

Instrumental Tunings

The instrumental tunings are based on the tuning of instruments such as the balalaika, the charango, the dobro, and others. They are adapted for use in a six string setting by completing the

tunings from instruments with fewer than six strings in a sensible, though nonunique, manner. The Cittern (2) tuning, for example, extends the CGCGC tuning of the cittern to the six string tuning CGCGCG. The balalaika tuning concatenates the tunings of the bass (EAD) and primo balalaikas (EEA) to form the six string tuning EADEEA.

Players of these (and other) stringed instruments can easily use the chord charts presented here by ignoring the extra strings. A list of banjo, cittern (and other instruments such as the oud, bouzouki, pipa, ukelele) is given here to direct you to the appropriate tuning chart.

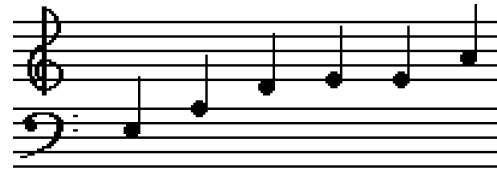
Banjo Tunings

G Tuning	X G D G B D	Open G
G Minor	X G D G Bb D	Open G Minor
G Modal	X G D G C D	Modal G
Open C	X G C G C E	Open C
Open C Minor	X G C G C Eb	Open C with string 1 lowered 1
Old-Time C	X G C G C D	Open C with string 1 lowered 2
D Tuning	X A D F# A D	Open D
	X F# D F# A D	Open D with string 5 lowered 3

Other Instruments

Bouzouki	X X G D A D	strings 2-5 of Cittern 1 transposed up 2
	X X G D A E	Lefty Tuning strings 1-4
Cittern	X D G D A D	strings 2-6 of Cittern 1 transposed up 2
	X D G D G D	strings 1-5 of Cittern 2 transposed down 5
	X D G D A E	strings 2-6 of Mandoguitar with string 6 raised 2
	X D A D A D	strings 2-6 of Cittern 1 with string 2 raised 2
	X G D G D G	strings 2-6 of Cittern 2 transposed up 2
	X G C G C G	strings 2-6 of Cittern 2 transposed down 5
	X C G D A E	strings 1-5 of Cittern 2
	X G C G D G	strings 2-6 of Mandoguitar
Mandolin	X G D A E X	strings 2-6 of Cittern 1 transposed down 5
Oud	D E A D G C	Mandoguitar strings 2-5
		All Fourths Tuning transposed down 5
		with string 6 raised 3
Pipa	X X A D E A	strings 1-4 of Pelican transposed up 2
Ukelele	X X D G B E	strings 1-4 of Standard tuning
	X X A D F# B	strings 1-4 Standard transposed down 5
	X X G C E A	strings 1-4 Standard transposed up 5

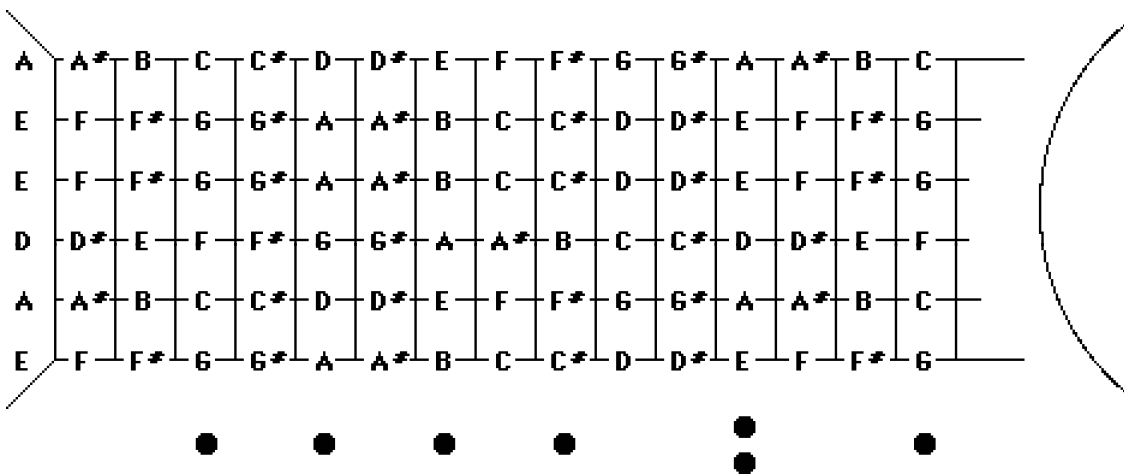
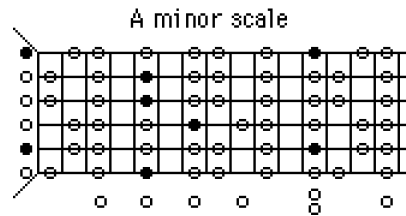
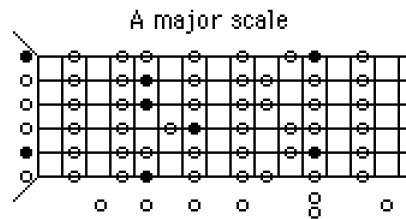
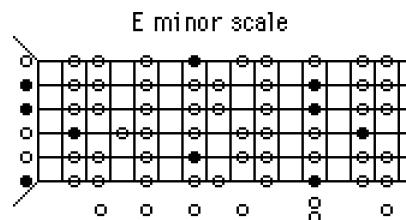
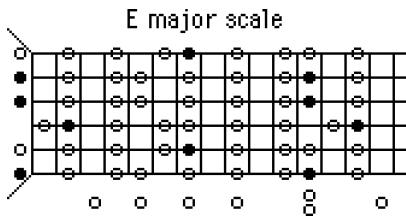
The Balalaika Tuning



