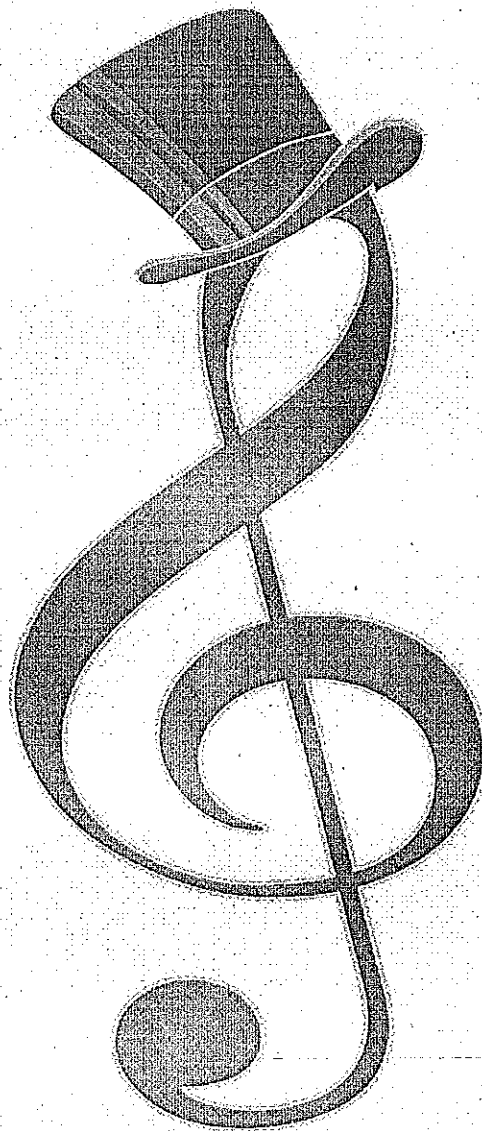


Science Hill Brass Manual



“make your best sound”

“always look your best”

“it only counts on the move”

MA18 – BRASS MANUAL

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IMPORTANT REHEARSAL MATERIALS

MOUTHPIECE:

TUNER / METRONOME: All members of the Science Hill brass team must own a tuner. It must be the following tuner – Korg TM-50 Combo Tuner / Metronome.

BREATHING TUBES: All members of the Science Hill brass team must have a **WHITE** ½ inch PVC Coupler – breathing tube – with them at **EVERY** brass rehearsal.

THREE-RING BINDER: (with clear sheet protectors): all music handouts (exercises, show music, and non-show music) must be kept in your three-ring binder. Any document you would need as a quick reference should be kept in your three-ring binder.

PENCIL: It is extremely important that every brass ensemble member have a pencil at all times. Notes should be taken at every rehearsal, especially when rehearsing with the arrangers. Write **EVERYTHING** down! The more details you document; the more details you will remember.

GLOVES (WHITE): Gloves must be worn when handling Science Hill brass instruments. You will go through many gloves during the season. It is important that your gloves remain in good condition and are replaced as necessary. Gloves that are dirty or that have acquired holes are **NEVER** acceptable..

BASEBALL CAP: Your cap must cover the top of your head and must shade your face, your eyes and your chops.

TENNIS SHOES / TRAINERS: You will be moving at all rehearsals. Thus, tennis shoes are required at all times. Sandals, shower shoes, vans, flip-flops, bare feet, etc. are never acceptable.

CLOTHING: You must wear clothing that will allow you to perform excessive movement such as sweats, shorts, t-shirts, etc. **NO JEANS!!!** Again, you will be moving at all rehearsals.

WATER BOTTLES: The approved water jug is a Coleman 1-Gallon Jug
<http://www.amazon.com/Coleman-3000000JUG-1-Gallon-Jug/dp/B00363RSXU>

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THE BUCKET LIST

The "Bucket List" is a consistent 6-step warm-up designed to prepare and enhance the brass ensemble on a daily basis. It is a series of steps in which the performers prepare themselves for rehearsal days and the performances. Everything involved with the exercises in the Bucket List directly transfers to the performance on the field.

