

# TEXAS BANDMASTERS ASSOCIATION

## THE SCIENCE OF THE SAXOPHONE SOUND: Developing the Advanced Saxophone Performer

Present by:  
Scott D. Plugge  
Professor of Saxophone  
School of Music  
Sam Houston State University

56<sup>th</sup> ANNUAL CONVENTION  
SAN ANTONIO, TEXAS  
JULY 26, 2003

No matter what you are performing, the sound is what everyone has to listen to! The performer that has a great sound (*i.e.* tone, control, pitch, vibrato, etc.) will be successful at any level and will also be more likely to continue playing whether as a career or for personal enjoyment. The saxophone sound is often misunderstood with regards to its capabilities. This misconception can be traced back to Hector Berlioz's *Grande traité d'instrumentation et d'orchestration modernes* (1844). The following scientific techniques can be used to assist in the production and instruction of a great saxophone sound.

## **POSTURE**

Alexander's Technique approach.

- Principal:
  - The aligning of the spine from the head to the tailbone.
- Application:
  - In saxophone playing, the neck strap must be adjusted, in order for the back of the neck to be straight, once the top teeth are seated on the mouthpiece. The performer needs to "bring the instrument to themselves." (Must have a neck strap that will not slip or stretch!)
  - The spine needs to maintain its alignment for maximum breathing capacity and to not impede the airflow.

Hand position:

The hand position in saxophone playing should be naturally curved, performing on the "pad of the fingers."

- Place your hands down at your side with no muscle tension. Notice the natural curvature of the fingers. Apply this position to the saxophone.

The above procedures will not only relieve stress and help prevent any "repetitive syndrome" injury; there can also be audible improvements in tone.

## **ORAL CAVITY**

- Saxophone is performed with an open throat. The back of the tongue should be in a low position. This can be achieved by thinking the syllable "Ah" or "Oh."
- The tongue should recess down the throat, placing the tip of the tongue at the tip of the reed.

## **AIR STREAM**

- Saxophone should be performed with a fast, focused air stream.
- Place your hand six inches in front of your mouth. Blow a fast focused air stream in to your hand.
- Cold air concept verses the warm air concept
  - Is the glass half full or half empty?
    - Cold air concept addresses the focus of the air stream at the front of the mouth where the air stream enters the mouth piece and reed, (which is necessary) however does not address the back of the tongue and can create tension.
    - The warm air concept addresses the back of the oral cavity or tongue position and emphasizes relaxation (Which is necessary), however does not address the focus of the air at the front of the mouth where the air stream enters the mouth piece and reed.

Ideally, the air steam needs to be “fast and focused” with an open relaxed oral cavity (back portion of the tongue needs to be low)

## **SAXOPHONE EMOUCHURE**

- Top teeth are firmly seated on the top of the mouthpiece.
- Lower lip slightly curls over the bottom teeth.
- The corners are pushed forward circling the mouthpiece (*e.g.* Like whistling or puckering lips.)
- Keep an even bite (*i.e.* bottom teeth below top teeth in natural position.)
- Chin should be flat.
- Embouchure should be firm, but not tight.

## **PLACEMENT**

The embouchure or “bite” should be place at the point where the mouthpiece separates from the reed.

- This position can be achieved by carefully placing a business card between the mouthpiece and the reed. Gently tap the card until it stops (do not force). The point where the card stops is where the top teeth should be placed.

## **MOUTH PIECE AND NECK**

Using this approach with young students is an excellent way to achieve proper focus of the air stream as well as the beginning steps to good intonation.

## TBA Convention/Clinic 2003

- Mouthpiece and neck on the alto saxophone should produce “concert Ad””
- Mouthpiece and neck on the tenor saxophone should produce “concert E”
- Mouthpiece and neck on the baritone saxophone should produce “concert

### **MOUTHPIECE EXERCISE**

The mouthpiece exercise is more acute and should only be used after success has been achieved with the mouthpiece and neck. The mouthpiece exercise truly measures all of the factors listed above. (*i.e.* embouchure, placement, tongue position, etc.)