Strings:	6	5	4	3	2	1
Notes:	e	a	d	e	e	a
MIDI #:	52	57	62	64	64	69
Retune:	0	0	0	-3	-7	-7
Fret:	5	5	2	0	5	

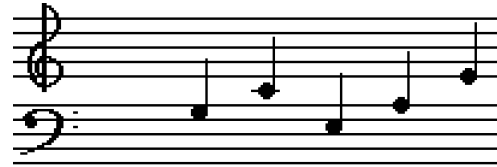
The balalaika is a three stringed Russian folk instrument with a characteristic triangle shaped body. The balalaika family extends from the large bass (tuned EAD) through the tenor, alto, and the prima balalaika (which is tuned EEA). The balalaika tuning concatenates the bass and prima tunings onto one fretboard for an interesting, if not authentic, tuning.

The strength of the tuning lies in its natural keys, E and A, and in the trance like effect of the two E strings tuned to the same note. Unless you restrung the guitar, the second string is very loose, which gives the tuning a "sitar" like quality.



C major 	D major 	F major 	G major 	A major
A major 	C minor 	D minor 	E minor 	A minor
A minor 	E minor 	C 7th 	C 7th 	D 7th
E 7th 	F 7th 	A 7th 	A 7th 	C maj 7
D maj 7 	E maj 7 	F maj 7 	F maj 7 	F maj 7
D min 7 	A min 7 	A min 7 	B min 7 	A sus 4

The Charango Tuning

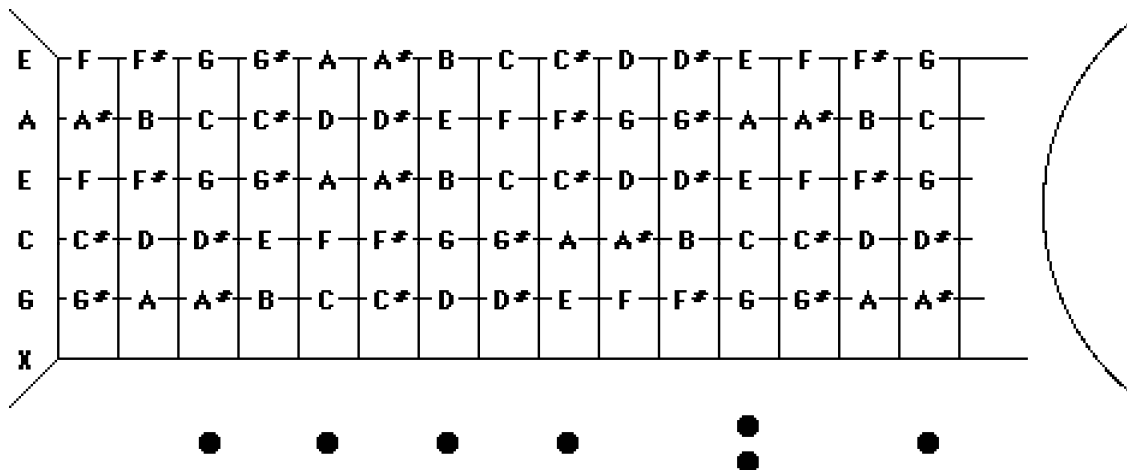
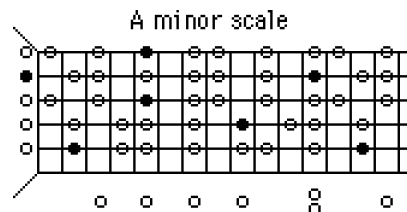
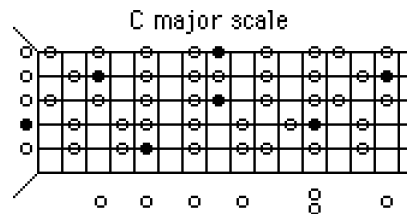


