

# ***guide to orchestral bowings through musical styles***

**A manual to be used with video**

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# Part I

## The Importance of Bowing Style in the Orchestra

*"...the period and style of the music influence the interpretation of bowing marks. For example, dots over the notes in a passage by Haydn might call for one type of bowing, whereas the same indication in a contemporary score might suggest another type."*

*(Kent Kennan, Donald Grantham, The Technique of Orchestration, 4th ed., © 1990. Reprinted by permission of Prentice-Hall, Inc., Englewood Cliffs, NJ.)*

Bowing styles and bowing strategies are keys to a musical and stylistic performance. Artistic performance of orchestral music in all stylistic periods depends extensively on the use of the bow for phrasing, articulations, and dynamics. The comprehension and communication of these factors is the responsibility of the conductor.

Different bowing styles can produce a variety of tonal effects and articulations. Consequently, the uniformity of bow directions, bow articulations on- and off-string, duration of notes, dynamics, rate of bow speed, and bow distribution are all involved in any effective performance.

Producing this consistency in artistic and musical results presents many challenges. First, orchestral scores often do not include appropriate bowings and articulations. Many editions, especially school editions, require bowing modifications for improved musical results.

Second, the terminology and notational symbols for bowing styles are confusing and limited. The same symbol may have multiple musical meanings, and a single musical effect may be represented by entirely different symbols.

Third, there are essential differences between solo or chamber music bowing styles and orchestral bowing styles. Orchestral bowings require a more articulated or marked style than does solo or chamber performance, largely because of the number of players in the orchestra string section. The combination of strings with woodwind, brass, and percussion sections often necessitates a different bowing style in certain passages.

The performance of some bowing styles requires technical skills above the level of some inexperienced players and the development of these skills constitutes a long-range challenge for the serious orchestra director. In many instances a satisfactory substitution may be worked out by a creative conductor.

And finally, it is important to realize that "no string player can obtain effects with equal effectiveness in any one part of the bow. Some of the effects will require the heel of the bow, the middle, and still others the tip."\* This means that the conductor who is ultimately responsible for marking and editing the score must know thoroughly which parts of the bow will produce the desired effects.

Orchestral bowing decisions thus are based on many considerations. Players and conductors may differ from one another on bowing choices, but ultimately consistency must be achieved. Common sense decisions based on the ability of the players, the size and balance of the string section, and the musical judgments of the conductor will decide specific bowing choices.

The unique feature of this presentation—*Guide to Orchestral Bowings Through Musical Styles*—is that used together the Manual and the videotape provide the visual and aural dimensions necessary for a comprehensive understanding of the conductor's task. In Parts II and III the Manual describes the spatial, tonal and rhythmic components of bowing, presents principles of bow usage and editing of scores, and introduces terminologies and definitions. Parts IV and V combine with the video for an applied study of various bowing styles and for illustrations and explanations of on- and off-string bowings, dynamics, articulations, phrasings, tone colors, and strategies.

\*Gigante, *Manual of Orchestral Bowings*, p. ix.

The exposition of Beethoven's *Symphony No. 1* was selected for this presentation because it illustrates many of the bowing devices necessary for stylistic performance of compositions from the Baroque to the Contemporary era. Other musical examples are taken from literature often performed by high school, youth, and community orchestras. The string ensemble on the video is comprised of university students.

Two additional sources are suggested by the authors of this publication: *Orchestral Bowings*, by Elizabeth A. H. Green (American String Teachers Association Publication, 17th printing, 1990) and *Manual of Orchestral Bowings*, by Charles Gigante (American String Teachers Association Publication, 1986).

Repeated study of this Manual and the accompanying videotape can result in a heightened perception of the role proper string bowings play in an effective orchestral performance. One of its parallel residues is an increased awareness by students of bowing techniques and their importance in a successful musical interpretation, a sensitivity that can become a part of their individual playing, whether solo or orchestral.

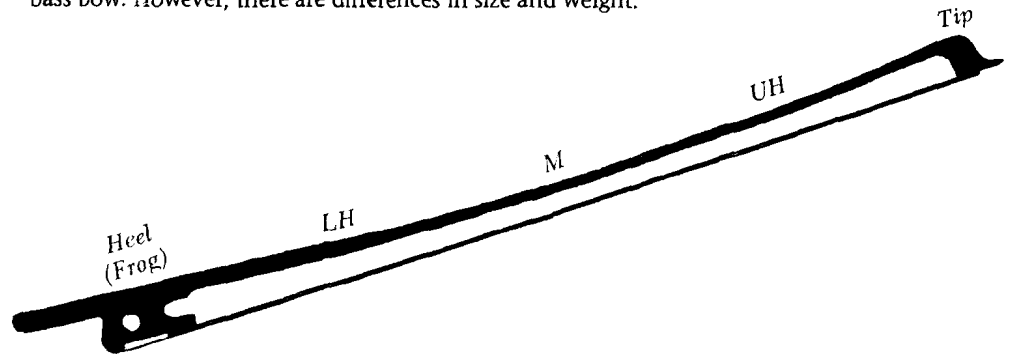
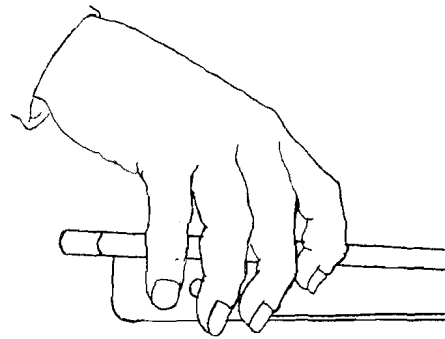
## Part II

### Principles of Bow Usage and Their Application to the Written Score

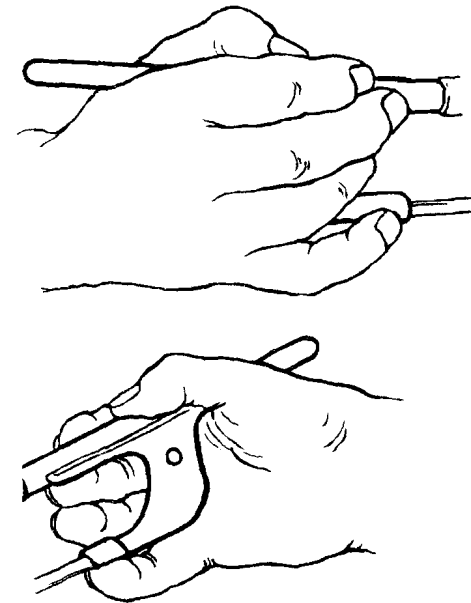
As the accompanying illustrations show, bows used in the family of orchestral string instruments are basically similar, and the terminology for the parts of the bow is the same: Whole Bow (WB), Upper Half (UH), Lower Half (LH), Middle (M), Tip and Heel (or Frog).

The bow in the illustration below is characteristic of the violin, viola, cello, and French-style bass bow. However, there are differences in size and weight.

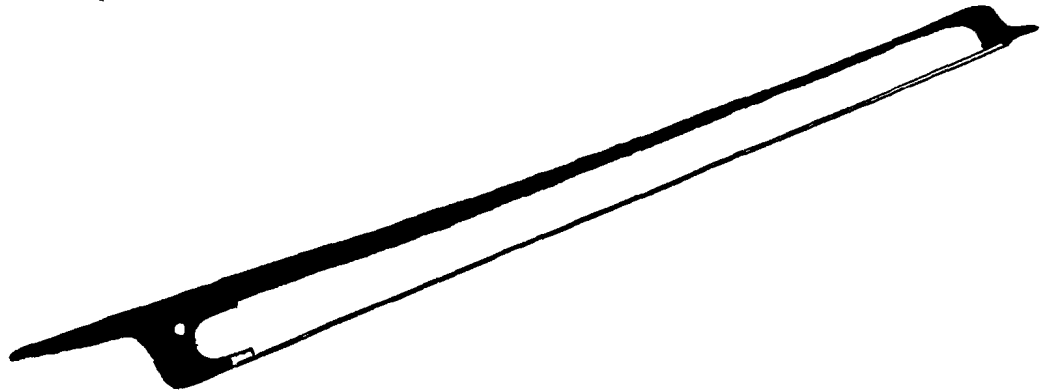
Hand position for the French-style bass bow.



Hand position for the German-style bass bow (below).



The German-style bass bow is slightly different in its structure and is held with a different hand position from that used with the other bows.



As the bow is moved across the strings in playing, directions are identified as a *down-bow* (▣) moving toward the *tip* of the bow, and *up-bow* (▽) when the bow moves toward the *heel*. Another way of stating this is to regard a down-bow (▣) as one moving to the player's *right* and an up-bow (▽) moving to the *left*. **Either ▣ or ▽ can originate in any part of the bow.**

The strongest accented articulations are easiest to play with a down-bow (▣), starting near the heel of the bow. Legato *piano* passages are best started with an up-bow (▽) near the tip, and an anacrusis (up-beat) phrase or note is generally played with an ▽.

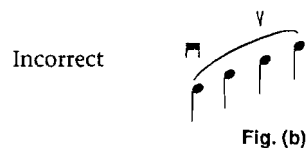
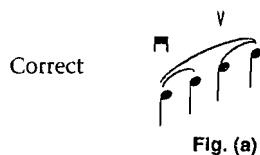
Editing of the players' parts is a primary responsibility of the conductor. Since bowing is a critical factor in phrasing and style, bow markings should be clearly indicated on the score of each of the individual parts of the string section. General principles for accomplishing this are detailed below. The conductor's scores in this Manual will usually show important markings that should appear in the players' parts.

When editing parts, insert only those bow indications that are absolutely necessary to establish the sequence of the patterns. Bowings that follow a normal sequence  $\text{■} \vee$  on consecutive notes are not marked for each note. Occasionally, editing may need to start from a specific point and then work in a backward direction in order to achieve the desired bowing for a given note or phrase.

With rare exceptions, bowing direction and style within sections should be uniform but may vary between sections of the orchestra strings. When "staggered" bowings are desired for musical reasons, inside and outside stand players alternate bow directions at different times to maintain a continuous sound.

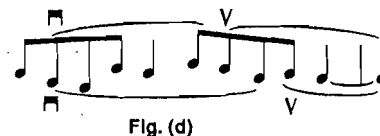
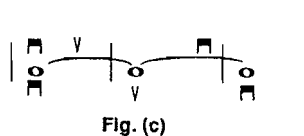
When marking parts, a pencil with dark, soft lead should always be used because erasures are commonly needed. Markings should not deface the page. The following points are standard editing practices:

1. Articulation marks such as accents and dots should be placed *closest* to the note heads.
2. *Essential* fingerings are placed *above* the notes.
3. The markings mentioned above would be enclosed by any necessary slurs. When possible, the curved line is drawn from the center of one note-head to the center of the final note-head within the slur. If necessary, the line may be drawn from and to the end of the stem of the note. Slurs should not touch the note-head or the stem, and the curve of the line should be more horizontal than vertical in the drawing.
4. The symbols for bow directions are always placed *above* the staff except in staggered bowing. Bow markings are given only when needed for guidance and change.
5. It is very important that the slur markings be consistent with bow direction markings. Figure (a) is correctly marked; (b) is incorrectly marked because the two inner slur lines should be indicated.



