

st154.1.51



sumtone

:

**michael edwards**

24/7: freedom fried

for viola d'amore and computer



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sumtone  
Neckarhalde 38  
D-72070 Tübingen  
Germany  
info@sumtone.com  
www.sumtone.com

## programme note

Busy, busy, busy. If we're shopping for food at 3am, is this a testament to modern convenience or an indictment of our over-crammed lives? If we have time to think, will it be about our career, family, i.e. the serious stuff, or about art (which should be a pleasant distraction, not yet another challenge, right?)?

But art and entertainment are not synonyms.

"The pleasures of urban populations have become mainly passive: seeing cinemas, watching football matches, listening to the radio, and so on. This results from the fact that their active energies are fully taken up with work; if they had more leisure, they would again enjoy pleasures in which they took an active part."

(In Praise of Idleness, Bertrand Russell)

If true in 1932, when Russell wrote this essay, then it is perhaps even more so today. An important question is: to what extent this phenomenon occurred naturally as opposed to being manipulated, and if at all the latter, then by whom? Russell in the same essay writes:

"In the West, we ... have no attempt at economic justice, so that a large proportion of the total produce goes to a small minority of the population, many of whom do no work at all... We keep a large percentage of the working population idle, because we can dispense with their labour by making the others overwork. When all these methods prove inadequate, we have a war: we cause a number of people to manufacture high explosives, and a number of others to explode them, as if we were children who had just discovered fireworks. By a combination of all these devices we manage, though with difficulty, to keep alive the notion that a great deal of severe manual work must be the lot of the average man."

No news there. Many people would recognise this social structure as fundamental to our modern 'democratic' societies. Others see it rather as oligarchy, plutocracy. Whichever it is, the distractions of over-work and a media system offering more cud for the chew than that which is our due seem to be working well:

"What the democratic mind requires, above all, is time; time to consider its options. Time to develop the democratic virtues of independence, orneriness, objectivity, and fairness. Time, perhaps ... to ponder the course our unelected captains have so generously set for us, and to consider mutiny when the iceberg looms.

Which is precisely why we need to be kept busy. If we have no time to think, to mull, if we have no time to piece together the sudden associations and unexpected, mid-shower insights that are the stuff of independent opinion, then we are less citizens than cursors, easily manipulated, vulnerable to the currents of power."

(Quitting the Paint Factory, on the virtues of idleness, Mark Slouka)

So what has all this to do with my piece of music? Everything and nothing. Everything because both my imagination and indignation are fueled by social injustice and this feeds the creative urge. Everything because I do not want to be "putting art to the service of suppression and the propagation of a false sense of security" (Helmut Lachenmann). Nothing because (diminuendo...) the driving generative and structural force of the piece relates to the title in another, infinitely more abstract way:

A viola player uses the four fingers of the left hand to stop the strings; there are 24 possible permutations of the four fingers; of these 24 there are 620448401733239439360000 permutations, only seven of which are used in this piece (thankfully, you might say), memorised by the performer and superimposed—generally as fast as possible: busy, busy, busy—onto various transpositions of seven basic tetrachords on each of the seven strings of the viola d'amore...

And "freedom fried"? From the embarrassingly childish jingoism of the US House of Representatives in renaming their French Fries as Freedom Fries after France's refusal to join the 2003 Iraq crusade. From the perversion of the very idea of freedom, something which can now apparently include frying innocent Fallujahns in burning white phosphorus: not, according to the military and the media, a chemical weapon, and certainly not remotely as wicked as the infamous chemical attacks Saddam inflicted on Halabja. Of course not; on the contrary, simply a fair price to pay for good ol' democracy.

24/7: freedom fried was written for Garth Knox.



## performance requirements

### essential equipment

- the Max/MSP audio programming environment (version 4.5 or above) running on a suitable Macintosh or PC computer
- multi-channel sound card (minimum 2 channels mic/line-in, 8 channels line-out)
- the Max/MSP performance patches supplied by the publisher on CDROM (email [hire@sumtone.com](mailto:hire@sumtone.com), order online at <http://www.sumtone.com/performance-materials.php>, or write to the address at the front of this score)
- A 16 fader MIDI controller plugged into the computer's sound card or other port recognised by Max/MSP. The faders should send volume messages to Max/MSP on separate MIDI channels. If controller numbers must be sent instead of MIDI channels, then the "midi-faders" patcher in Max will have to be suitably reprogrammed
- A pedal attached to the MIDI controller and to be used to trigger through the programmes in the performance patch; when pushed, the pedal should cause the controller to send a MIDI Mute signal on channel 2. If this is not possible then either the Max/MSP patch must be reprogrammed to use the available pedal/controller interface or the down arrow on the computer keyboard can be used to trigger instead
- one condenser and one clip-on microphone for the viola d'amore, connected to the sound card either directly or via a mixing desk. These should be pre-mixed into one live signal and come into Max/MSP via Input 1. In some cases a clip-on microphone alone will suffice
- a pickup on the resonance strings of the viola d'amore; this should come into Max/MSP via Input 2
- sound system: eight loudspeakers are preferred. They are fed directly from outputs 1–8 on the sound card and are to be placed around the audience as follows:
 

1	2
3	4
5	6
7	8

In addition, two sub-woofers would be ideal. A separate stereo mix is sent from outputs 17 and 18 of the sound card (if available) to the sub-woofers.

Performances with less loudspeakers are possible by combining two or more channels onto one speaker via the mixing desk or in software (the outputs of Max/MSP or the sound card configuration).

For more details about the software/hardware necessary for this piece, please send email to [info@sumtone.com](mailto:info@sumtone.com) or write to the address at the front of the score.

## performance directions

### computer

#### the computer's functions

The computer performs the following functions:

- dynamic compression and diffusion of the viola d'amore signals
- 4-channel sound file playback triggering
- real-time granular synthesis of filtered viola d'amore signal
- real-time looping of filtered viola d'amore signal
- independent level control and mixing of live signals, real-time granular synthesis, real-time looping, sub-woofers, and master levels

Amplification/diffusion of the viola d'amore is thus performed by the computer operator and not separately at the mixing desk (though this may also be desirable, depending upon the performance situation).

#### MIDI fader level control

The function of each MIDI Fader is given below. An asterisk indicates that, once set in advance, it is not envisaged that this fader will need to be moved much or at all during the performance.

- 3 Level control of the main viola d'amore signal
- 4 Level control of the viola d'amore's resonance strings pickup
- 5 Level control of sound file playback
- 6 Level control of real-time granular synthesis
- 7 Level control of real-time looper
- 8 Master level control

- \* 9 Filter Centre Frequency for input to granulation/looping
- \* 10 The front/back signal placement depth of the viola d'amore (fully up = only front 2 speakers, fully down = only back 2 speakers)
- \* 11 Level control for all electronics (sound files, granulation, loops)
- \* 12 Granular Synthesis objects' amplitude
- 13 Level control for separate sub-woofer mix
- \* 14 Control of the mix of main viola d'amore and resonance strings signals that are sent to the granulators and loopers (fully down = only main, fully up = only resonance)

## performing the computer part

The Max/MSP patch is programmed to step through a series of 4-channel sound files and real-time processing parameter changes. These, perhaps many simultaneous, instructions are performed upon one click of the MIDI controller pedal (or computer keyboard down arrow key) thus limiting the demands on the computer performer to clicking the pedal at the points indicated in the score, and controlling signal levels via the MIDI faders.

The score shows—always in blue—little more than the computer trigger points (an arrow) and a basic (and necessarily incomplete) indication of what happens upon each trigger. The numbers next to the arrow are simply the bar number in which the trigger occurs: this can be compared, for reassurance during the performance, with the “next trigger bar number” seen in the upper left part of the Max/MSP patch. “loop” indicates that a loop of the filtered viola d'amore signal is triggered at this point. “gran” indicates an important change in granular synthesis parameters (real-time granular synthesis runs throughout most of the piece and so is almost always available to be mixed in). The particular sound files that are triggered are indicated in square brackets; these are given for debugging/interest purposes only and do not require any particular action on the part of the computer performer beyond the trigger itself.

As subtle mixing of signals demands different actions in each performance situation it is very difficult to specify and notate exactly what must be done to achieve a good result. Moreover, as the musical usefulness of the real-time granular synthesis and looping depends partly on the live signals present and the accuracy of the triggering, it is not even possible to specify when either of these real-time processes should (or sometimes even could) be audible. For this reason the computer performer is left to improvise the fader movements.

Of course, the aim is to have a good balance between viola d'amore and computer sound, where the instrument is always audible but the computer is also a strong and multi-voiced partner. The most important part in the computer then is the sound file playback. Real-time granular synthesis and looping play a secondary role and in fact for perhaps large parts of the piece can be faded down to zero. Points in the score where “gran” and “loop” appear indicate the possibility for their introduction (perhaps domination even); a < or > sign indicates crescendo/diminuendo respectively: this should be followed if signal is present in the mix at that point.

As “gran” and “loop” indications also imply changes to the parameters of these processes it is important to realise that a sudden change in sound quality and perhaps level may occur at such trigger points. Depending on how much processed signal is present, it may be better to fade down granulation and/or looping before these trigger points so as to avoid undesirable changes of texture. However, exactly the opposite may also be the case: perhaps the change would work effectively and musically. To reiterate, due to the complex interactions of the performance environment, the live signals, the exactness of trigger points etc. it is impossible to fix the actions necessary. Only through rehearsing the piece and getting to know the patch and its interactions with the live player can one learn to handle the faders and pedal.

To aid this learning process, a sound file or CD of a recording of the live viola signal can be provided: this can be fed through the patch allowing the computer performer to rehearse alone. In addition, a recording of the piece with electronics can also be provided; this will help enormously in orienting the computer performer as to the correct balance of all the various signals involved.

## prior to performance begin

Before starting the piece, the checklist at the bottom right of the Max/MSP patch should be worked through (this may of course be modified for different performances). Most important here are the fader levels which need to be set once the “reset” button (top left) is pressed.

If desirable (for example, if this piece is first on a concert programme or after an interval) the opening looping sound may be running quietly before the viola d'amore performer comes on stage (perhaps even before the audience enters the hall). This sound begins once the “reset” button is pressed; its levels can be controlled by the two linked faders towards the middle right of the patch; it is automatically stopped upon the first trigger in the piece.

## computer monitor display

The Max/MSP patch was programmed assuming a minimum screen resolution of 1680x1050 pixels. This allows for side-by-side presentation of the score and the main patch. The pages of the score can be “turned” by pressing the space bar on the computer keyboard.

If this screen resolution is not possible, then the main Max/MSP patch should be brought into view on-screen (i.e. on top of the score pages) and a paper score used instead for following the performance.



## viola d'amore

The viola d'amore (both sympathetic/resonance strings and main strings) should be tuned as in Figure ??.



Figure 1: viola d'amore tuning

Because of this scordatura, some harmonic chords are spelled awkwardly (e.g. node F-sharp 3 on string VI with node D-flat 4 on string V—see bar 44). Rather than notate nodes on G-flat/D-flat or F-sharp/C-sharp, this perhaps unsightly chord was preferred as it makes the intended harmonic for each individual string clearer (i.e. a fourth harmonic on D-flat with a major third harmonic on D).

Given fingerings are suggestions only. To ease the performance of multiple stops, any notes in a chord may be doubled by open strings.

Tempo changes are to be strictly observed, i.e. a tempo increase/decrease should always occur where indicated. However, the actual tempi may deviate from those given, as deemed necessary by the performer.

Accidentals carry throughout the bar but are repeated in parentheses as necessary.

Except where otherwise indicated, meter changes necessitate rhythmic units to retain the same temporal duration, i.e., when changing from 2/4 to 5/8, an eighth note is equal in both meters.

## fingering permutations

The background structure of *24/7: freedom fried* is partly based on permutations of the order of the four left-hand fingers. There are 24 possible permutations of the fingers 1 2 3 4. Applied to various note groups (see below), these 24 permutations are to be played through in any of the many billions (620448401733239439360000) of their possible permutations (see below for more details) as fast as possible, unless otherwise notated in the score.

The notes used for the four fingers range over a perfect fourth, reflecting both the natural stretch of fingers 1–4 and the tuning system of the viol. Though notes (fingers) 1 and 4 are fixed, notes 2 and 3 microtonally interpolate between tetrachords of the phrygian, dorian, and lydian (or rather ionian) modes as illustrated in Figure ??.



Figure 2: Tetrachordal interpolation

In choosing the note groups to permute, the player should wander forwards and backwards along this line. In the graphic, each of the seven four-note groups are given a number. The numbers in parentheses represent the groups that may follow the current group, hence after group 1 only 2 can follow; after group 2 may come 3 or 1, depending on whether we are reading forwards or backwards. The basic pattern is 1 2 3 4 6 4 3 2 1 2 3 4 etc. Groups 5 and 7 are given in square brackets and represent alternative progressions that should be used to vary the basic pattern. Thus a constantly varying but basically static microtonal meandering through the various tetrachords is possible, as in, for example, Figure ??.

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

Figure 3: Tetrachord sequences

(As can be seen from the above example, it is quite acceptable to turn back almost as soon as you have has started, as in 1 2 1 2 3 2...)

When this tetrachordal interpolation is combined with the finger permutations mentioned above, we end up with such structures as those found in the appendices. These are given for the purpose of practice. In Appendix A seven orderings (permutations)<sup>1</sup> of the 24 permutations are given on the low E of string VI and combined with the tetrachordal interpolation. It is assumed that the player will practise these pages in order to get the non-repetitive yet nevertheless “learnable” nature of the structure “under their fingers.” Any other ordering of the 24 permutations may be used but the idea is of course that no single permutation should be repeated until at least several (ideally all 23) others have been played. It is envisaged that once the seven (or less perhaps) orderings of Appendix A are memorised, they will suffice for the whole piece.