Strings:	6	5	4	3	2	1
Notes:	X	g	c	e	a	e
MIDI #:		55	60	52	57	64

The charango is a ten stringed instrument from the Andes region of Peru and Bolivia that often uses an armadillo shell as a resonator. The instrument is typically held high up on the chest and the strings are tuned in pairs like a mandolin or a 12 string guitar. The third pair is usually tuned to octaves, while the other four pairs are in unison. Perhaps the most striking aspect of the tuning is that the strings do not ascend uniformly from low to high. Rather, they jump up, down, up and up, forming an Am7 chord (with an E bass) all within one octave. This makes for some very interesting finger picking patterns since the bass (on string 3) tends to be syncopated against the beat.

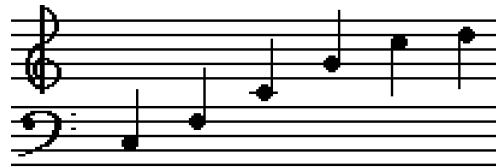
over the strings. The loose wrist of the style is reminiscent of the rapid strumming of "spanish" style guitar, though the higher octave of the charango gives it a unique flavor.

In the Andean musical tradition, the charango serves three roles. When playing melody lines, its double strings tend to give it a mandolin-like sound. In its finger picking style, it tends to sound very "fast," playing a role analogous to a banjo in the American folk tradition. Finally, charango players have perfected a rapid strum in which the first finger of the right hand flails rapidly back and forth



<p>C major</p>	<p>C major</p>	<p>C major</p>	<p>D major</p>	<p>F major</p>
<p>A major</p>	<p>E major</p>	<p>C minor</p>	<p>C minor</p>	<p>D minor</p>
<p>E minor</p>	<p>A minor</p>	<p>C minor</p>	<p>E minor</p>	<p>D minor</p>
<p>A minor</p>	<p>B minor</p>	<p>C 7th</p>	<p>C 7th</p>	<p>D 7th</p>
<p>D 7th</p>	<p>E 7th</p>	<p>E 7th</p>	<p>C min 7</p>	<p>D min 7</p>
<p>E min 7</p>	<p>C maj 7</p>	<p>G maj 7</p>	<p>C sus 4</p>	<p>C 7sus4</p>

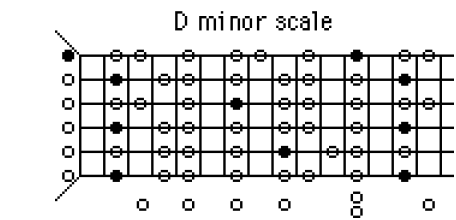
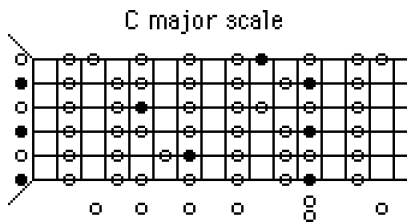
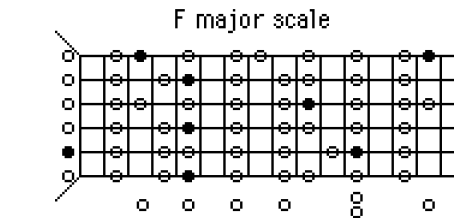
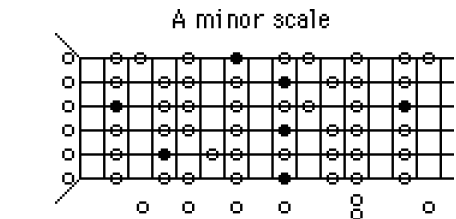
Cittern Tuning One



Strings:	6	5	4	3	2	1
Notes:	c	f	c	g	c	d
MIDI #:	48	53	60	67	72	74
Retune:	- 4	- 4	- 2	0	+ 1	- 2
Fret:	5	7	7	5	2	

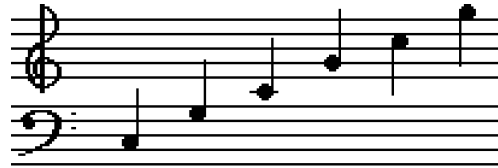
The cittern is an overgrown mandolin with an extra pair of strings. They can be tuned in a variety of open tunings, such as CFCGC, DGDAD, or GCGDG, all of which can be played using the fingerings shown here for strings 2 through 6. To play in DGDAD, transpose all chord names down two steps. To play in GCGDG, transpose down 5 steps (or capo up two and five steps, respectively).