It is crucial to consider the composer's intent with respect to a phrase or a nuance and to accommodate bow markings accordingly.

6. "Staggered" bowing is used when a single note or a phrase must be sustained longer than is possible in a single bow. Within the section, the players' bow changes will overlap. As noted in (c) and (d), the outside players in the section would follow directions shown above the notes, the inside players would follow those markings below the notes.



7. There are a number of ways that articulation or separation of notes can be indicated. Each of the examples below would be played similarly so that the hooked bowing (see definition) gives the effect of an articulated change of bow direction.



(e)



(f)



(g)




(h)


The omission of the slur in (e) is, in the authors' opinion, the clearest indication for this musical effect. The markings in (f) and (g) are often used to indicate the same style, including dots over the notes and the use of the slur to imply a continuing bow direction. However, this may result in confusion because with the presence of the slur it often becomes a pattern to separate the notes even though this may not have been the composer's intent (e.g., Beethoven, *Symphony No. 1*, Mvt. 1, mm. 77-87, violin and viola parts). Benjamin Britten uses the model (h) with the bracket to indicate the performance as shown in (e).

8. There are instances in which the marking of the part of the bow to be used (UH, M, LH) can be beneficial for indicating the placement of the bow on the string. This reference is helpful as a reminder for younger and less-experienced players.
9. When a specific bow direction and placement are absolutely necessary for a given note or phrase point, it is recommended that the bowing be determined in reverse from that place in order to determine the correct bowing for the entire phrase.
10. In divisi playing of parts and in staggered bowing the terms *outside* and *inside* refer to the customary seating of two players to a stand. The *outside* players are those *closest* to the audience. A more precise way of denoting these positions is to consider, on the conductor's left side, the player on the *right* of each stand as the outside player; on the conductor's right side, the player on the *left* side of each stand is the *outside* player. Divisi chord assignments can be indicated as shown:

To the *left* of conductor

inside player [  ] outside player

To the *right* of conductor

outside player [  ] inside player



# Part III





## Bowing Terminologies and Definitions






### A. ON-STRING BOWINGS

These bowings may vary from one note per bow direction to groups of two or more notes per bow direction and may range from legato to non-legato playing and from short to long bow strokes.

"Perhaps no aspect of orchestration offers more chance for controversy than does the labeling of various types of bowing. There is disagreement on this subject not only among the authors of orchestration books but among players themselves. In the first place, the terminology involves a hodgepodge of languages, and there are sometimes two or three different names in each language for a particular type of bowing. To complicate matters still further, descriptions of certain bowings differ from book to book and from player to player."







(Kent Kennan, Donald Grantham, *The Technique of Orchestration*, 4th ed., © 1990. Reprinted by permission of Prentice-Hall, Inc., Englewood Cliffs, NJ.)

1. **Bariolage**—Frequent crossing of two or more strings usually alternating stopped notes with open strings.
2. **Détaché**—Alternating bow direction with a smooth, connected stroke and evenness of tone. *Détaché* can also be smoothly accentuated or played as rapid *détaché* in a series of short notes. The character remains singing and cantabile. What may be considered a *grande détaché* bowing in solo and chamber music is often played as a broad *martelé* in orchestral style (e.g. Schubert, *Symphony No. 8*, Mvt. 2).
3. **Détaché Porté**—Emphasis of a note within a *détaché* passage for an expressive purpose, utilizing bow speed and length. It can be enhanced with vibrato. Sometimes it is identified as an agogic stress or quantitative accent.
4. **Détaché Lancé**—A gentle stroke with a slight slowing at the end of the stroke giving the illusion of space. This style appears most often in continuo parts of baroque music. Usually no marking is shown on the score, although some scores will be indicated with both dash and dot over the note (  ). *Lancé* is a French word meaning hurled or flung.
5. **Accented Détaché**—Alternating bow direction, connected stroke, with an emphasis at the beginning of each note, generally accomplished through increased bow speed.
6. **Group Staccato**—A series of two or more stopped bow strokes in a single bow direction with resultant space between the notes. It is used with patterns of even or uneven note values often giving the tonal effect of separate articulated bow strokes. The style can range from a smooth beginning and ending to an emphatic articulated separation. *Hooked and linked* bowings are included in the family of *group staccato*. This bowing is frequently referred to as *slurred staccato*.
7. **Hooked**—Patterns of two *uneven* note values in a single bow direction that may be either a stopped or portato bow style.
8. **Linked**—Patterns of two or more *even* note values in a single bow direction that may be either a stopped or portato bowing style.
9. **Louré**—See Portato.
10. **Marcato**—See *Martelé*. This term is also used as an off-string bowing. See *Marcato* (Off-String Bowing).
11. **Martelé**—A bowing technique indicating a definite articulation that can vary from light to heavy. Bow pressure is applied before moving the bow, resulting in space between each note. Varying degrees of initial pressure, length of bow, and duration of note are determined by dynamics and style. It is often identified with a release of pressure at the moment of movement, and the speed of the bow may be moderate to very fast.
12. **Portato or Louré**—A series of notes performed in a single bow direction *pulsating within continuous tonal duration*. The dynamic is usually *piano*, close to or over the fingerboard, necessitating a faster bow. It is generally  but may be indicated with dots or dashes (   ). The portato style may be used with either *hooked* or *linked* bowing.

13. **Slurred Staccato**—See Group Staccato.
14. **Slur**—A series of legato notes of different pitches performed with a continuous bow movement and indicated by a curved line.
15. **Staccato**—A generic term indicating space between notes. It should be qualified as to the type of bowing to be used (*martelé*, *spiccato*, group staccato, etc.) and must be determined by the articulation needed for the appropriate musical style. It is often identified as an on-string, stopped, short stroke or a series of *martelé* strokes in one direction. Late 19th century scores demonstrate the varied interpretations and markings of the term *staccato*. The term is derived from the Italian word *staccare*, meaning to detach or separate.
16. **Tremolo**—A series of short separate bows played between the middle and the tip of the bow depending on the dynamic level required. Tremolos may be measured (  or  or  in a very slow tempo) or unmeasured (  or  ). In the latter the bow changes are played as rapidly as possible with no measured rhythmic patterning. [Another variety of tremolo known as fingered tremolo involves different pitches and has no relation to bowing styles.]

## B. OFF-STRING BOWINGS

Bow strokes with a vertical dimension or bounce.

17. **Battuta**—A vertically applied percussion stroke that has no horizontal component.
18. **Collé or Piqué**—The bow is placed on the string and preceding the moment of release the string is lightly but sharply pinched. An  is most frequently employed and the bow is lifted off the string. The bow is then replaced at the point of initial contact for succeeding collé strokes. There is no specific marking. *Piqué* is derived from the French word *piquer*—to prick or pierce, while *collé* is defined as glued or soldered. Both terms have relevance to the tonal characteristics of the bowing style.
19. **Flying Spiccato**—See Group Spiccato.
20. **Group Spiccato (Flying Spiccato)**—A series of spiccato notes in a single bow direction. The bow is dropped on the string with a horizontal motion, rebounds, and drops again, continuing its direction. It is generally  and performed from the middle to the lower part of the bow. Tempo is always a consideration. A common reason for this usage is to sustain a bowing pattern.
21. **Marcato or Heavy Spiccato**—A hammered stroke *at the heel* (near the frog) for heavily accented spiccato notes.
22. **Piqué**—See Collé.
23. **Ricochet (Jeté or Saltando)**—The bow is dropped in a  direction in the upper part of the bow for a series of two or more notes and is allowed to bounce the requisite number of times. The initial impetus and elasticity of the bow creates the successive bounces. The notes within the ricochet bowing are of equal value, light in texture, and fast in tempo with an  rebound on the final note. *Ricochet* is the French term for the sport of skimming a thin stone on the water.
24. **Sautillé (Saltato)**—Played as short rapid détaché strokes in the middle of the bow. The bow will leave the string slightly through its own elasticity and momentum resulting in a rapid spiccato. *Sautlé* is the related French word meaning leaped, jumped or skipped over.
25. **Spiccato**—A bouncing stroke that may range from slow to moderately fast, from light *pianissimo* to heavy *fortissimo*. It is used as alternating  and  with successive notes or in groups with the same bow direction. The bow stroke has horizontal and vertical components. *Spiccato* is Italian meaning distinct or clear.
26. **Staccato Volante**—More a solo than an orchestral bowing, this style involves a rapidly thrown down-bow stroke with two or more notes in the same direction.

## C. SPECIAL EFFECTS

When special effects are to be used in the music, the term will always be stated in the music with the exception of *sul tasto* or *con sordino*.

27. **Col Legno** (*avec le bois; mit Hölz*)—The wood of the bow rather than the hair contacts the string. Often the stick is dropped to the string for a semi-percussive effect (*battuta*), but it may also be used for long strokes or slurred groups of notes. It is often used with *ricochet* bowing.
28. **Mute** (*con sordino, avec le sourdine, mit Dämpfer*)—The mute is the familiar clamp placed over the bridge. Its effect is to muffle the higher overtones of the strings resulting in the characteristic veiled quality. Many types of mutes used today are attached to the strings on the tailpiece side and can be quickly rolled against the bridge or pushed back as indicated by the instructions *con sordino* ("with mute") and *senza sordino* ("without mute"). A reasonable time period is generally needed to use or disengage the mute.
29. **Ponticello or Sul Ponticello** (*prés du chevalet or am steg*)—The point of contact of the bow hair is as close to the bridge as possible, producing a special "eerie" color effect that gives emphasis to the upper partials (harmonics). It is generally played tremolo but may be a sustained or percussive stroke.
30. **Sul Tasto** (*sur la touche, sulla tastiera or flautando*)—A light, fast, airy bow stroke played smoothly with the sound point over the fingerboard. Since the higher overtones are submerged, the resulting sound is flute-like and can be used either as an accompaniment figure or as a melodic line.

# Part IV

## Descriptions and Examples of Basic Bowing Styles

### Music Examples on Video

**Example 1 A** Corelli, *Concerto Grosso*, Op. 6, No. 5, Mvt. 1, mm. 16–22

**Allegro**

Viol. di rip.  
II  
Vla.  
Vo. Cb.

Viol. di rip.  
II  
Vla.  
Vo. Cb.

