CHAPTER 6

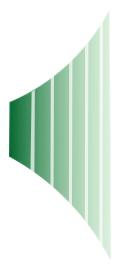
Development of the MINOR KEY



In Chapter Three we discussed some elements of the minor key, including the basic scale, diatonic triads, and common chord progressions like the stair-step Im, bVII, bVI sequence. In this chapter we will differentiate between the previous minor scale — usually called <u>natural</u> minor — and a variation called <u>harmonic</u> minor. The new harmonic scale will of course have implications for melodies and riffs, but our primary focus will be on how it changes the diatonic V chord from minor to major.

Essential Concepts / Skills covered in chapter 6

- Harmonic minor scale, diatonic 7ths in natural minor
- Common chord progressions in minor key pop songs using diatonic 7ths and V from harmonic minor
- Signature minor key riffs with chromatic notes
- sus2 and sus4 chords in minor key songs
- Drones and drone riffs in minor key
- Songwriting devices for creating focal points
- Ear training V from harmonic minor, bVImaj7, bIIImaj7, IIm7b5, sus2, and sus4 in minor key



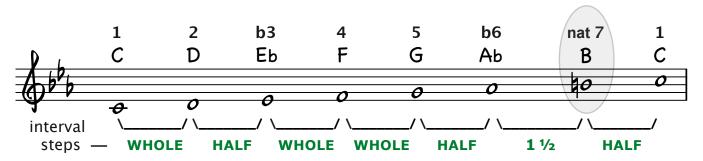
Harmonic Minor Scale

The harmonic minor scale is written below in the key of C minor:

C HARMONIC MINOR SCALE



For AUDIO, see "Theory Examples" on top-right sidebar, and click on ex. 1



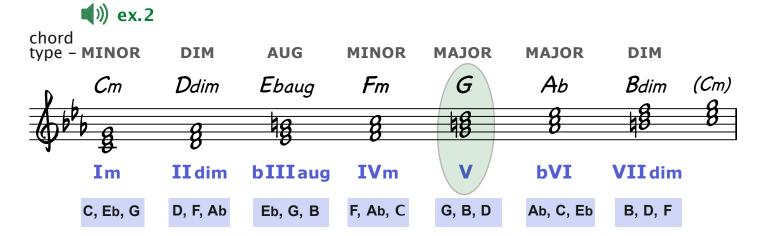
You will notice that only one note is changed from the natural minor scale — the 7th degree is raised one half step (from a b7 to a natural 7). There is no separate key signature for harmonic minor, so when the natural minor key signature is used, the 7th degree will always require an accidental sign (extra sharp or natural sign) in the written score. Remember that you can start the formula on any pitch, so there are 12 different harmonic minor scales.

WRITTEN EXERCISE

Practice spelling some common harmonic minor scales by completing **Exercise 6.1** (see "Textbook Contents"/ "Volume 1"/ "Written Exercises").

Harmonic Minor V Chord

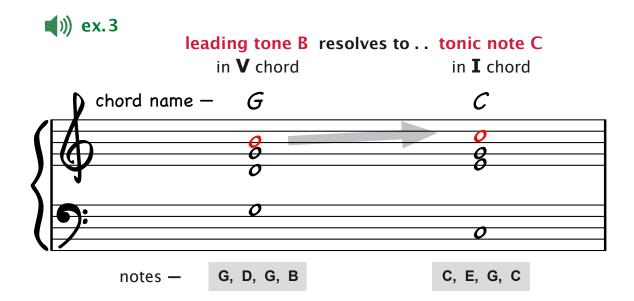
As with the natural minor, you can build triad chords on each step of the harmonic minor scale, as follows:



Compared to the natural minor, you will note that only the chords that contain the raised 7th degree (B note) are changed. The bIII becomes an augmented triad, with Eb, G, and B notes representing 1, 3, and #5, figured from Eb. (Augmented triads will be discussed further in Chapter Fourteen.) The last chord, VIIdim, now consists of B, D, and F resulting in a diminished triad (1, b3, b5 figured from B). However, these two chords are fairly rare in pop & rock music.

The chord we are most interested in is the V, where the triad changes from minor to major (now G, B, and D notes, or 1, 3, 5 figured from G). This chord is quite common. In fact, many minor key pop & rock songs use basically the triads from the natural minor chart with only one exception — changing the V from minor to major. A separate diatonic chord chart could be written for all the harmonic minor keys, but it is probably easier to just refer to the natural minor chart in Chapter Three and remember that the V chord is often altered.

Why is this change from Vm to V major so important? You will recall from Chapter Two the discussion about tension / resolution and focal points. We heard several examples like "Sweet Caroline," "Right Back Atcha," and "Jump" where a dominant V (tension chord) at the end of the verse led into a satisfying resolution on the I (home base or tonic chord) to start the chorus. The V to I resolution is shown below for the key of C major.



The dominant V to I resolution gets its power primarily from the movement of notes inside the chords, specifically between the 3rd degree of the V chord (B) and the root of the I chord (C). In the example above, the 3rd degree of the V is placed on top in red as the highest note in the chord voicing. This is just for visual clarity, because the 3rd could be anywhere in the note mixture.

In terms of the overall key /scale (C major), the B note represents the 7th degree, ever-so-close to resolving upwards by half step to the next home base note (C). In Chapter Two we mentioned that this 7th degree of the major scale is often referred to as the "<u>leading tone</u>" for the feeling of instability it can create, anticipating the tonic right next door.

As we have seen in Chapter Three, this half-step movement is missing in natural minor because the 7th degree of the overall scale is flatted. In the C natural minor scale, the b7 degree is a Bb note. In terms of chords, this results in a V minor chord (Gm), with the notes G, Bb, D, or 1, b3, 5 figured from the G root. Therefore, the movement from Vm to Im is not nearly as powerful in terms of tension/resolution. However, in C harmonic minor the V chord (G) is once again a major chord (spelled with notes G, B, and D) because it contains the raised 7th degree (B note). This in turn restores the dramatic quality of tension/resolution when the harmony moves from V to Im.

As mentioned, many minor key songs in pop & rock use chords predominantly from natural minor (including the bVII), but often "borrow" the V major chord from harmonic minor, creating a temporary shift to the harmonic minor tonality. This is especially useful for songwriters who are trying to create focal points in minor keys. However, it also has

important implications for improvisors. If you are playing a solo in a minor key, you must switch to the harmonic minor scale while the V major chord is prominent in the song. This is particularly true if the V chord lasts for several bars or keeps returning every other bar, like in a Im - V vamp.

