

Scalar Patterns for 5-String Banjo

Musical improvisation on a fretted instrument involves basically knowing how to traverse scales up and down the entire fretboard, whether that be through innate understanding or explicit knowledge of where the notes lie on the fretboard. One way to simplify the acquisition of the explicit understanding is to have a fretboard chart handy to help find the notes.

Here is the 5-string banjo fretboard for banjo in 'standard' tuning (open-G gdgbd) marked up in degree notation using Ionian G (G Major) scale.

Scale Degree numbering (in G major)

G Scale	G	G#	A	A#	B	C	C#	D	D#	E	F	F#	G
Ionian	1		2		3	4		5		6		7	1

The fretboard marked up using this notation:

	0	1	3	5	7	10	12	15	17				
D	5	6	7	1	2	3	4	5	6	7	1	2	
B	3	4	5	6	7	1	2	3	4	5	6	7	1
G	1	2	3	4	5	6	7	1	2	3	4	5	
D	5	6	7	1	2	3	4	5	6	7	1	2	
G	1				2	3	4	5	6	7	1	2	

You can do this with any scale. Try it with your favorite scale, such as major and minor pentatonics, which are a subset of major and minor blues respectively:

G Major / E Minor Pentatonic

	0	1	3	5	7	10	12	15	17				
D	5	6		1	2	3		5	6		1	2	
B	3		5	6		1	2	3		5	6		1
G	1	2		3		5	6	1		2	3		5
D	5	6		1	2	3		5	6		1	2	
G	1				2	3		5	6		1	2	

Bb Major / G Minor Pentatonic

(denoted using G Major scale degrees)

	0	1	3	5	7	10	12	15	17				
D	5		b7	1		b3	4	5		b7	1		b3
B	3	4	5		b7	1		b3	4	5		b7	1
G	1		b3	4		5		b7	1		b3	4	5
D	5		b7	1		b3	4	5		b7	1		b3
G	1					b3	4	5		b7	1		b3

G Mixolydian

	0	1	3	5	7	10	12	15	17		
D	5		b7	1	2	3		5	b7	1	2
B	3		5		b7	1	2	3	5		b7 1
G	1	2	3		5		b7	1	2	3	5
D	5		b7	1	2	3		5	b7	1	2
G	1				2	3		5	b7	1	2

All the notes of the 9th chord – {1 3 5 b7 9} = {1 3 5 b7 2}. To extend to 11th chord notes add the 4th - {1 3 5 b7 9 11} = {1 3 5 b7 2 4}, where the 4 is always one fret above the 3. To extend to 13th chord notes, next add the 6, where the 6 is always one fret below the b7. To find common 7th chord positions just look for clusters of {1,3,5,b7}, {1,3,b7} or {3, 5, b7}. The 5 is the ‘least’ necessary note, so musically the first two voicings are preferred; however the latter chord voicing is commonly used.

Using these Fretboard Diagrams to Learn Melodic Style

Melodic style doesn’t use the alternating arpeggios like Scruggs style, rather it follows chromatic lines across alternating strings. So how can these fretboard diagrams help you learn melodic style? One way to practice melodic runs is to select a sequence of interest and then pick out a melodic fingering that runs through the sequence. Here are some example sequences:

- Play up the scale and back down - 1 2 3 4 5 6 7
- Major 7th chords: 1 3 5 7
- 1 3 5 7 2 4 6 - up by thirds, also written:
1 3 5 7 9 11 13
- 6th chords: 1 3 5 6
- 7th chords: 1 3 5 b7
- 9th chords: 1 3 5 b7 9
- 11th chords: 1 3 5 b7 9 11
- Broken thirds: 1 3 2 4 3 5 4 6 5 7 6 8 7 9 8

One way is to select a sequence and a key, and then seek out places where one can play the sequence or some portion of it. Use the fretboard diagram to help speed up the process. Take the complete fretboard diagram, delete the notes you are not using in the sequence, making it easier to locate possible fingerings.

CLOSED POSITIONS

An alternative approach to melodic style that also allows playing of chromatic runs and scale patterns is to break the fretboard into localized scale positions. This allows great freedom for playing licks, especially those involving slides, pulloffs or hammerons, or single string runs through the scales. It is not as useful for melodic style because when playing on alternate strings you quickly run out of room with the closed position.

Another approach is to “connect” adjacent closed positions in order to extend the range of the position. This is a common approach in guitar – positions are connected by sliding up or down into an adjacent position.

The great Chet Atkins often achieved a similar effect to melodic style by simply playing an open string whenever it could be substituted in for a note he would otherwise play out of a closed position. Chet Atkins did not play “melodic” style per se, but he could leverage his knowledge of what notes he was playing out of closed position to opportunistically substitute an open string when he wanted to let the notes ring.

The following sections provide some background on closed positions for 5-string, and (hopefully) some ways to simplify the process of generalizing these positions across the fretboard to make them easier to remember and easier to play across keys.

