

George Winston

WORKSHOP

Introduction

This document explores the concepts and questions I'm often asked about.

Definitions	
Chord	Any combination of three or more notes played together.
Perfect Pitch	The ability to recognize the pitch of a musical tone accurately and instantaneously, without having external reference. It may be able to be learned by memorizing the first notes of your favorite songs.
Relative Pitch	The ability to recognize the pitch of a musical tone in relation to another tone before or after it – for example if you know the name of a note, and then when another note is played and you recognize the new note by knowing what the first note was, then you have relative pitch, which can definitely be learned.
Interval	The distance between the pitches of two notes played together or separately.
Octave	The interval between one pitch and another with half the frequency (for the note an octave lower); or double its frequency (for the note an octave higher).
Scale	An ordered series of intervals that, with the key the song is in (the first tone), defines the scale's intervals, or steps.
Mode	Each scale has Modes, which refers to the fact that the scale can be played with each note in it as the beginning note and played at least an octave up or down <ul style="list-style-type: none">– for example, the C Major scale with the notes C, D, E, F, G, A, and B could begin on the C note (the Ionian Mode)– or:<ul style="list-style-type: none">the D note (the Dorian Mode);the E note (the Phrygian Mode);the F note (the Lydian Mode);the G note (the Mixolydian Mode);the A note (the Aeolian Mode);the B note (the Locrian Mode).
Sharps & Flats	Notes that are altered from the C Major scale (the “white notes” on the piano), using the C Major scale as the basis for writing music on paper. However, I don't think of music in these terms (with the key of C as the basis) --rather, I think of all twelve keys as separate entities, almost like each of the twelve keys is a separate instrument.

I. Chords

Whether you learn music by ear or from the written page, I suggest learning chords (any combination of three notes or more played together), and music theory (how chords are used in the different music traditions).

Any piece of written music can be analyzed in terms of its chord structure. The individual notes are like the letters in the alphabet, and chords are like words. The **Major** and **minor** chords are the building blocks for all other chords. Becoming familiar with chord structures can aid in memorization.

Suggested order for learning chords:

1. **Major** chords, which have the 1st, 3rd, and 5th notes of the Major scale of a key.
2. **minor** chords, which have the 3rd lowered a half step (down one note).
3. **Dominant 7th** chords, the **minor 7th** chords, and the **Major 7th** chords.
4. **Ninth** chords (adding the 9th note with those three types of 7th chords mentioned just above in #3).
5. **diminished** chords (and the diminished 7th chords), and the augmented chords.
6. **Major 6th** and the **minor 6th** chords.
7. Then you may want to learn the jazz chords – **13th** chords, **flat 9th** chords, augmented 9th chords, **flat 5** chords (sometimes called **augmented 11th** chords), **11th** chords, and more.
8. and then you could study scales and Modes that are associated with the different chords (if you know the chords, then you already know 3, 4, or 5 of the notes of the seven note associated scale).

Again, any combination of three notes or more can be called a chord (and actually any chord could be interpreted in twelve different ways, interpreting the chord in the twelve keys).

THE 12 MAJOR & MINOR CHORDS		
KEY	MAJOR	MINOR
C	C-E-G	C-Eb-G
D flat (aka C#)	Db-F-Ab (aka C#-F-G#)	Db-E-Ab (aka C#-E-G#)
D	D-F#-A	D-F-A
E flat	Eb-G-Bb	Eb-Gb-Bb
E	E-G#-B	E-G-B
F	F-A-C	F-Ab-C
G flat (aka F#)	Gb-Bb-Db (aka F#-Bb-C#)	Gb-A-Db (aka F#-A-C#)
G	G-B-D	G-Bb-D
A flat	Ab-C-Eb	Ab-B-Eb
A	A-C#-E	A-C-E
B flat	Bb-D-F	Bb-Db-F
B	B-D#-F#	B-D-F#

A great book for exploring more about chords is Picture Chord Encyclopedia for Keyboard (HL00290528). This book has photos, diagrams, and music notation for over 1,600 keyboard chords. See www.halleonard.com.

When working out the chord and/or techniques, licks, etc. to practice on the piano, these are the suggested priority order of keys (Major and minor):

1	C, F, G, Eb, & Bb	by far the most commonly used keys in the R&B and Jazz traditions; and 99% of Boogie-Woogie piano songs are in the keys of C, F, G
2	Ab	sometimes used in the R&B and Jazz traditions
3	A	commonly used key in Blues when playing with guitarists
4	E & D	also commonly used keys in Blues when playing with guitarists
5	Db (C#) & Gb (F#)	rarely used
6	B	the key of B Major is the most rarely used key; B minor is used a bit more

II. Pitch

Perfect Pitch is the ability to recognize the pitch of a musical tone accurately and instantaneously, without having external reference.

Relative Pitch is the ability to recognize the pitch of a musical tone in relation to another tone before or after it.

Example:

If you can recognize a note then you have perfect pitch. If you can't recognize a note but you know the name of a note, and then when another note is played and you recognize the new note by knowing what the first note was, then you have relative pitch, which can definitely be learned.

1. Developing Relative Pitch

You can develop relative pitch by learning to recognize intervals. An interval is the distance between the pitches of two notes played together or separately. You can find songs that you like and recognize, and analyze the intervals of the first two notes in the song or identify the first change in the intervals near the beginning.

2. Developing Perfect Pitch

One way to learn perfect pitch is to memorize the first note of a song you like. Use this note as a reference note to find other notes by going up and down the Major scale. After you work with this method and get the hang of it, you can progress to working with Major and Minor scales.

PITCH EXERCISE:

Here is a song list that provides examples of songs that can help get you started in developing pitch skills. As you work with the list, think about the beginning intervals of songs you recognize (usually the first two notes of the song, or else the first change in intervals a few notes into the song). I have listed common songs, such as children's songs, Christmas carols, and popular and jazz standards, and you should add your own favorite and/or easily remembered songs to the list.

