# 

Online Magazine • Vol 31, Num 4 • April 2016



#### BW 2016

### The Future of the Bandworld

## MusiClips by Ira Novoselsky Bio



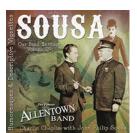
#### Gliding Girl Tango by John Philip Sousa

Album Title: JOHN PHILIP SOUSA: MUSIC FOR WIND BAND VOLUME 15

Recording: Marine Band of the Royal Netherlands Navy

Conductor: Keith Brion Publisher: Naxos 8.559745

The first of two Sousa CDs for this issue of BW comes from the magnificent Keith Brion series of recordings. Marchoholics will quench their thirst with Prince Charming, Ben Bolt, Volunteers, Yorktown Centennial, Pet of the Petticoats, Across the Danube, Legionnaires and Magna Charta. A pair of operetta selections also grace Volume 15; Electric Ballet from Act 2 of Chris and the Wonderful Lamp and Selections from Desiree. Also included is a tango some band enthusiasts may know; Gliding Girl. In addition to composing, Sousa was a gifted arranger as his fascinating transcription of Chopin's Eleventh Nocturne (Op. 37 No.1) will illustrate. The Band Came Back (later titled Showing Off Before Company) is almost the opposite of Haydn's Farewell Symphony and was often programmed by Sousa as the first piece after an intermission. The format of this work was for an instrumentalist or instrumental section to walk onto an empty stage and play a popular tune. This procedure continued until the entire band was present and Sousa came on at the end to conduct the final note(s). The version heard on this recording was made by Sousa's cornet virtuoso and assistant conductor Herbert L. Clarke and assembled & edited by Dan Reger.



#### **Humoresque - Listen to My Tale of Woe**

by Hubbard T. Smith/John Philip Sousa / Loren Schisse

Album Title: SOUSA:HUMORESQUES AND DESCRIPTIVE VIGNETTES

Recording: THE ALLENTOWN BAND Conductor: Ronald Demkee

Publisher: OUR BAND HERITAGE VOLUME 29: AMP-20059

For this issue's second of two Sousa CDs it is only fitting to have America's famous Allentown Band offer their musical finery. All the music in this collection is indeed descriptive whether it's the Straussian styled Intaglio Waltzes or the Prohibition influenced fantasy A Mingling of the Wets and Drys. Three of Sousa's Humoresques are included; these are Sousa's musical commentary on well known melodies. Swanee (Gershwin), Look for the Silver Lining (Kern) and Listen to My Tale of Woe (Hubbard T. Smith) are performed with interesting guises, variations and surprises. The Cubaland Suite needs no additional information as the music sparkles under the Spanish, American and Cuban flags. Four marches round out the program, the titles adequately portray their musical content: Mother Goose, Mother Hubbard, The Chantyman's March and Mikado March. A very enjoyable recording showing a hint of Sousa's "fun" side. P.S.-You'll love the cover!

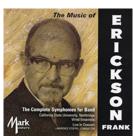
continued

### BW 2016

## The Future of the Bandworld

#### MusiClips by Ira Novoselsky Bio

Previous MusiClips Next MusiClips



#### **Third Symphony - Movement 1**

by Franik Erickson

Album Title: THE MUSIC OF FRANK ERICKSON: THE COMPLETE SYMPHONIES FOR BAND

Recording: California State University, Northridge Wind Ensemble

Conductor: Lawrence Stoffel Publisher: Mark Masters 51299-MCD

This fine recording has been long overdue, Frank Erickson has contributed so much music for band yet his most mature compositions have been sorely neglected. The three symphonies are among the best works by Frank Erickson but have fallen by the wayside to his "school band friendly" writings and apparently most directors never thought of them as serious compositions. The first symphony is from 1954 (revised 1956) and is a symphony in one movement of twelve minutes length. The second symphony from 1958 is a three movement work that Bourne sold as three individual movements: Intrada, Intermezzo, and Finale. The third symphony from 1984 gives a bit more exposure to the percussion section and was sold as a complete work. The live performances by Lawrence Stoffel and the CSUN Wind Ensemble are solid and perhaps will spur interest in Erickson's symphonies and other forgotten gems.



Octet - Sinfonia
By Igor Stravinsky

Album Title: SERENADE

Recording: University of Texas Arlington Wind Symphony Chamber Winds

Conductor: Douglas Stotter Violinist: Martha Walvoord Publisher: Mark 51930-MCD

Michael Daugherty's Ladder to the Moon joins three classic works for chamber winds in this excellent recording. Ladder to the Moon features solo violin and is a two movement musical tribute to the famous American artist Georgia O'Keefe. In the repertoire of chamber works for winds the next three compositions are hallmarks beginning with Serenade for Winds Op. 7 by Richard Strauss. This gem for thirteen winds was composed in 1881 when Strauss was seventeen years old. A wind nonet welcomes a cello and double bass in the beloved Serenade Op. 44 by Antonin Dvorak. The recording concludes with the legendary Octet by Igor Stravinsky, a challenging yet rewarding composition. There is always room for quality chamber winds CDs and this one is most welcome.

continued

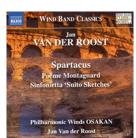
← Page Page ⇒ Select Page View as PDF Home ← Issue Issue ⇒ Issue Home

## BW 2016 The Future of the Bandworld

#### **MusiClips**

by Ira Novoselsky Bio

Previous MusiClips Next MusiClips



#### "Suito Sketches" Towards the Future

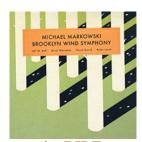
by Jan Van der Roost

Album Title: SPARTACUS: MUSIC OF JAN VAN DER ROOST

Recording: Philharmonic Winds OSAKAN

Conductor: Jan Van der Roost Publisher: Naxos 8.573486

The works of Jan Van der Roost are always an absolute pleasure for band music lovers. Following the success of Sinfonia Hungarica with the Philharmonic Winds OSAKAN (reviewed Volume 30 No. 1) this latest recording features Spartacus, Poeme Montagnard and Sinfonietta "Suito Sketches". With the dedication to the great orchestral works of Ottorino Respighi Spartacus is resplendent with the grandeur and beauty of ancient Rome. Poeme Montagnard is an homage to the fifteenth century Countess of the Aosta Valley, Catherine de Challant, and also depicts scenic wonders of this area in Northwest Italy. The four movement Sinfonietta "Suito Sketches" is one of Van der Roost's most challenging compositions; each movement runs the gamut of instrumental virtuosity, lyricism, and imagery. Very highly recommended.



<u>iovRIDE</u> By Michael Markowski

Album Title: Michael Markowski

Recording: BROOKLYN WIND SYMPHONY

Conductor: Jeff W. Ball

Guest Conductor: Brian Worsdale Clarinet Soloist: David Gould Publisher: Available from the composer

The band music of Michael Markowski probably gained some initial attention from the 2006 First Frank Ticheli Composition Contest (Shadow Rituals was his prize winning work). Today the catalog of Michael Markowski is filled with music for band, orchestra and chamber ensembles as well as theater works and film scores. The band selections in this collection illustrate a multi-faceted composer of many styles and musical genres. The CD begins with joyRiDE (intentional spelling) which could be interpreted as "Beethoven's Choral Symphony in a John Adams' Fast Machine". Other compositions give a nod to "movie music", cartoons,art, literature and even sheer fantasy with each work given a most descriptive title leaving little doubt to the musician and listener's imagination. The clarinet artistry of David Gould is at the forefront of Unfamiliar Territory: Three Sketches for Clarinet and Wind Ensemble. The Brooklyn Wind Symphony serves up fine performances of a gifted composer's music you will be hearing a lot more from.

continued

## The Future of the Bandworld

#### **MusiClips** by Ira Novoselsky Bio

Next MusiClips



#### **Bright Morning**

by David Maslanka

Album Title: THE MUSIC OF DAVID MASLANKA: VOLUME 2

Recording: University of Utah Wind Ensemble Conductor: Scott Hagen

Clarinet Soloist: Myroslava Hagen
Publisher: MARK MASTERS 51902-MCD

The world of David Maslanka is a planet resplendent with deep philosophy and instrumental scoring mastery. The musical foliage is lush with lines of simplicity, beauty and silence to moments of virtuosity and intense drama. Concertino for Clarinet and Wind Ensemble is performed by the conductor's wife, a most accomplished clarinetist as illustrated by the demands of this work. Morning Star was commissioned for the inauguration of a concert hall. This is indeed a celebratory piece and, like Maslanka's On This Bright Morning, can symbolize a new beginning to architecture or life itself. The remaining composition is Liberation which incorporates a Gregorian Chant phrase sung by the band (choir or audience) within the framework of this emotional musical episode. The University of Utah Wind Ensemble excels in the performance of Maslanka's music.



#### **Interlude from The Garden of Earthly Delights**

By Leroy Osmon

Album Title: THE MUSIC OF LEROY OSMON: VOLUME 5 THE GARDEN OF EARTHLY DELIGHTS

Recording: University of Houston Moores School of Music Wind Ensemble

Conductor: David Bertman

Publisher: MARK MASTERS 51965-MCD Recorded live at WASBE 2015

The last time I reviewed a recording of Leroy Osmon's music was Volume 3 entitled Dia De Los Muertos (Volume 21 No. 1) from 2005. This was an outstanding program of young band music that has been rarely duplicated. The Garden of Earthly Delights is a ballet in three acts and is an absolute masterpiece for mature ensembles The influence of this work comes from the 1504 painting by Hieronymus Bosch. The panels of this triptych are The Garden of Eden, The Garden of Earthly Delights and Hell (with a malevolent bass trombone representing Bosch's vision of evil). Even without seeing the ballet the music is incredibly descriptive and will captivate the listener. A truly outstanding performance by the University of Houston Moores School of Music Wind Ensemble with David Bertman is most fitting for this original ballet. Bravo!

#### Beginning Snare Drum by Mark Ford

The snare drum seems pretty easy to play when compared to the other instruments in beginning band. While the wind players are dealing with embouchure, tone, and intonation, the snare drummers primarily have to know how to hold the sticks, strike the drum and count to four. (Hmmmm, maybe that's where those non-musician drummer jokes started?)

But all band directors know that bad habits can develop on any instrument if the student doesn't have a good start. So this article is designed to outline the basics in teaching a beginning snare drummer, which can lay the foundation for good technique and musical applications. The following are suggestions for the teacher to follow on the first couple of days of instruction.

#### **Equipment**

As simple as it may seem, young drummers need to understand the parts of the instrument. It is important for students to learn terms such as batter head, snare head, tension rods and snare adjustment. A quick lesson on what a good snare drum sounds like will also help the student understand what the band director expects. Take the time to show students how to set up the stand and secure the drum in place. To reinforce your introduction, give the students a diagram of a drum that they can take home and on which they can write in the parts of the snare drum.

#### The Grip

Introduce the matched grip to the students. This a common grip that utilizes the same approach in each hand—fulcrum of the stick between the thumb and the forefinger, with the remaining fingers lightly curled around the stick. It is important that the stick have some freedom in the hand. This may feel a little funny at first, but the snare stick needs to be able to rebound off of the batter head. A tight grip will impede this rebound and cause rolls to sound choppy and irregular.

I do not recommend starting students with the traditional grip (where the right hand uses the grip above and the left hand is turned over). The traditional grip was designed for drums that are played on an angle (like the marching drums of "yesteryear"). With current hardware it is easy to set the drum up with a level playing surface, reducing the need for the traditional grip. Some marching organizations such as DCI drum corps have held onto the traditional grip for visual appearance. If the student wishes to learn the traditional grip later there is usually little problem. But the matched grip is much easier for the beginning snare drummer. It is also the same basic grip that the students will use on mallet-keyboard instruments and timpani. Therefore, it is the most logical grip to teach to a beginner.

#### The Stroke

After the drum is set up with a level playing surface and the grip is taught, the student needs to learn the basics of playing. Choose a playing level of about five to six inches above the drum and have the student drop the stick naturally with the wrist from that level to the batter head. Keeping the grip intact (don't let the ring finger and little finger fly off the stick), the student should bring the bead of the stick back to its original playing level immediately after striking the batter head. Initiate the stroke with the wrist, not the arm. Playing slowly on counts one and three of a 4/4 bar, use the right hand only until the stick is moving smoothly. While playing with

## Beginning Snare Drum - Continued by Mark Ford

the right hand, the left-hand stick can stay at the playing level to act as a reminder for the student. Then reverse this process. After each hand has practiced this stoke individually, start alternating the strokes (right, left, right, etc.).

The student should be striking the drum about an inch off center of the batter head. This should give a full, resonant snare response. Be careful that the student does not throw or whip the stick to the head. Just dropping it naturally from the wrist with a good grip is the goal here.

#### Counting

As the students are playing alternating stokes outlined above, have them count "1-e-and-ah" (yes, those are sixteenth notes). Start this process on the right hand, so the right hand plays on the "1" and "and" and the left hand plays on the "e" and "ah." There is no need for written music at this time. The concept is to go slow and associate each stroke with a counting syllable. Later on, this counting of sixteenth notes will help the students to subdivide the beat and understand the concept of longer note values.

Now you can play an easy counting/playing game. By rote, the instructor can call out which count to omit as the students continue to play. For example, if the teacher calls out to eliminate the "e," the students would respond by playing "1-(e)-and-ah," keeping the same sticking for the three notes they play (right, right, left). They should still count the "e" but not play it. In this manner, the teacher can navigate the students through every sixteenth note permutation in a fun, easy way. Remember to go slow. Just because it's sixteenth notes doesn't mean it has to be fast.

#### Bouncing

Have the student let the stick drop from the same playing height without bringing the stick back to its original playing level. The stick should bounce evenly and the grip should stay intact. The fingers around the stick should relax slightly to let the stick bounce freely. This will take some practice. If the initial bounces are "buzzy," the student may be pressing into the drumhead with the stick. Strive for an open bounce that gradually diminishes to silence. Have the student try this with both hands. The goal is to have an equal amount of bounces with each hand. Remember to keep a proper grip and don't squeeze at the fulcrum.

After the student has practiced bounces, try another game. See if the student can bounce the stick only four times and then lift it back to its original playing height. Try three and two bounces, too. These bounces will be rather slow, but this game will help the student gradually learn to control the sticks.

Then you can return to the "1-e-and-ah" sticking exercise and add bounces. For example, the teacher can call out to bounce on the "1"s. The students would respond by tapping normal strokes on "e-and-ah" and bouncing the right hand on the "1." In the beginning, the student can bounce any number of bounces. As they gain control, the students should strive to have two equal bounces per stroke.

## Beginning Snare Drum - Concluded by Mark Ford

These bounces are the foundation for rolls that the student will learn later. It is important to begin bouncing the stick early, even though most method books do not introduce rolls until much later.

#### **Putting It All Together**

Introduce the students to musical notation. Since they have been counting sixteenth notes, hand out one page of four-bar exercises consisting of sixteenth notes and sixteenth rests. These first written exercises may need to be written out by the teacher. Have the students write in the counts for each exercise before they play. Then have them slowly play the selection while they count. Remember to keep alternating strokes beginning on the right hand.

Once the students can count sixteenth notes, it is easy to introduce eighth, quarter, half and whole notes. Now the young drummer has a reference with which to subdivide these longer note values. Although most band and snare method books do not start with this sixteenth-note concept, it is an invaluable resource for drummers as they enter these texts. They will be stronger rhythm counters and be able to keep better time by internalizing the sixteenth-note value. Keep returning to the fundamentals of stroke, bounce and grip as the students read with the band.

#### Resources

There are many excellent resource materials for the beginning snare drummer. For starters try the following texts: Primary Handbook for Snare Drum by Garwood Whaley (Meredith Music Publications); Mel Bay's Complete Snare Drum Book by Mario Gaetano (Mel Bay Publications); Alfred's Drum Method by Sandy Feldstein and Dave Black, Books 1 and 2, each available with videos (Alfred Publishing Company).

For intermediate to advanced players, check out Lalo Davila's Contemporary Rudimental Studies and Solos (Vision Publications). It is an excellent study of the basics of snare drumming and it comes with a play-along compact disc.

## Positive, Productive, Painless Rehearsals By Judith Grimes

Although the title is designed to attract the progressive reader, it translates directly to classroom management, rehearsal control, assertive discipline, and "Who's in charge in here, anyway?!" Regardless of how you state it, classroom discipline has become a major issue in today's schools. A rehearsal cannot be positive, productive, and painless unless the discipline/management skills are highly focused and visibly successful.

Consider this: If you are not able to convince the committee conducting your interview that you will be successful with classroom management (discipline), you will probably not be appointed to the position. Once on the job, be observed as a zookeeper instead of an organized artistic conductor, and you will not remain there! In order to experience that positive, productive, and painless rehearsal, the music educator must be able to identify three types of discipline problems:

- 1. Discipline problems the music educator will have.
- 2. Discipline problems the music educator will avoid
- 3. Discipline problems the music educator will cause.

Discipline problems that you will have deal with children who experience special difficulties. Crack babies entered the first grade in droves this year. Abused children carry great burdens to the classroom. EHS (emotionally handicapped students) are many times mainstreamed and, in some situations, not even diagnosed. The child who barks in the music classroom because he suffers from Tourettes Syndrome is another example of a discipline problem you might have and need special assistance in handling

Although the number of these children at risk is considerably higher than in past years, this category of problems is blamed for more disruptive classroom situations than it merits. For example, the barking student may be legitimate, but on the other hand, that barking may occur simply because the teacher ticked him off. Understanding the category is important and not placing all of YOUR problems in this category is also important.

Discipline problems you will avoid deal with preparation, flexibility, adolescent understanding, and focused stimulation. In other words, if the student is doing something he or she thinks is neat, appropriate, useful, and important, the rehearsal may be far more positive, productive, and painless than the class that is not relative and incredibly boring.

Problems can be avoided by utilizing strong general management skills intermingled with equally strong musical management skills. Strong general management skills are those productive organization aspects that facilitate the rehearsal. General management skills are easy to identify. An example of a strong musical management skill would be illustrated by the conductor who facilitates rehearsing the clarinets by assigning clarinet skill identification activities to the rest of the band. This particular musical management skill centralizes or focuses the energy of the entire group on a specific activity directed to a few students.

## Positive, Productive, Painless Rehearsals - Continued By Judith Grimes

The largest group of problems (negative or non-productive classroom interactions) are probably teacher-caused (referred to in this particular article as discipline problems you will cause). For this reason, "The Survival Kit" interviewed several successful teachers and asked them to submit something they did (probably only early in their careers) that actually caused discipline problems. The responses follow:

"My first year teaching I actually caused problems by making TOO MANY RULES. Students were challenged to find the loopholes."

"I love good literature performed at top-level ability, but I have also found that UNREASONABLE EXPECTATIONS sometimes force students to give up before they are halfway there."

"Goals are really important to me, and in my first few months of teaching, I neglected to make MY goals OUR goals. Students really need a direct visual connection between daily rehearsal and long-term goals."

"INCONSISTENCY still gets me into trouble. If I try to bend a rule to benefit one student, the others are in an uproar!"

"Students need to feel a direct part of the SELECTION OF MUSIC process. I always find that the students work harder for contest when they have an input on what we are playing. It is true that I personally select three or four numbers from the required list that might be contest possibilities, but the group has a major role in the final choice."

"It took me several years to understand how to PACE THE DEVELOPMENT of a piece of music. Imagine my surprise when I discovered that I didn't have to be a bear the two weeks before contest!"

"All I know is that EVERY INDIVIDUAL IS IMPORTANT Ignore one person, and sure enough, that will be your next discipline problem, or even worse-a drop out."

"If you want to have positive classroom control, then use a VARIETY OF TEACHING TECHNIQUES. Repetition is a must and-there is no way around it, but you can avoid boredom (both yours and theirs) by being creative."

"I thought all music students would be as dedicated as I was. No one had to motivate me as a child to work or to CHANNEL MY ENERGY. Surprise! Surprise!!"

"SMALL GOALS are just as IMPORTANT as large goals. The general discipline in my classroom greatly improved when I discovered that every student cooperates far more when he feels successful every day."

## Positive, Productive, Painless Rehearsals - Concluded By Judith Grimes

"My college supervisor told me to be firm and always let them know who was the boss. I was a REAL JERK! Now I do much better when I utilize my own personality and let the student have (or at least let the student think he has) a part in the classroom control."

"I read *Approaches to Discipline Rated Ineffective by Adolescents* in the Indiana Musicator. I discovered that I was one of the case studies Yes, I was a whiner. I've quit whining and it has made a big difference. Thanks for the suggestions."

It is your turn now. Have you ever actually caused any discipline problems in your class? Here's to your next rehearsal: May It be Positive, Productive, and Painless!

#### **Elements of Style**

#### by Elden Janzen

The well schooled musician is as style-conscious as a well dressed fashion model. The discriminating dresser would sooner stay at home than to be seen in the wrong gown for the occasion. Yet many of us who claim to be musicians plod through a march with little attention to note emphasis and length which is so important in identification of correct style. We allow our bands to warm up on a chorale without any clear perception of the difference between the two forms of music.

Our students clearly understand the importance of the right clothes for the right occasion. Teenagers readily adapt to fashionable trends by emulation of their peers, but unless they are taught, the likelihood of achieving correct style in music by imitation seldom happens.

For the sake of this brief discussion, let us agree on a simple (perhaps overly simple) definition of style. Achieving correct style can be as uncomplicated as the careful tailoring of (1) note length and (2) weight (or emphasis). Having said that, let me say that there is no more confusing information given of the normal printed score and part, than those marks and words which would help us arrive at the correct style. Common musical terms are more helpful than most of the marks which appear above and around the notes, for example: Cantabile—"in a singing (i.e. flowing) manner", Tenuto—"sustain full value", Marcato—"with greater than normal emphasis", Staccato—"separated or detached." All of these, and many others, clearly direct or imply note length and weight. Cantabile demands a smoothly connected series of tones, often slurred; staccato requires just the opposite, a shortening of note length with proportionate periods of silence between notes without additional weight.

The addition of marks indicating articulation, accent, marcato, and staccato frequently serves to confuse or mislead a conductor or performer. These are marks which originated in the orchestra and have been distilled and adapted to the wind band. Here, the musician needs to know a great deal more about the piece, such as: historical period, composer, performance traditions, and a host of related facts which can help to interpret the music.

Let's deal first with a few of the most misinterpreted:

The staccato dot ( . ) simply means "shorter and lighter" within the dictates of the music period and tempo. The rule of thumb in judging note length in this case is to make the sound about one-half its original length. Hence the quarter note becomes an eighth and the eighth becomes a sixteenth in value. This, of course, is an oversimplification. Tempo has everything to do with the note length in every case. Inexperienced wind players usually convert the notes marked thus into sounds which are overly explosive and emphasized. The additional energy summoned to make the tongue and fingers or hand work faster also makes them work harder and usually our of character.

The horizontal accent (>) is often confused with the vertical (^) accent mark. These marks appear frequently and generously in band literature; there is no clear guideline for how the mark affects both note length and weight. The implication for the horizontal accent in jazz is to employ more weight from the tongue but to sound the note for its full value. In concert band literature the intent is usually to set the note apart from surrounding notes. This can be achieved by a slight shortening of the value with added breath emphasis. On the other hand, some band

## Elements of Style - Continued by Elden Janzen

composers write the adjusted value of these notes to reflect a shortened length, and intend the mark to indicate added emphasis. The vertical accent clearly demands a shortened note value with heavy added weight.

It is not unusual to see tenuto marks used over notes which are also slurred. The tenuto definition "full value" must take on a different meaning, generally implying more weight in addition to full value (which, one must assume, cannot be avoided when playing slurred notes.)

It seems clear that much of what we call "style" in music is subjective and depends upon the musical judgement of the teacher and conductor. Here then, it becomes our responsibility to apply an added dimension of knowledge about the historical period and composer.

Since much of the wind band literature is taken from the Baroque and early Classical periods. the functional instrument and musical intent of composers such as Bach are at least familiar to the conductor. Much of his music was written to be performed on the organ which, today is widely applied as a good example of breath support, phrasing and ensemble balance. The famous "green book" of Bach chorales transcribed by Lake has become an integral part of many bands' warm-up process. A number of Bach's smaller "prelude and fugues" have been transcribed and are on Grade III contest lists. Here, the conductor's judgment becomes an important factor in successfully interpreting such a work. The "prelude" falls comfortably into the sustained organ style of Bach's chorales; the "fugue" section does not always lend itself to the winds without some adjustment of note length. A purely sustained version of the fugue, for instance, in the "Prelude & Fugue in Bb" often lacks energy and transparency, and requires slight separation of quarter note values to maintain clarity as additional voices enter the ensemble. The eighth note values usually survive comfortably without adjustment, moderately connected as if coming from the organist's fingers at the keyboard. Dynamic variety is usually limited to "terrace" dynamics which were the norm for the instrument. This feature fits younger bands who are still developing technique and more basic playing skills without having to deal with frequent dynamic changes. Occasionally we see organ transcriptions with frequent and sudden dynamic changes; these are not likely to be those intended by Bach, but they can be used to enhance the performance.

The band library is generously supplied with transcriptions of pure romanticists, such as Wagner, Berlioz, and many living composers who prefer to market music in that general style. The Romantic "band hero" for many of us was Percy Grainger, whose legacy for the winds is still being uncovered and made available. In Romantic music we have a vastly different challenge in correct interpretation of style. The demands of every conceivable dynamic level from pppp to ffff is expected of the ensemble in addition to most conventional varieties of articulation. The emphasis is on basic tone quality and an enormous repertoire of tonal colors from the darkest to the lightest. Clearly, the music of the Romantic period demands mature musicianship as well as maturity in all technical aspects of performance.

Now, you say, I have you confused! How does one really learn about correct style in performance? You probably don't want to be told that you should have been more attentive when your sophomore music history prof administered those typical "drop-the-needle" tests in

## Elements of Style -Concluded by Elden Janzen

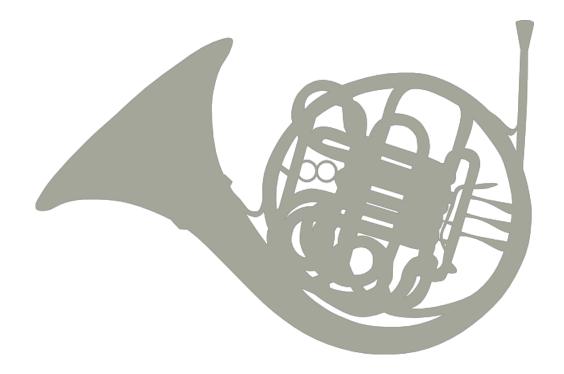
class. Neither do you have time at the moment to enroll in a graduate Symphonic Literature course at the nearest University.

Try this:

- 1. Pick up your major instrument and play through the lead lines of the band piece in question. Experiment with rhythmic accompanying parts; try different note lengths. Try to remember if you played a work by a composer of the same period in college. Really analyze your own playing and identify exactly what you do to each note in achieving what you consider to be a correctly styled performance.
- 2. Refer to a reliable music reference work. Buy one like The Dictionary of Music, pocket size, by Theodore Karp, published by Northwestern University Press. Look up anything which is not immediately clear to you, especially words on the score. Look up composers of every work you play; identify other works they have written with which you may be familiar. Own and study publications like Francis McBeth's book Effective Performance of Band Music, published by Southern Music Company, San Antonio, Texas.
- 3. Finally—listen to more music and identify the composer's historical period and style. Try to find original versions of transcribed works; many of the Bach pieces are recorded on organ. Composers like Hindemith, Persichetti, Dahl, Claude Smith, McBeth and countless others have recorded their own compositions. Listen to them. Continue to expand your knowledge about repertoire and start your own score library. As you listen and study, become more analytical of how each composer's music is interpreted differently, or in some cases, alike.



