led Zeppelin	F min ver, F maj release
1973	<i>Time in a Bottle</i>	Jim Croce	D min ver, D maj chorus
1994	<i>The Sign</i>	Ace of Base	G min int, G maj ver, chor
1995	<i>Have You Ever Loved a Woman</i>	Bryan Adams	G min ver, G maj chorus
2014	<i>Roller Coaster Ride</i>	Eric Church	A min ver, A maj chorus

PARALLEL MIXOLYDIAN / MAJOR

The parallel modulation from mixolydian to major is also fairly common in pop & rock. These keys have four shared triads — the I, II^m, IV, and VI^m chords — providing ample opportunity for pivot chord transitions. The movement is usually from mixo to major, and although it is a subtle change, the major key sounds a bit brighter and more uplifting.

We can start with “Get Together,” the 1969 recording by The Youngbloods. The song starts in A mixolydian, alternating between the I and bVII (A and G) chords. At the end of the verse, there is a short, six-bar refrain that briefly modulates to the parallel A major tonality. (A **refrain** is like a very short chorus — one or two lines that usually contain the song title. This refrain is doubled later in the song to 12 bars.)

The first chord of the refrain is D, a pivot IV chord shared by both keys. However, the second chord of the refrain (E) is a new chord, signaling the shift to a major tonality. It contains a G[#] note, which represents the natural 7th degree of A major. This is a change from the flatted 7th heard in the verse (root of the G chord). You will notice that the G chord is not used at all during the refrain, reinforcing the new major sound. At the end of the refrain, the song returns to mixo with another verse.

"Get Together" — Youngbloods — 1969



14

key A mix: I bVII

4/4 |: ——— | ——— | ——— | ——— :|

0:15 VERSE

IV

D E A D E A

new key A maj: IV V I IV V I

0:50 REFRAIN

Here's another example moving from a mixo verse to a major refrain. This time the keys are in E, with the verse using an E - Bm vamp (I and Vm7 of the mixo key). The refrain starts at **0:33** with the pivot chord E (I in both keys), and then quickly establishes the parallel major sound with a G#m chord (IIIIm). Like the previous song, this second chord of the refrain contains the natural 7th degree that shifts the sound to major. Also note that the V chord in the refrain is initially a major chord, reinforcing the major tonality. The last two bars of the refrain return to the I - Vm7 mixo vamp as the song resets to the original key heading into verse two.

"Ferry Cross the Mersey" - Gerry & The Pacemakers - 1965



key E mix: I Vm7 I Vm7 I Vm7 I Vm7

4/4 ||: E Bm7 | E Bm7 | E Bm7 | E Bm7 :||

0:14 VERSE

I E G#m F#m B E Bm7 E Bm7

new key E maj: I IIIIm IIIm V I

0:33 REFRAIN

E mix: I Vm7 I Vm7

Additional songs with PARALLEL MIXO / MAJOR MODULATION

1965	<i>You've Lost That Lovin' Feelin'</i>	Righteous Brothers	Db mix ver, Db maj chor
1991	<i>Breakdown</i>	Guns N' Roses	Db mix ver, Db maj chor
1999	<i>Back 2 Good</i>	Matchbox 20	D mix ver, D maj chorus
2012	<i>On Fire Tonight</i>	Little Big Town	Ab mix ver, Ab maj chor
2016	<i>Wasted Time</i>	Keith Urban	G mix ver, G maj chor

OTHER PARALLEL TONALITIES

The 1989 hit “It’s Ok (It’s Alright)” alternates between verses in C dorian and choruses in C major. You may recognize the **Im - IV dorian vamp** heard in the verse, for it was mentioned earlier in Chapter Eight. Also note the **descending bass progression** in the chorus with inversions. This sequence was discussed earlier in Chapter Five. The overall effect of dorian shifting to parallel major recalls the minor - major modulation heard previously in “Runaway.” START LISTENING AT **0:16**

“It’s Ok (It’s Alright)” — Fine Young Cannibals — 1989



key
C dor:

	Im	IV	Im	IV	
	Cm	F	Cm	F	4x
4/4	: ————— ————— ————— ————— :				

0:16 VERSE

new key
C maj:

