Jonestown Triptych for percussion and computer
by Bill Sallak

for Scott Farkas

Requirements

Instruments: snare drum
four small dissimilar percussion instruments (small idiophones or small drums, e.g., cowbell, woodblock, bongo, small gong, etc.)
computer running Max/MSP 5.0 or later (or equivalent Runtime program)
audio interface, one microphone, stereo sound output to PA

Sticks: one wire brush
one small-headed hard felt stick
one pair of snare drum sticks

Other: one small handkerchief or cloth

Regarding the Computer and Max/MSP

Max/MSP/Jitter (as well as Max/MSP/Jitter Runtime) can be downloaded from http://www.cycling74.com.

A Max/MSP patch controls all amplification and sound processing for the piece. The patch makes use of three third-party external MSP objects (*bonk~.mxo*, *resonators~.mxo*, and *munger~.mxo*) that are located in the same folder as the patch. *Please do not remove any files from the JT folder*.

bonk~ (by Ted Apel and Miller Puckette) listens for audio spikes that resemble percussion attacks and compares them against entries in a stored template. If an attack matches one of the template entries, *bonk~* then outputs a number corresponding to that template entry. In short, you can train *bonk~* to recognize a snare drum hit as instrument 0, a cowbell as instrument 1, and so on. More on training *bonk~* follows; the object (and others) can be downloaded for free at http://www-crca.ucsd.edu/~tapel/software.html.

resonators~ processes audio with narrow bandpass filters with controllable center frequency, gain, and decay rate. The object is part of the free CNMAT library of Max/MSP externals found at http://cnmat.berkeley.edu/downloads. Where possible, please consider supporting CNMAT's work; there is a donation link on the page listed above.

munger~ is part of the excellent open-source *PeRColate* object library by Dan Trueman and R. Luke DuBois. It's just about the coolest granular synthesis object out there for Max/MSP. The entire library can be downloaded at http://www.music.columbia.edu/PeRColate.

Jonestown Triptych was tested extensively on a "black model" MacBook (2.2 GHz Intel Core Duo processor with 4GB RAM) running Max/MSP/Jitter 5.0.6 on OSX 10.5.8. The audio interface used during testing was the Apogee Duet. The patch doesn't call for anything esoteric; interface compatibility shouldn't be a problem. If there is a problem, however, please write to me at billsallak@gmail.com.

Training *bonk~*

When you open the patch (jonestowntriptych.maxpat), one of the things you will see is a group of four buttons labeled “bang to tell bonk~” to “turn learn on,” “turn learn off,” “save template,” and “load template.” The first time you practice the piece (and anytime thereafter if you change instruments for the piece), you’ll need to put *bonk~* into learn mode so it can recognize the specific instruments you’re using. To do that:

1) Press the “turn learn on” button,
2) hit the snare drum ten times,
3) hit the first of the four small instruments 10 times,
4) hit the second of the four small instruments 10 times,
5) hit the third of the four small instruments 10 times,
6) hit the fourth of the four small instruments 10 times, and
7) press the “turn learn off” button.

If all went according to plan, you should see in the Max window (press Command-M if the Max window isn’t visible) fifty lines beginning with the word “bonkguess” and ending with digits. You’re looking for ten zeroes, followed by ten ones, ten twos, ten threes, and ten fours. If this is the case, each of your four small instruments will cause a different light to flash where it says “bonk~ output,” and your snare drum will cause no flashes at all. If this is not the case, try teaching *bonk~* again. If problems persist, try using different small instruments; if they sound too similar (wood block and temple block, perhaps), *bonk~* may have trouble telling them apart from one another.

Once *bonk~* is performing reliably, press the “save template” button, and *bonk~* will remember these settings for future practice and performance. Make sure that when you open the patch in the future and want to recall these settings, you press the “load template” button. New setup or instruments? Re-train *bonk~*.

Master Gain

For practice, rehearsal, and soundcheck, you’ll need to raise the master gain faders to hear the audio output if you’re only playing section 2 or 3. Avoid master gain values higher than 130.

If you start at the beginning of the piece, the master gain value is 120, and all fades are automated. Adjust the output level of your interface to create the right volume and mix for the hall.