**Example 1 B and C** Corelli, *Concerto Grosso*, Op. 6, No. 5, Mvt. 2, mm. 97–113

**Adagio**

Viol. di rip.  
II  
Vla.  
Vo. Cb.

Viol. di rip.  
II  
Vla.  
Vo. Cb.

Parts IV and V of the Manual are designed to be used with the video. The video gives attention to the differences between the violin/viola (instruments held horizontally) and the cello/bass (held in a vertical position). The scores for the music examples appear on the right side of the page, the explanations on the left. Although the camera focuses on an individual or a section, the entire string orchestra is always heard. The numbers following each example refers to the time in the video.

### ON-STRING BOWING— ONE NOTE PER BOW DIRECTION

#### Détaché

Example 1 A-C, 00:10)

A bowing that has a single note per bow direction in a smooth, connected stroke with an evenness of tone. Specific symbolic designation may or may not be indicated (e.g., ). Bowings which follow a sequence

on consecutive notes are generally not marked over every note. However, in this Manual more markings are shown for clarity.

- Violins. In this application of *détaché* the movement of the bow is generally distributed between the middle and the upper parts.
- Cellos. In the baroque performance style of continuo parts, the distribution should be in the middle of the bow. Characteristic of baroque music is a continuous bass accompaniment with a *détaché* bowing as played by cellos and/or basses.
- Basses. Bow placement should be near the middle. The bassist on the right plays with a German-style (Butler) bow with hand position placed at the end of the frog. The bassist on the left plays with a French-style bow. The hand position on the bow is similar to that of the cello.

**Rapid Détaché**


**Example 2, 02:32)**

apid détaché strokes are played in the middle or slightly above the middle of the bow when used for a series of repeated short notes. When a precise number of strokes per beat are indicated, the patterns are termed "measured tremolo." The bow may bounce through its own elasticity and momentum and the stroke is effective over a wide range of dynamics. Rapid détaché and sautillé bowings are related in practice. For a full sound and articulation it is advisable to use the flat hair of the bow.

*Violins.*

**Détaché Lancé**

**Example 3 A-B, 02:54)**

A gentle bow stroke which effects a slight pace between each note as the bow changes direction. Usually no marking is shown in the score, although some scores will indicate a line and dot (e.g., ) over or under the note head. This style is used most often in continuo parts of baroque music.

- 1. Cellos/Basses. Played slightly below the middle of the bow.
- 2. Cellos/Basses. Combines pizzicato and arco for the purpose of emphasizing the articulation, consistent with the traditional use of the harpsichord in this period. The same technique can also be applied to the bass passages of other periods in order to produce a more effective articulation. Observe the position of the French bass bow while playing pizzicato.

**Example 2** Beethoven, *Symphony No. 1*, Mvt. 1, mm. 92–100

*Allegro con Brio*



**Example 3 A and B** J.S. Bach, *Orchestral Suite No. 3*, Mvt. 2, mm. 1–6



# Staccato Style—Martelé Bowing

(Example 5 A-C, 06:43)

*Staccato* is used in this Manual as a generic term indicating simply space between notes. *Martelé* often loosely defined as a “broad staccato” is a bowing stroke using the staccato concept. It can vary in degrees of articulation but is generally identified with initial weight followed by release with bow movement. The fact that bow pressure is applied before moving the bow results in space between each note. The speed of the bow may be moderate to very fast. Varying degrees of initial pressure, length of bow, duration, and space between notes are determined by dynamics and style. What is often described as *grande détaché* in solo/ensemble performance is actually broad *martelé* in orchestral performance. The term *marcato*, when appearing in a score, refers to a marked articulation, but the term is sometimes applied to a short bowing style with the sound stopped by bow weight on the string. However, in this Manual *marcato* is referred to as an off-string “hammered stroke.” Symbols for the various staccato styles are inconsistent and often vague but may include dots, wedges (▲), accents (ˆ), or various combinations.

If m. 173, second beat, starts up-bow, then mm. 185-186 would be bowed



to facilitate the *subito piano* with an up-bow.

- A. Violas.
- B. Cellos/Basses.
- C. Violin.

## Example 5 A-C Schubert, *Symphony No. 8*, Mvt. 2, mm. 173–186

Andante con moto

# Staccato Style—Martelé Bowing

(Example 5 A-C, 06:43)

*Staccato* is used in this Manual as a generic term indicating simply space between notes. *Martelé* often loosely defined as a “broad staccato” is a bowing stroke using the staccato concept. It can vary in degrees of articulation but is generally identified with initial weight followed by release with bow movement. The fact that bow pressure is applied before moving the bow results in space between each note. The speed of the bow may be moderate to very fast. Varying degrees of initial pressure, length of bow, duration, and space between notes are determined by dynamics and style. What is often described as *grande détaché* in solo/ensemble performance is actually broad *martelé* in orchestral performance. The term *marcato*, when appearing in a score, refers to a marked articulation, but the term is sometimes applied to a short bowing style with the sound stopped by bow weight on the string. However, in this Manual *marcato* is referred to as an off-string “hammered stroke.” Symbols for the various staccato styles are inconsistent and often vague but may include dots, wedges (▲), accents (ˆ), or various combinations.

If m. 173, second beat, starts up-bow, then mm. 185-186 would be bowed



to facilitate the *subito piano* with an up-bow.

- A. Violas.
- B. Cellos/Basses.
- C. Violin.

## Example 5 A-C Schubert, *Symphony No. 8*, Mvt. 2, mm. 173–186

Andante con moto

Combination of Martelé  
and Accented Détaché

(Example 6 A-B, 08:17)

The presence of accent marks in this example suggests a martelé bowing. However, depending on one's interpretation the style could vary from a heavy martelé to an accented détaché. Examples 6 A and B demonstrate a martelé style of bowing moving to an accented détaché during the ritard. The final chord is played with "staggered"  $\text{V}$  bowing in order to sustain a *fortissimo* dynamic level. Staggered bowing implies random bow direction change within a section and is usually marked  $\text{V}$  above the note being sustained.

A. Violins/Violas.

B. Cellos/Basses.

Example 6 A and B Grieg, *Holberg Suite*, Prelude, mm. 68-72

Allegro vivace  $\text{div.}$  *rit. al Fine*

The musical score is arranged in five systems, each representing a different instrument. The first system is for Violins I and II, the second for Viola, the third for Violoncello I, the fourth for Violoncello II, and the fifth for Contrabass. The tempo is marked 'Allegro vivace' and the dynamics are 'ff' (fortissimo). The score includes a 'div.' (divisi) marking at the beginning and a 'rit. al Fine' (ritardando to the end) marking. The final chord is marked with 'V' (staggered bowing) and 'ff'.



## Chords

(Example 7 A-F, 09:03)

In three-note chords, the middle string should be pressed firmly so the three strings will sound simultaneously, as opposed to an angular motion which results in an arpeggiated sound. The lower third of the bow is the strongest part. It permits greater utilization of the weight from the arm-hand combination and is more effective for rhythmic articulation and chords.

Double-stops can be played in all styles of bowings and dynamics and in any part of the bow. It is generally recommended that chords be played divisi for intonation reasons. (See Part II for clarification of divisi with outside and inside players.) When chords are played divisi, they may be distributed in several different ways depending on the left hand difficulties and balance of the chord. Octaves, perfect and diminished fifths are difficult to play in tune except with an open string. The same principle applies to divisi playing of four-note chords. (Refer to Gigante, pp. 73-75.)

Possibilities for divisi playing of the first four chords in Example 7:

### 1st Chord

1. Upper two notes are played divisi by violin I; violin II plays the lower note.
2. The outside violin plays the upper two notes; the inside violin plays the lower note.
3. Three-way divisi within each section.

### 2nd Chord

1. Because the top two notes are perfect fifths, the outside violin plays the upper note only.
2. Inside violin plays two lower notes (minor 6th).
3. Three-way divisi within each section.

### 3rd Chord

1. Because of the diminished 5th in the upper two notes, the upper note (F natural) is played by the outside violin.
2. Because of the presence of the open string, the inside violin will play the lower two notes (B and D).

## Example 7 A-F Beethoven, *Symphony No. 1*, Mvt. 1, mm. 271-276

Allegro con brio

### 4th Chord

1. The double stop is played by all using open E string.
2. The basic principles will apply in determination of divisi of parts for viola and cello.

*Example 7 A-F demonstrates three-note chords played correctly and incorrectly. The first example starts with a bowing motion above the string, while the second version starts with the bow on the strings. It is important to note that orchestral precision is enhanced by the second approach.*

- A. Violins I. Correct. Starts off-string.
- B. Correct. Starts on-string.
- C. Incorrect.
- D. Violin. Correct. Starts off-string.
- E. Correct. Starts on-string.
- F. Incorrect.

## ON-STRING BOWING— TWO OR MORE NOTES PER BOW DIRECTION

The terms *group staccato*, *linked staccato*, and *slurred staccato* are often used interchangeably to identify separated and successive  $\nabla$  or  $\sqcap$  bow patterns comprising two or more notes. The tonal impression may be the same as separate bow directions. The initiation and release of notes can include the total range of styles from legato to sharply accented strokes and the entire range of dynamics. Hooked and linked bowings are included in this family of group staccatos. In a legato separation of notes of unequal value, hooked bowing is frequently used to avoid an undesirable accent on the shorter note. In slow tempi (e.g.,  $\text{♩}$   $\text{♪}$  or  $\text{♩}$   $\text{♩}$ ) where the use of

hooked bowing is not absolutely necessary, separate bows can be used, but one must be cautioned against an undesirable accent on the shorter note. (See Example 1 B, mm. 101-104.) By playing the longer note with the bow closer to the bridge and a slower bow speed followed by a faster bow further from the bridge, one can avoid the undesirable accent on the shorter note.

### Group Staccato (Linked)

(Example 8, 10:28)

Linked bowings are patterns of two or more even note values in a single bow direction that may be played as either group staccato or portato bowing.

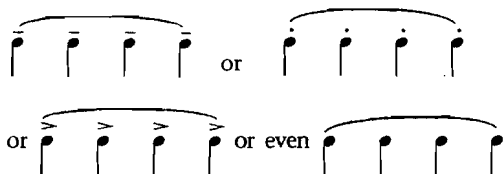
The designation *Spiccato* in this example has no reference to a spiccato bowing style but is Italian for “clear” or “distinct.” It is used here to indicate the mood and character of the solo line; *espressivo* would be a musical definition of its appearance in this example.

*Violas.* The style of these bowing patterns can range from a very smooth, undulating style to a distinctly articulated style. The performance in this particular example involves a legato separation followed by portato bowing in Example 9. The accompanying figure should be related to the phrasing of the melodic line. This will necessitate some variation in the amount of separation.

