

ANHARMONIUM is an immersive installation and performance, investigating the spatial awareness of subtle fluctuations that emerge from vibrational phenomena. The interference patterns within a sonically activated fluid illuminated by laser emissions forge an augmented meditative space, a psycho-physical observatory.

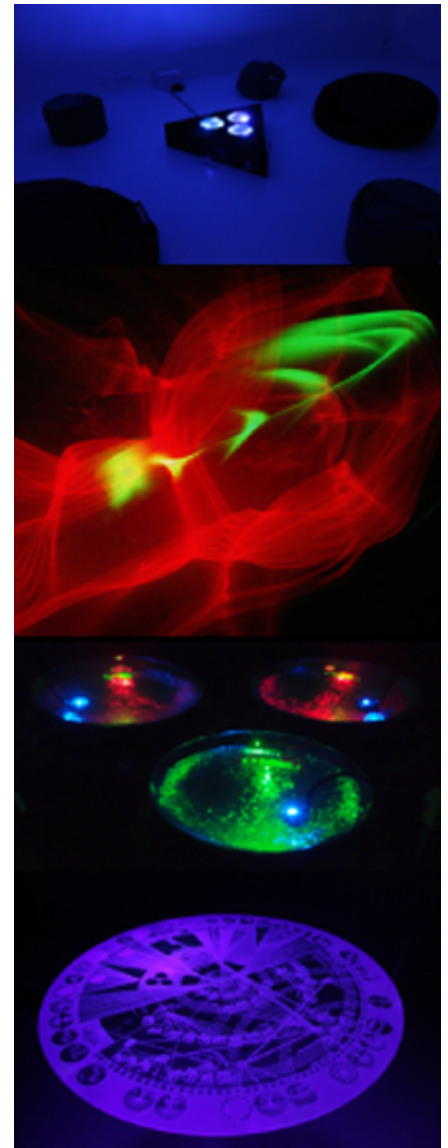


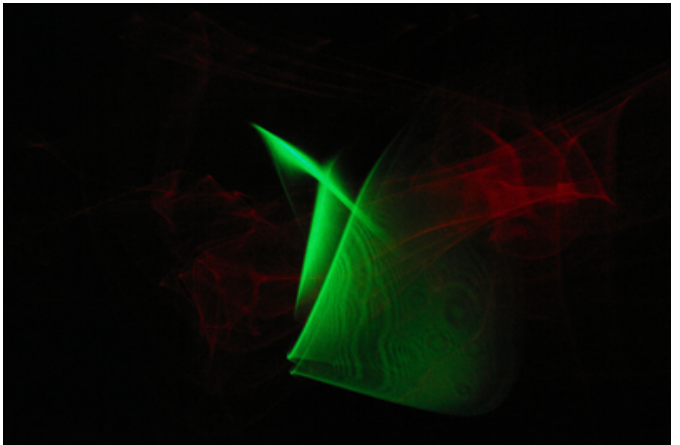
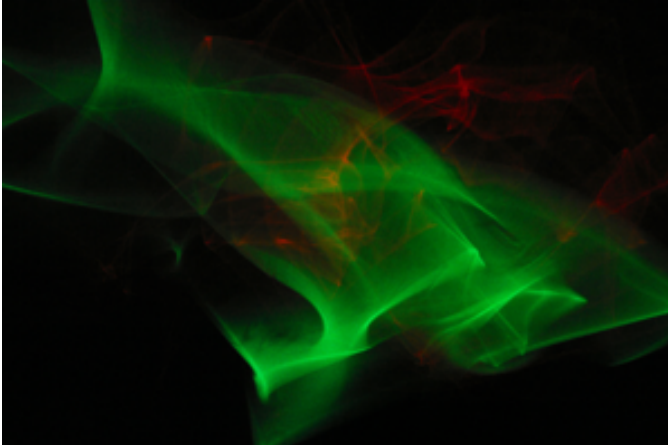
In nature, modal phenomena occur as interactions between diverse oscillating systems, producing mutual perturbations and deviations from pseudo-linear behaviors imposed by gravitational and electromagnetic parameters. The interferential and resonant modes produced by intermingling forces reveal the immense morphological range of matter set into motion. Only a small bandwidth of this range falls within the sensorial envelope of ordinary perception.

