

# BB'S HOPEFULLY HELPFUL HARMONY HINTS v.2.0

## for Irish Traditional Musicians

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### Introduction

The purpose of the following discussion is to help you, as a backup player or composer, find appropriate chords for accompanying Irish tunes or songs. The determination of what constitutes an appropriate chord is based on the most likely harmonizations of the accented melody note in the particular key. "Harmonization" is a five-syllable word meaning "putting a chord to a note".

I've tried to make it as un-technical as possible, but the fullest understanding of what's going on requires a certain familiarity on your part with terms like "relative minors" and "scales" (being familiar with Roman numerals helps too!) If you're not comfortable in this area, you can skip right to the chord tables that start on page 16.

What follows should not be viewed as a rigid set of rules, but rather as a guide to what will usually sound best. I have tried to list the chords by degree of suitability, i.e. the first one listed is the most likely one to produce the harmonization suitable to the tune or song.

This cannot however be anything more than a suggestion; your own musical ear (and those of the musicians around you, as you'll soon find out!) will make the ultimate decision.

### Table of Contents

<i>Heading</i>	<i>Sub-heading</i>	<i>Page</i>
<a href="#"><u>INTRODUCTION</u></a>		<a href="#"><u>1</u></a>
<a href="#"><u>DEFINITIONS</u></a>	<a href="#"><u>pitch(note/ton), step (interval), scale, major/minor, modes, triad, key, accented notes, scale degrees</u></a>	<a href="#"><u>2</u></a>
<a href="#"><u>TRANSPOSING</u></a>		<a href="#"><u>6</u></a>
<a href="#"><u>BUILDING CHORDS</u></a>	<a href="#"><u>triads, seventh chords, 'altered' chords</u></a>	<a href="#"><u>8</u></a>
<a href="#"><u>HARMONIZATION: THE BASICS</u></a>	<a href="#"><u>root/third/fifth/seventh, key signature, accented notes, arpeggios</u></a>	<a href="#"><u>11</u></a>
<a href="#"><u>HARMONIZATION: APPLICATION</u></a>	<a href="#"><u>chord tables</u></a>	<a href="#"><u>18</u></a>
<a href="#"><u>MORE ABOUT SCALES / MODES</u></a>	<a href="#"><u>chromatic scales, diatonic scales, major scales, minor scales, modal scales, mixolydian mode, dorian mode, some helpful pictures</u></a>	<a href="#"><u>21</u></a>

# BB'S HOPEFULLY HELPFUL HARMONY HINTS v.2.0

## for Irish Traditional Musicians

### DEFINITIONS

#### 1. Pitch / note / tone

The name for a distinct musical sound of a given vibration. "Pitch" is popularly used interchangeably with "note" although technically they are not the same. The term "tone" is used for the same purpose and will be the one I use in this document.

#### 2. Step or interval

The distance between two adjoining tones; based on acoustic concepts too technical to deal with here. The important thing to know is that our branch of so-called Western music deals in "whole steps" and "half steps". (I should note here that for equally technical reasons, the interval from B to C and from E to F is always a half-step, regardless of what the alphabet is telling you!)

#### 3. Scale

The tones starting from the "tonic" and working up to the "octave". There are two kinds of scale (bear with me here): the diatonic scale (= the "doh, re, mi" we all know and love), which contains seven notes (e.g. C, D, E, F, G, A, B) and the chromatic scale, which contains twelve notes (e.g. C, C#, D, D#, E, F, F#, G, G#, A, A#, B.) In both cases there's an octave C (the final "doh", usually indicated as C') at the end.

(The purpose of "accidentals" [sharps and flats] is to indicate half-step alterations in tones - a sharp moves a tone upwards a half-step, while a flat lowers it.)

Think of it this way:

- If you sit at the piano and play all the white keys starting at middle C and ending on the next C, you're playing a diatonic scale.
- If you play all the keys - white and black - between the first and second C, you're playing a chromatic scale.

If you play a fiddle, two- or three-row accordion, concertina, keyed flute, or fretted instrument, you're playing a chromatic instrument because you can play all the notes of the chromatic scale (corresponding to the white + black keys on the piano).

However, if you play the wooden flute, whistle or harmonica, you're playing a diatonic instrument, since most of the "half-steps" necessary for the chromatic scale are not readily available to you. (When we talk about "D whistles" we mean whistles

# BB'S HOPEFULLY HELPFUL HARMONY HINTS v.2.0

## for Irish Traditional Musicians

designed to play the D scale. We don't talk about "G fiddles" because fiddles, as chromatic instruments, can play any scale.)

Since the idea of the seven-note-plus-octave diatonic scale is more useful to this discussion, any reference to "scale" henceforth will automatically refer to a "diatonic" scale.

It's important to note that each member of a scale has a corresponding number called a "scale degree". This enables us to discuss musical relationships without worrying about the pitches involved. Scale degrees are usually indicated by Roman numerals, which also serve as shorthand for the chords built on those pitches (but we're getting a little ahead of ourselves here).