Once this is achieved, Appendix B should be examined and practised. This is a set of twelve transpositions of the tetrachordal interpolation and ordering found in Appendix A (any other ordering could be used of course as long it follows the rules given above). For each of the strings I–VI then, the first ordering of Appendix A is stated twelve times, once per transposition. The tetrachordal interpolation varies, however, so as to reflect expected performance practice. The subsequent six orderings that are found

<sup>1</sup>Whereas both the ordering of the four fingers and of the 24x4-note blocks that arise from this are both, technically speaking, permutations, to distinguish between the two I have called the former “permutations” and the latter “orderings.”

in Appendix A are assumed to follow ordering 1 in each given case of Appendix B, but for the sake of brevity are not written out. The lowest notes (i.e. finger 1) for each of the 12 transpositions are given in Figure ?? for string II.<sup>2</sup>



Figure 4: First-finger notes on string II for the 12 transpositions

Thus, to reiterate, each single ordering in Appendix B represents nothing more than the first ordering of Appendix A, only transposed onto different notes on different strings. If the fingering sequence of all seven orderings of Appendix A were memorised, it could simply (or not: see below) be transferred to the different notes and strings of Appendix B and this would suffice for the use of this structure in the piece. However, some players might wish to proceed through the tetrachordal interpolations more freely, and this is also to be encouraged (hence the rules of progression are given in Figure (??) above).

There are two further points to consider. First of all, it won't have gone unnoticed that there are no examples in Appendix B of permutations on string VII. This is because this string is never used alone with the permutations. We take advantage in this piece of the viola d'amore's potential to have two strings stopped with one finger. So, any of the permutations in the appendices should be playable stopping both the indicated notes on their respective string in conjunction with the one *below* (never above). This is indicated in the score by, for example, "IV+V". The player should practise both this and stopping just one string (so far as this is possible on the middle strings).

Secondly, the fingering permutations are complicated one level further. The player will no doubt have noticed and remarked that transferring fingering permutations from one transposition to another is not as simple as implied, as the natural shortening of finger-stretch distance for similar interval size as we progress up the string makes finding microtonal intervals, for instance, considerably more difficult. The piece does not attempt to obviate this but instead takes advantage of the fact that the player will have mastered this in practice (!) by calling for the superimposition of, for example, lower transposition finger stretches onto higher transposition permutations (thus stretching the basic perfect fourth tetrachord out to something considerably larger) and vice-versa (making the range of the lower transposition tetrachord considerably less than a perfect fourth and thus the quarter tones even smaller). Once the player has perfected the seven basic orderings of the permutations in combination with the tetrachordal interpolation, and this on all twelve transpositions of strings I–VI, they should then practise the superimposition of "foreign finger stretches" on any given ordering/transposition/string. In the score these are indicated above the starting note of a permutation with the indication, for example, "S9" (S for stretch), and meaning: use finger stretches associated with a tetrachord on transposition 9 instead of those that we would use for a "normal" perfect fourth tetrachord in, for example, transposition 3. Of course, the exact finger stretches of foreign transpositions are not expected here, rather, the extremity of the effect is proportional to the distance from the actual transposition to the foreign transposition indicated (e.g. playing in transposition 4 and demanding finger stretches associated with transposition 5 will result in only a slight shortening of the perfect fourth range of the tetrachord, whereas playing in transposition 7 with finger stretches associated with transposition 1 will result in a very considerable expansion of the tetrachord).



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<sup>2</sup>It probably won't go unnoticed that the 12 transpositions themselves fall into three disjunct tetrachords (dorian, lydian (ionian), and phrygian), each separated by a semitone.




key to symbols

mv	molto vibrato
sp	sul ponticello
spe	sul ponticello estremo
cl	col legno
hair	With the hair of the bow (arco normale); used to cancel col legno and to clarify when ord. might incorrectly imply, for example, the cancellation of sul ponticello.


	Quarter-tone flat
	Quarter-tone sharp



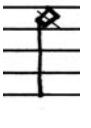
Permutations with full-toned notes (ord). Whenever notes in parentheses are given, then permutations whose lowest notes (finger 1) these represent, are to be inserted as fast as possible (unless otherwise indicated) for the full duration of the indicated rhythm. The strings on which the permutations are to be made are always indicated and the transposition corresponding to the given notes are also given. See “fingering permutations” at the beginning of the score for details.



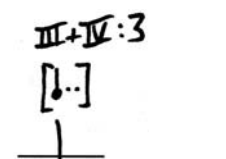
In order to reduce notational complexity, permutations are often tied to headless rhythms: in this case the permutations are to continue over the duration of the tied note. If headless rhythms are preceded by rests, then the previous permutation (or other playing technique) is intended. Where headless notes may cause rhythmic confusion, the intended duration is given in square brackets above the staff.



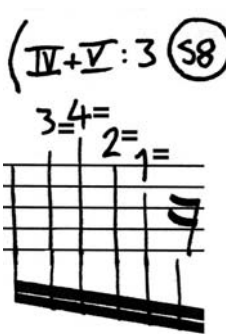
Permutations on non-bowed strings (tap-downs): this of course produces only a tapping noise on the finger board but the fingerings should generally be exaggerated to ensure microphone capture of the effect—lateral pulling of the strings may in some contexts also be appropriate. The dynamic in square brackets indicates the dynamic at which this should be executed, although the resultant sound will naturally be considerably quieter.




Half-flageolet: Finger pressure is somewhere between normal and flageolet; senza vibrato, the tone produced is spectrally a little flatter and duller than a normal tone. If the half-flageolet happens to be on a harmonic node, then placing a second finger behind the main finger could help damp the harmonic.



Half-flageolet permutations: the notes in these permutations should be executed as half-flageolets. If a finger touches a nodal point on the string, it should be depressed enough to avoid a harmonic sounding. Where open diamond note heads create rhythmic confusion, the intended rhythm is placed in square brackets above the staff.



Rhythmicised permutation: in the given transposition on the indicated string(s), perform a permutation in the notated rhythm (i.e. one note per rhythm) using the fingers indicated for each note. The ‘=’ sign indicates that one finger is used to stop two strings simultaneously. The circled S8 refers to a “foreign finger stretch” (see “fingering permutations” at the beginning of the score for details). For the sake of notational simplicity, resultant pitches are not indicated; these will of course be microtonal but it is not necessary in this instance to be concerned with which exact microtones should be heard.



When an open-string note is in square brackets, then the indicated event (pizz, bowed note etc.) takes place on the indicated string but because of a simultaneous permutation taking place on that string, the resultant pitch is not known in advance.

key to symbols continued



A cross through the stem indicates a battuto attack.



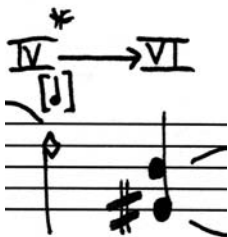
A dotted line to the right of the battuto cross indicates that the bow should bounce several times on the string (jeté).



Bow the bridge.



“Harmonic trill”: A tremolo between the open strings and the indicated harmonics should be executed. This creates a pulsating harmonic; the fundamental comes out more when the tremolo is slower (as sometimes indicated).



“String fade”: in this instance the flageolet is on string IV, C4 is on string V, and F#3 is on VI: over the duration of these two rhythms the bow should gradually move from IV alone to include V, then VI whereupon string IV is no longer being bowed at all. The result is a “fade-out” of IV and “fade-in” of V and then VI.



Scratch tone: lightly damp the indicated string(s) at a non-nodal point and draw the bow flatly across the string(s) with a continuous downward pressure.



24/7: freedom fried

duration c. 14:43

michael edwards 2004-5

Handwritten musical score for "24/7: freedom fried". The score is written on three staves in B-flat major (two sharps) and 2/4 time. It includes various musical notations, dynamics, and performance instructions.

**Staff 1:**

- Tempo/Character: *Jerky, mechanical* ( $\text{♩} = 56$ )
- Measure 1:  $\text{♩}$  (B-flat),  $\text{♩}$  (F),  $\text{♩}$  (B-flat),  $\text{♩}$  (F). Dynamics: *mp*, *mf*.
- Measure 2:  $\text{♩}$  (B-flat),  $\text{♩}$  (F),  $\text{♩}$  (B-flat),  $\text{♩}$  (F). Dynamics: *mf*.
- Measure 3:  $\text{♩}$  (B-flat),  $\text{♩}$  (F),  $\text{♩}$  (B-flat),  $\text{♩}$  (F). Dynamics: *[p]*.
- Measure 4:  $\text{♩}$  (B-flat),  $\text{♩}$  (F),  $\text{♩}$  (B-flat),  $\text{♩}$  (F). Dynamics: *[fp]*.
- Measure 5:  $\text{♩}$  (B-flat),  $\text{♩}$  (F),  $\text{♩}$  (B-flat),  $\text{♩}$  (F). Dynamics: *[fp]*, *[fp]*.

**Staff 2:**

- Measure 1:  $\text{♩}$  (B-flat),  $\text{♩}$  (F),  $\text{♩}$  (B-flat),  $\text{♩}$  (F). Dynamics: *mf*.
- Measure 2:  $\text{♩}$  (B-flat),  $\text{♩}$  (F),  $\text{♩}$  (B-flat),  $\text{♩}$  (F). Dynamics: *f*, *(lv)*.
- Measure 3:  $\text{♩}$  (B-flat),  $\text{♩}$  (F),  $\text{♩}$  (B-flat),  $\text{♩}$  (F). Dynamics: *[f]*.
- Measure 4:  $\text{♩}$  (B-flat),  $\text{♩}$  (F),  $\text{♩}$  (B-flat),  $\text{♩}$  (F). Dynamics: *(f)*.
- Measure 5:  $\text{♩}$  (B-flat),  $\text{♩}$  (F),  $\text{♩}$  (B-flat),  $\text{♩}$  (F). Dynamics: *mf*.

**Staff 3:**

- Measure 1:  $\text{♩}$  (B-flat),  $\text{♩}$  (F),  $\text{♩}$  (B-flat),  $\text{♩}$  (F). Dynamics: *mf*.
- Measure 2:  $\text{♩}$  (B-flat),  $\text{♩}$  (F),  $\text{♩}$  (B-flat),  $\text{♩}$  (F). Dynamics: *pp*.
- Measure 3:  $\text{♩}$  (B-flat),  $\text{♩}$  (F),  $\text{♩}$  (B-flat),  $\text{♩}$  (F). Dynamics: *p*.
- Measure 4:  $\text{♩}$  (B-flat),  $\text{♩}$  (F),  $\text{♩}$  (B-flat),  $\text{♩}$  (F). Dynamics: *p*.
- Measure 5:  $\text{♩}$  (B-flat),  $\text{♩}$  (F),  $\text{♩}$  (B-flat),  $\text{♩}$  (F). Dynamics: *mp<sup>5</sup>sub*, *mf*.

**Annotations and Performance Instructions:**

- sudden!*
- sympathetic strings* (with arrow pointing to the staff)
- \*move immediately to resonance strings but don't rush*
- (all sympathetic strings)*
- 5* (above the final measure)



con bravura; rapidly changing character

14

poco sp  $\frac{I}{III} \frac{II}{III} \frac{III}{III} \frac{IV}{III} \frac{V}{III} \frac{VI}{III} \frac{VII}{III} \frac{VIII}{III}$  sul tasto

16 [2.01] ff pp

17

poco sp sul tasto

ff pp

18

poco sp  $\frac{IV}{V} \frac{V}{V} \frac{VI}{V} \frac{VII}{V} \frac{VIII}{V}$  [ff] (b)(x) I spe ppp poco sp ff

21  $\frac{IV}{V} \frac{V}{V} \frac{VI}{V} \frac{VII}{V} \frac{VIII}{V}$  poco meno mosso, grandioso (d=52) poco sp ff sim. (b)(x) sul tasto fluente, surging pmo mosso (d=60) trem rit... pp sub. <

24 (trem rit) spe sloutrem, accel... (spe) sul tasto spe 3 (spe) 3 27 [1.02] mp ppp mp < ff ppp IV+V:4 IV+V:3 ff sub.

28 sul tasto 3 spe pp 3 (IV+V:3) [ff]

31 meno mosso (d=54) ord  $\frac{I}{III} \frac{II}{III} \frac{III}{III} \frac{IV}{III} \frac{V}{III} \frac{VI}{III} \frac{VII}{III} \frac{VIII}{III}$  spe ord. spe ord trem rit... spe pp f pp mf pp



34

IV:4

spe

III+IV:5

mf

pp

mf

pp

pppmp

38

7 cl

sp slow trem, accel

hair

trem rit...

ff

mp

pp

gran <

mf

p

mf

pp

41

sp

spe

IV+V:2 (S5)

hair

IV+V:6

sp

cl

mf

pp

cresc.

45 [2.02] poco meno mosso

loop (♩ = 50)

44

trem rit

5

(spe)

III:5 heavy!

ff

sim

pp

48

poco

sp

III II 5 I etc.

pp

5

5

f

ff

III+IV:5

spe, nail pizz

50

spe, nail pizz

IV

(ff)

(heavy pressure)



(53) poco scherzando  
meno mosso ( $\text{♩} = 44$ )

(2) piu mosso ( $\text{♩} = 63$ ) leggero  
III+IV: 4  
cl; sul tasto; fast, light bow  
Vhair

pp p

54 [1.03]

sp → sul tasto  
III+IV: 5

cl IV+V: 7

hair III+IV: 5

IV+V: 7 III+IV: 5 (sul tasto) → sp

mp = pp (pp) mp = pp mp

piu mosso  
poco scherzando ( $\text{♩} = 100$ )

cl hair

meno mosso ( $\text{♩} = 63$ )

piu mosso ( $\text{♩} = 100$ )

hair cl hair

meno mosso ( $\text{♩} = 63$ )

III+IV: 5

pp [d] p 3

poco meno mosso ( $\text{♩} = 58$ )

cl hair

pp 3 (pp)

(ord) → sp → ord

hair

III+IV: 3 IV+V: 5 III+IV: 3

IV+V: 5

III+IV: 3

p mp pp mf pp

\* Unless otherwise directed, from here onwards bowing is implicitly on the same strings as the fingered permutations.

delicato  
poco battuto  
poco sp

opening up, quasi espressivo

mf pp mp



Handwritten musical score for a piano piece, featuring a single staff with a treble clef and a key signature of one flat (B-flat). The score includes various musical notations such as notes, rests, and dynamic markings. Handwritten annotations in red ink provide performance instructions and fingering suggestions.

