

# **How To Determine Chords for Mountain Dulcimer Playing** **(How The Person Who Wrote the Chord Book Figured It Out)**

by **Roger Huffmaster**

Did you ever wonder how the person who wrote the mountain dulcimer chord chart or book that you refer to figured out the chords? Surely there was some hocus-pocus, some magic?.....eye of newt, tongue of toad, and PRESTO, chords! Well, not really. There is a logical basis for chords. This is it:

## **The Basics:**

There are TWELVE musical notes. A, A# or Bb, B, C, C# or Db, D, D# or Eb, E, F, F# or Gb, G, G# or Ab. The sharp of one note is the flat of the next note. There is no note between B and C and between E and F. Trust me. Explaining that is beyond this article.

There are SEVEN musical notes available in each key. Which seven are defined by the key. In the key of D (two sharps, as shown in sheet music notation), they are: D, E, F#, G, A, B, and C#. In the key of A (three sharps), they are: A, B, C#, D, E, F# and G#.

## **Major Chords:**

A basic CHORD is a combination of THREE musical notes. The definition of a major chord is a root note, a “third” note, and a “fifth” note. This refers to the relationship of the notes within a key. An example in the key of D:

|                     | <b>I (Root)</b> | <b>II</b> | <b>III (Third)</b> | <b>IV</b> | <b>V (Fifth)</b> | <b>VI</b> | <b>VII</b> |
|---------------------|-----------------|-----------|--------------------|-----------|------------------|-----------|------------|
| <b>Musical Note</b> | D               | E         | F#                 | G         | A                | B         | C#         |

So, a D major chord is a combination of three musical notes, the root (D), the third (F#) and the fifth (A). ANY combination of those notes fingered on a dulcimer fretboard is a valid D chord!

This is the same as above, using the key of A (three sharps) as an example:

|                     | <b>I (Root)</b> | <b>II</b> | <b>III (Third)</b> | <b>IV</b> | <b>V (Fifth)</b> | <b>VI</b> | <b>VII</b> |
|---------------------|-----------------|-----------|--------------------|-----------|------------------|-----------|------------|
| <b>Musical Note</b> | A               | B         | C#                 | D         | E                | F#        | G#         |

In the key of A, an A major chord is the root (A), the third (C#), and the fifth (E). Any combination of those notes fingered on a dulcimer is a valid A chord.

These are the notes on a mountain dulcimer fretboard up to the 10<sup>th</sup> fret when tuned in DAD (Mixolydian):

| Fret Number: | 0 (open) | 1 | 2  | 3 | 4 | 5  | 6 | 6 ½ | 7 | 8 | 9  | 10 |
|--------------|----------|---|----|---|---|----|---|-----|---|---|----|----|
| Bass         | D        | E | F# | G | A | B  | C | C#  | D | E | F# | G  |
| Middle       | A        | B | C# | D | E | F# | G | G#  | A | B | C# | D  |
| Melody       | D        | E | F# | G | A | B  | C | C#  | D | E | F# | G  |

It can be seen that there are several possibilities for a valid D major chord. With the open strings as DAD, simply fretting either D string at the second fret gives you a D, A and an F# note, which is a D chord. Fretting the bass string at the second fret(F#), the middle string at the third fret(D) and the melody string(s) at the fourth fret (A) gives another D chord. Or even fretting the bass string at the seventh fret (D), the middle string at the seventh fret (A) and the melody string(s) at the ninth fret (F#)...this also gives a D chord.

For the A major chord, one possibility is fretting the bass string at the first fret (E), the middle string at the second fret (C#) and the melody string(s) at the fourth fret (A). Another is the bass string at the fourth fret (A), the middle string at the fourth fret (E), and the melody string(s) at the 6 ½ fret (C#). Any combination of the A, C# and E notes is a valid A major chord.

### Minor Chords:

Now.....how are MINOR chords created? The definition of a minor chord is a root, a fifth and a FLATTED third. What this means is the note that was used for the third in a major chord is reduced one-half step to make it flat (lower in pitch) relative to the normal third. So.....a D-minor chord is made up of the notes D, A and **F** (NOT F#). The A-minor chord is made up of the notes A, E and **C** (NOT C#).