A Band Director's Guide to Understanding and Teaching the French Horn







Practical Application Project #1

MUSI 6285

Jonathan Bletscher

## Table of Contents

Introduction	4
Part One: Understanding the Horn	5
Horn History	5
Rotary Valves and Anatomy of the Horn	8
- Common Rotary Valve Problems	12
- Disassembling and Reassembling a Rotary Valve	14
- Replacing Rotary Valve String	21
Horn in F and Horn in Bb: Transposing Instruments	26
The Seven Chromatic Brass Fingerings	28
The Overtone Series	30
7 Fingerings, 7 Fundamentals, and 7 Series: Filling in the Gaps	35
The Partial Grouping Method	37
Horn Fingering Tricks	41
Trouble Fitting In: Why Horns Aren't Like Everyone Else (In the Brass Family)	45
Part Two: Teaching the Horn	47
Picking Your Horn Players	47
Equipping for Success	48
Posture and Holding the Horn	49
Making a Sound on the Horn	53
Common Problems with Horn Embouchure	56
Horn Fingerings	58
Instrument Maintenance	61
Developing as a Horn Player	63
Teaching Strategies	67
More to Learn	70
About the Author	71
Bibliography	72

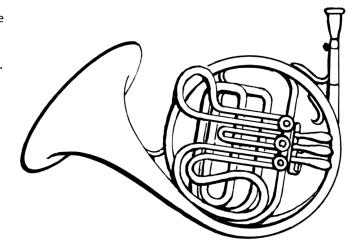
## Introduction

Consider a student who is about to begin the very first day of learning a foreign language. The student is presented with very basic vocabulary, is led to dabble in speaking and writing, and very slowly begins absorbing the sound, feel, and structure of the language. This is not unlike the experience of a student learning his or her first instrument. This slow and steady approach is designed to be the first step in a years-long sequence of instruction and study for a student who is brand new to the subject.

Now consider the teacher who provided the student's activities. A successful first lesson as described above must be planned and executed by a teacher who is already an expert on the topic at hand. The teacher is able to show the student where to start, what to do next, and which difficulties are likely to arise because the teacher already has a thorough understanding of the language. The vocabulary, grammar rules, and intricacies of the language's structure are no mystery to the teacher. His or her expertise is what generates high quality, accurate, and effective teaching to take place.

This prerequisite is just as true for teachers of band instruments. We know as band directors that we must strive for expertise on each band instrument, a process of demystifying the vocabulary, fingerings, embouchures, and intricacies of how each instrument functions. While there are no easy shortcuts to becoming an expert on the French horn, this manual aims to accelerate the learning process by teaching to teachers, not beginners. Rather than beginning with "How to Play the Horn," the goal is to jump right in to what makes the horn a challenging instrument to understand and teach. Please feel free to navigate and read this manual in the sequence that best fits your curiosities and previous knowledge. My hope is that readers of this book will find the curtain of con-

fusion often surrounding this instrument pulled back as rapidly and as easily as possible and walk away feeling much better equipped to teach students of any level about the horn. Becoming an expert in every instrument is a never-ending journey, but I believe you will find this manual to be a waystation worth your while.



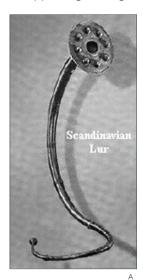
-Jonathan Bletscher

## Part One: Understanding the Horn

## **Horn History**

It is helpful to understand the origin of the modern French horn because it provides insight into why the instrument works the way it does today. As one of the longest brass instruments with an average 12 feet of tubing, it is fitting that the history of the horn reaches far into the distant past. Long, long ago, when the horns of animals began to be hollowed out to create instruments playable by human lips, the "horn" was born. In one form or another, the horn has been played continuously for 6,000 years. For many of those years, the horn was used as a communication device especially helpful for hunting. In truth, the use of the horn as a melodic musical instrument has only been taking place for a few hundred years.

By the late 15<sup>th</sup> century, the widespread use of the horn as a signaling instrument led to increasingly musical "horn calls". At that time, during the reign of French King Louis the XI, composers began to incorporate these musical horn calls into orchestral scores, elevating the status of the ancient instrument<sup>2</sup>. The hunting horn began appearing on stage in scenes depicting hunting, but it still had a harsh timbre that did not blend well with other



orchestral pit instruments. In fact, the Scandinavian Lur, a bronze, horn-like instrument, had already been put to use as a war-horn designed to generate loud, obnoxious, and frightening noise<sup>3</sup>. As hunting caught on as an aristocratic trend in western Europe, German and Austrian aristocrats began to desire higher quality "French horns" and skilled horn players to bring back to their courts. This motivated new developments in design and construction materials. Fashioning horns from metal allowed inventors to innovate and experiment, generating a variety of shapes, timbres, and new features for the instrument. In 1636, French musical scholar Marin Mersenne described 4 types of horns<sup>3</sup>:

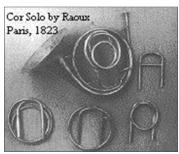
- ♦ Le grand cor (the big horn)
- ♦ Cor à plusiers tours (the horn of several turns)
- ♦ Le cor qui n'a qu'un seul tour (the horn which has only one turn)
- ◆ Le huchet (the horn with which one calls from afar)
  - ♦ The cor de chasse (hunting horn) is in this last category

Despite these innovations, the horn remained a fixed-length instrument and limited horn players to the natural overtone series (discussed later in this manual). Because of the close succession of overtones high in the overtone series, the high range of the instrument was the most useful for melodic playing. However, new designs were needed before the historic cor de chasse could become flexible enough to find a home with the orchestra. The earliest work-around to the overtone series limitation was to play multiple horns of varying lengths. The result was the combination of two or more overtone series, providing the musician (or group of musicians on different-length horns) some flexibility with a more complete set of notes. This allowed composers the option to write more complex melodic lines and parts for the horn in more than one key.



This instrument is from the Paris workshop of the famous Raoux family of brass instrument makers. They were especially noted for their hand-horns, which they raised to the highest standard of design and workmanship <sup>D</sup>.

However, using multiple instruments was cumbersome and inefficient. The invention of the horn "crook", an interchangeable piece of tubing available in varying lengths similar in construction to modern-day tuning slides, provided a way for musicians to change the length of the horn as needed<sup>3</sup>. Keep in mind that while this new control of the length of the horn allowed many more notes and keys to be played, it was still the close, upper overtones in the high range of the instrument that had to be used to play step-wise melodic passages. Remember this point as it will help us understand why the most-used overtones (or partials) on the modern horn don't seem to "match up" with the overtone system shared by the trumpet, trombone, euphonium, and tuba.

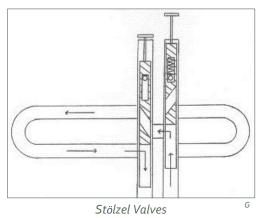


C



Following the development of the "crook" system, another notable innovation in pitch manipulation called "hand horn technique" was either discovered or perfected by Dresden hornist Anton Joseph Hampel sometime after 1750<sup>4</sup>. Hand horn technique (the predecessor of today's "stopped" horn technique) raised the pitch of the instrument by a half-step and made available a new set of chromatic notes. Due to these developments, the horn could finally be established as a regular, reliable orchestral instrument. This valve-less horn design, often referred to as the natural horn, played with crooks and hand horn technique remained in regular use until nearly the 20<sup>th</sup> century. Big names such as Haydn and Mozart took notice of the horn, which had finally matured, and wrote well known horn concertos<sup>3</sup>.

В



As the horn grew in popularity as an orchestral instrument, German horn player Heinrich Stölzel was preparing a revolutionary design that would become a cornerstone of brass technology for years to come. The "Stölzel valve" was first applied to the horn in 1814, and immediately following its patent there was a flurry of activity from instrument manufacturers looking to utilize this new technology<sup>5</sup>. Though most of the chromatic range had been possible on the natural horn for some time, the "in-between" notes achieved via hand horn technique had a distinctly different timbre due to the required blockage inside the bell of the instrument. Shortly after the introduction of Stölzel's valved horn, a writing appeared in the Leipzig periodical Allgemeine Musikalische

Zeitung (General Music Newspaper) remarking upon the improved consistency in tone and timbre Stölzel's valve brought to the Waldhorn (German term for the French horn):

"Heinrich Stölzel, the chamber musician from Pless in Upper Silesia, in order to perfect the Waldhorn, has succeeded in attaching a simple mechanism to the instrument, thanks to which he has obtained all the notes of the chromatic scale in a range of almost three octaves, with a good, strong and pure tone. All the artificial notes - which, as is well known, were previously produced by stopping the bell with the right hand - are identical in sound to the natural notes and thus preserve the character of the Waldhorn. Any Waldhorn player will, with practice, be able to play on it."

-Gottlob Benedict Bierey

Due to this superior quality of sound, not to mention the convenience of doing away with manual swapping of crooks, it was only a matter of time until the valved version of the horn exceeded the natural horn in popularity. Stölzel's piston-style valves are recognizable as the predecessor to the piston valves used in trumpets, euphoniums, and many tubas today. However, they are not the valves most commonly used today in the construction of the modern French horn. Rotary valves had been invented shortly after the debut of the Stölzel valve. Joseph Riedl of Vienna is credited with introducing a rotary valve design in 1832 which would lead to the modern form used today. Riedl's rotary valve overtook the piston design by the end of the 19<sup>th</sup> century and the rotary valve has remained the standard in French horn manufacturing ever since.

Valves overcame most of the original limitations of the natural horn, but there was still a matter of the key in which the instrument would be built. Manufacturers settled primarily on the horn in F because of its frequent usage in the orchestra, although the horn in Bb remained in production as an alternative. Once the inclusion of three rotary valves became the norm, the single horn in F was finally established more or less in the form we see it today.

Today, modern horn players typically prefer a horn one step further down the path of innovation: the double horn, which emerged in the late 19th century. Fritz Kruspe, a German horn maker, was the first to manufacture both single and double horns with rotary valves<sup>3</sup>. In a manner reminiscent of the old crook system, an additional fourth valve on the double horn re-routes the air through shorter tubing, thereby transposing the entire instrument from horn in F to horn in Bb. This allows performers to swap at will between the F horn's characteristic tone, "fatness" of sound, and accurate intonation and the Bb horn's ease of playing, accuracy in the high range, and rapid response<sup>6</sup>. While the double horn is the standard for most horn players, the single horn is still commonly used for its lightness, simplicity for beginners, and specialized use-cases in performance.

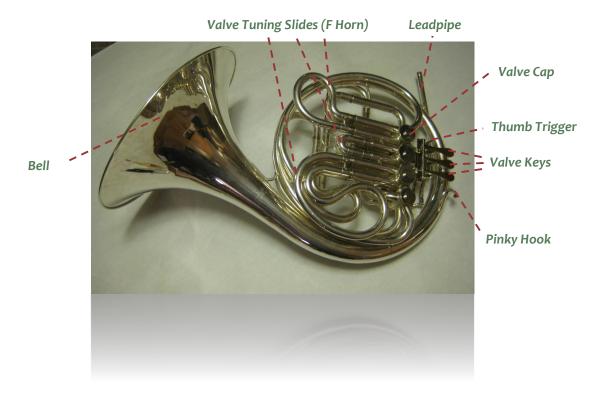
## Rotary Valves: Become a Spin Doctor

The piston valves used by most brass instruments can be complicated at times, but they have a maintenance advantage over the rotary valves of the horn. Piston valves are easily removed from their casings and can be opened up, examined, and put back in place in a matter of seconds. When piston valves have problems, it is relatively easy to inspect the valves, the valve casings, the valve guides, and the springs to start narrowing down the possible problems. The rotary valve offers no such convenience. The valve itself must be firmly seated within the valve casing in order to function properly, and the whole assembly is secured by a sizeable screw.

However, the assumption that rotary valves are "too confusing" or "hard to understand" is really a reflection of the fact that few take the little bit of extra time required to actually sit down and learn about them. In reality, rotary valves are still made up of just a few pieces, which we will examine. Rotary valves need oil, just like piston valves, and both types of valves slow down when they get dry or dirty. The most truly specialized part of the rotary valve is probably the string which transfers the player's finger motion into rotation of the valve, and with practice anyone can tie or replace these strings with ease.

Let's begin by looking at the pieces and parts of the horn and the rotary valve. Then we will move on to some common problems with rotary valves and figure out which ones you can learn to fix yourself.

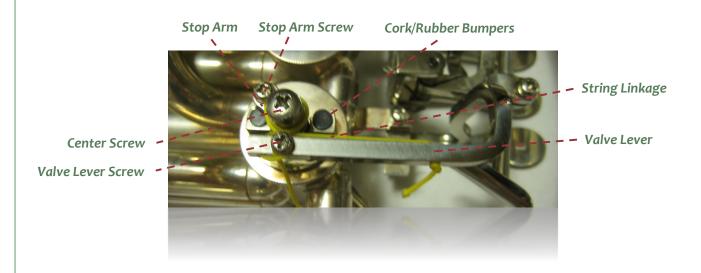
### **Anatomy of the Horn**



## Anatomy of the Horn (continued)



## **Anatomy of the Rotary Valve**



## **Anatomy of the Rotary Valve**

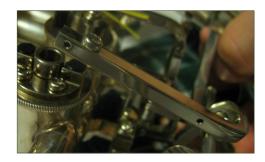
(Valve diagram on previous page)

There are multiple variations on rotary valve design, but one of the first things you may notice when looking at different horn valves is whether they use string linkage or mechanical/metal linkage. "Linkage" is just the term for what links the movement of the valve key to the actual valve so that it rotates. You can tell right away when looking at a horn whether there is string tied on the valves or not. If not, you're looking at metal linkage. String linkage is more common in general, but several quality models of single F horns are frequently produced with metal linkages. While the metal adds a little weight, the primary advantages are durability, simplicity, and generally low maintenance. No strings to break means no string-tying expertise necessary to replace those strings. Metal linkages do, however, generate a slight clicking sound of metal-against-metal as they operate, even when properly lubricated.

Because valves with string linkage are more common and require a bit more knowledge to maintain, this section will focus on that design. However, most of the information to come about lubrication, maintenance, and the components of the actual valves will be consistent no matter the type of linkage.

#### **Pieces and Parts**

- Valve keys Operated by the player's fingers to rotate the valves
- Springs Lift the valve keys which are not in use
- Valve lever Moves when a valve key is depressed. Must be linked to the valve by either string or metal linkage
- Valve lever screw Secures a part of the string linkage



Stop arm -



Controls how far the valve is allowed to rotate

- Stop arm screw Secures a part of the string linkage
- **Cork/Rubber bumpers** Receives the stop arm quietly and prevents the valve from rotating too far.



• **Center screw** – Secures the stop arm to the rotor shaft

Rotor – A single piece that rotates inside the valve. The
two stems of the rotor are referred to as the short shaft
and the long shaft. The long shaft on this rotor is shaped
so that the stop arm will only fit one way. This aligns the
rotation of the valve when fully assembled.





• **Bearing plate** – Sits on the short shaft, bears the rotation of the valve, and has a notch for aligning the valve within the valve casing

• Valve casing – Contains the rotor and bearing plate.



• Valve cap – Covers the bearing plate to prevent dryness and keep it clean.





## **Common Rotary Valve Problems**

Now that we have a shared vocabulary about rotary valves, let's look at a few things that frequently go wrong or need regular upkeep.

#### **Valves Get Sticky or Slow**

**Lubrication** is typically the go-to solution for improving the action of slow rotary valves. While lubricating rotary valves is not as simple as piston valves, it's also not rocket science. There are three main surfaces to lubricate, not including any metal joints in the linkage. You will need regular light **valve oil** (e.g. Al Cass Fast, like a trumpet might use) and a heavier **bearing oil** (e.g. Ultra-Pure Light Bearing Oil). Be aware that there are valve oils and bearing oils both labeled "Rotor oil". Ask a technician or music store to help you if needed.

Where to Lubricate: 3 Surfaces, 2 Oils

- 1. The bearing on the linkage side or "string" side (using **bearing** oil)
  - A few drops on the surface just below the stop arm
  - Work the valves to spread the oil
  - (Photo on the right shows a valve currently without string, but string does not need to be removed to apply oil)
- The bearing plate under the valve cap (using bearing oil)
  - Remove the valve cap and place a few drops of oil onto the rotor surface that spins
  - Work the valves to spread the oil
- 3. The rotor itself (using valve oil)
  - Pull out the valve tuning slide and put a few drops of fine trumpet valve oil into the tubes of the tuning slide you just removed. Do not drop the oil into the tubes that lead down to the rotor. The oil can wash the tuning slide grease (which is exposed while the tuning slide is removed) into the rotor, causing sticky valves<sup>16</sup>.
  - Reinsert the tuning slide with oil in it and tip the instrument to run the oil down to the rotor
  - Work the valve to distribute the oil

Metal-against-metal joints, especially ball joints common in metal linkage, should be lubricated with a small amount of lanolin based cream (e.g. Schilke Tuning Slide Grease) or a heavy weight oil (e.g. Hetman 15 Synthetic Ball joint Lubricant)







Dust and dirt accumulation is the other top cause for sticky or slow valves on any instrument. If the instrument has been in regular use but has not been thoroughly cleaned in over a year, it may just need a bath. Flushing the horn with water about once a month should be a part of regular maintenance, but a full bath with the valves removed should be done about every six months. See the tutorial below to learn about how to remove rotary valves properly. Following a complete bath, remember to reapply all lubrications, including grease for each tuning slide.

If lubrication doesn't solve the slow-valves problem and removing the valves on your own seems too scary or doesn't work, repair technicians will do full chemical or ultrasonic cleanings that remove dirt, oil, and even corrosion from inside the instrument.

### "Clanking" sound when working or releasing a valve

A hard metal-against-metal clicking or clanking usually means that something is loose in the valve assembly. The stop arm should sit snugly on the rotor shaft and be secured with a tightened center screw. It is possible for the plate that holds the rubber/cork bumpers to come a bit loose, so ensure it is tightly in place. Try listening closely to see if the sound is coming from any metal joints, especially if the horn uses a completely metal linkage system. If none of these pieces or parts seem loose, there may be some "play" in the rotor's fit inside the valve casing<sup>20</sup>. This is not a problem you'll want to try fixing yourself, so take the instrument to a qualified repair technician.

## Need to disassemble and reassemble the valves for bathing, cleaning, or other maintenance on the horn<sup>®</sup>

The horn needs a complete cleaning about once every six months to avoid corrosion and build-up inside the instrument. A thorough cleaning and bathing of the horn should include removal of the rotary valves. There is no reason to be afraid of doing this, though it can be intimidating at first. If possible, it is always helpful to learn from a qualified repair technician the first time you try something like this.

#### **Tools required**

- Small hammer or rawhide mallet
- The end of a roughly ¾" diameter dowel with a roughly ½" hole drilled in the middle or the end of a similar diameter piece of PVC pipe (2-3" long)
  - This is for tapping the valve back into place after it has been removed.
- Flathead or Phillips screwdriver that fits your screws, multiple sizes
- Make sure a small flathead is handy no matter what kind of screws you have.
- Small metal punch (optional)
- Valve oil (like basic trumpet valve oil)
- Bearing oil (heavier oil usually dispensed through a needle-like tip on the bottle)
- Horn string (Recommendation: Cortland Greenspot Dacron Trolling Line 50 lb. test)
- Old towel or some sort of cushion



#### Disassembling a Rotary Valve

1. Cut the string and remove it from the valve. Loosen the valve lever screw and the stop arm screw, but don't remove them. To be sure they don't come out, snug the screws back in place while working on the valve.





2. Remove the center screw from the rotor shaft. Use a slightly bigger screwdriver than you used for the valve lever screw and the stop arm screw. If working on multiple valves at once, make small piles of any removed pieces to be sure they are returned to the correct valves. You can use small labeled containers for keeping the pieces separate.



3. Remove the valve cap, then lay the horn valve-side down, string-side up.





4. Remove the stop arm. Take note of which way the stop arm is currently positioned to ensure you put it back the same way when you reassemble the valve. Use a thin screwdriver head to lift the stop arm off of the rotor shaft. Do this by pushing a small flathead underneath the stop arm and twisting to separate the stop arm.



<u>Note:</u> The stop arm can sometimes get stuck and become difficult to remove from the rotor shaft. First, try to find a thinner flathead screwdriver to fit underneath the stop arm.

- A less ideal solution for rare occasions is to tap out the rotor piece from the top *through* the stop arm. If using this method, be sure to place the old towel or cushion beneath the instrument before tapping. Simply take the instrument to a repair shop if you are not comfortable with this option.
- Place the metal punch in the center hole of the rotor shaft and lightly tap the punch with your hammer to remove the rotor from the stop arm and valve casing.



5. Remove the rotor. Be sure to place the old towel or cushion beneath the instrument before tapping out the rotor. This with catch it when it drops out. Tap lightly but directly down on the rotor shaft until it comes out.





6. Separate the bearing plate from the rotor if necessary. The bearing plate is on the short shaft of the rotor opposite the long shaft which you tapped on to remove the valve. It comes right apart from the rotor.



#### Reassembling a Rotary Valve

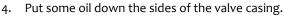
If the instrument has been bathed, brushed, and the valves wiped down and cleaned, lubrication will need to be reapplied during the reassembly process. If the valve was removed for a reason other than cleaning, relubricate as needed during reassembly.

- 1. Lay the horn down valve-side up, string-side down.
- 2. Separate the bearing plate from the rotor.



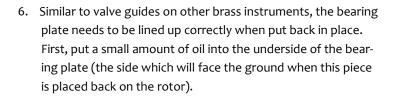
3. Apply a thin layer of valve oil directly onto the surface of the rotor







5. Holding the shorter end of the rotor shaft, place the rotor back into the valve casing with the long shaft toward the string side. Twist back and forth once the rotor is in the casing to ensure it rotates freely. Add a little more oil if the rotation is not smooth—this is by far the easiest time to apply oil to this surface of the rotor.





 Most horns have a little notch in the valve and a little notch in the bearing plate. Line up the two notches as evenly as you possibly can.





8. Remove the bell (if removable) or find a surface that allows the bell to hang off the edge.

- 9. Tap the rotor and bearing plate back into place.
  - Place the dowel with a hole in it or the piece of PVC pipe over the bearing plate
  - Check again that the notches on the bearing plate are lined up and have not been bumped out of place by the dowel/PVC.
  - 3. Tap 3-4 times firmly but not too hard on top of the dowel/PVC. (This piece applies even pressure as you tap everything back into place)
  - 4. The goal is to get the bearing plate "evenly seated" inside the valve casing. Look at the bearing plate from the side after tapping to check visually whether the plate is evenly seated (not sticking up higher or sitting down lower on any side). Be advised, there is a bit of an optical illusion when inspecting this because of the sloping threads for the valve cap.
  - 5. If done correctly, the rotor will be able to spin freely when twisted from the long end of the rotor shaft (currently on the underside of the instrument)
  - 6. If the rotor does not spin easily, the valve has not been seated correctly. Tap the rotor out again as you did in the last step of the disassembly process and try again.
  - 7. If you are unable to get the rotor and bearing plate seated correctly in three or four tries or can't figure why the valve doesn't spin freely when seated, it's time to take the instrument to a repair technician.





Bearing plate evenly seated.



Rotor spins/twists freely.



- 10. Flip the horn over to string-side up, valve-side down.
- 11. Replace the stop arm on the rotor shaft. Most stop arms will only go back on one way. If not, hopefully you took note of how the stop arm was positioned during disassembly.





- 12. Put the center screw back into the rotor shaft.
- 13. Flip the horn over to string-side down, valve-side up.
- 14. Oil the center of the bearing plate that rotates (if needed).
- 15. Screw the valve cap back on.



16. Re-string the valve (See *page* 21 about replacing strings on the horn)

## **Common Rotary Valve Problems** (Continued)

#### String comes untied or breaks

Restringing the valves on the horn is worth doing at least once a year, if not every six months or so, to prevent old strings from breaking. Before you walk through the steps of tying or replacing a string, let's get clear on the following terms and understand some basics of the string system:

#### Parts of the Rotary Valve String System (Review from pages 9-11)

**The string:** A durable piece of horn string or braided dacron trolling line. Monofilament line will not work. When replacing a string, cut a piece about 8 inches long so you have plenty of room to work.

**Valve lever:** The thin metal arm with two holes and a screw in it that is moved when depressing a valve key. Without the string, the valve lever is not attached to the rotary valve at all.

Valve lever screw: The small screw at the end of the valve lever.

**Stop arm:** The piece which visibly moves/pivots when the valve is rotated and allows only the proper amount of rotation to occur.

Stop arm screw: The small screw inside the stop arm.

[Center screw: The larger screw in the center of the valve. This screw is not involved in retying, replacing, or adjusting the string. It holds the stop arm firmly on the rotor shaft and is only removed when <u>disassembling</u> the entire valve (see page 14).]

#### Basics when replacing or adjusting rotary valve strings

- 1. Loosen both the **stop arm screw** and **valve lever screw** when completely replacing, removing, or retying the string.
- 2. Loosen the **stop arm screw** when you want to adjust the height of the valve key so that it lines up with the other valve keys.
- 3. Loosen the **valve lever screw** when you want to adjust the tension of the wrapped string. Too much tension can cause abnormal wear on the valve. Too little tension and the string may slip out of place.
- 4. Notice the term <u>loosen</u> is used and not <u>remove</u>. Not only are these two stringing screws small and easy to lose, but also the string must be wrapped around each of them during the stringing process. Try not to remove these screws or leave them loose any longer than is necessary.

#### Buying horn string in bulk

You can buy horn string at your local music store, or buy string in bulk by purchasing braided dacron trolling line (at least 50 lb. test). Dacron line is sold at most sporting goods stores. Monofilament line will not work.

The thicker the string, the slower the valve action. The thinner the string, the faster the valve action. Thinner string is more likely to fray and break, so look for the middle ground.



#### Replacing rotary valve string<sup>19</sup>

What you'll need...

- A flathead or Phillips screwdriver that fits the smaller stop arm and valve lever screws
- Something to cut the string (scissors should work just fine)

If restringing multiple valves, it is highly recommended to work on one valve at a time instead of removing multiple strings at once. It helps to have another valve left properly strung to provide a model in case you run into trouble.

Some find it helpful to have a simple tool to hold all of the valve keys in line. By taping two semi-flexible flat objects together (popsicle sticks work great!), you can create a tool which will slip down onto the valve keys and keep them straight as you work on the strings.

- Before you begin, cut the appropriate number of new strings from your supply. Each new string should be about 8" long.
- Loosen the stop arm screw and the valve lever screw.
- 3. Remove the old string by simply cutting it and pulling the scraps through the valve lever holes.



- 4. Tie a knot a couple of inches from the end of the string. You will probably need to tie one or two more additional knots on top of the first knot in order to make a knot large enough to avoid slipping through the hole in the valve lever. Thinner string may require even more additional knots.
- 5. Thread the string through the valve lever hole closest near the middle of the valve lever (not at the bottom). The string should be pulled through toward the valve leaving the knot away from the valve.
  - If the string became frayed in the cutting process, you can singe the end with a lighter or match and create a point by squeezing the singed end with a paper towel. Give the string a pull to be sure the knot doesn't slip through the hole.