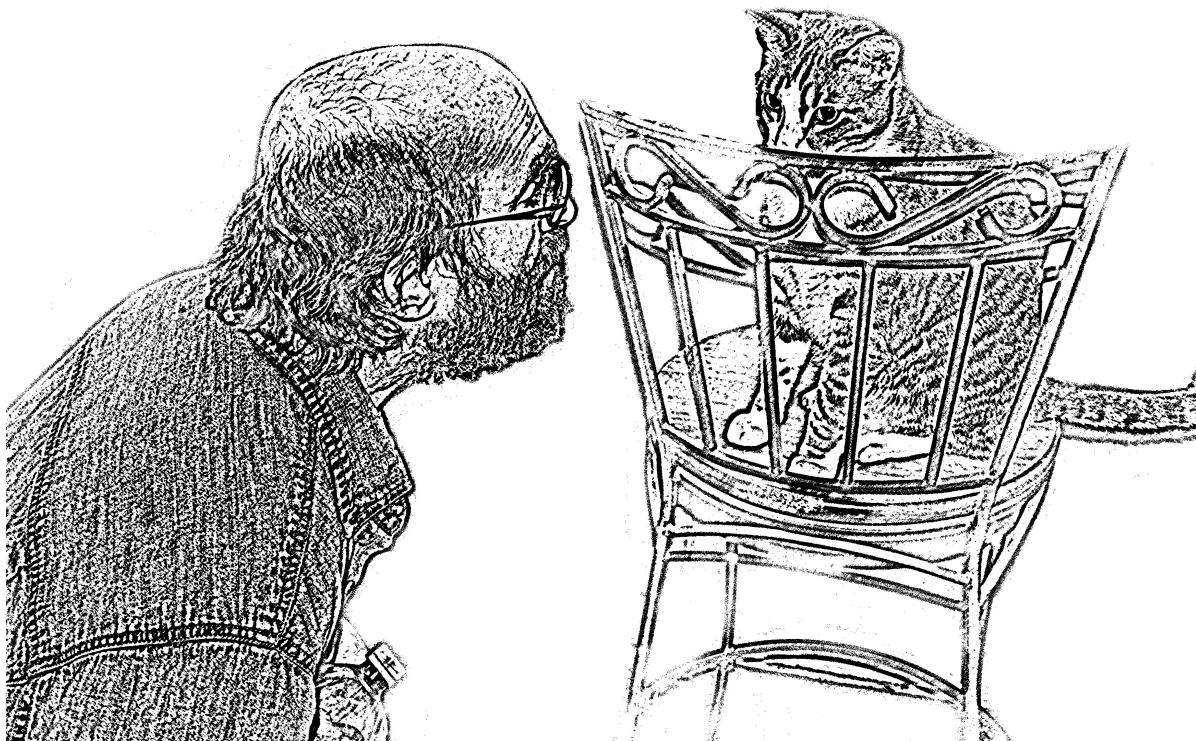
TIPS

You can subtract the intervals from :9: to get the inverted (the same notes, but reversed) intervals from it, within a diatonic “white notes on the piano” scale - for example, the inverted interval of a 6th is: 9-6=3 (a 3rd); and the inverted interval of a 5th is 9-5=4 (a 4th), etc.

For intervals more than an octave apart (sometimes also used to describe extended chords), add “7” to the interval - the four are the ones used (especially in naming extended chords) are:

- a. the 2nd interval (plus 7) becomes a 9th;
- b. the 3rd interval (plus 7) becomes a 10th;
- c. the 4th interval (plus 7) becomes a 9th;
- d. the 6th interval (plus 7) becomes a 13th

SONG LIST



George and Bob (spelled in reverse)

NOTE: References are to the first two notes at the beginning of songs unless otherwise noted.

ASCENDING INTERVALS

Ascending minor 2nd

White Christmas	Never My Love	Billy Boy
I Left My Heart in San Francisco	The Lonely Bull	How Insensitive
Michelle	Till There Was You	Caravan
I'm in the Mood for Love	Alley Cat	The Entertainer
The Twilight Zone (TV theme)	Third Man Theme	

S O N G L I S T

Ascending Major 2nd		
Yankee Doodle -(the 2nd & 3rd notes)	Oh Suzannah	I'm Gonna Sit Right Down and Write Myself a Letter -(4th & 5th notes of melody)
Happy Birthday (the 2nd & 3rd notes)	Silent Night	Tennessee Waltz
My Country 'Tis of Thee	Ain't Misbehavin'	Begin the Beguine
I Got Rhythm	Sweet Georgia Brown	Goodnight Irene
This Land is Your Land	Row Row Row Your Boat -(3rd & 4th notes in the beginning)	The Pink Panther
Frera Jacka	Alouette (aka "Pufferbillies")	Old Man River
Memories of You	September in the Rain	Begin the Beguine
Ruby	Send in the Clowns	Our Love is Here to Stay
Embraceable You	Linus & Lucy (aka The Peanuts Theme-by Vince Guaraldi from The Charlie Brown Christmas episode) -(the 1st & 2nd notes of the right hand melody, after the 4 measures of the intro left hand bass notes)	
Ascending minor 3rd		
Greensleeves (aka What Child is This)	Mission Impossible (TV theme)	Wade in the Water
Georgia on my Mind	Five Foot Two	Light My Fire (1st & 2nd sung notes)
Mack the Knife	St. Louis Blues	Riders on the Storm (2nd & 3rd sung notes)
Love Theme from Romeo & Juliet	In the Mood	Jambalaya
Sixteen Tons (1st & 2nd sung notes)	Moonglow	You Don't Know Me
Stand By Me	The Sounds of Silence	The Very Thought of You
Windy	The Work Song	What the World Needs Now
Ascending Major 3rd		
Kumbaya	Peggy Sue	Oh Pretty Woman -(the 2nd & 3rd notes of guitar intro)
Stardust	Blue Velvet	Maverick (TV theme) (the 2nd & 3rd notes)
Sometimes I Feel Like a Motherless Child (the 3rd & 4th notes)	Arkansas Traveler	Tammy
I Could Have Danced All Night	Dry Bones	Up a Lazy River
Can't Buy Me Love	September Song	High Heeled Sneakers