Since a mountain dulcimer is not a chromatic instrument (with all notes available on the fretboard, like a guitar), the flatted notes are not available unless you happen to have a half-fret available at the right place. This limits the availability of true minor chords on the mountain dulcimer. Looking at the fret board in DAD tuning above, it can be seen that there is no F note available, so no D-minor chord is possible. An A-minor chord is possible if you fret the bass and middle strings at the 4<sup>th</sup> fret, and the melody string(s) at the 6<sup>th</sup> fret, or the bass at the 6<sup>th</sup> fret and the middle and melody strings at the 4<sup>th</sup> fret.

If the flatted third is not available to make a true minor chord, what do you do?

## Chords Neither Major Nor Minor – “Fifth” or “Power” Chords

There exists chords that are neither major nor minor. They are called “5” or “fifth” chords (like A5, B5, C5...), but to those familiar with rock music, they are called “power chords”, as they are used extensively in rock and heavy metal music. These chords consist of only the root note plus the fifth note, with no third note used to create the chord. Since the third note is what determines whether the chord is major or minor, these chords are NEITHER. They simply provide the base chord tone.

This simplifies playing a mountain dulcimer if properly applied. Again, here are the notes on the fretboard in DAD tuning:

| Fret Number: | 0 (open) | 1 | 2  | 3 | 4 | 5  | 6 | 6½ | 7 | 8 | 9  | 10 |
|--------------|----------|---|----|---|---|----|---|----|---|---|----|----|
| Bass         | D        | E | F# | G | A | B  | C | C# | D | E | F# | G  |
| Middle       | A        | B | C# | D | E | F# | G | G# | A | B | C# | D  |
| Melody       | D        | E | F# | G | A | B  | C | C# | D | E | F# | G  |

For the D5 chord, all that is required is to fret the D (root) and the A (fifth) notes. For the A5 chord, the A (root) and E (fifth) notes are required. It can be seen above that the D and A notes for the D5 are very nicely all in the same fret!!!! Ditto for the A5 chord, the A and E notes are in the same fret.

So, a D5 chord can be played by simply strumming the open strings of a DAD-tuned mountain dulcimer. Hold down all the strings at the first fret and an E5 chord can be played. F#5 at the second fret, G5 at the third fret, A5 at the fourth fret, and so on up the fretboard.

Since the fifth chord is neither major nor minor, it can be used interchangeably when either a major or minor chord is needed. A useful survival technique when playing a mountain dulcimer in a jam, especially if the songs are key of D, is to simply barre chord (hold all the strings down) at a fret. The open strum is D, the third fret is G and the fourth fret is A. The barre chords for these can be used when either major or minor chords are required. If a B-minor chord is required for a song, barre chording the fifth fret will serve perfectly well.

The following table summarizes what fifth chords are available at each fret in DAD or DAA tuning:

| Fret Number: | 0 (open) | 1       | 2         | 3       | 4       | 5       | 6       | 6½        | 7       | 8       | 9         | 10      |
|--------------|----------|---------|-----------|---------|---------|---------|---------|-----------|---------|---------|-----------|---------|
| Chord        | D or Dm  | E or Em | F# or F#m | G or Gm | A or Am | B or Bm | C or Cm | C# or C#m | D or Dm | E or Em | F# or F#m | G or Gm |

## Dominant Seventh Chords

The other type of chord commonly used in mountain dulcimer playing is the dominant seventh chord, written as A7, D7, etc. The dominant seventh chord is created by adding the FLATTED “seventh” note to the root, third and fifth used for a major chord.

The notes in the key of D, with the seventh illustrated:

|                     | <b>I (Root)</b> | <b>II</b> | <b>III (Third)</b> | <b>IV</b> | <b>V (Fifth)</b> | <b>VI</b> | <b>VII (Seventh)</b> |
|---------------------|-----------------|-----------|--------------------|-----------|------------------|-----------|----------------------|
| <b>Musical Note</b> | D               | E         | F#                 | G         | A                | B         | C#                   |

The notes in the key of A, with the seventh illustrated:

|                     | <b>I (Root)</b> | <b>II</b> | <b>III (Third)</b> | <b>IV</b> | <b>V (Fifth)</b> | <b>VI</b> | <b>VII (Seventh)</b> |
|---------------------|-----------------|-----------|--------------------|-----------|------------------|-----------|----------------------|
| <b>Musical Note</b> | A               | B         | C#                 | D         | E                | F#        | G#                   |

With a mountain dulcimer with 3 courses of strings (a doubled pair is one course), it can be seen that it is impossible to create four different notes simultaneously, so a true dominant seventh chord is not possible. However, one can do a partial dominant seventh chord by fingering THREE of the four notes; preferably the root and the seventh should be used with either the third or fifth.