6. Pull the string down so that it is parallel with the valve lever and wrap the string under the center of the valve (where you see the center screw).

7. Now, looking down from the top, wrap the string in the first loop (of what will eventually be a figure-eight) that goes *left* around the stop arm screw (you may need to use both hands to help the string stay down as you wrap), and up between the stop arm screw and the center of the valve.

<u>Clarification</u>: After the string wraps around the stop arm screw, the string can't go back the way it first came in under the center of the valve. Go the other way (up toward the valve keys).





8. Before going further, use your thumb to hold the stop arm in its down position (away from the direction of the valve keys), lightly pull the string which is wrapped around the stop arm screw to remove excess slack, and snug the stop arm screw down to hold the string in place.



9. From here, wrap part-way around the center so that the string is headed down toward the remaining hole in the valve lever. As you start to thread the string through the empty hole in the end of the valve lever, be sure that your loose end was fed under the piece of string which first travelled down parallel to the valve lever.



Note: The figure-eight you're working toward consists of one small loop around the stop arm screw and one big "loop" around the center of the valve. This bigger "loop" is actually two segments of string on their

way to the valve lever from either side of the center of the valve, unlike the continuous piece looped around the stop arm screw).

10. Take the loose end of the string after threading it through the hole and loop to the *left* around the valve lever screw. Feed the loose end of the string *down through* the loop you're making (similar to a basic knot) before pulling the loop tight around the screw.

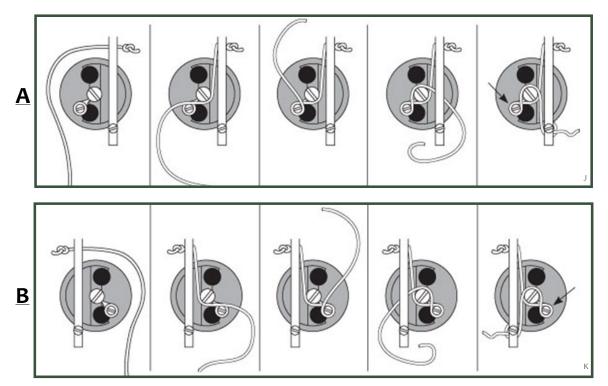




- 11. Snug the valve lever screw down to hold the string in place.
- 12. Cut off excess string. Singing or melting the end of the string at this point can help prevent fraying of the string in the future.
- 13. Check the tension of the string wrapped around the center of the valve. It should be able to move, but not be so loose that there's a lot of slack in it. If the tension needs adjustment, loosen the valve lever screw and either let a little slack in or pull a little slack through depending on the adjustment needed.

  If the tension is good, the height of the valve key can be adjusted by simply loosening the stop arm screw, moving the valve to the desired height, and snugging the stop arm screw back into place.

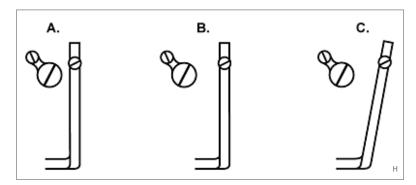
Here's an additional pair of diagrams for reference from the Paxman horns website. There are two sets of diagrams because there are two possible (mirrored) layouts when working with rotary valves. The instructions laid out above are described based on the layout in diagram A.



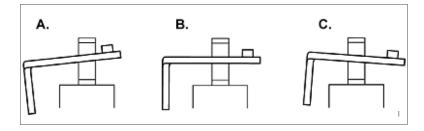
#### **Common Rotary Valve Problems** (Continued)

#### Valve lever out of place

Just because a rotary valve rotates does not mean the stringing job is completely trustworthy. In order to keep rotary valves working as quickly and smoothly as possible and to minimize wear on the string, check that the valve lever (or lever arm) is not far from its proper position:



**A** is the correct position with the valve lever very close to the stop arm. **B** and **C** will force the string to rub on itself and wear down more quickly.



**A**, **B**, and **C** are the three horizontal positions in proper valve lever action. **A** represents the valve before being pressed, **B** is half-way down, and **C** is fully pressed<sup>21</sup>.

The positioning of the valve lever is primarily a result of the way the string is tied. Adjust or replace the strings to reposition the valve lever. The valve lever in a metal linkage is anchored in place and should not become misaligned unless bent.

#### Stuffy sound or air does not flow through the horn

(How to check for misaligned rotary valves)

Normal wear and tear on rotary valves can eventually result in **misalignment of the rotor**. If a horn has been playing well until just recently, check to see if any of the rubber or cork bumpers for the stop arm have gone missing. In an emergency situation, a small wad of paper can serve as a temporary bumper. Have the bumper replaced at a music store, or purchase a length of rubber cord that can be cut to replace missing bumpers. Friction is usually sufficient to hold these in place, but you can use a very small drop of super glue if desired<sup>17</sup>.

Votaw Tool Company (votawtool.com) sells six inches of "rotary valve rubber stop cord" for about \$2 (3/16" or 4.76mm diameter). If making your own replacement, be sure to consider the sponginess of the rubber. A bumper that is too soft may not hold the valve in the correct position while a bumper that is too hard will probably be noisy.

If no bumpers are missing, check the alignment of the valve by removing the valve cap. Check first that the notch in the valve casing lines up with the notch on the bearing plate. If not, the valve needs to be reseated. You can do this using the steps for disassembling rotary valves (on page 14) or take the instrument to the repair shop.

If the notches on the valve casing and bearing plate *do* line up, look for the grooves/notches that rotate in the center of the bearing plate. There should be one notch that does not move and two grooves/notches set at a 90 degree angle that rotate when the valve is engaged. One of the 90-degree grooves should line up with the stationary notch when the valve is open, and the other should line up when the valve is engaged. If one or both of these grooves are misaligned, you may have worn out or dried out bumpers that need to be replaced <sup>17</sup>.

Though there is no replacement for a trusted repair technician, knowing the horn inside and out can save you money and headaches in the long run, especially when it comes to diagnosing or solving problems in an emergency before a performance or during class. The key to confident repair work should be very familiar to us as musicians—practice! Try out basic repairs on your own time so that you are equipped when the time comes to use these skills.

#### Horn in F and Horn in Bb:

#### Transposing Instruments

#### Horn in F

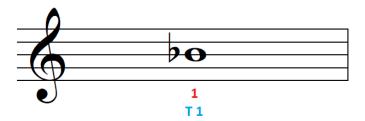
Let us take just a moment to be sure we understand that the horn is a transposing instrument. A vast majority of music written for the horn is in F horn music which is transposed up a Perfect 5<sup>th</sup> from concert pitch.



The handiest trick I know for helping teach students to deal with this transposition is to use the built in five fingers of the hand. Looking at my palm and pointing my fingers sideways, I assign the written note for the horn to the thumb and the concert pitch to the pinky. Each finger represents a letter name, and I can quickly "count" the letters up or down the hand to make the transposition needed. Counting pinky up to thumb transposes a concert pitch to the F horn note. Counting thumb down to pinky transposes an F horn note to concert pitch. Obviously this doesn't account for accidentals necessary to transpose a true Perfect 5<sup>th</sup>, but it gets students in the ballpark and it's enough to remind me which way I need to transpose.

#### **Double Horn**

On a double horn, when a player uses the Bb side of the instrument by pressing the thumb trigger, the player continues to read the F horn part. You will notice that the "thumb" fingerings in most method books and fingering charts are matched up next to their F horn counterparts:



The goal is to allow double horn players to use the Bb side of the horn as needed to play their regular F horn music (the Bb side provides better responsiveness and ease in the higher register). The "trick" for figuring out fingerings on the Bb side of the horn presented later in this manual follows this standard practice.

#### Single Bb Horn

If you or a student ends up with a single horn in Bb, remember the following declaration about the world of horn playing from professional horn player and Arizona State University brass professor John Ericson:

"Although pitched in B-flat, [fingerings on a single B-flat horn] are not thought of by the player as being in "B-flat" like a trumpet or baritone. For horn players, the world is always conceived to be in F. We would think of the fingerings as being the fingerings that we would use on the B-flat side ("thumb down") on a double horn when notated in F."

-John Ericson 15

#### Interlude: Before we go on...

I'm guessing you've already seen a French horn fingering chart, but the fact that you're reading this guide leads me to believe you could use some more help internalizing all those fingerings. I won't discount the value of rote memorization, but there is much to discover and learn by delving into the mechanics behind brass fingerings. The knowledge in the next few sections of this book covers far more than how to remember horn fingerings, although that's where this portion of the manual is eventually headed. If the information is new to you, this in-depth approach to understanding brass fingerings will be valuable, exciting, and possibly somewhat overwhelming. Take your time, look over the diagrams to let each topic soak in, and you will eventually master the beautiful patterns that allow brass valves to do what they do.



# The Seven Chromatic Brass Fingerings: How Valves Work

As you probably know, the purpose of a valve on a brass instrument is to change the length of the instrument's tubing. Each valve is built with a specific length of tubing attached, and depressing a valve adds that valve's tubing to the length of the whole instrument. The genius of the three-valve system is in the amount of tubing assigned to each valve. The 2<sup>nd</sup> valve has the shortest length of tubing attached and is long enough to lower the sound of the instrument by 1 half step. The 1<sup>st</sup> valve's tubing is long enough to lower the sound by 2 half steps (1 whole step). The 3<sup>rd</sup> valve has the longest length of tubing and lowers the sound by 3 half steps (1 and ½ whole steps). With these three lengths, we are able to achieve 7 different lengths of tubing by using the valves both individually and in combination with each other.

Valve(s) pressed	Sound lowered
o (open)	None
2 <sup>nd</sup>	1 half step
1 <sup>st</sup>	2 half steps
1 <sup>st</sup> + 2 <sup>nd</sup>	3 half steps
2 <sup>nd</sup> + 3 <sup>rd</sup>	4 half steps
1 <sup>st</sup> + 3 <sup>rd</sup> (*)	5 half steps
1 <sup>st</sup> + 2 <sup>nd</sup> + 3 <sup>rd</sup> (**)	6 half steps

These combinations create the **seven chromatic brass fingerings**. Notice that by using these fingerings in order, a musician can play a short descending chromatic scale of 7 notes. Take a moment to be sure you understand the table above. The reason there is no "3<sup>rd</sup> valve alone" fingering in this sequence is because the combination of 1<sup>st</sup> and 2<sup>nd</sup> valve also lowers the sound by 3 *half steps* but tends to be more in tune. For now, accept that 1<sup>st</sup> and 2<sup>nd</sup> valve is almost always the preferred fingering between the two options. This is due to manufacturing compromises and some physics of sound you will understand soon. It is critical that you memorize this sequence of fingerings and be able to recall them in ascending or descending order:

Some brass instruments include a 4th valve which, when pressed down, adds enough tubing to lower the sound by 5 half steps. This valve is designed to replace the 1st and 3rd valve combination which is, for a number of reasons, notoriously sharp. When the 4th valve is available, the last two valve combinations in the table above would be replaced by 4th (\*), then 2nd + 4th (\*\*). This type of 4th valve is typically found on tubas and euphoniums and is not the same as the thumb valve/trigger on a double horn.

123	13	23	12	1	2	0
0	2	1	12	23	13	123

To demonstrate these fingerings in action, let's look at an example of a brass instrument playing a 3<sup>rd</sup> space C in treble clef with *no valves* pressed down. By adding valves according to our seven chromatic brass fingerings, the following descending chromatic scale will result.



This concept is a very important reason for brass players to learn their chromatic scales. However, a full chromatic scale on any brass instrument is not as simple as repeating the entire set of seven chromatic fingerings over and over. Come to think of it, how exactly do brass instruments use just 7 fingerings to generate so many different notes? If you know something about **partials**, you're on the right track. The key to unlocking the fingering system for any brass instrument lies within a fascinating natural miracle we call **The Overtone Series**.

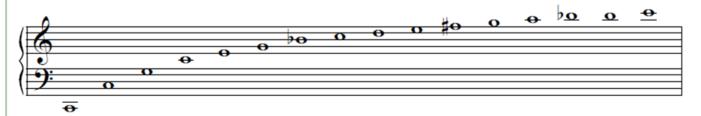


# The Overtone Series: The Music Theory of Nature

#### Introduction

To grasp how brass instruments achieve so many notes and to really understand how horn fingerings relate to fingerings on other brass instruments, you have to know the overtone series. If you haven't learned about this before, you're missing out on a deeper understanding of what's going on when we create or hear the vibrations of sound. The pitch and tone color (or **timbre**) of a sound is due to not just one vibration, but a whole series of vibrations at different frequencies taking place simultaneously. The overtone series is a beautiful marriage between the natural physics of sound and the bedrock foundations of music theory. This powerful tool will help you teach your students about pitch tendencies and alternate fingerings, and it will help you learn and remember the fingerings for brass instruments by understanding the pattern that makes them work.

#### The C Overtone Series



What you see above is a very elegant way of looking at the basic physics of sound. The low C on the far left determines the whole pattern, and we call that first note of the series the **fundamental**. We can choose any note to be the fundamental, but for the following examples we'll stick with C. Because we're using C as the fundamental, we call the diagram above a "C Overtone Series". What's fascinating is that this pattern was not made up by a teacher or composer somewhere along the way. The C overtone series is a natural phenomenon that occurs any time a C is produced by a voice or instrument of any kind. By "occurs," I mean that most or all of the notes you see in the series are produced *simultaneously* by that voice or instrument, even though what we *hear* is mostly the fundamental. We call the individual notes in the series which are above the fundamental **overtones**.

#### Timbre

Depending on the source of the sound, certain overtones will vibrate louder or softer than the others in the series. Even though we hear a C played by a tuba and a C played by an upright bass as the same pitch, each sound is like a different recipe with overtones as ingredients. One sound may include a lot more of the low overtones and just a touch of the higher overtones. Another sound might have a more even mix of high and low overtones. Each combination results in a distinct **timbre** (or tone color) that helps us tell the difference between different sounds, like a human voice versus the sound of a bass clarinet. Even though there is a lot of math and science behind the overtone series, music notation allows us to illustrate this concept in an approachable way.

#### Overtones, Harmonics, and Partials

The term "fundamental" is specific and always refers to the lowest note in an overtone series above which all the other notes are built (think *foundational*). But there are a few different terms that get thrown around when referring to the other notes in a series. Here's a clarification of the three most common:

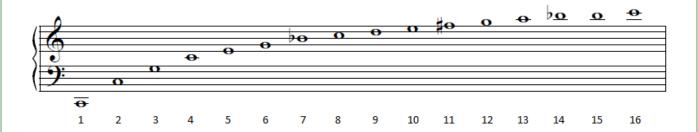
**Overtones** – The additional notes/vibrations *above* the fundamental in an overtone series that combine to create the timbre of a sound. (The first overtone in an overtone series is the first note *after* the fundamental. The fundamental is not an overtone.)

**Harmonics** – A general term used to refer to each of the notes/vibrations in an overtone series. (The first harmonic in an overtone series is the fundamental.)

**Partials** – A term used commonly by brass musicians to refer to each of the pitches in an overtone series which can be played with a single fingering by adjusting embouchure and airspeed. (The first partial in an overtone series is the fundamental.)

#### **Partials**

In the first part of this section about the overtone series, I discussed the fact that overtones combine all at once to create the timbre of a particular sound. Now it is time to focus on how these overtones are like a ladder that brass instruments can climb one at a time. As we move on from here, I will stick to the term **partial** to refer to the different notes in the overtone series which brass players move between as they play. Below is the overtone series with numbers which label each partial. 1 is the 1<sup>st</sup> partial, 2 is the 2<sup>nd</sup> partial, 3 is the 3<sup>rd</sup> partial and so on.



The length of a brass instrument is what determines which fundamental, and therefore which overtone series, it is able to play. Recall the history of the natural horn which was played for *years* but had no valves. The natural horn took advantage of the higher partials in the overtone series because they are close enough together to be combined into step-wise melodic lines. Fortunately for natural horn players, there are many more partials beyond the 16th partial which the horn is capable of playing. In fact, the horn can generate well-defined resonances up to the 22<sup>nd</sup> partial or beyond<sup>7</sup>! For now, though, let's stick to just 16 partials. After all, it's time learn (and memorize) how exactly the overtone series is constructed.

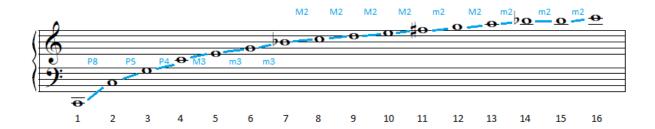
If you would like continue studying how the overtone series <u>specifically applies to brass fingerings</u>, you can come back to this section about "Building the Overtone Series" later. It is my goal to provide enough information for you to become comfortable with the overtone series. I hope you will eventually use it as an everyday tool in your teaching, but it is not necessary to have the overtone series memorized before reading the rest of this manual!

#### **Building the Overtone Series**

The ability to visualize the overtone series quickly and easily is an asset for any band director working with brass. Once learned, it aids in diagnosing pitch problems, fixing partial errors, and, of course, remembering brass fingerings. Find a strategy below that helps you remember how to build the overtone series, or study and develop your own!

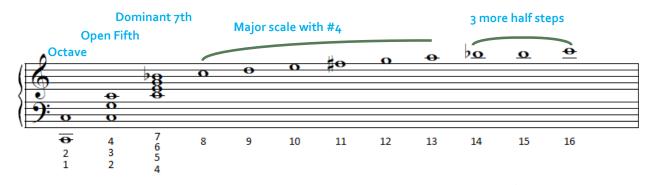
#### Strategy #1: Intervals

Though there are imperfections in tuning which will be discussed later on, we are lucky that the overtone series is built out of the intervals we already use in everyday music theory. OK, to be fair, luck has nothing to do with it. It is music theory that has been modeled after the physics of sound! You will see how the spacing between partials as they naturally occur in nature can be nicely described by intervals.



I find intervals to be the easiest way to remember how to build the first part of the overtone series because the partials are so far apart near the beginning. How fascinating that our three *perfect* intervals appear in order from biggest to smallest as the intervals between the first three partials. The list of intervals above may "click" for you as the best way to remember how to build the overtone series. However, if you find the whole list of intervals hard to remember, there is another way to think about the structure of the overtone series which unveils an even clearer link between the science of sound and the origins of harmony.

#### Strategy #2: Groupings



Forgiving for some overlap, we can see that the overtone series forms a few well known musical structures. The first two partials obviously form a Perfect Octave as we just saw above. Next, the  $2^{nd}$ ,  $3^{rd}$ , and  $4^{th}$  partials form an open-fifth chord. The next grouping of the  $4^{th}$ ,  $5^{th}$ ,  $6^{th}$ , and  $7^{th}$  partials forms a dominant  $7^{th}$  chord. Possibly the most important harmonic structure in Western Music is actually built into the natural overtone series. Mind blowing! Next we see the  $8^{th}$ ,  $9^{th}$ ,  $10^{th}$ ,  $11^{th}$ ,  $12^{th}$ , and  $13^{th}$  partials form six notes of a major scale with a sharp fourth scale degree (#4).

#### Strategy #3: Related Partials

Due to the math behind the frequencies of each partial in the series, there are groups of partials which are related to one another. Related partials are actually just different octaves of the same note in the overtone series. If you can remember these four groups of related partials, you can construct most of the overtone series, although the 9<sup>th</sup>, 11<sup>th</sup>, 13<sup>th</sup>, and 15<sup>th</sup> partials will be missing. It turns out that these groups of related partials each share the same pitch tendency (sharp, flat, or in tune). I will discuss the usefulness of this further in the section about horn fingering pitch tendencies. Note that each group is formed by repeatedly doubling the original partial number.



Partials 1, 2, 4, 8, and 16 are all octaves of the fundamental. In this case, C. These partials are generally in tune.



Partials **3**, **6**, and **12** are all octaves of the 3<sup>rd</sup> partial. The 3<sup>rd</sup> partial is always the "fifth" of the fundamental, in this case, G. These partials sound **sharp**.



Partials **5 and 10** are both octaves of the 5<sup>th</sup> partial. The 5<sup>th</sup> partial is always the "third" of the fundamental, in this case, E. These partials sound **flat**.



Partials **7 and 14** are both octaves of the 7<sup>th</sup> partial. The 7<sup>th</sup> partial is always the "flat seven" of the fundamental, in this case, B flat. These partials sound *very* flat.

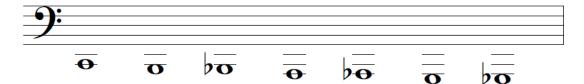
#### **Conclusion: Fundamentals**

It is critical to remember that the length of a brass instrument is what determines which fundamental, and therefore which overtone series, it is able to play. In all the examples of the overtone series so far, we used C as the fundamental and built the overtone series on top of that note. You may have noticed how low the fundamental C must be to keep the rest of the overtone series within or reasonably close to the grand staff. Oddly enough, even though the fundamental is hugely important in determining which notes a brass instrument can play, players rarely need to actually play the fundamental! Brass players tend to refer to really low notes like the fundamentals as "pedal tones", a name derived from the foot pedals on the pipe organ.

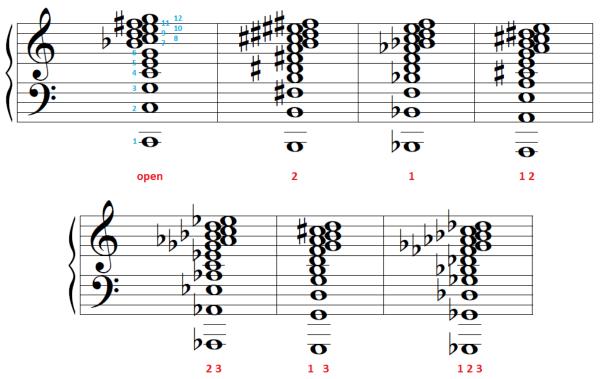
For more detailed information about the overtone series and brass pitch tendencies, check out "Partial To the Winds" (www.bandworld.org/pdfs/partialToTheWinds.pdf) and the video series that goes with it (www.bandworld.org/html/OvertoneIntro.html).

# 7 Fingerings, 7 Fundamentals, and 7 Series: Filling in the Gaps

Armed with an understanding of the overtone series, the partials it creates, and the fact that an instrument's length determines its fundamental, we can now do much more with our earlier discussion about the 7 chromatic brass fingerings. When all valves are open, the horn in F is constructed with C (F Concert) as its fundamental note (C written two ledger lines below the bass clef as in our overtone series examples earlier). Adding valves *lowers* this fundamental note a certain number of half steps depending on which valve combination is used. Refer to the chart on page 28 to review the effect of each of the 7 chromatic brass fingerings. Starting on C and using our 7 chromatic brass fingerings, we can see all seven fundamentals used by the horn in F:



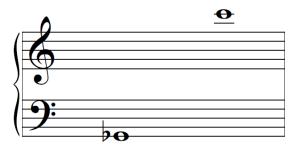
When the fundamental is lowered, the entire overtone series moves with it. 7 fundamentals means 7 different overtone series, each with its own complete set of partials that can be played without ever moving the fingers! Did someone say lip slurs? Fair warning, the diagrams in the next section can be overwhelming at first glance. As a comparison, remember that musicians often write chords both horizontally (like an arpeggio) and vertically (stacked in thirds). So far we have seen the overtone series written out horizontally, but below we see all 7 overtone series for the horn in F notated vertically. Only the first 12 partials in each series are shown for the sake of clarity. Notice the fundamentals at the bottom of each series match the set of 7 fundamentals shown in the diagram above:



What we are looking at is the complete spectrum of playable notes (up to the 12<sup>th</sup> partial) provided by the seven chromatic brass fingerings on the horn in F. It doesn't take too much imagination to see that as we smash all of these series together, they fill in each other's gaps and provide all the necessary notes to form three octaves of a continuous chromatic scale from Gb (bottom line of bass clef) up to G (on top of the treble clef).

There are even duplicate notes which appear in more than one of the 7 series. These duplicates are the basis of alternate fingerings. A note with alternate fingerings is a note which fits into more than one of the 7 overtone series, and therefore can be played with more than one fingering.

If we include notes up to the 16<sup>th</sup> partial, we gain an additional 5 notes for our chromatic scale that bring us up to C. Altogether, these 7 overtone series establish the primary playable range of the horn in F:



#### **Conclusion: Finding Fingerings**

Once you understand how to construct the overtone series and know where the 7 fundamentals are on each brass instrument, you have enough information to determine the fingering for any note. It's simply a matter of figuring out which of the 7 series the given note is a part of and using the associated fingering(s) from those series. However, due to the frequent occurrence of alternate fingering options when using this system, especially with notes found in the higher partials, you also need three rules to determine which fingering is the best.

Choosing preferred brass fingerings8:

- 1. The fingering with the fewest valves possible,
- 2. but not if it involves 3<sup>rd</sup> valve
- 3. or is the 7<sup>th</sup> partial of a series

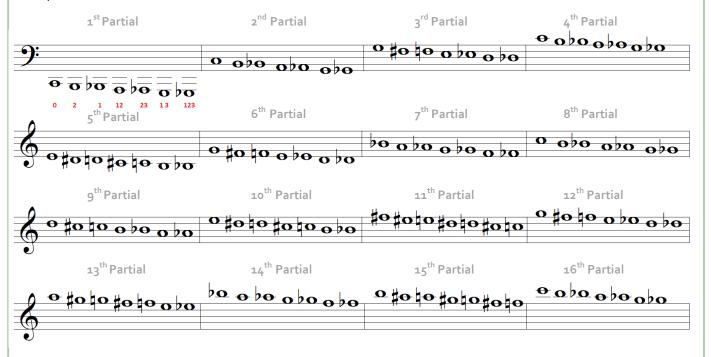
I believe that this technique is a complete and powerful method for determining fingerings on any brass instrument. However, in the interest of full disclosure, I also feel that using the overtone series in the way I have described is *initially* a very cumbersome way to determine brass fingerings. Until you memorize the construction of the series and practice enough to become an expert, finding fingerings this way can be too slow. In order to help you with horn fingerings in the meantime, I intend to provide you with alternate method that I find very helpful.

