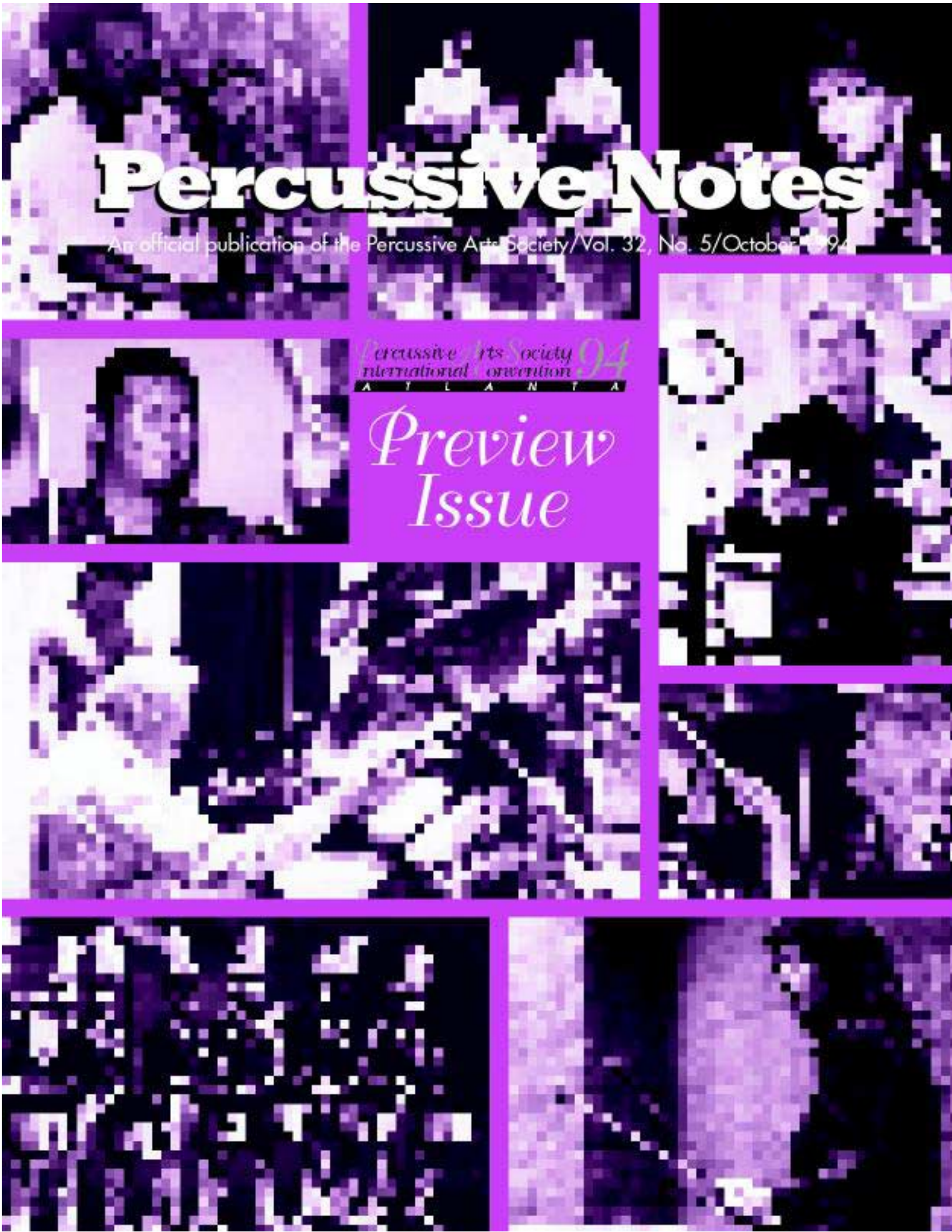
Percussive Notes

An official publication of the Percussive Arts Society/Vol. 32, No. 5/October 1994



Percussive Arts Society International Convention 94
ATLANTA

Preview Issue

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NOT PICTURED: **Lee Rudnicki,** *Santa Clara Vanguard;* **Scott Johnson,** *Blue Devils.*

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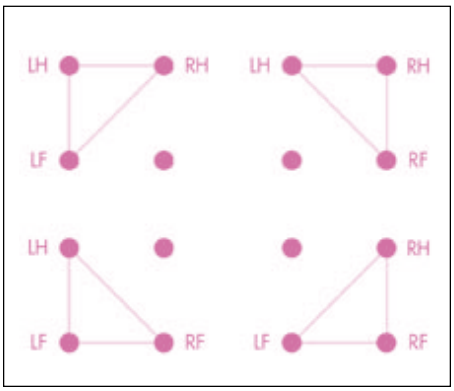

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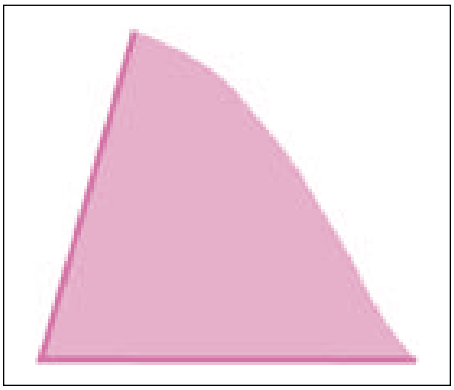

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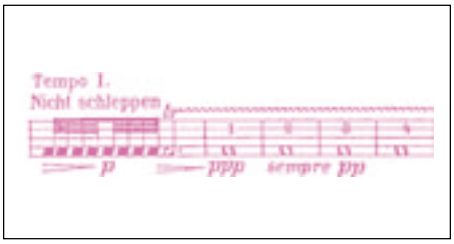

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COLUMNS

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DRUMSET

MARCHING PERCUSSION

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ELECTRONIC PERCUSSION

PERCUSSION RESEARCH

Percussive Arts Society / Administration

Mission Statement

The Percussive Arts Society (PAS™) is a not-for-profit service organization. Its purpose is educational, promoting drums and percussion through a viable network of performers, teachers, students, enthusiasts and sustaining members. PAS™ accomplishes its goals through publications, a worldwide network of chapters, the World Percussion Network (WPN™), the Percussive Arts Society International Headquarters/Museum and the annual Percussive Arts Society International Convention (PASIC™).

(year specifies date of induction)

Keiko Abe, 1993
Henry Adler, 1988
Frank Arsenault, 1975
Remo Belli, 1986
Louis Bellson, 1978
James Blades, 1975
Carroll Bratman, 1984
Harry Breuer, 1980
Gary Burton, 1988
John Cage, 1982
Bobby Christian, 1989
Michael Colgrass, 1987
Cloyd Duff, 1977
Alfred Friese, 1978
Billy Gladstone, 1978
Morris Goldenberg, 1974
Saul Goodman, 1972
George Hamilton Green, 1983
Lionel Hampton, 1984
Haskell Harr, 1972
Lou Harrison, 1985
Fred D. Hinger, 1986
Richard Hochrainer, 1979
Elvin Jones, 1991
Jo Jones, 1990
Roy Knapp, 1972
William Kraft, 1990
Gene Krupa, 1975
Maurice Lishon, 1989
William F. Ludwig, Jr., 1993
William F. Ludwig, Sr., 1972
Joe Morello, 1993
Clair Musser, 1975
John Noonan, 1972
Red Norvo, 1992
Charles Owen, 1981
Harry Partch, 1974
Paul Price, 1975
Buddy Rich, 1986
Max Roach, 1982
James Salmon, 1974
Murray Spivack, 1991
William Street, 1976
Edgard Varèse, 1980
William "Chick" Webb, 1985
Charley Wilcoxon, 1981
Avedis Zildjian, 1979

President's Report

By Garwood Whaley

EACH SUMMER THE PERCUSSIVE ARTS SOCIETY Executive Committee meets at the PAS headquarters offices in Lawton to discuss and act upon issues facing the society. In August we met for three intensive days of goal-setting, problem-solving and brainstorming. I'm happy to report that a tremendous amount of work was accomplished by this dedicated and hard working committee and the PAS office staff.

As president, I continued the individual staff evaluations and goal-setting that was begun last year. I find that our Lawton office staff is extremely professional, friendly and totally committed to PAS. My plans for next summer's Executive Committee meeting include bringing the entire Board of Directors to Lawton. The purpose of this meeting will be to set the short- and long-term direction of PAS. This meeting will be of monumental importance and should set the tone of PAS for years to come.

I'm also pleased to report that the addition to our museum is underway and should be completed by February, 1995. This project is moving forward very rapidly, thanks to the McMahon Foundation, Executive Director Steve Beck and the architects and builders involved. Photos of the completed project will be published in *Percussion News* early in 1995.

I look forward to seeing you at this year's convention in Atlanta. PASIC '94 should be another great convention, well worth the trip. Please make every effort to attend this major percussion event.

Warm regards,

Gar

Left to right: Steve Beck, Randall Eyles, Garwood Whaley, Bob Breithaupt and Genaro Gonzalez met at PAS Headquarters in August to evaluate goals for PAS

Percussive Arts Society International Convention 94
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PASIC '94 Scholarly Paper Presentations

A WIDE RANGE OF TOPICS CHARACTERIZE THE SCHOLARLY papers that will be presented at PASIC '94 in Atlanta. Alex Jacobwitz will present a paper on nineteenth-century xylophonist Josef Michael Guzikov, who brought acclaim to his 2 1/2 octave instrument and fame to himself as a performer, as he was often compared to Paganini.

Dr. David Courtney of the Texas Institute for Indian Studies will present a paper on the cyclic form in North Indian tabla playing. He will do this through an examination of the basic rhythmic forms (tal) and other stylistic elements found in North Indian music.

Two physicists and a percussionist will combine their efforts to present a paper entitled "Frequency Analysis of Timpani Sounds." Dr. Russell Pinizzotto, Dr. Dennis Mueller and Ron Fink of the University of North Texas will share their research on the effects of important performance parameters on the frequency spectra of timpani sounds. The performance parameters studied included drum manufacturer, drum size, drumhead manufacturer, mallet type, tuning and detuning of the head, the distance of the mallet strike from the edge of the drum and the percussionist playing the instrument. PN

REBOUNDS

DRUMSET NOTATION

I am writing to say how impressed I was with the presentation of the issue of drumset notation in Norman Weinberg's article (June '94 *PN*). This long-overdue topic of research must be of concern to any teacher of drumset. Even beginning pupils question the inconsistency of notation when all the various possibilities are raised.

This highlights one problem in laying down a new standard: The world is still full of the variety to which Dr. Weinberg refers, and students need to be alerted to the fact that they will encounter inconsistency at every turn and that an intelligent interpretation of unexplained notation often needs to be made.

However, it's never too late to start being consistent! Maybe Weinberg's conclusions could be summarized in chart form, like the PAS rudiments, and distributed to all publishers, particularly those who publish educational material. Consistency of stave positions for drumset parts in no way limits creativity, and the drummer will always be required to interpret musically to a degree unequalled by other instrumentalists.

I wonder if Dr. Weinberg has considered similar research into the existing range of notation of swing rhythms. I believe there is a place for both standard shorthand forms: dotted 8ths/16ths for basic time patterns and straight 8ths for rhythmic figures and hits, while full-triplet notation might be saved for occasions where the middle note of the triplet is required (i.e., "Elvin-esque" figures). Using straight 8ths for time, with written indication "swing" at the top, is not as safe as the dotted form, which is understood to indicate swing in any contemporary context. Time notated as triplets with the middle notes rested is too fussy to read and to write for any longer than one guide bar, so perhaps should be avoided except for pedagogical purposes.

One final concern with reference to notation software: I use Coda Finale, and while it is possible to change the noteheads to a cross, this has to be done note-by-note unless all examples of that note are changed at whatever octave. Thus, if I assign a cross notehead to all the notes on the top line of the stave (Weinberg's ride location), the bass drum notes in the first space will also change. I would be interested to know if other software has this limitation and whether Coda intends to make notehead alterations octave-dependent in future versions of Finale. Any thoughts?

Rick Finlay, London, England

Weinberg replies: Thanks for your kind words concerning my drumset-notation article. I would certainly consider putting together a notation summary in chart form. Since my recommendations cover more than instrument staff positions, I am currently working on a book that is more in-depth than the article, yet less "academic" than my 700-page dissertation. No, I haven't done similar research into the notation of swing rhythms. Perhaps that is a topic for another dissertation.

As far as I know, there is no easy work-around for Finale. Perhaps if enough users ask Coda for this ability, it could be implemented in future releases. The notation programs Encore and Nightingale let you select a region of notes and change the notehead shapes in one simple action.

JAMES BLADES

May I respectfully point out a significant omission in the "PAS Hall of Famers and their contributions to the Percussion World" (June '94 *PN*). In reference to James Blades, there is no indication in the chart as to his contribution to education, which many Brits and others worldwide consider to be of the highest importance. Nor is there a notation of his inventions. I draw the attention of members to "James Blades Career Retrospective" and "A Visit with James Blades" in *Percussive Notes*, April 1992, Vol. 30, No. 4, pages 42-53.

Bye-the-bye, is there such as word as "famers"?

Ian Turnbull, London, Ontario, Canada

Percussive Notes *welcomes comments and responses to articles. Send letters to: Rebounds, c/o* Percussive Notes, *P.O. Box 25, Lawton OK 73502.*

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Paul Yancich is Timpanist of the Cleveland Orchestra.

Message From the PASIC Host

AS THE TIME DRAWS NEAR FOR THIS year's PASIC, a dream that I and many others have had for a long time will finally be fulfilled: to have the PAS convention held in Atlanta, Georgia.

When I received a phone call from Steve Beck over two years ago asking me to be the host for PASIC '94, I knew that my life was about to change. What I didn't realize at the time was that Steve and the staff at PAS headquarters would assume many of the duties for which previous hosts had been responsible. This was, of course, by design so that each year the current host would not have to "re-invent the wheel" in planning the convention and making all of the arrangements with the local agencies involved.

In terms of coordinating previous PASICs, I would like to first thank Bob Schietroma for serving as PASIC Executive Director for a number of years, and secondly Genaro Gonzales who, in addition to serving as host for PASIC '88 in San Antonio, now continues to assist the current host by serving as liaison between the Host/Planning Committee and the Executive Committee. Genaro has also done a remarkable job of assembling a PASIC Host Handbook, which—along with the work of Steve Beck and his staff—will make the job for future PASIC hosts even easier. Even though I've already mentioned him several times, I cannot thank Steve Beck enough for his tireless work on planning the convention, as well as his dedication to the well-being of the Percussive Arts Society as a whole.


Tony McCutchen

Of course, I would be remiss if I did not acknowledge all of the hard work put forth by our local PASIC planning committee. It has been a pleasure for me to work with and, in some cases, get to know this outstanding group of professionals; once the convention is over I'm sure we will all miss our monthly meetings! Perhaps the most important person to thank is my wife, Susie, and our four children (Nori, Bryan, Todd and Shed) for their support and sacrifice during the planning, meetings and a "few" phone calls.

Through all of this, I must say that it has all been well worth the effort. Getting to know Steve Beck and the PAS staff plus other members of the Executive Committee has shown me that we have a tremendous group of volunteers who contribute so much of themselves in making the Percussive Arts Society perhaps the best organization of its kind in the world. I know of no other area in music where so many people come together to work towards a common goal and do so in a spirit of cooperation, which is, in turn, facilitated to a great degree by support from the percussion industry.

On behalf of the PASIC '94 Planning Committee, the people of Atlanta and the state of Georgia, we look forward to your visit, and hope you have a great experience in "Hotlanta" for PASIC '94! PN

PASIC '94 New Music/Research Day

Eugene Novotney, Coordinator, presents

Percussion in Traditional Musics

Wednesday, November 16

Clinics and Workshops: Noon–6 P.M. • Concert: 8 P.M.

The Westin Peachtree Plaza—Atlanta, GA

Admission: Free to PASIC attendees • $10 per person for non-PASIC attendees

featuring

C.K. Ladzekpo • Presentation on the polyrhythmic structures of Ewe percussion music

John Santos • Presentation on clave as the key to Afro-Cuban music

Valerie Naranjo and the MANDARA Quartet • Performance of the "Dagari Music of Ghana"

Ricardo Gallardo • Clinic/Demonstration on the traditional percussion instruments of Mexico

Liam Teague and Clifford Alexis • The State of the Art of Pan in 1994: Trinidad and Elsewhere

Patricia Sandler • Clinic/Demonstration on the music of the Shona people of Zimbabwe

Evening Concert (included in admission fee) • Featuring Liam Teague and the Mexico Percussion Quartet

Note: PASIC events begin on Wednesday, November 16 with the New Music/Research Day. See page 9 for a tentative schedule of events for Thursday, November 17 through Saturday, November 19, and PASIC preview articles throughout this issue for a close-up look at the clinicians and performers. See page 10 for a listing of exhibitors.
Schedule is subject to change.

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PASIC '94 SCHEDULE • THURSDAY, NOVEMBER 17								
8 a.m.				J. Butcher Instrument Repair				7:30 a.m. PN Editors
9 a.m	B. Moses	S. Fisher					D. Courtney paper pres.	8 a.m. Contest/Audition Procedures Committee
10 a.m.			Westfield H.S. Perc. Ens—Showcase	J. Bergamo Hand Drumming				Noon Board of Directors
11 a.m.	Escovedo family	G. Velez			College Individuals			4 p.m. Chapter Presidents Drumset Committee World Percussion Committee
11:30 a.m.			Atlanta Perc. Trio—Atrium					
1 p.m	G. Marsh	J. Campbell						
2 p.m.			TBA—Showcase	M. Yancich Timpani				
3 p.m	G. Bissonette	T. Sankaran						5 p.m. College Pedagogy Committee/Forum Discussion Marching Committee
5:30 p.m.			Atlanta H.S. Allstar—Atrium					
6 p.m					High School Individuals			6 p.m. Sustaining Members Advisory Council
7:30 p.m.			Common Ground Evening Concert					
10 p.m.						Jazz Drumset & Hand Drum		
PASIC '94 SCHEDULE • FRIDAY, NOVEMBER 18								
8 a.m.				B. Wilder Rhythm				8 a.m. Percussion Ensemble Committee Composition Contest Committee Scholarly Papers Committee International Committee Publications Committee
9 a.m	O. Hakim	N. Rosauro			College Drum Line Competition		A. Jacobwitz paper pres.	
10 a.m.			University of OK Perc Ens—Showcase	B. Gulbis Drumset				
11 a.m.	C. Blackman	J. Santos						
11:30 a.m.			Britain Moore Duo—Atrium					
Noon							College Solo Competition	Noon Board of Directors
1 p.m.	W. Green	E. Richards						
2 p.m			NIU/UWV Combined Steel Band—Showcase	F. Gruber Drumset				4 p.m. Chapter Presidents Anthology Committee Drumset Committee World Percussion Committee
3 p.m.	S. Emory	C. Lamb						
5 p.m					High School Drum Line Competition			
5:30 p.m.			Berklee Ensemble—Atrium					
6 p.m								6 p.m. Sustaining Members Advisory Council
7:30 p.m.			M. Mainieri Evening Concert					
10 p.m.						Jazz Drumset & Hand Drum		
PASIC '94 SCHEDULE • SATURDAY, NOVEMBER 19								
8 a.m.				K. Shelstad MIDI				8 a.m. New Music/Research Committee Education Committee WPN Committee Marching Committee
9 a.m	C. Adams	R. Brough					R. Pinnizzotto paper pres.	
10 a.m.			U.N.C.-Greensboro—Showcase	S. Houghton Drumset				
11 a.m.	P. Wertico	F. Epstein						
11:30 a.m.			Atlanta Pipe Band—Atrium					Noon Board of Directors
Noon								4 p.m. New Chapter President Orientation
1 p.m.	D. Datchmeritt	B. Schietroma						
2 p.m				J. Chapin Drumset E. Glennie Marimba				5 p.m. Committee Chairs (all)
3 p.m.	V. Colaiuta	B. Molenhof						
4 p.m								
6 p.m.			Reception					
7 p.m			E. Glennie—Guest Speaker at Banquet					
10 p.m.			Escovedo family Evening Concert					
11 p.m.						Jazz Drumset & Hand Drum		

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Gregg Bissonette

By Rick Mattingly

"A LOT OF TIMES I'LL SEE YOUNG DRUMMERS play rock or funk real strong and authoritatively, but when they play jazz, they suddenly feel they have to whisper," says Gregg Bissonette. "You sometimes have to play real loud on a jazz gig and real soft on a rock gig."

Bissonette has done his share of both. His first notable gig was playing jazz with Maynard Ferguson, and a few years later he occupied the drum throne in stadium-rocker David Lee Roth's band. In between there was a Latin-flavored gig with Tania Maria and the fusion of Brandon Fields, as well as appearances with the Buddy Rich Band for several of the tribute concerts.

"When you're playing big band jazz, you sometimes have to whack that cymbal like you're following through with a baseball swing in order to get the whole band to follow you," Bissonette explains. "You also have to adjust that bottom screw under the hi-hat cymbals to make them chick a little louder. If you're playing namby-pamby and not showing the band where the time is, the music is going to suffer and won't swing.

"By the same token, there are rock gigs where soft dynamics are really important. David Lee Roth would push dynamics to the limit, because he would talk to the audience a lot in the middle of songs. It was like James Brown, where he would break the band down and we would have to whisper behind him."

Part of Bissonette's PASIC '94 clinic will be devoted to the importance of learning a lot of different styles of music. "Even if you want to be the best hard rock player you can possibly be, you will be an even better hard rock player if you also learn what it takes to be a great jazz player, a great Latin player, a great brush player, a great symphonic player, a great rudimental drummer. The more things you can include in your style, the better.

"One of the best things for students to do is play weddings, where you have to play a bossa nova, a polka, 'Proud Mary,' a funk tune, a jazz standard with brushes and 'Happy Birthday,'" Bissonette says. "You also have to fake tunes you've never heard before and learn how to watch other players and follow visual cues. You can't sit there with blinders on."

While Bissonette advocates having different sizes and types of drums and cymbals for different situations, he advises that one lean towards larger drums for gigs that demand a variety of styles. "I find it easier to play quietly on large drums for soft tunes than to try to get small drums to sound strong enough for loud tunes. If you are regularly going to play a lot of styles, go for medium sizes such as a 22" bass drum, 12", 14" and 16" toms and a 5" snare with a coated head so that you can use brushes."

In order to learn all of those styles, Bissonette recommends working with tapes and CDs. "Besides going to the University of North Texas, the best training I had was buying tons of tapes and records and trying as hard as I could to emulate what the drummers were doing on those recordings. I didn't just jam along and make up my own stuff; I really tried to learn what the drummer was doing in that style of music.

"I've had students say, 'I don't want to work on trying to play like Terry Bozzio, or whoever, because then I'll sound just like him.' Only Terry Bozzio is going to sound like Terry Bozzio, and that goes for every drummer. When you emulate another drummer, certain things will creep into your style, but they will come back out with your own soul and expression." PN

Rick Mattingly *is the Senior Editor of* Percussive Notes *and a member of the PAS Board of Directors. His articles have appeared in* Modern Drummer, Modern Percussionist, Musician, Down Beat *and the* New Grove's Dictionary of Jazz.

Freddie Gruber

By Rick Mattingly

WALKING UP EIGHTH AVENUE IN New York City after attending a Broadway show, Freddie Gruber and Buddy Rich saw a blind man standing on the corner selling pencils.

"Give 'im a buck," Rich told Gruber.

"WHAT?" Gruber replied in disbelief.

"*Give him a buck*," Rich commanded.

Gruber dropped a dollar bill into the man's cup, and he and Rich continued down the street. A couple of blocks later Rich gave a dollar to another street beggar, and a couple of blocks after that told Gruber to give yet another dollar to a cripple. The pattern continued until they reached the building in which they shared an apartment.

Inside the elevator, Gruber let Rich have it. "You know, man, for a New York guy…" he said, barely able to control his anger. "Not *one* of those guys was really crippled or blind, but you fell for the whole thing."

"Yes, you dummy, I know they weren't blind," Rich shot back. "But you are. You know, in this world there are disabled people who climb mountains and swim the English Channel. You're right—not one of those guys was actually handicapped. But they were all crippled."

"I felt like a real idiot," Gruber says today, recalling the incident. "A lot of people think that Buddy was just an S.O.B., and he could certainly be tough to deal with, but he had a huge heart and a real understanding of people."

Drummers Gruber has coached, including such notables as Steve Smith, Peter Erskine, Mitch Mitchell, Adam Nussbaum and Clayton Cameron—feel the same way about him. "You can't put a price on what he knows about developing your own approach to drumming," says Nussbaum.

Gruber's teaching style is especially appropriate for the Master Class setting in which he will be presented at PASIC '94, in that he doesn't have a strict agenda that he imposes on students. "When I teach, I address what I'm looking at," Gruber says. "I have the students play for me, and I see if what they think they're doing matches up to what they're really doing.

"I slow things down so students can see how they're done. Kids go see a good drummer play, and they get enthusiastic and try to copy everything that drummer did. After three days they throw the sticks down and say, 'I can't do that.' Well, let's put a saddle on it and ride it by slowly. There are only so many ways a drumstick can go up and down."

Gruber especially loves working with students on aspects of drumming other than technical development. "The kind of drumming that people like Jim Keltner or Steve Gadd do has nothing to do with physical technique. What they play is not earth-shaking difficult; it's the way they do what they do. There is an approach to playing drums in which your time is internalized so that your drumming is coming from the actual source within you."

Having spent time with drummers from Chick Webb to Gregg Bissonette, and having worked with such artists as Charlie Parker and Buddy DeFranco, Gruber has a unique perspective on the balance between art and show business. "Kids today are growing up in a world where image is everything," he says. "They think being a musician means putting a ring in their nose, getting a tattoo on their ass and having a lot of women. Okay, they're young and they want to have fun, but it can detract from the seriousness that is required in the playing of a musical instrument.

"Look at Gene Krupa. Musically, he wasn't doing anything different than Chick Webb or Big Sid Catlett, but he was a performer who brought the drummer to the forefront. So there's a relationship between art and money. To make a living, you have to understand that you are in the *performing* arts, and there's nothing wrong with that." PN

Bob Moses

By Rick Mattingly

WHEN BOB MOSES TALKS ABOUT finding the clave in a song—as he plans to do at his PASIC '94 clinic—he's not just referring to the patterns used in Latin music.

"It's the art of thematic playing," Moses says. "To me, clave refers to the essential rhythmic hits in any piece of music, whether it's a Latin or Brazilian tune, a bebop tune, a funk tune or a standard. There are key resolution points that separate each piece of music from another piece of music, rhythmically. This concept of clave did come from my early exposure to Latin music, but since I rarely play Latin music, I applied it to all music."

Moses says that a clave can range from a repetitious pattern of several notes, like the standard Latin clave, to one accent point that is acknowledged every two bars—a concept that forms the basis of Moses' instructional book, *Drum Wisdom*, published by Modern Drummer and distributed by Hal Leonard. He stresses that clave patterns or resolution points are not something the drummer comes up with at random; they are found within the music itself.

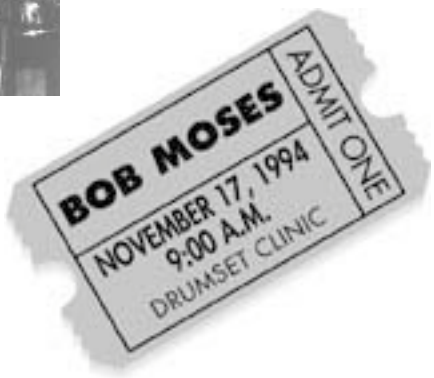
"You might get it from the melody, from the bass line or from the rhythm of where the chords change," he explains. "And you need to look at the whole tune. For instance, 'St. Thomas' is sort of a calypso tune, and most calypso music resolves on the fourth beat. A standard two-bar calypso clave works for most of the tune, but there is one section where it resolves to the 'and' of four. So you have to look at a tune in its entirety to find spots where it breaks the pattern.

"I'll ask students what they practice, and some of them will say, 'I like to practice playing jazz time.' I can't just practice 'jazz time'; I wouldn't know what to play. I have to be thinking of a song, because I'm not going to play 'All the Things You Are' the same way I would play 'Stella by Starlight.' The stuff a lot of drummers play could fit a lot of different songs. They don't realize that each tune has its own rhythmic cadence. Just playing straight time has nothing to do with a specific tune. You have to use the right accents and phrasings, and play with the material you're given. Otherwise, there's no difference between one song and another.

"Jazz cats often have this idea that 'anything goes,' and they'll just play whatever comes into their heads at any time. I find that a very lax way of playing. I'm much more into playing thematically, but it doesn't handcuff my creativity at all. I can get as 'out there' as you want, but I'm still basing it on something."

Throughout his career, Moses has proven himself a versatile drummer whose playing is notable for its logic. He was a member of Gary Burton's band in the late '60s, and when Jack DeJohnette formed the group Compost and wanted to play keyboards instead of drums, he chose Moses to be his drummer. Moses appeared on Pat Metheny's first album, *Bright Size Life*, which featured bassist Jaco Pastorius, and has also worked with Steve Swallow, Steve Kuhn, George Gruntz and Michael Gibbs. In addition, Moses is a prolific composer and has released several albums as a leader, the most recent of which is *Time Stood Still*, on Gramavision.

"The possibilities are endless," Moses says of thematic drumming. "But a lot of people don't want to deal with it because it's too much responsibility. I think a lot of people go into jazz to escape responsibility, and I never understood that because I love the music so much. The music tells you what to play, and you have to respect that. Self-expression comes almost as a by-product of respecting the music." PN



The Pro Behind Pro-Mark

Herb Brochstein has been a professional drummer, a drum teacher and a drum shop owner for 35 years. But most people know him to be the designer and manufacturer of the world's finest drumsticks. As an active jazz drummer and president of Pro-Mark, Herb understands the needs of today's set players. That's why he goes to the ends of the Earth to produce world-class sticks you can depend on to help you sound your best. Pro-Mark drumsticks are always made from the choicest, most durable woods...by a man who truly takes these important drumstick matters into his own hands.

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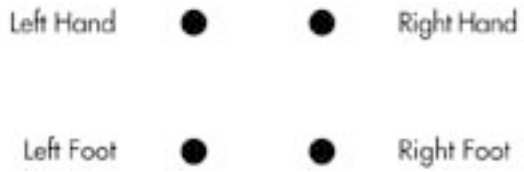
The Square Concept

By Louis Abbott

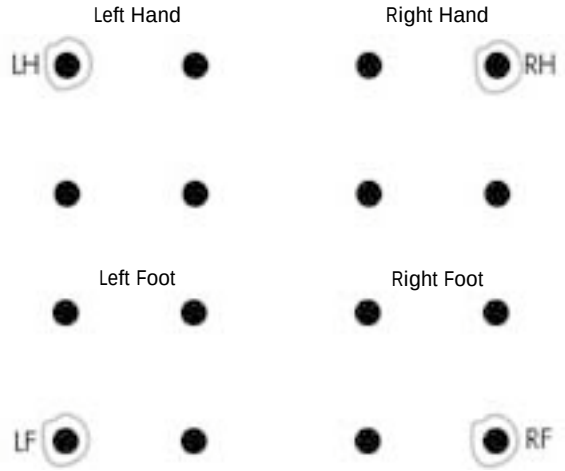
HERE IS A SYSTEM FOR DEVELOPING FOUR-LIMB coordination that uses a simple geometric figure, a square, to represent linear and harmonic movements. This system has proven effective in teaching all age groups and all levels of development because it supplies a facile model (a square) to an abstract concept (coordination) and develops a working vocabulary between teacher and student. For the working drummer, the Square Concept provides interesting combinations of movements that create melodic patterns, ostinatos and grooves, as well as a method to define coordination problems.

