CHAPTER 7
MINOR SCALES

Three commonly used forms of minor scales are: *natural* (also called pure), *harmonic,* and *melodic* minor scales. The harmonic and melodic minor scales derive from the natural minor scale.

NATURAL MINOR SCALE

The formula for the natural minor scale is **mLN.** The scale's half step/whole step interval relationship corresponds, on a keyboard, to a *white key* scale from *A* to *A*.

Scale Formula: **mLN**

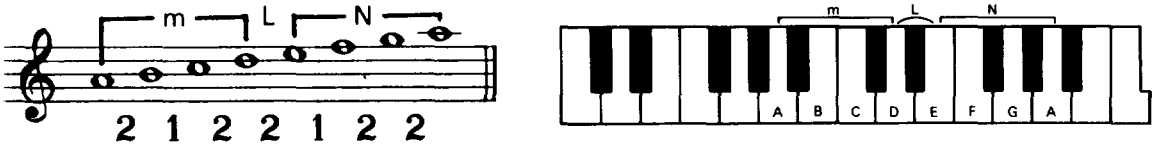

Figure 7.1: The a *Natural Minor Scale.*

Natural Minor Sharp Scales and Keys

When a natural minor scale is constructed on the fifth scale degree ascending in the *a* natural minor scale, the scale formed is an *e natural minor scale* and has one sharp: *F*♯.

Scale Formula: **mLN**

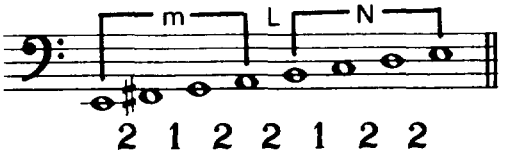

Figure 7.2: e *Natural Minor Scale.*

When a natural minor scale is constructed on the fifth scale degree ascending in the *e* natural minor scale, the scale formed is a *b natural minor scale* and has two sharps: $F\sharp$ and $C\sharp$.

Scale Formula: **mLN**

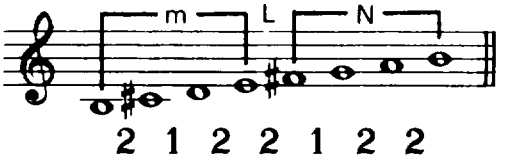

Figure 7.3: b *Natural Minor Scale.*

This pattern continues through the

$f\sharp$ *natural minor scale* with three sharps:
$F\sharp$, $C\sharp$, and $G\sharp$.

$c\sharp$ *natural minor scale* with four sharps:
$F\sharp$, $C\sharp$, $G\sharp$, and $D\sharp$.

$g\sharp$ *natural minor scale* with five sharps:
$F\sharp$, $C\sharp$, $G\sharp$, $D\sharp$, and $A\sharp$.

$d\sharp$ *natural minor scale* with six sharps:
$F\sharp$, $C\sharp$, $G\sharp$, $D\sharp$, $A\sharp$, and $E\sharp$.

$a\sharp$ *natural minor scale* with all seven pitch names sharped:
$F\sharp$, $C\sharp$, $G\sharp$, $D\sharp$, $A\sharp$, $E\sharp$, and $B\sharp$.

If the pattern is continued, double sharps will result. Therefore, $a\sharp$ natural minor (seven sharps) is the last practical sharp scale, making a total of seven natural minor scales with sharps. Although the tonics in natural minor differ from major, the order of sharps remains the same.