Handwritten annotations in red ink:

- Tempo/Character:** *poco sp* (poco sostenuto) is written above the staff at the beginning and later in the piece.
- Articulation:** *sul tasto* (sul tasto) is written above the staff, indicating a specific playing technique.
- Fingering:** Roman numerals *IV+V:9* and *IV+V:3* are written above the staff, indicating fingerings for the fourth and fifth fingers.
- Measure Markers:** Circled numbers **83** and **56** are placed above the staff, likely indicating measure numbers or section markers.
- Dynamic Markings:** *pp* (pianissimo) and *mp* (mezzo-piano) are written below the staff, indicating the volume level.

The score is a single staff with a treble clef and a key signature of one flat (B-flat). The notation includes various musical symbols such as notes, rests, and dynamic markings. The handwritten annotations in red ink provide performance instructions and fingering suggestions.

Tranquillo  
⊗  
[J]  
 $\text{IV}+\text{V}:6$   
sul tasto  
 $\text{III}+\text{IV}:3$  Ⓢ $\text{IV}+\text{V}:6$   
 $\text{IV}+\text{V}:6$   
poco sp → sul tasto  
91 loop, gran  
↓ poco sp

93 sul  
tasto

light bounces!

III+IV:3 S6

IV+V:5 IV+V:4 III+IV:3

IV+V:5 IV+5:4 III+IV:3 sim.

pp

(97)

Handwritten musical score for a single staff. The notation includes various notes, rests, and dynamic markings. A crescendo hairpin starts with *mp* and ends with *pp*. A circled "97" is at the top left. A double bar line with repeat dots is at the end.

Handwritten musical score for a single melodic line. The score is on a single staff with a treble clef and a key signature of one sharp (F#). It begins with a circled number '101'. The first measure has a triplet of eighth notes marked 'III+IV: 7'. The second measure has a half note marked 'III+IV: 3 (57)'. The third measure has a half note marked '5'. The fourth measure has a half note marked 'f'. The fifth measure has a half note marked 'p'. The sixth measure has a half note marked 'ppp'. The seventh measure has a half note marked 'f'. The eighth measure has a half note marked 'p'. The ninth measure has a half note marked 'f'. The tenth measure has a half note marked 'p'. The eleventh measure has a half note marked 'f'. The twelfth measure has a half note marked 'p'. The thirteenth measure has a half note marked 'f'. The fourteenth measure has a half note marked 'p'. The fifteenth measure has a half note marked 'f'. The sixteenth measure has a half note marked 'p'. The score is annotated with various performance instructions and dynamic markings.

Handwritten musical score for "The Sound of Silence" by Simon & Garfunkel. The score is written on a single staff with a treble clef and a key signature of one sharp (F#). It includes handwritten annotations such as "(106) IV\* -> VI", "(3)", "(IV) C", "pizz", "arco", "hair", "pp", "mp", and "3/4". A blue arrow points to measure 107 with the text "107 gran, loop". The score ends with a double bar line and a 3/4 time signature.

[illegible]



Handwritten musical score for a single melodic line. The score is written on a single staff with a treble clef. It begins with a circled number '118' and a blue arrow pointing down to the first measure, labeled '118 gran' and '(cl) sp (detaché)'. The first measure contains a series of eighth notes with a sharp sign. The second measure is a whole note with a sharp sign, labeled 'ord mv! hair' and 'sp cl'. The third measure is a half note with a sharp sign, labeled 'f' and 'pp'. The fourth measure is a half note with a sharp sign, labeled 'mp' and 'mf'. The fifth measure is a half note with a sharp sign, labeled 'pp'. The sixth measure is a half note with a sharp sign, labeled 'pp'. The seventh measure is a half note with a sharp sign, labeled 'pp'. The eighth measure is a half note with a sharp sign, labeled 'pp'. The ninth measure is a half note with a sharp sign, labeled 'pp'. The tenth measure is a half note with a sharp sign, labeled 'pp'. The eleventh measure is a half note with a sharp sign, labeled 'pp'. The twelfth measure is a half note with a sharp sign, labeled 'pp'. The thirteenth measure is a half note with a sharp sign, labeled 'pp'. The fourteenth measure is a half note with a sharp sign, labeled 'pp'. The fifteenth measure is a half note with a sharp sign, labeled 'pp'. The sixteenth measure is a half note with a sharp sign, labeled 'pp'. The seventeenth measure is a half note with a sharp sign, labeled 'pp'. The eighteenth measure is a half note with a sharp sign, labeled 'pp'. The nineteenth measure is a half note with a sharp sign, labeled 'pp'. The twentieth measure is a half note with a sharp sign, labeled 'pp'. The score ends with a double bar line.

[illegible]

Handwritten notes and markings on the musical score include:

- Tempo/Character:** *piv mosso* ( $\text{♩} = 76$ )
- Performance Instructions:** *suddenly pressing, nervous*, *broad, big*
- Measure Markings:** **124** (circled), **126** (with a blue arrow pointing to it)
- Dynamic Markings:** *f sub*, *pp*, *mp*, *f*
- Harmonic/Structural Markings:** *ord 8*, *IV+V:3*, *(S6)*, *5*, *IV-V:9*
- Other Markings:** *spe*, *hair*, *gran, loop*

- \* Where permutations are restated no attempt should be made to restart the sequence, rather, it should continue as if one long sequence, and any accents superimposed highlight mid-sequence notes

[illegible]

Handwritten musical score for "The Swan" by Camille Saint-Saëns, featuring a piano part with various annotations. The score is written on a single staff with a bass clef and a key signature of one flat (B-flat).

**Annotations:**

- Tempo/Beat Markings:**
  - meno mosso (♩=63)** (written above the staff, circled)
  - meno mosso (♩=54)** (written above the staff, circled)
- Measure Markers:**
  - (131)** (circled, at the beginning of the first measure)
  - 132 [1.04]** (written above the staff, with a blue arrow pointing to the measure)
  - (56)** (circled, at the beginning of the first measure)
  - (58)** (circled, at the beginning of the second measure)
- Performance Instructions:**
  - ff** (fortissimo, written below the staff)
  - staccato, broken** (written above the staff, indicating the style of the final figure)
  - sim. 2** (simile, written above the staff)
- Figural Analysis:**
  - 3=4= rough, biting** (written above the staff, indicating the character of the final figure)
  - 2=1=** (written above the staff, indicating the character of the final figure)
  - 4 3 1** (written above the staff, indicating the character of the final figure)
- Other Markings:**
  - 7** (written below the staff, indicating a seventh chord)
  - (ff) 7** (written below the staff, indicating a fortissimo seventh chord)

The score consists of a single staff with a bass clef and a key signature of one flat (B-flat). The tempo is marked "meno mosso" with a quarter note equal to 63 or 54 beats per minute. The score includes various performance instructions such as "ff" (fortissimo), "staccato, broken", and "sim. 2" (simile). The final figure is marked "3=4= rough, biting" and "2=1=".

(133) 4 2 3 1 3 4 1 2 1 2 4 3 1 3 2 4 3 2 1

ff

(136) 4 1 1 4 3 2 3 2 4 1 4 1 gliss

intense!  
piu mosso ( $\text{♩} = 63$ )  
(ord)  $\rightarrow$  sp  
V+VI:9 IV:V:8 V+VI:9

ff

f

(139) sim. (b) 140 loop sp  $\rightarrow$  ord

wild  
V:9 IV:8 pizz arco pizz

ff

f

(143) arco pizz arco arco [d] pizz arco

146 [2.03] V:5 (58) V+VI:5 (58) pizz arco

permutation rit. .... accel...

p sub  $\leftarrow$  f  $\rightarrow$  pf p

(149) [d] light V+VI:6

meno mosso ( $\text{♩} = 54$ ) nimble

max

ppp

p



(155)  $V:6(2,3,4)$   

(P) ppp

(159)  $V:6(2,3,4)$   

(P)  $\leftarrow$  mf pp p ppp

(162)  $f = \text{meno mosso}$   
 (4)  $(\text{♩} = 66)$  becoming threatening  

(pp)  $\leftarrow$  mp mf > p

(166)  $\frac{III}{IV}:5(2,3,4)$   

f p f >

(168)  $\frac{III}{IV}:5(2,3,4)$  pizz arco pizz  

P  $\leftarrow$  mf p

(172)  $\frac{IV}{V}:5$   

mp  $\leftarrow$  f mf pp

\* measured tremolo: each bow stroke corresponds to one permutation note.



$\text{♩} = \text{poco più mosso}$   
 $(\text{♩} = 48)$

(176)  $(\text{IV}+\text{V}:5)$   $\text{mp}$   $\text{mf}$   $\text{pp}$   $\text{IV}+\text{V}:5$  light, more even  $\text{III}+\text{IV}:3$  (56)  $\text{III}+\text{IV}:6$   $\text{III}$   $\text{III}+\text{IV}:3$  (56)  $\text{IV}:7$  (2,3,4)  $\text{III}+\text{IV}:6$

(179)  $\text{III}$   $\text{sim.}$   $\text{jeté}$   $\text{III}+\text{IV}:7$  [J.]  $\text{III}+\text{IV}:7$   $\text{III}+\text{IV}:7$   $(\text{III}+\text{IV}:3)$  (56)  $\text{IV}:7$  (2,3,4)

(183)  $(\text{III}:3)$  (56)  $\text{IV}$   $\text{III}$   $\text{IV}+\text{V}:2$  (57)  $(\text{nontrem!})$   $\text{V}+\text{VI}:5$  [J.]  $\text{mf}$   $\text{pp}$   $f$   $\text{sub}$

(186)  $\text{V}$   $\text{VI}:2$   $\text{V}+\text{VI}:9$  [J.]  $\text{V}+\text{VI}:2$  (57) [J.]  $\text{sim}$   $\text{V}+\text{VI}:5$   $(\text{nontrem!})$   $\text{V}+\text{VI}:9$  [J.]  $f > \text{pp}$

\* permutation gliss: 2 to 9

$\text{♩} = \text{♩} (\text{♩} = 72)$   $\text{sim}$   $(\text{pp})$   $\text{IV}+\text{V}:5$  (59) [J.]  $\text{IV}+\text{V}:5$  (59)  $\text{IV}+\text{V}:3$  (59)  $\text{pp}$

$\text{poco meno mosso} (\text{♩} = 66)$   
 suddenly scrambling  
 (nontrem!)

(190) [J.]  $\text{IV}+\text{V}:5$  (59) [J.]  $\text{IV}+\text{V}:5$  (59)  $\text{IV}+\text{V}:3$  (59)  $\text{pp}$

$f > 5$

(196) [J.]  $\text{big, broad}$   $\text{II}$   $\text{III}$   $\text{IV}$   $\text{V}$   $\text{VI}$   $\text{VII}$   $\text{VIII}$   $\text{sim}$   $\text{VI}:8$  (2,3,4)  $\text{pp}$   $\text{ff}$

$\text{200 loop}$   $(\text{sim})$   $\text{ff}$



Handwritten musical score for "L'Allegretto" by Beethoven, Op. 26, No. 2. The score is in 2/4 time and features a treble clef with a key signature of one sharp (F#). The tempo is marked "poco meno mosso" with a quarter note equal to 60 beats (♩ = 60). The score includes various musical notations such as notes, rests, and dynamic markings like "pp". Handwritten annotations include "sull tacto" above the first measure, "210 [2.05]" with a blue arrow pointing to the first measure, and "ord" above the final measure. The score is divided into measures by bar lines, with some measures containing multiple notes and rests.

Handwritten musical score for a piano piece, featuring a treble clef and a key signature of one flat (B-flat). The score is divided into measures by bar lines. Above the staff, there are handwritten annotations: "sul tasto" (pizzicato) above the first measure, "ord" (order) above the second measure, "sim." (simile) above the third measure, and "VI:7" (VI:7) above the fourth measure. The score includes various musical notations such as notes, rests, and dynamic markings like "Cresc." (Crescendo) and "sim." (simile). The piece concludes with a double bar line.



225 [1.07]  $\downarrow$  sim.  $\text{pp}$   $\text{Permutation gliss: } 5 \rightarrow 9$   $\text{poco meno mosso } (\text{♩} = 54)$   $\text{spe}$   $\text{IV+V:9}$   $\text{very light}$   $\text{*** Permutation continues over rests to end of bracket.}$

230 pizz  $\text{Bow down}$   $\text{still pressing IV+V:9}$   $\text{(pizz)}$   $\text{7}$

236  $\text{IV+V:9}$   $\text{IV+V:9}$   $\text{7}$

240  $\text{IV+V:9}$   $\text{III+IV:5 (S9)}$   $\text{* 4-finger pizz tremolo!}$   $\text{(sempre pp)}^7$   $\text{240 [2.06]} \nearrow$

243  $\text{III+IV:5 (S9)}$   $\text{7}$

246  $(\text{♩} = \text{♩} = 54)$   $\text{III+IV:3-7 III (S9)}$   $\text{sim}$   $\text{III (S9)}$   $\text{IV (S9)}$

(250)  $IV:3$   $III:3$   $VII:4$   $VI:4$   $VI+VII:4$   $VII$   $(\sharp \text{ } \text{ } )$   $(\text{ } \text{ } )$   $sim$   $[J]$

(255) *poco più mosso*  $(\text{ } = 60)$   $V+VI:9$   $V+VI:7$   $(\text{ } \text{ } )$   $(\text{ } \text{ } )$   $(pp)$

(262)  $III+IV:3$   $(S7)$   $III$   $IV$   $V$   $VI$   $III+IV:2$   $VI:8$  *sempre p*

(265)  $III+IV:2$   $VI:8$   $VI+VII:5$   $VI+VII:6$   $266$   $loop$   $[1.08]$   $wild!$   $ff$

(269)  $III+IV:9$   $(S6)$   $V+VI:6$   $I$   $II$   $III$   $IV$   $1$   $2$   $III+IV:10$   $(S10)$   $III+IV:1$   $I$   $II$   $III$   $IV$   $1$   $ff$   $pp$   $ff$   $p$   $ff$

(273) *sympathetic strings*  $f$   $VI:9$   $(f)$   $IV+V:5$   $(S9)$   $V+VI:3$   $(S9)$   $wild, explosive$   $III$   $IV$   $V$   $VI$   $4$   $3$   $2$   $1$   $4$   $3$   $2$   $1$   $ff$



Handwritten musical notation for measures 276-281. The notation includes various fingerings (e.g., 4 3 2 1, 1 2, 1 2 3, 1 2 3 4) and a circled measure number 6. The key signature is B-flat major (two flats).

