

DOT MATRIX DIALECT

for cello, piano, percussion and electronic sound

◆

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BENJAMIN HACKBARTH

CELLO ABBREVIATED TECHNIQUES

SP – *sul ponticello*

MSP – *molto sul ponticello*

CL Bat – *col legno battuto*

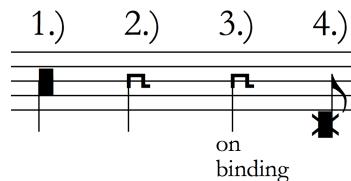
ST – *sul tasto*

MST – *molto sul tasto*

Each of these techniques applies **only to the event over which they are written**, unless extended by a horizontal bracket or additional text specifies how long they last.

CELLO NOTEHEADS

- 1.) Mute strings with left hand resulting in an unpitched sound. Multiple fingers of each string at different locations, ensuring that the strings are deadened and will pressure should be used to avoid generating a fundamental pitch. Written position - higher notes correspond to higher positions on the fingerboard.
- 2.) Scratch tone – pitchless, high pressure and a slow bow speed. Use left-hand resonances.
- 3.) Scratch tone behind the bridge on the string binding. Use left-hand muting to
- 4.) Forcefully slap the strings on the fingerboard with the left hand. Always written at this position on the staff.



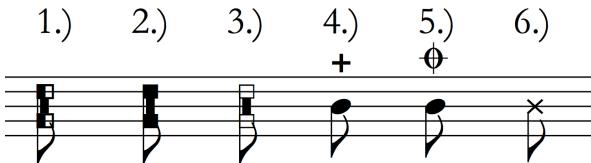
the left hand should be in contact with not produce pitches. Harmonic register (approx. pitch) indicates L.H.

muting to avoid open string

avoid open string resonances.

PIANO NOTEHEADS

- 1.) Fully chromatic clusters/glissandi.
- 2.) Clusters/glissandi with only black notes.
- 3.) Clusters/glissandi with only white notes.
- 4.) Muted. As little pitch as possible unless otherwise noted.
- 5.) Not played on the keyboard; stop the resonance of the articulate sound whilst hitting the strings.
- 6.) Plucked with fingernail.

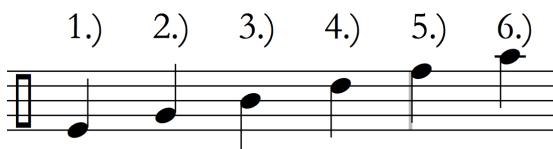


previous note with muting, making an

PERCUSSION INSTRUMENTS

Vibraphone, glockenspiel as well as the following unpitched set of instruments:

- 1.) Large plastic bucket. ~20 liters made of thick, hard material. cloth/foam.
- 2.) Small plastic bucket. ~4 liters made of thick, hard material. cloth/foam.



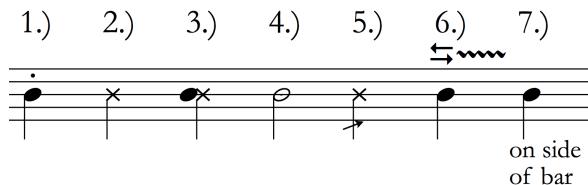
Inverted and on a table with

Inverted and on a table with

- 3.) Shekere, played non-traditionally – a ‘w’ above the staff indicates to play with a mallet on the part without beads. A ‘b’ indicates to strike the beaded surface with a mallet. An ‘h’ indicates a slap the beads with a hand. ‘h’ should be less articulate and pointed than ‘b’.
- 4.) Wooden Guiro. By default, hit like a woodblock, not scraped unless notation 5 (below) is given.
- 5.) Large tin can or small metal waste bin. ~2-4 liters. Inverted and on a table with cloth/foam.
- 6.) Whiskey bottle. On a table dampened with cloth/foam. Emptied responsibly.

