

Jarkko Hartikainen

# Superpositio

for three geographically separated organs,  
united by eelectronics

2013

**Music Finland**



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Music Library  
Urho Kekkosen Katu 2 C, 6<sup>th</sup> floor  
FI-00100 Helsinki  
Finland

[musiclibrary@musicfinland.fi](mailto:musiclibrary@musicfinland.fi)  
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# Superpositio

2013

for three geographically separated organs, united by electronics

Duration 9'42''

*Commissioned by Viitasaari Time of Music festival in cooperation with Gaudeamus Muziekweek and Fondation Royaumont under the auspices of the EU funded Ulysses Network project "Organ PLUS"*

World premieres: Utrecht, 6 September 2013 by Age-Freerk Bokma  
Viitasaari, 1 July 2014 by Age-Freerk Bokma  
Royaumont, 7 September 2014 by Age-Freerk Bokma



The piece is written for the 1957 Marcussen organ of the Nicolaikerkerk in Utrecht, the Baroque organ of the Viitasaari church (Kangasalan Urkurakentamo 1989), and the 1864 Cavaillé-Coll of the L'abbaye de Royaumont. All the sounds used in the piece have been generated with these organs, and then sampled onto a computer for simultaneous use. Thus only the organ of the concert venue is being played live, together with a stereophonic tape part containing the parts for the other two instruments, as performed by computer. The tape part (2.1) consists only of the sound of these organs, with the exception of a short Indian monsoon storm near the very end.

For a possible performance outside of these three venues, the performer must choose an organ similar to one of these organs – which might be borderline impossible due to the extremely specific sounds requested by the score. Playing the piece with very different timbres is not recommended.

Description of the specific half-stopped sounds:

### Royaumont

III (*Grand orgue*): Flûte Harmonique 8' (half) + Flûte Douce 8' (half)

The sound starts to erode from the third C upwards, turning into airy, noisy and in some cases overblown-sounding. Find the sound beforehand, no other sounds are used on III.

Demonstration: <http://tinyurl.com/RoyIII>

II (*Positif*): Flûte Harmonique 8' (half) + Piccolo 1' (half)

Range: third G to fifth (highest) C#. At the same time electronic-sounding and air noise -filled. Find the sound beforehand and make sure the Flûte Harmonique will work on its own as requested in the next sound. Demonstration: <http://tinyurl.com/RoyIIa>

II (*Positif*): Flûte Harmonique 8' (half)

Range: third G to fifth (highest) C#. Lot of air noise, closely resembling a flute played with a lot of air and overblown. When preparing the sound beforehand, take notice of the area between C and E. Demonstration: <http://tinyurl.com/RoyIIb>

### Utrecht

III (Hovodverk): Principal 8' (half) + Rørfløjte 8' (half) + Spidsfløjte 4' (half)

Range: third Bb to fourth F (a fifth). The desired sound is at the same time electronic and noisy. It is advisable to learn a way to prepare this sound silently, ie. by using some sort of markers on the stops, as this sound cannot be prepared beforehand due to other activity on the III.

Demonstration <http://tinyurl.com/UtrechtIII>

### Viitasaari

I: Kvint 2/3' (half) + Oktava 2' (half) + Kvint 1/5' (half)

The overall sound is quite electronic ("modulated"), with adjacent keys transposing differently, especially in the low register. In the highest register the sound almost disappears into air noise. Octaves have an electronic, "bleeding," feedback-like quality. Prepare this sound beforehand.

Demonstration on <http://tinyurl.com/ViitI>

(Viitasaari continued)

II: Suavial 8' (half) + Gedakt 8' (half) + Dulcian 8' (half)

In this sound, every octave is different. Lowest octave has audible beating ("two instruments out of tune"), the second octave has surprising nasal accents on some keys, the third octave has this nasalness pronounced on top of a "hovering" background (fast beatings), the fourth octave has a quiet, second tone clearly out of tune. Listen to the demonstration while preparing this sound beforehand <http://tinyurl.com/ViitII>

Ped: Subbass 16' (half)

This sound has a heavy air sound added to the sound of the stop. Prepare beforehand by finding the spot where the air sound is most pronounced while still having pitch (although quite veiled). Demonstration <http://tinyurl.com/ViitPed>

I: Rohrflöte 8' + Principal 8' + Spitzflöte 4' + Oktava 2' + Mixtur 4x (all air noise)

This sound will be prepared (audibly!) during the course of the piece., in mm. 97–114 (5'49"–6'57"). The goal is to find the loudest sound, consisting only of air noise, in the second octave (played as a cluster). Some practise is recommended, although the sounding result must resemble an exploration, as if showing the listener "what's under the hood," ie. how the piece has been constructed.

