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“Tuning, what?”

This is a guide for those with no idea where to start with tuning drums. It's hard to come up with a “primer” for people that doesn't say too little or too much. **Trial & error** is the best teacher. While there are no short-cuts in that **you** have to develop your method; once you have a method, it is so much easier, I do promise you!

Tuning drums is more involved than tying your shoes, but much easier than changing a tire.

There are people who have never seen a drum head free of the rim and lugs. Some students tell me they got a new kit because the old one “sounded horrible” only to find out they *never changed the drum heads* or even tuned them! If your car needed new brake pads, would you instead buy a new car? Do not be one of these people.

THE SHORT VERSION

(1) For each head, tune each lug to as close to the same pitch as you can so that each head represents one pitch. Two pitches tend to blend much nicer than twelve to sixteen different ones.

(2) In general, the bottom head should be the *same pitch* or *higher* than the top (“batter”) head. You should hear a nice, even decay or a “dip”/bend in pitch. The drum will not decay very nicely if the bottom head is lower-pitched [looser].

(3) Avoid a sound that is “tubby”/wrinkly [too loose] or “boingy”/choked [over-tight]. Everything in between is game. If you like the sound, you're a champ.

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THE LONG VERSION (FOR MOST OF US)

You want to have TWO pitches: one for each head. For each head, you want the individual lugs to point to the same pitch – the pitch depends on your choice though each drum has a limited range of pitches.

The Beatles said “all we need is love”. And that's true, but you'll also need:

- (1) **a drum key** [buy a handful of drum keys!]
- (2) **a towel** or cushy surface to muffle the head you are not actively tuning: a carpet, cushion, your knee. If you are quick-tuning with the drum mounted, you might use your finger tips to mute the other head.
- (3) WD-40 or equivalent
- (4) paper towels or rags

About Drum Heads

Which brand or model?

There are a handful of brands. *Remo* tends to be the cheapest of them and quite frankly they make great heads - so there you go, I saved you money. For general playing you can't go wrong with “medium-ply” **Remo Emperor** heads for the top (“batter”) side and “single-ply” **Remo Ambassadors** for the bottom (“resonant”) heads.

Coated or clear?

Coated sounds a little warmer upon impact [the “attack”] than clear heads. Often coated is used for top (“batter”) and clear for bottom. Unsure? Get coated for the top heads and clear for the bottom heads.

When to change drum heads?

Top ("batter") head: If the heads are pock-marked, dented or are otherwise not responsive to tuning. When the tone quality of the drum sounds worse and tuning doesn't seem to improve that, it is time to change them. If you only practice - maybe once every year and a half. If you practice or rehearse/gig with a band regularly you might find yourself needing new heads sooner (every 6-8 months.)

Bottom ("resonant") head: These obviously don't get played, but after 2 years they probably will not help produce much resonant tone. To be honest, if you feel your drums sound good you can probably get away with not changing bottom heads even longer. If you do any regular recording though, you'll be changing them at least once a year. You can always keep the old ones for back up heads, serving trays or frisbees.

Heads typically cost \$10-15 each. Bass drum heads \$30-45 each.

The Tuning

The Toms (mounted on bass drum or stands)



You might be putting on brand new drum heads or just removing your current heads to clean & re-tune, same deal.

Suggested tom heads for general playing:

[Remo Emperor](#) for top ("batter"); [Remo Ambassador](#) for bottom ("resonant")

Preparation - removing the heads

- (1) Remove the drum from the holder/mount.
- (2) Loosen and remove the individual lugs.
- (3) Remove the rims and drum heads from each side.
- (4) Brush out any dust, lint or "shmutz" from the inside of the drum

as well as cleaning off the bearing edges of the shells and rims. If you are putting used heads back on, make sure you clean under rim of the drum head too! If you have rusty or stiff turning lugs, add just a drop or two of bicycle chain oil (WD-40 or equivalent) to each lug housing.



Let the Tuning Begin!

Place drum on a towel (or similar) to mute the other drum head while you are tuning the other OR if both heads are off, you'll do this when you put on the other head.



Tuning, What?



Step 1: Seat the head on the drum (on the bearing edges) and then place the rim on top of that, lining up the rim holes over the lugs.

Step 2: Drop in the lugs and **finger-tighten** each one until you can't tighten them any more. The drum head will still be flappy but you are just setting your starting point.

