
ALAIN
CHARMOILLE
DRUM SCHOOL

Contents

1 - A Brief History of the Drumset

The history of percussion instruments dates back 30,000 years, but until the beginning of the 20th century, all the instruments were played separately. A player played only one instrument at a time. Drums and percussion instruments of various sizes and designs were used for all kinds of purposes, such as religious ceremonies, transmitting orders during war, healing ceremonies, passing messages, and so on.

- 1895: A drummer called Dee Dee Chandler builds the first bass drum pedal.
- 1899: Leedy introduces the first snare drum stand.
- 1909: William F. Ludwig introduces a new bass drum pedal that offer greater speed and control than any of its predecessors.
- 1910: The "traps" sets evolve, as drummers start to add various percussion instruments to their set-ups.
- 1920: The Walberg and Auge company introduce the first "lowboy" stand.
- 1930; Companies Leedy, Slingerland, and Ludwig begin to feature hi-hat stands in their catalogues.
- 1936: Slingerland design the first tunable tom toms in response to a request by Gene Krupa.

Chicago drummers begin experimenting with larger cymbals and the ride cymbal is born.

- 1950: Marion "Chick" Evans invents the synthetic drumhead but the Remo Company, founded by Remo Belli, makes it commercially popular.
- 1970: Improvements in hardware manufacturing make it possible to have larger, multi-tom set-ups, often incorporating single-headed concert toms.

Japanese companies enter the marketplace offering high quality drums and heavy-duty hardware.

Electronic percussion begins with devices like the Syndrum.

-1980: Manufacturing standards continue to improve and many new drum companies appear. Deeper drums called power sizes become fashionable.

Drum Workshop introduce the first practical double pedal.

In order to understand why drummers began to play with their arms crossed, let's take a look at some history.

Around 1900, drummers were starting to use more than one instrument at a time. Since there were no pedals, a style called "double drumming" was created, in which the bass drum and the snare were both played with sticks by one player. The drummers of the early New Orleans Jazz / Second Line bands were particularly well known for this style of drumming. This concept of playing multiple instruments led to the introduction of the bass drum pedal by William F. Ludwig in 1909. This was considered the birth of the modern drumset, because the snare and bass drum could be played at the same time by just one player with hand and foot. The first complete drumsets were available around 1918. Since most right-handed players are also "right footed", they chose to play the bass drum pedal with the right foot, while playing the snare (using the traditional grip) in a position slightly angled away from the player. The bass drum pedal was probably invented before the hi-hat because it is much more difficult to develop a device that allows someone to play a pair of cymbals with the feet. In most of the styles that were present in those days, the bass drum was more important musically than the cymbals, since it played the basic pulse.

As things progressed, drummers added all kinds of accessories mounted on the bass drum: woodblocks, cowbells, cymbals, any kind of contraptions (later called "traps"). The main thing that caused drummers to play with crossed arms was the invention of the hi-hat in the 1920s. Before that, there had been devices with a similar function called the "clanger," "snowshoe," or "low boy." The real hi-hat, as we know it today, was able to be played with both the hand and foot, and was adjustable in height. Since the bass drum pedal was already played with the right foot, the hi-hat was played with the left by default. Because drummers at that time used the traditional grip, it felt very uncomfortable to play the hi-hat with the left hand. Moreover, the hi-hat cymbals at that time were shaped differently than modern ones; the cymbals were much smaller (about 10" or 11"), and featured a much larger bell. Interestingly, after the invention of the hi-hat, some drummers actually played the hi-hat with the right hand crossed under the left hand. Gene Krupa can be seen playing this way in film footage from the era.

As you can see, the reasons for playing with crossed hands go back to the use of the traditional grip of the sticks, and the way the modern drumset developed. What would have happened if the hi-hat had been invented before the bass drum pedal?

2 - The Power of History

Systems of Natural Drumming: Stone, Moeller, Gladstone

Within the arena of percussion, there is a methodology which presents a "natural" means of playing: George Lawrence Stone, Sanford Moeller, and Billy Gladstone were all teachers and performers in the early to mid-1900's who represent this natural drumming tradition.

