

Michael Maierhof




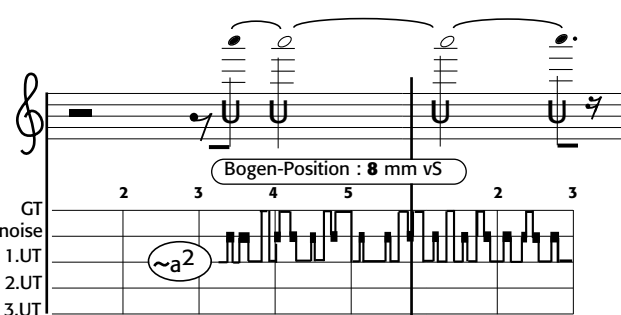
Untertonquartett 1

für Streichquartett (2006-2008)

Untertontechnik/ Undertone Technique

sound demo: vl : tr.20

Bogengeschwindigkeit
bow velocity: 7 cm / 



Bogen-Position : 8 mm vS

GT
noise
1.UT
2.UT
3.UT

Bogengeschwindigkeit: 7 cm pro Viertel und
Bogenposition: 8 mm (meint: zwischen Steg und der vorderen Bogenhaarkante gibt es einen freien Saitenabschnitt von 8 mm) vom Steg ("vS") streichen.

bow velocity 7 cm per beat and
bow position: 8 mm from the bridge ("vS")

"GT"=gegriffener Ton, der Grundton.

"GT"=Grundton, i.e. fingerposition on the string

a^2 =Tonhöhe ungefähr zweigestrichenes a/Intonation der Untertöne hängt von Bogenposition ab, je näher am Steg, desto sauberer ist die Unter-Oktave, je weiter desto kleiner.

In der Regel sind die Untertonintervalle eher zu klein, Abstand Unteroktave zu Unteroktave plus Quint ist meinst ein Tritonus.

a^2 = A5 pitch, intonation of the undertones depends on the position of the bow, closer to the bridge you get closer to the perfect octave, far from the bridge the underoctave gets smaller.

Zur Charakterisierung der Untertonqualitäten liegt für die meisten Klänge eine sound demo- CD der Partitur bei./ For further characterisation use the sound-demo CD, which comes with the score.

pitch indication:

c^2 = C5

c^1 = C4

c klein=C3

c groß=C2

c kontra=C1

c subkontra=C0

Untertöne:

Notiert ist im oberen System die von dem Finger abzugreifende Tonhöhe

Die anderen Saiten sollten möglichst **abgedämpft** werden.

Im unteren System sind die anzuspielenden Untertöne (UT) notiert, die Unteroktave, die Unterduodezime und die doppelte Unteroktave, etc. Die Veränderung der anzuspielenden Untertöne wird durch die Graphik angedeutet. Entscheidend für das Anspielen der Untertöne sind: die richtige Kombination aus Bogenruck und -geschwindigkeit und die Bogenposition auf den Saiten (siehe Angaben über und unter der zu spielenden Note). Es gibt meist eine Millimeter genaue Bogenposition auf der das schnelle Umspringen der Untertöne am leichtesten und klarsten funktioniert. In der Regel sollen die UT klar umspringen, möglichst ohne Verunreinigungen, da wo noise eine Rolle spielt ist es notiert. Die verschiedenen Qualitäten des noise sind den sound-demos zu entnehmen

Zusätzlich kann das schnelle Umspringen der Untertöne noch durch Bogenruckveränderungen unterstützt werden.

Weil doch einiger Druck auf die Saiten ausgeübt werden muss, je tiefer die Untertönen anspringen sollen, ist eine feste Bogenstange von Vorteil, weil die Haare stärker als normal gespannt werden müssen, denn bei maximalem Druck sollte das Haar nicht auf die Bogenstange stoßen.

Zuviel Kolophonium kann die Klarheit der Töne beeinträchtigen, auch die Saitenqualität spielt eine Rolle.

Die Untertöne sollen „fließen“ und nicht zurückgehalten, stockend wirken.

Es gibt einen speziellen **Untertongriff**, bei dem einige UT am leichter anspringen:

Man setze den 2.Finger als normalen Griffinger auf die Saite, den 3. Finger davor als Dämpfungsgriff (wie flag. Griff nur von der Seite), um die Schwingung der Saite zu behindern, aber man greift um soviel in der Intonation tiefer, wie der Dämpfungsfinger erhöht, mit dem 1. Finger werden die anderen Saiten abgedämpft.

In der Regel ist die Qualität der Untertöne wichtiger als die Tonhöhe/Intonation

Undertones ("UT"):

the ordinary pitch to be played with the finger is notated in the upper stave. Mute all other strings while playing the undertones. The undertones from this indicated base note are notated in the lower stave: the underoctave, the underoctave plus fifth, the double underoctave a.s.o.

The change between the different undertones are indicated by the skipping graphic line. Basic for getting the undertones is the right relation between bow velocity, bow position and bow pressure (see indication above and below the notes). Mostly there is a perfect position of the bow where the undertones come clear and without to much distortion, that means that the bow always has to stay on that position, which is not a usual string technique. Additionally the quick skipping of the undertones can be supported by quick changing bow pressure.

Its necessary to have more tension on the bow stick/hairs, the hairs should not touch the bow stick by maximal needed pressure.

Too much rosin can be difficult to get the clear undertones, also the string quality is important (but the inquiries are at the very beginning)

The undertones should sound "flowing" and not "faltering/staggering".

For some undertones its easier to play them with a second finger just beneath the gripping finger on the side of the string to hinder the normal vibration of the string.

In general the qualities of the undertones is more important than the perfect intonation.