S O N G L I S T

When the Saints Go Marching In		
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Ascending 4th

Home on the Range	When Johnny Comes Marching Home	Jimmy Crack Corn
A Certain Smile	Reveille	We Wish You a Merry Christmas
O Tannenbaum	Red River Valley	A Taste of Honey
Auld Lang Syne	Someday My Prince Will Come	The Shadow of Your Smile
The Look of Love	Exodus	Riders in the Sky
The Green Leaves of Summer	How High the Moon	So Rare
Bonaza (TV theme)	Tonight (from Westside Story)	Danny Boy (aka Londonderry Air)
What Kind of Fool Am I	All the Things You Are	We're Off to See the Wizard
Round Midnight	C Jam Blues	Nardis
When She Loved Me (by Randy Newman, from the movie <i>Toy Story</i>)	Mardi Gras in New Orleans (aka Go To the Mardi Gras) (by Professor Longhair)- (the 2nd & 3rd notes of the piano intro)	Taps (Day is Done) (the 2nd & 3rd notes in the beginning)
The William Tell Overture (TV theme from The Lone Ranger)		

Ascending augmented 4th (aka flattened 5th)

Maria (from West Side Story)	Washington Square (the 3rd & 4th notes in guitar intro)	Black & White Rag (the 1st & 3rd notes of main riff)
The Cosby Show (TV theme) (higher notes played after intro chord)	Unsolved Mysteries (TV theme) (2nd high note played over droning tonic note)	Sea Hunt (TV theme)
Black & White Rag (the 1st & 3rd notes of main riff)		

Ascending 5th

The Alphabet Song	Love & Marriage	My Favorite Things
Moon River	Scarboro Fair	Harlem Nocturne
Goldfinger	Chim Chim Cheree	Also Sprach Zarathustra (from the movie "2001")
Abraham Martin & John	Georgy Girl	Gunfight at the O.K. Corral

SONG LIST

Linus & Lucy (aka The Peanuts Theme-by Vince Guaraldi from The Charlie Brown Christmas episode) -(the 1st & 2nd notes of the low piano intro)	Cast Your Fate to the Wind -(the 1st & 2nd notes of low piano intro)	What'd I Say -(1st & 2nd notes of the low piano intro)
Ascending minor 6th		
Manha De Carnival (aka Morning of the Carnival or A Day in the Life of a Fool)	Shortnin' Bread	Bej Mir Bist Du Schein
Go Down Moses	Lassie (TV theme)	In Germany Before the War (by Randy Newman)
Ascending Major 6th		
It Came Upon a Midnight Clear	Jingle Bells	My Bonnie Lies Over the Ocean
On Broadway	Days of Wine and Roses	Everybody Loves Somebody
When Sunny Gets Blue	Raindrops	Coocoo Waltz
Take the A Train	Coocoo Waltz	
Ascending minor 7th		
Star Trek (first theme of TV series)	Somewhere (from West Side Story)	When I Fall in Love -(the 1st & 3rd notes)
The Fugitive (TV theme)	Friendly Persuasion (aka Thee I Love) -(the 2nd & 3rd notes)	Jungle Drums -(the 2nd & 3rd notes)
Watermelon Man -(the 1st & 2nd notes of piano intro)	Soul Kitchen (by The Doors) -(the 1st & 2nd notes of organ intro)	Little House on the Prairie (TV theme) -(the 1st & 4th notes)
Ascending Major 7th		
NOTE: The ascending interval of the Major 7th is the second least used interval between two notes in songs. It is best to play the note C and then the B above it on the piano and memorize the sound.		
Moon River -(9th & 10th notes of the song)	Somewhere Over the Rainbow -(the 1st & 3rd notes)	Bali Hai -(the 1st & 3rd notes)
Colour My World (by Chicago) -(the 1st & 4th notes on piano intro)	Dr. Kildare (TV theme) (aka Three Stars Will Shine Tonight) (the 1st & 4th notes)	I Could Have Danced All Night -(the 1st & 5th notes)
Samba de Orpheus -(the 1st & 4th notes)		
Ascending Octaves		
Somewhere Over the Rainbow	When You Wish Upon a Star	The Christmas Song (aka Chestnuts Roasting on an Open Fire)
What the World Needs Now	Bali Hai	Nature Boy

SONG LIST

Oh Where Oh Where Has My Little Dog Gone	Cast Your Fate to the Wind (by Vince Guaraldi) -(the first high piano melody)	Gunsmoke (TV theme) -(the 1st & 3rd notes)
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DESCENDING INTERVALS

Descending minor 2nd

Joy to the World	O Little Town of Bethlehem	Lover
Beautiful Dreamer	Bye Bye Love	The Birth of the Blues
Easter Parade	The Good Life	Mona Lisa
Twilight Time	Laura	On Green Dolphin Street
Smoke Gets in Your Eyes	The Poor People of Paris	Puff the Magic Dragon -(the 4th & 5th sung notes)
Tico Tico	Fly Me to the Moon	12th Street Rag
Stars & Stripes Forever		

Descending Major 2nd

Swanee River	Three Blind Mice	The First Noel
We Three Kings	Mary Had a Little Lamb	Deck the Halls
Away in a Manager	Yellow Rose of Texas	Volare
On the Sunny Side of the Street	Satin Doll	Cheek to Cheek
I Can't Stop Loving You -(the 2nd & 3rd notes)		

