

# ENSEMBLE RECORDING 101: BETTER RESULTS WITH EXISTING EQUIPMENT

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## “SET THE STAGE” FOR A GREAT RECORDING

### *Plan ahead to reduce stress level*

- Record multiple sessions
  - › Avoid letting a lack of time lead to lack of quality
  - › Listen between sessions to determine possible improvements
    - Recording techniques
    - Ensemble performance
    - Ensemble orientation or seating placement
- Enlist help from colleagues and/or mentors
  - › Improve conducting by transferring critique to another musician
  - › Use an outside evaluator to improve the group’s performance focus

### *Use the room properly*

- Setup for a recording may vary from the best rehearsal setup
  - › Try different setups, particularly to help achieve proper microphone placement
  - › Place the ensemble and individuals strategically to adjust balance and timbre
- Choose the best environment for recording
  - › Select a large room with a high ceiling
- Eliminate background noise
  - › Turn off climate control systems and consider alternative lighting

## CHOOSE THE BEST EQUIPMENT AVAILABLE

### *Focus on the microphones – borrow or rent if needed*

- Use Condenser microphones instead of Dynamic microphones when possible
- Avoid ball-type vocal microphones and low-end battery powered mics

### *Record to cd using direct-to-cd recorder, hard-drive recorder, or computer*

- If forced to use cassette, turn Dolby B on and mark the tape clearly Dolby B

## PLACE THE MICROPHONES FOR THE BEST BLEND, BALANCE, AND TIMBRE

### *Listen to the results and adjust accordingly before recording final performances*

- Set microphones about 15 feet high and 12-15 feet in front of ensemble
- Avoid placement near air-conditioning vents or lights
- Use creative microphone stand solutions to get appropriate height
- If using a microphone bar, set the capsules of the microphones at 90-110° separation

## SET THE RECORDING LEVELS PROPERLY

### *Use the technique for setting levels prescribed by the equipment manufacturer*

- Turn off all automatic volume setting devices and limiters
- Set levels in order from microphone to recorder
- Set level on each channel just low enough to avoid distortion

For more complete discussions of the topics discussed in this clinic please see my recent article on the Midwest Clinic web site <http://www.midwestclinic.org/recording101/>

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## FREQUENTLY ASKED QUESTIONS

### **Why does the sound come out scratchy or with loud pops?**

The recording level somewhere in the chain is set too high. Recheck the level and record again.

### **To be audible, the recording has to be turned all the way up on the stereo, what is wrong?**

The overall recording level is set too low. This will cause an amplification of the background noise as well when the auditioning panel listens. If the peaks of the recording are not approaching the limits of the recording device, recheck the level and record again.

### **The recordings seem to focus on one individual instead of the group, what do I do?**

Move the microphone back and/or up to allow the sound to blend more before being recorded.

### **The recordings seem too distant and without definition, what do I do?**

Move the microphone closer to the group and possibly lower. Check to see that the correct type of microphones are being used.

### **The recordings are out of balance—the front row is too loud, what do I do?**

Move the microphones up and possibly away.

### **How can I tell if a microphone is a condenser microphone?**

To determine if a microphone is a condenser microphone or a dynamic microphone there are a few options--see the owner's pamphlet, search for the microphone specifications by brand and model on the internet, or test the microphone by the following method: Condenser microphones need a power source, so check for a battery in the microphone or another source of power. (Phantom power is often used on mixers—this must be on for condenser microphones without batteries).

### **Why are there different sampling rates on my machine? Which do I use?**

Some recorders will allow sound to be recorded at different speeds to change the quality and/or space required to hold the audio file. The best thing to do is to use a 44100 sampling rate, if the final copy will be on CD, because CDs are recorded at that rate.

### **Is a CD-R the same as a CD? Is a CD-R more easily damaged than a CD?**

A CD-R is a foil covered plastic disc that is burnable one time, whereas a CD is a pre-recorded integrated plastic disc that is slightly more durable. Scratches on the play surface can cause either a CD or CD-R to skip or fail to play, but the top foil surface of a CD-r is more easily damaged. Use only felt tip marker to write on the CD-R. Ball-point pens and pencils will destroy the recording by scratching the top surface of the disc. Easy to use and inexpensive labels are available for printing on any printer. Do not leave CD-R's in the sun.

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