II: Suavial 8' + Gedakt 8' + Principal 4' + Waldflöte 2' + Dulcian 8' (all air noise)

Similar to the previous sound (maximal air noise in the second octave cluster), this sound must be practised by the assistant to do silently during mm. 101–115 / 6'05"–7'01" (use of marks on the stops is recommended). The first octave will have some amount of pitch left (a low and a high tone simultaneously, sounding a bit like double bass harmonics), while the third octave is completely mute.

Ped: Subbass 16' (air noise)

Likewise to be prepared by the assistant silently during the course of the piece (mm. 101–115 / 6'05"–7'01"). Maximal air sound between the first F and the first B (played as a cluster).

Commissioned by Gaudeamus Muziekweek, Viitasaari Time of Music and Fondation Royaumont under the auspices of the Ulysses Network project "ORGAN plus"

# Superpositio

for three geographically separated organs, united by electronics

Jarkko HARTIKAINEN 2013

♩ = 60

Royaumont

I

II

III

Pedal

Utrecht

I

II

III

Pedal

Viitasaari

II

Pedal

Flûte Harmonique 8' (half)  
Flûte Douce 4' (half)

(d)

Dulcian 16'

Quintaton 16'

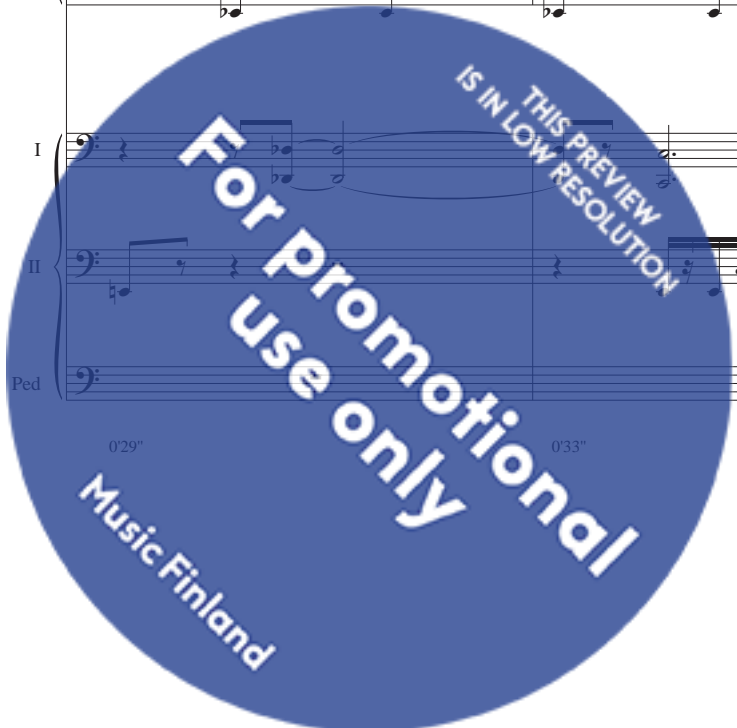
Fagot 32'

Kvinta 2 2/3' (half)  
Oktava 2' (half)  
Terz 1 3/5' (half)

Suavial 8' (half)  
Gedakt 8' (half)  
Dulcian 8' (half)

0'08" 0'12" 0'16" 0'20" 0'25"

The image displays a musical score for organ and electronics, consisting of three systems of staves. Each system includes staves for I, II, III, and Ped. The first system (measures 7-11) features a complex bass line in III with sixteenth-note patterns and sixteenth rests, marked with '6'. Pedal parts in I and II are mostly rests. The second system (measures 12-16) shows more activity in II and III, with a triplet in II and sixteenth-note patterns in III. Pedal parts in I and II have eighth-note patterns. The third system (measures 17-21) continues the patterns, with a 'Fagot 32' marking in the Pedal I part. Time signatures change from 5/4 to 4/4 at the end of each system. Performance markings include '(e)', '(d)', and '(d)' above notes, and '6' below notes.