## The Partial Grouping Method:

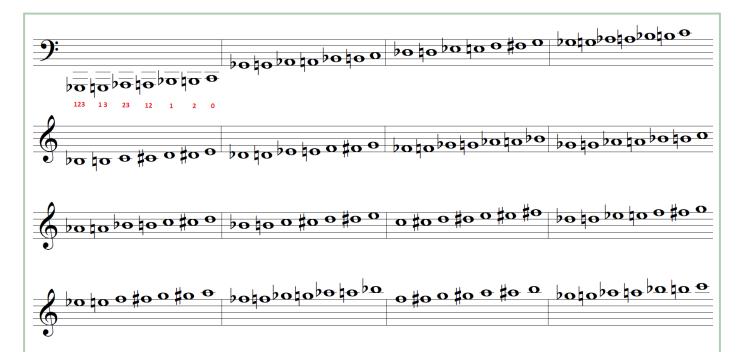
#### A Different Perspective

#### **Notes Per Partial**

This method of learning and memorizing brass fingerings focuses on individual partials one at a time rather than considering the entire series of partials generated by each fingering. The overtone series connects directly to the experience of playing lip slurs on a brass instrument. The partial grouping method connects directly to the experience of playing a chromatic scale which, as we well know, is incredibly useful for learning fingerings. Because there are seven chromatic brass fingerings, we can lay out all seven notes playable in the 1<sup>st</sup> partial, the 2<sup>nd</sup> partial, the 3<sup>rd</sup> partial, and so on. Take a look at how each of the first 16 partials of the horn in F contains seven possible notes:



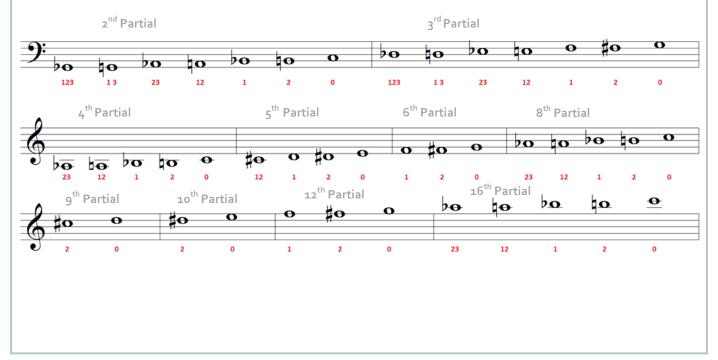
These descending chromatic scales are an excellent way to visualize each individual partial throughout the range of the horn in F. However, we're looking at far more notes than are actually used when playing. To make this diagram more useful, let's switch from the descending pattern of the seven chromatic fingerings to the *ascending* pattern.



Now that each partial is laid out in ascending order, we start to see more clearly how brass instruments are able to piece together their chromatic scales. Take a moment to consider how each partial connects to the following one. Some share *many* overlapping notes, while others share only a few. These overlapping notes are the origins of alternate fingerings. Notice that the 2<sup>nd</sup> and 3<sup>rd</sup> partials link perfectly together without any overlap!

#### **Building the Chromatic Scale with Partial Groups**

As I said earlier, playing a chromatic scale with valves is not accomplished by repeating the *entire* sequence of seven chromatic brass fingerings over and over. That would generate something like the diagram we see above—not a proper, smooth scale of half steps. By selecting groups from each partial determined by the rules for *preferred* brass fingerings and the partials which are most in tune, we are able to piece together the standard chromatic scale one partial at a time.



Some of the more obvious differences are the omissions of the entire 1<sup>st</sup> partial (the fundamentals which are rarely played), the entire 7<sup>th</sup> partial (in which, due to the mathematics of the overtone series, every note is extremely flat), and the entire 11<sup>th</sup>, 13<sup>th</sup>, 14<sup>th</sup>, and 15<sup>th</sup> partials

Notice that each time the scale passes an *open* fingering, we are moving into the next partial. We then jump *back* in the ascending sequence of chromatic fingerings far enough to account for the number of notes in the next partial. The set fingerings in each partial group uses at least the 2nd valve alone and open fingerings. The open and single-valve fingerings are the most in tune. The other fingerings are all combinations of valves which cause an adverse effect on tuning (See page 28).

#### **Fingerings from Partial Groups**

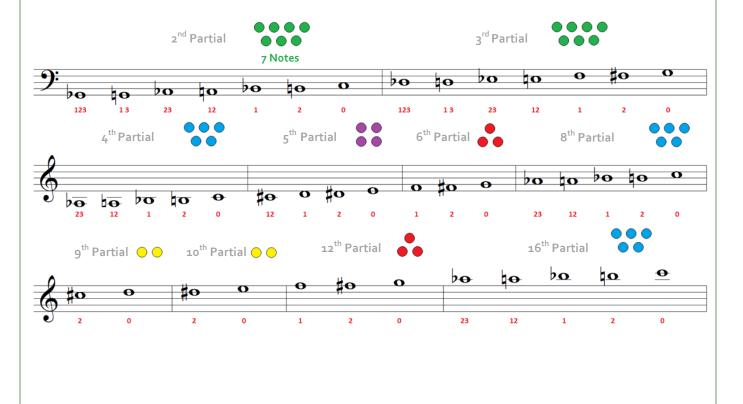
Now that we see how every partial grouping uses a predictable fingering pattern, we can memorize *chunks* of fingerings by simply knowing how many notes are in each partial group.

For example,

- A partial group with 7 notes uses the following fingerings: 123, 1 3, 23, 12, 1, 2, 0
- A partial group with 5 notes uses the following fingerings: 23, 12, 1, 2, 0.
- A partial group with 3 notes uses the following fingerings: 1, 2, 0.

It helps immensely to be able to quickly recognize which notes are generated by the open fingering when using this system to remember fingerings (which should be no problem if you've mastered the overtone series!). In this way you can find the "top" of any group and work down the chromatic fingering sequence to figure out the fingering of any note you see on the page.

For some, the chromatic scale diagram on the previous page is enough to absorb and remember this partial grouping method. However, I have provided colored dots in the diagram below as an aid for visualizing and memorizing the number of notes in each partial group:



Here are those dots laid out in sequence on their own.



The dividing lines in the sequence indicate which parts of this pattern I think makes sense together. The two 7's are the lowest range of the horn from Gb to G. The 5, 4, 3, 5 in the middle bring us through the middle range of the instrument up to third space C. In my experience, the most useful part of this entire pattern is the last part on the right for the upper range of the horn beyond C. In a moment, I will explain that there is a quick trick for horn fingerings if you are already confident with trumpet fingerings. However, this trick is not nearly as helpful in the upper range. If you can remember that the last four partial groups have 2, 2, 3, then 5 notes respectively, the fingerings above third space C will always be right at your fingertips.

Following third space C, we move up chromatically:

• Partial group with 2 notes: 2, 0

Partial group with 2 notes: 2, 0

• Partial group with 3 notes: 1, 2, 0

• Partial group with 5 notes: 23, 12, 1, 2, 0

Voila! The chromatic scale from third space C to C above the staff in a neat little pattern. I won't claim that the patterns in the partial grouping method are totally obvious or that seeing them once should be enough to remember them. Some study is required. However, I have experienced firsthand the usefulness of the partial grouping method for F horn fingerings, especially when remembering that last octave of fingerings from C to C.

Given enough time with the three diagrams in the last few pages, I expect you will be able to come up with the way of thinking about this pattern that works best for you. Remember, the partial grouping method and the overtone series are resources to make your life easier. They're fantastic shortcuts, but they aren't free! Spend some time dabbling in this material daily for a week or two and see if you can start to use these tricks to help both you and your students. Speaking of tricks, there are some even simpler systems for of working out horn fingerings if you have at least some brass fingering knowledge already.

# **Convenient Relationships:**Two Horn Fingering Tricks

#### **Bb Horn Fingerings**

Up until now there has been a glaring absence of any information regarding Bb horn fingerings. As you may know, or may have read at the beginning of this manual, most horn players use a double horn. The double horn is a horn in F, but it includes extra tubing and a special thumb trigger. When the trigger is depressed, the air is rerouted through a shorter section of tubing that changes the instrument to a horn in Bb. When playing on the "Bb side", there are also three additional pieces of valve tubing to account for the new, shorter length of the instrument. Consider the 2<sup>nd</sup> valve which is designed to add enough tubing to lower the fundamental of the instrument by 1 half step. A *shorter* amount of tubing is needed on the 2<sup>nd</sup> valve to lower the Bb side 1 half step because the horn in Bb is a shorter instrument to begin with.

All minutia aside, there is nothing too complicated about learning the fingerings for the horn in Bb. Because we know the horn in Bb is *shorter* than the horn in F, we know that the pitch relationship when moving from F horn to Bb horn is a movement *upward* when we add the thumb trigger. The distance from F *up* to Bb is a <u>Perfect 4<sup>th</sup></u>, and that interval defines the relationship between the two sides of the horn. If all of the diagrams and information about the horn in F presented in this document were transposed up a Perfect 4<sup>th</sup>, it would all be accurate for the Bb horn—the 7 fundamentals, the 7 overtone series, the 16 partials, and *all* of the fingerings (except two).

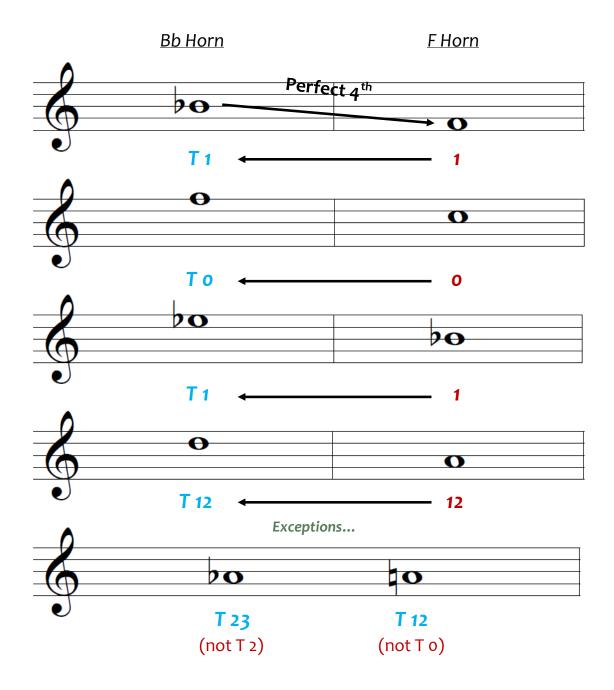
Because of this Perfect 4<sup>th</sup> relationship, we can use a simple trick to find the fingering for any note on a single horn in Bb or when using the thumb trigger on a double horn:

To find a fingering for the horn in Bb, transpose the written note you wish to play down a Perfect 4<sup>th</sup> and use the F horn fingering for that note.

Exception: The only exception to this rule is second space Ab and A natural. Using this Perfect  $4^{th}$  trick results in T 2 for Ab (**T** = thumb, for double horn) and T o for A natural. Standard practice is to play these notes with T 2 3 for Ab and T 1 2 for A natural.

Examples on the next page...

#### **Bb Horn Fingering Trick Examples**



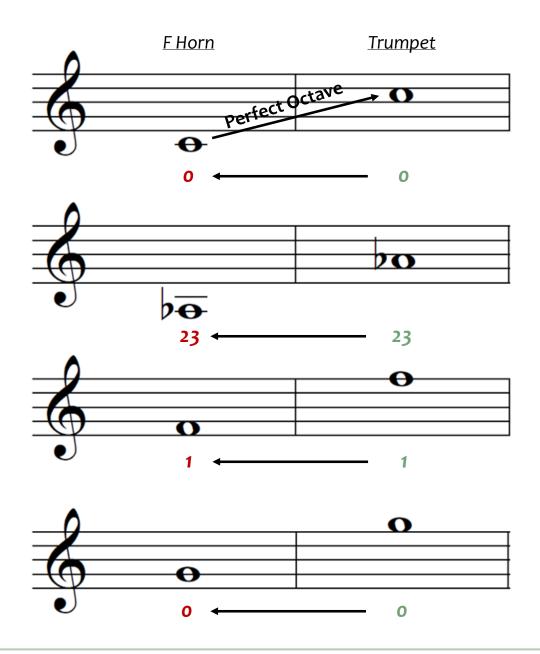
You now know the trick for finding any fingering on the Bb horn (or the Bb side of a double horn). This trick does require that you already know the fingerings of the F horn. What if you're still trying to learn your F horn fingerings? If you know trumpet fingerings, you're in luck!

#### **Relationship Between Horn and Trumpet Fingerings**

Every brass instrument uses the overtone series in order to build a full chromatic range of notes. This means that there are set relationships to be found between every set of brass instrument fingerings. Horn in F and horn in Bb relate to the trumpet according to the following rules:

To find an <u>F horn</u> fingering, transpose the written note up one octave and use the trumpet fingering for that note.

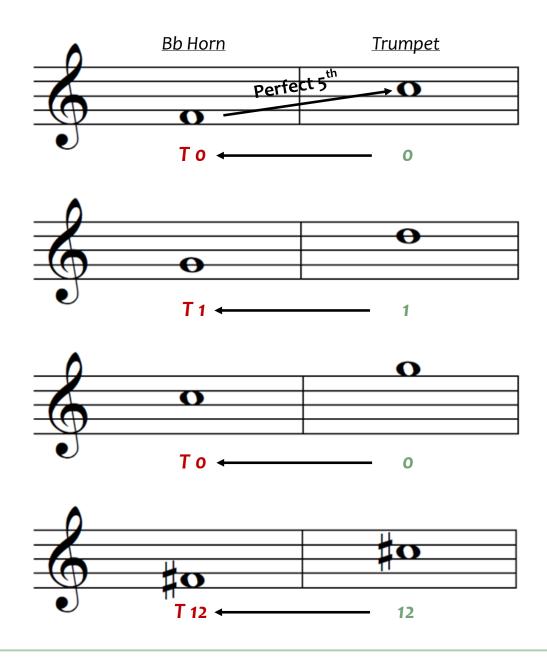
#### **F Horn/Trumpet Fingering Trick Examples**



To find a <u>Bb horn</u> fingering, transpose the written note up a Perfect 5<sup>th</sup> and use the trumpet fingering for that note.

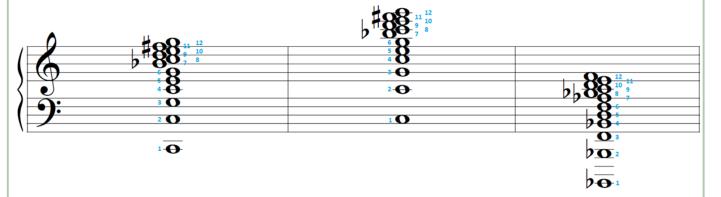
Exception: The same exception to second space Ab and A natural is true for this trick too. Using this Perfect 5th/ Trumpet fingering trick results in T 2 for Ab (T = thumb, for double horn) and T o for A natural. Standard practice on Bb horn is to play these notes with T 2 3 for Ab and T 1 2 for A natural.

#### **Bb Horn/Trumpet Fingering Trick Examples**

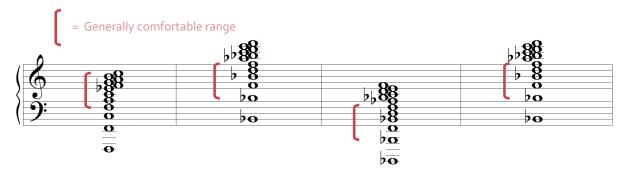


# **Trouble Fitting In:** Why Horns Aren't Like Everyone Else (in the Brass Family)

Before leaving this extensive portion of the manual on fingerings, partials, and the overtone series, I want to be sure I address a unique aspect of the horn's fingering system that caused me much confusion and frustration as a new band director. Coming to teaching as both a trombone and euphonium player, I found learning tuba and trumpet fingerings a snap. All the same partials lined up on all the same places on each instrument. But the horn just didn't cooperate. I couldn't figure out how the horn related to the other brass instruments and their fingerings. I didn't know any of the information you now know (assuming you've read the previous sections!). Fortunately, now that I understand the overtone series and have learned my horn fingerings, explaining why the horn doesn't seem to "match up" with other brass instruments is relatively simple. Take a look at the overtone series on horn, trumpet, and tuba for the open fingering:



At first glance, each looks to be quite different. It may not be immediately apparent why the trumpet series and the tuba series relate to each other so easily. You may also be rightly suspicious about the effect of transpositions in this visual comparison. Take a look at what happens when we transpose to concert pitch. The additional measure on the far right is the tuba series transposed up two octaves.



Suddenly the mismatch becomes clear. Though trumpet and tuba (and trombone and euphonium for that matter) sound in different octaves, they share a fundamental pitch (Bb Concert). Because of this, these instruments feel more or less the same to play, at least as far as partials are concerned. This is also a big reason why Bb Concert gets so much use in band. It's a solid note on an open fingering for all the brass—except the F horn.

The brackets on the diagram indicate a roughly 1 and ½ octave *comfortable* range on each instrument. Notice that the comfortable range for the horn lines up about a Perfect 4th away from the trumpet while the comfortable range of the transposed tuba series lines up exactly with the trumpet. A Perfect 4th is about as far away from "lining up" with the tuba and trumpet as one could possibly get, barring a frightening and awkward tritone separation (being an octave apart in this type of comparison is essentially the same as no distance apart).

The bottom line is that most brass instruments are designed to use just the first 9 partials to cover the majority of their playing ranges. The horn makes infrequent use of the 2<sup>nd</sup> and 3<sup>rd</sup> partials compared to how often those partials are used by the other brass instruments. This means the 4<sup>th</sup> partial on the horn feels similarly comfortable to the 2<sup>nd</sup> partial on other brass instruments (this point is, of course, a subjective one).

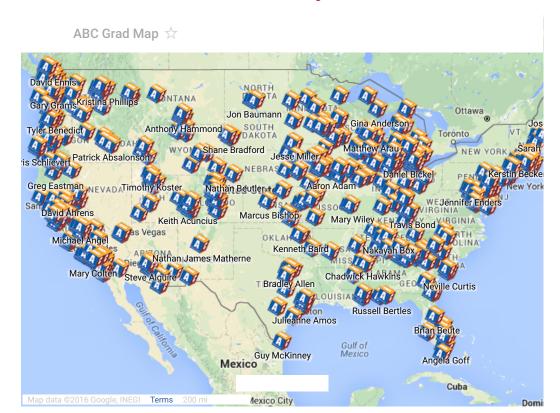
A most important take-away from these diagrams is not just understanding why this mismatch exists between the horn and other brass instruments, but also understanding the effect this built-in preference for higher partials has on the beginning horn student. When first learning the horn in F, most students begin with the 4<sup>th</sup>, 5<sup>th</sup>, and 6<sup>th</sup> partials (C, E, and G) because they fall in the comfortable range of the horn. These partials are only a Major 3<sup>rd</sup> and Minor 3<sup>rd</sup> apart, far more closely spaced than the Perfect 5<sup>th</sup> and Perfect 4<sup>th</sup> between the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> partials learned by other brass beginners. This presents one of the many unique challenges we must learn to overcome when trying to teach the French horn. From this point forward, this manual will attempt to identify many more of these educational challenges and provide knowledge, practical solutions, and tools to help you continue your journey toward becoming the kind of expert instructor we all wish to be.







#### Where Are They Now?



#### If map doesn't appear, click here.

As a fun way to keep up with some of the new and exciting things that the American Band College Graduates have been up to, we have added a new section to the magazine. It is our goal to interview a couple of graduates each issue as a way of staying in touch and sharing their successes.

For our groundbreaking series, we would like to share the successes of Matthew Conaway of Purdue University and Matthew Arau of Lawrence University. I guess that you can say it is Celebrating Matthews Month.

If you would like to be included in an upcoming issue, or nominate someone for this honor, please contact Ted at <a href="tedburton@bandworld.org">tedburton@bandworld.org</a>. Please don't be shy.

continued

Issue Home



#### BW 2016

#### The american Band College

#### Where Are They Now?

#### Matthew Arau

Year of Graduation - 2003

Current Position - Assistant Professor of Music, Associate Director of Bands and Chair of Music Education at Lawrence University Time in current position - 2nd Year

#### What was your background before ABC?

grew up in Sacramento. California where I fell in love with jazz. Some of my childhood musical highlights include performing with Dizzy Gillespie at the Monterey Jazz Festival and playing with my Dixieland band on the Mickey Mouse Club show at MGM studios. After high school, I attended Lawrence University in Appleton, Wisconsin where I graduated in 1997 with a Bachelor of Music in Music Education, Classical Music Performance, and Music Performance with an Emphasis in Jazz Studies and a Bachelor of Arts in Government with teaching certification in Political Science. I then moved to Colorado to begin my music-teaching career as the



assistant band director at Loveland High School and Walt Clark Middle School. The following year, I became the director of bands at Walt Clark Middle School in Loveland, Colorado. I found out about the American Band College from my roommate at the first Essentially Ellington Jazz Workshop for band directors at Snowmass, Colorado. I was immediately intrigued by ABC's focus on improving band directing skills, the quality of the faculty, and its timing in the summer so that I would not have to leave my teaching position to earn a masters degree.

#### Name some other accomplishments or awards since graduation.

Upon graduation from the American Band College in 2003, I was fortunate to be invited to join the staff of ABC and the Western International Band Clinic. While I was teaching at Walt Clark Middle School, my top performing group – the honor band – was a featured performing group at the Colorado Music Educators Association Conference in 2003. Moving to Loveland High School to become the director of bands in 2005 gave me more opportunities to employ what I had learned about repertoire and rehearsal techniques at the American Band College. The LHS Wind Symphony was featured at CMEA in 2008 and 2011 as well as at the Western International Band Clinic in 2011. The LHS Marching Band was the Colorado State Marching Band Champion in 2009. What I learned about leadership and working with people from the faculty at ABC greatly influenced my personal growth as a leader and teacher of leadership. In 2006, in response to the need for leadership training among my high school students, I created the Leadership Symposium, a forum for discussions on leadership principles and a venue to give voice to student ideas. Its success has led to presentations and clinics on leadership and unlocking potential at the Midwest International Band and Orchestra Clinic, the Western International Band Clinic, Music Educators Association Conferences in Wisconsin, Oregon and Colorado. As a Conn-Selmer Music Education Representative, I now give clinics on leadership, rehearsal techniques, saxophone and conducting. I also conduct camps, festivals and honor bands around the country. This May 2016, I will be guest conducting, giving the keynote address and performing a saxophone concerto in Nicosia, Cyprus at the first Wind Band Conference ever for the countries of Cyprus and Greece. The connections that led to this invitation are through mutual friends from Lawrence University and the American Band College! This summer, I am excited to be joining the ABC faculty to present sessions on teaching the saxophone and leadership

#### How did ABC help prepare you for these?

am grateful for the incredible education and connections that I made as a student at the American Band College. Every moment in class, and outside of class, helped prepare me to continually grow as an artist, conductor, music educator and personal growth motivator. Not only did I learn valuable content and knowledge from world-class faculty but I also learned about character, connecting, drive and excellence from the caliber of people that teach and study at the American Band College. I had the opportunity to play saxophone in ensembles conducted by conductor role models such as Frank Wickes, Colonel Lowell Graham, Colonel John Bourgeois, Anthony Maiello, Tim Lautzenheiser, Frank Ticheli, and Peter Boonshaft. I would not have had the opportunity to work with so many incredible teachers at any other traditional university setting. In addition, networking and learning from the close to 200 students each summer was invaluable.

#### What was your most memorable ABC experience?

have so many fond memories from my time at ABC but one that comes to mind is sharing drinks and dinner with Colonel Lowell Graham, Anthony Maiello, Tracy and Amy Wright at Pasta Piatti in downtown Ashland. We also had some great drives to Crater Lake, the Pacific coast and the Redwood Forest on our days off.

#### Who are you biggest influences/mentors?

Max McKee and Tim Lautzenheiser are two of my biggest influences and mentors. Both Max and Tim are examples of dreamers who have made their dreams realities. If Max and Tim had not gotten together, dreamed up ABC and WIBC and continually improved them, the programs would not be the thriving, life-changing events that they are today. Both ABC and WIBC are about putting people first and creating a family atmosphere designed to help students succeed at their highest level.

#### What advice do you have for young directors?

In addition to learning as much as you can about music, instruments, and rehearsal techniques, remember it is about the individuals that we teach. We need to truly connect with our students in order to make the greatest difference. The words of Teddy Roosevelt are just as true today, "nobody cares how much you know, until they know how much you care." Never stop learning; our personal and professional growth continues as long as we are open to new ideas and have a strong desire to improve. Keep performing on your primary instrument to keep your passion and musical skills fresh and alive.

#### Where do you see yourself in 10-20 years?

So much has happened in the past few years that it is hard to think about what the next 10-20 years could bring! I hope to continue my work as a professor, presenter and conductor to elevate the quality and importance of music education and artistry around the world.

Previous Grad

Next Grad



## The American Band College



#### Where Are They Now?

#### **Matthew Conaway**

Year of Graduation - 2010

Current Position - Assistant Professor of Bands at Purdue

University

Time in current position - Four years in August.

#### What was your background before ABC?

I grew up in Woodhaven, Michigan, and earned my Bachelor of Music Education degree from Indiana University (Bloomington) in 2001. After one year as a graduate assistant for the Purdue University Bands, I took the position as Director of Bands for the West Lafayette Community School Corporation (West Lafayette, IN), where I taught for ten years in grades 5-12.

#### Name some other accomplishments or awards since graduation.



While still a high school director, the NAMM Foundation named the West Lafayette schools as one of the "Best Communities for Music Education in America" in 2011 and 2012 (we were also recognized in 2006). I have enjoyed some success in the music publishing field, as I have had over 75 original compositions and arrangements published by the C.L. Barnhouse Company and the Hal Leonard Corporation. My music has been well-represented on the J.W. Pepper "Editor's Choice" lists, the BandWorld "Top 100" Compositions, and many other similar publications.

#### How did ABC help prepare you for these?

ABC provided a stunningly strong foundation in teaching fundamentals. The methodology behind beginning instrument instruction greatly impacted the way I taught my students. Even things like time management became much more focused after seeing the ABC approach. Of course, everything I learned about teaching the instruments greatly impacted my writing; I became much more developmentally aware of each instrument, which made writing educational literature MUCH more effective.

#### What was your most memorable ABC experience?

I have two. Sorry.:) The first was on my first concert, on a piece that I didn't play. Bruce Dinkins was conducting "Ave Maria" by Biebl, and the band was playing (and singing magnificently). I was seated in the percussion section just watching the sheer joy on his face as the band was perfectly in sync with him. When the band arrived at the final chord (a glorious, pipe-organ-esque C Major chord), he just mouthed the words "don't stop" to the ensemble, as they found every last bit of air in their tanks to keep that beautiful moment alive.

I have two. Sorry.:) The first was on my first concert, on a piece that I didn't play. Bruce Dinkins was conducting "Ave Maria" by Biebl, and the band was playing (and singing magnificently). I was seated in the percussion section just watching the sheer joy on his face as the band was perfectly in sync with him. When the band arrived at the final chord (a glorious, pipe-organ-esque C Major chord), he just mouthed the words "don't stop" to the ensemble, as they found every last bit of air in their tanks to keep that beautiful moment alive.

#### Who are you biggest influences/mentors?

As a conductor and educator, I greatly admire many of the great leaders I've played for and worked with... Ray Cramer, Stephen Pratt, Dave Woodley, Bill Kisinger, Jay Gephart, to name a few of the most prominent. As a publishing composer and arranger, I was (and am) fortunate enough to work with many amazing people who helped make sure my music was as good as it could be: Robert W. Smith, Andrew Glover, Andy Clark, Michael Sweeney, and Paul Lavender have had tremendous influence on my work, and I am so grateful to all of them for their help.

#### What advice do you have for young directors?

Devote yourself to your craft at the highest possible degree without sacrificing your family life. This is not anywhere near a 9 to 5 job. If you get home from work and you're not exhausted, you're doing it wrong. Your students deserve the very best you have to offer, and your best is NEVER good enough... you need to spend a lot of time and resources to continue your education however you can. Is this intimidating? You bet it is! Over your career, thousands of lives will be made better (or not) because of the experience and education you provide in your rehearsal room. If you're not willing to devote yourself totally to this effort, why are you doing it?? It will never be easy, but you will never be involved in anything as rewarding except your time with family and faith.

