

THE VERY USEFUL TROMBONE BOOK



COMPILED BY BOB DOWELL

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FOREWORD

This PDF contains lots of helpful information from technical exercises to advice on practicing and other useful trombone related stuff.

Hopefully it will help answer a few questions.

Spend time finding music you love. Listening to great trombonists and other instrumentalists will help you find your sound. Here are some wonderful trombone players to get you started.

Joe Alessi
Blair Bollinger
Ian Bousfield
Lawrence Brown
Bill Burgess
Jimmy Cleveland
Willie Colon
Steve Davis
Michael Dease
Ben Van Dijk
Tommy Dorsey
John Fedchock
Carl Fontana
Jay Friedman
Curtis Fuller
Marshall Gilkes
Wycliffe Gordon
Urbie Green
Al Grey
Slide Hampton
Conrad Herwig
Mark Hetzler
J.J. Johnson

Jimmy Knepper
Christian Lindberg
Melba Liston
James Markey
Andy Martin
Elliot Mason
Glenn Miller
Mark Nightingale
Arthur Pryor
Geert De Vos
Jorgen Van Rijen
Ralph Sauer
Bill Reichenbach
George Roberts
Frank Rosolino
Jack Teagarden
Alain Trudel
Steve Turre
Charles Vernon
Bill Watrous
Jiggs Whigham
Douglas Yeo

PRACTICE TIPS

PRACTICE AT LEAST EVERY DAY - 365 DAYS A YEAR

ALWAYS HAVE GOAL

THINK! MINDLESS BLOWING WILL NOT GET YOU ANYWHERE.

PRACTICE AT A SLOW TEMPO - BE IN COMPLETE CONTROL

USE A PENCIL - ADD BREATH MARKS. NOTE YOUR MISTAKES.

TAKE NOTE OF YOUR SUCCESSES. BE POSITIVE.

HOLD AN EXTREMELY HIGH STANDARD

REST BETWEEN EXERCISES

USE A METRONOME - TRAIN YOUR MUSCLES TO WORK IN TIME.

RECORD YOURSELF - WHAT COULD BE IMPROVED?

WHILE LEARNING A STUDY OR SOLO, PRACTICE SLOWLY IN SHORT SECTIONS

PLAY HIGHER PASSAGES DOWN AN OCTAVE (OR VICE-VERSA) TO WORK ON PHRASING AND AIRFLOW.

TAKE A BREAK TO RE-GAIN CONCENTRATION

IMPROVEMENT IS A GRADUAL PROCESS. YOU OFTEN DON'T NOTICE IT'S HAPPENING.

1 HOUR-A-DAY EQUALS 365 HOURS IN A YEAR. 2 HOURS-A-DAY EQUALS 730 HOURS IN A YEAR, AND SO ON...

SLIDE POSITION CHART

FOR TENOR & BASS TROMBONE

N.B: All trigger (F, G-Flat & D) positions refer to the standard 7-position system.

F	F-Sharp or G-Flat	G	G-Sharp or A-Flat
8 ^{vb}			
7 (false tone)	6 (false tone)	5 (false tone)	4 (false tone)

A	A-Sharp or B-Flat	B or C-Flat	C
(8)			
3 (false tone)	2 (false tone) D7	b7 (false tone) D-b5	7 (false tone) F7 D4

C-Sharp or D-Flat	D	D-Sharp or E-Flat	F
(8)			
6 (false tone) F6 D-bb2 Gb-b7	5 (false tone) F-#5 D1	4 (false tone) F-bb3 Gb-#5	6 F1 Gb-b2

F-Sharp or G-Flat	G	G-Sharp or A-Flat	A
5 Gb1	4	3	2

A-Sharp or B-Flat	B or C-Flat	C	C-Sharp or D-Flat
1 D7	b7 (false tone) F-#5 (false tone) D-b5	7 (false tone) F-b7 D4	6 (false tone) F6 D-bb2

D	D-Sharp or E-Flat	E or F-Flat	F
5 (false tone) F-#5 D1 Gb6	4 (false tone) F-bb3 Gb-#5	7 F-b2 Gb-bb3	6 F1 Gb-b2

F-Sharp or G-Flat	G	G-Sharp or A-Flat	A
5 Gb1	4 F-b7	3 F6	1 F-#5

A-Sharp or B-Flat	B or C-Flat	C	C-Sharp or D-Flat
1 F- <i>bb</i> 3	7 F- <i>b</i> 2 D5	6 F1	5

D	D-Sharp or E-Flat	E or F-Flat	F
4	3	2 7	1 6 F1

F-Sharp or G-Flat	G	G-Sharp or A-Flat	A
5	4	3 7	2 6

A-Sharp or B-Flat	B or C-Flat	C	C-Sharp or D-Flat
1 5	4 7	3 6	2 5

D	D-Sharp or E-Flat	E or F-Flat	F
<i>1</i> 4	<i>3</i> <i>short 6</i>	<i>2</i> <i>short 5</i>	<i>1</i> <i>short 4</i> 6

F-Sharp or G-Flat	G	G-Sharp or A-Flat	A
<i>short 3</i> 5	<i>short 2</i> 4	<i>3</i> 5	<i>2</i>

A-Sharp or B-Flat	B or C-Flat	C	C-Sharp or D-Flat
<i>1</i> 3	<i>2</i> 4	<i>1</i> 3	<i>2</i> 5

D	D-Sharp or E-Flat	E or F-Flat	F
<i>1</i> <i>short 3</i> 4	<i>short 2</i> 3	<i>2</i>	<i>1</i>

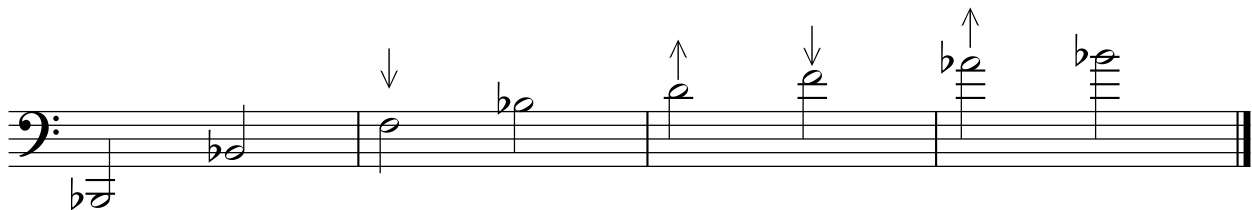
F-Sharp or G-Flat: *short 3*
 G: *short 2*
 G-Sharp or A-Flat: 3
 A: 2

A-Sharp or B-Flat: 1
 B or C-Flat: 2
 C: 1
 C-Sharp or D-Flat: 2

D: 1
 D-Sharp or E-Flat: *short 2*
 E or F-Flat: 2
 F: 1

INTONATION & TUNING

The trombone is a B-flat instrument, meaning that in 1st / closed position, we can play the B-flat harmonic series, as follows...



The harmonic series as exists in nature, is not 'in-tune' so some notes require very minute adjustments.

The arrows indicate how to adjust the slide. Up meaning inward, and down meaning outward.

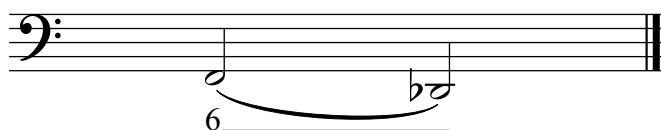
Experiment with a tuner, but above all.. LISTEN.

As you move further down the slide, the necessary adjustments will gradually become larger.

To play an in-tune 1st position D, many players push the tuning slide in a touch so that B-flat is in 'almost closed-position'.

TUNING THE F-ATTACHMENT

- * Tune the F-attachment so that low F is in 1st-position. Note that second space C may sound sharp so you should adjust outward slightly. Now, check that pedal D-flat is in tune in 6th-position.