- Mouthpiece on the alto saxophone should produce a “concert A”
- Mouthpiece on the tenor saxophone should produce a “concert G”
- Mouthpiece on the baritone saxophone should produce a “concert D”

### **TONE EXERCISE**

- The tone exercise is the opportunity to “put it all together.” This exercise should be done every day. Do not use vibrato on this exercise, focus on the raw elements of the saxophone tone.
- Initially, focus on how quickly the octave key functions.
- If the fundamental does not respond once the octave key is release, do not force it down; begin the exercise again in a lower tongue position.
- Once the octave key is functioning properly (through proper oral cavity placement) focus on niente attack and releases.
- Be sure that the first tone sounding is the fundamental!

## Saxophone Tone Exercise

Prepared by: Scott D. Plugge  
Associate Professor of Saxophone  
Sam Houston State University

1.  $\text{p} \gg \text{f}$   
& C w w

2. & #w #w #w

3. & w w w

4. & w w w

5. & bw bw bw

6. & w w w

The performer should strive for a smooth octave exchange.  
Work for niente attacks and releases.  
Listen to tone quality and a matched timber in both octaves.

## **INTONATION**

- A performer must first know the tendencies of their instrument.
- Playing “in tune” means one must be able to perform the entire instrument “in tune” not just the tuning note.
- Common mistake made is placing the mouthpiece in a position for only the tuning note. This may or may not work. The mouthpiece must be placed where every note on the instrument can be played in tune. (Always check the flat side of the instrument)
- Other elements of playing “in tune” involve attuned listening, factoring in temperature and understanding proper tendencies of the chord members.
- The following exercise is the first step in this process and usually the one over looked

NAME \_\_\_\_\_

DATE \_\_\_\_\_

### Saxophone Intonation Exercise

Using a tuner, mark the inherent intonation tendencies of your instrument.

& C

\_\_\_\_\_

& #v

\_\_\_\_\_

& w

\_\_\_\_\_

& #v

\_\_\_\_\_

&

\_\_\_\_\_

&

\_\_\_\_\_

## **VIBRATO**

Vibrato is produced by slightly moving the lower jaw up and down. (embouchure position should not change.)

Exercise:

- Begin with a “jaw exercise”
- On a G scale, bend the pitch as far down as possible four times on each note of the G major scale. (Think the syllables “Yah, Yah, Yah...”)
- First motion of the jaw should be down. (Always begin at pitch then bend down and return to pitch in one motion.)
- Always listening for quality and symmetry of the undulation.



NOT

VVVVVVVVV

- Once proper quality has been achieved, begin process in eighth notes
- Continue in this fashion with triplets and then sixteenth notes. As the pace increases the range the jaw moves needs to decrease.
- Once four undulations per beat is achieved (*i.e.* Sixteenth notes) begin using a metronome.
- Begin using scales two octaves and progress to the chromatic scale full range
- Gradually increase the tempo until four undulations per beat in a range of  $\text{♩} = 68- 80$  is achieved. (No faster than 320 beats per minute) **IMPORTANT:** this does not mean that the vibrato is metered! The metronome is only a tool in order to facilitate the symmetry and rate of the undulations. This does not imply that each quarter note (in a musical context) would receive four undulations of vibrato.

**NOTE:** The preceding discussion, although addressing the tone, will also improve a performers technique. This occurs because, the better the instrument responds, the easier it is to execute difficult technical passages. Sub-consciously, as performers we will wait for the instrument to respond before continuing, hence creating technical and rhythmical problems.



**TECHNIQUE**

Fingering Selection:

The difference between the ability to perform a piece of music at tempo or not, is often related simply to fingering choice. Students will often chose the fingering that they are most comfortable with rather than the fingering that is the most technically proficient for the situation. The following rules will help in this choice.