Handwritten musical notation for measures 279-282. Measure 279 is marked with a tempo of  $\text{♩} = 60$  and a dynamic of  $(ff)$ . Measure 282 is marked with a tempo of  $\text{♩} = 60$  and a dynamic of  $f$  *sempre*. The notation includes various fingerings and a circled measure number 7. The key signature is B-flat major.

Handwritten musical notation for measures 284-289. Measure 284 is marked with a tempo of  $\text{♩} = 100$  and a dynamic of  $gran <$ . The notation includes various fingerings and a circled measure number 11. The key signature is B-flat major.

Handwritten musical notation for measures 289-296. Measure 289 is marked with a tempo of  $\text{♩} = 100$ . The notation includes various fingerings and a circled measure number 11. The key signature is B-flat major.

Handwritten musical notation for measures 293-297. Measure 293 is marked with a tempo of  $\text{♩} = 100$ . Measure 297 is marked with a tempo of  $\text{♩} = 100$  and a dynamic of  $sim$ . The notation includes various fingerings and a circled measure number 11. The key signature is B-flat major.











(359) (sp) VI:12 [J] winding down  
 \*full flageolet fingering (pp)  
 361 [2.10]  
 3  
 sim

(365) meno mosso (♩ = 60)  
 spe (♩) III+IV:2 (S7)  
 III+IV:12 (notrem)  
 V+VI:10 (S7) (no trem)

\*\*\* permutation: max speed  
 tremolo: unmeasured  
 III+IV:12 373 [1.13]  
 V+VI:10 (S7) ♩ = ♩ = 60  
 III+IV:10 (S7)  
 5

(377) IV+V:3 (S7) IV+V:7  
 5 5 5 5

(383) III+IV:11 (S7) CODA light, simple, mantra-like  
 (♩ = ♩ = 60) sempre sul tasto  
 VII [J] (pp)

(388) 389 [2.11] gran > loop >  
 VI

(395) mv  
 mp \* a little more full-voiced but always whispery  
 pp

(402) V mv  
 (pp) 403 [1.14]  
 mp

Handwritten musical score in bass clef, 6/8 time signature, featuring various dynamics and articulations.

**Measure 409:**  $pp$   $mv$   $(pp)$

**Measure 415:**  $loop$   $loop < ppp$   $mp$   $pp$   $mp$   $pp$

**Measure 421:**  $mp$   $pp$   $(pp)$   $(pp)$

**Measure 426:**  $VI$   $mp$

**Measure 432:**  $loop >$   $pp$   $VII$   $mp$

**Measure 438:**  $(pp)$   $mp$   $pp$





Appendix A

7 orderings of 1 transposition on string VI

ordering 1

Ordering 1 musical notation (first three staves).

ordering 2

Ordering 2 musical notation (first three staves).

ordering 3

Ordering 3 musical notation (first three staves).

ordering 4

Ordering 4 musical notation (first three staves).

ordering 5

Ordering 5 musical notation (first two staves).

Musical staff 1: Bass clef, 3/4 time signature. The staff contains a sequence of eighth notes with the following fingering: 1, 4, 2, 3, 4, 1, 2, 3, 2, 4, 3, 1, 3, 1, 2, 4.

ordering 6

Musical staff 2: Bass clef, 3/4 time signature. The staff contains a sequence of eighth notes with the following fingering: 3, 1, 4, 2, 4, 3, 2, 1, 3, 4, 2, 1, 2, 1, 4, 3, 2, 3, 4, 1, 3, 1, 4, 2, 1, 4, 3, 2, 1, 4, 3, 2, 4, 1, 2, 3, 2, 4, 1, 3.

Musical staff 3: Bass clef, 3/4 time signature. The staff contains a sequence of eighth notes with the following fingering: 2, 1, 3, 4, 3, 4, 1, 2, 1, 2, 4, 3, 1, 3, 2, 4, 1, 2, 3, 4, 2, 3, 1, 4, 3, 4, 1, 2, 4, 2, 3, 1, 4, 4, 1, 2, 3, 2, 3, 4, 1.

Musical staff 4: Bass clef, 3/4 time signature. The staff contains a sequence of eighth notes with the following fingering: 3, 2, 1, 4, 2, 4, 1, 3, 1, 3, 2, 4, 1, 3, 2, 4, 2, 3, 2, 4, 2, 4, 1, 3, 2, 4, 2, 4, 3, 1.

ordering 7

Musical staff 5: Bass clef, 3/4 time signature. The staff contains a sequence of eighth notes with the following fingering: 3, 1, 4, 2, 3, 4, 1, 2, 3, 2, 1, 4, 1, 4, 3, 2, 1, 4, 2, 3, 4, 2, 1, 3, 2, 4, 1, 3, 2, 4, 1, 3, 4, 2, 3, 4, 2, 3, 1, 4.

Musical staff 6: Bass clef, 3/4 time signature. The staff contains a sequence of eighth notes with the following fingering: 1, 4, 2, 3, 1, 2, 3, 4, 3, 4, 1, 2, 1, 4, 3, 2, 4, 3, 2, 1, 4, 3, 2, 1, 2, 3, 4, 1, 2, 1, 4, 3, 2, 1, 3, 4, 2, 1, 3, 4, 2, 3, 1, 4.

Musical staff 7: Bass clef, 3/4 time signature. The staff contains a sequence of eighth notes with the following fingering: 3, 1, 2, 4, 2, 1, 3, 4, 3, 2, 4, 1, 3, 2, 1, 4, 3, 2, 4.

Appendix B

1 ordering on 12 transpositions on string I

string I position 1 ordering 1

string I position 2 ordering 1

string I position 3 ordering 1

string I position 4 ordering 1

string I position 5 ordering 1

string I position 6 ordering 1

Detailed description: The image displays a series of musical exercises for string I, organized into six groups based on string position (1 through 6). Each group is titled 'string I position [number] ordering 1'. Each group contains four staves of music, each staff showing 12 transpositions of a specific interval pattern. The notation includes various accidentals (sharps, flats, naturals) and fingering numbers (1, 2, 3, 4) above the notes. The exercises are presented in a systematic, ascending and then descending manner across the staves.

string I position 7 ordering 1

string I position 8 ordering 1

string I position 9 ordering 1

string I position 10 ordering 1

string I position 11 ordering 1

string I position 12 ordering 1

The image displays a musical score for a string instrument, specifically for the first string (string I) in position 12. The score is organized into six horizontal staves, each containing a series of musical notes. The notes are primarily eighth and sixteenth notes, often beamed together in groups. Above many of the notes are small numbers (1, 2, 3, 4) indicating fingerings. Various accidentals (sharps, flats, naturals) are used throughout the score. The notation is written on a five-line staff with a treble clef. The first five staves are filled with continuous musical notation, while the sixth staff at the bottom shows a few notes followed by a long rest, indicating the end of the exercise or a pause.

1 ordering on 12 transpositions on string II

string II position 1 ordering 1

string II position 2 ordering 1

string II position 3 ordering 1

string II position 4 ordering 1

string II position 5 ordering 1

string II position 6 ordering 1

string II position 7 ordering 1

string II position 8 ordering 1

Measures 1-4 of the first system, showing string II position 8 ordering 1. The notes are: G4 (2), A4 (4), B4 (3), C5 (1), D5 (4), E5 (1), F5 (2), G5 (3), A5 (4), B5 (1), C6 (2), D6 (1), E6 (3), F6 (4), G6 (2), A6 (1), B6 (3), C7 (4), D7 (2), E7 (1), F7 (3), G7 (4), A7 (2).

Measures 5-8 of the first system, showing string II position 8 ordering 1. The notes are: B6 (3), C7 (1), D7 (2), E7 (4), F7 (2), G7 (1), A7 (4), B7 (3), C8 (4), D8 (2), E8 (1), F8 (3), G8 (4), A8 (2), B8 (1), C9 (3), D9 (4), E9 (2), F9 (1), G9 (3), A9 (4), B9 (2), C10 (1).

Measures 9-12 of the first system, showing string II position 8 ordering 1. The notes are: D10 (2), E10 (3), F10 (1), G10 (4), A10 (3), B10 (2), C11 (4), D11 (1), E11 (2), F11 (4), G11 (3), A11 (1), B11 (2), C12 (4), D12 (1), E12 (2), F12 (4), G12 (3), A12 (1), B12 (2), C13 (4), D13 (1), E13 (2), F13 (4).

Measures 13-16 of the first system, showing string II position 8 ordering 1. The notes are: G12 (2), A12 (4), B12 (3), C13 (1), D13 (4), E13 (1), F13 (2), G13 (3), A13 (4), B13 (1), C14 (2), D14 (1), E14 (3), F14 (4), G14 (2), A14 (1), B14 (3), C15 (4), D15 (2), E15 (1), F15 (3), G15 (4), A15 (2).

Measures 17-20 of the first system, showing string II position 8 ordering 1. The notes are: B14 (3), C15 (1), D15 (2), E15 (4), F15 (2), G15 (1), A15 (4), B15 (3), C16 (4), D16 (2), E16 (1), F16 (3), G16 (4), A16 (2), B16 (1), C17 (3), D17 (4), E17 (2), F17 (1), G17 (3), A17 (4), B17 (2), C18 (1).

string II position 9 ordering 1

Measures 1-4 of the second system, showing string II position 9 ordering 1. The notes are: G4 (2), A4 (3), B4 (1), C5 (4), D5 (3), E5 (2), F5 (4), G5 (1), A5 (3), B5 (2), C6 (4), D6 (3), E6 (1), F6 (4), G6 (2), A6 (1), B6 (3), C7 (4), D7 (2), E7 (1), F7 (3), G7 (4), A7 (2).

Measures 5-8 of the second system, showing string II position 9 ordering 1. The notes are: B6 (3), C7 (1), D7 (2), E7 (4), F7 (2), G7 (1), A7 (4), B7 (3), C8 (4), D8 (2), E8 (1), F8 (3), G8 (4), A8 (2), B8 (1), C9 (3), D9 (4), E9 (2), F9 (1), G9 (3), A9 (4), B9 (2), C10 (1).

Measures 9-12 of the second system, showing string II position 9 ordering 1. The notes are: D10 (2), E10 (3), F10 (1), G10 (4), A10 (3), B10 (2), C11 (4), D11 (1), E11 (2), F11 (4), G11 (3), A11 (1), B11 (2), C12 (4), D12 (1), E12 (2), F12 (4), G12 (3), A12 (1), B12 (2), C13 (4), D13 (1), E13 (2), F13 (4).

Measures 13-16 of the second system, showing string II position 9 ordering 1. The notes are: G12 (2), A12 (4), B12 (3), C13 (1), D13 (4), E13 (1), F13 (2), G13 (3), A13 (4), B13 (1), C14 (2), D14 (1), E14 (3), F14 (4), G14 (2), A14 (1), B14 (3), C15 (4), D15 (2), E15 (1), F15 (3), G15 (4), A15 (2).

Measures 17-20 of the second system, showing string II position 9 ordering 1. The notes are: B14 (3), C15 (1), D15 (2), E15 (4), F15 (2), G15 (1), A15 (4), B15 (3), C16 (4), D16 (2), E16 (1), F16 (3), G16 (4), A16 (2), B16 (1), C17 (3), D17 (4), E17 (2), F17 (1), G17 (3), A17 (4), B17 (2), C18 (1).

string II position 10 ordering 1

Measures 1-4 of the third system, showing string II position 10 ordering 1. The notes are: G4 (2), A4 (3), B4 (1), C5 (4), D5 (3), E5 (2), F5 (4), G5 (1), A5 (3), B5 (2), C6 (4), D6 (3), E6 (1), F6 (4), G6 (2), A6 (1), B6 (3), C7 (4), D7 (2), E7 (1), F7 (3), G7 (4), A7 (2).

Measures 5-8 of the third system, showing string II position 10 ordering 1. The notes are: B6 (3), C7 (1), D7 (2), E7 (4), F7 (2), G7 (1), A7 (4), B7 (3), C8 (4), D8 (2), E8 (1), F8 (3), G8 (4), A8 (2), B8 (1), C9 (3), D9 (4), E9 (2), F9 (1), G9 (3), A9 (4), B9 (2), C10 (1).

Measures 9-12 of the third system, showing string II position 10 ordering 1. The notes are: D10 (2), E10 (3), F10 (1), G10 (4), A10 (3), B10 (2), C11 (4), D11 (1), E11 (2), F11 (4), G11 (3), A11 (1), B11 (2), C12 (4), D12 (1), E12 (2), F12 (4), G12 (3), A12 (1), B12 (2), C13 (4), D13 (1), E13 (2), F13 (4).

Measures 13-16 of the third system, showing string II position 10 ordering 1. The notes are: G12 (2), A12 (4), B12 (3), C13 (1), D13 (4), E13 (1), F13 (2), G13 (3), A13 (4), B13 (1), C14 (2), D14 (1), E14 (3), F14 (4), G14 (2), A14 (1), B14 (3), C15 (4), D15 (2), E15 (1), F15 (3), G15 (4), A15 (2).

Measures 17-20 of the third system, showing string II position 10 ordering 1. The notes are: B14 (3), C15 (1), D15 (2), E15 (4), F15 (2), G15 (1), A15 (4), B15 (3), C16 (4), D16 (2), E16 (1), F16 (3), G16 (4), A16 (2), B16 (1), C17 (3), D17 (4), E17 (2), F17 (1), G17 (3), A17 (4), B17 (2), C18 (1).

string II position 11 ordering 1

Measures 1-4 of the fourth system, showing string II position 11 ordering 1. The notes are: G4 (2), A4 (3), B4 (1), C5 (4), D5 (3), E5 (2), F5 (4), G5 (1), A5 (3), B5 (2), C6 (4), D6 (3), E6 (1), F6 (4), G6 (2), A6 (1), B6 (3), C7 (4), D7 (2), E7 (1), F7 (3), G7 (4), A7 (2).

The image displays two staves of musical notation, each featuring a series of eighth notes with specific fingerings indicated by numbers 1 through 4. The notes are primarily G#4 and A#4, with some flats and naturals. The first staff contains 16 measures, and the second staff contains 16 measures. The notation is written in a style that suggests a specific musical context, possibly a technical exercise or a short piece. The fingerings are carefully placed above each note to guide the performer.



