

A MODERN PEDAGOGICAL METHOD FOR DEVELOPING VALVE TECHNIQUE
ON INDEPENDENT DOUBLE VALVE BASS TROMBONE

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The modern bass trombone has undergone many changes in design since the 1960s and a student beginning on or switching to bass trombone today needs pedagogical material that methodically addresses the many valve combinations available on an independent double valve bass trombone. The existing books for bass trombone contain useful exercises, but none of the currently available books address all the valve combinations and patterns that are helpful for developing proficient valve technique on bass trombone. Therefore, I created a new bass trombone double valve technique method book that includes a thorough exploration of the bass trombone's two valves within the context of scales, scale exercises, and original material specifically designed to be applicable to common literature for the bass trombone.

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TABLE OF CONTENTS

	Page
LIST OF FIGURES	iv
CHAPTER 1. HISTORY OF BASS TROMBONE CONSTRUCTION.....	1
1.1 Introduction.....	1
1.2 Twentieth Century Bass Trombone Construction.....	1
CHAPTER 2. EXISTING PEDAGOGICAL MATERIALS FOR THE BASS TROMBONE.....	5
2.1 Introduction.....	5
2.2 Bass Trombone Pedagogical Materials Before 1974.....	5
2.3 Bass Trombone Pedagogical Materials After 1974	7
CHAPTER 3. TECHNIQUES REQUIRED FOR BASS TROMBONE PERFORMANCE	10
3.1 Introduction.....	10
3.2 Slide Position and Valve Combination Chart	10
3.3 Sequential Learning of Valve Combinations and Slide Positions	13
3.4 Major and Minor Scales.....	15
3.5 Arpeggios	17
3.6 Original Etudes	19
CHAPTER 4. TECHNIQUES USED IN BASS TROMBONE DOUBLE VALVE TECHNIQUE	22
4.1 Introduction.....	22
4.2 Explanation of Techniques Used in Bass Trombone Double Valve Technique...	22
APPENDIX: CHRIS SHARPE'S <i>BASS TROMBONE DOUBLE VALVE TECHNIQUE</i>	26
BIBLIOGRAPHY.....	141

LIST OF FIGURES

	Page
Figure 1: Slide position/valve chart in Blair Bollinger's <i>Valve Technique for Bass Trombone</i> ...	11
Figure 2: Excerpt from Brad Edwards' <i>Bass Trombone Craft</i>	12
Figure 3: Slide position/valve chart in <i>Bass Trombone Double Valve Technique</i>	13
Figure 4: Excerpt from Blair Bollinger's <i>Valve Technique for Bass Trombone</i>	16
Figure 5: Major scale excerpt from <i>Bass Trombone Double Valve Technique</i>	16
Figure 6: Arpeggios excerpt from <i>Bass Trombone Double Valve Technique</i>	18
Figure 7: Visual representation of valve flipping and same valve for adjacent semitones.....	20

CHAPTER 1

HISTORY OF BASS TROMBONE CONSTRUCTION

1.1 Introduction

Bass trombonists today have a significant number of pedagogical materials available for developing valve technique. Of the existing pedagogical materials available for bass trombone, most were written between 1965 and 1975 and designed for bass trombonists who had already accrued several years of experience on the tenor trombone, which was appropriate for the design and use of the bass trombone at the time. However, the modern bass trombone has undergone many changes in design since the 1960s and a student beginning on or switching to bass trombone today needs pedagogical material that methodically addresses the many valve combinations available on an independent double valve bass trombone. The existing books for bass trombone contain useful exercises, but none of the currently available books address all of the valve combinations and patterns that are helpful for developing proficient valve technique on bass trombone. Therefore, I created a new bass trombone double valve technique method book that includes a thorough exploration of the bass trombone's two valves within the context of scales, scale exercises, and original material specifically designed to be applicable to common literature for the bass trombone.

1.2 Twentieth Century Bass Trombone Construction

The construction of bass trombones in the United States has changed drastically from the beginning of the twentieth century to today. Beginning around 1890, bass trombones in the United States were predominantly pitched in B-flat and included one valve, an attachment

pitched in F.¹ Bass trombonists in the United States had few problems making this instrument work within the context of the orchestra until the Boston Symphony Orchestra premiered Béla Bartók's *Concerto for Orchestra* in 1943. Bartók was accustomed to writing for bass trombones pitched in F as they were still in use in Germany and central Europe in the early twentieth century,² so he wrote for this version of the instrument in the *Concerto for Orchestra*.³ This discrepancy in bass trombone models was only problematic during one passage of the work when the bass trombone must perform a solo glissando from a B below the bass clef staff to the F a tritone above. This glissando is simple on the F bass trombone Bartók had in mind; however, the same glissando is physically impossible on a bass trombone pitched in B-flat with one valve pitched in F because the maximum interval available for a glissando on the F-attachment is a perfect fourth from C to F.

Due to the difficulties in performing this glissando, several bass trombonists from major American symphony orchestras collaborated with instrument manufacturers throughout the 1950s to design new bass trombone prototypes that used two valves which could be operated simultaneously, rather than a single valve that was standard at the time.⁴ Depending on the tuning selected by the performer, the additional second valve produced the pitch E, E-flat, or D in first position with both valves engaged simultaneously.⁵ Regardless of which tuning the

¹ Byron Thomas Pillow, "The Bass Trombone in the United States and the Emergence of a Distinct, American-Style Instrument: 1755-1940" (Master's thesis, University of South Dakota, 2017), 85.

² Anthony C. Baines, et al, "Trombone," Grove Music Online, Oxford Music Online, Oxford University Press, accessed November 8, 2017, <http://www.oxfordmusiconline.com/subscriber/article/grove/music/40576>.

³ David Guion, *A History of the Trombone* (Lanham, MD: Scarecrow Press, Inc., 2010), 5-6.

⁴ Douglas Yeo, "EVOLUTION: The Double Valve Bass Trombone," *International Trombone Association Journal* 43, no. 3 (July 2015), 35.

⁵ Ashley Hollis Alexander, "A Short History of the Trombone with Emphasis on Construction Innovations and Performance Modifications from 1945 to 1970" (Master's thesis, North Texas State University, 1971), 45.

performer selected, the additional tubing extended the range of the F-attachment to include a B below the staff, and bass trombones with two valves have been the standard ever since.⁶

Once two valves became common for bass trombones, performers and instrument manufacturers alike experimented with the pros and cons of both dependent and independent valve systems on the bass trombone. The first double valve bass trombones used what are called dependent valve systems, which require the first valve to be engaged in order to use the second valve; however, performers eventually discovered they would have more efficient slide position and valve technique options if the second valve could be used independently, hence the increased popularity and eventual acceptance of independent double valve systems as the standard construction of the instrument.⁷ 1974 was the first year that the standard B-flat/F/G-flat/D tuning system was used on a commercially available bass trombone with independent valves, meaning the modern bass trombone has only been in use for 45 years as of completion of this document.⁸

Two studies in particular demonstrate how the independent valve bass trombone pitched in B-flat/F/G-flat/D has grown in popularity. Douglas Yeo conducted a survey of bass trombonists in American symphony orchestras in 1983, and 71% of the respondents reported using bass trombones with two valves pitched in B-flat/F/G-flat/D. Of the bass trombonists using the B-flat/F/G-flat/D tuning system, 65% used the more traditional dependent valve system and the other 35% used the newer independent valve system.⁹ As part of his dissertation published in 2015, Casey Winn Thomas included a survey of collegiate teachers' preferred bass trombone

⁶ Yeo, "EVOLUTION," 42.

⁷ Yeo, "Frequently Asked Questions: 7. What is the difference between 'in-line' and 'dependent' bass trombones? Which is better?"

⁸ Yeo, "EVOLUTION: The Double Valve Bass Trombone," 41.

⁹ Douglas Yeo, "Bass Trombone Equipment Survey," *International Trombone Association Journal* 11, no. 4 (October 1983), 22-23.

tunings that showed an increased preference for both independent valves as well as the B-flat/F/G-flat/D tuning system; 79% of respondents used this standard tuning system (up from 71% in Yeo's survey) and use of the independent valve system increased to 59% (up from 35% in Yeo's survey).¹⁰

¹⁰ Casey Winn Thomas, "Valve technique for the independent double-valve bass trombone: a pedagogical review and method" (DMA thesis, University of Iowa, 2015), 11.

CHAPTER 2

EXISTING PEDAGOGICAL MATERIALS FOR THE BASS TROMBONE

2.1 Introduction

The relatively recent developments in the construction of bass trombones have created a large problem for today's bass trombonist: a dearth of pedagogical materials relevant to today's bass trombone. Following the commercial availability of independent double valve bass trombones in 1974 and the standardization of valve tunings on bass trombone in the years since, authors of some of the older method books for bass trombone released new editions of their books with additional exercises specifically designed for the independent second valve, but the quality of these exercises is debatable. As of today, only four method books currently exist that were written after 1974 and specialize in double valve technique: one published in 1988 that is rarely used by teachers today, one published in 2007 that uses an uncommon tuning system for the valves, one published in 2012 that exclusively uses the standard B-flat/F/G-flat/D tuning system but contains material that is insufficient for bass trombonists today, and my method book written in 2019 that addresses concepts and techniques not found in the other three books.

2.2 Bass Trombone Pedagogical Materials Before 1974

Before the advent of the independent double-valve bass trombone, methods for the bass trombone were difficult to find and of varying quality. Thomas Everett states in his 1975 foreword to the first edition of Eliezer Aharoni's *New Method for the Modern Bass Trombone*, "there have been inadequate and few methods, text and teaching materials that inform and prepare students for the demands of playing bass trombone."¹¹ The notable sources Everett

¹¹ Eliezer Aharoni, *New Method for the Modern Bass Trombone* (Jerusalem, Israel: Noga Music, 1975), foreword.

alludes to here include Allen Ostrander's *Method for Bass Trombone and F attachment for Tenor Trombone*, Alan Raph's *The Double Valve Bass Trombone*, and Lew Gillis's *70 Progressive Studies for the Modern Bass Trombonist*, each published between 1966 and 1969. Both Gillis and Ostrander published their books in 1966, and both are still used today by trombone instructors at NASM-affiliated schools.¹² In a survey conducted in 1984, American orchestral bass trombonists listed the Aharoni, Gillis, Ostrander, and Raph books among the best study materials written specifically for the bass trombone, with both Aharoni and Ostrander being recommended by more than ten percent of respondents.¹³

The first two bass trombone-specific method books were published in the mid-1960s by Texas Christian University professor Lew Gillis and New York Philharmonic bass trombonist Allen Ostrander. Gillis's *70 Progressive Studies for the Modern Bass Trombonist* and Ostrander's *Method for Bass Trombone and F attachment for Tenor Trombone* contain etudes useful for helping students learn the F-attachment, but neither includes the second valve in their book. Gillis and Ostrander designed these books for use with the single-valve bass trombone, an instrument configuration that was standard at the time but is scarcely used by bass trombonists in the twenty-first century. Ostrander's book does not contain a slide position and valve chart for the full range of the instrument, and the slide position and valve chart in Gillis's book is no different from a chart that would be used for tenor trombone with F-attachment and is therefore incomplete when compared with charts that include the second valve.¹⁴

¹² Thomas, "Valve Technique for the Independent Double-Valve Bass Trombone: A Pedagogical Review and Method," 14-17.

¹³ Paul Donald Bauer, "Bass Trombone Pedagogy as Practiced by Selected Bass Trombonists in Major American Symphony Orchestras: Techniques and their Origins" (Doctoral thesis, Northwestern University, 1986), 123.

¹⁴ Lew Gillis, *70 Progressive Studies for the Modern Bass Trombonist* (San Antonio, TX: Southern Music Company, 1966), 1.

The most comprehensive bass trombone technique book published before the bass trombone's standardization of two independent valves, Alan Raph's *The Double Valve Bass Trombone* was first published in 1969. Raph was a prominent freelance bass trombonist in New York City, and his book was published just five years before the first commercially available independent double-valve bass trombone. This book was the first published with literature specifically written for bass trombones with a dependent second valve pitched in either E-flat or D, and Raph would later release a second edition in 1992 with additional material specifically written for independent use of the second valve tuned to G-flat. Despite the inclusion of material still relevant today, the book is very rarely used by teachers in the twenty-first century due to its confusing layout and overall technical difficulty.¹⁵

2.3 Bass Trombone Pedagogical Materials After 1974

The first bass trombone double valve method book published after 1974 was Eliezer Aharoni's *New Method for Bass Trombone*, published in 1975. Aharoni played bass trombone with the Jerusalem Symphony Orchestra for nearly forty years, and he capitalized on the recent innovations in bass trombone design in the 1970s by including material relevant for each of the second valve tunings that were in use by professionals at the time, immediately setting his book apart from the books discussed in the previous section. This book was widely adopted in the following years as Aharoni released updated editions, culminating in the currently available fourth edition published in 1996 that is still one of the most popular bass trombone method books used by professors in the United States.¹⁶

Ostrander's *Basic Techniques for the Double Valve Bass Trombone*, published in 1988,

¹⁵ Thomas, "Valve Technique," 108.

¹⁶ Ibid., 15.

was the next book to address double valve technique specifically and is nearly as popular as the Aharoni book today among collegiate teachers.¹⁷ This book is unique in that it primarily focuses on use of the double valves simultaneously, adding material regarding use of the second valve independently only when relevant within the context of using both valves simultaneously.

Alan Raph released the second edition of his *The Double Valve Bass Trombone* in 1992, now with original material specific to the independent second valve tuned to G-flat. As previously mentioned, this book has not had the widespread popularity of similar books.

Philadelphia Orchestra bass trombonist Blair Bollinger's *Valve Technique for Bass Trombone* was the only bass trombone double valve technique book released in the early 2000s, and it is an anomaly among bass trombone books. Despite containing some useful material, Bollinger's book advocates tuning the second valve to a quarter-tone flat G instead of G-flat, a change that necessitates the removal of a large portion of the second valve tubing by a professional instrument maker or repairman.¹⁸ Bollinger prefers this tuning but it is relatively rare among bass trombonists today, with most professionals preferring the G-flat tuning of the second valve.¹⁹ The musical content and overall planning of Bollinger's book is excellent, but the use of G tuning on the second valve presents issues once slide position suggestions are added for notes that use the second valve. For students using the G-flat tuning of the second valve, each slide position for the second valve alone is approximately a half-step low, resulting in significant tuning issues if students adhere strictly to the suggested slide positions. Due to the relative obscurity of this tuning system today, Bollinger's book has become obsolete among most

¹⁷ Ibid., 15.

¹⁸ Blair Bollinger, *Valve Technique for Bass Trombone or "You've Got TWO Valves – Use BOTH"* (Collingswood, NJ: CEC Music, 2007), 5.

¹⁹ Thomas, 11.

collegiate professors; only two of the respondents to Thomas's survey reported having used the book at some point in their teaching career.²⁰

The most recent publication to address double valve technique is Dr. Brad Edwards' self-published *Bass Trombone Craft*, released in 2012. Edwards was teaching trombone at the University of South Carolina when this book was published and he wanted to create a bass trombone-specific book similar to his *Trombone Craft* for tenor trombone, using fragments of scale patterns plus original exercises and etudes to incorporate discussions of technique.²¹ Building on previous books' use of unique symbols to indicate specific valve combinations, Edwards adopts a valve notation system he learned from trombonist Chuck DePaolo: **V** for the F-attachment (since V is commonly accepted for "valve"), **Γ** for G-flat attachment (the Greek letter Gamma for "G"), and **Δ** for both valves together (the Greek letter Delta for "D" because both valves together create a D fundamental).²² After experimenting with the valve notations used in each of the books reviewed for this document, I chose to use Edwards's system in my book due to the ease with which each symbol is distinguished from the others.

