What Goes In The Ears:
An Alternative to the Long Ranger for Marching Percussion Tempo Training

A Marching Percussion Clinic For
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The Long Ranger (and other branded sources of amplification) for the use of metronomes on the marching band field are a useful tool. However, there are some alternative techniques and technologies to consider as well. These affordable and clever approaches can offer directors a menu of choices to select from that can save students' ears from this exposure time to a necessarily loud noise. However, they can also actually help train them in ways that are more beneficial to ensemble playing.

The usual use of amplified metronome:

- The band will hear 8 clicks from the metronome, from the back of the field, and the band (or section of the band) plays along to the met.
- The met is kept near the back of the field, and near the center of pulse (usually the drumline).

- Sometimes the met will sound 8 clicks and turn off, and the musicians will play without the met.
- For an explanation of WHERE to use metronomes on the field (and in our case, where the drumline can be the "center of pulse" and where timing delays can cause problems for listening), check out this resource created by Andrew Rogers and shared by Dave Gerhart, it is AMAZING:
  http://percussioneducation.com/metronome-sound-delay-explained/

Some problems with the use of amplified metronome:

- The volume must be incredibly loud in close proximity if those further away are to hear it outside. This is obviously not helpful for our musicians' hearing.
- The further away you get from the met, the same delays in sound start to creep in that already exist on the field. This is true for "8 and out" or playing with the met for an entire repetition.
- In systems where the winds are to watch the conductor and NOT listen for time, having a met on can actually cause a regression, where they get comfortable having an audible (if late) pulse to listen to and stop watching.
- Use of amplified met is not going away, and definitely still serves it's purpose of building muscle memory, but there has to be a way to alleviate or at least help with some of these issues, at least some of the time. Musician's ear plugs are a good first step. But there is more that can be done.

New Ways of Approaching the Problem:

- Partial use of "In Ear" metronome for a center snare drummer that can handle it can provide a welcome break from the amplified metronome, but also can provide targeted training.

Some "Truths" to accept or reject depending on your outlook:

- Playing "in time" with a metronome in your ear is not the same as playing in time without hearing the metronome. The latter is much harder. Musicians are constantly making adjustments to a metronome to stay with it.
- Musicians can also constantly make adjustments to a center snare drummer (or quad drummer, or whatever) if they feel that they need to.
- Our center snare drummers (or whatever instrument) are constantly making adjustments that they know at some level are wrong to go with those around them to "save the ship," making playing in time 10 times harder.
- When you isolate them with "In Ear" metronome, they can't hear their colleagues making mistakes, and don't adjust.
- When the "center" doesn't adjust to the fleeting whims of the rest of the line, things get really tense and really, really terrible sounding for a little bit. :)
- When all the students realize that the "center" can't hear them, is playing with the met, and that they themselves will have to play in time to stay with the

center (or things go absolutely, horrifyingly wrong if they don't), they will listen to a degree they never have before, and start to play more in time, all without ever hearing a "beep beep" sound.

- Training a "center" to really play in time takes some effort and a student with talent and some thick skin, but it can be done, otherwise what are we using amplified metronome for in the first place? Really?
- Rehearsing with an "In Ear met" does involve checking the met to make sure that the "center" is actually doing a good job playing with the met. Watching the light on a DB-90 is an art that is quickly learned, but there are recommendations below as well. And honestly, after a few weeks of doing this, the student wearing the "In Ears" can develop a signal like patting the top of their head to signify "I didn't play with the In Ears that rep" so you don't waste time responding to it. They are smarter than you think.

Sounds terrifying, right? It actually goes really well in just a few rehearsals.

Let's cover a menu of options, starting with the least invasive and easiest, and heading to the most complex and potentially beneficial.

1. You can encourage students to practice in pairs with one of them plugged in to metronome on ISOLATED IN EAR MONITORS, and the other not, on practice pads. This practice buddy system will get some of the message across right away....you aren't really playing in time when you think you are.

