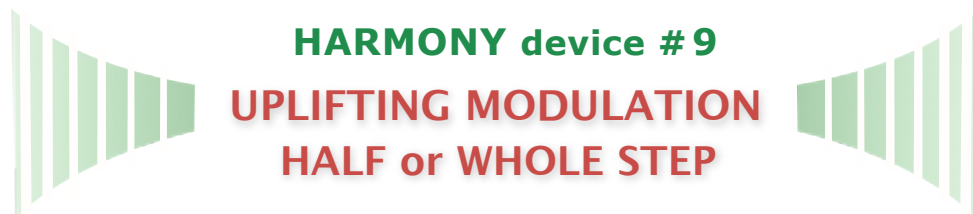


## CHAPTER 7

# MODULATION



If you have been looking closely at the Roman numeral analysis in previous chapters, you probably noticed an occasional song with **modulations** (key changes) from verse or pre-chorus to chorus. In this chapter we will take a closer look at how these modulations are yet another device that can add to the drama of a song's focal point.



Perhaps the most common modulation is to move up a half-step or whole-step at the entrance of a chorus or title phrase. This creates an uplifting feeling and gives the music an emotional boost.

### HALF STEP MODULATION

The 1963 hit “Denise” features a half step modulation, starting in the key of G major, then moving up to Ab major for the 2nd chorus. The key shift actually occurs from the dominant V chord (D) of the existing key to the dominant V chord (Eb) of the new key, before the resolution to the new I chord. Adding to the tension on the 2nd line is a series of stop times. Start listening at **0:53**.

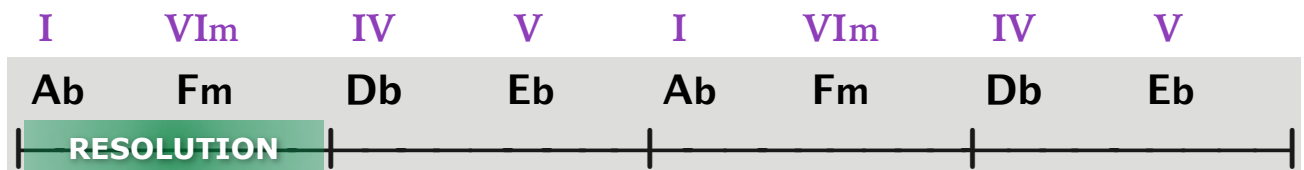
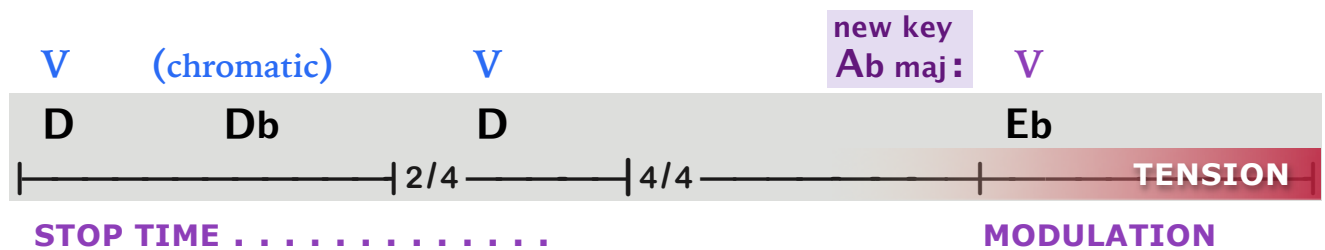
**"Denise" — Randy & The Rainbows — 1963**

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 to the desired starting point.

key  
G maj:



0:53 RELEASE



1:11 2nd CHORUS

## WHOLE STEP MODULATION

Whitney Houston's recording of "I Will Always Love You" features an uplifting whole-step modulation at the hook. Around the 3-minute mark, the tempo slows and the rhythm is suspended, increasing the tension before the dramatic entrance of the new key. This time there is no preparation (movement to the new V chord before the chorus). Start listening at **2:35**.