### **4. Major, minor**

Scales can be "major" or "minor" depending on the arrangement of the whole steps and half steps between their pitches. This is pretty important, so [a full explanation](#) (with graphics!) will follow later.

Note in the meantime that every major scale has a corresponding ("relative") minor scale that starts on the sixth scale degree. Thus A minor ( $A_{\min}$  or Am) is the relative minor of  $C_{\text{maj}}$ . Not surprisingly, every minor scale has a "relative major" that starts on the third scale degree (thus C in the key of A minor). They are called "relative" because each pair has the same key signature.

This is an important relationship in Irish music and helps to make the two parts of certain tunes sound the way they do. For example:

"Sailor's Bonnet" (first part in D major, second part in its "relative" B minor),

"Curragh Races" (A minor - C major),

"Leitrim Fancy" (E minor - G major).

### **5. Modes**

The best way to describe a "mode" is to think of it as a slightly altered scale, i.e. one in which the pitches are related in ways that make the scale not quite major or not quite minor.

A discussion of what [modal scales](#) mean to trad music is on page 19.

# BB'S HOPEFULLY HELPFUL HARMONY HINTS v.2.0

## for Irish Traditional Musicians

### 6. Triad

Not a Chinese gang but a three-note chord built on the notes of the scale. Every note has its corresponding triad. Very important, so more on this later.

### 7. Key

Another way of saying what scale we'll be using in a particular tune. If you know that a tune is in the key of D, for example, you can expect all the C's and F's to be sharp (if you're reading the music, the tune's key signature will remind you). "Tonality" is a fancy way of saying "key".

To expedite the learning process, I present here the important keys in traditional music along with their corresponding **key signatures** (= the sharps and flats right after the clef at the beginning of the tune) and relative minors:

<b>C major</b>	<b>no sharps or flats</b>	<b>A minor</b>
<b>G major</b>	<b>one sharp</b>	<b>E minor</b>
<b>D major</b>	<b>two sharps</b>	<b>B minor</b>
<b>A major</b>	<b>three sharps</b>	<b>F# minor</b>
<b>F major</b>	<b>one flat</b>	<b>D minor</b>
<b>Bb major</b>	<b>two flats</b>	<b>G minor</b>

*For a backup player, once you know the key, you know what chords you can expect to play.*

### 8. Accented notes

A synonym for "accented" is "stressed". The concept is important and will be discussed in detail on page 12.

### 9. Scale degrees

Disclaimer: I said at the beginning that I would try to make this discussion as un-technical as possible, but unhappily the concepts, though important and ultimately helpful, are a little complex. If you start the following but find yourself getting glazed eyes, skip it and go on to the next section!

# BB'S HOPEFULLY HELPFUL HARMONY HINTS v.2.0

## for Irish Traditional Musicians

As mentioned earlier, musical convention requires the use of Roman numerals to describe the relationship between notes (and the triads built on them) in any scale. Not surprisingly, the "tonic" (= first note of the scale) is always I.

Example: the classic rock-and-roll chord progression is I - VI<sub>min</sub> - IV - V, which means in musical shorthand that the chords are built on the first ("tonic") scale degree, on the sixth, on the fourth, and on the fifth. In the key of D, these chords would be D, B<sub>min</sub>, G, and A.

The handy aspect of the Roman numeral convention is the fact that the chord relationships (a.k.a "progressions") remain the same regardless of key. The rock-and-roll "1645" progression (much cooler than "I - VI<sub>min</sub> - IV - V") will produce the same sound regardless of what the I chord is.

*Remember: the Roman numerals are giving you information about the chord relationships, not the actual chords themselves.*

Another example: if you tell somebody that the basic harmony for an Irish traditional tune in a minor key consists of a I - VII relationship, that's shorthand for saying "for a tune in E minor, your secondary chord is D; for a tune in B minor, you'll be hearing a lot of A; for a tune in Dm, look for C", etc. etc.

Sounds handy, right? In fact it is, and even better it's very simple to learn how to match notes and numbers to start the whole procedure going.

There are names that go along with the Roman numerals. I list these names here just in case you come across them somewhere:

scale degree I..... tonic or root  
scale degree IV..... subdominant (ex. D E F# G A B C# D')  
scale degree V..... dominant (ex. D E F# G A B C# D')  
scale degree VII..... leading tone (ex. D E F# G A B C# D')

The scale starting on degree VI of a major scale is the "relative minor" of that scale. (Ex. D E F# G A B C# D')

The scale starting on degree III of a minor scale is the "relative major" of that scale. (Ex. A B C D E F G A')

"Relative" major/minor scales share the same key signature (per the table on page 4 above).

# BB'S HOPEFULLY HELPFUL HARMONY HINTS v.2.0

## for Irish Traditional Musicians

### TRANSPOSING

It happens occasionally that a musician has to change the key of a piece (to enable easier playing on a particular instrument, for example). This process is referred to as *transposing*. This process usually occurs more in the context of songs than tunes, since different singing voices have different comfort levels that may require pitches to be altered for a singer's range. Some transposing may also be necessary to accommodate tunes to a particular instrument with a limited range of notes (e.g. tin whistle).