PERCUSSION NOTEHEADS

- 1.) Staccato performed as a deadstroke.
- 2.) For buckets and tin can, play on the rim with the shaft.
- 3.) Rimshot.
- 4.) Hit towards the edge of the membrane. Only applies to the in the centre.
- 5.) An arrow across the note stem indicates a scraping motion the mallet, thus this notation will always use an x-notehead.
- 6.) A tremolo produced with the stick in constant contact with the instrument – after the initial attack, the stick should not leave the surface. The tremolo is created by rapidly moving the stick back-and-forth, “scribbling” across a small area. Accents and dynamics are created by expanding/contracting the area of the motion. Play frantically, as fast as possible.
- 7.) ‘On side of bar’, vibraphone only: strike the bar on the side of the top edge with the mallet.



buckets which, otherwise, are to be hit (guiro only). Always use the shaft of

SHAFT POSITION indicates where to play along the vertical length of the shaft. Locations closer to the head (top of the staff) should have a higher, brighter timbre which locations towards the end of the stick (bottom of staff) should be duller.

DYNAMICS IN QUOTATIONS MARKS are given when the resulting sound will be softer than the dynamic written due to an unusual performance technique. In these cases the written dynamic specifies the relative intensity of the performer’s action.

INTERPOLATE RHYTHM modifies the performance of written rhythms in a given passage such that the changing speed of attacks is smoothed. An example is shown to the left. Underneath the symbolic notation are two rows of dots corresponding to individual note attacks. The first line of dots shows the normal performed rhythm. The second row of dots shows “interpolate rhythm” instruction. Such modifications essentially ensure speed, the rate of successive notes is continually modified to

the desired result of the “interpolate that, rather than an abrupt change in achieve a fluid, continuous rhythm.

GLISSANDI are always notated such that quarter note stems are shown to indicate the location of each beat in each bar. These stems *do not* indicate bow changes or accent patterns, but are present only to elucidate rhythm.

DASHED GLISSANDI indicate that the rate of pitch change is coupled to the amplitude of the note. Thus, louder dynamics result in a faster glissando speed while softer dynamics indicate a slower glissando. As dynamics change over the course of a glissando, the speed of glissando should change in tandem. Consider the following examples that illustrate this coupling:

1. A static amplitude yields an even glissando, equivalent to an ordinary glissando.

2. However, a change in dynamic affects the slope of the glissando. In this case, the dynamic increase from p to mf creates a steeper pitch change towards the end of the note.

3. The slope of the change in dynamic affects the slope of the glissando. Here, the exponential hairpin creates a more sudden pitch change when compared to 2.

4. The intensity of dynamic change also affects the intensity of the glissando speed. A change from p – mp only creates a slight change in glissando slope...

5. ...while a change from p to mf yields a more dramatic slope in pitch change when compared to 4.

6. Any change in amplitude, however notated, affects glissando speed. Shown here, an accent.

Consider a more complete passage utilizing this notation:

...becomes...

DOT MATRIX DIALECT

$\text{♩} = 102$

Benjamin HACKBARTH
2016

The musical score consists of four staves:

- Cello:** Playing pizzicato (labeled "pizz III 8va") with dynamic markings $3''f''$, ff'' , and f .
- Vibraphone:** Playing sustained notes with dynamic markings mp , mf , p , mp , and f . A box contains instructions: "Pedal down continuously until letter G. Make sure that the resonator flaps are closed for maximum sustain duration." In measure 15, it plays a tremolo between ordinary and side of bar positions, gradually decelerating to elide note speed in measure 13.
- Piano:** Playing sustained notes with dynamic markings mf , f , and ff . A box contains instructions: "hit the metal frame inside the piano with a yarn mallet".
- Electronic Sound:** Represented by vertical bars indicating sustained tones.

Accented notes are "on side of bar"; non-accented notes are ordinary.

14

A

pizzicato, light and feathery

Shaft Position

Musical score for string instruments, page 14, section A. The score consists of four staves. The top staff is for bassoon, indicated by a bassoon icon. The second staff is for cello, indicated by a cello icon. The third staff is for double bass, indicated by a double bass icon. The bottom staff is for strings, indicated by a violin icon. The music is in common time. The bassoon part starts with a dynamic *p* and a melodic line consisting of eighth-note pairs. The cello part begins with a dynamic *p* and features a rhythmic pattern of eighth-note pairs. The double bass part starts with a dynamic *f > mp* and has a continuous eighth-note eighth-note pattern. The strings part starts with a dynamic *f* and includes dynamics *mp*, *mf*, *pp*, *mp*, *pp*, and *mf*. The score concludes with a series of vertical bar lines.