There are several other popular cittern tunings which can be played using the Cittern 2 tuning on the next page. The table "Cross Index of Tunings" contains a complete list and more information.



D	D#	E	F	F#	G	G#	A	A#	B	C	C#	D	D#	E	F
C	C#	D	D#	E	F	F#	G	G#	A	A#	B	C	C#	D	D#
G	G#	A	A#	B	C	C#	D	D#	E	F	F#	G	G#	A	A#
C	C#	D	D#	E	F	F#	G	G#	A	A#	B	C	C#	D	D#
F	F#	G	G#	A	A#	B	C	C#	D	D#	E	F	F#	G	G#
C	C#	D	D#	E	F	F#	G	G#	A	A#	B	C	C#	D	D#

Cittern Tuning Two



Strings:	6	5	4	3	2	1
Notes:	c	g	c	g	c	g
MIDI #:	48	55	60	67	72	79
Retune:	- 4	- 2	- 2	0	+ 1	+ 3
Fret:	7	5	7	5	7	

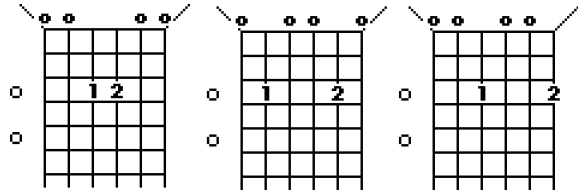
The three pairs of fifths span three octaves and form a wider tuning than usual. The bass is deeper and the treble is higher. Chords tend to sound very "open," with large spacing between adjacent tones, and scales invariably require sliding up and down the fretboard. The stretches are just too long to comfortably play in a single position.

Barring a finger across all six strings sounds a chord that is neither major nor minor, and the three fifths tuning lends itself nicely to pieces that are tonally ambiguous.

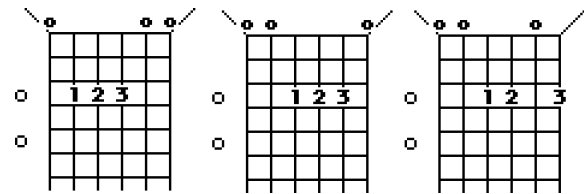
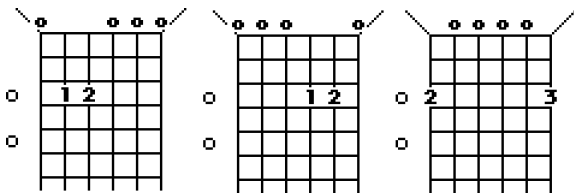
Transposing a riff or finger pattern by an octave is simply a matter of moving over two strings. New fingerings for chords can be found by changing strings. For instance, the C minor 7th

