

Spring Music

Luke Morse

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Committee:

Richard Karpen

Juan Pampin

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University of Washington

Abstract

Spring Music

Luke Morse

Chair of the Supervisory Committee:

Juan Pampin

DXARTS

This piece explores the sonic possibilities of a simple wooden box with springs attached. The electronic component is described in regard to performance specifications and instructions are included which detail how performers play both the box parts and the electronic part.

Luke Morse

Spring Music

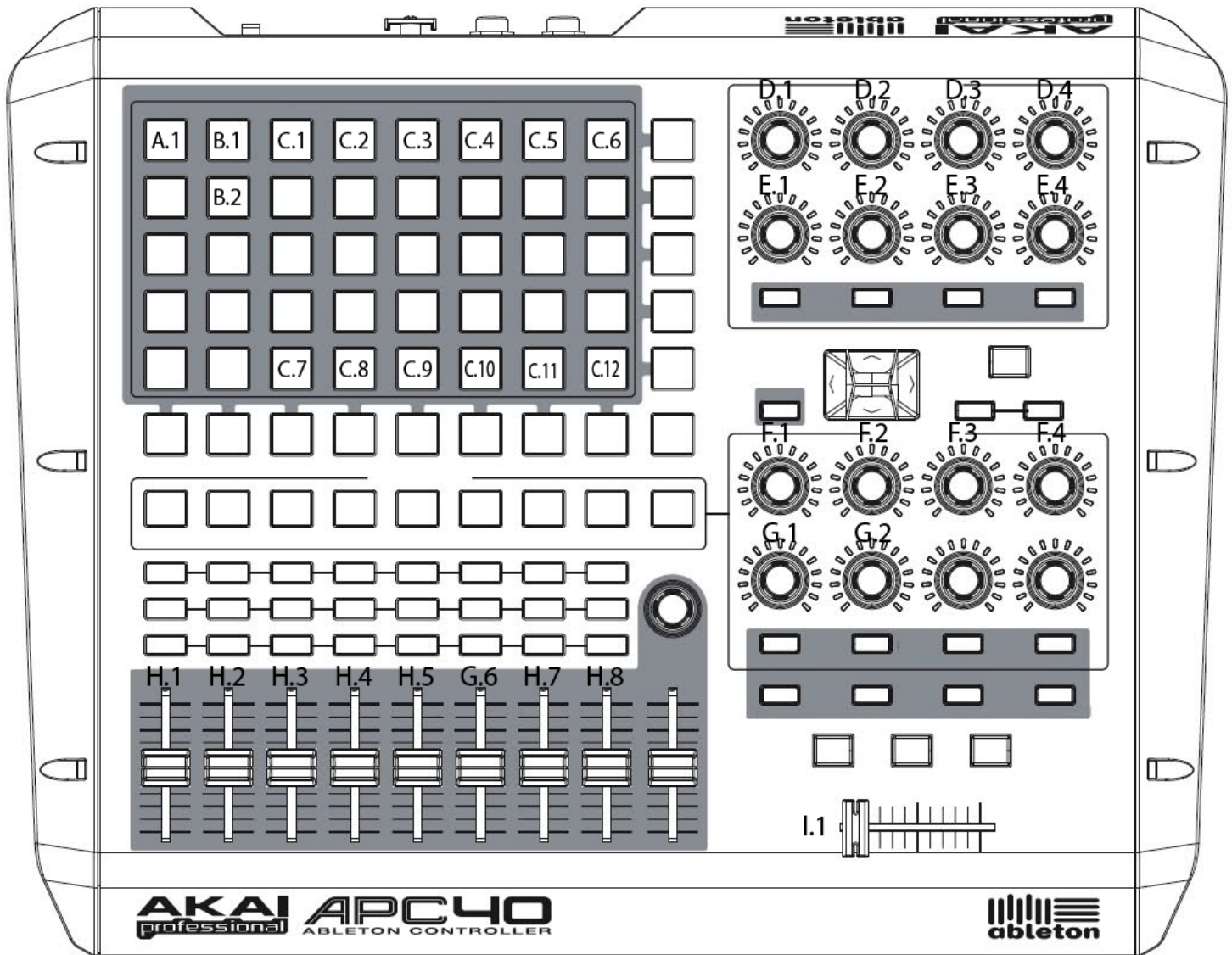
for two Cigar Boxes with Nails and Springs in them and Electronics

(Instructions)

June, 2015

Electronics Guide

Spring Music requires the use of an Akai APC40 controller for its electronic part. The electronics performer should use this guide to learn how to perform their part. The following diagram has all of the buttons, knobs, and sliders labeled that are required for performance. Following the diagram are short descriptions of what these controls do. Lastly, this guide provides more specific details on some controls and a few notes on suggestions for performance.