**"I Will Always Love You" — Whitney Houston — 1992**

— 2:35 (verse) **key of A major**

— 3:00 Tempo slows, then all instruments come to a stop on the V chord.

**RHYTHM IS SUSPENDED . . . . . TENSION**

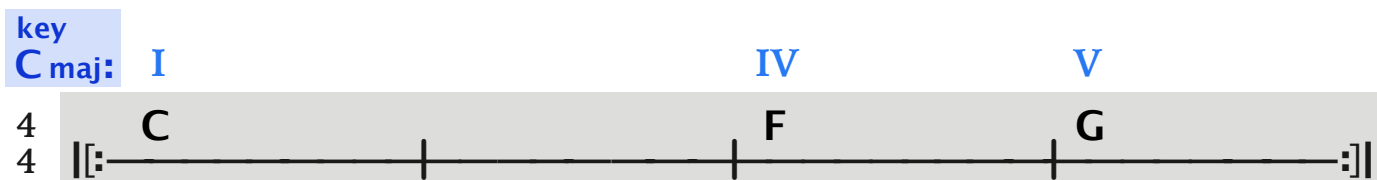
— 3:09 (chorus) **MODULATION up whole step** **key of B major**

**RESOLUTION**

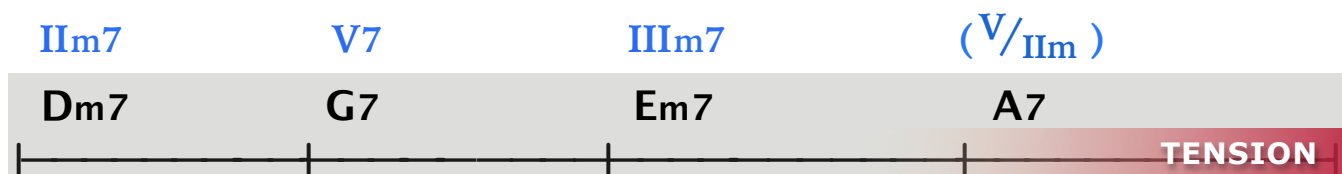
Chorus starts on the new I chord.

This song by the Beach Boys also has a whole step modulation into the chorus. Notice that the last two chords of the verse are pivot chords (they can be analyzed in both the old and new key), which creates a smooth transition between keys. If you listen to the end of the chorus, you will hear that the music moves back down to the original key (C major) for the second verse. As the song progresses, the keys keep shifting like this (verses in C - choruses in D).

**"Don't Worry Baby" — The Beach Boys — 1964**

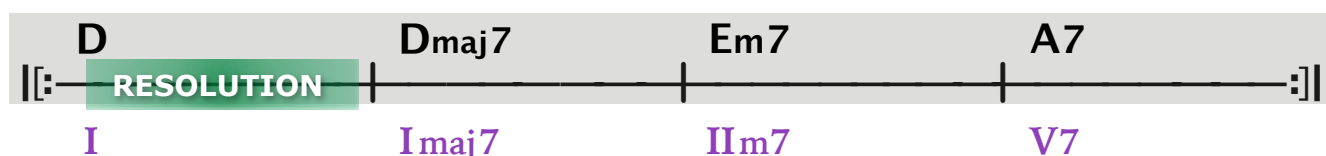


0:18 VERSE



new key D maj:

IIIm7 V7  
**MODULATION (pivot chords)**



0:42 CHORUS w title

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.

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.



Another way to create an uplifting modulation is to move from minor to major tonality. Most listeners would describe the minor key as sadder or darker, and the major key as happier and brighter. We might also consider mixolydian tonality as being a brighter key, since it also has the important natural 3rd that creates the uplifting feeling.

## PARALLEL KEYS

Sometimes modulations will occur between two keys with the same letter name, 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 two keys have no diatonic chords or scale tones that are shared. 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.

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. 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.