0'29"

0'33"

0'37"

0'41"

0'45"

12

I Flûte Harmonique 8' (half)  
Picolo 1' (half)

II

III

Ped Subbass 16'

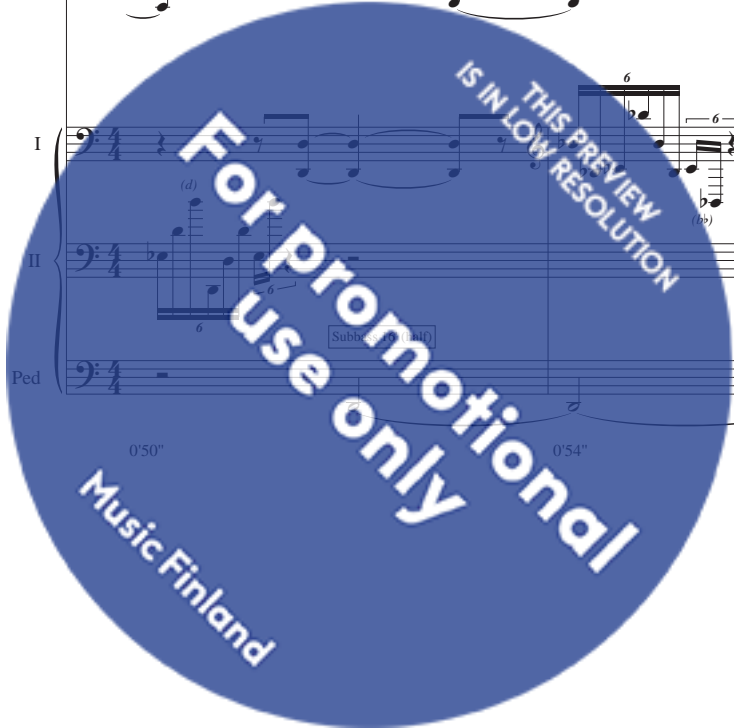
(d)

(e)

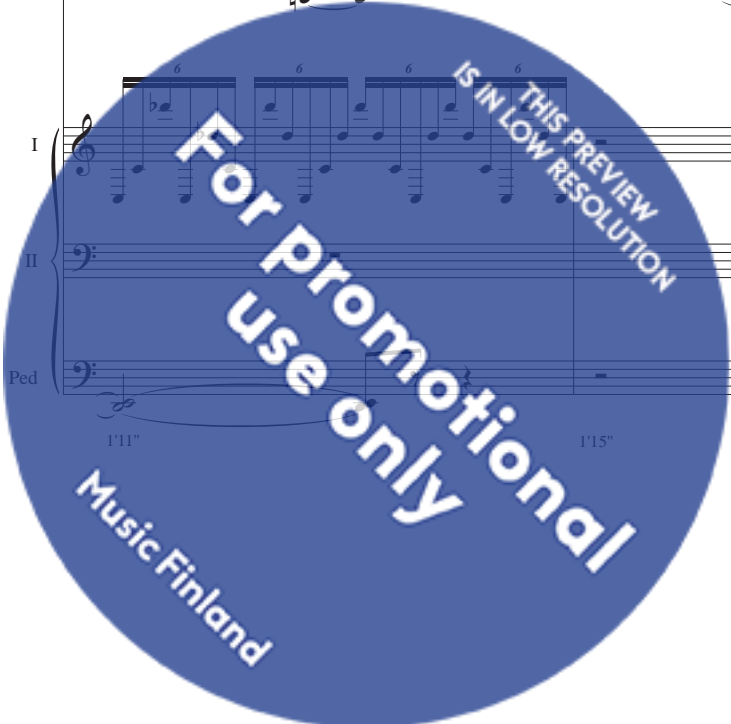
(d)

(c)

0'50" 0'54" 0'58" 1'03" 1'07"



The image displays a musical score for organ and electronics, consisting of three systems of staves. Each system includes staves for I, II, III, and Pedal. The first system (measures 17-21) features a melodic line in II and a bass line in Pedal. The second system (measures 22-26) includes a Waldflöte 2 part in I, with a key signature change to C# indicated by '(c#)'. The third system (measures 27-31) continues the organ and electronics parts, with a key signature change to B indicated by '(b)'. Measure numbers 1'11", 1'15", 1'19", 1'23", and 1'27" are marked at the bottom of the score.