	I	I / 7	VIIm	V / 3	
	C	C/B	Am	G/B	
	: ————— ————— ————— ————— :				

0:50 CHORUS

The next example will also remind you of previous songs. The sixties hit “Don’t Mess with Bill” alternates between a bluesy I7 - IV7 vamp in the chorus and a straight ahead major sound in the release. This is similar to the contrast between mixo and major heard earlier in “Get Together” and “Ferry Cross the Mersey.” However, the chorus is clearly not mixo because the I7 - IV7 vamp features the characteristic b3 / natural 3 clash of the blues tonality (discussed at length in Chapter Four). The release starts with the IIIm7 chord (F#m7), which contains the natural 3 and natural 7 notes (F# and C#). It is these notes that create the shift to the new key (parallel D major).

"Don't Mess with Bill" — Marvelettes — 1966



key
D blues :

4/4

I7 IV7 I7 IV7

D7 G7 D7 G7

0:10 CHORUS

new key
D maj :

IIIIm7 IIIm7 IIIIm7 IIIm7 V IV

F#m7 Em7 F#m7 Em7 A G

0:26 RELEASE

A WORD ABOUT FORM:

Most pop & rock songs have two main parts — a verse followed by a chorus (with perhaps an optional pre-chorus that connects the two). After hearing one or two repetitions of the verse and chorus, there is often a third part added midway through the song that introduces fresh musical material, such as new chords, melody, lyrics, or even a key change. This third part is sometimes called a “bridge” or a “release.” We will use the term **release**, which is more descriptive of its function, since it provides a temporary contrast or break from the rest of the song — kind of like taking a brief detour or sidetrack before rejoining the main highway.

On songs like “Don’t Mess with Bill,” there are only two parts. Are these verse and chorus? The first section clearly seems most important, repeating the song’s title over and over like a typical chorus. This could be a rare example that leads with the chorus, followed by the verse. However, the second section feels more like a sidetrack or release than a typical verse. In fact, the second section is never anchored by the tonic I chord (D), which is saved for the return of the chorus. We will therefore call this second section the release.

Two-part songs with chorus / release were very common in the pre-rock era of popular music (pre-1955), and most of the pop & rock examples in this book that use this form are not surprisingly from the 50s and 60s. (One final note: Other books may call the opening section a verse rather than chorus — either way the second section seems best labeled as a release.)

In the next 1970s dance classic, the verse is in C dorian — defined by the brief natural 6th notes in the bass line (A notes in blue) and the treble F chord on bars two and four (also containing an A note). The chorus starts with a prominent descending bass line, marching down almost an entire octave of the C mixo scale (F to G), announcing the shift to the new mixo key. START LISTENING AT **0:49**

"Disco Inferno" — Trammps — 1978



key **C dor:** **Im7** **Cm7** **IV F** **Im7 Cm7**

0:49 VERSE – bass line

IV F **Im7 Cm7** **4x**

new key **C mix:** **IV F** **bVII Bb** **I C**

C mixolydian scale

1:18 CHORUS

Additional songs with PARALLEL MODULATION

1965	<i>Norwegian Wood</i>	Beatles	E mixo verse, E dorian release
1968	<i>Legend of a Mind</i>	Moody Blues	A mixo, A dorian
2015	<i>Wish I Knew You</i>	Revivalists	C dorian verse, C min chorus

Relative Keys

RELATIVE MINOR / MAJOR

You may have noticed by now that every major key on the diatonic chord chart in Chapter Two has a related “cousin” on the minor chart in Chapter Three. Looking back at these two charts, you will see that the seven diatonic triads in C major are identical to the seven triads in A minor. The crucial difference is how they are used — ie. which chord functions as the tonic (home base). If the C sounds like the tonic I chord, then all the other chords function according to the roman numerals on the major chart. If Am is the tonic, then all roman numerals shift accordingly:

key C major:	I C	II ^m D ^m	III ^m E ^m	IV F	V G	VI ^m A ^m	VII ^{dim} B ^{dim}
key A minor:	bIII bIII	IV ^m IV ^m	V ^m V ^m	bVI bVI	bVII bVII	I ^m I ^m	II ^{dim} II ^{dim}

These are said to be **relative** keys - A minor is called the **relative minor** of C major, and vice versa. Of course this is also true with single note scales, since the seven diatonic chords are generated from the seven tones of the appropriate scale. Therefore, the C major scale and A minor scale share the same notes, and also key signatures (no sharps or flats). To find the relative minor of any major key, start on the sixth note of the major scale or sixth column on the major chord chart (VI^m chord). Likewise, to find the relative major of any

minor key, find the third column (bIII chord) on the minor chart. When it comes to modulations, a key change to the relative major or minor is usually very smooth, since all chords are shared and any one can be a pivot chord.