28

pizz
III

<ff f

3 *2* *4* *4* *3* *4*

Vibraphone

f ff <f <mp

on side of bar

ff mf

f

accented notes are "on side of bar"
non-accented notes are ord.

interp. rhythm

mp dim. poco a poco

(8)---

f ff

44

B
arco

f>p *"f">p* *"f">p* *"f">p* *"ff"* *f*

Cl pizz
Bat

Shaft Position

p *fmp* *"mf"* *"f"* *"mf"* *"f"* *"mf"* *"fp"* *"ff"*

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

Glockenspiel

Vibraphone

Cargo
C. Battuto

ff

fp

<"f">p

<"f">p

3

p *mf* *dim. poco a poco*
on side of bar

3

p

3

w *5*

mf

interp. rhythm

*accented notes are "on side of bar"
non-accented notes are ord.*

f

15^{ma}

15^{ma}

78

CL Bat
SP jeté-like

CL Bat
MST

fp "f > p" mf interp. rhythm 3
ff Glockenspiel 5 6
Vibraphone f ff
w 3 3 3
f mp mf

15^{ma}

mf

D

IV

ST

6

f — *p*

I

ord

3

*mf*CL Bat
jeté

f — *f*

all ord notes

mp — *mf* — *p*

Interpolate Rhythm
Slower note speed = the two notes are slightly out of sync.
Fast note speed = perfectly synchronised.

f — *ff*

mf — *mf*

ff — *mp* — *ff* — *mp*

105 *interp. rhythm*

E
CL Bat, interpolate rhythm

Glockenspiel

Vibraphone

(15)

Bassoon

Clarinet/Bassoon

117

F

Bassoon:

- Measure 1: ff, mf
- Measure 2: ff
- Measure 3: arco, ST, ff
- Measure 4: ff
- Measure 5: pizz IV, arco on binding, CL Bat jeté 5

Vibraphone:

- Measure 1: pickup for piano, f
- Measure 2: f, mf
- Measure 3: f
- Measure 4: f > mp
- Measure 5: < f > mp
- Measure 6: f
- Measure 7: Vibraphone

Glockenspiel:

- Measure 2: f, mf
- Measure 3: f
- Measure 4: f > mp
- Measure 5: < f > mp
- Measure 6: f

Clarinet/Bassoon:

- Measure 1: ff, mf
- Measure 2: ff
- Measure 3: arco, ST, ff
- Measure 4: ff
- Measure 5: pizz IV, arco on binding, CL Bat jeté 5

Performance Instructions:

- Interpolate rhythm: Faster speed = centre of bucket, Slower speed = near edge of bucket
- jeté-like, interp. rhythm

130 CL. Bat, interp. rhythm
ST

unison rhythm percussion until m. 142

on binding ord slow scratch pizz I II III

Vibraphone

unison rhythm cello until G

interpolate rhythm, intense muting no pitch. frantic and fanatical.

G

$\text{♩} = 74$

139

plus sign - mute note with RH according to upper staff
 • x-notehead - pluck with RH fingernail
 • open sign - no muting
 • dampen symbol - do not play on the keyboard; stop the resonance of the previous note with RH muting, making an articulative sound whilst hitting the strings.

I
SP nail pizz
2

-
mp p

Vibraphone

Senza pedal
on side of bar—

5

jeté-li

mp sub
pp

pp

p

mp > pp

p

mf

mp

mf

pp

p

mp

mf

Interp. rhythm

158 I SP nail pizz

H I SP nail pizz

sim.

f *p*

sim.

f *mp*

mute the glockenspiel with a strip of rubber, dampening the bars to give a staccato sound with no sustain.

sempre staccatissimo and interpolate rhythm until letter L.
all notes are as short as possible regardless of written duration.
always delicate, light. accents are understated.

169

muffled pizz

sempre staccatissimo and
interpolate rhythm until letter L

Musical score for orchestra and piano, page 10, measures 11-12. The score consists of five staves. The top staff (Bassoon) has a bass clef and rests. The second staff (Oboe) has a treble clef and rests. The third staff (Piano) has a treble clef and rests. The fourth staff (String Bass) has a bass clef and rests. The bottom staff (Violin) has a treble clef and rests. Measure 11 starts with a dynamic *p*. Measure 12 starts with a dynamic *pp*. Measures 11-12 feature sixteenth-note patterns with grace notes and slurs. Measure 12 includes a fermata over the first two measures.