Laser spectroscopy is adopted in scientific research to examine the precise energy states and electron dynamics of any molecule whose reaction to light is of interest. In Anharmonium, 3 specially constructed transducers sonicate concave mirrors, containing purified water. The ultrasonics emitted by the transducers are modulated by low and infrasonic frequencies. The mirrors are targeted by individual laser beams of different wavelengths, from blue-violet and green to red tonalities. Laser reflections from the mirrors, diffracted by the water's kinetic surface, intertwine in a magnified projection that enfolds the observer.

The acoustic modulations, initially performed at inaudible frequencies for generating dynamic fluid motion, are further processed and diffused as an ambisonically spatialized generative composition via a 4.1 surround speaker configuration.

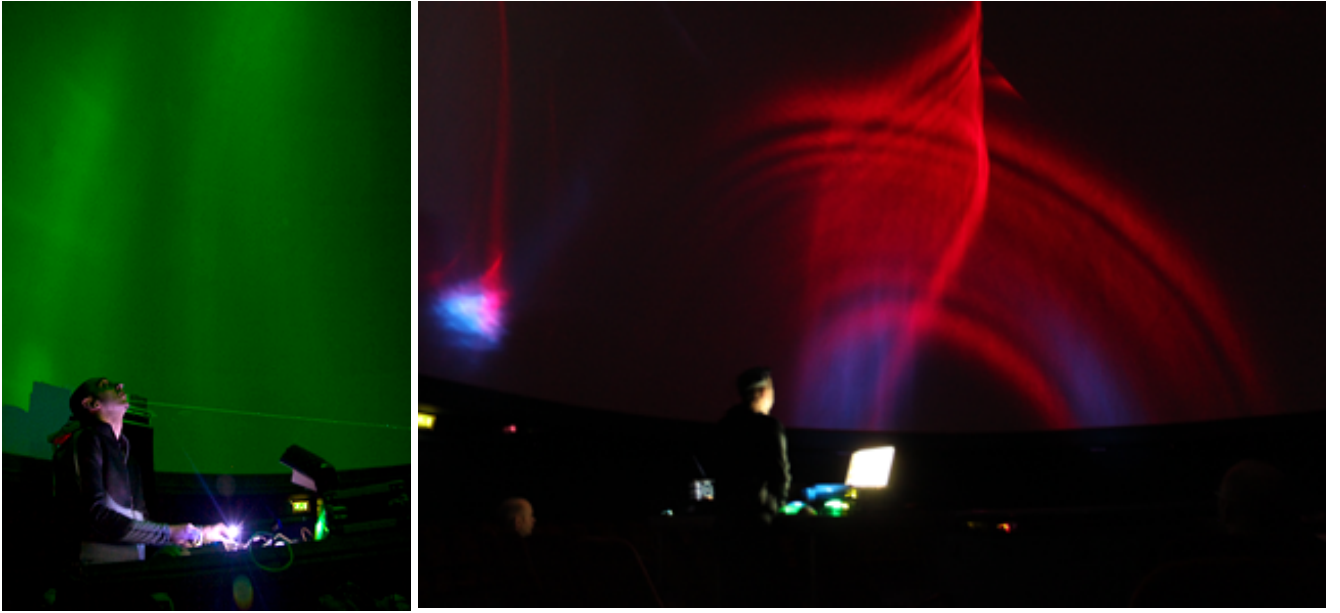
Complementing the installation is a laser-engraved diagram by artist-engineer, John Worrell Keely (1827-1898), a *free energy* pioneer who invented hundreds of prototypes of sound and ether driven engines. Complex associations between atomic vibrations and photonic emissions are illustrated, hinting to meta-science as a source of evolutionary cosmic unraveling.