Our first example of relative modulation alternates between verses in minor and choruses in major (shown below). As we have seen in previous examples, this is a common set-up, with the movement from minor to major giving an extra boost of energy.

"Rhiannon" — Fleetwood Mac — 1976



key **A min:** **I_m** **Am** **bVI** **F**

0:15 VERSE

bIII **C**
new key **C maj:** **I**

4
4

0:30 CHORUS – vocal melody

F **IV**

The image displays musical notation and chord diagrams for the song "Rhiannon" by Fleetwood Mac. The top section shows the beginning of the verse in A minor (4/4 time), with a treble clef and a key signature of one flat. The notation is a single staff with a repeat sign at the end. Below the staff, the time signature is 4/4, and the section is labeled "0:15 VERSE". The chord progression is indicated as I_m (Am) and bVI (F). The bottom section shows the beginning of the chorus, labeled "0:30 CHORUS – vocal melody". It features a 4/4 time signature and a key signature change to C major. The chord progression is indicated as bIII (C) and I (C). The vocal melody is shown as a series of notes: G, A, C, A, G, E, D, C, E, D. The C notes are highlighted in purple, indicating the new tonic. The bottom section also shows a chord diagram for F (IV) and a series of notes: G, C, C, A, D, C.

The beginning of "Rhiannon" suggests A minor because it starts on the Am chord and there is no C (relative major chord) anywhere in the verse. When the chorus starts on the C chord and the Am temporarily disappears, we hear a shift to the relative major key (C). The vocal melody also helps define C as the new tonic in the chorus with numerous C notes (highlighted above in purple).

The hit song from the musical Grease, “You’re the One that I Want,” is structured in a similar fashion, with the Am chord prominent in the verse and the C chord dominating the pre-chorus and chorus. Once again the vocal melody guides our ears, as the chorus explodes on a series of high C notes at 0:46, proclaiming the song’s title and reinforcing the shift to the relative major. Also of note is the inclusion of the harmonic minor V chord (E) on the second line, which strengthens the A minor flavor of the verse.

***“You’re the One That I Want” – John Travolta & – 1978
Olivia Newton-John***



key

A min:

I_m

bVI

bIII

2/2

Am

F

C

0:09 VERSE

V

I_m

E

Am

bIII

C

Em

Am

F

new key

C maj:

I

III_m

VI_m

IV

0:27 PRE-CHORUS

C

C/E

F

I

I/3

IV

0:46 CHORUS

Here's a more recent example of relative modulation from Justin Timberlake, moving from a C minor verse to an Eb major chorus.

"Mirrors" — Justin Timberlake — 2013



key

C min:

Im Vm7 IVm7 bVI Im Vm7 IVm7 V

4/4

Cm	Gm7	Fm7	Ab	Cm	Gm7	Fm7	G
----	-----	-----	----	----	-----	-----	---

||: ————— :||

0:12 VERSE

Im Vm7 IVm7 bVI Im Vm7 IVm7

Cm	Gm7	Fm7	Ab	Cm	Gm7	Fm7	
----	-----	-----	----	----	-----	-----	--

—————

bIII

Eb	Bb	Ab		Eb	Bb	Ab	
----	----	----	--	----	----	----	--

—————

new key

Eb maj:

I V IV I V IV

0:50 CHORUS

Eb	Bb	Fm	Cm	Eb	Bb	Ab	
----	----	----	----	----	----	----	--

—————

I V IIIm VIIm I V IV

On the 1985 hit "Loverboy," the chords immediately preceding the key change are the bVI (D) and bVII (E) of the initial key (F# minor). After we hear the modulation to the relative A major, we realize that the D and E could have been considered IV and V going to the new I chord. Also notice the other tension devices present, such as the **avoidance of the I chord** throughout the pre-chorus, and the **extra bar** added to the form.