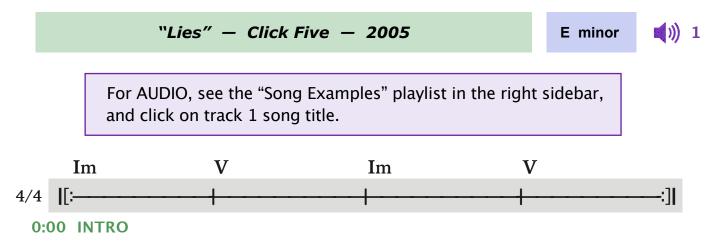
EAR TRAINING EXERCISES

For additional practice hearing the V major chord in a minor key, try **Exercises 6.1e - 6.4e** (see "Textbook Contents"/ "Volume 1"/ "Ear Training Exercises").

Let's now look at some minor key songs that prominently feature the V major chord.

TWO CHORD VAMP Im - V

One common usage of the V chord is in a repeating <u>Im - V vamp</u>, as heard on the following minor key hit from 2005:

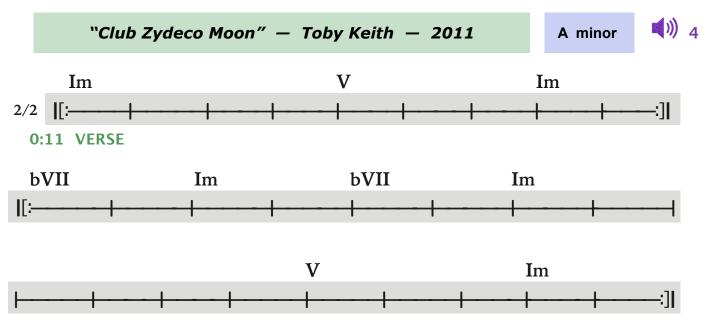


Here's another example, with the Im - V vamp lasting throughout the entire song. Once again there is one bar per chord.

Billie Eilish's recent "Therefore I Am" also features a Im - V vamp over the entire song.

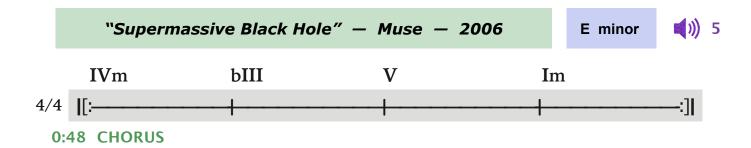
OTHER PROMINENT HARMONIC MINOR V CHORDS

The following Toby Keith hit also uses the movement of Im to V, but not in a strict alternating vamp.

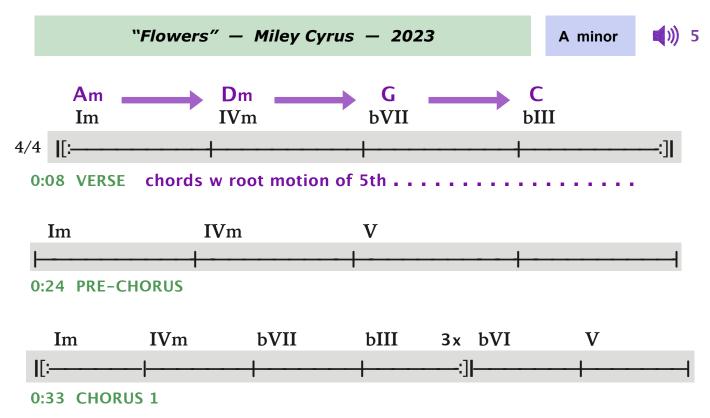


The V chord is preceded by the $\underline{\textbf{bIII}}$ in this 2006 song from Muse. START LISTENING AT 0:48

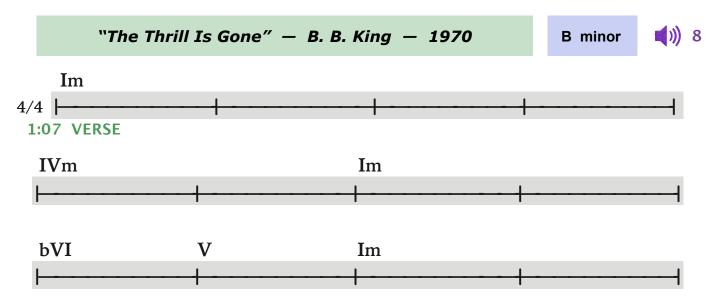
To navigate within an audio track, first click on the song title, then slide the progress bar forward to the desired starting point.



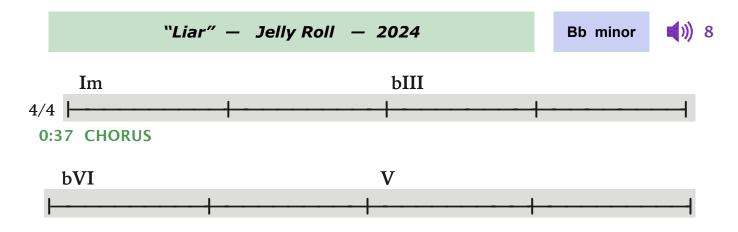
This example from Miley Cyrus features a chord sequence with <u>root motion of a 5th</u> on the first line of the verse. (You will recall our discussion about this kind of root motion in the previous chapter.)



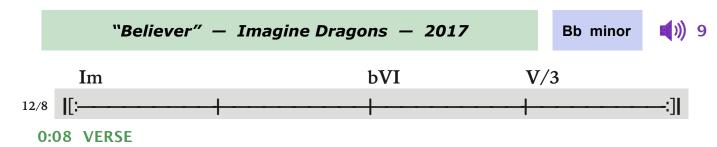
This B. B. King classic features a <u>minor key variation of the 12-bar blues form</u>. The I and IV chords are now minor, and the V is preceded by the bVI chord. START LISTENING AT **1:07**



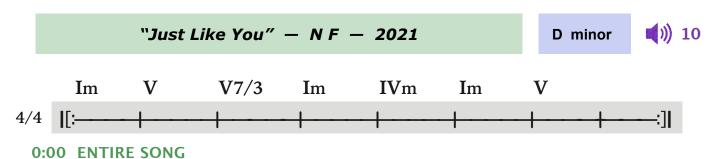
Here's a more recent example where the V is preceded by the bVI chord. START LISTENING AT **0:37**



The song "Believer" by Imagine Dragons features the V chord in first inversion with the $\underline{\textbf{3rd in the bass}}$ (V/3).



