



FADING FAST

*Basic Approach to Electronics and Sound
Reinforcement in the Marching Arts*



THE GEAR

- Microphones: Dynamic vs. Condenser
- Cables: XLR, Speak-on, Snakes (Modular vs. Box), Power (10 - 12 Gauge MINIMUM!), TRS, TS
- Speakers: Passive vs. Powered vs. Active
- Mixer: Analog vs. Digital vs. Hybrid
- Electronic Instruments: Synths/Midi Controllers, Laptop (mainstage), Samplers, Drum Pads, etc.
- Monitor(s)

THINGS TO KEEP IN MIND ABOUT SPEAKERS...

- Speaker positioning in relation to the boards
- Angle to the judges box
(up and in - same as with horns)



- Importance of the sub
- Placement of the subwoofers and what to send to the sub



PASSIVE SPEAKERS

Pros...

- Can push the most power
- Speakon connectors
- 1 cable needed for speaker

Cons...

- Less durable than powered
 - Noisier speaker
 - Amp needed/knowing what amp to use
- *Note* that amps are heavy



POWERED SPEAKERS

Pros...

- Easy to use - plug in and go
- Can be daisy chained with sub
- Variety of input options

Cons...

- Needing to run power along with audio feed
- Volume, EQ, crossover knobs that could be changed

THE EXTRAS

- Wireless Router (Digital Mixers)
- UPS System (Uninterruptible Power Supply)
- Power/Line Conditioner
- “Silent” inverter generator
- If not, have a generator with you at warmups so the front and soloists are performing the same as in any rehearsal setting.





TOOLBOX

- Extra cables, connectors, etc.
- Batteries
- Cable tester
- Gaffing tape
- Velcro
- Canopy and tarps for keyboards/electronics (especially during band camp)
- Soldering kit

THE SETUP

AKA: The Fun Part...



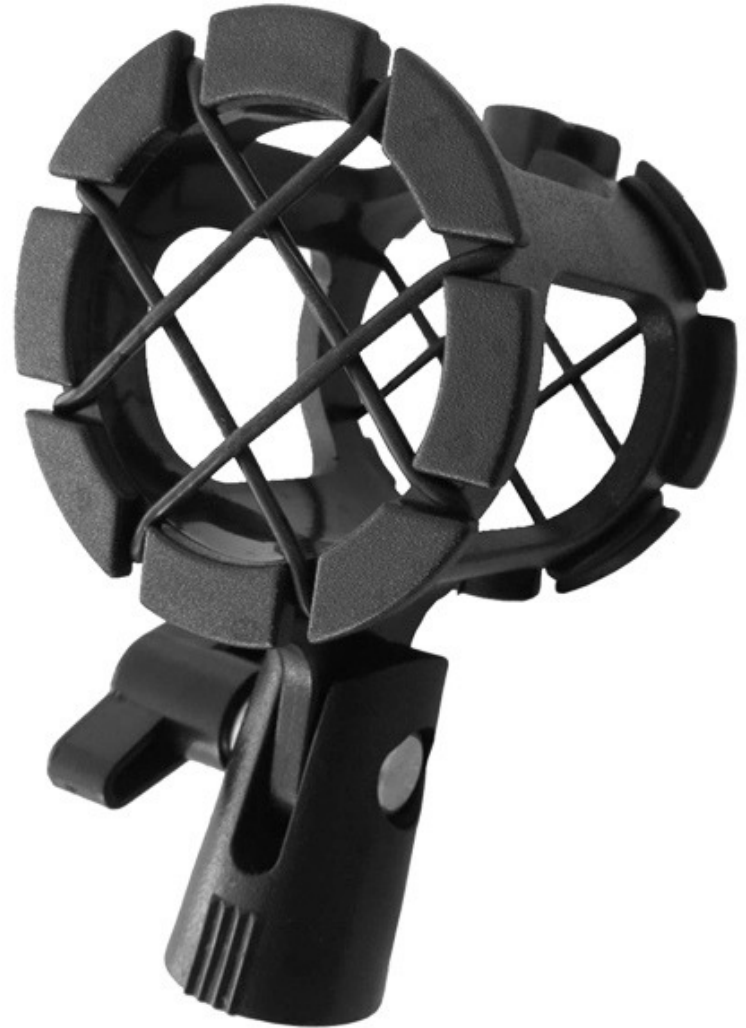
BUDGETING FOR ELECTRONICS

- Getting the most out of your used gear to match the sound of larger bands
- Cable wrapping correctly and storing microphones safely - longer life for gear
- Custom made cables for daisy chaining look neater and are often cheaper as well.