ORDER OF SHARP NATURAL MINOR KEYS:

e b f♯ c♯ g♯ d♯ a♯

1♯ 2♯s 3♯s 4♯s 5♯s 6♯s 7♯s

ORDER OF SHARPS:

F♯ C♯ G♯ D♯ A♯ E♯ B♯

SHARP NATURAL MINOR KEY SIGNATURES IN TREBLE AND BASS CLEFS:

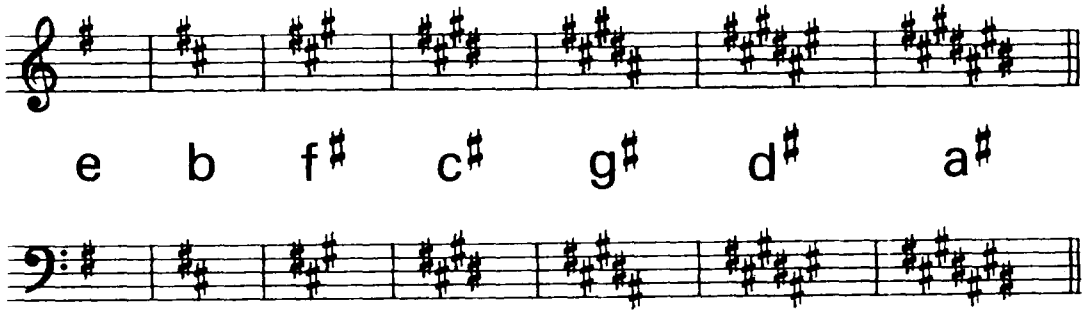

Figure 7.4: Sharp Natural Minor Key Signatures.

Natural Minor Flat Scales and Keys

When a natural minor scale is constructed on the fifth scale degree descending (fourth degree ascending) of the *a* natural minor scale, the scale formed is a *d natural minor scale* and has one flat: *B♭*.

Scale Formula: **mLN**

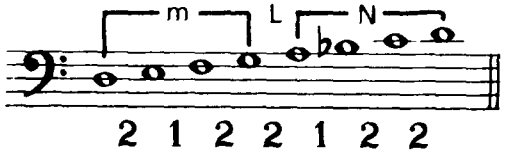

Figure 7.5: d *Natural Minor Scale.*

When a natural minor scale is constructed on the fifth degree descending (fourth degree ascending) of the *d* natural minor scale, the scale formed is a *g natural minor scale* and has two flats: *B♭* and *E♭*.

Scale Formula: **mLN**

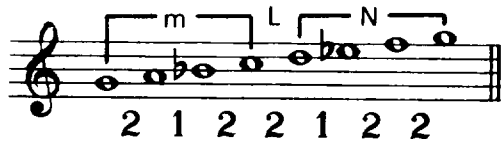

Figure 7.6: g *Natural Minor Scale.*

This pattern continues through the

c natural minor scale with three flats:
B♭, *E♭*, and *A♭*.

f natural minor scale with four flats:
B♭, *E♭*, *A♭*, and *D♭*.

b♭ natural minor scale with five flats:
B♭, *E♭*, *A♭*, *D♭*, and *G♭*.

e♭ natural minor scale with six flats:
B♭, *E♭*, *A♭*, *D♭*, *G♭*, and *C♭*.

a♭ natural minor scale with all seven pitch names flatted:
B♭, *E♭*, *A♭*, *D♭*, *G♭*, *C♭*, and *F♭*.

If the pattern is continued, double flats will result. Therefore, *a♭* natural minor (seven flats) is the last practical flat scale, making a total of seven natural minor scales with flats. Again, although the tonics in natural minor differ from major, the order of flats remains the same.

ORDER OF FLAT NATURAL MINOR KEYS:

d	g	c	f	b♭	e♭	a♭
1 b	2 bs	3 bs	4 bs	5 bs	6 bs	7 bs

ORDER OF FLATS:

B♭ E♭ A♭ D♭ G♭ C♭ F♭

FLAT NATURAL MINOR KEY SIGNATURES IN TREBLE AND BASS CLEFS:

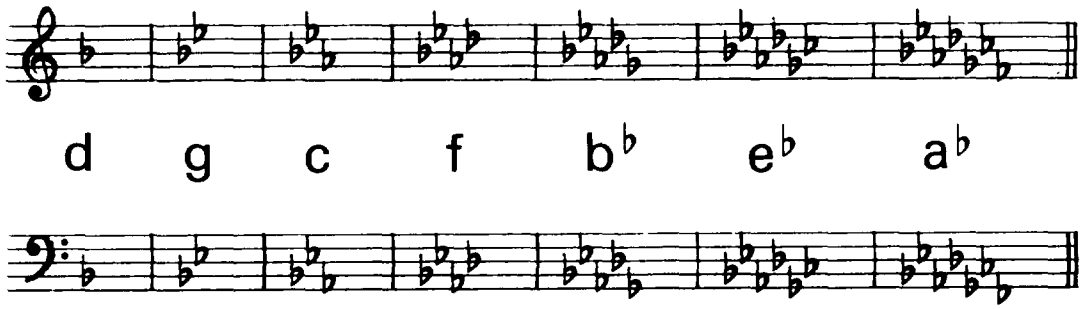

Figure 7.7: Flat Natural Minor Key Signatures.

Scale Degree Activity in Natural Minor

The natural minor scale has a lowered mediant, lowered submediant, and a subtonic when compared to the major scale constructed on the same tonic.

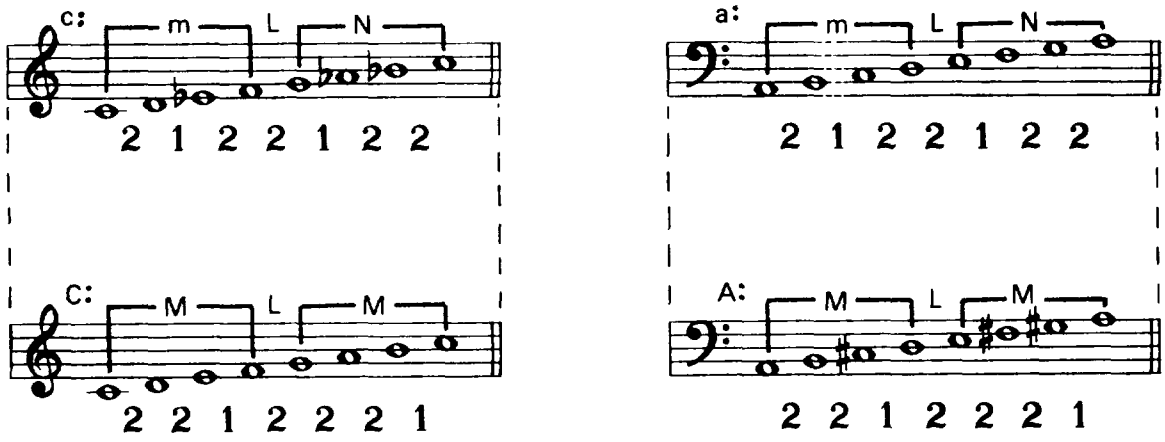

Figure 7.8: Comparison of Major and Natural Minor.

Since the scale degree relationships in natural minor are different from major, the activity of scale degrees is also different.

STABLE	ACTIVE
Tonic	Supertonic
Mediant	Subdominant
Dominant	Submediant
	Subtonic

TENDENCY

Submediant (pulls to Dominant)

Figure 7.9: Scale Degree Activity in Natural Minor.

HARMONIC MINOR SCALES AND KEYS

The formula for the harmonic minor scale is **mLH.** The scale's half step/whole step interval relationship does not correspond to any *white key* scale.

Scale Formula: **mLH**

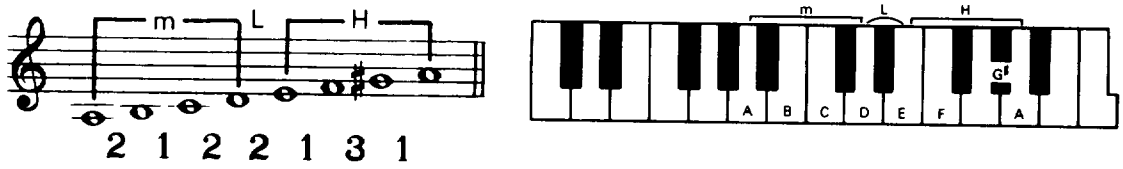

Figure 7.10: The a *Harmonic Minor Scale.*

Harmonic minor scales derive from natural minor scales. When constructed on the same tonic, the natural minor scale has a subtonic while the harmonic minor scale has a leading tone.