Descending minor 3rd

The Star Spangled Banner	America the Beautiful	This Old Man (aka "I Love You"--end theme from <i>Barney & Friends</i>)
Bicycle Built for Two	Girl from Ipanema	Playmate
Tea for Two	Misty	Love is a Many Splendored Thing
March from the River Kwai (aka Colonel Bogey March)	Hey Jude	

Descending Major 3rd

Skip to My Lou	Summertime	Swing Low Sweet Chariot
Christmas Time is Here (by Vince Guaraldi from the Charlie Brown Christmas episode)	Light My Fire -(the 1st & 2nd notes of the organ intro)	Don't Let the Sun Catch You Crying (Gerry & Pacemakers song)
Wheels		

S O N G L I S T

Descending 4th

Working on the Railroad	Old McDonald	Born Free
O Come All Ye Faithful	Our Day Will Come	Sleepwalk
Walk Right In	Wives & Lovers	Let's Fall in Love
Barnacle Bill the Sailor	Sixteen Tons -(the 1st & 2nd intro clarinet notes)	Do Nothing 'Till You Hear from Me

Descending Augmented 4th (aka flattened 5th)

Caravan (by Duke Ellington) (the 4th & 6th notes of the main melody)	Unsolved Mysteries (TV theme) (the 2nd high note played over droning tonic note)	The Man from U.N.C.L.E. (TV theme) -(the 2nd & 3rd notes of the main melody after the intro)
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Descending 5th

Drunken Sailor	The Flintstones (TV theme)	The Way You Look Tonight
My Foolish Heart	Have You Met Miss Jones	Waltz for Debby (by Bill Evans)

Descending minor 6th

Love Story (aka Where Do We Begin)	In Germany Before the War (by Randy Newman) -(the 4th & 5th sung notes)	
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Descending Major 6th

Bye Bye Blues	The Good Life -(the 2nd & 3rd notes)	Love Walked In
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Descending minor 7th

Watermelon Man -(the 1st & 2nd notes of trumpet melody) -(the 2nd & 3rd notes of the piano intro)	Soul Kitchen (by The Doors) -(the 2nd & 3rd notes of the organ intro)	
The Good Life -(the 1st & 3rd notes in the beginning)	The Price is Right (TV theme)	

Descending Major 7th

NOTE: Descending Interval-Major 7th is the least used interval between two notes in songs. It is best to play the note B and then the C below it on the piano and memorize the sound.

Colour My World (by Chicago) -(4th & 7th notes on piano intro)		
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III. Scales

A scale is an ordered series of intervals that, with the key or tonic (the first tone), defines the scale's intervals or steps. Two of the most frequently used scales are the Major (7 note) scale and the minor Pentatonic (5 note) scale.

1. Major (7 note) Scale (aka the Ionian Mode)

MAJOR SCALE							
Tonic is C							
Notes	C	d	e	F	G	a	b
Chords	C Major	d minor	e minor	F Major	G Major	a minor	b dim.

2. Pentatonic (5 note) Scale

The Major Pentatonic Scale uses five notes of the Major Scale - the 1st, 2nd, 3rd, 5th, and the 6th. This scale is the basis for Asian music, and is used in most of the world.

The Minor Pentatonic Scale is related to the C Major Pentatonic Scale (C-D-E-G-A-C). If you play the C Major Pentatonic Scale, but the first note as the "A", then it becomes the A minor Pentatonic Scale. Thus the Major Pentatonic Scale of a key is the minor Pentatonic Scale of the key three steps down, called the relative minor. Conversely, a minor Pentatonic Scale is the Major Pentatonic Scale of the key three half steps up, called the relative Major.

3. Blues Scale

The popular Blues scale is based on a minor Pentatonic (5 note) scale, with the 1st, the flattened 3rd, the 4th, (aka the flattened 5th), the 5th, and the flattened 7th. The 3rd is sometimes played or sung as a neutral note, in-between the flattened 3rd and the natural 3rd.

IV. Modes - taking a Major scale and making seven scales, starting the scales on each of the seven notes in the Major scale--making each of the seven notes the tonic note (the "1")

For convenience these are listed in the key of C--relating to a scale of an octave of the white notes from low to high in an octave (this is called *diatonic* - meaning that all the notes of the melody and all the notes of the chords are with these particular 7 notes) - and relating to each Mode what notes are *altered* from the Major scale (the "white note" scale with no flattened or sharpened notes): the seven pitches (scale degrees) of the white notes (the Major scale) from lower pitch to the higher pitch that form an octave. The term for this is called *diatonic*, meaning that all the notes of the melody, all the notes of the chords, and all the notes of the seven Modes fall within these particular seven notes.