"noise" vor dem 1. Unterton: mit Bogentechnik für Untertöne spielen, aber nur die noise-Anteile herausspielen bevor der 1. Unterton anspringt/
"noise" before 1st undertone: play with bow technique for the undertones, but play with the bow pressure that you get the noise distortion of the indicated pitch but not the 1st undertone



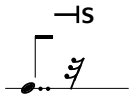
Gummidämpfer der Marke "ULTRA"
 rubber mute, brand "ULTRA"



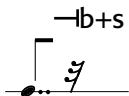
"Stillstand-Pause": absoluter Stillstand der Bewegungen, mehr ein Innehalten, kein theatralisches Hochspannungs-freeze; also Klang- und Aktionspause/
"standstill pause": standstill of all movements, but no theatrical freeze



"Vorbereitungs-Pause": die Vorbereitung der nächsten Spieleinheit in der angegeben Zeit
"preparation pause": for preparing the next action



Klang abstoppen: Bogen von Saite nehmen und alle Saiten in hohem Tempo auf notierter Pause abdämpfen
 stop sound: remove bow from string and quickly mute all strings ("s") on indicated pause



Klang abstoppen: Bogen auf der Saite abstoppen und alle Saiten in hohem Tempo auf notierter Pause abdämpfen/
 stop sound: stop bow on the strings and mute all other strings quickly on the indicated pause

sord (Holz), üblicher Holzdämpfer/ordinary wood mute
sord (Metall), schwerer Hotel-Dämpfer aus Stahl/heavy steel hotel mute

Für einige Klänge liegen auch Video-Demos vor/for some sounds there are also video-demonstrations

sound demo: vl : tr1
Bogengeschwindigkeit
bow velocity: 5 cm /

sound demo: vl : tr2
immer ganzer Bogen/always
all bow length

93

ff ^{nv} 1) -lb+s

f 2 -ls

3

4

ff ^{nv} -lb+s

Steg/bridge

Bogen-Position : 1 mm vS

am Frosch/on frog

verzerrter Geräuschklang mit
durchscheinendem fis³/distorted
sound with rests of the f sharp6

verzerrter hoher Geräuschklang mit
durchscheinendem b³ und 4/distorted
sound with rests of the b flat 6 and 7

sound demo: vl : tr2
immer ganzer Bogen/always
whole bow length

f -ls

ff -lb+s

f -ls

Steg/bridge

Bogen-Position : 1 mm vS

am Frosch/on frog

sound demo: vla : tr1
immer ganzer Bogen/always
whole bow length

f -ls

ff ^{nv} -lb+s

f -ls

Steg/bridge

Bogen-Position : 1 mm vS

verzerrter hoher
Geräuschklang mit
durchscheinendem
es³ und 4/distorted
sound with rests of
the e flat 6 and 7

verzerrter
Geräuschklang mit
durchscheinendem
fis³/distorted
sound with rests of
the f sharp6

sound demo: vlc : tr1
viel Bogen/lots of
bow

f -ls

ff -ls

Steg

sound demo: vlc : tr2
Bogengeschwindigkeit
bow velocity: 5 cm /

f -ls

ff ^{nv} -ls

Steg

sound demo: vlc : tr3
Bogengeschwindigkeit
bow velocity: 5 cm /

ff ^{nv}

etwas mehr als Bogenbreit vom
Steg mit Finger abgreifen, hoher
Mischklang, leicht verzerrt/put
finger on string a width of a bow
from the bridge, high multiphonic
sound, distorted

verzerrter Geräuschklang mit
durchscheinendem b¹/ distorted
spoundfield with rests of b flat 4

verzerrter
Geräuschklang mit
durchscheinendem
fis³/distorted
sound with rests of
the f sharp6

5 6 7 8

vi1

vi2

vla

vlc

f

ff

5:3

sound demo: vl : tr.3

The musical score is arranged in four staves, labeled vi1, vi2, vla, and vlc from top to bottom. The measures are numbered 5, 6, 7, and 8 at the top. Each staff begins with a treble clef and a key signature of one flat (B-flat).
- **vi1:** Measures 5 and 6 feature a melodic line with accents and dynamics 'f'. Measure 7 has a rest. Measure 8 features a melodic line with accents and dynamics 'ff', ending with a 5:3 ratio.
- **vi2:** Measures 5 and 6 feature a melodic line with accents and dynamics 'f'. Measure 7 has a rest. Measure 8 features a melodic line with accents and dynamics 'ff', ending with a 5:3 ratio. A box labeled 'sound demo: vl : tr.3' is present in measure 8.
- **vla:** Measure 5 has a rest. Measure 6 features a melodic line with accents and dynamics 'f'. Measure 7 has a rest. Measure 8 features a melodic line with accents and dynamics 'ff', ending with a 5:3 ratio.
- **vlc:** Measure 5 features a melodic line with accents and dynamics 'f'. Measure 6 has a rest. Measure 7 features a melodic line with accents and dynamics 'ff', ending with a 5:3 ratio. Measure 8 features a melodic line with accents and dynamics 'f'.

9 10 11 12

vi1

vi2

vla

vlc

sound demo:vl: track 4

Detailed description of measures 9-12: This section of the score covers measures 9 through 12. It features four staves: Violin I (vi1), Violin II (vi2), Viola (vla), and Violoncello (vlc).
- **Measure 9:** All staves begin with a downward bowing stroke. The violins play a half note G4, while the viola and cello play a half note G3.
- **Measure 10:** The violins play a half note G4 with a flat (G4b). The viola and cello play a half note G3 with a sharp (G3#).
- **Measure 11:** The violins play a half note G4 with a flat. The viola and cello play a half note G3 with a sharp.
- **Measure 12:** The violins play a half note G4 with a flat. The viola and cello play a half note G3 with a sharp.
Performance markings include slurs, accents, and specific bowing directions (up and down arrows). A text box in measure 12 reads "sound demo:vl: track 4".