TUNING THE DOUBLE-VALVE BASS TROMBONE

- * First, tune low B-flat in 1st position.
- * Tune the F-valve so you can play low F in closed position. (Always depress valve to adjust tuning slide).
- * Tune the 2nd valve to low G-flat in 1st position.
- * Now pressing both valves together, check pedal D in closed position.
- * Check that Bb, F, Gb and D are in tune without have to adjust the hand slide at all.

Certain trigger notes fall in regular slide positions. While tuning, match these pitches to the same position:

- * Low F (6th position) with Pedal D-flat (F-valve depressed)
- * Low F (6th position) with Pedal D (G-flat valve depressed)
- * Low G (4th position) with Pedal C (both valves depressed)
- * Low E in 7th match with Pedal Bb (both valves depressed)

TROMBONE CLEFS

BASS CLEF (Concert-pitch)

TENOR CLEF (Middle-C is on the 4th line)

ALTO CLEF (Middle-C is on the 3rd line)

B \flat TREBLE CLEF (Sounds a Major 9th below)

The first system of musical notation displays four staves, each with a different clef. Each staff contains two measures of music. The first measure shows the natural scale from 7 to 4 (7, 6, 5, 4) with fingerings 7, 6, 5, 4. The second measure shows the scale from 3 to 7 (3, 2, 1, 7) with fingerings 3, 2, 1, 7. The staves are: Bass Clef (Concert-pitch), Tenor Clef (Middle-C is on the 4th line), Alto Clef (Middle-C is on the 3rd line), and B \flat Treble Clef (Sounds a Major 9th below).

The second system of musical notation displays four staves, each with a different clef. Each staff contains two measures of music. The first measure shows the scale from 6 to 3 (6, 5, 4, 3) with fingerings 6, 5, 4, 3. The second measure shows the scale from 2 to 4 (2, 1, 5, 4) with fingerings 2, 1, 5, 4. The staves are: Bass Clef (Concert-pitch), Tenor Clef (Middle-C is on the 4th line), Alto Clef (Middle-C is on the 3rd line), and B \flat Treble Clef (Sounds a Major 9th below).

First system of musical notation. It consists of four staves. The first three staves use bass, alto, and tenor clefs respectively, while the fourth staff uses a treble clef. The music is in 3/4 time and has a key signature of one flat (B-flat). The notes and fingerings for each staff are as follows:

Staff	Measure 1	Measure 2	Measure 3	Measure 4
Bass Clef	B ₂ (3)	A ₂ (2)	G ₂ (1)	F ₂ (4)
Alto Clef	B ₂ (3)	A ₂ (2)	G ₂ (1)	F ₂ (4)
Tenor Clef	B ₂ (3)	A ₂ (2)	G ₂ (1)	F ₂ (4)
Treble Clef	B ₂ (3)	A ₂ (2)	G ₂ (1)	F ₂ (4)

Second system of musical notation. It continues the piece with the same four-staff arrangement. The notes and fingerings for each staff are as follows:

Staff	Measure 1	Measure 2	Measure 3	Measure 4
Bass Clef	E ₂ (2)	D ₂ (1)	C ₂ (3)	B ₁ (2)
Alto Clef	E ₂ (2)	D ₂ (1)	C ₂ (3)	B ₁ (2)
Tenor Clef	E ₂ (2)	D ₂ (1)	C ₂ (3)	B ₁ (2)
Treble Clef	E ₂ (2)	D ₂ (1)	C ₂ (3)	B ₁ (2)

TECHNIQUES

Alternate Positions Alternate slide positions facilitate smoother, more coherent slide motion. For example:

1st position F (on the staff) may be played in 6th position.

1st position Bb (top of staff) may be played in 5th position.

1st position D (above the staff) may be played in 4th position.

Breath-Attack Using the air alone (no tongue) to start the note.

Breath Control The ability to release air in a controlled manner. Breathing exercises, long-tones and flow-studies will help develop good breath control.

Doodle Tonguing Articulation of faster passages using the syllables “Doo-dle”. Pioneered by the great jazz trombonist, Carl Fontana.

Dynamics The ability to play loud and soft, or crescendo and decrescendo whilst maintaining good tone quality and intonation.

False Tones We can play low Bb down to low E. However, low Eb, D, Db, C and B are not available to us (without a trigger). With practice we can force these notes to sound.

Flutter Tongue Playing a note while rolling the tongue as if pronouncing the word “T-rrrrrrrr-ombone”. Some people, however, are genetically unable to roll their tongue.

Legato Smooth and flowing musical phrases played with a continuous air flow. Notes are separated using a light tongue, or a natural slur.

Lip Trill Rapidly slurring back and forth between two notes in the same harmonic series.

Multi-Phonics Producing multiple notes simultaneously by playing a fundamental tone while singing another to create harmonic overtones. Albert Mangelsdorff uses this technique to great effect.

Tongue Level or Tongue Position The raising or lowering of the tongue by using different vowel shapes to assist interval leaps.

Multiple Tonguing Double and triple tonguing patterns produced using the syllables “Dah-Gah” or “Tah-Kah” to articulate notes in rapid succession.

Pedal Tones Named after the (foot) pedal notes of the organ. On the trombone, pedal Bb (2 ledger lines below the staff) and downward.

Slide Technique The art of moving the slide from one position to the next in with a smoothly, quickly and with perfect intonation.

Natural Slur Moving seamlessly from one note to another using the harmonic series to create a natural break in the sound.

Staccato Detached notes played with a short puff of air.

Straight Tongue Using the syllable “Dah” or “Tah” to articulate the start of each note.

Vibrato A slight rapid variation in pitch, achieved by moving the jaw (jaw-vibrato) or the slide (slide-vibrato).

GOOD POSTURE TIPS

Below are some very general tips that you may find useful. Good posture can have a wonderful effect on your playing so is well worth giving some thought to. The Breathing Book by David Vining is a great place to start. He expertly outlines some of the principles of The Alexander Technique that many musicians have found invaluable.

STANDING

- * Place your trombone on its stand.
- * Stand with your feet a comfortable distance apart.
- * Spread your weight evenly between both legs/feet.
- * Try shifting your weight forward a little onto the balls of your feet. Feel yourself balancing from back to front rather than from side to side. Relax your feet.
- * Look straight ahead, relaxing your neck, shoulders and entire body. Unnecessary tension will affect breathing.
- * Neither slouch nor over stretch.
- * While looking straight ahead, bring the trombone up to your lips.
- * Your head faces forward, and so should your instrument.
- * Imagine the trombone is weightless, while relaxing both arms.
- * Let your elbows fall naturally by your side.

(GOOD POSTURE TIPS - Cont.)

- * Lightly grip the slide between your thumb and two fingers (fingers together). Learn to move the slide along its own line of travel. Slide motion should not cause any bell movement.
- * When reading music, place the stand a good distance away to maintain a good posture.

SITTING

- * Sitting is similar to standing, but instead, balancing on your sitting bones instead of your legs.
- * Sit closer to the front of the chair with your feet apart and flat on the ground.
- * Distribute your weight evenly to each side.
- * Allow your legs to relax. Any tension will inhibit your breathing.

WEARING GLASSES

Should your glasses tend to slip down your nose, as do mine, resist the temptation to tilt your head back in order to see. Wait for an opportune moment to push them up with your index finger.

ALEXANDER TECHNIQUE

Devised by F.E. Alexander, 'Alexander Technique' is a system of bodily awareness designed to promote well-being by ensuring minimum effort in maintaining postures and carrying out movements.

DAILY BREATHING-EXERCISES

Breathing is a great way to start the day. (Obviously!) Spending about ten minutes on breathing each morning will greatly improve your playing.

These exercises are from 'The Breathing Gym' by Sam Pilafian and Patrick Sheridan, and feature in their book and video, The Breathing Gym.