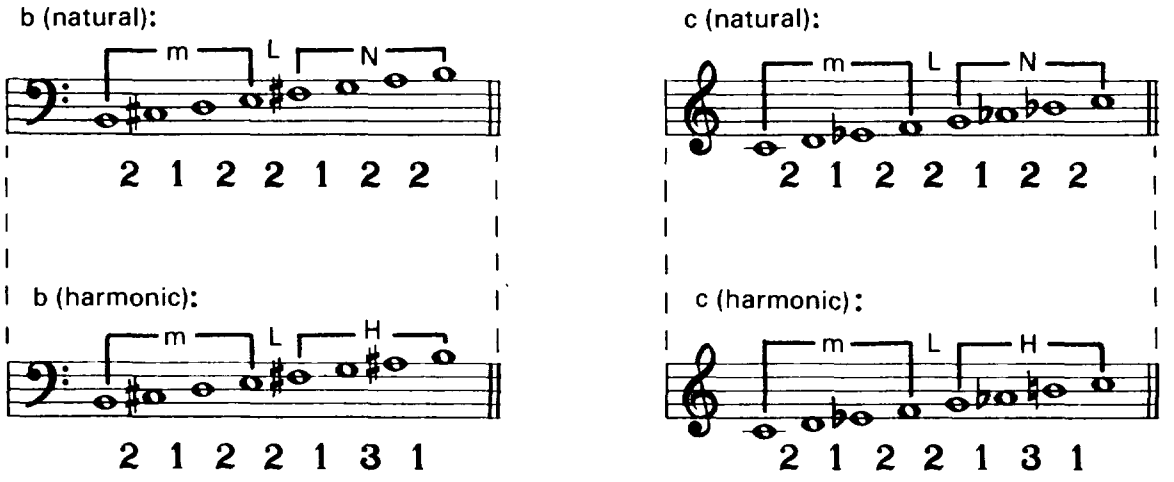

Figure 7.11: Comparison of Natural and Harmonic Minor.

Harmonic minor scales share the key signatures of natural minor scales. They are formed by a chromatic alteration of the subtonic upward to a leading tone. Chromatic signs used outside the key signature are called *accidentals.*

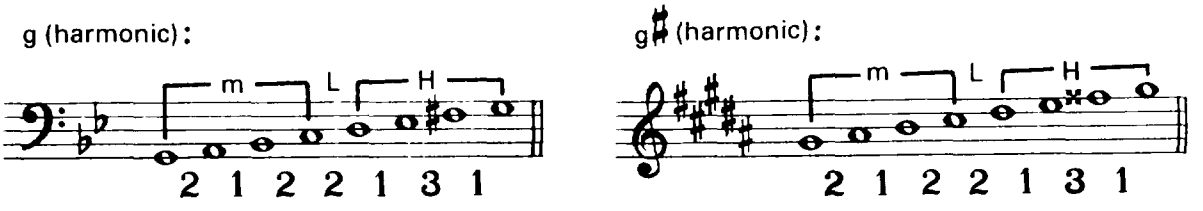

Figure 7.12: Harmonic Minor Scales with Key Signature.

Scale Degree Activity in Harmonic Minor

The harmonic minor scale evolved because of the relative lack of tendency tones in the natural minor. Using the harmonic form of the scale develops a better balance of tendency tones in minor keys.

