



Rockwell Sorts Out the Differences

Jerry Rockwell

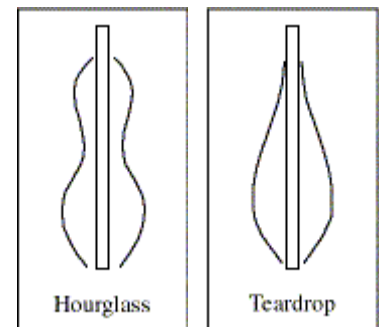
There are many differences among mountain dulcimers. Here I attempt to sort and categorize these differences. This should help in the purchase of a first dulcimer or an upgrade instrument. But perhaps more importantly this article will reveal the variety of options and features possible on a mountain dulcimer. Many of these characteristics are not widely known, especially to the novice, and many of them are not even generally agreed upon within the modern dulcimer community.

The classifications in this article are most useful when applied to dulcimers being made today. They generally reflect the practices and customs that revival (1940s onward) dulcimer makers have embraced and propagated. Here mountain dulcimers are discussed with regard to shape, size, stringing, and fret patterns.

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Shape

The two shapes of dulcimers that are most popular today are the hourglass and the teardrop. Both of these designs derive from older traditional dulcimers. The hourglass comes mainly from the Eastern Kentucky designs of J. Edward Thomas, and the teardrop is found mostly in early nineteenth century dulcimers from Virginia.

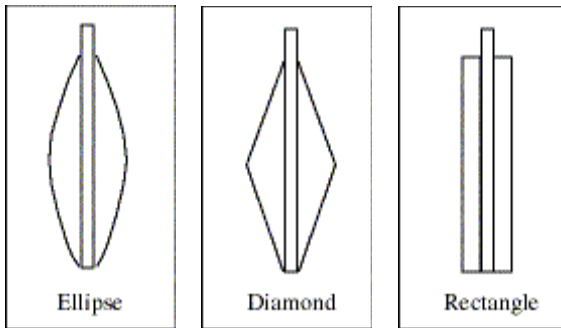


Does the Shape Affect the Sound?

This question seems to be on everyone's mind. In short there is no identifiable "hourglass sound print" nor is there a "teardrop sound print". The sound or tone of a dulcimer is more dramatically influenced by changing characteristics other than shape such as overall size, string length, string tension, string gauge, acoustic design, type of wood, and finish.

A Few Other Shapes

Another variation on the single-bout shape (bouts are the widest points on the sound box) is the ellipse. This design is also found in many older traditional dulcimers but is not as common today as is the teardrop. Other older shapes not often seen today are the diamond shape with straight sides and the straight-sided rectangular shape which is characteristic of the earliest known Appalachian dulcimers and the Pennsylvania German zithers, thought to be a direct precursor to the mountain dulcimer. There are endless variations and individual expressions within each basic shape. These are the individual statements and preferences of each craftsman.

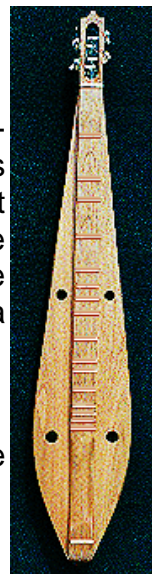


Size

There are three clearly distinct sizes of dulcimers: standard, dulcimette (octave-higher dulcimer), and bass (octave-lower dulcimer). I will discuss these sizes focusing on string length, the distance from the nut to the bridge, as the most important element. The total length of a dulcimer varies a great deal because headstocks come in many different lengths and the bridge might be right over the endblock, as it is with most older dulcimers, or it may be moved well into the area of the soundboard.

Standard Sized Dulcimers

Within this category are the widest divergence of dimensions: string length, side depth, soundboard width, and so on.



String Length--The shortest string length I've known on a standard dulcimer is about twenty-five inches, and the longest is about thirty inches. Most standard size dulcimers are strung to be tuned D-A-A or D-A-D. String length is a major factor in determining the tone quality of a dulcimer. Instruments with relatively long string lengths usually have more tension on the strings. This tends to make these instruments louder and it can also lend a degree of twang or nasal quality to the sound which is often associated with the traditional mountain dulcimer. The price you pay for this added volume is the increased distance between the frets.

Stretching the left-hand fingers from the first to the fourth frets, for instance, may be very difficult with an extremely long string length (twenty-nine or thirty inches); whereas the same stretch might be quite comfortable on a twenty-six string length. If you have a small hand and your playing style relies on frequent stretches, you may want to consider a shorter scale length.