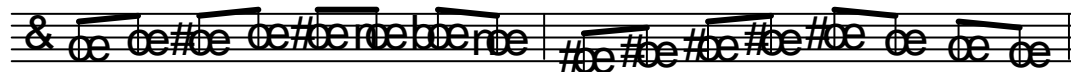
- If the B $\flat$ "/ A $\epsilon$ " stands alone (**NOT** preceded or followed by a B&!) Bis is the technically most proficient fingering.



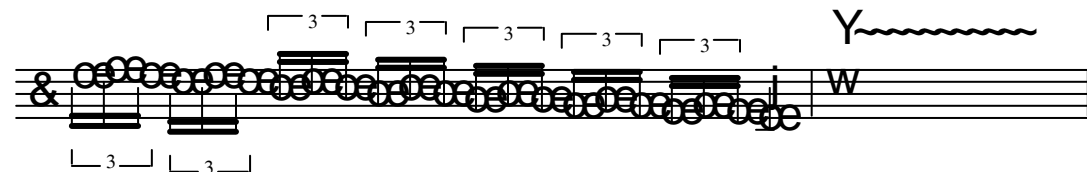
- If the B $\flat$ "/ A $\epsilon$ " is preceded or followed by a B&!, then use side-B $\flat$ ".



- Use chromatic F $\epsilon$ " in all chromatic situations when possible.



- Use side-C only for neighbor motion and trills. (pitch and timbre of this fingering is unsatisfactory)



- True technical mastery can only be achieved through diligent study of scales (major, minor, diminished, etc.) and their intervals. The following is a listing of the full range major scales with suggested fingerings for saxophone based upon the rules listed above. These are to be practiced everyday with a metronome. Begin first with just a slur and focus on the positive action of the fingers. Later begin to apply articulations and progress to intervals and other scales.

## SAXOPHONE FULL RANGE MAJOR SCALES

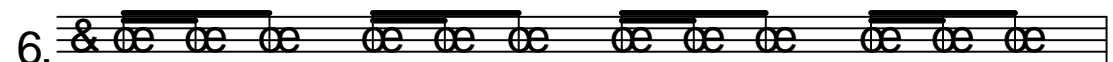
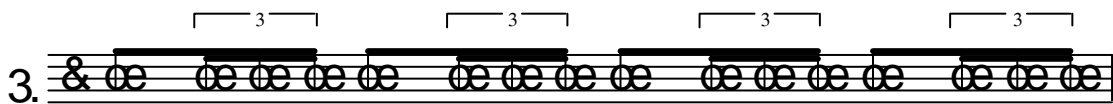
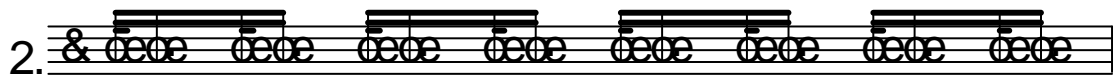
PREPARED BY  
SCOTT D. PLUGGE  
PROFESSOR OF SAXOPHONE  
SAM HOUSTON STATE UNIVERSITY

° - BIS B<sub>2</sub>  
sd - SIDE B<sub>2</sub>  
— - CHROMATIC F#

The image displays a musical score for saxophone, titled "SAXOPHONE FULL RANGE MAJOR SCALES". The score is prepared by Scott D. Plugge, Professor of Saxophone at Sam Houston State University. It consists of 11 staves, each representing a different key signature: C, F, B $\flat$ , E $\flat$ , A $\flat$ , C $\sharp$ , F $\sharp$ , B, E, A, D, and G. Each staff contains a major scale written in treble clef, with suggested fingerings indicated by numbers 1-4 above the notes. The scales are written in a continuous line across the staff, with a final whole note on the line. The key signatures are: C (no sharps or flats), F (one flat), B $\flat$  (two flats), E $\flat$  (three flats), A $\flat$  (four flats), C $\sharp$  (one sharp), F $\sharp$  (two sharps), B (three sharps), E (four sharps), A (five sharps), D (two sharps), and G (one sharp). The notation includes slurs and articulation marks (sd) for specific notes in the F $\sharp$ , B, and G scales.