George Lawrence Stone (1886-1967)

There are three basic principles in Stone's system of natural drumming. Foremost is Stone's statement found in *"Stick Control"* that control of a drumstick begins in muscularly relaxed action.
In other words, Stone's first lesson was simply to make a drum stroke by using comfortable, loose movements. He felt that arm and hand muscles would not be tense if a person attempted to use a little effort as possible in producing a full tone.
Stone's second principle was that for every drop of the stick, there is an opposite rebound to be accepted: in other words, there is a reaction for every action.

In his book, "*Accents and Rebounds*", Stone uses the analogy of comparing a drumstick to a rubber ball. He suggests that in bouncing a ball, one doesn't stop it after each bounce. Instead, continuous movement of the arm and hand is used to keep the ball in motion.
Likewise, one could use a similar motion in making successive strokes for playing situations.
George Lawrence Stone emphasized this by telling students that if they stopped the stick after each stroke, tension would stiffen the muscles and prevent relaxed, controlled movement.

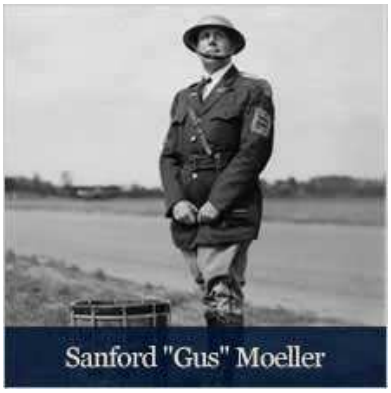
The third principle in the Stone approach is that all of the upper body hinges, the shoulders, elbows, wrists, and fingers, should be free to move when needed for various dynamics and tempos.

Georges Lawrence Stone believed that one should not keep the arms still and rely solely upon wrists or fingers in general playing.

Among his students: Vic Firth, Joe Morello…

Sanford Augustus Moeller (1886-1960)

As a result of observing jazz and rudimental drummers, he analyzed the similarities of their techniques and several years later, after much thought and experimentation, Moeller began to codify these natural components of drumming.



His students began calling his notes and exercises the "*Moeller Method*" or the "*Moeller Technique*".

Some of the basic fundamentals of Moeller's teaching are found in his text, "*The Moeller Book*".

The basic foundation of the Moeller system is to play with natural relaxed strokes in wave-like motions.

Moeller's basic full stroke, the premise of this system, can be likened to cracking a whip or throwing a baseball.

This, in a concise form, is what Moeller observed in the best players of the day. The faster or louder they played, the more wave motions they used.

Moeller then decided to break the motions into parts and teach them very slowly. This allowed his students to develop a very fluid, natural technique more quickly.

The second cornerstone for Moeller was that a player should be free and relaxed from the head, neck, and shoulders, to the arms, wrists, hands and fingers. This allowed a player's motions to be uninhibited.

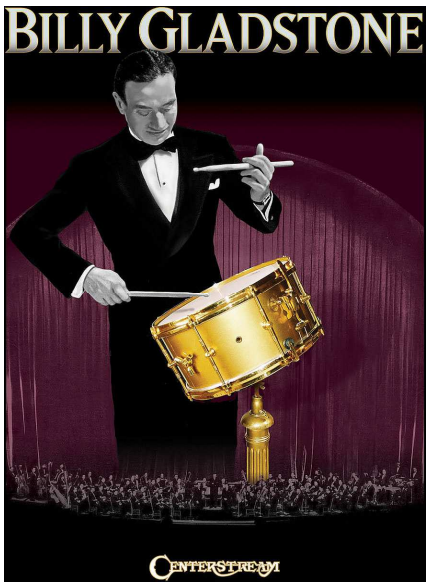
Third, Moeller taught that the sticks should move within the hands so that the body wasn't very involved. This is similar to Gladstone's idea of discovering what the sticks can do by themselves.

The fourth cornerstone was the idea that a composite use of all "levers" is required for good technique.

In other words, Moeller showed that a percussionist should develop the use of arms, wrists, and fingers just as any good pianist or conductor would. For example, a player would not use only the fingers or the wrists without assistance from the arms in general playing.

Among his students: Thomas Andrew, Frank Ippolito, Gene Krupa, Allen Paley, Jim Chapin was the best of them…

Billy Gladstone (1893-1961)



Drummer, percussionist, fantastic inventor, Billy Gladstone having spent much more of his time performing than teaching, had a system of natural playing that, in principle, seems very similar to the Stone system.