There are some 19th Century tune collections that feature way too many entries in non-traditional keys like B<sup>b</sup> and E<sup>b</sup>, which have to be transposed into more "user-friendly" keys before they can be played. I attribute this phenomenon to the influence of classical musicians with no real experience of traditional playing, who were just as happy in the realm of the flat keys as in the D and G that we all know and love.

I should point out too that most music software programs from **easyABC** on up have the capability of handling transposition quickly and easily. The guidance I provide in this section is directed primarily at those situations where a "quick fix" is needed, e.g. your box player - for reasons unknown - is playing everything a fifth out (hence "Miss McCloud's" in C, "Mountain Road" in G). I speak from sad experience (rest in peace, Johnny).

Based on the theory (which will be elaborated below – your patience appreciated!) that the pitches in all major scales bear the same distance relationship to one another, transposing from one key to another is actually very simple.

Here's the way I do it: I write the numbers 1 to 7 in a column down the page, put the notes of the original key in the second column, then put the notes of the new key in the third column. (Remember to make sure that you insert all the flats or sharps that the keys require, or else you'll wind up with a really weird sound!)

You don't really need the first column – as long as you remember to match the tonic notes of the old and new keys, the rest of the notes will more or less take care of themselves.

# BB'S HOPEFULLY HELPFUL HARMONY HINTS v.2.0

## for Irish Traditional Musicians

In the following examples, we'll suppose that we have:

Example 1 – a piece in the key of D major that we want to transpose into the key of F major.

Example 2 – a piece in the key of E minor that we want to transpose into the key of A minor.

### Example 1: Transposing from D<sub>maj</sub> to F<sub>maj</sub>

scale degree	key of D	key of F
1	D	F
2	E	G
3	F#	A
4	G	B <sup>b</sup>
5	A	C
6	B	D
7	C#	E

### Example 2: Transposing from Em to Am

scale degree	key of Em	key of Am
1	E	A
2	F#	B
3	G	C
4	A	D
5	B	E
6	C	F
7	D	G

This system will work for chords too:

In example 1, an F# minor chord in the key of D will transpose to an A minor chord in the key of F.

In example 2, a B minor chord in E minor will transpose to an E minor chord in A minor. (It's a lot simpler than it sounds!)

# BB'S HOPEFULLY HELPFUL HARMONY HINTS v.2.0

## for Irish Traditional Musicians

*Always remember: when transposing chords, majors transpose to majors and minors transpose to minors*



# BB'S HOPEFULLY HELPFUL HARMONY HINTS v.2.0

## for Irish Traditional Musicians

### BUILDING CHORDS

This is the time to talk more about "triads", which are the building blocks of chords in Western music for reasons that go back thousands of years to the ancient Greeks (who came up with a lot of concepts still valid today).

#### 1. Triads

A "triad" is a collection of notes that consists of a root, a third, and a fifth. In Roman numerals, a triad = I - III - V.

Ex. 1: D major triad = I - III - V = D E F# G A B C# D'

Ex. 2: G major triad = I - III - V = G A B C D E F# G'

The relationship between the I and the III can change, depending on whether the scale involved is major or minor, so we can have minor triads too:

Ex. 3: D minor triad = I - III - V = D E F G A B<sup>b</sup> C D'

Ex. 4: G minor triad = I - III - V = G A B<sup>b</sup> C D E F G'

(Note that you can add the octave pitch to any chord without affecting it - for chord purposes, it's still considered a "I" even though it's an octave higher.)

#### INVERSION

It is often the case that the root note of a chord (i.e. the first scale degree, I) is in the lowest position. However, this is not always so. Chords where the third or fifth scale degrees are in the lowest position (e.g. in the key of D, the notes F# - D - A or A - D - F#) are said to be "inverted".

If III is the lowest tone, the chord is in "first inversion".

If V is the lowest, it's in "second inversion".

But either way it's still called by its root name (in this case, a D chord).

#### 2. Seventh chords

Seventh chords are usually attached to the V note in a particular key. For example, in the key of D, the most common 'seventh' chord will be A<sub>7</sub>. Seventh chords (abbreviated V<sub>7</sub> or V<sup>b</sup><sub>7</sub>) have four scale members instead of three: the root, third, fifth, and the seventh.

Don't confuse a "seventh" chord – which means a V chord with an added seventh scale tone – with a VII chord, which is a triad built on the seventh scale degree (and which fortunately doesn't serve too much of a purpose in traditional music, so forget you ever heard about it).

# BB'S HOPEFULLY HELPFUL HARMONY HINTS v.2.0

## for Irish Traditional Musicians

You don't meet "seventh chords" too often in dance tunes either, but there are certain places where the melody seems to call for them and they can sound pleasant when used sparingly.

There are different flavors of seventh chords, only one of which has any real relevance to Irish dance tunes. It is however good to know about the others in case you come across them. The three main ones are major seventh, minor seventh and dominant seventh (otherwise often referred to simply as the 'seventh').