STABLE	**ACTIVE**
Tonic	Supertonic
Mediant	Subdominant
Dominant	Submediant
	Leading Tone
	TENDENCY
	Submediant (pulls to dominant)
	Leading Tone (pulls to Tonic)

Figure 7.13: Scale Degree Activity in Harmonic Minor.

Although the harmonic form of the scale has desirable harmonic features, the three-half-step interval on two successive staff degrees (augmented second) has been found to be melodically objectionable. Therefore, a third form of the scale has been developed to avoid the effect of this interval.

MELODIC MINOR SCALES AND KEYS

The melodic minor scale has two formulas, one ascending and one descending. The formula for the *ascending* melodic minor scale is **mLM.** The formula for the *descending* melodic minor scale is **NLm,** which is the same as the natural minor scale.

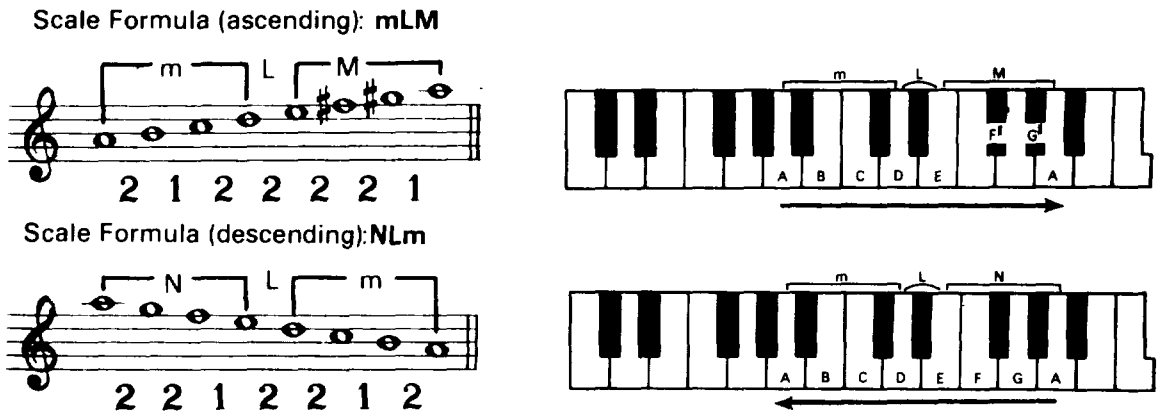

Figure 7.14: The a Melodic Minor Scale.

Melodic minor scales derive from natural minor scales. The ascending melodic minor scale has a raised submediant and leading tone (which eliminates the objectionable melodic interval) that return to a subtonic and lowered submediant when descending to achieve a more minor sound.

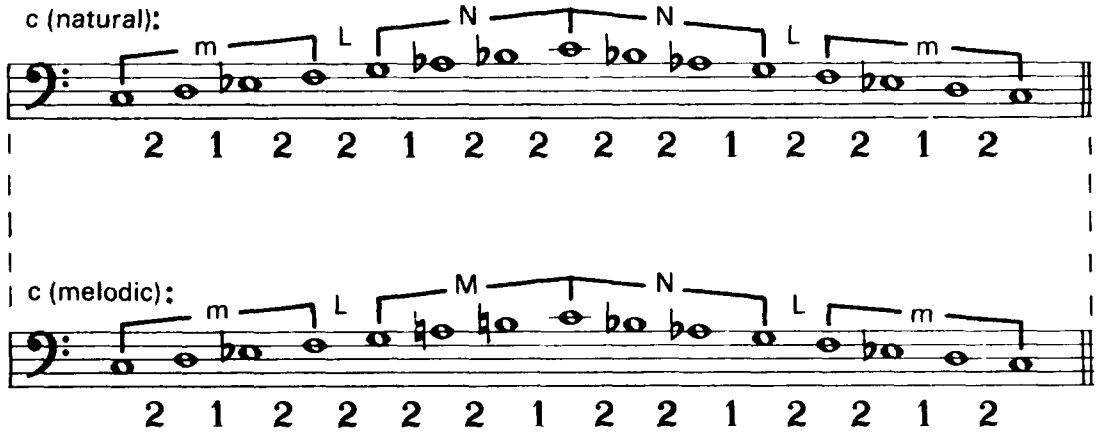

Figure 7.15: Comparison of Natural and Melodic Minor.

