

## 12 Sounds, 21 Symbols and 15 Keys

One octave has **12 sounds** and **21 letter symbols**: **7 natural** (♮), **7 flat** (b) and **7 sharp** (#). With these 21 letter symbols we can “spell” **15 major scales** in **15 major keys**. **Figure 1.**

Here’s a simple question: aren’t there really 21 major scales? The answer is yes, but to “spell” them we need 14 more letter symbols: **7 double flat** and **7 double sharp**.

For example, to spell the **Fb major scale**, we need B double flat (Bbb): Fb Gb Ab Bbb Cb Db Eb, and to spell the **G# major scale**, we need F double sharp (F##): G# A# B# C# D# E# F##.

Remember, the reason why there are only 15 “traditional” major scales is because we can only

spell 15 major scales with 21 letter symbols! To spell any other major scale not listed below, we would need to use double flat or double sharp letter symbols. See the “**Bakers Dozen**” lesson.

Notice that each major scale has a **different letter** spelling, but they all have the **same tone number** spelling: 1 2 3 4 5 6 7. The different letter spellings are the result of applying the **major scale interval pattern** (2 frets, 2 frets, 1 fret, 2 frets, 2 frets, 2 frets, 1 fret), to each of the 15 “traditional” **major scale key letters**.

Til next time, have some fun playing 15 major scales with 12 sounds, and spelling 15 major key signatures with 21 symbols...I’ll be listening.

**tones** (scale degrees) are the numbers of the scale.

Figure 1.

key	signature	1	2	3	4	5	6	7
C	7 ♮ zero # , zero b	C	D	E	F	G	A	B
G	1 # F#	G	A	B	C	D	E	F#
F	1 b Bb	F	G	A	Bb	C	D	E
D	2 # F# C#	D	E	F#	G	A	B	C#
Bb	2 b Bb Eb	Bb	C	D	Eb	F	G	A
A	3 # F# C# G#	A	B	C#	D	E	F#	G#
Eb	3 b Bb Eb Ab	Eb	F	G	Ab	Bb	C	D
E	4 # F# C# G# D#	E	F#	G#	A	B	C#	D#
Ab	4 b Bb Eb Ab Db	Ab	Bb	C	Db	Eb	F	G
B	5 # F# C# G# D# A#	B	C#	D#	E	F#	G#	A#
Db	5 b Bb Eb Ab Db Gb	Db	Eb	F	Gb	Ab	Bb	C
F#	6 # F# C# G# D# A# E#	F#	G#	A#	B	C#	D#	E#
Gb	6 b Bb Eb Ab Db Gb Cb	Gb	Ab	Bb	Cb	Db	Eb	F
C#	7 # F# C# G# D# A# E# B#	C#	D#	E#	F#	G#	A#	B#
Cb	7 b Bb Eb Ab Db Gb Cb Fb	Cb	Db	Eb	Fb	Gb	Ab	Bb

enharmonic keys

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