- 1. Air with feet**
 - 9-count Air, 7-count Air, etc. *(page 20)*
- 2. Long tones with feet**
 - 9-count Tones, 7-count Tones, etc. *(page 20)*
- 3. Long tones into Slurs with feet**
 - G-C-C lip slurs *(page 25-28)*
 - Flow Studies *(page 21-24)*
 - Clarke Studies – if completely slurred *(page 40-43)*
- 4. Lip Slurs with feet**
 - 2-note Lip Slur *(pages 25-28)*
 - 3-note Lip Slur *(pages 25-28)*
 - 4-note Lip Slur *(pages 25-28)*
 - 5-note Lip Slur *(pages 25-28)*
 - 7-down Lip Slur *(pages 25-28)*
 - Little Hills Lip Slur *(pages 25-28)*
 - Big Mountains Lip Slur *(pages 25-28)*
- 5. Articulations with feet**
 - 8 Staccato 8th Notes *(page 29)*
 - Tim's 'Ticulations *(page 30)*
 - Clarke Studies – if using articulations *(page 40-43)*
- 6. Music**
 - Ensemble Tuning
 - Excerpts from our Repertoire

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AIR TECHNIQUE

Great breath control is an important key to maximizing one's ability to play a brass instrument. Keep the following concepts in mind while playing:

TIMING OF THE BREATH

The timing of the breath is of the utmost importance. The breath will occur a FULL BEAT before the attack of the note. Tempo will dictate whether the "full beat" is interpreted as a full quarter breath, dotted quarter note, or half note. Failure to utilize this technique will result in significant timing problems. At certain tempos, we may employ a 2 count breath. A 2-Count breathe will be utilized on an as-needed basis.

TAKE IN MORE AIR

To achieve maximum breath control, breathe deeply into the lungs. As the diaphragm (the strong, doughnut shaped, involuntary muscle under the ribs) pulls downward, room is created for the expansion of the lower back, abdomen, and ribs. The chest should then expand, once the capacity of the lower torso is reached. One should inhale to the point where the body feels relaxed and full of air.

STAY RELAXED

To maintain a state of relaxation, the shoulders and the upper back must not be tense so that the breathing passage is never constricted while inhaling or exhaling. Keep the throat open so there is no resistance or audible friction. The only sound accompanying the inhale should be a very soft "hoe." When done correctly, one should feel a cold spot develop on the back of their throat.

AIR IS IN or OUT

Air NEVER stops while playing. Air is either going in or out. Be mindful not to "cap" the breath. Capping occurs when the air is stopped after inhalation. Visualize the lungs as giant bellows that are constantly expanding and contracting.

RELEASE POINTS

Releases should be approached through the initiation of a short inhalation. Using a contraction of the throat and jaw should never be used to release a note. Using the tongue to stop a note will rarely happen, unless the music calls for an articulation with a tongue-stop. Simply breathing inward on a predetermined count will create a defined release. A uniform timing of the breath will ensure uniform timing of the release throughout the entire ensemble.

STAGGER BREATHE

To create a seamless sound, we utilize a technique called *stagger breathing*. By staggering the points of breathing throughout the ensemble, we can create an impenetrable wall of air or tone.

When performing air exercises with the instrument, it must be in the **correct playing position** while using the **correct playing embouchure**. As the air is blown through the instrument, the player should use **different valve combinations**. To challenge the performer to use more air in their playing, we will have the player press the valve's half way down to create more resistance – "*half-valving*."

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There is a difference in the **speed** of air based on the **range** that is being played:

Faster air for higher notes
Slower air for lower notes

There is also a difference in the **amount** of air when the player changes **volumes**:

More air for the louder notes
Less air for the softer notes

Air exercises should have different volume levels as well as different ranges. A key point is to always have **CONSISTENT, MOVING** air.

Breathe and play. One's internal subdivision (mental metronome), the breath, and the beginning of the note are all one through-line. **TIMING STARTS WITH THE SUBDIVISION AND THE BREATH!** In other words, if we are to play together on beat one, we all need to take a breath on beat four; the accuracy of the timing on beat four will be unified if every member of the ensemble is subdividing in their head before (and while) they breathe.

Whenever an attack is early, it can usually be traced back to improper or poorly timed breathing. Late attacks typically result from "capped breaths" (stopped air between in and out) or poor timing. The performer must **ALWAYS** breathe and play with his or her feet to stay in time with the ensemble.

DO NOT:

- Close the jaw upon the release
- Choke the air with your glottis (closing your throat)
- Use your tongue to stop a note (individuals who use the tongue to release are detectable by anyone who listens)

A clean release will ring for a moment even after the air has been released. Strive to make the note ring!

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BREATHING EXERCISES

While performing the following exercises, the player should be concerned with filling up his or her lungs completely while maintaining relaxation. In normal everyday situations, humans use about 20-25% of their lung capacity. In playing a wind instrument, we strive to push that towards 90%.