Edwards' book is an improvement from previous pedagogical materials for bass trombone, but the book still contains some of the same limitations as its predecessors. Just as with Bollinger's book, there is no comprehensive display of valve and slide combinations for scales or exercises relevant to specific keys, and Edwards organizes the book into sections that are difficult to navigate, discouraging simple and sequential learning of skills.

²⁰ Ibid., 108.

²¹ Brad Edwards, *Bass Trombone Craft: A Musical Approach to Building Tone and Technique* (N.p.: Self-published, 2012), v.

²² Ibid., 1.

CHAPTER 3

TECHNIQUES REQUIRED FOR BASS TROMBONE PERFORMANCE

3.1 Introduction

In order to demonstrate some of the ways in which I attempted to improve upon the existing literature, the next paragraphs will discuss examples of outdated or insufficient instruction in previous double valve technique literature, followed by examples of similar material in my book that addresses these issues and attempts to develop technique more consistently and efficiently.

3.2 Slide Position and Valve Combination Chart

A common staple of early pedagogical material for wind instruments is the valve fingering/slide position chart displaying the appropriate fingering or slide position to use for each possible note on the instrument. This information can be found in introductory books for trombone as early as 1934, and books for beginners have typically included this information ever since.²³

Of the books from Chapter 2, only Bollinger and Gillis display a chart with slide positions and valves for every possible note that could use a valve on the instrument. Unfortunately, neither of these books use the B-flat/F/G-flat/D tuning that is standard today; Gillis's chart is designed for a single-valve bass trombone with the valve tuned in F, and Bollinger's chart uses the rare G tuning for the second valve, displayed in Figure 1. Partial charts of individual valves or harmonic series on the instrument can be found in the books by Aharoni,

²³ Newell H. Long, *Rubank Elementary Method: Trombone or Baritone* (Chicago: Rubank, Inc., 1934), 2.

Ostrander, and Raph, but none of these books display a single chart for the full range of the valves.

(6)

Fingering Chart

Useful Slide/Valve Combinations
Double In-Line Valves
B^b, F, 1/4 Tone G, D Tuning

1 2 3 4 5 6 7

5g 2g 3g 4g
b₃f #5f 1f * b₂f

1 2 3 4 5 6 7

5g 6g 5g 6g 3g 4g
b₃f #5f b₁d 6f 3d b₇f b₄d 6d 1 b₇d

1 2 3 4 5 6 7

**

Position and Adjustment

↓
KEY: b₃d

f = 1st valve - tuned to F
g = 2nd valve - tuned 1/4 step below G
d = both valves

* On some instruments this needs to be b₁f for correct intonation.

** All of these fingerings (except the A in 5th) work in the pedal octave, too.

Figure 1: Slide position/valve chart in Blair Bollinger's *Valve Technique for Bass Trombone*.²⁴

²⁴ Bollinger, *Valve Technique for Bass Trombone or "You've Got TWO Valves – Use BOTH,"* 6.

Edwards does not include a chart of any kind in his book, instead asking students to use a tuner to find where valve notes are in tune on their instrument as seen in Figure 2.

Tuning the F attachment

Using a tuner, write in the positions relative to the non-valve positions (use a pencil, not a pen!). You may find that, with the valve tuned for a good first-position F, it may be difficult to get the low C down to pitch without liping it down.



Figure 2: Excerpt from Brad Edwards' *Bass Trombone Craft*.²⁵

Edwards continues this exercise to include all possible valve combinations and demonstrates every practical note that can be played on these combinations, but he intentionally leaves out the slide positions so that students can write in the slide positions that work best on their instrument. This exercise is useful for more experienced trombonists who have already established a level of pitch and tone control as well as a knowledge of slide positions in the lower range, but I believe younger students would benefit more from having a chart containing the common slide positions for each note on each valve, allowing them to refer back to an established source if they are having issues tuning notes on the valve combinations. Figure 3 shows the slide position and valve chart from my book, which combines the practicality of the chart in Bollinger's book with the modern standard of tuning to B-flat/F/G-flat/D. The chart in Figure 3 provides students with a simple document displaying every possible slide position and valve combination for every note on the bass trombone that uses valves.

²⁵ Edwards, 1.

Bass Trombone Slide Position/Valve Combination Chart

1st valve tuned to F, 2nd valve tuned to G^b

V = 1st valve Γ = 2nd valve Δ = 1st and 2nd valve

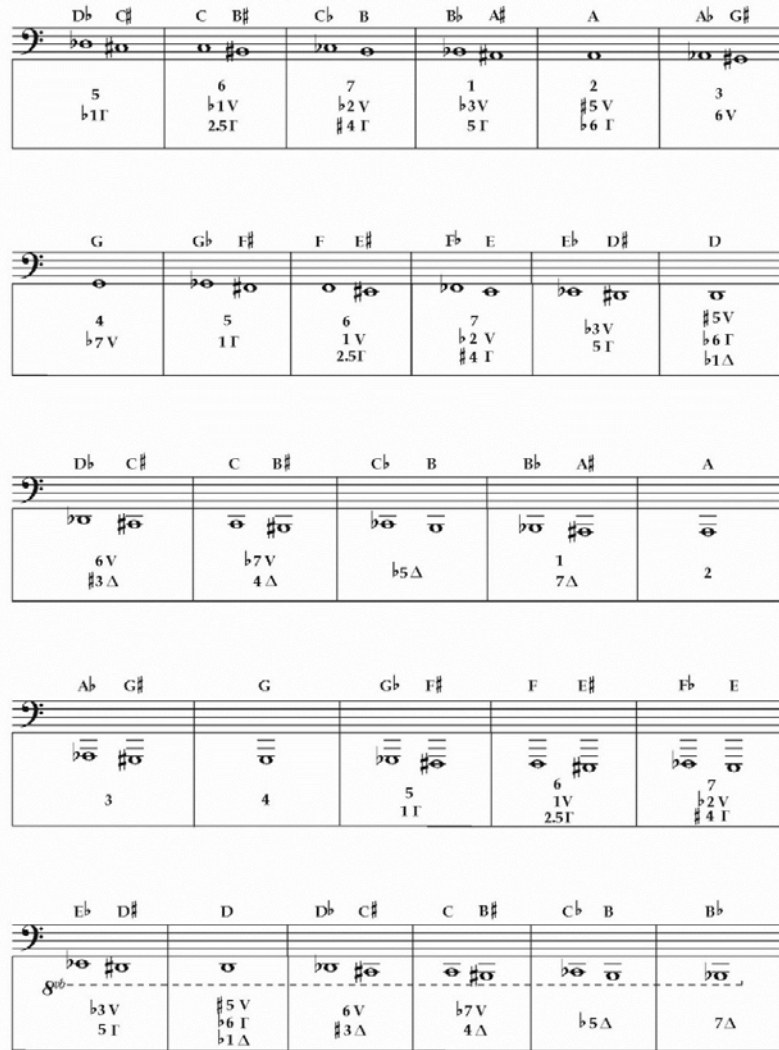


Figure 3: Slide position/valve chart in *Bass Trombone Double Valve Technique*.²⁶

3.3 Sequential Learning of Valve Combinations and Slide Positions

One of the primary issues relevant to bass trombone valve technique books is how to introduce both valves in the course of the book. Of the books relevant to this study written in the twentieth century, all but one approach the valves in the same way: each book begins by

²⁶ Chris M. Sharpe, *Bass Trombone Double Valve Technique* (Denton, TX: C. Sharpe Editions, 2019), 114.

exploring the common uses of all notes in first position on the first valve, then moves out on the slide until all of the notes on that valve have been used. At this point, each book repeats the same process with either the second valve or both valves simultaneously, depending on whether the book focuses on the dependent or independent valve system. The only book that does not follow this pattern is Ostrander's *Basic Techniques for the Double Valve Bass Trombone*; Ostrander uses the same strategy of starting in first position and moving out on the slide but only focuses on using both valves simultaneously to start the book, never addresses the first valve by itself, and briefly talks about the second valve by itself when relevant to the double valve material. This is likely because Ostrander had already covered the various uses of the first valve by itself in his book from 1966.

The two twenty-first-century books in this study both took new approaches to the valves when compared with the earlier books. Bollinger never addresses the valves individually in the book and focuses instead on using the appropriate valve and slide combination for various exercises in all major and minor keys, indicating slide position and valve choice above each note within the context of the exercise. Edwards's book begins with the exercise seen earlier in Figure 1, displaying all relevant notes with the first valve in first position and moving out on the slide, then doing the same for both second valve and both valves.

In order to provide contrast with the existing literature, the second chapter of my book starts with every fundamental pitch for each valve combination, then displays the recommended slide position and valve combination for all relevant notes moving out on the slide on the open instrument, followed by first valve, second valve, and both valves. Rather than provide extensive exercises for each slide position at the beginning of the book, I waited to introduce this material until after students have played very simple exercises using only two or three notes at a time.

3.4 Major and Minor Scales

Considering how prevalent major and minor scales are in Western music, a surprising amount of the literature reviewed in this document does not contain material dedicated to showing recommended valve choices in scales. Aharoni's book is the only book from the twentieth century to include exercises addressing scales of any kind. All the books published in the twenty-first century include scales, but Edwards does not indicate valve choices on any of the scales in his book.

Aharoni does include some scales in his book as he introduces individual valve combinations and slide positions, ensuring that students will experiment with several options available to them and develop techniques applicable to many different musical situations. However, Aharoni does not display additional scales at the end of the book after students have learned all the available slide positions and valve combinations, leaving out many combinations of valve choices that may be technically advantageous for the student.

Prior to my book, the most comprehensive model for valve technique in scales can be found in Bollinger's book. Figure 4 shows an excerpt from the major scale section of Bollinger's book that demonstrates all major scales and his suggested slide positions and valve combinations. Bollinger's book suffers from the opposite problem found in the Aharoni book: he includes every possible major scale on the instrument that uses a valve but displays only one option for valve combinations on each major scale, neglecting the other options students could consider when playing these scales. With the many options available to bass trombonists using an independent valve system, some trombonists may prefer to use a different valve combination on certain notes than Bollinger recommends. To account for the various options available on the independent valve bass trombone, my method book demonstrates several different valve

combinations for each scale. I have also updated the valve notation used within the exercises to match the system used by Chuck DePaolo and Brad Edwards. An example of this notation can be seen in Figure 5.

Major Scale Patterns

Tongue is needed only when indicated - "T"

Figure 4: Excerpt from Blair Bollinger's *Valve Technique for Bass Trombone*.²⁷

48 One Octave Scales

D Major

1)

2)

3)

4)

D-flat Major

1)

2)

Figure 5: Major scale excerpt from *Bass Trombone Double Valve Technique*.²⁸

²⁷ Bollinger, 8.

²⁸ Sharpe, *Bass Trombone Double Valve Technique*, 48.

For all scales, I chose to organize the options using progressively more advanced valve technique. For the first option on each scale, I begin by only using the first valve, the simplest and easiest option to comprehend for new bass trombonists. On the second option, I use the second valve as the primary valve, forcing students to incorporate the second valve. For all options after the second recommended pattern, I use combinations of both valves to create more efficient scale patterns that prioritize minimal slide movement and ease of transition between valves. The D major scale seen in Figure 4 received a fourth option due to added possibilities with using both valves simultaneously for the tonic pitch in first position.

3.5 Arpeggios

Of the books studied in this document that were written in the twentieth century, only Aharoni's book displays valve combination recommendations for major chord arpeggios. This oversight in the other books is surprising due to the prevalence of arpeggios in common orchestral excerpts for the bass trombone; of the fourteen excerpts studied by Thomas in his dissertation, nine contain arpeggios that can be simplified with the use of valves.²⁹ Ostrander's first book does contain original etudes that repurpose some of the arpeggios from the same orchestral excerpts, but Ostrander's valve indications on these etudes are now outdated due to the book being completed before the independent second valve became available.³⁰

The arpeggios included in Aharoni's book are introduced within the context of learning individual slide positions and valve combinations. This technique ensures students using the book will experiment with each option available to them, but this method of displaying the

²⁹ Thomas, 77-85.

³⁰ Allen Ostrander, *Method for Bass Trombone and F attachment for Tenor Trombone* (New York: Carl Fischer, 1966), 23.

arpeggios does not include the added possibility of combining several different valve combinations throughout the arpeggio.

36 One Octave Arpeggios

D Major

1) $\sharp 5V$ 5 5 $\sharp 5V$

2) $\natural 1\Delta$ 1Γ 1Γ $\natural 1\Delta$

D \flat Major

1) $6V$ 6 6 $6V$

2) $\sharp 3\Delta$ $1V$ 5 $1V$ $\sharp 3\Delta$

3) $\sharp 3\Delta$ 2.5Γ $\natural 1\Gamma$ 2.5Γ $\sharp 3\Delta$

C Major

1) 4Δ $\natural 2V$ $\natural 1V$ $\natural 2V$ 4Δ

Figure 6: Arpeggios excerpt from *Bass Trombone Double Valve Technique*.³¹

The arpeggios in Bollinger's book are an excellent resource, but this section has the same flaw as the major and minor scales in his book. Instead of displaying several different options

³¹ Sharpe, 36.

and allowing the student to choose which arpeggio works most efficiently in various scenarios, Bollinger only gives students one option for each arpeggio. My book addresses this issue by approaching arpeggios in the same manner it approaches scales, including several options that progress through various uses of the valves as seen in Figure 6.

3.6 Original Etudes

One common feature found in nearly all the relevant literature in this document is the inclusion of original etudes that incorporate valve technique. Bollinger's book is the notable exception here, using only commonly accepted scale and arpeggio patterns along with excerpts from significant orchestral and solo literature for bass trombone.

Of the books containing original material addressing the valves, each of the books published after 1974 has a section devoted to use of the second valve independently. Aharoni's book contains etudes focusing on each relevant slide position with the second valve and common neighbor tones. I used this approach as a model for the Two Line Etudes chapter of my method book, adapting the key and content of each etude to fit the most relevant use of the valve and slide position. Most authors of bass trombone valve technique books prioritize what I call "valve flipping" with the second valve. Because the two independent valves are tuned a semitone apart, bass trombonists can switch from first to second valve or vice versa while remaining in the same slide position in order to eliminate slide movement between adjacent semitones. However, Aharoni also includes exercises that call for keeping adjacent semitones on the independent second valve; many teachers incorporate this concept in their teaching of scale patterns and melodic phrases, finding that the consistency of airflow between the notes is more useful than

changing partials or flipping valves.³² A visual representation of this concept is displayed in Figure 7. While there are certainly some advantages to using valve flipping in legato phrases, I have found keeping adjacent semitones on one partial or one valve to be more efficient in my own playing than valve flipping, and I chose to not use any valve flipping in the scale patterns and etudes in my book for this reason.

