

Refraction

for

Clarinet, Violin and Piano

by

Keith A. Hamel

*Commissioned by Ensemble Intercontemporain as part of the
1991 Scotia Festival of Music*

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by members of the Ensemble Intercontemporain*

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Duration: 10'
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Performance Notes

General:



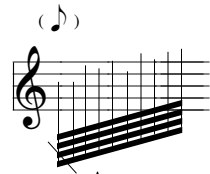
as fast as possible



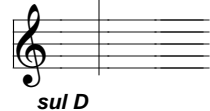
unmeasured, but played at approximately the speed indicated.



repeat pattern continuously



move fingers rapidly (in random order) and gradually move up the string

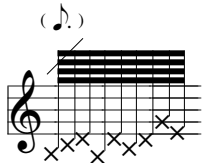


as high as possible on the specified string

Clarinet:

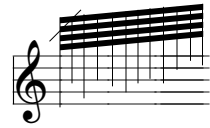


always denotes flutter-tongue



audible key clicks and breathy notes; some pitch, but mostly air

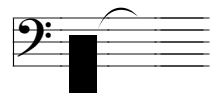
Piano:



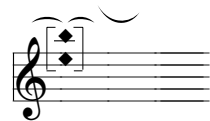
play random notes as quickly as possible (in the approximate register indicated)



chromatic cluster



hit piano strings with the palm of the hand and let the strings resonate



pitches sustained by sostenuto pedal

Violin:



move fingers rapidly (in random order) on specified string

Additional piano pedalings may be desirable. All notated pedal indications should be taken to be advisory in nature.

♩ = 60

Clarinet

Violin

Piano

pp *p* *ppp* *ppp* *mp*

con sord. *pp* *pppp* *ppp* *p* *ppp* *p* *pp*

ppp *pp* *ff* *p* *f* *mf*

ff *ff*

flutter *poco* *gliss*



5

Clarinet

Violin

Piano

pp *p* *mp* *pp* *p* *pp* *p* *ppp* *p*

sul pont *ord.* *ppp* *pp* *ppp* *ppp* *p* *ppp* *p* *mp* *p*

pp *pp* *pp* *pp* *mp*

mp *p* *pp* *mp*

flutter *poco* *poco*

*Bb Clarinet is written at sounding pitch.

9

poco
ppp p ppp mp mf fp fp
senza sord.
mp p mp mp mf fp fp
fff ff sfz ff f f



12

fp fp fp fp ffp
<fp <fp <fp <fp <fp <ffp
ff pp p f fff
mp mf f fff

14

Musical score for measures 14-15. The score consists of four staves. The top two staves are for the right hand, and the bottom two are for the left hand. Measure 14 features dynamic markings of *ff p*, *mf p*, *f p*, *f p*, and *f p*. Measure 15 features *ff p*, *mf p*, *mf p*, *poco*, *f p*, *f p*, and *f*. The left hand in measure 14 has dynamics *p*, *mf*, and *pp*, while in measure 15 it has *mp*, *mf*, and *f*. The bottom two staves of measure 15 show dynamics *ff mp* and *mp*.

15



16

Musical score for measures 16-17. The score consists of four staves. Measure 16 features dynamic markings of *f*, *mp*, *ff*, *mf*, *ff*, *mf*, *ff*, *mf*, and *ff*. Measure 17 features *mp*, *f*, *mp*, *ff*, *mf*, *ff*, *mf*, *ff*, and *mf*. The left hand in measure 16 has dynamics *mp* and *ff*, while in measure 17 it has *mp*, *mf*, and *ff*. The bottom two staves of measure 17 show dynamics *ff* and *f*. The score includes a *loco* marking at the end of measure 17 and a measure rest for 8 measures.

17

18

8va-----, loco

as fast as possible

gradually vary loudness p - f

20

8va-----, loco

as fast as possible

22

tr *tr* *tr*

ffmp *f* *ffmp* *ff* *ffmf*

f *f* *ff* *f* *ff*

mp *f* *mf* *mp* *f*

ff *ff*

mf *cresc. poco a poco...*

Sua... loco



24

tr *tr* *tr*

ff *f* *ff* *ffmp* *mf*

f *ff* *f* *ff* *f* *ff* *mp* *f*

ff *mf* *f* *ff* *mf* *fff* *fff*

fff *fff*

Sua... loco

26

ffpp *mfpp* *mfpp* *mfpp* *mfpp* *mfpp* *mfpp* *mp* *mfpp* *fp* *pp*

ffpp *mfpp* *mfpp* *mfpp* *mfpp* *mfpp* *mfpp* *fp* *pp*

p *p* *f* *legato* *pp*

f

Sostenuto

29

mp *pp* *mf* *p* *pp* *mf* *p*

mp *pp* *mf* *p* *pp* *p* *poco* *poco* *poco*

mf *mp* *f* *mf*

sempre p *f* *mf*

(Sost.) *mf* *Senza ped.*

32

Musical score for measures 32-34. The score is written for a single melodic line and a piano accompaniment. The melodic line starts with a triplet of eighth notes, followed by a half note, and then a quarter note. The piano accompaniment features sixteenth-note patterns and triplets. Dynamics include *mf*, *p*, *mf*, *p*, *mf*, and *f*. Performance markings include *poco*, *Pizz.*, and *mf*. A double bar line is present at the end of measure 34.