EXERCISE 1

4 counts in - 4 counts out (Twice)
3 counts in - 4 counts out (Twice)
2 counts in - 4 counts out (Twice)
1 count in - 4 counts out (repeat as many times as possible)

EXERCISE 2

4 counts in - 4 counts out (Twice)
4 counts in - 3 counts out (Twice)
4 counts in - 2 counts out (Twice)
4 counts in - 1 count out (Repeat as many times as possible)

EXERCISE 3

4 counts in - 4 counts out (Twice)
3 counts in - 3 counts out (Twice)
2 counts in - 2 counts out (Twice)
1 count in - 1 count out (As many times as possible)

EXERCISE 4

Inhale for four counts, blow (push!) everything out in 1 count, and then push out two extra breaths.

EXERCISE 5

While raising or arms over your head, slowly breathe in for 6 counts. Lower your arms as you exhale for 6 counts. Then go to 8, 10 ...

EXERCISE 6 “BOW AND ARROW”

Breathe in as you pull an imaginary bow back, take two more quick breaths, and then let go of the bow’s string and breathe out. Do this both right- and left-handed.

EXERCISE 7 “PITCHING A BALL”

As you inhale pull your arm back to throw the imaginary ball. Take two more quick breaths, and then throw the ball and blow everything out. Do this both right- and left-handed.

EXERCISE 8 “BLOWING A PAPER AIRPLANE”

(To work on pianissimo playing)

Toss the airplane slowly as you blow gently. Follow through with the hand as you envision the paper airplane flying with your breath.

EXERCISE 9 “THROWING DARTS”

(To work on fortissimo playing)

Blow out short, big “puffs” of air as you throw an imaginary dart.

EXERCISE 10

Inhale for 8 counts, hold air in for 8 counts (keep the chest and mouth open), and then blow out for 8 counts. As you progress, increase the length of the hold.

EXERCISE 11

Inhale for 4, hold for 4, push out half of the air, hold for 2, and then push out the rest of the air.

EXERCISE 12

Inhale for 4 counts, blow (push!) everything out in 1 count, and then push out 2 extra breaths.

DAILY ROUTINE

An essential part of your practice, the daily routine builds technical ability and helps monitor your progress. It is not the same as a 'warm-up'.

- * A 'warm-up' is used to loosen the muscles to prepare for playing. This may involve gentle long tones and slurs.
- * A daily-routine on the other hand, aims to actively work on and improve all essential techniques including...

breathing, breath-control, breath-attack, tone, intonation, slide-technique, slurs, articulation...
- * Work through your routine every day from start to finish, regardless of all other playing you may do.

Daily Routine 1 is for tenor and bass trombone (page 22).
Daily Routine 2 is for tenor trombone (page 26).
Daily Routine 2A is for bass trombone (page 35).

"Those times when you don't feel like working. You're too tired. You don't want to push yourself, but you do it anyway. That is actually the dream."
- Kobe Bryant (Not a trombonist, but it works!)

DAILY ROUTINE 1

FOR TENOR & BASS TROMBONE

1. LONG TONES

Continue as low as possible...



As you are running out of air, give the note a final push

2. INTONATION



3. LIP SLURS



4. LIP SLURS





5. TONGUING



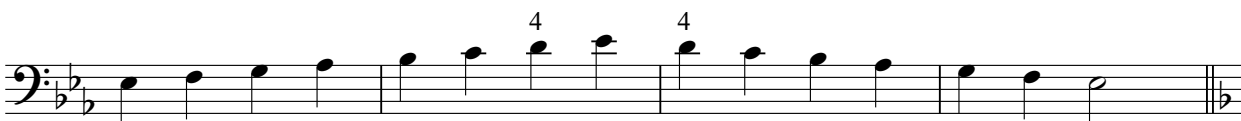
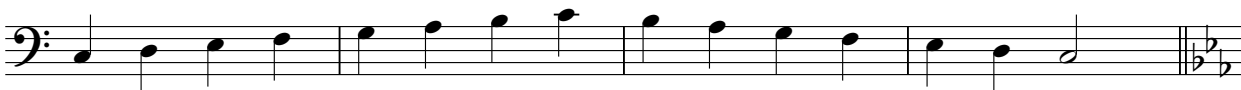
Use a different scale each day.



6. MAJOR SCALES



In a single breath.





DAILY ROUTINE 2

FOR TENOR TROMBONE

1. LONG TONES

Continue as low as possible...



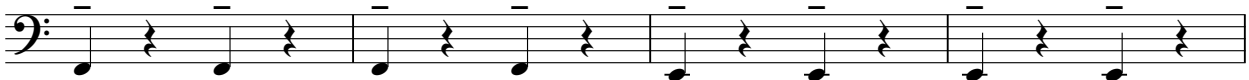
As you are running out of air, give the note a final push

2. INTONATION



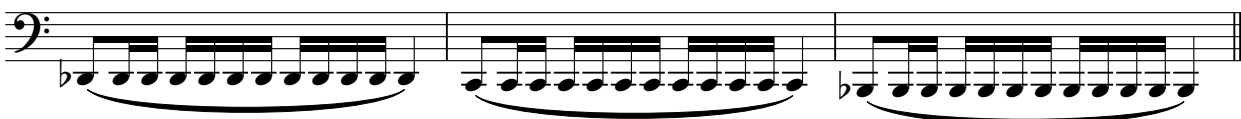
3. BREATH ATTACK





4. LEGATO TONGUE





5. LIP SLURS





6. LIP SLURS



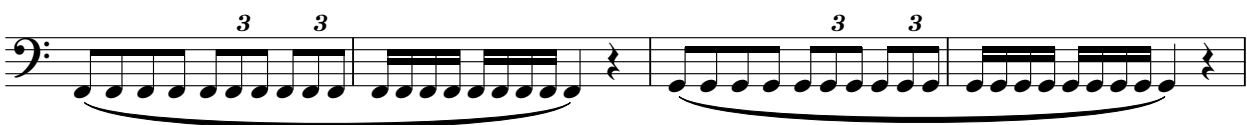
7. LIP SLURS







10. SINGLE TONGUE



11. MULTIPLE TONGUING

ta ta ta ta ta ka ta ta ka ta ka ta ka ta ka ta
ta ta ta ta ta ka ta ta ka ta ta ka ta ka ta ka ta

12. HIGH REGISTER

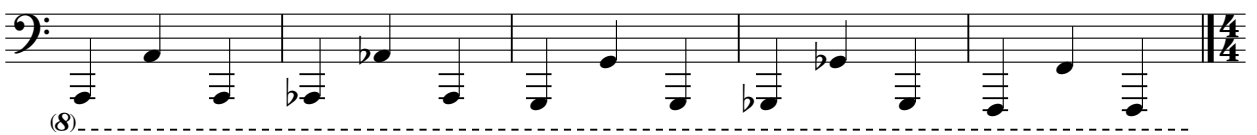
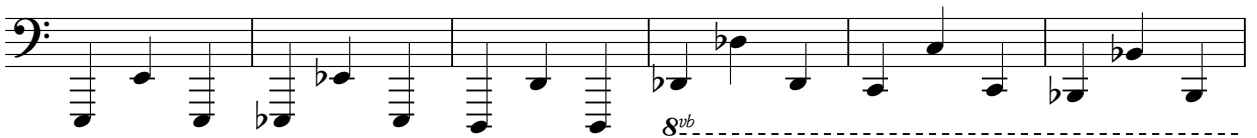
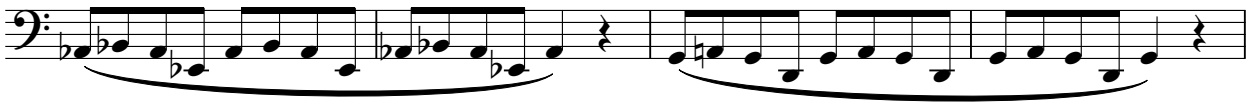
7 6

5 4

3 2

1

The bass line is written on a single staff with a bass clef and a key signature of one flat (B-flat). It consists of two measures, each containing a triplet of eighth notes. The first measure has a whole note rest, and the second measure has a whole note rest. The notes are G2, F2, and E2 in the first measure, and D2, C2, and B1 in the second measure. The notes are beamed together with a '3' above them to indicate a triplet.