### Example 8 Vivaldi, *Concerto Grosso*, Op. 3, No. 11, mm. 115–121

The musical score for Example 8 shows measures 115-121 of Vivaldi's Concerto Grosso, Op. 3, No. 11. The tempo is *Largo e spiccato*. The key signature has one flat (B-flat). The Violino principale part has a melodic line with various bowing markings including accents, slurs, and 'tr' (trills). The Violini I and II parts play a rhythmic accompaniment of eighth notes, marked 'simile'. The Viola part plays a similar rhythmic accompaniment, also marked 'simile'. Dynamics include 'f' (forte) and 'p' (piano).

Depending on the period and edition, any group staccato, linked staccato, or portato bowing may be indicated in any of the following ways with a variable number of notes in a single bow direction:



### Portato or Louré

(Example 9, 11:25)

This bowing encompasses a series of notes in a single bow direction, pulsating within a continuous tonal duration. The dynamic level is generally *piano*, played close to or over the fingerboard, necessitating a faster bow. It is expressive as an accompaniment figure in cantabile passages.

Violas.

### Group Staccato (Hooked)

(Example 10 A-D, 12:26)

Hooked bowings are patterns of two *uneven* note values in a single bow direction that may be a stopped or portato bowing depending on the style and the degree of articulation needed for a given acoustical presence.

Note the pattern (♩ ♪) in the continuo part. In this pattern of two uneven note values in a single bow direction, either a stopped or portato bowing is used in the middle part of the bow. In slow tempi, as in Example 10 A and B, separate bows may be used instead of hooked bowing, (eg., ♩ ♪).



The rhythmic pattern (♩ ♪) noted in this example is characteristic of the siciliano and pastoral motif that often appears in slow movements of baroque music. This rhythmic pattern should be bowed separately instead of hooked, thus avoiding unmusical rhythmic and phrasing accents. In actuality, it is an interrupted single bow direction.

A. Violins/Violas.


B. Cellos/Basses.

### Example 9 Vivaldi, *Concerto Grosso*, Op. 3, No. 11, mm. 115–121

### Example 10 A and B Vivaldi, *Concerto Grosso*, Op. 3, No. 11, mm. 105–107

In fast tempi, as in Example 10 C and D, the use of hooked bowing is common practice, and separation between the long and short note needs to be clearly indicated. The hooked bowing should be edited in the parts as composers and publishers did not specify this bowing style.

Also in these examples (10 C-D) note the absence of the slur marking in the hooked note patterns as recommended in Part II, p. 6, #7. However, Britten's practice of using a bracket in place of the slur marking may be used as an alternative.

The bowing  is used successfully at the tip of the bow in fast tempi. (See Gigante, p. 69, ex. 144 and p. 8.)

C. Violins I.

D. Cellos/Basses.

# Example 10 C and D Schubert, Symphony No. 9 (7), Mvt. 1, mm. 569-583

Piu moto





## Slurs

(Example 11 A-B, 14:11)

Slurs are two or more different pitches in a single bow direction that are connected in a legato style and are indicated by a curved line. Characteristically, legato playing is identified with singing tone, broad phrase lines, subtlety in shadings, and nuances with crescendi and decrescendi. Some basic considerations in achieving a legato style are: (1) distribution of the bow, (2) variable bow speed, (3) string crossings, (4) smooth bow changes, and (5) avoiding the tendency to crescendo during  $\vee$  or decrescendo on  $\sqcap$  unless needed in the musical context.

Conductors and string players should be aware that what often appears to be a bowing slur is in actuality a phrase indication, characteristic of many late Romantic compositions.

A. *Violins II.*

B. *Violins I.*

## Slurred Accents

(Example 12 A and B, 15:18)

A slurred accent is accomplished by a sudden increase of bow speed and weight. The intensity of the accents will vary according to the style and the dynamic level.

In mm. 3 and 7 the anacrusis (up-beat) quarter-note starts  $\vee$  in the upper part of bow on the string, then lifts off the string and moves toward the heel for the  $\sqcap$  as demonstrated in 12 A. This procedure is recommended because of the *tenuto* indication for

$\text{♩}$  thus omitting space between  $\text{♩}$  yet still effecting the *tenuto* and *staccato note* quality.

An alternative is to retake the bow immediately following the  $\sqcap$  and play  $\vee$  near the frog as demonstrated by the cello in 12 B. However, in performance all sections should have a uniform stylistic approach.

A. *Violins II/Violas.*

B. *Cellos/Basses.*

Example 11 A and B Beethoven, *Symphony No. 1*, Mvt. 1, mm. 4-8

Adagio molto

Example 12 A and B Britten, *Simple Symphony*, Mvt. 4 (Frolicsome Finale), mm. 1-8

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## OFF-STRING BOWING— ONE NOTE PER BOW DIRECTION

Off-string bowing is a bow stroke utilizing both horizontal and vertical components. *Staccato* is a generic term referring to space between notes, which includes all off-string bowings. These may range from a light, *pianissimo* spiccato to a heavy, *fortissimo* marcato. The lower part of the bow is used for marcato and the balance point to the middle for lighter effects. Sometimes compromises must be made if a light spiccato off-string bowing is not possible in a string section. If the problem passage is played *on* the string slightly above the middle with very little bow being used, the ensemble effect will generally be satisfactory. (For a detailed explanation refer to Gigante, pp. 92-116.)

### Spiccato (crisp)

(Example 13 A-D, 15:50)

In these examples, a crisp stroke is achieved by a controlled dropping and rebounding of the bow. Bowing style used by cellos and basses is also employed by the other strings. NOTE: Because of the 1986 Mozart edition published by Bärenreiter, changes in bowing may be recommended in view of a different interpretation. The eighth-note upbeat to the four-note pattern in the first violins in 13 A has no dot and consequently might be played with a down-bow. However, common interpretation generally starts the phrase with a spiccato up-bow.

- A. Violas/Violins II.
- B. Cellos.
- C. Basses. Note the minimal vertical motion used due to the thickness of bass strings.

## Example 13 A Mozart, *Eine Kleine Nachtmusik*, Mvt. 1, mm. 60–70

Allegro

The musical score for Example 13 A shows the string parts for Violins I, Violins II, Viola, and Cello/Double Bass. The tempo is Allegro. The score spans measures 60 to 70. The Violins I part features a series of eighth-note patterns with spiccato bowing marks (up-bow and down-bow) and dynamic markings like *p* and *f*. The Violins II part also features eighth-note patterns with spiccato bowing marks and dynamic markings like *p* and *f*. The Viola part features eighth-note patterns with spiccato bowing marks and dynamic markings like *p* and *f*. The Cello/Double Bass part features eighth-note patterns with spiccato bowing marks and dynamic markings like *p* and *f*.

## Example 13 B and C Beethoven, *Symphony No. 1*, Mvt. 1, mm. 35–48

Allegro con brio

The musical score for Example 13 B and C shows the string parts for Violins I, Violins II, Viola, and Cello/Double Bass. The tempo is Allegro con brio. The score spans measures 35 to 48. The Violins I part features a series of eighth-note patterns with spiccato bowing marks (up-bow and down-bow) and dynamic markings like *f*, *mf*, and *ff*. The Violins II part also features eighth-note patterns with spiccato bowing marks and dynamic markings like *f*, *mf*, and *ff*. The Viola part features eighth-note patterns with spiccato bowing marks and dynamic markings like *f*, *mf*, and *ff*. The Cello/Double Bass part features eighth-note patterns with spiccato bowing marks and dynamic markings like *f*, *mf*, and *ff*.

*Violas/Violins. The bow starts on-string for the first note of each grouping and then lifts off (spiccato) for succeeding notes and is played in the lower third of the bow. The player should replace the bow on the string during the rest and repeat the process. The solo viola part was notated by Mozart in D major, but the instrument was tuned a semitone higher to create the E-flat tonality. Passage work was therefore easier because of the D major fingering patterns and the increased string tension added brilliance.*

**Example 13 D** Mozart, *Symphonie Concertante*, Mvt. 1, mm. 285–292

*Allegro maestoso*

Solo Vln.  
Solo Vla.  
Vln. I  
Vln. II  
Vla. I  
Vla. II  
Vc.  
Cb.

Spiccato (Brush)

(Example 14 A-B, 17:23)

Compared to the crisp spiccato, the brush stroke has a longer horizontal contact on the string. It is generally played in the area of the balance point of the bow. There are no specific symbols to indicate this stroke. The use and extent of this bowing style should be determined by the conductor.

*This example illustrates a waltz style with the second violins and violas playing the accompanying rhythm. These notes are played as brush strokes with the second quarter note value slightly stronger than the third pulse; therefore, the second quarter note value starts (n).*

- A. Violins II.
- B. Violas.

Example 14 A and B Johann Strauss, Jr., *Emperor Waltz*, mm. 17–32

Tempo di Valse



## Collé or Piqué

(Example 15 A-B, 18:06)

In *collé* bowing, the bow is placed on the string, and at the moment of contact the string is lightly but sharply pinched or "picked" off the string. An  $\nabla$  is employed which immediately lifts off the string. The bow is then replaced at the point of initial contact for succeeding *collé* strokes. This bowing, as a single stroke, is particularly applicable to after-beats. It may also be used as a  $\square \nabla$  as demonstrated in 15 B. For a heavier effect each note would be played  $\square$ . No specific marking is given. This bowing is also referred to as *piqué*. In translation the French term *collé* means "glued." (For extensive coverage regarding this bowing principle refer to Gigante, pp. 84-91.)

A. Violas. Repeated up-bows  $\nabla \nabla \nabla$ .

B. Violins II. Alternating bow direction  $\square \nabla \square \nabla$ .

A frequent use of *collé* bowing occurs when a short note is followed by a longer note,

(e.g.,  $\nabla \square$ ).

## Example 15 A Johann Strauss, Jr., Overture to Die Fledermaus

## Example 15 B Johann Strauss, Jr., Overture to Die Fledermaus

## Marcato or Heavy Spiccato

(Example 16 A-E, 18:54)

These examples illustrate the *marcato* style of off-string bowing and is essentially a "hammered" stroke at the frog. *Marcato* and *Heavy Spiccato* are terms used interchangeably. To obtain precision, the initial note following a rest will start with the bow on the string but continue in an off-string style. Using the flat hair of the bow enhances the desired sound. Note in the incorrect demonstrations [Examples 16 B and E] the undesirable "whip" at the end of the sustained note in the effort to return to the heel of the bow for the next note. This is a common fault. The acceptable performances in 16 A, C and D demonstrate the desirable technique of releasing the sound before the bow retake.