### MAJOR SEVENTH

Usually written  $X_{\text{maj}7}$

Structure: I - III - V - VII

Ex. 5:  $C_{\text{maj}7} = C E G B$

Ex. 6:  $A_{\text{maj}7} = A C\# E G\#$

### MINOR SEVENTH

Usually written as  $X_{\text{m}7}$ , rarely  $X_{\text{min}7}$

Structure I - III<sup>b</sup> - V - VII<sup>b</sup>

Ex. 7  $C_{\text{m}7} = C - E^b - G - B^b$

Ex. 8  $A_{\text{m}7} = A - C - E - G$

### DOMINANT SEVENTH (OR SIMPLY "SEVENTH")

The dominant seventh chord is most commonly applied to the V note of the key you are working with (where V is the fifth step of the scale from the tonic) and is normally written V7. For example, in the key of D, the relevant seventh chord will be A7; in the key of G, the relevant seventh chord will be D7 and so on.

This is the "workhorse" seventh chord that a traditional musician is most likely to encounter (but in any event is still a rarity).

Structure is I - III - V - VII<sup>b</sup>

Ex. 9: D7 chord = I - III - V - VII<sup>b</sup> = D F# A C

Ex. 10: A7 chord = I - III - V - VII<sup>b</sup> = A C# E G

V and V7 chords normally serve as major-key "cadence" chords, i.e. the chord at the end of a tune just before it returns to the tonic (A to D, D to G, etc.)

# BB'S HOPEFULLY HELPFUL HARMONY HINTS v.2.0

## for Irish Traditional Musicians

In traditional minor key tunes, the cadence is usually VII -> I (D to Em, G to Am). V -> I is encountered very infrequently (one example is the lovely jig "Young Tom Ennis" in O'Neill's 1850, where the cadence is Em to Am).

### **3. "Altered" chords ("diminished" or "augmented" chords)**

These are so rarely encountered in dance tunes that I won't spend any time on them here.

On to the next exciting topic - the Basics of Harmonization!

# BB'S HOPEFULLY HELPFUL HARMONY HINTS v.2.0

## for Irish Traditional Musicians

### HARMONIZATION: THE BASICS

#### ROOT, THIRD, FIFTH AND SEVENTH

Every tone in a scale can serve four functions in a chord:

- as the root :        **D** E F# G A B C# -----> major triad: **D** F# A
- as the third:        B C# **D** E F# G A -----> minor triad: B **D** F#
- as the fifth:        G A B C **D** E F# -----> major triad: G B **D**
- as the seventh:    E<sup>b</sup> F G Ab Bb C **D** -----> "7th" chord: E<sup>b</sup> G B<sup>b</sup> **D**

This means that in theory at least you can harmonize (= add a chord to) a melody note D in any of four ways.

But in Irish dance music, the harmony is not based on individual notes, or your backup players would go nuts. Imagine playing six chords to the six notes in the first measure of "Boys of Blue Hill"? Or eight chords to the eight notes in any measure of "Silver Spear"?

Instead dance music harmony is based on patterns and accents (as well of course as the note – chord relationship explained above). Working with these parameters, we can be reasonably certain that our attempts at harmonization will be, if not 100% correct, at least headed in the right direction.

#### KEY SIGNATURE

The first step in analyzing a tune with the goal of harmonizing it correctly is to make sure we know what key the tune is in, which we can easily accomplish by checking its key signature. This knowledge will help us establish a priority of probabilities as to whether a particular note is likely to be a tonic/root, a third, a fifth, or a seventh of a particular chord.

For example, let's say we're analyzing a tune in the key of D. This means that any accented D note we find (see the discussion of Accented Notes below) has - let's say - a 60% chance of being the root of a D chord, a 20% chance of being V of a G chord, a 15% chance of being III of a Bm chord, and a 5% chance of being VII of an E7 chord. (These are all bogus percentages - I'm using them just to give you an idea what I'm talking about!)

There's also zero chance - given the key signature and the fact that we're working in a traditional context - that a B<sup>b</sup> chord, a G minor chord, a B diminished chord, or any of the other chords that contain D will be correct. In this respect our knowing the key

# BB'S HOPEFULLY HELPFUL HARMONY HINTS v.2.0

## for Irish Traditional Musicians

signature not only helps to establish the probability of what the correct chord will be, it also expedites the process of elimination so that we get rid of the "long shots" fairly quickly.

### ACCENTED NOTES

As you already know, Irish dance music is arranged in beats, which in turn are created by the proper accenting by the musicians of certain notes in the tune.

A reel, for example, is in  $4/4$  (also known as C, for "common") time, which means that there are four beats (top figure) of quarter notes (bottom figure) in each measure or bar of the tune.

In reality, reels consist primarily of eighth notes, so the time signature of  $4/8$  would be closer to the truth. For a danceable beat to be established, the musician must stress the accent on notes 1, 3, 5, and 7. In reels, the accent is fairly even.

