Drumset Setup & Tuning

So, you have yourself a drumset, now what?

A Beginners Guide by Vince M. Caiafa

What Is A Drumset?



A drumset is a combination setup of multiple drums and cymbals, within the percussion family. Drumsets also commonly include woodblocks, cowbells, tambourines and other mountable percussion instruments. The instrument is played in a sitting position incorporating both feet. Drumsticks are held in each hand



and are used to strike the drums and cymbals. Other implements commonly used are brushes, rutes, bundles of rattan and bamboo, mallets and hands can be used. The most basic setup of a drumset consists of a snare drum, bass drum, toms, ride cymbal, hi-hat, and crash cymbal. A drumset is often referred to as a drum kit, kit, or traps, stemming from the word contraption. Early drumsets started to appear at the beginning of the 20th century and new breakthroughs and



innovations are being made each day!

Basic Setup

These next few paragraphs will serve as a guide to the basic setup of a drumset. A drumset is an instrument that is part of the percussion family, meaning the sound is created when the objects on the set (drums, cymbals, cowbells, etc.) are struck with another object, such as a mallet, hand, brush or stick. The most common instruments that are part of a drumset are drums and cymbals, although many other common add-ons include tambourines, cowbells, and woodblocks.

It is important to note that while this is a general guide to setting your drumset, I encourage you to find out what works best for YOU. So try this setup out, and then find ways to modify it to fit your particular playing style.

The First Element: The Drum Throne

Although you don't actually play the drum throne, it is an extremely important component of the drumset. Without having a sturdy and comfortable throne, with which you can adjust the height, it may throw off you balance. Playing the pedals on a



This is arguably the most common drumset setup used today; Bass Drum, Snare Drum, Toms, a Ride Cymbal, a Crash Cymbal, and a Hi-Hat.

drumset is a lot like dancing; balance is a MUST! Without balance, it can compromise your playing ability and your sound, and make it that much harder to sound good!

Once seated, you should adjust the height of the throne so that your feet are touching the floor, with your legs at a comfortable 60 degree angle, where your knees are slightly lower that you hips. Once you are done with the next few steps, try and change the angle slightly, and see if there is another posture that you find more comfortable. Remember to sit up straight and be relaxed!

The Second Element: The Bass Drum

The Bass Drum, sometimes called a kick drum, is the lowest sounding drum in your set. It also is usually the largest in diameter and deepest in depth. This drum is played by pressing down on the bass drum pedal with your right foot, thus causing a beater to strike the head of the drum. While sitting in a comfortable position on your throne, place the bass drum in front of you and your foot on the pedal. The drum should be close enough that you can reach it easily, but not so close that the beater hits you in the leg when not in use. Remember, Balance!

The Third Element: The Snare Drum

The snare drum is also one of the most important drums on your drumset. It should be placed in front of you, in between your left and right legs. It should be tilted to that it is almost completely flat. A good height usually lines the head of the snare drum with your belt buckle. If you place it too low it will be difficult to produce rimshots (striking the head and rim of the drum at the same time). If you place it



too high, it will be hard to strike just the head, and not the rim.

The Fourth Element: The Hi-Hat

The hi-hat is one of the coolest instruments in the whole drum set! It is the stand with two cymbals attached to it, usually 13" or 14". There are three main sounds that you can get out of the hi-hat. By depressing the pedal with your foot you will produce a nice, clear 'chick' sound. By keeping the pedal depressed and striking the cymbals you will produce a closed sound. With the cymbals slightly open, you will produce a great 'sizzle' sound. When setting up your hi-hat, you should have it set up opposite the bass drum, so that you can play it with your left foot. The actual cymbals should be 6 or so inches higher than the snare drum, placed to the left.

Once you have the Hi-Hat, Bass Drum, and Snare Drum set up, play around a little bit on your drumset. Are you comfortable? Can you balance? Is it easy to reach all three instruments on the drumset at the same time? If you answered yes to these questions, let's move on, you are good to go! If not, make sure everything is set up properly and make some minor adjustments and see if it is easier when you try and fit the drumset more precisely to your body.

The Fifth Element: The Toms

Toms, or Tom-Toms, are the larger and deeper drums that are a part of your drumset. Unlike the snare drum, toms have no snares or wires under them, and they resonate freely. Toms that are placed on top of the bass drum are referred to as 'rack toms' and are usually mounted directly to the bass drum using hardware. The largest tom that has three metal pole-like pieces is the deepest sounding tom, known as the floor tom. Rack toms are usually 8, 10, 12 or 13 inches in diameter, whereas floor toms are usually 14, 15 or 16 inches.