#### Where do you see yourself in 10-20 years?

I've learned never to answer this question! Five years ago, I don't think my answer would have included working with a Big Ten band department or releasing 15-18 publications a year. I certainly couldn't have expected traveling to Colombia, Spain, or Ireland with large performing groups, or conducting honor bands all over the country. The only answer I can really give is that I see myself still heavily involved in teaching and writing, but beyond that, I've learned to take things as they come and to embrace the opportunities that present themselves. I've had a very successful career on many levels, and for the next 10-20 years, I want to prove that I've been worthy of the success that has come my way.

Previous Grad

Next Grad

# BW 2016 The Future of the Bandworld

#### It'll Be Grand

#### Visit Ireland with Your Band

by Edelle Moss (photos/video - Max & Scott McKee)

St. Patrick's Day, 17th March, is the national holiday of Ireland. It is celebrated by people around the world, but the best place to be on St. Patrick's Day is in Dublin, the capital city of Ireland. An even better place to be is performing in the Festival narade.

St. Patrick's Festival is Ireland's leading multi-disciplinary arts festival which takes place annually over a 4-5 day period, in celebration of Ireland's national holiday.

The Festival showcases all that is good about Ireland both domestically and internationally. Its multi-faceted programme creates a carnival atmosphere, ignites Irish pride, creates uplifting powerful experiences and delivers lasting memories for the 1.6 million people who engage with the festival annually.

Street theatre and performance, pageantry, spectacle, culture, music, dance, literature, comedy, film, gastronomy, sport and more are presented as part of the diverse world class programme.

The Festival Parade on March 17th is the principal event on the programme and is an enthralling, moving piece of street theatre with stunning pageantry, created by leading street theatre companies and spectacular and charismatic performers. Bands from around the world provide the uplifting musical score for the Festival Parade.

The spectacular procession meanders through the heart of Dublin City mesmerizing the audience along the 2.7 km route. The world renowned parade passes many of the city's landmark buildings and historic sites including the GPO, Trinity College, City Hall, Dublin Castle, Christ Church Cathedral and St. Patrick's Cathedral. Bands enliven the streets of Dublin and display their musical mastery to a live audience and a televised live broadcast, which is streamed live internationally.

# St. ratrick's







Click here for FREE full band arrangement by Johan de Meij

# The Future of the Bandworld

#### It'll Be Grand

#### Visit Ireland with Your Band (continued)

by Edelle Moss (photos/video - Max & Scott McKee)

#### What Bands Can Expect:

- A very big heartfelt welcome from the people of Ireland
- 500,000 people viewing live on the streets (circa 120,000 travel from overseas to experience the parade live)
- 500,000 people watching the parade broadcast on TV in Ireland
- · Images & Footage are broadcast around the world
- A culturally rich and diverse international performance experience
- · An international band competition judged by an esteemed international panel of adjudicators (for bands that choose to participate)
- Cherished memories

#### Making the most of your trip to Ireland:

There are many performance opportunities for bands throughout the Festival programme but aside from performing, the Festival has many FREE events that will immerse band members in both traditional and contemporary Irish culture during their visit.

#### **Exploring Ireland:**

Ireland's music, art and literature have traveled the world and made an impact on millions of hearts and minds. Its vibrant capital city, Dublin, is a multi-cultural, creative hub with endless attractions, historic sites, land marks, coastal towns and villages to experience.

Many bands spend some of their time outside of the capital exploring Ireland, from the breathtaking Wild Atlantic Way, the longest defined coastal touring route in the world, where the powerful Atlantic waves meet Ireland's jagged western coast to Ireland's Ancient East, there is something for everyone to enjoy. For information about the Festival Parade please see

stpatricksfestival.ie or email bands@stpatricksfestival.ie. For information about Dublin see visitdublin.com.

continued

# St. ratrick



# The Future of the Bandworld

#### It'll Be Grand

#### Visit Ireland with Your Band (continued)

by Edelle Moss (photos/video - Max & Scott McKee)

#### **Future Festival Dates:**

2018: Friday, March 16th - 19th

2019: Friday, March 15th - 18th

2020: Saturday, March 14th - 17th

#### ATLANTIC GROUP TOURS

You can't go wrong with the owner of Atlantic Group Tours, John Cox. Scott and Max McKee both recommend that you contact him by email or phone. Tell him we sent vou.

garrai@msn.com (302) 526-7291

#### John Cox's 5 Travel Tips:

- 1. Contact AGT in ample time; some people commence planning two years ahead of trip.
- 2. Research all aspects of trip, including music events and possibilities.
- 3. Attend site inspection trip of Ireland with AGT.
- 4. Select 2 locations to be used as travel hubs in Ireland.
- 5. Use previous band directors' experience as resource.



Special Band Arrangement

Another way of showing just how much people love the Irish, check out the free, complete setting of the oldest Irish tune "Deirin De" from composer, Johan de Meij. Johan donated a score and complete set of parts for this special Irish issue. Download it today and program it on your next concert. It's superb.

By the way, that tune is part of Johan's "At Kitty O'Shea's" that we commissioned for the 2010 American Band College here in Ashland, Oregon. A 16-minute work, it contains some of the best Irish music you'll hear.

Listen to the Premiere Recording. Thank you, Johan, for adding this "grand" tune.







# ST. PATRICK'S FESTIVAL PARADE MARCHING BANDS 2016

#### THE ARTANE BAND

From: Dublin, Ireland.

Director: Mr. Ronan O'Reilly
The Artane Band has been in
existence since 1872 and has played
for many heads of state, in their long
history. They have a unique and long
standing relationship with the GAA
and are a well known feature of all
Ireland Sundays. The band will perform
the celebratory theme tune 'March to
Dublin' composed by Pete St. John for
the Lord Mayor of Dublin on O' Connell
St. during this year's parade.

#### SHORECREST HIGH SCHOOL HIGHLANDER MARCHING BAND

From: Washington, USA
Director: Mr. Vince Caruso
The band consists of over 100
musicians accompanied by bagpipes,
highland dancers and flags. The
band members are proud to wear the

traditional kilt and uniform of the Clan of Gordon. Shorecrest is unique among American High Schools in that it boasts a bagpipe band. Over the school's 53 year history, the band has performed in numerous national and international events and parades, winning many prestigious awards. This is the band's fifth time in Ireland

#### MONA SHORES HIGH SCHOOL SAILOR MARCHING BAND

From: Michigan, USA Director: Mr. Jason Boyden

This marching band has been entertaining audiences as the pride of West Michigan for over 50 years. The band has compiled an incredible record of success in a variety of venues throughout the state and nation. This is the first time the band will perform in Ireland. The Sailor Marching Band is part of a music department of over 750 students.

#### **CLONDALKIN YOUTH BAND**

From: Dublin, Ireland
Director: Mr. Vincent Dolan
One of the largest marching and concert bands in Ireland, they have won many awards over the years. They have performed every year in the Dublin Parade since 1989. The band is under the expert guidance and baton of Mr. Vincent Dolan, a graduate of the College of Music, Dublin and a full-time member of the Irish Army School of Music.

#### CHRISTOPHER NEWPORT UNIVERSITY MARCHING CAPTAINS

From: Virginia, USA
Director: Dr. John Lopez
The Christopher Newport Marching
Captains are a high energy college
marching band from Newport
News, Virginia. They perform at all
home football games at CNU and
other venues around the region, as
well as around the world. The band
was founded in 2004, and now
boasts one of the largest Marching
Bands in Division 3 Athletics.

#### WHITEWATER HIGH SCHOOL WILDCAT MARCHING BAND

From: Georgia, USA Directors: Mr. Jack Jean &

Mr. Madison Argo

Whitewater High School opened in 2003, in Fayette County Georgia. Under the direction of Mr. Jack Jean and Mr. Madison Argo, the band programme has grown to accommodate over 190 students. The Whitewater Marching Band consistently receives superior ratings and awards and has earned seven Grand Championship wins in the past seven years. The band also played very impressively in the Dublin parade in 2012.

#### **ESSEX MARCHING CORPS**

From: Essex. UK

Director: Ms. Hayley Meagher
Based in Castle Point, Essex, the Essex
Marching Corps is a youth marching
band. Previous performances include the
London 2012 Paralympics, the 02 Arena
and London's New Year's Day Parade.
With a repertoire of British Military
Marches to pop punk and rock classics,
they are very versatile and full of energy.
This is the band's first visit to Ireland.

#### COLORADO SCHOOL OF MINES MARCHING BAND

Prom: Colorado, USA

Director: Dr. Robert Klimek

This band, formed in 1924, is made up of university musicians who are also engineering professionals. They were three times winner of the Denver, Colorado St. Patrick's Day Parade, the largest one in western USA. They have performed at St. Peter's in Rome, Italy in 2013 and in the shanty towns of Lima, Peru in 2014.

#### CATHEDRAL HIGH SCHOOL 'PRIDE OF THE IRISH' MARCHING BAND

From: Indianapolis, USA

Director: Mrs. Kathy McCullough Cathedral School *Pride of the Irish* Band is almost 100 years old. The *Pride of the Irish* is the spirit centre of the school with over 120 students participating in the marching concerts and pep bands. They participate every year at the Indianapolis' Veterans Day Parade, the Hyberinan Parade and the St. Patrick's Day Parade. The Band performed in Dublin previously in 2000 and 2008.

#### **BAGAD DE VANNES MELINERION**

From: Brittany

**Director:** Mr. Etienne Chouzier This traditional band from Brittany was created after the Second World War. It is the oldest and the youngest Briton band at the same time because of the members' ages! Winner of "France's got Talent" in 2015, the band has made a huge contribution to Briton music in France and abroad. This is the band's first time playing in Dublin.

#### OLD DOMINION UNIVERSITY MONARCH MARCHING BAND

From: Virginia, USA

Director: Dr. Alexander R. Trevino Dr. Alexander Trevino established the Old Dominion University Monarch Marching Band in August 2008. They have performed in Raleigh, North Carolina, El Paso Texas, New Orleans, Louisiana and Washington and in many band competitions across Virgina. In 2013 and 2014 the band was crowned 'Best Marching Band' at the Grand Illumination Parade held in Norfolk

#### HAGERTY HIGH SCHOOL MARCHING HUSKIES

From: Florida, USA

Directors: Mr. Brian Kuperman &

Mr. Brad Kuperman

From the Paul J. Hagerty High School, the Hagerty Huskies are based just outside Orlando in Oviedo FL. The band program at Hagerty was formed in 2005. The 'Marching Huskies' are composed of Hagerty Symphonic Band and Wind Ensemble members, as well as a dance colour guard. In 2011 the Marching Huskies competed in and won the FMBC state Championships.

#### JOHN F. KENNEDY HIGH SCHOOL SHAMROCK REGIMENT

From: California, USA Director: Mr. Joshua Parsons

John F. Kennedy High School in La Palma, California opened in 1964 as the first High School in the United States to be named after the former President. They are known as the Fighting Irish. The High School recently celebrated its  $50^{\rm TH}$  Anniversary as an institution. The Kennedy Shamrock Regiment has performed in Ireland approximately every four years since 1974.

#### UNIVERSITY OF MISSOURI MARCHING BAND

From: Missouri, USA Director: Dr. Bradley Snow

University of Missouri, also known as Marching Mizzou, are the largest Band this year. They have been in Dublin previously in 2012, and will be remembered for a superb performance. Marching Mizzou, also known as the "Big 'M' of the Midwest," is comprised of over 300 students from nearly every major within the University. This time-honoured organisation boasts quality musicianship, unrivalled dedication and over 110 years of tradition.

Conductor

ONE STEP
Mose Trombone's Ah-finity

HENRY FILLMORE

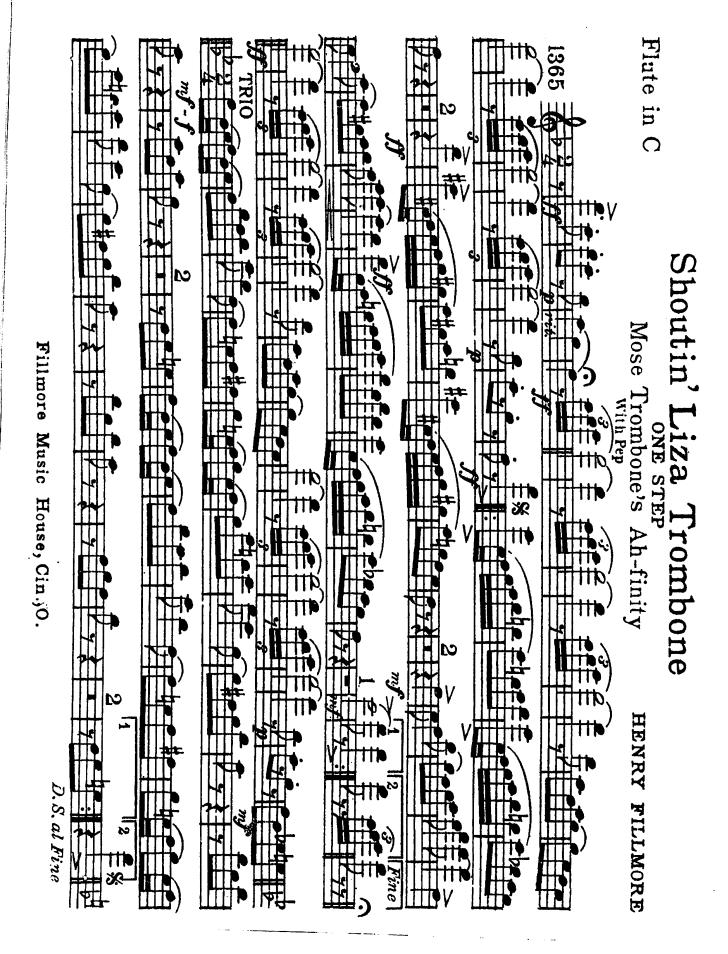


Copyright MCMXX by The Fillmore Bros. Co., Cin. O.

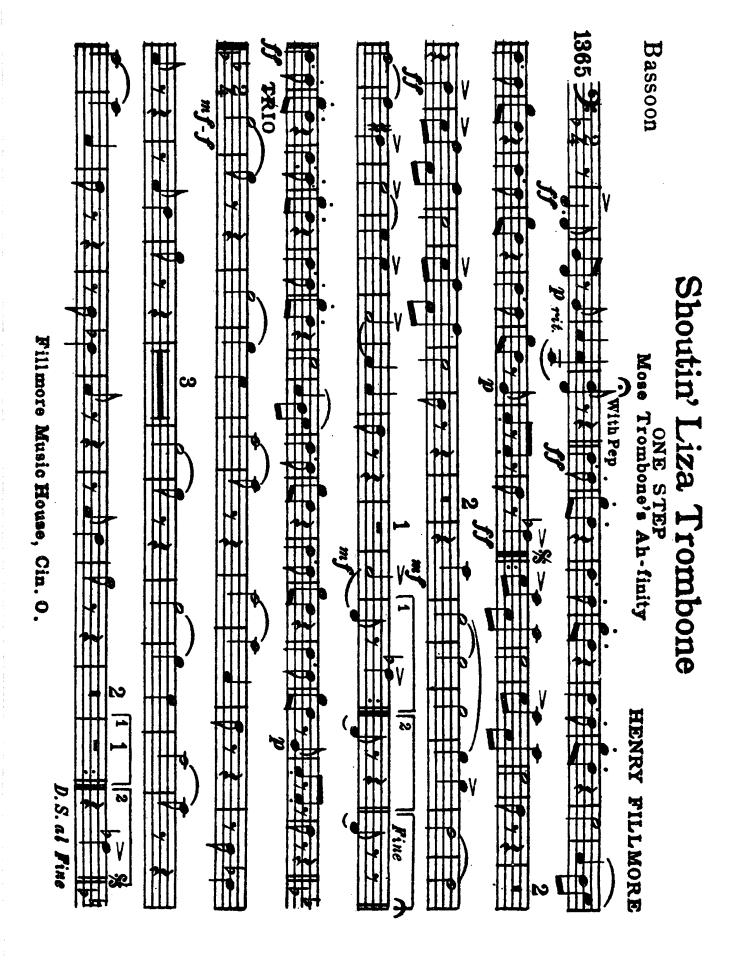
All rights throughout the world controlled by Carl Fischer, Inc., 56-62 Cooper Square, New York 3, N. Y. Copyright Renewed

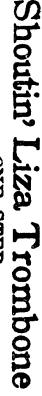


# 1



Page from Bandworld Magazine Online Ed. (Vol 31#4 • Apr.-June 2016) • More info at www.bandworld.org • Page 72 of 145

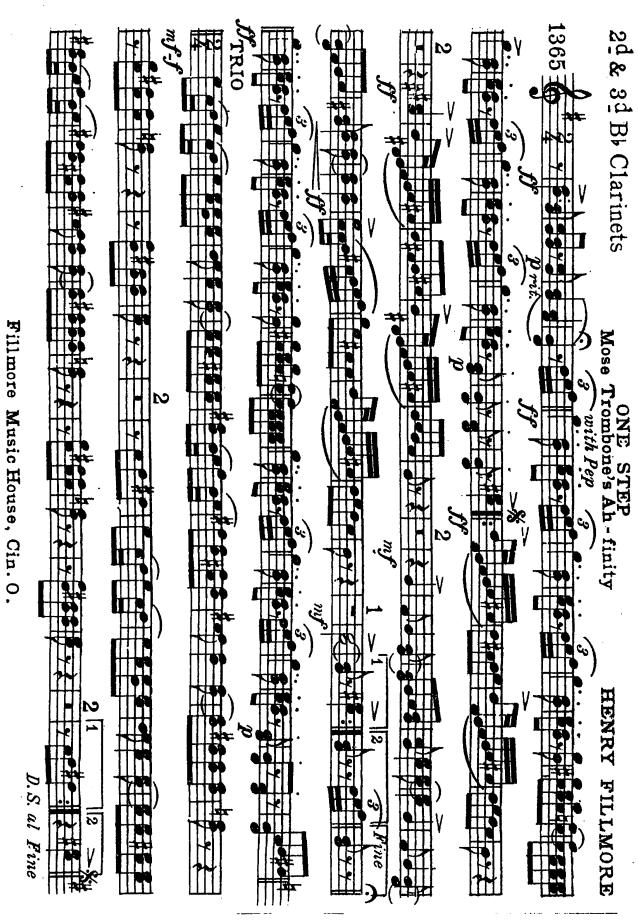




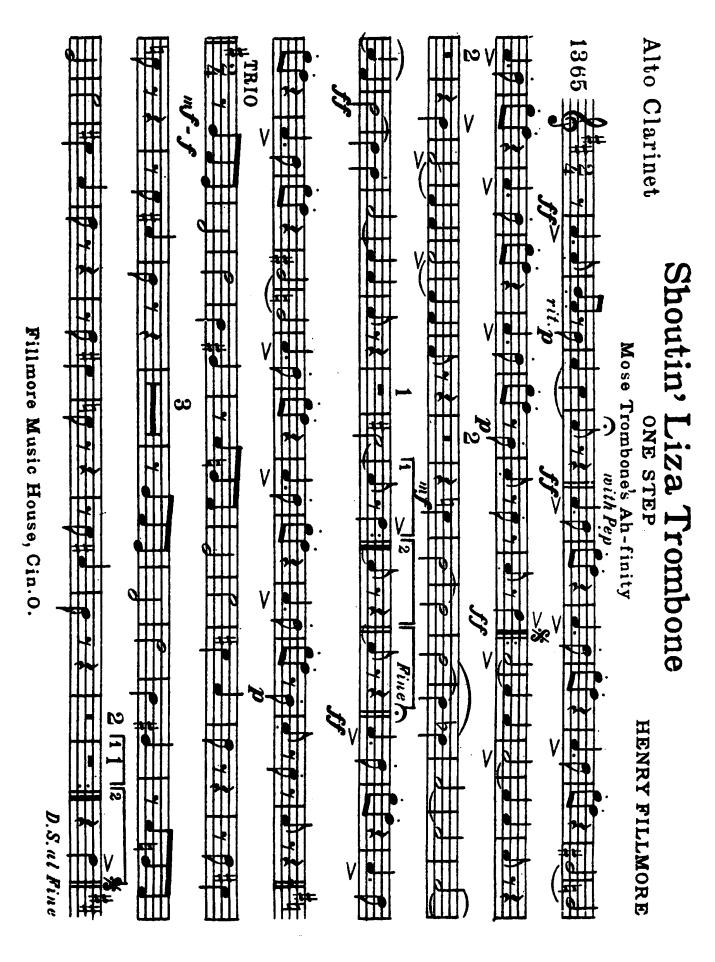


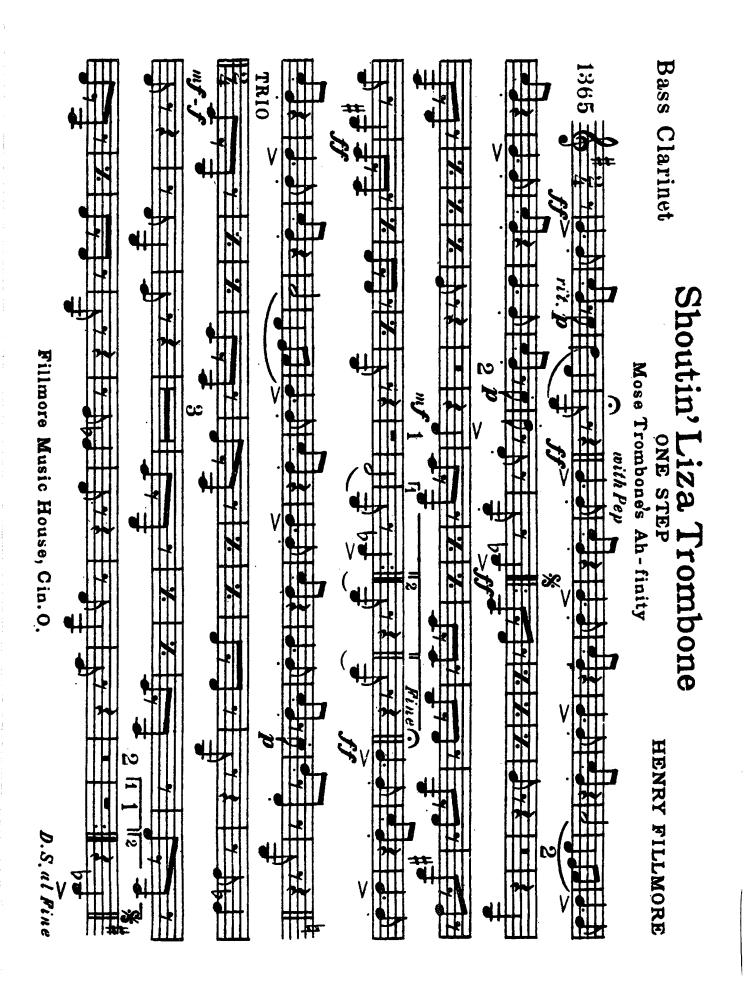
Fillmore Music House, Cin. O.



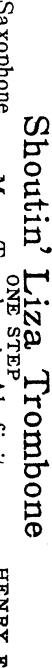


Fillmore



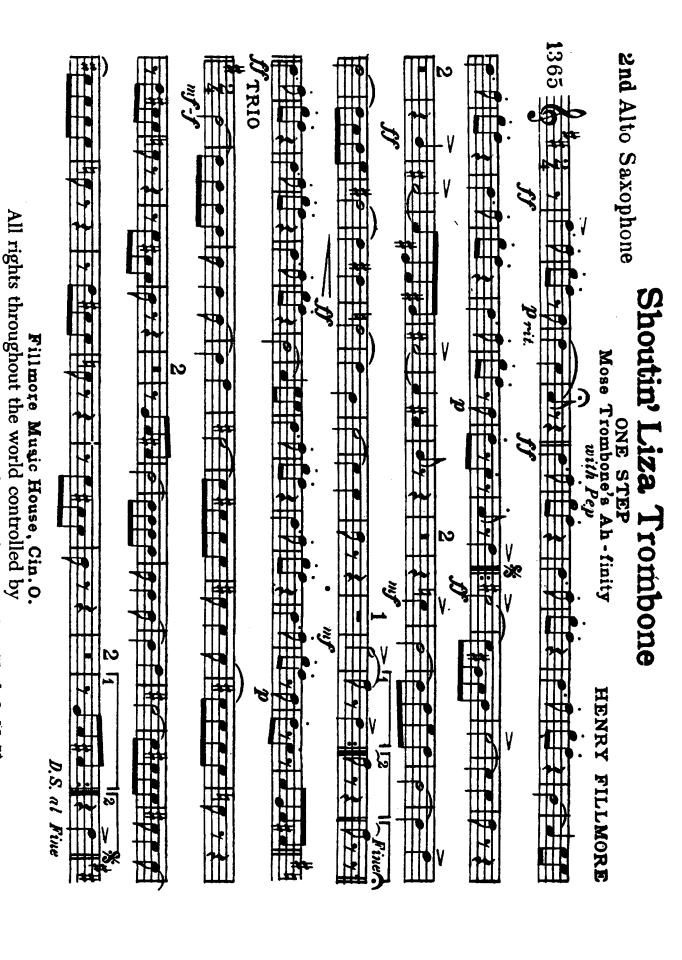


Page from Bandworld Magazine Online Ed. (Vol 31#4 • Apr.-June 2016) • More info at www.bandworld.org • Page 78 of 145

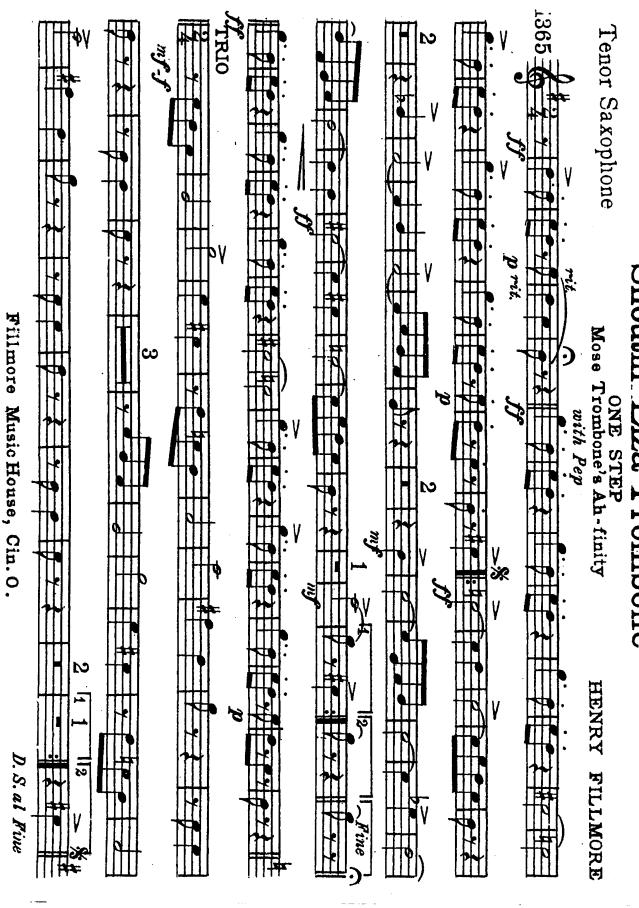


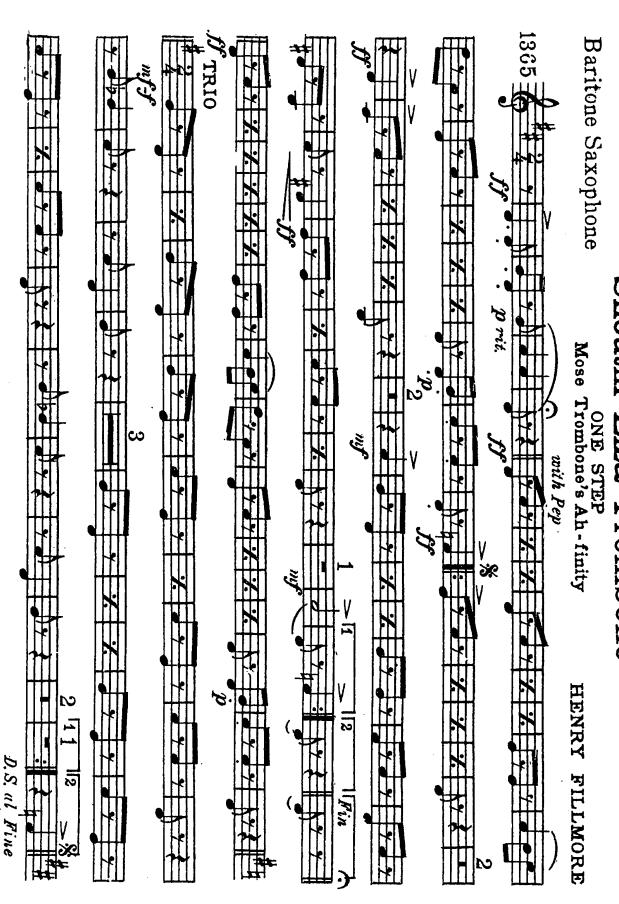


Fillmore Music House, Cin., O.