35

Musical score for measures 35-37. The score is written for a single melodic line and a piano accompaniment. The melodic line features a series of eighth notes with a *flutter* marking. The piano accompaniment includes sixteenth-note patterns and a sixteenth-note triplet. Dynamics include *p*, *f*, *ffp*, *mf*, and *p*. Performance markings include *Arco* and *ff*. A double bar line is present at the end of measure 37.

38

mp \triangleleft \triangle pp \triangleleft \triangle f \triangleleft \triangle p \triangleleft \triangle mp \triangleleft \triangle p \triangleleft \triangle fmp \triangleleft \triangle ff

p \triangleleft \triangle pp \triangleleft \triangle f \triangleleft \triangle p \triangleleft \triangle mp \triangleleft \triangle p \triangleleft \triangle fmp \triangleleft \triangle ff \triangleleft \triangle fff

f ff



41

$\text{♩} = 48$

fff \triangleleft \triangle pp \triangleleft \triangle mp \triangleleft \triangle pp \triangleleft \triangle pp \triangleleft \triangle mp \triangleleft \triangle f \triangleleft \triangle ffp \triangleleft \triangle mp \triangleleft \triangle p

legato

sub. p poco a poco cresc. ... mf p

$\text{♩} = 48$

ppp pp fff

ffff

U.C.

46

mf p mp f ffp mp p

mp p

p ff p p

U.C. U.C.



49

mfp mfp p mp f ff ffp ff ffp

mp f ffp mp mp ff mp

mp ff mp ffp

U.C. U.C.

10 ♩ = 60

52

flutter
 tremolo
 poco a poco sul pont . . .
 sul pont
 poco a poco ord. . .

mfpp *mfpp* *ffp* *mp* *pp p*

ffp *ffp* *ffp* *mp* *p* *pp p*

♩ = 60

pp *mf* *p* *mp* *p*

U.C.



56

♩ = 72

f ffp *p* *ffmp* *mf* *ffp* *fff*

ord.
ffp *ffp* *p* *ffmp* *mf* *ffp* *fff*

♩ = 72

p *mf* *ff* *f*

mf *f*

(U.C.)
 Senza ped.

59


Musical score for measures 59-60. The score consists of four staves. The top two staves are for the right hand, and the bottom two are for the left hand. The right hand part features a melodic line with dynamics *p*, *mf*, and *ffp*, ending with a 'flutter' effect. The left hand part features a rhythmic accompaniment with triplets and dynamics *p*, *mf*, *f*, and *ff*. A double bar line is present between measures 59 and 60.

61

Musical score for measures 61-62. The score consists of four staves. The right hand part features a melodic line with dynamics *ff* and *ff*. The left hand part features a rhythmic accompaniment with dynamics *ff* and *ff*. The time signature is 3/4. A double bar line is present between measures 61 and 62.

63

♩ = 60

( approx) slightly uneven trill speed

fff ppp mf pp pp

mp p mp

fff

fff

flutter

66

mp p mf p pp ppp p pp pp

pp mp pp mf p mf p mp pp mp p

fff

fff

ppp

mp

loco

(rit.)

1/2 (rit.)

Sost.

73

flutter

p *mp* *mf* *p* *pp* *mp* *p*

mf *p* *mf* *p* *mf* *p* *f* *p*

ff *p* *mp* *p* *p* *mp* *fff* *loco* *p*

mf *p* *mp* *p*

ff *fff*

(Sost.)

75

mf *p* *f* *mp* *mf* *p* *f* *mp* *ffmp*

f *p* *mp* *p* *mp* *f*

p *mf* *ff* *p* *f* *mp* *p*

mf *mp* *mf* *p* *mp* *f* *p*

(Sost.)

77

Violin I: *mf*, *mp*, *f*, *p*, *f*, *mp*

Violin II: *mp*, *f*, *ff*, *pppp*

Violin III: *mf*, *f*, *ff*

Cello/Double Bass: *ff*, *fff* *lv*

Annotations: *tr*, *gliss*, *hit piano strings with palm of hand*

Tempo: $\text{♩} = 48$

Rehearsal Markings: *(Sost.)*

79

Violin I: *ff*, *pp*, niente, *pp*, *mp*, *ppp*, *mfpp*

Violin II: *ppp*, *mp*, *pp*, *mp*, *ppp*, *mf*, *pp*

Violin III: *ppp*, *mp*, *pp*, *mp*, *ppp*, *mf*, *pp*

Annotations: *tr*, *gliss*, *flutter*

Tempo: $\text{♩} = 48$

84

mp > *pp* < *mp* > *pp* > *pp* < *mf* > *p* > *pp* > *f*

mf > *pp* > *mp* > *pp* > *ppp*

mf < *f*

p *sfpp*

mostly air (*mp*) with some pitch (*pp*) and audible key clicks

/ Senza ped.



