CHAPTER 3





Essential Concepts / Skills covered in chapter 3

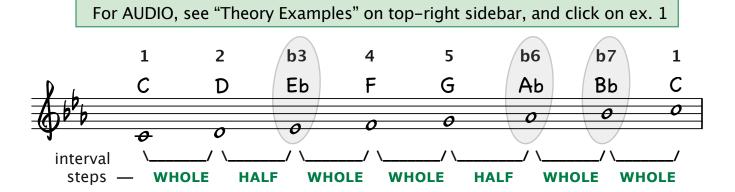


- Minor scales, diatonic triads in minor keys
- Common chord progressions in the minor key using Im,
 IVm, Vm, bIII, bVI, bVII chords in pop song examples
- Signature minor key riffs, minor pentatonic scale
- Songwriting devices for creating focal points
- Ear training Im, IVm Vm, bVI, bVII chord

The Minor Scale

In terms of music theory, the minor key works just like the major key, including a seven-note scale that is the source of melodies, bass lines, riffs, and a set of accompanying chords generated directly from the scale. The formula for the minor scale is shown below, using the key of C as an example.

C MINOR SCALE ♥)) ex.1



You will notice that there are 3 notes changed from the parallel C major scale. The 3rd, 6th, and 7th degrees are all flatted, giving the minor scale a darker, sadder sound. Recalling the importance of the 3rd degree in defining a major vs. minor triad, it is the b3 that most clearly defines the scale's minor tonality.

As with the major scale, you can start the formula on any pitch, so in terms of sound alone (without enharmonic spelling), there are only 12 different minor scales. However, there are three scales that are sometimes spelled enharmonically (again like the major scale) - G# minor is sometimes written as Ab minor, D# minor is sometimes written as Eb minor, and A# minor is sometimes written as Bb minor.

The minor scales are presented below:

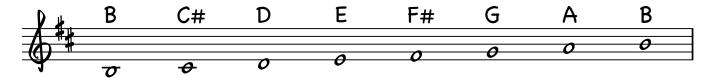
A MINOR SCALE

	A	В	С	D	E	F	G	<u> </u>
A							0	0
-		77	0	0				

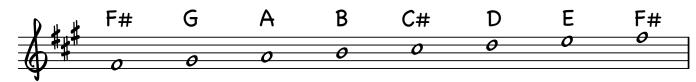
E MINOR SCALE



B MINOR SCALE



F# MINOR SCALE



C# MINOR SCALE

D # # C#	D#	Ε	F#	G#	A	В	C#
A HINTH							
_/L "1L #						_	0
7/1) T "			_	0	0	U	

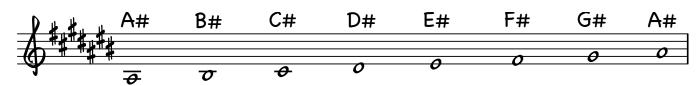
G# MINOR SCALE

D 4. H	_ G#	A#	В	C#	D#	E	F#	G#
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/h *	T 1							0
Ψ					0			
•	77	$\overline{m{\phi}}$	$\boldsymbol{\sigma}$					

D# MINOR SCALE

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/L ""L #1	٣١ ط				_	0	0	
// () 17 "1	1		_	0	0	U		
י עט	1 _	0	0	U				
9	0	0		•			•	

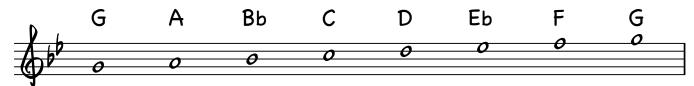
A# MINOR SCALE



D MINOR SCALE

D	D	Ε	F	G	A	Вь	C	D
A (
<u> </u>							<i>O</i>	
		^	0	U				
-	$-\alpha$							

G MINOR SCALE



F MINOR SCALE

δ.	F	G	Ab	Вb	C	DЬ	Eb	F
<u> </u>								
<u> </u>	-D							
//>/	<u>, , , , , , , , , , , , , , , , , , , </u>							
<u>UV</u>	<u> </u>							

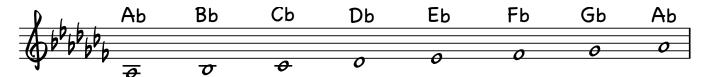
Bb MINOR SCALE

DL	Bb	С	Db	Eb	F	Gb	Ab	Вь
Abb	2						0	0
(())' /	9			0	0			
7	77	-0 -	0	O	•			

Eb MINOR SCALE

D 6.	Eb	F	Gb	Ab	Вь	Cb	Db	Eb
1 (D.h							_	0
/L h' LV	0				_	0		
	9 /		0	0				
	_	0	U					
4								

Ab MINOR SCALE

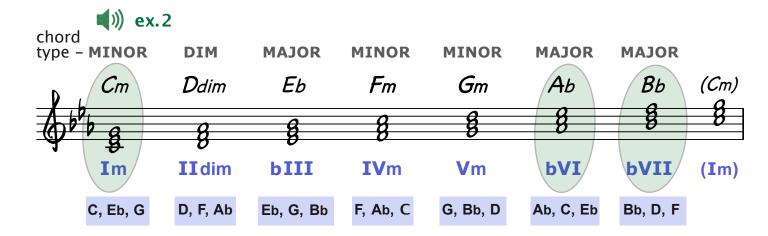


WRITTEN EXERCISE

For extra practice spelling some of these minor scales, complete **Exercise 3.1** (see "Textbook Contents"/ "Volume 1"/ "Written Exercises").

Diatonic Triads

As with the major key triads discussed in Chapter Two, chords can also be built on each step of the minor scale, resulting in the seven diatonic triads shown below.