A. Violas. Correct. Starts on-string.

B. Violas. Incorrect.

C. Violin. Correct. Starts off-string.

D. Violin. Correct. Starts on-string.

E. Violin. Incorrect.

## Example 16 A-E Beethoven, Symphony No. 5, Mvt. 1, mm. 1-5

**Marcato—Repeated Down-Bows**

(Example 17 A-B, 20:01)

The use of repeated down-bows in *marcato* style is an effective device in orchestral bowing for articulated rhythmic patterns at a *fortissimo* level. These are played with the arm moving in a circular motion with a return to the heel of the bow. The arm moves quickly and lightly, and the natural weight of the arm should prevail in order to prevent a crushed sound. This bowing also may be used to facilitate a necessary bow direction change.

- A. All strings.
- B. Violin.

**Example 17 A and B** Borodin, *Symphony No. 2*, Mvt. 1, mm. 254–277

**Allegro (Tempo I)**

The musical score is divided into two systems, A and B. System A (top) includes staves for Violin I, Violin II, Viola, Violoncello, and Contrabass. System B (bottom) includes staves for Violin I, Violin II, Viola, Violoncello, and Contrabass. The tempo is marked 'Allegro (Tempo I)'. The key signature has two sharps (F# and C#). The score shows repeated down-bows in marcato style for all strings and violin. The notation includes dynamic markings like 'ff' and 'f', and articulation marks like 'acc' and 'stacc'. The rhythm is primarily eighth and sixteenth notes.

# **OFF-STRING BOWING— TWO OR MORE NOTES PER BOW DIRECTION**

## **Group Spiccato (Flying Spiccato)**

(Example 18 A-D, 20:57)

Group spiccato is a series of spiccato notes in one bow direction usually  $\vee$  and played at any appropriate tempo. The bow is limited to an area from the middle to the lower third. From slow to moderate tempi the performer can play the series of lifted up-bows in the same spot of the bow or by moving from one placement to another. In rapid tempi the former is more difficult and may necessitate the use of the latter. The following illustration can be an awkward bowing both rhythmically and in bow placement. However, it can be desirable for forte and marcato style passages.

Allegro



A musical and technical approach as shown below is to play this figure in the lower part of the bow.

Allegro



In Example 18 A-D the style suggests that of slurred couplets while the rhythmic impulse is maintained by a slight stress on the first of the slurred notes and a lightening and shortening of the second. Avoid the tendency to accent the second slurred note as this disrupts the rhythmic pulse and melodic flow.

- A. Violas.
- B. Cellos.
- C. Basses.

## **Example 18 A Mendelssohn, *Fingal's Cave*, mm. 217–222**

Allegro moderato animato

## **Example 18 B and C Beethoven, *Symphony No. 1*, Mvt. 1, mm. 81–88**

Allegro con brio

- D. *Violins. The first note for violins/violas should be played with a collé stroke as shown in Example 15. The same principle applies here as in A-C but in a context of syncopation and with the accent demanded by the "sf" marking.*

**Example 18 D** Beethoven, *Symphony No. 5*, Mvt. 4, mm. 22–26

Allegro

Vln. I

Vln. II



Vla.

Vc.

Cb.

### Ricochet (Jeté, Saltando)

(Example 19 A-C, 22:02)

The bow is dropped in a  direction in the upper part for a series of two or more notes and allowed to bounce the requisite number of times. It is a springing bow, lacking in power, and therefore light and crisp in style. Ricochet is sometimes used in combination with col legno. Occasionally the ricochet style will include . (Refer to Gigante, pp. 109-115.)

- A. Cellos.
- B. Violin.
- C. Violin.

**Example 19 A-C** Rimsky-Korsakov, *Capriccio Espagnol*, Mvt. 5, mm. 101–108

Fandango asturiano

VI. I

VI. II

Vla.

Vc.

Cb.

## SPECIAL TONE COLORS

When special effects are to be employed in a musical passage, they will generally be identified in the score. A possible exception is *sul tasto* ("above the fingerboard").

### Col Legno

(Example 20 A-B, 22:46)

Col legno is a bowing that has the wood of the bow rather than the hair in contact with the string. The wood of the bow is turned toward the player. Often the bow is dropped vertically to the string for a semi-percussive effect (*battuta*), but it may also be used as long strokes or slurred groups of notes (drawn). In any legato-like passage or for a sustained pitch, it is best played with a slight amount of the hair of the bow employed along with the wood. Col legno is frequently used as a *ricochet* bowing. *Col legno* is the Italian term; in French it is *avec le bois*, as in this score. The term *Marcato* in this example describes the character of the music not the bowing style.

- Violins/Cellos. *Col legno* used with *ricochet* and *battuta* bowing (percussive).
- Violas. *Col legno*, drawn. Slightly more of the hair is used in the stroke so pitches will be sustained and audible.

## Example 20 A Chabrier, *España*

Allegro con fuoco

The musical score for Example 20 A, Chabrier's *España*, shows a section marked 'Marcato' with the instruction 'avec le bois' (col legno) for the Violins (Vons.), Altos (Alt.), and Violas (Vc.). The Cellos/Bass (B.) part also features 'pizz.' (pizzicato) markings. The tempo is 'Allegro con fuoco'.

## Example 20 B Prokofiev, *Peter and the Wolf*

The musical score for Example 20 B, Prokofiev's *Peter and the Wolf*, shows a section marked 'Sostenuto' with a tempo of 100. The Violins (VI.I, VI.II) and Viola (Vla.) parts are marked 'col legno'. The Cello (Vc.) and Double Bass (Cb.) parts feature 'pizz.' (pizzicato) markings. The tempo is 'Sostenuto. ♩ = 100'.

## Sul Ponticello

(Example 21 A-B, 23:29)

The “glassy” and “eerie” sound effect of ponticello bowing is created by the prominence of the upper partials, emphasized by bowing close to the bridge. This bowing style is usually found in tremolo passages and only occasionally in legato areas. *Piano* tremolo passages are executed near the tip of the bow in ponticello style and *forte* passages more toward the middle or lower middle.

A. Cellos. Drawn. Observe the short notes of the opening and the linked bowing in mm. 5–8.

## Example 21 A Prokofiev, *Peter and the Wolf*

Andante

VI.I

VI.II

Vla.

Vc.

Cb.

*p*

*f*

*pizz.*

*mf*

*mp*

*sempre sul pontic.*

*loco*

B. Cellos. Rapid *détaché*. Note the “bristle” of the rapid *détaché* *sul ponticello* bowing throughout the strings as well as in the cellos.

## Example 21 B Prokofiev, *Peter and the Wolf*, mm. 35–36

Poco meno mosso ♩ = 138

*sord.*

*co*

*arco*

*div.*

*sord.*

*ff*

*sf*

*sul pontic.*

**Sul Tasto (Sur la Touche,  
Sulla Tastiera, or Flautando)**

(Example 22 A-C, 24:06)

Sul tasto is a light, fast, airy bow stroke played smoothly with the sound point over the fingerboard. The effect is a delicate and veiled quality that may be played drawn or played tremolo. When *sotto voce* (under the voice) is indicated in the score, a sul tasto bowing style is recommended. The term sul tasto will not always be indicated in the score. The conductor should be aware of the tonal quality desired and identify its use for a given passage.

Example A demonstrates bowed tremolo sul tasto. Example B is left-hand fingered tremolo (*legato*) sul tasto. Example C demonstrates the comparative timbres and strategies used for “normal” tonal characteristics and sul tasto playing of a passage.

- A. Violas/Cellos. Tremolo.
- B. Violins. Legato stroke with fingered tremolo.

Example 22 A Debussy, *Prelude to The Afternoon of a Faun*, mm. 11-14

Violin II: Div. (sur la touche), pp

Viola: (sur la touche), pp

Violoncello: (sur la touche), pp

Contrabasso: (sur la touche), pp

Example 22 B Debussy, *Prelude to The Afternoon of a Faun*, mm. 94-95

Solo Violins: sans sourdines, pp très doux et expressif

Violin I: sur la touche, pp

Violin II: sur la touche, pp

Viola: sur la touche, pp

Cello: Div. sur la touche, pp

Bass: pp

C. Violin. Contrasts “normal” tonal characteristics with the *sul tasto* style. As the sound point is moved away from the fingerboard and toward the bridge, the dynamics are intensified.

## PIZZICATO

Pizzicato is produced by plucking the string(s) and may be performed with or without the bow in hand, depending on the musical setting. Pizzicato effects range from the very subtle to the percussive *fortissimo* and may include multiple strings. The pizzicato should have a secure left-hand stopping of the string, with or without vibrato, as desired.

In fast passages two fingers may be used alternately. When a quick change from arco to pizzicato is necessary, under normal circumstances it is best to have the last arco note ♮ for the positioning of the hand near the heel in order to play the pizzicato. When pizzicato is quickly followed by arco, the note should be played ♮ for the same reason unless left-hand pizzicato is used. Left-hand pizzicato is indicated by a plus sign (+) above the note as in Example 24 A, m. 80.

The duration of a pizzicato note can be extended somewhat by the use of vibrato. Special effects can be produced by the use of a “snap” (Bartok) pizzicato or the strumming of three or four strings in both directions. To achieve a *pianissimo* pizzicato, a right-hand finger can press the string at the sound point between bridge and fingerboard and release the string for the sound.

### Pizzicato Without Bows

(Example 23 A-C, 25:39)

- A. Violins II.
- B. Cellos.
- C. Basses.

### Example 22 C Grieg, *Holberg Suite*, Mvt.4, mm. 40-47

Andante religioso

a tempo

Vln. I

### Example 23 A-C Britten, *Simple Symphony*, Mvt. 2, Playful Pizzicato, mm. 35-44

Vln. I

Vln. II

Vla.

Vc.

Ch.

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## Pizzicato to Arco

(Example 24 A-D, 26:31)

- Violins.** Hold the bow while the thumb is anchored near the end of the fingerboard for the index finger to play pizzicato. The hand then shifts to a hold of the bow for arco. The left-hand pizzicato is indicated by (+) over the note. The pitch is sounded generally with the second or third finger of the left-hand. Most left-hand pizzicatos involve only open strings.
- Cellos.** The bow is held in the hand and the thumb may be anchored on the side of the fingerboard. Pizzicato is played with the first or second finger.
- Bass.** The German bow is suspended with the tip pointed in a downward direction. Pizzicato is played with the first or second finger.
- Bass.** The French bow is held with the tip pointed in an upward direction. Pizzicato is played with the first or second finger.

## Example 24 A-D

Britten, Simple Symphony, Mvt. 1, Boisterous Bouree, mm. 69-83

Allegro ritmico

The musical score is arranged in three systems, each containing staves for Violin I, Violin II, Viola, Cello, and Bass. The key signature is one flat (B-flat major or D minor). The tempo is marked 'Allegro ritmico'.