Step 3: Get a tone. Start with **1/8 turns** on each lug to get the drum head out of "tubby" mode. If you have new heads you will hear the drum heads making a "crackling" sound when you progressively tighten the head - this is absolutely normal! Just remember you are not trying to *crank* the lugs as far as

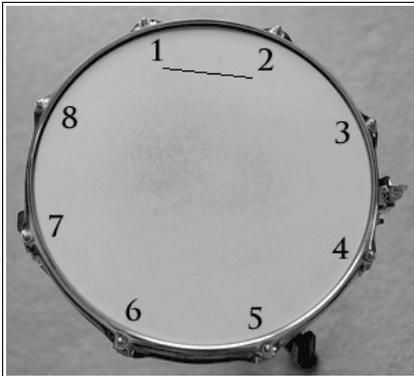
they can go or else the pitch will be choked.



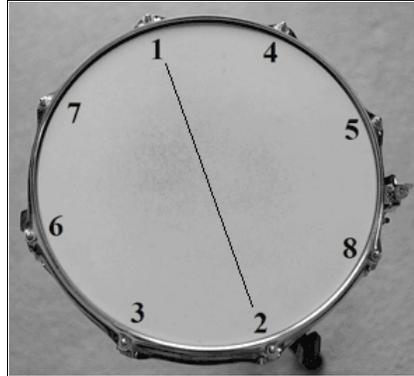
IMPORTANT! Note that when you pick up the drum from the towel, the pitch of the drum will be lower! That's okay, you're trying to get the lugs in tune with each other. You'll deal with adjusting the "key" pitch higher or lower in Step 5 below. Alternatively, you could tune the drum when it's on the tom mount and use your fingertips to mute the other head. This is the likely scenario for a rehearsal or gig.

Should one tune the lugs in a criss-cross fashion or consecutively around the drum?

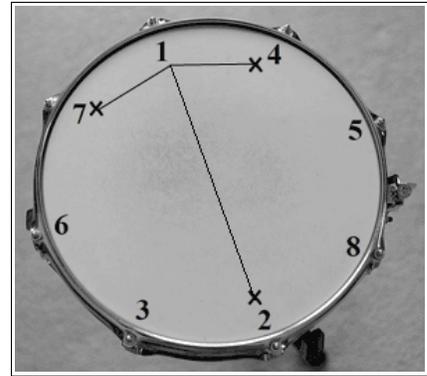
It does not matter. Those who wrote books about this might feel differently. That's because they wrote a book about it. However, it's a good idea to try both ways and see what *you* prefer.



"Consecutive" method



"Criss-cross" method (looks more fun!)



For an unresponsive lug "tweak" directly across and on each side!

This author tends to use "criss-cross" method when getting a tone and "consecutive" when "tweaking" or fine-tuning the "key" pitch of individual lugs (step 4). When a lug seems un-responsive to tweaking, I will tweak the lugs directly *across* and/or on *each side* to influence the tension!

Step 4: Choose your "key" pitch. When you feel like you have a tone, tap an inch from each lug and choose the tone most appealing to *you*. This is your "**key**" pitch. Now match all the other lugs to it accordingly. Sometimes multiple lugs have the same pitch..I'll usually follow that!

There is no way to tell you precisely what pitch or exactly how many turns! Every drum, brand and line has its own tuning range. You will be able to answer this the more you tune!

Step 5: Check the drum & fine-tune ("tweak"). Pick up the drum by the rim and give it a whack with a stick. If the tom is still too tubby sounding, go around the lugs and tighten with *even smaller* turns (1/16th?) Re-choose a "key" pitch and match the lugs to it. Check drum again. You may go back and forth quite a few times be it higher or lower...don't worry! It really gets easier the more you do it. The most important thing is, does it sound good to *you*? Remember you are developing *your* method!

The Other Side...

If you like the sound, then let's tune the other head – the top (“batter”) head following the *same* procedure you just did for the bottom (“resonant”) head.

After both heads have been tuned to themselves, pick up the drum by the top rim and give the top head a good whack. If it produces a relatively pleasing, consistent pitch and it steadily decays, you did good! Put it back on the tom holder and proceed to the next tom following the same procedures.

If it sounds “dissonant” like a pre-pubescent male singing *The Rose* by Bette Midler, re-tweak by:
(1) Checking the individual lugs to make sure they are still pointing to the same pitch for each side.

(2) **Make sure the bottom (“resonant”) head is the *same pitch or higher than the top (“batter”)!*** You should hear a nice, even decay or a “dip”/bend in pitch. The drum will not decay very well if the bottom head is *lower*-pitched than the top!

(3) Optional: Even though you may have relegated your tom to two pitches...certain pitch intervals do not cooperate. Half-steps are one of them. If you don't know what a half-step is – think “B” to “C” on a piano or sing “*Happy birthday to you...*”; “to” and “you” are a half-step interval down!