Again comparing to the major key, where I, IV, and V dominant the landscape, the chords built on the 1st, 4th, and 5th degrees of the minor scale are all minor this time. These chords are the basis for many songs, but the most common chords in pop & rock are the Im, bVI, and bVII, highlighted in green above. (For examples, see the lengthy list of songs with the "Stair-Step" progression, later in this chapter.) Shown below is the chart of diatonic triads for all the minor keys.

(key)		DIATONIC TRIADS - MINOR KEYS						
Im	II dim	bIII	IVm	Vm	bVI	bVII		
Am	Bdim	С	Dm	Em	F	G		
Bbm	Cdim	Db	Ebm	Fm	Gb	Ab		
Bm	C#dim	D	Em	F#m	G	Α		
Cm	Ddim	Eb	Fm	Gm	Ab	Bb		
C#m	D#dim	E	F#m	G#m	Α	В		
Dm	Edim	F	Gm	Am	Bb	С		
D#m	E#dim	F#	G#m	A#m	В	C#		
Em	F#dim	G	Am	Bm	С	D		
Fm	Gdim	Ab	Bbm	Cm	Db	Eb		
F#m	G#dim	А	Bm	C#m	D	E		
Gm	Adim	Bb	Cm	Dm	Eb	F		
G#m	A#dim	В	C#m	D#m	E	F#		

WRITTEN EXERCISE

Start your memorization of the minor chord chart by writing the diatonic triads for some common minor keys in **Exercise 3.2** (see "Textbook Contents"/ "Volume 1"/ "Written Exercises").

Common Chord Progressions

ONE CHORD or RIFF

When discussing riffs in the previous chapter, we mentioned that some hits are basically "one-chord" songs, with little or no chord changes. The song may remain on the Im chord throughout, or there may technically be another chord, but the changes are so quick or so sporadic that the overall effect is of a static harmony.

Pink's 2001 hit "Get the Party Started," with its rumbling bass and rhythmic wah-wah guitar, is a good example of a one-chord piece, remaining anchored to the Im the entire song.

"Get the Party Started" — Pink — 2001

B minor



For AUDIO, see the "Song Examples" playlist in the right sidebar, and click on track 1 song title.

MINOR PENTATONIC SCALE

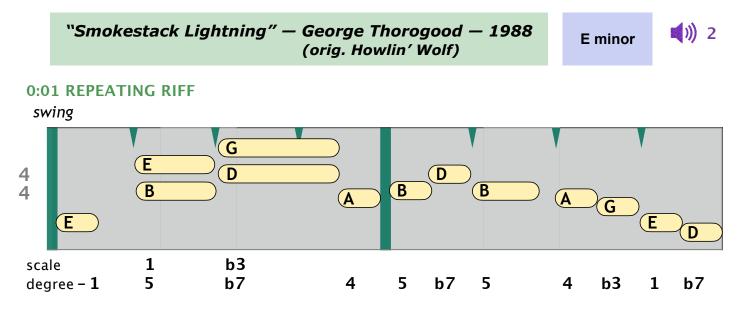
One-chord songs often have a strong repeated riff that is used in place of an actual chord sound. As with the major-key riffs heard in Chapter Two, minor-key riffs are usually based on the pentatonic rather than the full scale. The pentatonic scale for C minor is shown below.



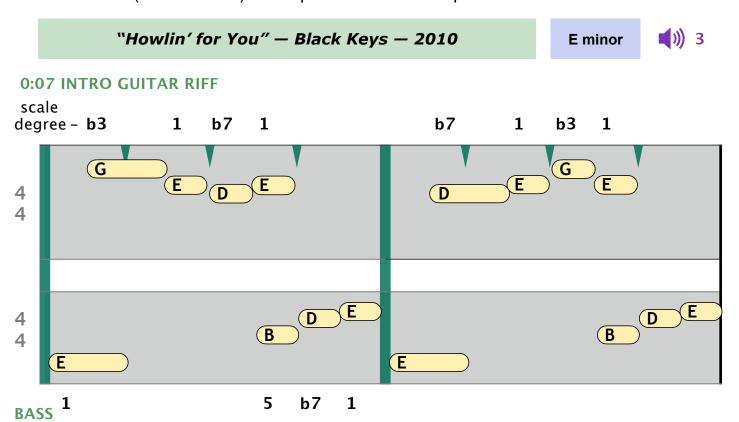


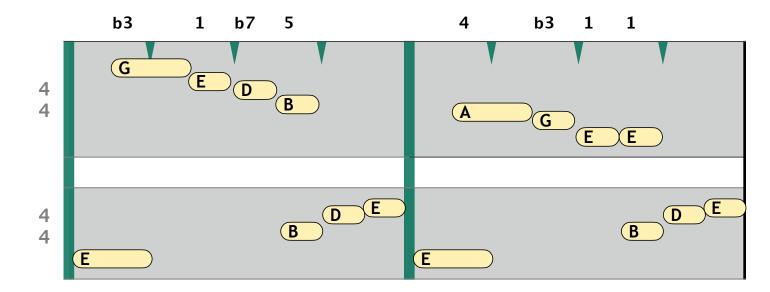
D 6	C	Eb	F	G	Вь	С	
Abb				0	0	0	
minor scale degree —	0 1	b3	4	5	b 7	1	

"Smokestack Lightning," a song recorded by several blues-rock artists, is a song with no chord changes, based solely on a repeating **minor pentatonic guitar riff** (shown below in our alternative graphic notation).