The image displays a musical score for organ and electronics, consisting of three systems of staves. Each system includes staves for I, II, III, and Pedal. The score is written in treble and bass clefs with various time signatures (2/4, 4/4, 3/4, 2/2). It features complex rhythmic patterns, including triplets, sextuplets, and quintuplets. The notation includes notes, rests, and dynamic markings. The first system starts at measure 22. The second system continues the piece. The third system concludes with measure 27. Time stamps are provided at the bottom of the page: 1'31", 1'35", 1'37", 1'41", 1'45", and 1'48".



28

I

II

III

Ped

I

II

III

Ped

I

II

III

Ped

pppp

1'52"

1'56"

2'00"

2'04"

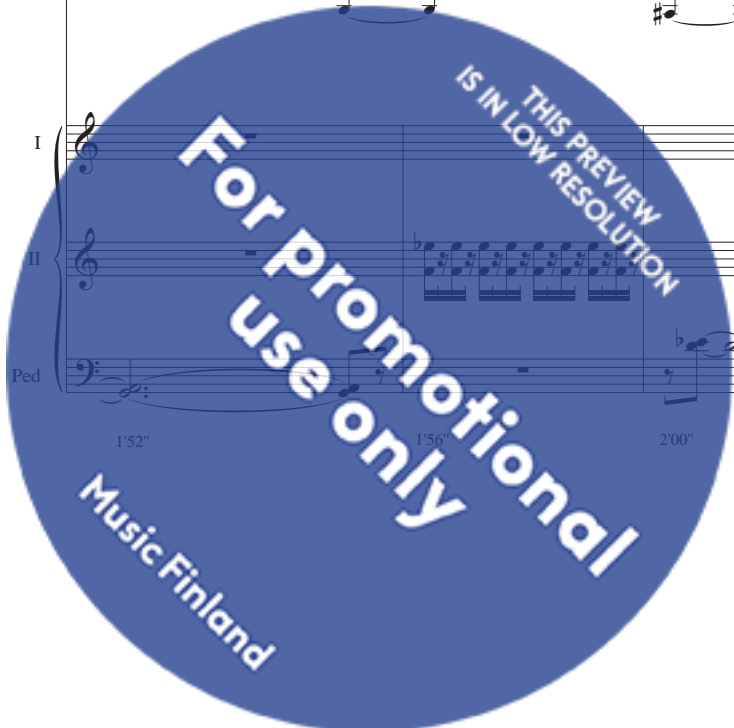
2'07"

2'11"

2'16"

2'20"

2'24"



37

Gambe 8'

Flûte Harmonique 8' (half)

I

II

III

Ped

I

II

III

Ped

I

II

Ped

2:28''

2:32''

2:36''

2:39''

2:42''

2:45''

2:48''

2:51''

2:54''



46

I

II

III

Ped

I

II

III

Ped

I

II

III

Ped

2'57"

3'00"

3'03"

3'06"

3'09"

3'12"

3'15"

3'18"



Flûte Traversière 8'