Guess what? If you put on new heads and tune them, they are going to de-tune shortly after! Yep - not a big deal...but the head might take a couple tunings to “seat” itself properly where it's not going to contract after tuning. All this business about first “stretching” a drum head by tuning *very* tightly overnight to get all the “crackles” out at once or standing on the drum with a new head...it's baloney and only ruins the tune-ability of the drum head and very possibly strip the lug threads.

The Floor Tom (Standing or Mounted)



Floor toms are a bit more difficult to tune. Particularly for rock, you will find yourself tuning a little looser than you'd think. Still not to the point of wrinkly, but you'll be searching for that point where it just starts to have a tone. If you are playing jazz, R&B, world music, the toms are generally tuned higher. For rock/metal/blues or fusion, a “boingy” floor tom is generally not the best sound.

Suggested tom heads for general playing:

[Remo Emperor](#) for top (“batter”); [Remo Ambassador](#) for bottom (“resonant”)

The Snare Drum

You can get away with “cranking” the snare top (“batter”) head a little more than you can with a tom, however if it is *too* cranked, it will sound like a coffee can and feel like playing a countertop.. If the snare drum batter head is too loose it will sound tubby and have no definition.

The snare bottom (“resonant”) head needs to allow the snare wires to vibrate and if too tight, you'll barely hear the snares. If I feel like I want to fatten my snare sound a little bit I might slightly loosen (1/16th turn) the bottom lugs on each side of the snare beds.

The hardest part of tuning a snare is adjusting the snares to the strainer!...



Tuning, What?

Older snare strainer	Modern/better quality snare strainer
	
...were tensioned with string	...tensioned with a plastic tape
...forward & backward moving strainers	...forward & backward or outward & inward moving strainers
...used older style screws (Phillips and flat head)	...use lug screws (like the toms)

When buying *new* strainers AVOID Ludwig snare strainers (or others) that still use Phillips and flat top screws! Bad!

If you have a snare that uses the old kind of strainer, you can probably upgrade to a strainer using lug screws for less than \$30. But you may want to have a local drum shop do it because it's not always easy to determine if a strainer will fit your model snare!

The snare butt plate: This is the clamp on the other end of the drum bottom that holds the other side of the snare tape. You can't tell by the pictures but my snare is blushing that you are looking at it's butt!



The strainer tensioner knob: That's the turning knob on the strainer that "fine-tunes" the snare tension to adjust your snares to sound a little looser or tighter.

Adjusting the snares

It takes time to familiarize with the mechanisms here. A lot of it is visual trial-and-error. If you are new to adjusting the snares, figure on a relaxed 30 minutes of trying things out. Once you are familiar, it will only take you about 5 minutes from start to finish!



(1) Turn the snare tensioner knob relatively loose. Turn the drum upside down. Turn strainer to the "off" position (use finger to keep off, if needed). Always do so when adjusting snare tension!

(2) Insert the snare tape into the snare butt clamp and then strainer clamp. One way to avoid tensioning the snares too tight is to place a drumstick across the rims & underneath the snares. Align the snares evenly over the bottom head.

(3) Tighten the butt ("butt!") plate side first, then the strainer side. Aim for a medium tension (not real tight).



The snare tape into the snare butt clamp



The snare tape into the snare strainer clamp



Optional: place a drumstick underneath the snares to keep from over-tightening

Tuning, What?

(4) Turning the snare right-side up, engage the snare strainer to the “on” position.

...If you have to *force* the strainer on OR if the knob is loose and it's already a tight snare sound, you need to go back and loosen the strainer clamp on the snare tape a little bit. If you tried the drumstick-under-the-snares idea, you may want to try re-tightening using something that doesn't raise the snares as high...maybe a wallet?

...If the snares don't engage after a few turns of the tensioner knob, you need to go back and slightly increase the snare tension by the strainer clamp.

You may have to go back and forth a few times – it's part of the game! The idea is to be able to tighten the tensioner knob until you have a nice mix of definition and “fatness” in the snare sound. Generally speaking, you should NOT have to tighten the knob all the way.

Suggested heads for general snare playing:

[Remo Emperor](#) for top (“batter”); [Remo Ambassador Hazy](#) for bottom (“resonant”)



The Bass Drum

The style of music you play makes a difference in how you tune. Small combo jazz drummers tune bass drums pretty high. For rock and most styles, you can afford to tune the bass drum *just above* wrinkly on the batter side (where the beater hits). The front bass drum head you usually want tighter to help with projection.