### CREATIVE PRACTICE TECHNIQUES

- When a technical situation presents itself, the performer must learn or teach themselves this coordination.
- Changing the rhythm of the technical passage to one of the following rhythms helps develop the physical memory necessary as well as develop “positive action.”
- Rhythms 1 through 4 are best suited for simple meters. (sub-division of two, etc.)
- Rhythms 5 and 6 are best suited for compound meters. (sub-divisions of three, etc.)



### **THREE LEVELS OF PRACTICE**

- First level is all technical (see techniques listed above)
- Second level is “Contextual.” Practice getting across the bar line.
- Third level is “Continuity and Consistency” (this is only achieved through slow practice!)

Many performers never go beyond the first level of practice, hence never achieving the level of consistency necessary to be successful at any level.

### **THE MENTAL GAME**

Left Brain, Right Brain:

- The left side of the brain is the technical side.
- The right side of the brain is the abstract or creative side.
- Generally, students practice on the right side of the brain, because they are in a low stress environment and do not fear the mistake; hence they do not make one.
- When a student performs, they generally will try to perform on the left side of the brain. (High stress environment, they want it to go well and be correct) This is where the problem lies.
- A performer should perform on the right side of the brain and practice on the left side. In actuality, both hemispheres must be involved at all times.
  - In the practice session, try to re-create the performance environment.
  - In performance, try to re-create the practice environment. (Do not fear the mistake)
  - Many of the above practice techniques will aid in this development.

NOTE: The state of mind is the one element that changes every time an individual performs. If a performer can begin to control the state of mind, he/she will become more consistent.

The following materials are included merely as resource information and are not considered comprehensive.

**RECOMMENDED HIGH SCHOOL LEVEL ALTO SAXOPHONE SOLOS**

Aria	Bozza	Leduc
Chanson et Passepied	Rueff	Leduc
Concerto	Glazounov	Leduc
Improvisation and Caprice	Bozza	Leduc
Sicileinne	Lantier	Leduc
Solos for the Alto Saxophone	Teal	Schirmer
Sonata	Creston	Shawnee
Sonata	Eccles/Rascher	Carl Fischer
Sonata	Heiden	Schott
Sonata	Hindemith	Schott
Sonata	Lunde	Southern
Suite No. 1	J. S. Bach/Londeix	Lemoine
Suite No. 3	J. S. Bach/Londeix	Lemoine
Tableaux de Provence	Maurice	Lemoine
Three Romances	Schumann/Hemke	Southern

**RECOMMENDED HIGH SCHOOL LEVEL TENOR SAXOPHONE SOLOS**

Ballad	Martin	Universal
Fantasia	Villa-Lobos	Southern
Improvisation and Caprice	Bozza	Leduc
Poem	Hartley	Tritone
Solos for the Tenor Saxophone	Teal	Schirmer
Sonata	Di Pasquale	Southern
Sonata	Stein	Southern
Sonate en Sol Mineur	G. F. Handel/Londeix	Leduc
Sonate No. 1	G. F. Handel/Londeix	Leduc
Suite No. 1	J. S. Bach/Londeix	Lemoine
Suite No. 3	J. S. Bach/Londeix	Lemoine

## RECOMMENDED SAXOPHONE EQUIPMENT

### Mouthpieces:

Selmer S80 C\* Highly recommended

Other Options:

Selmer S80 C**	Same as C*, but more open
Selmer S90	Different bore than C*, more open
Vandoren	Comparable, but less desirable than the Selmer
Rousseau	Comparable, but less desirable than the Selmer
Larry Teal	Comparable, but less desirable than the Selmer

### Ligatures:

Vandoren Optima	Excellent, however expensive (@^\$60.00)
Winslow	Excellent, however expensive and difficult to obtain (@^\$60.00)
Selmer	Adequate, inexpensive and easy to obtain
Bonade	Adequate, inexpensive and easy to obtain