The time signature for a jig is  $6/8$  (= six beats of eighth notes), but here again it's where the accent goes that makes the difference, and in jigs the accent is quite clearly on beats 1 and 4. For slip jigs ( $9/8$ ), there are three accents per measure, on beats 1, 4, and 7. Slides are  $12/8$  and have four accents per measure, on beats 1, 4, 7, and 10.

In Chief O'Neill's day, most hornpipes were notated in  $2/4$  time, but today these tunes are mostly written in  $4/4$ . As with reels, the accent goes on beats 1, 3, 5, and 7, but for dancers, hornpipes require special emphasis on beats 1 and 5.

Polkas notated in  $2/4$  have two accents per measure; those notated in  $4/4$  have four accents. Shown opposite is another time signature for "cut time" which for all practical purposes functions the same as  $4/4$ .



The relationship of all this accent information to the harmonic aspect of Irish music is as follows: when the time comes to decide what notes in a tune you want to consider adding chords to, you're going to focus on the accented notes only. In fact, you're not going to worry about all of them either, for obvious reasons: even four chord changes per measure in a reel or a hornpipe would be too much. The table below indicates the positions of the accented notes for the common types of tune.

# BB'S HOPEFULLY HELPFUL HARMONY HINTS v.2.0

## for Irish Traditional Musicians

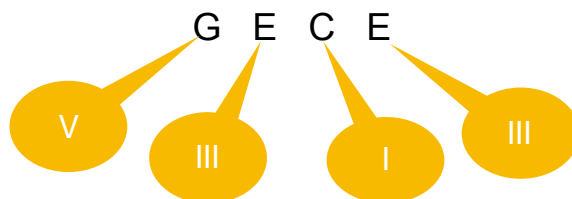
Type of tune	Time signature	Accented notes
Reel	4/4	1, 3
Jig	6/8	1, 4
Slip jig	9/8	1, 4, 7
Slide	12/8	1, 7
Polka	2/4	1, 3

### ARPEGGIOS

An arpeggio (from the Italian word for "harp") is basically a chord whose tones are played consecutively instead of concurrently. If I play piano or accordion or concertina or guitar, I have the option of playing all the tones in a chord at the same time, or I can play the tones as separate notes. Players of other instruments don't have the first option (double stops on fiddles or banjos notwithstanding), but certainly do have the second option of playing arpeggios.

The melodies in Irish traditional music are heavily based on arpeggios or "broken" chords, so that examination of the melody structure – the notes that follow the accented notes discussed above – will lead us further in the direction of deciding the correct harmonization.

For this procedure to be successful, it presumes that the musician doing the analysis is familiar with the triad structures outlined above, so that when he sees a series of eighth notes consisting of, say, GECE he will recognize it as being a broken (arpeggiated) C major chord where the notes CEGC are reordered as shown below.



This I find is a handy way of figuring out which notes correspond to which scale steps in any key.

# BB'S HOPEFULLY HELPFUL HARMONY HINTS v.2.0

## for Irish Traditional Musicians

If you really get ambitious, you can throw in the Roman numerals I mentioned before and get your chords too. I think this is very useful for us backup players who specialize in chord relationships!

Example, using the D major scale (two sharps – "Silver Spear", "Lark in the Morning")

1	note D	I	D chord
2	note E	II	Em chord (explanation below)
3	note F#	III	F#m chord (ditto)
4	note G	IV	G chord
5	note A	V	A chord
6	note B	VI	Bm chord (ditto)
7	note C#	VII	don't worry about this one!

Example using the A minor scale (relative to C major, no sharps or flats):

1	note A	I	Am chord
2	note B	II	don't worry about this one!
3	note C	III	C major chord
4	note D	IV	Dm chord
5	note E	V	Em chord
6	note F	VI	F major chord
7	note G	VII	G major chord

### Graham's rule of thumb:

To work out which chords are major and which are minor, remember:

For major keys, the chords linked to notes I, IV and V are major, otherwise they are minor.  
For minor keys, the chords linked to notes I, IV and V are minor, otherwise they are major.

This rule of thumb is summarised in the table below.

# BB'S HOPEFULLY HELPFUL HARMONY HINTS v.2.0

## for Irish Traditional Musicians

Scale Degree	Major Key	Minor Key
I	maj	min
II	min	
III	min	maj
IV	maj	min
V	maj	min
VI	min	maj
VII		maj

It's important to understand these relationships because the little "m" symbols (corresponding to 'minor' chords) that we're so familiar with in our chord charts don't appear automatically when we build our harmony chart – we have to know when to be looking for them.

Now that you have all this good theory, let's move on to the tables I've made up that will I hope assist you in finding the appropriate chord to harmonize any given note.

I realize that the choice of chords in Irish traditional or any music is in some respects a matter of taste. However, since my tastes in backup tend to be conservative ones, I have listed only the chords I consider to be appropriate to the task: you won't find any 7th chords, augmented or diminished chords, etc.