Controls

- A.1: Re-pitch synth on/off

- B.1: Noise synth on/off
- B.2: Update convolution buffer toggle

- C.1-6: Pattern synths on/off
- C.7-12: Pattern Synth selectors

- D.1: Density of Re-pitch Synths
- D.2: Re-pitch synth time dispersion
- D.3: Low end of pitch window for both re-pitch synth and pattern synths
- D.4: High end of pitch window for both re-pitch synth and pattern synths

- E.1: Low end of buffer window for selected pattern synth
- E.2: Size of buffer window for selected pattern synth
- E.3: Chance of stretched note occurring in pattern synths
- E.4: Order of buffers

- F.1: Noise synth feedback
- F.2: Noise synth delay time
- F.3: Frequency of pitch window reevaluating/changing
- F.4: Tempo of selected pattern

- G.1: Character of stretched notes (changes the grain window size)
- G.2: Attack of notes in patterns

- H.1-8: Amplitude of corresponding synth (the synth that is initiated by the button directly above this slider in the top row)

- I.1: Crossfader between direct signal (full left) and convolved signal (full right)

B.2: When toggled, the convolution buffer will change to the most recently recorded buffer. Performer should watch the post window to know when a new buffer has been recorded. When “recorded something” appears in the window, the most recent attack heard should be the new convolution buffer. Performer should experiment with using this button in conjunction with the I.1, the crossfader, to achieve varying results when changing from one convolution buffer to another.

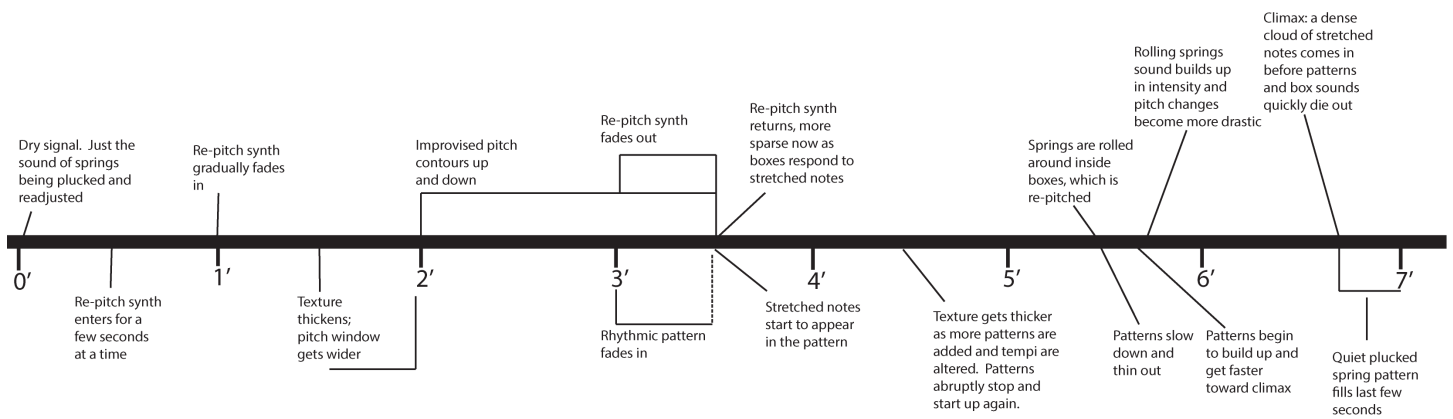
C 1-12: Before a pattern is to be started, one of the pattern slots must be selected using C.7-12. When a pattern is selected, the pattern controls (E.1-4 and F.4) will affect the parameters of this pattern and the button directly above the selected pattern will start/stop this pattern. In addition to selecting a pattern, one must also designate values for the buffer window (both E.1 and E.2) and a tempo for this pattern (F.4).

D.3-4 + F.3: The re-pitch synth and pattern synths will change the pitch of the buffers at random to a pitch between the low end (D.3) and high end (D.4) of the pitch window. If no pitch change is desired, turn both of these knobs to the middle position. There is always a triad from which these synths are choosing pitches, unless both knobs are turned to the same value. F.3 changes the frequency at which this triad changes, so a low value will make changes faster (useful to articulate a widening or narrowing of pitch window) and a high value will give the impression of a chord being arpeggiated.