DAILY ROUTINE - 2A

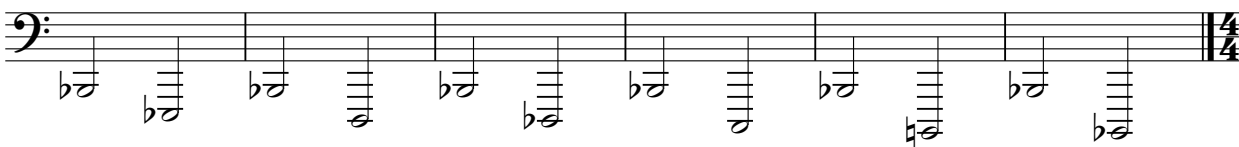
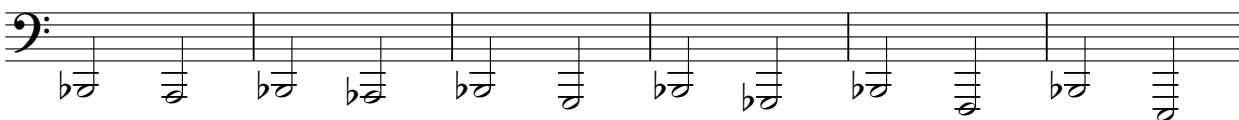
FOR BASS TROMBONE

1. LONG TONES

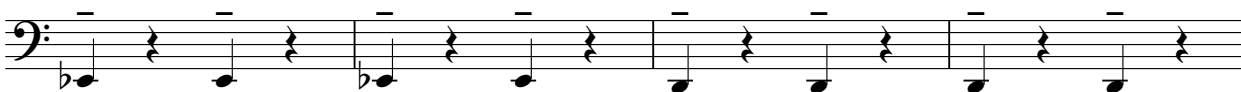
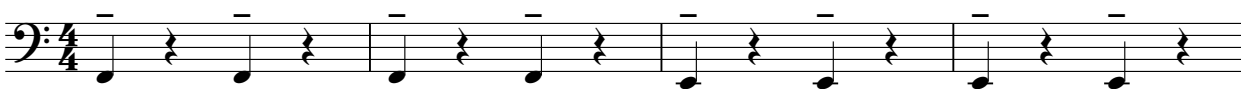
Continue as low as possible...



2. INTONATION



3. BREATH ATTACK



Continue as low as possible



4. LEGATO TONGUE



Continue as low as possible...



5. LIP SLURS



7. LIP SLURS

7. LIP SLURS

Four staves of music in bass clef, key signature of one flat (B-flat). The exercise involves slurs over eighth and sixteenth notes, with some slurs spanning across bar lines.

8. LEGATO TONGUE

8. LEGATO TONGUE

Four staves of music in bass clef, key signature of one flat (B-flat). The exercise involves slurs over eighth and sixteenth notes, with some slurs spanning across bar lines. Fingerings and fingering numbers are indicated below the notes.

1 2 3 2 _____ F1 F2 F3 F2 _____

D1 D2 D3 D2 _____ 1 2 3 2 _____

2 3 4 3 _____ F2 F3 F4 F3 _____

D2 D3 D4 D3 _____ 2 3 4 3 _____

3 4 5 4 _____ F3 F4 F5 F4 _____

D3 D4 D5 D4 _____ 3 4 5 4 _____

4 5 6 5 _____ F4 F5 F6 F5 _____

D4 1 2 1 _____ 4 5 6 5 _____

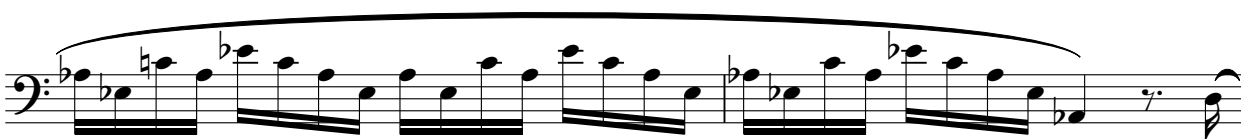
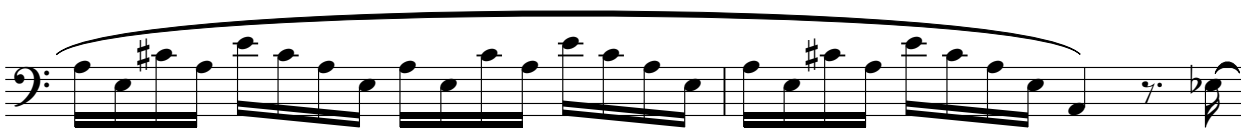
5 6 7 6 _____ D2 D3 D4 D3 _____

1 2 3 2 _____ Gb1 Gb2 Gb3 Gb2 _____

F1 F2 F3 F2 _____ D3 D4 D5 D4 _____

2 3 4 3 _____ Gb2 Gb3 Gb4 Gb3 _____

9. LIP SLURS



10. SINGLE TONGUE

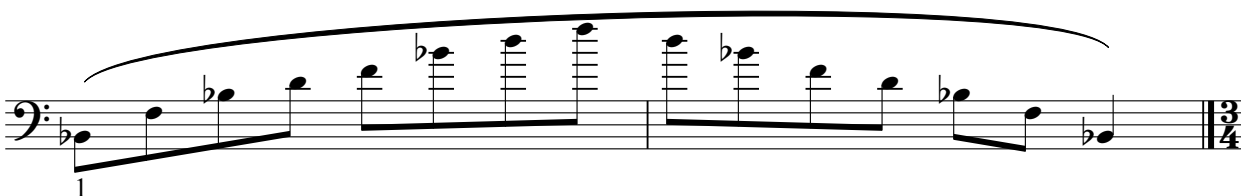
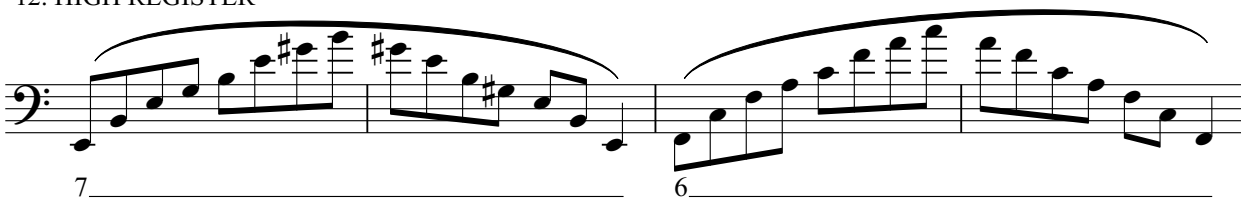
Exercise 10: SINGLE TONGUE. This section contains four measures of music in bass clef. Measures 1 and 2 feature eighth-note triplets (marked '3') on a half-note staff, with a slur spanning both measures. Measures 3 and 4 feature eighth-note triplets (marked '3') on a half-note staff, with a slur spanning both measures. The key signature has one flat (B-flat).