The human body has four limbs, which correspond to the four points of a square:

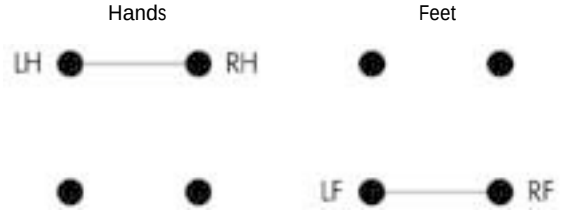


This can be used as the basis for a system that illustrates the coordination involved in any rhythmic pattern. First, we will define the 15 harmonic possibilities (thanks to Marvin Dalhgren):

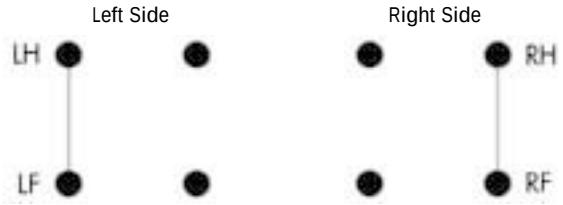
Individual



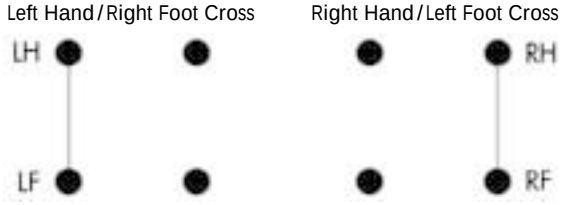
Horizontal



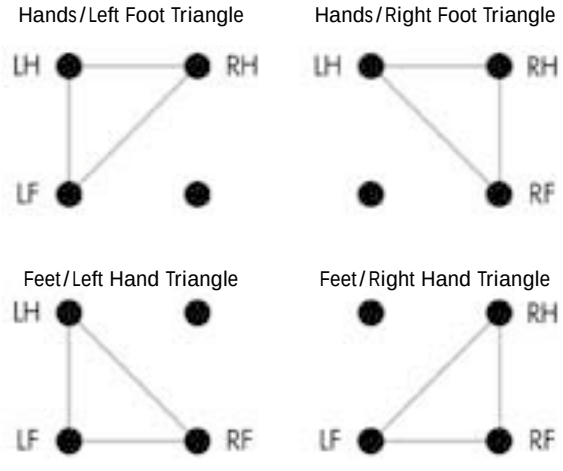
Vertical



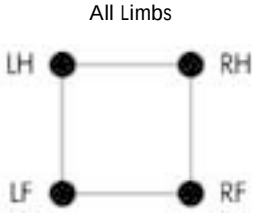
Cross-Body



Triangles



Together



Next, we will look at some linear movements that use common shapes to develop a smooth, coordinated flow. In the examples below, the starting point is circled, and the arrows show the direction of the linear movement. These are only a few representative examples; for all of the shapes one can start at any point and move in either direction.

Perimeter: Start at any point and move around the square's perimeter in either direction.

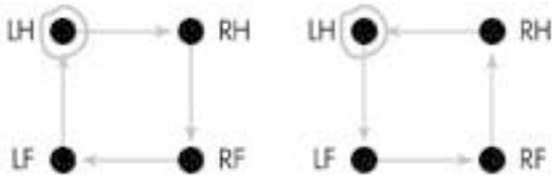
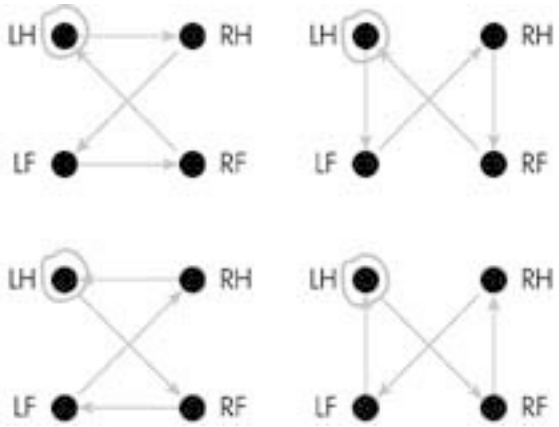
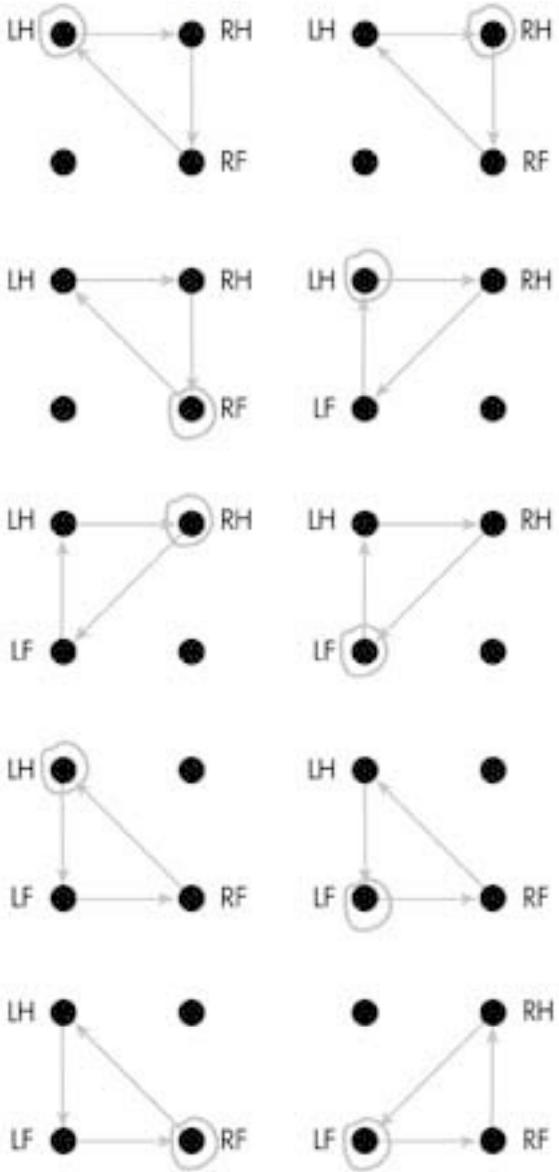


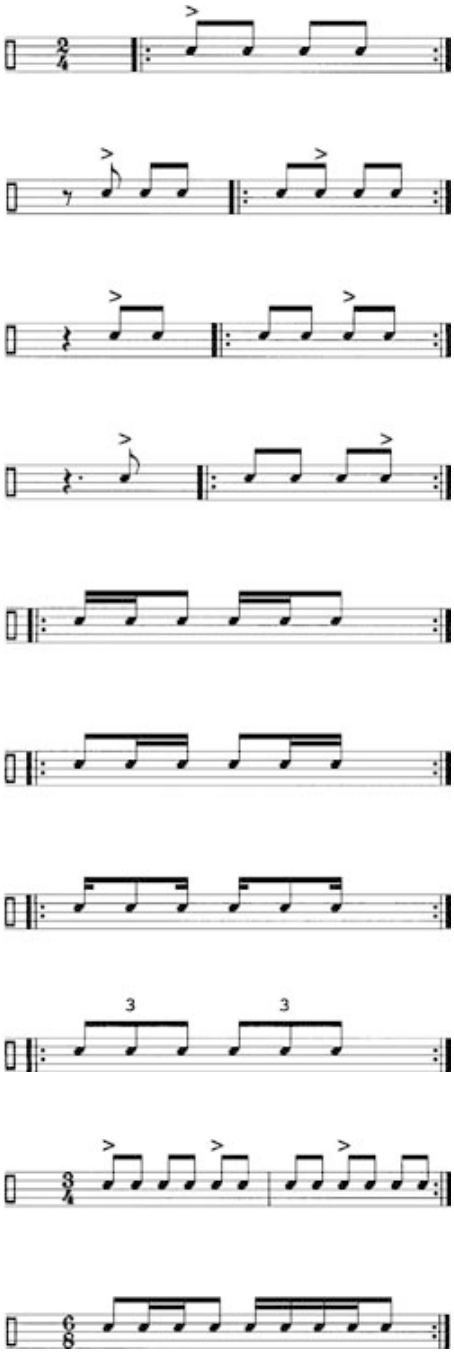
Figure 8: Start at any point and trace a figure 8.



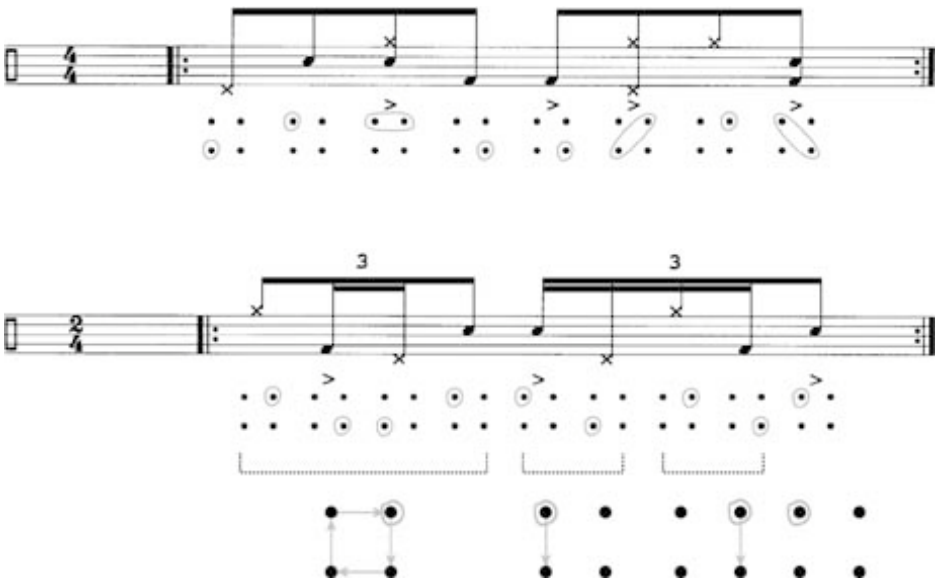
Triangles: Start at any point and trace a triangle.



Apply the shapes to various rhythms and meters:



The Square Concept is very useful in analyzing coordination problems. Draw a square under each subdivision of a rhythmic pattern and circle the limb (or limbs) that play each note. Then, play the harmonic and/or linear movements in sequence.



To play the patterns, learn the movements as slowly as necessary. Then connect each until a smooth flow occurs. You might initially feel awkward with unusual combinations of movements, but with repetition, the motor reactions will become familiar. This concept integrates hands and feet from the beginning, and requires that each limb be able to lead and follow. Also, the use of the square provides a simple shape to explain a series of abstract movements. The result is a rudimentary vocabulary that address the four-limb coordination aspect of drumset study with a comprehensive system.

In closing:

1. Practical use and development of this concept will always be successful when guided by musicality and taste.

2. The smooth flow from movement to movement is the final goal, not the analysis of separate movements. More simply put, these exercises are meant to groove.

3. This concept has proven effective in teaching even the youngest beginners (5+ years) and should be introduced early to develop hands and feet together. PN

Louis Abbott *is pursuing a master's degree at the University of Miami, where he studies with Steve Rucker. As a drumset player he has toured and recorded extensively with a variety of artists, and has taught drums privately for 20 years.*

PASIC '94 Marching Preview

By Lauren Vogel Weiss

FOR THOSE WHO THINK MARCHING percussion is just part of the band that fills time between halves at a football game, guess again! Marching percussion is one of the most innovative and rapidly advancing areas in the percussive arts and PASIC '94 in Atlanta will be a great place to catch up on all the latest developments and performers. From leading authorities in the field such as Jim Campbell and Bob Schietroma to the top competitive drum lines and soloists who will be featured at the PAS Marching Percussion Festival, PASIC will see the culmination of an exciting season of marching percussion.

JAMES CAMPBELL

Jim Campbell is a highly respected performer and clinician in the development of the contemporary marching percussion ensemble. Currently Professor of Music and Director of Percussion Studies at the University of Kentucky in Lexington, he also serves as the Program Consultant for the internationally renowned Cavaliers Drum & Bugle Corps. The Cavaliers won the Drum Corps International (DCI) World Championship in 1992 and are a consistently high-ranking corps each year. In addition, Campbell has served as the Director of Percussion for the McDonald's All-American High School Band and has performed at the Bands of America World Percussion Symposium.

Campbell's clinic, scheduled for Thursday, November 17 at 1:00 P.M., will be a workshop focused on arranging for marching percussion ensembles. "You could actually call it 'Percussion Composing for the '90s," says Campbell. "The medium has really changed. We now include a great deal of ethnic and world percussion influences as well as contemporary polyrhythmic voice leadings. I'll present examples of how to modernize the sound of a marching percussion ensemble."

Campbell will incorporate live performers in conjunction with recorded examples from both marching percussion and commercial music in his presentation. Examples will be displayed on an overhead projector and handouts highlighting specific examples will be distributed.

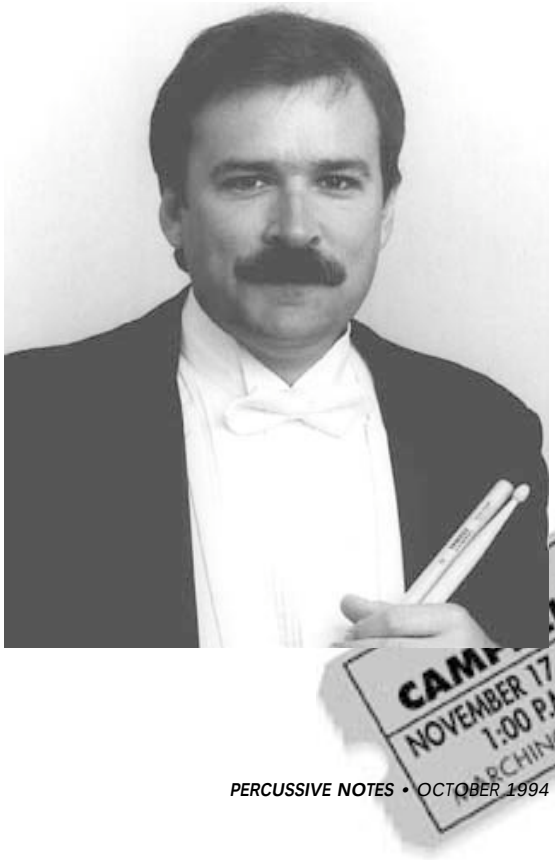
"I'll also cover some of the more contemporary rudiments and their use," adds Campbell. "Many of the examples will be actual parts played by the Cavaliers and other drum corps." Have you ever wondered about a "cheese rudiment" or a "shock-a-diddle"? This will be your chance to find out!

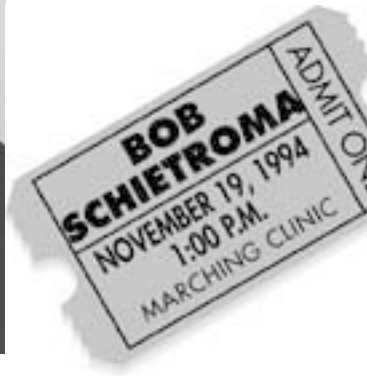
ROBERT SCHIETROMA

Bob Schietroma, Past-President of the Percussive Arts Society, is regarded as a successful teacher, administrator, composer, arranger and performer, in addition to being in demand as a clinician, adjudicator, consultant and conductor. Currently the Coordinator of Percussion at the University of North Texas, Schietroma will be assisted in his clinic by the UNT Drum Line, recognized as one of the leading marching percussion ensembles in the United States. Founded in 1982, the UNT Drum Line continues to present innovative programs that have been unprecedented in national competition. Appearing at ten previous PASICs, the ensemble has been featured at an exhibition (1988) and a clinic (1991), in addition to winning the title of "Best Collegiate Drum Line" eight times between 1984 and 1993.

The ensemble has toured extensively throughout the U.S. presenting clinics and exhibitions at high schools, universities, educational conventions and state marching competitions. Many of the UNT Drum Line members actively participate in top DCI corps and UNT alumni are also active as instructors on competitive drum corps staffs. When you see those red hi-tops march into view and hear the announcer cry, "Ladies and gentlemen, believe every bit of hype you've heard because you're about to see it for yourselves—the world's most dangerous drum line!", you know you're about to see the best.

Plan to arrive well before 1:00 P.M. on Saturday, November 19, because this clinic, entitled "Performance Styles of the Contemporary Indoor Marching Percussion Ensemble," will probably be standing room only. Schietroma will divide the clinic into three parts:





the show, the drill (where he will be assisted by Paul Rennick, one of the UNT Drum Line instructors) and writing for indoor vs. outdoor performances (assisted by yet another of the drum line's experienced staff, Tom Float). Of course, the UNT Drum Line will demonstrate and perform.

Using their 1994 show as a focal point, Schietroma says he will demonstrate how to put it together by tearing it apart. He explains, "You need to decide on a show concept. Usually it's three major pieces plus two transitions. When you pick your music, make sure all your 'points' are covered. For example, there must be a sufficient amount of drumming for the judges, because technique is key; however, as in any performance, there should be an emphasis on staging and production. Sometimes it is more important how you present your program.

"The front ensemble, or 'pit,' should function as a chamber ensemble," continues Schietroma. "Unfortunately, last year there was no place for beautiful sonority writing for the pit because we had no down time. You've got to have your tempo and mood changes.

"It all boils down to a 'checklist' for making a musical presentation. Number one, bring everyone into the pit to show that all the members of the drum line are percussionists; number two, when you run out of timbres, use a variety of styles; and number three, make sure that your program has a form."

In case you won't be able to check out Dr. Schietroma and his drum line in Atlanta, you can still watch them in action on their highly regarded instructional video *Styles & Techniques of the Contemporary Marching Percussion Ensemble* available from Impact Videos. Schietroma is the Executive Producer of this video as well as the highly acclaimed North Texas Percussion Ensemble, Javanese Gamelan and Caribbean Steel Band recording.

PAS MARCHING PERCUSSION FESTIVAL

The 13th annual PAS drum line competition/festival will be the first year in which schools have the option of performing under a "competitive" format (with actual scores announced) or under a "festival" format (with ratings announced). Winners will still be determined by the actual numerical score and may come from either category. Look for exciting performances in both the college and high school divisions. The college drum lines, including the 1993 defending champs from the University of North Texas, will perform on Friday, November 18 beginning at 11:00 A.M. in the Atlanta Civic Center. The high school drum lines begin their performances at 5:00 P.M. that same day. In addition to the highly competitive and skillful high schools in Georgia, there may be an appearance by the 1992 high school division champs, Marcus High School from Flower Mound, TX. (There was no high school division at PASIC '93.)

The Marching Percussion Festival actually begins on Thursday, November 17 at 11:00 A.M. with the College Individuals. Come and watch performances by some of the outstanding college percussionists from across the country as they play in either the snare, tenor (multiple toms), keyboard or timpani divisions. There will also be a new category for rudimental drummers. The winners of each division will perform in exhibition at the end of the college drum line festival on Friday afternoon. There will also be a High School Individuals division (for the first time at a PASIC) on Thursday evening beginning at 6:00 P.M. Imagination and creativity go hand-in-hand with musical talent during these exciting solo performances. Since each solo lasts less than five minutes, you can sample a wide variety during a lunch or dinner break without missing any other clinics or concerts.

Adjudicators for Marching Percussion Festival events include some of the top names in the field of marching percussion: Glenn Carter, Ward Durrett, Marty Hurley, Mike Mann and Paula Williams, just to name a few. Atlanta-based marching expert Mike Back will be serving as the Marching Percussion Festival host and local coordinator.

Anyone interested in becoming actively involved in the marching areas of PAS in the future is invited to attend an open meeting of the PAS Marching Percussion Committee on Saturday, November 19 at 8:00 A.M. And the next time the football teams decide to take a break, pay attention to the field; the drummers are the best part of the show! PN

Lauren Vogel Weiss *is the chair of the PAS Marching Committee, a member of the PAS Board of Directors, and President of the Texas chapter of the PAS. Her articles have appeared in* Percussive Notes, Drum Corps World, Modern Drummer *and* Modern Percussionist. *A graduate of the University of North Texas, she has performed with the Dallas Symphony, Fort Worth Symphony, Dallas Ballet Orchestra and the Phantom Regiment drum & bugle corps. She is President of Percussion Events Registry Company.*

The Timeline Of Marching And Field Percussion: Part 2

By Jeff Hartsough and Derrick Logozzo

This article is the second in a series on the history of marching and field percussion, which was presented by the authors at PASIC '93 in Columbus, Ohio. In the previous article, the Ancient, Medieval, Renaissance and Baroque periods were discussed. Part 2 covers the Classical and Romantic periods of marching percussion history. As a reminder, the focus of the timeline was directed at these questions:

- **How and where did our modern drum corps originate?**
- **How did marching equipment develop?**
- **Who were the innovators in marching percussion?**
- **How and why did the drumming styles change over the years?**
- **When did marching percussionists first appear in history?**

Classical Period • 1750-1850

THE CLASSICAL PERIOD INCLUDED ONE OF THE MOST SIGNIficant events in the history of rudimental drumming: the Revolutionary War. Some authorities say that this marks the beginning of the American drumming heritage. Others claim that it is merely a continuation of developments from earlier historical periods. Nevertheless, two observations summarize developments in the Classical Period. First, rudimental drumming becomes much more stylized. For example, the New England style was open, heavy and slow (Carroll). In the Connecticut River Valley, a tradition of playing square-dimensioned bass and snare drums at a slow tempo developed. Today, there are fife & drum corps that recreate this and other older colonial drumming styles. Second, many of the most significant songs and instructional books about marching percussion were written in this period, especially in the United States. Tunes like "Yankee Doodle" and "Frog in the Well" (1750s) were played by various fife & drum units such as the Mattack Drum Band—the oldest continuous musical group in America (Carroll).

During the crucial years of the American Revolution, the importance of having skilled field musicians in the Continental Army was witnessed by General George Washington, who said, "The music of the army being, in general, very bad, the Drum and Fife Majors will exert themselves to improve it or they will be reduced and their extraordinary pay taken from them. Stated hours for instructions are to be assigned and the fifers and drummers are to attend them and practice" (Ashworth, 3). From these orders came a series of instructional notations, called "regulations," that were written by various commanders such as American General von Steuben. One of the drum parts in his regulations was called "The Long March," which was used to signal a column of soldiers to march at the quickstep. Until very recently, musicologists had to rely on 19th century publications to understand how these drum parts or beats actually sounded. The fife parts, however, were always written down in recognizable notation (Carroll).

Two other documents significant to the history of rudimental drumming are *The Drummer's Assistant*, an English publication, and a manuscript collection entitled *Drum Beatings*. Although the whereabouts and contents of these remained a mystery for over 200 years, they have been unearthed from a collection of material from the 1780s, and just this year translated into modern notation. Found among these works is the English Reveille, which can be recognized as "The Points of War," more commonly known as "The Three Camps" (Carroll).

Important to note is the fact that the "American rudimental drumming heritage" is based on several developments or contributions from other countries, particularly those of Great Britain. For instance, one of the many famous Scottish regiments in the British army is the Royal Scots Grays, originally a mounted command. Fortunately, in the previously-mentioned *Drum Beatings*, a drum part was found for their regimental march of the 18th century. It is noticeable in the drumming that the drag paradiddle is now common as well as a series of hand-to-hand flams, a very popular device in American drumming, particularly of the 19th century (Carroll). Also, in the 1770s, the "English Dragoon March" demonstrates one of the earliest uses of the 7-stroke roll as outlined in *The Young Drummer's Assistant* (Carroll).

During the early 1900s, American military drum lines were famous for lifting the stick off the head to a very high position. However, this technique was being taught in Great Britain in the mid-18th century (Carroll). A remnant of this style still exists in Britain's Royal Marines (Carroll). Furthermore, many drummers today believe that in order for a drum roll to be rudimental or traditional, it has to have an open texture or sound. Nevertheless, research has shown that many different roll patterns were in use as early as the 18th century. In "The Grenadier's March," used by the

British in the French & Indian War and the American Revolution, closed drags and hand-to-hand closed 9-stroke rolls as well as fairly open 6-, 7-, 10- and 11-stroke rolls were all utilized. Thus, closed and open rolls are part of our rudimental heritage.

As for the French, there was a famous field band at Yorktown with the French Royal Deux-Ponts Regiment. According to a painting by Flemish artist van Blarenburg, this organization also included a corps of drums. The French drum technique of the period included flammed rolls, English strokes and "open" doubles. At the end of every day, each army would play its own retreat music in a ceremony (Carroll).

During the French Revolution around 1789, a number of field tunes became popular. Two of them were "Ah Sa Ira" and the root melody of another tune that is known as "The Downfall of Paris," which has been played in Britain, France and America for over 200 years and is still popular today.

During the War of 1812, many more fife & drum tutors and collections were published in the United States than at any other time. One of these significant contributions was made by a leader of the United States Marine Corps Music Dept., located in what was then called Washington City (Carroll). He was of English birth and in 1802, at age 25, enlisted in the Corps in Boston. His occupation was drumming. In 1804 he was promoted to Drum Major and then, in 1812, published a book called *A New, Useful and Complete System of Drum Beating*. His name was Charles Stewart Ashworth, which was ironic because documents say that copies of his book were ready for binding at the War Department when his ex-countrymen attacked Washington City and used Ashworth's drum book to start the fire that consumed the department (Carroll).

On page 3 of his work, Ashworth purposely put the title "Rudiments for Drum Beating in General." Consequently, this made him the first person, most likely, to use the term "rudiments" for labeling his collection of 28 exercises, rolls, flams and drags. Twenty-six of these were taken by the National Association of Rudimental Drummers about 100 years later (Spalding). Not much is said about grip, form or stance in Ashworth's book, but there is the basic foundation of all "American" drum rudiments. Therefore, it can be said that Charles Stewart Ashworth, an English-born U.S. Marine, is the father of rudimental drumming.

Another Englishman, Samuel Potter, head drum major of the Coldstream Regiment Foot Guards, documented a whole system for drumming technique in his 1815 text, *The Art of Drumming* (Carroll). Fundamental to martial snare drumming, Potter's work is unfortunately little known. All of the precepts of modern playing were addressed. As a matter of fact, Potter was one of the first individuals to document the instruction of practicing the rudiments from open (slow) tempos to closed (fast) tempos (Spalding). Here are a few of Potter's other ideas:

"The position...to learn the long roll...place the boy's arms up with his elbows nearly level with his ears, the top of his right stick to the right and the palm of his hand to the front. [Place] the left elbow and back of the hand as much to the front as the boy can bear without pain, letting the buttons of the...sticks nearly meet over the head. Strike the drum twice with each stick beginning with the left,

throwing [the] arm up between each [stroke]...gradually lowering them according to the closing of the roll...In learning all rolls, flams, drags, [and] paradiddles, begin very slow increasing to the quickness required...Be sure he keeps the buttons of the sticks as far as possible from the drum head between each [stroke]...and both sticks should strike as even...as possible. Pay attention to his arms so that the elbows and wrists move in good form and...the drum is struck as near the center as possible. If strictly attended to...[the boy] will learn to beat the drum with ease, and it will appear slight to those who see him...[It] ought to be the pride of every drummer to beat his duty with an 'air and spirit'."

In America at the beginning of the 19th century, certain rudiments came into use that never became current in Great Britain (Carroll). These were the single and triple ratamacues, the flam paradiddle-diddle and the flam accent. A gentleman named Alvan Robinson wrote three rudimental books in Hallowell, Maine at this time and called the flam accent "the Flam and a Two" (Carroll). Also, expanded rolls made their appearance with the 15-stroke roll included in *The Drummer's Instructor*, a fife & drum book written by Rumrille and Holton and published in Albany, New York in 1817 (Rumrille, Holton:11). The 6/8 drum beat called "Tecumseh," which is set to the contemporary fife tune "Baltimore," contains some of these new rudiments.

Another drum beat, which is uniquely syncopated for its time, is called "Jack's Quick Step," and was written by a drummer in a sort of code in 1817. Interestingly, two musicologists translated it in exactly the same way without having any contact with each other (Carroll).

By the early 1800s, the bass drum has made its way into the American fife & drum corps as a permanent fixture. The time of its adoption is not exactly known, although there are many bass drums in museums purported to be of Revolutionary War vintage (Carroll). Instructions for double-stick bass drumming were included in *The Drummer's Instructor* (Rumrille, Holton:30). It suggested that a covered stick be used for the right hand, which played the main beats and subdivisions, and that a common drumstick be used for the left hand, which played the fills.

Another innovation in equipment was the development of metal screw-tensioning for metal shell drums by Cornelius Ward in 1837 (Blades:297). Although field drums were still generally rope-tensioned, since their shells were made of wood, the use of this development in tuning of marching drums can be seen much later in history.

ROMANTIC PERIOD • 1850-1900

A DIRECT PRELUDE TO MODERN RUDIMENTAL DRUMMING the 20th century, perhaps the most active era was he Romantic Period that began virtually with the Civil War. In 1862, another greatly significant book entitled *The Drummer's and Fifer's Guide* was written by George Bruce and Daniel Emmett. As Bill Ludwig, Jr. said at Yorktown a few years ago, drum teacher Sanford Moeller claimed that the Bruce and Emmett Book was the one that "saved American drumming" (Carroll). Defending this claim are 100 pages of the complete camp duty, quick-steps, jigs, reels, slow marches, reveilles and retreats. There is also a very thorough treatment of fife & drum instruction, and rudiments that had never before been obtained. It is also important to note that Bruce and Emmett are two of the earliest authors to document the idea of practicing rudiments in the "open to close to open" manner, which goes one step further from Potter's book that used "open to close" only (Spalding:120).

Another important feature of the Bruce and Emmett book is that it explores the roots of jazz and ragtime. Daniel Decatur Emmett, born in Ohio, was the founder of "minstrelry" and composer of tunes like "Old Dan Tucker" and "Dixie's Land" (Carroll). He had been taught field music by Juba Clark at the Western School of Practice in Newport Barracks, Kentucky (Bruce, Emmett:1). One can speculate that the syncopated nature of some of his music, particularly the first usage of the flamacue, may have emanated from the African-American influence of Clark. During the war, George Barrett Bruce was the chief instructor of drumming at the Eastern School for Practice at Governor's Island, New York (Bruce, Emmett:2). Afterwards, he settled in Baltimore, becoming the drum major of the Dandy 5th Regiment Field Music.

A feature of fife & drum corps of this period is the use of rudimental technique on bass drums with solid beaters in the center of the head. Although this style may be older, it was typical of the late 1800s as documented in 1862 by Col. H.C. Hart in his book, *The New Improved Instructor for the Drum*. Also typical of this period were various standards established by the military for their drummers. Delavan Miller in his book, *Drum Taps in Dixie*, mentioned that a drummer in the Civil War could not pass muster unless he could play the long roll for 10 to 15 minutes, imitate the rattle of musketry and do all kinds of tricks with the sticks.

In the late Romantic Period, there seem to coexist at least four national field drumming styles with roots that began strong development in the Medieval Period (Blades:297). They are Basle drumming

of Switzerland, Pipe drumming of Scotland, and English and American styles of drumming. Also, there was a gradual change from the use of the fife as the primary melodic instrument on the field to the use of the bugle. Percussionist William McGrath states that, "This...was the single most important element in the beginnings of drum & bugle corps" (McGrath:149-176). McGrath claims that, "Drum & bugle corps's [sic] started as highly militaristic-oriented street and field music organizations used as pageantry units commonplace on army and navy bases between 1875 and 1913." With this new emphasis, "...there became a need for a new method book, and in 1886, John Philip Sousa published his book entitled *The Trumpet and Drum*." Essentially, this pivotal work included a listing of rudiments and an adaptation of fife tunes written for the bugle.

During this time, a variety of activities in marching percussion took place. First, drum & bugle corps began to appear outside of the military. They became utilized at large music festivals such as those held in New Orleans and Boston. Also, the very first drum & bugle corps field competition within the United States was probably held in 1872, according to the earliest written record (McGrath:149-176). Another activity that began in that same year was the first annual muster of the Ancient Fifers and Drummers of Connecticut, "...an event that continues to this day" (McGrath:149-176). This organization consists of individuals who are interested in passing on to future generations the traditions of drumming and fifing from the Revolutionary War.

Part 3 of the Timeline will cover 1900 to 1950. Special thanks goes to George Carroll, rudimental drumming expert and historian, for his generous contribution to the PASIC '93 timeline presentation. Mr. Carroll's historical information, fife & drum corps and dedication to the art inspired this project.

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Nürnberg Days and Knights

By Bill Molenhof

Many Percussive Notes *readers are familiar with Bill Molenhof as a fabulous vibraphonist and marimbist, and composer of some of today's most widely performed mallet percussion solos. Knowing that Bill had moved to Nürnberg not too long ago, I thought it would be particularly interesting to know why Bill left the United States to take up residency overseas. Most of us know the stories of major jazz artists moving to Europe beginning in the 1920s, and deciding on such a move is not done lightly. I have on occasion been asked by students and young professionals if I know what the scene is like in Europe, and if they should consider moving there. Although I have traveled extensively, I have never lived outside of the United States, and I certainly do not feel qualified to answer them. Knowing Bill's great outlook on life in general, it seemed to me that his words would be most appropriate to assist someone considering such a move. What follows then are Bill's thoughts and reasons for becoming a resident of Germany.—Rich Holly*

BACK IN THE DAYS OF KNIGHTS IN shining armor, the king of an important castle decided to hold a tournament, the winner of which would take the king's daughter as his wife. This particular castle was at the crossing point of historical trade routes binding Celtic, Anglo-Saxon, Mediterranean, Persian and Far Eastern merchants. Consequently, word-of-mouth publicity generated a great deal of interest in (and contenders for) the tournament.