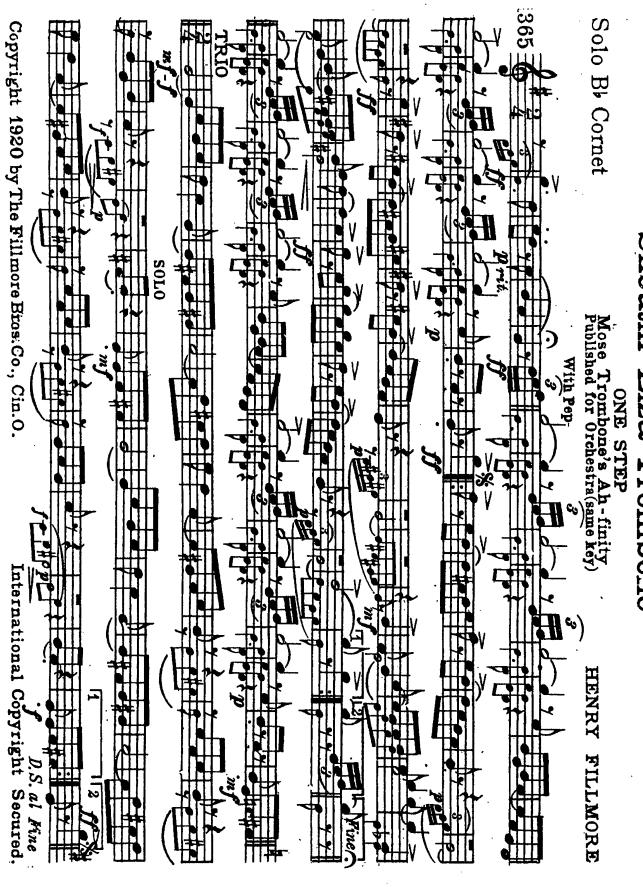


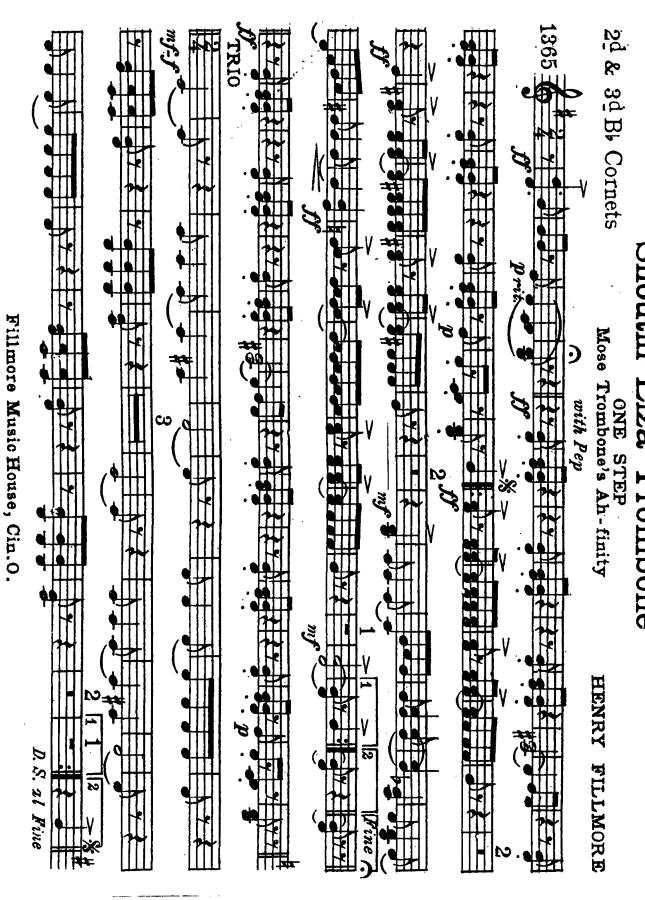
CARL FISCHER, INC., 56-62 Cooper Square, New York 3, N. Y.

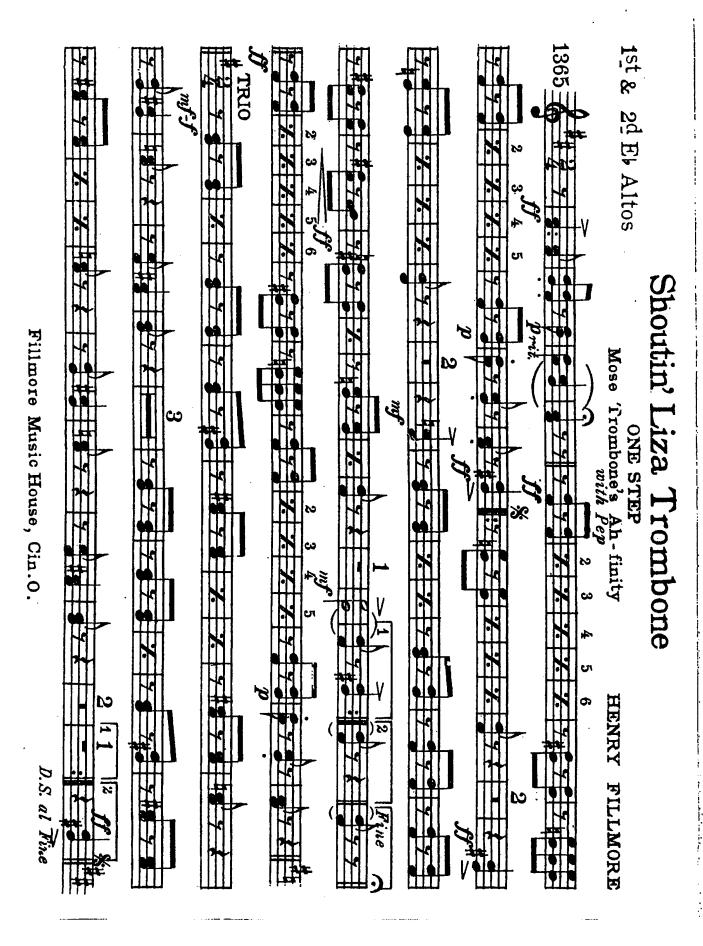


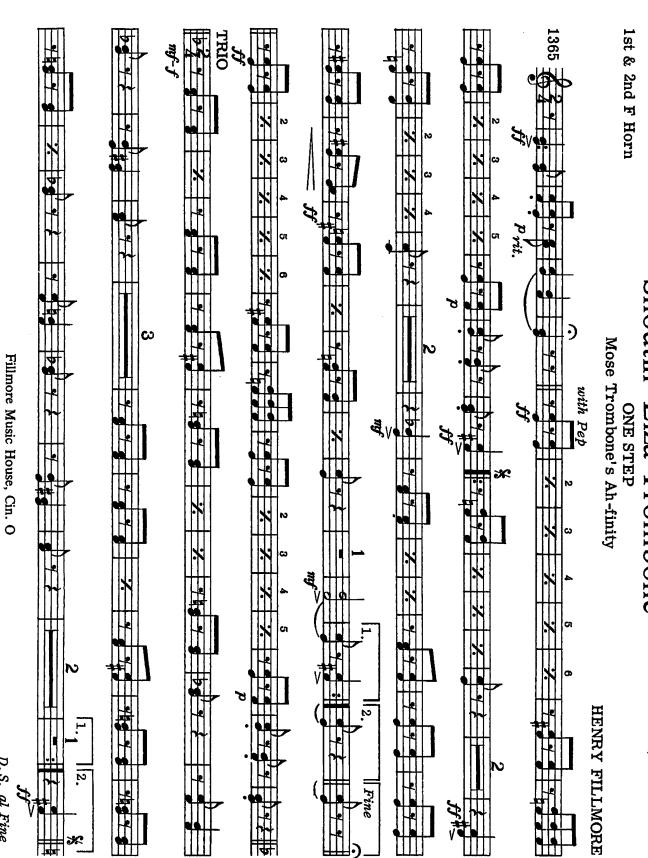


Fillmore Music House, Cin.O.



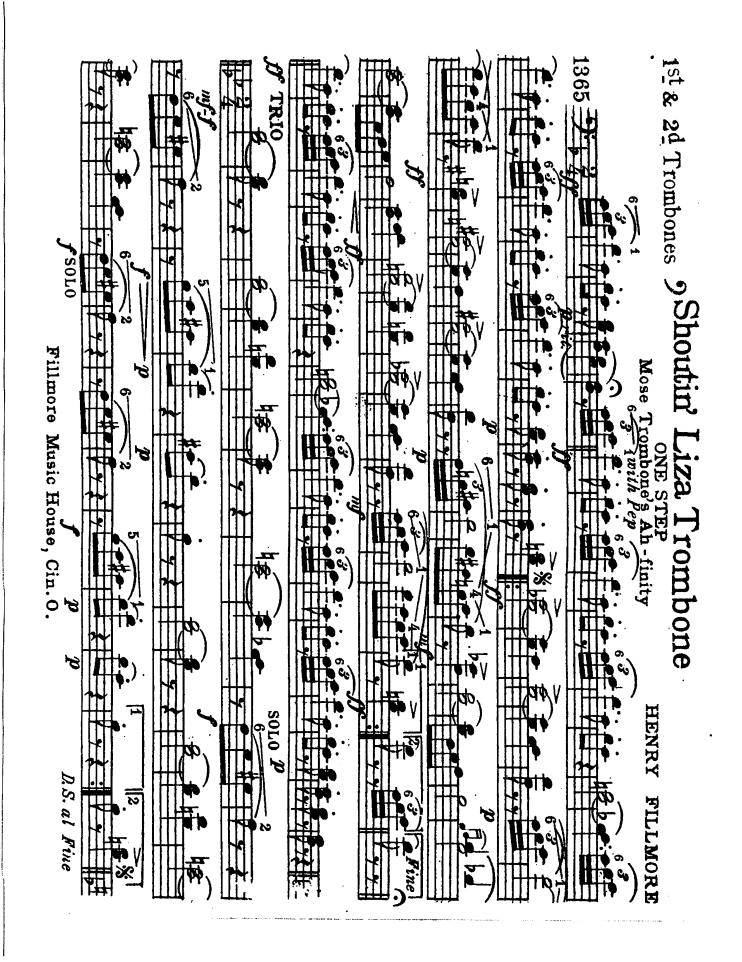


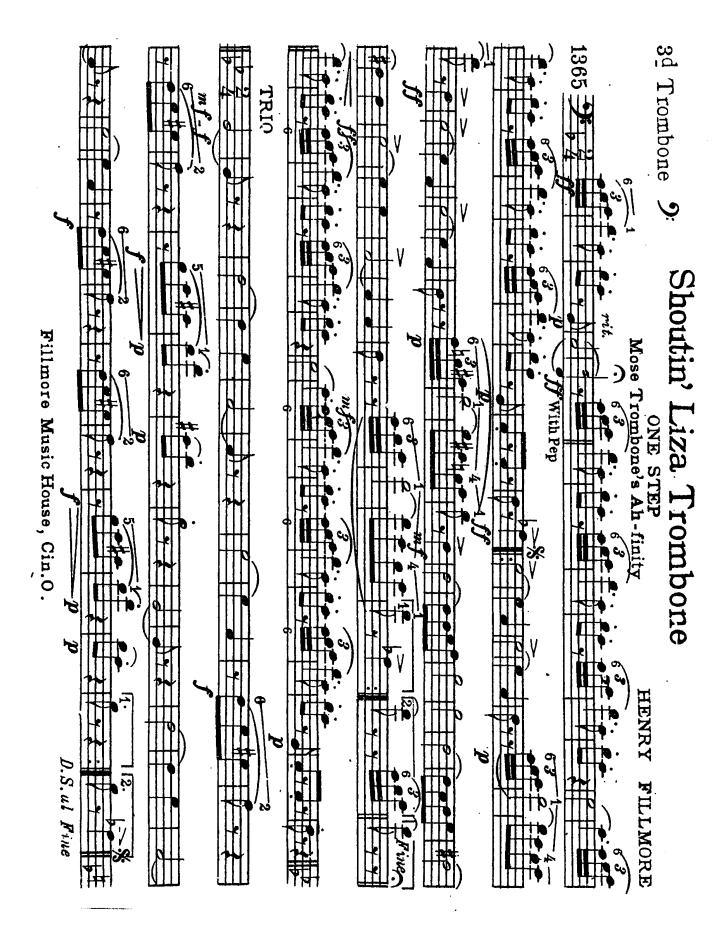


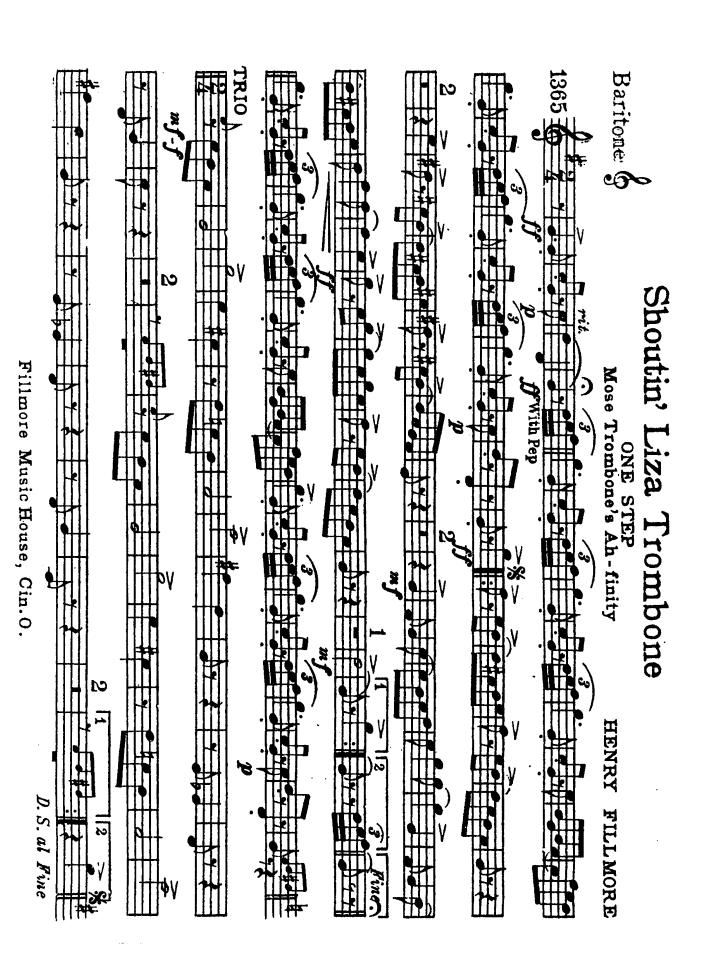


D.S.

al Fine

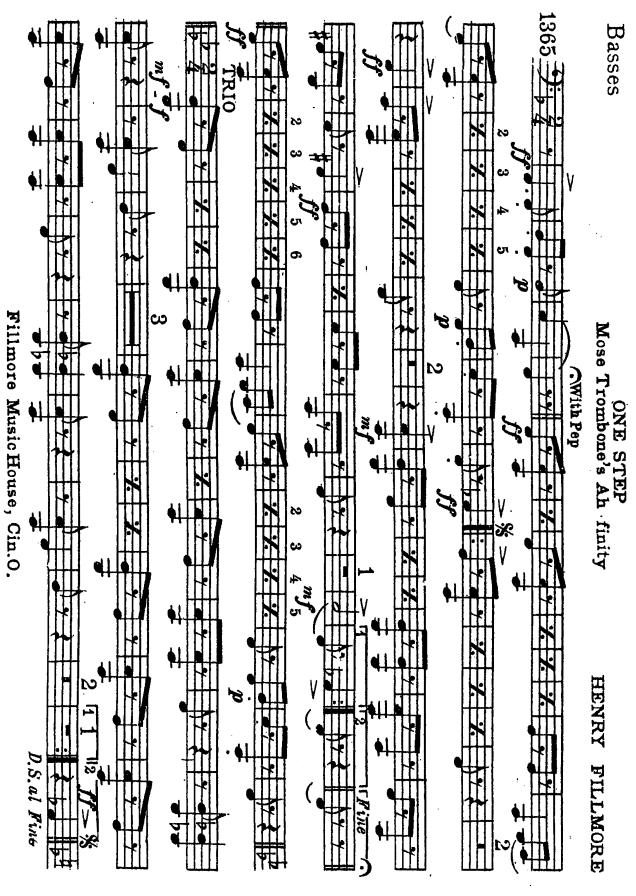


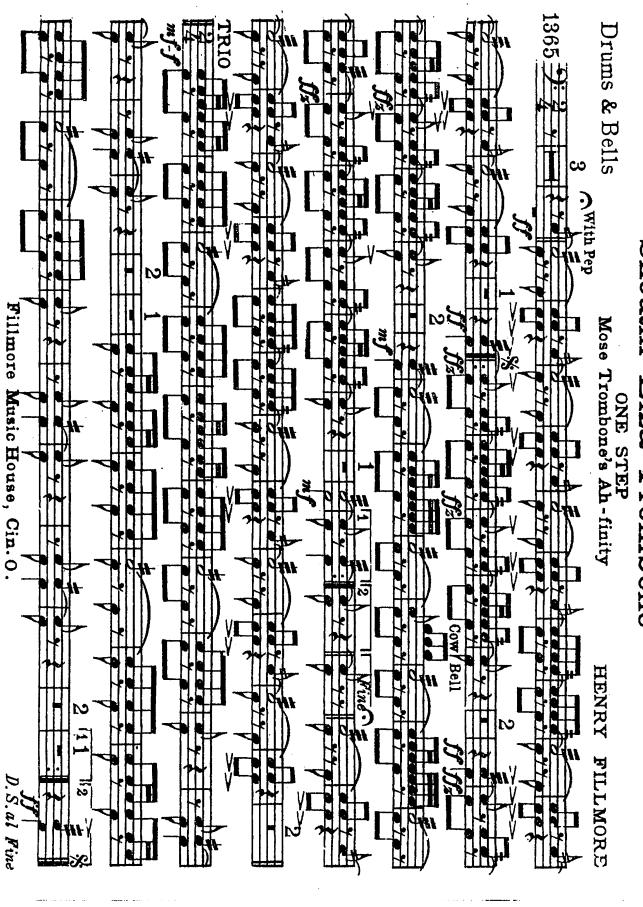






Fillmore Music House, Cin.O.





## There Sits a Soloist in Every Chair

JazzDeck in the Classroom, by Brian Switzer

### **Confidence and Capability**

Too often, immature musicians approach learning jazz improvisation with unreasonable expectations of immediate mastery. Students once eager to improvise are quickly disheartened by a lack of fluency and retreat, defeated, back to their role in the ensemble as a parts player.

Does a baby sit in the crib looking up at mother and father, eternally mute, until finally one day, he breaks vowed silence with a perfectly crafted flurry of words, ripe with inflection and intent? Hardly! The little darlings babble and cooh until they stumble upon the sounds that prove to be most effective. "Mama" and "Dada" are two of the earliest crowd pleasers.

Command of language is developed through discovery over time. I remind students time and time again that to become compelling soloists they must spend a great deal of time babbling on their instruments in the language of jazz.

My goal as a teacher has always been to instill confidence and capability in students by helping them play the "right" notes at the "right" time—simply and quickly. Years of whittling down the most crucial elements of jazz improvisation to their most basic form led to me creating and self-publishing JazzDeck: Textbook In a Box. As more and more teachers achieved success with JazzDeck, the national music education community became quite supportive of my invention. I am somewhat amazed that JazzDeck is now used in middle school, high school and college classrooms all across the country.

### **Chords Are King**

A chords-first approach provides the budding soloist with a clearly defined agenda. Repeated, creative, rhythmic outlining of the chord tones teaches the student to hear and participate in the harmonic movement of chord progressions as they unfold.

Advising students to play from a major scale over an entire 2-5-1 is a common teaching technique. While a perfectly legitimate method, young improvisers often sound, and most likely feel, wander-ee when performing such scale-based improvisations. Learning to improvise chords-first arms students with the instincts to eventually ground scale passages to the harmonic pacing of chord progressions, using the scale tones to deliberately connect chord tones. Seasoned players, of course, do this naturally.

A great deal of the staple phrases in the standard jazz vocabulary are the result of decorated chord tones. A nimble command of chord structure provides young improvisers with a solid frame upon which to hang idiomatic decorations as they mature.

The human mind has a much easier time remembering a group of four items—chord tones—than a group of seven—scales. We employ this everyday when reciting phone numbers.

### **Problems JazzDeck Solves for Band Directors**

Gone are the days of spending class time writing the chords for all of the instruments in all of the different keys on the board. Instead, students pull out their JazzDecks and the harmonic information is immediately available to them.

Because all students have the decoded chords transposed in front of them, the director can easily teach groups of mixed instrumentation. Multiple keys can be taught as one key, allowing the director to employ instructional language that emphasizes color and direction.

Students acquire chord knowledge <u>while they play</u> rather than having to wrap their heads around the theory <u>before</u> diving in.

Not all band directors participate in jazz band during their time as music students. Classical specialists, marching aficionados or choir majors saddled with the task of teaching jazz band benefit from the way JazzDeck deciphers the chord changes for their students, providing a starting point for improvisation.

Timid players gain confidence thanks to the elimination of bum notes. By avoiding "wrong" notes, budding improvisers are able to string together successful explorations and experience the "I'm doing it!" feeling.

Students can independently decode any jazz chord progression of their choosing: Realbook, Big Band chart, audition piece, Jamey Aebersold play-a-long, etc.

Infinity paralysis falls by the wayside when students are presented with a clear and manageable agenda laid out before them in bitesized pieces.

The clearly stated groups help students deviate from their own set of established immature conventions—i.e. those bluesy B flats that get tossed in no matter the key.

## **Teaching Improvisation In the Classroom**

The basic JazzDeck approach is as follows:

- 1. Pull up the cards that match the chord progression you are working on and place them on your stand.
- On your instrument, explore the white notes of each card and slowly move through the progression. Learn to hear proper voice leading by resolving to the nearest chord tone when changing chords.
- 3. After developing familiarity with the white notes, continue to dance through the progression, this time using the color-coded notes. Once again, resolve to the nearest chord tone when changing chords.

To begin, have the students spend upwards of sixty seconds on each chord. As the students become fluid in their note selection, slowly decrease the time spent on each chord to thirty seconds, four measures, two measures, one measure or two beats. Increase the tempo as

appropriate. Remember, the key is to set parameters that allow the students to feel successful so they develop confidence as well as capability!

### **Sample Materials**

A 2-5-1 to D minor has been included so that you may explore the concepts presented above on your own instrument. JazzDeck is available in music stores nationwide and directly from <a href="www.jazzdeck.com">www.jazzdeck.com</a>.

## **Final Tips**

When it comes to improvisation, the more you know, the more you will be able to discover. When it comes to practicing, 1,000,000 notes is literally 1,000 times better than 1,000 notes.

Thank you for reading. I hope you have discovered something new and valuable that you can bring back to the musicians in your classroom. Best of luck to you and your students. Jazz everywhere, forever!

Brian Switzer is a San Francisco based trumpet player, music educator and clinician. Brian has toured the world playing solo trumpet for the rock band Train, played US dates with Muse and is the creator of JazzDeck. Mr. Switzer is a graduate of the University of California Los Angeles where he studied jazz performance and music education. ||e: switzer@jazzdeck.com • t: (855)-JAZZDECK • w: www.brianswitzer.com ||



# BW 2016 The American Bandmasters Association



## Around the 82nd Annual ABA Convention • San Luis Obispo, California



(left to right) ABA Board of Directors: Dennis Zeisler, Tom Fraschillo, Dave Waybright, Gary Smith, Tim Rhea and Terry Austin.



(left to right) Past ABA President, Tom Leslie congratulates new ABA member, Bruce Broughton.



Composer, Julie Giroux keeps the ABA members in stitches as she gives her acceptance speech.



Composer, James Barnes accepts his Honorary Membership award from the Japanese Band Directors Association.



Euphonium soloist, Brian Bowman accepts his Honorary Membership award from the Japanese Band Directors Association.



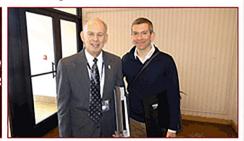
Past ABA President, Ray Cramer accepts his Honorary Membership award from the Japanese Band Directors Association.



ABA President, Terry Austin congratulates Brian Bowman on his Edwin Franko Goldman Award.



ABA President, Terry Austin congratulates Brian Bowman and Christopher Martin were Christopher Martin on his Edwin Franko Goldman Award.



selected as the Edwin Franko Goldman Award winners for 2016.



(left to right) Composers, Frank Ticheli and Johan de Meij relax before an ABA meeting.



(left to right) Past ABA Presidents, Ken Bloomquist (and wife Ann) and Frank Wickes visit after an ABA meeting with Joe Simpkins.



New ABA Member, Elizabeth Peterson (far right) visits with Col. Hal Gibson and his wife Marie after an ABA session.





(left to right) Past ABA Presidents, Frank Wickes and Ken Bloomquist fondly remember W J Julian during the convention.

(left to right) Loras Schissel and Col. Arnald Gabriel take some time out from dinner to pose for a picture.

(left to right) Past ABA President, Jeff Bianchi, wife Pat enjoy the ABA banquet with Col. Michael Colburn and his wife, Nancy.



(left to right) ABA members, Mohamad Schuman (wife Susan), and Jay Gephart (wife Jana) enjoy time together at the banquet.



(left to right) Michael Burch-Pesses, Robyn Chapman and newly inducted ABA member, Chris Chapman visit before the banquet.



(left to right) ABA President, Terry Austin thanks ABA host, William Johnson for all of his hard work.



ABA President, Terry Austin is awarded the past president's pin by former ABA President, Ray Cramer.



ABA President, Terry and Austin thanks his wife, Tracia for all of her support during his presidency.



(left to right) Terry Austin presents a plaque to ABA hosts, William Johnson and his wife Pamela for all of their hard work.

