



# Percussive Notes

The journal of the Percussive Arts Society • Vol. 49, No. 3 • May 2011



## Mel Lewis History of Jazz Drums

The Bodhrán  
Online Percussion Instruction  
50 Years of PAS Publications

**On the Cover:** Mel Lewis in front of the Village Vanguard. Photo by Rick Mattingly



**Norman Weinberg: Setting the Standard for Online Percussion Course Instruction, page 22**



**The Hellcats: Why Rope Drums?, page 50**

## Web Extra

Hear the legendary conversations between Mel Lewis and Loren Schoenberg at [www.pas.org/experience/oralhistory/mellewis.aspx](http://www.pas.org/experience/oralhistory/mellewis.aspx)

See a video lecture excerpt on Milhaud's "Creation of the World," at [www.pas.org/publications/May2011webextras.aspx](http://www.pas.org/publications/May2011webextras.aspx)

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# The Hellcats: Why Rope Drums?

By Staff Sergeant J. Andrew Porter

One question The Hellcats drummers are often asked at clinics is, "Can you tell us about your drums?" While they are certainly beautiful to look at, the sound is what usually surprises our audiences. The drums we use are a modern reproduction of instruments from the Revolutionary War period. We use these drums in honor of our musical ancestors, the drummers and fifers who first began the long heritage of soldier musicians stationed at the garrison of West Point. Established by General George Washington in 1778, soldier musicians have served at West Point ever since. The United States Military Academy was established here in 1802, and the West Point Band was established in 1817.

The Hellcats have the proud honor of holding the oldest continuous position for musicians in the United States military, and have made it a goal to tie together the old and new through our repertoire and performances. This article will discuss our drums and compare them to a modern marching snare drum.

## CONSTRUCTION

The rope-tension snare drums The Hellcats use today are constructed very similarly to those made in Europe and the United States since the 1700s. They are constructed of a steam-bent, single-ply wood shell, usually either maple or ash. For added strength, there are interior reinforcing rings at the top and bottom edges. The counterhoops are also steam-bent single-ply maple. The Hellcats most often use snare drums that measure 17 x 18 inches (diameter by depth). The bass drum is 26 x 14 inches.

Our drumheads are always synthetic. Due to the repertoire we choose and the climate of the Hudson Valley, natural skin heads do not work for us. Unfortunately, there are only a few synthetic head choices available in the U.S. for our 17-inch diameter snare drums. For the snare side, we use a clear plastic head. Our batter heads are two-ply polyester weave heads made in Basel, Switzerland. They are much more durable than any other head we have tried. Our last set of batter heads lasted two and a half years. In comparison to the average Mylar head lifespan of four to six months, the extra cost is well worth it.

To tension the heads, a single Dacron rope is laced around the drum. Like a new drumhead, the rope will stretch for a while. For this snare drum, the rope is 48 feet long. In addition to the rope, there are 10 leather ears that can be pushed down to increase the tension. Since the rope is laced through both the bottom and top counterhoops, equal tension is applied to both heads. The heads are not tuned individually.

The last piece of the puzzle is the snare unit. Our drums have a strainer with a horizontal tension adjustment, but no throw-off. Like the heads and rope, the snares are synthetic, made of nylon.

## TUNING

Coming from a DCI and WGI background, I did not quite know what to expect when I auditioned for The Hellcats. I had no experience with rope-tension drums. I expected a loosely tuned drum, which would make fast rolls and flam passages more difficult to play. Much to my relief, this was not the case. The

rebound on our drums is similar to a well-tuned concert snare drum. Even with some of the very demanding repertoire we choose, the tuning and response of our drums is not often an issue.

When asked how we tune our drums, the simple answer is "brute force." It takes a good amount of pressure to put a desirable tension on a rudimental snare drum. On modern drums, this is accomplished by a system of tension screws and a wrench. For a rope-tension drum you simply have to pull the rope tighter, which will probably give you a bit of a workout. A drum press can help keep even tension on the drumheads and make the process easier. However, plenty of physical effort is still required to get the ropes tight enough to hold the tension.