13 14 15 16

vi1

vi2

vla

vlc

Detailed description of measures 13-16: This section of the score covers measures 13 through 16.
- **Measure 13:** The violins play a half note G4 with a flat. The viola and cello play a half note G3 with a sharp.
- **Measure 14:** The violins play a half note G4 with a flat. The viola and cello play a half note G3 with a sharp.
- **Measure 15:** The violins play a half note G4 with a flat. The viola and cello play a half note G3 with a sharp.
- **Measure 16:** The violins play a half note G4 with a flat. The viola and cello play a half note G3 with a sharp.
Performance markings include slurs, accents, and specific bowing directions. The score includes various musical notations such as notes, rests, and dynamic markings.

17 18 19 20 21

vi1

vi2

vla

vlc

♩=27

-4-

♩=81

sound demo: vl : tr.5

Bogengeschwindigkeit
bow velocity: 5 cm / ♩

Bogengeschwindigkeit
bow velocity: 30cm / ♩

Bogengeschwindigkeit
bow velocity: 5 cm / ♩

22 23 24 25 26

fff ff fff fff

vi1

vi2

vla

vlc

sound demo: vla : tr.3

sound demo: vlc : tr.4

Bogen-Position : 1 mm vS

27 **fff** 28 **ff** 29 **ff** 30 **fff** 31

vl1

vl2

vla

vlc

32 33 34 35 36

vl1

vl2

vla

vlc

37 38 39 Bogengeschwindigkeit bow velocity: 30cm / ♩ *sound demo: vl : tr.6* 40 41

8va

ff

Bogen-Position : 1 mm vS

GT noise

2 3 4 5

sim. noise Partikel durch Druck auf Bogen/noise particles by increasing pressure on bow

8va

ff

Bogen-Position : 1 mm vS

GT noise

4 5

sim. noise Partikel durch Druck auf Bogen/noise particle by increasing pressure on bow

8va

ff

Bogengeschwindigkeit bow velocity: 30cm / ♩ *sound demo: vla : tr. 4*

Bogen-Position : 1 mm vS

GT noise

2 3 4 5

sim. noise Partikel durch Druck auf Bogen/noise particle by increasing pressure on bow

8va

ff

Bogen-Position : 1 mm vS

GT noise

2 3 4 5

sim. noise Partikel durch Druck auf Bogen/noise particle by increasing pressure on bow

sound demo: vl : tr.7

42 43 44 mf 45 46 mp

8va

Bogengeschwindigkeit bow velocity: 7cm / ♩

Bogen-Position : 10mm vS

GT noise

1.UT

2.UT

3.UT

5 2 3 4 5

2 3 4 5

2 3 4 5

2 3 4 5

2 3 4 5

2 3 4 5

2 3 4 5

1) Intonation an den 2.UT der Violinen angleichen, gute Klangmischung/ajust intonation and dynamics to second undertone of the violins

mp

ord. 5

47 48 49 50 51

-8va →

mf

sound demo: vl : tr.9

GT noise 1.UT 2.UT 3.UT

-8va →

mf

sound demo: vl : tr.9

GT noise 1.UT 2.UT 3.UT

vla

mf

sound demo: vla : tr 5

-8va →

Bogen-Position : 9 mm vS

GT noise 1.UT 2.UT 3.UT

~b2

vlc

52 53 54 55 -lb+s 56

-8va →

v11

GT noise 1.UT 2.UT 3.UT

-8va →

v12

GT noise 1.UT 2.UT 3.UT

-8va →

v1a

GT noise 1.UT 2.UT 3.UT

-lb+s

v1c

-s

57 58 59 60 61

vi1
vi2
vla
vlc

sound demo: vla : tr.6
Bogengeschwindigkeit
bow velocity: 4 cm / ♩
mf
Bogen-Position : 9 mm vS

GT
noise
1.UT
2.UT
3.UT

62 63 64 65 66

vi1
vi2
vla
vlc

sound demo: vl : tr.10
Bogengeschwindigkeit
bow velocity: 4 cm / ♩
mf
Bogen-Position : 13 mm vS

sound demo: vl : tr.11
Bogengeschwindigkeit
bow velocity: 3 cm / ♩
f
Bogen-Position : 9 mm vS

sim.
Bogen-Position : 8 mm vS

sound demo: vl : tr.12
Bogengeschwindigkeit
bow velocity: 30cm / ♩
f
-8va
Bogen-Position : 8 mm vS

sound demo: vla : tr.7
Bogengeschwindigkeit
bow velocity: 5 cm / ♩
-Is f -Is
Bogen-Position : 10 mm vS

sound demo: vla : tr.8
Bogen-Position : 13mm vS

sound demo: vlc : tr.5
Bogengeschwindigkeit
bow velocity: 3 cm / ♩
f -Is
Bogen-Position : 20 mm vS

sound demo: vlc : tr.6
Bogengeschwindigkeit
bow velocity: 7 cm / ♩
sord. (Metall)

GT
noise
1.UT
2.UT
3.UT

67

68

69

70

71

v11

sound demo CD track 13
ff Bogengeschwindigkeit bow velocity: 3 cm /
Bogen-Position : 10 mm vS

sound demo CD track 14
Bogengeschwindigkeit bow velocity: 30cm /
Bogen-Position : 12 mm vS

sound demo: vl : tr.15
mf Bogengeschwindigkeit bow velocity: 4 cm /
Bogen-Position : 11mm vS

GT noise 1.UT 2.UT 3.UT
~fis1 d1 es2 noise shots sim. ~bkl

v12

ff Bogengeschwindigkeit bow velocity: 3 cm /
Bogen-Position : 10 mm vS

sound demo CD track 13
Bogengeschwindigkeit bow velocity: 30cm /
Bogen-Position : 12 mm vS

sound demo: vl : tr.15
mf Bogengeschwindigkeit bow velocity: 4 cm /
Bogen-Position : 11mm vS

ff -8va Bogengeschwindigkeit bow velocity: 30cm /
Bogen-Position : 10mm vS

GT noise 1.UT 2.UT 3.UT 4.UT 5.UT
~fis1 d1 es2 sim. ~bkl e3

v1a

Bogen-Position : 10mm vS

sound demo: v1a : tr.9
Bogengeschwindigkeit bow velocity: 7 cm /
-lb+s -lb+s -lb+s -lb+s -lb+s