The next example has the V chord in both root position and as a $\underline{\text{dom7 in first}}$ $\underline{\text{inversion}}$ (V7 / 3).



Additional songs with HARMONIC MINOR V CHORD

		-	
1971	I'd Love to Change the World	Ten Years After	E minor
1990	Thunder Rolls	Garth Brooks	D minor
1995	Gangsta's Paradise	Coolio	C minor
1999	No Scrubs	TLC	G# minor
2001	The Call	Backstreet Boys	Bb minor
2002	Ain't It Funny	Jennifer Lopez	G minor
2005	Holiday	Green Day	F minor
2006	Black Horse & The Cherry Tree	K.T. Tunstall	E minor
2010	Crazy Enough	MercyMe	B minor
2014	Love Runs Out	OneRepublic	G minor
2015	Cold, Cold, Cold	Cage The Elephant	G minor
2015	Ex's and Oh's	Elle King	E minor
2019	Sucker	Jonas Brothers	C# minor
2020	Bragger	Kelsea Ballerini	F# minor
2023	Lose Control	Teddy Swims	F# minor

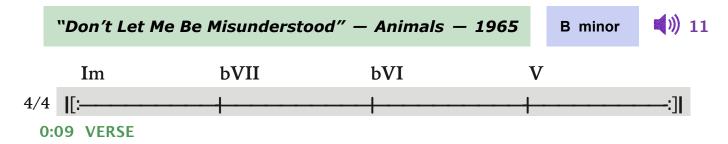
STAIR-STEP (Im, bVII, bVI) DESCENDING to V

You will recall in Chapter Three our discussion of the stair-step progression, either ascending or descending with the chords Im, bVII, and bVI. Quite often the progression will descend one more step to the harmonic minor V chord.

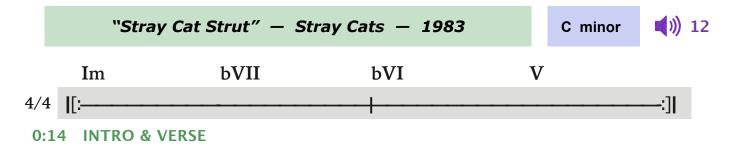
WRITTEN EXERCISE

Use **Exercise 6.2** (main menu/"Exercises" tab/"Written Exercises") to practice writing the stair-step descending to V progression in some common minor keys.

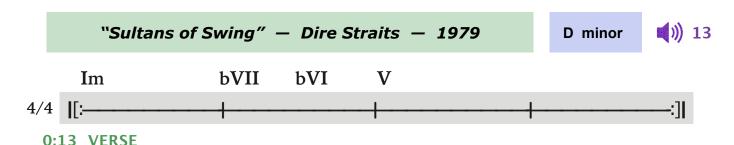
The Animals used the <u>stair-step to V progression</u> on their 1965 hit "Don't Let Me Be Misunderstood," shown below.



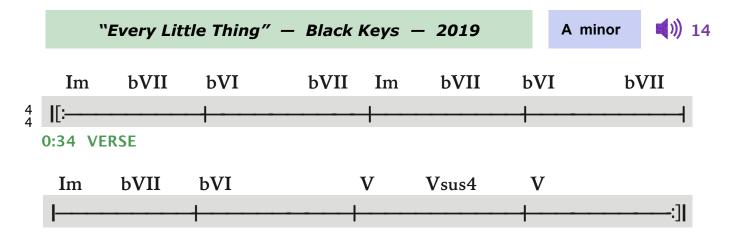
Here's another example, recorded some 20 years later, introducing the stair-step to V sequence to a whole new generation of music fans.



This Dire Straits classic features steps that are not quite as even, but the V is still the destination.



In the verse of the next Black Keys song, the chords go down and up the stair-step twice before finally descending all the way to the V on the second line. Note that there is a color variation on the V as the progression briefly shifts to a Vsus4 before returning to the regular V on the last measure. (You will recall the discussion of sus4 chords in the previous chapter.) START LISTENING AT **0:34**

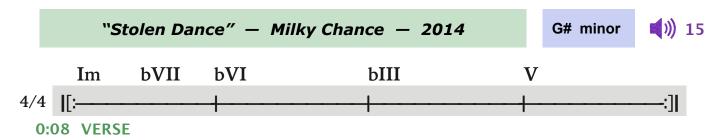


Additional songs with STAIR-STEP DESCENDING TO V

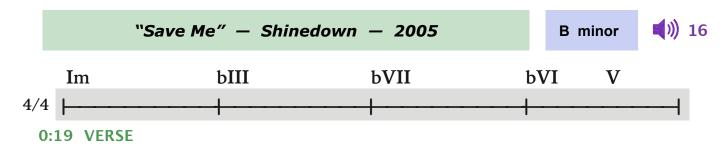
1961	Hit the Road Jack	Ray Charles	G# minor
2001	Objection (Tango)	Shakira	B minor
2002	I Care 4 U	Aaliyah	C minor
2013	Knee Socks	Arctic Monkeys	E minor

STAIR-STEP (Im, bVII, bVI) DESCENDING to V - VARIATIONS

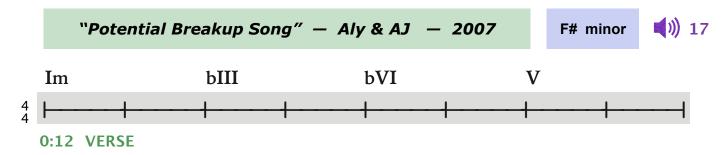
In this recent song from 2014, a **bill** chord is added to the descending stair-step between the bVI and V.



Shinedown's "Save Me" adds the bill near the beginning, right after the Im chord.

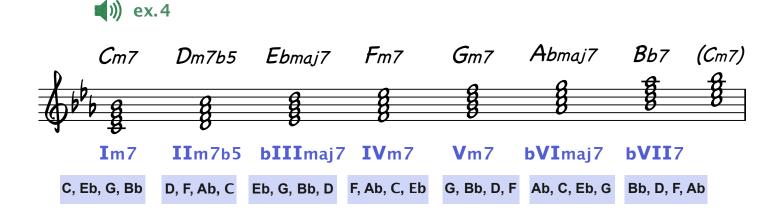


Here's another example with the bIII near the beginning, this time substituting for the bVII chord.