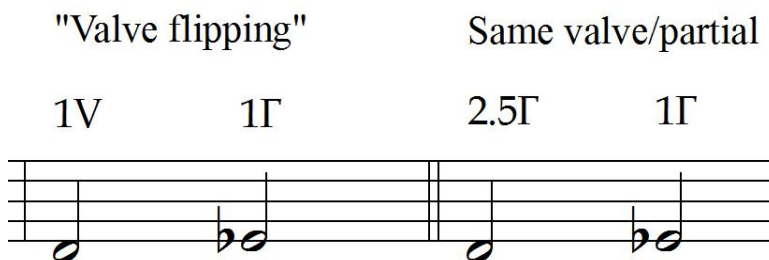


Figure 7: Visual representation of valve flipping and same valve for adjacent semitones

Ostrander's *Basic Techniques for the Double Valve Bass Trombone* does not actually contain any etudes focusing solely on the second valve by itself but prioritizes use of the two valves simultaneously, only incorporating the second valve independently when relevant to the melodic material. This usually manifests as valve flipping between adjacent semitones, and Ostrander never uses the second valve for consecutive notes in this book. This use of the second valve is extremely cautious and does not provide any unique information when compared with the Aharoni book.

Raph's book contains four etudes focusing on use of the second valve independently, written for the second edition printed in 1992. Raph's markings in these etudes prioritize valve flipping instead of adjacent semitones on the same valve combination, and he only focuses on three different key signatures. While his use of the second valve independently is more extensive

³² Buddy Baker, *Buddy Baker Tenor Trombone Method: An Approach to Trombone Basics, Warm-up, and Daily Routine for Tenor Trombone with or without F-attachment* (Hialeah, FL: Studio 224, 1983), 25.

than Ostrander, Raph also does not provide any new information or techniques when compared with Aharoni.

Edwards's book does contain some unique techniques for independent use of the second valve when compared with previous books, and he prioritizes using adjacent semitones on the same valve combination or partial far more often than valve flipping. Edwards addresses valve technique in terms of its relevance within certain key signatures, an approach I found useful in my own studies and incorporated in my method book as well. However, Edwards only notates specific valve choices for common patterns found in eight major keys, leaving four key centers unaddressed. In addition, these exercises are spread out throughout the book, adding a level of difficulty for students attempting to find these exercises among other material.

CHAPTER 4

TECHNIQUES USED IN BASS TROMBONE DOUBLE VALVE TECHNIQUE

4.1 Introduction

After researching the available pedagogical materials for this document and determining areas for improvement, I completed my own method book in April of 2019. The book covers the techniques discussed in the previous chapter, combining the positive attributes of the existing method books for bass trombone while adding some of my own techniques and original material. The only material discussed in previous chapters that I chose to not include in my book was minor scales and arpeggios due to concerns about the size of the book if this material was included, and students can still combine the techniques found in my book's major scale and arpeggio sections to create efficient patterns for minor scales and arpeggios.

4.2 Explanation of Techniques Used in Bass Trombone Double Valve Technique

The first chapter of my book is "Tuning System / Valve Symbols and Terminology," a necessary introduction for students unfamiliar with my system of valve notation. Because of the variance in tuning systems and valve notation that still exists, I wanted to ensure anyone using my book would understand the reasoning for tuning the second valve to G-flat as well as the choices in symbols for the valve notation previously discussed in Chapter 2.3.

The second chapter, "First Notes," takes students through each relevant note on the instrument using a variety of valve combinations. I designed this section to introduce students to each relevant note and slide position on each valve combination before having to play these notes in actual musical situations.

"Two Note Patterns," the third chapter, helps students become more familiar with each note that requires a valve. Rather than begin with complex etudes like many of the previous

books for bass trombone, I wanted students to explore basic uses of the valve in simple musical situations. This chapter only asks students to alternate between just two notes at a time, establishing the recommended slide position for notes on each valve combination while requiring minimal slide movement.

“Three Note Patterns” is the fourth chapter, and it functions similarly to “Two Note Patterns.” This section starts on a given pitch, ascends two whole steps, and returns to the first pitch, then repeats the pattern with a different valve combination on one or more of the notes. This pattern continues down chromatically as far as the instrument can physically play, although students are reminded at the beginning of the section that they may need time to develop proper technique in this range of the instrument. By extending the pattern in this section to three notes, students are slowly building technique that will be applicable to the major scales found later in the book.

At this point, I wanted students to apply their new techniques to slightly more demanding musical situations, so the next chapter is “Two Line Etudes.” Much like the short etudes found in previous books, these etudes comprise just two staves that focus on incorporating one slide position and one valve combination per etude into a relevant musical situation. This chapter begins with each relevant note on the first valve alone, followed by each relevant note on the second valve alone, and ends with each relevant note available when both valves are used simultaneously. Each successive etude uses a new slide position and valve combination but can also draw from the notes used in previous etudes, showing students the need to be able to use several different slide positions or valve combinations depending on the musical situation.

Having introduced every possible note on the valves at this point, I wanted students to start experimenting with several uses for these notes in “One Octave Arpeggios.” By limiting

this section to a pattern of four notes, students can work on several different options available on the bass trombone when playing major chord arpeggios. Each arpeggio begins with an option using only the open instrument or first valve alone, and each subsequent option (if necessary) adds the use of the second valve alone and/or the use of both valves simultaneously. The only exceptions to this pattern occur in arpeggios that require use of both valves simultaneously for one or more notes, starting on page 36 of the book.

“One Octave Scales” immediately follows the arpeggios, asking students to attempt several different patterns of varying slide positions and valve combinations to discover which pattern is most desirable in terms of consistency of tone quality and efficiency of slide and valve movement. These scales follow the same pattern as the arpeggios in the previous chapter, beginning with use of the first valve alone and introducing the second valve in subsequent options for each scale.

The following two chapters, “Two Octave Arpeggios” and “Two Octave Scales,” provide students with one recommended option of slide positions and valve combinations for each arpeggio and scale, and the text before both chapters warns students to only experiment with other combinations after thoroughly practicing the recommended patterns. These chapters were designed to allow students to apply their knowledge of every slide position and valve combination to progressively longer and more demanding musical situations.

“Modal Scale Patterns” takes students through another version of a two-octave scale, this time spread out in one octave scales that progressively ascend through each mode of a major key until the student has reached the first mode an octave higher. This chapter was added to show students the same techniques used in the major scales may not be sufficient in other modes in the

same key, and the recommended slide positions and valve combinations on certain pitches changes throughout the modal scale pattern depending on which mode is being played.

The culmination of all these techniques, “Original Etudes in Every Key” takes students through an etude in every major key that tests their ability to adapt to several different slide positions and valve combinations. Each etude uses at least fragments of the scales and arpeggios used earlier in the book and modulates to a nearby key center in the middle of the etude, typically the dominant of the original key or the relative minor.

The final page of the book is the chart containing each possible slide position and valve combination for each relevant note that uses a valve. This chart is also on the inside front cover of the book so students can turn to whichever end of the book is easiest depending on where they are in the book at any given moment.

APPENDIX:

CHRIS SHARPE'S *BASS TROMBONE DOUBLE VALVE TECHNIQUE*

My book *Bass Trombone Double Valve Technique* is reproduced in its entirety in this Appendix. All pages containing musical notation are reproduced as JPEGs for consistency of formatting. I am the sole owner of the publisher, C. Sharpe Editions, and no additional permissions are necessary.

Tuning System

Since most modern bass trombones have independent valves tuned to F and G-flat, we need a system for tuning both the open instrument and the individual valves. Here is my recommended tuning system:

Main tuning slide: tune to B-flat

- Since our instrument produces a B-flat harmonic series in 1st position, we should tune our 1st position to B-flat. ALWAYS tune the open instrument before tuning the valves. You might also consider tuning B-flat in a slightly flat 1st position – many professionals do this in order to allow for more accurate tuning if a slightly raised B-flat is necessary.

1st valve tuning slide: tune to F

- When tuning the 1st valve, keep in mind that F will be flat if we tune the valve to play C in 1st position. Therefore, we must tune the 1st valve's 1st position to F and remember to play C in a slightly lowered 1st position.

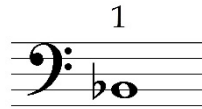
2nd valve tuning slide: tune to G-flat

- The 2nd valve presents many tuning options, all of which have advantages and disadvantages. For the purposes of the valve technique in this book, I recommend tuning the 2nd valve's 1st position to G-flat.

Slide Position and Valve Symbols

Numbers = Slide Position

If a certain slide position is required for a note, a number will be placed directly above the note, seen below:



V = F Valve / 1st Valve

If the F valve is required for a note, a slide position and the symbol V will be placed above the note:



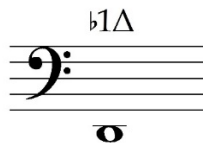
Γ = G-flat Valve / 2nd Valve

If the G-flat valve is required for a note, a slide position and the symbol Γ will be placed above the note:



Δ = D Valve / 1st and 2nd Valve

If both valves are simultaneously required for a note, a slide position and the symbol Δ will be placed above the note:



First Notes

Before getting into intricate techniques using the two valves on your bass trombone, let's start by getting acquainted with both valves.

I recommend using a tuner to help you tune your instrument and valves before starting this section of the book. Make sure to tune your open instrument first (without valves) before attempting to tune the valves. Tuning the valves first before the open instrument will result in your valves being out of tune.

Establishing a consistent tuning system will allow you to develop consistent slide positions for each note that uses a valve, allowing for a better overall musical product over time. As you learn more and more notes on each of the valve combinations, use your tuner to find the precise slide position for each note. Your instrument's tuning tendencies might be slightly different from the recommended slide positions in this book, and that's okay! Trust your tuner and adjust slide positions as needed.

Things to keep in mind:

As you go lower, use more air

In order to maintain a consistent tone quality across the instrument, you will need to use more air as you move to lower notes. It will likely take some experimentation to find the exact air and embouchure required to produce your best tone quality on these notes.

As you add more valves, use more air

Noticing a trend? Adding valves means adding more twists and turns your air will have to make as it moves through the instrument. Just like moving to lower notes on the instrument, adding valves will require even more air from you in order to maintain a consistent tone quality.

Don't be afraid to make mistakes (and use more air)

Trial and error is an important part of developing new skills on any instrument, so don't get discouraged if you happen to make a mistake or the notes don't come easily to you at first! Keep working to improve and make your next notes better than your last. Also, use more air!

Start by playing some common notes in first position:

1st position	1st position and 1st valve	1st position and 2nd valve	Flat 1st position and both valves
1	1V	1 Γ	\flat 1 Δ

Here is every note available on the same partial as B-flat

1	2	3	4	5	6	7
---	---	---	---	---	---	---

Each of these notes can be played on the first (F) valve/trigger
Note: there are only 6 playable slide positions on the F valve

1V	\flat 2V	\flat 3V	\sharp 5V	6V	\flat 7V
----	------------	------------	-------------	----	------------

We can also play the following notes on the first valve, one partial above the previous line*
Note: there are only 6 playable slide positions on the F valve

1V	\flat 2V	\flat 3V	\sharp 5V	6V	\flat 7V
----	------------	------------	-------------	----	------------

Use the second (G₂) valve/trigger for each of these notes*
 Note: there are only 6 playable slide positions on the G-flat valve

1Γ 2.5Γ #4Γ 5Γ ♭6Γ ♭7Γ

Just like the first valve, we can play the following notes on the second valve, one partial above the previous line*
 Note: there are only 6 playable slide positions on the G-flat valve

1Γ 2.5Γ #4Γ 5Γ ♭6Γ ♭7Γ

Press down both valves/triggers at the same time in order to play each of these notes*
 Note: there are only 5 playable slide positions on the double valve

♭1Δ #3Δ 4Δ ♭5Δ 7Δ

These notes are called pedal notes and do not require a valve/trigger*

1 2 3 4 5 6 7

* You may have noticed already that you can play some of these notes in several different slide positions and valve combinations. We will explore each of these options (and many more) as the book progresses.

Two Note Patterns

Now that you have found the notes available to you on each of the valve combinations, use Two Note Patterns to start applying valve technique to practical situations.

Remember to start at as slow a tempo as necessary to prevent mistakes, paying close attention to the recommended slide position and valve combination for each note. Try to keep the tone quality as consistent as possible, using more air as you add valves and move lower on the instrument.

Things to keep in mind:

Take things slow

If you are not yet familiar with the valve notation and symbols used in this book, go slowly through this section and pay very close attention to the marked slide positions and valve combinations. These combinations have been chosen for a reason, so master each combination before attempting another pattern.

As you add more valves, use more air

This has already been mentioned earlier, but it's still just as important. Make sure your lungs are sufficiently warmed up before playing for extended amounts of time in the low range.

Explore the "basement"

Once you get comfortable with this section, try playing some of the exercises down an octave. In both the First Valve and the Second Valve parts of this section (pages 10-13), you can play the last 3 measures of each line down an octave using the exact same slide positions and valve combinations that are marked. You can play the entire First and Second Valve section (page 14) down an octave using the same slide positions and valve combinations.

First Valve - V

1 1V 1 1V 1 1 1V 1 1V 1

A musical staff in bass clef with a 4/4 time signature. It contains six measures of music. The first measure has a quarter note G2 with a '1' above it. The second measure has a quarter note G2 with a '1V' above it. The third measure has a quarter note G2 with a '1' above it. The fourth measure has a quarter note G2 with a '1V' above it. The fifth measure has a half note G2 with a '1' above it. The sixth measure has a half note G2 with a '1' above it. The staff ends with a double bar line.

2 2V 2 2V 2 2 2V 2 2V 2

A musical staff in bass clef with a 4/4 time signature. It contains six measures of music. The first measure has a quarter note G2 with a '2' above it. The second measure has a quarter note G2 with a '2V' above it. The third measure has a quarter note G2 with a '2' above it. The fourth measure has a quarter note G2 with a '2V' above it. The fifth measure has a half note G2 with a '2' above it. The sixth measure has a half note G2 with a '2' above it. The staff ends with a double bar line.

3 3V 3 3V 3 3 3V 3 3V 3

A musical staff in bass clef with a 4/4 time signature. It contains six measures of music. The first measure has a quarter note G2 with a '3' above it. The second measure has a quarter note G2 with a '3V' above it. The third measure has a quarter note G2 with a '3' above it. The fourth measure has a quarter note G2 with a '3V' above it. The fifth measure has a half note G2 with a '3' above it. The sixth measure has a half note G2 with a '3' above it. The staff ends with a double bar line.

4 4V 4 4V 4 4 4V 4 4V 4

A musical staff in bass clef with a 4/4 time signature. It contains six measures of music. The first measure has a quarter note G2 with a '4' above it. The second measure has a quarter note G2 with a '4V' above it. The third measure has a quarter note G2 with a '4' above it. The fourth measure has a quarter note G2 with a '4V' above it. The fifth measure has a half note G2 with a '4' above it. The sixth measure has a half note G2 with a '4' above it. The staff ends with a double bar line.

5 5V 5 5V 5 5 5V 5 5V 5

A musical staff in bass clef with a 4/4 time signature. It contains six measures of music. The first measure has a quarter note G2 with a '5' above it. The second measure has a quarter note G2 with a '5V' above it. The third measure has a quarter note G2 with a '5' above it. The fourth measure has a quarter note G2 with a '5V' above it. The fifth measure has a half note G2 with a '5' above it. The sixth measure has a half note G2 with a '5' above it. The staff ends with a double bar line.

6 6V 6 6V 6 6 6V 6 6V 6

A musical staff in bass clef with a 4/4 time signature. It contains six measures of music. The first measure has a quarter note G2 with a '6' above it. The second measure has a quarter note G2 with a '6V' above it. The third measure has a quarter note G2 with a '6' above it. The fourth measure has a quarter note G2 with a '6V' above it. The fifth measure has a half note G2 with a '6' above it. The sixth measure has a half note G2 with a '6' above it. The staff ends with a double bar line.