Bogen-Position : 13 mm vS

GT noise 1.UT 2.UT 3.UT
sim. ~fis2 ~h1

v1c

sound demo: v1c : tr.7
Bogengeschwindigkeit bow velocity: 3 cm /
-lb+s -lb+s -lb+s -lb+s -lb+s

sound demo: v1c : tr.8
mf Bogengeschwindigkeit bow velocity: 3 cm /
-lb+s

Bogen-Position : 35 mm vS

IV 5 (l) 3

sord

Bogen-Position : 15 mm vS

GT noise 1.UT 2.UT 3.UT
~dg1 ~a1 ~es1 ~gis kontra ~ekl ~hkl ~hgl

72 73 74 75 76

sound demo: vl : tr.16
Bogengeschwindigkeit
bow velocity: 10 cm /
ff

sound demo: vl : tr.17
Bogengeschwindigkeit
bow velocity: 5 cm /
f

sound demo: vl : tr.18
Bogengeschwindigkeit
bow velocity: 10 cm /
ff

Bogengeschwindigkeit
bow velocity: 5 cm /
f

6 Bogen-Position : 10mm vS

2 3 4 5

GT noise
1.UT
2.UT
3.UT

~gis2 ~fis1 ~hkl ~bkl ~ekl

~b1 ~f1

ff Bogen-Position : 10mm vS

2 3 4 5

GT noise
1.UT
2.UT
3.UT

~gis2 ~fis1 ~hkl ~bkl ~ekl

~b1 ~f1

ff Bogen-Position : 10mm vS

2 3 4 5

GT noise
1.UT
2.UT
3.UT

~fis2 ~g2 sim. ~fis2 ~h1 ~fis1

3 3 5

5

5

5

2 3 4 5

GT noise
1.UT
2.UT
3.UT

~d1 ~giskl

5

5

2 3 4 5

The page contains musical notation for four string instruments: Violin I (vl1), Violin II (vl2), Viola (vla), and Violoncello (vlc). Each instrument part includes a main staff with notes and rests, and a lower staff for 'GT noise' (1.UT, 2.UT, 3.UT) with various performance markings like ~gis2, ~fis1, ~hkl, ~bkl, ~ekl, ~b1, ~f1, and sim. Performance instructions include 'Bogengeschwindigkeit' (bow speed) and 'bow velocity' in cm per note, with dynamic markings like ff and f. Sound demo references are provided for vl1 and vl2. Fingerings (2, 3, 4, 5) and bow positions (10mm vS) are indicated. Specific techniques like 'Bva' and '3 IV' are also noted.

77 78 79 80 81

sound demo: vl : tr.19
mf Bogengeschwindigkeit bow velocity: 7 cm /

8va
-lb+s
5
Bogen-Position : 8 mm vS
GT noise 1.UT 2.UT 3.UT

→ sord.(Holz)

mf Bogengeschwindigkeit bow velocity: 7 cm /

8va
-lb+s
5
Bogen-Position : 8 mm vS
GT noise 1.UT 2.UT 3.UT

→ sord.(Holz)

sim. sound demo: vla : tr.10
-lb+s
3 5
Bogen-Position : 10 mm vS
GT noise 1.UT 2.UT 3.UT (~a1 ~es1)

→ sord.(Holz)

sound demo: vlc : tr.9
f Bogengeschwindigkeit bow velocity: 30cm /

8va
-lb+s
3
Steg sord.
Bogen-Position : 15 mm vS
GT noise 1.UT 2.UT 3.UT noise-shots

→ sord.(Metall)

sound demo: vla : tr.11
f Bogengeschwindigkeit bow velocity: 30cm /

8va
-lb+s
3
Steg sord.
noise-shots

↓ =80

82

83

84

85

86

vi1 sord. *f* *sound demo: vl : tr.20* *-lb+s* *-lb+s* *-lb+s* *-lb+s* *ff* *-lb+s*

Steg sord.

GT noise 1.UT 2.UT 3.UT *sim.* *sim.* *~a2* *~f1*

noise shots herausspielen, GT und 1.UT sekundär/emphasize noise shots

vi2 sord. *f* *sound demo: vl : tr.20* *-lb+s* *-lb+s* *-lb+s* *-lb+s* *ff* *-lb+s*

Steg sord.

GT noise 1.UT 2.UT 3.UT *sim.* *sim.* *~a2* *~f1*

noise shots herausspielen, GT und 1.UT sekundär/emphasize noise shots

vla sord. *sound demo: vla : tr.12* *-lb+s* *sound demo: vla : tr.13* *-lb+s*

GT noise 1.UT 2.UT 3.UT *noise shots* *~c2* *~g2* *~a2*

vlc sord. *sound demo: vlc : tr.10* *Bogengeschwindigkeit bow velocity: 6 cm /* *-lb+s* *ff* *-lb+s* *-lb+s* *-lb+s*