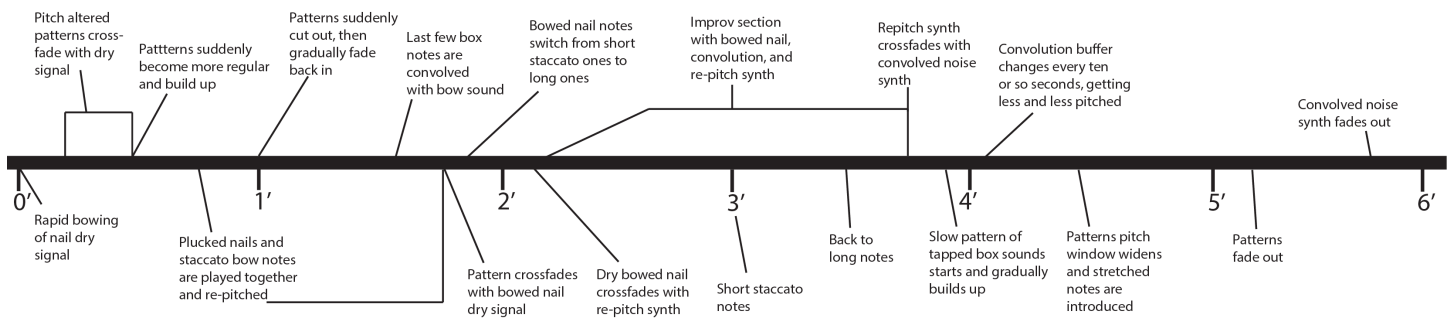
In preparation to play Spring Music, the electronics performer is highly encouraged to gain experience through improvisation with the program either using the example files or with additional performers on the boxes. This is to get the performer comfortable with the controls, as not only are they expected to execute multiple tasks simultaneously, but the instructions for the piece do not always direct the performer to use a specific control, but rather uses language that the performer must interpret and use the controls that they feel will achieve the designated outcome. The electronics performer should be confident with the purpose of each button, knob, and slider, and be able to predict the auditory outcome of using each of these individually, as well as in conjunction with each other.

Also, Spring Music is comprised of a series of build-ups which require special attention to dynamics. As some aspects of the electronics do not always react as expected, an additional duty of the electronics performer is to adjust the faders as needed to execute an effective build-up. Performer may also feel free to adjust parameters of synths as he/she sees fit. This does not only apply to making sure build-ups get loud enough, but also that moments between these build-ups have an appropriately soft dynamic.

Timeline For First Movement



Timeline For Second Movement



Spring Music

Part I

About 0:30

Box 1: Take a spring out of the bowl and affix it to a nail. Pluck the spring. Wait a few seconds. Repeat this, sometimes with new springs from the bowl and sometimes taking springs off of nails and affixing them to alternative nails.

Box 2: Don't do anything.

Elec: Start with dry signal.

About 0:30

Box 1: (Continue until each nail has a spring with an interesting and unique sounding spring affixed to it.)

Box 2: Take a spring out of the bowl and affix it to a nail. Pluck the spring. Wait a few seconds. Repeat this, sometimes with new springs from the bowl and sometimes taking springs off of nails and affixing them to alternative nails. Continue until each nail has a spring with an interesting and unique sounding spring affixed to it.

Elec: Toggle re-pitch synth a few times, just for one spring-pluck at a time.

About 2:00

Box 1: (Continue, gradually moving faster and pluck springs more than changing which nail they are on.) Once or twice, pluck the same spring several times in a row, just twisting small amounts to change it's tension and it's resulting pitch just slightly.

Box 2: (Continue, gradually moving faster and pluck springs more than changing which nail they are on.)

Elec: Gradually fade in re-pitch synth while fading out direct signal, minimally altering input. Then gradually thicken texture and widen pitch window. Then, improvise gradual pitch contours up and down.

About 0:30

Box 1: (Continue)

Box 2: (Continue)

Elec: Fade in long pattern while fading out re-pitch synth. Adjust order of buffers and length to your liking.

About 1:00

Box 1: Alternating with the following four actions, choose one and perform it after each stretched note heard:

- pluck a spring
- scrape any part of the box
- scrape a spring
- tap any part of the box
- remove a spring
- affix a spring on a nail

Box 2: Alternating with the following four actions, choose one and perform it after each stretched note heard:

- pluck a spring
- tap bottom of box
- remove a spring
- affix a spring on a nail

Elec: Turn re-pitch synth back up. Bring in some stretched notes which box performers will react to. Space them out some to allow for the reaction to be heard. For the last ten seconds, speed up the tempo of the pattern before stopping abruptly.

About 1:00

Box 1: (Continue, though ignore a stretched note here and there)

Box 2: (Continue, though ignore a stretched note here and there)

Elec: Start another pattern along with the first, this one a bit slower and reduce stretched notes. Increase stretched notes to lead to cadences, at which you stop both patterns at the same time. Start them again at the same time. Increase speed of patterns each time they are brought in, and improvise more drastic changes later on, stopping and starting individual patterns.

About 0:15

Box 1: Take a spring from the bowl and begin to lightly roll it around inside the box by tilting the box.

Box 2: Take a spring from the bowl and begin to lightly roll it around inside the box by tilting the box.