These more exotic chords are all fine and wonderful harmonies in the context of Debussy or George Gershwin or Thelonious Monk, but I personally don't think they have a place in the harmonic accompaniment of Irish traditional music, and on that basis you won't find any listed here.

A reminder: the following harmonization suggestions apply to accented notes (i.e. the notes where the beats fall).



# BB'S HOPEFULLY HELPFUL HARMONY HINTS v.2.0

## for Irish Traditional Musicians

### HARMONIZATION: APPLICATION

Okay – time to put all this (maybe yucky) theory to work. I *think* (hope) I've made it easy for you in the following chord tables.

*Remember that the "melody note" referred to is always an accented note!*

### Chord tables for the common keys

#### 1. Key sig: TWO SHARPS

melody note	D maj possible chords	B minor possible chords
D	D, Bm, G	Bm, D, G
E	A, Em	A, Em
F#	D, Bm, F#m	Bm, D, F#m
G	G, Em	G, Em
A	D, A, F#m	F#m, A, D
B	G, Bm, Em	Bm, Em, G
C#	A, F#m	F#m, A



#### 2. Key sig: ONE SHARP

melody note	G maj possible chords	E minor possible chords
G	G, C, Em	Em, G, C
A	D, Am	D, Am
B	G, Em, Bm	Em, G, Bm
C	C, Am	Am, C
D	G, D, Bm	D, G, Bm
E	C, Em	Em, C
F#	D, Bm	Bm, D

# BB'S HOPEFULLY HELPFUL HARMONY HINTS v.2.0

## for Irish Traditional Musicians



### 3. Key sig: THREE SHARPS

melody note	A major possible chords	F# minor possible chords
A	A, D, F#m	F#m, A, D
B	E, Bm	Bm, E
C#	A, F#m, C#m	F#m, A, C#m
D	D, Bm	Bm, D
E	A, E, C#m	E, A, C#m
F#	D, F#m, Bm	F#m, Bm, D
G#	E, C#m	C#m, E



### 4. Key sig: NO SHARPS OR FLATS

melody note	C major possible chords	A minor possible chords
C	C, F, Am	Am, C, F
D	G, Dm	Dm, G
E	C, Am, Em	Am, C, Em
F	F, Dm	Dm, F
G	C, G, Em	Em, C, G
A	F, Am, Dm	Am, F, Dm
B	G, Em	G, Em



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### 5. Key sig: ONE FLAT

melody note	F major possible chords	D minor possible chords
F	F, B <sup>b</sup> , Dm	Dm, F, B <sup>b</sup>
G	C, Gm	Gm, C
A	F, Dm, Am	Dm, F, Am
B <sup>b</sup>	B <sup>b</sup> , Gm	Gm, B <sup>b</sup>
C	F, C, Am	C, F, Am
D	B <sup>b</sup> , Dm, Gm	Dm, Gm, B <sup>b</sup>
E	C, Am	Am, C



### 6. GENERAL FORMULA

scale degree	any major = I	relative minor = VI	minor = I
1	I, IV, VI	VI, I, IV	I, IV, VI
2	V, II	II, V	VII, V
3	I, VI, III	VI, I, III	I, III, VI
4	IV, II	II, IV	VII, IV
5	I, V, III	V, I, III	I, V, III
6	IV, VI, II	VI, II, IV	IV, VI
7	V, III	III, V	III, V, VII

The chords are all numbered based on their relationship to the tonic (= root note) of the major key.

Remember "Graham's Rule of Thumb" (or "The Rule of Graham's Thumb") for working out if a chord is major or minor – way back on page 14!



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### MORE ABOUT SCALES / MODES

#### "CHROMATIC" AND "DIATONIC" SCALES

First order of business in this section: let's deal with references that you might run across to "chromatic" and "diatonic" scales. (Note that these were first introduced on page 3 but are dealt with in more detail here.)

**The chromatic scale:** Very roughly speaking (as I do occasionally), "chromatic" means all the keys on a piano between octave notes. Example starting on C: C - C#/D<sup>b</sup> (same pitch spelled differently) - D - D#/E<sup>b</sup> - E - E#/F - F#/G<sup>b</sup> - G - G#/A<sup>b</sup> - A - A#/B<sup>b</sup> - B - B#/C.

Note that there are **twelve** pitches in a chromatic scale, all separated by half a step. If you have a piano, you get the chromatic scale by playing all the keys, black and white, between your starting note and its octave. The octave note is then the 13th note in the scale. Some traditional instruments (e.g. fiddle, fretted instruments, some accordions, keyed flutes/chanters) are capable of producing chromatic scales, while others are not (e.g. whistles, melodeons).

**Diatonic scale:** for our purposes, the ability to play all the notes of a chromatic scale is nice but not necessary, since the scale encountered in 99.54% of traditional music is the simpler "diatonic" scale represented by the "doh - re - mi" we all recall (lovingly, one hopes) from Sister Gertrude Imelda's first-grade class. This diatonic scale consists of **eight** pitches (seven plus the octave) in both the major and minor keys. "Doe, a deer, a female deer . . ."

