



Marching Band Sound Systems

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Why you should use sound systems!

1. That is the direction things are going in both BOA and DCI.
2. Super fun for your kids... they will love it.
3. Even MORE opportunities for kids
4. Some shows require it

The big CONS of sound systems!

1. Terrible pain in the rear
 - a. You just increased the number of problem variables by 1000
2. They are very expensive
3. Hauling, moving, and storing is a giant pain.

Building a system - Type & Resources

1. Types of systems
 - a. Small Systems
 - i. Get your synth heard
 - ii. Project a solist
 - iii. Good for small bands and/or small venues
 - b. Big Systems
 - i. Good for Big Venues need Big Systems
 - ii. Big Bands are known to bury front ensembles that aren't mic'd
 - iii. Certain shows REQUIRE big audio
2. Purchasing a system
 - a. Custom Rigs that you piece together (or help from a friend... hint hint)
 - b. Pre-Packaged Rigs (available through big band retailers)
 - c. Grandma's Stew Version (Just throw everything you have in there)

Sound Board

1. Digital vs. Analog
 - a. Just like TVs... the price is dropping
 - b. Digital boards will SAVE your work... like a google doc (sort of)
2. Brands
 - a. [Yamaha](#)
 - b. [Allen & Heath](#)
 - c. [Beringer](#)
 - d. [Midas](#)
 - e. [Peavey](#)
 - f. [Pre-Sonus](#)
 - g. [DigiCo](#)
3. Cost = \$1,500 to \$25,000
4. Ipads
 - a. Know the rules of your event
 - b. Beware signal interference.... Your router might drop you

Connectivity

1. Modular Snake / Breakout Cable
 - a. [D'Addario](#) / [Jumperz](#) / [Hosa](#)
 - b. Two specific breakout sections - Then one LONG connection cable
 - c. Pros
 - i. Everyone has only one job
 - ii. That job is in their AREA only
 - iii. They are cheap & sturdy
2. Digital Snake Box
 - a. Expensive
 - b. Big and Heavy
 - c. Proprietary Technology can be a pain
 - d. Only connecting with a Cat-6 cable
 - i. That cable is easy to replace but is SUPER delicate

Microphones

1. Mics for mallet instruments
 - a. [SM57](#) - The Instrumental Giant
 - i. Cheap and easy to find
 - ii. Easy to mount
 - iii. You will need a lot of them
 - b. [Condenser Mic](#)
 - i. Large Diaphragm vs Small Diaphragm
 - ii. Pro - It picks up better
 - iii. Con - It picks up better
 - iv. Bigger Con - Wyoming Wind (Casper Wind?)

2. Mics for Soloists

a. Wired Mic

- i. Shure [SM57](#) or [SM58](#)
 1. Make the soloist come to the sideline for the solo
- ii. [Wireless Handheld Mic](#)
 1. Use whatever you have (steal from your auditorium or gym)
 2. Solist can come to you or NEAR you, sound tech can meet them halfway
 3. Wireless mics need good antennas in big venues
- iii. [Wireless Instrument Mic](#)
 1. Buy the beltpack, select your [condenser mic](#)
 2. [Bell Clip Mic](#)
 3. [Woodwind Mount Mic](#)

b. Wireless Band Issues

- i. Make sure you know what band is legal and available in your area
- ii. Big venues will inform you about bands you shouldn't use
- iii. [Shure Wireless Frequency Finder](#)

Digital and Analog Connections

1. When sending devices to the board or snake use a [DIRECT BOX](#) for better signal/easier switch to XLR
2. When connecting a computer use a [USB Audio Interface](#).
 - a. NEVER TRUST THE HEADPHONE JACK... NEVER!!!

Synths

1. A good synth saves a lot of headaches
 - a. They are programable
 - b. They have ALL the sounds you need
 - c. They DON'T NEED AN ADDITIONAL COMPUTER
 - i. Additional equipment is just more opportunities to fail
2. Brands
 - a. [Yamaha Montage \\$4,000](#)
 - b. [Roland Juno \\$1200](#)
 - c. [Nord Piano 5 \\$3500](#)
3. Midi-Controller plus a computer is a cheaper route
 - a. Use a Mac Computer you (hopefully) already have at school
 - b. Use [Apple Mainstage](#) (\$30) or [Ableton Live](#) (\$270 for teachers) to deliver your sounds

1. Sound Effects are an effective way to enhance a performance
 - a. Bass Drop
 - b. Synth Bass
 - c. Verbal Audio
 - d. Simple FX
2. Pads are the most effective way to deliver FX
 - a. You need something that can be precisely timed and reliable (not an Ipad)
 - b. Internal Storage Pads are clean and easy, but have limited storage
 - c. Most files need to be converted to .WAV files
 - i. [Yamaha DTX Multi12 Pad](#) - \$349
 - ii. [Roland SPD-SX Pad](#) - \$749
3. Like the synth - Use a pad controller and use a computer with Mainstage to deliver your sound FX
 - a. [Akai Professional Drum Pad](#) - \$119
 - i. Computers have much more internal storage than the other pads

Speakers

1. Powered (Active) or Unpowered (Passive)?
 - a. Personnel Preference
 - b. Powered speakers don't require any power amps
 - c. Passive speakers require power amps in your rack rig
2. You need subs and mains.
 - a. Most subs have built in crossover to split your signal
 - b. It's just silly to deliver sound effects without subs
3. Powered Speaker Sets
 - a. (2) [Yamaha Sub](#) and (2) [Yamaha Mains](#) \$6000
 - b. (2) [QSC Subs](#) and (2) [QSC Mains](#) \$8000
 - c. (2) [Mackie Subs](#) and (2) [Mackie Mains](#) - \$2200
4. Passive Speaker Sets
 - a. (2) [Yamaha Subs](#) and (2) [Yamaha Mains](#) \$3500
 - b. (2) [QSC Subs](#) and (2) [QSC Mains](#) \$4000
 - c. You'll need (2) Yamaha PX5 800 Watt Amps \$1500

Pre-Packaged System

1. McCormicks
 - a. [Top of the line complete package including JUICER!!! \\$15,000](#)
 - b. [Basic Package](#) - \$9800
 - c. Lonestar Percussion will build a system too
 - d. Hill Music will build you anything you want
2. Resources
 - a. Facebook - Marching Arts Audio Trader
 - b. Facebook - Church Production Gear Traders
 - c. www.reverb.com

In Ear Monitor

1. A wireless in ear monitor can be used to communicate with Drum Majors
 - a. Communicate important info directly to your DM
 - b. Talk to the DM from the Press Box
 - c. Send Tempo or Pitch through an ipad to the DM
2. [Shure P9TRA In Ear System](#) - \$1500

Portable Power

1. Generator
 - a. You'll need fuel and they are kinda noisy
 - i. [Yamaha Boost Generator](#) - \$2500
2. Juicer
 - a. Electric power supply. Charged like an electric golf cart.
 - b. Super Quiet
 - i. [McCormicks Juicer](#) - \$2400