Section 2 Count

The audio processing for section 2 uses the *bonk~* object to count the number of times the performer changes small instruments. The “section 2 count” number box lists the number of these changes that happen in each rehearsal run or performance. Once the number reaches 18, the computer waits 20 seconds, and then begins section 3. The number box allows you to keep tabs on exactly when the countdown to begin section 3 is triggered.

Section 3 Threshold control

In the third section of the piece, the computer starts and stops tape playback when the signal from the microphone rises or falls below a certain threshold value. This allows you to "play" the soundfile with the snare drum. If the fermata rolls do not create continuous playback of the soundfiles, you can lower the threshold value (try 2 instead of 3). If individual notes produce a longer chunk of playback than what is desired (and you get to the end of the spoken phrase before the corresponding fermata roll), or if ambient sound is triggering playback, try raising the threshold value.

The threshold value defaults to three upon opening the patch—if you need to use a different setting, you'll want to re-enter it each time you open the patch.

Section 3 Completion

Section 3 concludes with a soundfile that is played back 3 seconds after the penultimate soundfile finishes playing. Since a roll triggers the penultimate soundfile playback, it's important that the roll continues all the way through until the file is finished. Even if it sounds like the file has faded out, keep rolling until the green (go!) square turns red (stop!).

Other Notes

The piece moves from section to section automatically; the buttons to start sections 2 and 3 are there for practice and rehearsal only, and should not be used in performance.

There is an input level meter for the microphone on the very left-hand side of the patch. Adjust the input gain on your mic preamp to avoid "overs" when you play.

Jonestown Triptych contains strong language.

Bill Sallak
Kent, OH
9/21/09

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Performance Instructions

Section 1

Snares off. No sticks. Begin with your hands on the snare drum. All transitions in Section 1 should be gradual. All of your playing in Section 1 should be quiet. Press the button to begin the piece, and after 5 seconds, you'll hear:

"I wouldn't bullshit you; I've never bullshitted you in my life."

Make quiet, atomized sounds with your fingertips on the snare drum head. Construct short phrases that gradually elaborate on themselves. Experiment with lifting the heels of your hands on and off the drum to mute/unmute it. Experiment with different areas of the head, including quiet, ping-y finger rimshots. The computer will respond to what you play. Create an interesting relationship between what you play and the computer's responses. Stay quiet; the microphone gain is quite high in Section 1, and it's easy to overload the input.

"We respect the family. We respect the family."

Once you hear this, make a transition to one empty hand and one brush. Begin incorporating the brush with single taps, and gradually add sweeps across the drumhead with both the brush and your fingers. This portion of Section 1 should move from staccato to legato. Your playing should remain Feldman-quiet; let the microphone and computer take care of raising the volume level for you.

"And, it's really fun here. This-- This really is the best place to be."

Expand your improvisation to include one, and then two, of the four small instruments you've chosen, as well as the snare drum. (Try to use ones that respond well to open hands and fingers as well as brushes.) All means of variation used up to this point are still at your disposal. Dynamic variations can range between *ppp* and *p*.

"We have been so terribly betrayed."

Pick up the felt stick with your open hand. Expand your improvisation to all instruments. Maintain an interesting relationship with the computer-produced sounds. Dynamic range can expand upwards to *mp* if it doesn't overload the microphone.

"I'm gonna tell you, Christine, without me life has no meaning."

Continue.

"You'll wonder for a long time what's taken place."

After this final verbal interjection, create a transition to Section 2.

Section 2

Snares on. Normal snare drum sticks.

You'll hear new sounds fade up as Section 2 begins.

The bottom part in each system is the snare drum part; the upper part is for any one of the four small instruments. You must change which of the four small instruments you are using at the points marked by asterisks; in between the asterisks, you must continue using the same small instrument for the upper line. The computer is keeping track of these instrument changes; after 18 of them, the computer begins Section 3. You can keep track of the current number of changes in the "section 2 count" box in the patch.

The designation *recitative* and the use of complex rhythmic language should not be taken as a license for excessive rhythmic inaccuracy.

