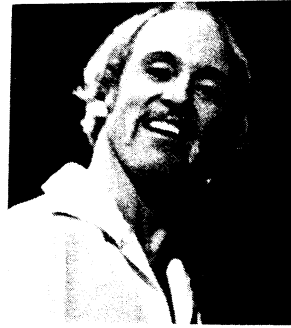


## VOCAL

### The Performance Set-Up and Miking Techniques



Gene Aitken  
Nat'l. Vocal Jazz Chm.

In the last article, we talked about some specific rehearsal techniques and rehearsal set-ups, some techniques used to help blend voices, some ideas about rehearsing with vocal jazz quintets and sextets, and the use of rhythm tracks and the metronome. If you do not have a copy of this article, please write me and I will forward you a copy.

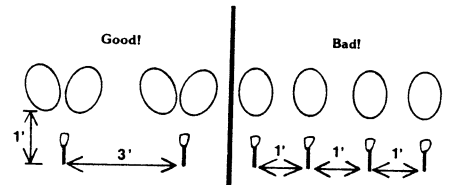
The next step, miking the vocal jazz ensemble in a performance situation, is perhaps one of the most difficult jobs confronting the music educator. Any balance or blend obtained in a rehearsal can be totally destroyed by a bad performance set-up, incorrect microphone placement, and/or use of

inferior equipment. We will assume every vocal jazz ensemble has an audio-technician who has the ears to reproduce as natural and unamplified sound as possible.

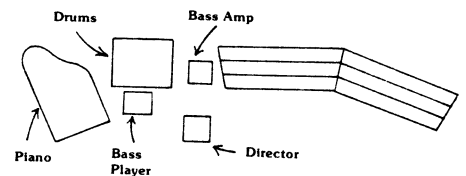
#### The Acoustic Set-Up

In the performance set-up, I suggest you make use of the three-tiered riser...two sections, with two choral shells over the vocal jazz ensemble. No choral shells are placed over the rhythm section as this will cause some sound reinforcement problems when microphones are added to the group. The drummer sets up right next to the second and third rows of the stage right riser, with the bass player in front of the

drummer, slightly to the drummer's right. The grand piano is then brought in tight on the drummer and bassist. There are some directors who recommend using the spinet piano next to the stage-right end of the vocal jazz ensemble with the sound board facing the choir. This is fine, too. However, my personal tastes lean toward the full sound of the grand piano.



As per the vocal jazz article in the last issue of the **JAZZ EDUCATOR**, place the vocal jazz quintets and sextets in this performance set-up **based** on the



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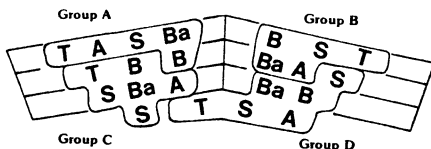
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texture of the vocal student's group sound. Group A and B (heavier-textured voices) are placed toward the back of the riser while Groups C and D (thinner-textured voices) are placed toward the front.

The reasoning behind this placement is that the heavier-textured voice sound tends to come through the choir, and can be heard by the thinner-textured voice students. Also, the placement of the lighter voices toward the front of the choir decreases the possibility of a voice or voices not blending or balancing where sound reinforcement is added. Further, the voices are placed in such a way that the bass parts form a core near the center of the choir. With the placement of the basses in the core of the group, we have provided the fundamental of the pitch for everyone



to hear... a base from which to build the chord. We further set-up the voices in the choir so we have as much bleed-through of all the parts, SATBB, from the back of the ensemble to the front. The diagram below is an ideal situation.

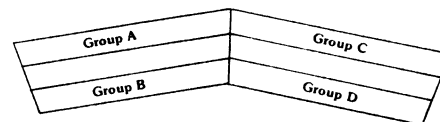
This placement seems to work quite well for a vocal group of 18-24 voices. However, the two most important questions you now need to ask yourself after this basic set-up is:

1. Can the students hear well, both their own voices and others? and,
2. What does the acoustical balance and blend sound like?

### Adding Sound Reinforcement

There are several ways of miking a vocal jazz group, depending on the size of your group. Usually, with smaller groups of 12 students or under, one person a mike seems to work successfully... with a good audio-technician and lots of microphone practice. On the other hand, I have heard some limited success with two singers per mike. This type of miking usually works best with 8-18 voices. The most common type of

sound reinforcement in use are the vocal ensembles that employ a few to several mikes for overall reinforcement, plus additional mikes for solo work. One basic rule to remember is that if you use more than one mike to reinforce sound, the mikes must be 3' apart from each other for each 1' from the performer. If this 3-1 ratio is not observed, you may get what we call "phase cancellation," a technical term meaning not much amplification, and a tendency for much feedback. The 3-1 ratio must also be observed when using hand-held (solo) mikes. As an example:



Microphones which are used for choir mikes should not also be used for solo mikes. If you do not have solo mikes with on-off switches, the audio-technician needs to turn on and off the mike just before and after the singer's solo.

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## UNC's Sound Reinforcement Equipment

Some music educators have written and asked specifically what kind of sound reinforcement equipment we use at the University of Northern Colorado. Fortunately, the UNC School of Music and Associated Students are very supportive of the jazz program and have invested a considerable amount of money in excellent equipment.

### Main:

Yamaha PM 1000 mixer  
Yamaha P2100 Amp  
MXR 15-band stereo equalizer  
Zennheiser 421 mikes  
AKG D1000 mikes

### Monitor:

Acoustic Mixer/Amp  
1 Peavy 27-band 1/3 octave equalizer

2-Electro-voice A-15 speakers

### Main Speakers:

2-Klipsch LaScala speakers and horns  
All this equipment was not purchased in one year. We rented or borrowed equipment until we could afford to

purchase what we considered to be the best equipment.

## The Practice Performance

Find a nightclub or some service organization to perform in before you sing a major concert. Chances are that this one-time performance might be a little rusty. Be sure to record this performance for your benefit and plan to have an extended rehearsal the following day or evening to work-out the "bugs." As the UNC Vocal Jazz Ensemble only rehearses two hours per week (1 hours each on Tuesday and Thursday), we have to budget time very wisely.

Finally, rehearse in the auditorium or concert hall where you will perform. Plan to spend plenty of time getting the sound you want and provide ample time for the soloists to get used to the solo mikes. Our schedule before a major performance will look like this:

Sunday Evening-Club performance  
Monday Evening-2½ hour rehearsal on auditorium stage

Tuesday Afternoon-Straight run-through

Tuesday Evening-Concert

In the next **JAZZ EDUCATOR** issue we will deal specifically with the vocal jazz rhythm section . . . not at all similar in concept to the rhythm section of a big band.

Be sure to write or call if you have any comments or questions. See you in a few months.

Gene Aitken is Director of Jazz Studies at the University of Northern Colorado in Greeley, Co. as well as a free-lance bass player in the Denver area. Since his arrival at UNC the jazz program has shown tremendous growth with over 400 students enrolled. Gene has extensive background as a professional musician including appearances with Vicki Carr, Accidentals II, Four Freshmen, Henry Mancini and more. During the summer months he is Director of the Jazz Program at Birch Creek Farm in Door County, Wi. and co-principal trumpet with the Peter Britt Orchestra in Jacksonville, Or. He is active in numerous professional and community organizations and is widely sought after as a clinician in both classical and jazz fields. Gene presently serves NAJE as the National Vocal Jazz Ensemble Chairman.

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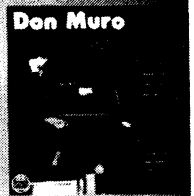
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