Bogen-Position : 35 mm vS
evtl mit Faustbogen/ bow in the fist

GT noise 1.UT 2.UT 3.UT *~cis8)* *~gkontra/G1*

87 88 89 90 91

sound demo: vl : tr.22
Bogengeschwindigkeit
bow velocity: 7 cm /

ff *—lb+s*

v1
5 5 Bogen-Position : 10 mm vS

GT noise
1.UT
2.UT
3.UT

Bogengeschwindigkeit
bow velocity: 7 cm /

ff *—lb+s*

v2
Bogen-Position : 10 mm vS

GT noise
1.UT
2.UT
3.UT

—lb+s

vla

GT noise
1.UT
2.UT
3.UT

noise shots

sound demo: vlc : tr.11
Bogengeschwindigkeit
bow velocity: 7 cm /

f *—lb+s*

vlc
Bogen-Position : 16 mm vS

GT noise
1.UT
2.UT
3.UT

sound demo: vla : tr.14
Bogengeschwindigkeit
bow velocity: 4 cm /

f *—lb+s*

vla
Bogen-Position : 13 mm vS
am Frosch

GT noise
1.UT
2.UT
3.UT

~cis!
~gkl

sound demo: vlc : tr.12
Bogengeschwindigkeit
bow velocity: 3 cm /

f *—lb+s*

vlc
Bogen-Position : 33 mm vS

GT noise
1.UT
2.UT
3.UT

~bgr
~fkl
~fgr

92 93 94 95 96

vl1

GT
noise
1.UT
2.UT
3.UT

vl2

GT
noise
1.UT
2.UT
3.UT

sound demo: vla : tr.15
Bogengeschwindigkeit
bow velocity: 13 cm /

Bogengeschwindigkeit
bow velocity: 5 cm /

Bogengeschwindigkeit
bow velocity: 13 cm /

Bogengeschwindigkeit
bow velocity: 5 cm /

Bogengeschwindigkeit
bow velocity: 13 cm /

f

Bogen-Position : 12 mm vS

vla
sord.
Steg

GT
noise
1.UT
2.UT
3.UT

noise shots

vlc

97 98 99 100 101

vl1

vl2

vla

Bogen entsprechend Klang wie vorher/bow according to sound

GT
noise
1.UT
2.UT
3.UT

Bogen-Position : 12 mm vS

vlc

Steg sord.

= 52

Bogengeschwindigkeit
bow velocity: 0 cm /

0 0 sim.

Spitze/point/tip

0 0 sim.

Spitze/point/tip

0 0 sim.

Spitze/point/tip

0 0 sim.

Spitze/point/tip

104 Bogengeschwindigkeit
bow velocity: 1cm / 10 105 106

102 103 1cm/10 beats 1cm/5 beats

0 0 sim.

vl1
vl2
vla
vlc

107 108 109 110 111

1cm/5 beats 1cm/3 beats 1cm 1cm =pp =p

1cm 1 1 1 2 2 3 3 3 4 4 5 5 5

vl1
vl2
vla
vlc

Bogengeschwindigkeit und -druck langsam erhöhen/
increase slowly bow velocity and pressure

112 113 114 115 116

=mp =mf =f

vl1
vl2
vla
vlc

117 118 119 120 121

f ff fff

♩ =48

sound demo: vl : tr.23
Bogengeschwindigkeit
bow velocity: 30cm / ♩

vl1

Bogen-Position : 5 mm vS

2 3 4 5 2 3 4 5

GT noise 1.UT 2.UT 3.UT

sord. Steg

noise shots

Bogen-Position : 5 mm vS

2 3 4 5 2 3 4 5

GT noise 1.UT 2.UT 3.UT

sord. Steg

noise shots

sound demo: vla : tr.16

Bogen-Position : 5 mm vS

2 3 4 5 2 3 4 5

GT noise 1.UT 2.UT 3.UT

sord. Steg

noise shots

sound demo: vlc : tr. 13

nah am Dämpfer streichen/
bow close to the sord.

2 3 4 5 2 3 4 5

GT noise 1.UT 2.UT 3.UT

sord. Steg

noise shots

Steg sord.

122

123

124

125

126

The image displays a musical score for five string instruments, labeled vI1, vI2, vIa, and vIc. The score is organized into five measures, numbered 122 through 126. Each instrument part consists of a musical staff with a treble clef and a series of notes, each with a fingering number (2, 3, 4, or 5) written above it. Below the musical staff for each instrument are three rows of tablature, labeled 'GT', 'noise', and '1.UT', '2.UT', '3.UT'. The tablature rows contain black squares and vertical lines indicating fret positions and string activations. The 'GT' row typically contains a single square corresponding to the fingering of the note above. The 'noise' and 'UT' rows contain various patterns of squares and lines, representing specific techniques or effects for each instrument. The overall layout is clean and professional, typical of a technical music score.

127

128

129

130

131

sound demo: vl : tr.24

Bogengeschwindigkeit
bow velocity: 7 cm /

Score for Violin 1 (vl1), Violin 2 (vl2), Viola (vla), and Violoncello (vlc) across measures 127-131. The score includes musical notation, fingerings (2, 3, 4, 5), and bowing instructions.

Violin 1 (vl1) and Violin 2 (vl2): Measures 127-130 feature a melodic line with fingerings 2, 3, 4, 5. Measure 131 includes dynamics *f* and *-b+s*, and a *sord* (sordina) instruction. Bowing instructions specify *Bogengeschwindigkeit* (bow velocity) of 7 cm / and *Bogen-Position : 18 mm vS*.

Viola (vla) and Violoncello (vlc): Measures 127-130 feature a melodic line with fingerings 2, 3, 4, 5. Measure 131 includes dynamics *ff*, *-s*, and *sim.*, and a *sord* instruction. Bowing instructions specify *Bogengeschwindigkeit* (bow velocity) of 10 cm / and *Bogen-Position : 1 mm vS*.

Technical details: The score includes a grid for GT (Guitar), noise, and 1.UT, 2.UT, 3.UT (Upper Tapes) for each instrument. Circled annotations *~e!* and *~hkl* are present in measures 130 and 131.