20 seconds after the count reaches 18, the computer will begin its transition to Section 3. Make sure to pace the final portion of Section 2 to allow you enough time to prepare for Section 3 without needing to rush or leaving an uncomfortably long pause.

Section 3

Snares off. Normal snare drum sticks. Half of the batter head should be muted with a light cloth or handkerchief; play on the uncovered portion of the drum.

The computer will play back soundfiles when you play the drum; single notes will create a short burst of playback, while rolls should cause the soundfiles to play continuously. (Adjust the threshold and/or your dynamic if this is not the case.) Rolls with fermatas should last until the given phrase is spoken on the tape, and then stop. Pause for a moment or two before beginning the next passage.

After the final roll (decrescendo-ing and ending with the cheers after "Jim Cobb is laying on the airfield dead at this moment..."), remain motionless, and wait for the final spoken phrase to play. Fin.

Bill Sallak
Kent, OH
9/21/09

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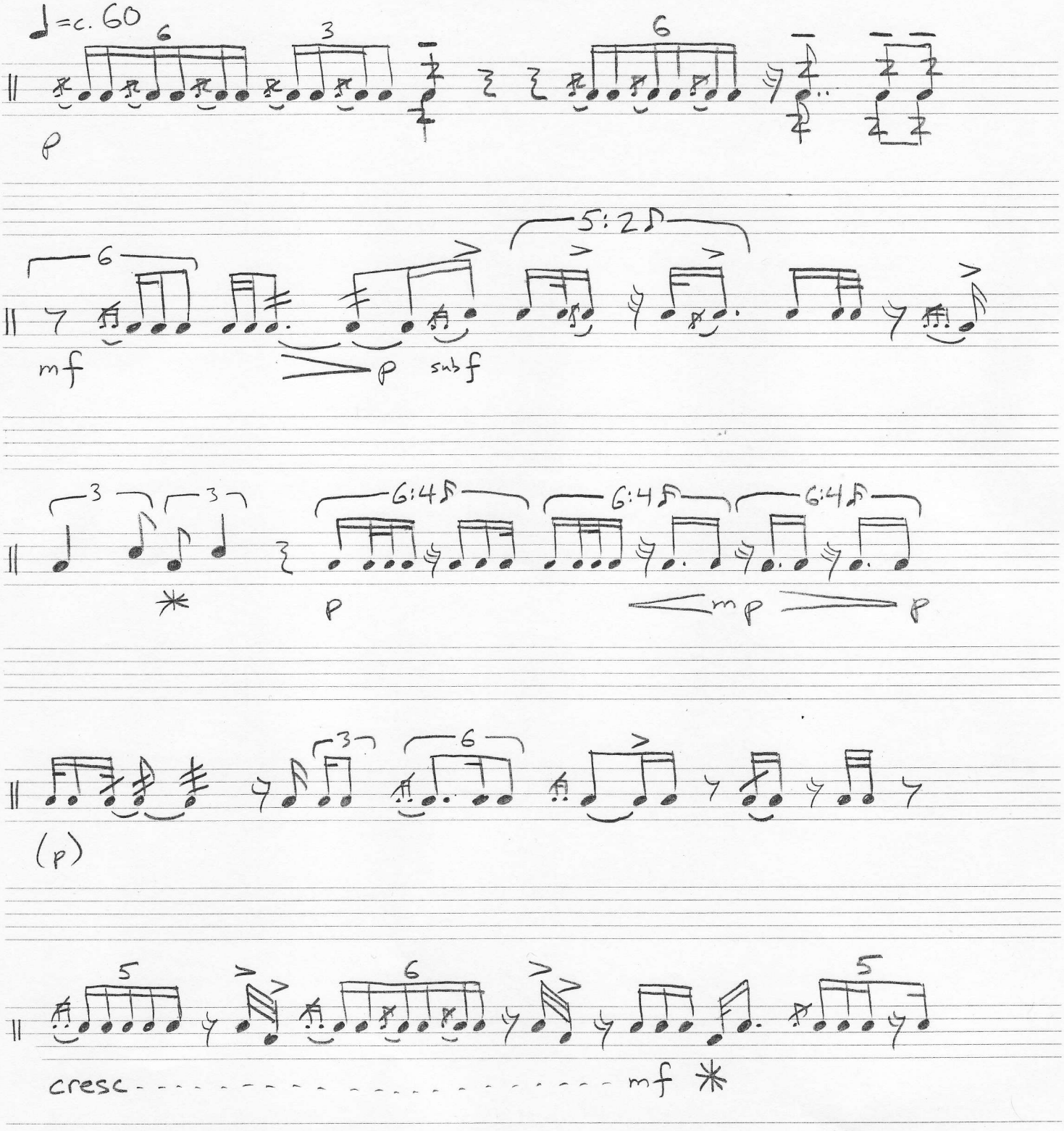
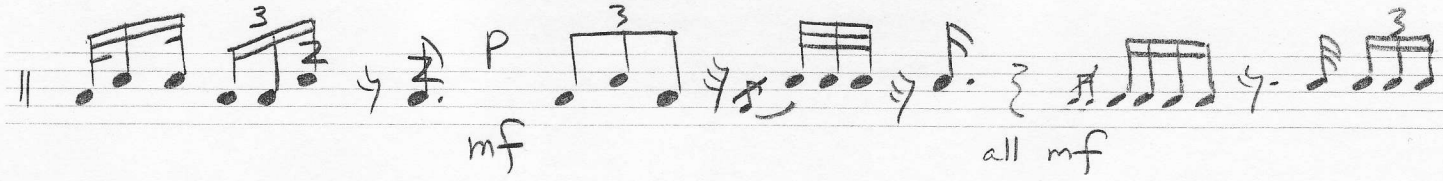
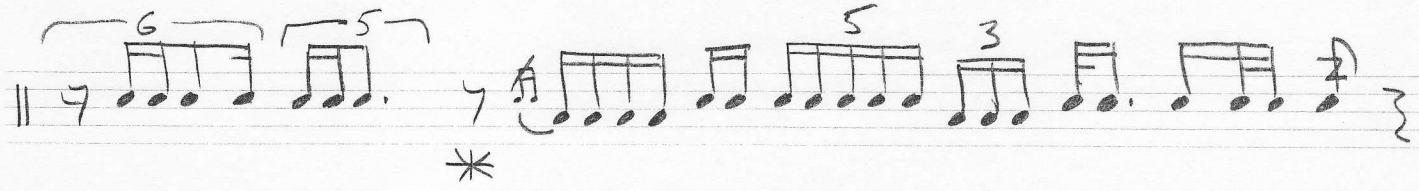
II. Recitative