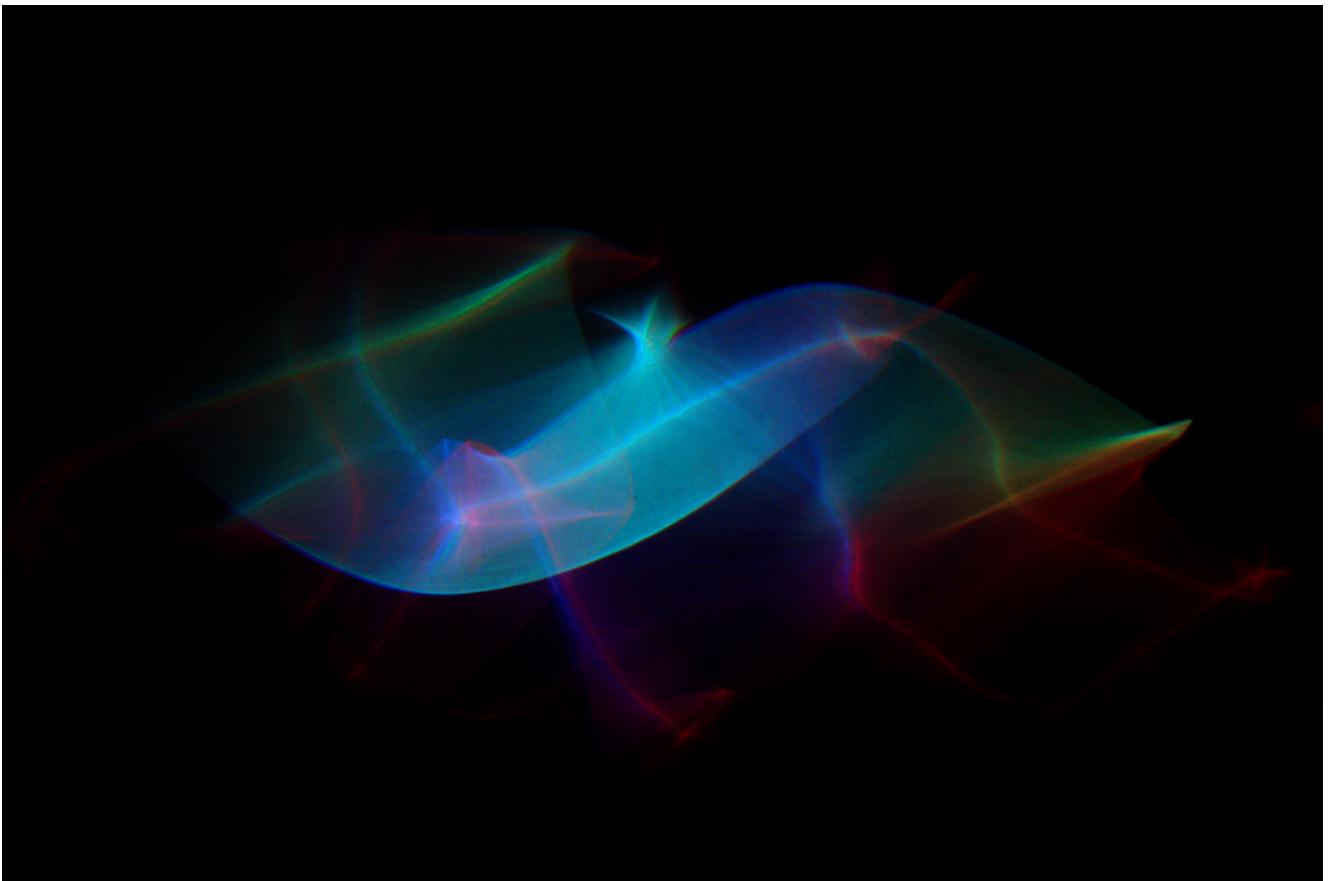


The current version of the Anharmonium composition unfolds in two cycles: the first with red and green laser projections, reflected from the sonicated mirrors onto the ceiling, and/or adjacent walls, in sync with minimal and hypnotic sequences of ambisonic sound; the second, a more meditative piece with deep blue lights and shadows, diffused by underwater hi-power LEDs and modulated by unpredictable bell-like harmonics. By means of generative programming, both cycles recur with perpetual variations.

... *Anharmonium* ... live performance



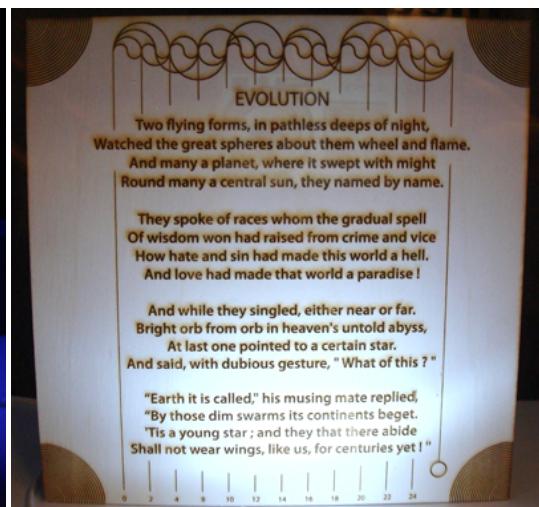
In terms of lighting and fluid dynamics, the live performance version of Anharmonium adopts different techniques than the installation. While in the latter low frequencies activate the formation of long wavelength patterns, in the live execution a specific ultrasonic transducer allows the creation of very high-resolution arrangements of standing waves on the surface of the liquid, finely shaped by the audible frequencies of the ambisonics composition. The effect is enhanced by a focused beam from a scanning white laser whose spectrum is ultimately fragmented by the fluid motion in a myriad of vibrating gradients.




