

AMPED UP

The Raiders Drum and Bugle Corps get Creative with Audix Microphones

A drum and bugle corps, or drum corps, is a musical marching unit (similar to a marching band) consisting of brass instruments, percussion instruments, and color guard. Typically operating as independent non-profit organizations, drum corps perform on-field competitions, parades, festivals and other civic functions.

Through the drum and bugle corps experience, young people develop life skills including self-discipline, teamwork and leadership.

The award-winning Raiders Drum and Bugle Corps, in North Jersey, has one of the top programs in the country. Their current band director Derick Jerinsky has taught many front ensembles over the years.

Derick has developed some miking techniques that are very creative, practical, and effective and when asked to share these ideas with our customer base, he gladly agreed.

Derick explains, “Up until 1995, the front ensemble [which consists of bells, marimbas, and vibes] were all acoustic. There was literally no way to get the sound of the instruments above the horn lines or the drum line.”

When DCI (Drum Corp International) started allowing electronics, it changed everything. A large chain reaction occurred and every high school group in the country was trying to figure out how to amplify their front ensembles.

Derick then started to amplify his indoor groups, like the Raiders, when they demonstrated a desire to be “amp up.” So began the research and experimenting. He called in numerous friends who became involved in the activity of testing and trying out different methods, until they found one that worked.

ON TO THE MICROPHONES

The first two questions that arise are: What kind of microphones should I use, and how do I attach the microphones to my instruments?

The first question is easily answered. You want to use a Dynamic Instrument Microphone on all of your equipment, including marimbas, vibraphones, timpanis, chimes, and all auxiliary instruments. With a good value for a low cost, the Audix Company makes the best product. It offers dynamic microphones, within a price range of \$60 to \$300.

“My microphones of choice are the I-5 and the D-2. The I-5 runs around \$100 and the D-2 runs around \$130. I have had conversations with people who have had great success with both the D-4 and D-6 models, as well,” Jerinsky said.

The major problem that arises when attaching microphones to instruments is this: how do I avoid picking up extra sounds from the mallets, striking the instruments? We want the microphones to pick up the sound of the instrument—not the attack. For example: when we play the chimes, the microphone is going to pick up the sound of the bells, along with the sound of the hammer striking the bells. Instruments with pedals, such as timpanis and vibraphones, come with another problem altogether. Along with the sounds from the instrument and the attack, the microphone will also pick up on the sound from the pedal.

There is an easy solution to all of this: **shockmounts**.

Attaching shockmounts to timpanis and chimes is very simple in fact Audix makes several types of shockmounts that work with the D series and i-5.

However, attaching them to vibraphones and marimbas requires more effort. A few companies have started to make shockmounts that work under keyboards, but it is a new science and not all systems are compatible with every brand.

We have designed a way to shockmount under the keyboards. We use one microphone under our vibraphones and two microphones under our marimba-- one near the top and one near the bottom.

Step One: Attach a little piece of string around the sides of the keyboards, and another in the middle of the marimba (if using two microphones).



Step Two: Attach small bungee cords to the sting. These bungees are what creates the shockmount effect.



Step Three: Attach an "O" ring around the microphone, and attach the bungees to the ring. You can purchase an "O" ring in the plumbing section of any hardware, pool, or boat store.



The final product should look something like this:



This method is not always necessary. If you choose to attach the microphones above the keyboards, all you need to do is attach them to the action bar. When the microphones are secured, attach a gooseneck, in order to position the microphones to your desired height.



B: Over or Under

How do I know if I should attach the microphone over or under the keyboard? There are pros and cons for each position.

Over: The natural tendency is to mic above the keyboards. It seems logical that the sound should be picked up from above. However, placing the mics above the keyboard means that the mics will be much more prone to wind noise. An even bigger problem is that a mic above the keyboards is more apt to pick up sounds from all around it, making it more difficult to distinguish the sound of the keys.

Under: Even though a better sound can be achieved from placing the microphones over the keyboards, I find that positioning them beneath the instruments is more practical. The

keys and resonators create an effective shelter from the rain and wind. Once we set our bungee cords to the proper height, we no longer have to worry about hot spots. Attaching the microphones under the keyboard also separates them from the cymbals, keeping the microphones pointed up, and preventing them from picking up noise from other places on the field.

THE REST OF THE STORY

The rest of the gear that is needed is no different from any other stage production. You will need a mixer with enough inputs for all of your microphones, (16-24 depending on the size of your band). A “snake,” which allows you to keep you mixer in front of the ensemble. A speaker system (usually consists of two mains and two subs), amplifiers to run the speakers, and a generator or battery packs in order to get your electricity.

E: Cost

There is no cheap way to buy a full sound system. I have found the best way to achieve affordability is to formulate a plan. We set up a three-year plan to obtain everything we needed. Our first year, we purchased ten Audix I-5’s, 12 microphone cables, a power conditioner, a speaker cable, and a sound rack to hold our electronics. We borrowed speakers, a snake, two amps, and a sound board.

Our second year, we purchased an amp, two Audix I-5’s, two Audix D-2’s, four microphone cables, and a sound board. We borrowed only a second amp and speakers.

Our third year, we bought speakers, an amp, two Audix I-5’s and two Audix D-2’s, and four microphone cables.

Conclusion:

When asked how he came up with the current design, Jerinsky replied, “Every group has something different that works for them, and every year the design advances. This is definitely a continuous experiment with its own unique evolution.”

Throughout the process, Jerinsky has found that, “Amplifying the front ensemble is a new process. I have spent the past three years researching and experimenting with different concepts. There is not a single “correct” way to amplify the pit. Everybody does it a little differently, and it’s all about finding the best way to make it work for your group. Finding your group’s method becomes a balance between achieving the sounds you want and working within a set budget.”

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