"Loverboy" — Billy Ocean — 1985

key **F# min:** **Im** **bVII**

4/4 **F#m** **E**

0:45 VERSE

bVI **IVm** **bVI** **bVII** **extra bar**

D **Bm** **D** **E** **TENSION**

1:03 PRE-CHORUS

bIII

A **D** **E** **A** **D** **E**

new key A maj: **I** **IV** **V** **I** **IV** **V**

1:18 CHORUS

RESOLUTION

Our final example in this section is the 2010 country-pop hit "Need You Now." It moves from a C# minor verse to an E major chorus.

"Need You Now" — Lady Antebellum — 2010

key **C# min:** **bVIImaj7** **Im7** **bVIImaj7**

4/4 **Amaj7** **C#m7** **3x** **Amaj7**

0:18 VERSE

bIII

E **G#m** **E** **G#m**

new key E maj: **I** **III_m** **I** **III_m**

0:50 CHORUS

A **Asus2** **Amaj7** **C#m7**

IV **IVsus2** **IVmaj7** **VI_m7**

WRITTEN EXERCISE

Use **Exercise 10.4** (main menu / “Exercises” tab / “Written Exercises”) to practice calculating modulations between relative major and minor keys.

Additional songs with RELATIVE MINOR / MAJOR MODULATION

1963	<i>Heat Wave</i>	Martha & The Vandellas	C min verse, Eb maj chor
1972	<i>You're So Vain</i>	Carly Simon	A min verse, C maj chorus
1977	<i>Go Your Own Way</i>	Fleetwood Mac	F maj verse, D min chorus
1985	<i>Boys of Summer</i>	Don Henley	Eb min verse, Gb maj chor
1985	<i>I Want to Know What Love Is</i>	Foreigner	Eb min verse, Gb maj chor
1991	<i>Here I Am</i>	UB 40	F min verse, Ab maj chor
1994	<i>Mr. Jones</i>	Counting Crows	A min verse, C maj chor
2000	<i>Everything You Want</i>	Vertical Horizon	D# min ver, F# maj chorus
2001	<i>Thank You</i>	Dido	A minor to C major
2014	<i>American Kids</i>	Kenny Chesney	E min ver, G maj chorus 1, E min chorus 2
2014	<i>Stupid Me</i>	MAGIC!	G min ver, Bb maj chorus
2014	<i>Style</i>	Taylor Swift	B min verse, D maj chor

RELATIVE MIXOLYDIAN / MAJOR

There are other relative keys besides major and minor. Many songs modulate between a relative mixolydian and major key, such as G mixo and C major. Once again, you can compare the two chord charts. The key of G on the mixolydian chart (in Chapter Seven) shares the exact same diatonic chords as the key of C on the major chart. You can quickly calculate the relative mixo chords for any key from the major chart — just pick a horizontal row and start with the V chord instead of the I.

We have already heard a previous example of this relative modulation in Chapter Seven when we listened to Neil Diamond's "Cherry Cherry." Let's listen again, this time focusing on the change of keys.

"Cherry Cherry" — Neil Diamond — 1966



- **0:11** (verse) **key of Eb mixo** Circular mixo chord progression.
- **0:31** (chorus) Continues in Eb mixo with same progression.
- **0:42** (release) **MODULATION to relative major** **key of Ab major**
Changes to circular major chord progression.
- **1:11** (verse 2) **MODULATION back to relative mixo** **key of Eb mixo**
Returns to circular mixo progression.

The verse and chorus used the circular mixo I - IV - bVII - IV progression as follows:

Eb – Ab – Db – Ab

Then the song modulated at **0:42** to the relative major key (Ab major) for the release, using the circular major progression I - IV - V - IV discussed in Chapter Two:

Ab – Db – Eb – Db

Even though the same three chords are used in both progressions, the Eb chord clearly sounds like home base in the first sequence, thanks to its placement as the starting chord. However, not all modulations start with the I chord. The other factor is the vocal part, which clearly reinforces Eb as the tonic in the verse and chorus. The actual melody sung by Diamond only briefly touches on the high Eb in the first phrase of the verse. However, the background singers grab that Eb note and hold onto it for over two measures like a drone. This puts the Eb firmly in your ear as the anchoring pitch.