Melodic minor scales share the key signatures of natural minor scales. They are formed by chromatic alterations of the submediant upwards a half step and the subtonic upward to a leading tone.

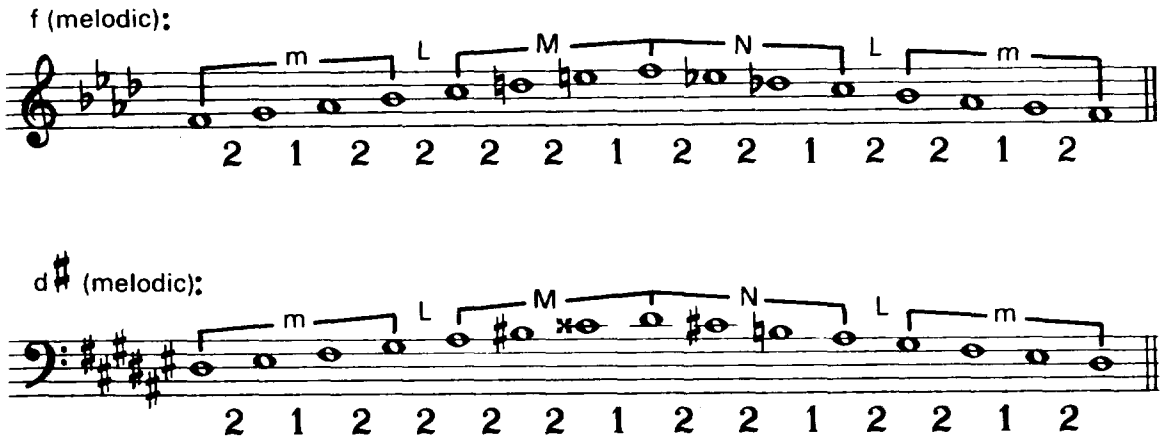

Figure 7.16: Melodic Minor Scales with Key Signatures.

Scale Degree Activity in Melodic Minor

STABLE	ACTIVE
Tonic	Supertonic
Mediant	Subdominant
Dominant	Raised Submediant (passes to Leading Tone)
	Subtonic (passes downward to lowered Submediant)
	TENDENCY
	Lowered Submediant (pulls to Dominant)
	Leading Tone (pulls to Tonic)

Figure 7.17: Scale Degree Activity in Melodic Minor.

CIRCLE OF MINOR KEYS

Since the natural, harmonic, and melodic minor scales share the same group of key signatures, it is possible to construct one circle of fifths for all three forms of the scale.