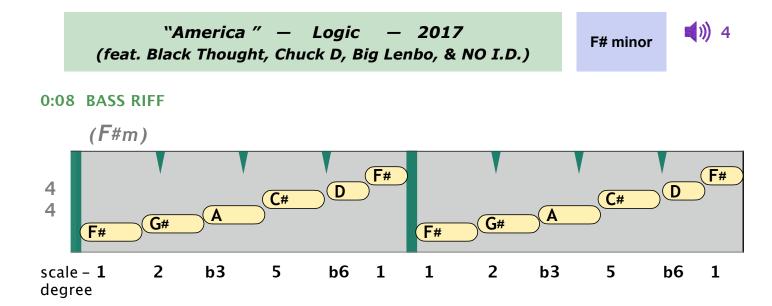


The Black Keys' "Howlin' for You" is another example of a one chord song in minor. Again there is no actual chord sound, just a repeating bass figure and an occasional guitar riff in the treble (shown below). Both parts use the minor pentatonic scale.





Logic's 2017 recording "America" is a more recent example of a one-chord song with a repeated riff. Notice that the signature bass riff is not strictly pentatonic — it also includes the **2nd degree** (G# note) and **b6 degree** (D note) from the full minor scale.



Here is a list of some additional one-chord songs in a minor key. You will recall that you can use all of the "Additional Listening" songs in this book to practice improvisation and ear training. Just like Chapter Two , the pentatonic scale of the key will be the easiest place to start. For more on how to use the minor pentatonic to improvise, see the supplemental guitar workbook that is meant to accompany this main text.

Additional ONE-CHORD SONGS (minor key)

1958	Fever	Peggy Lee	A, Bb, B minor
1986	Nasty	Janet Jackson	F minor
1996	No Diggity	Blackstreet	F# minor
2002	Days Go By	Dirty Vegas	D minor
2005	Dirty Harry	Gorillaz	Bb minor
2005	Pon De Replay	Rihanna	F# minor
2006	SOS	Rihanna	F# minor
2014	The Hand is Quicker	Aloe Blacc	E minor

TWO CHORD VAMP

The most common two-chord vamp in minor is the alternation between the <u>Im and IVm</u> chords, as demonstrated in the 2005 hit "Baby I'm Back." The song is in the key of A minor, and the alternation of the Am chord (one bar) and Dm chord (one bar) continues throughout the entire piece.

"Baby I'm Back" — Baby Bash — 2005

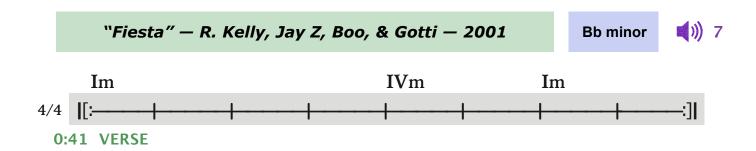
A minor



On Ed Sheeran's hit "Sing," the two chords in the Im - IVm vamp last for **four** bars each. Once again the alternation covers the entire song.

The next example has a bit of a variation — instead of two chords of equal duration alternating, this song spends more time on the Im chord, and a shorter time on the IVm. To hear the chord progression, START LISTENING AT **0:41**.

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



Additional songs with Im - IVm TWO CHORD VAMP (minor key)

1975	That's the Way I Like It	KC & The Sunshine Band	C minor
1987	Smoking Gun	Robert Cray	E minor
1996	1-2-3-4 (Sumpin' New)	Coolio	Eb minor
1998	The Boy Is Mine	Brandy and Monica	C# minor
2001	Love Don't Cost a Thing	Jennifer Lopez	E minor
2011	Moves Like Jagger	Maroon 5 feat. Christina Aguilera	B minor

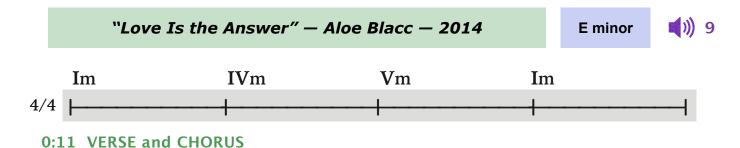
Another common two-chord vamp alternates between the Im and Vm, as heard on Mary J. Blige's "Family Affair," where each chord lasts for two bars. The chord changes are clearly evident in the steady 8th-note pulse of the synth.

Additional songs with Im - Vm TWO CHORD VAMP (minor key)

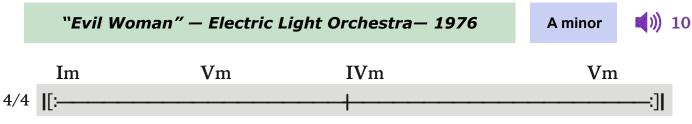
2001	Fallin'	Alicia Keys	E minor
2004	Bounce	Sarah Connor	F# minor
2004	Dip It Low	Christina Milian	A minor
2009	Day 'N' Nite	Kid Cudi	E minor

Im, IVm, Vm CHORDS

As seen in Chapter Two, the I, IV, and V are clearly the most prominent chords in major key songs, with hundreds of hits based on these three chords alone. In the minor key, Im, IVm, and Vm songs are also common, but not quite as dominant. Here's a song from 2014 that uses a Im - IVm - Vm progression for most of the song.



ELO's "Evil Woman" also is based on the Im, IVm, and Vm chords, as shown below. START LISTENING AT **0:31**.