FOR REVIEW ONLY

Two Note Patterns

♭1V ♭2V ♭1V ♭2V ♭1V 1V ♭2V 1V ♭2V 1V



A musical staff in bass clef with a key signature of one flat. The notes are: G2 (♭1V), F2 (♭2V), G2 (♭1V), F2 (♭2V), G2 (♭1V), G2 (1V), F2 (♭2V), G2 (1V), F2 (♭2V), G2 (1V).

♭2V ♭3V ♭2V ♭3V ♭2V ♭2V ♭3V ♭2V ♭3V ♭2V



A musical staff in bass clef with a key signature of one flat. The notes are: F2 (♭2V), G2 (♭3V), F2 (♭2V), G2 (♭3V), F2 (♭2V), F2 (♭2V), G2 (♭3V), F2 (♭2V), G2 (♭3V), F2 (♭2V).

♭3V ♭5V ♭3V ♭5V ♭3V ♭3V ♭5V ♭3V ♭5V ♭3V



A musical staff in bass clef with a key signature of two flats. The notes are: E2 (♭3V), D2 (♭5V), E2 (♭3V), D2 (♭5V), E2 (♭3V), E2 (♭3V), D2 (♭5V), E2 (♭3V), D2 (♭5V), E2 (♭3V).

♭5V 6V ♭5V 6V ♭5V ♭5V 6V ♭5V 6V ♭5V



A musical staff in bass clef with a key signature of one flat. The notes are: D2 (♭5V), E2 (6V), D2 (♭5V), E2 (6V), D2 (♭5V), D2 (♭5V), E2 (6V), D2 (♭5V), E2 (6V), D2 (♭5V).

6V ♭7V 6V ♭7V 6V 6V ♭7V 6V ♭7V 6V



A musical staff in bass clef with a key signature of two flats. The notes are: D2 (6V), C2 (♭7V), D2 (6V), C2 (♭7V), D2 (6V), D2 (6V), C2 (♭7V), D2 (6V), C2 (♭7V), D2 (6V).

FOR REVIEW ONLY

Second Valve - Γ

1 ♭Γ 1 ♭Γ 1 1Γ 1 1Γ 1

2 2.5Γ* 2 2.5Γ 2 2 2.5Γ 2 2.5Γ 2

3 #4Γ 3 #4Γ 3 3 #4Γ 3 #4Γ 3

4 5Γ 4 5Γ 4 4 5Γ 4 5Γ 4

5 ♭6Γ 5 ♭6Γ 5 5 ♭6Γ 5 ♭6Γ 5

6 ♭7Γ 6 ♭7Γ 6 6 ♭7Γ 6 ♭7Γ 6

*Slide position 2.5Γ should be played halfway between 2nd and 3rd position.
This slide position should be considered lower than ♭2.

Two Note Patterns

1Γ 2.5Γ 1Γ 2.5Γ 1Γ 1Γ 2.5Γ 1Γ 2.5Γ 1Γ

2.5Γ #4Γ 2.5Γ #4Γ 2.5Γ 2.5Γ #4Γ 2.5Γ #4Γ 2.5Γ

#4Γ 5Γ #4Γ 5Γ #4Γ #4Γ 5Γ #4Γ 5Γ #4Γ

5Γ b6Γ 5Γ b6Γ 5Γ 5Γ b6Γ 5Γ b6Γ 5Γ

b6Γ b7Γ b6Γ b7Γ b6Γ b6Γ b7Γ b6Γ b7Γ b6Γ

FOR REVIEW ONLY

First and Second Valve - Δ

1V ♭1Δ 1V ♭1Δ 1V ♭1Δ #3Δ ♭1Δ #3Δ ♭1Δ

Musical staff 1: Bass clef. Notes: G2, F2, G2, F2, G2, F2, G2, F2, G2, F2, G2, F2, G2, F2, G2, F2. Accidentals: ♭1, ♭1, ♭1, ♭1, ♭1, ♭1, ♭1, ♭1, ♭1, ♭1, ♭1, ♭1, ♭1, ♭1, ♭1. A double bar line is after the 5th note.

♭2V #3Δ ♭2V #3Δ ♭2V #3Δ 4Δ #3Δ 4Δ #3Δ

Musical staff 2: Bass clef. Notes: F2, E2, F2, E2, F2, E2, F2, E2, F2, E2, F2, E2, F2, E2, F2, E2. Accidentals: ♭2, ♭2, ♭2, ♭2, ♭2, ♭2, ♭2, ♭2, ♭2, ♭2, ♭2, ♭2, ♭2, ♭2, ♭2. A double bar line is after the 5th note.

♭3V 4Δ ♭3V 4Δ ♭3V 4Δ ♭5Δ 4Δ ♭5Δ 4Δ

Musical staff 3: Bass clef. Notes: E2, D2, E2, D2, E2, D2, E2, D2, E2, D2, E2, D2, E2, D2, E2, D2. Accidentals: ♭3, ♭3, ♭3, ♭3, ♭3, ♭3, ♭3, ♭3, ♭3, ♭3, ♭3, ♭3, ♭3, ♭3, ♭3. A double bar line is after the 5th note.

#5V ♭5Δ #5V ♭5Δ #5V ♭5Δ 7Δ ♭5Δ 7Δ ♭5Δ

Musical staff 4: Bass clef. Notes: D2, C2, D2, C2, D2, C2, D2, C2, D2, C2, D2, C2, D2, C2, D2, C2. Accidentals: ♯5, ♯5, ♯5, ♯5, ♯5, ♯5, ♯5, ♯5, ♯5, ♯5, ♯5, ♯5, ♯5, ♯5, ♯5. A double bar line is after the 5th note.

FOR REVIEW ONLY

Notes

(Feel free to use these blank pages to keep notes throughout the book)

FOR REVIEW ONLY

Three Note Patterns

The following Three Note Patterns are helpful when used in major scales and patterns derived from these scales.

Every note is marked with a valve combination and/or slide position above the note. Each combination was chosen for a specific reason, so study the markings carefully!

Things to keep in mind:

Attention to detail

As with previous sections, the slide position and valve indications were all chosen for a reason. Each has unique advantages, so go slowly through this section and focus on the various valve options.

Explore the “basement”

This section may end at pedal F, but many of these exercises can be played down an octave. Specifically, the last two lines of page 18 and all of page 19 can be played an octave lower with the exact same slide positions and valves. That being said, if you can't quite play low enough to take advantage of that entire range just yet, don't be discouraged. Play as low as you can for now and continue pushing yourself to go lower and lower over time.

Don't forget your tuner

Experimenting with new valve patterns isn't the only purpose of this exercise. Notice that every pattern (except pedal A-flat and G) includes two options - this also helps us to compare tuning and pitch for the same note on different valves. Listen carefully to the whole step intervals as you play these exercises. Find a tuner (such as the Tonal Energy Tuner app) that works well with the lowest notes on your horn - some tuners have difficulties consistently picking up an accurate pitch for low frequencies.

Three Note Patterns

1 1V 4 1V 1 1 2.5Γ 4 2.5Γ 1

2 ½2V 5 ½2V 2 2 #4Γ 5 #4Γ 2

3 1 ½1V 1 3 3 1 2.5Γ 1 3

4 2 ½2V 2 4 4 2 #4Γ 2 4

*Note: the following exercises through page 19 can be played an octave lower using the same slide positions and valve combinations

5 3 1 3 5 1Γ 3 1 3 1Γ

1V 4 2 4 1V 2.5Γ 4 2 4 2.5Γ

Three Note Patterns

♭2V 5 3 5 ♭2V #4Γ 5 3 5 #4Γ

♭3V 1V 4 1V ♭3V ♭3V 2.5Γ 4 2.5Γ ♭3V

#5V ♭2V 5 ♭2V #5V ♭1Δ ♭2V 5 ♭2V ♭1Δ

#3Δ ♭3V 1V ♭3V #3Δ #3Δ ♭3V 2.5Γ ♭3V #3Δ

4Δ #5V ♭2V #5V 4Δ 4Δ ♭1Δ ♭2V ♭1Δ 4Δ

#5Δ 6V ♭3V 6V #5Δ #5Δ #3Δ ♭3V #3Δ #5Δ

FOR REVIEW ONLY

Three Note Patterns

1 4Δ #5V 4Δ 1 1 4Δ ♭1Δ 4Δ 1

2 ♭5Δ 6V ♭5Δ 2 2 ♭5Δ #3Δ ♭5Δ 2

3 1 4Δ 1 3 4 2 ♭5Δ 2 4

5 3 1 3 5 1Γ 3 1 3 1Γ

1V 4 2 4 1V 2.5Γ 4 2 4 2.5Γ

Notes

(Feel free to use these blank pages to keep notes throughout the book)

FOR REVIEW ONLY

Two Line Etudes

Now that you are more comfortable with playing various notes with different slide position and valve combinations, it's time to start incorporating these combinations into more difficult musical situations.

For each etude, study the content carefully before playing. Each note that requires a valve is marked with a slide position and a valve indication. Some of these valve indications will be different from your first instinct, but the marked combinations have each been chosen for a very specific reason! Remember to start at as slow a tempo as necessary to prevent mistakes, and gradually increase the tempo as you become more comfortable with the content.

Things to keep in mind:

Slow practice = fast progress

Don't be in a rush to finish this section. Attention to detail is paramount when developing the skills necessary for this section. Start working on these etudes at slow tempos. After you have gotten comfortable with the technique, feel free to increase tempos.

Patience

This could be an extension of the previous reminder, but its importance is crucial. Each etude is designed to focus on one particular slide position and valve combination, so follow the valve markings very closely in this section. After first mastering the combinations shown, feel free to begin experimenting with your own ideas.

V in 1

1V 1V 1V

1V 1V 1V

V in 2

1V 12V 11V

1V 12V 1V 12V 1V 12V 11V 12V 11V

1V 12V 1V 12V 12V 11V

V in 3

1V 1V 1V 3V 1V

6 3V 11V 1 1V 1 1V 3V

V in #5

1V #1V #2V #5V #5V

V in 6

6 #3V 1 6 #3V 6V #3V 6 6 6V

#3V 6 6V #3V 6 #3V 6

V in #7

6 #7V 1V 6 1 #7V #1V 1 1 6 #1V #7V #7V 1V

1V #7V 2 6 1 4 #1V 1 6 #1V #7V #2V #7V 6

Γ in 1

1 Γ \flat 1 Γ \flat 2V 1 Γ \flat 2V 1 Γ

\flat 2V \flat 1 Γ 1 Γ \flat 1 Γ \flat 2V 1 Γ

Γ in 2.5

\flat 1 Γ 2.5 Γ \flat 1 Γ \flat 1 Γ 2.5 Γ 1 Γ 2.5 Γ \flat 1 Γ 2.5 Γ \flat 1 Γ

1 Γ 2.5 Γ 1 Γ 2.5 Γ 2.5 Γ \flat 1 Γ

Γ in #4

2.5 Γ #4 Γ 2.5 Γ 2.5 Γ #4 Γ 2.5 Γ #4 Γ 2.5 Γ #4 Γ 2.5 Γ

2.5 Γ #4 Γ 2.5 Γ #4 Γ #4 Γ 2.5 Γ

Two Line Etudes

Γ in 5

5 5 $b3V$ 5 5 Γ 5 #4 Γ 5 5 Γ

#4 Γ $b1\Gamma$ 1 Γ $b3V$ $b2V$ $b1\Gamma$ 1 Γ

Γ in 6

5 #4 Γ #4 Γ 5 #4 Γ $b6\Gamma$ #4 Γ 5 5 $b6\Gamma$

#4 Γ 5 $b6\Gamma$ #4 Γ 5 #4 Γ 5

Γ in 7

5 $b7\Gamma$ 1 Γ 5 3 $b7\Gamma$ 1 Γ 1 Γ 1 Γ $b7\Gamma$ $b1\Gamma$ $b7\Gamma$ $b7\Gamma$ 1 Γ

1 Γ $b7\Gamma$ 1 5 $b2V$ 6V 5 1 Γ $b7\Gamma$ $b1\Gamma$ $b7\Gamma$ 1V 6V 5

Δ in $\flat 1$

5 ♭2V 5 ♭2V 5 ♭2V ♭1Δ ♭2V 5 5 ♭5V

♭2V 5 ♭2V 5 ♭2V ♭1Δ

Δ in $\sharp 3$

♭1Γ 2.5Γ 1Γ 2.5Γ ♭3V 1V ♭3V ♭3Δ ♭3V 2.5Γ 1Γ 2.5Γ ♭3Δ

♭3V 2.5Γ 1Γ ♭1Γ 2.5Γ 1Γ 2.5Γ ♭3V ♭3Δ

Δ in 4

♭3V ♭1V ♭2V ♭5V 4Δ 2.5Γ 2.5Γ

2.5Γ ♭4Γ 2.5Γ ♭3V ♭3Δ 4Δ

Two Line Etudes

Δ in $\flat 5$

Δ in 7

FOR REVIEW ONLY

One Octave Arpeggios

Arpeggios are figures that divide a chord into its individual notes. These figures are quite common in Western music and can be found in many significant works and orchestral excerpts for the bass trombone such as Haydn's *The Creation* and Wagner's *Das Rheingold*.

Each arpeggio in this section is marked with valve combinations and/or slide position markings for certain notes. For every note that does not have a marking, use the most common slide position for that note.

Things to keep in mind:

Attention to detail

Yes, this point could apply to the entire book, but it's important to maintain focus during each of these sections in order to gain the most information possible from the exercises. If you have been practicing several chapters in this book and can sense that your mind is starting to wander, consider taking a break and returning to the book after doing something else.

Tone quality

Some of these arpeggios will contain varying instances of notes on the valve(s). As you begin to use patterns that require more use of the valves, do not allow the tone quality to suffer.

Notes played on the valve will frequently possess a different, often less desirable tone quality than an in open positions. If a particular note can be played both with and without a valve, use the non-valve slide position's tone as an example for the valved slide position's tone. Many notes on the valves can possess a tone quality comparable to non-valve notes, but this will require additional practice in order to develop a desirable tone quality. Once again, trial and error will help as you attempt to find your ideal tone quality.