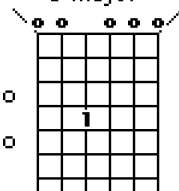
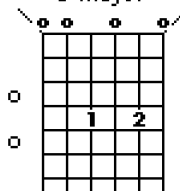
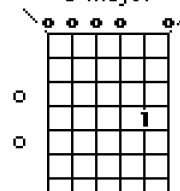
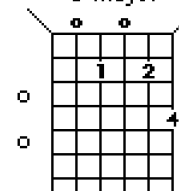
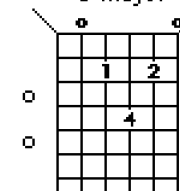
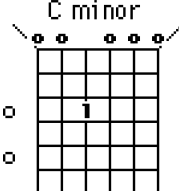
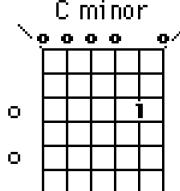
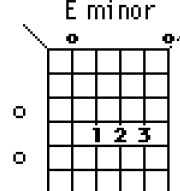
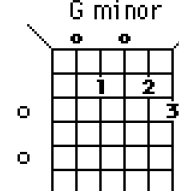
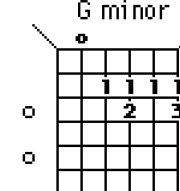
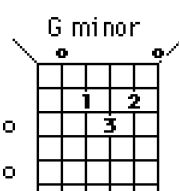
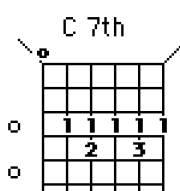
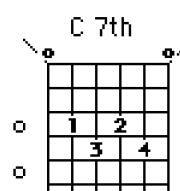
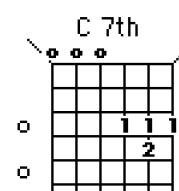
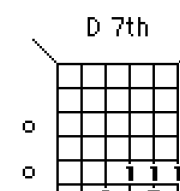
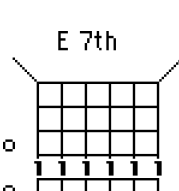
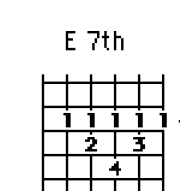
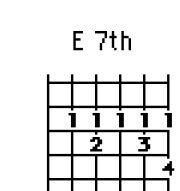
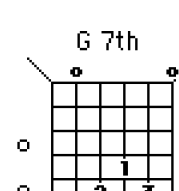
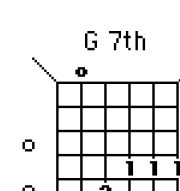
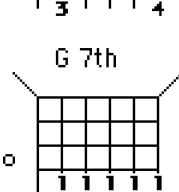
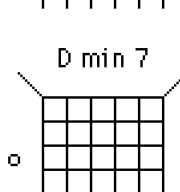
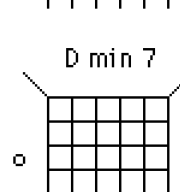
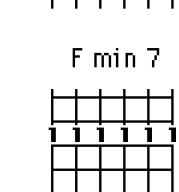
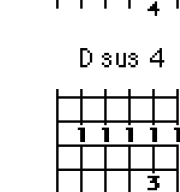
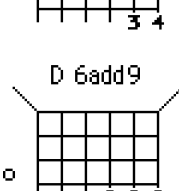
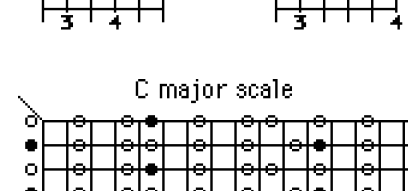
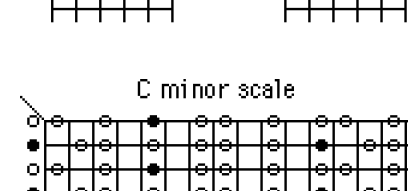
chord can be fingered in numerous ways.

These chord forms are all related by moving the third or fourth finger (or both) two strings



up or down. With this trick, you can form hundreds of chords from a few sample chords. Doubling some of the notes gives even more possibilities. Can you think of others?

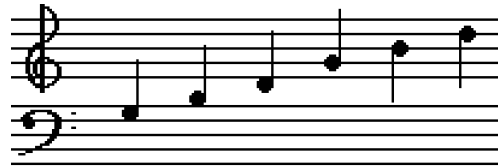
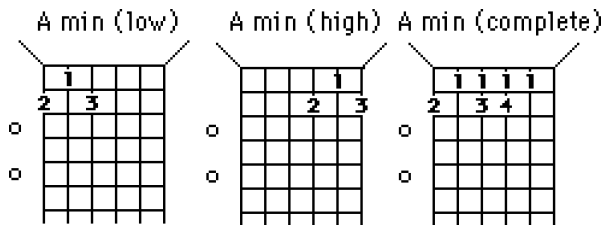


<p>C major</p> 	<p>C major</p> 	<p>C major</p> 	<p>G major</p> 	<p>G major</p> 
<p>C minor</p> 	<p>C minor</p> 	<p>E minor</p> 	<p>G minor</p> 	<p>G minor</p> 
<p>G minor</p> 	<p>C 7th</p> 	<p>C 7th</p> 	<p>C 7th</p> 	<p>D 7th</p> 
<p>E 7th</p> 	<p>E 7th</p> 	<p>E 7th</p> 	<p>G 7th</p> 	<p>G 7th</p> 
<p>G 7th</p> 	<p>D min 7</p> 	<p>D min 7</p> 	<p>F min 7</p> 	<p>D sus 4</p> 
<p>D 6add9</p> 	<p>C major scale</p> 		<p>C minor scale</p> 	