Diatonic 7th Chords - Natural Minor

Just as we did in Chapter Five with the major scale, we can also generate a set of 4-note diatonic 7th chords from the natural minor scale, as follows:



WRITTEN EXERCISES

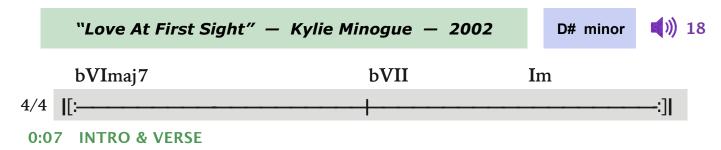
Use **Exercises 6.3** and **6.4** (see "Textbook Contents"/ "Volume 1"/ "Written Exercises") to continue practicing your spelling of 4-note chords and begin memorizing the diatonic 7ths in natural minor.

The diatonic 7th chords for every natural minor key are shown in the chart below. If the harmonic minor V is used, it would be a dom7 (V7) chord.

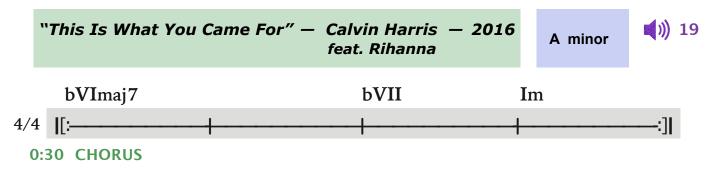
DIATONIC 7ths - NATURAL MINOR KEYS (key)						
Im7	II m7b5	bIIImaj7	IVm7	Vm7	bVImaj7	bVII7
Am7	Bm7b5	Cmaj7	Dm7	Em7	Fmaj7	G7
Bbm7	Cm7b5	Dbmaj7	Ebm7	Fm7	Gbmaj7	Ab7
Bm7	C#m7b5	Dmaj7	Em7	F#m7	Gmaj7	A 7
Cm7	Dm7b5	Ebmaj7	Fm7	Gm7	Abmaj7	Bb7
C#m7	D#m7b5	Emaj7	F#m7	G#m7	Amaj7	В7
Dm7	Em7b5	Fmaj7	Gm7	Am7	Bbmaj7	C 7
D#m7	E#m7b5	F#maj7	G#m7	A#m7	Bmaj7	C#7
Em7	F#m7b5	Gmaj7	Am7	Bm7	Cmaj7	D7
Fm7	Gm7b5	Abmaj7	Bbm7	Cm7	Dbmaj7	Eb7
F#m7	G#m7b5	Amaj7	Bm7	C#m7	Dmaj7	E7
Gm7	Am7b5	Bbmaj7	Cm7	Dm7	Ebmaj7	F7
G#m7	A#m7b5	Bmaj7	C#m7	D#m7	Emaj7	F#7

STAIR-STEP PROGRESSION with bVImaj7 CHORD

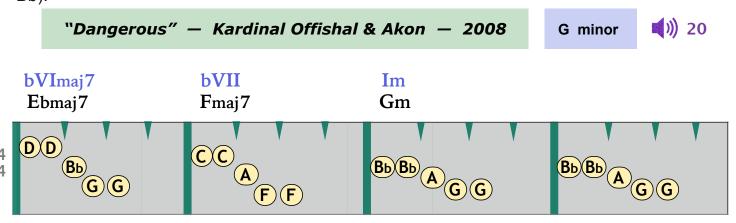
Although the stair-step progression usually contains all triads, occasionally the bVI will be a **maj7 chord**, as in the following example from Kylie Minogue.



Here's a more recent example of the same progression. START LISTENING AT 0:30

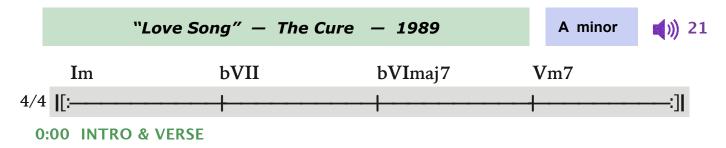


The 2008 hit "Dangerous" also has the ascending stair-step progression. Notice that although the chord root notes are rising Eb, F, G, the **synth riff sequences** for each chord seem to be **descending in the treble**. (The starting notes of the riffs move from D to C to Bb).



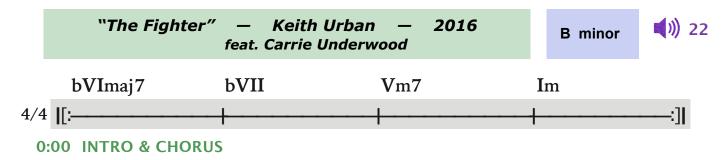
0:00 INTRO & VERSE synth riffs

The next song features the stairstep progression descending to <u>Vm7</u>, instead of the usual harmonic minor V chord.

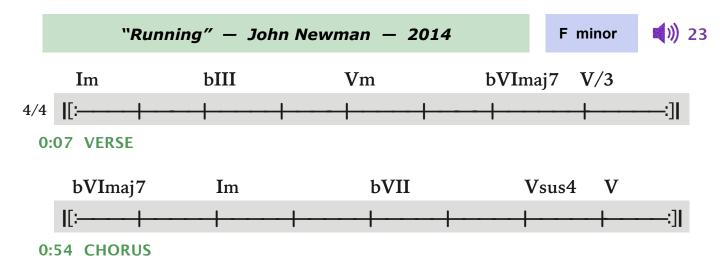


OTHER bVImaj7 CHORD

Keith Urban's "The Fighter" also features a bVlmaj7 and Vm7 chord, but not in the stair-step sequence.



Our last example of the bVImaj7 contains two variations of the harmonic minor V chord. At the end of the verse, the V is heard in first inversion with the 3rd in the bass (V/3). On the chorus, the Vsus4 preceeds the V.