0:31 VERSE and CHORUS

Additional songs with Im, IVm, Vm (minor key)

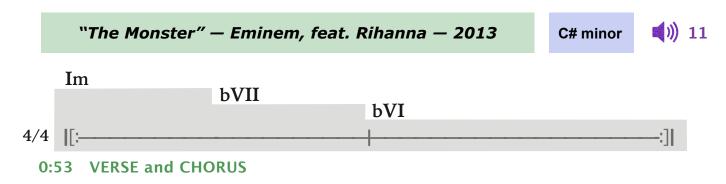
1970	Black Magic Woman	Santana	D minor
1992	Wishing on a Star	Cover Girls	F minor
1998	Gettin' Jiggy With It	Will Smith	F# minor
2020	Levitating	Dua Lipa	B minor

EAR TRAINING EXERCISES

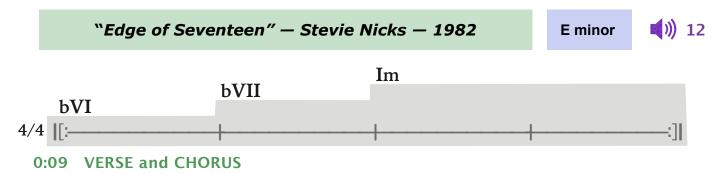
For additional practice hearing the Im, IVm, and Vm chords in a minor key, try **Exercises 3.1e - 3.4e** (see "Textbook Contents"/ "Volume 1"/ "Ear Training Exercises").

STAIR-STEP Im, bVII, bVI

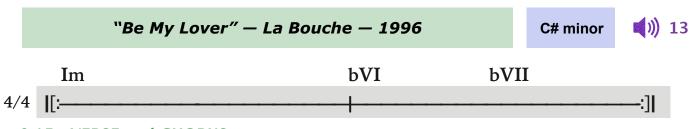
In pop & rock, the three most common minor key chords are the Im, bVII, and bVI. Hundreds of songs are based on these three chords in some combination, not unlike the prominence of I, IV, and V in the major key. Often these minor key chords are featured in a short 2- or 4-bar sequence that is repeated throughout the entire song. (You will recall our discussion of these repeating sequences in the previous chapter.) The 2013 hit "The Monster" offers a great example, featuring the common "stair-step" descent Im - bVII - bVI — much like walking down a stairway. START LISTENING AT **0:53**.



If you can go down the stairway, you can also come back up, as seen on the Stevie Nicks song "Edge of Seventeen."

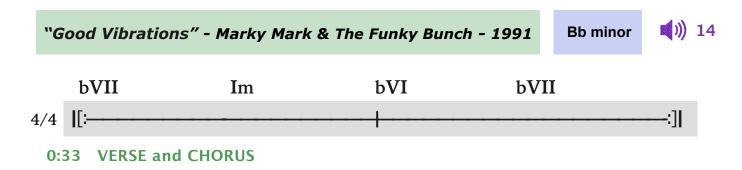


The next example starts on Im, jumps down to bVI, then walks back up to the tonic Im.

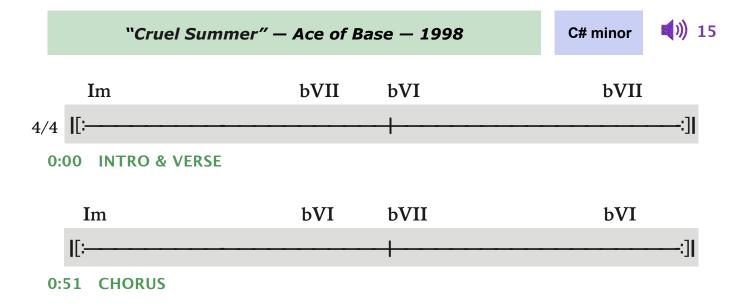


0:15 VERSE and CHORUS

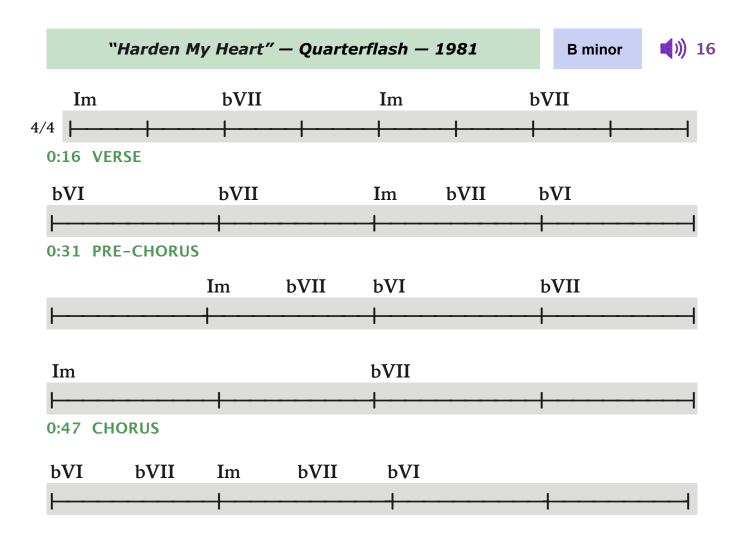
This 1991 hit once again features the stair-step chords throughout, but in a slightly different order. START LISTENING AT **0:33**.



Quite often there will be a quicker chord change at the end of the bar, as seen below on the 1998 hit "Cruel Summer:"



Quarterflash's "Harden My Heart" moves up and down the stair-step progression several times throughout the song, but the movement is not as obvious as the previous songs. In the examples above, the progressions repeat every 2 or 4 bars over the entire piece, which makes the movement easy to hear. On "Harden My Heart" the progression is clearly more varied and less repetitious. START LISTENING AT **0:16:**



EAR TRAINING EXERCISES

For additional practice hearing the stair-step Im, bVII, and bVI chords in a minor key, try **Exercises 3.5e - 3.8e** (see "Textbook Contents"/ "Volume 1"/ "Ear Training Exercises").

The following list of stair-step songs is quite lengthy, but is included to demonstrate the dominance of this progression in pop & rock. Of all the progressions in this book, the stair-step Im, bVII, bVI is the most common, and more examples beyond this list will be seen in future chapters.

