

# Soundpoint exercises

<b>Soundpoint 1</b>	<b>Close to the bridge (slow and heavy)</b>
<b>Soundpoint 2</b>	<b>Between the bridge and the centre-point</b>
<b>Soundpoint 3</b>	<b>Centre, between the bridge and fingerboard</b>
<b>Soundpoint 4</b>	<b>Between the centre-point and fingerboard</b>
<b>Soundpoint 5</b>	<b>Close to the fingerboard (fast and light)</b>

The friction of the bow pulls and pushes the string sideways. A magnified, slow-motion film of a bow stroke would show that during the down-bow the hair ‘catches’ the string and pulls it to the right. The further the bow pulls or ‘bends’ the string, the more the tension of the string increases, until the tension is such that the string suddenly snaps back. The hair instantly catches the string again, and the ‘catch, pull, snap-back, catch’ repeats an infinite number of times. The up-bow pushes the string to the left until the tension is such that the string snaps back. This sideways movement is called the amplitude.

The three main factors to consider are speed, pressure, and distance from the bridge (‘soundpoint’). On every soundpoint there is a certain speed of bow and amount of pressure which creates the widest possible amplitude. The tone produced by this ideal balance of speed/pressure/soundpoint is always radiant and pure.

If the bow is drawn too quickly or lightly there is a whistling sound because the hair skids over the surface of the string without catching it. Too much pressure produces a torn, scraped sound because the string cannot move freely from side to side underneath the hair.

## Exercise 1: Finding the balance of speed and pressure on each soundpoint

Near the bridge the string is hard and inflexible, and the bow has to be drawn slowly and heavily. Near the fingerboard the string gives to the slightest pressure, and the bow has to be drawn quickly and lightly. Whatever distance you are from the bridge, you have to use enough pressure to engage the string, but too much pressure constricts the side-to-side movement of the string and chokes the sound. For the most singing, open tone, tone production is based on speed, not on pressure.

In this exercise, the aim is to find the perfect balance of speed and pressure to create the widest possible vibration of the string. Watch the string (midway between the finger and the bridge) and see how widely you can make it move.

- 1 Draw continuous whole bows up and down on soundpoint 5. Play without vibrato.  
Try more and less pressure, and faster and slower bow speed, to find which combination of speed and pressure makes the string vibrate the widest. Only a little extra pressure may make the string vibrate less, or just a little faster bow let it vibrate more, etc.
- 2 When you are sure the speed and pressure are exactly right, i.e. the vibration of the string is at its widest, add a little vibrato.
- 3 Start again on soundpoint 4 without vibrato. Find the right balance of speed and pressure to make the string vibrate to its maximum, and then add vibrato. Do the same on soundpoint 3, 2 and 1.

## Exercise 2: Different soundpoints, same speed

The faster the bow moves across the string, the more pressure is needed to catch the string. Fast bows near the fingerboard need less pressure because the string is so soft; fast bows near the bridge need great pressure because the string is so hard. This exercise highlights the pressure differences by keeping one, constant speed of bow while changing the soundpoint.

Play this exercise with a metronome (crotchet = 80) to ensure that the speed of bow does not change. The length of bow must also stay the same for the bow speed not to change.

The musical notation for Exercise 2 consists of three staves, each containing three measures of music. The first staff starts with 'Soundpoint 5 Whole bows. Very light.' (dynamic *mp*) and 'Soundpoint 4 Whole bows, same speed. Slightly heavier.' (dynamic *mf*). The second staff starts with 'Soundpoint 3 Whole bows, same speed. Heavier.' (dynamic *f*) and 'Soundpoint 2 Whole bows, same speed. Very heavy.' (dynamic *ff*). The third staff starts with 'Soundpoint 3 Slightly lighter' (dynamic *f*), 'Soundpoint 4 Slightly lighter' (dynamic *mf*), and 'Soundpoint 5 Very light' (dynamic *mp*). All notes are quarter notes.

- 1 Without vibrato, play whole bows on soundpoint 5. Find the balance of speed and pressure that makes the string vibrate as widely as possible, as in Exercise 1.
- 2 Then, *without changing the speed of bow* (or length of bow), move to soundpoint 4. Increase the pressure. Stay on soundpoint 4, adjusting the pressure until the string vibrates as widely as possible.
- 3 Repeat on soundpoint 3, still without changing the speed or length of bow, and then on soundpoint 2.
- 4 Having moved as far into the bridge as possible, move out again, decreasing the pressure on each soundpoint, back to the fingerboard.

## Exercise 3: Different soundpoints, same pressure

Normally when you move towards or away from the bridge you have to change the pressure to keep the speed/pressure/soundpoint balance correct. However, you can keep the pressure the same (or almost the same) if the speed of bow is altered instead.

- 1 Without vibrato, play on soundpoint 1 in the middle of the bow, using centimetre-long bows. Find the balance of speed and pressure, for that length of bow and soundpoint, that makes the string vibrate the widest.
- 2 Then *without changing the pressure*, move to soundpoint 2. Increase the bow speed by using more bow. Stay on soundpoint 2, adjusting the speed (i.e. length of bow) until the string again vibrates as widely as possible.
- 3 Move to soundpoint 3, using as much bow as necessary to keep the sound from breaking, but still without changing the pressure. Repeat somewhere between soundpoints 3 and 4, using whole bows.
- 4 Having moved as far towards the fingerboard as possible, move in towards the bridge again, now using less bow on each soundpoint, back to soundpoint 1. Use exactly the same pressure on each soundpoint, changing only the bow-speed (length) to keep the sound pure.

The musical notation for Exercise 3 consists of three staves, each containing three measures of music. The first staff starts with 'Soundpoint 1 One centimetre of bow in the middle' (dynamic *ff*) and 'Soundpoint 2 Same pressure, same tempo, quarter-bows in the middle' (dynamic *ff*). The second staff starts with 'Soundpoint 3 Same pressure, same tempo, half bows in the middle' (dynamic *ff*) and 'Soundpoint 3-4 Same pressure, same tempo, whole bows' (dynamic *f*). The third staff starts with 'Soundpoint 3 Half-bows' (dynamic *ff*), 'Soundpoint 2 Quarter-bows' (dynamic *ff*), and 'Soundpoint 1 One centimetre' (dynamic *ff*). All notes are quarter notes.

Next month's BASICS features an exercise for developing a subtle aspect of left hand technique: overlapping.