A basic idea of his was to bring the hands back in a continuous movement as opposed to starting and stopping the sticks for every stroke. He believed it impossible to drum with just arms and wrists. He felt the fingers had to be involved.

A facet of the Gladstone system that is distinct from Stone's basic ideas is stated by Ted Reed: the action of the arm, wrist, hand, and fingers in Billy's drumming system closely related to the action of the piano key striking the rod, which strikes the hammer, which in turn strikes the string.

Essentially, this meant that Gladstone used a flowing motion from his shoulders to his fingers that could be likened to a wave moving throughout the arm. Gladstone's stroke system also consisted of arm, wrist, and finger strokes.

However, his basic arm stroke used forearm turning and wrist motion with more of an open fulcrum that allowed one to "catch the bounce". This meant that one would allow the stick to come back after a down stroke and catch it in the rebound. Joe Morello's first lesson with Gladstone consisted of learning how to make a stroke in the right hand with the stick doing half of the work.

Another distinction is in the finger stroke where Gladstone thought of finger motion on the sticks to be like a piano hammer striking a string.

The fingers tap the sticks and the sticks strike the head. Finally, Gladstone said that accents should be considered as very relaxed strokes at a louder dynamic level. He challenged his students to play them with as gentle and loose a motion as possible.

Among his students: Ted Reed, Arnie Lang, Henry Adler, Joe Morello, Shelly Manne...

5 similarities

In reviewing these three systems, there are five overall similarities:

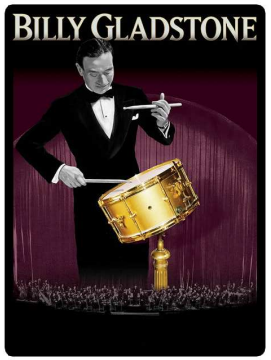
- First, Stone, Moeller and Gladstone taught relaxed fluid strokes and motions as a fundamental technique.
- Second, they taught a full use of rebounds, producing multiple strokes from one body motion.
- Third, they taught the use of a natural grip and fulcrum that allowed for free motion of the sticks, essentially, a loose grip that used the natural curve of the fingers.
- Fourth, the demonstrated the need to use the complete musculature from the shoulders to the fingertips so that the arms, wrists, and fingers worked in conjunction with each other. For example, playing from slow to fast meant that one would depend primarily upon the arms at first, and then use more finger motion as the tempo increased.

Finally, they all taught natural body and instrument positioning so unnecessary strain was avoided. For Stone, Gladstone and Moeller, this is most evident in tilting the snare drum in the same direction as is the left stick in traditional grip.

Gladstone snare drum

Sanford Augustus Moeller

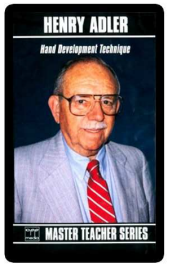
DRUM TEACHER LINEAGE



Billy Gladstone
Finger Techniques
(1893-1961)

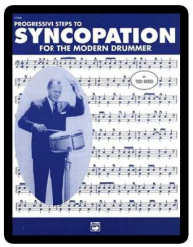
Georges Lawrence Stone
Wrist / Free Stroke
(1886-1967)

Sanford
Moeller
Arm / Whip
(1886-1960)



Henry Adler

Arnie Lang



Ted Reed

Shelly Mane

Joe Morello

Vic Firth

Jim Chapin

Gene Krupa

Dom Famularo
Range of Motion
(hands & feet)

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3 - Anatomy of a Drumset

The drumsets played today evolved through a combination of diverse percussion instruments, taken from different musical cultures, and technical innovation.

Drumsets come in a wide variety of sizes and configurations, depending on the style of music being played, and are produced all over the world by numerous manufacturers.

Here is a standard 5-piece acoustic drumset

4 - Shell

Bass drums and toms are traditionally made from wooden shells, and snare drum shells from both metal and wood. Maple and birch are the most common woods used in the construction of high-end drums.
Metal-shelled snare drums are commonly made from steel or brass, but copper, bronze and aluminium are also used.
More recently, drums have been made from exotic woods, chosen for their interesting sonic characteristics and unique appearance.