MODAL FINGERING DIAGRAM FOR G MAJOR

These are the classic closed position scale patterns. Formally, these are the “modes” of the major scale. The top and bottom note of the 4th string identify the pattern – the first scale identified in the heading gives the mode for the lower note on the 4th string, and the second scale (after the /) gives the mode for the higher note. Alternatively (and probably the way most players use them) just think of them as various ways to access the scale depending upon where you are on the fretboard.

1. Ionian [D Major] / 5. Mixolydian [F#]

Longest run: [D-F#], Length 9

	0	1	3	5	7	10	12	15	17			
D	5	6	7	1	2	3	4	5	6	7	1	2
B	3	4	5	6	7	1	2	3	4	5	6	7
G	1	2	3	4	5	6	7	1	2	3	4	5
D	5	6	7	1	2	3	4	5	6	7	1	2
G	1				2	3	4	5	6	7	1	2

6. Aeolian [E Natural Minor] / 1. Ionian [G Major]

Longest run: [E-G], Length 10

	0	1	3	5	7	10	12	15	17			
D	5	6	7	1	2	3	4	5	6	7	1	2
B	3	4	5	6	7	1	2	3	4	5	6	7
G	1	2	3	4	5	6	7	1	2	3	4	5
D	5	6	7	1	2	3	4	5	6	7	1	2
G	1				2	3	4	5	6	7	1	2

7. Locrian [F#] / 2. Dorian [A]

Longest run: [F#-A], Length 10

	0	1	3	5	7	10	12	15	17			
D	5	6	7	1	2	3	4	5	6	7	1	2
B	3	4	5	6	7	1	2	3	4	5	6	7
G	1	2	3	4	5	6	7	1	2	3	4	5
D	5	6	7	1	2	3	4	5	6	7	1	2
G	1				2	3	4	5	6	7	1	2

2. Dorian [A] / 4. Lydian [C]

Longest run: [A-C], Length 10

	0	1	3	5	7	10	12	15	17			
D	5	6	7	1	2	3	4	5	6	7	1	2
B	3	4	5	6	7	1	2	3	4	5	6	7
G	1	2	3	4	5	6	7	1	2	3	4	5
D	5	6	7	1	2	3	4	5	6	7	1	2
G	1				2	3	4	5	6	7	1	2

3. Phrygian [B] / 5. Mixolydian [D]

Longest run: [B-D], Length 10

	0	1	3	5	7	10	12	15	17			
D	5	6	7	1	2	3	4	5	6	7	1	2
B	3	4	5	6	7	1	2	3	4	5	6	7
G	1	2	3	4	5	6	7	1	2	3	4	5
D	5	6	7	1	2	3	4	5	6	7	1	2
G	1				2	3	4	5	6	7	1	2

5. Mixolydian [D] / 6. Aeolian [E Natural Minor]

Longest run: [D-E], Length 9

	0	1	3	5	7	10	12	15	17			
D	5	6	7	1	2	3	4	5	6	7	1	2
B	3	4	5	6	7	1	2	3	4	5	6	7
G	1	2	3	4	5	6	7	1	2	3	4	5
D	5	6	7	1	2	3	4	5	6	7	1	2
G	1				2	3	4	5	6	7	1	2

ABSTRACT POSITION TEMPLATES

These are the movable scale patterns you get from abstracting out the patterns given above. In each case the scale degrees used are for the Root major scale. The two “anchor” notes are the upper and lower fret of the fourth string. One way to recall the first 3 abstract patterns is by noting that each of the second two differs from the first by a position shift of a single note.

6. Aeolian [6] / 1. Ionian [Root]

6			R
6		7	1
	5		6
2		3	4
6		7	1

2. Dorian [6] / 4. Lydian [Root]

6			R
6		7	1
#4	5		6
2		3	
6		7	1

3. Phrygian [6] / 5. Mixolydian [Root]

6			R
6	b7		1
	5		6
2		3	4
6	b7		1

7. Lochrian [7] / 2. Dorian [2]

7	R		
7	1		2
	6		7
3	4		5
7	1		2

5. Mixolydian [5] / 6. Aeolian [6]

	5		6
	5		6
	3	4	
7	1		2
	5		6

Mini Pattern 1.

			R
3	4		5
	2		3
			1

Mini Pattern 2.

		R		
4		5		6
(2)		3	(4)	
		1		2

Mini Pattern 3.