In the release, the new major progression also starts on the I, and this time the I chord lingers for 3 beats (slightly longer than the other two chords in the sequence). Once again the melody plays a prominent role in guiding your ears toward the new Ab major key at 0:42, since the release starts with a long Ab melody note.

The following 1967 example from the Monkees also alternates between relative mixo in the verse (C mixo) and relative major in the chorus (F major). Once again the chord progressions steer our ears, with the C chord prominently featured in the verse, and the F chord dominating the chorus. You will notice that even though both keys have a major I chord, the mood seems a bit brighter when the chorus enters. The change is not as dramatic as the previous modulations from minor to major, but once again the major key is usually reserved for the chorus to boost the mood ever so slightly.

"A Little Bit Me, A Little Bit You" — Monkees — 1967



key
C mix:

	I	bVII	I	bVII	I	bVII	I	bVII
	C	Bb	C	Bb	C	Bb	C	Bb
4/4	: ————— ————— ————— ————— :							

0:12 VERSE

IV

new key
F maj:

	F	Bb	F/A	C	F	Bb	F/A	C
	I	IV	I/3	V	I	IV	I/3	V
	: ————— ————— ————— ————— :							

0:24 CHORUS

Here's a more recent example of relative mixo and major from the group Casting Crowns and their 2011 recording "Already There." The verses are in F# mixo and the choruses in B major. START LISTENING AT **0:28**

"Already There" — Casting Crowns — 2011

 26

key

F# mix:

4/4 **I** **II_m** **bVII** **II_m** **I** 4x

F# G#_m E G#_m F#

0:28 VERSE

I **II_m** **V_m** **bVII** **I**

F# G#_m C#_m E F#

II_m **bVII** **IV**

G#_m E B F#

new key B maj: **I** **V**

1:13 CHORUS

G#_m E_{maj7} B F#

VI_m **IV_{maj7}** **I** **V**

Our last song in this section, a 1990 hit from Phil Collins, is the ultimate example of relative modulation. It features three relative keys - C minor in the intro, Bb mixo in the verse, and Eb major in the chorus. The intro sounds minor, thanks to **droning treble C notes** in the background instruments. Likewise a **mid-range Bb drone** in the strings helps define the mixo tonality of the verse. The chorus is clearly in Eb major, thanks to the **prominence of the Eb chord** — heightened by the fact that this chord was not used at all in the previous intro and verse. The **vocal melody** also prominently features Eb notes at the entrance to the chorus.

**"Something Happened on the Way to Heaven" –
Phil Collins – 1990**



27

key

C min:

Im

bVI

bVII

Vm

Im

4/4

Cm

Ab

Bb

Gm

Cm

0:01 INTRO

bVI

bVII

Vm

Ab

Bb

2/4

4/4

Gm

bVIImaj7 bVII

Abmaj7

Bb

Abmaj7

Bb

Abmaj7

Bb

Abmaj7

Bb

||[:—|—|—|—|—|—|—|—|:]||

new key

Bb mix:

bVIIImaj7

I

bVIIImaj7

I

bVIIImaj7

I

bVIIImaj7

I

0:29 VERSE

new key

Eb maj:

I

IV

V

I

IV

V

VIIm

Eb

Ab

Bb

Eb

Ab

Bb

Cm

||[:—|—|—|—|—|—|—|—|:]||

IV

1:15 CHORUS

WRITTEN EXERCISE

Use **Exercise 10.5** (main menu / "Exercises" tab / "Written Exercises") to practice calculating modulations between relative major and mixolydian keys.

Additional songs with RELATIVE MIXO / MAJOR MODULATION

1965	<i>The Last Time</i>	Rolling Stones	E mixo ver, A maj chor
1967	<i>Thank the Lord for the Night Time</i>	Neil Diamond	E mixo ver, A maj chor
1994	<i>Come to My Window</i>	Melissa Etheridge	D mixo ver, G maj chor
1995	<i>Drowning</i>	Hootie & The Blowfish	G mixo ver, C maj chor

EAR TRAINING EXERCISES

For practice recognizing modulations by ear, go to **Exercises 10.1e – 10.8e** (see “Textbook Contents”/ “Volume 2”/ “Ear Training Exercises”).

