

# **Technical & Scale Studies**



**Edited  
by  
Jay Lichtmann**

# Technical and Scale Studies

It is all too obvious that the ability to think in keys is essential for expertise in transposition, sight-reading, music memorization and general technical facility on a musical instrument. The following set of technical and scale studies should help the student not only with basic valve dexterity on the trumpet, but also with the ability to play *and think* in all major and minor keys.

Unfortunately, because of the nature of the instrument and the standard pedagogical methods in use, thinking in keys comes late in the learning process for most trumpeters. As a beginner we are taught "fingerings" and we carry this chromatic concept with us throughout our schooling. Though we are taught scales, arpeggios and play some simple tunes in several keys, these exercises are written out for us and we become dependant on having to see the notes on the page. We see a note and think a fingering instead of thinking of where the line is going in the key we are in. Usually it is not until we learn how to transpose that most of us begin to fluidly think in keys. Even then, when we begin learning transposition the emphasis is on moving up or down intervallically (or learning a new fingering) and not on horizontal thinking. More recent pedagogical methods (like Suzuki) have stressed learning and memorizing many tunes in different keys at an early age. This emphasis seems to give these students advantages in many facets of musicianship over that of "traditionally" schooled instrumentalists.

These studies present a simple pattern, much like a H. L. Clarke technical study (some are actually reconfigured Clarke studies), in C major or minor and then present a guide to the transpositions, up and down, that the student must implement. The arrows refer to the direction of the transposition and the letters refer to the key of the pattern *on the instrument*. The patterns are simple and should be easily memorized so that the student does not have to depend on constant intervallic orientation (looking above or below the notes) to play the study in different keys. The use of a metronome is essential with these studies, and because each key differs in its ease of execution, I have provided a place for metronome markings *for every key*.

I suggest that the student work on only one page at a time and that the first few practice sessions entail establishing a "base" metronome marking for each key. That is: determine the speed at which you can *accurately, steadily and comfortably* perform the pattern in each key and record that metronome marking in the space provided. In each subsequent session start with that written tempo marking, but work with the metronome to increase your speed. When you feel that your "base" has improved write down the new, faster marking.

**Jay Lichtmann**  
**Summer 2000**

# Technical Study #1

Repeat 2 to 6 times.



**C** ♩ =

**↑ F** ♩ =

**↑ C#** ♩ =

**↓ G** ♩ =

**↓ B** ♩ =

**↑ F#** ♩ =

**↑ D** ♩ =

**↑ G** ♩ =

**↓ Bb** ♩ =

**↑ Ab** ♩ =

**↑ Eb** ♩ =

**↑ A** ♩ =

**↓ A** ♩ =

**↑ Bb** ♩ =

**↑ E** ♩ =

**↑ B** ♩ =

**↓ Ab** ♩ =

**↑ C** ♩ =

# Technical Study #2

Repeat 2 to 6 times.



**C** ♩ =

**↑ F** ♩ =

**↑ C#** ♩ =

**↓ G** ♩ =

**↓ B** ♩ =

**↑ F#** ♩ =

**↑ D** ♩ =

**↑ G** ♩ =

**↓ Bb** ♩ =

**↑ Ab** ♩ =

**↑ Eb** ♩ =

**↑ A** ♩ =

**↓ A** ♩ =

**↑ Bb** ♩ =

**↑ E** ♩ =

**↑ B** ♩ =

**↓ Ab** ♩ =

**↑ C** ♩ =

# Technical Study #3

Repeat 2 to 6 times.



**C** ♩ =

**↑ F** ♩ =

**↑ C#** ♩ =

**↓ G** ♩ =

**↓ B** ♩ =

**↑ F#** ♩ =

**↑ D** ♩ =

**↑ G** ♩ =

**↓ B<sup>b</sup>** ♩ =

**↑ A<sup>b</sup>** ♩ =

**↑ E<sup>b</sup>** ♩ =

**↑ A** ♩ =

**↓ A** ♩ =

**↑ B<sup>b</sup>** ♩ =

**↑ E** ♩ =

**↑ B** ♩ =

**↓ A<sup>b</sup>** ♩ =

**↑ C** ♩ =

# Technical Study #4

Repeat 2 to 6 times.