11. MULTIPLE TONGUING

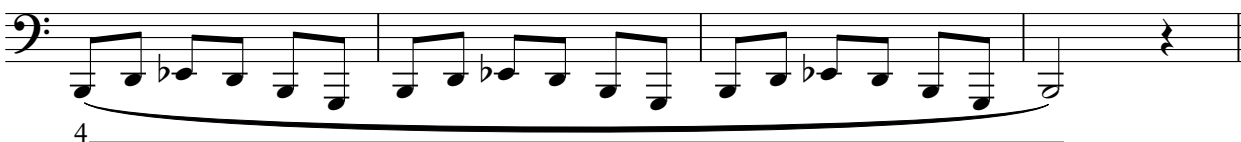
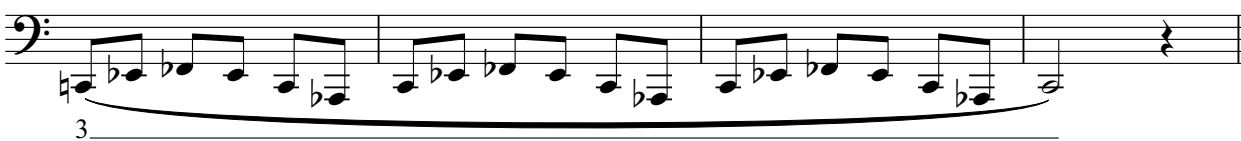
Exercise 11: MULTIPLE TONGUING. This section contains four measures of music in bass clef. Measures 1 and 2 feature eighth-note triplets (marked '3') on a half-note staff, with a slur spanning both measures. Measures 3 and 4 feature eighth-note triplets (marked '3') on a half-note staff, with a slur spanning both measures. The key signature has one flat (B-flat). Below the first measure, there are two lines of syllables: 'ta ta ta ta ta ta ka ta ta ka' and 'ta ta ta ta ta ka ta ta ka ta'. Below the second measure, there are two lines of syllables: 'ta ka ta ka ta ka ta ka ta' and 'ta ka ta ka ta ka ta ka ta'.



12. HIGH REGISTER

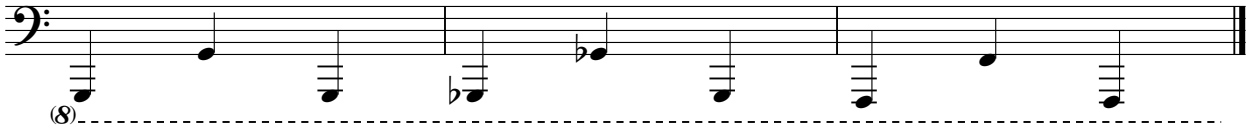
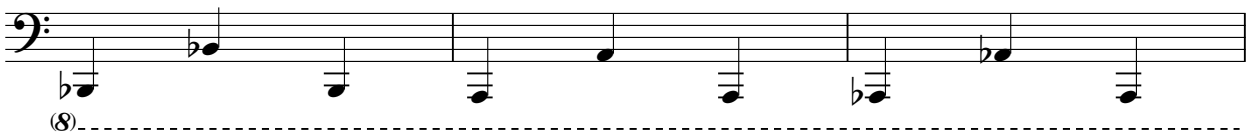


13. LOW RANGE TRIGGER COORDINATION & PLACEMENT



14. EXTENDED LOW REGISTER OCTAVES





FURTHER STUDY

A selection of books in alphabetical order of author, covering all aspects of technique. I have included some trumpet books that of course should be practiced down one octave.

New Method For The Modern Bass Trombone - Eliezer Aharoni

Arban's Famous Method For Trombone - Jean Baptiste Arban

Tenor Trombone Method - Buddy Baker

Thirty Six Studies For Trombone With F Attachment - O. Blume

Musical Calisthenics For Brass - Carmine Caruso

Long Tone And Flow Studies For Trombone - Vincent Cichowicz

Technical Studies For The Cornet - H.L. Clarke

Setting Up Drills For The Trumpet - H.L. Clarke

Advanced Lip Flexibilities For Trombone - Charles Colin

Flexus - Trumpet Calisthenics For The Modern Improvisor -
Laurie Frink & John McNeil (Bb treble-clef)

70 Progressive Studies For The Bass Trombone - Lew Gillis

A Systematic Approach To Daily Practice - Claude Gordon

Thirty Velocity Studies For Trombone - Claude Gordon

Tongue Level Exercises For Trumpet - Claude Gordon (Bb treble clef)

The Remington Warm-Up Studies - Donald Hunsberger

(FURTHER STUDY - CONT.)

The Original Louis Maggio System For Brass - Carlton MacBeth

Basic Routines For Trombone - Robert Marsteller

Doodle Studies - Bob McChesney

Method For Bass Trombone - Allen Ostrander

The Breathing Gym - Sam Pilaflin & Patrick Sheridan

The Double Valve Bass Trombone - Alan Raph

Encyclopedia Of The Pivot System - Donald S. Reinhardt

Clef Studies For Trombone - Ralph Sauer

Daily Drills And Technical Studies For Trombone - Max Schlossberg

Warm-Ups And Studies For Trumpet - James Stamp

A Singing Approach To The Trombone - Charles Vernon

The Breathing Book For Tenor Trombone - David Vining

The Breathing Book For Bass Trombone - David Vining

Flow Studies For Tenor Trombone - David Vining

Flow Studies For Bass Trombone - David Vining

Trombonisms - Bill Watrous & Alan Raph

CARE OF TROMBONE

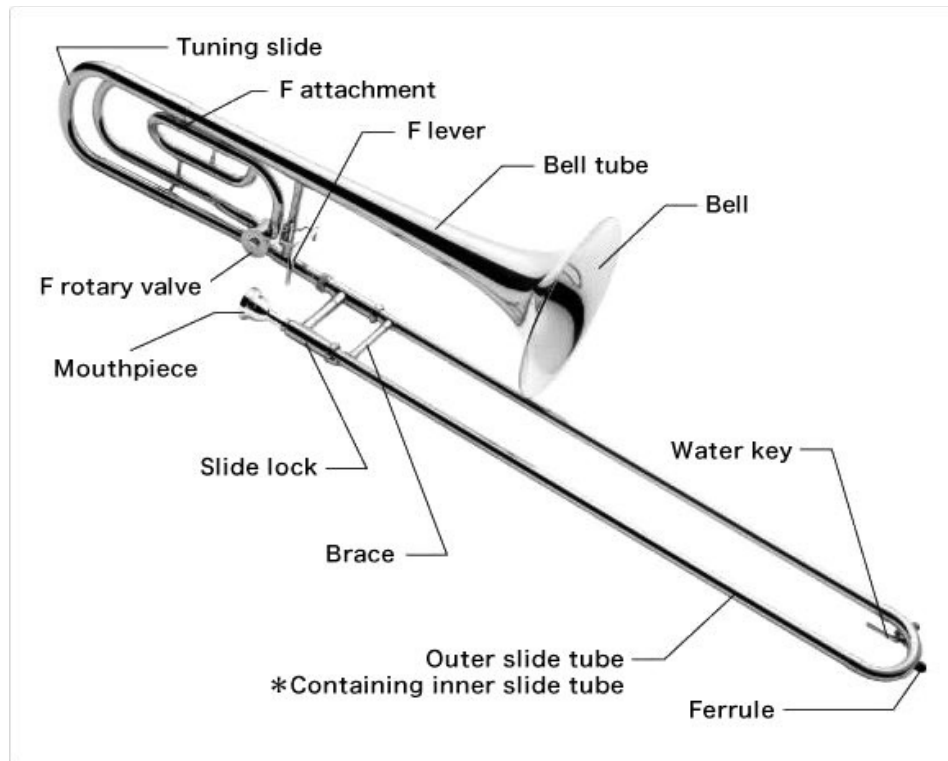
BEFORE PLAYING

- * Wash your hands. Especially after using mosquito spray.
- * With the slide-lock on, remove slide from the case. Connect the slide to the bell section and tighten the lock-ring.
- * Check for any dents at the end of the mouthpiece shank that could damage the receiver then gently place the mouthpiece into the receiver.
- * Unlock the slide, and lubricate if necessary.
- * Do not rest the trombone on its slide. Use a trombone stand.
- * Be careful not to bash the slide on your music stand.
- * While playing, support the whole weight of the instrument with your left arm. As you extend the slide, resist the temptation to support the instrument by it's slide.
- * Do not leave your instrument out unattended. Put it in its case.