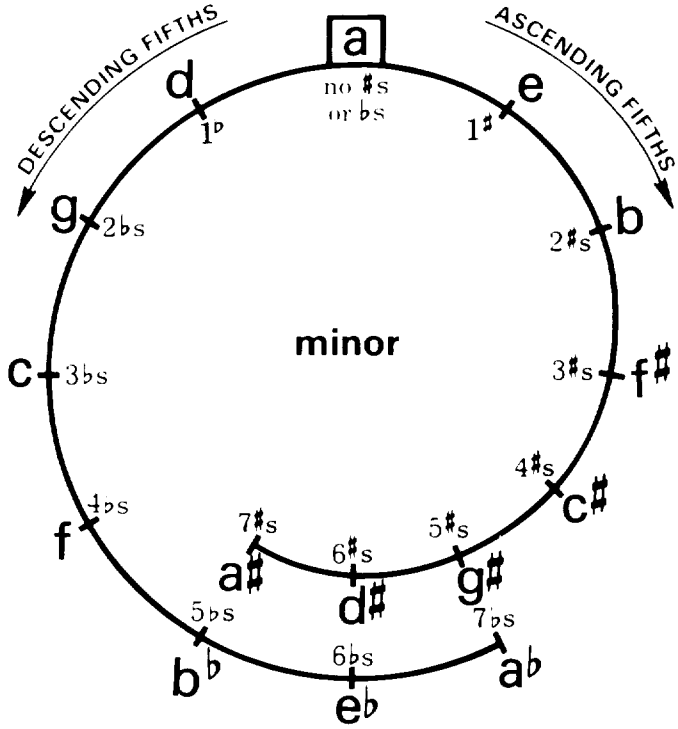

Figure 7.18: Circle of Minor Keys.

The enharmonic minor keys are

$g\sharp$ minor (5 $\sharp$s) and $a\flat$ minor (7$\flat$s)

$d\sharp$ minor (6 $\sharp$s) and $e\flat$ minor (6$\flat$s)

$a\sharp$ minor (7 $\sharp$s) and $b\flat$ minor (5$\flat$s).

It is possible to start on *a* minor and travel around the circle of fifths in either direction and return to *a* minor by using one of the enharmonic keys to continue around the circle.

RELATIVE AND PARALLEL KEYS

Relative Keys

Keys having the same key signature are called *relative.* Relative keys will not have the same tonic. The keys of *a* minor and *C* major have no sharps or flats. Therefore, the relative major of *a* minor is *C* major, and the relative minor of *C* major is *a* minor.

To find the relative minor of any major key, descend three half steps on three successive staff degrees, or determine the sixth degree (submediant) of the major scale.

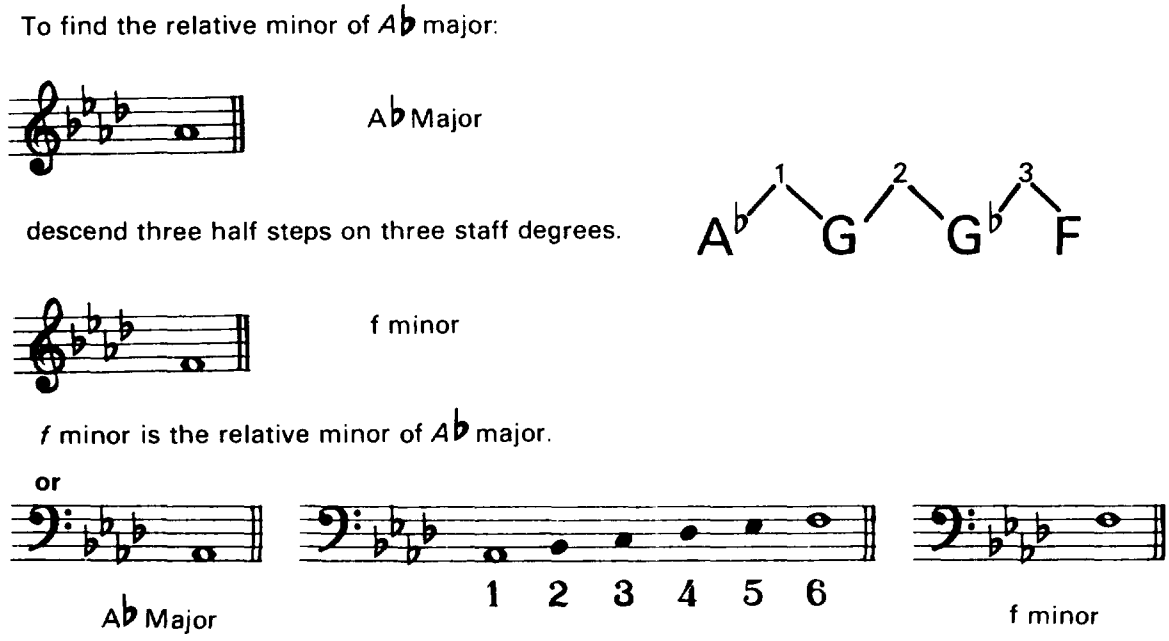

Figure 7.19: Relative Minor From Major.