132 133 134 135 136

$\text{♩} = 12$ $\text{♩} = 82$

sound demo CD track 25
Bogengeschwindigkeit
bow velocity: 10cm / ♩

sound demo CD track 18
Bogengeschwindigkeit
bow velocity: 10cm / ♩

sound demo: vla : tr.17
Bogengeschwindigkeit
bow velocity: 10cm / ♩

vi1
GT
noise
1.UT
2.UT
3.UT

vi2
GT
noise
1.UT
2.UT
3.UT

vla
GT
noise
1.UT
2.UT
3.UT

vlc

Bogen-Position : 1 mm vS
Bogen-Position : 10 mm vS
Bogen-Position : 10 mm vS

GT kann ab und zu anspringen/d6 may also sound sometimes

ff -s
ff -s

137

138

139

140

141

vi1

Bogengeschwindigkeit
bow velocity: 3 cm /

am Frosch mit viel Druck/on
the frog with highest pressure

fff **vi** : tr.26

Bogengeschwindigkeit
bow velocity: 10 cm /

Bogengeschwindigkeit
bow velocity: 3 cm /

vi2

Bogengeschwindigkeit
bow velocity: 3 cm /

am Frosch mit viel Druck/on
the frog with highest pressure

fff **vi** : tr.26

Bogengeschwindigkeit
bow velocity: 10 cm /

Bogengeschwindigkeit
bow velocity: 3 cm /

via

sound demo: via : tr.18

Bogengeschwindigkeit
bow velocity: 3 cm /

Bogen-Position : 10 mm vS

vlc

The musical score is divided into five measures corresponding to measures 137, 138, 139, 140, and 141. Each measure contains staves for Violin I (vi1), Violin II (vi2), Viola (via), and Cello (vlc). The Violin parts feature a melodic line with slurs and dynamic markings (fff, f). The Viola and Cello parts have lower register notes. A guitar noise track is present for each instrument, with specific markings like '~gis' and '~d1' in measures 138 and 140. Performance instructions include bow velocity (3 cm or 10 cm per quarter note) and bow position (10 mm vS). A reference to 'sound demo: vi : tr.26' is provided for measures 140 and 141.

142

143

144

145

146

vi1

GT noise
1.UT
2.UT
3.UT

vi2

GT noise
1.UT
2.UT
3.UT

vla

GT noise
1.UT
2.UT
3.UT

vlc

sim.

sound demo: vl : tr.27
Bogengeschwindigkeit
bow velocity: 10cm / ♩

fff

-lb+s

Bogen-Position : 1 mm vS

am Frosch/
on the frog

sound demo: vla : tr.19
Bogengeschwindigkeit
bow velocity: 10cm / ♩

fff

-lb+s

Bogen-Position : 1 mm vS

am Frosch/
on the frog

sound demo: vlc : tr.14
Bogengeschwindigkeit
bow velocity: 3 cm / ♩

fff

am Frosch/on the frog

Bogen-Position : 5 mm vS

147

148

149

150

151

152

153

154

The image displays a musical score for four string instruments: Violin I (vi1), Viola (vla), and Violin C (vlc). The score is organized into measures 147 through 154. Measures 147, 148, and 149 contain melodic lines for each instrument, featuring slurs, accents, and a fingering of 5. A marking $-b+s$ is present above the notes in measures 148 and 149. Measures 150, 151, 152, 153, and 154 show rests for all instruments, indicated by downward-pointing arrows.

155

156

157

158

159

sound demo: vl : tr.28
Bogengeschwindigkeit
bow velocity: 5 cm /

sim.

mp

ord.

III

Bogen-Position : 20 mm vS

GT
noise
1.UT
2.UT
3.UT

gliss. auf dem 2.Unterton, der zum 1. UT und 3.UT umspringen soll/gliss. on 2nd undertone skipping also to 1st and 3rd UT

Bogengeschwindigkeit
bow velocity: 5 cm /

sim.

sound demo: vla : tr. 20
Bogengeschwindigkeit
bow velocity: 5 cm /

sim.

f

es2

e1

f

Bogen-Position : 22 mm vS

GT
noise
1.UT
2.UT
3.UT

sim.

gliss. auf dem 2.Unterton, der zum 1. UT und 3.UT umspringen soll/gliss. on 2nd undertone skipping also to 1st and 3rd UT

es2

e1

Bogengeschwindigkeit
bow velocity: 5cm /

sound demo: vlc : tr.15

sord.(gummi) fff -lb+s

f

Bogen-Position : 47 mm vS

GT
noise
1.UT
2.UT
3.UT

gliss. auf dem 1. Unterton /gliss. on 1st undertone

sord

165

166

167

168

169

sound demo: vl : tr.31

The score is divided into five measures (165-169) for Violin 1 (vl1), Violin 2 (vl2), Viola (vla), and Violoncello (vlc). Each measure includes a musical staff with notes, rests, and articulation marks, and a corresponding bowing/fingering diagram above it. Fingerings are indicated by numbers 1-5. Bowings are indicated by 'U' (up) and 'D' (down) strokes. Performance instructions include 'askl' (attack), 'sim.' (simulazione), and 'sord. (Gummi)' (muted). Specific technical notes include 'Bogengeschwindigkeit: 4 cm / ♩' and 'Bogen-Position: 30 mm vS'. A 'GT noise' section with three sub-sections (1.UT, 2.UT, 3.UT) is present for each instrument, showing bowing patterns. Measure 169 includes a 'f' dynamic marking and a '5' fingering. The 'vlc' part in measure 169 has a '5' fingering and a 'Bogen-Position: 30 mm vS' instruction.

170 171 172 173 174

$\text{♩} = 87$

The image shows a musical score for measures 170 through 174. The score is organized into four systems, each corresponding to a measure. The first system (measures 170-171) contains four staves: two for Violin I (vl1), one for Viola (vla), and one for Violoncello (vlc). Each staff includes a fingerboard diagram with fingerings (2, 3, 4, 5) and a wavy line representing a bowing pattern. The first two staves (vl1) also include specific performance markings: a 'U' for up-bow, a '5' for a quintuplet, and a '-lb+s' marking. The second system (measures 172-174) consists of four empty staves, each with a downward-pointing arrow and a horizontal bar at the bottom, indicating a specific performance instruction or bowing mark for each instrument.