So those “port holes” you sometimes see in the front heads? Those are to stick a microphone inside the bass drum for “live” playing or recording. For home practice, they allow you to adjust the muffling without having to remove and re-tune the front head! To make a “port hole” for your front bass drum head, lay the front bass drum head face down over some layers of cardboard. On the head, trace around a can or lid that is 4-6” across. Then with a box cutter, cut as evenly as possible around the outline. You may want to cover the edge of the hole with duct tape. Not feeling crafty? *Kickport* makes a simple [reinforcing ring](#); or there are [Bass Drum Port "O"s](#). [Evans](#), [Aquarian](#) and [Remo](#) all offer front bass drum heads with pre-cut port holes!



For rock music, you'll generally want muffling in your bass drum to help attack & punch, but too much dampening will weaken the sound. A heavy beach towel will do, folded and placed at the bottom so it touches both heads. Keep it well below the level of the bass drum beater to leave you plenty of attack. [Evans](#) makes a [muffling pad](#) for this purpose too. For small combo jazz, you generally want little or no muffling.

Suggested batter heads for general bass drum playing: [Remo Powerstroke](#) or [Aquarian Super-Kick series](#). Suggested front (“resonant”) bass drum heads: [Evans](#) or [Remo](#).

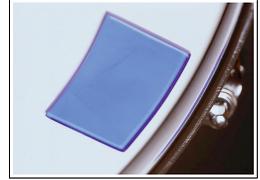
Muffling

Muffling isn't just for controlling unruly overtones. It could also be to quiet a drum or for a recording situation where you want a “dry” sound. Here some common options:

Duct Tape: Firstly, “quack”. Take small 3-5” piece of this complex technological device called **duct tape** and fold it *inside-out* so the sticky part faces the outside. Put it near the edge of the drum where you will *not* be hitting. This helps cut down on some of the overtones/ringing that you might feel lingers too long after hitting the drum. Because the tape is inside-out it's easy to remove and barely leaves a trace tape gook behind.

Great Balls of Cotton!: With a drum head removed, drop in a cotton ball inside the drum – you'll be surprised how much a cotton ball can muffle! The downside is if you need another cotton ball, you have to remove the drum head and tune it all over again, however once you have it the way you want, it's easy street!

Moongel: This stuff works almost too well! It comes in small rectangles of blue jelly-like material. With a box cutter or scissors I suggest cutting them in thirds. That is plenty for a drum! Check out Moongel [here](#).



“Muffle rings”: Retail stores sell these muffling rings you put on drums to...muffle! These can be cumbersome if your stick mistakenly bumps it and it flies off the drum. They constantly get whisked off when you are playing brushes on the snare. They easily get kinked/bent and sometimes don't stay put though a little tape could help. But if you want to quiet the drums a bit, say for a home practice scenario, this might not be a bad idea. Remo makes [Muffle Rings](#). If you are recording, be careful that these don't create a buzzing sound when you hit the drum!

Final/Random Thoughts

...It is likely that there will be many times your drum will sound good even if every lug is not quite pointed to the same “key” pitch. It is most important that the aggregate of all the lug pitches add up to a nice-sounding drum. Tuning is very forgiving - and thank goodness!

...Your snares are *not* going to stop buzzing as a result of hitting a tom. That is natural. The smaller a room you are in, the more noticeable it is.

...Student model drums have less flexibility for tuning and usually fewer lugs per drum than professional models. However, a well-tuned student model kit *can* definitely be used professionally.

...If you do recording in a studio, engineers will appreciate it greatly if you can tune as you save *them* time from having to do it & having to tweak microphone EQ to accommodate for drums that sound bad.

...My take on the tom “suspension” or “isolation” mounting systems:

This author feels it is a marketing ploy that most companies entertain, unfortunately. The big deal is supposed to be that the tom arms don't *enter* the drum and thus make the toms *resonate* better. Some “isolation” systems attach to 2 or 4 lugs while some attach directly to the rim (I will say the “L-shaped” tom mounts [as seen by Tama] are the *least* offensive in this issue.) No matter the claim, when the weight of a tom is hanging on a rim or lug *it is going to limit the tuning capacity*, if not choke, the weighted lugs. As a result you will find those lugs may not change pitch accordingly to how you tune (or de-tune)! It doesn't mean you *won't* be able to tune your toms, just that you may have to compensate by altering the other lugs from what you may have wanted. As a result, you may not be able to get the “key” pitch the same for all lugs.

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With new information you may have new questions. Feel free to rattle my cage with any questions, comments or criticisms at john@jkdrumsolutions.com. Consider signing-up on my [mailing list](#) and stay tuned for my next web discussion on tuning!

Drums and cymbals,

John Kerr

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