D \flat Major

1) 

2) 

C Major

1) 

2) 

B Major

1) 

2) 

One Octave Arpeggios

B \flat Major

1) 

2) 

A Major

1) 

2) 

A \flat Major

1) 

2) 

G Major

1) 

2) 

G^b Major

1) 

2) 

3) 

F Major

1) 

F Major (continued)

2) 

E Major

1) 

2) 

E♭ Major

1) 

2) 

3) 

D Major

1) $\sharp 5V$ 5 5 $\sharp 5V$

2) $\flat 1\Delta$ 1 Γ 1 Γ $\flat 1\Delta$

D \flat Major

1) 6 V 6 6 6 V

2) $\sharp 3\Delta$ 1 V 5 1 V $\sharp 3\Delta$

3) $\sharp 3\Delta$ 2.5 Γ $\flat 1\Gamma$ 2.5 Γ $\sharp 3\Delta$

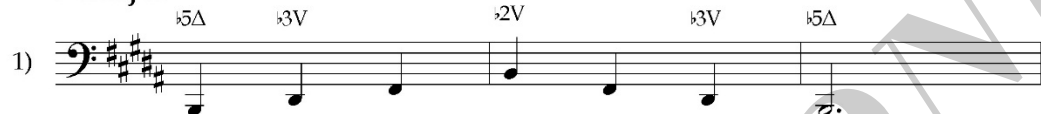
C Major

1) $\flat 4\Delta$ $\flat 2V$ $\flat 1V$ $\flat 2V$ $\flat 4\Delta$

C Major (continued)

2) 

B Major

1) 

2) 

B \flat Major



A Major



A \flat Major



G Major

1) $\sharp 5\Delta$ $\sharp 5V$ $\sharp 5V$ $\sharp 5\Delta$

2) $\sharp 5\Delta$ $\sharp 6\Gamma$ $\sharp 6\Gamma$ $\sharp 5\Delta$

G \flat Major

1) 5 $\sharp 3\Delta$ 5 $\sharp 3\Delta$ 5

2) 1Γ $\sharp 3\Delta$ 1Γ $\sharp 3\Delta$ 1Γ

F Major

1) 1V 4Δ 1V 4Δ 1V

2) 2.5Γ 4Δ 2.5Γ 4Δ 2.5Γ

E Major

1) $\flat 2V$ $\flat 5\Delta$ $\flat 2V$ $\flat 5\Delta$ $\flat 2V$

2) $\sharp 4\Gamma$ $\flat 5\Delta$ $\sharp 4\Gamma$ $\flat 5\Delta$ $\sharp 4\Gamma$

E \flat Major

1) $\flat 3V$ $\flat 3V$ $\flat 3V$

2) 5Γ 5Γ 5Γ

D Major

1) $\sharp 5V$ 5 $\sharp 5V$ 5 $\sharp 5V$

2) $\flat 6\Gamma$ 5 $\flat 1\Delta$ 5 $\flat 6\Gamma$

D Major (continued)

3) $\flat 1\Delta$ 1Γ $\flat 1\Delta$ 1Γ $\flat 1\Delta$

D \flat Major

1) $6V$ 6 $6V$ 6 $6V$

2) $\sharp 3\Delta$ 2.5Γ $\sharp 3\Delta$ 2.5Γ $\sharp 3\Delta$

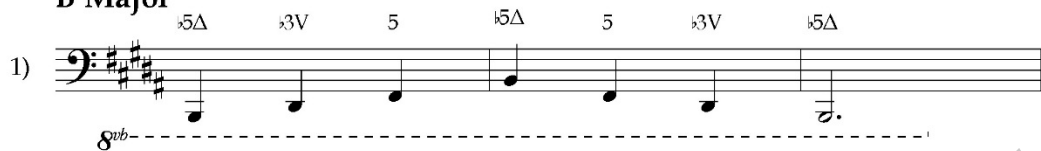
C Major

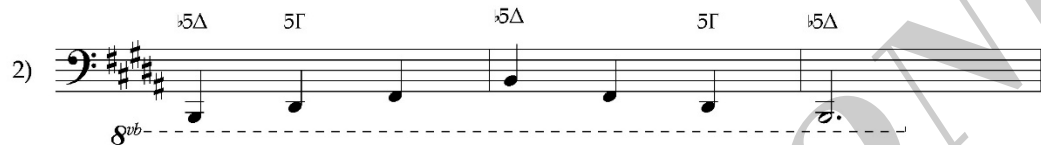
1) 4Δ $\flat 2V$ 4Δ $\flat 2V$ 4Δ

2) 4Δ $\sharp 4\Gamma$ 4Δ $\sharp 4\Gamma$ 4Δ

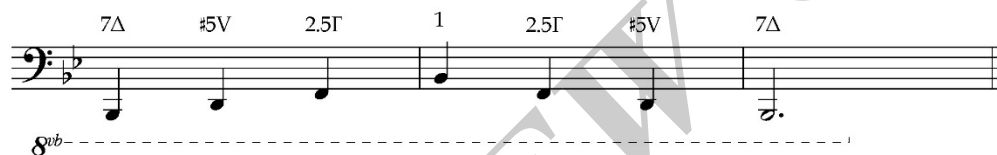
One Octave Arpeggios

B Major

1) 

2) 

B \flat Major



FOR REVIEW ONLY

One Octave Scales

Major scales are an integral part of Western music and trombone music. Therefore, they must be an integral part of our practice.

Follow the slide position and valve combination indicators for each scale; some scales have just one recommended pattern, and others have as many as four. Try each pattern and decide for yourself which works best for you in terms of efficiency of slide movement, consistency of tone quality, pitch, etc.

If you find some patterns to be more efficient but are not satisfied with the tone quality, work to improve the tone quality slowly over time and match patterns that yield a more desirable tone quality. This will allow you to have more options for slide positions and valve combinations in various musical situations you will encounter.

Things to keep in mind:

Not all patterns are created equal

Some of these scales may have as many as four unique recommended patterns. These patterns will prioritize aspects such as tone quality, minimal slide movement, playing adjacent half-steps on the same partial, etc. You may find that one pattern works best when playing long tones and another pattern for the same scale works better for fast technique. Experiment with each pattern and try to find a practical use for all of them.

Pitch is still important

While the slide position and valve patterns are the primary focus of this exercise, remember to remain vigilant about keeping pitch and tone quality consistent across slide positions and valves. Every major scale should have the exact same intervals throughout the scale, so aim for consistency regardless of the key signature.

D^b Major

1) 

2) 

3) 

C Major



B Major

1) 

2) 

B \flat Major

$\flat 1V / 2.5\Gamma$ $\flat 1V / 2.5\Gamma$

A Major

$\flat 2V / \#4\Gamma$ $\flat 2V / \#4\Gamma$

A \flat Major

1) $\flat 3V$ 6 5 5 6 $\flat 3V$

2) 1 2.5 Γ $\flat 1\Gamma$ $\flat 1\Gamma$ 2.5 Γ 1

G Major

1) $\flat 2V$ $\flat 1V$ $\flat 1V$ $\flat 2V$

2) $\#4\Gamma$ 2.5 Γ 2.5 Γ $\#4\Gamma$

G \flat Major

1)

2)

3)

F Major

1)

2)

3)

E Major

1) 

2) 

3) 

E^b Major

1) 

2) 

3) 

D Major

1) 

2) 

3) 

4) 

D \flat Major

1) 

2) 

D \flat Major (continued)

3) $\sharp 3\Delta$ $\flat 3V$ 2.5 Γ 1 Γ 2.5 Γ $\flat 1\Gamma$ 2.5 Γ 1 Γ 2.5 Γ $\flat 3V$ $\sharp 3\Delta$

4) $\sharp 3\Delta$ $\flat 3V$ 6 5 2.5 Γ $\flat 1\Gamma$ 2.5 Γ 5 6 $\flat 3V$ $\sharp 3\Delta$

C Major

1) 4 Δ $\sharp 5V$ $\flat 2V$ 1V $\flat 2V$ $\flat 1V$ $\flat 2V$ 1V $\flat 2V$ $\sharp 5V$ 4 Δ

2) 4 Δ $\flat 6\Gamma$ $\sharp 4\Gamma$ 2.5 Γ $\sharp 4\Gamma$ 2.5 Γ $\sharp 4\Gamma$ 2.5 Γ $\sharp 4\Gamma$ $\flat 6\Gamma$ 4 Δ

3) 4 Δ $\sharp 5V$ $\flat 2V$ 1V $\sharp 4\Gamma$ 2.5 Γ $\sharp 4\Gamma$ 1V $\flat 2V$ $\sharp 5V$ 4 Δ

B Major

1) $\flat 5\Delta$ 6V $\flat 3V$ $\flat 2V$ $\flat 3V$ $\flat 2V$ $\flat 3V$ $\flat 2V$ $\flat 3V$ 6V $\flat 5\Delta$

B Major (continued)

2) $\flat 5\Delta$ 6V 5 Γ $\sharp 4\Gamma$ 5 Γ $\sharp 4\Gamma$ 5 Γ $\sharp 4\Gamma$ 5 Γ 6V $\flat 5\Delta$

3) $\flat 5\Delta$ $\sharp 3\Delta$ $\flat 3V$ $\flat 2V$ $\flat 3V$ $\flat 2V$ $\flat 3V$ $\flat 2V$ $\sharp 3V$ $\sharp 3\Delta$ $\flat 5\Delta$

B \flat Major

1) 1 4 Δ $\sharp 5V$ $\flat 3V$ 1V 1V $\flat 3V$ $\sharp 5V$ 4 Δ 1

2) 1 4 Δ $\sharp 6\Gamma$ 5 Γ 2.5 Γ 2.5 Γ 5 Γ $\sharp 6\Gamma$ 4 Δ 1

3) 1 4 Δ $\sharp 5V$ $\flat 3V$ 2.5 Γ 2.5 Γ $\flat 3V$ $\sharp 5V$ 4 Δ 1

A Major

1) $\flat 5\Delta$ 6V $\sharp 5V$ $\flat 2V$ $\flat 2V$ $\sharp 5V$ 6V $\flat 5\Delta$

A Major (continued)

2) $\flat 5\Delta$ $\sharp 3\Delta$ $\flat 1\Delta$ $\flat 2V$ $\flat 2V$ $\flat 1\Delta$ $\sharp 3\Delta$ $\flat 5\Delta$

3) $\flat 5\Delta$ $6V$ $\sharp 5V$ $\sharp 4\Gamma$ $\sharp 4\Gamma$ $\sharp 5V$ $6V$ $\flat 5\Delta$

A \flat Major

1) 4Δ $\sharp 3\Delta$ $\flat 3V$ $1V$ $1V$ $\flat 3V$ $\sharp 3\Delta$ 4Δ

2) 4Δ $\sharp 3\Delta$ 5Γ 2.5Γ 2.5Γ 5Γ $\sharp 3\Delta$ 4Δ

3) 4Δ $\sharp 3\Delta$ 5Γ 6 6 5Γ $\sharp 3\Delta$ 4Δ

G Major

1) $\flat 5\Delta$ 4Δ $\sharp 5V$ $\flat 2V$ $\flat 2V$ $\sharp 5V$ 4Δ $\flat 5\Delta$

G Major (continued)

2) $\flat 5\Delta$ 4 Δ $\flat 6\Gamma$ $\sharp 4\Gamma$ $\sharp 4\Gamma$ $\flat 6\Gamma$ 4 Δ $\flat 5\Delta$

3) $\flat 5\Delta$ 4 Δ $\flat 1\Delta$ $\flat 2V$ $\flat 2V$ $\flat 1\Delta$ 4 Δ $\flat 5\Delta$

G \flat Major

1) 5 $\flat 5\Delta$ 6V $\flat 3V$ 6 5 6 $\flat 3V$ 6V $\flat 5\Delta$ 5

2) 1 Γ $\flat 5\Delta$ $\sharp 3\Delta$ 5 Γ 2.5 Γ 1 Γ 2.5 Γ 5 Γ $\sharp 3\Delta$ $\flat 5\Delta$ 1 Γ

3) 5 $\flat 5\Delta$ $\sharp 3\Delta$ $\flat 3V$ 6 5 6 $\flat 3V$ $\sharp 3\Delta$ $\flat 5\Delta$ 5

F Major

1) 1V 4 Δ $\flat 5V$ $\flat 2V$ 1V $\flat 2V$ $\flat 5V$ 4 Δ 1V

F Major (continued)

2) 2.5Γ 4Δ $\flat 6\Gamma$ $\sharp 4\Gamma$ 2.5Γ $\sharp 4\Gamma$ $\flat 6\Gamma$ 4Δ 2.5Γ

3) 2.5Γ 4Δ $\sharp 5V$ $\sharp 4\Gamma$ 2.5Γ $\sharp 4\Gamma$ $\sharp 5V$ 4Δ 2.5Γ

E Major

1) $\flat 2V$ $\flat 5\Delta$ $6V$ $\flat 3V$ $\flat 2V$ $\flat 3V$ $6V$ $\flat 5\Delta$ $\flat 2V$

2) $\sharp 4\Gamma$ $\flat 5\Delta$ $6V$ 5Γ $\sharp 4\Gamma$ 5Γ $6V$ $\flat 5\Delta$ $\sharp 4\Gamma$

3) $\flat 2V$ $\flat 5\Delta$ $\sharp 3\Delta$ $\flat 3V$ $\flat 2V$ $\flat 3V$ $\sharp 3\Delta$ $\flat 5\Delta$ $\flat 2V$

E♭ Major

1) $\flat 3V$ $1V$ 4Δ $\sharp 5V$ $\flat 3V$ $\sharp 5V$ 4Δ $1V$ $\flat 3V$

E^b Major (continued)

2)

3)

D Major

1)

2)

3)

D^b Major

1)

D \flat Major (continued)

2) $\sharp 3\Delta$ $\flat 3V$ 2.5 Γ 1 Γ 4 Δ $\sharp 3\Delta$ 4 Δ 1 Γ 2.5 Γ $\flat 3V$ $\sharp 3\Delta$

C Major

1) 4 Δ $\sharp 5V$ $\flat 2V$ 1V $\flat 5\Delta$ 4 Δ $\sharp 5\Delta$ 1V $\flat 2V$ $\sharp 5V$ 4 Δ

2) 4 Δ $\sharp 5V$ $\sharp 4\Gamma$ 2.5 Γ $\flat 5\Delta$ 4 Δ $\sharp 5\Delta$ 2.5 Γ $\sharp 4\Gamma$ $\sharp 5V$ 4 Δ

B Major

1) $\flat 5\Delta$ $\sharp 3\Delta$ $\flat 3V$ $\flat 2V$ 1 $\flat 5\Delta$ 1 $\flat 2V$ $\flat 3V$ $\sharp 3\Delta$ $\flat 5\Delta$

2) $\flat 5\Delta$ $\sharp 3\Delta$ 5 Γ $\sharp 4\Gamma$ 1 $\flat 5\Delta$ 1 $\sharp 4\Gamma$ 5 Γ $\sharp 3\Delta$ $\flat 5\Delta$

B \flat Major

7 Δ 4 Δ $\sharp 5V$ $\flat 3V$ 1V 1 1V $\flat 3V$ $\sharp 5V$ 4 Δ 7 Δ

Two Octave Arpeggios

Some music you play will call for arpeggios larger than one octave. Work through these arpeggios slowly and carefully, making a consistent and beautiful sound in all registers of your instrument.

If some of the upper notes of the first arpeggios are too high for you right now, start at a comfortable arpeggio further into the section and work your way backwards, allowing yourself to work on your high range more gradually and efficiently.

Things to keep in mind:

Tone quality across octaves

Do not allow the range to negatively impact your tone quality! Our instrument will naturally have different tone colors in the various registers but aim to keep the tone quality as consistent and resonant as possible. Remember to use faster air in the upper range and slower air in the lower range.

Take as many breaths as needed

When first starting this section, take as many breaths as you need in order to keep the tone quality consistent. As you get more comfortable with the low range and playing these arpeggios, try to play them in one or two breaths, working to not sacrifice tone quality.

A Major**A^b Major****G Major****G^b Major****F Major**

E Major

Musical notation for E Major arpeggio in bass clef, spanning two octaves. The notes are E2, G2, B2, E3, G3, B3, E4, G4, B4, E5, G5, B5, E6, G6, B6, E7. Fingerings are indicated as 1 2 V, 1 2 V, 1 2 V, 1 2 V.