# 1 ordering on 12 transpositions on string III

string III position 1 ordering 1

2 3 1 4 3 2 4 1 3 1 2 4 1 2 4 3 1 4 3 2 3 1 4 2 1 2 3 4 2 1 3 4 2 4 3 1 4 1 2 3 4 1 3 2 4 2 1 3

2 3 4 1 2 4 1 3 2 3 1 4 1 3 4 2 3 1 2 4 2 1 4 3 4 3 1 2 3 4 2 1 4 1 2 3 4 2 3 1 4 3 1 2 4 3 2 1

string III position 2 ordering 1

2 3 1 4 3 2 4 1 3 1 2 4 1 2 4 3 1 4 3 2 3 1 4 2 1 2 3 4 2 1 3 4 2 4 3 1 4 1 2 3 4 1 3 2 4 2 1 3

2 3 4 1 2 4 1 3 2 3 1 4 1 3 4 2 3 1 2 4 2 1 4 3 4 3 1 2 3 4 2 1 4 1 2 3 4 2 3 1 4 3 1 2 4 3 2 1

string III position 3 ordering 1

2 3 1 4 3 2 4 1 3 3 1 2 4 1 2 4 3 1 4 3 2 3 1 4 2 1 2 3 4 2 1 3 4 2 4 3 1 4 1 2 3 4 1 3 2 4 2 1 3

2 3 4 1 2 4 1 3 2 3 1 4 1 3 4 2 3 1 2 4 2 1 4 3 4 3 1 2 3 4 2 1 4 1 2 3 4 2 3 1 4 3 1 2 4 3 2 1

string III position 4 ordering 1

2 3 1 4 3 2 4 1 3 3 1 2 4 1 2 4 3 1 4 3 2 3 1 4 2 1 2 3 4 2 1 3 4 2 4 3 1 4 1 2 3 4 1 3 2 4 2 1 3

2 3 4 1 2 4 1 3 2 3 1 4 1 3 4 2 3 1 2 4 2 1 4 3 4 3 1 2 3 4 2 1 4 1 2 3 4 2 3 1 4 3 1 2 4 3 2 1

string III position 5 ordering 1

2 3 1 4 3 2 4 1 3 3 1 2 4 1 2 4 3 1 4 3 2 3 1 4 2 1 2 3 4 2 1 3 4 2 4 3 1 4 1 2 3 4 1 3 2 4 2 1 3

2 3 4 1 2 4 1 3 2 3 1 4 1 3 4 2 3 1 2 4 2 1 4 3 4 3 1 2 3 4 2 1 4 1 2 3 4 2 3 1 4 3 1 2 4 3 2 1

string III position 6 ordering 1

2 3 1 4 3 2 4 1 3 3 1 2 4 1 2 4 3 1 4 3 2 3 1 4 2 1 2 3 4 2 1 3 4 2 4 3 1 4 1 2 3 4 1 3 2 4 2 1 3

4 1 3 2 4 1 3 2 3 1 4 2 1 3 4 2 1 4 3 1 2 3 4 2 1 4 1 2 3 4 2 3 1 4 3 1 2 4 3 2 1

string III position 7 ordering 1

4 1 3 2 4 1 3 2 3 1 4 2 1 3 4 2 1 4 3 1 2 3 4 2 1 4 1 2 3 4 2 3 1 4 3 1 2 4 3 2 1

1 2 3 4 2 1 3 4 2 1 3 4 2 1 3 4 2 1 3 4 2 1 3 4 2 1 3 4 2 1 3 4 2 1 3 4 2 1 3 4 2 1 3 4 2 1 3 4 2 1

string III position 8 ordering 1

string III position 9 ordering 1

string III position 10 ordering 1

string III position 11 ordering 1

string III position 12 ordering 1

# 1 ordering on 12 transpositions on string IV

string IV position 1 ordering 1

Measures 1-4 of string IV position 1 ordering 1. The staff shows a sequence of notes with fingerings: 2 3 1 4, 3 2 4 1, 3 1 2 4, 1 2 4 3.

Measures 5-8 of string IV position 1 ordering 1. The staff shows a sequence of notes with fingerings: 4 1 3 2, 4 2 1 3, 2 3 4 1, 2 4 1 3.

string IV position 2 ordering 1

Measures 1-4 of string IV position 2 ordering 1. The staff shows a sequence of notes with fingerings: 4 1 2 3, 4 2 3 1, 4 3 1 2, 2 3 1 4.

Measures 5-8 of string IV position 2 ordering 1. The staff shows a sequence of notes with fingerings: 4 3 2 1, 3 1 2 4, 3 2 4 1, 2 3 4 1.

string IV position 3 ordering 1

Measures 1-4 of string IV position 3 ordering 1. The staff shows a sequence of notes with fingerings: 3 1 2 4, 2 1 4 3, 4 3 1 2, 4 2 3 1.

Measures 5-8 of string IV position 3 ordering 1. The staff shows a sequence of notes with fingerings: 4 3 1 2, 4 3 2 1, 2 4 3 1, 4 1 2 3.

Measures 9-12 of string IV position 3 ordering 1. The staff shows a sequence of notes with fingerings: 2 4 3 1, 4 2 3 1, 4 1 2 3, 4 2 3 1.

string IV position 4 ordering 1

Measures 1-4 of string IV position 4 ordering 1. The staff shows a sequence of notes with fingerings: 4 3 1 2, 4 3 2 1, 2 3 1 4, 3 2 4 1.

Measures 5-8 of string IV position 4 ordering 1. The staff shows a sequence of notes with fingerings: 3 1 2 4, 1 2 4 3, 1 4 3 2, 3 1 4 2.

Measures 9-12 of string IV position 4 ordering 1. The staff shows a sequence of notes with fingerings: 1 2 3 4, 2 1 3 4, 2 4 3 1, 4 1 2 3.

Measures 13-16 of string IV position 4 ordering 1. The staff shows a sequence of notes with fingerings: 4 1 3 2, 4 2 1 3, 2 3 4 1, 2 4 1 3.

string IV position 5 ordering 1

Measures 1-4 of string IV position 5 ordering 1. The staff shows a sequence of notes with fingerings: 4 3 1 2, 4 3 2 1, 2 3 1 4, 3 2 4 1.

Measures 5-8 of string IV position 5 ordering 1. The staff shows a sequence of notes with fingerings: 3 1 2 4, 1 2 4 3, 1 4 3 2, 3 1 4 2.

Measures 9-12 of string IV position 5 ordering 1. The staff shows a sequence of notes with fingerings: 1 2 3 4, 2 1 3 4, 2 4 3 1, 4 1 2 3.

Measures 13-16 of string IV position 5 ordering 1. The staff shows a sequence of notes with fingerings: 4 1 2 3, 4 2 3 1, 4 1 2 3, 4 2 3 1.

string IV position 6 ordering 1

Measures 1-4 of string IV position 6 ordering 1. The staff shows a sequence of notes with fingerings: 4 3 1 2, 4 3 2 1, 2 3 1 4, 3 2 4 1.

Measures 5-8 of string IV position 6 ordering 1. The staff shows a sequence of notes with fingerings: 3 1 2 4, 1 2 4 3, 1 4 3 2, 3 1 4 2.

Measures 9-12 of string IV position 6 ordering 1. The staff shows a sequence of notes with fingerings: 1 2 3 4, 2 1 3 4, 2 4 3 1, 4 1 2 3.

Measures 13-16 of string IV position 6 ordering 1. The staff shows a sequence of notes with fingerings: 4 1 2 3, 4 2 3 1, 4 1 2 3, 4 2 3 1.

string IV position 7 ordering 1

Measures 1-4 of string IV position 7 ordering 1. The staff shows a sequence of notes with fingerings: 4 3 1 2, 4 3 2 1, 2 3 1 4, 3 2 4 1.

Measures 5-8 of string IV position 7 ordering 1. The staff shows a sequence of notes with fingerings: 3 1 2 4, 1 2 4 3, 1 4 3 2, 3 1 4 2.

Measures 9-12 of string IV position 7 ordering 1. The staff shows a sequence of notes with fingerings: 1 2 3 4, 2 1 3 4, 2 4 3 1, 4 1 2 3.

Measures 13-16 of string IV position 7 ordering 1. The staff shows a sequence of notes with fingerings: 4 1 2 3, 4 2 3 1, 4 1 2 3, 4 2 3 1.

Musical staff 1: Treble clef, key signature of one sharp (F#). The staff contains a sequence of eighth notes with fingerings: 4, 1, 3, 2, 4, 2, 1, 3, 2, 3, 4, 1, 2, 4, 1, 3, 2, 3, 1, 4, 1, 3, 4, 2, 3, 1, 2, 4, 2, 3, 4, 2, 1, 4, 1, 2, 3, 4, 2, 3, 1, 4, 2, 3, 1.

string IV position 8 ordering 1

Musical staff 2: Treble clef, key signature of one sharp (F#). The staff contains a sequence of eighth notes with fingerings: 4, 3, 1, 2, 4, 3, 2, 1, 2, 3, 1, 4, 3, 2, 4, 1, 3, 1, 2, 4, 1, 2, 4, 3, 1, 4, 3, 2, 3, 1, 4, 2, 1, 2, 3, 4, 2, 1, 3, 4, 2, 4, 3, 1, 4, 1, 2, 3.

Musical staff 3: Treble clef, key signature of one sharp (F#). The staff contains a sequence of eighth notes with fingerings: 4, 1, 3, 2, 4, 2, 1, 3, 2, 3, 4, 1, 2, 4, 1, 3, 2, 3, 1, 4, 1, 3, 4, 2, 3, 1, 2, 4, 2, 3, 4, 2, 1, 4, 1, 2, 3, 4, 2, 3, 1, 4, 2, 3, 1.

string IV position 9 ordering 1

Musical staff 4: Treble clef, key signature of one sharp (F#). The staff contains a sequence of eighth notes with fingerings: 4, 3, 1, 2, 4, 3, 2, 1, 2, 3, 1, 4, 3, 2, 4, 1, 3, 1, 2, 4, 1, 2, 4, 3, 1, 4, 3, 2, 3, 1, 4, 2, 1, 2, 3, 4, 2, 1, 3, 4, 2, 4, 3, 1, 4, 1, 2, 3.

Musical staff 5: Treble clef, key signature of one sharp (F#). The staff contains a sequence of eighth notes with fingerings: 2, 4, 3, 1, 2, 4, 3, 2, 1, 2, 3, 1, 4, 3, 2, 4, 1, 3, 1, 2, 4, 1, 2, 4, 3, 1, 4, 3, 2, 3, 1, 4, 2, 1, 2, 3, 4, 2, 1, 3, 4, 2, 4, 3, 1, 4, 1, 2, 3.

string IV position 10 ordering 1

Musical staff 6: Treble clef, key signature of one sharp (F#). The staff contains a sequence of eighth notes with fingerings: 4, 3, 1, 2, 4, 3, 2, 1, 2, 3, 1, 4, 3, 2, 4, 1, 3, 1, 2, 4, 1, 2, 4, 3, 1, 4, 3, 2, 3, 1, 4, 2, 1, 2, 3, 4, 2, 1, 3, 4, 2, 4, 3, 1, 4, 1, 2, 3.

Musical staff 7: Treble clef, key signature of one sharp (F#). The staff contains a sequence of eighth notes with fingerings: 1, 4, 3, 2, 3, 1, 4, 2, 1, 2, 3, 4, 2, 1, 3, 4, 2, 4, 3, 1, 4, 1, 2, 3, 4, 2, 4, 3, 1, 4, 1, 2, 3, 4, 2, 1, 3, 4, 2, 4, 3, 1, 4, 1, 2, 3.

string IV position 11 ordering 1

Musical staff 8: Treble clef, key signature of one sharp (F#). The staff contains a sequence of eighth notes with fingerings: 3, 1, 2, 4, 2, 1, 4, 3, 4, 3, 1, 2, 3, 4, 2, 1, 4, 1, 2, 3, 4, 2, 3, 1, 4, 3, 2, 4, 3, 1, 4, 2, 3, 4, 2, 1, 4, 3, 2, 4, 3, 1, 4, 1, 2, 3.

Musical staff 9: Treble clef, key signature of one sharp (F#). The staff contains a sequence of eighth notes with fingerings: 3, 1, 2, 4, 1, 2, 4, 3, 1, 4, 3, 2, 1, 4, 3, 2, 1, 4, 3, 2, 1, 4, 3, 2, 1, 4, 3, 2, 1, 4, 3, 2, 1, 4, 3, 2, 1, 4, 3, 2, 1, 4, 3, 2, 1, 4, 3, 2, 1.

Musical staff 10: Treble clef, key signature of one sharp (F#). The staff contains a sequence of eighth notes with fingerings: 2, 3, 4, 1, 2, 4, 1, 3, 2, 3, 1, 4, 1, 3, 4, 2, 3, 1, 4, 1, 3, 4, 2, 3, 1, 4, 1, 3, 4, 2, 3, 1, 4, 1, 3, 4, 2, 3, 1, 4, 1, 3, 4, 2, 3, 1, 4, 1, 3, 4.

string IV position 12 ordering 1

Musical staff 11: Treble clef, key signature of one sharp (F#). The staff contains a sequence of eighth notes with fingerings: 4, 3, 1, 2, 4, 3, 2, 1, 2, 3, 1, 4, 3, 2, 4, 1, 3, 1, 2, 4, 1, 2, 4, 3, 1, 4, 3, 2, 3, 1, 4, 2, 1, 2, 3, 4, 2, 1, 3, 4, 2, 4, 3, 1, 4, 1, 2, 3.

Musical staff 12: Treble clef, key signature of one sharp (F#). The staff contains a sequence of eighth notes with fingerings: 1, 2, 3, 4, 2, 1, 3, 4, 2, 4, 3, 1, 4, 1, 3, 4, 2, 3, 1, 4, 1, 3, 4, 2, 3, 1, 4, 1, 3, 4, 2, 3, 1, 4, 1, 3, 4, 2, 3, 1, 4, 1, 3, 4, 2, 3, 1, 4, 1, 3, 4.

Musical staff 13: Treble clef, key signature of one sharp (F#). The staff contains a sequence of eighth notes with fingerings: 2, 3, 1, 4, 1, 3, 4, 2, 3, 1, 4, 2, 3, 1, 4, 2, 3, 1, 4, 2, 3, 1, 4, 2, 3, 1, 4, 2, 3, 1, 4, 2, 3, 1, 4, 2, 3, 1, 4, 2, 3, 1, 4, 2, 3, 1, 4, 2, 3, 1.