MODE CHART			
Mode	Interval Division	Key	Notes
W=Whole Step H=Half Step			
Ionian	W-W-H-W-W-W-H	from C up to C	- The standard Major Scale with no flattened or sharpened notes - (this Mode corresponds with the C Major chord, the I chord)
The most common Mode in traditional Celtic music and for Appalachian fiddle tunes, and for traditional American songs.			
P E N T A T O N I C S C A L E S	Within this Mode is the often Major Pentatonic Scale , Pentatonic, with the 1st, the 2nd, the 3rd, the 5th, and the 6th.		
	The Major Pentatonic and minor Pentatonic Scales are related - if you play the C Major Pentatonic Scale (C-D-E-G-A), but have the first note as the "A", then it becomes the A minor Pentatonic Scale - so a Major Pentatonic Scale is the minor Pentatonic Scale of the key 3 half steps down (its relative minor); and conversely, a minor Pentatonic Scale is the Major Pentatonic Scale of the key three half steps up (its relative Major).		
	Modes based on the Major Pentatonic Scale--there are three (of the mathematical possible 5) that are most used starting the Pentatonic Scale on:		
	the 1st Note	key of C	Major Pentatonic Scale of: C, D, E, G, & A
	This is a very common scale everywhere in the world, and is the basis for Chinese classical music and is very common in Celtic music and Appalachian music.		
	the 6th Note	key of C	relative A minor Pentatonic Scale (with a flat 3rd note (here the C note), and the flat 7th note (here the G note) of: A, C, D, E, & G
	The Blues Scale		Based on a minor Pentatonic (5 note)Scale with the 1st, flattened 3rd, 4th, (often adding in the sharp 4th), the 5th, and the flattened 7th. The 3rd is often played as a "neutral" note, in-between the flattened 3rd and the natural 3rd. This scale is the basis for Blues--and it is very prevalent in Mongolian music, and it is a very common scale everywhere in the world.
	the 2nd Note	key of C	D Pentatonic Scale of D, E, G, A, & C.
	<ul style="list-style-type: none"> This scale is neither <i>Major</i> or <i>minor</i>, but it feels like a minor scale because of the flattened 7th note in the Mode (here the C note); but there is no minor (or Major) 3rd, so it isn't quite as dark as the minor Pentatonic Scale. The 2nd Note of this Mode (here the E Note) is sometimes used as a substitute for (or in addition to) the minor 3rd Note (the F Note). This Pentatonic Mode is occasionally used for traditional Appalachian tunes and tunes composed by Old-Time musicians such as Curt Bouterse's song <i>Felecita</i>, and sometimes for part of the minor key version of the well-known traditional tune <i>Shady Grove</i>; also sometimes for Celtic tunes, such as <i>Bo Mhin No Toitean</i> by the Irish band Altan; and Scottish bagpiper Fred Morrison's La Paulettina Set: <i>Munlochy Bridge/Bogán Lochan/Calum Crubach/Alick Cirrie's/The Smith/La Paulettina</i>, and also his composition <i>Alasdair's Reel</i>, as well as his versions of <i>The Snuff Wife</i>, <i>The Old Wife's Dance</i>, <i>Rip the Calico</i>, and <i>Donald MacLellan of Rothesay</i>. 		

MODE CHART					
Mode	Interval Division	Key	Notes		
<ul style="list-style-type: none"> Scottish bagpipers often use this Pentatonic Scale to <i>imply</i> a minor key, since the Scottish pipes only have nine notes, and they are in the Mixolydian Mode, with the Major 3rd note - in the key of C the notes would be: B flat, C, D, E, F, G, A, B flat, and C. To imply C minor, the notes in this Mode would be: B flat, C, D, F, G, B flat, and C - leaving out the Major 3rd E note, since the minor 3rd note E flat is not available on the pipes. (FYI - the key of C is listed here just for easy reference - the Scottish bagpipes are pitched in the key of B flat, with the nine notes being: A flat, B flat, C, D, E flat, G, A flat, and B flat. The Mode in the key of B flat [to imply the key of B flat minor] would be: A flat, B flat, C, E flat, F, G, A flat, and B flat). (Also, the Scottish pipes are sometimes played in the key of E flat, the 4th note of the B flat scale [which would be the key of F if the instrument was in the key of C]. This makes the playing in the Major scale, the Ionian Mode, which Scottish pipers use for playing Irish & Scottish tunes that are in the Major scale [the same drone note would then be the fifth note of the scale in the key of E flat]). In traditional Korean music, this Pentatonic Mode is also used, treating it as the tonic Mode, the i (here of the key of D), with the complimentary Mode , the v (in A minor), would be the Pentatonic Scale in # 2 above (starting on the A note, with the notes A,C,D,E, & G). This would be the D key (neither minor nor Major) and a complimentary A minor, staying in the notes of the Mode for both keys (starting with a D bass note, and answering with a lower A bass note). In traditional Vietnamese music, this Pentatonic Mode is called Hoi Xuam. 					
the 3rd Note	key of C	E Pentatonic Scale of E,G,A,C, & D			
<ul style="list-style-type: none"> This is a minor scale, used as a complimentary scale, the v, to the often used Pentatonic Scale mentioned above in #2 (the Mode starting on the 6th note with the notes A, C, D, E, & G) treating that Mode as the i (in A minor). This is used in traditional Korean music, as an A minor and a complimentary E minor, staying in the notes of the Mode for both keys (starting with an A bass note, and answering with a lower A bass note.” 					
the 5th Note	key of C	G Pentatonic Scale of G, A, C, D & E			
<ul style="list-style-type: none"> This scale is neither Major or minor, and is rarely used. 					
<ul style="list-style-type: none"> In addition, there is another Major Pentatonic Mode of C, E, F, G, & B that is the main scale for traditional music in Okinawa. 					
This Major scale Ionian Mode corresponds with the C Major chord, the I chord.					
Dorian	W-H-W-W-W-H-W	from D up to D with flattened 3rd & 7th notes	This Mode corresponds with the D minor chord, the ii chord.		
<ul style="list-style-type: none"> Used in many traditional Irish tunes, such as <i>Drunken Sailor</i>, in some Appalachian fiddle tunes; often used in jazz improvisation as a scale, and especially for the chords of this mode, especially starting in the early 1960's with saxophonist John Coltrane's work with pianist McCoy Tyner, and also composer/arranger/saxophonist Oliver Nelson. Also used for R&B and Soul songs such as Bill Withers <i>Use Me</i> and <i>Love Potion No. 9</i>, rock songs such as <i>She's Not There</i>, Latin songs, such as <i>Mas Que Nada</i> and <i>Nena Na Na</i>, and New Orleans R&B songs, such as Dr. John's songs <i>Right Place Wrong Time</i>, <i>I Walk on Gilded Splinters</i>, <i>You Swore</i>, and <i>Holdin' Pattern</i>. 					