Issue ■

## BW 2015

# The Bandworld Legion of Honor



Previous LEGION Next LEGION

### **Michael Boitz**

Michael Boitz is the director of instrumental music at Saratoga High School in Saratoga, California. He has held this position since 1998. At Saratoga High he also serves as the department chair.

Boitz earned his Bachelor of Music from Concordia College in Moorhead Minnsota, he then went on to Northwestern University in Evanston, Illinois for his Master of Arts in Music Education.

After moving from Minnesota to California Boitz was named the CMEA Bay Area Freitas Award winner in 2005, the CMEA Orchestra Educator of the Year in 2007 and the CMEA Band Educator of the Year in 2012.

He has served the profession in many different offices including the the President of the Santa Clara County Band Directors, the CODA Representative to the CBDA, and the Area Rep of the Bay Area to CMEA. His groups continue to receive Unanimous Superior ratings at the CMEA Area and State

When asked about things that shaped his life he says, "I have been fortunate to have studied with incredible educators from a young age all the way through graduate school. I'm still in contact with my Junior High, High School, College,

and Graduate School teachers many years later, consider them mentors, and seek their advice regularly. I can't imagine my life without the role models I have met in our profession, outside of official studies, that shape my teaching and overall career on a daily basis. Most importantly, I work with incredible and inspiring students every day, in a school community filled with colleagues, parents, and community members at large that support Excellence in Education to the highest degree."

His philosophy is this, "The study of Music is for people of all ages at any level of proficiency. Being a good person comes first, being a good musician comes second. Herein lies the route to a joyful experience in endeavoring the most exciting, creative, and meaningful musical performances from which to learn and for the world to enjoy.'

### A special award of

## The John Philip Sousa **Foundation**

The Bandworld Legion of Honor was established in 1989 to honor, over the course of a year, eight of the finest band directors in our business.

Recipients have taught for at least fifteen years, have maintained a very high quality concert band program, and have contributed significantly to the profession through dedication to bands and band music.

Each is honored at the annual Sousa Foundation awards ceremony during the Midwest Band Clinic in Chicago, Illinois.

Chairman of the Legion of Honor Committee is Terry Austin, Virginia
Commonwealth University.

Legion Laureates List Link



### Leonard Ingrande

Leonard Ingrande has been the band director of Central High School in Fresno, California for the last 14 years. Prior to arriving at Central he had served as the Music Specialist for the San Diego UNified School District. He also taught at the middle school, high school and college levels.

Ingrande earned both his Bachelor of Music Education and his Masters in Conducting from the University of Southern California.

He has as President of the Central Section of the CMEA as well as the CMEA Jazz Representative and the CMEA Representative for Stand Up

His groups continually earn Superior and Unanimous Superior Rataings at the CMEA and District Music Festivals. They were also First Place Gold in the Heritage Music Festival in Seattle, WA.

Ingrande says. "I have been performing since the age of nine. I have played in concert halls, rock bands, jazz bands, chamber ensembles,I have conducted classical and pop concerts. I believe it shaped me become a better teacher. Since that age, I have had great Mentors and teachers in High School and college who had high standards and expectations, who held me accountable. But, they treated me with respect and patience. I strive everyday to give my students what my mentors, teachers, and peers gave to me.

His philosophy is this,"I believe that music is an essential part of a students education. It is also my belief that all students should have the right to an education in music, which provides them with a life long joy through singing or playing an instrument. Music Education allows students to grow musically, socially, and intellectually using the objectives of cultural education, music education, school, and community service. To quote Dykema and Gehrkens, "the teacher teaches the children through the medium of music."

Terry Austin Bio



Page from Bandworld Magazine Online Ed. (Vol 31#4 • Apr.-June 2016) • More info at www.bandworld.org • Page 99 of 145

# MISSION OVERVIEW

ABC



Mission Briefing: Page 2 About the Author: Page 2

### Level 1:Introduction to Bassoon

Bassoon Utility Belt: Page 4
Anatomy of the Bassoon: Page 5

Bassoon Care and Maintenance: Page 6

Single Reed/Flute vs. Bassoon Comparison Chart: Page 7

### Level 2:Before You Play

Bassoon Terminology: Page 9

The Reed: Page 10

Steps to Assembly: Pages 11-15

Preparing to Play: Pages 16-17

Forming the Bassoon Embouchure: Page 18

Reading Bass Clef: Page 18

### Level 3: The First Mission

Hand Position: Page 21

Fingering Chart by David Wells: Pages 22-23

Crowing/First Note: Page 24

Articulation: Page 25 Decoding the Fingers

Flute to Bassoon: Pages 26-27 Clarinet to Bassoon: Pages 28-29 Saxophone to Bassoon: Pages 30-31

Songs for Bassoon: Pages 32-34

### Level 4: Special Operations

Voicing: Page 36

Half-Hole Technique: Pages 37-38 Flicking Technique: Page 39-40

### Level 5 and Beyond:

List of Bassoon Repertoire: Page 42
Bassoon Listening Examples and Online

Resources: Page 43

The Index: Famous Bassoonists: Page 44

Works Cited: Page 45-46

TOP SECRET



## BRIEFING

Greetings, Agent.

This book is meant to help students with 1-2 years of experience on flute, clarinet, or saxophone, to make a successful switch to bassoon. The book uses a comparison-based method, using comparative embouchures and fingerings to help students use their prior knowledge to jump-start into bassoon. The book also focuses on bassoon specific techniques, such as half-holing, flicking, voicing, and reading bass clef. Because this book is focused on bassoon techniques only, students using this book should already have a basic grasp of music theory (key signatures, rhythms).

Good luck, Agent. We are all counting on you.

Director Brainard Level 10 Agent of A.B.C.



# ABOUT THE DIRECTOR



Whitney Brainard teaches 6th, 7th, and 8th grade woodwinds at West Ottawa Public Schools in Holland, Michigan. She also teaches an after-school jazz band one day per week, and is the flute and clarinet instructor for the West Ottawa High School Panther Marching Band. Her middle school bands march in the world-famous Tulip Time Festival each May, and they also perform at MSBOA District Festival each year.

When she is not teaching, Whitney performs as a freelance clarinetist in the Grand Rapids area. She plays with the Grand Rapids Symphonic Band and Holland Symphony Orchestras on a regular basis, and is also a pit musician for many area theater groups.





# LEVEL 1: INTRODUCTION TO BASSOON



### Intelligence Transmission #24601A

Bassoon is the only wind instrument in the concert band and orchestra that uses all 10 fingers to play.

TOP SECRET



### BASSOON UTILITY BELT

Before you begin playing, there are some essential items you will need to add to your gear. The following items are strongly recommended:

### A Good Reed

A good reed can make a beginner sound great, and a bad reed can make a professional sound awful. You should try to find a reed that is free-blowing and does not feel difficult to play. Bassoon reeds are incredibly sensitive to changes in humidity and temperature, so it is a good idea to have several reeds available. It is not uncommon for a great reed to stop working on a rainy day!

### A Hand Rest or Crutch

A bassoon hand rest or crutch is fastened on the side of the right hand keys. It greatly helps beginners maintain correct hand position for the right hand.

### A Good Bocal

The bocal is the slender metal tube that goes directly into the instrument. Because it is so thin, bocals are easily damaged—bent, crushed, even snapped in half. Make sure that your bocal is in good condition, as any damage will have a major affect on your tone quality and ease of playing, and it will be very difficult to play with a characteristic bassoon tone.

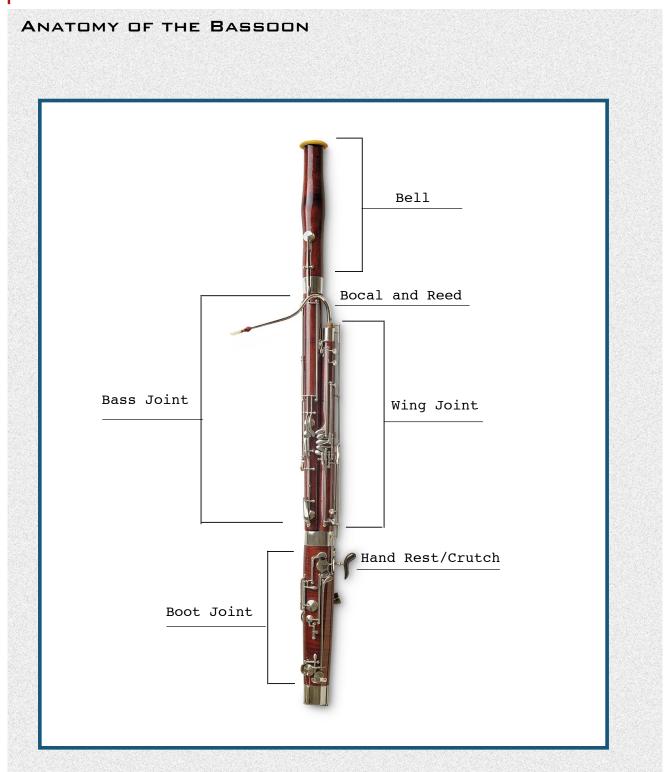
### A Bassoon that Works

Bassoons are notoriously finicky when it comes to being perfectly adjusted instruments. The keys are long and rather fragile, and this often means that keys get bumped and bent over time, especially on school-owned instruments. Wooden bassoons are also very sensitive to changes in humidity, and should never be left to the elements (in a hot/cold car, outside, etc.).

### The Seat Strap

It is essential to have a seat strap to play the bassoon. The seat strap holds the weight of the instrument, leaving all ten of your fingers available to play.





PAGE 5



### BASSOON CARE AND MAINTENANCE

### General Care:

Most bassoons are made out of some type of maple wood. This wood is very sensitive to changes in moisture, humidity, and temperature. Do not leave your instrument in extreme hot or cold temperatures (ex. in a car), or the instrument may crack, resulting in a very expensive repair bill.

### Every Day:

After you play, complete the following:

- 1. Remove the reed with a gentle twisting motion. Blow air through the part which attaches to the bocal, and carefully put it in your reed case.
- 2. Remove the bocal with a gentle twisting motion, grabbing it by the curve. Blow air through the cork end to get rid of excess moisture.
- 3. As you take apart the instrument, swab each section by dropping the weighted end of the string through the joint. Grab it from the other side, and gently pull it through. If your swab gets stuck, see your band director or bassoon teacher immediately!
- 4. When swabbing the boot joint, drop the weighted end through the unlined side, and pull it out the lined side, to prevent moisture from penetrating the wood.

### Every Week:

Apply cork grease to tenons as needed (does not apply to threaded tenons).

### Every Year:

Ideally, your bassoon should be checked by a repair technician at least once per year. Have your band director or bassoon teacher help you find a good bassoon repair person. This will keep your bassoon in good condition and playing great.



# BASSOON VS. FLUTE, CLARINET, AND ALTO SAXOPHONE COMPARISON CHART

	Flute	Clarinet	Alto	Bassoon
			Saxophone	
Instrument Family	Woodwind	Woodwind	Woodwind	Woodwind
Reed Type	No Reed	Single Reed	Single Reed	Double Reed
Clef	Treble (mostly reads notes in and several ledger lines above the staff)	Treble (reads below, within, and above the staff)	Treble (mostly reads notes in and above the staff)	Bass Tenor Treble
Tongue Position	Tongue on Roof of Mouth	Tip of Tongue on Tip of Reed	Tip of Tongue on Tip of Reed	Tip of Tongue on Tip of Reed
Pitch	Concert Pitched	Bb Instrument	Eb Instrument	Concert Pitched
Range		\$ # T		9: 2
Approximate Mouthpiece Pitch	Head Joint	Mouthpiece and Reed	Mouthpiece and Reed	Reed with Bocal C
Embouchure Position	Corners Back Long Bottom Lip, not rolled to cover teeth. Lower Jaw Flexible to Move Back and Forward No Reed	Firm Embouchure: Corners Forward Single Lip Lower Jaw Forward Reed and Mouthpiece enter mouth at Downward Angle	Loose Embouchure: Corners Forward Single Lip Lower Jaw Forward Reed and Mouthpiece enter mouth at Straight Angle	Loose Embouchure: Corners Forward Double Lip Lower Jaw Back Reed Enters Mouth at Straight Angle



# LEVEL 2: BEFORE YOU PLAY



### Intelligence Transmission #407TS

The bassoon is a very versatile instrument. It plays in both bands and orchestras, often having bass parts and important melodies and solos in the same piece of music.

TOPSECRET



### BASSOON TERMINOLOGY

### Crowing

Crowing is when a bassoon player makes a sound on the reed only. Bassoon players often do this to check their embouchure, and to find good reeds. A good crow should have a mix of low, medium, and high sounds.

### Half Hole

Some notes on the bassoon use half hole fingerings: the top finger of the left hand rolls forward slightly, as to uncover the hole about half way. Some notes need more coverage, some need less—find what sounds best! The half hole acts the similar to the register or octave key on the clarinet or saxophone.

### Flicking

The bassoon is the only instrument that uses flicking. Flicking is a fingering technique to help produce good tone quality when slurring up to notes above the bass clef staff (A, Bb, B, C, D). The player quickly presses the correct flick key in the left hand thumb before the note is played, and releases it as the note is played.

### Double Lip Embouchure

Bassoonists use a double lip embouchure to play. This means that both the upper and lower lips are slightly rolled inward, covering the top and bottom teeth.

### Voicing

Voicing is changing the shape of the inside of your mouth, to make high, middle, and low notes sound better. Higher notes have "dee" voicing, middle notes have a "dew" voicing, and lower notes have a "doe" voicing.



PAGE 9



### THE REED

Picking a good reed to play on is very important in producing good tone quality. Most professional bassoon players make their own reeds from cane: these reeds often play much easier and sound better than reeds bought from your local music store. It is highly suggested that you find a bassoon teacher to make reeds for you. If you or your band teacher cannot

find a bassoon teacher, here are some guidelines for picking a good reed from the store:

- 1. The tip opening should be a symmetrical almond shape with the widest point being in the middle
- 2. The edges should be clean—no cracking or fraying.
- 3. The wires should be slightly loose—they will tighten when the reed is soaked.



### REED CARE

- 1. Make sure you always soak your reed in water before playing—soaking it in your mouth like a clarinet or saxophone reed is not enough! Make sure you dip both ends of the reed in the water.
- 2. When not in use, keep your reeds in your reed case. This will prevent them from damage and help them dry properly. The plastic tubes that store bought reeds come in are often airtight, causing reeds to mold as they dry.
- 3. Be careful when walking around with your bassoon: always take your reed off and put it in your reed box.
- 4. Keep your reed clean! Make sure you wash out your mouth thoroughly before playing. Brushing your teeth before playing is highly recommended. Food particles can clog the pores in the cane, shortening the life of the reed.



1. Place your case on the ground. Check that the case is facing right-side up! You may want to put a sticker or find some identifying marker to make sure you always know that your case is being opened the correct way.



2. Begin soaking your reed (2a). Place the seat strap on your chair, about two thirds of the way from the seat back (near the front legs of the chair-2b).





3. Take the boot joint and put it in a sturdy position: on your lap, on the ground, or in your case.



PAGE 11



4. Take the wing joint (4a) and gently twist and push it into the smaller tenon receiver in the boot joint (4b, 4c). Make sure the inside curve of the wing joint is aligned with the bass joint tenon receiver (4d).









As you are gently twisting the wing joint into place, use your thumb to press down the whisper key (4e). This will lift the bridge key (4f), and allow you to line up the keys without bending them.







Caution: Do not grab the wing joint with an extra firm grip (4g)! You risk bending keys, which will make your bassoon very difficult to play.

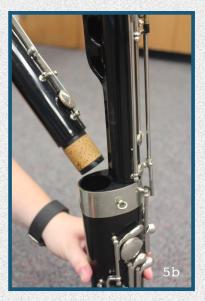


5. While holding on to the boot and wing joint, take the bass joint (5a) and gently place it into the larger receiver in the boot joint (5b), using a gentle twisting and pushing motion.

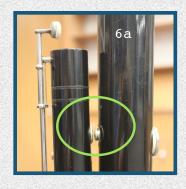


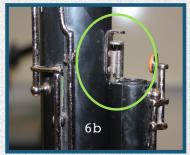
6. If your bassoon has a body lock, lock the wing joint and bass joint together. Here are two different types of body locks (6a, 6b).





Make sure that the thumb keys are on the correct side of the instrument (5c).





PAGE 13



7. Hold the bell with your thumb on the key (7a) so that the bridge key is lifted (7b). Gently twist and push it onto the top of the bass joint, making sure that the bridge key is properly aligned (e).

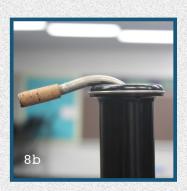






8. Place the bocal into the bell (8a, 8b) to move to your seat. Place the end of the boot joint into the seat strap cup, or clip the strap to the small hoop on the end of the boot joint (8c, cup shown).







PAGE 14



9. Grabbing the bocal by the curve (9a), gently twist it all the way down into the receiver on the wing joint (9b). Make sure the whisper key pad completely covers the vent on the bocal (9c, vent not covered).







10. Gently twist your reed onto the end of the bocal. Mission Accomplished!



PAGE 15



### PREPARING TO PLAY

Now that you've assembled your bassoon, it's time to learn about instrument and hand position. A few things are the same as the instrument you are switching from:

- 1. Feet flat on the floor.
- 2. Back straight and relaxed.
- 3. Head straight and comfortable in a natural forward position: not tilted to the side, upward, or downward.













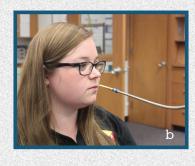
PAGE 16



### PREPARING TO PLAY

Next, adjust your seat strap so that the reed goes straight into your mouth while your head is straight ahead and at a comfortable position. It might take a few tries to get it right! The pictures below show the seat strap adjusted too low (a), correctly (b), and and too high (c).







Because the bassoon requires all 10 fingers to be played, the seat strap should be bearing the weight of the instrument, and your body should be balancing the instrument rather than holding it. After you have established your basic posture and adjusted your seat strap, check your three balance points:

- Point 1: The bassoon should naturally rest on your right leg.
- Point 2: The right hand, between the thumb and index finger.
- Point 3: The 2nd (middle) knuckle of your left hand index finger.









PAGE 17



### FORMING THE BASSOON EMBOUCHURE

To form a bassoon embouchure, use the following steps:

- 1. Let the tip of the reed gently rest on your lower lip. Your mouth should be in a relaxed, natural position.
- 2. Gently push the reed into your mouth, allowing the reed to take the lip with it. Your bottom lip should be slightly covering your bottom teeth.
- 3. Bring the top lip down slightly over the top teeth.





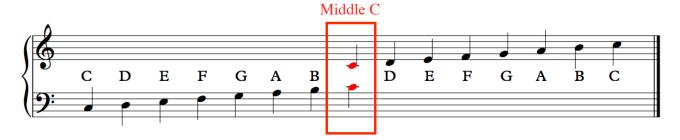


- 4. The teeth should not be touching the reed.
- 5. Check that you have enough reed in your mouth. The top lip should come almost to the first wire on the reed, with the back lip slightly behind it; if not, you do not have enough reed. Go back to step 1.
- 6. Make sure you have a slight overbite. The top lip should be more forward than the bottom lip.
- 7. Saxophone and clarinet players: do not apply pressure from the top or bottom lip. This embouchure will feel more relaxed. Flute players: Your jaw will feel more pulled back than it does in your flute embouchure.

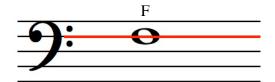
Practice forming the embouchure while looking in a mirror. This will help you connect the feeling of a correct embouchure with how it looks.



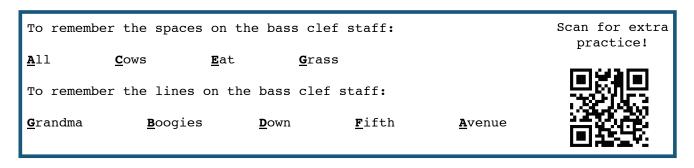
### READING BASS CLEF



To understand how the bass clef is related to treble clef, take a look at the "Grand Staff" above. A "Grand Staff" shows notes in both treble and bass clef. This staff shows you how the bass clef and treble clef are connected through sharing the note, "Middle C." The bassoon plays mostly in the bass clef because it is usually one of the lower instruments in the band.



Another name for the bass clef is the "F Clef," because it shows us where the note F is: on the line between the two dots on the bass clef.



Bass Clef Training: Label the Notes Below





# LEVEL 3: THE FIRST MISSION

### Intelligence Transmission #7806566

Bassoon is a very sought-after instrument in bands in orchestras, because not very many people play it. Being a good bassoonist can open many doors, for everything from performance opportunities to college scholarships.

\*\*TOPSECRET\*

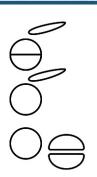


### HAND POSITION

Left (Top) Hand





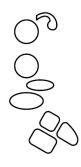




Right (Bottom) Hand









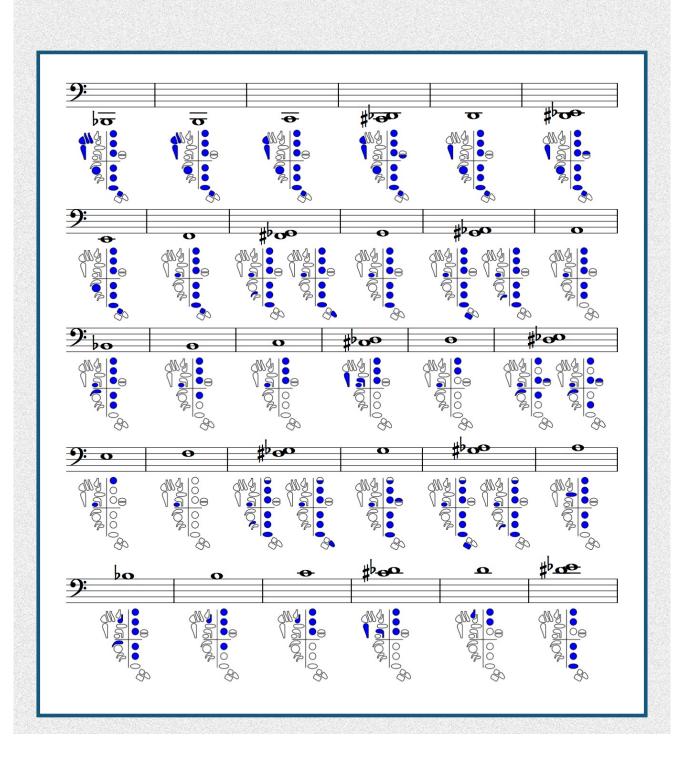
American Band College

of

Sam Houston State University



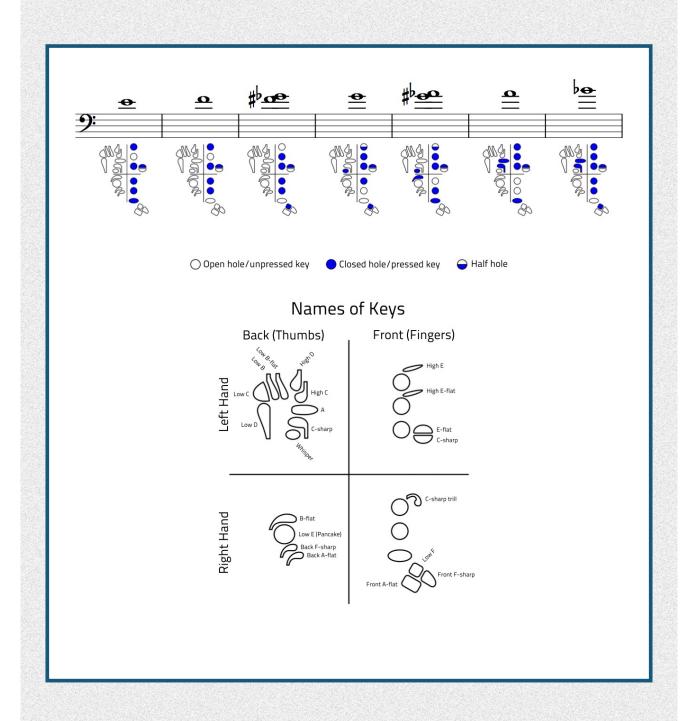
# FINGERING CHART BY DAVID WELLS



PAGE 22



# FINGERING CHART BY DAVID WELLS



PAGE 23



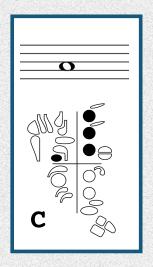
### CROWING

Crowing is when a bassoon player makes a sound on the reed only. Bassoon players often do this to check their embouchure, and to find good reeds. Set the embouchure and tongue in the "dew" position, as if you were going to play the instrument. A good crow should have a mix of low, medium, and high sounds. If you are getting a good crow sound, it means that your embouchure is correct and the reed is good. If not, follow the chart below:

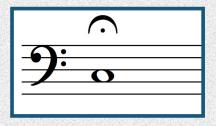
Crow too high: squealing or squeaky sound.	Embouchure is too tight/too pinched. Relax the embouchure. The reed may be too stiff-check the thickness of the reed.
Crow too low: no high sounds can be heard.	Lack of air support. Blow with more air support to dampen the reed. The reed may be too long and/or too wide-check the length and width of reed.

### THE FIRST NOTE

Using only your reed and bocal, set your embouchure and breathe through the corners of your mouth. Say "dew" into the bocal as you begin your air stream, and hold the note. If your embouchure is correct, the note "C" should come out. Check with a tuner to see if you are correct.



Now, with the whole instrument, press the correct fingers and play the note "C" below and hold it, with a steady supported sound. It should sound similar in pitch to the note produced using only the reed and bocal.



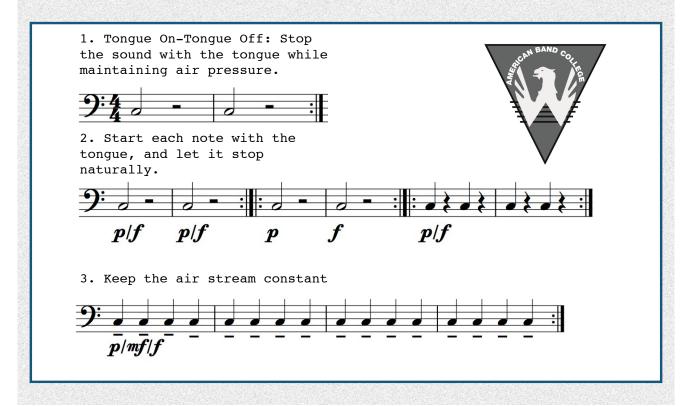
PAGE 24



### ARTICULATION

On the bassoon, articulation (or "tonguing") is similar to that of the clarinet or saxophone—The flow of air vibrates the reed, creating sound, while the tip of the tongue acts as a valve, opening and closing the air flow through the instrument. Here are some things to keep in mind about articulation:

- The tip of the tongue should make contact with the lower left-hand corner of the reed. Think of the white part at the base of your fingernail, as a visual for how much tongue should touch the reed.
- Start each note with a "dew (middle notes)," "doe (low notes)" or "dee (high notes)."
- The jaw should move slightly while tonguing.
- Always start each note with plenty of air behind the tongue, in order to fill the entire instrument. Breathe through the corners of your mouth, leaving the reed on your lower lip— this will prevent your embouchure from becoming unset before you play.