Musical score page 178, featuring five staves of music for different instruments. The top staff shows a bassoon part with dynamics *mf*, *p*, and *pp*. The second staff contains a note with a grace note and a dynamic *p*. The third staff includes a box with instructions: "senza *Réo* unless noted otherwise. *sempre* interpolate rhythm until letter L. medium mallets." The fourth staff features a *Glockenspiel* part with a dynamic *p*. The fifth staff shows a complex rhythmic pattern with dynamics *mfp*, *p*, *mp*, *p*, *pp*, *p non-dim.*, *mp*, and *p*. The bottom staff concludes with *Réo* markings.

186

Musical score for orchestra and vibraphone, page 186. The score consists of three staves. The top staff is for the strings, the middle staff is for the vibraphone, and the bottom staff is for the piano. The score begins with a dynamic of $mp > p$, followed by pp . The vibraphone part starts with a dynamic of pp and includes a label "Vibraphone". The piano part has dynamics of p , $mp > p$, and pp . The strings play a rhythmic pattern with grace notes and slurs. The vibraphone part features a complex, descending melodic line with various dynamics and articulations. The piano part includes sections of double time and normal time. The score concludes with a dynamic of mf .

muffled pizz.

Vibraphone

[double time]

[normal time]

193 J

arco
each note is a single off-the-string bounce

Musical score for string instrument, page 193. The score consists of four staves, each with a 4/4 time signature and a key signature of one sharp. The first staff begins with a dynamic *p*. The second staff begins with a dynamic *f*. The third staff begins with a dynamic *fmp*. The fourth staff begins with a dynamic *p*. The music features continuous sixteenth-note patterns with various grace note patterns above them. The notes are primarily off-the-string bounces, as indicated by the arco instruction and the note heads. Dynamics include *p*, *mp*, *mf*, *p*, *f*, *fmp*, *p sub*, and *p*. Articulation marks like '3' and '5' are placed above specific notes. Pedal points are marked with 'Ped' and vertical lines below the staves. The score concludes with a final dynamic *p*.

199 → SP → ord pizz → ST → ord pizz

Glockenspiel

p

gradual release ^

K
207

Musical score page 207 featuring three staves:

- Bassoon:** Starts with a dynamic of *mf*. The first measure consists of two measures of rests. The second measure begins with a sixteenth-note pattern: $\text{Bassoon} \quad 7 \quad 6 \quad 7 \quad 5 \quad 6 \quad 6$, followed by a measure of rests. The third measure begins with a sixteenth-note pattern: $\text{Bassoon} \quad 7 \quad 5 \quad 6 \quad 6 \quad 3$, followed by a measure of rests. The fourth measure begins with a sixteenth-note pattern: $\text{Bassoon} \quad 7 \quad 5 \quad 6 \quad 6 \quad 3$, followed by a measure of rests. The fifth measure begins with a sixteenth-note pattern: $\text{Bassoon} \quad 7 \quad 5 \quad 6 \quad 6 \quad 3$, followed by a measure of rests.
- Vibraphone:** Dynamics: *fmp*, *mf*, *p*, *mp*, *p*, *mp*, *p*, *mp*, *p*, *mf*. The Vibraphone part consists of sixteenth-note patterns with various note heads and stems.
- Glockenspiel:** Dynamics: *p*, *mf*. The Glockenspiel part consists of sixteenth-note patterns with various note heads and stems.

Musical score page 213, featuring three staves of music. The top staff uses a treble clef and includes dynamic markings *mp*, *p*, and *mf*. The middle staff uses a treble clef and includes dynamic markings *mp*, *p*, and *mf*. The bottom staff uses a bass clef and includes dynamic markings *mp*, *pp*, *mf*, *p*, and *p*. The score includes a section for Vibraphone with dynamic *p* and a section for double time with measures numbered 6, 7, and 8. Measure numbers 3, 5, and 6 are also present above the staves.