If you're interested in knowing the mechanics of all this, please continue reading. If not, have a nice day!

The discussion that follows deals **ONLY** with the simpler diatonic scale.

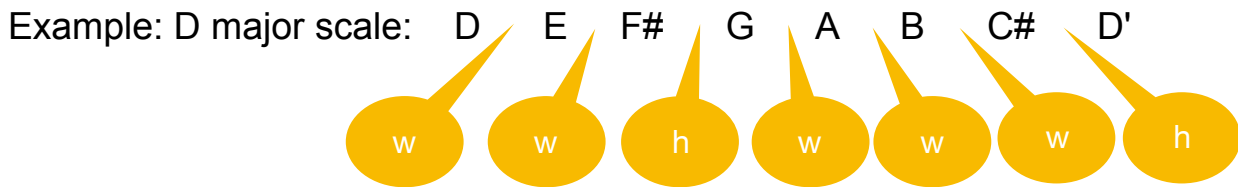
#### MAJOR SCALES

The pitches of a major scale are arranged so that the "spaces" between adjoining pitches are as follows (w = whole step, h = half step) starting at the first pitch:

w w h w w w h

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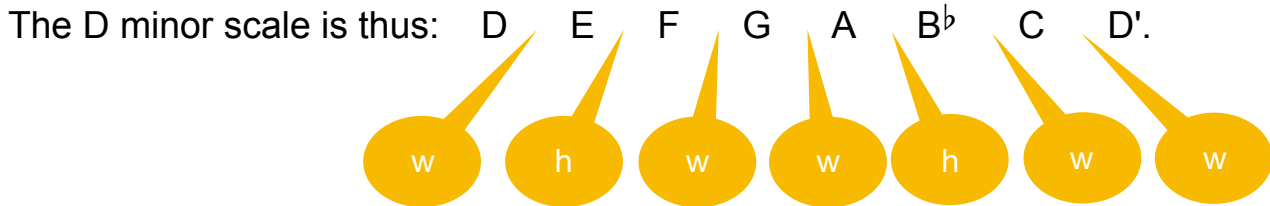
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Any major scale (i.e., beginning on any tonic note) will be constructed using exactly the same 'w w h w w w h' relationship and it is this relationship that defines it as a major scale.

### MINOR SCALES

The minor scale is defined by a different arrangement of whole and half steps, namely: w h w w h w w



Notice the difference between the two scales:

D major has F# and C#

D minor has F (natural) and C (natural), plus B<sup>b</sup> instead of B (natural)

It is important to realize that this 'w h w w h w w' pattern of note intervals that defines a minor scale applies regardless of what the tonic (= starting) note is.

As you know, the sounds of major and minor scales are quite different; the arrangement of whole and half-steps creates an emotional response in the listener that nobody fully understands (think of the difference between "Mason's Apron", key A major, and "Star of Munster", key A minor, and you'll know what I'm talking about).

### "MODAL" SCALES

This of course is "Music Theory for Dummies" material, but the truth is that the subject of modes is a complicated one and best left to the editors of the [Harvard Dictionary of Music](#) to explain.

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For the purposes of Irish traditional music, however, the situation is made bearable by the fact that there are really only two modes to worry about (and easy enough to understand once you get past the names):

The "mixolydian" mode (a major scale where the 7th scale degree is always flatted.

Ex. G<sub>mix</sub>: G - A - B - C - D - E - F natural - G')

The "dorian" mode (a minor scale where the 6th scale degree is always sharped.

Ex. A<sub>dor</sub>: A - B - C - D - E - F# - G - A').

When Irish musicians talk about "modal" tunes (if they ever do), they are referring to the mixolydian tunes where most if not all of the accented 7th degree pitches are "flattened" in reference to the tonal center ("key").

### **The mixolydian mode**

#### **Tonal center D**

major key, VII = C is C#

"Silver Spear", "Off She Goes", "Boys of Bluehill"

"mix mode", VII = C is C natural

"Rakish Paddy", "Blarney Pilgrim", "Wicklow Hornpipe"

#### **Tonal center G**

major key, VII = F is F#

"Miss McCloud's", "Kesh Jig", "Maggie in the Woods"

"mix mode", VII = F is F natural

"Cook in the Kitchen", "Yellow Tinker"

#### **Tonal center A**

major key, VII = G is G#

"Mason's Apron", "Sweet Biddy Daly", "Bill Sullivan's Polka"

"mix mode", VII = G is G natural

"High Reel", "Fairhaired Boy", "Langstrom's Pony"

The sound of a modal tune is quite distinctive, as the examples I cited will make clear.

### **The dorian mode**

The Dorian mode is almost the default for Irish traditional tunes. I can't think offhand of any minor-key tunes that consistently use the "plain" sixth, i.e. C instead of C# in the key of E minor, F natural instead of F# in A minor, etc. I'm sure there are some ("Rights of Man" comes to mind) but they are a distinct minority of the repertoire.