Musical staff 14: Treble clef, key signature of one sharp (F#). The staff contains a sequence of eighth notes with fingerings: 4, 3, 1, 2, 4, 3, 2, 1, 2, 3, 1, 4, 3, 2, 4, 1, 3, 1, 2, 4, 1, 2, 4, 3, 1, 4, 3, 2, 3, 1, 4, 2, 1, 2, 3, 4, 2, 1, 3, 4, 2, 4, 3, 1, 4, 1, 2, 3.

# 1 ordering on 12 transpositions on string V

string V position 1 ordering 1

string V position 2 ordering 1

string V position 3 ordering 1

string V position 4 ordering 1

string V position 5 ordering 1

string V position 6 ordering 1

The image displays a musical score for string V, organized into six systems, each representing a different playing position (1 through 6). Each system contains four staves, each with a sequence of 12 transpositions. The notes are written in treble clef with various accidentals (sharps, flats, naturals). Below each note, a number (1, 2, 3, or 4) indicates the recommended fingering for that specific note and position. The systems are labeled 'string V position 1 ordering 1' through 'string V position 6 ordering 1'. The notation is consistent across all systems, showing a systematic approach to fingering across different positions and transpositions.

The musical notation for the 'Fingering' section is written on a single staff. It consists of a continuous sequence of eighth notes across 20 measures. The notes are: G4, A4, B4, C5, B4, A4, G4, F#4, E4, D4, C4, B3, A3, G3, F#3, E3, D3, C3, B2, A2. The fingering numbers (1-4) are written below the notes: 2, 3, 1, 4, 1, 3, 4, 2, 3, 1, 2, 4, 2, 1, 4, 3, 4, 3, 1, 2, 3, 4, 2, 1, 4, 1, 2, 3, 4, 2, 3, 1, 4, 3, 1, 2, 4, 3, 2, 1.

string V position 7 ordering 1

2 3 1 4 3 2 4 1 3 1 2 4 1 2 4 3 1 4 3 2 3 1 4 2 1 2 3 4 2 1 3 4 2 4 3 1 4 1 2 3 4 1 3 2 4 2 1 3

string V position 8 ordering 1

The 'Fingering' exercise is a single melodic line on a treble clef staff. It consists of 36 notes, grouped into 12 measures of 3 notes each. The notes are: G4, A4, B4, C5, D5, E5, F5, G5, A5, B5, C6, D6, E6, F6, G6, A6, B6, C7, D7, E7, F7, G7, A7, B7, C8, D8, E8, F8, G8, A8, B8, C9, D9, E9, F9, G9, A9, B9, C10, D10, E10, F11, G11, A11, B11, C12, D12, E12, F13, G13, A13, B13, C14, D14, E14, F15, G15, A15, B15, C16, D16, E16, F17, G17, A17, B17, C18, D18, E18, F19, G19, A19, B19, C20, D20, E20, F21, G21, A21, B21, C22, D22, E22, F23, G23, A23, B23, C24, D24, E24, F25, G25, A25, B25, C26, D26, E26, F27, G27, A27, B27, C28, D28, E28, F29, G29, A29, B29, C30, D30, E30, F31, G31, A31, B31, C32, D32, E32, F33, G33, A33, B33, C34, D34, E34, F35, G35, A35, B35, C36, D36, E36, F37, G37, A37, B37, C38, D38, E38, F39, G39, A39, B39, C40, D40, E40, F41, G41, A41, B41, C42, D42, E42, F43, G43, A43, B43, C44, D44, E44, F45, G45, A45, B45, C46, D46, E46, F47, G47, A47, B47, C48, D48, E48, F49, G49, A49, B49, C50, D50, E50, F51, G51, A51, B51, C52, D52, E52, F53, G53, A53, B53, C54, D54, E54, F55, G55, A55, B55, C56, D56, E56, F57, G57, A57, B57, C58, D58, E58, F59, G59, A59, B59, C60, D60, E60, F61, G61, A61, B61, C62, D62, E62, F63, G63, A63, B63, C64, D64, E64, F65, G65, A65, B65, C66, D66, E66, F67, G67, A67, B67, C68, D68, E68, F69, G69, A69, B69, C70, D70, E70, F71, G71, A71, B71, C72, D72, E72, F73, G73, A73, B73, C74, D74, E74, F75, G75, A75, B75, C76, D76, E76, F77, G77, A77, B77, C78, D78, E78, F79, G79, A79, B79, C80, D80, E80, F81, G81, A81, B81, C82, D82, E82, F83, G83, A83, B83, C84, D84, E84, F85, G85, A85, B85, C86, D86, E86, F87, G87, A87, B87, C88, D88, E88, F89, G89, A89, B89, C90, D90, E90, F91, G91, A91, B91, C92, D92, E92, F93, G93, A93, B93, C94, D94, E94, F95, G95, A95, B95, C96, D96, E96, F97, G97, A97, B97, C98, D98, E98, F99, G99, A99, B99, C100, D100, E100, F101, G101, A101, B101, C102, D102, E102, F103, G103, A103, B103, C104, D104, E104, F105, G105, A105, B105, C106, D106, E106, F107, G107, A107, B107, C108, D108, E108, F109, G109, A109, B109, C110, D110, E110, F111, G111, A111, B111, C112, D112, E112, F113, G113, A113, B113, C114, D114, E114, F115, G115, A115, B115, C116, D116, E116, F117, G117, A117, B117, C118, D118, E118, F119, G119, A119, B119, C120, D120, E120, F121, G121, A121, B121, C122, D122, E122, F123, G123, A123, B123, C124, D124, E124, F125, G125, A125, B125, C126, D126, E126, F127, G127, A127, B127, C128, D128, E128, F129, G129, A129, B129, C130, D130, E130, F131, G131, A131, B131, C132, D132, E132, F133, G133, A133, B133, C134, D134, E134, F135, G135, A135, B135, C136, D136, E136, F137, G137, A137, B137, C138, D138, E138, F139, G139, A139, B139, C140, D140, E140, F141, G141, A141, B141, C142, D142, E142, F143, G143, A143, B143, C144, D144, E144, F145, G145, A145, B145, C146, D146, E146, F147, G147, A147, B147, C148, D148, E148, F149, G149, A149, B149, C150, D150, E150, F151, G151, A151, B151, C152, D152, E152, F153, G153, A153, B153, C154, D154, E154, F155, G155, A155, B155, C156, D156, E156, F157, G157, A157, B157, C158, D158, E158, F159, G159, A159, B159, C160, D160, E160, F161, G161, A161, B161, C162, D162, E162, F163, G163, A163, B163, C164, D164, E164, F165, G165, A165, B165, C166, D166, E166, F167, G167, A167, B167, C168, D168, E168, F169, G169, A169, B169, C170, D170, E170, F171, G171, A171, B171, C172, D172, E172, F173, G173, A173, B173, C174, D174, E174, F175, G175, A175, B175, C176, D176, E176, F177, G177, A177, B177, C178, D178, E178, F179, G179, A179, B179, C180, D180, E180, F181, G181, A181, B181, C182, D182, E182, F183, G183, A183, B183, C184, D184, E184, F185, G185, A185, B185, C186, D186, E186, F187, G187, A187, B187, C188, D188, E188, F189, G189, A189, B189, C190, D190, E190, F191, G191, A191, B191, C192, D192, E192, F193, G193, A193, B193, C194, D194, E194, F195, G195, A195, B195, C196, D196, E196, F197, G197, A197, B197, C198, D198, E198, F199, G199, A199, B199, C200, D200, E200, F201, G201, A201, B201, C202, D202, E202, F203, G203, A203, B203, C204, D204, E204, F205, G205, A205, B205, C206, D206, E206, F207, G207, A207, B207, C208, D208, E208, F209, G209, A209, B209, C210, D210, E210, F211, G211, A211, B211, C212, D212, E212, F213, G213, A213, B213, C214, D214, E214, F215, G215, A215, B215, C216, D216, E216, F217, G217, A217, B217, C218, D218, E218, F219, G219, A219, B219, C220, D220, E220, F221, G221, A221, B221, C222, D222, E222, F223, G223, A223, B223, C224, D224, E224, F225, G225, A225, B225, C226, D226, E226, F227, G227, A227, B227, C228, D228, E228, F229, G229, A229, B229, C230, D230, E230, F231, G231, A231, B231, C232, D232, E232, F233, G233, A233, B233, C234, D234, E234, F235, G235, A235, B235, C236, D236, E236, F237, G237, A237, B237, C238, D238, E238, F239, G239, A239, B239, C240, D240, E240, F241, G241, A241, B241, C242, D242, E242, F243, G243, A243, B243, C244, D244, E244, F245, G245, A245, B245, C246, D246, E246, F247, G247, A247, B247, C248, D248, E248, F249, G249, A249, B249, C250, D250, E250, F251

The 'Fingering' exercise is a single melodic line on a treble clef staff. It consists of 48 notes, grouped into 12 measures of 4 notes each. The notes are: G4, A4, B4, C5 (first measure); A4, B4, C5, D5 (second); B4, A4, G4, F#4 (third); F#4, G4, A4, B4 (fourth); C5, B4, A4, G4 (fifth); G4, F#4, E4, D4 (sixth); C4, B3, A3, G3 (seventh); F#3, E3, D3, C3 (eighth); B2, A2, G2, F#2 (ninth); E2, D2, C2, B1 (tenth); A1, G1, F1, E1 (eleventh); D1, C1, B0, A0 (twelfth). Fingerings are indicated by numbers 1-4 above the notes: 2 3 4 1, 2 4 1 3, 2 3 1 4, 1 3 4 2, 3 1 2 4, 2 1 4 3, 4 3 1 2, 2 3 4 2, 1 4 1 2, 3 4 2 3, 1 4 3 1, 4 3 1 2, 2 4 3 2, 1.