Wooden shells are commonly made up from a number of plies bent into a cylindrical shape, although solid one-piece shells and shells made from blocks of wood are now popular. Metal shells are either cast, or made from a single sheet of metal rolled into a cylinder. A good shell should be as close to a perfect cylinder as possible.

Drumheads: An essential component of any drum, drumheads are available in a bewildering number of sizes, thicknesses and models.

Hoop: This is the metal ring that holds the head in tension over the shell.

Tension rods: These are the threaded bolts that screw into the nutboxes, holding the hoop in place and giving the head tension.

Snare strainer: This is the device that holds the snare wires tightly across the bottom head. Strainers come in a variety of designs, but all feature an adjustment screw to change the exact tension of the snare wires.

Lugs: These are the housings into which the tension rods are screwed. They are attached to the side of the shell and come in a variety of styles and finishes.

Snares: These are the strands of curled metal wire that are stretched across the bottom head giving the snare drum its characteristic "snappy" sound.

5 - Hardware

Drum pedal

Snare stand

Hi-hat stand

Boom cymbal stand

Straight cymbal stand

6 - Cymbals

Hi-hats: Hi-hats cymbals are sold in pairs and usually the bottom cymbal is heavier than the top. Ranging between 10" (inches), and 15" in diameter, the most popular sizes are 13" and 14". They are mounted horizontally on the hi-hat stand and can be played with the sticks or using the pedal, with the foot. The primary function of the hi-hats is to state the time.

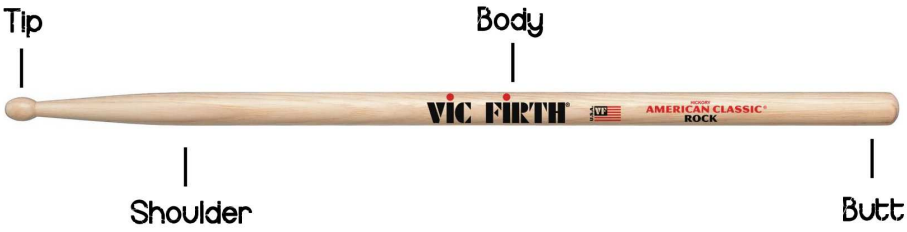
Splashes: Splashes are smaller, thinner cymbals, ranging from 6" to 12" in diameter. They produce a shorter, higher-pitched sound, and are generally used to expand the sonic possibilities of a basic cymbal set-up.

Crashes: Crashes are generally used to accentuate certain rhythmic points within the music. They range in size from 14" to 19", and come in a variety of thicknesses depending on their chosen application. They are played with the shoulder of the stick on the edge of the cymbal, and the resulting sound is explosive.

Effects cymbals: Effects cymbals include a range of different designs including chinas, gongs, and bells all intended to offer exotic sounding alternatives to traditional cymbals.

Rides: The ride cymbal will be the largest cymbal, ranging from 18" to 22" in size, with 20" models tending to be the most popular. The function of the ride cymbal is similar to that of the hi-hat, that is, to state the time. So, as well as having a large diameter, ride cymbals are relatively thick, which gives them a more controlled sound.

7 - Drumsticks



Tip: This is the part that usually strikes the drum or cymbal.
Shoulder: This is the point at which the body begins to taper toward the tip.
Body: This is the main part of the stick and the bit that you actually grip. It is also the part of the stick that strikes the hoop of the drum when you play rimshots.
Butt: This is the back end of the stick and acts as a counterweight.

Stick sizes:

Traditionally, a universal system involving letters and numbers was used to identify the size and recommended application of different models. Within each category, the number describes the thickness (or diameter) of the body of the stick. Interestingly, the smaller the number the greater the diameter – so a "7A" is actually smaller than a "5A." But because of their intended application, a "5B" is bigger than a "5A".

Universal model numbers:

These comprise a number and a letter. For example, "5A" or, "2B". The letter describes the suggested application. Three letters are used: "S," "B," and "A".
- "S" model sticks are the largest and were originally designed for street use (marching bands, drum corps) where extra volume and projection are needed.
- "B" model sticks were originally intended for band use, and are consequently not as big as "S" model sticks.
- "A" model sticks were intended for orchestral use, where soft playing is often necessary. Consequently the sticks in this category are the smallest and lightest of all.