But the king had one problem. Because of such varied cultural influences and impressions, in addition to the wealth of local markets, his beautiful daughter was rather sophisticated. She would not settle for just anyone who could swing a battle-ax; the king needed the winner to be someone with class! Hence, the king sought the advice of his principal monk (who basically ran the town anyway!). The solution to this problem became the beginning of a legend: The winner of the contest must not only be the best knight, he must also be the best singer—a master singer.

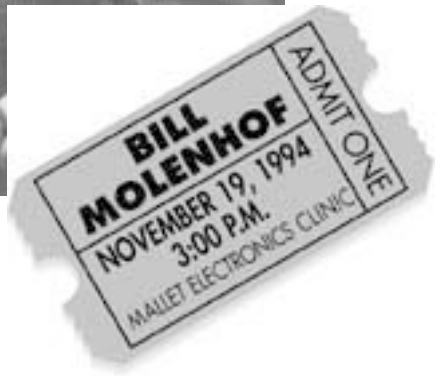
Thus was born the legend and tradition of the Meistersinger. Made famous by Richard Wagner's opera, this story represents the beginnings of a music center in Nürnberg, Germany. The music school here today is the most recent link in the chain of events that, by its direct physical location across from the Dominican Monastery founded in 1275, provides a sense of connection back to those ancient times.

The first public-funded music school in Europe was opened in Nürnberg in 1450. Nürnberg is famous for its ancient music tradition, music instrument manufacturing and the German National History Museum, which has a collection of instruments to rival any other in the world.

In December 1989 I was approached about teaching my favorite areas, mallet percussion and jazz, at the Meistersinger Konservatorium. It was my privilege to have given concerts for Herrmann Schwander on various occasions previously, and had always enjoyed my visits to Nürnberg (Herrmann hosted a German PAS festival in 1986). Over his 18-year tenure as head of the percussion program, and more recently as Assistant Director of the school, Herrmann has developed a very fine department. So, in November of 1990, I became a member of the percussion department, joining Herrmann, Hans Gunther Brodman (drumset), and Roland Schmidt (orchestral percussion).

THE KONSERVATORIUM

The enrollment of the Meistersinger Konservatorium is just over 400, with about 80 full- and part-time



teachers. This would place it in the world as a typical, average-sized institution. We have pupils and teachers from Germany, France, Austria, Belgium, Spain, England, Mexico, USA, Brazil, Uruguay, Argentina, Japan, Poland, Hungary, Romania, the Czech Republic and the Ukraine. The students receive the typical education as all do in music schools around the world, and perform in a myriad of ensembles—even an accordion orchestra!

My first duty was to participate in the auditions for the opening of the new jazz program. Due to the strong historical connection and tradition between the European cultural community and American jazz, I was certain that this branch of the school would flourish. Even the mayor of Nürnberg is a jazz fan! Today, almost all of the city and college-level music schools in Germany have expanding jazz and percussion programs.

It's also interesting to know that the students in Germany compete for a place in schools, in all subjects. If you win a spot (up to this point in time, at least), there is rarely a tuition fee charged! The schooling itself is free. Students tend to be two or three years older when they start than their counterparts in the United States. At 18 or 19 years of age they graduate from "Gymnasium"—roughly the equivalent of a U.S. high school—and then males have obligatory military or national "Zivil Dienst," community service.

THE SCENE

A sincere effort is made through the state and city governments that cultural and educational opportunities are readily and easily available. A significant portion of tax revenue goes toward opera, symphony, theater, concerts and festivals of all manner, cultural centers and the "public" radio and television. Classical issues, of course, receive the lion's share of this money, but all other idioms participate as well. Strong patterns of expenditure have long existed in arts funding in Europe; recently these levels have been in decline. Due to the historical social underpinning, political consciousness and work opportunities, it is fair to say that the music students in Germany have some advantages that their U.S. counterparts usually do not have.

It is my observation that over the past 25 years there has been a slightly stronger tradition for live music of all sorts in clubs, bars and youth centers in Germany than in the United States. This is based on the fact that commercial television has only developed here in the last decade. It was also a point of honor for people *not* to sit in front of a TV for many hours each day. One of the usual outlets for entertainment was—and still is, although to a lesser extent—to meet friends in a pub and listen to whatever group happened to be performing there. This provided tremendous work opportunities for musicians, which obviously stimulates musical and cultural growth in the society.

This situation is changing, and many people here believe that live performance venues are suffering a marked decline. Without a doubt, market forces will play a larger role in the future for all the arts in Germany. On the other hand, the tradition of tax money being spent on all social and cultural issues is not likely to dramatically and suddenly evaporate.

People often ask if it is "better" for a musician in Europe than it would be in America, and this is like comparing apples to oranges. The two continents have endless differences, and how each person reacts to the various situations is perhaps the single most important deciding factor. The common denominator between all the people I know who work on two or more continents boils down to hard work and the ability to overcome difficult circumstances. As the great drummer Ed Thigpen, who for many years has lived in Copenhagen, once told me, "You never know where you are going to wind up in this business."

Today, with direct-call telephone satellite systems, fax machines, home television satellites, short-wave radios being plentiful and inexpensive, computer networks, partnerships among airlines, etc., one can almost say it doesn't matter where you live.

COMMUNICATION

Music is truly the universal language, and as long as one finds others to jointly perform or listen to your favorite dialects, then there is basically no problem. The devil lies in all of those personal, socio-economic, geo-political details that bring us to the point of speaking that dialect nearest and dearest to our hearts!

The greatest benefit to me living and working in Nürnberg has been the improvement in my ability to consider and appreciate more and different perspectives. Grappling with the logic constructions and endless grammatical minutia of the German language has taught me to some degree what it is to relearn to speak, and speaking is similar to improvising and composing. The two greatest differences between Nürnberg and all the places I have lived in the United States are sun and space. Neither are in plenitude here, and that makes all the difference in the world.

Understanding, fitting in, coping with and inventing new solutions to these differences is the name of the game living away from your native land. Creating new solutions while accepting an architecture of natural tendencies and order is also the name of the game with the music I love to play, as the thought processes are often similar.

Working and living in a place with such a deep tradition and history over many centuries has given me a greater appreciation for, and interest in, the continuity and importance of people expressing their higher values through the arts, and how this work and effort has a timeless meaning regardless of the medium, language or location.

SURVIVING

Music teachers at the college level have a pretty good deal in Germany and Austria with salaries roughly equivalent to other professionals. One month's bonus pay at Christmas is the rule, as well as either a summer vacation supplement or even another month's pay. Struggling to get tenure is unheard of here. I did have to go down to the beautiful city hall and promise not to join a terrorist gang and dynamite public property. I was also tested for tuberculosis. Taxes are higher here, but in return the pension, retirement care, health and dental benefits and public transportation supplements are superb (tax accountants here are extremely creative, to put it mildly).

Due to the huge music-business market—the Frankfurt Music Fair and dealerships—all equipment and products are readily available. However, prices are without a doubt higher at this point in time. As Europe reluctantly but inevitably comes together to form a more free-market economy of scale, many are predicting that the cost of goods and services will decline. One good example is that time-honored international standard monetary unit, Levi's blue jeans. When I arrived here four years ago, they cost approximately $100.00 U.S., and today they are about $25.00 less.

It has been fascinating to experience and observe how state funding, as opposed to commercial success, influences musical and performance choices. In June 1992 I performed at a jazz festival in Weimar, which is in what used to be East Germany. I will never forget hearing four East German groups who played at a very high level of skill. These groups had no commercial potential whatsoever, and very little U.S. jazz influence as well.

The performers told me what their lives were like during the Communist era (up until October 1989), and then how radically things changed when the government financial support stopped. Most of the East German and Russian musicians I have met have said that the previous system was good for the arts, but horrible for the artists as people. On the bandstand they could perform their own music as long as it was not "incorrect" Western material, and they earned enough money to get by. But their normal daily routine, shopping, traveling, censorship, police control, isolation, etc., was, of course, brutal.

Through the opportunities given to me in Nürnberg I have re-learned and reexamined how fortunate we are to be able to have the freedom and chance to pursue our work and dreams, musical or otherwise. To pursue those higher aesthetic and intellectual values in such an atmosphere for the arts and learning as exists here in Nürnberg has been a marvelous blessing for which I am most grateful. PN

Bill Molenhof *has appeared throughout the world as a soloist and with other jazz luminaries. He is a former faculty member of the Berklee College of Music, the Manhattan School of Music and Ithaca College, and his recordings and compositions have received critical acclaim and are sold worldwide.*

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The Pursuit of Sound

Ellie Mannette: Training Tomorrow's Steel Band Tuners

By Kaethe George

Ellie Mannette has been at the forefront of the steel band community in the United States for over 25 years. During these years, he has built a significant number of the bands that exist in this country and worked with practically all of the tuners currently building in the United States.

Three years ago Mannette was appointed Artist in Residence at West Virginia University, where he started a joint effort with WVU's College of Creative Arts Dean Phil Faini to train future steel band tuners and builders.

With 1996 marking the 50th anniversary of the creation of the 55-gallon steel drum instrument, Mannette takes a look back at the activities of tuners over 20 years ago and discusses his assessment of the future availability of competent tuners as the art form moves towards the 21st century.

Kaethe George: *What was it like working in the early '70s at the University Settlement?*

Ellie Mannette: About seven to ten panmen worked at the same location in New York City known as the University Settlement. It was a large community center, and we occupied the basement. There was a large room in the center with several different rooms adjoining that we each occupied as work stations. There was Kim Loy Wong, Vincent Taylor, Ansell Joseph, Vincent Hernandez, Rudy King and Rudolph Charles, just to name a few. No two of us could agree on patterns, tuning technique, ranges or anything. It was definitely an interesting period—to put it mildly—but I also found it to be very frustrating. Everyone was more concerned about producing to make a fast dollar. There was not enough attention paid to quality.

George: *What do you believe will be some of the challenges for the next generation of tuners?*

Mannette: The next generation of tuners will need to put aside their egos and arrive at standard patterns that will be better for the instruments. Also, low voices like the bass, tenor bass and cello still pose a problem for most tuners. They have to come to grips with putting more power in their lower notes because that is where the beauty of the steel band lies. I also believe that tomorrow's tuners will have to have high-quality hammer skills. A grand piano would not be the same class of instrument if the wood were chipped or the keys were yellowing. Tuners will have to pay more attention to the visual aesthetics of their work.

George: *Who are some of the individuals you have worked with recently across the country?*

Mannette: I have been working with about a dozen young men, and women also, who over the past ten years are showing significant potential. Right now, however, no one is at a point where I can recommend them as a complete tuner. In my view a complete tuner is one who can consistently construct all the voices and can sufficiently manipulate the steel to produce the sound the tuner wants to hear, and even change color of tone if he wishes to do so.

George: *Describe your duties at West Virginia University.*

Mannette: My title is Artist in Residence and Director of Steel Band Studies. Currently, I am working with Dr. Tim Peterman, who recently came on board as Director of Percussion, to put together the curriculum for the classes I teach daily on tuning construction and history. But I guess my main purpose for being at this school is to teach my craft, and that is how we arrived at the University Tuning Project.

George: *What is the purpose of the University Tuning Project?*

Mannette: The University Tuning Project is designed to train young people to not only construct and tune steel band instruments, but to be familiar with all aspects of the art form. I have to respect Dean Faini for his vision in getting something like this program implemented in the university system. The program is set up so that if a student finds he is interested in building, we begin his instruction on what we term a "project drum." He will take the drum all the way through grooving or beyond and then start another. This process continues until the work is good enough to be purchased by the University and tuned by me and sold to programs all across the country. The goal is to eventually have all of the work done by th

George: *What do you see as benefits of your being at a tution like WVU?*

Mannette: Most obvious, I guess, is the steady flow of young, bright, interested students who are also talented musicians. Of course, not ever

one will have an in-depth interest in every aspect of other art forms, but for those who have the talent, I believe the daily access to me will enable us to produce quality builders and tuners.

George: *What characteristics do you look for most in an individual interested in becoming a competent steel band craftsman?*

Mannette: First and foremost, you will need good hearing, an ability to work with your hands, a significant amount of patience and an incredible amount of desire.

George: *Why so much desire?*

Mannette: Learning to build one of these instruments will be a lot easier than learning how to tune one. A strong desire to do this thing right will help you stick with it while your tuning skills are developing.

George: *Realistically, how long will it take a person to learn how to tune and construct a steel instrument?*

Mannette: Realistically speaking, in three years a person should be able to get a proper foundation of the early stages of building. Of course, a lot depends on a person's natural ability. However, one of the students at the University, Alan Coyle, graduated with a Master's Degree in June '93. He decided to stay on with WVU's University Tuning Project and can now construct every one of the voices—most even better than I can—and that is the way it should be. I believe I have served my purpose as a teacher if I can produce students who will be better than me. That is the only way this art form will advance.

George: *Do you think there is a financially viable future for someone who can only tune existing bands or instruments?*

Mannette: Definitely, maybe even as soon as in another five or seven years. The tuner who can do a good blend job will be in great demand. It will be important for a person interested in this skill to not only be well-equipped with all the tuning principles for each instrument, but the preparation process also. Preparation is the stage before tuning when rapid, light blows are applied to the surface to flatten the groove lines and smooth the areas between the notes. This movement of the hammer is similar to the hammer technique used in tuning.

George: *What is your assessment of the work coming from Trinidad?*

Mannette: From what I have seen over the years of the instruments from Trinidad, the high ranges are consistently better than the lower ranges. There is a brilliance and a clarity to their leads and the higher notes on the double seconds and double tenors. But again, the ranges don't appear to have the necessary amount of the lower register. It appears that they put the higher registers on the notes to have more ringing. However, all of those high tones won't produce the proper depth needed for the lower ranges. I would recommend that they tune each voice of the orchestra to depict what that voice represents.

George: *Would you be willing to work with individuals from Trinidad interested in tuning instruction?*

Mannette: Certainly, I am interested in working with any person who wants to observe my scientific approach to tuning. I use methods that can be clearly understood by my students or any other observer.

George: *There have been many rumors about your return to Trinidad. Will you really ever make that trip?*

Mannette: Yes, I have every intention to. I know I have been rumored to return to Trinidad on several occasions—most of which, incidentally, I had nothing to do with. This past June, however, I was invited by my old band, The Invaders, to return for a week-long celebration. I really wanted to return on that occasion, I appreciated their recognizing me in that fashion, but had an unexpected injury and had to cancel.

However, 1996 will mark the 50th anniversary of my building the first 55-gallon instrument in 1946. We are currently working on taking the West Virginia University Steel Band to Trinidad to perform at the Music Festival that year. So I know my return to Trinidad should be no later than 1996. PN

Kaethe George *has coordinated Ellie Mannette's steel band activities for the past 11 years. She has done extensive research on steel band history and has been compiling material for Mannette's book on steel band tuning, construction and history.*

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JAMES ROSS

James Ross has been a member of the percussion section of the Chicago Symphony Orchestra since 1979. Since that time, he has performed with the orchestra around the world. Born in Cincinnati and educated in Chicago, Jim was a member of the Grant Park Symphony from 1973 to 1978. He is an active chamber musician, performing with such ensembles as Grammy Award winning Chicago Pro Musica, Summit Brass and Chamber Music Chicago. He has been a clinician for the Bands of America "World Percussion Symposium" and is a faculty member at DePaul University's School of Music.

Mr. Ross' product selection:

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EMIL RICHARDS

The list of Mr. Richards' credits read like the who's who of music. Just some of the artists he's performed and recorded with include Charlie Mingus, Perry Como, Ray Charles, Ella Fitzgerald, Sarah Vaughn, Tony Bennett, Frank Zappa, George Harrison and Frank Sinatra. In 1962, Emil joined Frank Sinatra's jazz sextet on a world tour to benefit underprivileged children. Recently, this band can be heard on a newly released CD "Frank Sinatra and Sextet Live in Paris 1962", on Reprise Records. After this tour, Emil began working in the film music recording field, and to this day he remains the top studio film percussionist. Just some of films he has worked on: *THE DEER HUNTER, BATMAN, TEN, STAR TREK, LETHAL WEAPON, CLOSE ENCOUNTERS,* and *THE PINK PANTHER*.

He will soon be releasing a CD of his own solo percussion music on the "Innerworld Music" label.

Mr. Richards' product selection:

4½ Octaves of Paiste Tuned Gongs
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20" Signature Symphonic Light
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JEFFREY MOORE

Jeffrey Moore is the Professor of Percussion at the University of Central Florida. He also spends his creative energy as the Percussion Director of the internationally acclaimed Madison Scouts Drum & Bugle Corps. With a Bachelor degree from the University of North Texas and a Masters degree from the University of Wisconsin, Jeff has become one of the most in demand marching percussion specialists in the world.

Jeff has written and worked for numerous high school and university drum lines, and also serves as program consultant/percussion arranger with the Jubal Drum & Bugle Corps from Holland, The Sunrisers from England and the Kansai Drum & Bugle Corps from Japan. Mr. Moore's talents are constantly called upon for clinics, lectures and recitals around the world, and he serves as a clinician/performer for Yamaha and endorsee/sound advisor for Paiste.

Mr. Moore's product selection:

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SAM DENOV

Sam Denov, a native of Chicago, is a graduate of the U.S. Navy School of Music and Chicago's Roosevelt University. Sam was a percussionist and timpanist with the Chicago Symphony Orchestra for 31 years, starting in 1955. Prior to settling the Chicago Symphony in 1954, he was a member of the San Antonio and Pittsburgh Symphony Orchestras. He was a scholarship student of Roy C. Knapp.

Sam, honored many times as one of America's foremost percussionists, has been in more Grammy winning recordings than the Beatles. He has written many articles and is the author of the classic "The Art of Playing the Cymbals". He has recently been featured on the video "Concert Percussion & Performer's Guide", with Anthony Cirone and Cloyd Duff. Sam is currently the President of the Chicago Symphony Orchestra Alumni Association and his biography appears in "Who's Who in America" and "Who's Who in Entertainment".

Mr. Denov's product selection:

19" Signature Symphonic Light
18" Signature Symphonic Medium
17" Signature Fast Crash (Suspended)
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Starting a Steel Band: The Nuts & Bolts

By Ron Brough

FOR ANYONE TRYING TO START A STEEL band, many things have changed in the past several years. Finding arrangements, recordings, where to buy/build stands and learning how to make mallets were all a part of the pioneering work done by those involved in early steel bands formed in the 1960s and '70s in the United States and Canada. Many of these "nuts and bolts" type activities were done individually by directors or band leaders but materials are now commercially available. Due to computer technology and a few enterprising individuals, there are published arrangements, a variety of mallets, books imported from the West Indies about the history of pan, and recordings galore of steel bands from Trinidad and other parts of the world. These items allow those just starting a band a great opportunity to spend more time getting into the music instead of dealing with the mechanics of putting a steel band together.

The originators of pan worked diligently through trial and error to develop one of the world's most unique families of acoustic instruments. By creating these instruments they sacrificed a great deal and have given many of us a voice by which we're able to make music. Also, all members of PAS should feel indebted to the wealth of information that has been made available to us through *Percussive Notes*. Since 1981, when the first articles concerning pan were published, a great deal of very basic information has been provided to help anyone interested in the pan movement get started (see Table 1). These articles have included interviews with some of the foremost innovators of pan building, tuning and arranging, broad overviews of historical information, how to play drumset in a steel band and how to arrange for pan. This article will briefly discuss some of the tasks necessary in getting a band started and tips on individual preparation for greater productivity in rehearsal.

DETERMINATION AND MONEY

Starting anything these days takes a lot of determination. Unfortunately, besides determination you need money, which allows your goals to become a reality. World music has brought about a greater awareness for the general public in the last several years and has created an increased acceptance of music from different cultures. The popularity of salsa bands, reggae bands, etc. are examples of this trend in popular music. Funding a steel band by obtaining a grant has been done in school music programs. If you don't feel comfortable in writing a grant proposal, find out how to do it from those who have done so. It isn't as difficult as you might think.

Another way to procure pans is by a gradual integration of pans into your program. If you have an existing percussion ensemble, jazz quartet or other musical group, the purchase of a single tenor pan or a set of double second pans is one way to start exposing the instrument to your audience and to your administration. Once people see and hear a pan in almost any context, their interest grows and their willingness to support your ideas of an entire band becomes a greater possibility.

The instrumentation of a steel band can vary a great deal, which is contingent on finances. Purchasing the instruments, keeping them in tune, transporting them and finding a market for your band are major concerns for any band leader. For example, at Brigham Young University, we have a large steel band that performs concerts on campus, a smaller group or sextet that we take off campus for concerts and tours, and I have recently started a family band with my wife and children. The big band has 12 pan players, the sextet has five and the family band has three. Each band has a drumset player and some of them use percussion, electric bass, vocals, etc. Each has a different instrumentation and fills a different need in our

community. As leader/director, you have to decide what you can afford and go with that. Your realization of what you can eventually do is entirely up to that first ingredient mentioned earlier: determination.

Another aspect involves deciding what you are able to make yourself as opposed to what you have to purchase. I know individuals who have gone to pan workshops, learned some of the rudimentary principles of building pans and have gone home and done just that! Granted, they may not be top-quality instruments, but it is a beginning. Writing your own arrangements, making your own mallets, building your own stands and cases are all possibilities. For those who are more anxious to play and are willing to purchase these items, most of the above mentioned items are now available. Information about vendors for these various products can be found in Table 2.

LISTENING AND LEARNING

The number of steel pan recordings available today is staggering compared to just five or ten years ago. Listening to other bands and to various solo artists is a valuable resource in helping you to understand the purpose of each of the instruments in a steel band. It is also a wonderful way to learn various styles, new tunes and even recording techniques for your own band, and it gives you the opportunity to learn what others are doing in this medium.

Teaching your students and/or members of your band how to play pan is a broad topic—much too broad for this article. But there are ways that you can make learning more efficient. Touch and technique are a must in producing good tone and keeping your pans in tune. By playing any pan too hard or with too much wrist and/or down-stroke motion, one can easily knock the instrument out of tune in a relatively short time.

TABLE 1

Articles about Steel Pan in Percussive Notes, organized by title, author and issue

Pan, Heartbeat of a Nation	G. Allan O'Connor	Vol. 19, No. 3, Summer 1981, p. 54.
A Conversation with Clifford Alexis	Al O'Connor	Vol. 19, No. 3, Summer 1981, p. 56.
Panorama 1981	Jeffrey E. Bush	Vol. 19, No. 3, Summer 1981, p. 57.
A Brief Survey of Steel Drum Programs in North American Schools	G. Allan O'Connor	Vol. 19, No. 3, Summer 1981, p. 58.
So You Want to Start a Steel Band	Al O'Connor	Vol. 19, No. 3, Summer 1981, p. 60.
Ellie Mannette on the Beginnings of Pan in Trinidad	Gary Gibson	Vol. 24, No. 4, April 1986, p. 34.
Pan in the U.S.—Looking Back and Ahead: Andy Narell and Jeff Narell Share their Views	Larry Snider	Vol. 24, No. 4, April 1986, p. 40.
Techniques in Advanced and Experimental Arranging and Composing for Steel Bands	Gary Gibson	Vol. 24, No. 4, April 1986, p. 46.
Steel Drum 101: A Guide to the First Year	Tom Miller	Vol. 24, No. 4, April 1986, p. 60.
Panorama-USA	Robert Chappell	Vol. 25, No. 6, September 1987, p. 60.
An Interview with Clifford Alexis	Robert Chappell	Vol. 25, No. 6, September 1987, p. 61.
Drum Set in the Steel Band	Paul C. Ross	Vol. 27, No. 1, Fall 1988, p. 20.
Establishing a Steel Band Program in the United States	Jeannine Remy	Vol. 28, No. 3, Spring 1990, p. 16.
Interview with Ellie Mannette	Ensley George	Vol. 28, No. 3, Spring 1990, p. 34.
A Conversation with Andy Narell	Susan Jette	Vol. 29, No. 6, August 1991, p. 14.
Interview with Ray Holman	Ben Brown and Shelly Irvine	Vol. 30, No. 4, April 1992, p. 31.
Pan Discussion Continues...	Mark Ford	Vol. 31, No. 6, June 1993, p. 46.

TABLE 2

List of Vendors/Organizations promoting Steel Pan

Clifford Alexis, pan builder, tuning and accessories, Northern Illinois University School of Music, DeKalb, IL 60115, ph (815) 753-2030
Mannette Touch, pan builder, tuning and accessories, Ellie Mannette, East Coast Phone (412) 324-6323, West Coast Phone (801) 632-6366
Pan-Lines, c/o Pan & Pan Publishing, 300 W. Drayton, Ferndale MI 48220
PanScripts, NASBA Newsletter, 164 Hickory Heights Drive, Bridgeville, PA 15017
Panyard, Inc., pan sales, music, recordings and pan accessories, 1206 California Ave., Akron, OH 44314, ph (216) 745-3155
Phil Solomon, pan builder, tuning and accessories, 1234 Tennessee Ave., Dormont, PA 15216, ph (412) 531-6216
PB Percussion, pan tuning and accessories, 1607 Mission Street, South Pasadena, CA 91030, ph (818) 441-2434
Trinidad & Tobago Instruments Ltd., pan tuning and accessories, Santa Rosa Industrial Estate, Port of Spain, Trinidad WEST INDIES
Tropical Breeze, pan builder, tuning and accessories, c/o Tom Reynolds, 200 Country Club Rd., Sanford, FL 32773 or c/o Wheeler Matthews, 311 Evergreen Forest Dr., Seneca, SC 29678
West Virginia University, Steel Band Workshop, c/o Ensley George, P.O. Box 6111, Morgantown, WV 26506-6111, ph (304) 293-5330 ext. 213

Should you have students learn scales and arpeggios first or give them easy parts to a rather simple arrangement? Since most of my students are percussion majors at a university, I've had them learn their parts on a marimba or xylophone first so that they understand how the part feels and sounds. I also give them a copy of a recording of the entire tune so that they understand their role in the arrangement. If no recording is available, I'll create one using my sequencer and computer. I never program a drumset part to these sequences as they make great practice tapes for my drumset player. I still have students work on scales and some arpeggios on the pans, but prefer that they focus on parts found in a steel band arrangement. This proves to be a more satisfying approach for the students. By learning some of their more difficult parts on instruments with which they are more familiar (marimba, xylophone), they apply what they've learned to the pan by ear. Eventually, they can learn to read at their pan and can continue to progress on the instrument.

In conclusion, the question might well be asked, "Why start a steel band and what are the benefits to your program?" As a percussionist, I've always enjoyed getting out of the role of playing in the back of the band (or orchestra) and performing up front like other instrumentalists/vocalists. That opportunity exists, at times, in a percussion ensemble, but touring or traveling with large amounts of equipment (as most percussion ensembles require) becomes prohibitive. A steel band is portable, creates interest among the general public and is rewarding for students that become involved. I seldom conduct the band, and this forces the ensemble to "use their ears" and listen to each other. Most of the music is groove-oriented and they have to develop an entirely different set of tools to rely upon compared to their usual music ensemble experiences. They still have to develop a good sense of time and feel, and yet they are creating much more than just rhythms. Together they're making music that the general public enjoys at all levels.

Should the steel band replace any of the traditional ensembles or music experiences of our students? No, but having a steel band certainly broadens and augments many of the principles needed in performing with orchestras, bands, jazz combos, big bands, and percussion ensembles. At the same time, playing in a steel band is simply fun as well as rewarding for the members involved. PN

Ron Brough *is Coordinator of the Brass & Percussion Area at Brigham Young University. He conducts the BYU Percussion Ensemble and Panoramic Steel. He was formerly artistic director of the Vocal Jazz Ensemble and has conducted theatrical productions. Brough plays drumset in the Faculty Jazz Quintet and vibes, marimba, and steel drum in the Brough/Wolf Percussion Duo and has performed as principal percussionist in the Utah Chamber Orchestra and as percussionist with the Pioneer Memorial Theater Orchestra, Ballet West, Utah Opera Company, and the Salt Lake Mormon Tabernacle Choir. He is active in the recording studios of Salt Lake City and is president of the Utah chapter of the Percussive Arts Society.*

Mike Mainieri

By Rick Mattingly

CALL IT A LOVE/HATE RELATIONSHIP—Mike Mainieri says that playing the vibraphone has always come easy to him, yet he's spent most of his career battling the instrument's limitations.

"My problem with the vibraphone is that the range is too small," Mainieri says. "I work things out on piano and find something that sounds cool, and then I go to the vibes and there's an octave missing on the bottom. When I bring everything up an octave it sounds like Christmas tunes. I'd like to be able to play long, resonant bass notes with some other stuff on top.

"I've been fascinated with the idea of a four-octave vibraphone for years. Deagan built a couple for Emil Richards and me. But the bars weren't graduated so the lower notes sounded very tinny.

"The way I voice chords is not like anybody else, and I have a unique grip as well," says Mainieri, who holds his inside mallets in the usual position between thumb and first finger but holds the outer mallets between his ring finger and pinky, allowing extremely wide intervals with one hand. "Anyone who played with my technique would understand how much more I could accomplish with a four-octave instrument. But people who use the usual Burton grip or the Leigh Stevens grip don't have the facility to employ some of my ideas."

The frustration of dealing with the vibraphone's limited range drove Mainieri to experiment with MIDI before most musicians had even heard of it, and by the late '80s Mainieri was generating high-volume synthesized sounds from his vibes with the very electric version of Steps Ahead that included saxophonist Michael Brecker (who had a MIDI saxophone), guitarist Mike Stern, bassist Daryl Jones and drummer Steve Smith—a band documented on the recently released *Live in Tokyo 1986* on NYC Records.

Steps Ahead was a far cry from Mainieri's first gig. In 1952, at age 14, he was on the road as a featured instrumentalist with the Paul Whiteman orchestra. Three years later he joined the Buddy Rich band—a gig that would last six years and reveal Mainieri's talents as a composer and arranger as well as a vibist. During the early '60s Mainieri became an in-demand New York City studio player and arranger, and in the late '60s formed White Elephant, one of the first rock-influenced jazz bands, whose members included Larry Coryell, the Brecker brothers, Tony Levin and Steve Gadd. In the early '80s Mainieri formed Steps Ahead with saxophonist Michael Brecker, drummer Peter Erskine, keyboardist Don Grolnick and bassist Eddie Gomez.

Mainieri also worked as a composer and arranger, doing everything from jingles to orchestrations for the rock group Aerosmith, and his credits as a producer include three albums with Carly Simon. In 1991 he formed his own record label, NYC Records, on which he re-released his own 1981 album *Wanderlust* in addition to albums by Steps Ahead and other artists.

These days, Mainieri is mostly playing acoustic vibes. "Steps Ahead was the most electric I ever got, and ever intend to get, in terms of sheer energy and volume," he says. "The current version of Steps is much more acoustic, and I'm liking that more and more."

In true jazz spirit, Mainieri hasn't made specific plans for what he will perform at his PASIC '94 concert. He will likely employ his five-mallet technique (three in the left hand, two in the right) at some point, and will devote much of his program to standards (he boasts of knowing over a thousand).

"If I had it to do again, I might play piano because I'm fascinated by its range," he says. "But the vibraphone came easy to me, and I would have had to work a lot harder to be a pianist. So I guess I'm a vibraphonist from a combination of natural talent and laziness," he laughs. PN

Resonator Acoustics

By Leigh Howard Stevens

THERE IS AN OLD JOKE TOLD BY orchestral musicians about harpists: "Harp players spend half of their time tuning their harps and the other half playing out of tune."

I've written this article with the hope that similar jokes about marimbists never develop. That is not such an easy task, because there is a vast amount of misunderstanding and percussive folklore to overcome. Even today, almost ten years after the (re)introduction of tunable resonators to the marketplace, there is still great confusion about what they are for, what actually happens to the bars and resonators in different weather conditions, what tunable resonators can do to compensate for those conditions and, perhaps even more confusingly, what to do if you don't have tunable resonators.

Generations have passed since the introduction of less-sophisticated features such as slots, handles and knobs for raising and lowering the entire bank of resonators, and yet there is still disagreement over what to do with them.

> "*Move the bank of resonators into the lower slot for a hot stage...*"—Article on resonator tuning in *Percussive Notes*, Vol. 31, No. 2, December, 1992.
>
> "*In temperatures warmer than 70 degrees...raise each bank...*"—Infomercial on resonator tuning in *Percussive Notes*, Vol. 32, No. 1, February, 1994.

Both experts can't be correct. But is it possible that both are wrong and that the solution to the problem lies elsewhere? Before we referee this match, let's return to the harp/marimba comparison.