string V position 9 ordering 1

string V position 10 ordering 1

The first staff of the exercise is written on a treble clef. It contains a sequence of chords and intervals, each with a specific fingering indicated by numbers 1-4. The sequence is as follows:   
 1. Chord: F#4, A3, C#4 (Fingering: 2, 3, 1)   
 2. Chord: G#4, B3, D#4 (Fingering: 4, 3, 2)   
 3. Chord: A#4, C#5, E4 (Fingering: 4, 1, 2)   
 4. Chord: B#4, D#5, F#4 (Fingering: 4, 3, 1)   
 5. Chord: C#5, E5, G#4 (Fingering: 4, 2, 3)   
 6. Chord: D#5, F#5, A#4 (Fingering: 4, 1, 2)   
 7. Chord: E5, G#5, B#4 (Fingering: 4, 3, 1)   
 8. Chord: F#5, A#5, C#5 (Fingering: 4, 2, 3)   
 9. Chord: G#5, B#5, D#5 (Fingering: 4, 1, 2)   
 10. Chord: A#5, C#6, E5 (Fingering: 4, 3, 1)   
 11. Chord: B#5, D#6, F#5 (Fingering: 4, 2, 3)   
 12. Chord: C#6, E6, G#5 (Fingering: 4, 1, 2)   
 13. Chord: D#6, F#6, A#5 (Fingering: 4, 3, 1)   
 14. Chord: E6, G#6, B#5 (Fingering: 4, 2, 3)   
 15. Chord: F#6, A#6, C#6 (Fingering: 4, 1, 2)   
 16. Chord: G#6, B#6, D#6 (Fingering: 4, 3, 1)   
 17. Chord: A#6, C#7, E6 (Fingering: 4, 2, 3)   
 18. Chord: B#6, D#7, F#6 (Fingering: 4, 1, 2)   
 19. Chord: C#7, E7, G#6 (Fingering: 4, 3, 1)   
 20. Chord: D#7, F#7, A#6 (Fingering: 4, 2, 3)   
 21. Chord: E7, G#7, B#6 (Fingering: 4, 1, 2)   
 22. Chord: F#7, A#7, C#7 (Fingering: 4, 3, 1)   
 23. Chord: G#7, B#7, D#7 (Fingering: 4, 2, 3)   
 24. Chord: A#7, C#8, E7 (Fingering: 4, 1, 2)   
 25. Chord: B#7, D#8, F#7 (Fingering: 4, 3, 1)   
 26. Chord: C#8, E8, G#7 (Fingering: 4, 2, 3)   
 27. Chord: D#8, F#8, A#7 (Fingering: 4, 1, 2)   
 28. Chord: E8, G#8, B#7 (Fingering: 4, 3, 1)   
 29. Chord: F#8, A#8, C#8 (Fingering: 4, 2, 3)   
 30. Chord: G#8, B#8, D#8 (Fingering: 4, 1, 2)   
 31. Chord: A#8, C#9, E8 (Fingering: 4, 3, 1)   
 32. Chord: B#8, D#9, F#8 (Fingering: 4, 2, 3)   
 33. Chord: C#9, E9, G#8 (Fingering: 4, 1, 2)   
 34. Chord: D#9, F#9, A#8 (Fingering: 4, 3, 1)   
 35. Chord: E9, G#9, B#8 (Fingering: 4, 2, 3)   
 36. Chord: F#9, A#9, C#9 (Fingering: 4, 1, 2)   
 37. Chord: G#9, B#9, D#9 (Fingering: 4, 3, 1)   
 38. Chord: A#9, C#10, E9 (Fingering: 4, 2, 3)   
 39. Chord: B#9, D#10, F#9 (Fingering: 4, 1, 2)   
 40. Chord: C#10, E10, G#9 (Fingering: 4, 3, 1)   
 41. Chord: D#10, F#10, A#9 (Fingering: 4, 2, 3)   
 42. Chord: E10, G#10, B#9 (Fingering: 4, 1, 2)   
 43. Chord: F#10, A#10, C#10 (Fingering: 4, 3, 1)   
 44. Chord: G#10, B#10, D#10 (Fingering: 4, 2, 3)   
 45. Chord: A#10, C#11, E10 (Fingering: 4, 1, 2)   
 46. Chord: B#10, D#11, F#10 (Fingering: 4, 3, 1)   
 47. Chord: C#11, E11, G#10 (Fingering: 4, 2, 3)   
 48. Chord: D#11, F#11, A#10 (Fingering: 4, 1, 2)   
 49. Chord: E11, G#11, B#10 (Fingering: 4, 3, 1)   
 50. Chord: F#11, A#11, C#11 (Fingering: 4, 2, 3)   
 51. Chord: G#11, B#11, D#11 (Fingering: 4, 1, 2)   
 52. Chord: A#11, C#12, E11 (Fingering: 4, 3, 1)   
 53. Chord: B#11, D#12, F#11 (Fingering: 4, 2, 3)   
 54. Chord: C#12, E12, G#11 (Fingering: 4, 1, 2)   
 55. Chord: D#12, F#12, A#11 (Fingering: 4, 3, 1)   
 56. Chord: E12, G#12, B#11 (Fingering: 4, 2, 3)   
 57. Chord: F#12, A#12, C#12 (Fingering: 4, 1, 2)   
 58. Chord: G#12, B#12, D#12 (Fingering: 4, 3, 1)   
 59. Chord: A#12, C#13, E12 (Fingering: 4, 2, 3)   
 60. Chord: B#12, D#13, F#12 (Fingering: 4, 1, 2)   
 61. Chord: C#13, E13, G#12 (Fingering: 4, 3, 1)   
 62. Chord: D#13, F#13, A#12 (Fingering: 4, 2, 3)   
 63. Chord: E13, G#13, B#12 (Fingering: 4, 1, 2)   
 64. Chord: F#13, A#13, C#13 (Fingering: 4, 3, 1)   
 65. Chord: G#13, B#13, D#13 (Fingering: 4, 2, 3)   
 66. Chord: A#13, C#14, E13 (Fingering: 4, 1, 2)   
 67. Chord: B#13, D#14, F#13 (Fingering: 4, 3, 1)   
 68. Chord: C#14, E14, G#13 (Fingering: 4, 2, 3)   
 69. Chord: D#14, F#14, A#13 (Fingering: 4, 1, 2)   
 70. Chord: E14, G#14, B#13 (Fingering: 4, 3, 1)   
 71. Chord: F#14, A#14, C#14 (Fingering: 4, 2, 3)   
 72. Chord: G#14, B#14, D#14 (Fingering: 4, 1, 2)   
 73. Chord: A#14, C#15, E14 (Fingering: 4, 3, 1)   
 74. Chord: B#14, D#15, F#14 (Fingering: 4, 2, 3)   
 75. Chord: C#15, E15, G#14 (Fingering: 4, 1, 2)   
 76. Chord: D#15, F#15, A#14 (Fingering: 4, 3, 1)   
 77. Chord: E15, G#15, B#14 (Fingering: 4, 2, 3)   
 78. Chord: F#15, A#15, C#15 (Fingering: 4, 1, 2)   
 79. Chord: G#15, B#15, D#15 (Fingering: 4, 3, 1)   
 80. Chord: A#15, C#16, E15 (Fingering: 4, 2, 3)   
 81. Chord: B#15, D#16, F#15 (Fingering: 4, 1, 2)   
 82. Chord: C#16, E16, G#15 (Fingering: 4, 3, 1)   
 83. Chord: D#16, F#16, A#15 (Fingering: 4, 2, 3)   
 84. Chord: E16, G#16, B#15 (Fingering: 4, 1, 2)   
 85. Chord: F#16, A#16, C#16 (Fingering: 4, 3, 1)   
 86. Chord: G#16, B#16, D#16 (Fingering: 4, 2, 3)   
 87. Chord: A#16, C#17, E16 (Fingering: 4, 1, 2)   
 88. Chord: B#16, D#17, F#16 (Fingering: 4, 3, 1)   
 89. Chord: C#17, E17, G#16 (Fingering: 4, 2, 3)   
 90. Chord: D#17, F#17, A#16 (Fingering: 4, 1, 2)   
 91. Chord: E17, G#17, B#16 (Fingering: 4, 3, 1)   
 92. Chord: F#17, A#17, C#17 (Fingering: 4, 2, 3)   
 93. Chord: G#17, B#17, D#17 (Fingering: 4, 1, 2)   
 94. Chord: A#17, C#18, E17 (Fingering: 4, 3, 1)   
 95. Chord: B#17, D#18, F#17 (Fingering: 4, 2, 3)   
 96. Chord: C#18, E18, G#17 (Fingering: 4, 1, 2)   
 97. Chord: D#18, F#18, A#17 (Fingering: 4, 3, 1)   
 98. Chord: E18, G#18, B#17 (Fingering: 4, 2, 3)   
 99. Chord: F#18, A#18, C#18 (Fingering: 4, 1, 2)   
 100. Chord: G#18, B#18, D#18 (Fingering: 4, 3, 1)   
 101. Chord: A#18, C#19, E18 (Fingering: 4, 2, 3)   
 102. Chord: B#18, D#19, F#18 (Fingering: 4, 1, 2)   
 103. Chord: C#19, E19, G#18 (Fingering: 4, 3, 1)   
 104. Chord: D#19, F#19, A#18 (Fingering: 4, 2, 3)   
 105. Chord: E19, G#19, B#18 (Fingering:

string V position 11 ordering 1

string V position 12 ordering 1

[illegible]

# 1 ordering on 12 transpositions on string VI

string VI position 1 ordering 1

Two staves of music in 3/4 time, starting on a C-clef. The first staff contains 12 measures of eighth-note patterns with fingerings: 2, 3, 1, 4, 3, 2, 4, 1, 3, 2, 4, 3. The second staff contains 12 measures with fingerings: 4, 1, 3, 2, 4, 2, 1, 3, 4, 3, 2, 1.

string VI position 2 ordering 1

Two staves of music in 3/4 time, starting on a C-clef. The first staff contains 12 measures with fingerings: 4, 1, 2, 3, 4, 2, 3, 1, 4, 3, 2, 1. The second staff contains 12 measures with fingerings: 1, 2, 3, 4, 2, 1, 3, 4, 2, 3, 1, 4.

string VI position 3 ordering 1

Two staves of music in 3/4 time, starting on a C-clef. The first staff contains 12 measures with fingerings: 3, 1, 2, 4, 2, 1, 4, 3, 4, 3, 1, 2. The second staff contains 12 measures with fingerings: 1, 4, 3, 2, 3, 1, 4, 2, 1, 2, 3, 4.

Two staves of music in 3/4 time, starting on a C-clef. The first staff contains 12 measures with fingerings: 2, 3, 4, 1, 2, 4, 1, 3, 2, 3, 1, 4. The second staff contains 12 measures with fingerings: 4, 3, 1, 2, 3, 4, 2, 1, 4, 3, 2, 1.

string VI position 4 ordering 1

Two staves of music in 3/4 time, starting on a C-clef. The first staff contains 12 measures with fingerings: 4, 3, 1, 2, 4, 3, 2, 1, 2, 3, 1, 4. The second staff contains 12 measures with fingerings: 3, 1, 2, 4, 1, 2, 4, 3, 1, 4, 3, 2.

string VI position 5 ordering 1

Two staves of music in 3/4 time, starting on a C-clef. The first staff contains 12 measures with fingerings: 4, 3, 1, 2, 4, 3, 2, 1, 2, 3, 1, 4. The second staff contains 12 measures with fingerings: 4, 1, 3, 2, 4, 2, 1, 3, 2, 3, 1, 4.

string VI position 6 ordering 1

Two staves of music in 3/4 time, starting on a C-clef. The first staff contains 12 measures with fingerings: 4, 3, 1, 2, 4, 3, 2, 1, 2, 3, 1, 4. The second staff contains 12 measures with fingerings: 4, 1, 3, 2, 4, 2, 1, 3, 2, 3, 1, 4.

string VI position 7 ordering 1

Two staves of music in 3/4 time, starting on a C-clef. The first staff contains 12 measures with fingerings: 4, 3, 1, 2, 4, 3, 2, 1, 2, 3, 1, 4. The second staff contains 12 measures with fingerings: 4, 1, 3, 2, 4, 2, 1, 3, 2, 3, 1, 4.



[illegible]

string VI position 8 ordering 1

The bass line of 'The Rose Tree' is written on a single staff with a bass clef. The key signature has one flat (B-flat). The melody consists of a series of eighth and sixteenth notes, often beamed together. Fingerings are indicated by numbers 1-4 above the notes. The rhythm is consistent with the 16-measure structure described in the text.

string VI position 9 ordering 1

The bass line of 'The Rose Tree' is written on a single staff in 2/4 time. It begins with a treble clef and a key signature of one flat (B-flat). The melody consists of a series of eighth and sixteenth notes, often beamed together. Fingerings are indicated by numbers 1 through 4 above the notes. The piece concludes with a final double bar line.

string VI position 10 ordering 1

The bass line of 'The Rose Tree' is written in 2/4 time. It consists of a single melodic line on a five-line staff. The key signature has one flat (B-flat). The melody is composed of eighth and sixteenth notes, with some measures containing beamed sixteenth notes. The melody is as follows: (Measure 1) B4, A4, G4, F4, E4, D4, C4, B3; (Measure 2) A3, G3, F3, E3, D3, C3, B2, A2; (Measure 3) G2, F2, E2, D2, C2, B1, A1, G1; (Measure 4) F1, E1, D1, C1, B0, A0, G0, F0; (Measure 5) E0, D0, C0, B0, A0, G0, F0, E0; (Measure 6) D0, C0, B0, A0, G0, F0, E0, D0; (Measure 7) C0, B0, A0, G0, F0, E0, D0, C0; (Measure 8) B0, A0, G0, F0, E0, D0, C0, B0; (Measure 9) A0, G0, F0, E0, D0, C0, B0, A0; (Measure 10) G0, F0, E0, D0, C0, B0, A0, G0; (Measure 11) F0, E0, D0, C0, B0, A0, G0, F0; (Measure 12) E0, D0, C0, B0, A0, G0, F0, E0; (Measure 13) D0, C0, B0, A0, G0, F0, E0, D0; (Measure 14) C0, B0, A0, G0, F0, E0, D0, C0; (Measure 15) B0, A0, G0, F0, E0, D0, C0, B0; (Measure 16) A0, G0, F0, E0, D0, C0, B0, A0; (Measure 17) G0, F0, E0, D0, C0, B0, A0, G0; (Measure 18) F0, E0, D0, C0, B0, A0, G0, F0; (Measure 19) E0, D0, C0, B0, A0, G0, F0, E0; (Measure 20) D0, C0, B0, A0, G0, F0, E0, D0; (Measure 21) C0, B0, A0, G0, F0, E0, D0, C0; (Measure 22) B0, A0, G0, F0, E0, D0, C0, B0; (Measure 23) A0, G0, F0, E0, D0, C0, B0, A0; (Measure 24) G0, F0, E0, D0, C0, B0, A0, G0; (Measure 25) F0, E0, D0, C0, B0, A0, G0, F0; (Measure 26) E0, D0, C0, B0, A0, G0, F0, E0; (Measure 27) D0, C0, B0, A0, G0, F0, E0, D0; (Measure 28) C0, B0, A0, G0, F0, E0, D0, C0; (Measure 29) B0, A0, G0, F0, E0, D0, C0, B0; (Measure 30) A0, G0, F0, E0, D0, C0, B0, A0; (Measure 31) G0, F0, E0, D0, C0, B0, A0, G0; (Measure 32) F0, E0, D0, C0, B0, A0, G0, F0; (Measure 33) E0, D0, C0, B0, A0, G0, F0, E0; (Measure 34) D0, C0, B0, A0, G0, F0, E0, D0; (Measure 35) C0, B0, A0, G0, F0, E0, D0, C0; (Measure 36) B0, A0, G0, F0, E0, D0, C0, B0; (Measure 37) A0, G0, F0, E0, D0, C0, B0, A0; (Measure 38) G0, F0, E0, D0, C0, B0, A0, G0; (Measure 39) F0, E0, D0, C0, B0, A0, G0, F0; (Measure 40) E0, D0, C0, B0, A0, G0, F0, E0; (Measure 41) D0, C0, B0, A0, G0, F0, E0, D0; (Measure 42) C0, B0, A0, G0, F0, E0, D0, C0; (Measure 43) B0, A0, G0, F0, E0, D0, C0, B0; (Measure 44) A0, G0, F0, E0, D0, C0, B0, A0; (Measure 45) G0, F0, E0, D0, C0, B0, A0, G0; (Measure 46) F0, E0, D0, C0, B0, A0, G0, F0; (Measure 47) E0, D0, C0, B0, A0, G0, F0, E0; (Measure 48) D0, C0, B0, A0, G0, F0, E0, D0; (Measure 49) C0, B0, A0, G0, F0, E0, D0, C0; (Measure 50) B0, A0, G0, F0, E0, D0, C0, B0; (Measure 51) A0, G0, F0, E0, D0, C0, B0, A0; (Measure 52) G0, F0, E0, D0, C0, B0, A0, G0; (Measure 53) F0, E0, D0, C0, B0, A0, G0, F0; (Measure 54) E0, D0, C0, B0, A0, G0, F0, E0; (Measure 55) D0, C0, B0, A0, G0, F0, E0, D0; (Measure 56) C0, B0, A0, G0, F0, E0, D0, C0; (Measure 57) B0, A0, G0, F0, E0, D0, C0, B0; (Measure 58) A0, G0, F0, E0, D0, C0, B0, A0; (Measure 59) G0, F0, E0, D0, C0, B0, A0, G0; (Measure 60) F0, E0, D0, C0, B0, A0, G0, F0; (Measure 61) E0, D0, C0, B0, A0, G0, F0, E0; (Measure 62) D0, C0, B0, A0, G0, F0, E0, D0; (Measure 63) C0, B0, A0, G0, F0, E0, D0, C0; (Measure 64) B0, A0, G0, F0, E0, D0, C0, B0; (Measure 65) A0, G0, F0, E0, D0, C0, B0, A0; (Measure 66) G0, F0, E0, D0, C0, B0, A0, G0; (Measure 67) F0, E0, D0, C0, B0, A0, G0, F0; (Measure 68) E0, D0, C0, B0, A0, G0, F0, E0; (Measure 69) D0, C0, B0, A0, G0, F0, E0, D0; (Measure 70) C0, B0, A0, G0, F0, E0, D0, C0; (Measure 71) B0, A0, G0, F0, E0, D0, C0, B0; (Measure 72) A0, G0, F0, E0, D0, C0, B0, A0; (Measure 73) G0, F0, E0, D0, C0, B0, A0, G0; (Measure 74) F0, E0, D0, C0, B0, A0, G0, F0; (Measure 75) E0, D0, C0, B0, A0, G0, F0, E0; (Measure 76) D0, C0, B0, A0, G0, F0, E0, D0; (Measure 77) C0, B0, A0, G0, F0, E0, D0, C0; (Measure 78) B0, A0, G0, F0, E0, D0, C0, B0; (Measure 79) A0, G0, F0, E0, D0, C0, B0, A0; (Measure 80) G0, F0, E0, D0, C0, B0, A0, G0; (Measure 81) F0, E0, D0, C0, B0, A0, G0, F0; (Measure 82) E0, D0, C0, B0, A0, G0, F0, E0; (Measure 83) D0, C0, B0, A0, G0, F0, E0, D0; (Measure 84) C0, B0, A0, G0, F0, E0, D0, C0; (Measure 85) B0, A0, G0, F0, E0, D0, C0, B0; (Measure 86) A0, G0, F0, E0, D0, C0, B0, A0; (Measure 87) G0, F0, E0, D0, C0, B0, A0, G0; (Measure 88) F0, E0, D0, C0, B0, A0, G0, F0; (Measure 89) E0, D0, C0, B0, A0, G0, F0, E0; (Measure 90) D0, C0, B0, A0, G0, F0, E0, D0; (Measure 91) C0, B0, A0, G0, F0, E0, D0, C0; (Measure 92) B0, A0, G0, F0, E0, D0, C0, B0; (Measure 93) A0, G0, F0, E0, D0, C0, B0, A0; (Measure 94) G0, F0, E0, D0, C0, B0, A0, G0; (Measure 95) F0, E0, D0, C0, B0, A0, G0, F0; (Measure 96) E0, D0, C0, B0, A0, G0, F0, E0; (Measure 97) D0, C0, B0, A0, G0, F0, E0, D0; (Measure 98) C0, B0, A0, G0, F0, E0, D0, C0; (Measure 99) B0, A0, G0, F0, E0, D0, C0, B0; (Measure 100) A0, G0, F0, E0, D0, C0, B0, A0; (Measure 101) G0, F0, E0, D0, C0, B0, A0, G0; (Measure 102) F0, E0, D0, C0, B0, A0, G0, F0; (Measure 103) E0, D0, C0, B0, A0, G0, F0, E0; (Measure 104) D0, C0, B0, A0, G0, F0, E0, D0; (Measure 105) C0, B0, A0, G0, F0, E0, D0, C0; (Measure 106) B0, A0, G0, F0, E0, D0, C0, B0; (Measure 107) A0, G0, F0, E0, D0, C0, B0, A0; (Measure 108) G0, F0, E0, D0, C0, B0, A0, G0; (Measure 109) F0, E0, D0, C0, B0, A0, G0, F0; (Measure 110) E0, D0, C0, B0, A0, G0, F0, E0; (Measure 111) D0, C0, B0, A0, G0, F0, E0, D0; (Measure 112) C0, B0, A0, G0, F0, E0, D0, C0; (Measure 113) B0, A0, G0, F0, E0, D0, C0, B0; (Measure 114) A0, G0, F0, E0, D0, C0, B0, A0; (Measure 115) G0, F0, E0, D0, C0, B0, A0, G0; (Measure 116) F0, E0, D0, C0, B0, A0, G0, F0; (Measure 117) E0, D0, C0, B0, A0, G0, F0, E0; (Measure 118) D0, C0, B0, A0, G0, F0, E0, D0; (Measure 119) C0, B0, A0, G0, F0, E0, D0, C0; (Measure 120) B0, A0, G0, F0, E0, D0, C0, B0; (Measure 121) A0, G0, F0, E0, D0, C0, B0, A0; (Measure 122) G0, F0, E0, D0, C0, B0, A0, G0; (Measure 123) F0, E0, D0, C0, B0, A0, G0, F0; (Measure 124) E0, D0, C0, B0, A0, G0, F0, E0; (Measure 125) D0, C0, B0, A0, G0, F0, E0, D0; (Measure 126) C0, B0, A0, G0, F0, E0, D0, C0; (Measure 127) B0, A0, G0, F0, E0, D0, C0, B0; (Measure 128) A0, G0, F0, E0, D0, C0, B0, A0; (Measure 129) G0, F0, E0, D0, C0, B0, A0, G0; (Measure 130) F0, E0, D0, C0, B0, A0, G0, F0; (Measure 131) E0, D0, C0, B0, A0, G0, F0, E0; (Measure 132) D0, C0, B0, A0, G0, F0, E0, D0; (Measure 133) C0, B0, A0, G0, F0, E