Elec: Start re-pitch synth with wide range of pitch. Reduce down to one short, slow pattern, trying to make it mostly plucked spring sounds. Start and stop a very slightly faster pattern every few seconds.

About 0:15

Box 1: (Continue, adding a new spring every 15 seconds or so)

Box 2: (Continue, adding a new spring every 15 seconds or so)

Elec: Speed up second pattern considerably and allow to play continuously alongside first pattern. After about ten seconds, start a third pattern between the two existing tempi. Make all patterns at least *mostly* plucked spring sounds.

About 0:45

Box 1: (Continue, building intensity)

Box 2: (Continue, building intensity)

Elec: One at a time, increase the tempo of each pattern by a little bit until all three are respectively playing at the three fastest tempi. At the same time as this, gradually bring the pitch window all the way up and then all the way down to the lowest setting.

About 0:15

Box 1: Stop when you hear the stretched notes

Box 2: Stop when you hear the stretched notes

Elec: Bring in stretched notes to lead to climax, at which point take away stretched notes while simultaneously slowing down the first pattern and stopping the other two. Let this play out for about ten seconds and then stop pattern.

Part II

About 0:30

Box 1: Bow side nail as rapidly as possible with enough pressure to achieve a pitched sound. Freely adjust pressure every few seconds by a small amount to get slightly different sounds.

Box 2: Don't do anything.

Elec: After about fifteen seconds, begin fading in two patterns of medium length while fading out the direct signal. Make the patterns approximately the same tempo as Box 1 performer's bowing and make the pitch window subtle.

About 0:30

Box 1: Stop bowing abruptly when signaled by electronics performer.

Box 2: Prepare box with a large spring on each nail, affixed on the last spiral such that the largest amount possible will vibrate.

Elec: When crossfade is complete, cue Box 1 performer and drastically reduce texture of patterns. Improvise a few short build-ups, but quickly cut them off.

About 0:30

Box 1: Upon cue from electronics performer, bow a staccato note on the side nail. Do this a few more times, cuing box 2 performer each time.

Box 2: Upon cue from electronics performer, pluck a nail. Pluck a different nail each time cued by box 1 performer.

Elec: Suddenly decrease the tempo of the second pattern to half that of the first pattern, such that for every note in the second pattern, there are two in the first. Let this play out for about ten seconds while turning on the re-pitch synth. Then, cue both box performers and, alternating between patterns, adjust tempi slightly up and down for about ten seconds. Then, increase both tempi and widen pitch window. Suddenly decrease amplitude in both patterns and then gradually build both back up.

About 0:45

Box 1: (Continue)

Box 2: (Continue)

Elec: At the top of the build-up, cue both box performers while stopping both patterns. After each note they play, change the re-pitch synth parameters, gradually getting thicker in texture throughout. After about ten seconds, fade in two patterns again, this time with very slow tempi and get very slightly faster throughout. For the last few notes the box performers play, bring up the convolution mix.

About 0:10

Box 1: On cue from electronics performer, play several bowed nail staccato notes at a moderate tempo, stopping abruptly.

Box 2: Don't do anything.

Elec: Cue both box performers, and crossfade patterns with dry signal.

About 0:20

Box 1: After a breath, begin bowing as long of notes as possible, connecting movements as smoothly as possible.

Box 2: Don't do anything.

Elec: After about fifteen seconds of a long bowed note, crossfade dry signal with re-pitch synth.

About 0:45

Box 1: (Continue)

Box 2: Don't do anything.

Elec: Improvise with re-pitch synth, bringing up the convolution mix here and there.

About 0:45

Box 1: Bow staccato (or slightly longer than staccato) notes spaced out about 2-3 seconds for about 20 seconds. Then, return to long bow notes.

Box 2: Don't do anything.

Elec: Continue improvising, ending with a couple of longer build-ups.

About 2:00

Box 1: Continue bowing long notes, doing your best to achieve a clear pitched sound at the frog of the bow, and gradually moving toward noise when at the tip of the bow.

Box 2: Drum on the box in different places with fingers. Independently of anything else going on, create build-ups not only with the force of your fingers on the wood, but also adjusting your fingers' angles such that they begin with the fat of the finger making contact and end with the nail.

Elec: Update convolution buffer when box 1 performer's bow's frog is closest to the nail and quickly crossfade re-pitch synth with noise synth.

Update the convolution buffer with a slightly less pitched buffer each time. With each new convolution buffer, let it play out for five to twenty seconds before updating the buffer.

After about ten seconds, start a very slow pattern, trying to not include any bowed sounds. Gradually build this up by adding additional patterns and adding stretched notes. Fade all patterns gradually.

About 0:20

Box 1: Continue until no electronics are heard.

Box 2: Continue until no electronics are heard.

Elec: When you have updated the convolution buffer that is close to white-noise, let it play out like the others and then fade out the noise synth.