54

I  
II  
III  
Ped

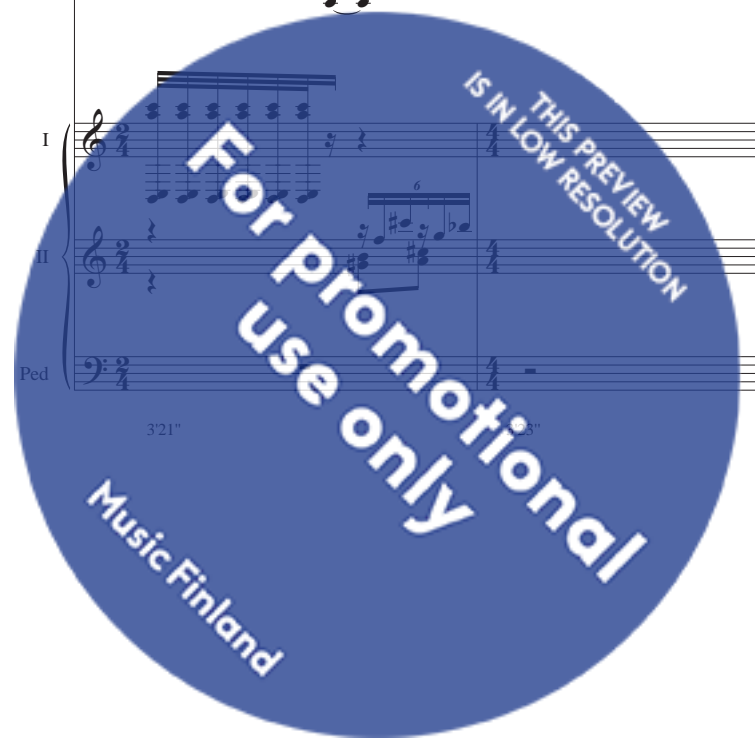
I  
II  
III  
Ped

I  
II  
III  
Ped

3'21"

3'27"

3'31"



58

I

II

III

Ped

(d)

(d)

(d)

(e)

(b)

(d)

3'35"

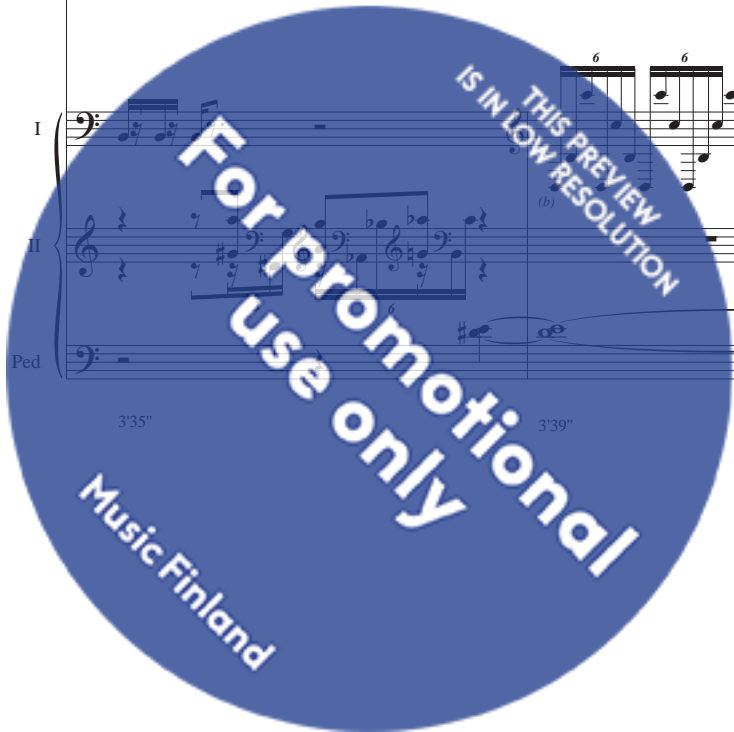
3'39"

3'43"

3'47"

3'51"

3'55"



64

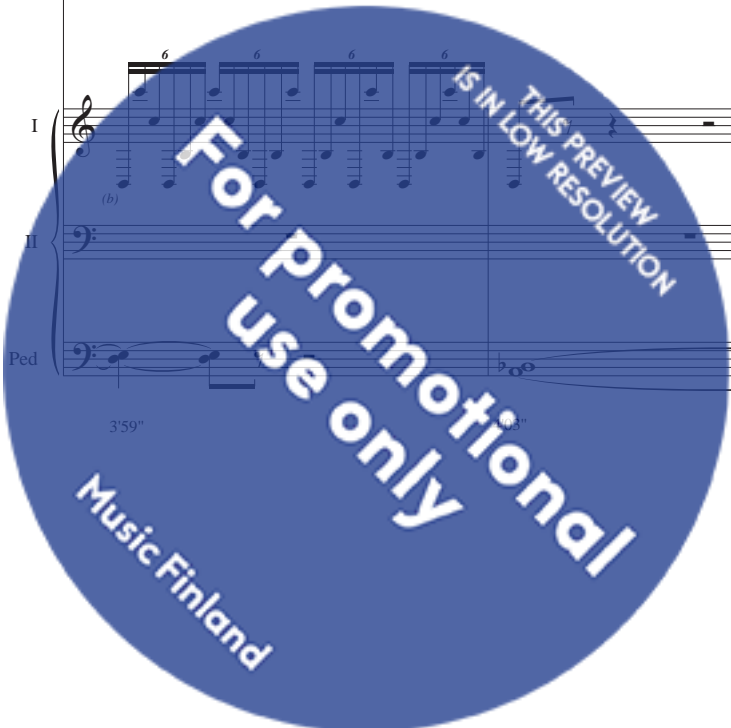
Musical score for measures 64-71. It consists of four staves: I (Treble clef), II (Treble clef), III (Bass clef), and Ped (Bass clef). Measure 64 starts with a rest in I and a triplet of eighth notes in II. Measures 65-71 feature various rhythmic patterns, including triplets and sixteenth notes, across all staves.