### Reeds:

Vandoren	3
Hemke	3 or 3 1/2

### Instruments:

Student Models:

Yamaha	YAS- 23
Vito	

Intermediate Models:

Yamaha	YAS- 52
--------	---------

Professional Models:

Selmer	Super Action 80 Series II or III (Paris)
Yamaha	Custom YAS- 855 or YAS- 875

## RECOMMENDED JAZZ SAXOPHONE MATERIALS

### MOUTHPIECES

#### Soprano

1. Meyer 6m or 5m (hard rubber; m = medium chamber; 5-6 tip opening)
2. Otto Link (hard rubber or metal; 6-8 tip opening;)
3. Beechler (hard rubber; S, M, L chambers; 5-7 tip opening)
4. Claude Lakey (hard rubber; 4\*3)
5. Selmer (hard rubber or metal; D - E facing)

#### Alto

1. Meyer 6m or 5m (hard rubber; m = medium chamber; 5-6 tip opening)
2. Otto Link (hard rubber; 6-8 tip opening;)
3. Beechler (hard rubber; S, M, L chambers; 5-7 tip opening)
4. Claude Lakey (hard rubber; 4\*3)
5. Berg Larson

#### Tenor

1. Berg Larson:  
(hard rubber or metal; 95, 110 or 120 tip opening; 0 1, 2 or 3 chamber)
2. Otto Link (hard rubber or metal; 6-8)
3. Dukoff (metal; D6-8 *bright* or LC 6-8 *darker*)

#### Bari

1. Berg Larson:  
(hard rubber or metal; 95; 110 or 120 tip opening; 0 1, 2 or 3 chamber)
2. Otto Link (hard rubber or metal; 6-8)
3. Lawton (metal; 7\* or 8\*)

### METHODS

- |    |  |                |                        |
|----|--|----------------|------------------------|
| 1. | Patterns for Jazz  | Jerry Coker    | StudioPr Pub           |
| 2. | Jazz Conception for Saxophone<br>(basic; intermediate; advanced) | Lennie Niehaus | TRY Pub.               |
| 3. | Charlie Parker Omnibook  | Jamey Abersold | Joe Goldfeder<br>Music |
| 4. | A New Approach to Jazz Improvisation<br>(book and record set)    | Jamey Abersold | J. Abersold            |
| 5. | Scales for Jazz Improvisation                                    | Dan Haerle     | StudioPr Pub           |
| 6. | The Jazz Language  | Dan Haerle     | StudioPr Pub           |
| 7. | Various other transcriptions and methods                         |                |                        |

## Recommended Saxophone Sources

### Journals

*Saxophone Journal*. Needham, Mass: Dorn Publications, 1980-  
(Saxophone Journal, Inc., P.O. Box 206, Medfield, Mass 02052)

### History

Deans, Kenneth N. "A Comprehensive Performance Project in Saxophone Literature with an Essay Consisting of Translated Source Readings in the Life and Work of Adolphe Sax." D.M.A. Thesis. University of Iowa, 1980. 201 p. (Xerox copy. Ann Arbor: University Microfilms.)

Hemke, Fred L. "The Early History of the Saxophone." D. M. A. thesis. University of Wisconsin, 1975. 568 p. (Xerox copy. Ann Arbor: University Microfilms.)

Kochnitzky, Leon. *Adolphe Sax and His Saxophone*. New York: Belgian Government Information Center, 1949. 50 p. (Kochnitzky is available from North American Saxophone Alliance).

Street, William Henry. "Elise Boyer Hall, America's First Female Concert Saxophonist" Her Life as Performing Artist, Pioneer of Concert Repertory for Saxophone and Patroness of the Arts." D.M. thesis. Northwestern University, 1983. 149 p. (Xerox copy. Ann Arbor: University Microfilms.)

### Biography

Rousseau, Eugene. *Marcel Mule, His Life and the Saxophone* Shell Lake, Wisconsin: Etoile, 1982. 154p.