The proper breath should allow an outward expansion of the midsection of the body. This is easiest to see in the stomach area, but the expansion should also be felt in the side as well as the back. Once the lung capacity is full, the focus should switch toward releasing all the air out. It is important to completely empty the lungs, because the lungs will start to store carbon dioxide. If the air is not released to its natural point, carbon dioxide will build up and begin to decrease the player's lung capacity – causing unnecessary stress, tension, dizziness, and exhaustion.

When you begin these exercises, take in as much air as possible, and release ALL of the air through the horn; again, **THIS IS ESSENTIAL**. You should concentrate on taking ALL of the counts to perform each portion of the exercise. If four counts are given to take in air, the player should take all counts to do so, then turn the air around, moving it out. This will take away any dead time that is similar to holding your breath. There should be no hitch in the breathing process. This will give the player the greatest efficiency with regards to the use of air when playing.

These exercises should be done with and without the instrument. In both cases, relaxation is a key factor towards producing a proper air-stream; the avoidance of tension will allow for a more effective use of the air-stream. It is important with all the exercises that you try to imitate the way you play in a performance situation as closely as possible. Simply playing through the exercises without a thought of application is not effective and will form bad habits.

There are many kinds of breathing exercises and techniques that we will utilize throughout the spring, summer, and fall (such as sizzling and the Breathing Gym®). All exercises will develop and improve your air support.

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EMBOUCHURE DEVELOPMENT

Most professional brass musicians practice with the mouthpiece on a regular basis. The benefits of mouthpiece buzzing include: being able to isolate embouchure and tone production problems, improved aural skills, and less lip fatigue.

The first notes we will play every day will usually be on the mouthpiece. There will be much attention placed on how you produce that sound and its overall quality. The mouthpiece, embouchure, and air support combine to create the true instrument; the tubing of the brass instrument merely resonates your buzz. The quality of sound on the mouthpiece directly correlates to the player's tone quality when the mouthpiece is added to the instrument. Therefore, developing a dark and resonant sound on the mouthpiece should be a priority for all brass players.

There are numerous articles written about embouchure development for each of the instruments. We strongly recommend that you find and research these articles so that you may apply the information to your specific instrument. You should also continue to reinforce the embouchure work that you may have done with your private lesson instructor.

Remember, the first rule is **ALWAYS SOUND GOOD**. This requires focus on producing the most resonant, dark, and warm tone as possible.

Here are some basic embouchure rules that can be applied to all brass players:

The corners of the mouth need to be firm and strong. Close to unmovable.

- The middle of lips should be firm yet pliable. We cannot restrict airflow through the lips.
- The mouthpiece should be placed as close to perpendicular on the lips as possible – not too upstream or downstream.
- Both lips should have enough flesh on the mouthpiece to allow for a full and robust buzz.
- Always bring the mouthpiece to the same place on your lips.
- The jaw should always be open – especially in the lower register.
- The teeth are apart.

There should always be a dark, open "Oh" sound. If the sound is bright and tinny, open your jaw more and firm up the corners. Be sure to check that the mouthpiece is not forced against your lips. Again, be certain that the corners are locked and that there is **ALWAYS** excellent breath support.

In addition to warm-up exercises, mouthpiece playing will help improve accuracy discrepancies in the show music. **Every player in the ensemble should be able to play any part of the show music on his or her mouthpiece.**

BENDING PITCHES

When practicing on your own, or even during a warm down, we **DO** recommend bending/sliding as a technique to gaining true flexibility. It is important that when you slide between pitches or when bending pitches, that your corners stay firm, and that the "M"-muscles in the upper lip stay engaged. The bending or sliding of the pitch lies solely on the rolling in-and-out of the bottom lip and the type of air being used.

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When playing flexibility exercises on the mouthpiece, target the exact pitch. Sliding will cause intonation problems, along with serious timing problems, because players arrive at the pitch at different times. **WHEN WE HAVE MANY PLAYERS TRYING TO PLAY TOGETHER, WE NEED TO "NAIL" EVERY PITCH WITH NO SLIDING.**

You may be asking yourself, "How do I play large interval leaps without sliding?" Answer: **AIR VELOCITY** and tongue elevation while buzzing in the mouthpiece.

In other words, if a player's air moves at 50 mph for middle "C", then it should move at 100 mph for a high "C". Every pitch should have a specific air velocity that will help you find the pitch-center rapidly and efficiently. On the other side of this concept, do not slow down the air too much in the lower range, as the pitch will go flat and the tone will be thin.