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## for Irish Traditional Musicians

Since it's unlikely that anyone reading these pages is studying for a PhD in musicology, we'll bid farewell to the topic of Modes. I hope the foregoing details are enough for you to understand how they work in Irish music. There's a refresher and some neat diagrams later in the paper (page 23).

Just so you know: I've used our old friends D, G, and A in the foregoing examples, but every major key has its corresponding "mix" mode, and every minor key has its corresponding "dorian" mode. (If your curiosity about modes is well-nigh insatiable, there's much much more information available online.)

Note that Irish dance tunes are in:

- \* major keys (Sister's "do-re-mi") - one sharp G, two sharps D, etc etc, or
- \* minor keys - zero sharps A minor, one sharp E minor, etc, or
- \* mixolydian mode (major key with VII lowered half a step), or
- \* dorian mode (minor key with VI raised half a step) – 93.76% of "Irish minors" are dorian

**Important: harmonizing the "flatted" note in "modal" tunes is relatively simple: use either the chord that has the same name as the note name, or its relative minor.**

Examples:

key D modal: C# lowered to C natural: use either C or A minor

key G modal: F# lowered to F natural: use either F or D minor

That's basically all there is to it. Again, the choice of chord will depend on your ear.

(One last factoid before you go: Scots traditional music has many more "modal" tunes than we do – mostly all "A modal" – based on the fact that much of the repertoire consists of bagpipe tunes and the bagpipe chanter is itself "A modal". Here's a link if you want to pursue this any further:

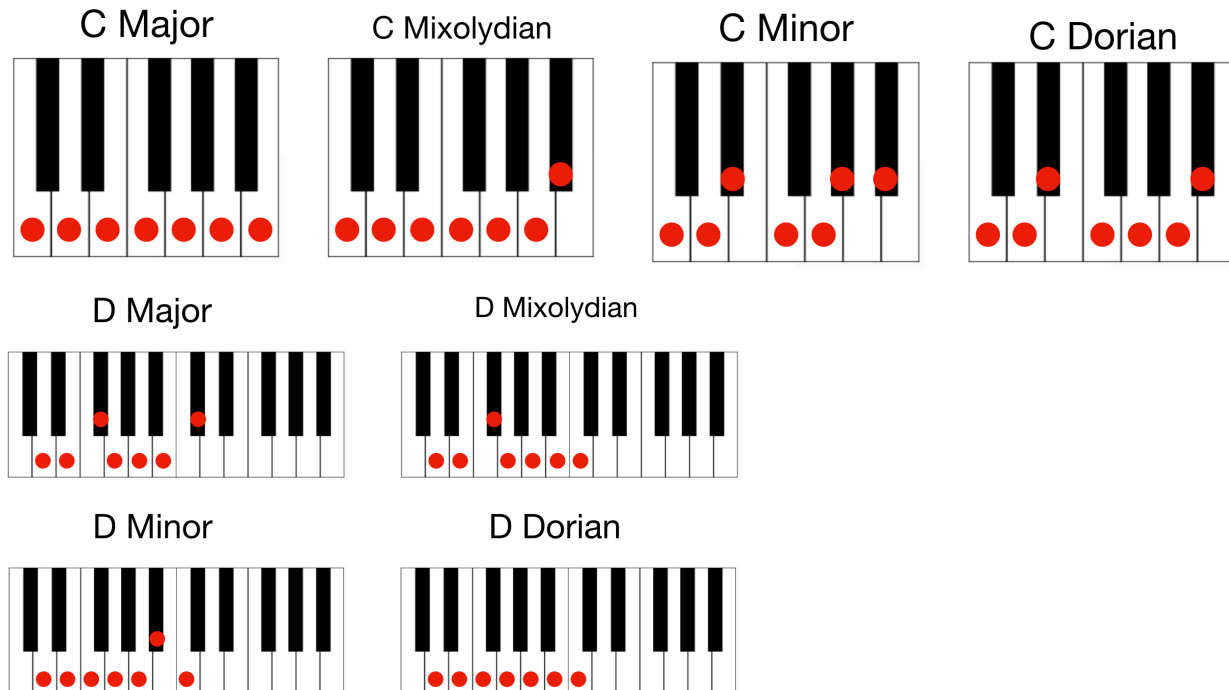
**<http://publish.uwo.ca/~emacphe3/pipes/acoustics/pipescale.html>**

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### Some helpful pictures

Alan Graham has provided some neat graphics that will help elucidate the subject of scales for those of you with access to a piano or keyboard:



Here endeth the lesson (as they say). I hope that the above – which I realize is not easy to digest – will prove helpful.

Please send any comments or suggestions to me at [bill@capeirish.com](mailto:bill@capeirish.com).

And remember – trad music is about having fun, and having a little knowledge about it (if you can call 23 pages "a little") might be fun too. At the very least you can impress your session pals with a fleeting reference on suitable occasions to "diatonic scales" and "dorian modes". Just don't overdo it.

Have fun!

**Bill Black**  
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**March 2019**