The floor tom should be placed to the right of the snare drum, at approximately the same height and angle. It is important that both your right and left hands can easily reach it. The two smaller rack toms are mounted to hardware that is attached to the bass drum. The toms should be positioned at a slight angle where it is easy to reach them as well.



Once you have all of the toms set up, along with the bass drum, snare drum, and hi-hat you should try a couple of exercises to make sure that the kit is comfortable. An idea would be playing quarter notes with your bass drum and hi-hat (with foot) while playing sixteenth notes on the snare drum and toms, changing drums each beat. If this feels comfortable, on to the next step!

The Sixth Element: The Cymbals

Now that the hi-hat and all of your drums are set up where they are comfortable it is time to add some really cool sounds - the ride cymbals and crash cymbals! The ride cymbal can be used in place of some hi-hat patters, except the ride cymbal is going to be set up on the right side of your drumset, just past the floor tom, and will be played with your right hand. It is important to slightly angle the cymbal towards you so that you can easily reach the shoulder and bell of the cymbal. You don't want it too far away; that will just cause extra strain and fatigue. The diameter of a ride is commonly 20 - 22 inches.

The next cymbal to add on is the Crash cymbal. Some drummers use only one crash, while others use many. If you are using just one it should be mounted above the hi-hat, to the left of the small rack tom. The crash cymbal usually has it's own stand, which is referred to as a boom stand, and should be mounted relatively flat so that you can easily strike the cymbal with the shoulder of your stick with either hand. A common diameter of a crash cymbal is around 15 to 19 inches.

These are not the only type of cymbals used. Some other common cymbals include splash cymbals, effect cymbals, and china cymbals. Each produces a unique tone and sound that can help expand your palette.

Beyond The Basic Elements

This is where things begin to get interesting. Some drummers will add other percussion instruments to their drumset to create a unique sound all of their own. Some other common percussion instruments that are used with a drumset are cowbells, woodblocks, tambourines, timbales, bongos, gongs, and shakers. Don't be afraid to experiment!



Remember there is no right or wrong instrument to add to a drumset - just don't break it!

Drumheads & Tuning

Drumheads

Tuning a drum is something that appears to be quite simple on the surface, however anyone who is new to tuning drums and replacing heads knows that this is no easy task! I can't stress this enough - BE PATIENT! I feel that the best way to improve on tuning drums is through practice. It may take a while, but the rewards will be well worth it.

You can think of tuning a drum much like tuning a guitar. On a guitar, you have a string. When the string is tightened, the string reverberates at a high rate or frequency, thus producing a higher pitch. If you loosen the string, it will reverberate at a slower rate and cause a lower pitch. The same is true for a drum, except with a few major exceptions. With a guitar there is only one tuning peg to turn to change the pitch, whereas with drums we have several per side. These tuning devices are called lugs and some drums have up to 12 on each side, making up to 24 on a single drum! This makes for a huge amount of tuning possibilities, which may seem overwhelming at first, however practice will really help out, as I have previously stated.

I think it is interesting and important to mention the history of drumheads. Originally, drumheads were made out of calf or goat skin dried and stretched over the drum. Now, most drumheads are made out of a man-made material such as plastic, acrylic, or aramid fiber. There were two main reasons that drumheads switched from real skin to synthetic. The first is pure demand and cost. It is far more economical to make pre-formed synthetic drumheads, rather than sell sheets of skin and have each drummer take up to several days or weeks to properly fit it. Secondly, due to humidity changes and changes in temperature, skin heads are very vulnerable to loosening and tightening on their

More On Drumheads

CLEAR: Clear heads are said to be 'bright' with many overtones. Higher frequencies generally carry very well with clear heads.

COATED: Coated heads are describe as 'warm' and minimize high frequencies more so than clear heads. The actual stick hit is very bright and defined, which results in a darker sound. Coated heads work great with brushes.

SINGLE PLY: Single ply heads are made both in clear and coated. Single ply heads tend to be thinner, thus producing more highs and more overtones.

DOUBLE PLY: Double ply heads are thicker than singly ply heads and come in both coated and clear. Because they are 2 ply they are more durable than single ply heads and reduce many overtones and ring that single ply heads cannot without external muffling or dampening.

SNARE DRUM BATTER: Many companies make heads specifically designed for the snare drum, to either aid in durability, control overtones and ring, or decrease ring. Almost all snare drum heads are coated.

SNARE DRUM RESONANT: Resonant snare drum heads are the thinest heads on a drumset. The thinner the head, the easier it is to vibrate, and the more sensitive it is. Since the goal on a snare drum is to resonate the snare wires these heads are extremely thin. You should NEVER strike a snare drum resonant with a stick - you will damage it.



own. Although some drummers still use authentic skin heads, it is far more consistent to use synthetic heads. Many companies try to attain the warmth, feel, and tone of skin heads, albeit in a synthetic form.