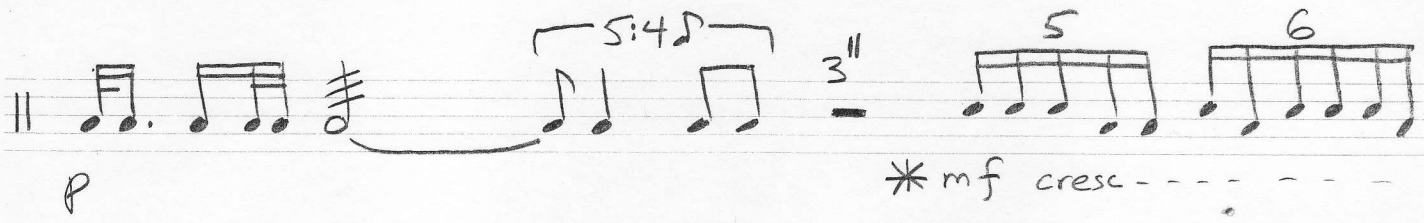
Snares on; normal snare drum sticks
* = switch to a different small instrument.

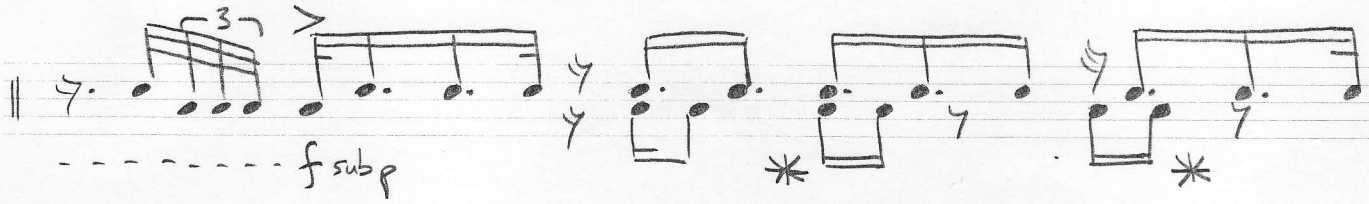
SD • • SM INST




mf
all mf




p
mf