To be fair to harpists (who already hear enough criticism about their rhythm without having to put up with jokes about their tuning), it is a far more difficult skill to tune a set of harp strings than a set of marimba resonators. You can make a major mistake tuning a resonator or two and it may not spoil a performance for most listeners. Try that with a couple of harp strings and most people in the audience will know something is dreadfully wrong—at least with the harp, if not with the harpist. (Sometimes, I have heard, clever harpists deliberately mistune a string or two—to deflect attention from their poor rhythm.)

Fortunately or unfortunately, you can still perform an entire marimba concert with the whole set of resonators out of tune and most marimbists won't notice anything wrong—unless they happen to be sitting near a chatty acoustician, who might lean over and explain. Perhaps because we do not really "tune" percussion instruments (with the exception of timpani) in the same sense that a harp, violin or even trumpet is tuned, I believe we do not generally develop as critical a sense of tone as most other instrumentalists. The first music lesson on a violin or trumpet is a struggle to produce a recognizable tone. The issue of "tone" for a percussionist may not even be mentioned until the student has played for many years! How often do you hear percussionists refer to other percussionists in terms of their tone production? A remark like, "Did you hear so-and-so's recital the other night? He's really developing a great tone," is unlikely to be heard in the halls of a music school in reference to a marimbist or percussionist, but is very common among other instrumentalists and singers. With us, it's usually technique that is commented on, not the beauty of sound.

This lack of sensitivity to the tone of the marimba is really quite natural. Just think about it: In a practice or performance environment without temperature and humidity control, the ring, tone and sustain of the same marimba varies day to day with the weather. Neither teachers nor students have had any particular reason to even notice these changes, because there wasn't anything that could be done about them anyway. It has only been recently that players have had the opportunity to even hear the difference between an "in-tune" and "out-of-tune" resonator. Pounding on force-fit permanent resonator caps with a broom handle and hammer (as I did for many years) is not a very quick or even accurate way to "A/B" the effects of sharp and flat caps. Now that the dawn of the tunable resonator is here (again), our days of innocence are numbered. Once your ears get accustomed to the difference that an "in-tune" resonator makes, the lack of proper tuning will drive you just as crazy as listening to a snare drum with a broken head.

THE NOVICE EXPERIMENTS

I don't know what originally caught my attention, but 20 years ago I began noticing that my marimba sounded radically different depending on the weather. I was not bothered so much by the tuning as by the tone quality, fullness, response and sustain of the instrument. In my non-air-conditioned practice room at the Eastman School of Music it was obvious that my low-A marimba had short ring and poor tone quality in the hot, humid Rochester summer. Raising the resonators to the higher slot, as recommended by the manufacturer, had almost no effect on this problem and sometimes seemed to make it even worse. At other times, on what I began to call "marimba days," the wood sang.

Not knowing what to do, I tried to improve the sound by tightening and loosening the cord, waxing the bars (okay, it was pretty stupid, but I thought it might keep the humidity from flattening the pitch) and raising and lowering the ranks of resonators. Some days there seemed to be a subtle improvement when I performed one or more of these procedures. But that was the problem; the changes, if any, were subtle. The instrument still sounded like...ah...well, a bad xylophone, instead of a good marimba.

At that time I didn't understand marimba acoustics and assumed, as many people still do today, that the bars had gone flat. True enough, the bars probably had gone a few cents flat in the hot weather. However, blaming the bars for the terrible tone and short ring is akin to blaming foul sounds coming out of a guitar amplifier on the speaker or electronics, when you haven't tuned the guitar strings in weeks.

I had heard some vintage instruments from the 1930s and '40s that obviously needed tuning. Many of those bars still had good ring and a full-bodied tone. How could that be? Some of those instruments seemed to be very far out-of-tune compared to my instrument on its worst day, yet the ring and tone seemed relatively unaffected. Clearly, the dead sounds coming out of my marimba in certain weather conditions were not strictly related to the bars being thrown a little out of tune by temperature changes. Something more serious was going on here.

THE INTRODUCTION OF SYNTHETICS

Evidence began to pile up showing that the problem was not with the bars but with the resonators. When synthetic bar material was first introduced, some thought this new material was going to cure all the weather-related sound problems "caused" by the rosewood. Advertising headlines read "unaffected by temperature and humidity." Hooray, hooray! So durable it's "bullet-proof!" (As it turns out, this is a more relevant feature today than we could have imagined in the '70s!)

Twenty years later I can think of six different brands/formulas of synthetic bars for sale in the world. But despite the advertising claims, in hot or cold halls (or, even more obviously, on the football field) the tone and

projection of these instruments deteriorates almost as quickly as rosewood because the problem all along was not with the bars, but with the resonators. Inexperienced players might think that the instrument is still ringing well because their ears are only two feet away from the bars and resonators. The weak but long ring of the fiberglass bar may still be there in hot or cold temperatures, but the characteristic sound of the marimba (a full bodied, gutsy sound made up of the tube and bar ringing together) is lost with the synthetics, just as with a rosewood bar! You don't have to listen in a perfect concert-hall setting to hear this; compare the sound of the sideline keyboards in a drum corps on 70˚ and 80˚ days.

I remember the denial and disbelief that originally met my assertion that synthetics were just as subject to deterioration in tone as rosewood—that the reason marimbas sounded so terrible in hot weather was not so much that the bars went flat, but that the resonators went sharp. How could the resonators go sharp in hot weather? Don't things expand in heat? Yes, but that is completely overshadowed by the fact that the speed of sound increases at higher temperature. String instruments go flat under stage lights because the main vibrating element, the string, expands. Clarinets go sharp because the main vibrating element, the air column, vibrates faster.

Any acoustic scientist worth his salt could probably have told the manufacturers years ago that the problem that players were hearing in different performance situations was not caused principally by the bars but by the resonators. Had someone only asked! Even the designers themselves, had they really been passionate about the marimba, could have found out many of the answers. I'm not saying it is easy—you have to read a half dozen acoustics books to assemble all the pieces of the puzzle—but the information is there in any public library for anyone who is interested.

Recently I found a great book that succinctly explained in layman's terms much of why we hear what we do on marimba: it is *Science and Music* by Sir James Jeans (Dover Publications, 1937). Some of what he writes about is so relevant to the design of marimbas and vibes that it merits quoting here:

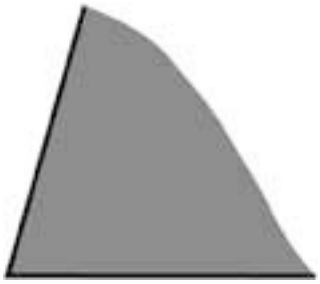
> *"We have already seen that any change of temperature alters the speed of sound in air very appreciably…It has, however, far less effect on either the dimensions or the elasticity of wood or metal. Thus when the temperature changes, we may almost disregard any change produced in the dimensions of pipes or resonators…The only thing that changes appreciably is the column of air in each pipe, and the frequency of its vibrations will change in exactly the same ratio as the speed of sound."*

A simple experiment confirms this. Point a blow dryer (with the heat switch off) into a resonator and measure the pitch with a strobe tuner. Flip on the heat switch. Within a split second, the strobe spins like the wheels of a criminal's getaway car on TV. You can hear

it. Next, remove a rosewood bar from the instrument and measure its pitch with the strobe. Now "blow dry" the bar with the heat on. What happens? Nothing. Well, not exactly nothing, but you've got to really toast the thing to get the strobe to even move. So the resonator goes up like a rocket and the bar goes down like, well, like the fuel gauge in a four cylinder car when you drive 55. (Sorry, I've run out of good metaphors.)

To understand the effects of this, let's look at pictorial representations of what this does to the sound of a marimba. First of all, when the bar and resonator are in the proper relationship to one another, the tone will be full, rich in fundamental, and the ring of the bar will decay smoothly. The "envelope" (acoustician lingo for the shape of the attack, ring and decay pattern of a sound) might look something like this: (The vertical axis is volume and the horizontal axis is time.)

If the temperature gets too warm, the resonator goes sharp to the bar. This results in the decay time being too short. The envelope might look like this:



If the temperature gets too cool, the resonator will be too flat to the bar. This results in the tone sounding thin and weak. It will be lacking in volume and fundamental, and the decay time will be long, but most of the after-ring will be too soft to be heard in the audience. The envelope might look like this:

Of course, these are examples only—and pictorial representations of sound at that. There are as many possible envelopes as there are individual marimba bars and individual sets of circumstances.

PROGRESS

In recent years a few major manufacturers of marimbas have spent many tens of thousands of dollars to develop and patent tunable resonator plugs in an effort to give the player control over these undesirable changes in the response of keyboard percussion instruments. This is not as simple as making some kind of sliding force-fit stop, or a tube within-a-tube, the way you might at first imagine. Once you begin to actually make a prototype, you come up against a very inflexible and discouraging reality. Just like a leaky pad on a woodwind instrument, the slightest pin hole of an air leak around a resonator plug will kill the volume and fullness of tone of that bar. Almost every simple design you can think of has one or more fatal flaws: they leak, they get stuck, they take too long to change position, they don't seal at the leading

edge or tend to camber away from 90˚ to the side of the tube and therefore lose "focus," they just sound bad for no apparent reason, or they work and sound great but cost $50 each to make! These are some of the reasons why a convenient-to-use, tunable resonator plug that seals perfectly at the leading edge of the cap is so difficult to design and manufacture.

Why are the tunable plugs only put on the bottom octave of most instruments? Most people believe that you don't need tunable resonators on the higher notes because the upper range isn't as affected by the weather. Sir James disagrees: "Actually small pipes are slightly *more* affected than large by changes of temperatures".

Once you experience for yourself the dramatic improvement in the ring time of the mid and upper range, and the new-found control over volume and tone, you can't help but feel that having tunable resonators in the low range only is just a tease.

THE EMPEROR'S NEW CLOTHES

To return to the opening quotes: One expert says raise the bank of resonators for warm weather, one says lower it for warm weather. They both can't be right. I have been asked about this issue ("Do I raise or lower the resonators for hot weather?") by dozens of college percussion teachers through the years (many of whom, I'm sure, have excellent ears). Why is everyone so confused? The reason the experts can't agree is because moving the whole bank of resonators up and down makes such an insignificant difference to the tone of the instrument that nobody can tell what is happening! The addition of knobs or levers to position the bank of resonators, instead of just different slots in the resonator bracket, only makes it more convenient to be confused.

Sure, it's confusing, because the fact is that moving the resonators around does not tune them. Waving them in the air or chanting at them doesn't tune them either. You can move the entire rank of resonators to China and they will still be tuned to the same pitches as long as the temperature and humidity are identical that day in China. However, this is not to say that both theories are equally wrong.

Logic would tell you to move the set of resonators lower in warm weather (make the distance between the plug and bar longer and therefore "lower"). But logic doesn't prove out here any more than it does in many other percussive debates. The pitch of the tube is not determined by the distance of the bar to the plug; it is determined by the distance of the open end to the plug (or, even more accurately, a little past the open end to the plug). Knowing about this "end correction"—the wave length extending a little beyond the open end—you might be led by logic to think that moving the bars closer to the open end of the tube would "squish it down" (smaller), and that would then make the note sharper. But that doesn't happen either. In fact, not much of anything happens.

But a little tiny thing does happen that makes moving the resonators up in warm weather the better of the two alternatives. There is a very slight (and very esoteric) "proximity effect" that flattens the response of the resonator slightly when something approaches the open end of the tube.

Obviously, any improvement is frequently not enough for even an experienced player to hear, and thus all the confusion. If the *player* is having difficulty hearing the improvement, how about the *audience*? It also needs to be pointed out that this "proximity flattening effect" has no parallel for cool temperatures. Move the resonators away from the bar and all you do is "de-couple" them and lose volume.

In any case, the tuning changes that take place in rosewood bars due to temperature and humidity are not uniform. (This is why tuning or retuning them in anything but a temperature and humidity-controlled environment is not totally accurate. There is no such thing as accurate "temperature correction" when it comes to rosewood.) Each bar is unique in its grain, elasticity and hardness. In other words, some bars go flat sooner, later or to a greater or lesser degree than others. Therefore, moving the resonators as a unit, even if it could substantially change the pitch of the tubes (which it can't), will never compensate for the variations in individual bars. Only individual tunable resonators can do this.

Why, until recently, did the major manufacturers offer only high and low resonator brackets, instead of tunable resonators? After all, some models of marimbas produced in the early part of this century offered crude versions of resonator tuning. I believe it was simply supply and demand: Players weren't asking for tunable resonators because they really didn't know what a huge difference they could make. Besides, offering the high and low bracket feature adds only a few dollars to the cost of each instrument. Adding individual resonator tuners can add a few dollars to the cost of each note.

Will tunable resonators "catch on" and become the norm, rather than the exception? Only time will tell, but I can tell you from personal experience that once you've gotten a taste of being able to customize the sound of your instrument to the hall's acoustics, control the ring and volume of individual bars and completely compensate for temperature, it's hard to go back. PN

Leigh Howard Stevens *is a clinician and product designer for Malletech and has been awarded three U.S. patents for marimba design. As a performer he has appeared throughout the world, and his repertoire ranges from Renaissance music and the compositions of J.S. Bach to contemporary works for the marimba, many of which he commissioned. Stevens developed a unique four-mallet system of technique that is now used by numerous players, and his book on four-mallet marimba playing,* Method of Movement, *has been translated into four languages.*

"The world's greatest classical marimbist... Stevens has revolutionized the playing of the instrument." — Time Magazine

Leigh Howard Stevens performing on a Malletech LHS4.6 marimba.

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Chris Lamb

By Rick Mattingly

AS HE BEGINS HIS TENTH YEAR AS principal percussionist with the New York Philharmonic, Chris Lamb still hasn't decided what his specialty is.

"I love variety," he says. "After a couple of weeks of playing xylophone, I want to play some snare drum or cymbals. Being in an orchestra brings together all the areas of percussion I'm interested in. My specialization is not one instrument but an orchestral concept of percussion playing.

"We often see percussionists who have developed a specialty after 20 years of playing, and that's fine," Lamb says. "But specialization should be the result of venturing through a lot of instruments and styles. If something really takes hold, okay, but specialization shouldn't be something that is planned ahead of time."

Lamb points out that the audition process for an orchestra demands that one be fluent on a wide range of instruments. "Audition lists are comprehensive and communicate that excellence on all instruments—and, in some cases, in solo playing as well—is expected," Lamb says. "Much of the modern literature for orchestra requires the same. In January I will be premiering Joseph Schwantner's percussion concerto. He's got me jumping from amplified marimba to a multi-drum setup, then to crotales, xylophone, shekere, vibraphone, almglocken and all sorts of things."

In order to approach such a piece—and orchestral percussion playing in general—Lamb advocates a playing system or technical structure that is focused on the similarities between different instruments rather than their differences. "When I play cymbals, I'm coming to it with some of the same skills, tools and creativity that I've been nurturing since the first day I played snare drum. Too many people approach a new instrument as if they have nothing to draw from."

Lamb's approach, which he plans to touch on at his PASIC '94 clinic, involves finding a thread that connects all the instruments. "When I go to the marimba, I bring fundamentals from snare drum, and then add on to them," he explains. "When I go to timpani, I build on to things I brought from snare drum and marimba, and so on."

This approach is even more important to Lamb now that he has a full-time job as well as family responsibilities. "When I was in college, I could spend hours practicing each instrument. I can't do that now, so I need a system that keeps me in shape on several instruments, no matter which one I'm practicing."

In his teaching, Lamb stresses the importance of learning the process by which he makes his decisions rather than simply learning his techniques. "Good teachers will show you how they arrived at something, rather than just saying, 'This is how to do it,'" he explains. "That way, when the student gets a job with an orchestra and a situation arises, the student doesn't say, 'How would my teacher play this?' Instead, the student can say, 'Here are the steps I should go through to make a decision.'

"Students often spend too much time practicing excerpts and not enough time learning the instrument," Lamb contends. "If you asked me how to approach the secco cymbal crash in *Romeo and Juliet*, my answer would be that I approach it the same way I approach a secco crash in any piece. First, I look at a variety of ways to play a secco crash. Then I chose the one that is most appropriate for this specific piece. By the same token, the ability to play the snare drum part to *Scheherazade* should be the end result of learning to play the snare drum, not just the result of practicing that excerpt."

Above all, Lamb stresses the importance of fundamentals. "Orchestral playing is based on strong fundamentals in many areas," he says. "Your final destination will be determined by the number of areas you are strong in. Understanding the connection from one instrument to the next is crucial." PN

Emil Richards

By Lauren Vogel Weiss

IF YOU SAW MEL GIBSON IN *MAVERICK*, Kevin Costner in *Wyatt Earp* or Julia Roberts in *I Love Trouble*, then you also heard one of L.A.'s premier percussionists: Emil Richards.

Richards has been complementing visual illusions with audio colors for over 30 years. Originally a mallet specialist, today he is known as a master of the special percussion effect. With cymbals and gongs, woodblocks and washboards, he brings countless images to life on both the big and the small screen.

Raised in Hartford, Connecticut, Richards began playing with the Hartford Symphony when he was in the tenth grade and studied with Alexander Lepak at the Hartt School of Music. He joined George Shearing's group for three years during the mid-1950s, and in 1959, Richards and his family headed for California, where he soon became a first-call percussionist in the L.A. studios.

Richards will share some of his many "tricks of the studio" during his Paiste-sponsored clinic, "Studio Cymbal and Gong Techniques," at PASIC '94. But the sound sources won't be limited to metallic instruments; look for timpani, a bass drum, orchestra bells and vibraphone along with lots of different cymbals and gongs. "I'm trying to show the variety of unusual sounds that can be made on standard percussion instruments," states Emil. "Of course, it will be mainly gongs and cymbals, but there will be many other interesting things, too."

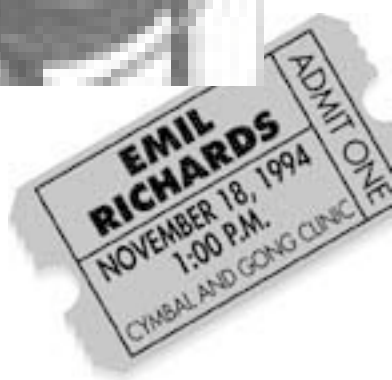
What can one do with a gong, besides hit it with a gong beater? "I use bows," Emil replies. "I use plastic combs. I use Superballs! If you rub a plastic comb across a gong, you get these screeching sounds. When you rub a gong with a Superball, you get moans.

"You can get similar effects using cymbals. I bow them, rub them with Superballs, scrape them. I just want to show the different possibilities. For example, when you put two cymbals very close to each other to where they're just touching, you get a different, odd sound with that noise. There are times in the studio when you can't pick up piatti, so you can hit two cymbals with sticks if you're running from one instrument to the other. This clinic is just a hands-on way of showing percussionists the different techniques that we use in the studios that can also be used in symphonic or other venues."

Richards has over 360 instruments in his collection. What is his favorite? "Probably the flapamba," he says after a few moments of consideration. The flapamba? "It is a uniquely carved set of bars sounding like the most liquid marimba you've ever heard. A gentleman in Los Angeles made that instrument years ago. It can sound either very liquid and mellow, or thumpy like a slap-tongued bass clarinet sound, depending on the type of mallets that are used."

Having done so many movies over the years, does Richards have a favorite? "I liked the Planet of the Apes movies because Jerry Goldsmith left it up to me to find the unusual sounds. I enjoy helping pick out the instruments that might be used in the score. My favorite instrument for that was stainless steel mixing bowls. They actually produce two unique sounds. If you hit them on the rims, they sound like beautiful bells. If you turn them upside down and hit their bottoms, they 'boing' like Chinese opera gongs. We used those for all the chases in the first *Planet of the Apes*. That was an unusual sound because no one had ever come up with that before."

Richards' clinic in Atlanta promises to be an exciting exploration into studio techniques and sounds that can be utilized by percussionists in all fields of music. But don't expect any electronics. He gets his unusual sounds from acoustic instruments that can be found almost everywhere. "I like to keep everything organic," he smiles. PN



Common Ground

By Rick Mattingly

KEYBOARD PERCUSSIONIST JULIE SPENCER says that the members of the ensemble Common Ground never perform for an audience. "To us," she says, "performance is something you do *with* an audience, not for them. We don't go into a whole lot of explanation about what our music means to us because we are very interested in people being able to close their eyes and attach their own story to the sounds they are hearing. It's important to give the audience that freedom of improvisation to respond to the music in their own way."

That sense of music as a shared experience between performers and audience members is at the very root of the name Common Ground. "First, we have the common ground of being people who share the earth as our home," Spencer explains. "Second, the name reflects the fact that music is a common ground for people. And third, there is the common ground of wanting to share the love of God with other people through the music."

The music Common Ground plays is virtually unclassifiable. It uses improvisation, but it's not jazz; it contains elements from a variety of cultures, but it is not world beat; it's modern, but not "contemporary"; it can groove hard, but it's not dance music. It's mostly acoustic, but members also utilize MIDI on occasion.

The four-member, percussion-based group was founded by Spencer, who first achieved renown as a solo marimbist and who also plays vibes and the malletKAT. Spencer holds degrees from the Eastman School of Music and CalArts, and also taught at CalArts from 1990-'94. In February she was featured as marimba soloist with the Glendale Symphony Orchestra under Lalo Schifrin, and has been awarded an NEA grant to compose a piece for the percussion group NEXUS. Her solo CD, *Ask*, is available from Interworld Music and features several of the compositions that Common Ground regularly performs.

The group also includes Spencer's husband, Gernot Blume, a German multi-instrumentalist and composer who specializes on sitar and piano. He holds degrees from CalArts and is currently pursuing a doctorate in ethnomusicology at the University of Michigan.

The group is rounded out by percussionists Craig Williams and Ruben Alvarez. Williams is based in St. Louis and has performed with such artists as Anita Baker, Steve Lawrence and Edie Gorme, Louis Bellson, the St. Louis Symphony and the American Ballet Company of New York. Alvarez is based in Chicago and has performed with Airto Moreira, John Mayall, Dave Mason, Anita Baker, the Commodores, the Illinois Philharmonic Orchestra and his own Latin jazz ensemble, the Sunsounds.

Joining Common Ground for their PASIC '94 concert will be guest artist John Bergamo, who has taught at CalArts since its founding in 1970 and who has performed with Lukas Foss, Gunther Schuller, John McLaughlin and Frank Zappa. He is a member of both Bracha and the Repercussion Unit, and has released a solo album on CMP as well as two hand-drumming videos and a cassette on Interworld Music.

Spencer says that the wide range of influences evident in Common Ground's music, which is composed by Spencer and Blume, is not the result of a conscious plan. "The different types of music we have been exposed to and studied over the years come out naturally when we write," she says. "People will hear where we've been, and that's cool. But it's not like sitting down to compose a piece based on 'how I spent my summer vacation.' "

A typical Common Ground performance includes acoustic and electronic mallet instruments, drumset, tabla, sitar, accordion, gamelan instruments and a variety of Latin percussion. "We don't just buy an instrument from another culture and immediately try to use it," Spencer says. "We study the whole tradition of the music in which that instrument is used.

"Basically, our music is a mix of rhythms that make you want to move and melodies that make you want to sing. And a lot of colors." PN

Mahler's First Symphony: The Timpani Parts

By Andrew Simco

DURING THE COURSE OF THE PAST TEN SEASONS IN which I have been timpanist of the Oslo Philharmonic Orchestra, I have had many occasions to perform the timpani part to the Mahler *First Symphony*. The more opportunities I had to perform the work, the more I got out of it, especially in terms of interpreting the part in a musically meaningful way.

I would like to share my thoughts with the readers of *Percussive Notes* in the hope that whatever light I can bring to the subject will be of assistance to those who have never played the work before or will be playing it for the first time, as well as those who have had the good fortune to perform the work. The symphony was originally written as a five-movement work in two separate parts, with the movement known as "Blumine" being cast as the original second movement of the first part. In a subsequent revision, Mahler withdrew "Blumine" from the symphony and recast the entire work as a four-movement symphony in one part, which is the version that has come down to us today. It is this version, in the edition by Dr. Erwin Ratz published by Universal Edition A.G. of Vienna, Austria, that will concern us here, as it represents Mahler's final thoughts on the subject. (I would like to thank the publishers of this edition, Universal Edition A.G. Wien, and in particular Ms. Gucki Hanisch, for permission to reproduce extracts from the timpani part.)

First, let us take a look at the background of the composition. It was composed in February and March of 1888, and in correspondence of that period, Mahler referred to the work as a "symphonic work" or as "a symphony." According to contemporary sources, the scoring for this first version was finished while Mahler was resident in Budapest. The first performance took place in that city, under the direction of the composer, where it was misunderstood by both critics and public alike. Four years later, the work was performed in Hamburg, for which performance Mahler revised the score substantially, and added the sub-title "Titan," which was a reference to a novel of the same name by the author Jean Paul. After another performance in Weimar in June 1894, Mahler called the work Symphony in D minor, and for a performance in Berlin that took place in 1896, deleted the "Blumine" movement, which only came to light again in 1967. As mentioned earlier, this four-movement version is the one most often played and the one (with further revisions made later in the composer's lifetime) with which we will concern ourselves.

Scored for a relatively large orchestra, including seven horns, two sets of timpani (finale only), percussion and one harp, the work has become one of the most popular and often-played of the Mahler symphonies. Its relatively short length of about 50-plus minutes, in addition to its wealth of tone and color, contribute to its popularity and to the frequency with which it appears on today's orchestral programs.

For the timpanist, this symphony offers many challenges, both musically and in terms of sound. The later Mahler symphonies increase in complexity, particularly numbers five, six and seven, but the first symphony has its own special challenge. Let us look at the timpani part movement by movement and see just how challenging it is, and at the same time, put forth some ideas as to its interpretation.

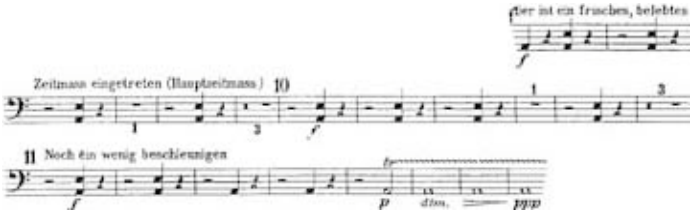
The part is played by one player for the first three movements. In the finale, a second timpanist is brought in with a rather substantial part of his own. A minimum of six drums is required, with player one using the three larger drums, and player two using the three smaller drums in order to reach the high G and F-sharp.

MOVEMENT I

The first movement, marked "Langsam schleppend," has one of the most atmospheric openings in the history of the symphony. Mahler's own sound world is immediately established with stylized bird-calls and military fanfares over a sustained A, scored for strings, and utilizing harmonics. The first entry of the timpani (together with the contrabasses), four bars after Rehearsal 3, marked Tempo I, Nicht Schleppend, contributes a feeling of foreboding to an already mystery-laden atmosphere. Note that Mahler has written the first half of the bar as 32nd notes, and only on the last half of the bar does he indicate a roll.

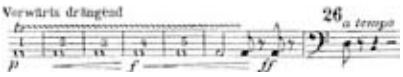
In executing this passage, I use a pair of general-purpose mallets, with slightly larger heads than normal, and play the first half of the bar slowly, as to emphasize the 32nd notes, speeding it up ever so slightly as I reach the second half of the bar so as to differentiate the roll from the previous 32nd notes. I also play the first half of the bar a bit closer to the center of the drumhead, in order to aid the articulation, drawing back to the normal playing spot in the second half of the bar.

The rest of the movement is fairly straightforward, with the composer giving ample tempo indications, leaving both conductor and player in no doubt as to his intentions. The open fifths five bars after Rehearsal 9 should be played with both brilliance of tone and energy, as much of the full orchestra is engaged in playing the theme of the exposition. General-purpose or perhaps medium-hard timpani mallets would be advisable here. Get those sticks off the head quickly, as this will not only add the required brilliance of tone, but also the required energy to the passage, as the fifths are repeated quite frequently. (One must take the timpani heads into account. If one is playing on drums equipped with plastic heads, medium-hard to hard mallets would be called for.)

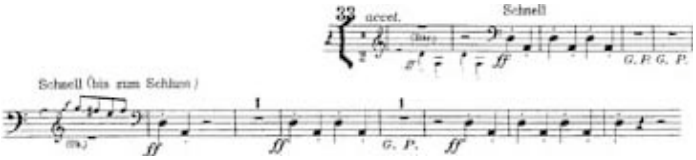


One bar before Rehearsal 14 is played as a roll, as Mahler clearly indicates. At this point, I emphasize the *mezzo-forte* and make an immediate diminuendo, as the whole passage is, like much of the timpani part so far, nothing but tone-painting. In the cadential passage leading up to the climax in D major at Rehearsal 26, I play as *piano* as possible at first, making a crescendo only to a *poco forte* three bars before Rehearsal 26. I thus save everything for the bar before 26, putting particular emphasis on the 8th note at the end of the bar, and the first 8th-note of Rehearsal 26. These I play with two mallets simultaneously (not as a flam!), both to emphasize the cadential nature of the music at this point and to support the horns in their *fortissimo* statement of the second subject. I also prefer the "thicker" sound of two mallets striking the drums here, as I feel that

it is in keeping with the character of the music at this point.

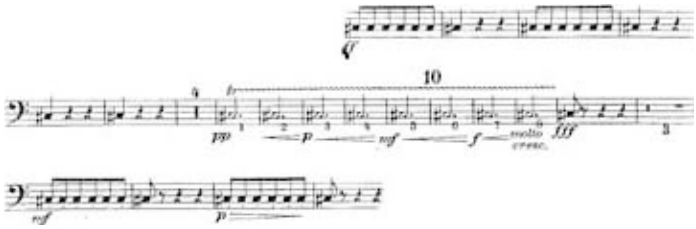


The remainder of the movement is played with the same brilliance as before and with even more energy, if that is possible, as the music is rushing forward in a great burst of energy. The concluding section (from Rehearsal 33 to the end of the movement) is particularly interesting, as the composer indicates an accelerando at Rehearsal 33, and at the entry of the timpani four bars later on the second half of the bar, he writes "Schnell" and later "Schnell (bis zum Schluss)." This passage should be played as Mahler indicated, with as much forward motion as possible. The notes should be loud and as short (secco) as possible, with impact, and the player should take care to muffle *immediately* after the figure is played, as any "ringing over" would destroy the significance of the passage. This stricture applies to the entire passage, right up to the conclusion of the first movement.



MOVEMENT II

The second movement is fairly straightforward and offers relatively little challenge. However, the section between Rehearsal 9 and Rehearsal 11 is of interest, particularly when it concerns the manner of sticking.

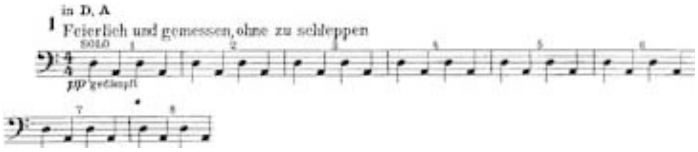


Normally, one can play the passage at Rehearsal 9 hand to hand (R L R L R L R), which would be just fine, as long as the required dynamic (*fortissimo*) is observed and the rhythmic figure played with the proper energy and articulation. However, I have found the sticking R L R L R R L to be quite effective in imparting that necessary burst of energy needed to "drive" the passage along. The figure is repeated, albeit at decreased dynamic levels, four bars before Rehearsal 11. I would use the same sticking, as it also helps in articulation. I play this passage on my 28-inch drum, as the relatively tight skin makes the articulation that much easier, and sounds better than if it were played on a smaller drum with a looser head.

MOVEMENT III

We now come to the famous third movement, which was intended by Mahler to portray a huntsman's funeral procession, with the animals themselves acting both as members of the funeral party and pallbearers for the huntsman's coffin. A more colorful, ironic piece of music than this would be hard to imagine, with its combination of

the minor-mode "Frere Jacques" (known in Europe as "Bruder Martin"), Klezmer wedding music and in the midst of this parody another of the "Wunderhorn" songs, all beautifully scored. The movement opens with a slow timpani ostinato on the notes D and A, which serves as a basso ostinato for the minor mode "Bruder Martin" theme, introduced by solo contrabass, and then taken up by solo bassoon and solo tuba, with the rest of the orchestra gradually taking part.



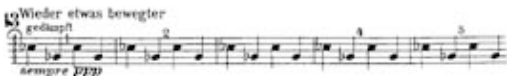
On paper, this looks very easy, but in practice, it is a rather tricky passage—not so much technically, but in terms of musicality and intonation. The player must take care that the drums are as clear-toned as possible and that the heads respond well. One must also take care to follow Mahler's directions scrupulously. The composer has marked the opening to be muffled (Gedampft). The question here is how muffled should this passage be? The danger is that one could use too heavy a muffler, thus killing the resonance to the point that all that is obtained is a dull thud, which is not what I feel Mahler had in mind. If one is careful to use a pair of mufflers that are small enough and are constructed of a material that is just the right weight to take out some of the overtones, then that would be a good solution. A pair of the small chamois mufflers like those advocated by Mr. Cloyd Duff would do nicely. I myself do not use mufflers, but use both the sticks and the head to accomplish what the composer had in mind.