**C** ♩ =

**↑ F** ♩ =

**↑ C#** ♩ =

**↓ G** ♩ =

**↓ B** ♩ =

**↑ F#** ♩ =

**↑ D** ♩ =

**↑ G** ♩ =

**↓ Bb** ♩ =

**↑ Ab** ♩ =

**↑ Eb** ♩ =

**↑ A** ♩ =

**↓ A** ♩ =

**↑ Bb** ♩ =

**↑ E** ♩ =

**↑ B** ♩ =

**↓ Ab** ♩ =

**↑ C** ♩ =

# Technical Study #5

Repeat 2 to 6 times.



Note: This study begins on the 3<sup>rd</sup>.

**C** ♩ =

↑ **F** ♩ =

↑ **C#** ♩ =

↓ **G** ♩ =

↓ **B** ♩ =

↑ **F#** ♩ =

↑ **D** ♩ =

↑ **G** ♩ =

↓ **B<sup>b</sup>** ♩ =

↑ **A<sup>b</sup>** ♩ =

↑ **E<sup>b</sup>** ♩ =

↑ **A** ♩ =

↓ **A** ♩ =

↑ **B<sup>b</sup>** ♩ =

↑ **E** ♩ =

↑ **B** ♩ =

↓ **A<sup>b</sup>** ♩ =

↑ **C** ♩ =

# Technical Study #6

Repeat 2 to 6 times.



Note: This study begins on the 3<sup>rd</sup>.

**C** ♩ =

↓ **G** ♩ =

↑ **C#** ♩ =

↑ **F#** ♩ =

↓ **B** ♩ =

↑ **G** ♩ =

↑ **D** ♩ =

↑ **A<sup>b</sup>** ♩ =

↓ **B<sup>b</sup>** ♩ =

↑ **A** ♩ =

↑ **E<sup>b</sup>** ♩ =

↑ **B<sup>b</sup>** ♩ =

↓ **A** ♩ =

↑ **B** ♩ =

↑ **E** ♩ =

↑ **C** ♩ =

↓ **A<sup>b</sup>** ♩ =

↑ **F** ♩ =



# Technical Study #7

Repeat 2 to 6 times.



**C** ♩. =

**↑ F** ♩. =

**↑ C#** ♩. =

**↓ G** ♩. =

**↓ B** ♩. =

**↑ F#** ♩. =

**↑ D** ♩. =

**↑ G** ♩. =

**↓ Bb** ♩. =

**↑ Ab** ♩. =

**↑ Eb** ♩. =

**↑ A** ♩. =

**↓ A** ♩. =

**↑ Bb** ♩. =

**↑ E** ♩. =

**↑ B** ♩. =

**↓ Ab** ♩. =

**↑ C** ♩. =

# Technical Study #8

Repeat 2 to 6 times.