2. You can start with the full group by playing your "8 on a hand" Rebound/Legato exercise with the "In Ear met," and only that exercise, as a way to train the ears from the get-go. This is a really easy one to enter into the full ensemble setting with. And it works with front ensemble or battery, no problem. Put the "In Ears" on the center snare. Have that person start an exercise by tapping, or my preferred choice of clicking the drum on 1, dutting the remaining 3 beats of a bar, then the rest of the group duts four, then play. For front ensemble I recommend visual cues to start exercises. However, how you choose to start an exercise is not the important part of what we are discussing.

3. You can move on to a tap accent exercise next for a battery. Something that mostly sticks to a simple rhythm but develops an inflection of accents and unaccented notes that the students probably are morphing rhythms around. For the front ensemble, a Green Scales type exercise would be a good second step.

4. You can get brave with the battery and try more complex two height drumming exercises, like two hand paradiddle / paradiddlediddle exercises, and the two hand complexity will cause a whole host of new issues, but the listening benefits will be

huge. With the front ensemble you can move into 4 mallet work like block and arpeggiated chords, or working scales with mallets 2 and 3....things that will preoccupy their mental energy so that their listening skills are strained. Of course anything you do with dynamics will also add a layer.

5. One of the most difficult things to play in this environment is a roll exercise for the battery. It is so tough because the notes come so fast....it makes the margin for error so small and the time for adjustment goes by so quickly. This is an advanced concept for this tool.

6. Don't forget to use the "center" to change tempo as your members get stronger! Can the line go 10 clicks faster simply by you giving a signal, changing the met on the release of the exercise, the center giving them four faster "duts," the line do four "duts" at that new tempo, and then off they go? Next level!

7. Playing Book Segments in the "arc." This is a no-brainer. If the group can play their book in this system, their timing feel on the field will be better. You may have to have some "dutting" during places where the snare drums do not play, but this seems to not be that big of a deal in this setting.

8. Tracking Book Segments. Another no brainer. Same idea as the "arc" setting, just on the move, solidifying foot timing while their musical timing gets a tune up. It is hard to overstate how helpful this is. Probably one of the smartest things I've ever done from a "cost/benefit" analysis.

9. Field Reps. This is the big one. Only to be attempted AFTER success with some of the other ideas above. You would do this ONLY where you have a section of the show music where the percussion is scored consistently (no large gaps of tacet time) AND where they are located in a place to be the center of pulse. If you have a show chunk where you can start there, you would start the repetition with the center snare with the "In Ear met" on. That student would give 8 taps on the snare, and the rep would start. That student would literally play and march with the metronome, and the conductor would be conducting with that student's feet. This system has to be worked out in battery sectionals FIRST, full percussion sectionals SECOND, moving music ensemble rehearsal THIRD, and only then brought to full ensemble rehearsal. This is an invaluable tool. It allows for that section of the show to be completely defined. The drums know where to listen (for playing or subdivision). The conductor knows where to watch and conduct with, anticipation or not. The winds have consistent pulse to watch or music to listen to, depending on your system. There were several sections of the Blue Springs Golden Regiment production in 2016 that were organized in this way.

10. Next level application: Are there times where the drum major should train a little bit with the "In Ears" in? Are there places (like a moment where no battery percussion is playing) where the winds should be watching and playing with the hands, and not listening to anyone? Would it help the winds to fall apart once or twice (IN REHEARSAL, MIND YOU!) because the drum major didn't bend to their will, and they learned that valuable lesson? I have SEEN and HEARD some really great results come from this method, but you have to pick the moment carefully.

What To Expect:

1. A WARNING: You must be CAREFUL to get the "In Ears" well fit to the student and keep the volume as low as you can while still allowing them to hear confidently while the group is playing.

2. The students are NOT going to want you to trade the "In Ears" out between them (like between the front ensemble and the battery section leaders between classes) because they are unsanitary to share. Eww! Keeping extra ear inserts or a set of "In Ears" for each student you expect to use them might be the right thing to do!

3. Expect the first time you try this to crash and burn. This is a game changing skill, and it will take some time.

4. They will begin to notice if they are speeding up or slowing down with much tighter tolerances. Any speeding up or slowing down they do will blow the whole thing up and you'll have to cut, because the "center" will not hear it. All you are doing is taking away their ability to slow down and speed up to get back with the met when something goes significantly wrong. When they ride the tempo wave, they are not really playing in time anyway. They will eventually stay with the "center," and when they do, they will probably tell you that it felt more "groovy" or just plain better. It's more fun to play in time.