As to sticks, I have a pair of Feldman mallets with very large, soft ball-type heads, which I find ideal for the purpose. I then play the passage a bit further in on the drumhead, toward the center, obtaining a slightly "dumpy," almost muffled sound. I take care to test this out in practicing before I go into rehearsals and performance so I know where on the head to play in order to achieve the desired result. Our chief conductor, Mariss Jansons, was satisfied with this solution.

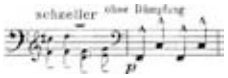
I have played the work using drums equipped with both calf and plastic, and have come to the conclusion that calfskin works better, being more "earthy" in timbre and less resonant than plastic. Note that at bar 29 Mahler directs that the mufflers be removed, as by now much of the orchestra has entered, and with the entry of the E-flat clarinet, more resonance is required.

The mufflers remain off until four bars before Rehearsal 13, where the low G is muffled; they should also be replaced on the two middle drums during the 19 bars rest between Rehearsal 10 and Rehearsal 12.

At Rehearsal 13, the drums have been tuned up a half-step to E-flat and B-flat, and here the composer is very careful to stress that the dynamic is "*sempre ppp*," always *pianississimo*.

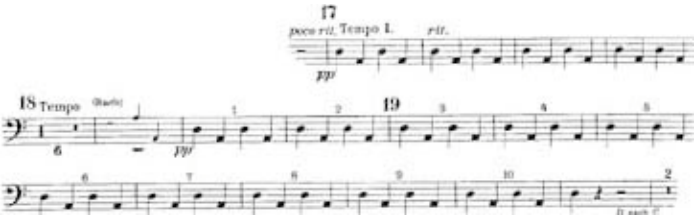


There is one small detail concerning the passage between Rehearsal 16 and 17 that the player should be aware of, so watch the conductor attentively. Mahler calls for a sudden increase in tempo on the second bar after Rehearsal 16. This is rather brief, lasting at most five bars, with a *poco ritard* just one bar before the return to Tempo I at Rehearsal 17. The drums are tuned to C and F, and the dampeners are removed. The sound here is quite different from what Mahler has called for up until now, especially with the quicker tempo. I recommend using a pair of hard-felt mallets, both to bring more articulation to the passage (it lasts all of one measure) and to brighten up the sound.



The player must be careful to return to heavier, rounder, soft mallets, and to do so quickly, as the music at Rehearsal 17 returns to the same sound world as at the beginning of the movement. At this point, Mahler does not call for mufflers. However, I recommend playing that passage in somewhat the same fashion as at the opening, especially bearing in mind that it is the same sound picture. The only difference is that the tone should be a little more "open."

I play this passage in the normal beating spot (as opposed to a bit further in toward the center in the opening bars) but with the same mallets as I used at the opening. In this manner, I obtain the best of both worlds, namely roundness of tone, albeit with more ring to it than at the opening. Pay scrupulous attention to the dynamics, and be very careful to change mallets and make your tuning change for



the opening of the finale as discreetly and as quietly as possible.

MOVEMENT IV

We now turn our attention to the finale, marked "Sturmisch bewegt." The movement begins with a clash of cymbals on the first half of the opening bar, with the timpani coming in like a ton of bricks on the second half of the bar. Mahler suggested that this opening passage be played as if it were "the cry of a deeply wounded heart," so give it all you have, but then pull back, as there are now two players involved, and both must be careful not to overplay in the movement. I recommend general-purpose mallets here, as there is much rolling, especially in the first part of the movement. However, the mallets should be capable of articulation as well, especially when the two

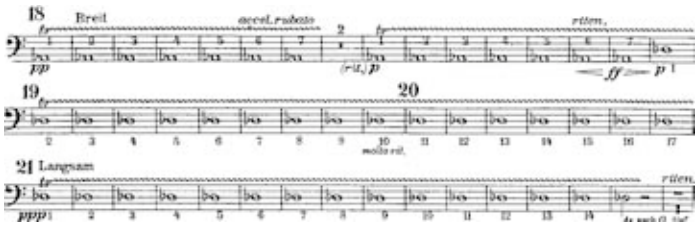
Timpani I

Timpani II

players "trade off" later in the movement. It is important that the two players be very careful, as it is easy to become over enthusiastic and overplay the passage between Rehearsals 4 and 6.

Make clean entries and forceful ones, but come down just enough so as to allow the orchestral detail to come through. The parts are very straightforward. Be careful to observe the dynamics carefully, and to give as much brilliance of tone as possible, especially when you come to *forte-piano* passages and single notes. The orchestration is fairly heavy, and it is important that the orchestral detail always be heard.

For the first player, the passage between Rehearsal 18 until just before Rehearsal 22 is an exercise in rolling, especially in the softer dynamics. The passage is all accompaniment, but the player must be careful to choose the right mallets and drums in order to achieve the desired effect. I use a pair of Duff-American number 7 mallets with

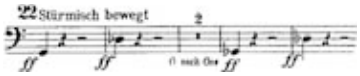


large round heads, and they have proven most satisfactory. The weight of the mallets are, to my mind, just right, and they are voiced with this type of passage in mind.

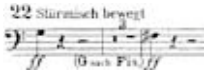
Be careful with the crescendo three bars before Rehearsal 19, as it is tempting to make a real "schmaltzy" *fortissimo* at this point. There is nothing wrong with schmaltz, especially in this movement,

and it is important to weigh in heavily at this point, but be careful to go *with* the orchestra, not *over* it. The conductor is usually helpful here in determining the correct balance. What works for me is speeding up the roll just a bit as I make the crescendo, and as I change over to the D-flat, go back to my original dynamic and speed of roll in relation to the drum I am playing. Mahler does not give the

Timpani I

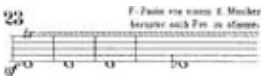


Timpani II



player much time to change mallets for Rehearsal 22, but I wouldn't worry too much. The part is doubled with player two, who has the upper octave, and that octave comes out easier than the lower one.

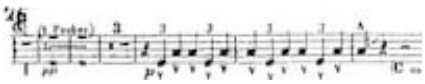
If the conductor wishes for a change of mallets at that spot (one would change to general-purpose mallets here), I would fade out a bit earlier and discreetly make the shift. If not, I would play with the mallets I used previously, giving as much energy and brilliance of tone as possible, making the change of mallets during the ten measures of rest that follow the four *fortissimo* strokes. As I noted above, the second player is doubling the passage one octave higher, so there is no real problem here. What is interesting is the way Mahler uses



the timpani at Rehearsal 23. The timpani are assigned a low F for three bars, and on the fourth bar of Rehearsal 23, the note suddenly descends by a half-step to F flat.

This passage presents the player with a problem. Shall he or she pedal it, thereby risking even the slightest of unintentional downward glissandi, or let the second player play the F flat? Note the directions above the passage, in which Mahler instructs the second player to effect the tuning, while the first player continues to roll. This dates from a period in which lever-operated machine timpani were the rule, pedal drums not having come into full usage at the time. The effect would be somewhat the same, unless a rapid downward turn on the tuning lever were to be effected.

I pedal it, using a rapid downward pedal movement to the desired note. I make sure that the motion is rapid enough to disguise any glissando effect. One other solution would be to have an extra drum



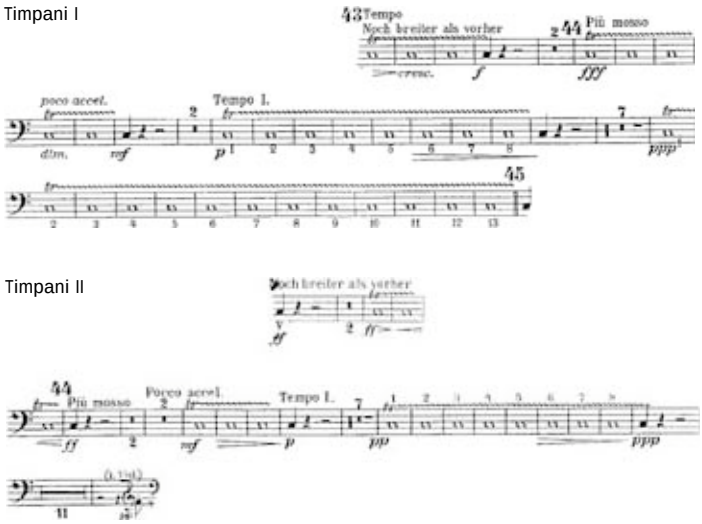
tuned to F-flat, or to have the second player take over the F-flat. The choice is up to you. The second player has a nice soloistic passage,

albeit a quiet one, seven bars after Rehearsal 26.

I would use mallets with as much brilliance of tone as possible, in order for the notes to come out clearly and distinctly, despite the *piano* dynamic. I mentioned earlier that the second player uses the upper three drums, in order to obtain the upper G and F-sharp. This would mean that he or she would be performing this passage on the 26- and 29-inch drums, which (if the drums are in good shape tonally, the correct mallets are used and the player is aware of the composer's intentions at this point) would be ideal**.** Remember, this little passage should have the feeling of distance about it, hence the *piano* dynamic. Today, most players, and I include myself among this number, prefer a bigger, rounder, and warmer tone from our drums, so we use our larger drums for notes such as C and G whenever we can. Here is an exception: The smaller drums would be a bit shallower in sound, but that is just what is wanted here, as the larger drums would tend to make this small soloistic passage a bit too heavy. Again, the choice is up to you.

I could go on for pages and pick apart the entire movement, but I will confine myself to some general comments concerning the rest of the movement. The parts for both players are straightforward, and require a good deal of sensitivity. By this, I mean sensitivity to each other as well as to the music. It is very easy to get carried away and try to outdo each other. The music would almost seem to encourage this; however, if both players are sensitive enough to realize that at times "less is more," then a good result, as well as a moving performance, will most likely be obtained.

A case in point would be the section from Rehearsal 43 to 45. Here both players are required to trade off and to match each other's sound, if possible. I would recommend that both players use the 28-



or 29-inch drum for the C, as the music here requires a full round tone. Be careful with your crescendi and diminuendi, and pay scrupulous attention to the dynamics.

I cannot reiterate enough the necessity for both players to be musically aware of what is going on in this movement, and this is particularly true in relation to the coda. From rehearsal number 52 on to the end, the orchestration is on the heavy side, with dynamics of *forte* and above being the general rule. Both players should play

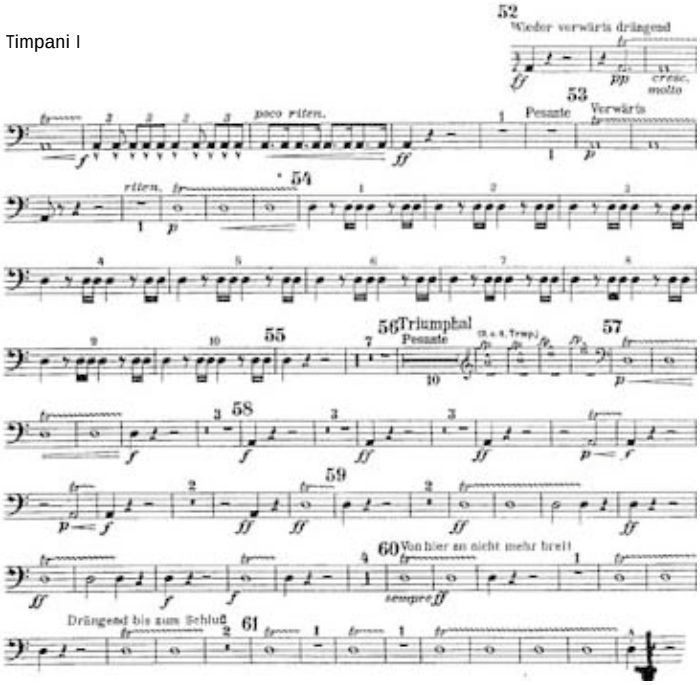
the passage at rehearsal number 52 with great weight, giving greater emphasis to the quarter note, but at the same time not stinting on the grace note, either. I play this fairly open, almost as a flam, and with a rather thick sound. This is another instance in which Mahler requires this type of sound.

The second, third and fourth bars (these relate now to the first player) are played *pianissimo* with a molto crescendo from the third to the fifth bar, where the dynamic is *forte*. Here, the player must be careful to articulate the rhythmic figure on bars five and six carefully, while at the same time watching the conductor, who will indicate just how much of a poco ritenuto there will be on bar six. This is musically vital, as these bars act as sort of a brake, collecting the entire orchestra, just before the brass section begins with their big "Pesante" one bar before Rehearsal 53. The first timpanist is again in an accompanying role at Rehearsal 53, and remains such until Rehearsal 54. Three bars before Rehearsal 54, he or she plays a roll marked *piano*, with a gradual crescendo until Rehearsal 54, where he or she again takes the leading role. Going back to three bars before Rehearsal 54, the second player takes the bit between the teeth, so to speak, by playing a single quarter-note *fortissimo* and a serious of repeated 8th notes two bars before Rehearsal 54. Mahler has indicated that these notes be played with great brilliance of tone, and care should be taken that they be heard, as these bars set the stage for the first player taking the lead at number 54. Like a similar passage heard earlier (namely the fourth bar after Rehearsal 34), this should be played with great energy and brilliance, with a feeling of triumph. This sets the stage for the great blaze of glory from Rehearsal 56 on, which Mahler has marked "Triumphal."

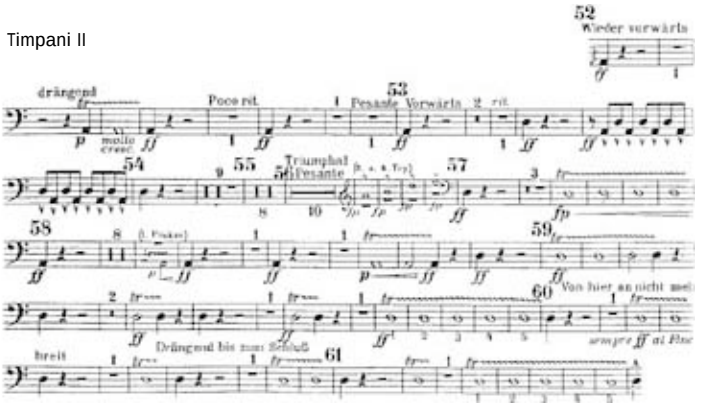
From Rehearsal 57 to the end, care should be taken on the part of both players to match their respective sounds. The great "trade-off," which begins one bar before Rehearsal 59 and continues until the last five bars, when both players contribute their "all" to the great torrent of sound, should be done carefully. The ends of each roll should be slightly accented, so that where one player's roll ends and the other begins can be heard cleanly and effectively. This is important, as it is all too easy to get carried away and overplay this section. If this is overplayed, then it would sound unclear and act as an anti-climax, rather than an exciting conclusion to a fine symphony. Play with enthusiasm, by all means, but always keep the overall sound picture in your mind. Save your all for the last five bars! Then you can let go!

One last item, and this concerns the very last notes of the piece. The timpani parts end on a D, on the first quarter of the bar, whereas the rest of the orchestra plays another D an octave lower on the second quarter. The timpani are silent here. Many conductors, beginning with Leonard Bernstein, have added the low-octave D to match what the orchestra does at that point. As a matter of fact, that seems to be the general rule nowadays, so if the conductor asks for it, why not deliver it? It makes musical sense, and with all of the instruments available today, there is no question of a problem in obtaining the low D. In most cases, both players play the low D, so both players should in this case have four drums each, in order to best play the note. I now quote the previously mentioned passages:

Timpani I



Timpani II



In conclusion, let me restate what I said at the outset of this article: The more exposure I have had to this piece, the more I have learned from it, which is true of any piece of great music and is one of the things that makes that particular piece of music great. It is my hope that this article will give those who read it a better idea of what it is to play this symphony (especially those who come to it for the first time), and food for thought for those who have had the good fortune to play the symphony before. Either way, I can guarantee that you will find it an intensely enriching, rewarding experience.

Editor's Note: *The musical examples for this analysis were extracted from the Universal edition; the Kalmus edition is different in some ways and deserves perusal by interested readers. For a translation of the terms used in the timpani and percussion parts of this symphony see* Percussive Notes, *Vol.19, No.1, 1980.—Michael Rosen* PN

Andrew Simco *is an American-born timpanist who plays with the Oslo Philharmonic Orchestra in Norway,*

Terms Used In Percussion: Olivier Messiaen's *Chronochromie*

By Michael Rosen

MESSIAEN HAD ALWAYS PERceived harmony in terms of color, but with *Chronochromie* (1960) this aspect of his compositional vision takes on far greater significance. He has his musical roots in the anti-symphonic approach of Debussy rather than the nineteenth-century symphonic tradition. His sectional, unorganic conception of form along with his discarding of harmony as a progression of a series of tension and relaxations put him in a whole new class closer to Varèse. For Messiaen, harmony is decorative rather than functional. This gives his music a static rather than dynamic quality because harmony is vertical rather than horizontal. Although bird song is evident in *Chronochromie,* Messiaen has them played by stringed instruments in addition to woodwinds and xylophone as in other of his works. In addition, this compositional device takes on a more balanced position in the coloration of the piece rather than being central to it.

Chronochromie was commissioned by Heinrich Ströbel for the orchestra of the Südwestrundfunk (The Southwest Radio Station) in Germany. The first performance took place in Donaueschingen, Germany on October 16, 1960 under the direction of Hans Rosbaud. It is scored for large orchestra and a large percussion section including orchestra bells, marimba, xylophone, an extended set of tubular chimes, three gongs, two cymbals and tam-tam. There is no piano in the orchestration, which is unusual for Messiaen.

The title is derived from two Greek words: *khronos*, which means time, and *khroma*, which means color, and which emphasize the importance of these elements in the piece. Therefore: "the color of time." Percussion plays an important part in Messiaen's harmonic coloration. There are three main timbres, one of which is pitched percussion with woodwinds; another is harmonies played by the strings; and the third delineated by percussion with one line given to the three gongs, played *pianissimo*, another to the chimes, played *forte*, and the third to cymbals and tam-tam played *pianissimo*. This composite timbre produces a chilling and beautiful sound very unique to Messiaen.

The rhythmic permutations used in the work are far too complex to discuss in this article but I recommend the book *Messiaen* by Robert Sherlaw Johnson (University of California Press, 1975) for an in-depth look at the music and life of the composer.

Note: The text that appears in square brackets is my own explanation and does not appear in the music.

Chronochromie:

1 Glockenspiel (a petit clavier de piano): one keyboard set of orchestra bells [This part cannot be played on the type of orchestra bells used in the United States because it calls for two hands and is really a piano keyboard part. It will be necessary to either have two players play the part, dividing the notes between them, or to have the part played on celeste, which is really too soft for the timbre Messiaen wants. The best instrument, of course, would be a keyboard glockenspiel.]

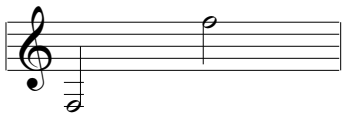
1 Xylophone (à baguettes): One xylophone (played with mallets)

1 Marimba (à baguettes): One marimba (played with mallets)

N.B.—Les parties de xylophone et de marimba sont difficiles (surtout dans les 2 Antistrophes) et réclament d'excéllents instrumentalistes. Pour les deux instruments: utiliser des baguettes dures.: Note—The xylophone and marimba parts are very difficult (especially in the 2 movements entitled Antistrophes) and require excellent instrumentalists. For both instruments: use hard mallets.

Cloches (Chimes)

Jeu de 25 cloches, donnant tous les degrés chromatique: A set of 25 chromatic tubular chimes



N.B. La partie de cloches est difficile (surtout dans les 2 Antistrophes) et réclame un excellent instrumentaliste. Pour les cloches: les signe ___ signifie: laissez résonner toutes les notes jusqu 'an prochain signe—le signe ' signifie: étouffez la résonance. La succession immédiate des 2 signes (' ---) veut dire: supprimez la résonance précédente et laissez aussitôt tout résonner de nouveau.: Note—The chime part is very difficult (especially in the 2 movements entitled Antistrophes) and require excellent instrumentalists. For the chimes: the symbol ___ signifies: let all the notes ring until the next symbol—the symbol ' signifies: dampen the sound. The two symbols after each other (' ---) means: cut off the preceding sound and immediately let all the new sounds ring.

Percussions métalliques: metallic percussion

1er gong (aigu): first gong (high)

2e gong (médium aigu): second gong (medium high)

3e gong (médium): third gong (medium)

joués par un seul exécutant: played by one player

cymbale chinoise (grave): Chinese cymbal (low)

cymbale suspendue (médium grave): medium low

tam-tam (très grave): Tam-Tam (very low)

joués par un seul exécutant: played by one player

Xylophone Part

gliss. touches blanches: glissando on the white keys [Messiaen considers the xylophone and marimba as keyboard instruments, which is why he uses the term "white keys." We might be more likely to call them the "naturals."]

Dans tous less passages d' "Alouette des champs": les parties de xylophone et de marimba sont soloistes et très difficiles, la partie de cloches également—faire travailler ensemble xylophone, marimba, et cloches.: In all the passages of the movement called "Alouette des champs": the xylophone and marimba parts are soloistic and very diffi-

cult as is the chime part—practice this section so that these instruments play together well.

De 42 à 44 exclu: la mélodie principale est aux cloches, qui doivent être fff: From rehearsal number 42 to 44 inclusive: the principal melody is played by the chimes, which must be played *fortississimo.*

Dans toute la Strophe II, pour l'exactitude des durées: faire travailler les cloches avec 7 seconds violins.: In the section called Strophe II the durations must be precise, therefore practice the chime part with the 7 second violins.

d: abbreviation for *droit*, right hand

g: abbreviation for *gauche*, left hand PN

Michael Rosen *is Professor of Percussion at Oberlin Conservatory and director of the Oberlin Percussion Institute. He has taught and concertized extensively around the world. Formerly, he was Principal Percussionist with the Milwaukee Symphony and was a student of Charles Owen. He has recorded for the Bayerische Rundfunk, Opus One, Albany, Lumina and CRI labels. He serves on the Board of Directors of PAS and is an Associate Editor of* Percussive Notes.

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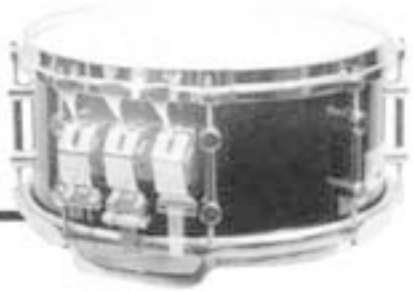

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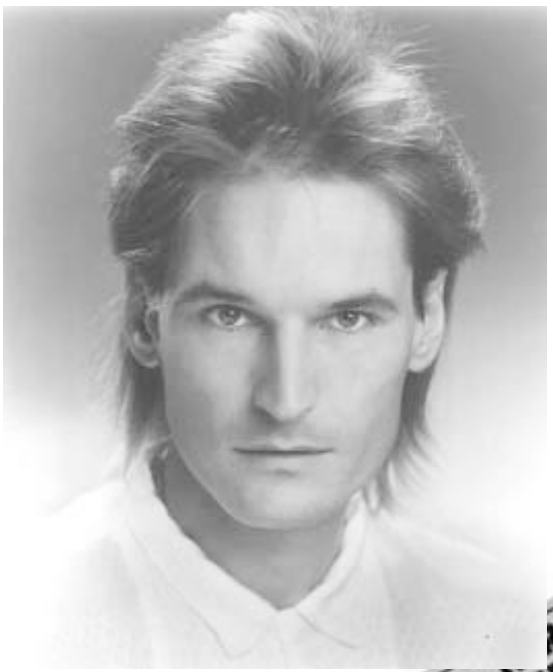
The Transition to Electronic Mallet Playing

By Kirby Shelstad

THE CHALLENGES OF PLAYING ACOUSTIC INSTRUMENTS

Let's face it, mallet playing is a challenging endeavor. Playing well is an even greater challenge. Size is one of the first challenges, as an instrument of four to five octaves can span over six feet in length. When you compare the physical effort a mallet player must generate to play a scale up and down the instrument, compared to say a sax or a violin player, you start to get the idea. Not only are mallet instruments large, but on professional instruments the bars change in size from the bottom of the keyboard to the top for the best possible sound (called graduated bars). On instruments with graduated bars, the distance between intervals changes as you go up or down the keyboard.

Another challenge is playing with accuracy. On acoustic mallet instruments, the bars are suspended by a cord or string running through the bar at a point called the node (those dreaded #@%*& nodes!). The nodal point is a dead spot on the bar and is normally avoided, particularly on the accidentals where it's right next to the "sweet spot" on the end or middle of the bar. One is always practicing how not to hit the bar as much as how to hit the sweet spot. Another challenge to accuracy is trying not to strike two notes at the same time, particularly on vibes while using the sustain pedal.



PLAYING THE MALLET KAT

The "bars" of the Kat MIDI Controller are made of 1/4-inch sponge rubber and have a great deal of rebound, which is unavailable on a vibe or marimba. Striking the spongy rebounding notes can take some adjustment but can also facilitate playing by making it easier to perform very fast patterns or scales based upon rudiment-type stickings.

When the Kat was first introduced, I was concerned that it would be hard to play an instrument with non-graduated bars. After years of playing an M-55 vibe and large marimbas, I was bummed that I'd have to change my technique considerably. What I discovered was that it became much easier to play on a non-graduated instrument. When playing with four mallets on a standard vibraphone, the spread of a fifth on the low end is about the same as a seventh or octave on the upper end of the instrument. Shifting your body up or down the keyboard also changes your relationship to the instrument and requires continual adjustment.

After spending some time on the Kat I found that I was becoming more accurate with chords and scales, as intervals and body position remain constant throughout the instrument's range. Because the playing surfaces are closer together on a Kat, playing consecutive octaves or fifths with the same hand is also much easier. One other advantage is that your vision focus doesn't have to shift as much from right hand to left. On the Kat, you don't have to avoid hitting nodes because there are none! It's also quite difficult to trigger two notes with the same stroke (you still have to hit the right note, though).

Playing *legato* on a vibraphone requires very good pedaling and dampening techniques—and even then it's hard to play truly *legato* during a long passage without some breaks in the sound. On the Kat, one can shift the instrument into "mono mode," which allows only one note to sound at a time. To play *legato* using mono mode, one only needs to hold the sustain pedal down for the whole passage. Each time a new note is struck, the previous one is silenced—kind of like an auto-dampening feature: very handy and it sounds cool, too. This technique can be used to emulate the classic bending guitar trill (a whole-step trill) by holding the pedal down and using a breath controller to bend the pitch up or down a whole step.

WHEN PLAYING SYNTH SOUNDS

Emulating acoustic instruments (or playing any synth sound for that matter) has to be approached with its own technique. Performing with standard marimba technique doesn't work well when playing a trumpet sound. Playing a strumming guitar part requires good pedal control, arpeggios, breath control and a good sense of guitar voicings—which is a study unto itself and necessary for playing a convincing guitar part. Playing woodwind or brass sounds requires the combination of good pedaling technique, breath control for adding vibrato and a good sense of playing *legato* for solo passages.

One thing that has helped my soloing is playing wind sounds with the breath controller, which can be assigned to effect the vibrato, volume or pitch bend. It has helped my sense of phrasing immensely to be

able to have such fine control over the vibrato and volume. I now seem to play more fluidly and leave more space for sustained notes with pitch bend and vibrato. Before playing the Kat, my tendency was to fill space with more notes.

It's important to view playing an electronic mallet instrument on its own terms, rather than comparing it to an acoustic mallet instrument. In my opinion, it's difficult to say that synthesizers sound like acoustic instruments—better synths sound close, but certainly not the same. If one plays and listens to good acoustic piano samples on a high quality synth for a period of time, one gets comfortable with that sound and takes for granted that yes, this sounds realistic enough. But just sit down at an acoustic grand and you immediately hear that samples fall quite short of generating the same sound.

In terms of sound, electronic mallet playing is convincing when emulating a real vibe or marimba. Good mallet sounds and mallet samples aren't as difficult to produce on synthesizers as a good piano or string ensemble sound. There are MIDI synths and samplers on the market that are very convincing, and when care is taken with EQ, reverb and stereo samples, one can create a very realistic mallet instrument sound.

MORE ON SOUND

Another aspect to bear in mind is that when playing an EMI (electronic mallet instrument), you are hearing your sound through a speaker. With an acoustic mallet instrument you hear the instrument itself along with all the characteristics of the room it is in. When recording an acoustic mallet instrument, what goes to tape is more than just the instrument. The room, all the little nuances in playing of attack and dynamics, and even the sound of the player's breathing are recorded. With good stereo microphone placement, you can achieve a wonderful spread of the low to high range moving from left to right across the stereo field. Special factors, such as mallet hardness, where you strike the bar, rolls, dampening and particularly the dynamics, require even more effort in programming your MIDI device to sound convincing. The best emulation of a marimba requires samples of various strikes from soft to loud that are triggered according to the strength of your playing.

Acoustic instruments achieve their full character through a variety of subtle nuances in their timbre. Just think of the many colors of sound that are available with violins, guitars and saxophones using minute changes in technique. If you want to emulate other instruments successfully, knowledge of these nuances can help you immensely.

PLAYING IN A LIVE CONTEXT

EMI playing is best suited for amplified settings such as jazz, rock, pop, techno, etc. Finally being able to play loud enough with a rock or jazz group is great, especially if you've experienced the frustration of trying to play acoustic mallets in a loud context. Now, I can crank it as much as I need and not have to kill myself playing so hard. After years of playing drumset and "locking in" with bass players, I now lock in my synth parts with the bass and the drums with a sensibility akin to theirs—making for a more intense groove. It's also great fun playing bass parts on the Kat and "locking in" with the drummer.

Playing in a more acoustic or symphonic setting is a bit more challenging with an EMI. Playing effectively with an orchestra requires the nuance of acoustic playing. Blending an amplified sound with acoustic sounds is tricky. This skill requires sensitivity to one's own volume—more difficult when listening to yourself through a speaker, as room characteristics and speaker placement can cloud your perception of how loud you think you are. You might sound in balance from where you are standing, but the conductor might think otherwise. However, an EMI provides flexibility, convenience and certainly less space than all the instruments you would want to emulate. Switching between vibes, marimba, chimes, bells, timpani, gong, triangle, etc. at the touch of a button from the same instrument is pretty attractive.

USING AN EMI WITH A COMPUTER AND MIDI SEQUENCING SOFTWARE

One of the most powerful applications of an EMI is using it in conjunction with a MIDI sequencer. Using MIDI sequencing software, one can record, play back and edit EMI performances.

I like to compose at the instrument by recording several takes of improvisations—listening back to them and editing the coolest ideas together into a form and then developing the piece from there. When doing soundtrack work, the EMI is not only great for mallet parts, but substitutes for timpani, bass parts and percussion. The EMI works well when very rhythmic chordal parts or parts that sound very "sequency" need to appear more human rather than sounding so computer-like.

Playing along with the computer is also an incredible practice tool. You can create your own tracks and grooves from scratch, then change the tempo or the key for practice. It's also possible to record your entire practice session into the computer to see how good your time is, and observe and listen to how well you can play ahead of or behind the beat.

EQUIPMENT

The only EMI currently on the market is the MalletKAT. The new MalletKAT Pro has a more sensitive playing surface that makes it even more dynamic and, well, mallet-like. It also has several new software features and plenty of

live functions, such as changing sounds, volume, duration, MIDI channel and octave transposition on-the-fly. At this writing, the people at Kat were preparing to release a new model with its own built-in sound generator, making it even more convenient and simple to use.

You'll also need a stand. Kat has a great stand for the new instruments, but you can also modify an existing keyboard stand. If you're gigging often, it pays to streamline your set-up and tear-down time as much as possible.

The possibilities of synthesizers are endless. There are many synth/sampler modules available today in all price ranges. Keep in mind that you can trigger as many different devices as you can afford. Playing a couple of different modules allows one to get more unique tonal combinations. I normally use two or three modules, programming their sounds as one unit to create a bigger, more complex sound. One module might play a bell sound while the other module might be set up for a string sound. Most of the newer modules also allow you to create stacks that could, for example, create a four- to five-part woodwind ensemble. I'd recommend buying devices that have the sounds you need, are multitimbral (the ability to play several instrumental colors at once), have a card slot for adding more sounds in the future and have programmable reverbs.