MODE CHART			
Mode	Interval Division	Key	Notes
<ul style="list-style-type: none"> Again within this Mode is the often used Blues Scale, based on a minor Pentatonic (5 note) Scale, with the 1st, the flattened 3rd, 4th, (often adding in the sharp 4), the 5th, and the flattened 7th. The 3rd is often played as a "neutral" note, in-between the flattened 3rd and the natural 3rd. The Major Pentatonic and minor Pentatonic Scales are related - If you play the C Major Pentatonic Scale (C-D-E-G-A-C), but have the first note as the "A", then it becomes the A minor Pentatonic Scale - so a Major Pentatonic Scale is the minor Pentatonic Scale of the key 3 half steps down (its relative minor); and conversely, a minor Pentatonic Scale is the Major Pentatonic Scale of the key three half steps up (its relative Major). 			
This minor Dorian Mode corresponds with the D minor chord, the ii chord.			
Phrygian	H-W-W-W-H-W-W	from E up to E with flattened 2nd, 3rd, 6th, 7th notes	<p>This Mode corresponds with the E minor chord, the iii chord.</p> <ul style="list-style-type: none"> Used in traditional Spanish music and in traditional Middle Eastern music.
<ul style="list-style-type: none"> This Mode is used in traditional Spanish music ,as in the song <i>Malaguena</i>; and for traditional Middle Eastern music. This Mode is also often used in classical music in India (the Bhairavi basic scale, one of the then main scale called thats. In these traditions sometimes the 3rd is <i>not</i> flattened; and this Mode is also often used in classical music in India (the Bhairav basic scale, one of the ten main scales called thats. Also, sometimes the 2nd is flattened when the 3rd is <i>not</i> flattened. 			
This Mode corresponds with the E minor chord, the iii chord.			
Lydian	W-W-W-H-W-W-H	from F up to F with sharped 4th	<p>This Mode corresponds with the F Major chord, the IV chord.</p> <ul style="list-style-type: none"> Used in jazz improvisation from the late 1940's on, classical music from India, and traditional Eastern European and Balkan music.
<ul style="list-style-type: none"> This Mode is often used in a scale in jazz improvisation from the late 1940's on. An example is the beginning of Leonard Bernstein's song <i>Maria</i> from <i>Westside Story</i>. This Mode is also often used in classical music from India (the Kalyan basic scale, one of the ten main scales called thats, and used for the very popular <i>Yaman Kalyan Raga</i>); and sometimes in traditional Eastern European and Balkan music. 			
This Mode corresponds with the F Major chord, the IV chord.			
Mixolydian	W-W-H-W-W-H-W	from G up to G with flattened 7th	<p>This Mode corresponds with the G Major chord, the v chord, and especially the v7 chord.</p> <ul style="list-style-type: none"> Used in traditional Scottish, Irish & American Appalachian tunes, Celtic airs/songs,, scale in jazz, Latin music, American blues & boogie woogie.

MODE CHART			
Mode	Interval Division	Key	Notes
<ul style="list-style-type: none"> Used in many traditional Scottish tunes; also used in some traditional Irish and Celtic fiddle tunes, and also sometimes in Celtic airs and songs such as <i>She Moves Through the Fair</i> and <i>The First Time Ever I Saw Your Face</i>, and also in some American Appalachian fiddle tunes; often used in a scale in Jazz; This Mode is also one of the ones most often used in classical music in India, and is the one most associated with music from India by the rest of the world (the Khamai basic scale, one of the ten main scales called thats, and is used for the popular <i>Gavati Raga</i>); also used in Latin music; and from the 1950s and 1960s on, influenced by the Blues and the Boogie Woogie pianists, the Mixolydian Mode often became the “new I chord” with the flattened 7th note in it (and the Modes would shift - often the IV chord of the key also used its flat 7th note as well (the note that would be the flattened 3rd of the I chord, changing the Mode for that chord); and the V7 chord of that key used its Major 3rd note [that note would be the Major 7th of the I chord]). This Mode (and the shifting of Modes described above) was used in many R&B, rock, and pop songs in the 1950's and the 1960's, such as: <i>Bo Diddley</i>, <i>Not Fade Away</i>, <i>On Broadway</i>, <i>I Only Have Eyes for You</i>, <i>If I Was a Carpenter</i>, <i>Dancing in the Street</i>, <i>We Gotta Get Out of this Place</i>, <i>Ferry Cross the Mersey</i>, <i>White Bird</i>, <i>Only in America</i>, <i>Five O'Clock World</i>, <i>If You Could Read My Mind</i>, <i>My Generation</i>, <i>Hey Gyp</i>, <i>Hey Little One</i>, <i>The Lonely Bull</i>, <i>The Lonely Surfer</i>, <i>Theme from The Endless Summer</i>, <i>The First Time Ever I Saw Your Face</i> (composed by the late Scottish singer Ewan MacColl), <i>Norwegian Wood</i> (very Scottish influenced), The Doors' <i>L.A. Woman</i> and <i>Soul Kitchen</i> and <i>Twentieth Century Fox</i>, and many of Chuck Berry's songs, including <i>Memphis</i>. Also many songs from the 1960s used the chord progression of the I chord, to the flat VII chord, to the IV chord for part of the song (or sometimes for the whole song), using the flattened 7th note in the flat VII chord and giving that part of the song the feeling of the Mixolydian Mode for effect (in the key of C those chords are C, B flat, and F, and in the often used key of E they are E, D, and A). Many songs from the 1960s also used the I chord to the flat VII chord in certain parts of the song, using the flattened 7th note and giving that part of the song the feeling of the Mixolydian Mode for effect, such as <i>Watermelon Man</i>. Also some songs from the 1960s started with the V to the IV chord before going to the I chord later, giving the temporary feeling of being in the Mixolydian Mode, songs such as <i>Respect</i>, and <i>Baby I Need Your Loving</i>. 			
This Mode corresponds with the G Major chord, the V chord [especially the V7th chord].			
Aeolian	W-H-W-W-H-W-W	from A up to A with flattened 3rd, 6th, and 7th	<p>This Mode corresponds with the A minor chord, the vi chord. Often referred to as the minor scale.</p> <ul style="list-style-type: none"> Used for some traditional Irish tunes, and English song <i>Greensleeves</i>.
<ul style="list-style-type: none"> Used for some traditional Irish tunes; the English song <i>Greensleeves</i> (aka the Christmas carol <i>What Child is This</i>) sometimes uses the Aeolian Mode (and it also sometimes uses the Dorian Mode). Also, the European Harmonic minor Scale is the same as the Aeolian Mode, with the 7th note not flattened. This Mode is also one of the ones most often used in classical music in India (the Asavari basic scale, one of the ten main scales called thats). 			