### Literature

Londeix, Jean-Marie. *150 Years of Music for Saxophone: bibliographical index of music and educational literature for the saxophone, 1844-1994 = 150 ans de musique pour saxophone; repertoire generals des oeuvres et des ouvrages d'enseignement pour le saxophone, 1844-1994/* by Jean-Marie Londeix; Bruce Ronkin, editor. Cherry Hill, N.J., USA:Roncorp, c1994. 438 p.

### Books

Kietzy, Daniel. *Les Sons Multiples aux Saxophones*. Paris: Editions Salabert, n.d. 80 p.

Kynaston, Trent. *Circular Breathing for the Wind Performer*. Paris: Editions Salabert, n.d. 80 p.

Londeix, Jean-Marie. *Hello! Mr. Sax or Parameters of the Saxophone*. Paris: Editions Musicales Alphonse Leduc, 1989. 81 p.

Schleuter, Stanley L. *Saxophone Recital Music: a discography/compiled by Stanley L. Schleuter*. Westport, Conn., Greenwood Press, 1993. 287 p.



## TBA Convention/Clinic 2003

### Videos

*Donald Sinta: Sinta on Sax*

*Eugene Rousseau: Eugene Rousseau\**

### Compact Discs\*

Eugene Rousseau, *Saxophone Colors*, Delos DE 1007  
James Umble, *Chamber Music-Dejeuner Sure L'Herbe*, Dana 001  
Laura Hunter, *Duo Vivo*, Crystal 651  
Arno Bornkamp, *Arno Bornkamp/Ivo Janssen*, Globe 5032  
Frank Bongiorno, *Classic Saxophone*, Lisio 1001  
Marcus Weiss, *Jeue Musik Fur Saxophone*, XOPF  
The Farier Sax, *The French Collection*, Allegro 1130  
The Farier Sax, *Diversions*, Sayd 436528  
Daniel Keintzy, *Daniel Keintzy Saxophone*, ADDA581047  
Lynn Klock, *Vintage Flora*, Open Loop 007  
Steve Mauk, *Distances Within Me*, Open Loop 012  
John Sampen, *The Contemporary Saxophone*, Neuma records  
*Chicago Saxophone Quartet*, Centaur CRC 2086  
Eugene Rousseau, *Saxophone Vocalise*, Delos DE 3188  
Timothy McAllister, *Visions*, Centaur CRC 2280  
John Harle, *Saxophone Concertos*, EMI

\*Compact Discs, Videos and the above books are available from:

Woodwind Service, Inc.  
P.O. Box 206  
Medfield, MA 02052  
Customer Service 1(800) 527-6647  
Fax 1(800) 359-7988

### Jazz Materials

Coker, Jerry. *The Teaching of Jazz*. Rottenburg, West Germany: Advance Music Publishing, 1989. 175p. (ISBN 3-89221-028-4)

Coker, Jerry. *Patterns for Jazz*. Lebanon, Indiana: Studio Pr Publishing, 1970. 172p.

Coker, Jerry. *Improvising Jazz*. New York, NY: Simon & Schuster, Inc., 1964. 115p.

Coker, Jerry. *Complete Method for Improvisation*. Lebanon, IN.: Studio Pr. Pub., 1980. 111p.

Gridley, Mark. *Jazz Styles: History and Analysis*. Englewood Cliffs, New Jersey: Prentice Hall, 1994. 442p.

## TBA Convention/Clinic 2003

Reeves, Scott D. *Creative Jazz Improvisation*. Englewood Cliffs, New Jersey: Prentice Hall, 1995. 260p.

Haerle, Dan. *Scales for Jazz Improvisation*. Miami, Florida: Belwin, Inc., 1975. 52p.

Haerle, Dan. *The Jazz Sound: A Guide to Tune Analysis and Chord/Scale Choices for Improvisation*. Milwaukee, WI.: Hal Leonard Pub., 1989. 88p.

