The evolution of marching percussion is punctuated: long periods of stasis followed by rapid changes, often brought about by a simple idea that spreads quickly throughout the drumline world. Competitiveness, and now the availability of online videos, are usually the driving forces.

Three popular changes in recent years are:

- Bass drum playing zones
- Bass drum tuning
- Bass drum grip

Bass drum playing zones:

A bass drum has the same basic physics as any other drum – striking it in the centre is louder than if you strike the drumhead near the edge. Velocity and stroke height are often the primary, and only, way that ensembles vary their volume. To broaden the dynamic range of the instrument even further, players can strike the drumhead at the upper edge for a quieter sound with a longer sustain. This is usually done between the manufacturer's logo and the drum hoop. The addition of playing zones to your bass ensemble will widen the overall dynamic range and textural palette.

Bass Drum Tuning:

There has been a big change in bass drum tuning in recent years. In the past there were relatively even intervals between the five bass drums. The overall pitch of the entire line has moved higher and higher with each decade. With ensembles tuning so high, the bassline started to lose its powerful sound when playing unison impacts. Many American marching bands have used six bass drums, and tuned the largest drum extremely low. This drum was utilized as the drumset's "kickdrum" of the ensemble. It also plays the unison impacts – giving the bassline a strong sound. However, six basses may not be practical in many situations, and contemporary ensembles have moved to tuning the bottom (fifth) bass as low as possible (with added muffling to decrease sustain), while tuning the upper 4 as high as possible for maximum articulation and clarity. This is an exceptionally effective tuning method for indoor ensembles, and has quickly become the standard.

Bass Drum Grip:

The relationship of the players' fingers and thumb to a bass mallet is the same as that of the snare and multitenor. The difference lies in the position the hand holds the stick along its shaft. Snare & tenor drummers hold a stick with the fulcrum (thumb and index) at the natural balancing point of the stick – approximately one third from the bottom. This results in a small portion of the stick/mallet protruding out the back of the hand. What is different for a bass drum is that the striking surface is on a vertical plain, and the head of the mallet has significant weight -- changing the overall balance of the mallets. Performers should slide their grip down to the bottom of the mallet, with the butt of the stick flush with the back of the hand. This grip provides as a counterweight for the mallet, vastly improving player comfort, speed, and endurance.