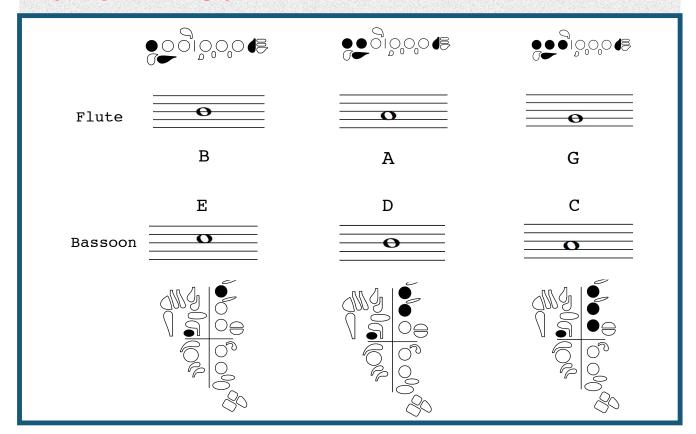


PAGE 25



### DECODING THE FINGERS: FLUTE TO BASSOON

The flute and bassoon have many similar fingerings. Compare the first three left hand notes on flute to the first three left hand notes on bassoon, then try the song below. Notice that the bassoon fingerings on this page use NO PINKY!



# 1. Hot Crossed Fingers

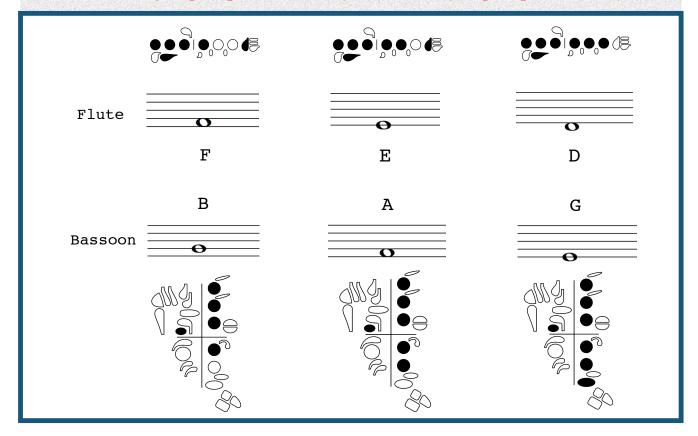


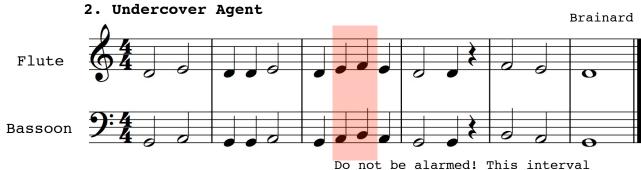
PAGE 26



### DECODING THE FINGERS: FLUTE TO BASSOON

Here are three more notes that share similar fingerings between flute and bassoon, all using the right hand. Practice them using the song below. Once again, notice the slight differences between F/B and E/A (no pinky on bassoon), and D/G (no pinky on flute).





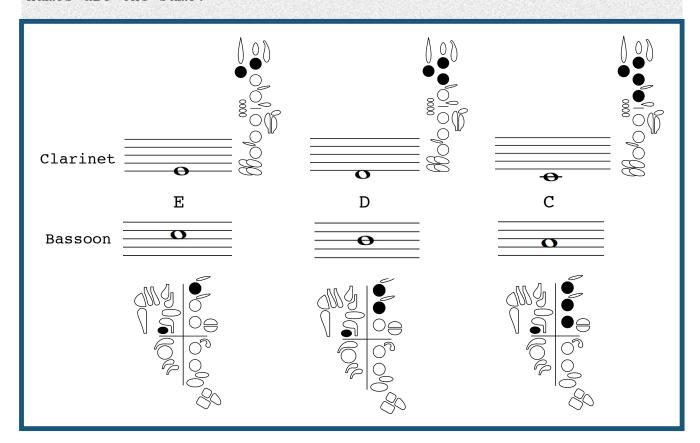
will sound different between the flute and bassoon versions of this song.

PAGE 27



### DECODING THE FINGERS: CLARINET TO BASSOON

The clarinet and bassoon have many similar fingerings. Compare the first three left hand notes on clarinet to the first three left hand notes on bassoon, then try the song below. Notice that the note names are the same!



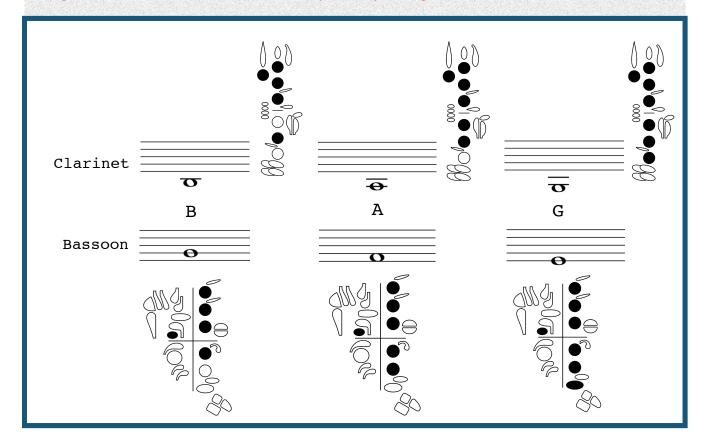


PAGE 28

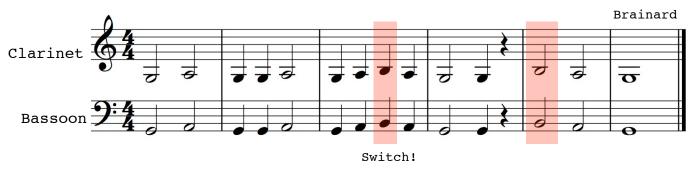


### DECODING THE FINGERS: CLARINET TO BASSOON

Here are three more notes that share similar fingerings between clarinet and bassoon, all using the right hand. Practice them using the song below. Notice that B natural uses 2nd (middle) finger on clarinet, and first (index) finger on bassoon.



## 2. The Old Switch-a-Roo

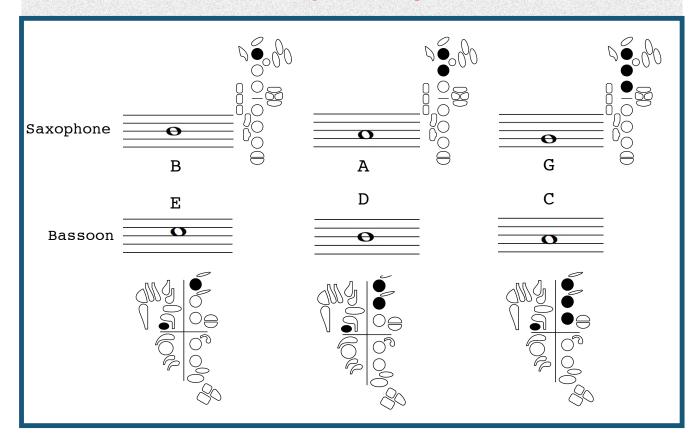


PAGE 29



### DECODING THE FINGERS: SAXOPHONE TO BASSOON

The saxophone and bassoon have many similar fingerings. Compare the first three left hand notes on saxophone to the first three left hand notes on bassoon, then try the song below. In these examples, add the thumb when transferring from saxophone to bassoon.



### 1. Hot Crossed Fingers

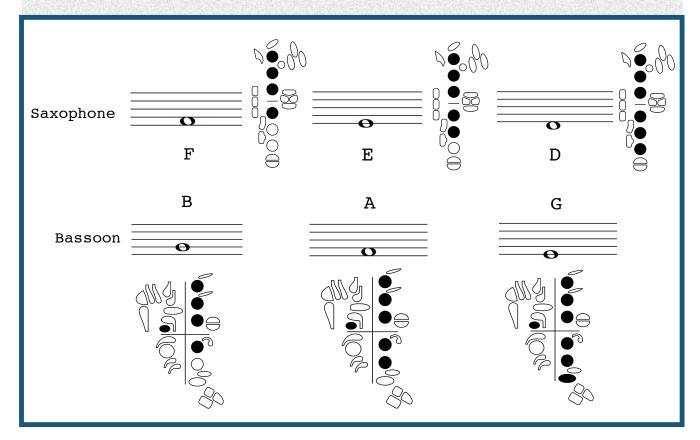


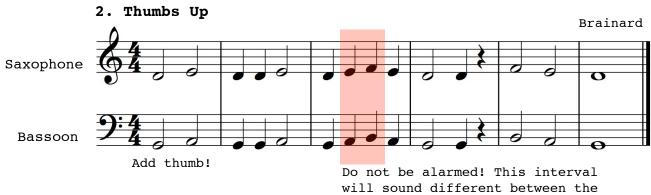
PAGE 30



### DECODING THE FINGERS: SAXOPHONE TO BASSOON

Here are three more notes that share similar fingerings between saxophone and bassoon, all using the right hand. Practice them using the song below. In these examples, add the thumb when transferring from saxophone to bassoon.





PAGE 31

this song.

saxophone and bassoon versions of



### SONGS FOR BASSOON

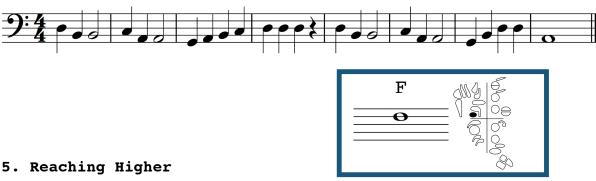
Now that you've learned the first six notes, here are some songs for additional practice. As you are playing, remember the basics: posture, hand position, breath support, and tone.

### 3. Wheels Up in Six



Hold each note to its fullest value

# 4. This Seems Familiar





# 6. Fantastic Flying Fingers

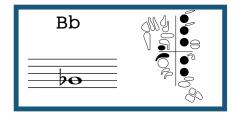


PAGE 32



# SONGS FOR BASSOON

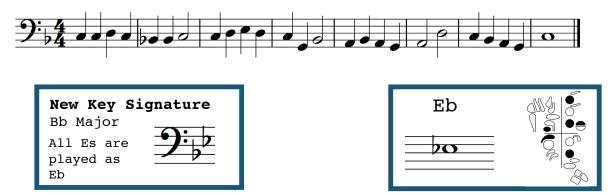




### 7. Flatten the Bee



# 8. Sneaking Around



# 9. Emergency Exit



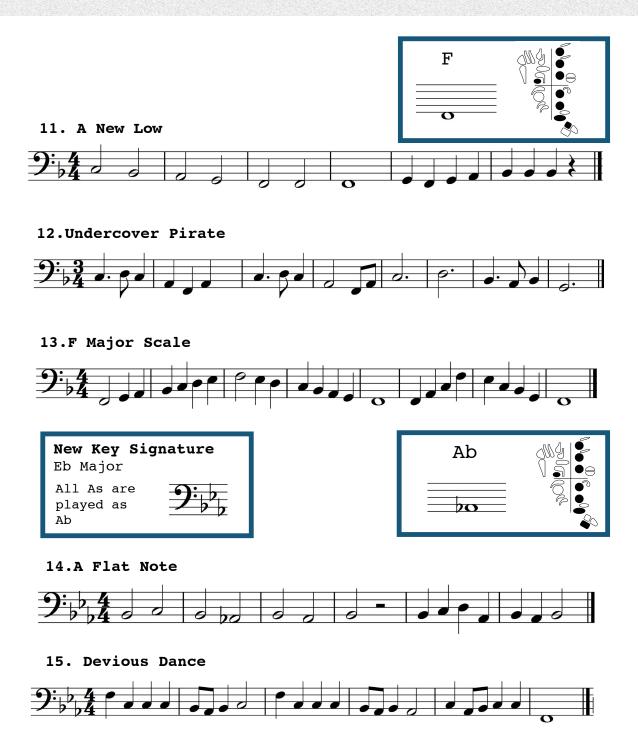
# 10. A Joyful Tune



PAGE 33



# SONGS FOR BASSOON



PAGE 34



# LEVEL 4: SPECIAL OPERATIONS



### Intelligence Transmission #8675309

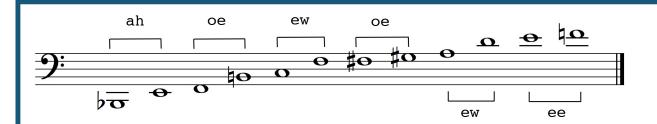
The bassoon has the most thumb keys of any instrument. The left thumb controls 9 keys, while the right thumb controls 5.

TOPSECRET



### SPECIAL OPS 1: VOICING

Voicing is changing the shape of the inside of your mouth, to make high, middle, and low notes have their best tone and intonation.

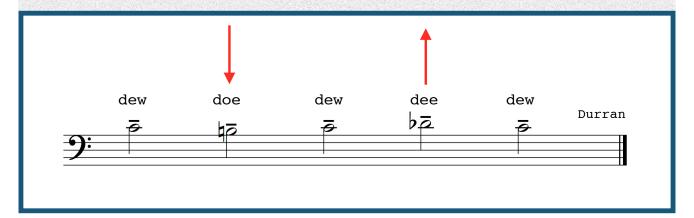


Practice saying the phrases below, to become aware of how the different vowel sounds feel.

"ah": Saw the Law "ew": Brew the Stew

"oe": Toast the Ghost "ee": The Bee's Knees

As a bassoon player, it is important to be flexible in your voicing. This will allow you to adjust notes to be in tune, since the bassoon does not have a built-in tuning mechanism. Practice the exercise below, using only the bocal and reed. The arrows indicate the direction of the pitch.

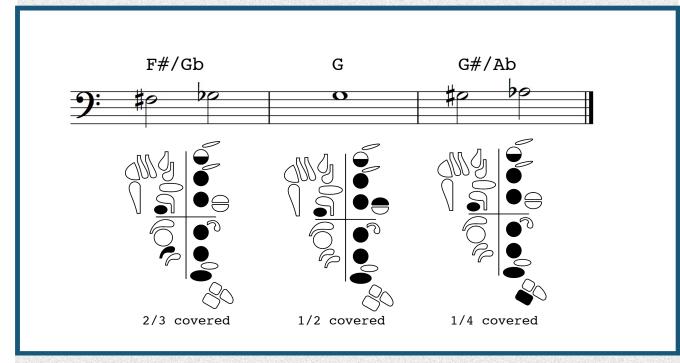


PAGE 36

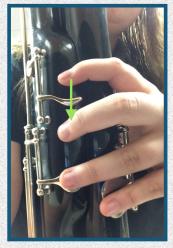


## SPECIAL OPS 2: HALF-HOLE TECHNIQUE

There are some notes in the "break" range of the bassoon that require using a half-hole fingering to avoid cracking of tone. A half-hole fingering is indicated below by the half-shaded tone hole, the left index finger. "Half-hole" is a general term; each note below actually requires a slightly different amount of hole coverage, as shown below (left to right, least coverage to most).



To play a half-hole fingering, roll the index finger downward to open the tone hole. Do not lift the finger and move it out of position!



PAGE 37



## SPECIAL OPS 2: HALF-HOLE TECHNIQUE

Practice the training exercises below. Always strive for your very best tone, and remember your posture, hand position, and air support. Half-hole notes use a "doe" voicing.

1. Roll Out Durran



Practice this exercise in a mirror so you can watch your finger movement. There should be no break in the sound at any time. Repeat each measure many times.

### 2. Leap of Faith

Durran



Try to make each interval as smooth as possible. There should be no break in the sound at any time. Pay special attention to your index finger movement for F to G: make sure it lands in a half-hole position.

### 3. Tahiti is a Magical Place

Brainard



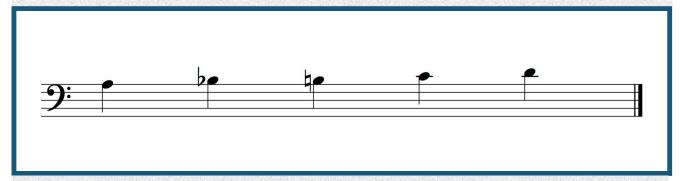
5



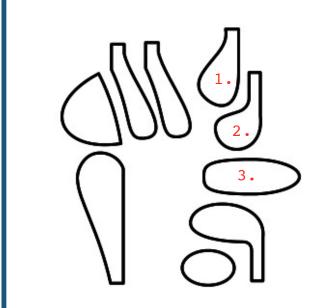


# SPECIAL OPS 3: FLICKING TECHNIQUE

The bassoon is the only instrument that uses flicking. Flicking makes it possible to play with good tone quality, when <u>slurring</u> up to the notes A, Bb, B, C, and D:



Flick keys are all played with the left thumb. The flick key should be briefly held down at the beginning of the note, and then released while the note is still being held. This creates a vent, allowing air to escape and making the beginning of the note clearer.

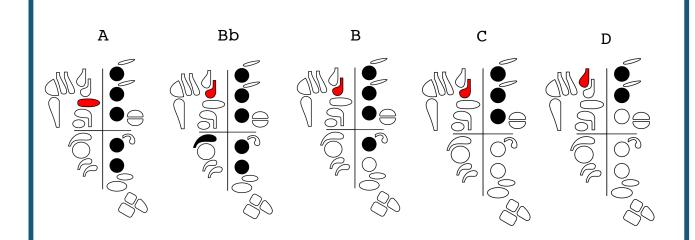


- 1. D flick key. Used to play D only. Some bassoons do not have this key—if yours does not, use the C flick key.
- 2. C flick key. used to play Bb, B, and C. Also used to play D, if your bassoon does not have a D flick key.
- 3. A flick key. Used to play A only.



## SPECIAL OPS 3: FLICKING TECHNIQUE

Practice the training exercises below. Always strive for your very best tone, and remember your posture, hand position, and air support.



- 1.Normal fingering
- 2. Lift and position thumb for flick, increase air speed
- 3. Press flick key (indicated above in red), holding key open. Change voicing from "doe" to "dew."
- 4. Lift thumb from flick key, hold upper note and prepare thumb for 1.

Durran

1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4

Durran

1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4

PAGE 40



LEVEL 5 AND BEYOND



### Intelligence Transmission #12234

Composers have been writing for bassoon since the 17th century—hundreds of years! They are some of the oldest wind instruments, developed from an even older instrument called the dulcian.

TOPSECRET



### LIST OF BASSOON REPERTOIRE

Here is a list of solos and method books for beginning bassoon. Performing solos can help make you a more confident player, and method books will teach you even more bassoon skills to take your playing to the next level!

Composer	Title	Publisher	Туре
Burness, John	Four Easy Pieces for Bassoon	Paterson Ltd	Solo
Denley, Ian (arrangements)	Time Pieces for Bassoon, Vol. 1	ABRSM Publishers	Solo
Herfurth, C. Paul	A Tune a Day for Bassoon	Boston Music	Solo
Hilling, Lyndon; Bergmann,Waltern	First Book of Bassoon Solos	Faber Music	Solo
Hughes, Eric	Six Low Solos [bassoon and piano]	June Emerson Wind Music	Solo
Vaughan Williams, Ralph	A Winter's Willow	Medici Music Press	Solo
Anzalone, Valentine	Breeze-Easy Method for Bassoon	Alfred Publishing	Method
Eisenhauer, William	Learn to Play the Bassoon! Book 1	Alfred Publishing	Method
Gekeler & Hovey	Belwin Bassoon Method, Vols. 1-3	Belwin Mills	Method
Hawkins, Alan	Progressive Studies Vol 1-2	Southern Music Company	Method
Langey, Otto	Practical Tutor for the Bassoon	Boosey & Hawkes	Method
Lentz, D.	Method for Bassoon	Boosey & Hawkes/ Belwin	Method
Pares, Gabriel, ed. Harvey Whistler	Pares Scales for Bassoon	Rubank Publications	Method
Siennicki, Edmund	Rubank Elementary Method for Bassoon	Rubank/Hal Leonard	Method
Skornicka, J.E.	Technical Growth for the Bassoonist	Ludwig Music Publishing	Method
Weissenborn, Julius	Bassoon Studies, Opus 8 - in "The New Weissenborn Method for Bassoon	Hal Leonard	Method

PAGE 42



### BASSOON LISTENING EXAMPLES

There are many band and orchestra pieces that feature the bassoon. Here are some examples:

### Band:

Alligator Alley, Michael Daugherty
Four Scottish Dances, Malcolm Arnold
American Salute, Morton Gould
Children's March, Percy Grainger
Molly on the Shore, Percy Grainger

### Orchestra:

Symphonie fantastique, Op. 14, Berlioz The Sorcerer's Apprentice, Dukas A Midsummer Night's Dream, Mendelssohn Peter and the Wolf, Prokofiev Bolero, Ravel Scheherazade, Op. 35, Rimsky-Korsakov



### BASSOON ONLINE RESOURCES

www.theorchestralbassoon.com (many great listening examples!)
www.michaelburnsbassoon.com (additional exercises)
www.savvy-bassoonist.com (information on everything bassoon)
www.musicracer.com (note name and fingering practice)
www.bassoontrainer.com (fingering practice at all levels)
www.foxproducts.com/pdfs/LetsPlayBassoon (great bassoon resource)



PAGE 43



### THE INDEX: FAMOUS BASSOONISTS

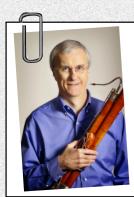
The best way to develop a great bassoon tone is to listen to professionals play. This will help you develop a high standard for bassoon sound. Here are some amazing bassoon players!



Name: Judith LeClair

Position: Principal
Bassoon, New York
Philharmonic; Faculty,
Julliard School

Notable Recording: <u>The</u>
<u>Five Sacred Trees</u>
(Sony Classical, 1997)



Name: Daryl Durran

Position: Faculty, Penn State University

Notable
Recording: American Wind
Music (Centaur Records,
1993)



Name:Klaus Thunnemann

Position:Soloist

Notable
Recording: <u>Vivaldi:</u>
<u>Bassoon Concertos</u>
(Phillips, 2003)



Name: Leonard Sharrow

Position: Faculty,
Indiana University;
Principal
Bassoon, Chicago Symphony
(1951-1964)

Notable Recording: <u>Mozart</u>
<u>Bassoon Concerto (NBC</u>
Symphony Orchestra, 1992)



Name: William Waterhouse

Position: Principal
Bassoon, London
Symphony and BBC
Symphony

Notable
Recording: <u>Schubert-</u>
<u>Melos Ensemble (His</u>
<u>Master's Voice, 1968)</u>



Name:Barrick Stees

Position: Assistant
Principal Bassoon,
Cleveland Orchestra;
Faculty, CIS and Akron

Notable Recording: <u>The</u> <u>Romantic Bassoon</u> (Mark <u>Records</u>, 2003)



### PRINT RESOURCES

Bassoon: Early History and Development. (n.d.). Retrieved July 27, 2015, from https://en.wikipedia.org/wiki/Bassoon#Early history

Durran, D. (Director) (2015, June 30). Bassoon Clinic. American Band College. Lecture conducted from , Ashland, OR.

Fagan-Miller, P. (2003). Beginner Bassoon Music. Retrieved July 27, 2015.

Pimentel, B. (2001). Fingering Diagram Builder. Retrieved July 29, 2015, from http://fingering.bretpimentel.com/#!/bassoon/

Polonchak, R. (1987). Bassoon. In M. McKee (Ed.), Embou-Shure (p. 43). Ashland, Oregon: W.I.B.C. Publishing.

Van Gansbeke, B. (2015). Principal Bassoon Excerpts. Retrieved July 27, 2015.

Wells, D. (2014, June 25). Fingering Charts. Retrieved July 20, 2015, from http://davidawells.com/2012/02/fingering-charts/

Wilson, R. (2015, July 27). Famous Bassoonists [Telephone interview].

### PHOTOS AND GRAPHICS

Alto Sax Range. (n.d.). Retrieved July 24, 2015, from <a href="https://upload.wikimedia.org/wikipedia/commons/a/a1/Range">https://upload.wikimedia.org/wikipedia/commons/a/a1/Range</a> alto saxophone.png

Bandworld ABC Logos. (n.d.). Retrieved July 2, 2015, from http://www.bandworld.org/ABC/View.aspx?p=ABC\_Download

Bassoon BW. (n.d.). Retrieved July 29, 2015, from http://www.1800usaband.com/uploads/images/417.jpg

Bassoon HD. (n.d.). Retrieved July 18, 2015, from <a href="https://capitolmusic.files.wordpress.com/2013/07/bassoon.jpg">https://capitolmusic.files.wordpress.com/2013/07/bassoon.jpg</a>

Bassoon Range. (n.d.). Retrieved July 27, 2015, from https://upload.wikimedia.org/wikipedia/commons/c/c5/Range\_bassoon.png

Clarinet Range. (n.d.). Retrieved July 29, 2015, from <a href="http://static.newworldencyclopedia.org/thumb/8/85/Range\_clarinet.png/250px-Range\_clarinet.png">http://static.newworldencyclopedia.org/thumb/8/85/Range\_clarinet.png/250px-Range\_clarinet.png</a>

Flute Range. (n.d.). Retrieved July 29, 2015, from https://upload.wikimedia.org/wikipedia/commons/1/12/Range of Flute.JPG



### PHOTOS AND GRAPHICS

Judith LeClair. (n.d.). Retrieved July 25, 2015, from <a href="https://nyphil.org/~/media/images/artists/orchestra/k-l/judith leclair.ashx">https://nyphil.org/~/media/images/artists/orchestra/k-l/judith leclair.ashx</a>

Klaus Thunnemann (n.d.). Retrieved July 27, 2015, from <a href="http://i.ytimg.com/vi/W4LboPMextw/maxresdefault.jpg">http://i.ytimg.com/vi/W4LboPMextw/maxresdefault.jpg</a>

Leonard Sharrow (n.d.). Retrieved July 27, 2015, from <a href="http://www.manchestersymphonyorchestra.com/concerts/guests/lsharrow.jpg">http://www.manchestersymphonyorchestra.com/concerts/guests/lsharrow.jpg</a>

Manila Envelope. (n.d.). Retrieved July 13, 2015, from http://png.clipart.me/previews/4fe/manila-envelope-47287.jpg

Man Wearing Hat. (n.d.). Retrieved July 29, 2015, from <a href="https://guintessentialgentlemen.files.wordpress.com/2013/04/cropped-man">https://guintessentialgentlemen.files.wordpress.com/2013/04/cropped-man</a> wearing hat silhouette.png

Orchestra (n.d.). Retrieved July 27, 2015, from <a href="http://academy.interlochen.org/sites/default/files/styles/full\_page\_image/public/bassoon-orchestraW.jpg?itok=8idouB2">http://academy.interlochen.org/sites/default/files/styles/full\_page\_image/public/bassoon-orchestraW.jpg?itok=8idouB2</a>

Paper Clip Clip Art. (n.d.). Retrieved July 27, 2015, from http://top-img.com/p/paper-clip-art

Secret Agent Silhouette. (n.d.). Retrieved July 29, 2015, from <a href="https://s-media-cache-ak0.pinimg.com/736x/54/00/ce/5400ce7a35c0f63a34fcd6e347ca7657.jpg">https://s-media-cache-ak0.pinimg.com/736x/54/00/ce/5400ce7a35c0f63a34fcd6e347ca7657.jpg</a>

WO Logo. (n.d.). Retrieved July 22, 2015, from http://www.westottawa.net/westottawa/wp-content/uploads/2014/05/WO-Block-Logo.jpg

X Marks the Spot. (n.d.). Retrieved July 9, 2015, from http://www.clker.com/cliparts/5/u/w/z/E/3/x-marks-the-spot.svg