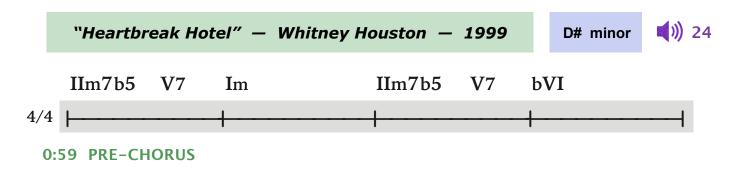


Additional songs with bVImaj7 CH

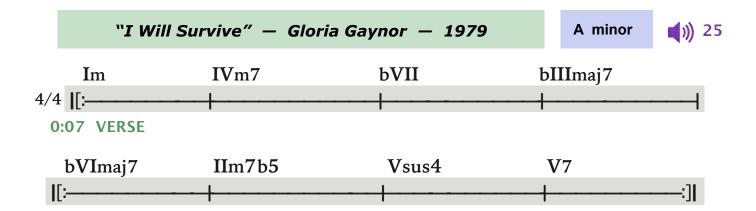
2009	Heartless	Kanye West	Bb minor
2010	D J Got Us Fallin' in Love	Usher feat. Pitbull	G minor
2014	Tumble and Fall	Little Big Town	G minor
2015	Cavalry Captain	Decemberists	A minor
2015	Ocean Drive	Duke Dumont	G# minor
2016	Night Moves	Roosevelt	A minor
2024	Instructions	Ana Shine	Bb minor

PROGRESSIONS with IIm7b5 CHORD

The <u>IIm7b5</u> chord is rarely used in pop & rock (unlike jazz, where it is used quite often). However, there are a few examples we can look at, including this 1999 pop hit by Whitney Houston. As is usually the case with jazz, the IIm7b5 is paired here with the V7 chord in the pre-chorus. START LISTENING AT **0:59**



The next 70s disco anthem by Gloria Gaynor features not only the IIm7b5 chord, but also several other diatonic 7ths and another example of the Vsus4 to V chord:



EAR TRAINING EXERCISES

For additional practice recognizing the bVImaj7, bIIImaj7, and IIm7b5 chords in a minor key, try **Exercises 6.5e - 6.8e** (see "Textbook Contents"/ "Volume 1"/ "Ear Training Exercises").

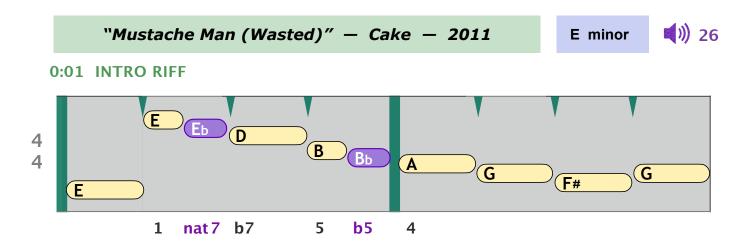
Signature Riffs

In Chapter Three, the signature minor key riffs were either from the minor pentatonic or full natural minor scale. Most of the riffs in this chapter will have some additional tones outside of natural minor, such as the #4 / b5, natural 6, or natural 7 notes. These extra notes will usually move by half-step either to or from a natural minor scale tone. Often these notes are passing tones between degrees 4 and 5 or b7 and 1.

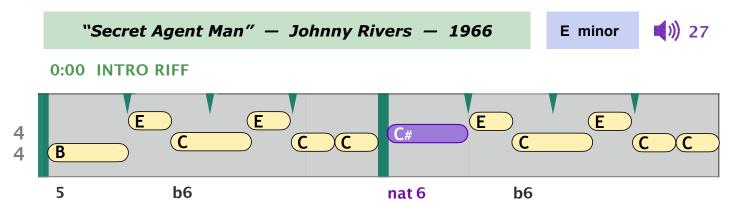
[NOTE: Regarding terminology, notes that are inside the prevailing scale of the key are said to be **diatonic**. Extra notes that are outside the prevailing scale are said to be **chromatic**. In the riffs below, chromatic notes will be highlighted in purple.]

MELODIC FUNCTION RIFFS

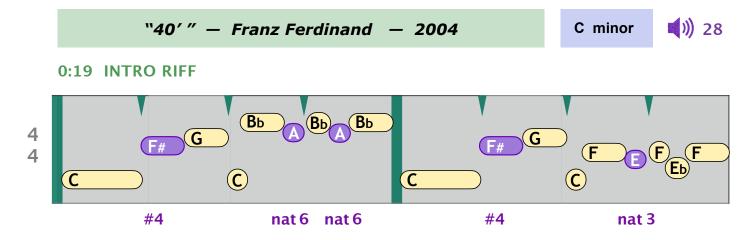
Our first example of a melodic riff comes from the band Cake. Note the **chromatic passing tones** between the 1 and b7, and also the 5 and 4 notes. (In Chapter Four, we usually referred to the note between 4 and 5 as a #4. Here it is labeled a b5 because it is descending, and the use of the flat sign avoids having to use another accidental marking for the 4.)



Variations of the next classic riff have been used for decades to invoke an air of mystery and intrigue in spy movies. The famous sequence used here of <u>5 - b6 - nat 6 - b6</u> (B - C - C# in the key of E minor) will be discussed further in Chapter Fourteen.

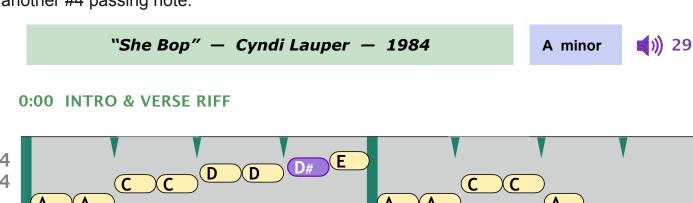


This 2004 song by Franz Ferdinand has a similar feeling of mystery, with several chromatic notes, including the <u>natural 3</u>, <u>#4</u>, and <u>natural 6</u>. START LISTENING AT **0:19**



HARMONIC FUNCTION RIFFS

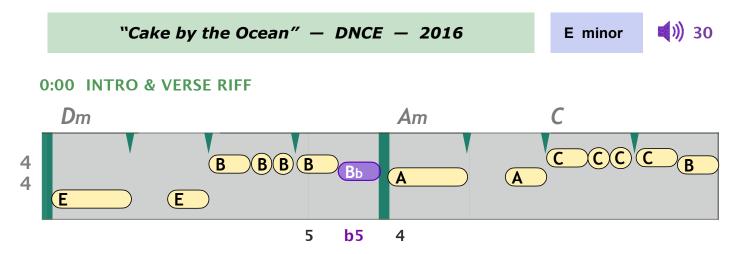
The harmonic function bass riff on the 1984 hit "She Bop" by Cyndi Lauper features another #4 passing note:



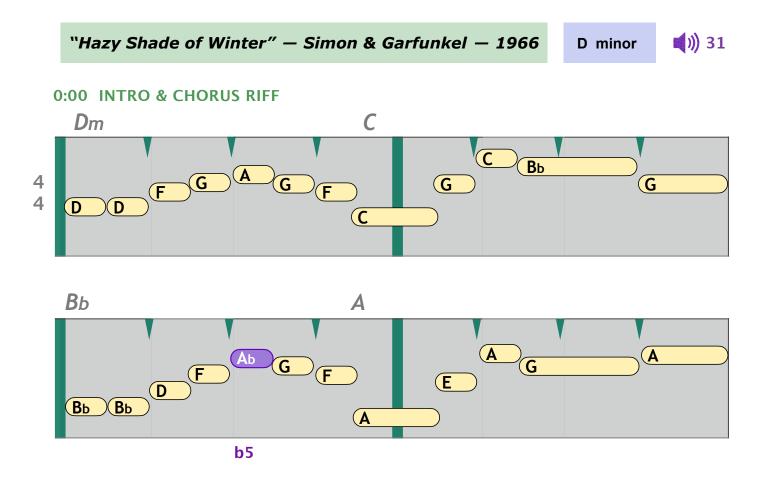
5

Here's a more recent minor-key hit with a b5 chromatic passing tone.