[illegible]

string VI position 11 ordering 1

string VI position 12 ordering 1

The bass line of 'The Rose Tree' is written on a single staff with a bass clef. It consists of 16 measures, each containing a triplet of eighth notes. The notes are: G2, A2, B2 (first measure); A2, B2, C3 (second measure); B2, A2, G2 (third measure); G2, F2, E2 (fourth measure); D2, C2, B1 (fifth measure); A1, G1, F1 (sixth measure); E1, D1, C1 (seventh measure); B1, A1, G1 (eighth measure); F1, E1, D1 (ninth measure); C1, B1, A1 (tenth measure); G1, F1, E1 (eleventh measure); D1, C1, B1 (twelfth measure); A1, G1, F1 (thirteenth measure); E1, D1, C1 (fourteenth measure); B1, A1, G1 (fifteenth measure); and A1, G1, F1 (sixteenth measure). The notes are written on the lines and spaces of the bass staff, with some notes on ledger lines below the staff.

The 'Fingering' section of the 'Piano' part shows a sequence of chords and single notes across 16 measures. The notes are numbered 1 through 4 to indicate fingerings. The sequence of notes is: G4, A4, B4, C5, B4, A4, G4, F#4, E4, D4, C4, B3, A3, G3, F#3, E3, D3, C3, B2, A2, G2, F#2, E2, D2, C2, B1, A1, G1, F#1, E1, D1, C1, B0, A0, G0, F#0, E0, D0, C0, B-1, A-1, G-1, F#-1, E-1, D-1, C-1, B-2, A-2, G-2, F#-2, E-2, D-2, C-2, B-3, A-3, G-3, F#-3, E-3, D-3, C-3, B-4, A-4, G-4, F#-4, E-4, D-4, C-4, B-5, A-5, G-5, F#-5, E-5, D-5, C-5, B-6, A-6, G-6, F#-6, E-6, D-6, C-6, B-7, A-7, G-7, F#-7, E-7, D-7, C-7, B-8, A-8, G-8, F#-8, E-8, D-8, C-8, B-9, A-9, G-9, F#-9, E-9, D-9, C-9, B-10, A-10, G-10, F#-10, E-10, D-10, C-10, B-11, A-11, G-11, F#-11, E-11, D-11, C-11, B-12, A-12, G-12, F#-12, E-12, D-12, C-12, B-13, A-13, G-13, F#-13, E-13, D-13, C-13, B-14, A-14, G-14, F#-14, E-14, D-14, C-14, B-15, A-15, G-15, F#-15, E-15, D-15, C-15, B-16, A-16, G-16, F#-16, E-16, D-16, C-16, B-17, A-17, G-17, F#-17, E-17, D-17, C-17, B-18, A-18, G-18, F#-18, E-18, D-18, C-18, B-19, A-19, G-19, F#-19, E-19, D-19, C-19, B-20, A-20, G-20, F#-20, E-20, D-20, C-20, B-21, A-21, G-21, F#-21, E-21, D-21, C-21, B-22, A-22, G-22, F#-22, E-22, D-22, C-22, B-23, A-23, G-23, F#-23, E-23, D-23, C-23, B-24, A-24, G-24, F#-24, E-24, D-24, C-24, B-25, A-25, G-25, F#-25, E-25, D-25, C-25, B-26, A-26, G-26, F#-26, E-26, D-26, C-26, B-27, A-27, G-27, F#-27, E-27, D-27, C-27, B-28, A-28, G-28, F#-28, E-28, D-28, C-28, B-29, A-29, G-29, F#-29, E-29, D-29, C-29, B-30, A-30, G-30, F#-30, E-30, D-30, C-30, B-31, A-31, G-31, F#-31, E-31, D-31, C-31, B-32, A-32, G-32, F#-32, E-32, D-32, C-32, B-33, A-33, G-33, F#-33, E-33, D-33, C-33, B-34, A-34, G-34, F#-34, E-34, D-34, C-34, B-35, A-35, G-35, F#-35, E-35, D-35, C-35, B-36, A-36, G-36, F#-36, E-36, D-36, C-36, B-37, A-37, G-37, F#-37, E-37, D-37, C-37, B-38, A-38, G-38, F#-38, E-38, D-38, C-38, B-39, A-39, G-39, F#-39, E-39, D-39, C-39, B-40, A-40, G-40, F#-40, E-40, D-40, C-40, B-41, A-41, G-41, F#-41, E-41, D-41, C-41, B-42, A-42, G-42, F#-42, E-42, D-42, C-42, B-43, A-43, G-43, F#-43, E-43, D-43, C-43, B-44, A-44, G-44, F#-44, E-44, D-44, C-44, B-45, A-45, G-45, F#-45, E-45, D-45, C-45, B-46, A-46, G-46, F#-46, E-46, D-46, C-46, B-47, A-47, G-47, F#-47, E-47, D-47, C-47, B-48, A-48, G-48, F#-48, E-48, D-48, C-48, B-49, A-49, G-49, F#-49, E-49, D-49, C-49, B-50, A-50, G-50, F#-50, E-50, D-50, C-50, B-51, A-51, G-51, F#-51, E-51, D-51, C-51, B-52, A-52, G-52, F#-52, E-52, D-52, C-52, B-53, A-53, G-53, F#-53, E-53, D-53, C-53, B-54, A-54, G-54, F#-54, E-54, D-54, C-54, B-55, A-55, G-55, F#-55, E-55, D-55, C-55, B-56, A-56, G-56, F#-56, E-56, D-56, C-56, B-57, A-57, G-57, F#-57, E-57, D-57, C-57, B-58, A-58, G-58, F#-58, E-58, D-58, C-58, B-59, A-59, G-59, F#-59, E-59, D-59, C-59, B-60, A-60, G-60, F#-60, E-60, D-60, C-60, B-61, A-61, G-61, F#-61, E-61, D-61, C-61, B-62, A-62, G-62, F#-62, E-62, D-62, C-62, B-63, A-63, G-63, F#-63, E-63, D-63, C-63, B-64, A-64, G-64, F#-64, E-64, D-64, C-64, B-65, A-65, G-65, F#-65, E-65, D-65, C-65, B-66, A-66, G-66, F#-66, E-66, D-66, C-66, B-67, A-67, G-67, F#-67, E-67, D-67, C-67, B-68, A-68, G-68, F#-68, E-68, D-68, C-68, B-69, A-69, G-69, F#-69, E-69, D-69, C-69, B-70, A-70, G-70, F#-70, E-70, D-70, C-70, B-71, A-71, G-71, F#-71, E-71, D-71, C-71, B-72, A-72, G-72, F#-72, E-72, D-72, C-72, B-73, A-73, G-73, F#-73, E-73, D-73, C-73, B-74, A-74, G-74, F#-74, E-74, D-74, C-74, B-75, A-75, G-75, F#-75, E-75, D-75, C-75, B-76, A-76, G-76, F#-76, E-76, D-76, C-76, B-77, A-77, G-77, F#-77, E-77, D-77, C-77, B-78, A-78, G-78, F#-78, E-78, D-78, C-78, B-79, A-79, G-79, F#-79, E-79, D-79, C-79, B-80, A-80, G-80, F#-80, E-80, D-80, C-80, B-81, A-81, G-81, F#-81, E-81, D-81, C-81, B-82, A-82, G-82, F#-82, E-82, D-82, C-82, B-83, A-83, G-83, F#-83, E-83, D-83, C-83, B-84, A-84, G-84, F#-84, E-84, D-84, C-84, B-85, A-85, G-85, F#-85, E-85, D-85, C-85, B-86, A-86, G-86, F#-86, E-86, D-86, C-86, B-87, A-87, G-87, F#-87, E-87, D-87, C-87, B-88, A-88, G-88, F#-88, E-88, D-88, C-88, B-89, A-89, G-89, F#-89, E-89, D-89, C-89, B-90, A-90, G-90, F#-90, E-90, D-90, C-90, B-91, A-91, G-91, F#-91, E-91, D-91, C-91, B-92, A-92, G-92, F#-92, E-92, D-92, C-92, B-93, A-93, G-93, F#-93, E-93, D-93, C-93, B-94, A-94, G-94, F#-94, E-94, D-94, C-94, B-95, A-95, G-95, F#-95, E-95, D-95, C-95, B-96, A-96, G-96, F#-96, E-96, D-96, C-96, B-97, A-97, G-97, F#-97, E-97, D-97, C-97, B-98, A-98, G-98, F#-98, E-98, D-98, C-98, B-99, A-99, G-99, F#-99, E-99, D-99, C-99, B-100, A-100, G-100, F#-100, E-100, D-100, C-100, B-101, A-101, G-101, F#-101, E-101, D-101, C-101, B-102, A-102, G-102, F#-102, E-102, D-102, C-102, B-103, A-103, G-103, F#-103, E-103, D-103, C-103, B-104, A-104, G-104, F#-104, E-104, D-104, C-104, B-105, A-105, G-105, F#-105, E-105, D-105, C-105, B-106, A-106, G-106, F#-106, E-106, D-106, C-106, B-107, A-107, G-107, F#-107, E-107, D-107, C-107, B-108, A-108, G-108, F#-108, E-108, D-108, C-108, B-109,

The first system of the musical score for 'The Rose Tree' is written in G major (one sharp, F#) and 2/4 time. It consists of two staves. The upper staff contains the melody, which begins with a quarter note G4, followed by eighth notes A4 and B4, and then a quarter note C5. This is followed by a series of eighth-note chords: G4-A4, G4-B4, and G4-C5. The lower staff provides a harmonic accompaniment, starting with a half note G3, followed by a half note C4, and then a series of eighth-note chords: G3-A3, G3-B3, and G3-C4. The system concludes with a final chord of G3-A3-B3-C4.





