

# Using the Tuning Spreadsheet

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**Note: This article is in reference to this [Excel spreadsheet](#). Right-click and save the spreadsheet to the location of your liking. It works great, but you must have Excel on your computer to use it.**

**Here's a portion of the spreadsheet in case you don't have Excel [[jpg image](#) | [PDF](#)]**

**Jak has done a fine job on this project. Thank you Jak!**

## Introduction:

Many people play the mountain dulcimer by ear. In fact, the ease of doing that is one of the big attractions to new players. When people can't pick a song up by ear, they often turn to tablature to help them get going, but not all songs are available in tab form. If you have music in standard notation such as piano music or a hymn or song book you can easily create your own tab if you know which notes correspond to a particular string and fret on your dulcimer. That can be a big if, so I developed a spreadsheet in Microsoft Excel to show you what notes you are playing on your dulcimer. This sheet will help you write tab even for songs that are not in the common dulcimer key of D. It will also help you construct chord fingerings if you know which notes make up the chord. It is also helpful if you just want to know what notes you are playing. It is my hope that this tool will help someone play their music and thereby spread a little joy. Feel free to use it, alter it and share it as you see fit.

The idea to make this sheet came from page 85 of Bud and Donna Ford's Cripple Creek Dulcimer Book. The book is among the better beginner's guides I've seen. Page 85 is a set of "Dulcimer Transposition Charts for Major Keys." These charts are set up for DAA tuning. When I started playing in a lot in DAD, I wanted something to make that transposition easier and decided to write a spreadsheet. This is what has developed over time.

On a side note, I bought my first dulcimer from the Fords' Cripple Creek Dulcimer Shoppe in Manitou Springs, CO in 1981 or 1982. Donna spent a couple of hours showing me how to play and then helped me choose a dulcimer. I had always wanted to play a stringed instrument, but had never been able to become proficient at the guitar or other common instruments. I could do this. I'll never be a great dulcimer player. I enjoy making music with my dulcimer and folks don't cover their ears when I play. I'm happy with that.

## Basic Introduction to the Spreadsheet:

I won't go into a lot of music theory or spreadsheet mechanics here. Others can do either of those things much better than I. I will try to provide a detailed description of how the sheet works and enough of the underlying theory to help you get started.

There are two pages to this spreadsheet. The first, labeled "Tuning" allows you to choose a standard mode or tuning scheme or create your own tuning scheme. When you have made your selections, the table automatically updates to show what note is played when any string is fingered anywhere from open to the 17th fret. The second page, labeled "Basic Tunings" is a listing of the notes and their relative position in the major scale (do-re-mi...) for each of three common mountain dulcimer tunings. Both sheets assume a 3 or 4 string dulcimer with doubled melody string on the 4 string. The only "additional" frets added to the diatonic fret board are the 6+ (6 ½) and 13+ (13 ½) frets.

At this point you may want to open the spreadsheet and play with it. There is a brief set of instructions on the "Tuning" page. It is pretty simple to use and the interactive "Tuning" page is protected to prevent entry into cells that should not be changed. In other words, you have to try hard to mess up the spreadsheet.

I will now include the standard disclaimer: Caveat emptor - let the buyer (or user since this is free) beware. I have not tried every tuning combination or even every mode in every key. You may find one that doesn't work. In those cases, the spreadsheet will return something like "NA" in a cell and not a wrong note.

If you are still with me, I'll now explain in a more detail what is on each page of this spreadsheet.

### **Tuning Page Details:**

The primary input into this page is the pull down menu box in cell B14. The pull down list shows the seven modes (Ionian, Mixolydian, Aeolian, etc.), and additional selections labeled DGD, Key/Mode and Custom.

Choosing a mode name in the B14 box returns tuning information for key of D tuning in each mode. The mode listed in column C corresponds to the list box. Information on the mode is provided in the table at the top left. Column A shows the fret where the scale starts. Since a mode is determined by the location of the half step intervals within the scale, the interval sequence is provided for scales using both the 6 fret and the 6+ (6 ½) fret. You will notice that using the 6+ (6 ½) fret in the scale puts you in a different mode. The mode for each scale sequence is listed. The far right columns in the table show the standard tuning notes. In all standard tuning cases the bass string is tuned to the key note (D since this is the key of D). The middle string is tuned a standard 5th interval above the bass string.

If you choose DGD from the B14 box the tuning information is for key of G "New Ionian" tuning. New Ionian tuning is different because the middle string is tuned to the key note (G since this is the key of G). In other words, the bass and middle string tunings are reversed from the standard key of G Ionian tuning of GDD. The bass string would be tuned to the D below the middle string and the melody strings are tuned an octave above that. The advantage of this tuning is that it allows you to change keys from D to G easily by retuning a single string from DAD tuning. Since the Ionian scale starts on the 3rd fret, this is a good tuning to play songs which have quite a few notes below the scale.

If you choose Key/Mode in the B14 box, you must choose a mode in the pull down menu box in cell D11 and enter a key in cell E11. The cells in this area are colored blue and the cell you enter the key in is bolded. Starting fret for the mode and step sequence is not provided on this row since you can easily find that information above. The notes you should tune each string to are listed, again assuming the bass string is tuned to the key note and the middle string is tuned a standard 5th interval above the bass.

If you choose Custom in the B14 box, you must enter the tuning for each string in cells G12 (bass string), H12 (middle string) and I12 (melody strings). These cells are colored light green and the input cells are bolded. One common custom tuning would be the Galax tuning where all strings are tuned to the same note with the bass string an octave lower than the other strings. You can also play with other tuning arrangements as you desire.

How does this help me write tab? Let's say you have the standard music notation to a song in the key of C major (no sharps or flats) and want to play it on your dulcimer. To find out which notes correspond to which frets, choose Key/Mode in the B14 box, choose Mixolydian in the D11 box and enter C in cell

E11. The output table (cells G38 through I58) shows you that a C on the melody string is on either the 0 (open) or 7th fret. All you have to do is put down the fret numbers corresponding to the notes. You can extend this method to the other strings to include harmony notes or figure chording from the other notes shown.

You may notice that there are quite a few cells hidden. These are used in the calculation and also include the calculated pitch frequency of each note. If you want to look at what I did, just unprotect the sheet (it is not password protected) and then unhide the hidden rows and columns.

### **Basic Tunings Page Details:**

This page has no calculations. It is just a listing of how the fret board works in each of three common major tunings. The three tunings I chose are those I use most: DAA (key of D Ionian), DAD (key of D Mixolydian or key of D Ionian if you use the 6+ fret) and DGD (key of G "New Ionian").

The interval from the previous fret is shown for each fret.

For each string in each tuning, I show two things for each fret. First is the position in the scale using Do-Re-Mi-Fa-So-La-Ti-Do terminology. The note the string is playing is also shown.

That's it. Nothing fancy on this page. If you unprotect and unhide things on this page you will discover the pitch frequency for each note.