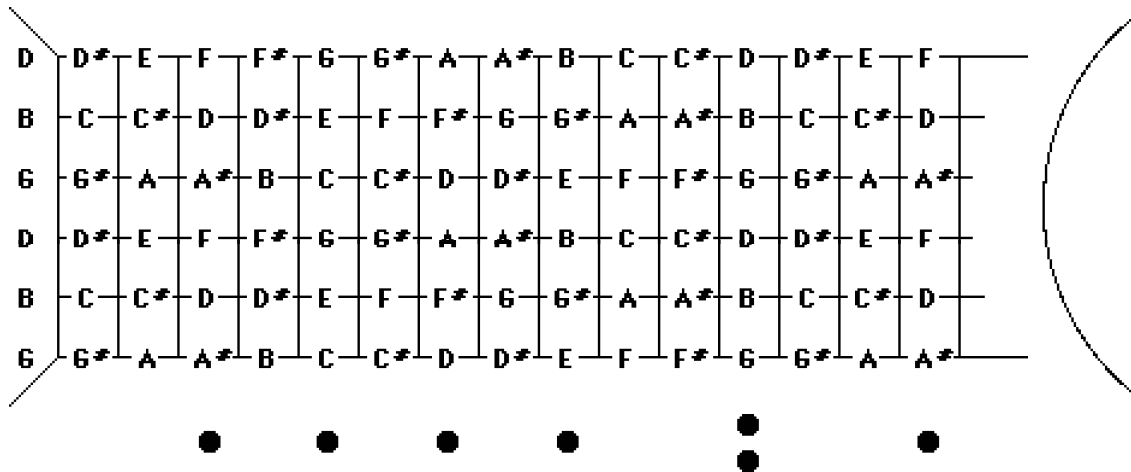
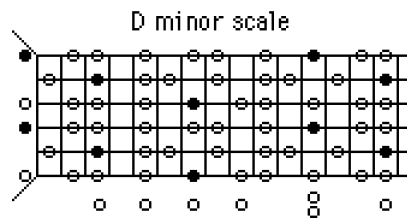
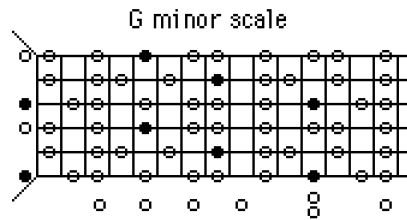
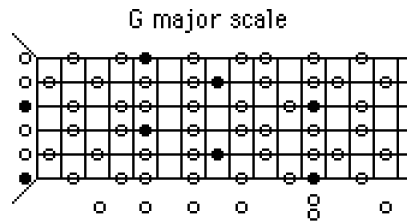
The Dobro Tuning

The dobro is a type of guitar with a metal resonator. It is usually held horizontally on the lap and played with a metal bar that acts like a moveable fret. It is typically tuned to a G major chord that is different from the G major chord of the Open G tuning (DGDGBD), though the three highest strings are identical. Consequently, the high three strings of both tunings can be played the same.

The dobro tuning offers two triplets of strings tuned an octave apart, which makes it easy to visualize chord forms and to transpose them up and down octaves. For instance, the three note A minor chord can be played either high or low, or the two octaves can be combined to form a more complete version.

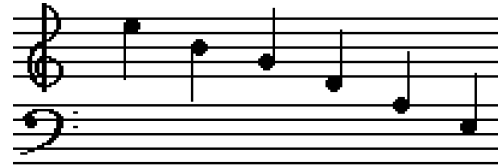


Strings:	6	5	4	3	2	1
Notes:	g	b	d	g	b	d
MIDI #:	55	59	62	67	71	74
Retune:	+ 3	+ 2	0	0	0	- 2
Fret:	4	3	5	4	3	



C major 	D major 	G major 	E major 	A major
B major 	A minor 	B minor 	B minor 	F minor
G minor 	C 7th 	C 7th 	E 7th 	F 7th
F 7th 	G 7th 	C min 7 	D min 7 	F min 7
G min 7 	A min 7 	G sus 4 	G 7sus4 	G maj 6
G maj 6 	G min 6 	G maj 9 	G maj 9 	C dom 9