R				
		6	b7	
	4		5	
1		2		3

TRANSPOSING

Move a G position the following number of frets to transpose it to a different key:

- +2: A
- +3: Bb
- +5: C
- +7: D
- 5: D
- 4: Eb
- 3: E
- 2: F

Before:

G Major

6. Aeolian [E Natural Minor] / **1. Ionian** [G Major]

Longest run: [E-G], Length 10

	0	1	3	5	7	10	12	15	17				
D	5	6	7	1	2	3	4	5	6	7	1	2	
B	3	4	5	6	7	1	2	3	4	5	6	7	1
G	1	2	3	4	5	6	7	1	2	3	4	5	
D	5	6	7	1	2	3	4	5	6	7	1	2	
G	1				2	3	4	5	6	7	1	2	

After raising the entire pattern 7 frets:

D Major

6. Aeolian [B Natural Minor] / **1. Ionian** [D Major]

Longest run: [B-D], Length 10

	0	1	3	5	7	10	12	15	17				
D	1	2	3	4	5	6	7	1	2	3	4	5	
B	6	7	1	2	3	4	5	6	7	1	2	3	4
G	4	5	6	7	1	2	3	4	5	6	7	1	
D	1	2	3	4	5	6	7	1	2	3	4	5	
G	4				5	6	7	1	2	3	4	5	

POSITION SHIFTS

Major Scale

To use position shifts for converting one major scale to another by changing a note:

Position Shifts:

<u>Up by 5ths</u> (“Sharp” side of Circle)			<u>Up by Fourths</u> (“Flatted” Keys)		
From	To	Shift	From	To	Shift
C	G	F ⇒ F#	C	F	B ⇒ Bb
G	D	C ⇒ C#	F	Bb	E ⇒ Eb
D	A	G ⇒ G#	Bb	Eb	A ⇒ Ab
A	E	D ⇒ D#	Eb	Ab	D ⇒ Db
E	B	A ⇒ A#	Ab	Db	G ⇒ Gb
B	Gb/F#	E ⇒ E#/F	Db	Gb/F#	F ⇒ Fb
Gb/F#	Db	B ⇒ B#/C	Gb/F#	B	C ⇒ Cb

A mnemonic to remember in what order to add the sharps starting from C:
Father **C**harles **G**oes **D**own **A**nd **E**nds **B**attle.

Use this mnemonic to remember in what order to add the flats starting from C:
Battle **E**nds **A**nd **D**own **G**oes **F**ather **C**harles

EXAMPLE: Starting with the first position of G major:

From: G Major

6. Aeolian [E Natural Minor] / 1. Ionian [G Major]

Longest run: [E-G], Length 10

	0	1	3	5	7	10	12	15	17			
D	5	6	7	1	2	3	4	5	6	7	1	2
B	3	4	5	6	7	1	2	3	4	5	6	7
G	1	2	3	4	5	6	7	1	2	3	4	5
D	5	6	7	1	2	3	4	5	6	7	1	2
G	1				2	3	4	5	6	7	1	2

After shifting the C to C# (raising the 4 of G, which then becomes the 7 of D):

To: D Major

2. Dorian [E] / 4. Lydian [G]

Longest run: [E-G], Length 10

	0	1	3	5	7	10	12	15	17			
D	1	2	3	4	5	6	7	1	2	3	4	5
B	6	7	1	2	3	4	5	6	7	1	2	3
G	4	5	6	7	1	2	3	4	5	6	7	1
D	1	2	3	4	5	6	7	1	2	3	4	5
G	4				5	6	7	1	2	3	4	5

Major Pentatonic Scale

To use position shifts for converting one major pentatonic scale to another by changing a note:

Locate any closed position for any major pentatonic (12356) that you may already know. Now locate the root(s). Drop the string(s) for the root by a semitone, and you get the pentatonic 5 semitones down. I.e., going around the circle of fifths in the flatted direction, down a perfect 4th, or equivalently, to the V of the current key. Repeat this 4 times to find all five positions. Doing this the fifth time repeats the first position you started with, down a fret.

Example: Say you begin with F major pentatonic. Drop the F string(s) by a fret (to E) to obtain the C pentatonic. Drop the C strings (to B) to obtain G major pentatonic. Drop G to F# to obtain D pentatonic. Once more dropping D to C# giving the A pentatonic and you'll have traversed F,C,G,D,A. The next time (dropping the A) gives E, which repeats the first position (that was used for F) lowered by a fret. Etc.

In standard gDGBd tuning starting from F down the circle through A gives all five pentatonics positions that lie within the same region of fretboard. Then E gives the same position as the F, lowered by a fret, and the cycle repeats.

To go the other way around the circle, raise the 3rd. It now becomes the root of the IV.

1. I to V: Drop the Root. The dropped root becomes the 3 of the V.
2. I to IV: Raise the 3rd. The raised 3rd becomes the 1 of the V.

From: G Major

	0	1	3	5	7	10	12	15	17						
D	5	6		1											
B	3		5	6											
G	1	2		3											
D	5	6		1											
G	1														

Drop the 1 (G) to F#, which then becomes the 3 of the V (D):

To: D Major

	0	1	3	5	7	10	12	15	17						
D	1	2		3											
B	6		1	2											
G	4	5		6											
D	1	2		3											
G	4														

To reverse the operation, raise the 3rd, which becomes the 1 of the D's IV (G).