The shorter scale lengths (less than twenty-eight inches) may also have a certain melodic sweetness not found in a longer instrument (although this could easily be my own subjective bias as a dulcimer maker). I think it is clear that these shorter scale length dulcimers, unless they are strung with extremely heavy strings, tend to have considerably less punch and volume than their long-necked cousins.



Side Depth and Bass Response --The other factor that affects tone dramatically is the depth of the sides combined with the width of the soundboard and the length of the whole soundbox. Those dulcimers with deep sides (deeper than two inches) emphasize the bass end of the spectrum. They sound full and rich on the bass string as well as in the first three frets across the fingerboard, but they tend to be lacking in clarity and volume on the melody string especially in the second octave (from the 7th fret upward). But keep in mind that this is a generalization and does not take into account critical factors such as type of finish and woods used.

Conversely, dulcimers having a relatively shallow side depth (one and one half inch or less) tend to favor the high frequencies and the open bass string may not sound as full and warm as you might expect.

Mini-Dulcimers, Dulcimettes, or Octave-Higher Dulcimers

Many dulcimer makers have offered a mini-dulcimer in recent years. These are usually tuned one octave higher than the normal D-A-D, although I've seen a few designed to be a fourth or fifth higher than standard as well. They are generally quite short in overall length, twenty-four or twenty-five inches, with a correspondingly short string length (fifteen to eighteen inches).

Ron Ewing may be the best-known builder of the smaller dulcimers, which he calls "dulcimettes." He offers these in standard 4-string configurations but makes 6-string models as well. With three pairs of unison strings tuned an octave above the standard D-A-D, these 6-string dulcimers are powerhouses, truly a force to be reckoned with. They pack a whallop and are very reminiscent of the mandolin.

As you might imagine, most of the mini-dulcimers tend to have massive amounts of high-end response and "cut-through" ability, particularly in an ensemble setting. By the nature of the high tuning, they have very little bass response.

Bass Dulcimers

To account for the low register, one octave lower than the standard D-A-D, we have the bass dulcimer. These instruments are relatively rare. By far the most prominent maker of bass dulcimers is Blue Lion Musical Instruments of Santa Margarita, California.

I see these bass dulcimers as special-use instruments. Their value does not lie in playing standard D-A-D arrangements one octave lower. Instead, the bass really shines when playing unique and compelling bass-range repertoire. For instance Sally Rogers often does a boogie-woogie or blues bass line on her Blue Lion bass. The results are extraordinary. The boogie tune contrasts quite dramatically with the rest of Sally's repertoire and lends a degree of humor and light-heartedness to the performance.

Baritone Dulcimers

There is one more general category of dulcimer with respect to tuning and pitch range. I call this the baritone dulcimer. It is pitched in A (A-E-A) between the standard and the bass dulcimer. Since a baritone or low-strung dulcimer is sometimes simply a standard dulcimer with thicker strings, I choose not to give the baritone its own size category.

J. C. Rockwell Dulcimer Company began making baritones in 1994. They are based on my Large Hourglass (LH) model except that the baritone sometimes has slightly deeper sides.

The baritone, being only a fourth lower than standard pitch, is a little more friendly to adapting D-A-D arrangements than is the bass. Of course, as with the bass dulcimer, it's still wise to think about the unique abilities of the baritone. Then your arranging will sound purposeful and will make more sense musically.

Dulcimer Ensembles

Bass, baritone, and mini-dulcimers can be used well in a dulcimer ensemble to extend the range of the standard dulcimer to below as well as above. In years to come we should be hearing some recordings of dulcimer trios and quartets. Who knows? A literature for dulcimer ensemble may someday develop.

Stringing

Dulcimers have a variety of string spacing options, as well as a varying number of strings. The most common stringing arrangement today is the four-string with double-melody.

Four-String with Double-Melody || ||

This arrangement is essentially a three-course instrument. The double-melody is almost always tuned in unison and these strings are always pressed down together. Since they are about 1/8" apart they are not able to be fretted separately. In the traditional melody-with-drone style of playing, the melody will get a better chance to ring out above the middle and bass string drone when the melody string is doubled.

Three-String Equidistant | | |

Many of the older dulcimers had only three strings and this is still the arrangement preferred by many modern players (myself included). It lends itself to intricate, expressive articulations that are hard to get with doubled strings.

Four-String = Equidistant | | | |

This is an arrangement which expands the harmonic capabilities of the dulcimer in a dramatic way. It has found favor among a small but growing number of innovators who find these increased harmonic capabilities quite compelling.

Five-String with Double-Melody || || ||

This is essentially a 4-course dulcimer, as it has the double-melody string acting as one string.

Five-String with Double-Melody and Double-Bass || || ||

This five-string arrangement boils down to a three-course dulcimer because the melody string is doubled in unison and the bass string is doubled in octaves, major thirds, or unisons.