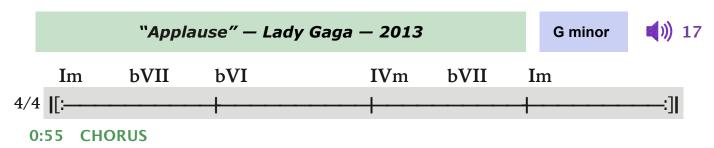
As with all the "Additional Songs" lists in this book, you can use the songs for extra ear training or improv practice. You may want to try and identify the chord changes, or you may want to cover the key info in the blue boxes and practice finding the key of each song by ear.

Additional songs with STAIR-STEP Im, bVII, bVI PROGRESSION

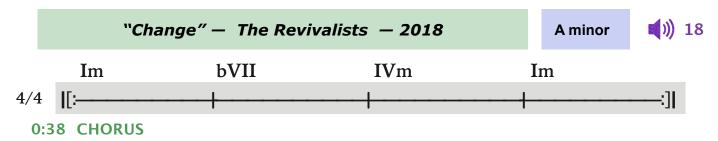
	All Along the		•
1968	Watchtower	Jimi Hendrix	C minor
1976	Don't Fear the Reaper	Blue Oyster Cult	A minor
1983	Stand Back	Stevie Nicks	B minor
1985	Mislead	Kool & The Gang	D# minor
1985	New Attitude	Patti Labelle	B minor
1986	Silent Running	Mike & The Mechanics	D minor
1994	Mr. Vain	Culture Beat	A minor
2000	Kryptonite	Three Doors Down	B minor
2001	Ride Wit Me	Nelly, City Spud	E minor
2002	Love At First Sight	Kylie Minogue	D# minor
2004	Breathing	Yellowcard	E minor
2004	Hotel	Cassidy, feat. R. Kelly	A minor
2008	Dangerous	Kardinal Offishal & Akon	G minor
2010	DJ Got Us Fallin' in Love	Usher, feat. Pitbull	G minor
2013	Bad Blood	Bastille	F minor
2015	Human	Of Monsters and Men	E minor
2015	Lovetap!	Smallpools	C minor
2017	Something Just Like This	Chainsmokers & Coldplay	B minor
2018	Gettin Warmed Up	Jason Aldean	A minor
2018	Emotion	lovelytheband	A minor
2021	The Business	Tiesto	G# minor

STAIR-STEP with IVm / Vm VARIATIONS

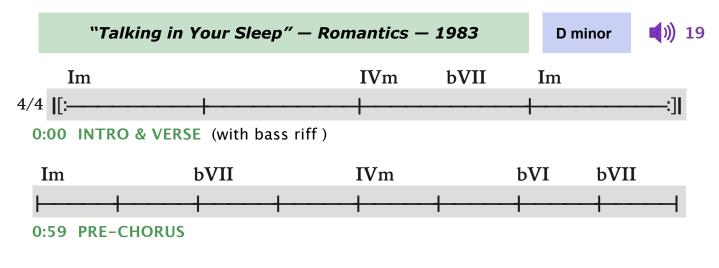
Sometimes a <u>IVm chord will substitute for the bVI</u>. On the 2013 hit "Applause," the verse and chorus start with a normal descending stair-step progression (Im - bVII - bVI). However, on the following ascent back to the tonic (IVm - bVII - Im), the bVI is replaced with a IVm chord. START LISTENING AT **0:55**.



The next song by The Revivalists features the IVm substitution on the descending stair-step. START LISTENING AT **0:38**.

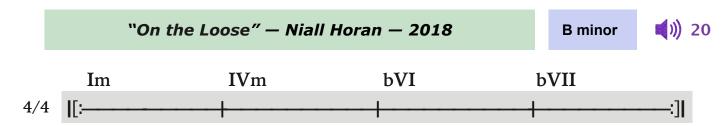


Here's an example with an ascending sequence like "Applause" in the verse, and a descending sequence like "Change" in the pre-chorus.

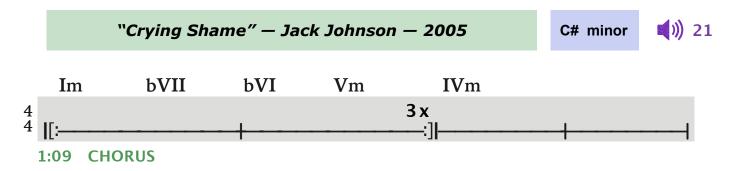


1:13 CHORUS same as verse

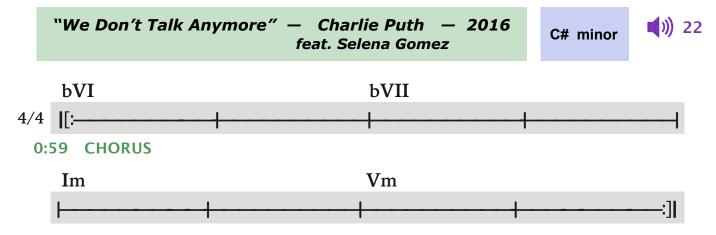
This Niall Horan song uses **both** the IVm and bVI in the progression.



