

## Tristan Perich – Sound in Bits

### Curated by Lluís Nacenta

**11.03.15 > 08.05.15**

Opening: 20:00h - Artist Talk / 19:00h.

àngels barcelona presents **Sound in Bits**, the first solo show of the New York-based artist and composer **Tristan Perich** in Spain. Curated by Lluís Nacenta, the show explores how the dematerialized abstract language of digital technology may be translated into a visual and graphic form so that it becomes directly perceptible.

Influenced by the work of American composers and artists of the Minimalist movement of the 1960s (like that of Steve Reich, Phillip Glass, John Cage, and Sol LeWitt, who used strict patterns and processes), Perich is interested in the physical and material qualities of code, giving a place for simple forms in which complex systems are hidden. Tristan Perich is the creator of the first album ever published in the form of a microchip, titled *1-BIT Music* (2004), which later would lead to *1-Bit Symphony* (2010).

Understanding code doesn't necessarily require knowing the language in which it is written or having the ability to read it. To understand it may also be to form an idea on how to proceed, to reach a certain degree of familiarity with it after close observation, listen to it, or simply have it by your side. Code is of course written in a different realm than the one in which we relate ourselves to it, and perhaps the distance between these realms (that of written code and its effect) is insurmountable. Tristan Perich does not cancel out this distance (he wouldn't be able to), but he achieves something perhaps more revelatory: making it perceptible. His pieces explore something along the lines of the forced, almost violent insertion of code in the reality of things, because of which we can get the impression that we are seeing or hearing code itself.

The gallery presents the last version of his project **Machine Drawings** (2005-15), a work that will take shape on the wall of the gallery throughout the duration of the exhibition. His *Machine Drawings* demonstrate how a single process oscillates between order and chance. The algorithm that controls the movements of the marker permits variation in the probability that it will change directions. When this probability is small, the marker traces approximately straight lines, when this probability is large, the marker vibrates frenetically (because it is constantly changing direction) and traces a chaotic cloud. In the two extremes the algorithm is the same, except the value of one parameter. So much with one as with the other, the logical instructions of code become visible with the organization and contingent properties of a physical medium.

**Octave** (2015) consists of 300 speakers projecting 300 different frequencies which are distributed at equal distances and in ascending order at the length of one octave from Do to Do. Each one of the 12 panels in which the piece is divided comprises a semi-tone (one could say that they correspond to the 12 musical notes of an octave on a piano) : the speaker on the bottom left of the first panel makes sounds Do, the second panel Do#, the third Re, and so forth. Beginning with the speaker on the bottom left of each panel, the frequencies augment with each one, as a result of the twenty-fifth part of a semi-tone, of each speaker precisely above it. Beginning with every speaker on the top of each column, the progression continues in the bottom speaker of the next column.

Although each speaker emits a sound of a constant frequency, which we could call a pure tone, the impression that the piece produces from a certain distance is that of a noise close to white noise. This noisy impression results from the superposition of tones so close together: the piece consists of a sort of very dense cluster.

But the impression of noise proceeds from each individual speaker as well: if we approach one closely, the sound appears to be distorted. This is due to the fact that the speakers emit square waves, 1-bit frequencies characteristic of Tristan Perich's work. These waves result from the direct translation from the information proceeding from an electronic circuit, chains formed by the numbers 0 and 1, to the movement of the speaker's membrane. The numbers 0 and 1 correspond to the two extreme positions of the membrane, and the passage from one to the other. If the passing from 0 to 1 is done 440 times per minute, the resulting sound (for as much as it may appear to be distorted) is the perfectly tuned note La.

Thus, from an electronic circuit perspective, the sound is pure. The impression of noise results from the distance that separates the functioning of a circuit from the functioning of our ears, it is roughness and friction which makes audible the distance between two worlds, or two languages not completely compatible.

Lluís Nacenta

## BIOS

**Tristan Perich's** (b. 1982, New York) work is inspired by the aesthetic simplicity of maths, physics and code. The WIRE Magazine describes his compositions as "an austere meeting of electronic and organic." 1-Bit Music, his 2004 release, was the first album ever released as a microchip, programmed to synthesize his electronic composition live. His latest circuit album, 1-Bit Symphony (Cantaloupe, 2010) has received critical acclaim, called "sublime" (New York Press), and the Wall Street Journal said "its oscillations have an intense, hypnotic force and a surprising emotional depth." His works for soloist, ensemble and orchestra have been performed internationally by ensembles including Bang on a Can, Calder Quartet, Eighth Blackbird at venues from the Whitney Museum and Mass MoCA to Sónar Festival and Ars Electronica. He has received commissions from Bang on a Can, Meehan/Perkins Duo, Dither Quartet, Yarn/Wire, and others.

As a visual artist, Perich has had solo exhibitions at Bitforms gallery (NYC), Mikrogalleriet (Copenhagen), Museo Carandente (Spoleto), The Addison Gallery (Massachusetts), Katonah Museum (New York), Monster Truck (Dublin), LEAP (Berlin) among others, as well as group shows around the world. His *Machine Drawings*, pen-on-paper drawings executed by machine, were described as "elegantly delicate" by BOMB Magazine.

Perich was a featured artist at Sónar Festival 2010 in Barcelona, and in 2009, the Prix Ars Electronica granted him with the Award of Distinction for his composition *Active Field* (for ten violins and ten-channel *1-bit music*). Rhizome awarded him a 2010 commission for *Microtonal Wall*, an audio installation with 1,500 speakers. Perich attended the first Bang on a Can Summer Institute in 2002. He was artist-in-residence at the Issue Project Room in 2008, at Mikrogalleriet in Copenhagen in 2010, at the Addison Gallery in Andover, MA and Harvestworks in New York in Fall 2010, and at the Watermill Center in 2012. His work has received support from the New York State Council on the Arts, the American Music Center, Meet the Composer and others. He has spoken about his work and taught workshops around the world.

Perich studied maths, music and computer science at Columbia University, and received a masters in from the Interactive Telecommunications Program at Tisch School of the Arts, NYU.

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**Lluís Nacenta** is a professor, essayist, and curator specialized in music and sound design. As a mathematician and pianist, he combines the two worlds of music and sound design. Currently a professor of the Master of Research in Art and Design at Eina, the University of Design and Art of Barcelona. He has curated exhibitions and concerts for the Sónar Festival in Barcelona, Arts Santa Mònica, the Centre de Cultura Contemporània de Barcelona (CCCB) and the Fundació Antoni Tàpies, among other institutions and spaces.