

Timpani Clinic, part I

by Eric Hollenbeck

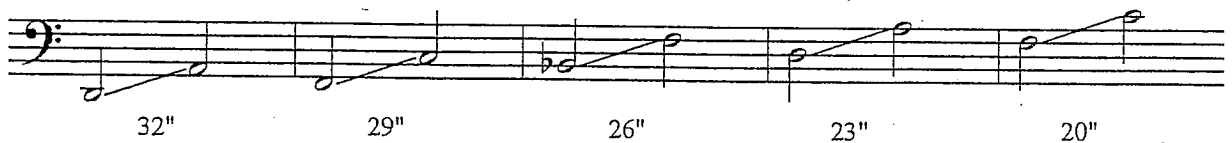
Timpani Care

Basic Maintenance list:

- 1) Make sure heads are in range
- 2) Check that the pedal holds in the entire range of the drum
- 3) Wipe down beating spots before and after each playing session
- 4) Check for loose nuts and bolts, especially on the tuning gauge
- 5) Replace heads at least once a year
- 6) Move the drums by the frame only with the pedal in the highest position, store the drums with the pedal in the midrange
- 7) Make sure the timpani is not used as a table for anything, covers will help violations
- 8) When transporting timpani in a vehicle make sure the heads are covered, are in the top of the range, secured tightly by the frame to the wall of the truck, are at least a foot in distance from each other, and take slow turns with smooth speed ups and slow downs
- 9) Check and adjust pedal resistance
- 10) Lubricate any moving parts using Lithium grease or powder graphite

Counter hoops - replacing the counter hoop is relatively cheap and will make significant improvements in the sound, ca. \$200.00 each. I recommend that Ludwig hoops be replaced for older Yamaha models

General Timpani Range - this may differ slightly among manufacturers and models, e.g., Dresden style timpani often hold a range around a Major 7th



Pedals - Adjust the pedal resistance to create an even pedal tension on all of the timpani. On most Ludwig models, the adjustment can be found under the pedal on the side of the frame and uses a standard drum key. On Yamaha timpani, this can be found under the heel of the pedal and uses a timpani key. When adjusting the pedals, make sure the head is in range. If the head is in range and the pedal will not hold at the top of the range, adjust the counter spring clockwise by 1/2 turns; reverse the direction for the bottom of the range. It is recommended that you adjust the counter spring no more than 3 full turns in any direction. Any adjustment strengthens the pedal's ability to hold on one side of the range and weakens it on the other. If the pedal still does not hold or will only hold on one end of the range, then adjust the pedal resistance to compensate.

Heads - the heads I recommend for most academic situations are the Evans smooth white heads for a bright projecting sound and the Remo Renaissance hazy heads with low profile steel insert ring for a dark and focused sound. Generally, I have found the Remo Renaissance heads work the best for concert settings making average to low end timpani sound the best. The Evans smooth white heads work well for outside applications. All synthetic heads have a place where the metal hoop of the head has been joined. This is a weak place of the head and you want to place the head to avoid making this area as your beating spot. On Remo timpani heads, this is 90 degrees from the logo. On Evans heads the logo is placed at this point.

Bearing Edge – the bearing edge is the lip of the bowl where it meets the head. Often Teflon tape is used to reduce friction between the bearing edge and the head. Teflon tape last much longer, although; eventually the tape will wear thin at the point where it comes into contact with the head. Cork grease is also used, but eventually dries out allowing friction between the head and the bearing edge. When the Teflon tape and cork grease fail there is often increased pedal resistance and/or a squeak or groan from the head when the pedal is moved.