219 arco CL Bat. IV = 112

CL Bat II

CL Bat II

CL Bat II

off the string bounce

IV pizz

arco

h

h

229

IV pizz

IV pizz

arco Cl Bat
IV ST

sim.

interpolate rhythm until m. 241

238

on binding MST

on binding MST

on binding

pizz II III II III II III II III II III II III II III

f'' *mp* *"f"* *"f"* *mp* *"f"* *"f"* *mp* *"f"*

h

f

sub *mp*

f

sub *mp*

f

sub *mp*

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

mf *f*

mf *f*

mf *f*

M

254

II III IIIII arco II (don't change bow) pizz II arco II pizz I arco ST CL Bat MST CL. Bat. MST

"f" *mf* *smpz* *mf* *smpz* *mf* *mf* *f* *mf* *mf* *mf* *mf* *f* *mf* *mf* *mf*

(jeté)

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

interp. rhythm interp. rhythm interp. rhythm

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

262

CL Bat
jeté

b w

(jeté)

staccatissimo, interp. rhythm

25

274

jeté-like bounce
interpolate rhythm until N

N

pizz IV
8va III II I
8va II I
8va IV III II

mf > p

f 3 p

mf mp

f ff' 3 mf ff'

b sub mp

mf

mp

f mp f mp

284

I I
 II IV IV
 II II III

arco CL Bat jeté

mf < *f*

ff

CL Bat III I

pizz II arco CL Bat III I

"*f*" *mp*

h

mp

sub f

sub mp *mf*

sub mp *mf*

mp

ff [emphase C#]

mf

ff ma

ff ma

300 pizz
II
15^{ma}
"f"
f
ff possible

pizz
3
arco
3

the guiro scrapes happen slightly before the beat

forearm clusters. Articulation gradually changes throughout this passage: at the beginning, there's a fast upwards glissando in both arms. at the end, the glissandos are perfectly synchronised and together.

Put on socks

311

Musical score page 311, featuring four staves of music:

- Top Staff:** Bass clef, 4/4 time, key signature of one flat. Measures show rests followed by dynamic markings: ff , fff , and ff .
- Second Staff:** Treble clef, 4/4 time, key signature of one flat. Measures show eighth-note patterns with dynamics: w , b , w , and w . The dynamic fff is also present.
- Third Staff:** Bass clef, 4/4 time, key signature of one sharp. Measures show eighth-note patterns with dynamics: w , w , and w . The dynamic fff is also present.
- Bottom Staff:** Bass clef, 4/4 time, key signature of one sharp. Measures show eighth-note patterns with dynamics: v , v , and v .

336
O
= 82

LH RH *sim.*
p (as soft as possible)

mp **p**
mp
mf > **p** < **mp** < **p**
sub
mp **p**

Solo. Soft, but with white-hot energy and unyielding relentlessness.
 Each glissando is made with a single gesture.
 All glissandi fall below F6 (the dotted line, the first pitch without dampers) until m. 337.
 Dynamics are written between **p** (as soft as possible) and **f** (as loud as possible).
 Use una corda as needed to achieve soft dynamics.

fp *mf* > *mp* < *f* *p*

sub
mp

< *mf* > *mp* < *fp* >

Play even, fluid, continuous glissandi. Minimise the
 impact of bow changes and avoid changing the bow
P if the glissando direction changes when possible.
 Do dynamics with bow pressure/speed.

331

339

IV SP → ord fast trill → slow trill → fast trill → over pressure

tr → fast trill

Vibraphone: all glissandi are fully chromatic

this is first instance of pitches without dampers (above E₅)

ff' ff p p<fmp > ff mf <f> sub f

347

III SP → slow trill → fast trill
ord

Q
Cat

ff^{mp} f → mp f → p < f arco → over pressure

ff^{mp}

slow trill → fast trill
ord

Q
Cat

ff^{mp} f → mp f → p < f arco → over pressure

ff

mf < fmp < ff

mp

mp < fz

mf < ff

mp

3

tight

5

3

2

5

3

3

mp

358 SP

p p ff

mp <f>

f >mf

p mf

a wild romp

Unmuted Glockenspiel, hard mallets

f

p 6 6 mf p 6 5

intensely handmuted, almost unpitched

tight

<mf p <mp> <f> mf <ff fff

sockless

ffff

R

367 *sempre IV (until the end)*

weak, unfocussed sound
this gliss actually goes up!

edge → centre

Vibraphone, medium mallets
As deadsticked as possible

gradually release notes until only the C# remains.
let resonate until it fully decays.

lowest C#

Piano

377

Pno.

intense muting, no pitch, no pedal.