**C** ♩. =

**↑ F** ♩. =

**↑ C#** ♩. =

**↓ G** ♩. =

**↓ B** ♩. =

**↑ F#** ♩. =

**↑ D** ♩. =

**↑ G** ♩. =

**↓ Bb** ♩. =

**↑ Ab** ♩. =

**↑ Eb** ♩. =

**↑ A** ♩. =

**↓ A** ♩. =

**↑ Bb** ♩. =

**↑ E** ♩. =

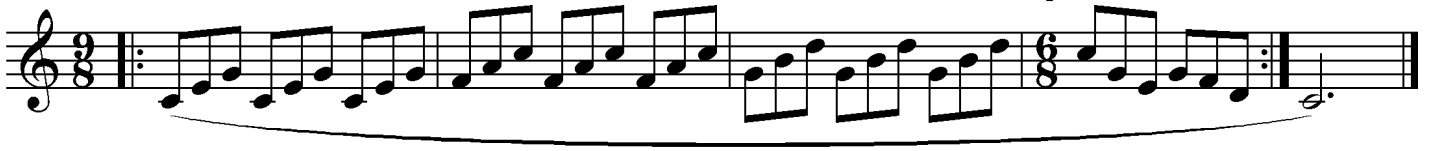
**↑ B** ♩. =

**↓ Ab** ♩. =

**↑ C** ♩. =

# Technical Study #9

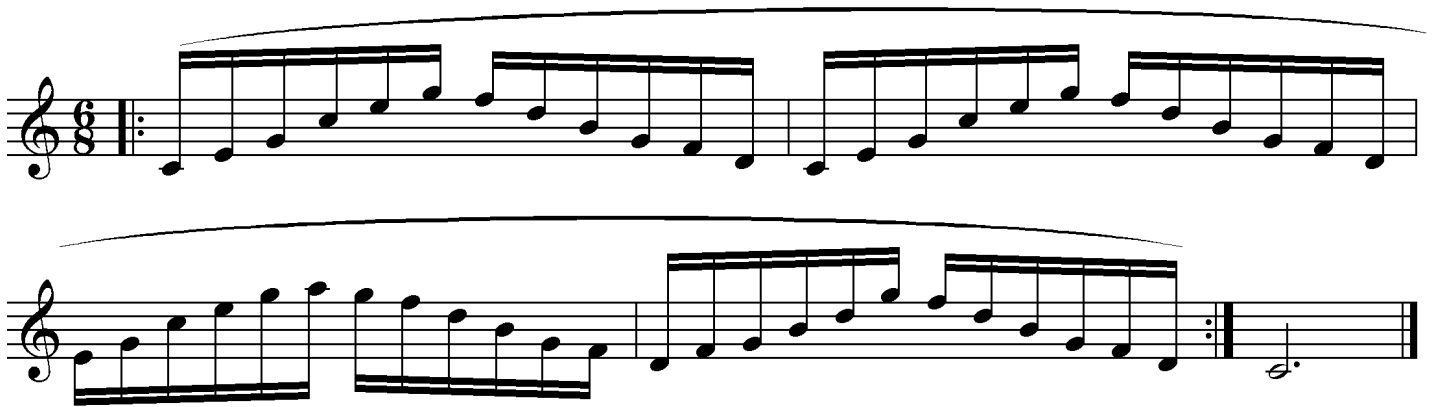
Repeat 2 to 6 times.



- |   |                |      |   |                |      |
|---|----------------|------|---|----------------|------|
| C | ♩. =           | ↑    | F | ♩. =           |      |
| ↑ | C#             | ♩. = | ↓ | G              | ♩. = |
| ↓ | B              | ♩. = | ↑ | F#             | ♩. = |
| ↑ | D              | ♩. = | ↓ | F#             | ♩. = |
| ↓ | B <sup>b</sup> | ♩. = | ↑ | G              | ♩. = |
| ↑ | E <sup>b</sup> | ♩. = | ↑ | A <sup>b</sup> | ♩. = |
| ↓ | A              | ♩. = | ↑ | A              | ♩. = |
| ↑ | E              | ♩. = | ↑ | B <sup>b</sup> | ♩. = |
| ↓ | A <sup>b</sup> | ♩. = | ↑ | B              | ♩. = |
|   |                |      | ↑ | C              | ♩. = |