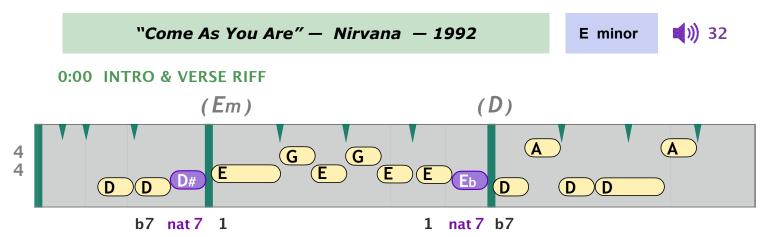
#4



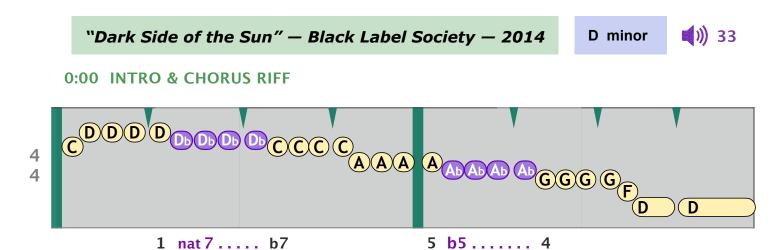
The signature riff on this next Simon & Garfunkel song closely follows the chord tones of the **descending stair-step to V** progression (Im - bVII - bVI - V) in D minor.



This classic riff from the 90s features the natural 7 (spelled two different ways) as a passing tone between b7 and 1.

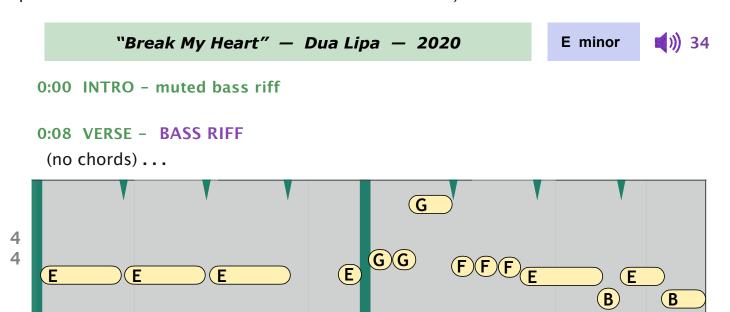


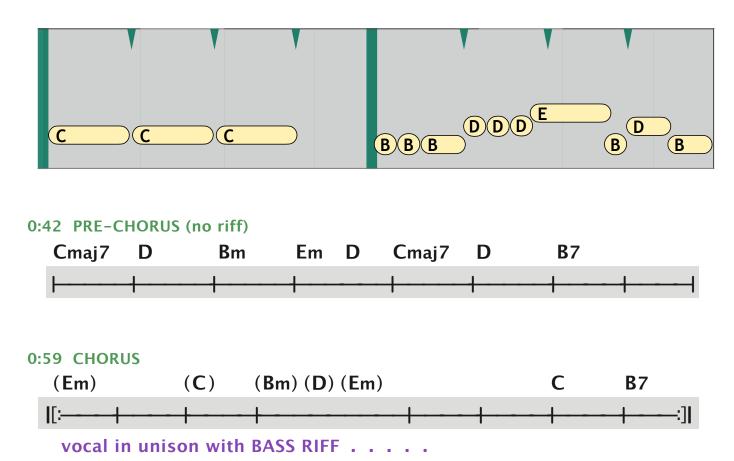
"Dark Side of the Sun" by Black Label Society has a riff with both the nat 7 and the b5 passing tones.



Our last example, Dua Lipa's 2020 hit "Break My Heart," illustrates the overall importance of signature riffs in the pop / rock style. The song opens with the main riff heard alone on muted bass guitar. During the verse, the vocal melody is sung without chords — the only harmonic accompaniment is the continuing bass riff (scored below), propelling the rhythm forward. Lush, floating chords mark the entrance of the pre-chorus, as the riff briefly disappears and the rhythmic groove is suspended (similar to "Crying Shame," heard in Chapter Three). When the chorus enters, the signature riff returns, but now it has become the **actual vocal melody, joined in unison with the bass line**. We realize that the earlier bass riff was actually a clever preview of the song's main vocal hook at the chorus.

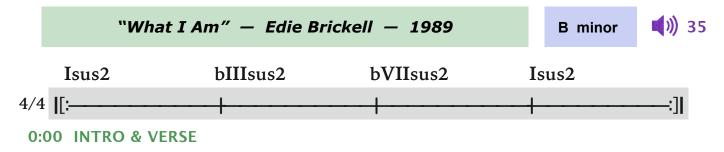
(Also of note is the somewhat understated entrance of the chorus. Unlike the big bang that announces most pop choruses, this chorus starts more low key, as the drums and percussion are held back until the fifth bar of the section.)



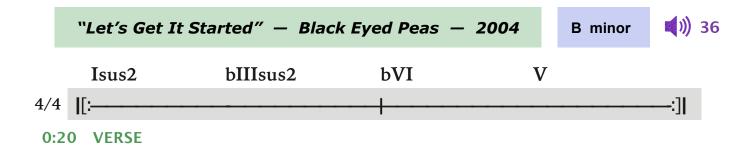


Sus2 and Sus4 Chords

Sus2 and sus4 chords are not as common on minor key songs compared to the major key, but the song below happens to be a perfect example of the sus2 sound, featuring <u>all</u> <u>sus2 chords</u> on the intro and verse.