MOUNTING THE MICROPHONES

- Shock Mounts: Consumer vs. DIY Options
- DO NOT ATTACH MICROPHONES DIRECTLY TO THE BOARD
- Location: 2 per Marimba, 1 per Vibe
- Distance from keys
- Consider placement of cymbals, wind chimes, or any aux percussion.
- Windscreens for microphones



WIRELESS/SOLOIST MICROPHONE

- Clip ons vs. front sideline mics
- Wireless extenders(depending position on the field)
- LOTS of batteries
- Talk with soloists about what to do if the microphone cuts out

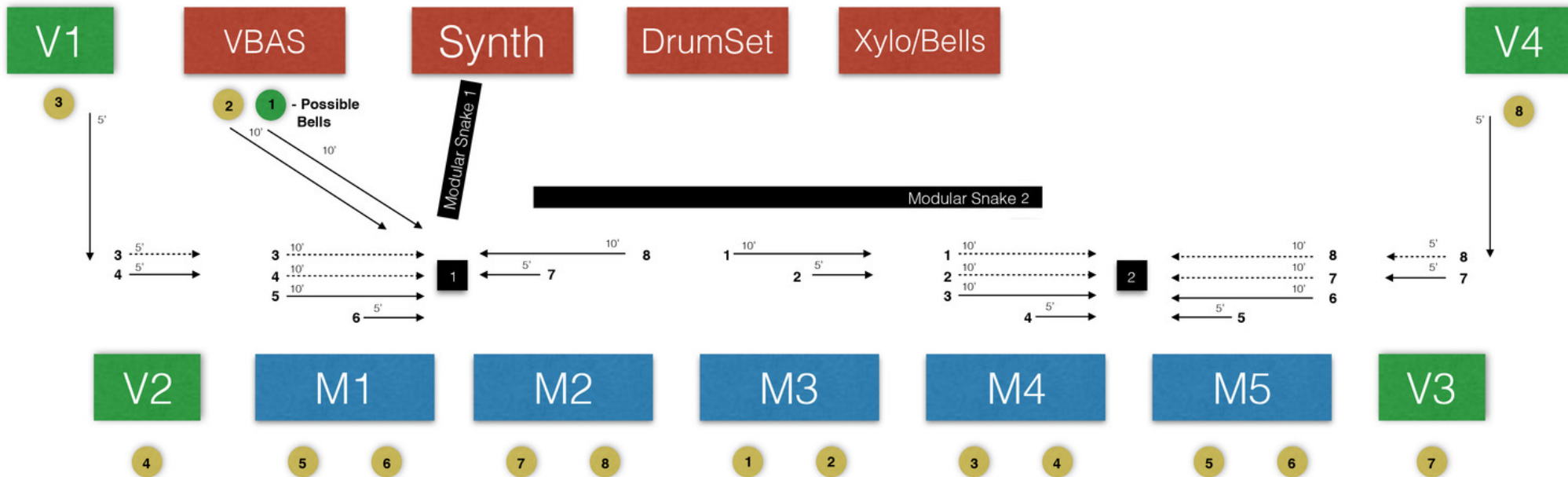




RUNNING YOUR AUDIO CABLE

- “Daisy Chaining”
- Hide those XLRs!
- Black cables
- YES THAT MEANS BLACK POWER CABLES TOO!

Front Ensemble Setup



Modular snakes and/or daisy chain for easier setup/teardown

MAKING EVERYTHING SOUND GOOD



VOCABULARY

- EQ: Subtractive vs. Additive / Parametric vs. Graphic
- Gain Structure: leave overhead (watch for clipping!)
- High Pass/Low Pass Filter
- Gate: Think about what you don't want to capture
- Compression: dynamic control for louder phrases
- Effects: Reverb, Delay, Panning, etc.
- Stereo vs Mono



A large, intense fire is burning within a dark, rectangular metal container, possibly a fire pit or a furnace. The flames are bright yellow and orange, reaching upwards. The background is dark and industrial, with some structural elements visible. The overall scene is dimly lit, with the fire providing the primary light source.

Some Do's & Don'ts

DO...

- Rehearse the setup and tear-down
- Coil cables correctly EVERY TIME!
- Have a weather plan and REHEARSE IT!
- Rehearse in the same configuration every time
- Achieve consistency and efficiency

DON'T...

- Set speakers in line with or behind mics
- If remotely controlling mix, sit in an area where you can't get an accurate sampling
- Make mallet selections without EQ in mind



TROUBLESHOOTING

- STAY CALM! You have more time than you think
- Start with the most obvious problems first: have a system in place
- Are you getting signal in the meter? Follow signal flow
- Kids come first, don't freak them out!
- Test Fire (have test samples for each electronic instrument)

A green ceramic mug with a handle is positioned on the left side of the frame, resting on a white surface. The background is a soft-focus image of a mountain range under a bright sky. The right side of the image features a white rectangular area containing text.

THANK YOU FOR YOUR TIME.

*I hope you enjoyed
our presentation. Please
contact us with any questions you
may have.*

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