

# Sound / Tone Development

(orig. for cello)

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Before practicing the following, the student must be familiar with the preceding Open Strings/Rhythm Drills section. Experiment with the five variables of tone production: weight, speed, point of contact, tilt, and angle to the string. The goal is a relaxed but alert arm, that produces a strong, projecting tone. Practice the following on other strings. Advancing players: 1. Try also holding the bow with only the thumb, index, and 4th finger. Notice the difference. 2. Try also holding the bow backwards, at the tip. Notice the weight difference. Don't overdo!

## Son filé ("spun sound")

ff ————— pp ————— ff ————— pp (subito)

pp ————— ff (subito) ————— ff ————— pp ————— pp ————— ff

ff ————— pp ————— ff ————— pp ————— pp ————— ff ————— pp ————— ff

## Alive 1st Finger

f p f p p f p f f p f p p f p f

f p f p f p f p p f p f p f p f p f p f

## Ghost Bowing

The following is a silent exercise. The bow must be drawn very slowly and steadily, 1 inch (2.5 cm) ABOVE the string. The goal is complete control of the bow's speed, elevation from the string, and (non-)point of contact. Notice the time signature.

silent

## The 'Russian Sound Builder'

Play as closely to the bridge as possible, as loudly as possible, and as slowly as possible. Relax from the shoulder. Keep constant the bow's speed, volume, and point of contact. Notice the time signature.

Musical notation for 'The Russian Sound Builder' in 2/4 time. The piece consists of two measures, each containing a single note with a long, sustained bow stroke. The first measure starts with a square symbol (□) above the note, and the second measure starts with a triangle symbol (▽) above the note. The dynamic marking *ffff* is written below the first measure.

## The Grasshopper

Short strokes (1 inch; 2.5 cm), using mainly fingers and wrist. Up-bow at the Frog, Down-bow at the Tip. Always *ff*. Practice also on scales. Do not allow the bow to splash and bounce on the string at the tip - control it.

Musical notation for 'The Grasshopper' in 3/4 time. The piece consists of two staves. The first staff has four measures, each with a single note and a short stroke. The notes alternate between being marked 'at Frog' (with a square symbol □) and 'at Tip' (with a triangle symbol ▽). The dynamic marking *ff* is written below each note. The second staff has eight measures, alternating between 'at Frog' and 'at Tip' notes, each with a short stroke and the dynamic marking *ff*.

## Bouncing Ball

Landing on the string loudly, relaxed from shoulder to wrist, describing circles in the air, bouncing off the string.

Musical notation for 'Bouncing Ball' in 2/4 time. The piece consists of two staves. The first staff has four measures, each with a single note and a short stroke. Above each note is a circle with an arrow indicating a circular motion. The dynamic marking *fff* is written below the first measure. The second staff has four measures, each with a single note and a short stroke. Above each note is a square symbol (□) with an arrow indicating a vertical motion. The dynamic marking *fff* is written below the first measure.

## Double the Bow

Musical notation for 'Double the Bow' in 2/4 time. The piece consists of two staves. The first staff has four measures, each with a single note and a short stroke. The dynamic marking *ff sempre* is written below the first measure. The second staff has four measures, each with a single note and a short stroke. Above each note is a square symbol (□) with a triangle symbol (▽) below it, indicating a double bow stroke. The dynamic marking *ff* is written below the first measure.

## Retakes / Bow Lifts (all □ or all ▽; try at different spots on the bow)

Musical notation for 'Retakes / Bow Lifts' in 2/4 time. The piece consists of two staves. The first staff has four measures, each with a single note and a short stroke. Above each note is a square symbol (□). The dynamic marking *ff* is written below the first measure. The second staff has four measures, each with a single note and a short stroke. Above each note is a triangle symbol (▽). The dynamic marking *ff* is written below the first measure.

### Wrist Exercise

### Voicing

### Biting Accents (1st finger must be very "alive")

### Missing fingers (lift selected fingers off the bow stick; feel the difference)

### Role of the wrist and fingers in changing strings (use mostly finger motion - Collé)

### Silent bow placement (PoB = Point of Balance) Challenge: close your eyes!!!

## The Seven Levels (Planes) of the Bow

Musical notation for 'The Seven Levels (Planes) of the Bow' in 2/4 time, starting with a forte (f) dynamic. The notation shows seven distinct bowing levels, numbered 1 through 7, each represented by a different note value and placement on the staff. Level 1 is a half note, level 2 is a quarter note, level 3 is an eighth note, level 4 is a sixteenth note, level 5 is a thirty-second note, level 6 is a sixty-fourth note, and level 7 is a final half note. The notes are placed on the staff to represent different vertical positions on the bow.

Play the following at the Frog, PoB, Middle, and close to the Tip:

Three staves of musical notation for bowing exercises. The first staff is marked with a forte (f) dynamic and shows a sequence of notes starting from the Frog position. The second and third staves show exercises for PoB, Middle, and close to the Tip, with 'Whole Bow' markings and slurs indicating the bow's movement across the string.

## Balancing Double Stops

Musical notation for 'Balancing Double Stops' in 2/4 time, starting with a forte (f) dynamic. The notation shows a sequence of double stops (two notes played together) that change in position and rhythm, with slurs and accents indicating the bowing technique.

## Bow Tilt

B = tilt toward Bridge; F = tilt towards Fingerboard. First measure is silent. Notice the role of the fingers and thumb.

Musical notation for 'Bow Tilt' in 2/4 time. The first measure is silent, indicated by an 'x' on the staff. The notation shows a sequence of notes with 'B' and 'F' markings above them, indicating the tilt direction. The notes are played in a sequence: B, F, B, F, B, F, B, F, F, B, F, B.

## Bow Angle

B = pull wrist toward Bridge; F = push wrist towards Fingerboard. This is a silent exercise. Notice the role of the arm.

Musical notation for 'Bow Angle' in 2/4 time. The notation shows a sequence of notes with 'B' and 'F' markings above them, indicating the wrist movement. The notes are played in a sequence: B, F, B, F, B, F, B, F, B, F, B, F, followed by a final note marked 'play normally'.

## Bow Speed / Sounding Point

F = fast bow; S = slow bow. Keep the same dynamic, changing the Sounding Point.

Musical notation for 'Bow Speed / Sounding Point' in 2/4 time. The notation shows a sequence of notes with 'F' and 'S' markings above them, indicating the bow speed. The notes are played in a sequence: F, S, S, F, F, S, F, S, S, F, S, F, F, S, F, S, F, S, followed by a final note.

'Add-A-Beat' every four notes (Practice with the metronome ♩ = 60. Slower is better...)

The exercise is written on a single staff in bass clef. It consists of two lines of music. The first line starts with a 2/4 time signature and contains four measures: four quarter notes, two half notes, two half notes, and two half notes. Above the first and third measures are small square accents. The second line starts with a 5/4 time signature and contains four measures: a half note followed by a quarter note, a half note followed by a quarter note, a half note followed by a quarter note, and a half note followed by a quarter note. Above the first and third measures are small square accents. The piece ends with a double bar line and the text "etc., etc." to the right.

write  
your  
own  
exercises

Eight blank musical staves are provided for the student to write their own exercises. Each staff begins with a bass clef and a common time signature (C).