Abersold, Jamey. *Charlie Parker Omnibook*. Atlantic Music Corp., 1978. 142p.  
(Eb; Bb & C versions)

Ricker, Ramon. *Pentatonic Scales for Jazz Improvisation*. Hialeah, Florida: Columbia Pictures Publications, 1976. 80p.

Ricker, Ramon. *Technique Development in Fourths for Jazz Improvisation*. Hialeah, Florida: Columbia Pictures Publications, 1976. 60p.

Nelson, Oliver. *Patterns for Jazz Improvisation*. Nolsen Music Company, 1966. 58p.

Campbell, Gary. *Expansions: A Method for Developing New Material for Improvisation for All Instruments*. Lebanon, IN: Houston Publishing, Inc., 1988. 80p.

Baker, David. *How to Play BeBop*. (vol. 1,2 & 3). Van Nuys, CA: Alfred Publishing Co., Inc.

Green, Bunky. *Jazz in a Nutshell: A Short-Cut to Jazz Improve*. Jamey Abersold Publications, 1985. 63p.

Higgins, Dan. *120 Blues Choruses*. 1979

Higgins, Dan. *The II-V-I Progression in Solo Form*. 1978.

Matteson, Rich and Jack Peterson. *Flexibility and Improvisational Patterns for All Treble/Bass Instruments*. Rich Matteson Music: BMI, 1978.72p.

Niehaus, Lennie. *Dexter Gordon: Jazz Saxophone Solos*. Milwaukee, WI: Hal Leonard Publishing Corp., 1989. 64p.

Kynaston, Trent. *Masters of the Tenor Saxophone: Bob Berg Jazz Tenor Solos*. Kalamazoo, Michigan: Corybant Productions Inc., 1987. 36p.

Kynaston, Trent. *Masters of the Tenor Saxophone: Bob Berg Jazz Tenor Solos Volume II*. Kalamazoo, Michigan: Corybant Productions Inc., 1992. 40p.

Kynaston, Trent. *Jazz Tenor Solos: Masters of the Tenor Saxophone Play the Blues*. Corybant Productions Inc., 1986. 34p.

## TBA Convention/Clinic 2003

Niehaus, Lennie. *Jazz Conception for the Saxophone* (Beginner; intermediate and advanced). Hollywood, CA.: TRY Publications, 1964. 41p.

Lawn, Richard. *The Jazz Ensemble Director's Manual: A Handbook of Practical Methods and Materials for the Educator*. Oskaloosa, Iowa: C.L. Barnhouse Company, 1981. 92p.

Haerle, Dan. *Jazz/Rock Voicings for the Contemporary Keyboard Player*. Lebanon, Ind.: Studio P/R, 1974. 42p.

Haerle, Dan. *The Jazz Language: A Theory Text for Jazz Composition and Improvisation* Hialeah, FL.: Studio P/R, 1980. 58p.

Haerle, Dan; Jack Petersen and Rich Matteson. *Jazz Tunes for Improvisation*. (Eb; Bb; C and bass clef versions). Miami, Florida: Belwin, Inc., 1981. 80p.

Baker, David. *The Jazz Style of Cannonball Adderley*. Lebanon, IN.: Studio P/R, 1980. 117p.

Baker, David. *The Jazz Style of John Coltrane*. Miami, FL.: Belwin, Inc. 1980. 92p.

Kynaston, Trent. *Masters of the Tenor Saxophone Play Rhythm Changes*. Corybant Productions, Inc., 1988. 32p.

Coan, Carl. *Artist Transcriptions: Michael Brecker*. Milwaukee, WI.: Hal Leonard Corp., 1995. 127p.

*Artist Transcriptions: Joe Henderson, Selections from "Lush Life" & "So Near, So Far"*. Milwaukee, WI.: Hal Leonard Corp., 1995. 70p.

*Artist Transcriptions: The Best of Joe Henderson*. Milwaukee, WI.: Hal Leonard Corp., 1995. 118p.