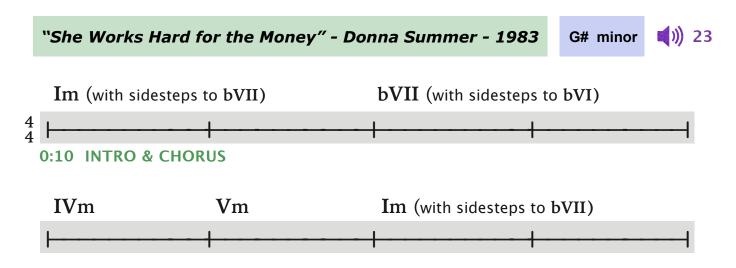
Sometimes the stair-step progression will descend all the way to the $\underline{\text{Vm chord}}$, as seen in the next example. START LISTENING AT 1:09



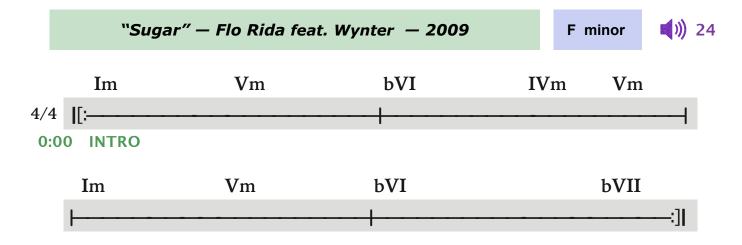
Here's another song that adds the Vm chord into the mix. START LISTENING AT **0:59**



This disco hit from 1983 features **both the IVm and Vm substitutions**, as seen on the second line below (ascending sequence IVm - Vm - Im).



On Flo Rida's 2009 song "Sugar," the Vm is used as a substitute for the bVII on the first descent to bVI, then both the IVm and Vm are used on the ascent back to Im.

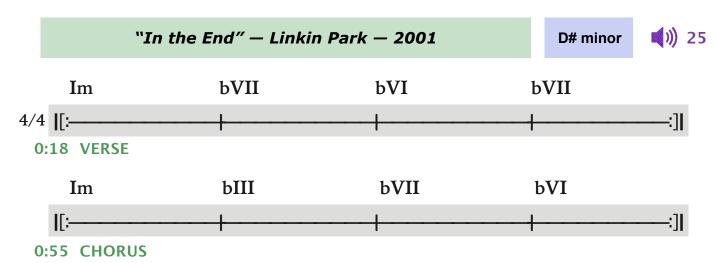


Additional STAIR-STEP songs with IVm or Vm VARIATIONS (minor key)

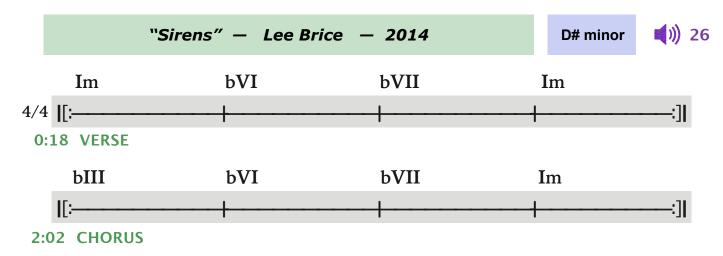
1989	Another Day in Paradise	Phil Collins	F minor
2008	Black and Gold	Sam Sparro	E minor
2011	Lights	Ellie Goulding	G# minor
2013	Instant Crush	Daft Punk, feat. Julian Casablanca	Bb minor
2016	Without You	Andra feat. David Bisbal	A minor
2017	Shape of You	Ed Sheeran	C# minor
2020	My Head & My Heart	Ava Max	A minor
2022	I'm Good (Blue)	David Guetta & Bebe Rexha	G minor

STAIR-STEP with VARIATION - bIII

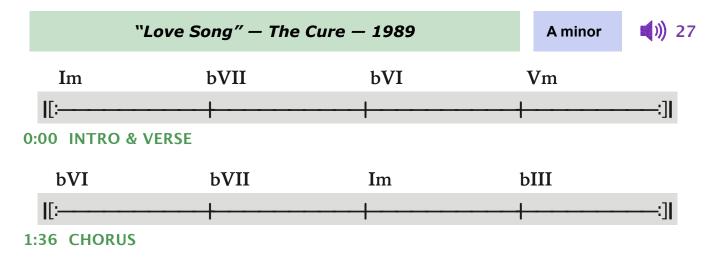
On the chorus of their 2001 recording "In the End," Linkin Park includes the **blll chord** with the stair-step progression.



Here's another example of the bIII chord used with the stair-step sequence.



The chorus of The Cure's "Love Song" has the same chords as the chorus of "Sirens," but the progression is shifted so the bVI starts the sequence (chorus starts at 1:36). Also notice that the verse has the same descending stair-step to Vm progression heard earlier on "Crying Shame."



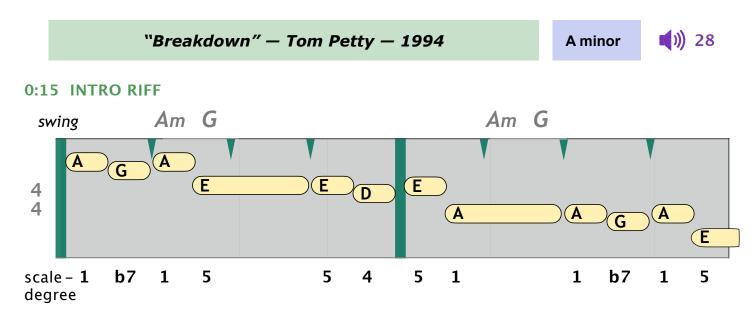
EAR TRAINING EXERCISES

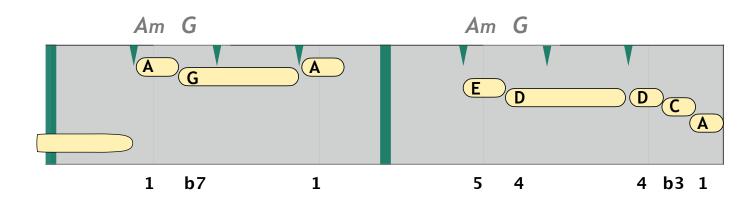
For a brief review of all the minor key chords discussed in this chapter, listen to **Exercises 3.9e - 3.12e** (see "Textbook Contents"/ "Volume 1"/ "Ear Training Exercises").