If you really want to explore the universe of electronic music, you should invest some time in learning how to program your sound generators. Each of these devices is basically a computer with the ability to edit its sounds to no end. Programming isn't for everyone, but it comes in very handy for tweaking a sound to respond to your own playing style, and programming is the only path to creating "your own sound."

Synthesizers are capable of producing a very wide frequency spectrum. Two- or three-way speakers (two or three different speakers in the cabinet, woofer/midrange/tweeter) will reproduce the sounds more efficiently and accurately than single-speaker units. For big sounds (bass drums, bass guitar, etc.) 12- to 15-inch woofers are recommended. Synths are stereo instruments, so if you want to take advantage of this feature, you'll need two speakers and a stereo amplifier. If you're on a tight budget, there are some good single-enclosure keyboard amps for smaller setups, or one can even start with just a pair of stereo headphones, which are great for practicing.

IN CLOSING

Electronic mallet playing opens up many new possibilities previously unavailable to mallet players. The Kat overcomes some of the physical difficulties of acoustic instruments but also requires and encourages new techniques in playing and understanding the technology. Probably the most exciting aspect of this new technology is that one can now play an infinite number of sounds with mallet techniques, which also opens the door to participating in more kinds of electric music. ROCK MALLETS! PN

Kirby Shelstad *has scored and produced music for records, feature films, educational films, television and radio. As a synthesist, drummer and percussionist, Shelstad has performed and recorded with Leon Russell, Gatemouth Brown, Charley Rich, Mark O'Conner, Bela Fleck, Dobie Gray and The New Grass Revival. He received his formal training at the University of Minnesota, and has studied North Indian classical music and drumming at the Ali Akhbar Kahn school in San Rafael.*

Shelstad has served as a consultant and performer for Apple Computer and has written articles for Keyboard *magazine. His compact discs* As Above So Below *and the* Peaceful Solutions *series are ranked among the best in Contemporary Instrumental music.*

Steve Rehbein's MIDI Vibes

By Rich Holly

OFTEN WE COME IN CONTACT with musicians whose lives are so full of activities that we wonder, "How do they do it all?" Percussionists especially seem to be wearing many different hats these days, as performers, teachers, authors, composers, etc. And there are, of course, those people whose personal slates are just as full, with time allotted for family, religion, fitness and the like.

One such very busy percussionist is Steve Rehbein, whose primary gig as Coordinator of Jazz Studies and Percussion and Assistant Director of Bands at the University of Nebraska at Omaha is a handful in itself, requiring him to instruct many different courses, conduct nine ensembles and teach private lessons. Very few of us have that much time, energy or expertise! In addition, Rehbein is extremely active as a performer, author, composer, husband, father and President of the Nebraska chapter of PAS. Such an active lifestyle stems from his personal philosophy: "I believe that knowledge is all-powerful and that each individual possesses certain talents and abilities that should not and must not be ignored," he says.

In the late 1970s and early 1980s Rehbein was a member of the critically acclaimed jazz sextet, Auracle, which recorded three albums: one for Mark Records and two on Chrysalis Records. Steve performed on vibraphone, marimba, xylophone, orchestra bells and a battery of Latin percussion and accessory instruments. Also during this period he performed as a percussionist at MGM, Paramount and Universal Studios in Los Angeles

Hailing from Oshkosh, Wisconsin, Rehbein came from a very musically active family. At age seven he began piano lessons and in fourth grade switched to drumset. He looks fondly upon his early music instruction and experiences. "My first drumset teacher, Jim Audiss, introduced me to a variety of jazz. By eighth grade, I began studying mallets with Dr. John Baldwin, who was then teaching at the University of Wisconsin-Oshkosh. One summer I studied with Gary Burton and another I spent at the Berklee College of Music in Boston studying with Alan Dawson."

From Oshkosh, Rehbein went to Rochester, New York to study with Chuck Mangione and John Beck at the Eastman School of Music. It was here that he met the musicians who would later become Auracle. After Auracle's breakup in 1981, Steve returned to the life of a student and received his Master's degree from the University of Wisconsin-Madison and his DMA from the University of Iowa.

Rehbein has nothing but glowing praise for his teachers: "At Eastman, Bill Dobbins and Rayburn Wright were gifted teachers in the jazz studies program, and John Beck emphasized versatility in percussion performance and a professional attitude from his students. At the University of Wisconsin, James Latimer helped me hone my skills as a jazz vibraphonist and shared his wisdom and knowledge of jazz composers with me. I studied with a wonderful percussion teacher, Tom Davis, at the University of Iowa. He taught me a great deal about jazz vibraphone and how to be an effective teacher and musical scholar."

Since 1990, Rehbein has been working on his innovations in the field of vibraphone MIDI workstation. Steve believes that musical expression on mallet keyboards is no longer limited to the acoustic parameters of the instruments. "Electronic technology advancements coupled with sophisticated amplification have transformed acoustic instruments into veritable MIDI drivers, while still retaining the sonic integrity of the mallet instrument," he says. "Contemporary musicians need to augment their fundamental musical knowledge and abilities with new skills and techniques in order to harness the emerging technology and to become conversant with new modes of expression. The combination of music and electronic technology is perhaps the direction in which music is headed, and tomorrow's improvisers will need to address these issues."

Rehbein stresses the necessity of using intuitiveness and objectivity when choosing electronic sounds, combinations of sounds, or more complex arrangements using a sequencer. "In many instances, however, the old adage 'less is more' is a reliable guidepost to use as the basis of one's decision," he says.

Admitting that initial reactions to his MIDI music and setup ranged from curiosity and skepticism to encouragement and excitement, Rehbein has spent the last four years refining his extensive MIDI workstation so that it is compatible with his musical vision and electronic technological innovations. The early days consisted mainly of experimentation and problem-solving, but through such time well-spent, this has evolved into what Rehbein believes is a compelling musical presentation. In the beginning of this process, Steve says he "realized the potential that MIDI represented for accessing different tone colors, and I wanted to expand my acoustic sound into a more broad-based electro-acoustic sound. I discovered that this was possible by using the K&K Sound System MIDI Master triggering device."

After installing the K&K Sound System MIDI Master unit and piezoceramic pick-

Steve Rehbein's live performance setup

ups on his vibraphone, it was then recommended to Rehbein that the first piece of MIDI equipment he purchase should be a sound module. "The sound module," says Steve, "is essentially a synthesizer without the keyboard. The tones or sounds are accessed via MIDI from the control keyboard, which in my case is the vibraphone."

For vibraphonists considering adding MIDI to their setup, Rehbein recommends utilizing the same first steps, noting that at the time of this interview, the K&K Sound Systems MIDI Master unit was the only one of its kind available. In selecting an appropriate sound module, Rehbein offers this advice: "It's important to explore sound modules that work well in conjunction with a vibraphone master controller. Although the price of the unit may be a consideration, if a lower-priced unit is a poor musical match with the vibraphone, then price is irrelevant." Rehbein mentions that there is a great deal of variety in terms of features on the available sound modules, and from one model to another there may be great differences in the areas of internal sounds, response time, special effects, acceptability of external sound cards and the like. For players who are considering using a sequencer in their setup, Steve recommends that a sound module be judged also regarding its programmability, how many MIDI channels it accommodates at one time and if it is multitimbral—capable of producing different sounds and timbres simultaneously. If the unit is multitimbral, then it is important to consider how-many-note polyphony the unit is designed to handle.

Rehbein initially chose the Roland U-220 as his sound module. "Vibraphonist Ted Piltzecker recommended this particular unit to me. I compared it to a variety of sound modules from several manufacturers, and I found that the preset sounds available on it as well as its expandability via PCM Data ROM cards was most desirable."

Another piece of equipment Rehbein notes as being worth considering for a vibraphone MIDI workstation is a Digital-Effects Processor. "This MIDI-compatible device enables the performer to alter the acoustic sound of the vibraphone with varying degrees and combinations of digital effects, such as reverb, delay, EQ and pitch change. Although numerous sound modules contain effects-processing capabilities, the integration of this device frees the sound module for patch-change considerations and sequencing operations."

For reverb and ambient effects, Steve is currently using an Alesis Quadraverb Digital Effects Processor in combination with an ART X-11 MIDI Mastercontrol pedal, which enables him to change patches on the Quadraverb rapidly. "In essence," he says, "I'm using the Quadraverb to enhance the amplified vibraphone sound with more spatial effects. I've programmed my ten favorite patch settings so that they are easily accessed with the ART X-11 pedal. I'll choose a particular setting based on the specific arrangement I'm playing and the acoustics of the room in which I'm performing. I find it imperative that you adjust your electronic sound to the acoustics of the hall, which involves an accurate and thorough soundcheck prior to each performance."

Although Rehbein initially used only the sound module and Quadraverb to change the sound of his vibes, he now includes a sequencer in his MIDI workstation. Asked how he decided to get involved in using sequences, he replied, "I have a friend, Dan Cerveny, who is a keyboardist and MIDI

specialist for a large music retailer. Dan also owns a studio and was doing some exceptional MIDI sequencing for other people. I originally had him produce a couple of backing tracks recorded on tape for me to play along with. In my rack I have a JVC stereo cassette deck that I use for some of the more complex ethnic rhythm-groove compositions I perform. Plus, I now back up all of my MIDI sequences on tape for emergencies. I fell in love with the sequenced arrangements and saw another musical dimension unfolding for me."

It was at this point that Rehbein added a sequencer to his setup. For those considering buying a sequencer, Steve recommends that you "bear in mind the sequencer's note-memory capacity and the number of available tracks for recording." These sequenced arrangements, plus the sound module, are then used as accompaniment for the vibraphone during performance.

Rehbein is using a Yamaha QX5-FD Digital Sequencer, which he says is easy to operate and handles his multitimbral needs efficiently. And, he says, the sequenced arrangements sound much better direct from the module rather than from the tape. He notes that it's possible to forego the purchase of a sequencer and to substitute a computer in its place. "If the computer is too cumbersome for live performances, the computer-sequenced tracks may be played back on a MIDI data filer—a small module that stores entire sequences as songs for quick retrieval." Rehbein recently purchased a Yamaha MDF-2 MIDI data filer for exactly this purpose and also to program change and system-exclusive information. He adds, "Because it reads standard MIDI files, I can now program 16-track sequences using the Cakewalk program on my IBM computer and store them as standard MIDI files. I can also store them in any order for concerts, which will not only enable me to have more elaborate arrangements, but the pacing of my concerts will be more efficient."

In trying to make his MIDI workstation an ever-evolving project, Steve has recently added another sound module, the Yamaha TG-500, which he chose for its 64-note polyphony, superior digital effects and its ability to store 16 mulitimbral setups for his sequences, as well as other reasons.

It's obvious that all of this equipment needs to be organized for ease of use both in programming the arrangements as well as for performances. Rehbein and his friend Rick Weiner, who owns a sound store in Omaha, customized a top-loading rackmount case manufactured by Hybrid. He's quick to mention that all of his equipment is plugged into a Tripplite power-surge protector in case of power failures or surges.

All of this is connected to the last major component of Rehbein's MIDI workstation, which is the sound system. "I use a 16-channel Tascam M-1016 mixer, which connects to a Peavey M-2600 Stereo Power Amp (130 watts per side), which in turn is connected directly to two Peavey 1210 H series speaker cabinets, each with 12" and 10" speakers and a horn. I initially powered my entire system with a six-channel powered mixer, but as my sonic requirements grew, I found that I needed a stereo board with more channels," he says.

"For my monitor setup, I run the cables

Close-up of Rehbein's rack

from the mixer to a Peavey XR-600 FC Monitor Power Amp. I recently purchased new monitors and am now using Electro-Voice FM-12 monitors. The 12" coaxial speaker in each monitor contains a time-aligned woofer and tweeter, which means that the sound pressure created by both units arrives at the ear equidistantly. I also use a Galaxy Audio Hot Spot PA III monitor connected from the mono output of the mixer. In addition to the Hot Spot's compactness, I like the fact that it's powered and that I can position it for ear-level monitoring."

Utilizing all of this equipment allows Rehbein to perform on amplified acoustic and MIDI vibraphone, along with arrangements previously sequenced on the QX5 in addition to prerecorded accompaniment tapes utilizing the JVC stereo cassette deck.

Rehbein has made presentations and clinics at universities in Oregon, Wisconsin, South Dakota, Nebraska and Iowa, and at many public schools. He notes that his clinic schedule has increased significantly during the past three years with the advent of his MIDI vibraphone setup.

It's also interesting to know that Rehbein's electronic music performance and composition are not limited to his vibraphone setup. He is also involved in two other projects of a different nature. One includes several collaborators and will result in a live marching drum line solo with MIDI instrument accompaniment and field drill. The other will be premiered during the 1994 Christmas season. This is being prepared with Dan Cerveny, and is a concert entitled *Christmas Future*. Steve says, "The concert combines traditional and some original Christmas music with the latest innovations in music technology enabling people to experience Christmas in a new way."

All this techno-talk is but one part of Rehbein's make-up. He has very strong beliefs, and when discussing his musical philosophy, he says "Music is an artistic expression that should be cherished and nurtured by its creators because it represents the most profound statements we as individuals are capable of producing. An enlightened musician perceives music from a historical perspective that continues to evolve. Their understanding of music as well as their musical destiny is shaped, in part, by the innovations and contributions of musicians that have preceded them as well as by their contemporaries. Therefore, it is essential that a musician should be a student of music past and present, in multiple idioms if possible, in order to gain greater knowledge and insights about music, to understand the historical progression and relevance of an entire musical tradition, and to appreciate music on a more profound level as an art form."

The depths of these beliefs carry over into Rehbein's teaching. "I feel a tremendous responsibility towards educating the younger generation," he affirms. Steve has much advice for younger musicians—perhaps for all musicians: "Among ten things that I stress to students are to believe in yourself, take pride in yourself, all good things come to those who work hard, and listen more, talk less. These—and other—key points are often helpful to students as they pursue their dreams and aspirations."

Certainly, Steve Rehbein is living his dreams and following his own rules as he continues to work hard as a musician and devoted family man. Perhaps his personal philosophy sums it up best: "Be an individual that embodies personal integrity, honor, commitment to excellence and respect for your family, your work and other people, and you will be a positive influence in this world." PN

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Unisyn—Patch Editor and Librarian: For Macintosh Computers

By Norm Weinberg

ONCE UPON A TIME, EVERYONE programmed synthesizers and sound generators by fiddling with all the little knobs, buttons, sliders and wheels on the unit's front panel. By reading a small LCD display on the machine (typically only two lines long), a user would punch a few buttons to call up a musical parameter, change the values for that particular parameter, then push a few more buttons to switch to another set of values for more programming. This was an extremely time-consuming process that required mental—as well as physical—dexterity. Then came software editors.

Software editors are programs that take over the programming tasks of your hardware by using the number-crunching power of a personal computer. Instead of programming a new sound or patch from the front panel of the instrument, editors let you adjust all of the critical parameters by "remote control" using your computer. Since most synths have a limited display and a convoluted programming environment, serious sound designers prefer to use computer editing programs instead of front panels. Most editing programs also include librarians.

Librarians are programs that allow you to save your device's configurations, patches, presets, tones, maps, etc. to your computer. The library analogy is actually quite accurate. Just as a library is a storehouse for books, librarian programs are a storehouse for sounds and banks of sounds. Once these patches are on your computer system, you can save them for future use, rename them, or shuffle them around to create new banks of sounds. Later on, you can send the original or newly created banks or patches back to your device.

Computer based editors and librarians communicate with MIDI devices through System Exclusive messages. Since these messages are unique for each device manufactured by each company, they require specialized programs dedicated to each model of machine. In other words, if you want to save or edit the patches from your Yamaha DX7 synthesizer and your E-Mu Proteus sound generator, you need to buy two separate programs—expensive, time-consuming, and cumbersome. The solution is "Universal Editors and Librarians."

Universal programs are like a "shell" that is designed to run smaller programs dedicated to specific models of hardware. In order to accomplished this, the program needs to run a "template" or a "profile" of the specific instrument you want to communicate with. Universal editors and librarian programs come with a large number of templates included with the disks (see the sidebar for a list of all devices currently supported by Unisyn).

Because of the large variety of system-exclusive data formats, templates may consist of different things for different instruments. A template for a reverb unit is going to look much different than a template for a master keyboard. A template might include a bank of sounds, a single tuning table, system setup information, a program map, an instrument's definition, or even a drumkit configuration. The template's identity is determined by the device.

Well, now that we know how they work, what can they do? The main goal of a program like Unisyn is to turn your studio into one gigantic, intelligent instrument. Toward this end, you can tell the program about your studio by defining which devices are listening to certain MIDI channels, what channel your MIDI patch bay is on (although the program can be operated without a patch bay), and the program-change messages necessary to have your patch bay route signals from the computer to the device. Once this is completed, you

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gram to grab information from every device in your studio in one action. In essence, you're taking a "snapshot" of the current state of every unit you own. The next time you want to configure your studio the same way, you just send the information back to each device.

UNISYN OPERATION

In order to get Unisyn up and running, you simply copy the program to your hard disk. The installation section of the 200-page User's Guide suggests that you create two additional folders—one for data and one for profiles. After copying the program, you insert the four template disks included and copy the templates for your instruments into the template folder. To save disk space, you should only load templates for instruments that you currently own. If you should buy a new device in the future, you can always go back to the template master disks and copy your new instrument templates to the folder. Even though Unisyn is a copy-protected program, I had no trouble running the program from both the floppy master disk and from an authorized hard disk.

Once Unisyn is up and running, you are taken to the Device Setup window. As

Figure 1—The Device Setup window is used to define your MIDI studio to Unisyn.

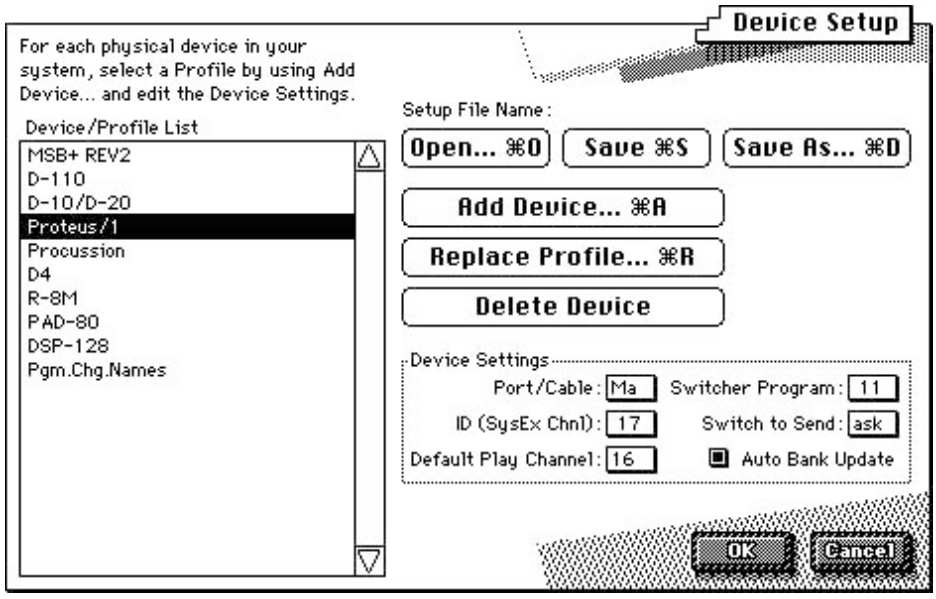


Figure 2—The Modules window shows all of the devices used for a specific project.

Modules (Project #1)

DEVICE	PORT	MODULE	CH	✓	PATCH NAME	SOURCE
JLCooperMSB+	Ma	Program	--	?		Perf. file : Project #1
Roland D-110	Ma	Patch	--	?	Init Patch	Perf. file : Project #1
		PartTone 1	--	?	Init Tone	Perf. file : Project #1
		PartTone 2	--	?	Init Tone	Perf. file : Project #1
		PartTone 3	--	?	Init Tone	Perf. file : Project #1
		PartTone 4	--	?	Init Tone	Perf. file : Project #1
		PartTone 5	--	?	Init Tone	Perf. file : Project #1
		PartTone 6	--	?	Init Tone	Perf. file : Project #1
		PartTone 7	--	?	Init Tone	Perf. file : Project #1
		PartTone 8	--	?	Init Tone	Perf. file : Project #1
		Drumset	--	?	Init Drumset	Perf. file : Project #1
		Tmbr.Tbl	--	?	Init Timbr.Table	Perf. file : Project #1
Rol. D-10/20	Ma	Perf.Pat	xx	?	Init Perf. Patch	Perf. file : Project #1
		MultiPat	--	?	Init Patch	Perf. file : Project #1
		PartTone 1	2	?	Init Tone	Perf. file : Project #1
		PartTone 2	3	?	Init Tone	Perf. file : Project #1
		PartTone 3	4	?	Init Tone	Perf. file : Project #1
		PartTone 4	5	?	Init Tone	Perf. file : Project #1
		PartTone 5	6	?	Init Tone	Perf. file : Project #1
		PartTone 6	7	?	Init Tone	Perf. file : Project #1
		PartTone 7	8	?	Init Tone	Perf. file : Project #1
		PartTone 8	9	?	Init Tone	Perf. file : Project #1
		Drumset	--	?	Init Drumset	Perf. file : Project #1
		Tmbr.Tbl	--	?	Init Timbr.Table	Perf. file : Project #1
Emu Proteus1	Ma	Setup	1	?	Default Setup	Perf. file : Project #1
		Preset	1	?	--Default--	Perf. file : Project #1
		Prog.Map	--	?		Perf. file : Project #1
		Tune Tbl	--	?		Perf. file : Project #1
Procussion	Ma	Kit	--	?	Ampitheater	Perf. file : Project #1
		Stack	--	?	Custom #0	Perf. file : Project #1
		Master	--	?	Default Master	Perf. file : Project #1
		ZoneMaps	--	?		Perf. file : Project #1
		Prog Map	--	?	Default Prog Map	Perf. file : Project #1
Alesis D4	Ma	Drumset	--	?	Standard Stuff	Perf. file : Project #1
		System	--	?	Init	Perf. file : Project #1
		PC_Table	--	?	Init	Perf. file : Project #1
		Triggers	--	?	Init	Perf. file : Project #1
Roland R-8M	Ma	Patch	--	?	InitPtch	Perf. file : Project #1
		FeelPtch	--	?	Init Feel Patch	Perf. file : Project #1
		Setup	--	?		Perf. file : Project #1
Roland PAD80	Ma	Patch	--	?	INIT PATCH	Perf. file : Project #1
Digi DSP-128	Ma	Fx Setup	--	?	Init Program	Perf. file : Project #1
ChannelSetup	Ma	Program	--	?		Perf. file : Project #1

shown in Figure 1, clicking on "Add Device" allows you to bring a new device into the Device/Profile List. Notice that in the Device Settings portion of this window, you are asked to set the serial port (printer or modem, with multi-cable support), the SysEx ID number, the default play channel and the program-change message to be sent to your MIDI patch bay (if used).

Once your profile list is complete, you can move into the main window of your program, which contains all of the devices and templates you have defined in your studio (See Figure 2). To get a snapshot of your studio, simply access the MIDI menu and select the "Get Group" command with the "All Patches and Banks" submenu. If all goes well, Unisyn will take over control of your MIDI patch bay and ask for data from all the devices. When you're ready to duplicate your device's current state, select the "Send Group" command (See Figure 3). In reality, this may take a little trouble-shooting. If the computer asks for the synth's data before the MIDI patch bay has called up the proper patch and made the internal connections, you'll receive a message saying that there is a problem with the MIDI connections. To be honest, while Unisyn provides all the necessary commands and controls to make everything happen as advertised, you may not be successful on your first attempt. The manual provides clear and ample instructions on how to fix just about any problems you may encounter (including using multiple patch bays!). Or, if you prefer, you can simply highlight a single device with the mouse and get or send individual patches or banks.

PATCH EDITING

To get to a single patch, simply choose the Patch Edit window from the Windows menu or double-click on a patch name. Once in the patch editing template, you can adjust sounds to your heart's content. As shown in Figures 4 through 8, templates typically contain sliders, envelope graphs, and text boxes. If you're familiar with common Macintosh mouse movements, editing these parameters should be quick and simple. To edit an envelope graph, you can either grab the box and drag it around the screen or type new numbers in the time and level boxes. Text boxes can be edited by using the arrows to increment or decrement values, or—by clicking on the selection itself—access pop-up parameter select menus that list all available options.

OTHER GOODIES

If you like to program your synths to create totally new sounds, but don't enjoy spending hours doing it, Unisyn has the answer! This program will let you create new patches by merging or mixing two existing sounds or by randomizing parameters. The "Blend" command creates new parameter values by averaging the corresponding parameter values from two selected patches. The "Mingle" command randomly swaps parameters between

the two source patches. When patches are randomized, a new bank of patches is created with random variations of the selected patch. With these commands, it's easy to create over 1,000 new patches in a matter of minutes. A quick audition of each patch will yield interesting patches along with garbage patches. Simply copy the cool patches to a new library and discard the rest. Voilà, instant creativity!

Once you've created thousands of patches, you'll need some way to organize them. Again, Unisyn comes to the rescue with up to 216 characters of comments for each patch and up to eight keywords. So, you can search in libraries of "tuned percussion" for patches that contain comments such as "Vibes," "Bright" or "Thin," using the operators of "and," "or" and "without." Unisyn will also search for duplicate patches both by name and by data contained within the patch. If the program finds a duplication, it will notify you and ask if you wish to delete the duplicate.

Figure 3—The Get Group and Send Group menu selections.

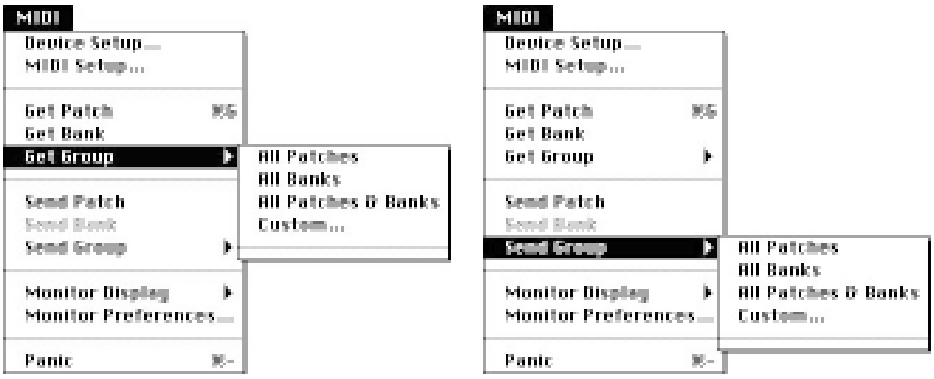
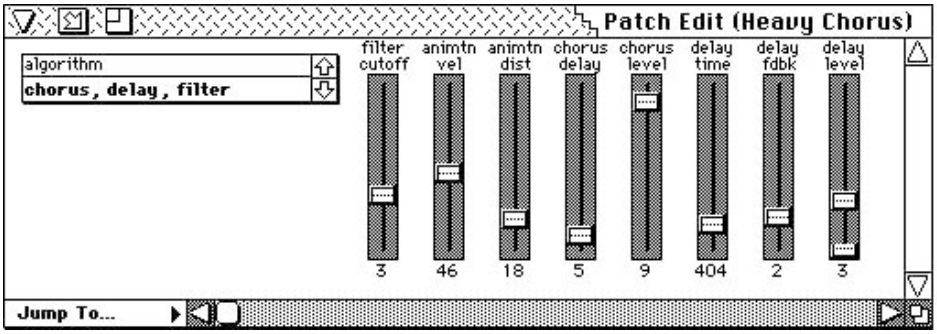


Figure 4—A Patch for the Digitech DSP-128 effects processor showing the chorus, delay, filter algorithm and all of the various values for each parameter.



RUNNING UNISYN WITH PERFORMER

If you are currently using Mark of the

Figure 5—The entire template for a Roland D-10 synth sound called AcouPiano 3. Notice the graphic envelope displays with drag boxes.

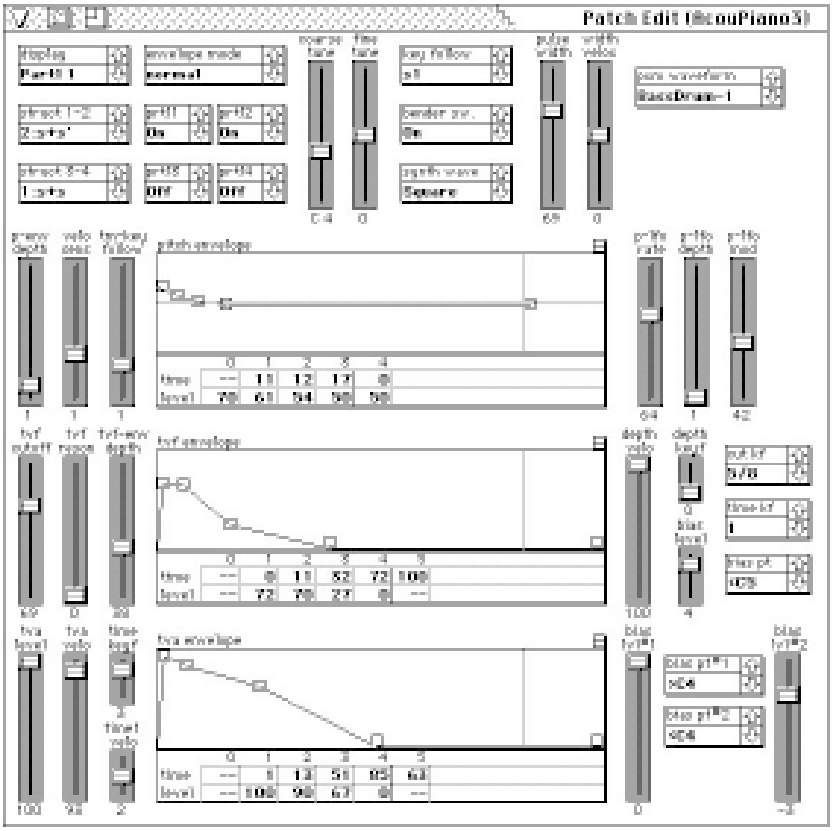


Figure 6—A partial template for a D-10 Performance. In this template, tones and MIDI channels can be quickly assigned to each of the nine parts that make up the performance.

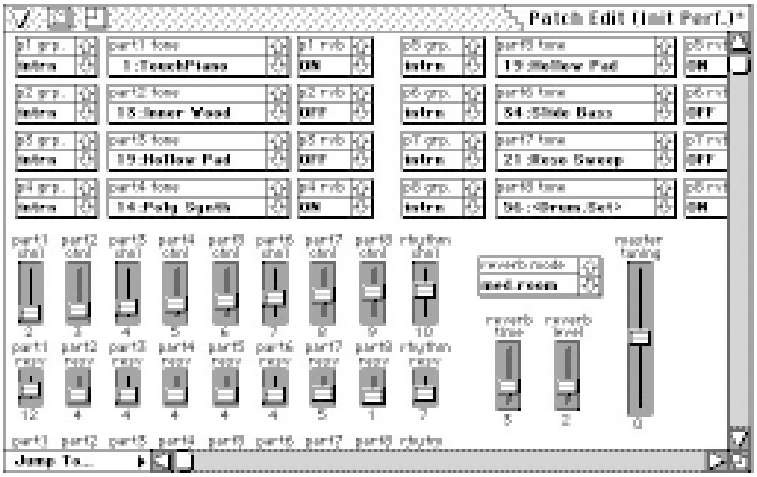
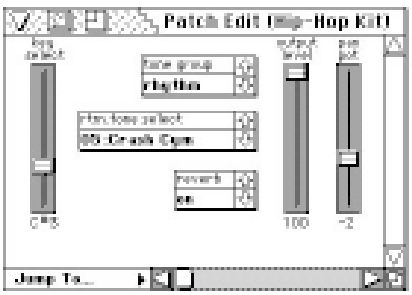


Figure 7—The template for creating drumkit assignments on the D-10.



Unicorn's Performer (version 4.0 or higher) you can integrate the two programs together. The programs are integrated in the following ways: Unisyn will allow Performer to play a sequence in the background when you switch to Unisyn under System 7 (or with MultiFinder in System 6) to audition patches, edit patches, or perform any other Unisyn task. All Unisyn-generated devices will appear in Performer's MIDI Configuration window. Unisyn-generated patch lists appear for each device in Performer's Set Patch List dialog, which you can assign to your existing MIDI configuration devices. This lets you select your synth sounds by name in Performer instead of by program-change message numbers. Unisyn will also make sure that the names in the Performer match the names inside the instrument.