AFTER PLAYING

- * Lock the slide.
- * Press the water-key and blow the moisture from your trombone.
- * Remove the mouthpiece, wiping away any moisture. Put it back in the case.
- * Wipe away fingerprints with your polish cloth. Acid in sweat can damage the finish.
- * Put your trombone in the case, fastening the latches.
- * Check for loose items in your case that could dent or scratch your trombone.
- * Do not store anything on top of your trombone in its case.
- * F-attachments should be stored bell facing downward to avoid rotor oil mixing with tuning slide grease.
- * Check water key occasionally. Make sure the screw is not working its way out, and the cork is air-tight.

LUBRICATION & CLEANING



YOU WILL NEED

Polishing cloth
Cleaning rod (plastic end if possible)
Plenty of cheesecloth
91% Isopropyl Alcohol
Mouthpiece Brush
Trombone Snake (plastic coated)
Slide Lubricant
Tuning-Slide Grease
Distilled Water
Spray Bottle (for distilled water)

F-ATTACHMENT

Rotor oil
Light bearing oil
Linkage oil

REGULAR MAINTENANCE

WEEKLY SLIDE CLEANING

Always handle the slide with extreme care. It will dent easily.

THE OUTER SLIDE

- * Attach cheesecloth to cleaning rod. Make sure the metal end is covered to avoid denting the bow or scratching the insides. Grip the rod so that it can't reach the bow. (Use the snake to pull through the slide bow).
- * As you swab the tube with the cheesecloth, the outside should become warm. Use 91% Isopropyl Alcohol if you wish (See page 66).
- * Repeat with new cloth until it comes out clean.

THE INNER SLIDE

- * Wipe down the inner slide with a soft cotton cloth. You may use isopropyl alcohol for this.
- * Pull the snake through the inner tubes to remove any dirt.
- * Do not use the rod on the inner slide.
- * Lubricate the slide.
- * Put back together.

HAND-SLIDE LUBRICANTS

See manufacturer websites for further information.

Ultra-Pure Slide Lube

Ultra-Pure Slide Lube applies easily and does not build up. It does not separate under hot or freezing conditions. A few drops on each stocking and a few drops on the upper part of the slide is adequate for several days playing.

Yamaha Trombone Slide Oil

Similar to Slide-O-Mix Rapid Comfort and Reka-Superslide. Wipe off your slide, and apply this with or without water.

Slide-O-Mix

Comes in two bottles - A large bottle containing a soapy detergent and a small bottle of silicone. Try using one drop of the small, and a 4" line of the large. It's easy to adjust the consistency by applying the ingredients independently. The large bottle also works well when mixed with Trombotine.

Slide-O-Mix Light

Same as the original Slide-O-Mix but a little thinner for players who have trouble with the standard viscosity Slide-O-Mix gumming up their slide.

(HAND-SLIDE LUBRICANTS - CONT.)

Slide-O-Mix Rapid Comfort

A medium size bottle with both parts mixed together. Simply wipe off the inner tubes, dribble this down each tube about 1/3 of the way, and spray with distilled water.

Reka Super Slide

Similar to Rapid Comfort, only no water is required. It works best on newer slides with very good action.

Trombotine

Trombotine works well with or older or noisier slides. It is also cheaper and longer lasting.

Superslick Slide Cream

A favorite slide cream for its thin viscosity and low price.

Superslick Silicone

Apply a drop of this silicone to each slide tube after applying your slide cream for a smoother longer lasting action.

Water Spray Bottle

Always use distilled water. Tap water leaves mineral deposits.

TUNING SLIDE CARE

- * Move your tuning slide or slides every so often to ensure free movement (or to tune up!). Use tuning-slide grease to prevent corrosion caused by moisture.
- * Always engage the trigger when moving F or Gb slides so as not to create a vacuum.
- * First, remove the slide and wipe off the old grease with the cheesecloth.
- * Use the snake to clean inside the tubes.
- * Add tuning slide grease to one side.
- * Insert the greased tube, moving around back and forth to distribute the grease evenly.
- * Remove and wipe away any grease bunched up inside the tube end.
- * Now grease the other side.
- * Replace tuning slide and wipe away excess grease.

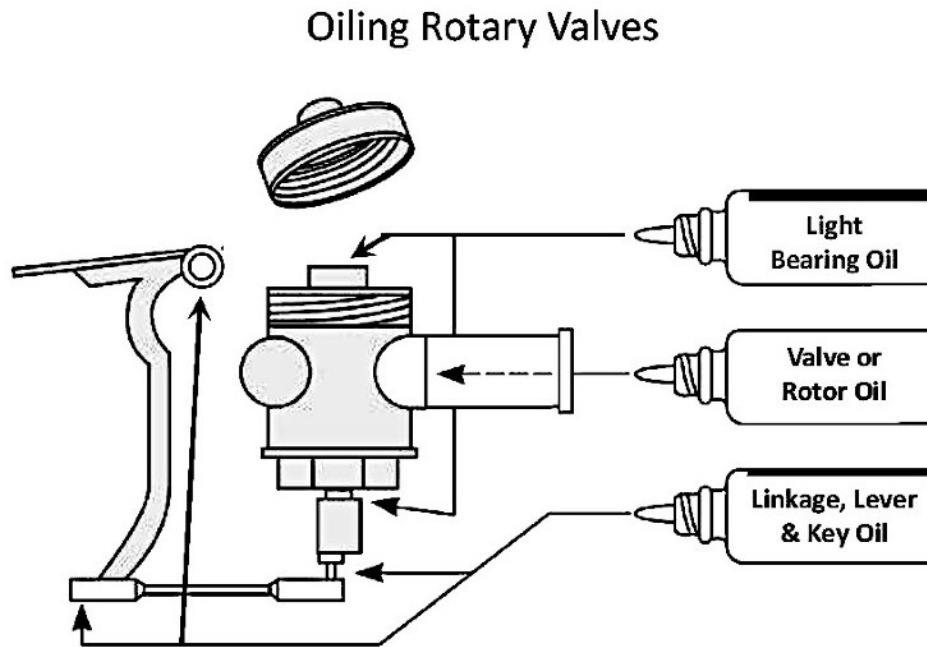
(TUNING SLIDE CARE - CONT.)

Here are some of the tuning-slide lubricants available. If your tuning slide seems loose, you may look for a thicker lubricant. 'Fat Cat' and 'Monster' slide greases are resistant to heat, which may work well in the outside or in a hot car. Melted tuning slide grease can drip down into rotary valves.

- * Hetman 7 Slide Gel Lubricant
- * Hetman 7.5 Slide Gel Plus
- * Hetman 8 Premium Slide Grease
- * Shilke Tuning Slide Grease
- * Fat Cat Tuning Slide Grease
- * Monster Slide Grease
- * Ultra-Pure Oils Tuning Slide Lube
- * Superslick Tuning Slide Grease
- * Reka Tuning Slide Grease

F-ATTACHMENT VALVE CARE

THE STANDARD ROTARY VALVE



Lubricate your standard rotary valve every 2-3 days. I like to use Hetman lubricants. For further details, visit hetman.com.

The higher the product number the thicker the oil. Thinner oils break down faster so must be applied more frequently.

If you use different brands, note that “Spindle-Oil” is intended for the trigger-spindle (Spring and linkages) - NOT the valve spindle.

ROTOR OIL - Hetman 11 Light Rotor Lubricant.

- * Place the bell section (without the slide) on your trombone stand so sits vertically.
- * Remove the main tuning slide and drop some rotor oil onto the rotary valve through the center of the neck pipe. Work the valve to distribute the oil.
- * Do not allow rotor oil to mix with tuning-slide grease.
- * Press the trigger to remove the F-attachment slide. Drip a few drops down onto the other side of the valve.
- * Waggle the trigger and replace the slide (pressing trigger).
- * Wipe away any excess oil from slide receiver.