cresc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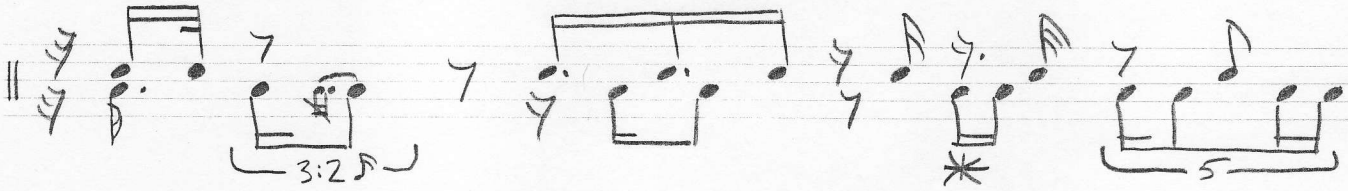
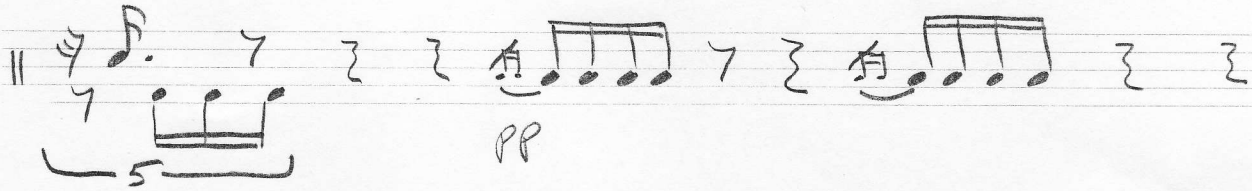
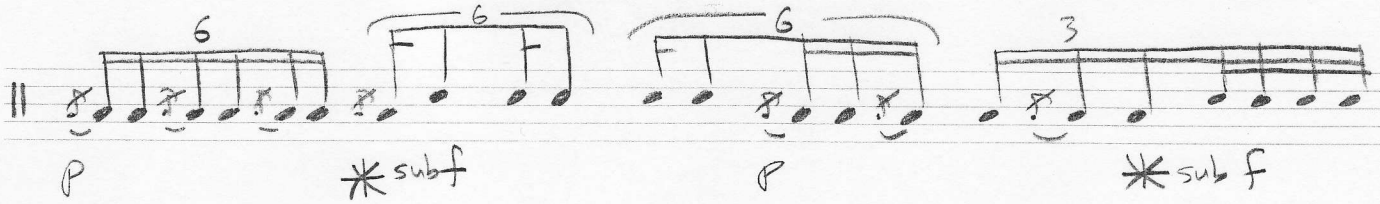
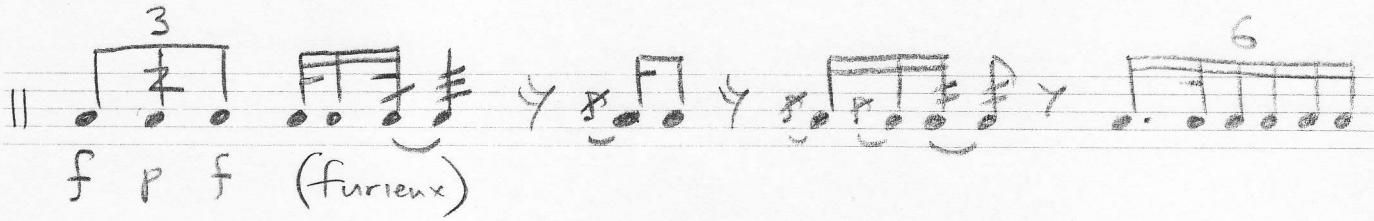
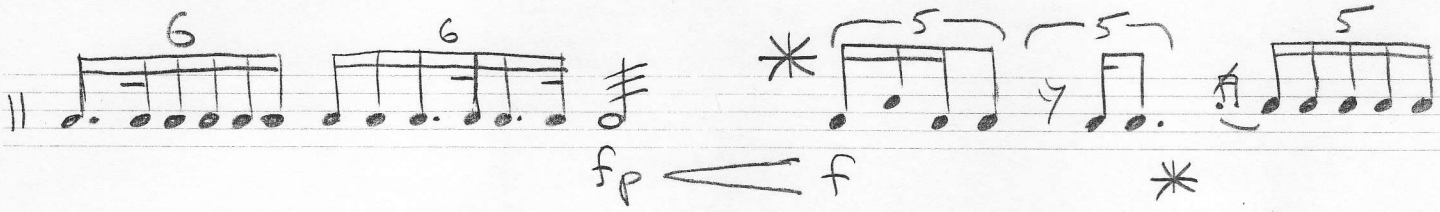