BOTTOM LINE

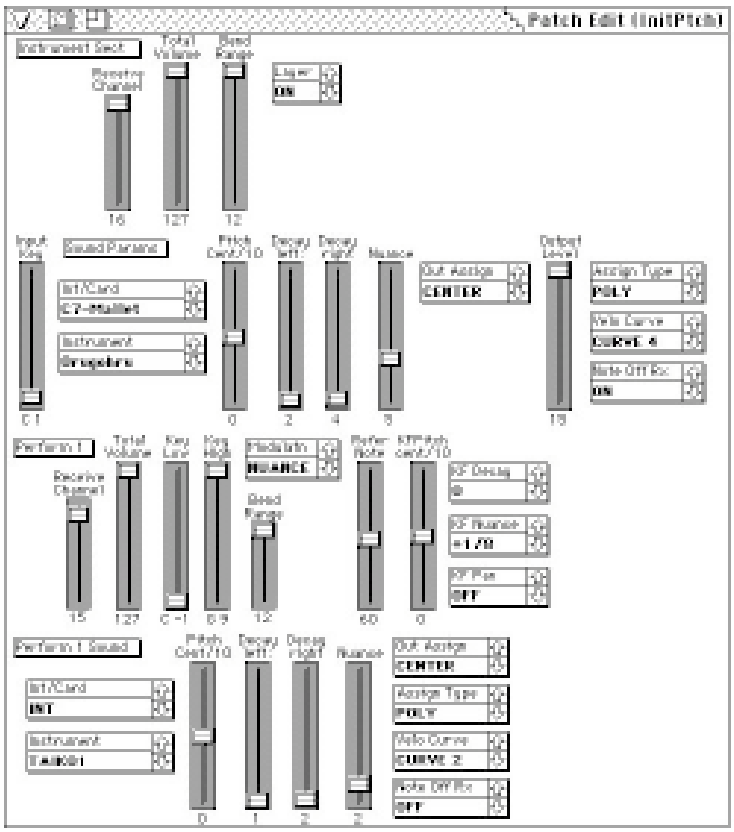
A solid program, a fine manual (with online help for each profile) and over 150 supported devices makes Unisyn a hot program. If you run Unisyn with a small-screen Macintosh (like a Plus or an SE), you won't be able to see all your synth's parameters on a single screen. The other side of that coin is that the profile layouts are uncluttered and organized into logical areas. A few of the profiles are not as "polished" as others (notice the additional slider knob in Figure 4 on the delay level). Another oddity: after asking for data from my D-10, the LCD on the synth read "This synth has been X-Orsized"—relating to an older editing program published by Dr. T's software called "X-Or."

Unisyn goes a long way toward automating certain aspects of your MIDI studio. The ability to take a "snapshot" of all sounds in all devices, save them to disk and then load them back will save you many hours of work. Considering the cost of individual librarian and editor software programs, Unisyn can save you a substantial amount of money. If your MIDI studio is starting to get out of hand or if you're going nuts organizing thousands of patches for different devices, look into this program. It could just save your sanity!

Mark of the Unicorn, Inc.
1280 Massachusetts Avenue
Cambridge, MA 02138
Voice (617) 576-2760
FAX (617) 576-3609
Suggested Retail Price: $395.00

System Requirements: Apple Macintosh Plus or above with 1 MB RAM (3 MB for System 7), System 6.0.1 or above and a hard drive.

Figure 8—A partial template for the Roland R-8M drum module.



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SUPPORTED UNISYN DEVICES

360 Systems
MIDI Patcher

Akai
MB-76

Alesis
HR-16
Quadraverb
Quadraverb+
Quadraverb GT
SR-16

A.R.T.
Multiverb
Multiverb II

Casio
CZ-101
CZ-1000
CZ-3000
CZ-5000
CZ230s
CZ-1
VZ-1
VZ-10m
VZ-8m

Digitech
DSP-128
DSP-128 Plus

DMC
MX-8

E-Mu
Proteus/1
Proteus/2
Proteus/3
Proteus/1XR
Proteus/2XR
Proteus/3XR
Proteus/Protologic
Proteus/XR Protologic
Proteus/MPS
Proteus/Orchestral P
Proteus 1+2
Procussion*

Ensoniq
ESQ-1
ESQ-M
SQ-1
SQ-2
SQ-R
SQ-80
VFX
VFX-SD

J.L. Cooper
MSB+

Kawai
K1
K1-m
K1-II
K3
K3-m
K4
K4r
K5
K5-m*

KMX
MIDI Central
8x8 Patcher

Korg
DSS-1
DVP-1
DW-6000
DW-8000
EX-8000
707
DS-8
P3
Symphony
M1
M1R
M1/EX
M1R/EX
M3R
Poly 6
Poly 800
T1
T2
T3
Z3
Wavestation
Wavestation EX
Wavestation A/D
01/W
01R/W
03R/W

Kurzweil
K-2000

Lexicon
LXP-1
LXP-5
LXP-15
PCM-70

Oberheim
Matrix 12*
Matrix 1000
Matrix-6
Xpander*

Peavey
DPM-3
DPM-V3

Rane
MPE 14
MPE 28
MPE 47

Roland
Alpha Juno 1
Alpha Juno 2
CM-32P
CM-32L
CM-64
D-10
D-20
D-110
D-50
D-550
D-70
DEP-5
GM-70
GP-8
GR-50
JD-800
Juno 106
JX-8P
MKS-20
MKS-70
MKS-80
MT-32
PAD-80
R8-M
R-8
U-110
U-20
U-220

Sequential
DrumTraks
MAX
Prophet V
Prophet 600
Six-Trac

Sony
DPS-D7*
DPS-R7*

Waldorf
Microwave

Yamaha
DMP-7
DX-21
DX-27
DX-100
DX-7
DX-7 s
DX-7 II
DX-7 IIFD
FB-01
KX-88
KX-76
RX-11
SPX-90
SPX-90 II
SY-55
TG-55
SY-77
TG-33
TG-77
TG-100
TX-7
TF-1
TX-816
TX-216
TX-802
TX-81Z
V-50

* These 6 have Librarian support only. All others are Editor & Librarian.

New devices supported by Unisyn in the free profile update #1 release include:
Kurzweil K-2000 and K-2000R
Roland JV-80, JV-880 and MKS-50
Alesis D4, Quadraverb GT and MIDIVerb III
Ensoniq DP/4
Mackie OTTO system
E-Mu Vintage Keys, Proteus 3, 3XR, MPS+ Orchestral
Digitech PMC-10
Yamaha TG100
Alesis SR-16

New devices supported by Unisyn in the profile update #2 release include:
Alesis QuadraSynth S4 and S5
E-Mu Vintage Keys Plus
Korg 05R/W, X3 and X3R
Yamaha TG500 and SY85
Roland JV-1000 and JD-990 (requires ROM 1.03)
Digitech DHP-55

New devices supported by Unisyn in the profile update #3 release include:
Korg 01W and 03R/W—Adds multi-timbral parent/child support
Mackie OTTO—supports fader & mute grouping and crossfading
Roland JV-0 and JV-880—for Pop, Orchestral Vintage and Piano boards
Alesis Quadraverb GT—supports operating system 1.03

The first upgrade is sent free to all registered Unisyn owners, and update disks #2 and #3 are available for $49.95 each. PN

Edgard Varèse's *Ionisation*: Analysis and Performance Problems

By Thomas Siwe

The following article was adapted by Kathleen Kastner from a lecture/demonstration presented at PASIC '93.

EDGARD VARÈSE'S *IONISATION* WAS completed on November 13, 1931 in Paris, France. This landmark composition, written for 13 players utilizing 40 percussion instruments was "the work that he was most satisfied with and proud of," according to his wife, Louise. Varèse himself wrote his friend and colleague Carlos Salzedo the following regarding the piece: "*Ionisation*, the title of my piece for percussion, has turned out well—cryptic, synthesized, powerful and terse. And, as for structure: stunning mechanics. What I like most about myself is my modesty."

Percussionist-composer Jean-Charles Francois noted that "the works of Varèse are all designed to tame timbre. They cannot be imitated, and they cannot generate durable principles." This statement provides an understanding of Varèse's own views as he stated, "The misunderstanding has come from thinking of *form* as a point of departure, a pattern to be followed, a mold to be filled. Form is a result—the result of a process. Each of my works discovers its own form. I could never have fitted them into any of the historical containers. Conceiving musical form as a resultant—the result of a process—I was struck by what seemed to me an analogy between the formation of my compositions and the phenomenon of crystallization. Content, rhythm and form are one."

To better understand how *Ionisation* was "crystallized," the raw materials—the instruments themselves—need to be examined. First, it is important to note that there are some problems with the English translation of the printed nomenclature listed in the front of the published score. These problems also appear in the reprint and edited remarks found in Morris Goldenberg's *Modern School for Snare Drum* book. A comparison of the French and English versions will illuminate the discrepancies.

According to Jean-Charles Francois and Chou Wen-chung, Varèse organized the percussion instruments into groups by timbre and usage. The score calls for the following instruments: the metal sounds include two triangles, two anvils, two cowbells, suspended cymbal, crash cymbals, Chinese cymbal, gong and three tam-tams. The membranes include a pair of bongos, snare drum without snares, two tenor drums and three bass drums. The category of snared membranes calls for a tarole (piccolo snare drum), caisse claire and a tambour militaire. The wooden instruments include claves, three woodblocks, two slapsticks, castanets and rimshots. Rattles and scrapers include sleighbells, tambourine, maracas and two guiros. Varèse utilizes only three keyboard or mallet instruments, namely the glockenspiel, tubular chimes and the piano. Finally, two sirens and a lion's roar are used in the category of air and friction instruments.

With the summary of instruments completed, the following specific comments and recommendations will be helpful to potential performers of this work.

Varèse calls for two triangles; 10- or 12-inch silver-plated triangles should be selected for their blend of high overtones and their sonic capability to project above the percussion orchestra when necessary. Both triangles should be played with substantially sized beaters in order to create the necessary wide timbral spectrum while producing the required dynamic levels.

With regard to the anvils, high and low resonant opera anvils or other contrasting, resonant metal material (steel railroad track) should be used. The anvils should be chosen for their dark quality of sound, ambiguity of pitch and volume of resonance.

Varèse used the Spanish term "cencerro" to describe a cowbell muted by placing cloth inside the bell to obtain the relatively high and dry quality of hand-held cowbells heard in Latin orchestras of his day, as opposed to the Kentucky-style clangorous instruments used in vaudeville orchestras. It is this author's contention that the pitch of the cowbells in relation to the other metal instruments is not important, given Varèse's unique structural use of these instruments.

The author's recommendation for the suspended cymbal is to use a 16- or 18-inch medium-weight Turkish style cymbal that is played mostly with snare sticks, which the player also uses on the piccolo snare drum. For the crash cymbals (cymbals a2), a pair of 16- or 18-inch heavy-weight Turkish style is suggested. These are played in normal fashion and *frottee*, which means rubbed together, producing a roll or sustained sound. Varèse calls for a Chinese cymbal, which should be a hand-hammered, Wuhan style cymbal, 16 or 18 inches in diameter played with yarn mallets of appropriate mass, or wood sticks when the articulation requires greater definition.

For the gong, the author recommends the use of a flat-faced Chinese or Tibetan style gong with an unobjectionable pitch, or a very small Wuhan style Chinese tam-tam. The first option is preferred as this was the type of gong Varèse kept in his New York apartment. The final metallic sounds heard in *Ionisation* are three tam-tams that should be Wuhan style, hand-hammered tam-tams, graduated in pitch with appropriately sized mallets. No priming or "warming-up" technique should be used to execute the tam-tam parts.

With regard to the membrane instruments, a standard pair of calf-skinned bongo drums are required. These comprise the two highest pitches in Varèse's scale of membranophones.

Any sized snare drum will suffice since the function of the snare drum (senza snares) seems to be timbral and not part of the membranophone scale. As expected, the snare drum is to be played with the snare drum sticks.

There is some lack of clarity with regard to the tenor drums, as Varèse, in a conversation with the author stated that "tenor drums have snares"; however, it appears that the tenor drum part within the five membranes (player 3) should be without snares because of its context. In any case, one of the tenor drums should be pitched between the lower drum of the bongos and the highest bass drum; the other tenor drum should be pitched below the military drum.

Three bass drums are required: one medium and one low-sounding drum to be laid flat, and a very low-sounding drum to be played in normal fashion.

In the category of snared membranes, the tarole or piccolo snare drum should be the highest of the snare sounding drums; the caisse claire would be a standard 5" or 6" x 14" snare drum and the tambour militaire would ideally be a 6- to 10-inch deep gut-snared field drum with good response. A Hinger snare drum with cable snares would be a good option to create the appropriate rough quality of sound.

In the category of wood sounds, the claves should be a pair of resonant rosewood sticks. The three woodblocks should be high, me-

dium and low Chinese blocks, not the fish or dragon mouthed "MU" of Korean origin, but the hardwood, brilliant sounding woodblocks of pre-World War II China. Varèse calls for two slapsticks, which should be large hardwood clapper type sticks, as opposed to the rhythm band, spring-action type. To ensure the clearest articulation, a pair of quality wooden castanets, mounted on a handle and played against the leg, should be utilized.

One of the most controversial notation problems in *Ionisation* is the notation for playing "on the rim." Most of the drums that have rims require the player to play on the rim, notated as an "X" with the letter "R" above it. Analysis shows that these notes should, in fact, be played using the jazz rimshot technique, which includes striking both rim and skin simultaneously, as Varèse thought of this sound as a combination of wood and skin timbre. Using old-style woodhoop drums would help produce this authentic sound.

Four instruments comprise the rattle and scraper category: the sleighbells should be a string of bronze bells or a combination of bronze and steel bells mounted on a board. To facilitate performance problems, several sets may be used. To accommodate thumb rolls, a tambourine with a calf head partially covered with emory paper will ease the anxiety of the tambourine player. A penetrating quality is needed for the maracas, thus the author recommends the use of authentic gourds with bird-shot seeds or the LP maracas, which will produce the necessary volume and sound. Varèse calls for two guiros, which must produce a loud penetrating sound with precise rhythmic definition; a small wooden stick or plastic scraper should accomplish this.

The two sirens and the lion's roar fall in the air-and-friction category. The score calls for two Sterling Type H (part No. 73 PU.PB) hand-cranked portable fire sirens with brake mechanism, pitched high and low. If these are not available, a theremin or similar electronic instrument could be used to substitute for the sirens, especially if a low growling sound is created. Mouth sirens or other high pitched sirens should not be used. The lion's roar (tambour a corde) is a single-headed drum with a gut bass string attached and played by rubbing the string with a rosined cloth.

The final category of sounds is the keyboard mallet instruments. The score calls for a five-note cluster to be played on a keyboard glockenspiel, an instrument similar to a celesta, but with a more clangorous sound. Notes could be rearranged so as to be next to one another, but should be played with brass mallets or a cluster mallet to produce a brilliant, resonant sound.

The problematic chime part includes the low C one octave below the standard chime range, and a low B natural a minor second below the range; transposition or access to opera chimes are two solutions. In any case, the part should be played with rawhide mallets.

Finally, the piano serves two functions: the low end is played with the forearms in cluster fashion and serves as part of the low-metal sonority. The upper piano register plays chords that are heard as brilliant clusters in conjunction with the role given to the chimes and bells.

"Rhythm is too often confused with metrics… Rhythm is the element in music that gives life to the work…"
—Edgard Varèse

While it is obvious that timbre is a primary aspect of *Ionisation*, an understanding of the structural elements is important to an overall appreciation of the work. Varèse's use of rhythmic cells forms the basis for the temporal structure of *Ionisation*. These rhythmic cells are derived from characteristic performance techniques of the instruments on which such cells are initially introduced. For example, the simple high-low sound of the bongo later develops into a typical bongo rhythm (ms. 10-11) and the tambour militaire plays what sounds like a street beat (rehearsal #1).

While rhythm is an important musical parameter, tempo is another important performance consideration. The quarter note is the basic notated rhythmic unit throughout the piece. In the manuscript, the tempo is indicated as quarter note = 80, but after the work was composed, the initial tempo was changed to a quarter note = 69, and in the last section it was slowed even further to quarter note = 52, apparently for practical or acoustical considerations. These alterations must have occurred when Varèse heard the collective mass of sound that his percussion orchestra created. He was not present at the premiere in 1932, but participated in a 1933 recording session conducted by Nicholas Slonimsky and thus had input into the tempo of that recording. In a later conversation with composer/conductor Ralph Shapey, Varèse complained that his music was, in general, performed at too rapid a pace.

Another aspect related to rhythm is that of metric division and accent, and its notation. Varèse used standard time signatures, such as common time, for the convenience of the performer, but without any implication of a pulse hierarchy. Varèse stated, "Rhythm is too often confused with metrics. Cadence, or the regular succession of beats and accents, has little to do with the rhythm of a composition. Rhythm is the element in music that gives life to the work and holds it together. It is the element of stability, the generator of form. In my own works, for instance, rhythm derives from the simultaneous interplay of unrelated elements that intervene at calculated, but not regular, time lapses. This corresponds more nearly to the definition of rhythm in physics and philosophy as 'a succession of alternate and opposite or correlative states.' "

Another aspect of *Ionisation* is register alternation within timbral families and between families and textures. This effective device provides interest and movement in the work and represents a fundamental principle of the piece, according to Chou Wen-chung. The relative pitch area is important to the structure of *Ionisation*. Timbral scales of membranophones, groupings of related high- and low-sounding percussion instruments are another important parameter that Varèse considered when creating his percussion-ensemble masterpiece. Varèse did not like the descriptor "unpitched" as applied to percussion; as he claimed, "everything is pitched, if but relatively."

Texture is yet another important consideration when approaching an analysis of this work. *Ionisation* is not static but appears, according to Chou Wen-chung, to have its forward motion created through the "contrapuntal" and "chordal" expansion of its primary rhythmic cells and by the juxtaposition and alternation of timbres identified with these rhythmic ideas. In addition, distinct textures are created through the combination of timbre, register, articulation and rhythm. Varèse uses the term "sound-mass," which is illuminated by composer Glenn Hackbarth as follows: "The most apparent influence is evident in the nature of the sound-mass structure itself. Although it ap-

pears in different shapes and textures, each mass is constructed with a full awareness of the contributing potential of all parameters and, consequently, acquires a multi-dimensional quality which closely resembles a corresponding concern for volume and mass in architecture. Therefore, the ultimate identity of a sound-image is dependent on all these factors. Each contains a specific pitch content, registral location, timbral character, intensity factor, and a general amount of vertical density. In addition, fluctuations in any of these factors, especially in rhythm, produce shaping forces capable of creating a strong sense of inner motion and direction. Thus, with so many interdependent factors, a sound-mass is capable of a unique identity, even though some of the parameters are shared by other masses."

To illustrate, several important structures and textural components found in *Ionisation* will be highlighted. The metal instruments, namely the cymbals, gong and tam-tams, along with the sirens, combine to produce a very important texture heard in the opening bars at a *piano* dynamic level (ms. 1-4). This textural component returns several times throughout the work, but at different dynamic levels (ms. 13-16, 51-55, 75-78).

The snare sonority is comprised of typical snare drum figures in duple time accompanied by the bongos, bass drum, cymbals a2 and maracas in a three-four pattern that results in a complex contrapuntal and timbral combination (ms. 9-12). The rattle sonority is comprised of sleighbells, castanets and tambourine, which combine to produce a 6/8 or two-beat triplet feeling in accompaniment to the tarole and woodblock's rapid, angular rhythmic cells. These woodblock/snare drum figures seem to be an elaboration of the military drum figures and the rhythms of the bongo accompaniment that is heard earlier in the piece (ms. 18-20).

An analysis of *Ionisation* will reveal various sections of linear and vertical elaborations. Measures 23-27, 28-32 and 33-37 mark off three, five-bar sections of linear elaborations in which earlier material is transformed by substitutions between timbre groups and by small rhythmic variations. The *subito forte* in measure 38 focuses one's attention on a powerful vertical sonority played by those instruments of precise articulation. The rapid register shift, high to low, and the use of accented notes, highlighted by the newly introduced cencerros, creates a two against three cross rhythm (ms. 38-40). An interesting measure of wood and rimshot sounds follows, as this unique transitional measure seems to be positioned almost in the center of the entire composition (m. 43). Careful listening and analysis also reveal that Varèse appears to use the lion's roar and occasionally the woodblocks and triangle for a transitional or cadential function, which helps the performer and listener to identify the important sections of the work.

The vertical interest continues in measures 44-46 with a difficult triplet-versus-quintuplet figure section. This section includes groups of five in which all five notes are not always present within the group. To make it even more difficult for the performer,

these fragmented fives are also played over groups of instruments including an occasional note to be played as a rimshot. At the premiere, conductor Slonimsky noted that it was impossible to find New York City percussion players who could handle the part, so he enlisted a number of his composer colleagues, such as Paul Creston, William Schuman and Wallingford Riegger to perform these intricate rhythms.

The sudden appearance in measure 51 of the anvils marks a return of the opening texture comprised now primarily of metallic timbres. From measures 51 to 65, Varèse slowly brings back all the instruments and their rhythmic cells, building an effective crescendo to the only pause or hold found in *Ionisation*. This pause appears to be located about two-thirds of the way through the work. What follows in measures 66 to 74 is a clear reprise of the elaborated rhythmic cells heard earlier, the bongo rhythm in counterpoint with itself played on the anvils, the metallic "wall of sound," the military drum theme, the rattle sonority, the tarole theme and the triplet-quintuplet group, all leading to the big explosion of sound that marks the beginning of the last section. This finale is signaled by the appearance of the piano, playing forearm clusters simultaneously with the very low tam-tam, which is heard for the first time as well. The piano right hand plays clusters combined with the orchestral bells and tubular chimes adding brilliance to this powerful closing sonority. This climax rapidly fades away as fragments of the tambour militaire and cadential figures on the woodblock keep the rhythmic interest alive. Finally, the snare drum without snares fades into the residue of the ringing metals and the piece is complete.

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Selected Reviews of New Percussion Literature and Recordings

Publishers and composers are invited to submit materials to Percussive Notes *to be considered for review. Selection of reviewers and the editing of reviews are the sole responsibility of the Review Editor of* Percussive Notes. *Comments about the works do not necessarily reflect the opinions of the Percussive Arts Society. Send two copies of each submission to: James Lambert, Percussive Arts Society, P.O. Box 25, Lawton, OK 73502 USA.*

Difficulty Rating Scale

I-II	Elementary
III-IV	Intermediate
V-VI	Advanced
VI+	Difficult

PERCUSSION INSTRUCTIONAL/REFERENCE TEXTS

Conga Drumming—A Beginner's Guide to Playing with Time
Alan Dworsky and Betsy Sansby
$24.95 with recording
Dancing Hands Music
37 Thomas Avenue S, Suite 103
Minneapolis, MN 55405

Conga Drumming is a 160-page instruction book for the conga drum. Unlike most instruction books, *Conga Drumming* does not deal with notes, i.e., whole, half, quarter, etc. Rather, it deals with a chart consisting of three lines: the top line is the counting, the second line tells you how to strike the drum and the third line tells you which hand to use. There are 10 different ways to strike the drum and each is given a symbol that must be learned; i.e., O = open tone, Δ = slap, Ø = muffled tone, etc. There are good illustrations for each of the symbols so the student, with the aid of a teacher, will have a reference source. Also covered are various Afro-Cuban rhythms such as rhumba, calypso, bomba, etc. A CD or cassette accompanies the book that has short samples of all the drum parts and combined rhythms in the order in which they appear in the book.

Conga Druming—A Beginner's Guide to Playing with Time is an excellent instruction book for the conga drum. Its unique approach is destined to produce good results.

—John Beck

The Cymbal Book
Hugo Pinksterboer
Edited by Rick Mattingly
$24.95
Hal Leonard Publishing Corp
7777 West Bluemound Road
P.O. Box 13189
Milwaukee, WI 53213

This is the most comprehensive book on the subject of cymbals ever written. It is in no way an instruction book, but a history that covers cymbals from their beginning in the Bronze Age in 1700 B.C. to the present. It is divided into the following chapters: History, Types of Cymbals, Selection and Testing, Composing a Setup, Cymbal Acoustics, Influencing the Sound, Cymbal Care, The Manufacturing Processes, The Companies and Historical Dates. Each chapter deals in depth with all aspects of the main subject and the reader is left with a thorough knowledge of the subject. A 16-page color-photo section provides the reader with some beautiful pictures of the cymbal-making process of the various cymbal manufacturers from around the world. Sprinkled throughout the book are quotes and photos of famous cymbal-makers and drummers, which add personal flavor to the subject of cymbal history.

The Cymbal Book is by far the most definitive source of cymbal information in the world. Its completeness assures the reader of a thorough and accurate knowledge of the subject of cymbals, and it should be in the hands of every drummer/percussionist who has ever played a cymbal.

—John Beck

Fundamentals of Tabla
David R. Courtney
$34.95
Sur Sangeet Services
P.O. Box 270685
Houston, TX 77277

Fundamentals of Tabla is the first of a several-volume set intended to be an all-inclusive source of tabla information. This volume is 275 pages long and covers the following: Introduction, Getting Started, Elementary Material, Other Bols, Theka and Prakar, Appendix 1—Notation, Appendix 2—Sources of Tabla, Appendix 3—Sample Questions, Appendix 4—Misc. Tal, Appendix 5—Misc. Praker, Appendix 6—Map of India, Glossary, Bibliography and Discography, and Index.

This is a comprehensive instruction book on the understanding and playing of tabla. Striking the instrument correctly is only a small part. One must understand the tabla's heritage, notational system and Indian culture in order to correctly perform on the instrument. David R. Courtney has provided the student with all the necessary information with which to become a tabla player. He has included tests enabling the students to evaluate their progress. He has supplied the Tals that are the backbone of tabla playing. However, to become a good performer one must have a teacher. This is a thorough, well-organized book, and although it is not a self-instruction, it comes quite close to being one.

Fundamentals of Tabla is an excellent source of tabla information. David R. Courtney is recognized as a major tabla player, and he imparts all of his knowledge to the reader.

—John Beck

Percussion Work Book
Maggie Cotton
$45.00
Maggie Cotton
57 Elmfield Crescent
Moseley
Birmingham B13 9TL
England

"Essentially a book born of experience and necessity," *Percussion Work Book* is a compilation of approximately 1000 entries that covers the requirements of the percussion section and timpani for symphonic orchestra literature. Produced in a practical and well-organized manner, this reference source provides the reader with the following information: composer, composition, timpani requirements, number of percussionists needed for a performance, the instruments needed and a space for making notes pertinent to the composition.

Example:
Composer: Tschaikovsky
Work: Romeo and Juliet Overture
Timp: 1
Perc: 2
Instrs: B.D., cyms.
Notes:

Cotton includes her notes where she has them; otherwise, the individual readers may add their own.

The book is divided into the following sections: 1. Introduction; 2. Composers represented in the *Percussion Work Book*; 3. Notes (which explain the abbreviations); 4. Large setups with composers and requirements; 5. An alphabetized list of composers with requirements; 6. Appendix 1 Timpani—percussion tacets; 7. Viennese (this section deals with works that can possibly be performed with fewer players if a drumset is used).

Cotton has provided the percussion community as well as conductors, librarians, concert promoters, orchestra managers and teachers with a useful source of reference material for symphonic orchestra literature. I see this as a required book for the principal percussionist of a symphony orchestra, the teacher of percussion (especially at the college level) and the orchestra librarian. No other source has this material available in such an organized manner. Cotton is to be congratulated for sharing her years of experience and knowledge as percussionist with the City of Birmingham Symphony Orchestra with all of us.

—John Beck

SNARE DRUM SOLOS

Farce et Pas a Pas **I**
George Paczynski & Evelyne Stroh
$5.00
Editions Aug-Surfluh
Selling agent Theodore Presser Co.
1 Presser Pl.
Bryn Mawr, PA 19010

These are two elementary level solos for snare drum written with piano accompaniment. Each solo includes dynamic contrasts for interest, and the potential to perform with another musician is good training for the young student. The rhythm content includes only quarter notes and 8th notes, and the technical demands do not exceed single strokes and taps. A suitable addition for the beginning student.

—George Frock

Roxy **III**
Gerald M. Heslep
$4.00
Kendor Music
Main & Grove Streets
Box 278
Delevan, NY 14042
Roxy is a two-minute rudimentary style solo. It is written in standard eight-bar phrases, and the technical demands include rolls, flams, drags and paradiddle patterns. The composer has included numerous dynamic contrasts as well as accents and syncopation. A page of performance notes includes interpretation of notations as well as rehearsal suggestions. This is a good solo to teach the rudimentary style and develop technical control.

—George Frock

MULTIPLE PERCUSSION

Cahiers **I-III**
J. Geoffroy, J. F. Juskowiak,
P. Labadie, P. Zavaro
$12.50
Editions Henry Lemoine
Selling agent Theodore Presser Co.
1 Presser Pl.
Bryn Mawr, PA 19010
This is a collection of multiple-percussion solos written by various composers for the beginning- to intermediate-level student. The collection uses a variety of instruments such as xylophone, slapstick, tom-toms and temple blocks, and the pieces are sequential in nature with the more difficult solos located in the latter half. Each piece is relatively short in length and has a legend to answer most questions regarding instrumentation and setup. While several of the pieces are relatively vague in terms of setup possibilities (i.e., *Coulibiac, Pas De Trois*), this could provide a first step towards challenging students to explore setup possibilities individually, which is a valuable lesson in itself for successful multiple-percussion performance.

One drawback is the use of explanatory notes and other markings only in French; therefore, a knowledge of the language is needed. However, I am very pleased at the prospect of more quantity and quality multiple-percussion solos available to the beginning and intermediate students. This collection is well-written and a long overdue addition to the literature. *Cahiers* can be used as a sequential method for the development of multiple-percussion technique and/or can stand alone for use in various performance venues.

—Lisa Rogers

KEYBOARD PERCUSSION SOLOS

Nibaircs **IV**
Jeff Hunter
$12.00
C. Alan Publications
P.O. Box 29323
Greensboro, NC 27429-9323
What famous Russian composer's name has eight letters that, when spelled backwards, begins with an "n" and ends with an "s"? If you've guessed "Scriabin" then you are absolutely correct and can actually see it when so spelled in the title of this new vibraphone solo by Jeff Hunter.

The reason for the reference to Scriabin in the title of this work is that the melodic material is derived solely from a "Scriabin six-note scale" (F-B-Eb-A-D-G) and the transposition of same up one-half step.

Although the composer has chosen to use an obviously limited melodic palette, he manipulates other musical parameters to produce a work that has sufficient variety to keep it interesting. The piece falls into seven sections with differing textures, metric schemes and tempi, from the slow-moving introductory and concluding sections marked "rubato" to a section moving at a rapid tempo (quarter note = 132) and played in "strict rhythm."

Pedaling is indicated throughout, including a "flutter pedal" effect in four measures. Malleting is not indicated. This is literature that is well within the musical and technical competencies of intermediate to advanced college-level mallet percussionists. The fact that it received recognition in the Honorable Mention category of the 1990 PAS composition contest is an indication of its quality. And the composer's explanation of his use of scale structures borrowed from Scriabin contributes a worthwhile education component.

—John R. Raush

Paint Me A Sky **V**
Jeff Hunter
$12.00
C. Alan Publications
P.O. Box 29323
Greensboro, NC 27429
This composition for solo vibraphone is written in a style that utilizes continuous note patterns and with harmonic materials presented by shifting textures. It is written with A as the tonal center but with numerous accidentals that shift tonal centers and harmonies. The rhythm content opens with straight 8th notes and moves to a series of phrases that include three half notes, followed by two quarter-note triplets. The B section consists of ternary rhythm patterns. After a *D.S.* the solo concludes with a variation of the binary patterns that end with quarter-note triplets.

The solo requires four mallets throughout and is difficult because of the large skips in register that are present in several places. An excellent addition to the serious literature for solo vibraphone.

—George Frock

Northern Lights **VI**
Eric Ewazen
$25.00
M. Baker Publications
SMU Box 752510
Dallas, TX 75275
Northern Lights is a 287-measure, single-movement work for solo marimba with a performance time of approximately 16 minutes. It requires a low F instrument.

The piece begins with a softly rolled *adagio* chorale in D dorian and then moves to several other tonal centers, occasionally using arpeggiated figures. An *allegro molto* section follows that primarily uses broken chord figurations. Similar *adagio* and *allegro* sections alternate throughout the piece. It is tonal in nature but is not primarily based on the harmonic progressions or other "rules" of the "common practice period." Other broad descriptions of the piece include: open rather than close spacing, consonant rather than dissonant harmony, more single and double vertical notes than block chords, and continually changing dynamics. One of the *adagio* sections requires a great deal of one-handed rolls, but, in general, few advanced students would likely consider the techniques required to perform this piece to be extreme or unusual.