MODE CHART			
Mode	Interval Division	Key	Notes
This Mode corresponds with the A minor chord, the vi chord.			
Locrian	H-W-W-H-W-W-W	from B up to B with flattened 2nd, 3rd, 5th, 6th, and 7th	<p>This Mode corresponds with the B diminished chord, the vii diminished chord.</p> <ul style="list-style-type: none"> • This Mode is basically the Mixolydian Mode starting up the interval of up a Major third interval. • It is very very rarely used as a Mode in itself.
This Mode corresponds with the B diminished chord, the vii diminished chord.			

Circle of 5ths

The Modes also can be organized (especially for diatonic harmonica players) in a “Circle of 5ths” – that is, for each 5th interval you go up, another note is flattened (these are also the seven positions for playing the diatonic harmonica. I use the 1st, 2nd and 3rd positions extensively (usually retuning some notes), and occasionally (also with always retuning some notes) I use the 5th and 7th positions. Rick Epping also uses the 1st, 2nd and 3rd positions extensively (often retuning some notes), and occasionally (always with retuning some notes) uses the 4th and 6th positions.

Position	Key	Flats
1	C	1 flat
2	G	2 flats
3	D	2 flats
4	A	3 flats
5	E	4 flats
6	B	5 flats
7	F	1 sharp

NOTE: Position 7, Key of F, 1 sharp: In the Diatonic Scale this Mode is a flattened 5th interval (rather than a 5th interval) above the B position (#6 just above), and in this Mode there are no flattened notes, and the 4th note in the scale is sharped.

- On the harmonica I use the 1st, 2nd, and 3rd positions extensively (usually retuning some notes), and those are the positions mainly used by harmonica players; and occasionally (with always retuning some notes) I use the 5th and 7th positions.
- Harmonica player Rick Epping also uses the 1st, 2nd, and 3rd positions extensively, and occasionally (with always retuning some notes) uses the 4th and 6th positions.
- Harmonica player Howard Levy uses all twelve of the chromatic language positions (never with retuning, but with using bent notes, and overdraws and overbends).

V. Guitar

1. Tuning the Guitar

One way to tune the guitar in the Standard Tuning (E-A-D-G-B-E - from the lowest pitched string to the highest), is to establish the highest pitch (the "E" note) on the 1st string, and then place your finger on the 2nd string on the fifth fret to find and fine tune the note the 2nd string should be tuned to (the "B" note). When that is in tune, then place your finger on the 3rd string on the fifth fret. Then do the that exact same thing on the 4th, the 5th, and the 6th strings. The numbering for this tuning as to what frets to put your finger on the 2nd, 3rd, 4th, 5th & 6th strings would be: "5-4-5-5-5."

- a) For the G Major Tuning (D-G-D-G-B-D - from the lowest pitches string to the highest), establish the highest pitch (the "D" note) on the first string, then place your finger of the 2nd string on the third fret to find and fine tune the "B" note. Then continue down the strings (as you did with Standard Tuning in number 1 above). The numbering for this tuning as to where to place your finger on the 2nd, 3rd, 4th, 5th & 6th strings would be: "3-4-5-7-5."
- b) You can remember other tunings by numbers in this way if it suits you.

2. G Major Tuning

- a) The G Major is the third most popular tuning in the world, after the Standard Tuning (E-A-D-G-B-E), and the Dropped D Tuning (D-A-D-G-B-E - ["5-4-5-5-7"]). The G Major Tuning is a very versatile tuning, and the two traditions that it is used in the most are the Blues, and Hawaiian Slack Key guitar (and it is the most common tuning for the 5-string banjo).

NOTE: For more on the Hawaiian Slack Key guitar tradition you can go to www.dancingcat.com, then especially to "Slack Key Info Book" (you can get to the same information at www.georgewinston.com, then go to "George", then to "Slack Key Info Book."

- b) Three notes in the G Major Tuning are the same as the Standard Tuning - the next to the highest pitched 2nd string, the 3rd string, and the 4th string notes B, G and D, respectively. From the Standard Tuning, tune the highest pitched first string, the fifth string, and the lowest pitched sixth string all down two half steps. Note that the second, third, and fourth strings remain the same as the Standard Tuning, so all Standard Tuning fingerings still apply to those three strings.