E \flat Major

Musical notation for E \flat Major arpeggio in bass clef, spanning two octaves. The notes are E \flat 2, G \flat 2, B \flat 2, E \flat 3, G \flat 3, B \flat 3, E \flat 4, G \flat 4, B \flat 4, E \flat 5, G \flat 5, B \flat 5, E \flat 6, G \flat 6, B \flat 6, E \flat 7. Fingerings are indicated as 1 3 V, 1 3 V.

D Major

Musical notation for D Major arpeggio in bass clef, spanning two octaves. The notes are D2, F \sharp 2, A2, D3, F \sharp 3, A3, D4, F \sharp 4, A4, D5, F \sharp 5, A5, D6, F \sharp 6, A6, D7. Fingerings are indicated as 1 Δ 1 Γ , 1 Γ 1 Δ .

D \flat Major

Musical notation for D \flat Major arpeggio in bass clef, spanning two octaves. The notes are D \flat 2, F \flat 2, A \flat 2, D \flat 3, F \flat 3, A \flat 3, D \flat 4, F \flat 4, A \flat 4, D \flat 5, F \flat 5, A \flat 5, D \flat 6, F \flat 6, A \flat 6, D \flat 7. Fingerings are indicated as 1 3 Δ 2.5 Γ 1 Γ , 1 Γ 2.5 Γ 1 3 Δ .

C Major

Musical notation for C Major arpeggio in bass clef, spanning two octaves. The notes are C2, E2, G2, C3, E3, G3, C4, E4, G4, C5, E5, G5, C6, E6, G6, C7. Fingerings are indicated as 4 Δ 1 4 Γ , 2.5 Γ , 2.5 Γ 1 4 Γ , 4 Δ .

Two Octave Arpeggios

B Major**B \flat Major****A Major****A \flat Major****G Major**

Two Octave Arpeggios

G^b Major

1Γ #3Δ 1Γ ♭1Γ 1Γ ♭1Γ 1Γ #3Δ 1Γ

F Major

1V 4Δ 2.5Γ ♭1V ♭1V 2.5Γ 4Δ 1V

E Major

♭2V ♭5Δ #4Γ ♭2V ♭2V #4Γ ♭5Δ ♭2V

E^b Major

♭3V ♭3V ♭3V ♭3V

D Major

♭5V 5 ♭5V 5 5 ♭5V 5 ♭5V

8^{vb}-----

Two Octave Arpeggios

$\flat 1\Delta$ 1Γ $\flat 1\Delta$ 1Γ 1Γ $\flat 1\Delta$ 1Γ $\flat 1\Delta$

8^{vb}

D \flat Major

$\sharp 3\Delta$ 2.5Γ $\sharp 3\Delta$ 2.5Γ $\flat 1\Gamma$ 2.5Γ $\sharp 3\Delta$ 2.5Γ $\sharp 3\Delta$

8^{vb}

C Major

4Δ $\sharp 4\Gamma$ 4Δ $\sharp 4\Gamma$ 2.5Γ $\sharp 4\Gamma$ 4Δ $\sharp 4\Gamma$ 4Δ

8^{vb}

B Major

$\flat 5\Delta$ 5Γ 5 $\flat 5\Delta$ 5Γ 5 $\sharp 4\Gamma$ 5 5Γ $\flat 5\Delta$ 5 5Γ $\flat 5\Delta$

8^{vb}

B \flat Major

7Δ $\sharp 5V$ 2.5Γ 1 $\flat 1\Delta$ $1V$ 1 $1V$ $\flat 1\Delta$ 1 2.5Γ $\sharp 5V$ 7Δ

8^{vb}

Notes

(Feel free to use these blank pages to keep notes throughout the book)

FOR REVIEW ONLY

Two Octave Scales

Just as with arpeggios, you will likely encounter scales in your music that span more than one octave. Use these suggested patterns of slide positions and valve combinations for two octave major scales in every key.

As always, start at a slow tempo and pay close attention to the marked slide position and valve combinations. Master the suggested patterns in this section before creating your own.

Things to keep in mind:

Tone quality across octaves

Do not allow the range to negatively impact your tone quality! Our instrument will naturally have different tone colors in the various registers but aim to keep the tone quality as consistent and resonant as possible. Remember to use faster air in the upper range and slower air in the lower range.

Take as many breaths as needed

When first starting this section, take as many breaths as you need in order to keep the tone quality consistent. As you get more comfortable with the low range and playing these arpeggios, try to play them in one or two breaths, working to not sacrifice tone quality.

D^b Major

$\sharp 3\Delta$ $\flat 3V$ 2.5Γ 1Γ 2.5Γ $\flat 1\Gamma$ 1 1Γ
 1Γ 1 $\flat 1\Gamma$ 2.5Γ 1Γ 2.5Γ $\flat 3V$ $\sharp 3\Delta$

C Major

4Δ $\sharp 5V$ $\flat 2V$ $1V$ $\sharp 4\Gamma$ 2.5Γ
 2.5Γ $\sharp 4\Gamma$ $1V$ $\flat 2V$ $\sharp 5V$ 4Δ

B Major

$\flat 5\Delta$ $\sharp 3\Delta$ $\flat 3V$ $\flat 2V$ $\flat 3V$ $\flat 2V$ 5 5
 5 5 $\flat 2V$ $\flat 3V$ $\flat 2V$ $\flat 3V$ $\sharp 3\Delta$ $\flat 5\Delta$

B \flat Major

1 4 Δ #5V ♭3V 1V 2.5 Γ

2.5 Γ 1V ♭3V #5V 4 Δ 1

A Major

♭5 Δ #3 Δ ♭1 Δ ♭2V #4 Γ

#4 Γ ♭2V ♭1 Δ #3 Δ ♭5 Δ

A \flat Major

4 Δ #3 Δ ♭3V 1V 1 2.5 Γ ♭1 Γ

♭1 Γ 2.5 Γ 1 1V ♭3V #3 Δ 4 Δ

G Major

G^b Major

F Major

E Major

Two octaves of the E Major scale in bass clef. The key signature has three sharps (F#, C#, G#). The first octave is played on the lower staff, and the second octave is played on the upper staff. Fingerings are indicated by numbers 1-5 and symbols Δ (finger) and Γ (thumb). Above the notes, the following fingerings are specified: $\flat 2V$, $\flat 5\Delta$, $\sharp 3\Delta$, $\flat 3V$, $\flat 2V$, $\flat 2V$, $\flat 2V$, $\flat 2V$, $\flat 2V$, $\flat 2V$, $\flat 2V$, $\flat 2V$, $\flat 2V$, $\flat 2V$, $\flat 2V$, $\flat 2V$.

E \flat Major

Two octaves of the E-flat Major scale in bass clef. The key signature has three flats (Bb, Eb, Ab). The first octave is played on the lower staff, and the second octave is played on the upper staff. Fingerings are indicated by numbers 1-5 and symbols Δ (finger) and Γ (thumb). Above the notes, the following fingerings are specified: $\flat 3V$, $1V$, 4Δ , $\sharp 5V$, $\flat 3V$, 2.5Γ , 2.5Γ , 2.5Γ , 2.5Γ , $\flat 3V$, $\sharp 5V$, 4Δ , $1V$, $\flat 3V$, 2.5Γ , 2.5Γ .

D Major

Two octaves of the D Major scale in bass clef. The key signature has two sharps (F#, C#). The first octave is played on the lower staff, and the second octave is played on the upper staff. Fingerings are indicated by numbers 1-5 and symbols Δ (finger) and Γ (thumb). Above the notes, the following fingerings are specified: $\flat 1\Delta$, $\flat 2V$, $\flat 5\Delta$, $\sharp 3\Delta$, $\flat 1\Delta$, $\flat 2V$, $\sharp 4\Gamma$, $\flat 2V$, $\flat 1\Delta$, $\sharp 3\Delta$, $\flat 5\Delta$, $\flat 2V$, $\flat 1\Delta$, $\sharp 4\Gamma$, $\flat 2V$, $\flat 1\Delta$.

D^b Major

Ascending: #3Δ #3V 2.5Γ 1Γ 4Δ #3Δ #3V 2.5Γ 1Γ 2.5Γ

Descending: #1Γ 2.5Γ 1Γ 2.5Γ #3V #3Δ 4Δ 1Γ 2.5Γ #3V #3Δ

C Major

Ascending: 4Δ #5V #2V 1V #5Δ 4Δ #5V #2V 1V #4Γ

Descending: 2.5Γ #4Γ 1V #2V #5V 4Δ #5Δ 1V #2V #5V 4Δ

B Major

Ascending: #5Δ #3Δ #3V #2V 1 #5Δ #3Δ #3V #2V #3V

Descending: #2V #3V #2V #3V #3Δ #5Δ 1 #2V #3V #3Δ #5Δ

B \flat Major

The image shows two staves of musical notation for the B \flat Major scale in bass clef. The first staff contains the first octave, and the second staff contains the second octave. The notes are: B \flat 2, B \flat 3, C3, C \sharp 3, D3, D \flat 3, E3, E \flat 3, F3, F \sharp 3, G3, G \flat 3, A3, A \flat 3, B \flat 4. The fingering numbers are: 7 Δ , 4 Δ , #5V, \flat 3V, 1V, 1, 4 Δ , #5V, \flat 3V, 1V. The second staff contains the second octave, with notes: B \flat 4, B \flat 5, C5, C \sharp 5, D5, D \flat 5, E5, E \flat 5, F5, F \sharp 5, G5, G \flat 5, A5, A \flat 5, B \flat 6. The fingering numbers are: 1V, \flat 3V, #5V, 4 Δ , 1, 1V, \flat 3V, #5V, 4 Δ , 7 Δ .

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Modal Scale Patterns

Once you feel comfortable playing major scales in every key, I highly recommend practicing your scales in different patterns. Not all scales in your music will start or end on scale degree 1; some scales will start on a different scale degree (see common excerpts from Berlioz's *Hungarian March*, Rossini's *La Gazza Ladra*, and more).

As with the previous exercises in this book, work on keeping a consistent tone quality across all registers, start at a slow tempo, and work to maintain a steady tempo throughout the entire range of the scale pattern.

Things to keep in mind:

Keep exploring the “basement”

I have chosen to only print one version of each key for the modal scales. However, if you so choose, you can play the modal scale patterns all the way down as low as you can play on the instrument. Use the experience and knowledge you have gained from the previous exercises in this book and discover the slide positions and valve patterns that work best for these extra-low pedal versions of the modal scales.

Try different articulation patterns

Due to the frequent indication of slide positions and valves notated above notes, I tried to keep articulation markings to a minimum in this book. However, you can choose to play these scales (and every other exercise in this book) with different articulation patterns. Experiment with playing these exercises legato, staccato, tenuto, or your own favorite combination of articulations.

F Major

1V

2.5Γ

2.5Γ

2.5Γ

2.5Γ

2.5Γ

♭1V

♭1V

2.5Γ

♭1V

1V

E Major

The image displays eight staves of musical notation for the E Major modal scale patterns in bass clef. The key signature is E major (three sharps: F#, C#, G#). The patterns are as follows:

- Staff 1:** Ascending scale starting on E. Interval markings: ♭2V, ♭2V, ♭2V, #4I.
- Staff 2:** Ascending scale starting on E. Interval markings: ♭2V, ♭2V.
- Staff 3:** Ascending scale starting on E. Interval markings: ♭2V, ♭2V.
- Staff 4:** Ascending scale starting on E. Interval markings: ♭2V, ♭2V.
- Staff 5:** Ascending scale starting on E. Interval markings: ♭2V, #4I.
- Staff 6:** Ascending scale starting on E. No interval markings.
- Staff 7:** Ascending scale starting on E. No interval markings.
- Staff 8:** Ascending scale starting on E. Interval markings: ♭2V, ♭2V.

A large, semi-transparent watermark reading "FOR REVIEW ONLY" is oriented diagonally across the page.

E \flat Major

Musical notation for E \flat Major modal scale patterns in bass clef. The notation consists of eight staves, each showing a two-measure pattern. The first staff is labeled with ♭3V, 2.5Γ, 2.5Γ, 2.5Γ, 2.5Γ, and ♭3V. The second staff is labeled with 2.5Γ, 2.5Γ, 2.5Γ, and 2.5Γ. The third staff is labeled with 2.5Γ and 2.5Γ. The fourth staff is labeled with 2.5Γ and 2.5Γ. The fifth staff is labeled with 2.5Γ and ♭IV. The sixth staff is labeled with ♭IV and 2.5Γ. The seventh staff has no labels. The eighth staff is labeled with ♭3V. A large 'FOR REVIEW ONLY' watermark is overlaid diagonally across the page.

D Major

The image displays eight staves of musical notation for the D Major modal scale patterns in bass clef. The key signature has two sharps (F# and C#). The patterns are as follows:

- Staff 1: $\flat 1\Delta$ $\flat 2V$ $\flat 2V$ $\flat 2V$ $\flat 2V$ $\flat 2V$ $\flat 1\Delta$
- Staff 2: $\flat 2V$ $\sharp 4\Gamma$ $\sharp 4\Gamma$ $\sharp 4\Gamma$ $\sharp 4\Gamma$ $\sharp 4\Gamma$
- Staff 3: $\sharp 4\Gamma$ $\sharp 4\Gamma$
- Staff 4: $\sharp 4\Gamma$ $\sharp 4\Gamma$
- Staff 5: $\sharp 4\Gamma$ $\flat 2V$
- Staff 6: $\flat 2V$ $\sharp 4\Gamma$
- Staff 7: (No interval labels)
- Staff 8: 1Γ $\flat 1\Delta$

D[♭] Major

The image displays eight lines of musical notation for the D[♭] Major modal scale patterns in bass clef. Each line represents a different pattern, with notes and fingerings indicated above the staff. The patterns are as follows:

- Line 1: Ascending scale with notes D[♭], E[♭], F[♭], G[♭], A[♭], B[♭]. Fingerings: 3Δ, 3V, 6, 5, 2.5Γ, 1Γ, 2.5Γ, 5, 6, 3V, 3Δ.
- Line 2: Ascending scale with notes D[♭], E[♭], F[♭], G[♭], A[♭], B[♭]. Fingerings: 3V, 6, 5, 2.5Γ, 1Γ, 1Γ, 2.5Γ, 1Γ, 2.5Γ, 3V.
- Line 3: Ascending scale with notes D[♭], E[♭], F[♭], G[♭], A[♭], B[♭]. Fingerings: 2.5Γ, 1Γ, 2.5Γ, 1Γ, 1Γ, 2.5Γ, 1Γ, 2.5Γ.
- Line 4: Ascending scale with notes D[♭], E[♭], F[♭], G[♭], A[♭], B[♭]. Fingerings: 1Γ, 2.5Γ, 1Γ, 1Γ, 1Γ, 2.5Γ, 5.
- Line 5: Ascending scale with notes D[♭], E[♭], F[♭], G[♭], A[♭], B[♭]. Fingerings: 2.5Γ, 1Γ, 1Γ, 1Γ, 1Γ, 2.5Γ.
- Line 6: Ascending scale with notes D[♭], E[♭], F[♭], G[♭], A[♭], B[♭]. Fingerings: 2.5Γ, 1Γ, 1Γ, 1Γ, 1Γ, 2.5Γ.
- Line 7: Ascending scale with notes D[♭], E[♭], F[♭], G[♭], A[♭], B[♭]. Fingerings: 2.5Γ, 1Γ, 1Γ, 1Γ, 1Γ, 2.5Γ.
- Line 8: Ascending scale with notes D[♭], E[♭], F[♭], G[♭], A[♭], B[♭]. Fingerings: 1Γ, 1Γ, 2.5Γ, 3Δ.