# Technical Study #11



**C** ♩. =

**↑ E** ♩. =

**↑ C#** ♩. =

**↓ A<sup>b</sup>** ♩. =

**↓ B** ♩. =

**↑ F** ♩. =

**↑ D** ♩. =

**↓ G** ♩. =

**↓ B<sup>b</sup>** ♩. =

**↑ F#** ♩. =

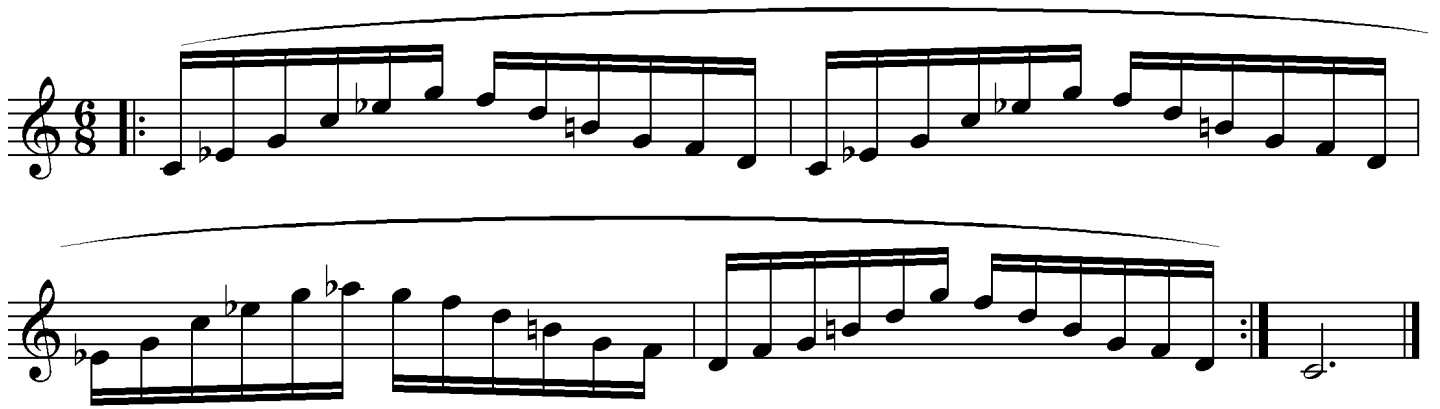
**↑ E<sup>b</sup>** ♩. =

**↓ F#** ♩. =

**↓ A** ♩. =

**↑ G** ♩. =

# Technical Study #12



**C** ♩. =

**↑ E** ♩. =

**↑ C#** ♩. =

**↓ A<sup>b</sup>** ♩. =

**↓ B** ♩. =

**↑ F** ♩. =

**↑ D** ♩. =

**↓ G** ♩. =

**↓ B<sup>b</sup>** ♩. =

**↑ F#** ♩. =

**↑ E<sup>b</sup>** ♩. =

**↓ F#** ♩. =

**↓ A** ♩. =

**↑ G** ♩. =

# Scale Study #1



- |          |          |
|----------|----------|
| C ♪ =    | ↑ F ♪ =  |
| ↑ C# ♪ = | ↓ G ♪ =  |
| ↓ B ♪ =  | ↑ F# ♪ = |
| ↑ D ♪ =  | ↑ G ♪ =  |
| ↓ B♭ ♪ = | ↑ A♭ ♪ = |
| ↑ E♭ ♪ = | ↑ A ♪ =  |
| ↓ A ♪ =  | ↑ B♭ ♪ = |
| ↑ E ♪ =  | ↑ B ♪ =  |
| ↓ A♭ ♪ = | ↑ C ♪ =  |

# Scale Study #2



- |                 |                 |
|-----------------|-----------------|
| <b>C</b> ♩ =    | <b>↑ F</b> ♩ =  |
| <b>↑ C#</b> ♩ = | <b>↓ G</b> ♩ =  |
| <b>↓ B</b> ♩ =  | <b>↑ F#</b> ♩ = |
| <b>↑ D</b> ♩ =  | <b>↑ G</b> ♩ =  |
| <b>↓ Bb</b> ♩ = | <b>↑ Ab</b> ♩ = |
| <b>↑ Eb</b> ♩ = | <b>↑ A</b> ♩ =  |
| <b>↓ A</b> ♩ =  | <b>↑ Bb</b> ♩ = |
| <b>↑ E</b> ♩ =  | <b>↑ B</b> ♩ =  |
| <b>↓ Ab</b> ♩ = | <b>↑ C</b> ♩ =  |



# Scale Study #3



Repeat 2 to 6 times.

- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| <b>C</b> ♩ =                      | <b>↑</b> <b>F</b> ♩ =             |
| <b>↑</b> <b>C#</b> ♩ =            | <b>↓</b> <b>G</b> ♩ =             |
| <b>↓</b> <b>B</b> ♩ =             | <b>↑</b> <b>F#</b> ♩ =            |
| <b>↑</b> <b>D</b> ♩ =             | <b>↓</b> <b>F#</b> ♩ =            |
| <b>↓</b> <b>B<sup>b</sup></b> ♩ = | <b>↑</b> <b>G</b> ♩ =             |
| <b>↑</b> <b>E<sup>b</sup></b> ♩ = | <b>↑</b> <b>A<sup>b</sup></b> ♩ = |
| <b>↓</b> <b>A</b> ♩ =             | <b>↑</b> <b>A</b> ♩ =             |
| <b>↑</b> <b>E</b> ♩ =             | <b>↑</b> <b>B<sup>b</sup></b> ♩ = |
| <b>↓</b> <b>A<sup>b</sup></b> ♩ = | <b>↑</b> <b>B</b> ♩ =             |
| <b>↑</b> <b>C</b> ♩ =             |                                   |

# Scale Study #4



Repeat 2 to 6 times.

<b>C</b> ♩ =	<b>↑ F</b> ♩ =
<b>↑ C#</b> ♩ =	<b>↓ G</b> ♩ =
<b>↓ B</b> ♩ =	<b>↑ F#</b> ♩ =
<b>↑ D</b> ♩ =	<b>↓ F#</b> ♩ =
<b>↓ B<sup>b</sup></b> ♩ =	<b>↑ G</b> ♩ =
<b>↑ E<sup>b</sup></b> ♩ =	<b>↑ A<sup>b</sup></b> ♩ =
<b>↓ A</b> ♩ =	<b>↑ A</b> ♩ =
<b>↑ E</b> ♩ =	<b>↑ B<sup>b</sup></b> ♩ =
<b>↓ A<sup>b</sup></b> ♩ =	<b>↑ B</b> ♩ =
<b>↑ C</b> ♩ =	

# Chromatic Scale Study #1

Repeat 4 to 6 times.



<b>C</b> ♩ =	<b>↑ F</b> ♩ =
<b>↑ C#</b> ♩ =	<b>↓ G</b> ♩ =
<b>↓ B</b> ♩ =	<b>↑ F#</b> ♩ =
<b>↑ D</b> ♩ =	<b>↓ F#</b> ♩ =
<b>↓ B<sup>b</sup></b> ♩ =	<b>↑ G</b> ♩ =
<b>↑ E<sup>b</sup></b> ♩ =	<b>↑ A<sup>b</sup></b> ♩ =
<b>↓ A</b> ♩ =	<b>↑ A</b> ♩ =
<b>↑ E</b> ♩ =	<b>↑ B<sup>b</sup></b> ♩ =
<b>↓ A<sup>b</sup></b> ♩ =	<b>↑ B</b> ♩ =
	<b>↑ C</b> ♩ =

# Chromatic Scale Study #2

Three staves of musical notation for a chromatic scale study in 3/4 time. The first staff starts with a treble clef and a key signature of one sharp (F#). The second staff has a key signature of one flat (Bb). The third staff has a key signature of two flats (Bb, Eb). Each staff contains a chromatic scale of eighth notes, with a fermata over the final note of each line.

- |                            |                            |
|----------------------------|----------------------------|
| <b>F#</b> ♩ =              | ↑ <b>C</b> ♩ =             |
| ↑ <b>G</b> ♩ =             | ↑ <b>C#</b> ♩ =            |
| ↑ <b>A<sup>b</sup></b> ♩ = | ↑ <b>D</b> ♩ =             |
| ↑ <b>A</b> ♩ =             | ↑ <b>E<sup>b</sup></b> ♩ = |
| ↑ <b>B<sup>b</sup></b> ♩ = | ↑ <b>E</b> ♩ =             |
| ↑ <b>B</b> ♩ =             | ↑ <b>F</b> ♩ =             |