The Lefty Tuning

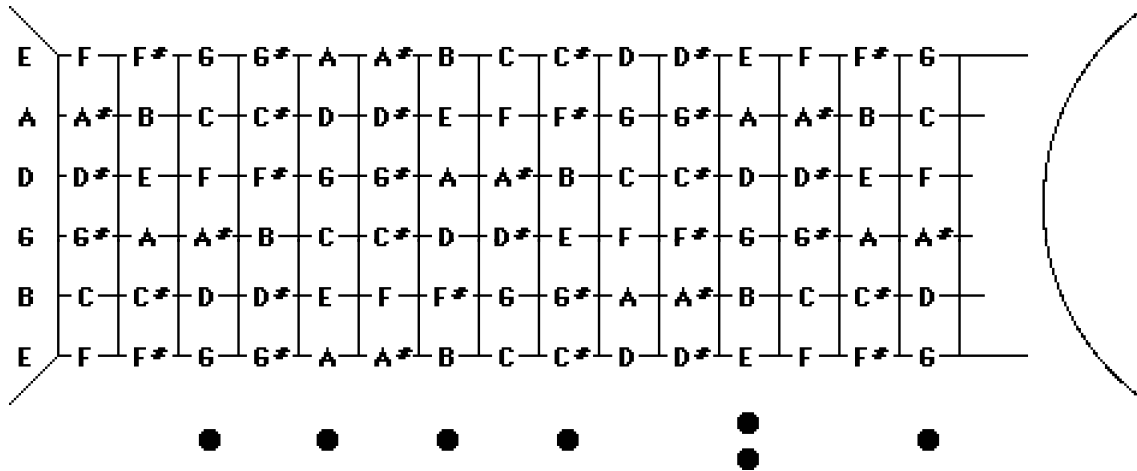
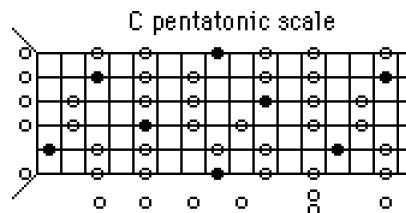
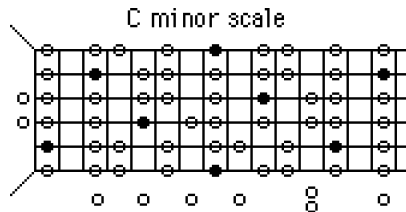
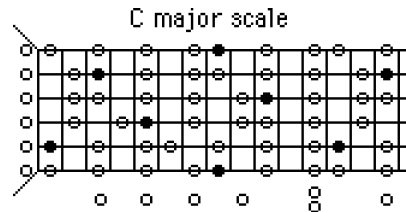


Strings:	6	5	4	3	2	1
Notes:	e	b	g	d	a	e
MIDI #:	76	71	67	62	57	52

Watch a left handed guitarist play a right handed guitar - they play chords backwards - and finger them strangely, too. You can simulate this left/right confusion by restringing your guitar from high to low (or by programming a MIDI guitar controller). Interestingly, it doesn't take long to become quite proficient at left hand guitar (assuming you start out proficient at right hand guitar!), because the left/right symmetry makes many chords easier to remember. In general, scales are more confusing than chords - the sound often rises when you expect it to fall, and falls when you think it should rise. Many standard strums take on an interesting character because the "alternating bass" turns into an "alternating treble."

Some chords are easier to finger, like the barred E major. Some are more difficult: try to play an E ninth at the 7th fret. There are some surprises, too, some chords that "don't exist" in the standard tuning (note the F minor at the fifth fret).

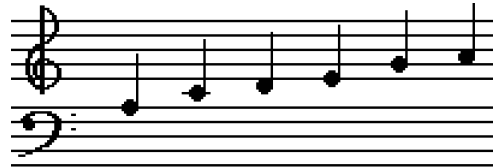
Hmm, I wonder what other tunings would be fun in their "lefty" versions?



<p>C major</p>	<p>D major</p>	<p>E major</p>	<p>F major</p>	<p>G major</p>
<p>A major</p>	<p>B major</p>	<p>C major</p>	<p>E major</p>	<p>F major</p>
<p>G major</p>	<p>G major</p>	<p>A major</p>	<p>B major</p>	<p>D minor</p>
<p>E minor</p>	<p>F minor</p>	<p>A minor</p>	<p>B minor</p>	<p>F minor</p>
<p>G minor</p>	<p>C 7th</p>	<p>C 7th</p>	<p>D 7th</p>	<p>F 7th</p>
<p>F 7th</p>	<p>F maj 7</p>	<p>F maj 7</p>	<p>D sus 4</p>	<p>A sus 4</p>

<p>C major</p>	<p>F major</p>	<p>F major</p>	<p>C minor</p>	<p>C minor</p>
<p>D minor</p>	<p>E minor</p>	<p>F minor</p>	<p>G minor</p>	<p>C 7th</p>
<p>D 7th</p>	<p>F 7th</p>	<p>F 7th</p>	<p>G 7th</p>	<p>C min 7</p>
<p>C min 7</p>	<p>E min 7</p>	<p>G min 7</p>	<p>A# min 7</p>	<p>C maj 7</p>
<p>G sus 4</p>	<p>C 7sus4</p>	<p>C dom 9</p>	<p>C pandi 3</p>	<p>C pandi 3</p>
<p>C maj 6</p>	<p>C min 6</p>	<p>C pandi 4</p>	<p>C pandi 5</p>	<p>C pandi 6</p>