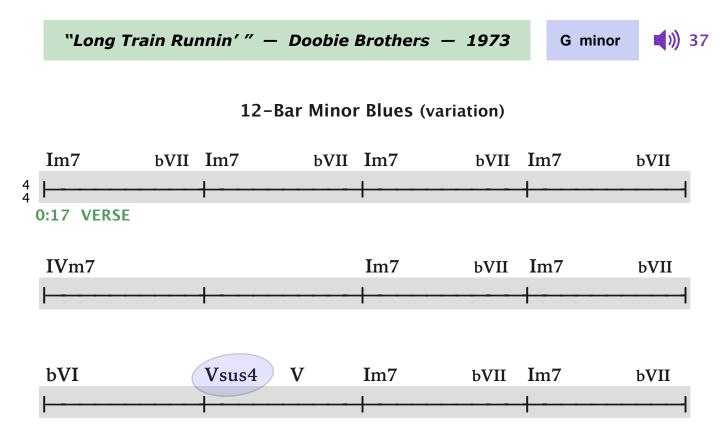


This Black Eyed Peas song features a <u>variation of the descending stair-step to V</u> progression, using a bIII as the second chord and changing the first two chords to sus2 structures. START LISTENING AT **0:20**

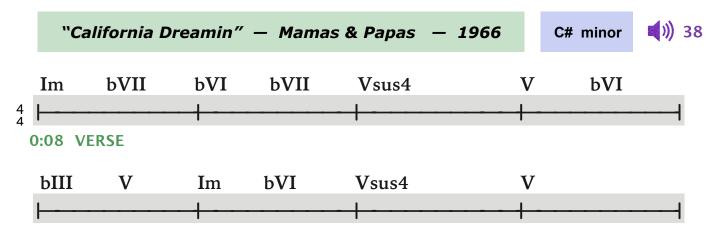


One common usage of the sus4 chord in minor keys is the placement of a Vsus4 immediately preceding the harmonic minor V. We heard two examples of this earlier when we listened to John Newman's "Running" and Gloria Gaynor's "I Will Survive."

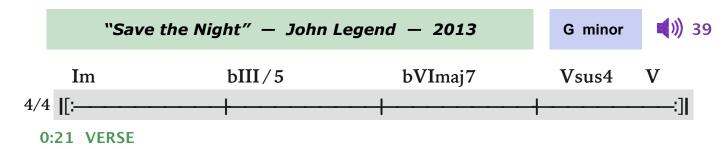
Here's another example of the Vsus4 to V combo from the Doobie Brothers. Notice that this song uses a <u>variation of the 12-bar minor blues form</u>, mentioned previously on "The Thrill Is Gone." The Im and IVm are now m7 chords, and every measure of the Im7 chord has a brief sidestep to the bVII on beat 4. The Vsus4 is highlighted in blue.



The 1966 classic "California Dreamin" also features the Vsus4 chord preceding the V.



Here's one more variation of the descending stair-step to V progression, this time using a bIII / 5 on the second step, a maj7 on the third step, and finishing with the Vsus4 to V combo. START LISTENING AT **0:21**



Additional songs with sus2 or sus4 CHORDS (minor key)

1987	The One I Love	R.E.M.	E minor
1996	Wonderwall	Oasis	F# minor
2014	Stay With Me	Ryan Adams	C# minor

EAR TRAINING EXERCISES

For additional practice recognizing the sus2 and sus4 chords in a minor key, try **Exercises 6.9e - 6.11e** (see "Textbook Contents"/ "Volume 1"/ "Ear Training Exercises").

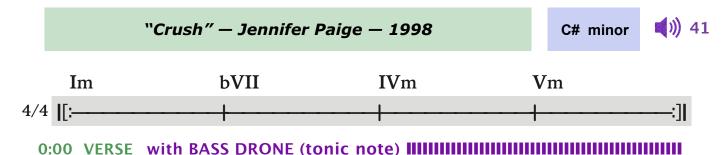
Drones

BASS DRONE

Minor key songs can have drones in the accompaniment, just like the major key examples heard in Chapter Five. Here's the classic intro to Survivor's "Eye of the Tiger," featuring a <u>bass drone on the tonic (key) note</u>. Notice that the drone continues throughout the verse, then releases at the chorus.

"Eye of the Tiger" — Survivor — 1982 C minor (1)) 40

The following 1998 hit "Crush" also holds a tonic bass drone throughout the verse. Notice the variation on the descending stair-step progression, substituting the IVm for the bVI chord on the 3rd step of the sequence.



Here's a recent example from Dua Lipa, featuring the following 2-bar sequence over 90% of the song.



Additional songs with BASS DRONE (minor key)

1981	In the Air Tonight	Phil Collins	D minor
1983	Jeopardy	Greg Kihn Band	D minor
1986	Silent Running	Mike & The Mechanics	D minor

TREBLE DRONE

You will recall our discussion in the previous chapter about treble drones, and the difficulty of naming some of the underlying chords when accounting for the drone notes. In the interest of clarity and simplicity, the chord symbols in this chapter will only reflect the basic underlying progression without factoring in the drone notes. We will save further discussion on this topic for Chapters Fourteen and Fifteen.

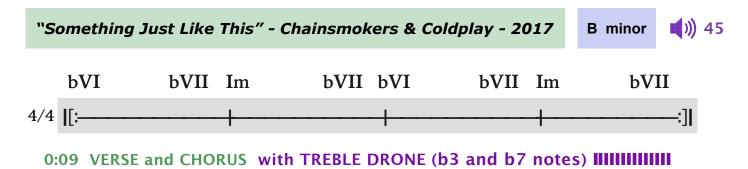
Let's start with an example of a <u>treble drone using the tonic note</u>, courtesy of Maroon 5. Once again, there is a small variation in the underlying stair-step progression, with the use of the bIII chord on the second descent.



Of course not all drones are on the tonic note. The next song contains a droning **b3** note on every upbeat of the verse and chorus, starting at **1:11**.