pp


6
6
6
3
p
*subf
p
*sub f


3
6
f p f (furieux)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6
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5
fp
f
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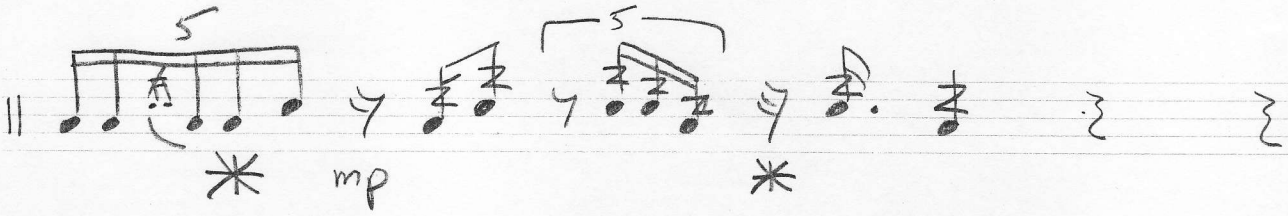
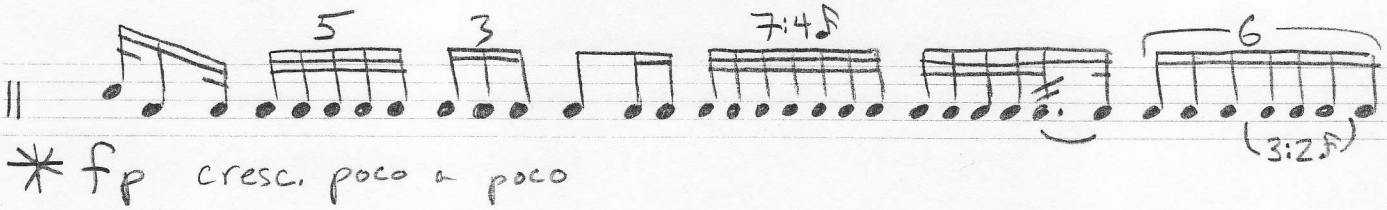
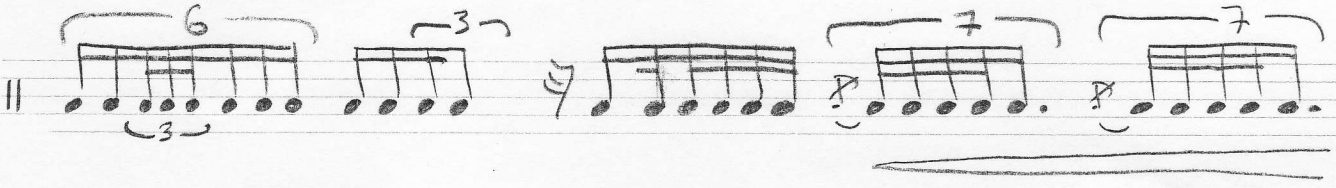