Drumhead Basics 101

Although there are many brands and manufacturers of drumheads and even more sizes, types and models, all drumheads can be broken down into two basic categories; Batter Heads and Resonant Heads.

Batter Heads are the heads that go on the top of a drum and are the heads that are struck with a stick



or mallet. Batter heads tend to be thicker than resonant heads, is responsible for the 'feel' of the drum, and the main sound it produces is called the attack.

Resonant Heads are the

opposite of batter heads. These heads are on the bottom side of the drum which you do not play, and tend to be much thinner than Batter Heads. Resonant heads are responsible for the sustain of a drum after the Batter Head is hit. The resonant head is also a huge factor in the pitch of a drum.

Now that we've covered the two basic categories of drumheads, there are more kinds of batter and resonant heads, made by many companies. Some of the more popular companies are Remo, Evans, Aquarian and Attack. Each of these companies provide a version of the kind of head listed to the left.

Tuning The Drum

Finally, a step by step instruction on tuning that drum. Although there are slight variations to tuning drums from person to person, this is the method which I have found most useful. This method works on all toms, bass drums, snare drums with any type of head. Here we go!

STEP 1: Remove both old heads, batter and resonant. Now is a good time to brush off the bearing edge with a soft, DRY, micro fiber cloth, removing all dust and debris that may have accumulated. I also suggest checking all of the nuts, bolts, washers and screws to make sure everything is nice and snug.

STEP 2: Place the drum upside down (the resonant side facing up) on a soft surface such as a towel or carpet.

STEP 3: Place the resonant head on the drums and the metal hoop over the head.

STEP 4: Place the tuning rods into the appropriate lugs and tighten them finger tight. Do NOT use a

drum key at this point. Once all the rods are finger tight, move to the next step.

STEP 5: Using two drum keys tighten two lugs at once that are opposite of each other about a half of a turn. Continue with this pattern around all the lugs of the drum. Once you have tightened each lug 4 times (about 2 full turns) move on to the next step.

STEP 6: Lift the drum up from the soft surface and strike it LIGHTLY with a stick or drum key. The sound you are listening for is a smooth singing sounds free of 'floppiness' or distortion. If you haven't reached that point, use the same tuning method to increase the head tension until you have reached a clear singing tone.

STEP 7: Place the drum back down on the carpet with the resonant head facing up. Next, tap the head about an inch to two inches away from each lug. You will notice that the pitches may be close, but usually will not exactly be the same. Here is where fine tuning comes in. Hit an area away from a lug, listen to the pitch and then hit away from another lug. Was one higher in pitch than the other? If so, tune the lower pitched lug UP to the higher pitched. Remember, never TUNE DOWN to a note.

STEP 8: At this point we will do something which is called 'seating'. Place both of your hands in the absolute center of the drum (as if you were giving it CPR) and press down about a half an inch. You may hear some cracking noises - this is completely normal.

STEP 9: Lift the drum off the floor and place it on it's mount or tom stand.Now detune each lug so that it is right to the point where it sounds dead and the head slightly buzzes. Loosen in the same manner you tightened; evenly with two drum keys, about a 1/4 of a turn each time.

STEP 10: Once again tighten each lug using two



drum keys, checking periodically until you get a clear, pleasing, singing tone.

STEP 11: Once again, fine tune each and every lug as you did in step 7, so that the whole

drum is the same pitch.

STEP 12: Turn the drum over and place the resonant side on a soft surface and repeat steps 3 - 11.

In Conclusion

Now that you have the basic knowledge to set up your instrument and to tune it, remember it takes much practice and a lot of hard work and repetition to get your drumset to sound it's best. To sound even better and to learn more, I would highly recommend lessons from a



trained drumset artist. **NOTES:**

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Vince has been playing drums and percussion since age three. He attended The Hartt School of Music, studying under Benjamin Toth, with focus on Classical Percussion, Hand Drums. World Percussion and Marimba. He later transferred to Berklee College of Music in Boston, MA where he studied under Kim Plainfield (Andy Narell, Bill O'Connell), Ralph Peterson (Mike Brecker), and Mike Mangini (Dream Theater, Steve Vai) with a focus on drumset performance. It was in Boston where he began to teach and tutor privately. Upon returning to Connecticut his teaching has continued. Vince is an active drumset artist in the greater New England area. He is active in both playing

live with various groups as well as being a studio recording artist. He currently teaches drumset and percussion at Music & Arts in East Hartford, CT and is available for both private and group instruction.

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