FOGHORN

"Foghorn" is an exercise that involves removing the tuning-slide of a brass instrument and inserting only one end of the slide back in. The difference between the foghorn and the mouthpiece is that with foghorn, there is more resistance and there are breaks between ranges. For example, going from a lower pitch to a middle pitch, you go through a break (similar to a slur). The following rules apply to foghorn:

- Breath attacks are used.
- Define the pitch you will play – every instrument will be different.
- Try to match that pitch every time you come back to it.
- Work to minimize any "shaking" in the sound.
- Work to minimize any "air-in-the-sound" in your tone quality.
- Use as much air as possible and play at a solid forte level at all times.
- No pressure should be placed on the embouchure.

SINGING

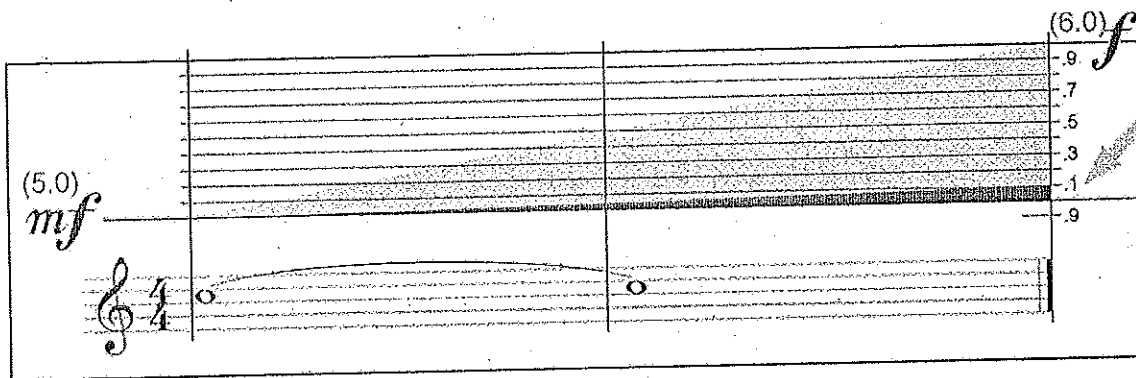
All instruments produce sound that imitates the human voice. Singing is an important tool for developing great ensemble tone quality and intonation. The brass section will sing frequently, and we will have a very serious approach to the technique of singing. The resonance and breath support necessary for singing are quite similar to proper brass playing. When singing, we use the "radio announcer" voice, the voice that seems to project a great distance. Here are some guidelines for all singing exercises:

- The throat should be open.
- The face should be relaxed.
- The mouth shape should be oval like – the longer part of the oval from nose to chin.
- The same approach to breathing, air support, and direction of air with your wind instrument, applies to singing.
- Everyone should always be listening to match the pitch.
- We will use different vowel sounds, including humming.
- We will train you to use audiation, and often check the pitch before, during, and after singing.
- We will work on and be able to sing every exercise in the technique book, chorales and show music.

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GOING TO .1 (POINT ONE)

The concept of "going to .1 (point one)" was designed to prevent decay at the end of a note due lack of air support. Take a look at the example below – the "9-count tone". The amount of space between *mezzo-forte* (5.0) and *forte* (6.0) is 1.0. If there were a crescendo assigned to this long tone, then the numerical value would be 5.0 to 6.0 (indicated by the gray zone). However, since there is no crescendo, the numerical value would be .15 (indicated by the blackzone). This creates consistent **support to the end of the note** without decay (falling to 4.9 or less).



LONG TONES

There are several benefits from playing long tones every day. Along with mouthpieces work, this allows the muscles in your face to loosen up and helps you to become comfortable with instrument. Primarily, this is an opportunity for the player to concentrate solely on **tone quality, breath support, and intonation**. Without the distraction of rhythms and notes, the player can focus on playing in tone with his or her section and throughout the ensemble. Long tones are essential toward establishing a solid center of pitch for the warm-up. Balance and blend are key factors to this portion of the warm-up. Players should be listening for intonation, blend of tone, intensity, as well as quality of sound.