Northern Lights is a substantial composition for solo marimba, one that could easily be the focal point of a senior or graduate recital. It is well written from both a musical and playability standpoint. While it is often energetic and exciting (especially during the *allegro* sections), it relies more on quality of craft than flashy, technical display to engage the audience.

—Lynn Glassock

Of Wind and Water **VI**
Dave Hollinden
$18.00
Dave Hollinden
2225 1st Ave. #302
Seattle, WA 98121
Those in attendance at Michael Burritt's PASIC '93 performance heard his interpretation of a new work for solo marimba written by Hollinden on a commission by Burritt, who also programmed it on his recital at Weill Recital Hall at Carnegie Hall. This reviewer, having had some acquaintance with Hollinden's work, had every expectation of finding in *Of Wind and Water* a product of considerable intellectual and musical acumen. To this end I was not disappointed.

Hollinden's music derives movement from the juxtaposition of placid, serene sections, such as those that begin and end the work, with sections that are marked, to use the composer's directions to the player, "restless," "animated—excited," "increasingly agitated" and "impassioned." Explaining the derivation of the placid, serene portions, Hollinden cites the second chapter of the *Bhagavad Gita* that "suggests that the movement of our senses among the sense objects is similar to the wind carrying a ship across the waters. This image," he explains, "resulted in the spacious and tranquil material in the piece."

Like all good composers, Hollinden knows how to build a large structure from simple, brief musical ideas by the process of variation and development. The result of his effort is a composition that is fused into an organically unified whole, not one that is merely the sum total of a series of unrelated, disjunct events. In the development process Hollinden uses rhythmic variety to maximum effect. His score is quite idiomatic for the marimba. It is written for a low-E instrument; an optional version is no-

tated if played on a low-F marimba.

This is superb literature for a mature college-level marimbist. Unlike some of the contemporary literature for that instrument now being published, there is as much in Hollinden's work for the musician as for the technician.

—John R. Raush

KEYBOARD PERCUSSION ENSEMBLE

Diversion for Marimba Quartet **V**
David Sorgi
$10.00
David M. Sorgi
18749 Marsh Lane
Apt. #1714
Dallas, TX 75287-3528

This is a marimba quartet in which all four performers are equally challenged. In terms of instrumentation, parts I, II and III can fit on 4-octave instruments and part IV on a 4 1/3-octave instrument; however, I would suggest that parts III and IV both use 4 1/3-octave instruments. *Diversion* makes use of four-mallet technique; therefore, performers should have had extensive experience with technique for application. Sorgi should be commended for the appearance of the work. The score is very legible and all indications such as repeats, meter changes and dynamic markings are extremely clear.

The tonal center of the work seems to revolve around A-flat minor with a tendency towards the fourth and fifth as the primary intervallic relationships explored. *Diversion* is very minimalistic in nature—a quality that prevails throughout. The texture consists of layering, with part III performing an ostinato-like pattern continuously. The layering starts with part III, builds by addition of the other parts, climaxes with all parts frenzied and *forte*, and resolves back to a single voice before repeating the process. The ostinato pattern itself is very interesting. The pattern exists in a 3/4 meter; however, it neatly repeats within two groups of 16th-note sextuplets. Therefore, a sense of hemiola pervades the ostinato, which exists in part III and part II as well. Not only do parts I, II and IV serve as the melodic line at various points together and alone, they sometimes join part III in the accompaniment process.

Diversion for Marimba Quartet is an excellent addition to keyboard literature. I recommend it highly for advanced marimbists who want to be challenged and rewarded with a quality, musical experience.

—Lisa Rogers

DRUMSET INSTRUCTION

The Drumset Owner's Manual
Ronald Vaughan
$25.00
McFarland & Company, Inc.
Box 611
Jefferson, NC 28640

This 164-page book comprehensively identifies and describes the various components of the acoustic drumset. Some of the topics covered include: basic construction and types of drumshells, drumheads and cymbals; overall selection of new and used equipment; techniques of tuning and muffling; use and care of sticks, brushes, mallets and beaters; hardware and cases; and general maintenance of equipment. The text is supplemented by a reasonably large number of photographs. Specific products of companies and manufacturers are often referred to in addition to comments that are more general in nature.

This is a fairly unique publication. It reads somewhat like the texts that are used in university percussion-methods courses, but is far more selective and comprehensive in its chosen subject matter. It is a well-written book that obviously offers more information to the novice than to the experienced professional, although both should find it enjoyable and informative reading. Those who tend to read the instructions, manuals, etc. for the equipment they buy will want to consider *The Drumset Owner's Manual.*

—Lynn Glassock

The Rhythm Concept **I-IV**
Kelly Wallis
$22.95
KeWallis Music Pub.
P.O. Box 2014
Salt Lake City, UT 84110-2014

Upon receiving this book for review, my first reaction was to wonder why there would be a need for another snare drum book. However, *The Rhythm Concept* is unique in several ways. Unlike most texts that teach the rudiments, it concentrates on developing coordination of each limb, with the concept that the coordination can move directly to the feet to cover drumset performance.

The book is expensive for a snare drum text, but it has 378 pages and is very comprehensive. The various types of strokes covered include full strokes, down strokes, up strokes and rebound strokes. One glaring omission is the fact that flams, drags and normally notated rolls are not covered. Because of the progressive steps of development throughout the text, it is appropriate for students of all ages.

—George Frock

Understanding Rhythm **I**
Michael Lauren
$9.95
Drummers Collective Series
541 Avenue of the Americas
New York, NY 10011

Understanding Rhythm is designed to "acquaint non-readers with the fundamentals of reading rhythmic notation." This text would be an excellent reading method both for the beginner or for the more experienced non-reading musician, no matter what instrument they play. However, it is obviously designed with the drumset player in mind.

The book is made up of 17 lessons, starting with whole notes and progressing systematically through 32nd-notes and syncopation exercises. A foreword includes a clear explanation of the fundamentals of music notation and a note-value chart. Appendices include information on counting, ties and what the author calls "enharmonic rhythms," which are rhythms that can be written more than one way. Also included are 11 suggestions for adapting the material for use as drumset independence exercises.

Absent from the book are any exercises dealing with meters other than 2/4 and 4/4. The notation is very easy to read and the exercises progress logically. This would be a particularly effective book for students with some drumset playing experience who are learning to read music.

—Tom Morgan

PERCUSSION SOLO COLLECTION

21st Century Percussion Solo Recital Series—Levels I, II and III **II-IV**
Steve Houghton and George Nishigomi
$12.95 each
CPP Belwin, Inc.
15800 NW 48th Ave.
Miami, FL 33014
The title of this series is aptly named, as it addresses a need in terms of available literature that will propel percussionists into the 21st century.

This set of percussion solos at various levels, which are sequential in nature, provides the percussionist with new literature that stresses the importance of being a total percussionist, performing in a group or accompanimental setting, and listening to other performances of the same works for guidance, inspiration and musical individuality.

Each level contains four complete solos, each of which represents multiple percussion, keyboard percussion, timpani and drumset. In addition to the solo, a recorded accompaniment is supplied as well as a demonstration of solo and accompaniment together. Details such as instrumentation, setup, notational legends, and tempo and dynamic markings are clearly marked. This series of percussion solos can be used as recital material by advanced junior high, high school and undergraduate college percussion students.

—Lisa Rogers

PERCUSSION ENSEMBLE

Rondo For Five **III**
Elliot A. Del Borgo
$11.00
Kendor Music, Inc.
Main and Grove Streets
P.O. Box 278
Delevan, NY 14042
This 4:40 percussion quintet is written for snare drum, woodblock, triangle, field drum, claves, gong, bongos, suspended cymbal, tom toms, vibes or piano, timpani, temple blocks and bells. The beginning tempo is marked *Allegro*, quarter note = 144 and is for the membranophones. The slow section marked *Adagio*, quarter note = 66 is for the idiophones. Tempo I returns and the composition continues until a *D.C.* The piece ends with a five-measure Coda. *Rondo for Five* is a well-written quintet for intermediate percussionists. It would be challenging and fun to perform. The many unison passages of 16th-note patterns would require some serious practice sessions, but the results would be worth the effort.

—John Beck

Congastück **IV**
J.B. Smith
$12.00
Whole>Sum Productions Press
2608 South River
Tempe, AZ 85282
Congastück is for two players using four conga drums: a quinto, high conga, low conga and a tumba. Player one uses the high conga and player two uses the low conga. Both players share the quinto and tumba and wear ankle bells.

Students with little or no hand-drumming experience could benefit greatly from performing this piece, as the composer has provided excellent instructions regarding all the basic conga strokes. These include the "bass," "normal" (open), "open slap," "closed slap" and "finger slap." Along with clear explanations and diagrams are short exercises that will aid in developing the techniques. These exercises also relate directly to the composition, so that while students are learning the techniques, they are also learning rhythmic motives frequently found in the piece. The notation system is very easy to read and understand.

The piece itself uses typical conga rhythms and the two parts interact in a fairly intricate manner. The visual effect is impressive due to the sharing of the middle drums and the use of the ankle bells. While meters such as 10/8 and 14/8 are used, all the rhythms are made up simply of groups of two and three notes, and the rhythmic flow is very natural. *Congastück* is excellent for teaching hand-drumming techniques, and it is enjoyable for both the performers and the audience.

—Tom Morgan

Millet Music **V**
Matthew Davidson
$8.00
HoneyRock
RD 4, Box 87
Everett, PA 15537
Millet Music, for as many players as possible, was written on the occasion of John Cage's 80th birthday celebration at Northwestern University. It consists of 28 measures of various rhythms in 3/8 meter designed to be played on any two "untuned percussion instruments sounding roughly a fifth apart." Performed as a canon that can be repeated anywhere from 25 to 840 times, the effect suggests the rhythms of "pestles pounding in their mortars as performed by Fulani Women of Northern Benin (AUVIDIN-UNESCO D8006)." Undoubtedly, the process of preparing this piece would improve rhythmic security among the members of the ensemble, and the work would be an interesting and unique addition to any concert program.

—Tom Morgan

Rain Forest **VI**
Frances Danforth
$22.00
M. Baker Publications
SMU Box 752510
Dallas, TX 75275
The performance notes included with the score describe *Rain Forest*, a work for six percussionists, as a "mood portrait of the dark, sultry, murky vegetation covering unexpected mysteries of the tropical rain forest." Though not published until 1993, *Rain Forest* was premiered at the Charles Ives Center for American Music in August 1983 by the University of Buffalo Percussion Ensemble under the direction of Jan Williams.

The instruments required include marimba (low A), four timpani, glockenspiel and an assortment of drums and accessories that, with the possible exception of the two-pitched log drum, would be found in any typical college percussion department arsenal. The marimba part (which requires four mallet technique) and timpani part are each played by separate players, and the other four parts require multiple-percussion setups. Some special effects are employed such as brushes on the marimba, wooden triangle beaters and thimbles. The notation is very clear and easy to

read. The four multiple percussion parts do not contain a "key," which means the player must search through the part to learn which instrument is assigned to which line or space. However, a list of instruments is included at the top for each of the four multiple-percussion parts.

The piece begins in 13/8 time at a very slow tempo (8th note = 54). The 13/8 measures are subdivided by dotted lines into three smaller units of 4, 5 and 4 beats respectively, adding to the clarity of the notation. The timpani player performs a repetitive motif "to suggest the Australian didjeridu, a major inspiration for this work." Density increases as more instruments are added and rhythms become more complex. Along with polyrhythms and odd note groupings are improvisation sections in which note heads are indicated with the rhythm left up to the performer. A timpani cadenza occurs near the middle of the piece, requiring polyrhythms such as 3 against 4, and 4 against 5. After an *allegro* middle section (8th note = 92), the piece returns to its original tempo and the repetitive timpani motif reappears. The texture thins and the piece ends gradually, as if a rain storm is fading away.

Rain Forest is an interesting work using complex rhythms and contemporary harmonies. At the same time, it is extremely playable, mostly due to its clear and organized notation system. It would be both challenging and rewarding for any college percussion ensemble.

—Tom Morgan

INSTRUCTIONAL VIDEO

Brazilian Percussion
Airto Moreira
$39.95
DCI Music Video/CPP Media
15800 NW 48th Ave.
Miami, FL 33014

It is largely due to the talents of musicians such as Airto Moreira that ethnocentric biases regarding the superior artistic merits of percussion as played in European/Western musical tradition have been totally shattered. It can be very humbling, for example, to be made aware of the phenomenon of generating a multitude of sounds from one simple instrument, as in the case in hand-drumming traditions, as opposed to the Western practice of deriving but a few sounds from any single instrument, in what has historically been a performance practice that requires an implement such as a stick, mallet or beater.

Interviewed by Dan Thress, Moreira first demonstrates his fabulous right-hand technique performing on the Brazilian tambourine called the pandeiro. Aspects of a basic technique, including the use of the right thumb and the left hand to turn the instrument while it is being played, are discussed.

The video takes up, in turn, the playing of the surdo (especially in traditional Samba rhythms), the caxixi (including its use when playing the triangle and in playing clave and 6/8 rhythms), the tamborim (a "trick" is shown of striking the underside of the head with the middle finger of the left hand to which a quarter is taped), the cuica (on which Moreira demonstrates his special performance techniques) and the triangle.

The "grand finale" of this video, which should be of particular interest to every percussionist viewing the tape, is a "tour" of Airto's trap table showing his collection of favorite instruments. Helpful tidbits of information, such as his method of setting cowbells on the table using strategically placed balls of tape for maximum resonance, are included. In this concluding section, Moreira's commitment to and love for his art are made apparent, and his comments should prove an inspiration to all those students and professionals alike who view this excellent video.

—John R. Raush

Listen and Play
Featuring Airto Moreira and Fourth World
$39.95
DCI Music Video/CPP Media
15800 NW 48th Avenue
Miami, FL 33014

The incomparable Airto Moreira is at his best in this video, along with his Fourth World group: Flora Purim, vocals; José Neto, guitar; and Gary Meek, sax/flute/keys, who perform "Africa," "Partido Alto," "Seven Steps" and "Firewater-Jive Talk." Each tune is played in its entirety, and through interviewer Dan Thress, Airto is asked to explain the rhythms he uses. His explanations are easily understood, and his performances are quite clear from a pedagogical standpoint. If the rhythm is intricate, Airto plays it slowly to get his point across and then at normal speed. Airto also relates some valuable information he received from Miles Davis, and at one point talks about the difference between classical percussion performance and his style of performing.

Listen and Play is not only entertaining but instructional as well. For those who like Airto Moreira and Fourth World this a must-buy video with excellent artistry and production.

—John Beck

New Orleans Drumming
$39.95 each
DCI Music Video/CPP Media
15800 NW 48th Ave.
Miami, FL 33014

New Orleans Drumming, a boxed set of three videos, is a must-see, not just for drummers interested in New Orleans drumming styles, but for any serious drumset player who wants to gain a better understanding of the history and evolution of the instrument.

Ragtime and Beyond: Evolution of a Style, features Herlin Riley and is very much like a modern video version of the famous recording *Baby Dodds: Talking and Drums* (Folkway Records FJ2290). Riley beautifully demonstrates many of the traditional techniques and musical practices found on the Dodds recording, along with modern applications of these techniques.

On *Street Beats: Modern Applications*, famed New Orleans Drummer Johnny Vidacovich applies the New Orleans parade drumming approach to the creation of modern funk and jazz time feels.

The connection between the old and new styles is revealed further in *From R&B to Funk*. On this video, funk master Herman Ernest and recording legend Earl Palmer demonstrate hit record grooves they have played through the years, and reveal how New Orleans drumming styles have served as the inspiration for much of what they have created.

All three videos contain clear and interesting teaching segments along with instructive musical demonstrations. Interviewer Dan Thress asks insightful questions and effectively guides the discussions. Solo drumming and combo playing are juxtaposed very effectively, and the camera work, as with all DCI productions, is excellent.

Along with being superb teaching tools, these videos represent an important historical documentation of drumming techniques that are not widely known. The art of playing time on the snare drum using press rolls was once the standard practice among all jazz drummers before the development of the ride cymbal and hi-hat. It is exciting to see that these techniques have not been forgotten, but rather are extremely relevant to current drumming styles.

—Tom Morgan

Let It Flow
Omar Hakim
$39.95 video
$21.95 book w/cassette
Manhattan Music (book)
DCI Music Video/CPP Media
15800 NW 48th Ave.
Miami, FL 33014

This 70-minute video showcases the talents of Omar Hakim, who gives the viewer an insight into his ideas about technique and musicianship. With help from bassist Victor Bailey, guitarist Jimi Tunnell, and Michael Beardon and John Adams on keyboards, Hakim is shown in performance of several compositions including "The Mystic's Glance," "My Heart is Dancing" and "Shinjuku Strut."

Topics discussed that should be of particular interest to drumset students and aficionados include the warm-up routine used by Hakim and the subject of "touch" and its importance to different musical styles. It is important to note that the text published by Manhattan Music, Inc. (same title as the video) and billed as a "transcription/play-along audio package" complete with a CD, reproduces, in notated form, much of the musical material presented in the video. In fact, the spoken portion of the video also appears in print in the book.

Hakim's own composition "The Mystic's Glance" is used as a vehicle to demonstrate his particular affinity for playing and soloing in 6/8 meter. The book provides a drum chart for "The Mystic's Glance" (charts for "Shinjuku Strut" and "My Heart is Dancing" are also provided), as well as solos and "additional grooves."

Hakim demonstrates the importance of versatility by showing his own ability to handle everything from funk to bop and swing. However, perhaps the most important lesson to be learned from this video and Manhattan's "transcription/play-along audio package" is that, even in the electronically-printed era in which we now live, the musician is still important. In the words of Hakim, "Everybody's looking for 'the new sound'…In reality, a musician is the one who makes the sound."

—John R. Raush

Power Workout 1 (video) **V-VI**
Power Workout 2 (video)
Power Workout 1 (book w/cassette)
Kenny Aronoff
$39.95 (video)
$29.95 (book)
DCI Music Video/CPP Media
15800 NW 48th Ave.
Miami, FL 33014

With *Power Workout 1 and 2*, Kenny Aronoff has created a very demanding warm-up system that will be useful for serious drumset players interested in developing physical and mental control. Each video tape comes complete with a booklet containing all the exercises. The book and audio cassette version contains virtually the same material.

The workout routine is similar to exercises found in *Stick Control* by George L. Stone, but Aronoff has integrated the feet in such a way as to add a whole new dimension to the basic sticking patterns. In *Power Workout 2*, he goes even further, creating more complex hand-and-foot combinations and adding challenging polyrhythmic cymbal patterns. Once the individual grooves and solos have been learned, the student is encouraged to play the sequence of exercises as a 13- to 15-minute "power workout." As the author points out, the workout "not only builds physical strength, power and endurance on the drumset, but also develops your ability to focus and concentrate on technique, time and your groove."

Aronoff explains each part of the workout clearly and performs each section, then the entire workout, flawlessly with amazing power and control. He plays a drum solo at the conclusion of each video tape, demonstrating the benefits of this kind of disciplined practice. The production quality of these materials is excellent and students will relate well to the method of presentation.

—Tom Morgan

PERCUSSION RECORDINGS

Border States
Glen Velez
$15.95
Interworld Music
RD3, Box 395A
Brattleboro, VT 05301

Wow! This compact disc recording features the combination of fabulous hand-drumming by Glen Velez assisted by Randy Crafton, with Howard Levy's harmonica virtuosity. The results of the collaboration are astounding and a "must buy" for everyone. All selections on the recording were composed by Velez.

Velez describes the compositions on this recording as "the places where things shift, the areas where one state of consciousness merges into another, where the water meets the land, where one nation touches another, these borders have great vibrant energy that influences all life. The music of *Border States* addresses some of these effects on my own life." The instrumentation used to evoke such images from the listener include kalimba, ocean drum, tar, mazar, bodhran, bones, jew's harp and harmonica. Two of my favorites are "Tuva," with Velez's angelic overtone singing, and "Seven Heaven" with the use of the ocean drum as the lone voice to bridge the ending of "Prelude" and the beginning of "Seven Heaven." *Border States* is highly recommended for the pure enjoyment of the soulful sounds of drumming and the spiritual magic it provides.

—Lisa Rogers

Global Warming
Ed Mann & Brian Hand
$15.95
Interworld Music
RD 3, Box 395A
Brattleboro, VT 05301

While this CD might be found in the "new age music" bin at the local record store, percussionists will find *Global Warming* to be much more than simple minimalistic mood music. A collaboration between Ed Mann (former Zappa percussionist) and Brian Hand, this recording explores the many timbres of gongs, tuned pipes, hand drums and MIDI effects, combined with the haunting sounds of the huaca, a three-chambered ocarina. Rhythms and melodies characteristic of Africa, India and American jazz are combined in an eclectic mix to produce a unique and interesting variety of pieces.

Among the seven selections are several that focus on the exploration of tone color, such as the bright and buoyant "Bell Garden," which blends the ringing sounds of tuned pipes, gongs, camel bells, finger cymbals, rattles and air tubes. Similarly, "Trace-portation" uses gongs and the huaca to create a mysterious ambiance. In contrast, other pieces are more groove-oriented, exhibiting wonderful hand-drumming patterns and interesting bass lines. Occasionally, jazz elements are added to the mix, producing a captivating effect.

This recording will be very enjoyable to anyone who loves the wonderfully diverse sounds of percussion fused with melodic and rhythmic finesse.

—Tom Morgan

I Mean You
Gary Lee
$16.00
Request Records
P.O. Box 484
Kalamunda 6076
Western Australia

The appearance of this compact disc represents several "firsts." It is the first modern jazz CD from Western Australia since 1965, and of even greater import for percussionists on this side of the world, the first Australian recording in some ten years that features, as leader, a jazz keyboard percussionist: Gary Lee, who not only contributes his talents as a vibist/marimbist, but as a guitarist on one tune and a composer of 10 of the 12 tracks on the album. (The other two are Thelonious Monk's "I Mean You" and a Latin-flavored number, "Port-au-Club," by Murray Wilkins.)

Lee's able colleagues, all solid musicians in their own right, are Roger Garrood playing concert and alto flutes, and soprano and alto saxophones, Don Gomes on piano and pocket trumpet, Murray Wilkins on bass, David Vrcic, who proves himself a sensitive as well as technically adept drumset/percussionist, and Victoria Newton, who participates on a few tracks as bass clarinetist and vocalist.

To this listener, the highlights of the

album were those occasions when the group explored exciting new sonorities made possible by the unique instrumentation. For example, in "Rachel's Song" Lee's marimba and vibes, the bass clarinet and Gomes' pocket trumpet weave a texture of exquisite aural beauty. A similar timbral feast is in store for the listener in "Dreamtime I," which uses soprano sax, bass clarinet, vibraphone and pocket trumpet in a short, metrically free piece that comes across as something of a sound mobile. In these pieces, one is impressed by the group's interest in exploring new means of expression, but always within well-controlled musical boundaries.

The listener who is turned on by pyrotechnical displays will not be disappointed either. Lee's composition "Heartvelt" is a vehicle for his artistry on vibes and for that of saxophonist Garrood. Lee proves himself a facile performer who infuses his music with energy, wit and imagination. Jazz is indeed live and well "down under."

It will be of interest to readers to note that Gary Lee presents a weekly, two-hour jazz program on Perth radio (he states that he has presented more jazz vibists/marimbists than any other program in the world) and has volunteered to broadcast jazz CD or vinyl recordings of any PAS member.

—John R. Raush

MIXED MEDIA

Concertino Indio **IV**
Alice Gomez
$11.95
Southern Music Co.
111 Boardway
San Antonio, TX 78292

This publication for multi-percussion and piccolo features a combination of instruments that is unusual, to say the least, but that fits well the musical imagery suggested by the title of the piece and the titles of its three movements: "Mayan," "Navaho" and "Crow."

Musical devices such as rhythmic ostinatos in the percussion part, an instrumentation featuring tom-toms and "rattle" (here in the form of a maraca) and pentatonically oriented melodic material conjures up the appropriate musical imagery—at least as appreciated by Western ears. The multi-percussion setup is very modest in proportions, at least as far as multi-percussion setups go, requiring only a small tom-tom, a pair of bongos, a snare drum, glockenspiel and a single maraca.

The initial movement begins and ends with solo piccolo set to the accompaniment of a maraca and features alternating meters, a cadenza-like section for piccolo solo and a piccolo-glockenspiel duet.

In the second movement the percussionist simultaneously plays a tom-tom with one hand and a maraca with the other. Pentatonic figurations give the piccolo part an appropriately primitive flavor.

The last movement is a spirited, dance-like offering with repeated 8th-note patterns in the percussion part written in a rapid 4/4 meter. It utilizes all the membranophones in the multi-percussionists' arsenal.

High-school teachers, take note: This is ideally suited to musicians of high-school age, both in terms of technical requirements and musical demands. A proficient piccolo player, however, is a must. If you have one, consider using this piece for your next solo and ensemble festival or contest.

—John R. Raush

Jeu-Parti **V-VI**
Marta Ptaszyńska
$8.00
Music For Percussion
107 NE 33 Street
Ft. Lauderdale, FL 33334

Jeu-Parti is a duet for vibraphone and harp written in 1970. It opens with brief statements that alternate between each player. The first theme features block chords by the vibraphone supported by a series of sextuplet arpeggios on the harp. This moves to a section that is more fragmented and angular in melodic content. The remainder of the work covers several contrasting moods and textures. There is no key signature, but numerous accidentals are included to shift tonal centers and harmonies. A page of instruction is included to assist in preparation and interpretation. There are four measures that have a written high F#, which exceeds the range of the standard vibraphone. The instructions suggest that the high F-natural is to be played in these places.

Four-mallet technique is required throughout the composition. An excellent addition to the serious literature for vibraphone, *Jeu-Parti* is worthy of inclusion on the advanced percussion recital.

—George Frock PN

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PASIC '95—Phoenix, Arizona / November 1-4, 1995

By J.B. Smith, Host

DECEMBER 1 IS THE DEADLINE FOR submission of concert and clinic proposals for PASIC '95 in Phoenix. Proposals will be deliberated by the various planning subcommittees, who will then meet in January to make programming recommendations to the PAS Executive Committee. Final decisions will be made by February 1.

Proposals are being accepted in the following areas: **1. Clinics:** Drumset, Education, Ethnic, Marching, Orchestral, Keyboard and Electronic; **2. Masterclasses:** Drumset, Marching, Orchestral, Keyboard or Ethnic; **3. Three showcase concerts** featuring professional-level soloists and/or ensembles; **4. Six Concerts-in-the-Park** featuring school and/or professional level groups; **5. Three evening concerts** featuring professional-level soloists and/or ensembles. Applications for paper presentations, marching festival and new music research performances (PASIC '95 theme: Percussion and Theater) are not due until later in the Spring.

Include in your proposal a description of your session or concert (be as specific as possible), recordings and/or documentation of past performances or clinics, and sponsor information (if applicable). Performers and clinicians are responsible for all funding and instrument needs.

Proposals should be sent by December 1 to Dr. J.B. Smith, c/o Percussive Arts Society, P.O. Box 25, Lawton OK 73502. PN

The Percussive Arts Society sends out press releases monthly to publications, manufacturers and retailers in the percussion industry to keep them informed of the latest PAS activities. The space here is reserved for reprints of these official releases. For additional information on any item printed here, write to PAS, P.O. Box 25, Lawton, OK 73502, or call (405)353-1455.

PERCUSSIVE ARTS SOCIETY
P.O. Box 25
Lawton, OK 73502
Telephone: 405/353-1455
FAX: 405/353-1456

MORE VISIBILITY FOR PERCUSSIVE ARTS SOCIETY, VOTES EXECUTIVE COMMITTEE

LAWTON, OKLAHOMA--The Percussive Arts Society Executive Committee met here August 12–14 to discuss progress made in achieving goals set by the PAS Board of Directors at last year's Percussive Arts Society International Convention (PASIC).

Much of the committee's focus was directed toward increasing the visibility of PAS with new offerings to non-members and current members alike. The committee agreed to:

• Develop an expanded line of PAS gift items. These will include ceramic mugs, caps, polo shirts, patches, water bottles and drumstick key rings. All items will be available at PASIC '94 in Atlanta, and from PAS throughout the year.

• Distribute PAS Clubs information at various sites at PASIC. The PAS Clubs program provides the opportunity for junior and senior high school students to join PAS at greatly reduced rates.

• Provide more feedback options for *Percussive Notes* and *Percussion News* readers. A new column dealing with "how to" issues is slated for *Percussive Notes*, while students are encouraged to contribute articles for a students' column in *Percussion News*.

• Develop a local public relations committee to promote the PAS museum. Projects in the works include a museum catalog, increased outdoor signage, and fliers to be distributed through local hotels, realty offices and state tourist information centers.

• Enlist the aid of chapter presidents and members of the percussion industry in distributing PAS membership materials at Days of Percussion and clinics.

• Provide companies with PAS promotional items to be included with clinic giveaways.

The Executive Committee is also working with the World Percussion Network Committee in investigating methods for offering back issues of PAS publications on-line.

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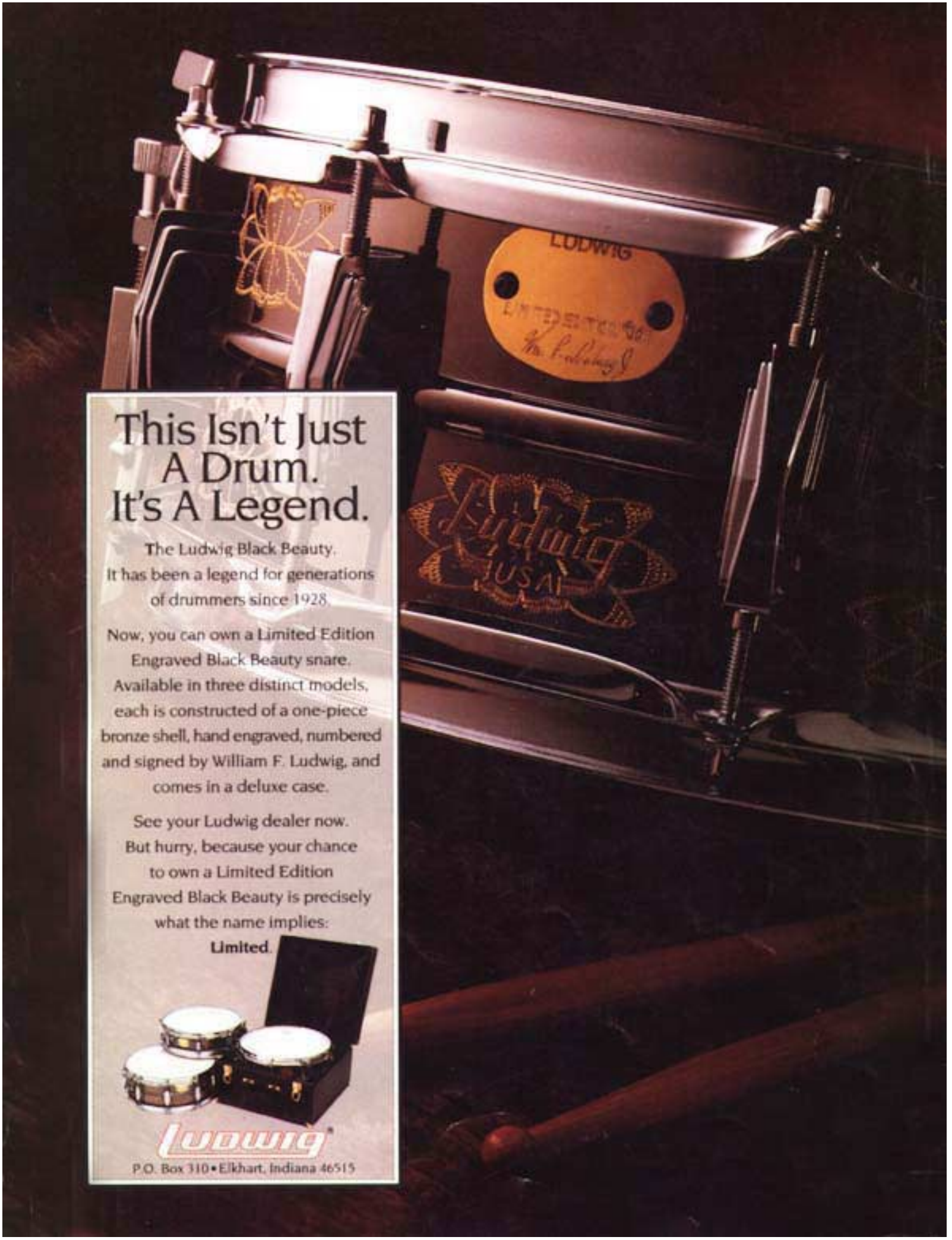

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