OTHER RELATIVE TONALITIES

Here are three more examples with different combinations of relative keys. Notice that like most of the songs in this chapter, the brighter tonality is used on the chorus of all three examples.

The first example by Kiss moves from a verse in E minor to a chorus in D mixolydian. The new tonality is defined in part by the chord progression. The chorus starts on a D major chord and there is no Em anywhere in the new section. Even though the tonic note drops a whole step from E to D, the modulation still feels uplifting because mixolydian is a “major sounding” tonality with a major I chord (D), versus the darker minor key with its minor I chord (Em). Of course a dramatic change in loudness and timbre also increases the excitement of the chorus.

"Sure Know Something" — Kiss — 1979

28

key
E min:

Im7

IVm7

bVII

IVm7

Im7

Em7

Am7

D

Am7

1. Em7

0:18 VERSE

Im7

bVI

bVII

2. Em7

C

D

C (w. desc. bs
B, A, G)C (desc.
bass)new key
D mix:

I

bVII

0:50 CHORUS

D

C (desc.
bass)C (desc.
bass)

D

C (desc.
bass)

D

I

bVII

I

bVII

I

On the next example from the Police, the verse is in the key of A minor, and the chorus in D dorian. These are both dark tonalities, but the natural 6th degree in the dorian chorus — evident in the major IV chord (G) — gives this section a slightly brighter feeling. (For a review of the dorian scale and key, see Chapter Eight.)

"Spirits in the Material World" — Police — 1982

29

key
A min:

Im

bVII

Vm

Im

bVII

Vm

4/4

Am

G

Em

Am

G

Em

4x

0:14 VERSE

IVm

Dm

G

Dm

G

new key
D dor:

Im

IV

Im

IV

0:41 CHORUS

Nirvana's "Lake of Fire" also pairs relative dorian and minor keys, but this time the song opens with the dorian chorus, and then shifts to the darker minor for the release. Like many of the previous examples, the chord progression and the vocal melody help define the difference between the closely related keys. Notice that the harmonic minor V chord (G#) on the last line reinforces the minor tonality of the release.

"Lake of Fire" — Nirvana — 1994



key
F# dor:

	Im	bVII	bIII	Im	IV	bIII	Im	bVII	bIII
4/4	F#m	E	A	F#m	B	A	F#m	E	A

0:03 INTRO & CHORUS

IV	bVII	Im	bVII	Im	bVII	Im
B	E	F#m	E	F#m	E	F#m

V_m

C#m	A	C#m	G#	C#m	A	B	C#m
-----	---	-----	----	-----	---	---	-----

new key
C# min:

Im	bVI	Im	V	Im	bVI	bVII	Im
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0:41 RELEASE

Multiple Modulations

The last section on modulations in this chapter will feature three songs with a variety of key changes. The first example, "My Generation" by the Who, contains basically a mixture of the half and whole step modulations heard at the beginning of this chapter. The chord progression throughout the piece is based on the short, circular blues progression heard in Chapter Four. This progression starts in the key of G mixo (G - C/G - G7 - C/G), then moves through the keys of A mixo, Bb mixo, and finally C mixo.

"My Generation" — The Who — 1970

- 0:05 key of G mixo
- 1:19 MODULATION up whole-step key of A mixo
- 1:49 MODULATION up half-step key of Bb mixo
- 2:23 MODULATION up whole-step key of C mixo

Progressive rock in the 1970s often featured multiple key changes and unusual time signatures. Jethro Tull's rock classic "Living in the Past," shown below, has both of these elements. The song is set in 5/4 time, and moves quickly through three different keys in the intro before settling on the verse in C mixolydian.