- System 1 (Measures 69-73):**
  - Violins:** Play a rhythmic pattern of eighth notes. Measure 70 has a *pp* dynamic. Measure 71 has a *mf* dynamic. Measure 72 has a *pizz.* marking.
  - Viola:** Plays a similar rhythmic pattern. Measure 70 has a *pp* dynamic.
  - Cello/Bass:** Play a bass line. Measure 70 has a *p* dynamic. Measure 71 has a *pizz.* marking.
- System 2 (Measures 74-78):**
  - Violins:** Measure 74 has a *p* dynamic. Measure 75 has a *pizz.* marking. Measure 76 has a *pp* dynamic. Measure 77 has a *pp* dynamic. Measure 78 has a *pp* dynamic.
  - Viola:** Measure 74 has a *pp* dynamic. Measure 75 has a *pp* dynamic. Measure 76 has a *pp* dynamic. Measure 77 has a *pp* dynamic. Measure 78 has a *pp* dynamic.
  - Cello/Bass:** Measure 74 has a *pp* dynamic. Measure 75 has a *pp* dynamic. Measure 76 has a *pp* dynamic. Measure 77 has a *pp* dynamic. Measure 78 has a *pp* dynamic.
- System 3 (Measures 79-83):**
  - Violins:** Measure 79 has a *p* dynamic. Measure 80 has a *pizz.* marking. Measure 81 has a *pp* dynamic. Measure 82 has a *pp* dynamic. Measure 83 has a *pp* dynamic.
  - Viola:** Measure 79 has a *pp* dynamic. Measure 80 has a *pp* dynamic. Measure 81 has a *pp* dynamic. Measure 82 has a *pp* dynamic. Measure 83 has a *pp* dynamic.
  - Cello/Bass:** Measure 79 has a *pp* dynamic. Measure 80 has a *pp* dynamic. Measure 81 has a *pp* dynamic. Measure 82 has a *pp* dynamic. Measure 83 has a *pp* dynamic.

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## Pizzicato Chords

(Example 25 A-B, 28:17)

If an arpeggiated pizzicato is to be musically acceptable, the lower notes must be anticipated so the highest note is played on the beat.

Three- and four-string arpeggiated chords on the violin and viola are played with the index finger. On the cello they are generally stroked with the thumb in a diagonal movement across the fingerboard, starting on the lower string. With the presence of double-stops (two notes played simultaneously), the thumb and index finger are often used together for both cello and bass; the same technique may be used on violin and viola. As the strumming moves more perpendicular to the strings, the sound will become increasingly percussive. Occasional strumming of three- or four-note pizzicato chords in both directions is indicated. Colorful examples of this device are used extensively in Rimsky-Korsakoff's *Scheherazade* and *Capriccio Espagnol*.

A. *Violas, with and without bows.*

B. *Cellos, with and without bows.*

## Example 25 A and B Britten, *Simple Symphony*, Mvt. 2, Playful Pizzicato

**CODA**

The musical score for the CODA section of Example 25 A and B from Britten's *Simple Symphony*, Movement 2, 'Playful Pizzicato'. The score is written for Violins I and II, Viola, Cello, and Double Bass. It begins with a CODA symbol and a key signature of one flat. The Violin parts (Vln. I and Vln. II) play a rhythmic pattern of eighth notes, starting with a forte (*ff*) dynamic. The Viola, Cello, and Double Bass parts play a similar rhythmic pattern, also starting with a forte (*ff*) dynamic. The Viola part includes the instruction '(non troppo f)' and '(come sopra)'. The Cello and Double Bass parts also include the instruction '(non troppo f)' and '(come sopra)'. A rehearsal mark (18) is placed above the Viola staff. The score concludes with a final forte (*ff*) dynamic marking.

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DYNAMICS AND ARTICULATIONS

Dynamics, pulse, articulations, nuances, and connections between notes are critical aspects of interpretation. Effective contrasts as performed by the strings of the orchestra are enhanced by concepts of intensity, timbre and color (e.g., vibrato, expressive shifting, sound point) as well as by dynamics. Articulations are capable of highlighting a phrase and creating a dramatic impact. They are realized by the great variety of accents ranging from a subtle emphasis to a dramatic *sforzando*.

There are a number of ways to indicate articulations. The symbols for articulations, as have been noted throughout this Manual, will vary considerably among composers, editors, and publishers. However, consideration of bow usage and style should be guided by the pragmatic circumstance of each situation. The final determinants include the style of the composition, the intent of the composer, the interpretation of the conductor, and the skills of the performers.

Dynamics

(Example 26 A and B, 28:46)

Examples 26-32 are presented to implement insights and understandings of the varieties of interpretative resources to enhance musical performance. Varying bow speeds, bow directions, and sound points are the most obvious bowing techniques used to enhance interpretation. *Alternative Bowing for Example 26 starts with a ♯ instead of ∨ and in m. 4 the two quarter notes are played in a portato bowing style with ♯. The same bowing would apply to each of the succeeding phrases.*

A. Violins.

B. Cellos/Basses.

Larghetto elegiaco. (♩ = 60.)

The image shows two staves of musical notation. The top staff is for Violins (Vln. I and II) and the bottom staff is for Cellos/Basses (Vc. and Cb.). The tempo is marked 'Larghetto elegiaco. (♩ = 60.)'. The key signature is one sharp (F#). The notation includes various dynamics such as *pp*, *mp*, and *pp*. Articulations are indicated by symbols like *♯* (portato) and *∨* (bowing style). The first staff shows a phrase starting with a *pp* dynamic and a *♯* articulation. The second staff shows a phrase starting with a *pp* dynamic and a *∨* articulation.

Example 26 A and B Tchaikovsky, *Serenade for Strings*, Mvt. 3, mm. 1-20

Larghetto elegiaco. (♩ = 60.)

The image shows three systems of musical notation for Example 26 A and B. The first system includes Violins I and II (Vln. I, Vln. II), Viola (Vla.), Cello (Vc.), and Double Bass (Cb.). The second system includes Violins I and II (Vln. I, Vln. II), Viola (Vla.), Cello (Vc.), and Double Bass (Cb.). The third system includes Violins I and II (Vln. I, Vln. II), Viola (Vla.), Cello (Vc.), and Double Bass (Cb.). The tempo is marked 'Larghetto elegiaco. (♩ = 60.)'. The key signature is one sharp (F#). The notation includes various dynamics such as *pp*, *mp*, and *pp*. Articulations are indicated by symbols like *♯* (portato) and *∨* (bowing style). The first system shows a phrase starting with a *pp* dynamic and a *♯* articulation. The second system shows a phrase starting with a *pp* dynamic and a *∨* articulation. The third system shows a phrase starting with a *pp* dynamic and a *∨* articulation.

Intensity Accents

(Example 27 A-B, 32:01)

In rapid passages, accents are usually accomplished by increased bow speed as noted in mm. 5-8.

- A. Violins I.
- B. Violin.

Example 27 A and B Grieg, *Holberg Suite*, Mvt. 1, Prelude, mm. 1-8

I. Præludium Edvard Grieg (1843-1907) op. 40

Allegro vivace  $\text{♩} = 76$

Violini I

Violini II

Viola

Violoncelli

Bassi

cresc.

cresc.

cresc.

cresc.

cresc.

cresc.

non div.

*fp*

## Articulation of Syncopation

(Example 28 A-B, 32:39)

A consistent principle in syncopation is that syncopated notes are articulated with varying degrees of "bite." The basic pulse must not be accented with the bow since this would destroy the rhythmic character of syncopation itself. The space between the syncopated notes may vary, depending on the character of the music, the preference of the conductor, and the size of the string section. This example is played twice to demonstrate different articulations. A syncopated figure can be played in any part of the bow, either on or off the string, determined by desired dynamics and articulations. In this example the upper part of the bow is used.

- A. *Violins/Violas with Oboe. Syncopated figure played with a subtle emphasis.*
- B. *Violins/Violas with Oboe. More legato with less "bite" than Example A.*

Example 28 A and B Schubert, *Symphony No. 8*, Mvt. 2, mm. 201-224

Andante con moto

This musical score shows the first system of measures 201-224 from Schubert's Symphony No. 8, Movement 2. The tempo is marked 'Andante con moto'. The instruments listed are Oboe, Violins I and II, Viola, Violoncello (Vc.), and Contrabass (Cb.). The Oboe part features a syncopated figure. The Violins and Violas play a similar syncopated pattern. Dynamics include *pp* (pianissimo) and *p* (piano). There are also accents and a 'V' marking in the Violins.

This musical score shows the second system of measures 201-224. It continues the parts from the first system. Dynamics include *p* (piano), *pp* (pianissimo), and *dim.* (diminuendo). There are also accents and a 'V' marking in the Violins.


This musical score shows the third system of measures 201-224. It continues the parts from the first system. Dynamics include *pp* (pianissimo) and *morendo* (fading). There are also accents and a 'V' marking in the Violins.

## PHRASING



Every phrase involves tension and release within the musical line. Variation of bow speed is a major factor for effective phrasing.

### Phrasing

(Example 29 A-B, 34:50)

Phrase endings are especially characterized by the presence of a "tear-drop" effect (mm. 6 and 10). Therefore,  is recommended. In mm. 8 and 11 the *sf* must be lyrical and not explosive to be in character with the general temperament of the movement.

- A. *Violins. Musical.* Note the relationship of the accompaniment to the melodic line. This accompaniment in violins II, violas, and cellos is best achieved by use of a portato bowing with four notes per bow. For more artistic results, there must be tension and release within notes as well as phrases. This is accomplished by varying bow speeds, bow distributions, and sound points.
- B. *Violins. Unmusical.* Note the lack of ensemble and faulty intonation caused by poor phrasing. There is also an absence of flexibility in the accompanying line.

The alternative bowing shown below enhances the phrasing by use of  for the anacrusis and  for phrase endings.

### Alternative Bowing

Violino I.



Example 29 A and B Mendelssohn, *Symphony No. 5*, Mvt. 3, mm. 1–18

Andante



**Crawl Bowing**

(Example 30 A-C, 37:17)

Crawl bowing is a bowing device used to approach the frog gradually by judicious use of more  $\vee$  than  $\sqcap$  movement, thus avoiding an unmusical accent caused by poor preparation for the long note.

A. *Violins. Musical. The crawl bowing strategy is indicated in this score with the bracket and asterisk. This crawl bowing is used to avoid an unmusical accent and to place the bow in position to facilitate sustaining the half note.*

B. *Violins. Musical. This example uses a hooked bow after the sustained note to avoid the need for crawl bowing and is employed in many editions.*

Example 30 A J.S. Bach, *Double Concerto*, Mvt. 1, mm. 5-13

Vivace.

Violino I.

Violino II.

Viola.

Continuo.

Example 30 B J.S. Bach, *Double Concerto*, Mvt. 1, mm. 5-13

Vivace.

Violino I.

Violino II.