(e)

Musical score for measures 72-79. It consists of four staves: I (Bass clef), II (Bass clef), III (Bass clef), and Ped (Bass clef). Measure 72 features a complex sixteenth-note pattern in I, marked with a '6' and a circled 'e'. Measures 73-79 show sparse accompaniment in II, III, and Ped.

(b)

Musical score for measures 80-87. It consists of four staves: I (Treble clef), II (Bass clef), III (Bass clef), and Ped (Bass clef). Measure 80 features a sixteenth-note pattern in I, marked with a '6' and a circled 'b'. Measures 81-87 show complex rhythmic patterns in II and Ped, with some notes in I.



3'59" 4'07" 4'11" 4'15" 4'19" 4'23" 4'27" 4'31"

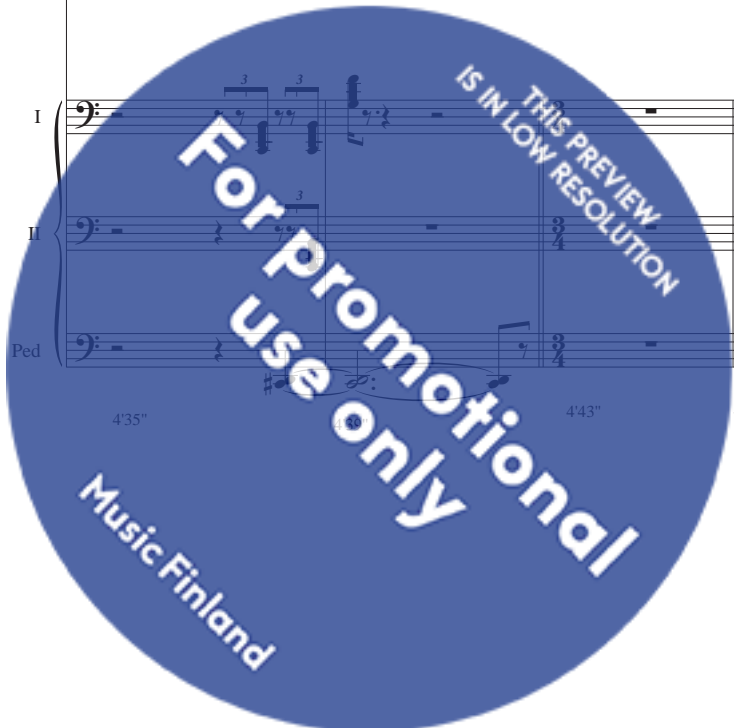
73

Principal 8' (half)  
Rörflöjte 8' (half)  
Spidsflöjte 4' (half)

prepare the desired sound now, if you can do it silently (ie. with marks on the stops)

Principal 8' (half)  
Rörflöjte 8' (half)  
Spidsflöjte 4' (half)

4'35" 4'43" 4'46" 4'49" 4'52" 4'55" 4'58" 5'01" 5'04" 5'07" 5'10" 5'13" 5'16" 5'19" 5'22"





89

Rohrflöte 8' (air noise)  
Principal 8' (air noise)  
Spitzflöte 4' (air noise)  
Oktava 2' (air noise)  
Mixtur 4x (air noise)

find the loudest airy, pitchless sound using these stops, be ready before measure 114

(play only during the indicated durations, and only the indicated palm cluster)

5'25" 5'33" 5'37" 5'41" 5'45" 5'49" 5'53" 5'57" 6'01" 6'05" 6'09"