To find the relative major from any minor key, ascend three half steps on three successive staff degrees, or determine the third degree (mediant) of the minor scale.

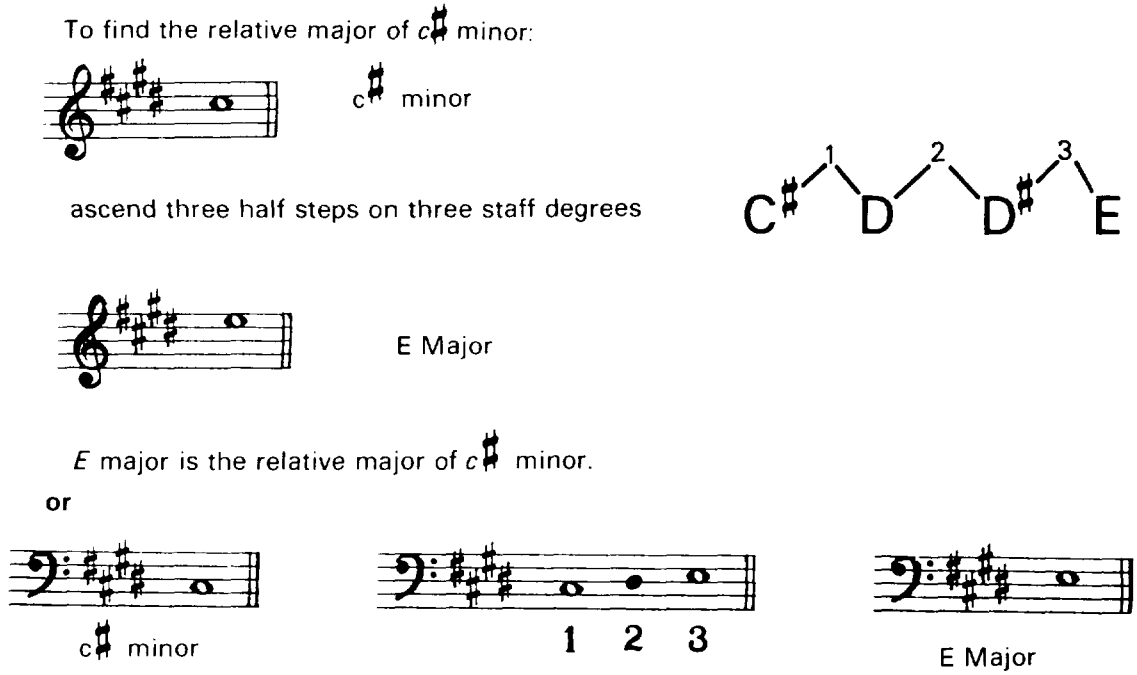

Figure 7.20: Relative Major From Minor.

PARALLEL KEYS

Keys having the same tonic are *parallel.* Parallel keys do not have the same key signature. The keys of *C* major and *c* minor have the same tonic: *C.* Therefore, the parallel major of *c* minor is *C* major, and the parallel minor (or tonic minor) of *C* major is *c* minor. Note that their key signatures differ (no ♯s or ♭s and 3 ♭s).

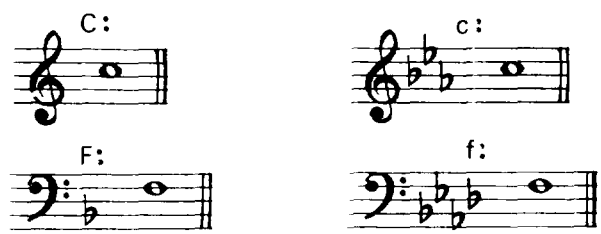

Figure 7.21: Parallel Keys.