C. Violins. *Unmusical*. The asterisks (\*) indicate the notes which have the potential of being overemphasized. This is a result of the lack of preparation because of the rapid bow recovery that must take place preceding the half-note.

**Example 30** C.J.S. Bach, *Double Concerto*, Mvt. 1, mm. 5-13

Violino I.

Violino II.



## ALTERNATIVE BOWINGS

(Example 31 A-F, 38:56)

These bowings are presented as possible options in the violin I part. The bowings are all acceptable stylistically and musically. If the conductor interprets m. 17 as an anacrusis concept, an  $\vee$  is appropriate. The final decision should be made by the conductor. Factors to consider are tempi, size of the string section, and skill of the players. Violins II and violas in m. 17 should be consistent in bow direction with violins I.

A-F. Violins I.

Example 31 A Haydn, *Symphony No. 104*, Mvt.1, mm. 17-24

Example 31 B Haydn, *Symphony No. 104*, Mvt. 1, mm. 17-24


Example 31 C Haydn, *Symphony No. 104*, Mvt. 1, mm. 17-24

Example 31 D Haydn, *Symphony No. 104*, Mvt. 1, mm. 17-24

Example 31 E Haydn, *Symphony No. 104*, Mvt. 1, mm. 17-24

Example 31 F Haydn, *Symphony No. 104*, Mvt. 1, mm. 17-24

(Example 32 A-E, 40:20)

Example 32 illustrates alternative bowings that may be used effectively. It is important to note that the  figure generally appears

unedited in traditional literature. Depending on the interpretation of the conductor, this figure in mm. 2 and 6 can be played on the string at the tip, middle, or lower half of the bow or off the string in the lower part of the bow. All quarter notes in this example are to be played martelé. Eighth notes in mm. 4, 5 and 8 may be bowed on- or off-string. Examples C and D are played on-string, the other examples are off-string. In mm. 2 and 6 of Examples B and E, a recovery of the bow is necessary as is also the case in mm. 3 and 7 of Examples B, D and E.

A-E. Violins, Cellos/Basses.

Example 32 A Bizet, *L'Arlésienne Suite*, No. 1, Farandole, mm. 1-9

Allegro deciso (Tempo di Marcia)



Example 32 B Bizet, *L'Arlésienne Suite*, No. 1, Farandole, mm. 1-9

Allegro deciso (Tempo di Marcia)



Example 32 C Bizet, *L'Arlésienne Suite*, No. 1, Farandole, mm. 1-9

Allegro deciso (Tempo di Marcia)

VI. I

VI. II

Vla.

Vc.

Cb.

Example 32 D Bizet, *L'Arlésienne Suite*, No. 1, Farandole, mm. 1-9

Allegro deciso (Tempo di Marcia)

VI. I

VI. II

Vla.

Vc.

Cb.

Example 32 E Bizet, *L'Artésienne Suite*, No. 1, Farandole, mm. 1-9

Allegro deciso (Tempo di Marcia)

VI. I

VI. II

Vla.

Vc.

Cb.

VI. I

VI. II

Vla.

Vc.

Cb.

# Part V

## Bowing Strategies and Analyses

(Example 33 A-B, 42:28)

*Symphony No. 1*, L. van Beethoven (Mvt. 1, Exposition)

This section of the Manual accompanies Example 33 A and B of the video to provide a comprehensive study of the application of various bowing styles for a musical performance. Although Example 33 A on the video concentrates on violins and violas and 33 B on cellos and basses, the two are combined in the Manual because these sections of the orchestra are closely coordinated musically. They should be studied together, though viewed separately. [The string parts of the score for the Exposition with bow markings appear without comments beginning on p. 55 of the Manual.] It is recommended that the full score of Beethoven's *Symphony No. 1*, Mvt. 1, be studied for an understanding of the relationship of the strings to the winds, brasses, and timpani.

Although the video presents only one bowing approach, there are acceptable alternatives to the version presented. Markings in the music on the right side of the page are those followed by the performers on the video.

A. Violins/Violas.

B. Cellos/Basses.

Measure

Number:

- 1-2 The top notes of the Violin I chord must be coordinated with woodwind and lower string parts. Chords should have the effect of sounding simultaneously. The three-note chords may be accomplished by divisi in the first and second violins. The contrast of *forte* and *piano* is obtained by the placement and angle of the pizzicato stroke across the strings. (Refer to Examples 23, 24 and 25.)

1 Adagio molto (♩ : 88)

The musical score shows five staves for string instruments. The top staff is Violino I, followed by Violino II, Viola, Violoncello, and Contrabasso. Each staff has a 'pizz.' marking at the beginning of the first measure. The first measure is marked with a forte (f) dynamic, and the second measure is marked with a piano (p) dynamic. The notes are chords, and the dynamics change from f to p between the two measures.

The right hand must be in position to facilitate the *arco* in a rapid change from pizzicato to arco in all parts. (Note Example 24.)

- 7 The three lowest notes of the chord in m. 4 of the violins are coordinated in length with the remaining strings. It is recommended that all first violins play  $\text{p} \cdot \text{G}$

and continue without a pause the melodic line to G#, since Violin II can play the  $\text{p}$  chord divisi which includes

the same notes as in the lower part of Violin I. Violins must take a long  $\text{p}$  to be at the tip for the legato *piano*  $\text{V}$ .

For a discussion of chord playing in m. 4 and in mm. 8-9 and 10-11, refer to Part II #10 and to Example 7. For legato slurs, as in mm. 4-7, refer to Example 11.

Cellos/basses play *détaché lancé* bowing. However, group staccato may be used to advantage (legato separation) with four notes per bow direction in mm. 5-6 and two notes per bow direction in m. 7 because of the crescendo.

Legato slurs with smooth and sustained bow and string changes are essential in the violins. Original bowings may be considered, but problems in the phrasing could be caused by using an  $\text{V}$  at beginning of m. 6. In showing the alternative bowings, one should always respect the need for coordination between the various voices and the importance of consistency of bowing with similar patterns in the melodic line.

If more sound is desired, especially with a small string section, alternative bowings are suggested. Alternative Bowing 1 or 2, shown below, would assist in producing the crescendo as indicated in m. 7. In Alternative Bowing 1, note the pattern of the slur on the third and fourth beats of the violins. This suggests change in the phrasing due to the tied-over note on the second beat of each of the three measures.

#### Alternative Bowing 1



In m. 5 beware of the possibility of an undesirable accent by the violas on the fourth count. This can be avoided by slowing the bow on beats 1-2-3 or by using hooked bowing as suggested in Alternative Bowing 2. Adjustments of the bowing in the viola part would be necessary in m. 7 to be consistent with the violins; therefore in Alternative Bowing 2 the slur remains between counts 1 and 2, but in Alternative Bowing 1, the slur is removed.

#### Alternative Bowing 2



#### 8 The options for divisi are as follows:

Outside violin I play D; inside violin I play F;

Outside violin II play F; inside violin II play A.

Since there are no perfect fifths in these chords (as there are in m. 10), both sections could play a double-stop. Outside and inside Violin I and II can play either the upper two notes or lower two notes inasmuch as they are both double stops in sixths which are considered secure.



- 9 A separation of the  $\text{■}$  (hooked bowing) must occur between the first two notes in each of the string parts for three reasons: (1) to avoid an accent on the first  $\text{■}$ , (2) to secure a crescendo on

counts 3 and 4 with an  $\text{V}$ , and thus (3) have a  $\text{■}$  at the heel for the forte chord in m. 10.

10-11

Chords are played  $\text{■}$  and divisi. The same principle applies as in m. 8, but the chords must be balanced. The second chord of m. 10 is marked *tenuto* suggesting that it connects to the following wind chord. In m. 11, the outside violin I and II play the C; the inside violin I and violin II play E and G as a double-stop.

- 12 Clarity of articulation between the repeated G  $\text{V}$  is needed. An Alternative Bowing is for the last four notes preceding m. 13 to be played  $\text{■}$  with the  $\text{■}$  slurred through the first note of the *Allegro con brio*.



13-15

Violin I (  $\text{■}$  ) is played legato in mm. 13-14 without a stop between notes. (This also applies to mm. 19-20 and 25-29.) The dotted half-notes in mm. 13-14 as well as in mm. 19, 20, and 25 should not move past the middle of the bow in order to be in proper position for the spiccato patterns that follow. The quarter notes in the string parts (mm. 16-17) should be crisp and resemble timpani strokes.

16-17 and 22-23

Violin I Alternative Bowings in m. 16 can be: 1)  $\text{■}$   $\text{V}$   $\text{V}$  group spiccato, or 2) a light group staccato on the string, or 3) played on the string in the upper part of the bow as a light martelé. Consistent bowing patterns should be followed in similar passages whenever possible. Observe that the final note of this passage (mm. 17 and 23) does not have a dot; therefore, it should be played  $\text{■}$ , slightly longer and legato.

### 13 Allegro con brio ( $\text{♩} = 112$ )

20



23-24

Violins II, violas, cellos/basses play  $\blacksquare$  in m. 23 but change to  $\vee$  at the beginning of m. 24. Crescendo to *sf* is made more effective by use of grace notes as part of  $\vee$ . Note the fingering that is necessary on the trill to facilitate the grace notes and the trill.

- 25 In all lower string parts,  $\text{♩}$  must be released precisely with the first violin part. The *sforzando* is within a *mezzo piano* dynamic level.

26-29

The violas, cellos/basses can play this figure starting with an  $\vee$  or  $\blacksquare$  in m. 26, but violins II should coordinate with violins I because of the bowing in mm. 29-30. The bowing used in this example in m. 29 requires a flying spiccato  $\vee\vee$  in m. 30 on the first count of violins I and II. This will also bring the bow closer to the heel for the crescendo and the *ff* chords in m. 31. In m. 29 if the violins play  $\text{♩}$  with  $\vee$  (as occurs in violin I,

m. 27), then the beginning of m. 30 will be a  $\blacksquare$ , thus avoiding the flying spiccato. This bowing is acceptable common practice.

- 30 Heavy spiccato bowing is used. This measure must be played near the heel with the utmost energy and with crescendo to the m. 31 *ff*—all in the space of one measure. This dramatic device is characteristic of Beethoven.

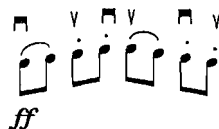
Refer to mm. 8 and 10 and Example 7 for a review of the *divisi*. The same bowing occurs in mm. 46, 48, and 51. The violas, cellos/basses play  $\text{■}$  on each  $\text{■}$  to create uniformity of sound.

### 33-34

The chords should be performed *divisi* in the first and second violins with the outside players playing the C and the inside ones the E-G double-stop. The outside violins should play the legato slur line in m. 33 as notated; the inside second violins should use a hooked bow to join with the Violin I melodic line on the last quarter of m. 33. Measure 34 necessitates  $\text{VV}$  with a definite articulation on the first of the sixteenth notes. Violas, cellos, and basses supply a throbbing *spiccato* pattern as background.