Six-String || || ||

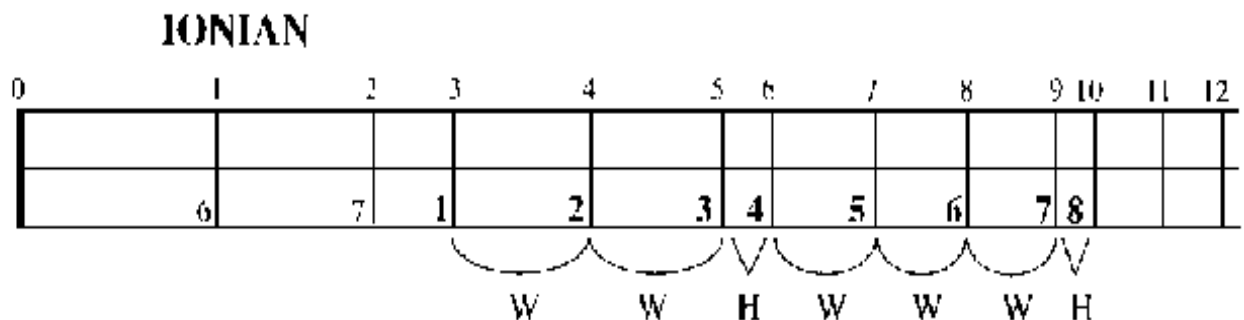
In this arrangement we have the same configuration as on the mandolin: all three courses are doubled in unison. Alternatively, as with the five-string, the bass course may be unisons or octaves, with some other interval being used rarely. These double course instruments have lots of volume, their main selling point.

Eight-String || || || ||

The eight-string set-up is extremely rare. It is just like the six-string, except with four courses instead of three.

Fretting and Fret Patterns

The traditional dulcimer fret pattern is purely diatonic:



...and plays a Major Scale (Ionian Mode) from the 3rd fret up to the 10th.

Many of the older fret patterns used on traditional dulcimers were created by a very intuitive process. The builder used his ear (the ability to hear the tones) to determine the location of each fret. This usually yielded some form of "just intonation," with the thirds (fifth fret) and sixths (first fret) being placed back further toward the nut than they would be in equal temperament (the standard tuning system for all Western instruments). This flattening of the thirds and sixths has the effect of making them sound smoother and sweeter than their equal-tempered cousins.

Some of the earliest dulcimers used little staples for frets, allowing only the melody string to be fretted, with the middle and bass strings relegated to a pure open-string drone function. The traditional modal tunings for the dulcimer are best understood using a purely diatonic fret pattern on the melody string only.

These days most dulcimer makers use the twelve-tone equal temperament (12-ET) system to mathematically compute their fret patterns. This actually makes practical sense in that the

rest of the music world is pretty much in 12-ET and the dulcimer must be as well if it is to tune properly with other instruments.

Additions To The Diatonic Pattern =

The 6+ or Extra Fret--Sometime in this century (the 1950s?) some dulcimer maker started adding an extra fret between the sixth and seventh frets of the traditional diatonic pattern. This came to be known as the "six-and-one-half" fret, often written as 6+ for brevity and clarity in tablature. The 13+ fret is its equivalent one octave higher and is often added to dulcimers that have the 6+ fret.

As of 1998 it is difficult, if not impossible, to find a living dulcimer maker who doesn't offer this 6+ fret option. It has taken the modern dulcimer world by storm and is an integral part of the modern mountain dulcimer.

One of the most important uses of the 6+ fret (and maybe the reason for its existence) is to allow a major seventh interval from the open melody string when tuned to the popular 1-5-8 or D-A-D tuning. This will let you play a complete major scale on the melody string starting with the open string as the root.

The 1+ and 8+ Frets--After the 6+ and 13+, the newest additions to the dulcimer fret pattern are the 1+ and its octave-higher equivalent 8+. In the 1-5-8 tuning, the 1+ and 8+ allow a minor third on the melody and bass strings, as well as a b7 on the middle string.

Fully Chromatic Fret Patterns--It is not hard to see that this extra fret business is heading directly toward a fully chromatic fretboard like the guitar, mandolin, and banjo! Although still rare, fully chromatic dulcimers are being seen and heard these days. The full deck of chromatic notes is a tremendous advantage when playing jazz and modern pop music where a musician needs all harmonic possibilities within comfortable reach of the left hand. However some of the more historically-driven dulcimer folks refuse to call these chromatic instruments by the name "dulcimer." This continues to be an area of explosive dialogue and controversy within the dulcimer community.

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