The notation includes a large watermark "FOR REVIEW ONLY" diagonally across the page.

C Major

The image displays ten musical staves in bass clef, each representing a different modal scale pattern for the C Major scale. Each staff contains a sequence of notes with specific fingering and interval labels above them. The patterns are as follows:

- Staff 1: 4Δ, #5V, ♭2V, 1V, ♭2V, ♯1V, ♭2V, 1V, ♭2V, #5V, 4Δ
- Staff 2: #5V, ♭2V, 1V, ♭2V, ♯1V, ♯1V, ♭2V, 1V, ♭2V, ♯1Δ
- Staff 3: ♭2V, 1V, ♭2V, ♯1V, ♭2V, ♯1V, 2.5Γ, #4Γ
- Staff 4: 2.5Γ, #4Γ, 2.5Γ, 2.5Γ, #4Γ, 2.5Γ
- Staff 5: ♭2V, ♯1V, ♯1V, ♭2V, ♯1V, ♭2V
- Staff 6: ♭2V, ♯1V, ♯1V, ♭2V, ♯1V, ♭2V
- Staff 7: ♭2V, ♯1V, 2.5Γ, #4Γ
- Staff 8: 2.5Γ, 2.5Γ, #4Γ, 4Δ

B Major

The image displays eight lines of musical notation for the B Major modal scale patterns in bass clef. Each line represents a different mode of the B Major scale, with specific fingerings and accidentals indicated above the notes. The modes and their corresponding fingerings are as follows:

- Line 1: $\flat 5\Delta$ $\sharp 3\Delta$ $\flat 3V$ $\flat 2V$ $\flat 3V$ $\flat 2V$ $\flat 3V$ $\flat 2V$ $\flat 3V$ $\sharp 3\Delta$ $\flat 5\Delta$
- Line 2: $\flat 6V$ $\flat 3V$ $\flat 2V$ $\flat 3V$ $\flat 2V$ $\flat 2V$ $\flat 3V$ $\flat 2V$ $\flat 3V$ $\sharp 3\Delta$
- Line 3: $\flat 3V$ $\flat 2V$ $\flat 3V$ $\flat 2V$ $\flat 2V$ $\flat 3V$ $\flat 2V$ $\flat 3V$
- Line 4: $\flat 2V$ $\flat 3V$ $\flat 2V$ $\flat 2V$ $\flat 3V$ $\flat 2V$ $\flat 3V$ $\sharp 4\Gamma$
- Line 5: $\flat 3V$ $\flat 2V$ $\flat 2V$ $\flat 3V$ $\flat 2V$ $\flat 3V$
- Line 6: $\flat 3V$ $\flat 2V$ $\flat 2V$ $\flat 3V$ $\flat 2V$ $\flat 3V$
- Line 7: $\flat 3V$ $\flat 2V$ $\flat 2V$ $\flat 3V$ $\flat 2V$ $\flat 3V$
- Line 8: $\flat 2V$ $\flat 2V$ $\flat 3V$ $\flat 2V$ $\flat 3V$ $\sharp 4\Gamma$ $\flat 5\Delta$

B \flat Major

The image displays eight lines of musical notation for the B \flat Major modal scale patterns in bass clef. Each line represents a different pattern, with fingerings and accents indicated above the notes. The patterns are as follows:

- Line 1:** 4 Δ \sharp 5V \flat 3V 1V | 1V \flat 3V \sharp 5V 4 Δ
- Line 2:** 4 Δ \sharp 5V \flat 3V 1V | \sharp 1V | 1V \flat 3V \sharp 5V 4 Δ
- Line 3:** \sharp 5V \flat 3V 1V | 2.5 Γ 2.5 Γ | 2.5 Γ \flat 3V \sharp 5V
- Line 4:** \flat 3V 2.5 Γ | 2.5 Γ 2.5 Γ | 2.5 Γ 2.5 Γ | 2.5 Γ \flat 3V
- Line 5:** 2.5 Γ | 2.5 Γ 2.5 Γ | 2.5 Γ 2.5 Γ | 2.5 Γ 2.5 Γ
- Line 6:** 2.5 Γ | 2.5 Γ 2.5 Γ | 2.5 Γ 2.5 Γ | 2.5 Γ 2.5 Γ
- Line 7:** 2.5 Γ | 2.5 Γ 2.5 Γ | 2.5 Γ 2.5 Γ | 2.5 Γ 2.5 Γ
- Line 8:** 2.5 Γ | 2.5 Γ 2.5 Γ | 1V \sharp 1 Δ

A Major

The image displays eight lines of musical notation for the A Major modal scale patterns in bass clef. The key signature is two sharps (F# and C#). The patterns are as follows:

- Line 1:** Ascending: $\flat 5\Delta$ 6V $\sharp 5V$ $\flat 2V$; Descending: $\flat 2V$ $\sharp 5V$ 6V $\flat 5\Delta$
- Line 2:** Ascending: $\flat 5\Delta$ 6V $\sharp 5V$ $\flat 2V$; Descending: $\flat 2V$ $\flat 2V$ $\sharp 5V$ 6V $\flat 5\Delta$
- Line 3:** Ascending: 6V $\sharp 5V$ $\flat 2V$; Descending: $\flat 2V$ $\flat 2V$ $\flat 2V$ $\flat 2V$ $\flat 1\Delta$ $\sharp 3\Delta$
- Line 4:** Ascending: $\sharp 1\Delta$ $\flat 2V$; Descending: $\flat 2V$ $\flat 2V$ $\flat 2V$ $\flat 2V$ $\flat 2V$ $\flat 1\Delta$
- Line 5:** Ascending: $\flat 2V$; Descending: $\sharp 4\Gamma$ $\sharp 4\Gamma$ $\sharp 4\Gamma$
- Line 6:** Ascending: $\sharp 4\Gamma$; Descending: $\sharp 4\Gamma$
- Line 7:** Ascending: $\sharp 4\Gamma$; Descending: $\sharp 4\Gamma$
- Line 8:** Ascending: $\sharp 4\Gamma$; Descending: $\flat 1\Gamma$ $\flat 2V$ $\sharp 3\Delta$

A^b Major

The image displays ten staves of musical notation for the A^b Major modal scale patterns in bass clef. Each staff shows a sequence of notes with specific fingering or interval markings above them. The notes are: A^b (2), B^b (3), C^b (4), D^b (1), E^b (2), F^b (3), G^b (4), A^b (1), B^b (2), C^b (3), D^b (4), E^b (1), F^b (2), G^b (3), A^b (4).

The markings for each staff are as follows:

- Staff 1: 4Δ #3Δ ♭3V 1V 1V ♭3V #3Δ 4Δ
- Staff 2: 4Δ #3Δ ♭3V 1V 1V ♭3V #3Δ 4Δ
- Staff 3: 4Δ #3Δ ♭3V 1V ♭1V 1V ♭3V #3Δ 4Δ
- Staff 4: #3Δ ♭3V 1V 2.5Γ ♭1Γ 2.5Γ 1V ♭3V #3Δ
- Staff 5: ♭3V 1V 2.5Γ ♭1Γ ♭1Γ 2.5Γ 1V ♭3V
- Staff 6: 1V 2.5Γ ♭1Γ ♭1Γ 2.5Γ 2.5Γ
- Staff 7: 2.5Γ ♭1Γ ♭1Γ 2.5Γ
- Staff 8: 2.5Γ ♭1Γ 2.5Γ ♭3V 4Δ

G Major

$\sharp 5\Delta$ 4Δ $\sharp 5V$ $\flat 2V$ $\flat 2V$ $\sharp 5V$ 4Δ $\flat 5\Delta$
 $\flat 5\Delta$ 4Δ $\sharp 5V$ $\flat 2V$ $\flat 2V$ $\sharp 5V$ 4Δ $\flat 5\Delta$
 $\flat 5\Delta$ 4Δ $\sharp 5V$ $\flat 2V$ $\flat 2V$ $\flat 2V$ $\sharp 5V$ 4Δ $\flat 5\Delta$
 4Δ $\sharp 5V$ $\flat 2V$ $\flat 2V$ $\flat 1V$ $\flat 2V$ $\flat 2V$ $\sharp 5V$ 4Δ
 $\sharp 5V$ $\flat 2V$ $\sharp 4\Gamma$ 2.5Γ 2.5Γ $\sharp 4\Gamma$ $\flat 2V$ $\flat 1\Delta$
 $\flat 2V$ $\sharp 4\Gamma$ 2.5Γ 2.5Γ $\sharp 4\Gamma$ $\sharp 4\Gamma$
 $\sharp 4\Gamma$ 2.5Γ 2.5Γ $\sharp 4\Gamma$
 $\sharp 4\Gamma$ 2.5Γ $\sharp 4\Gamma$ $\sharp 5V$ $\flat 5\Delta$

G^b Major

The image displays eight lines of musical notation for the G^b Major modal scale patterns. Each line consists of a bass clef staff with a key signature of two flats (B^b and E^b) and a common time signature. The notes are quarter notes, and the patterns are as follows:

- Line 1: 1Γ, ♭5Δ, ♯3Δ, ♭3V, 2.5Γ, 1Γ, 2.5Γ, ♭3V, ♯3Δ, ♭5Δ, 5
- Line 2: ♭5Δ, ♯3Δ, ♭3V, 2.5Γ, 1Γ, 1Γ, 2.5Γ, ♭3V, ♯3Δ, ♭5Δ
- Line 3: ♭5Δ, ♯3Δ, ♭3V, 2.5Γ, 1Γ, 1Γ, 2.5Γ, ♭3V, ♯3Δ, ♭5Δ, 7Δ
- Line 4: ♭5Δ, ♯3Δ, ♭3V, 2.5Γ, 1Γ, ♭3V, ♭2V, ♭3V, 1Γ, 2.5Γ, ♭3V, ♯3Δ, ♭5Δ
- Line 5: ♯3Δ, ♭3V, 2.5Γ, 1Γ, ♭3V, ♭2V, ♯1Γ, ♭2V, ♭3V, 1Γ, 2.5Γ, ♭3V, ♯3Δ
- Line 6: ♭3V, 2.5Γ, 1Γ, ♭3V, ♭2V, ♯1Γ, ♯1Γ, ♭2V, ♭3V, 1Γ, 2.5Γ, 5Γ
- Line 7: 2.5Γ, 1Γ, ♭3V, ♭2V, ♯1Γ, ♯1Γ, ♭2V, ♭3V, 1Γ, 2.5Γ
- Line 8: 1Γ, ♭3V, ♭2V, ♯1Γ, 1Γ, ♯1Γ, 1Γ, ♯3Δ, 1Γ

F Major

The image displays eight staves of musical notation for the F Major modal scale patterns in bass clef. Each staff contains a sequence of notes with specific fingerings and technical markings above them. The patterns are as follows:

- Staff 1: 1V, 4Δ, #5V, ♭2V, 1V, ♭2V, #5V, 4Δ, 2.5Γ
- Staff 2: 4Δ, #5V, ♭2V, 1V, 1V, ♭2V, #5V, 4Δ
- Staff 3: 4Δ, #5V, ♭2V, 1V, 1V, ♭2V, #5V, 4Δ
- Staff 4: 4Δ, #5V, ♭2V, 1V, 1V, ♭2V, #5V, 4Δ
- Staff 5: 4Δ, #5V, ♭2V, 1V, ♭1V, 1V, ♭2V, #5V, 4Δ
- Staff 6: #5V, ♭2V, 1V, 2.5Γ, 2.5Γ, 1V, ♭2V, ♭1Δ
- Staff 7: ♭2V, 1V, 2.5Γ, 2.5Γ, 2.5Γ, #4Γ
- Staff 8: 2.5Γ, 2.5Γ, ♭1V, 2.5Γ, 4Δ, 1V

Notes

(Feel free to use these blank pages to keep notes throughout the book)

FOR REVIEW ONLY

Original Etudes

in Every Major Key

Having worked through all of the other exercises in this book, it's time to put your skills to the test! Each of the following etudes use the scales and arpeggios found earlier in the book, plus some additional patterns and ideas not covered previously.

Just as in earlier sections, study the slide position and valve combinations carefully and start at a slow tempo that is comfortable for you. Some of the recommended valve techniques in these etudes are quite intricate, so do not attempt to play some of the more difficult etudes at the recommended tempo on the first try. Good luck!

Things to keep in mind:

Slow practice = fast progress

These reminders are very similar to the ones for the Two Line Etudes. Just as before, take your time as you work on these etudes. Start at tempos slower than the suggested metronome markings and give these etudes the attention to detail they need in order to develop the required valve technique. After you have gotten comfortable with the required technique, try playing at the suggested tempos (or faster).

Patience

This cannot be overstated: follow the valve markings very closely in this section! Each etude is designed to target common technical issues in that key. Master the suggested slide position and valve combinations before experimenting with your own.

If needed (or desired), skip around

The etudes are presented in a circle of fifths progression starting with C major, but feel free to play the etudes in any order you like. Just make sure to play through all twelve etudes at some point!

C Major

Moderato ♩ = 96

The musical score is written in bass clef with a 4/4 time signature. It consists of seven staves of music. The first staff begins with a forte (*f*) dynamic and includes fingering markings of 2.5Γ. The second staff features fingering markings of ♭1V, 2.5Γ, and 2.5Γ #4Γ 2.5Γ. The third staff includes 2.5Γ, #4Γ, 2.5Γ #4Γ, 2.5Γ, and 1Γ. The fourth staff has #5V, ♭1Δ, ♭2V, #4Γ, 5, and #5V. The fifth staff includes ♭1V, ♭2V, #4Γ, ♭1Δ, ♭2V, and 5, with a piano (*p*) dynamic marking. The sixth staff starts with a crescendo (*cresc.*) and includes #4Γ, #4Γ, 4Δ, and ♭5Δ, ending with a forte (*f*) dynamic. A large diagonal watermark reading 'FOR REVIEW ONLY' is overlaid across the score.

4Δ #5V ♭2V 4Δ #5V 4Δ ♭5Δ 1V ♭2V ♭1Δ ♭2V 4Δ

♭2V ♭2V ♭2V ♭1V ♭2V ♭1V ♭2V ♭2V ♭2V ♭2V

♭1V ♭2V ♭1V ♭2V ♭2V ♭1V ♭2V ♭1V

p

♭2V ♭2V 4Δ ♭2V #4Γ #5V #4Γ

mf

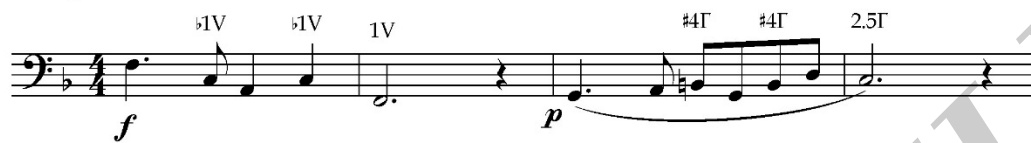
2.5Γ 2.5Γ 2.5Γ

f

2.5Γ 2.5Γ #4Γ 2.5Γ #4Γ 4Δ

F Major

Allegretto ♩ = 108



2.5Γ #4Γ 1V ♯2V 1V ♯2V ♯1Δ 4Δ ♯5Δ ♯5V ♯5Δ

4Δ #4Γ 4Δ 2.5Γ #4Γ

mp

♯4Γ 2.5Γ 2.5Γ ♯1V *cresc.* *mf* *cresc.*

2.5Γ ♯1V 2.5Γ 4Δ 2.5Γ *f*

♯1V ♯1V ♯1V 1V 2.5Γ 4Δ 2.5Γ *mp* *cresc.*

2.5Γ 4Δ 4Δ 2.5Γ 4Δ 1V *f*

B \flat Major

Moderato $\text{♩} = 90$

1V 2.5 Γ \flat 1V 1V 2.5 Γ
mf

1V \flat 1V , 1V 1V \flat 1V 1V 2.5 Γ \flat 1V
mp

1V 2.5 Γ 2.5 Γ 2.5 Γ 1V \flat 1V 1V 2.5 Γ
cresc. *mf*

\flat 1V 1V ,

\flat 1V 5 \sharp 5V \flat 3V \sharp 5V 4 Δ \flat 3V \flat 1 Δ

4 Δ , \sharp 5V \flat 1V 5
f

♯5V 2.5Γ 1Γ 5 ♯5V ♯5V ♯1Δ

p

♯1V 5 ♯5V 2.5Γ 1V ♯3V 4Δ

cresc.