101

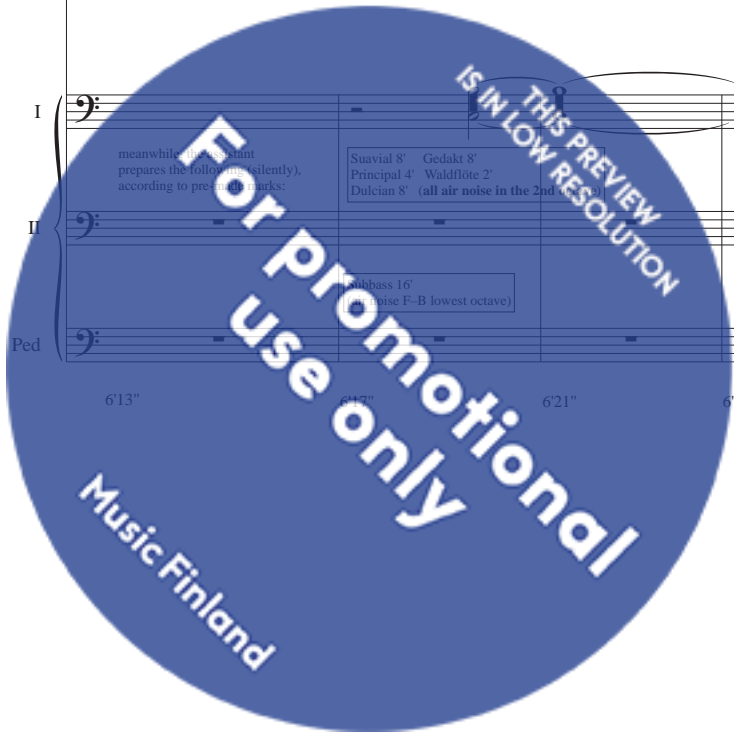
Gambe 8'

meanwhile, the assistant prepares the following (silently), according to previous marks:

Suavial 8'	Gedakt 8'
Principal 4'	Waldflöte 2'
Dulcian 8'	(all air noise in the 2nd)

Subbass 16'  
(all noise F-B lowest octave)

6'13" 6'17" 6'21" 6'25" 6'29" 6'33" 6'37" 6'41" 6'45" 6'49" 6'53"



112

Rohrflöte 8' (air noise 2nd octave)  
Principal 8' (air noise 2nd octave)  
Spitzflöte 4' (air noise 2nd octave)  
Oktava 2' (air noise 2nd octave)  
Mixture 4x (air noise 2nd octave)

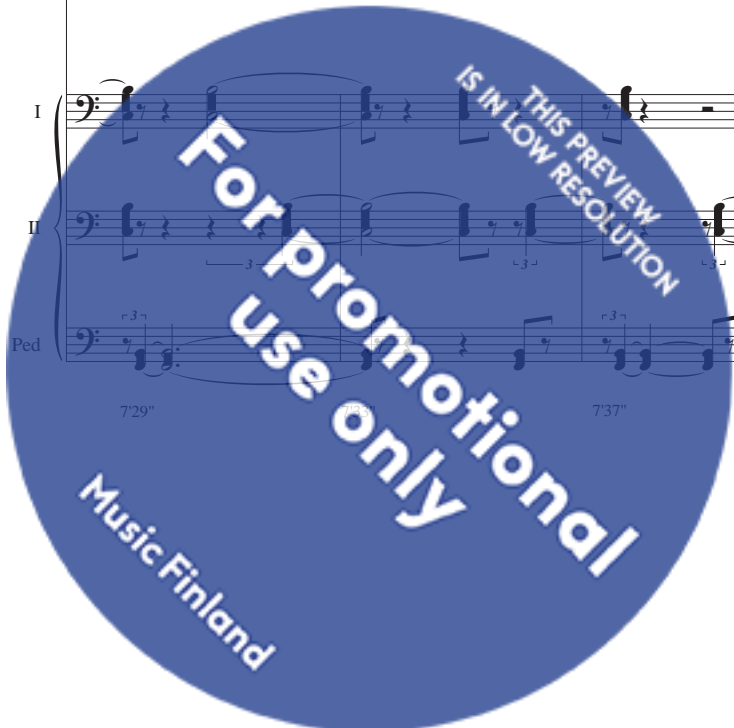
Suavial 8' Gedakt 8'  
Principal 4' Waldflöte 2'  
Dulcian 8' (all air noise in the 2nd octave)

Subbass 16'  
(air noise F-B lowest octave)