One of the most important steps in tuning a rope-tension drum is getting even tension all around the drum. This is most difficult at the point where the rope is tied off. Uneven tension on one side can cause the hoops to warp (what we affectionately call a "taco rim") and create sound problems later. It sometimes helps to have another person assist in the tie-off.

To tie the rope off, we utilize what is known as a "pigtail." It is a knot of sorts, where the rope is twisted and wrapped around itself. After the pigtail is finished and the drum is at a good tension, the remainder of the rope is tied across the bottom of the drum and hangs below the bottom head. This is known as a drag rope, and is mostly decorative. However, it does serve as a handy carry strap when put over one shoulder similar to a backpack.



Hellcats 17" x 18" rope-tension drum disassembled. Clockwise from top left: Dark walnut stained maple shell with hand-painted crest, counterhoops, dampener cloth, rope, snare-side head, batter head, leather ears.



Dacron rope that is laced around the drum as a tension system. Shown is the eyelet braided on one end, through which the pigtail is tied.

## COMPARISON

At first glance, the size difference between a rope-tension drum and a modern marching snare drum is clear. As mentioned earlier, our drums are 17 x 18. Most modern marching snare drums today are 13 or 14 inches in diameter and 11 or 12 inches deep. Contrary to what it might seem, a modern drum is quite a bit heavier than a rope-tension snare drum. The amount of metal on a modern drum adds considerable weight.

Another difference is how the drum is carried when marching. The rope-tension drum is typically carried using a strap that goes over the right shoulder and diagonally across the performer's body. The strap connects to the drum at a single point using a hook. The drum rests against the left leg and moves with each step as the player marches. With this method of carry, the drum is naturally tilted. This is the basic reason for the use of traditional grip. Conversely, modern marching drum carriers are made of various metals and composites, and they cover a much larger area of the upper body. They typically attach to the drum at two points and keep the drum completely off the lower body.

Designs for modern marching drums and carriage systems have been heavily influenced by competitive marching activities. Higher-pitched tuning became the norm in the U.S. with the popularity of Kevlar and Aramid heads over the past 20 or 30 years. Repertoire that included faster passages and complicated hybrid rudiments led to a desire for more clarity in the sound, and a drier, higher-pitched drum was demanded. Drum manufacturers responded with drums that could withstand the tweak of someone armed with a cordless drill and a T-key.

Competition marching drill also became more demanding, with ever-increasing tempi, abrupt direction changes, incorporation of dance elements, and many other challenges. This led to manufacturers making carrier systems that are more form-fitted to the upper body and much easier to control. One of the biggest benefits of this system is the maneuverability of the player. With the drum separated from the lower body, the movement of the drum is greatly reduced. Modern competition marching demands would be very difficult to accomplish with a drum carried on a sling.

With nearly 700 years of history, study of the snare drum family tree can continue for many more chapters. American rudimental drumming history is very important to The Hellcats, and we will strive to continue to provide a valuable resource to the percussion community. Visit the "DrumCats" section of the West Point Band website ([www.westpointband.com](http://www.westpointband.com)) to view the companion video addressing rope drum tuning. There you can also find more information about The Hellcats and the West Point Band, view tutorials and videos of performances, download free sheet music, and get links to many other resources.

**Staff Sergeant J. Andrew Porter** serves as drum section leader for The Hellcats, the Field Music Group of The West Point Band in West Point, New York. He holds degrees from Western Kentucky University and Louisiana State University. Staff Sgt. Porter's previous performance experience includes the drum lines of the Bluecoats Drum and Bugle Corps and Music City Mystique. PN



Assembled Hellcats 16"x 16" rope-tension snare drum, ash ply shell. Drum is shown at playing tension, with the leather ears down.



Snare strainer without throw-off, and nylon gut snares. To the right of the strainer is the drag rope and pigtail.



Inside view of the 17" x 18" snare drum. Note the interior seam of the single-ply steam bent maple shell.



Pulling down the leather ears to bring the drum up to playing tension.