♯1Δ 4Δ ♯3V ♯1Δ ♯1Δ 1V 4Δ ♯1Δ 4Δ ♯3V

f

♯5V 4Δ 4Δ 1V 1V ♯1V 1V 2.5Γ ♯1V

p

1V 2.5Γ 2.5Γ 2.5Γ 1V ♯1V

cresc. *f*

1V ♯1Δ 1V

f

E \flat Major

Allegretto $\text{♩} = 112$

The musical score is written in bass clef with a key signature of two flats (B \flat and E \flat) and a 4/4 time signature. The tempo is marked 'Allegretto' with a quarter note equal to 112 beats per minute. The dynamics range from *mf* to *f*. The score consists of six staves of music. Fingering is indicated by numbers 1-5 and symbols like ♮ and Δ . A large watermark 'FOR REVIEW ONLY' is overlaid on the score.

mf

$\text{♮}3V$ $\text{♮}1\Delta$ $1V$ $\text{♮}1V$

4Δ $\text{♮}3V$ 2.5Γ $1V$ $\text{♮}3V$ 4Δ

4Δ $\text{♮}1\Delta$ $1V$ $\text{♮}3V$ $\text{♮}3V$ $\text{♮}3V$ $\text{♮}3V$ $\text{♮}3V$ $\text{♮}3V$ $\text{♮}3V$

$\text{♮}3V$ 1 $\text{♮}1\Delta$ $1V$ 2.5Γ 2.5Γ 2.5Γ

4Δ $\text{♮}3V$ 2.5Γ 2.5Γ $1V$ $\text{♮}3V$ $\text{♮}5V$ 4Δ $\text{♮}1\Delta$ $1V$

2.5Γ $\text{♮}3V$ $\text{♮}5V$ $\text{♮}3V$ 2.5Γ



FOR REVIEW ONLY

A \flat Major

Andantino $\text{♩} = 80$

legato $\flat 3V$ 2.5Γ $1V \flat 3V$ $\sharp 3\Delta$ 4Δ $\flat 3V$ 2.5Γ

mf

2.5Γ $\flat 1\Gamma$

$\flat 1V$ $\flat 3V$ $\flat 1\Gamma$

mp

$\flat 1\Gamma$ 2.5Γ $\flat 1\Gamma$ $\flat 1\Gamma$

mp *cresc.*

f 2.5Γ

\ast *tr* 2.5Γ

mp

* Trill between D in 4th position and E-flat on the 1st valve

3V 3V 3V 2.5Γ

mf

3V 1Γ 2.5Γ 3V 4Δ 3V

3V 2.5Γ #4Γ 2.5Γ 1V 3V 1V 3V #3Δ 4Δ 3V 3V 2.5Γ 2.5Γ

f

1V 2.5Γ 1Γ 1Γ

1Γ 3V 1Γ 3V 2.5Γ 2.5Γ

2.5Γ 2.5Γ 4Δ 3V

D \flat Major

Adagio maestoso $\text{♩} = 64$

5 $\flat 1$ $\flat 1$

f

2.5 $\flat 1$ $\flat 1$

p

2.5 $\flat 1$ $\flat 1$ $\sharp 3 \Delta$ 2.5 Γ

f

$\flat 1$ 2.5 $\flat 3 V$ Δ $\flat 3 V$ Δ Δ

$\sharp 3 \Delta$ Δ $\sharp 3 \Delta$ 2.5 $\flat 1$ $\flat 1$ 5 5 5 1V 2.5 Γ 1 Γ

$\flat 1$ 1V $\sharp 3 \Delta$ $\flat 1$ 1V

f

The musical score consists of six staves of music in bass clef, with a key signature of two flats (B-flat and E-flat). The music is written in a 2/4 time signature. The first staff begins with a *p* (piano) dynamic marking. The second staff contains a *f* (forte) dynamic marking. The score includes various fingering notations such as 1V, 2V, 3V, 4Δ, 5, 1Γ, 2.5Γ, and 3Δ. The piece concludes with a double bar line.

G \flat Major

Allegretto $\text{♩} = 108$

The musical score consists of six staves of bass clef notation in G \flat Major (three flats) and 3/4 time. The piece is marked 'Allegretto' with a tempo of 108 quarter notes per minute. The dynamics range from *mf* (mezzo-forte) to *f* (forte). The score includes various fingering instructions such as 1 Γ , \flat 1 Γ , 5, \flat 2 Γ , 1, \flat 3 Δ , 4 Δ , \flat 3 Δ , \flat 2V, 1, \flat 2V, \flat 1 Γ , \flat 3 Δ , 4 Δ , \flat 3 Δ , \flat 2V, \flat 1 Γ , 1 Γ , and \flat 1 Γ . A 'cresc.' (crescendo) marking is present in the fifth staff. A large watermark 'FOR REVIEW ONLY' is overlaid diagonally across the page.

1Γ 1Γ 1Γ 3Γ 1Γ 3Γ 1Γ

5 5 5Γ

5Γ 3V 2V 3Δ 3Δ 3V 2.5Γ

mp

1Γ 1Γ 3V 2V 3Γ 1Γ

cresc.

3V 2V 3Γ 1Γ 1Γ 3Γ 3Γ 3Γ 1Γ

f

1Γ 3Δ 1Γ 3Δ 1 1Γ

B Major

Allegro non troppo ♩ = 112

$\flat 2V$ 5 $\flat 2V$ $\flat 2V$ 5
mf *leggiero*

$\flat 1\Gamma$ 1Γ 1 $\flat 2V$

5 5 $\flat 2V$,

$\flat 1\Gamma$ 1 $\flat 2V$

$\flat 2V$ $\flat 3V$ 5

$\sharp 1\Gamma$ $\sharp 3\Delta$ $\flat 5\Delta$ $\sharp 3\Delta$ $\flat 3V$ $\flat 2V$ 5 5Γ $\flat 5\Delta$ 5Γ $\flat 5\Delta$

#3Δ #3V ♭2V ♭2V #3Δ #3Δ ♭3V ♭2V 5 ♭2V ♭3V 5

#4Γ #4Γ ♭3V ♭2V ♭3V ♭2V ♭5Δ

1Γ 2.5Γ 1Γ 1 1Γ 2.5Γ #3Δ 1Γ ♭3V ♭2V ♭1Γ 1

2.5Γ #3Δ 1Γ 2.5Γ 1Γ ♭2V ♭3V ♭2V

♭3V ♭2V #3Δ ♭5Δ 5Γ 5 #4Γ

#4Γ 5 5Γ ♭5Δ

E Major

Allegro ♩ = 116

The musical score consists of six staves of music in E major, bass clef, 4/4 time. The tempo is marked Allegro with a quarter note equal to 116 beats per minute. The score includes various fingering instructions and dynamic markings.

- Staff 1: Starts with a rest, followed by notes G2, A2, B2, C3, D3, E3, F#3, G3. Fingering: ♭2V, ♭2V, ♭2V, ♭2V, ♭2V, ♭2V. Dynamics: *f* at the start, *p* at the end.
- Staff 2: Notes G2, A2, B2, C3, D3, E3, F#3, G3. Fingering: #4Γ, 1Γ, #4Γ, 5Γ, 5, 5Γ, 5 #4Γ, 5, #4Γ. Dynamics: *f* at the end.
- Staff 3: Notes G2, A2, B2, C3, D3, E3, F#3, G3. Fingering: #4Γ, ♭2V, ♭2V. Dynamics: *p* at the start.
- Staff 4: Notes G2, A2, B2, C3, D3, E3, F#3, G3. Fingering: ♭2V, ♭2V, 5, ♭1Γ. Dynamics: *f* at the start.
- Staff 5: Notes G2, A2, B2, C3, D3, E3, F#3, G3. Fingering: ♭2V, #4Γ, 5, 5, ♭3V. Dynamics: *f* at the start.
- Staff 6: Notes G2, A2, B2, C3, D3, E3, F#3, G3. Fingering: ♭2V, ♭2V, ♭2V, 5. Dynamics: *p* at the end.

5 #4Γ 5 #4Γ 5 #4Γ 5 #4Γ 5 #4Γ 5Γ #5Δ

5 5 b2V 5 #4Γ 5 #4Γ 5

#4Γ #5Δ #4Γ f b2V b2V b2V

b2V #3Δ b2V b1Γ b2V

5 5Γ #3Δ #5Δ 5Γ 5 5 #4Γ #5Δ #4Γ #4Γ

#4Γ #4Γ #4Γ #4Γ

A Major

Allegretto ♩ = 108

The musical score consists of six staves of bass clef notation in 4/4 time, marked *mf*. The key signature is A major (two sharps). The score includes various fingering and articulation markings:

- Staff 1: *mf*, 5 #4Γ, ♭2V, 5 #4Γ
- Staff 2: #4Γ, #4Γ, 5, #4Γ 5
- Staff 3: ♭2V 5, ♭2V 5, #4Γ, ♭2V, #3Δ
- Staff 4: #1Δ, 1Γ, ♭2V, 5, ♭2V, ♭2V, #3Δ, ♭2V
- Staff 5: #5V, 5, #4Γ, #4Γ, #4Γ 5, 5
- Staff 6: #1Γ, #4Γ, ♭2V, #4Γ 5

The image displays a musical score for a bass clef instrument in the key of A major (two sharps). The score consists of six staves of music. The first staff begins with a half note G2, followed by quarter notes A2, B2, and C3, then a half note D3. The second staff contains a half note E3, a quarter note F#3, a half note G3, and a quarter note A3. The third staff starts with a half note B3, followed by quarter notes C4, D4, and E4, then a half note F#4. The fourth staff begins with a half note G4, followed by quarter notes A4, B4, and C5, then a half note D5. The fifth staff contains a half note E5, a quarter note F#5, a half note G5, and a quarter note A5. The sixth staff starts with a half note B5, followed by quarter notes C6, D6, and E6, then a half note F#6. The score includes various fingering and articulation markings such as $\flat 2V$, $\sharp 4\Gamma$, $\flat 1\Gamma$, 1Γ , $\sharp 1\Gamma$, 5 , $\sharp 4\Gamma$, $\sharp 3\Delta$, and $\flat 2V$.

D Major

Allegro ♩ = 136

f

♯5V 5 ♯5V ♭2V ♭2V ♭2V

♭2V ♭1Δ ♭2V ♯4Γ 4 ♯4Γ ♯4Γ ♯4Γ

♯4Γ ♭2V ♭1Δ 1Γ ♭1Δ 1Γ 5

♯4Γ ♯3Δ ♯3Δ ♯4Γ ♯5V 5 5 ♯4Γ

♭2V ♭1Γ ♯4Γ ♯4Γ ♯4Γ ♭2V ♭1Γ

♭2V ♭2V ♭2V ♯3Δ ♭2V ♭1Γ ♭1Γ

5 Γ 5 $\sharp 4\Gamma$ 5 $\sharp 4\Gamma$

mp

5 Γ 5 Γ 5 $\sharp 4\Gamma$ 5

mf *cresc.*

f

$\sharp 5V$ 5 $\sharp 4\Gamma$

$\sharp 5V$ 5 $\sharp 4\Gamma$

5 $\sharp 5V$ $\sharp 4\Gamma$ 5 $\sharp 4\Gamma$ 5 $\sharp 4\Gamma$ 5

5 $\sharp 5V$ $\sharp 4\Gamma$ 5 $\sharp 4\Gamma$ 5 $\sharp 4\Gamma$ 5

1 Γ $\sharp 4\Gamma$ $\sharp 3\Delta$ 5 Δ

1 Γ $\sharp 4\Gamma$ $\sharp 3\Delta$ 5 Δ

G Major

Allegro ♩ = 132

The musical score for the G Major Etude on page 112 is written in bass clef, 4/4 time, and G major. The tempo is marked Allegro with a quarter note equal to 132 beats per minute. The piece begins with a forte (*f*) and *leggiero* (light) dynamic. The first staff contains measures 1-4 with fingering: #5V, #5V, #5V, #4Γ, 2.5Γ, 2.5Γ. The second staff contains measures 5-8 with fingering: 2.5Γ, 1Γ, >1Δ, #4Γ, 5, >1V, 1Γ. The third staff contains measures 9-12 with fingering: #4Γ, 5, >1V, 5, #4Γ, >2V. The fourth staff contains measures 13-16 with fingering: >2V, 2.5Γ, #4Γ, 2.5Γ, and a dynamic marking of *p*. The fifth staff contains measures 17-20 with fingering: 2.5Γ, #4Γ, #4Γ, #4Γ, and dynamic markings of *sf* and *p*. The sixth staff contains measures 21-24 with fingering: #4Γ, #4Γ, 2.5Γ, #5V, >2V, 5, #4Γ, and dynamic markings of *sf*, *p*, and *cresc.*

f

p

4Γ 5 4Γ 2.5Γ 4Γ

5 5V 5Δ 5Δ 5V

f

5V 4Γ 5 5V 5Δ 5Δ 5V 5V 4Γ 5

Bass Trombone Slide Position/Valve Combination Chart

1st valve tuned to F, 2nd valve tuned to G \flat

V = 1st valve Γ = 2nd valve Δ = 1st and 2nd valve

5 $\flat 1\Gamma$	6 $\flat 1V$ 2.5 Γ	7 $\flat 2V$ $\sharp 4\Gamma$	1 $\flat 3V$ 5 Γ	2 $\sharp 5V$ $\flat 6\Gamma$	3 6 V					

4 $\flat 7V$	5 1 Γ	6 1 V 2.5 Γ	7 $\flat 2V$ $\sharp 4\Gamma$	$\flat 3V$ 5 Γ	$\sharp 5V$ $\flat 6\Gamma$ $\flat 1\Delta$				

6 V $\sharp 3\Delta$	$\flat 7V$ 4 Δ	$\flat 5\Delta$	1 7 Δ	2				

3	4	5 1 Γ	6 1 V 2.5 Γ	7 $\flat 2V$ $\sharp 4\Gamma$				

8 \flat $\flat 3V$ 5 Γ	$\sharp 5V$ $\flat 6\Gamma$ $\flat 1\Delta$	6 V $\sharp 3\Delta$	$\flat 7V$ 4 Δ	$\flat 5\Delta$	7 Δ			

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