175 176 177 178 179

sound demo: vl : tr.29

Bogengeschwindigkeit
bow velocity: 15cm /

fff

Bogen-Position : 1 mm vS
am Frosch/on frog/heel

ff ord. sub.

fff

-lb+s

ff ord.

Bogengeschwindigkeit
bow velocity: 15cm /

fff -8va

Bogen-Position : 1 mm vS
am Frosch/on frog

ff -8va

fff -8va

-lb+s

ff ord.

Bogengeschwindigkeit
bow velocity: 15cm /

fff

Bogen-Position : 1 mm vS
am Frosch/on frog

ff ord. sub.

fff

-lb+s

ff ord.

breiter und hoher Mischklang

Bogengeschwindigkeit
bow velocity: 12cm /

fff

Bogen-Position : 5 mm vS

ff ord. sub.

fff

-lb+s

ff ord.

180 **181** **182** **183** **184**

vl1
-lb+s
ord.
=21
↓

vl2
-lb+s
ord.
↓

vla
-lb+s
ord.
↓

vlc
-lb+s
ord.
↓

184
=99
sound demo: vl : tr.32
Bogengeschwindigkeit
bow velocity: 4 cm /
b klein möglichst stabil/keep
b flat 3 as stabil as possible
mp
Bogen-Position : 10 mm vS
GT
noise
1.UT (~bkl)
2.UT
3.UT

184
Bogengeschwindigkeit
bow velocity: 4 cm /
b klein möglichst stabil/keep
b flat 3 as stabil as possible
mp
Bogen-Position : 10 mm vS
GT
noise
1.UT (~bkl)
2.UT
3.UT

184
sound demo: vla : tr.23
Bogengeschwindigkeit
bow velocity: 3 cm /
b klein möglichst stabil/keep
b flat 3 as stabil as possible
mp
Bogen-Position : 12 mm vS
GT
noise
1.UT (~bkl)
2.UT
3.UT

184
sound demo: vlc : tr.18
Bogengeschwindigkeit
bow velocity: 3 cm /
b klein möglichst stabil/keep
b flat 3 as stabil as possible
sord. (Metall) mp
Bogen-Position : 28 mm vS
GT
noise
1.UT (~bkl)
2.UT
3.UT

185

186

187

188

189

The image displays a musical score for four string parts: Violin 1 (vi1), Violin 2 (vi2), Viola (vla), and Violoncello (vlc). The score is organized into five measures, labeled 185 through 189 at the top. Each part consists of a main staff and a guitar tablature section below it.

vi1: The main staff shows a sequence of notes: G4 (measure 185), A4 (186), B4 (187), C5 (188), D5 (189). The guitar tablature shows fret numbers 2, 3, 4, 5 for measures 185-188, followed by a 'sim.' marking in measure 189.

vi2: The main staff shows a sequence of notes: G4 (measure 185), A4 (186), B4 (187), C5 (188), D5 (189). The guitar tablature shows fret numbers 2, 3, 4, 5 for measures 185-188, followed by a 'sim.' marking in measure 189.

vla: The main staff shows a sequence of notes: G4 (measure 185), A4 (186), B4 (187), C5 (188), D5 (189). The guitar tablature shows fret numbers 2, 3, 4, 5 for measures 185-188, followed by a 'sim.' marking in measure 189.

vlc: The main staff shows a sequence of notes: G4 (measure 185), A4 (186), B4 (187), C5 (188), D5 (189). The guitar tablature shows fret numbers 2, 3, 4, 5 for measures 185-188, followed by a 'sim.' marking in measure 189.

190 191 192 193 194

vl1

$\text{♩} = 78$

sound demo: vl : tr.33
Bogengeschwindigkeit
bow velocity: 4 cm / ♩

f

Bogen-Position : 9 mm vS

GT
noise
1.UT
2.UT
3.UT

vl2

sound demo: vl : tr.23
Bogengeschwindigkeit
bow velocity: 4 cm / ♩

f

Bogen-Position : 9 mm vS

GT
noise
1.UT
2.UT
3.UT

vla

sound demo: vla : tr. 24
Bogengeschwindigkeit
bow velocity: 3 cm / ♩

f

Bogen-Position : 14 mm vS

GT
noise
1.UT
2.UT
3.UT

vlc

sound demo: vlc : tr.19
Bogengeschwindigkeit
bow velocity: 4 cm / ♩

f

Bogen-Position : 20 mm vS

GT
noise
1.UT
2.UT
3.UT

sound demo: vl : tr.34

sound demo: vla : tr. 25

sound demo: vlc : tr.20

195

196

197

198

199

The image displays a musical score for five string instruments: Violin 1 (vi1), Violin 2 (vi2), Viola (vla), and Violoncello (vlc). Each instrument part is accompanied by a guitar track (GT) and three noise tracks (1.UT, 2.UT, 3.UT). The score is organized into five measures, numbered 195 to 199. Performance instructions are provided for each measure, such as "sound demo: vl : tr.35" for the first violin and "sound demo: vlc : tr.21" for the cello. The notation includes musical staves with notes, stems, and dynamic markings like "p" and "f". The guitar tracks show fret numbers (2, 3, 4, 5) and specific techniques like "d2" (double stop) and "b+s" (bend and sustain). The noise tracks are represented by vertical bars indicating the timing and intensity of noise. The overall layout is a grid where each instrument's part and its corresponding guitar and noise tracks are aligned across the measures.