**"Runaway" — Del Shannon — 1961**



key  
Bb min:

	Im	bVII	bVI	V
4	Bbm	Ab	Gb	F
4	: ————— TENSION :			

0:06 VERSE

new key  
Bb maj:

I

VI<sub>m</sub>

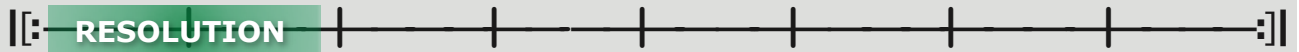
I

VI<sub>m</sub>

Bb

G<sub>m</sub>

Bb

G<sub>m</sub>

Uplifting PARALLEL MODULATION

0:31 CHORUS

## RELATIVE KEYS

Modulations can also occur between two keys that share the exact same set of diatonic chords, scale tones, and key signatures. These keys are said to be “relative” to each other. The crucial difference between the keys is which chord or scale tone we designate as “home base.” For example, the keys of C major and A minor both share the same diatonic triads - C, D<sub>m</sub>, E<sub>m</sub>, F, G, A<sub>m</sub>, and B<sub>dim</sub> (shown below). If the C sounds like the tonic I chord, then all the other chords function according to the Roman numerals on the top line. If A<sub>m</sub> is the tonic, then all Roman numerals shift accordingly (like the bottom line).

key  
C major:

I

II<sub>m</sub>III<sub>m</sub>

IV

V

VI<sub>m</sub>VII<sub>dim</sub>

C

D<sub>m</sub>E<sub>m</sub>

F

G

A<sub>m</sub>B<sub>dim</sub>key  
A minor:

bIII

IV<sub>m</sub>V<sub>m</sub>

bVI

bVII

I<sub>m</sub>II<sub>dim</sub>

Since relative keys share the same pool of notes and chords, the modulation between them can be quite smooth - sometimes too smooth. Often it only takes a slight change in a chord progression to flip the perception of which chord is actually home base. In fact, there are quite a few pop songs (especially in recent years) that basically have ambiguous tonalities. Entire songs can be based on a short, repeated 4-bar loop with only 4 chords, and the placement of the chords creates ambiguity between two relative keys.

A detailed discussion of ambiguous harmony is beyond this book, so we will move on and keep our focus on songs with clearer tonal centers. However, you may recall that we have already seen a hint of tonal ambiguity on “Don’t Worry Baby,” where pivot chords could be analyzed in two different keys.

The 1963 hit “Heat Wave” features an uplifting modulation between the relative keys of C minor (in the verse) and Eb major (in the chorus). Listen for the ascending progression on the second line that builds to the Bb chord. There is clearly tension, and we assume the Cm chord will resolve it, but instead the progression ends with an uplifting Eb chord. This chord lasts for eight bars (with brief sidesteps to the II<sub>m</sub>), firmly establishing the relative Eb major as the new key. When the next verse starts, the key falls back to C minor and the harmonic journey begins again. Start listening at **0:28**.

**“Heat Wave” — Martha & The Vandellas — 1963**



key

**C min:**

IV<sub>m</sub>

V<sub>m</sub>

I<sub>m</sub>

IV<sub>m</sub>

V<sub>m</sub>

I<sub>m</sub>

4  
4

F<sub>m</sub>

G<sub>m</sub>

C<sub>m</sub>

F<sub>m</sub>

G<sub>m</sub>

C<sub>m</sub>

**0:28 VERSE**

IV<sub>m</sub>

V<sub>m</sub>

bVI

bVII

F<sub>m</sub>

G<sub>m</sub>

A<sub>b</sub>

B<sub>b</sub>

**TENSION**

**ASCENDING PROGRESSION . . . . .**

new key

**Eb maj:**

I

II<sub>m</sub>

I

II<sub>m</sub>

I

II<sub>m</sub>

I

II<sub>m</sub>

E<sub>b</sub>

F<sub>m</sub>

E<sub>b</sub>

F<sub>m</sub>

E<sub>b</sub>

F<sub>m</sub>

E<sub>b</sub>

F<sub>m</sub>

[:

**RESOLUTION**

|

:|

**Uplifting RELATIVE MODULATION**

**0:46 CHORUS**

In retrospect, we can see that the entire second line of “Heat Wave” could have been labeled II<sub>m</sub> - III<sub>m</sub> - IV - V, leading into the new I. However, we only know this after hearing the Eb, and not before. For this reason, we will not consider all these as pivot chords.