Replacing Heads

- 1) When changing heads, put the pedal in the lowest position and put a block of wood under the pedal to keep the spring from slapping it down when the tension from the head is released.
- 2) Mark the counter hoop in such a way that you can replace it in the same place.
- 3) Use two timpani keys and turn opposite tension rods at the same time to gradually releasing all head tension.
- 4) Remove the counter hoop and the head carefully.
- 5) Clean and inspect the bearing edge, apply a very light layer of cork grease to the bearing edge if there is no Teflon tape.
- 6) Clean each tension rod and apply a very small amount of Lithium grease to the first couple of threads.
- 7) Place the new head on the bearing edge so that the hoop joint of the head is in the “3” or “9” o’clock position relative to a “6” o’clock playing position.
- 8) Place the counter hoop on the head and finger thread each tension rod with out putting tension on the head.
- 9) Center the head and counter hoop by putting your fingers under opposite sides of the head and gently sliding the head so there is equal space on each side. Do this at 3 and 9 o’clock and 12 and 6 o’clock.
- 10) Using two timpani keys gradually tighten opposite tension rods simultaneously by 1/2 a turn, until the head is at the lowest pitch with the drums range.
- 11) Remove the block of wood from under the pedal
- 12) Allow the drum to sit for at least 24-48 hours before playing to allow the head to seat and stretch
- 13) After the drum has sat for at least a day, check to see if the lowest pitch is in range. Adjust all tension rods evenly to put it in range if the head has stretched.
- 14) Using a drum dial with the timpani in the middle of the range, check each tension rod. Find one or two tensions rods that are not in average with the others and move them using 1/4 turns to bring them close to the other tension rods. Adjust the tension rods until all tension rods are within .1 degree of each other.
- 15) Clear heads at least once a week.

Clearing Heads

- 1) I recommend clearing heads with more than one person and no more than 1 or 2 drums for about 15 minutes max. Having another set of ears confirms pitch direction and allows one person to have some distance away from the drum, which helps in hearing pitch.
- 2) Carefully place the drum up on two chairs to allow the head to be at ear level, or kneel to get your ear at the level of the head.
- 3) Put the drum in the upper part of the range. Using a hard timpani mallet, play 3 soft notes in the beating spot. Listen to the lowest/darkest pitch of the drum. This is the reference pitch that you will use to adjust the pitch to. Play one loud note in the same spot and compare the pitch to the 3 soft notes. If the pitch is higher you are looking for a high-tension rod, if it is lower, you are looking for a lower tension rod.
- 4) Place a small mute in the center of the drum. Play 3 soft notes a few inches from the tension rod

- immediately to the right or left of the beating spot. Play 3 soft notes at the tension rod on the opposite side of the beating spot. Compare the pitch of the two tension rods and determine which one is higher or lower based on what you are looking for which was determined in step #3.
- 5) Once you have determined which tension rod of the two is what you are looking for, use 3 soft notes and compare the pitch of the opposite tension rod. Based on this comparison move the tension rod that is most extreme 1/4 turn in the corrective direction.
 - 6) Remove the mute and repeat step #3. If the difference of pitch of the loud note is closer to the pitch of soft notes the adjustment is correct. If not, return the adjusted tension rod back to its original position.
 - 7) Place the mute back in the middle of the drum and play 3 soft notes at each tension rod moving in the same direction around the drum. Find the most extreme tension rod in the direction that was determined in step #3. Adjust the tension rod a 1/4 turn and repeat step #6.

Timpani Mallets

Heads

- 1) Cartwheel – more felt in contact with the head, heavier, seam, edge
- 2) Ball – smaller contact point, lighter, no seam
- 3) Wood/ Chamois

Shafts

- 1) Bamboo – light, largest variance
- 2) Turned hardwood – heavier
- 3) Metal – consistent
- 4) Fiberglass – rigid, consistent

Rewrapping

- 1) Duff manual
- 2) Rewrap kits – Vic Firth, Black Swamp
- 3) American vs. German felt
- 4) Matt Bassett - www.matthewbassett.net, American Drum - www.americandrum.com

Timpani Dampening Etude

Only dampen where notated, s = simultaneous, x = duration, b = both pitches

Eric Hollenbeck

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Staff 1: Bass clef, 4/4 time signature. Notes: G₂, A₂, B₂, C₃, D₃, E₃, F₃, G₃, A₃, B₃, C₄, D₄, E₄, F₄, G₄, A₄, B₄, C₅. Dynamics: *f*, *mp*. Performance markings: x, x, s, x, x, x, x, s, x, 3, s, x, s, s, s. Rhythmic notation: R r L I R R r L r L I R r L R I R L I R L L R R L R.

Staff 2: Bass clef, 4/4 time signature. Notes: G₂, A₂, B₂, C₃, D₃, E₃, F₃, G₃, A₃, B₃, C₄, D₄, E₄, F₄, G₄, A₄, B₄, C₅. Dynamics: *p*, *ff*, *p*, *ff*. Performance markings: b, s, s, s, s, s, x, s, s, s, s, s, s, s, s, b. Rhythmic notation: L R L R L L R L R L *p* *ff* R RR RLRLRLR.