### 35-44

All strings play *spiccato* in the lower third of the bow in mm. 35-36 and 39-40, and although the dynamic indication is *ff*, it should be modified in order that the woodwind passage can be heard and a crescendo can be developed beginning in m. 42. Many conductors insert a subito *mf* at the beginning of m. 41. The example below is an alternative bowing (mm. 37-38) for the violins. This also must be played in the lower part of bow.



45-48

The viola, cello, and bass parts in mm. 45-51 are prime examples of the need for *group spiccato*  $\vee\vee$  on the fourth beats of mm. 45 and 47 in order that absolute uniformity is projected in the bowing styles.

49-58

For mm. 53-56, refer to the discussion of mm. 16-17 and 22-23. It should be noted, however, that in this section there is a single wind solo, reinforcing the need for light spiccato or a light martelé in the violins as well as careful articulation in the violas, cellos/basses, all *piano*.

The accompanying voices in m. 57 can play the first quarter note either  $\vee$  or  $\sqcap$ , but the *sforzandos* which are within a *piano* context are played  $\sqcap$  in the lower third of the bow. The same bowing can apply to all strings. Note the  $\vee$  recovery for shortened  $\downarrow$  on first beats in order

to play *sf* near the heel of the bow. These *sfz* notes should "sing" and be created as much by vibrato intensification as by additional bow weight. The strings must be in balance with the woodwind section.

59 Violins could play  $\vee\sqcap$  instead of  $\vee\vee$ .

60-64

The first and second violin up-beat entrance to the m. 61 theme should be construed as a continuation of the legato lower string line of m. 60 rather than as a separate entrance. Both measures must together express a lyrical phrase leading to the flute-oboe line starting in m. 62. A continuation of the style occurs in mm. 63-64.

45

Vl.

Vla.

Vc. e B.

49

Vl.

Vla.

Vc. e B.

55

Vl.

Vla.

Vc. e B.

62

Vl.

Vla.

Vc. e B.

This is a typical example of the bowing adjustments that need to be made. Ideally, the shorter note in m. 65 should be  $\vee$  with the bow starting on the string and then lifting off. This version results in a *sf* with  $\vee$ , unless *sforzandos* are  $\blacksquare$  as shown in the alternative figure below; however, in order to have  $\blacksquare$  on the sixteenth notes that follow, the slur must be removed in m. 68. This bowing best coordinates with the  $\blacksquare$  *sf* of the violas and cellos in mm. 65-66.

Alternative Bowing



The *subito forte* in mm. 69-72 should be played rapid détaché in the lower part of the bow so that in mm. 70 and 72 the transition to the eighth notes in the violins can be played heavy spiccato for the forte. Careful observance of the dots on the second and fourth beat quarter notes will prevent too much down-bow being used and a loss of positioning for the following sixteenths.

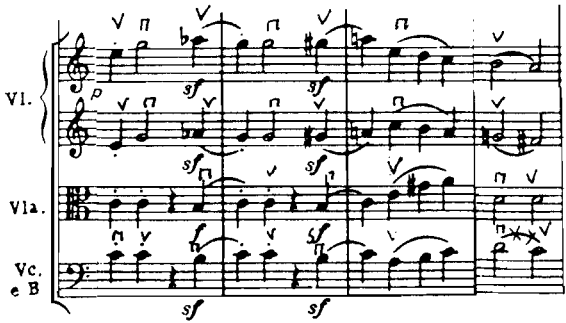
Violas, cellos/basses should have a slight recovery of the bow following  $\bullet$  for




$\vee$  on  $\flat$ . The eighth notes of the

passage are normally played off-string near the frog through mm. 73-74; but because of the absence of dots for  $\flat$

all notes in mm. 73-74 could be played on the string in the lower part of the bow. M. 75 should be played with a heavy spiccato as suggested by the dotted notes (violas, cellos/basses).

76 All parts should be played martelé and with the utmost intensity.




The first  in m. 77 in the upper strings is the ending of the previous phrase; therefore a slight "breath" stop of the bow is made between the first and second  as the bow continues 

without any recovery. Violins and violas play *pianissimo* in group staccato with the sound point near the fingerboard and with a legato separation of notes. The cello/bass bowings mm. 77-80 (also mm. 82-83) are consistent with the violin bowings in mm. 61 and 63.

## 85-87



Starting *pp* in m. 85 the cellos/basses should play two bows per measure as in the original bowing to implement the dramatic crescendo line. Violins and violas change from four notes per bow to two notes per bow in m. 87 to implement the crescendo line.

## 88-89


The dynamic level remains no more than *forte* throughout this passage so that the *subito fortissimo* in m. 94 is effected to produce the real climax. These details, so crucial to the drama present in Beethoven's music, are often overlooked. Caution:  must be slurred *without* a

separation.

## 90-91

Fast bow speed is necessary for the  sforzando in the violins. This also prepares the bow for the three slurred notes on the following  figures.

## 92-97

Violas, cellos/basses  are to be played

with powerful martelé strokes in mm. 92-93, but mm. 94-96 are without dots and the dynamic level is *ff*; therefore these measures (94-96) are played with less separation and more détaché bowing. Again in m. 97 the staccato dots reappear on the notes, and a careful performance will distinguish between m. 94 through m. 96 and m. 97. Such details are characteristic of the seriousness of Beethoven's workmanship.

79

85

91

98 -  
7-99

The excitement of these two contrasting rhythms can be further heightened by the lower strings' use of crisp eighth-note spiccatos while the violins play the repeated sixteenth-note patterns as a rapid détaché on the string but with great energy.

100-104

If the Alternative Bowing shown below is used, it is important to avoid an accent in the first violin (m. 101, third beat). To accomplish this the  $\vee$  must come off-string and move to the lower part of the bow for *sf*. This entire passage remains within a *piano* dynamic level. The same applies to mm. 103-105.



3-104 105-106

Play  $\square\square$  in violas, cellos/basses with energy for the same previously indicated reasons. The four-note chord in Violin I, m. 6, must be played divisi.

98

104

Following this section the Exposition is presented without written comments.

# Symphony No. 1

# I

L. van Beethoven, Op. 21

1770 - 1827

Adagio molto (♩ = 88)

Adagio molto (♩: 88)

1770 - 1827

I  
Violino

II  
Viola

Violoncello

Contrabasso

pizz. *f* *p* *cresc.* arco *V* *p*

pizz. *f* *p* *cresc.* arco *V* *p*

pizz. *f* *p* *cresc.* arco *f*

pizz. *f* *p* *cresc.* arco *f*

pizz. *f* *p* *cresc.* arco *f*

5

Violin I (Vl.)

Viola (Vla.)

Violoncello/Bass (Vc. e B.)

Measures 5-7 of the musical score. The Violin I part features a melodic line with slurs and accents, marked with *p* and *cresc.* The Viola part provides harmonic support with a lower melodic line, also marked with *p* and *cresc.* The Violoncello/Bass part plays a steady eighth-note accompaniment, marked with *p*.

# Allegro con brio (♩ = 112)

13

Vl.

Vla.

Vc.  
e B.

*p*

20

Vl.

Vla.

Vc.  
e B.

*sf*

27

Vl.

Vla.

Vc.  
e B.

*sf*





49

VI.  
Vla.  
Vc.  
e B.

55

VI.  
Vla.  
Vc.  
e B.

62

VI.  
Vla.  
Vc.  
e B.

68

VI.  
Vla.  
Vc.  
e B.

98

Vl.

Vla.

Vc.  
• B.

sf sf sf sf sf p sf sf sf

sf sf sf sf fp sf sf sf

sf sf sf sf fp sf sf sf

104

Vl.

Vla.

Vc.  
• B.

sf ff sf ff

sf ff sf ff

sf ff sf ff

73

Vl. *sf* *sf* *sf* *sf* *pp* *v*

Vla. *sf* *sf* *sf* *sf* *pp* *v*

Vc. e B. *sf* *sf* *sf* *sf* *pp* *v*

79

Vl. *simile*

Vla. *simile*

Vc. e B. *simile*

85

Vl. *cresc.* *sf* *sf* *sf* *sf* *sf*

Vla. *cresc.* *sf* *sf* *sf* *sf* *sf*

Vc. e B. *cresc.* *sf* *sf* *sf* *sf* *sf*

91

Vl. *sf* *sf* *sf* *sf* *sf* *sf*

Vla. *sf* *sf* *sf* *sf* *sf* *sf*

Vc. e B. *sf* *sf* *sf* *sf* *sf* *sf*

# Part VI

## Appendix

### Music Examples

Excerpts from the compositions listed below are used in the video and printed in Parts IV and V of the Manual. The number(s) in parentheses following each selection indicates the Example number.

- Bach, J. S., *Concerto for Two Violins*, Mvt. 1 (30)  
Bach, J. S., *Orchestral Suite No. 3*, Mvt. 2 (3)  
Beethoven, *Symphony No. 1*, Mvt. 1 (2) (7) (11) (13) (18) (33)  
Beethoven, *Symphony No. 5*, Mvt. 1 (16) and Mvt. 4 (18)  
Bizet, *L'Arlesienne Suite No. 1*, Mvt. 4 (32)  
Borodin, *Symphony No. 2*, Mvt. 1 (17)  
Britten, *Simple Symphony*, Mvt. 1 (24), Mvt. 2 (23) (25), Mvt. 4 (12)  
Chabrier, *Espana* (20)  
Corelli, *Concerto Grosso*, Op. 6, No. 5 (1)  
Debussy, *Prelude to The Afternoon of a Faun* (22)  
Grieg, *Holberg Suite*, Mvt. 1 (6) (22) (27)  
Haydn, *Symphony No. 104*, Mvt. 1 (31)  
Mendelssohn, *Fingal's Cave* (18)  
Mendelssohn, *Symphony No. 5*, Mvt. 3 (29)  
Mozart, *Eine Kleine Nachtmusik*, Mvt. 1 (13)  
Mozart, *Symphonie Concertante*, Mvt. 1 (13)  
Prokofiev, *Peter and the Wolf* (20) (21)  
Rimsky-Korsakov, *Capriccio Espagnol*, Mvt. 5 (19)  
Schubert, *Symphony No. 8*, Mvt. 2 (5) (28)  
Schubert, *Symphony No. 9*, Mvt. 1 (10)  
Sibelius, *Finlandia* (4)  
Strauss, Johann, *Emperor Waltz* (14)  
Strauss, Johann, *Overture to Die Fledermaus* (15)  
Tchaikovsky, *Serenade for Strings*, Mvt. 3 (26)  
Vivaldi, *Concerto Grosso*, Op. 3, No. 11 (8) (9) (10)

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