"Living in the Past" — Jethro Tull — 1973

key
C dor:

Im	IV	Im	IV	Im	IV	Im	IV	bIII	bVII
Cm	F	Cm	F	Cm	F	Cm	F	Eb	Bb

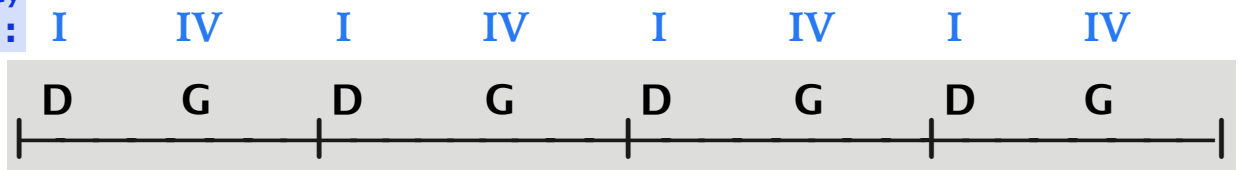
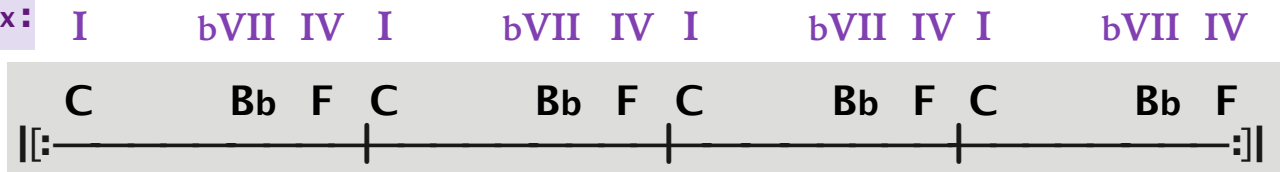
5/4

0:04 INTRO

Im	IV	bIII	bVII	Im	IV
Cm	F	Eb	Bb	Cm	F

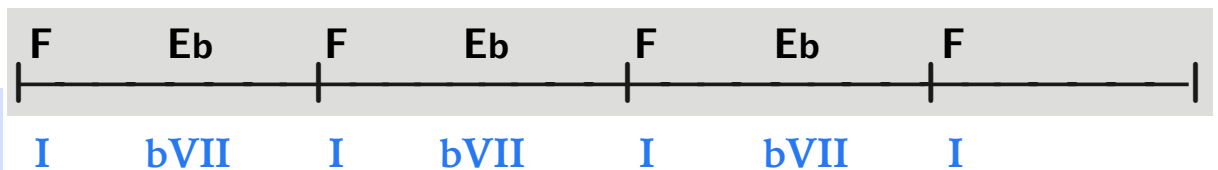
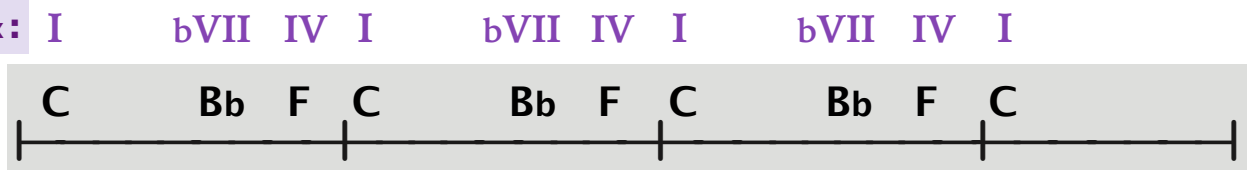
new key
G mix:

I	Vm7	I	Vm7	I	Vm7	I	Vm7
G	Dm7	G	Dm7	G	Dm7	G	Dm7

new key
D maj:new key
C mix:

0:39 VERSE

IV

new key
F mix:key
C mix:

V

The main part of the 1999 song “Then the Morning Comes” alternates between a verse in C dorian and a chorus in E \flat major. After establishing this sequence, the music takes a sidetrack at the 1:44 mark to the keys of C major and A dorian. The song then returns to the original groove with another C dorian verse and E \flat major chorus. In a final twist, the vocal melody finishes the last chorus on a C note rather than E \flat , leaving the suggestion of C dorian tonality at the very end.