Signature Riffs

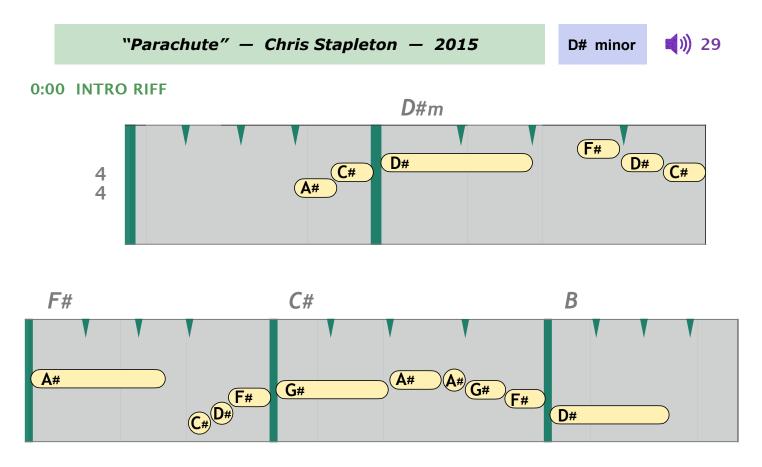
MELODIC FUNCTION RIFFS

In the earlier discussion of one-chord songs, several listening examples contained repeated riffs based on the minor pentatonic scale. Repeated riffs are also quite common on other minor key songs, including this well-known riff from Tom Petty's 1994 hit "Breakdown." Note that the scale degrees shown below are once again from the pentatonic scale.

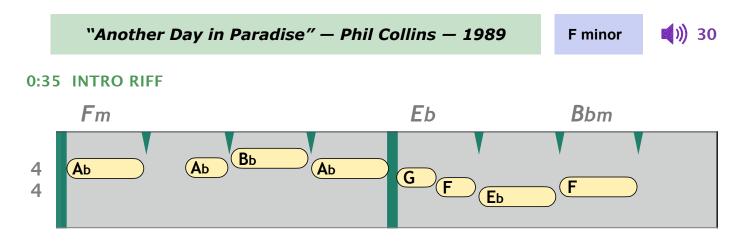


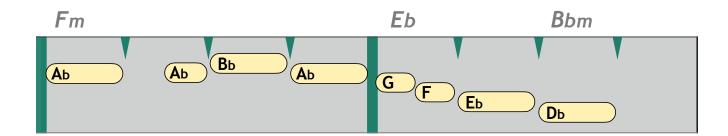


Here's another example of a signature riff based on the minor pentatonic scale.



The next song features a signature riff based on the full minor scale, rather than just the pentatonic, adding in the 2nd degree (G note) and the b6 (Db note). START LISTENING AT **0:35**.



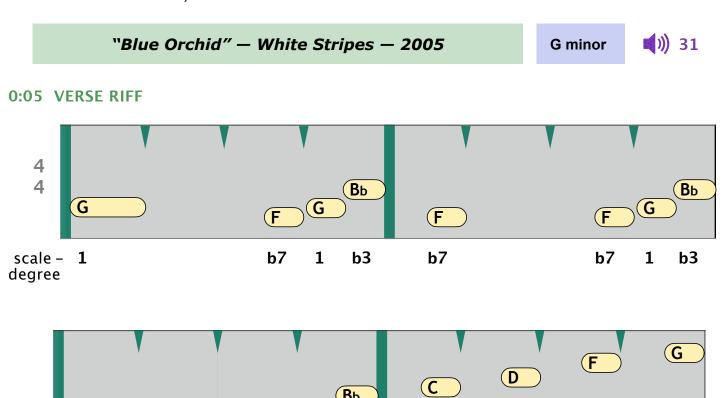


HARMONIC FUNCTION RIFFS

G

1

Harmonic function riffs (accompanying the vocal melody) are also very common in minor key songs. The following White Stripes riff was heard earlier as an example of syncopated rhythm, but we can listen again, this time noting the scale degrees from the minor pentatonic scale. (You may notice that the chorus riff is slightly different from the verse riff shown below.)



Вь

b3

5

b7

1

4

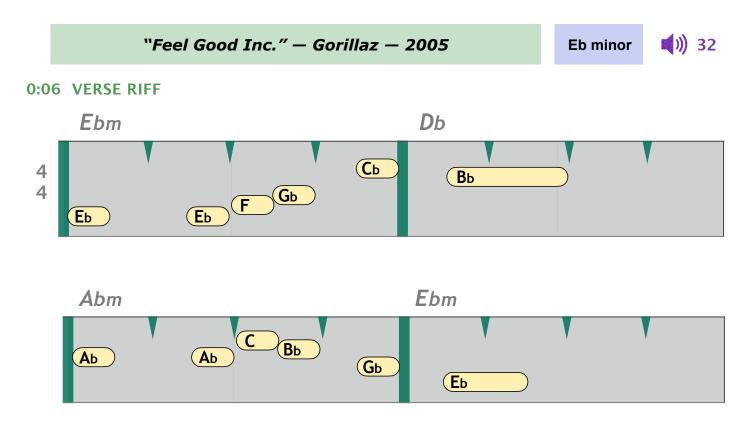
G

1

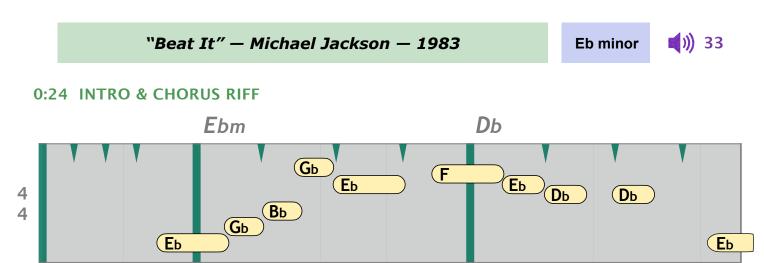
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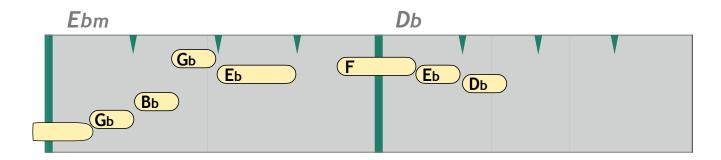
b7

Here's another example discussed earlier for its use of rhythmic syncopation. This riff used notes from the full minor scale, in addition to the pentatonic pitches.