5
5
*
mp
*


5
3
7:4
6
3:2
*fp cresc. poco a poco


6
3
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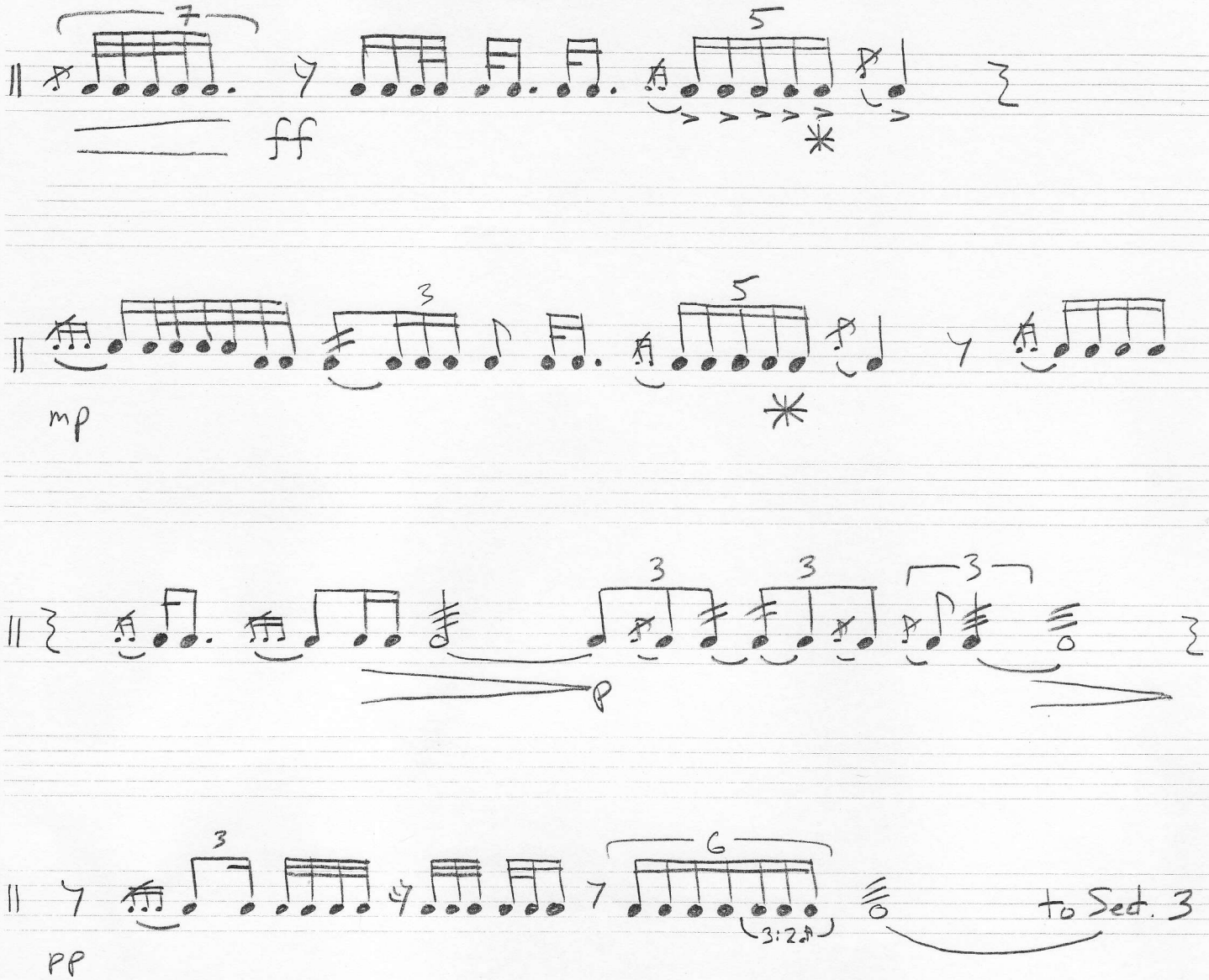
7
7