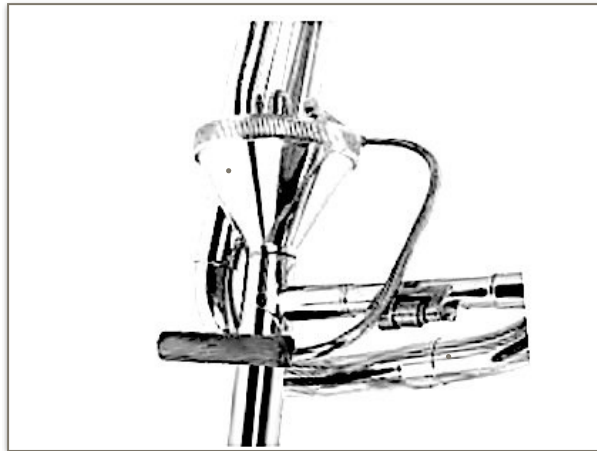
BEARING OIL - Hetman 13 Light Bearing Lubricant.

- * Unscrew valve cap and apply a small amount of lubricant to the center of the rotary valve and the area supporting the shaft on the other side of the valve (See diagram).
- * Close the valve cap (finger tight) and work the lever a few times to distribute the oil.

LINKAGE OIL - Hetman 14 Bearing & Linkage
or Hetman 15 Ball Joint.

- * Apply lubricant to the linkages and trigger spring.

AXIAL FLOW VALVE MAINTENANCE



Lubricate your axial-flow valve every other day.

- * Press the trigger to remove the F-attachment slide.
- * With bell section vertical, drop some Hetman 11 Light Rotor Oil onto the valve through the center of the tuning slide. Do not let it mix with the tuning slide grease.
- * Add a drop of Hetman 14 Bearing & Linkage or 15 Ball Joint Lubricant to the outside moving parts (Linkages, trigger and spring).
- * Do not use the thicker linkage oil on top of the valve shaft as it will leak into the valve.
- * Wipe away any excess oil from slide receiver.
- * If lubrication does not seem to work, the valve may require a professional clean.
- * If the trigger spring tension becomes loose, take to your local brass repairer.

BATHING YOUR TROMBONE

This is best done in the evening so you can leave to dry overnight before re-assembling.

- * Fill a bath with cold water (never hot) deep enough to cover the bell section. Add a few squirts of mild dish-soap such as 'Dawn'. (Must not contain bleach or ammonia). Soft water can cause corrosion due to acidity. Adding detergent raises the water's pH level.
- * Remove all slides and rotary valve caps, lead-pipe, and lay parts gently in the tub allowing to soak for 10 minutes. Using a rubber bath mat is a good idea.
- * Use your mouthpiece brush to scrub inside the mouthpiece. Then rinse, dry and set aside.
- * Use the snake underwater to clean all the slides. Work on one part at a time,
- * Soak the bell section for 10 minutes in the soapy water, working the trigger and using the snake to dislodge dirt from tubes.
- * Rinse parts and set on a dry soft towel to dry overnight.
- * Check that the instrument is bone dry before lubrication and re-assembly.

91% ISOPROPYL ALCOHOL

'Isopropyl Alcohol' is a solvent that dissolves oils and evaporates leaving virtually zero trace.

- * Wipe down inner slide before lubricating.
- * Swab outer slide to remove old lubricant.
- * Wipe grease from tuning slides.
- * Clean and dis-infect mouthpiece. Especially when sick.

CHEMICAL CLEANING

About once a year, have your instrument chemically cleaned by a professional. This will prolong the life of the instrument by reducing the effects of corrosion.

MUTES

20th century composers such as Gustav Mahler, Igor Stravinsky and Paul Hindemith made use of brass mutes. They were also used to great effect during the swing and big band era.



The first mute you should own is a metal straight mute. Be sure to buy the correct size to fit your trombone. For orchestral music 'Denis Wick' mutes are very popular. Always aim to blend with the other sounds in the trombone section by using the same equipment where possible. Similarly, for 'Humes & Berg' mutes are widely used in big- bands.

All trombone bells are not the same. To get the optimum sound with a mute, you may need to adjust the corks to achieve the perfect fit. A badly fitted mute can cause intonation problems. With the Humes & Berg Stonelined Cup, the points of the scalloped edges should just about touch the bell, but other mutes may require experimentation. Generally speaking, the tighter the mute, the sharper the pitch - except for bucket mutes which tend to sound flat.

FILING DOWN CORKS

- * Warm up and tune your instrument. Use a tuner.
- * Play with the mute in, listening carefully for intonation.
- * If the pitch is flat, shave the corks. If sharp, replace the corks.
- * With a small file, shave the corks a little at a time.
- * Try to file each cork the same amount for an even fit.
- * Observe changes in tone quality as well as intonation.
- * Don't shave off so much that the mute will not function properly.



STRAIGHT MUTE (FIBER)

There are two main types: Metal or fibre.

The metal gives a bright metallic sound and the fibre gives a softer sound. The whole trombone section should use the same type.



STRAIGHT MUTE (METAL)



CUP MUTE

The Humes & Berg scalloped type, commonly used in big bands.

There is also the metal adjustable 'Denis Wick' type whereby the cup may be adjusted inward or outward to affect the tone.



HARMON MUTE

Also known as the 'bubble', 'wah-wah' or tin Mute. It has a central stem that may be moved in or out to provide a more prominent buzz sound. More commonly, the stem is completely removed.



BUCKET MUTE

There are two types of Bucket Mute -

The traditional 'Humes & Berg' that clip to the bell, or similar to the 'Jo-Ral' (pictured below) that is held in by corks. The sound may be altered by adding or removing the filling.





THE PLUNGER MUTE

Made famous by 'Tricky' Sam Nanton (Duke Ellington) and Al Grey (Count Basie), this is a standard American sink plunger which is held over the bell of the instrument in the palm of the hand to create a 'doo-wah' sound. Do not forget to remove the stick first. In notation each note is marked '+' for closed or 'o' for open.

As these mutes are cheap, you can experiment cutting a hole in the center where the handle used to be. This allows you to play with the plunger fully closed over the bell. Another thing you can try, is squeezing a nickel into the hole (positioned sideways, so air can pass through) to create a buzzy tone.



THE GLENN MILLER TUXEDO MUTE

A metal plunger created by Willie Berg inventor of 'Stone Lined' Mutes. If you see 'Tuxedo' written on your chart, this is what you need.



THE DERBY HAT

Also made by 'Humes & Berg'. Dance Orchestras often own these mutes which are suspended on stands so the player can lean in for a bucket like tone. It is not necessary to own.



THE TRIXIE MUTE

This plunger mute can be used alone, or coupled with a 'Pixie' mute (see below). Listen to 'Tricky' Sam Nanton (Duke Ellington) or Booty Wood (Count Basie).



PIXIE MUTE

A type of straight mute that does not protrude from the bell to be used with a 'Trixie' plunger.



SOLO-TONE, CLEAR-TONE OR MEGA MUTE

A mute seldom called for, it was famously used by Tommy Dorsey on 'Song Of India'.



WARM-UP MUTE

Useful for warming up backstage or in a hotel room, they are almost inaudible. This 'Best Brass' mute is conveniently small and fits neatly inside the bell.

CHOOSING A TROMBONE

Generally speaking, most professional players favor large bore trombones for symphonic and 'classical' styles, and smaller trombones for jazz, pop and commercial styles. There are of course many exceptions.

Large-bore or 'symphonic' trombones often have an F-attachment. Those without are known as 'straight' horns. Straight horns weigh less and the absence of a valve allows for un-interrupted air-flow. However, learning the F-attachment is hugely beneficial.

For jazz fans, the small bore may be your preferred instrument. Although playing a large-bore will greatly improve your breathing and overall technique.

You will find myriad reviews and personal opinions online, but the best advice is to play and judge for yourself. Below are some things to consider when trying a new (or used) instrument.

BORE SIZE

Bore measurement refers to the width of tubing in the slide.

*	Small or 'Jazz' bore	0.500"
*	Large or 'symphonic' bore	0.547"
*	Bass Trombone	0.562"

Some instruments are described as dual-bore. This means the inner slide tube is slightly narrower on the mouthpiece side than on the opposite side.