On this classic Michael Jackson song, the signature riff is made up primarily of chord tones from either the Ebm or Db chords (I and bVII).



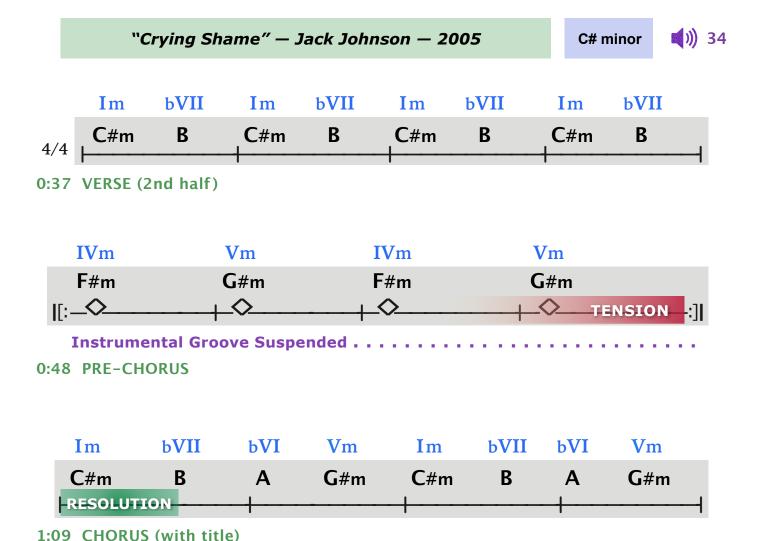


Additional songs with HARMONIC FUNCTION RIFFS (minor key)

1974	For the Love of Money	O'Jays	D minor
1981	Who's Crying Now	Journey	A minor
2001	In The End	Linkin Park	D# minor
2009	Day 'N' Nite	Kid Cudi	E minor
2010	Like a G6	Far East Movement, Cataracs & Dev	G minor
2012	Don't You Worry Child	Swedish House Mafia, feat. J. Martin	B minor
2014	Stay With Me	Ryan Adams	C# minor

Songwriting Focal Points

Chapter Two introduced the idea of focal points (aka. "hooks") in songwriting, and covered some of the devices used to create them on the 1984 hit "Jump." In this chapter we will introduce several more devices, analyzing the minor key song "Crying Shame," recorded in 2005 by Jack Johnson (written by Johnson and Adam Topol). You will recall that the chorus of this song was discussed earlier as an example of the descending stair-step progression to Vm (Im - bVII - bVI - Vm). Now we will turn our attention to the pre-chorus (at 0:48), and the focal point leading into the chorus. START LISTENING AT **0:37**:



"Crying Shame" features the following new tension devices:

Main Instrumental Groove Is Temporarily Suspended

Sometimes the main instrumental flow or rhythmic "groove" of a song is temporarily suspended for several bars or even an entire section. The instrumental texture thins out or the parts become simpler, often with a drop in volume, and rhythm figures may become more deliberate. The instrumental accompaniment does not stop entirely, and the tempo is maintained, so the overall effect is one of coasting — like the gears of the main engine have just become disconnected for a few bars. This feeling of rhythmic suspension is clearly heard during the pre-chorus of "Crying Shame."

The song's main groove is established by 0:21, but at 0:48 the bass, full drum sound, and guitar strums all disappear. Only light cymbals maintain the pulse while the guitar switches to more deliberate whole notes. Notice that although the rhythm pattern is disrupted, the chord progression continues on in tempo, alternating between IVm and Vm. The longer the rhythm coasts, the more tension is created in anticipation of the return to the main groove. When that groove finally kicks back in at the entrance to the chorus, there is a feeling of rhythmic resolution. You will also note that the **song's title** is sung here at this focal point.



Contrast in Harmonic Rhythm - Slower Changes

Focal points can also be accentuated by a contrast in harmonic rhythm, ie. the rate of the chord changes. On "Crying Shame" the tension is increased by slowing the usual rate of chord change during the pre-chorus, creating anticipation of the return to normal flow in the chorus. The harmonic rhythm is initially established in the verse as one chord for every two beats. Then during the pre-chorus the chords slow down, changing half as fast (every four beats). When the chords finally return to normal speed in the chorus, there is a sense of movement and excitement that reinforces the accompanying return of the main rhythmic groove.

Highest Melody Note Starts Chorus

One of the simplest melodic devices for accenting a focal point is to sing the highest note of the melody at the very beginning of the chorus. This is heard on "Crying Shame" as the title word is proclaimed three times in a row at the chorus entrance.

All these devices work together to create the strong hook on "Crying Shame." You may have also noticed the use of one device covered in the previous chapter — the resolving **Im chord is avoided** for eight bars leading up to the chorus entrance, further increasing the tension.

In Chapters Two and Three we have introduced the two main pillars of our traditional tonal system — the major key and the minor key. More will be said about the minor key in Chapter Six. However, in order to fully understand the foundations of pop and rock music, we must move on to Chapter Four and add a very important "third pillar" - The Blues.