

iPhone 4tet

for John Cage
(2012)

John Kennedy

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www.johnkennedymusic.com

iPhone 4tet

The smartphone may be the most signal tool of the digital era, capable of many activities and assuming the function of instrument in the realization of these activities. It will continue to be an evolving communicative tool with a wide capacity for producing and manipulating sound.

This piece is an open-ended exploration of this new instrument, with activities of several types determined by the performers using the **iChing** or other chance operations. Many strategies might be explored, from simple interaction with phone applications, to using the phone as a component and driver within a larger compositional system.

Other activities beyond those suggested here might be possible, including the live streaming of the performers' phones to video for the audience, laptop or iPad local broadcast, or internet feeds. Other apps will arrive which will no doubt provide more expansive possibility than those suggested here.

This might be done by more than four phones: it is a quartet as a starting place, with an assumption that this iconic musical formation generates interesting and perceptible counterpoint.

For John Cage (1912-2012), aka 212-989-7132.

– John Kennedy, 2012

DIRECTIONS FOR SCORE PREPARATION

The piece has four sections, one of which requires advance chance operations and the schematic of a score.

In the days ahead of performance, determine for this section a total duration (D) which all performers share, using chance operations, within a specified range of duration with a minimum (perhaps 5 minutes) and maximum (perhaps 12 minutes, though this could be considerably longer if desired).

Each individual performer obtains music (M) for the performance by selecting a piece of music (and passage within this music) from their personal studio or music library, using a series of chance procedures devised by the performer (e.g., using Random Number Generator or iChing for iPhone), a process perhaps resulting in something like: second shelf , 37th folio, start at measure 22. The selected score/passages (M) should be playable in primitive form on a midi facsimile of one's instrument (a violinist might use violin mode in Wi Orchestra for iPhone).

This passage (M) forms the content of duration (D), which is interrupted by eight activities (I for Interruption):

- 1) Phone Call
- 2) Audio or video consumption
- 3) Game Playing
- 4) Reading
- 5) Musical idling
- 6) Audio recording, saving, and playback
- 7) Photography and/or videography
- 8) Other activity chosen by performer which creates sound on the phone

(D) is thus comprised of 16 sections for which each individual performer devises their own order of the eight interrupted activities using chance operations (i.e. a random order for activities 1-8 assigned to each space (I) below:

M – I – M – I – M – I – M – I – M – I – M – I – M – I

Durations of the 16 sections are assigned through chance operations using this formula:

D/8 for 1 section

D/12 for 2 sections

D/16 for 8 sections

D/24 for 5 sections

A score is then prepared for (D) that might look something like this (if D = 10 minutes or 600 seconds):

0'00" – 0'37.5" M (a D/16 randomly assigned)
0'37.5" – 1'27.5" I-6 (a D/12)
1'27.5" – 2'04" M (a D/16)
2'04" – 2'29" I-3 (a D/24)
etc...
9'22.5" – 10'00" I-8

DIRECTIONS FOR PERFORMANCE

Phones should be at full volume and amplified if necessary depending on the performance environment/hall. An ensemble may decide to set phones in non-disturb (airplane) mode, or leave them open to disruption.

Apps used in performance should be arranged in convenient quick-change screen locations, and pre-set individually to minimize loading times.

A chronometer (such as laptop running www.online-stopwatch.com) is positioned so all performers can see it and perform (D) in relation to it. Observance of sections (and divisions of seconds) is approximate.

The piece has four sections:

Tuning

Prelude

Duration (D) described above

Coda

Tuning: using an app such as PitchBot, sync the phones to a sine wave A440 or other chosen referent.

Prelude (Homage to Ligeti): starting together on cue and using an app such as Pro Metronome, preset the metronomes to as fast as possible (e.g. 240 BPM) and over approximately thirty seconds, gradually reduce to as slow as possible (e.g. 30 BPM). Set default meter to $\frac{1}{4}$ to avoid different tonalities of clicks. Let the arrival at slowest tempo last for another thirty seconds, end on cue.

Duration: chronometer is started by one player, and each player proceeds with their devised score with these additional suggestions:

Music (M): at each successive section of M, start where you previously left off. If you ever finish your selected music, repeat as necessary. Facile realization (e.g. skipping octaves, virtuosic passages), need not be realized on the phone, but their attempt should highlight the limitations (or not) of iPhone musical performance.

Interruptions (I) to be observed for the sub-durations determined in your score:

- 1) Phone Call: pre-select a contact using chance operations and dial the number, resulting in a live conversation or leaving a message, if possible.
- 2) Audio or video consumption: pre-determine through chance operations a selection from iPod track list, Pandora station list, YouTube favorite list, etc, and play back (this can be a surprise to you in performance, as long as you have set in your score that your pre-selection will be to playback the 176th track in your iPod, or the 4th video that YouTube suggests, etc).
- 3) Game Playing: using chance operations, select and play a game you enjoy which produces sounds that are either interactive (e.g. Angry Birds), or background (e.g. iPhone Chess). Pre-load game in ready mode before performance if possible.
- 4) Reading: using chance operations, select a news app (e.g. New York Times, The Onion, Huffington Post, USA Today, etc) or e-reader material, and again use chance operations to determine a passage (such as the 8th article in the 2nd list), and read aloud.
- 5) Musical idling: choose an interaction with an iPhone music app, such as Animoog, Bloom, or improvising with your Wi Orchestra instrument on pre-generated material (such as from Twelve Tone Generator for iPhone).
- 6) Audio recording, saving, and playback: record the live performance around you (e.g. using iPro Recorder) for 2/3 of the section duration, and playback what you recorded for 1/3 of the duration.
- 7) Photography and/or videography: take photos and/or video of the live performance, and give yourself time to do real-time social media posting during the performance (e.g. Facebook, G+, or Twitter).
- 8) Other activity: choose other activities which produce sound on the phone (e.g., keyclicks in composing email, foreign language lesson app, dialogue with Siri, etc). Try and use chance operations to govern your decision-path.

Coda: At the conclusion of (D), all performers simultaneously playback their recorded material from Interruption Activity #6, until the last recording is finished.

RECOMMENDED APPLICATIONS (as of 2012):

For chance operations:

- 1) Random Number (free): allows the generation of random numbers for chance operations, using a specified range e.g. 1-10 or 1-100.
- 2) iChing Oracle for iPhone: a labor-intensive but old-fashioned method for generating decisions.

For “Tuning”:

Pitch Bot generates a sine wave form for any specified frequency e.g. A440.

For “Prelude”:

Pro Metronome (free) has capacity for preset of 240 BPM with gradual dialdown to 30 BPM. Can be set in “1/4” time to have uniform tick playback.

For “Music”:

- 1) Wi Orchestra is a higher-end simulation of orchestral instruments.
- 2) Wivi Band (free): blowable wind and brass instruments using phone mic.

For “Musical Idling”:

- 1) Twelve Tone Matrix Generator generates pitch sets and derived matrixes for sets of 1-12 pitches.
- 2) Animoog (\$9.99) is an iPhone version of the Moog synthesizer, with many sonic possibilities.
- 3) Bloom (\$3.99) is Brian Eno’s iPhone app for creating ambient music.