"Then the Morning Comes" — Smashmouth — 1999



key **C dor:**
4/4

Im7	IV7	Im7	IV7	Im7	IV7	Im7	IV7
Cm7	F7	Cm7	F7	Cm7	F7	Cm7	F7

0:19 VERSE

Im7	IV7	Im7	IV7	Im7	IV7	V7
Cm7	F7	Cm7	F7	Cm7	F7	G7

Im7	IV7	Im7	IV7	Im7	IV7	Im
Cm7	F7	Cm7	F7	Cm7	F7	Cm

bIII

E ^b	A ^b	B ^b	A ^b	E ^b	A ^b	B ^b
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new key **E^b maj:**

I	IV	V	IV	I	IV	V
---	----	---	----	---	----	---

0:51 CHORUS

(REPEAT VERSE & CHORUS)

new key **C maj:**

I	IV	I	IV	I	IV
C	F	C	F	C	F

1:44 RELEASE

VI^m

new key **A dor:**

Am	D	Am	D	Am	D	Am	D
Im	IV	Im	IV	Im	IV	Im	IV

(REPEAT VARIATION OF VERSE & CHORUS)

Songwriting Focal Points

Uplifting Modulation - Minor to Major

You will recall from previous songs like “Runaway,” “Rhiannon,” and “Mirrors,” that modulations from a minor key verse to a major key chorus can create an uplifting feeling. This can be yet another tool for songwriters who are trying to build strong focal points and add excitement to the chorus.

Eddie Money’s 1986 hit “Take Me Home Tonight” (written by Mike Leeson, Peter Vale, Ellie Greenwich, Jeff Barry, and Phil Spector) also has this type of modulation. The song starts with a verse and pre-chorus in Bb minor, then transitions to the key of Db major for the chorus. START LISTENING AT **0:22**

“Take Me Home Tonight” – Eddie Money – 1986

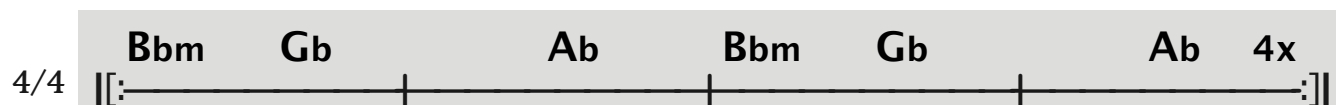


34

key

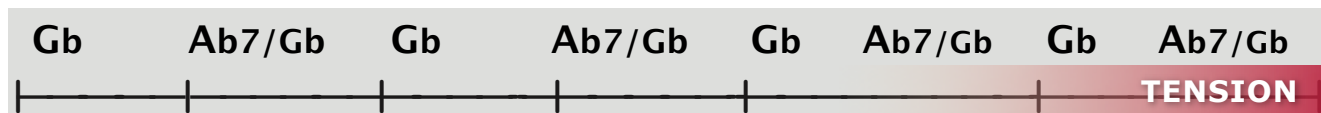
Bb min:

Im bVI bVII Im bVI bVII



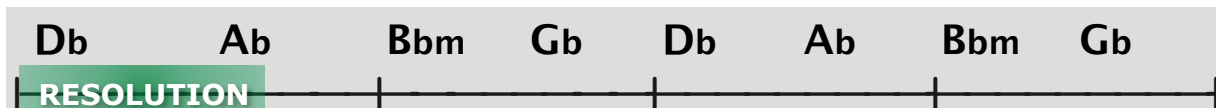
0:21 VERSE

bVI bVII7 bVI bVII7 bVI bVII7 bVI bVII7



0:51 PRE-CHORUS

bIII



new key

Db maj:

I V VIIm IV I V VIIm IV

1:01 CHORUS

Four previously discussed focal point devices were also used on “Take Me Home Tonight” to create the strong hook at the chorus entrance -

- **REPETITION of SHORT HARMONIC PATTERN** during the pre-chorus, with alternating Gb and Ab7/Gb chords that create tension.
- **HARMONIC RHYTHM is SUSPENDED** during the pre-chorus. Technically two chords are alternating (Gb and Ab7). However, the **droning Gb bass** creates the feeling that the overall harmonic accompaniment has become “stuck” on the Gb note, building tension.
- **V to I TENSION - RESOLUTION** from pre-chorus to chorus. The Ab7 at the end of the pre-chorus could be considered a pivot chord, functioning as both a bVII7 in the old key, and as V7 of the new key.
- The chorus / song title has the **HIGHEST MELODY NOTE** (on the word “home”).