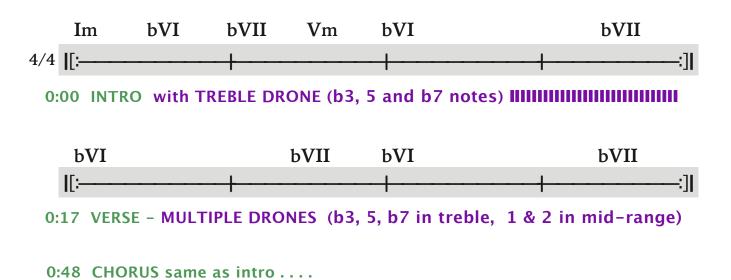


The recent hit "Something Just Like This" features a two-note drone, using the b3 and **b7 notes.** Note that the chord progression basically walks up and down the stair-step sequence for the entire song:



The next example from Empire of the Sun has a very complex texture, with heavy reverb creating a dream-like atmosphere. There are three droning notes — **b3**, **5**, **and b7** — floating above the entire mix. These three notes are actually a major triad, spelling out the bill chord. In the verse there is a second drone with a muted guitar sound that alternates between the tonic and 2nd degree, holding a steady 8th-note pulse. Underneath all this, the bass articulates the basic chord progression, shown below in roman numerals:

"I'll Be Around" — Empire of the Sun — 2013

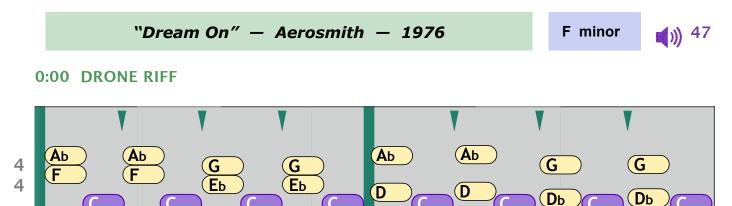


Additional songs with TREBLE DRONE (minor key)

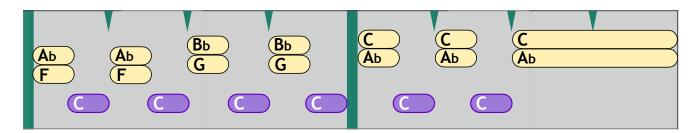
2014	Just a Girl	Lady Antebellum	D# minor
2015	Human	Of Monsters and Men	E minor
2015	Lovetap!	Smallpools	C minor

DRONE RIFF

The opening riff of Aerosmith's "Dream On" is anchored by a droning C note, which represents the **5th degree** of the key.

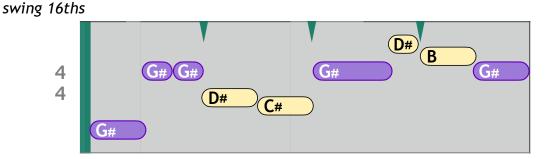


Dь

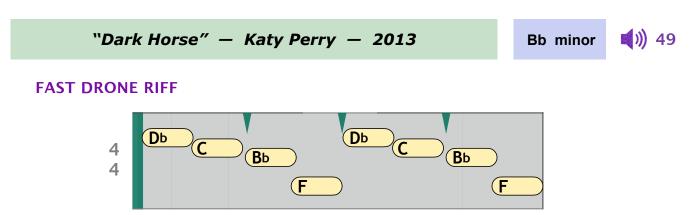


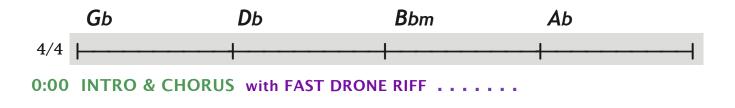
On the 2012 hit "Thrift Shop," the signature honking sax riff revolves around the tonic **<u>G# note</u>**. This riff functions as a memorable and arresting melodic hook, due to its dramatic leaps and wide pitch range.



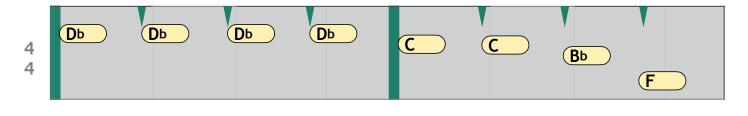


Katy Perry's "Dark Horse" features a fast, one-bar drone riff over several chord changes during the intro and the chorus. In the verse, the same four notes are used to create a **slower**, **two-bar riff** over the Im chord.





SLOWER, TWO-BAR RIFF





Additional songs with DRONE RIFF (minor key)

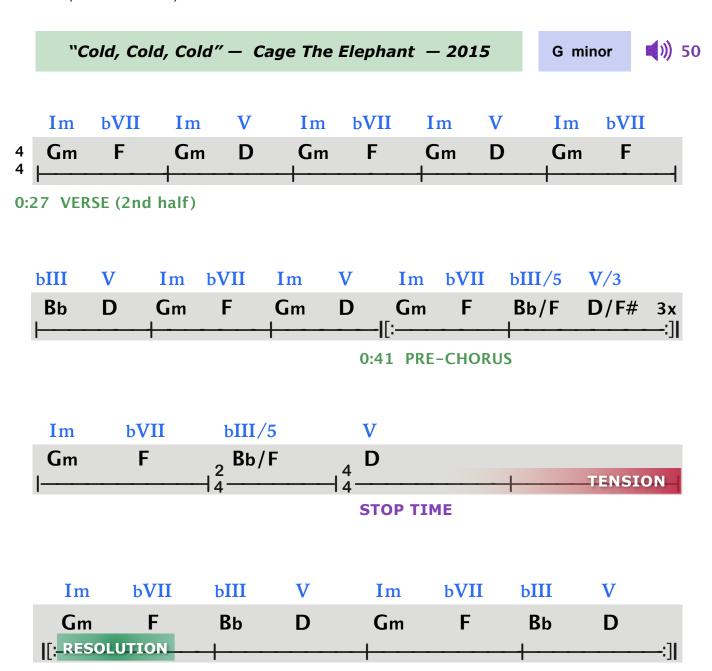
2004	Breaking the Habit	Linkin Park	E minor
2004	Gigolo	Nick Cannon	E minor
2010	Wide Eyes	Local Natives	B minor

Songwriting Focal Points

V to I Tension - Resolution in Minor Key

As we discussed earlier, strong V to I tension - resolution is missing in <u>natural</u> minor, due to the minor quality of the Vm chord. However, we have heard several songs in this chapter where the Vm was changed to a V major triad (borrowed from <u>harmonic</u> minor), restoring the tension. This gives songwriters an important tool when trying to build focal points in the minor key.

The 2015 song "Cold, Cold, Cold," by rock band Cage The Elephant (Matt Shultz, Brad Shultz, Daniel Tichenor, and Jared Champion - composers) features extensive use of the harmonic minor V chord, particularly to set up the song's hook at the entrance of the chorus (shown below). START LISTENING AT **0:27**



0:58 CHORUS (with title)

You will notice that several previously discussed focal point devices were also used on "Cold, Cold," including the following —

- A SHORT MELODIC PHRASE is REPEATED four times in the prechorus, building tension. The first phrase starts with the lyrics "Doctor can you help me 'cause I don't feel right."
- **STOP TIME** accentuates the tension of the V chord.
- The chorus / song title starts on the HIGHEST MELODY NOTE