For the D7 chord, the four notes to be used are D, F#, A and C(the flatted note to C#), so a good partial D7 would be any combination of D, F# and C or D, A, and C.

For the A7 chord, the four notes are A, C#, E and G(the flatted note to G#), so a good partial A7 would be A, C# and G, or A, E and G.

## Tunings Other Than Mixolydian (DAD)

How do the principles of determining chords stated above apply to other tunings? The principles do not change, simply the frets at which the chords are played. The determination of major, minor, fifth and seventh chords is exactly the same, using the same notes.

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## Appendix 1 – Notes On Each String For Common Tunings

Notes at each fret position for common string tunings, to assist you in determining your own chords:

|                     |                 |          |          |          |          |          |          |           |          |          |          |           |
|---------------------|-----------------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|-----------|
| <b>Fret Number:</b> | <b>0 (open)</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>6½</b> | <b>7</b> | <b>8</b> | <b>9</b> | <b>10</b> |
| <b>Note:</b>        | A               | B        | C#       | D        | E        | F#       | G        | G#        | A        | B        | C#       | D         |

|                     |                 |          |          |          |          |          |          |           |          |          |          |           |
|---------------------|-----------------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|-----------|
| <b>Fret Number:</b> | <b>0 (open)</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>6½</b> | <b>7</b> | <b>8</b> | <b>9</b> | <b>10</b> |
| <b>Note:</b>        | B               | C#       | D#       | E        | F#       | G#       | A        | A#        | B        | C#       | D#       | E         |

|                     |                 |          |          |          |          |          |          |           |          |          |          |           |
|---------------------|-----------------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|-----------|
| <b>Fret Number:</b> | <b>0 (open)</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>6½</b> | <b>7</b> | <b>8</b> | <b>9</b> | <b>10</b> |
| <b>Note:</b>        | C               | D        | E        | F        | G        | A        | B        | C         | D        | E        | F        | G         |

|                     |                 |          |          |          |          |          |          |           |          |          |          |           |
|---------------------|-----------------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|-----------|
| <b>Fret Number:</b> | <b>0 (open)</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>6½</b> | <b>7</b> | <b>8</b> | <b>9</b> | <b>10</b> |
| <b>Note:</b>        | D               | E        | F#       | G        | A        | B        | C        | C#        | D        | E        | F#       | G         |

|                     |                 |          |          |          |          |          |          |           |          |          |          |           |
|---------------------|-----------------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|-----------|
| <b>Fret Number:</b> | <b>0 (open)</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>6½</b> | <b>7</b> | <b>8</b> | <b>9</b> | <b>10</b> |
| <b>Note:</b>        | E               | F#       | G#       | A        | B        | C#       | D        | D#        | E        | F#       | G#       | A         |

|                     |                 |          |          |          |          |          |          |           |          |          |          |           |
|---------------------|-----------------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|-----------|
| <b>Fret Number:</b> | <b>0 (open)</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>6½</b> | <b>7</b> | <b>8</b> | <b>9</b> | <b>10</b> |
| <b>Note:</b>        | F#              | G#       | A#       | B        | C#       | D#       | E        | F         | F#       | G#       | A#       | B         |

|                     |                 |          |          |          |          |          |          |           |          |          |          |           |
|---------------------|-----------------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|-----------|
| <b>Fret Number:</b> | <b>0 (open)</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>6½</b> | <b>7</b> | <b>8</b> | <b>9</b> | <b>10</b> |
| <b>Note:</b>        | G               | A        | B        | C        | D        | E        | F        | F#        | G        | A        | B        | C         |

**Note:** As in all things with a human involvement, mistakes are possible, so if you believe you have found a mistake, please contact me at [ruffmas@yahoo.com](mailto:ruffmas@yahoo.com) and let me know. Thank you.