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9 Count

7 Count

13 Count

11 Count

17 Count

15 Count

21 Count

19 Count

Rules in Ensemble Breathing:

- Subdivide in your head
- Always move your feet in time
- Use a full count to breathe
- Full deep breaths (never shallow breaths)
- Support to the release
- Release by taking a short breath in (reverse the air)
- Air is going In or Out, one motion – never “cap” or pause the air

FLOW STUDIES

The flow studies are another staple in the Mandarins fundamentals package. This exercise will allow the member to focus on creating the most smooth and characteristic sound possible. Based on the exercises of Vincent Cichowicz, these lines begin with small intervals and progress to larger intervals, allowing the performer to create a block sound that is even throughout all registers.

The exercise can be transposed down to work on lower register playing. In addition, by adding notes to the middle of each line, the upper register can be expanded.

The performer should strive to create the most resonant and even sound possible. This even sound occurs when all notes produced are equal in tone, volume, and energy. Dynamics can also be added to the exercise to place additional responsibilities on the player. However, in the initial stages, the performer should work to create a constant and unchanging sound with no dynamic change.

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FLOW STUDIES – High Brass

1. Treble clef, 4/4 time. Notes: G4, A4, B4, C5, B4, A4, G4. Slur over measures 1-7. Final measure: G4.

2. Treble clef, 4/4 time. Notes: G4, A4, B4, C5, B4, A4, G4. Slur over measures 1-7. Final measure: G4.

3. Treble clef, 4/4 time. Notes: G4, A4, B4, C5, B4, A4, G4. Slur over measures 1-7. Final measure: G4.

4. Treble clef, 4/4 time. Notes: G4, A4, B4, C5, B4, A4, G4. Slur over measures 1-7. Final measure: G4.

5. Treble clef, 4/4 time. Notes: G4, A4, B4, C5, B4, A4, G4. Slur over measures 1-7. Final measure: G4.

6. Treble clef, 4/4 time. Notes: G4, A4, B4, C5, B4, A4, G4. Slur over measures 1-7. Final measure: G4.

7. Treble clef, 4/4 time. Notes: G4, A4, B4, C5, B4, A4, G4. Slur over measures 1-7. Final measure: G4.

8. Treble clef, 4/4 time. Notes: G4, A4, B4, C5, B4, A4, G4. Slur over measures 1-7. Final measure: G4.

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FLOW STUDIES - Baritones

This image displays eight numbered musical staves (1-8) for baritone flow studies. Each staff begins with a bass clef and a key signature of one flat (B-flat). The time signature is 4/4. The studies are designed as continuous, flowing lines, indicated by long horizontal slurs above the notes. The notes are primarily quarter and eighth notes, with some half notes. The studies progress in difficulty from staff 1 to staff 8, with staff 8 featuring a sequence of ascending eighth-note chords. Each staff concludes with a final note and a double bar line.

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FLOW STUDIES - Tubas

1
2
3
4
5
6
7
8

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LIP SLURS / FLEXIBILITY

Lip slurs play a huge part in the development of any brass player's flexibility. The ability to move fluidly from partial to partial while maintaining accurate pitch is essential. Providing a consistent air stream throughout the musical line will allow the player to attain this fluidity. The exercise should not be thought of merely as an exercise, but rather as a musical phrase. Each musical line should have purpose, movement, and arrive at a destination.

With the Flexibility Exercises remember these important guidelines:

- Always take a full count breath before you play
- Always take a step out on the first note
- Every double bar line is a step out
- Down 3 half steps (1&2) and back up
- Finish the exercise by halting your feet and sustaining the last note
 - Low C/Bb for "G-C-C", "5-note", and "Big Mountains"
 - Middle G/F for "2-note", "3-note", "4-note", and "Little Hills"
 - Middle C/Bb for "7-down"

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FLEXIBILITY EXERCISES - High Brass

"G-C-C"

"2 note"



"3 note"



"4 note"



"5 note"



"7 down"



"Little Hills"



"Big Mountains"



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FLEXIBILITY EXERCISES - Baritones

"G - C - C"



"2 note"



"3 note"



"4 note"



"5 note"



"7 down"



"Little Hills"



"Big Mountains"



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FLEXIBILITY EXERCISES - Tubas

"G-C-C"



"2 note"



"3 note"



"4 note"



"5 note"



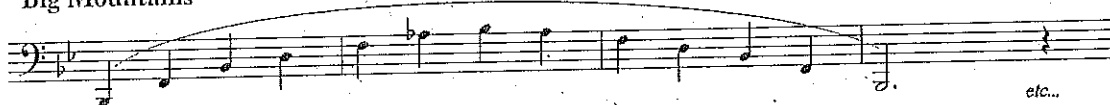
"7 down"



"Little Hills"



"Big Mountains"



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