WLA
Kent, OH
9/21/09

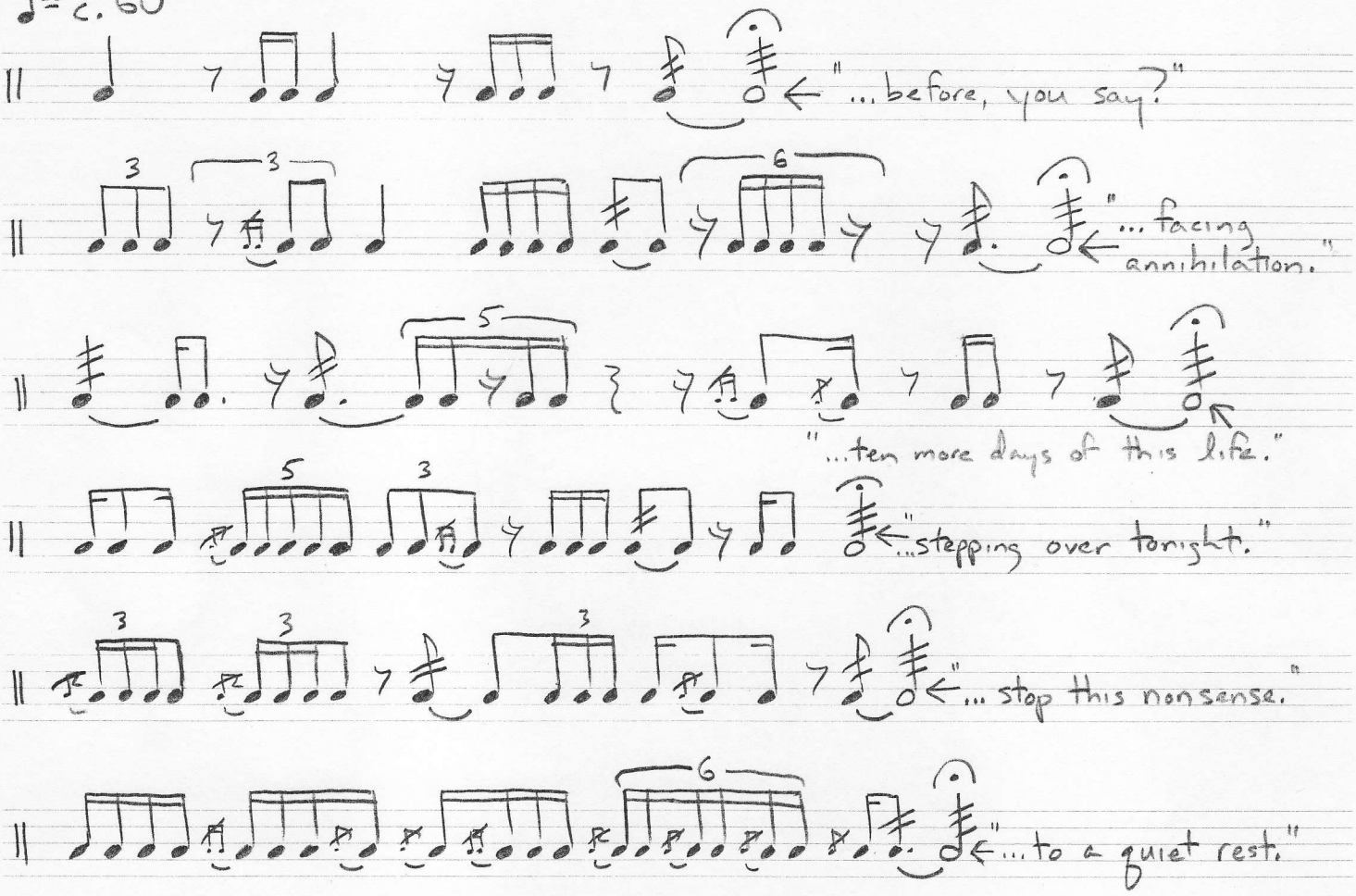
Jonestown Triptych

by Bill Saltak

III. Dirge

Snares off; drum partially covered with a light cloth
Stop fermata rolls when the indicated words are spoken on the tape.

♩= c. 60



The last roll should continue until the green square turns red.
Remain motionless until the last recording is finished playing.

→ ["... so the adults can begin."]

DLS
Kent, OH
9/21/09