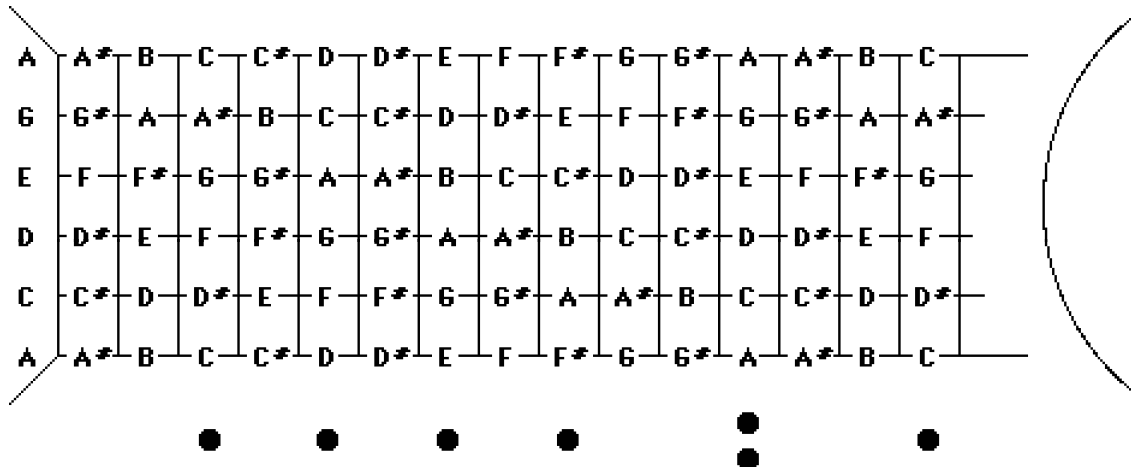
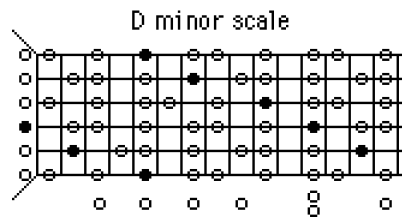
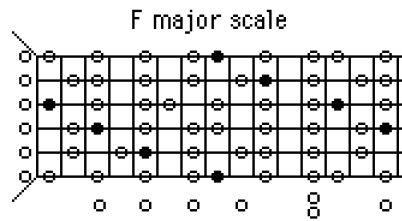
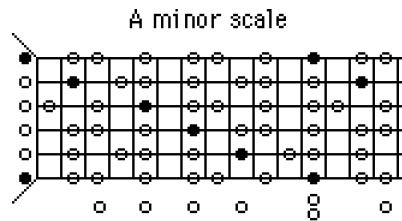
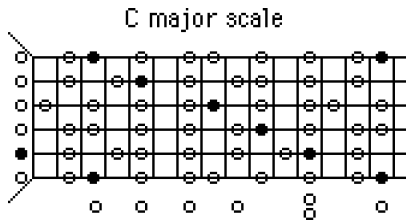
The Pentatonic Tuning



Strings:	6	5	4	3	2	1
Notes:	a	c	d	e	g	a
MIDI #:	57	60	62	64	67	69

The six strings of the pentatonic tuning are formed from a single octave of the pentatonic scale. The tuning is highly compressed since all six strings span only a single octave. Chords tend to contain multiple copies of tones which gives an overall impression of chorusing and depth.

For those using a MIDI guitar controller, this is an excellent opportunity to assign each string to a different sound, since then multiple tones will not be exact copies. Then, changing the inversion or position of the chord changes the timbre.



<p>C major</p>	<p>D major</p>	<p>F major</p>	<p>A major</p>	<p>D major</p>
<p>E major</p>	<p>G major</p>	<p>A major</p>	<p>D minor</p>	<p>E minor</p>
<p>A minor</p>	<p>D minor</p>	<p>C 7th</p>	<p>C 7th</p>	<p>D 7th</p>
<p>A 7th</p>	<p>A 7th</p>	<p>F 7th</p>	<p>C min 7</p>	<p>D min 7</p>
<p>A min 7</p>	<p>B min 7</p>	<p>B min 7</p>	<p>F min 7</p>	<p>G min 7</p>
<p>D 7sus4</p>	<p>A sus 4</p>	<p>A maj 6</p>	<p>A min 6</p>	<p>A min 9</p>