200

201

202

203

204

The image displays a musical score for five violins (vl1, vl2, vla, vlc) and guitar (GT) tracks across five measures (200-204). Each violin part consists of a melodic line with notes marked with 'U' and a corresponding guitar track with fret numbers (2, 3, 4, 5) and noise indicators. The guitar track is divided into three sub-tracks: 1.UT, 2.UT, and 3.UT. The notation includes stems, beams, and slurs for the violin parts, and square markers for the guitar noise. The overall layout is organized into a grid of measures and tracks.

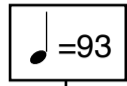
205

206

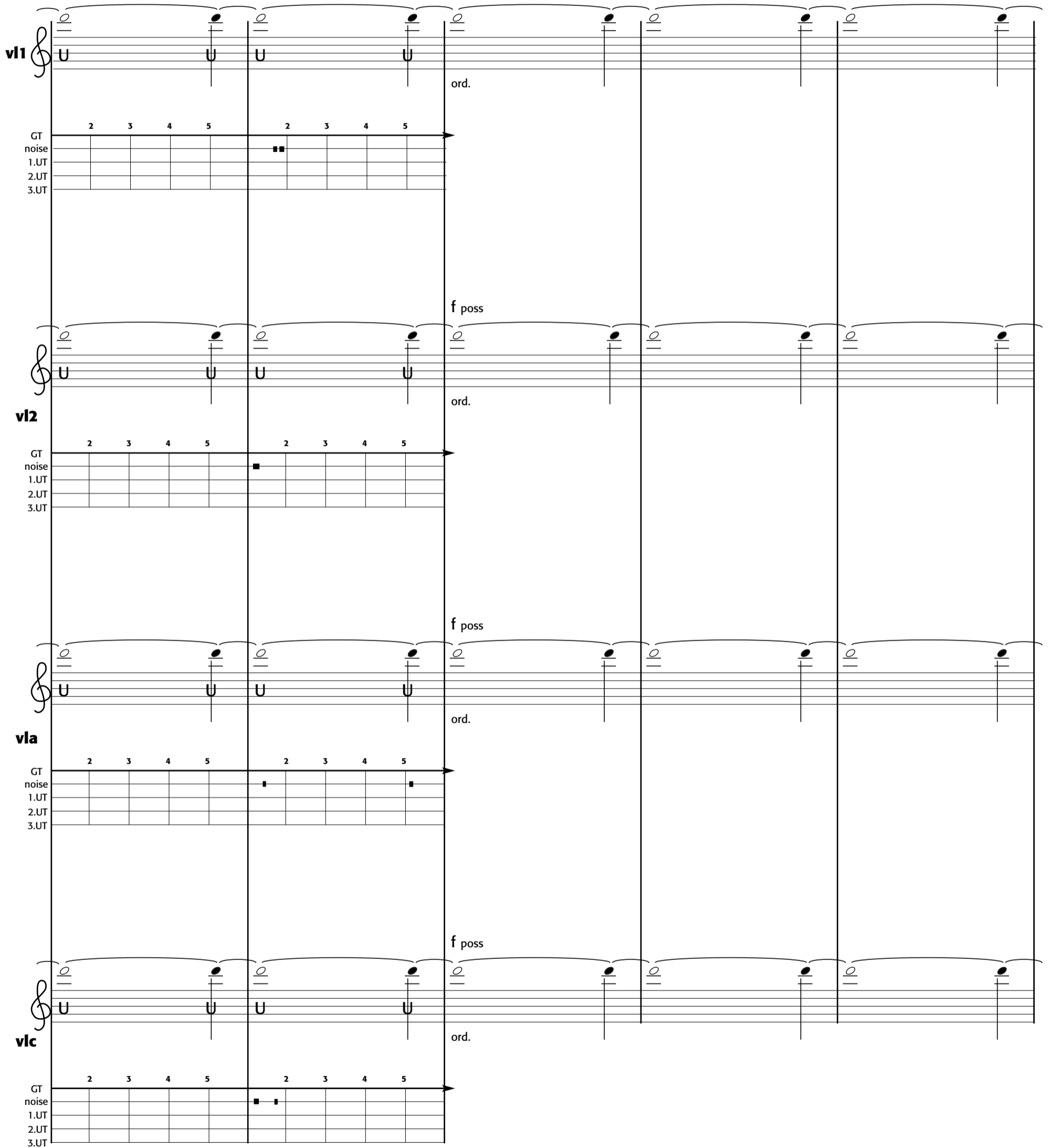
207

208

209



f poss



vl1

ord.

GT
noise
1.UT
2.UT
3.UT

vl2

f poss

ord.

GT
noise
1.UT
2.UT
3.UT

vla

f poss

ord.

GT
noise
1.UT
2.UT
3.UT

vlc

f poss

ord.

GT
noise
1.UT
2.UT
3.UT

210 211 212 213 214

vl1
vl2
vla
vlc

Detailed description: This block contains the first system of the musical score, covering measures 210 through 214. It features four staves for violins: vl1, vl2, vla, and vlc. Each staff contains a melodic line consisting of a sequence of notes: a half note on G4, a quarter note on A4, a quarter note on B4, a half note on C5, and a quarter note on D5. The notes are grouped by a slur, and each measure is marked with a fermata. The measures are numbered 210, 211, 212, 213, and 214 at the top of the system.

215 216 217 218 219

vl1
vl2
vla
vlc

Detailed description: This block contains the second system of the musical score, covering measures 215 through 219. It features the same four violin staves: vl1, vl2, vla, and vlc. The melodic line continues from the previous system, with measures 215 and 216 showing the same sequence of notes. Measure 217 begins with a fermata over the G4 note, followed by a measure rest. Measures 218 and 219 are marked with a fermata over the G4 note. The system concludes with a final cadence in measure 219, indicated by a double bar line and a fermata over the G4 note. The measures are numbered 215, 216, 217, 218, and 219 at the top of the system.