5. Each "step" I described above will be like totally restarting. A group that can play 16s with tempo changes can start their tap accent exercise and completely fall apart. Be ready for that reality. Every new technical challenge is also a new timing challenge.

6. For "Field Reps," understand that the bigger the form, especially from a horizontal perspective, the harder it will be to line all this up.

Trouble Shooting:

1. If things are not going well, start with the "center" and one other member first. Add on one member per repetition. This seems to work well.

2. Remove other variables when things are going wrong. Have the quads play on drum 2. Take out the diddles. Play one height. Anything you can do to get down to what is really going wrong and take out the other variables.

3. In order to make "Field Reps" with large horizontal forms go better, try playing exercises in that form, starting with the most basic and moving up. The ears will begin to be attuned to the form as needed.

4. Similarly, listening errors are magnified with distance, and "directional listening" will be key. Asking students to put their ear "on the drum" of the person next to them toward center will be a big deal.

Equipment Recommendations:

What you need to do this is really simple, and relative to what we spend on marching band, sinfully cheap. You will need:

- A set of "In Ear" Monitors with strong noise attenuation
- A headphone extension cord (this is key, so you don't have to stand right in front of the student plugged into the "In Ears"
- A metronome (your output connection will be important to your extension cord choice)

The student simply puts the headphones in, wraps them around the harness, and wraps the end of the headphone cable around a tension rod on the drum. It works so well, it's hard to believe you don't need something more complicated. But you don't.

There are some things that I have used for this purpose over the years that have served me well, are road tested, and get the job done.

1. **<u>You've got to check out Planet Waves cables.</u>** They are the **only** choice for the brutal use we put electronics through. I have used several (read way too many) headphone extension cords from other companies. What I recommend is the **Planet Waves PW-EXT-HD-20 (Headphone Extension Cables, 20 feet)**. You plug the male end into your metronome, and the male end of your "In Ear" Monitor into the female end of this cord. It's long enough that you can run a section from the

front, or coil it up and carry it with the metronome to move on the field with the battery.

2. **Etymotic MC5 In-Ear Headphones.** These are an affordable and durable model that come with 35-42 dB of attenuation, come with a 2 year warranty, and cost something along the lines of $60. They get the job done and are comfortable and light.

3. **Boss DB-90 Metronome.**

I have also in the past used a headphone splitter so that I could personally listen in to the metronome to check the "center" to make sure that he or she was playing with the metronome. However, if you want to do this, you can't just use a splitter from Wal-Mart. You have to boost the signal, or you are cutting the signal and volume to the "In Ears" so much that the student can't hear it with the musicians playing. Basically I plugged the below recommended Boostaroo in at the metronome, and split the signal to me and to the student. This would also require some sort of adapter to go from 1/8" male to 1/4" female for the headphone extension cord, and another set of "In Ears." I eventually decided this wasn't worth the hassle to me, and got really good at looking at the light on the DB-90, but here it is:

- Boostaroo Portable Audio Amplifier & Splitter T613-BNC http://boostaroo.com/store/Boostaroo-Portable-Audio-Amplifier-and-Splitter-T613-BNC.html
- You'll need an adapter to go from 1/8" to 1/4" for the Headphone Extension Cord

Important Tips of the Hat

Any discussion of this topic would be remiss without tipping the hat to Murray Gusseck and his article about playing with the entire Santa Clara Vanguard battery hooked into isolation headphones and playing along to groovy music in his fight against of a terrible affliction called Nonhavinus Groovus. While this is a really different topic, a lot of my thoughts about this were inspired by that effort of his and my admiration of his work in general.

I also want to thank the companies that make it possible for me to do clinics around the world, including Evans Drumheads, Innovative Percussion Sticks and Mallets, Pearl Drums, and Sabian Cymbals. These companies make the best instruments on the planet, and I hope you'll try them out some time soon to see what I see.

Thanks also to The Kansas Chapter of the Percussive Arts Society for the opportunity to share this information with you. As a former Missouri Chapter President, I encourage you to get involved with your local PAS Chapter as a member by becoming a member of The Percussive Arts Society.

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