[ NOTE: It should be mentioned that the pivot chords on “Don’t Worry Baby” were set up differently. The Dm - G (IIIm - V in old key) prepared our ears to hear the pivot chords Em - A as IIIm - V in a new key before even hearing the new I chord (D) ]

The 1985 hit “Loverboy” offers another example of uplifting modulation from relative minor to relative major. Also notice the other tension devices present, such as the avoidance of the I throughout the pre-chorus, and the extra 7th bar added to the section. Start listening at **0:46**.

**“Loverboy” — Billy Ocean — 1985**



key

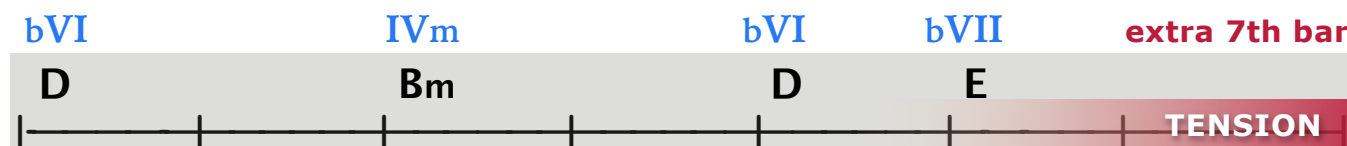
F# min:

I<sub>m</sub>

bVII



0:46 VERSE



1:03 PRE-CHORUS

new key

A maj:

I

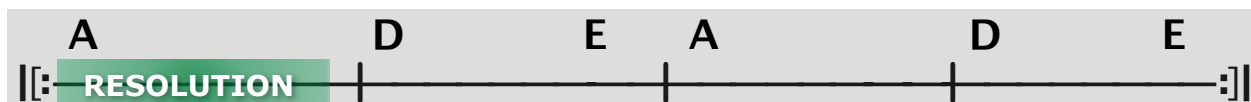
IV

V

I

IV

V



**Uplifting RELATIVE MODULATION**

1:19 CHORUS



The next song by Kiss features a different combination of relative keys, moving from E minor in the verse to D mixolydian in the chorus. Even though the tonic note drops a whole step from E to D, the modulation still feels uplifting because mixolydian has a brighter quality with a major I chord (D). Also notice the repetition of a single note value (series of 8th notes on guitar) right before the chorus, building tension and highlighting the hook.

**"Sure Know Something" — Kiss — 1979**



key  
E min:

4/4

Im7 IVm7 bVII IVm7 Im7

Em7 Am7 D Am7 Em7

0:17 VERSE

Im7

new key  
D mix:

I bVII

2. Em7 D C (w. desc. bass c, b, a, g) C (desc. bass)

TENSION RESOLUTION

Uplifting RELATIVE MODULATION

0:50 CHORUS

I bVII I bVII I

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

Additional songs with  
UPLIFTING MODULATION MINOR to MAJOR / MIXO

1971	<i>Wild World</i>	Cat Stevens
1985	<i>I Want to Know What Love Is</i>	Foreigner
1985	<i>What About Love</i>	Heart
1986	<i>Take Me Home Tonight</i>	Eddie Money
1988	<i>Pour Some Sugar on Me</i>	Def Leppard
1997	<i>Sunny Came Home</i>	Shawn Colvin
1999	<i>That's the Way It Is</i>	Celine Dion
2013	<i>It's Your World</i>	Tim McGraw
2014	<i>Stupid Me</i>	MAGIC!
2014	<i>Style</i>	Taylor Swift