ERGONOMICS

The trombone should feel comfortable in your hands.

- * Weight
- * Balance. Is it front heavy?
- * Does it fit in your hands well?
- * Adjustable trigger lever?
- * General build quality

SOUND

- * Do you sound like yourself?
- * Do you sound warmer or brighter?

RESISTANCE

Some horns require larger amounts of air than others. Some players prefer a very open horn, while others like a little more resistance. Some models come with 2 or even 3 different 'lead-pipes' that effectively alter the resistance. Think about how the instrument feels to blow and how each compares.

BELL MATERIAL

- * Yellow brass might have a brighter sound.
- * Gold brass or rose brass may have a warmer tone quality.

Regardless of which you choose, a smooth slide action is essential to playability.

LIGHT-WEIGHT VS STANDARD SLIDE

Some manufacturers such as Bach offer a choice of slide.

- * 'Light-weight' - Outer slide made of nickel-silver.
- * 'Standard' - Outer slide made of brass.

LARGE BORE TROMBONES

Most large-bore trombones are based around two classic designs - the CONN 8H and the BACH 42. Both having an 8.5" bell, the most noticeable difference is the slide width - meaning the distance between the slide tubes. Narrow slides may suit smaller hands.

NARROW SLIDE

Conn 88H (more info below)
Yamaha YSL-882
Yamaha YSL-882-0
Schilke ST21 / ST22 (Narrow slide option)

WIDE SLIDE

Bach 42B (more info below)
Yamaha YSL-882-OR
Shires Q30GR
Shires Q-Alessi
Schilke ST21 / ST22 (Wide slide option)
XO Brass 1236L
Getzen 1047F
Getzen 3047AF
Antoine Courtois AC420BOR

F-ATTACHMENT TUBING

There are 2 basic design principles:

Closed or 'traditional' wrap

More bends in the tube add air resistance.

Open-wrap

Fewer bends in the tube offer less resistance.

If you prefer more resistance, opt for the closed-wrap. If you don't have a preference either way, choose the trombone with the best slide.

ROTARY VALVE OPTIONS

3 rotary valve designs each offer differing amounts of resistance as the air changes direction by varying degrees.

- * The standard rotary valve turns the air-flow by as much as 90 degrees when engaged.
- * The Hagemann valve offers less resistance at around 60 degrees.
- * The Thayer axial-flow Valve offers the least resistance, changing the air direction by as little as 20 degrees.

TWO CLASSIC DESIGNS

BACH 42

The gold brass bell with the lightweight slide is a great choice.

42	straight horn	-	without F-attachment
42B	closed wrap	-	standard rotary valve
42BO	open wrap (O)	-	standard rotary valve
42AF	open wrap	-	axial-flow valve (AF)

CONN 8H & 88H

Be sure to buy the 8.5" bell, not the 9" version. Most players favor the Rose Brass bell or the Thin Rose Brass bell.

8H	straight horn (without F-attachment)		
88HT	thin rose brass bell (T)	-	closed wrap F-attachment
88HTO	thin rose brass bell (T)	-	open wrap (O)
88HCL	open wrap	-	CL2000 rotor (CL = Christian Lindberg)

SMALL-BORE TROMBONES

Small-bore or 'jazz' trombones come in various bores and bell-sizes.

Interestingly, a 0.508" bore does not necessarily feel more open than a 0.500" bore.

Other factors such as materials and thickness also play a big part.

It is NOT essential that we use a small trombones for jazz and commercial music, but there are certain advantages.

- * A lighter slide is more nimble and makes slide vibrato more effortless.
- * More easily achieve a bright focused tone at a lower volume.
- * Responsive to articulation,
- * Brighter sound blends more easily with trumpets.
- * If the rest of the section are using small bore instruments, the sounds will blend more easily.

(SMALL BORE TROMBONES - CONT.)

KING TROMBONES

2B	Dual bore 0.481-0.491" - 7-3/8" bell
2BL	0.491" bore - 7-3/8" bell
2B Plus	0.500" bore - 7-3/8" bell
3B	0.508" bore - 8" bell

BACH

12	0.500" bore - 7.5" bell
16	0.495-0.509" dual bore - 7.5" bell
LT16M	0.509" bore - 7.5" bell

BAC

Paseo	0.500-0.508" dual bore - 8" bell
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CONN

100H	0.500" bore - 8" bell
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GETZEN

3508	0.500-0.508" dual bore - 7-3/4" bell
1050	0.508" bore - 8" bell

SHIRES

Q-SERIES TBQ33	0.508" bore - 8" bell
MD	0.495" bore - 7.5" bell
MD+	0.508" bore - 7.75" bell

XO BRASS

1632	0.500" bore - 7.5" bell
1634	0.508" bore - 8" bell

YAMAHA

897Z	0.484"/0.490" dual bore - 7.5" bell
891Z	0.508" bore - 8" bell

BASS TROMBONES

All listed have dual independent valves F/Gb/D and a 9.5" bell.

ANTOINE COURTOIS

550 BH 0.562" bore - 9.5" bell - Hagmann valves

BACH

50A3 0.562" bore - 9.5" bell - Hagmann valves

50AF3 0.562" bore - 9.5" bell - Thayer valves

50B3 0.562" bore - 9.5" bell - standard valves

EDWARDS

B454-E 0.562" bore - 9.5" bell - axial-flow valves

B454-CR-E 0.562" bore - 9.5" bell - standard valves

GETZEN

1052FD 0.562" bore - 9.5" bell - standard valves

SHIRES Q-SERIES

TBQ36YR 0.562" bore - 9.5" bell - standard valves

TBQ36YA 0.562" bore - 9.5" bell - axial-flow valves

XO BRASS

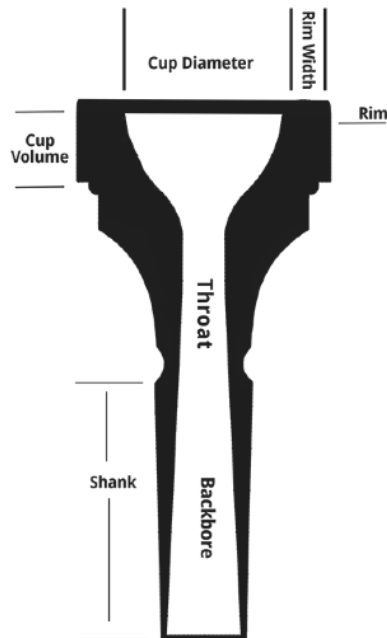
1240 0.571" bore - 9.5" bell - standard valves

YAMAHA

YBL-822 XENO 0.563" bore - 9.5" bell

YBL-830 XENO 0.563" bore - 9.5" bell

MOUTHPIECES



RIM

Rounded rim is more comfortable

Squarer rim has clearer attack.

CUP

Deeper cup has a darker tone.

Shallower cup has a brighter tone

THROAT

Narrow throat has more resistance.

Wider throat has less resistance.

Too wide or too narrow can affect intonation.

Deciding factors:

- * Comfort
- * Good intonation from low to high?
- * Good tone in all registers?
- * Good dynamic range?
- * Do you have a silver allergy? If so choose a gold-plated.
- * Preferable to current mouthpiece?

Here are some possible choices...

SMALL-BORE

Approx. 0.500" Small Shank Mouthpieces

Bach 11C

Bach 7C

Denis Wick 10CS

Denis Wick 12CS

Schilke 46

Schilke 47B

Schilke 47

Stork T1

Stork T2

LARGE-BORE

0.547" Large Shank Mouthpieces

Bach 6.5AL

Bach 5G

Denis Wick 5BS

Denis Wick 6AL

Denis Wick 6BL

Schilke 51

Schilke 52

BASS TROMBONE

Bach 1.5G

Bach 2G

Denis Wick 2AL

Schilke 58

Schilke 59