Brushes: Although very versatile, brushes are most commonly associated with jazz drumming. They comprise a set of plastic, or metal, bristles, which fan out from a handle that is most often made of rubber-coated metal but can also be made of plastic or wood. Some designs are telescoping, allowing the bristles to retract into the handle in order to protect them when not in use.

Multirods: Multirods are bundles of thin wooden dowels (or rods) that are used like sticks but create a lighter sound with less attack and lower volume.

8 - Drumheads

Originally, drumheads were made of natural materials such as calfskin, but today they are made of synthetic materials like polyester. Such materials are more durable and resistant to changes in temperature and humidity. All heads are constructed in basically the same way; they are made from a synthetic film, set with resin into an alloy or plastic ring. Beyond this basic design they come with a variety of features, to enable a variety of different sounds.

Coated or clear?

Most commonly, drumheads come in one of two finishes: coated or clear. Clear heads are transparent and smooth in texture, while coated heads have a coarse white finish. This coating adds mass to the head, causing it to have a slightly lower tone, while the rough texture accentuates the attack of the stick. Coated heads can also be played with brushes.

Sizes: The size of the head is determined by the size of the drum it is for. A 12-inch tom takes a 12-inch drumhead.

Thickness: The thickness of drumheads is measured in mils (1 mil equals 0.001 of an inch). Heads come in three weights: thin, medium, and thick. Manufacturers generally have their own names for each of these weights; however, the standard was set some time ago by Remo who labelled the weights of their heads - Diplomat, Ambassador and Emperor respectively. In the drumhead business these names have become synonyms for thin, medium, and thick. Thinner heads are more sensitive but less durable than thicker heads. To increase the durability of some single ply heads most manufacturers offer models reinforced at the center with a dot.

Single or double ply?

There is some discrepancy between the ply of different manufacturers but as a guide, thin heads are made from single ply around 7.5-mil thick, and medium heads are made from a single ply around 10-mil thick. Interestingly, thick heads are usually made from two plies of film, each around 7-mil thick.

9 - Tuning

This picture illustrates the correct sequence to tune a 10 lug drum.

Head tension:

Once you understand the tuning process, the tension you tune your drum to, is up to you. As a guide, higher tensions give higher pitch, brighter tone, longer sustain, and greater projection; whereas lower tensions give lower pitch, darker tone, shorter sustain, and less projection. The key is to experiment, but bear in mind that all drums have an optimum tuning range within which they will give you the best sound.

Relative tension:

The vast majority of drums have a batter head and a resonant head, but how should these be tuned to one another? Generally, a drum will have maximum volume and sustain when both heads are at the same tension, and the drum is within its optimum tuning range. The exception is the snare drum, where you should start with the batter head higher than the snare head.

A word about bass drums

Because of the size and function of the bass drum, your approach to tuning it will be different than that of the other drums. It is common to place some kind of material inside the drum before fitting the heads, in order to dampen it. Most often, a pillow is used which is large enough to touch both the batter, and resonant heads at the same time.

Once you fit the heads, it is best to tune both to the same tension. Start by tightening the batter head just tightly enough to remove any wrinkles. If at this tension the bass drum feels a little unresponsive and difficult to play, try tuning it up slightly, until it feels better. The idea is to get a balance between a “fat” sound with lots of low end, and playability.

The resonant head on the bass drum often has a small hole in it. This does two things: firstly, it allows air to escape quickly from the drum when it’s struck, significantly reducing resonance. Secondly, it enables a microphone to be placed inside the drum. It also has the advantage of making it easier to reach in and reposition any pillows that you might be using to dampen the drum.

10 - Hearing Protection

Very Important!!

Drums are very loud and prolonged exposure to them can have a permanent, detrimental effect on your hearing. There is a simple and inexpensive solution to this – hearing protection. Drummers commonly use earplugs or headphones.

So now all you need to do is grab your sticks and start learning.
Have fun!!!

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Extracts from books:
The Drummer's Bible (Justin Scott)
Scholarly Paper Presentations at Percussive Art Society
Open-Handed Playing (Claus Hessler)