89

p *sf* *p* *ffp* > *mp* > *pp* *p* *p* *sf*

mf < *f*

mf

col legno battuto

sul G

15

15

92

(♩) *1/2 col legno* (♩) (♩)
mf *fff* *pp*
as high as possible (sul G) *gliss*
 15 *fff* *loco*
 15 *fff* *sfz*
Ed.



94

(♩) (♩) (♩)
sf p *ffp* *mf p* *ff*
1/2 col legno *sul D* *mf* *ff*
 12 12
 15 *fff*
 15 *fff*
Ed.

106

Musical score for measures 106-115. The score consists of three staves. The top staff is a treble clef with dynamics *f*, *mp*, *ff*, *f*, and *ff*. The middle staff is a treble clef with dynamics *ffp*, *ff*, *ffp*, *ff*, *ffmp*, *ff*, and *mf*. The bottom staff is a bass clef. Technical markings include triplets, sextuplets, and fingering numbers (3, 5, 7, 10).

107



109

Musical score for measures 109-118. The score consists of three staves. The top staff is a treble clef with dynamics *mf*, *ff*, *mp*, *mf*, *f*, *mf*, *ff*, *mf*, *ff*, and *fff*. The middle staff is a treble clef with dynamics *ff*, *ff*, *mf*, *ff*, *mp*, *ff*, *f*, and *fff*. The bottom staff is a bass clef with markings *mp poco a poco cresc...*, *loco*, *f molto cresc...*, and *ffff*. Technical markings include sextuplets, triplets, and fingering numbers (6, 10, 12, 3, 5, 6).

110

mp poco a poco cresc...

f molto cresc...

ffff

♩ = 92

111

Musical score for measures 111-116. The score consists of three staves: Treble Clef, Middle Clef, and Bass Clef. The tempo is marked as ♩ = 92. Measure 111 starts with a treble clef staff containing a melodic line with dynamics *pp* and *p*. The middle clef staff features a triplet of sixteenth notes marked *fff*, followed by a glissando and a *mp* dynamic. The bass clef staff has a *lv* dynamic. Measures 112-116 show various dynamics including *pp mp*, *pppp*, and *p*. The middle clef staff includes a *molto legato* instruction. The bass clef staff has a *poco cresc...* instruction.



117

Musical score for measures 117-122. The score consists of three staves: Treble Clef, Middle Clef, and Bass Clef. The tempo is marked as ♩ = 92. Measure 117 starts with a treble clef staff containing a melodic line with dynamics *pp mp*, *pp mp*, *pp mp*, *pp mp*, *pp mf*, *pp mf*, *p mf*, and *p mf*. The middle clef staff has a *poco a poco cresc...* instruction and a *mf* dynamic. The bass clef staff has a *pp* dynamic, followed by *p*, *mp*, and *mf* dynamics.

122

p mf *p mf* *p mf* *p mf* *f* *p*
f
mf
f

/ Senza ped.



126

f *p* *ff* *p* *ff*
ff
ff *ff*
subito mp
subito mp

Sua... loco

130

fp fp fp fp fp fp < f p <

fp fp fp fp fp fp < f

mf f

mf f

134

f p < f ff mf ff mf ff mp < ff ff mp <

p < f ff mf ff mf ff mp < ff ff mp <

f f f f

f f f f

Ped. / Ped. / Ped. / Ped. /

148

mf < ffmp < ffmp < ff

ffmp < ffmp < ff

f ff



152

ffp < ffp < fp < fp

ffp < ffp < fp < fp

fff ffff ffff fff

(Ped.)

Sost.

(Ped.)

156

fp mfp mfpp

<fp <mfp <mfpp

p pp

pp 3

(sost.)



161

mfpp ppp mfpp mp pp ppp pp

mp>pp mfpp

p ppp

ppp

ppp

(sost.)

167

ppp pp <> <p > ppp <> ppp <p > ppp mp > ppp

p > ppp <> pp p > ppp <mp > ppp <mp > ppp

poco poco poco poco poco a poco sul pont ...

pp

pp

(sost.)



173

flutter flutter

<> ppp <mp

sul pont (at the tip) poco a poco ord ...

<> ppp <mp

ppp

ppp

(sost.)

ord.

pp

pp

(*ord.*) _____ /
(*sost.*) _____ /