657" 705" 709" 713" 717" 721" 725"



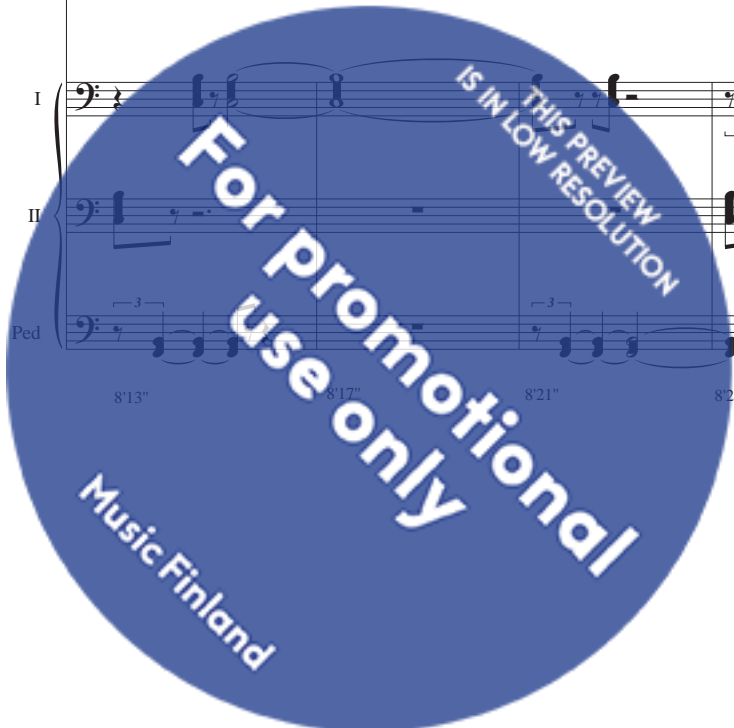
120



TAPE PART  
fades in  
(rain, thunder)

131

8'13" 8'17" 8'21" 8'25" 8'29" 8'33" 8'37" 8'41" 8'44" 8'47" 8'50"



142

I

II

III

Ped

I

II

III

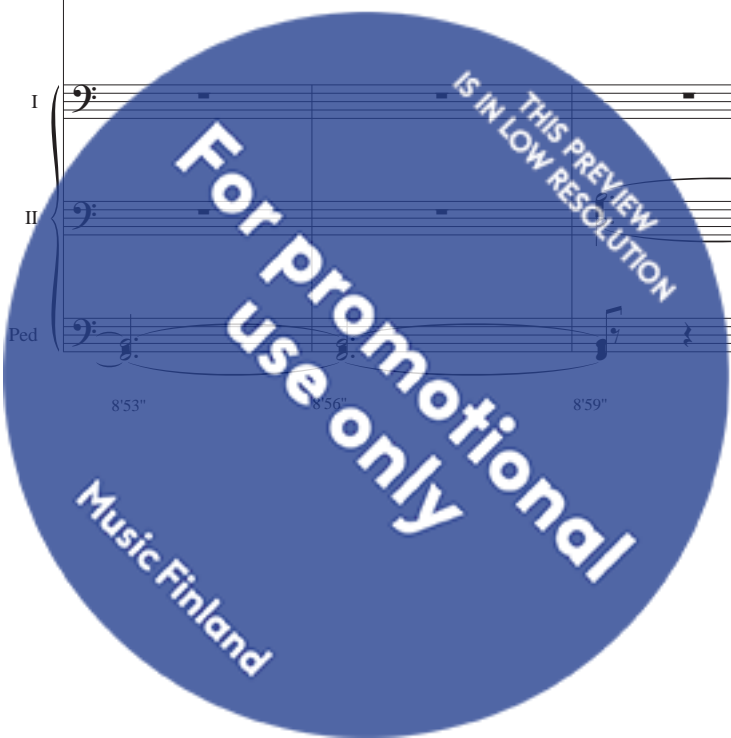
Ped

I

II

Ped

8'53" 8'56" 8'59" 9'02" 9'05" 9'08" 9'11" 9'14" 9'17" 9'20" 9'23"



153

I  
II  
III  
Ped

I  
II  
III  
Ped

I  
II  
Ped

9'26" 9'32" 9'35" 9'38" 9'41" 9'44" 9'47" 9'50"