## Appendix 2 – Mixolydian (DAD) Chords:

Given as fret numbers for each of the three courses, from bass to middle to melody.

| Fret Number:  | 0 (open) | 1 | 2  | 3 | 4 | 5  | 6 | 6½ | 7 | 8 | 9  | 10 |
|---------------|----------|---|----|---|---|----|---|----|---|---|----|----|
| <b>Bass</b>   | D        | E | F# | G | A | B  | C | C# | D | E | F# | G  |
| <b>Middle</b> | A        | B | C# | D | E | F# | G | G# | A | B | C# | D  |
| <b>Melody</b> | D        | E | F# | G | A | B  | C | C# | D | E | F# | G  |

**A**: (notes are A, C# and E) 124, 421, 446, 644, 6½ 78, 876½, 6½ 08, 806½

**A5**: (notes are A and E) 444, 104, 401

**A7** (partial): (notes are A, C# and G, or A, E and G) 423, 324, 103, 301

**B**: (notes are B, D# and F#) **None possible**, no D# note available

**B5**: (notes are B and F#) 555, 212

**B7** (partial): (notes are B, D# and A or B, F# and A) 554, 455, 502, 205

**C**: (notes are C, E and G) 643, 346, 668, 866

**C5**: (notes are C and G) 666

**C7** (partial): (notes are C, E and A#, or C, G and A#) **None possible**, no A# note available

**D**: (notes are D, F# and A) 002, 200, 234, 432, 779, 977, 754, 457

**D5**: (notes are D and A) 000, 777, 034, 430

**D7** (partial): (notes are D, F# and C, or D, A and C) 006, 600, 756, 657

**E**: (notes are E, G# and B) 8 6 ½ 5, 5 6 ½ 8

**E5**: (notes are E and B) 111, 888, 145, 541

**E7** (partial): (notes are E, G# and D, or E, B and D) 8 6 ½ 7, 7 6 ½ 8, 110, 011, 887, 788, 880, 088

**F**: **None possible**, no F note available

**F#**: (notes are F#, A# and C#) **None possible**, no A# note available

**F#5**: (notes are F# and C#) 222, 999, 256½, 6½ 52

**G**: (notes are G, B and D) 310, 013, 335, 533, 567, 765, 78 10, 10 87

**G5**: (notes are G and D) 333, 10 10 10, 063, 360

**G7** (partial): (notes are G, B and F or G, D and F) **None possible**, no F note available

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### Appendix 3 – Ionian (DAA) Chords:

Given as fret numbers for each of the three courses, from bass to middle to melody.

| <b>Fret Number:</b> | <b>0 (open)</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>6½</b> | <b>7</b> | <b>8</b> | <b>9</b> | <b>10</b> |
|---------------------|-----------------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|-----------|
| <b>Bass</b>         | D               | E        | F#       | G        | A        | B        | C        | C#        | D        | E        | F#       | G         |
| <b>Middle</b>       | A               | B        | C#       | D        | E        | F#       | G        | G#        | A        | B        | C#       | D         |
| <b>Melody</b>       | A               | B        | C#       | D        | E        | F#       | G        | G#        | A        | B        | C#       | D         |

**A:** (notes are A, C# and E) 120, 102, 442, 424, 6½ 7 4, 6½ 4 7

**A5:** (notes are A and E) 444, 100, 401

**A7** (partial): (notes are A, C# and G, or A, E and G) 6½ 7 6, 6½ 6 7, 446, 464, 304, 340, 876, 867

**B:** (notes are B, D# and F#) **None possible**, no D# note available

**B5:** (notes are B and F#) 555, 211

**B7** (partial): (notes are B, D# and A or B, F# and A) 550, 505, 557, 575

**C:** (notes are C, E and G) 646, 664

**C5:** (notes are C and G) 666

**C7** (partial): (notes are C, E and A#, or C, G and A#) **None possible**, no A# note available

**D:** (notes are D, F# and A) 050, 005, 203, 230, 757, 775, 9 7 10, 9 10 7

**D5:** (notes are D and A) 000, 777, 030, 003, 433

**D7** (partial): (notes are D, F# and C, or D, A and C) 603, 630

**E:** (notes are E, G# and B) 8 6½ 8, 5 6½ 4

**E5:** (notes are E and B) 111, 888, 141, 544

**E7** (partial): (notes are E, G# and D, or E, B and D) 014, 041, 4 6½ 7, 7 4 6½, 113, 131, 543, 534, 8 8 10, 8 10 8

**F:** **None possible**, no F note available

**F#:** (notes are F#, A# and C#) **None possible**, no A# note available

**F#5:** (notes are F# and C#) 222, 999, 6½ 5 5

**G:** (notes are G, B and D) 313, 331, 768, 786, 563, 536

**G5:** (notes are G and D) 333, 10 10 10, 066, 363

**G7** (partial): (notes are G, B and F or G, D and F) **None possible**, no F note available

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