F minor

String Number	Standard Tuning	G Major Tuning
(from highest pitched to lowest pitched string)		
1	E	DOWN  two half steps to D
2	B	(same note) B
3	G	(same note) G
4	D	(same note) D
5	A	DOWN  two half steps to G
6	E	DOWN  two half steps to D

Most Effective Keys for Solo Guitar		
Standard Tuning (E-A-D-G-B-D)	Major	E Major, A Major, D Major, C Major, and G Major, and some in F Major
	minor	E minor, A minor, D minor, and some B minor
G Major Tuning (D-G-D-G-B-D)	Major	G Major, C Major, D Major; and some in B Flat Major, E Flat Major, and A Major
	minor	G minor, A minor, E minor, D minor, C minor, B minor, and some in F minor

VI. Harmonica

1. Harmonica Basics

The correct way to hold a harmonica is with your left hand, low notes to the left and numbers facing up. The right hand is used to “cup” the harmonica and change the sound.

- a) Place the harmonica in your mouth with lips lightly but completely resting on the two covers and breath easily in and out through holes 1, 2, 3, and 4 together.
- b) Continue this exercise until you feel comfortable with the harmonica and are producing a clear and resonant sound

NOTE: Developing good tone comes from maintaining a good posture and relaxed breathing which allows the vocal tract to form a resonating air column. This air column, like an organ pipe, will amplify if shaped correctly to allow a clear air passage all the way to the diaphragm. Weak tone or incorrect intonation (notes sounding flat) is usually caused by constricted airflow. The restriction is usually caused by an incorrect mouth and throat position or an incorrect angle of the harmonica in relation to the mouth.

2. Playing Single Notes

Method #1 Tongue Blocking

Tongue Blocking is where the lips encompass four holes and the tongue is used to block all but the highest on the right side. Variations on this method allow for more advanced techniques.

- (1) Lift the tongue on and off the blocked notes to achieve chord vamping - a method whereby blocked noise serve as rhythmic accompaniment to the higher melody note.
- (2) Play from both corners of the mouth while blocking notes in-between with the tongue allows for octaves, other wide intervals, and base notes to be played simultaneously.
- (3) Shift the tongue to switch the airflow from one corner of the mouth to the other. This allows notes far removed from each other to be played smoothly and is called corner switching.

b) Method #2 Puckering

Puckering is a method of playing single notes while pursing your lips as if you were about to whistle.

- (1) While playing two or three notes together, begin to purse your lips.
- (2) Reduce the opening to the size of one note and hold the position.

NOTE: Move the harmonica side to side slightly to center the airflow.

NOTE: Too much puckering can reduce the airflow and mute the sound.

3. Note Bending

Note Bending requires the tongue and throat muscles to constrict airflow so that the pitch of a note is lowered. The ability is similar to whistling. The back of the tongue is raised against the roof of the mouth and slides backward or forward to alter the size of the oral cavity. In the case of low notes, the bend is created in the throat similar to changing a vowel shape from AAAH to EEEE without making the actual sound.

NOTE: The easiest notes to bend are: 1 through 6 draw - and 7 through 10 blow.

4. Harmonic Positions

Most harmonicas are marked either on the top cover or on the comb the key to which they are tuned. When you play in this key, you are playing in 1st position.

The Key The Harmonica Is In	STRAIGHT HARP	CROSS HARP	
	1st Position (Major Scale)	2nd Position (Blues)	3rd Position
	Major Scale	Mixolydian Mode	minor Scale Dorian Mode
C	C	G	D minor
C# (Db)	C# (Db)	Ab (G#)	Eb minor
D	D	A	E minor
Eb	Eb	Bb	F minor
E	Eb	Bb	F# minor
F	F	C	G minor
F#	F#	C# (Db)	Ab (G#) minor
G	G	D	A minor
Ab (G#)	Ab (G#)	Eb	Bb minor
A	A	E	B minor
Bb	Bb	F	C minor
Bb	B	F#	C# (Db) minor

The Standard Diatonic harmonica tuning in the key of C is the following:

hole	1	2	3	4	5	6	7	8	9	10
blow	C	E	G	C	E	G	C	E	G	C
draw	D	G	B	D	F	A	B	D	F	A

The main three positions that are played are (using the key of C harmonica for reference):

1st Position	the key of C, in the Major Scale (and this is the key that is factory-stamped on the harmonica) - the notes are C, D, E, F, G, A, B, & C again.
2nd Position	the key of G in the Mixolydian Mode (Major-based scale with the 7th note flattened) - the notes are G, A, B, C, D, E, F , & G again.
3rd Position	the key of D minor, in the Dorian Mode (minor scale with the 7th and 3rd notes flattened) - the notes are D, E, F , G, A, B, C , & D again.

The main tuning I use is this (with the retuned notes in bold italics):

hole	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
blow	C	E	G	C	E	G	C	E	G	B
draw	D	G	B	D	F#	A	B	D	F#	A

To play in:

2nd Position	the key of G, in the Major Scale - the notes are G, A, B, C, D, E, F# , & G again.
(Occasionally) 3rd Position	the key of D in the Mixolydian Mode (Major-based scale with the 7th note flattened) - the notes are D, E, F# , G, A, B, C , & D again.
(Also effectively played) 5th Position	the key of E minor, in the Aeolian Mode (minor scale with the 7th, 3rd, and 6th notes flattened) - the notes are E, F# , G , A, B, C , & D , & E again.

- You can create other tunings. Search the web for tuning instructions.
 - For more on how to play harmonica (and the Hohner Special 20) see article by Kit Kiefer: www.ehow.com/how_5548243_play-harmonica-special.html (note the two underscores in this URL).
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1. For more information about how George plays the piano, guitar, and/or harmonica, go to www.georgewinston.com, click on “ABOUT”, then “Q & A”, then select the appropriate section: “Piano Related Questions”, “Guitar Related Questions” or “Harmonica Related Questions”.
2. To see George’s influences, go to “ABOUT”, and then “Influences”.
3. For updates of all workshop documents, go to “ABOUT”, then “Q & A’s”, then “Piano Related Questions” then “Question #3”.



(from left to right)
Gobajie (1984-1997), Goobajie (unknown - 1992), & George Winston (1949 -)