ANHARMONIUM VIDEO

INSTALLATION VERSION

artist brings	requirements
1 x custom laser projector (class III, green 70 mW, red 200 mW)	<ul style="list-style-type: none"> - exhibition space: fully darkened room, minimum 5 x 5 x 4 mt (w/d/h), clean white ceiling (and optionally walls) - pillows (like fatboy) for the audience spread around the center of the piece - stand for the laser projector/plate, about 2 mt above the floor and 2 mt distant from the center of the piece - quadraphonic sound system: 4 full range speakers + subwoofer (needed if speakers' low frequency response is > 50 Hz). Power must be adequate for the space and discussed with TeZ in advance. - sound mixer with 5 channels to address individual speakers and subwoofer. - U.V. light spot for illuminating the laser-engraved plexi disc artwork - windows or other illuminated display space for showing the laser-engraved wooden print artwork (<i>EVOLUTION</i>) and the <i>CYMATICS</i> book + video (optional)
3 x custom cymatics concave mirrors + underwater blue LEDs 1W	
1 x MacMini computer	
1 x custom interface for laser and high-power LEDs modulation	
1 x midi controller	
2 x 20 mt multicore cables from computer/interface to laser projectors and mirrors	
1 x laser-engraved plexi disc artwork for display (45 cm diameter) - title: " <i>KEELY</i> "	
1 x laser-engraved wooden plate artwork for display (30 x 30 squared) - title: " <i>EVOLUTION</i> "	
1 x original Hans Jenny's book " <i>CYMATICS</i> " with small photoframe featuring 15 min. excerpt video of the original films [optional]	
all packed in a flightcase ready for transport: 63 x 53 x 64 cm (w/d/h), approx. 50 Kg	



LIVE PERFORMANCE VERSION

artist brings	requirements
<p>1 x RGB laser projector (class III, green 100 mW, red 500 mW, blue 100 mW) with ILDA INTERFACE 45K pps scanner</p> <p>check this for reference: http://www.l-spot.nl/webshop2/index.php?act=viewProd&productId=192</p> <p>PLEASE NOTE ! TeZ brings his own laser projector only for shows in the Netherlands, Belgium, Luxemburg, Germany, France and UK, provided pick-up at the train station. In other countries, to be reached by flight, it must be rented.</p>	<p>- 1 x RGB laser projector (class III, green 100 mW, red 300 mW, blue 100 mW minimum) with ILDA INTERFACE 45K pps scanner</p> <p>check this for reference: http://www.l-spot.nl/webshop2/index.php?act=viewProd&productId=192</p> <p>PLEASE NOTE ! TeZ brings his own laser projector only for shows in the Netherlands, Belgium, Luxemburg, Germany, France and UK, provided pick-up at the train station. In other countries, to be reached by flight, it must be rented.</p>
<p>1 x custom ultrasound transducer + generator and concave mirror</p>	<p>- performance space: fully darkened, minimum 6 meters high clean white ceiling (and optionally walls / screens)</p>
<p>1 x MacBookPro computer</p>	<p>- stand for the laser projector (60 x 35 x 20 cm w/d/h), at least 4 mt above the floor</p>
<p>1 x sound interface, 2 racks unit / flightcase</p>	<p>- table big enough for laptop, 2 racks unit flightcase and midi controller.</p>
<p>1 x custom ILDA interface</p>	<p>- quadraphonic sound system: 4 full range speakers + subwoofer (needed if speakers' low frequency response is > 50 Hz). Power must be adequate for the space and discussed with TeZ in advance.</p>
<p>1 x midi controller</p>	<p>- sound mixer with 5 channels to address individual speakers and subwoofer.</p>
	

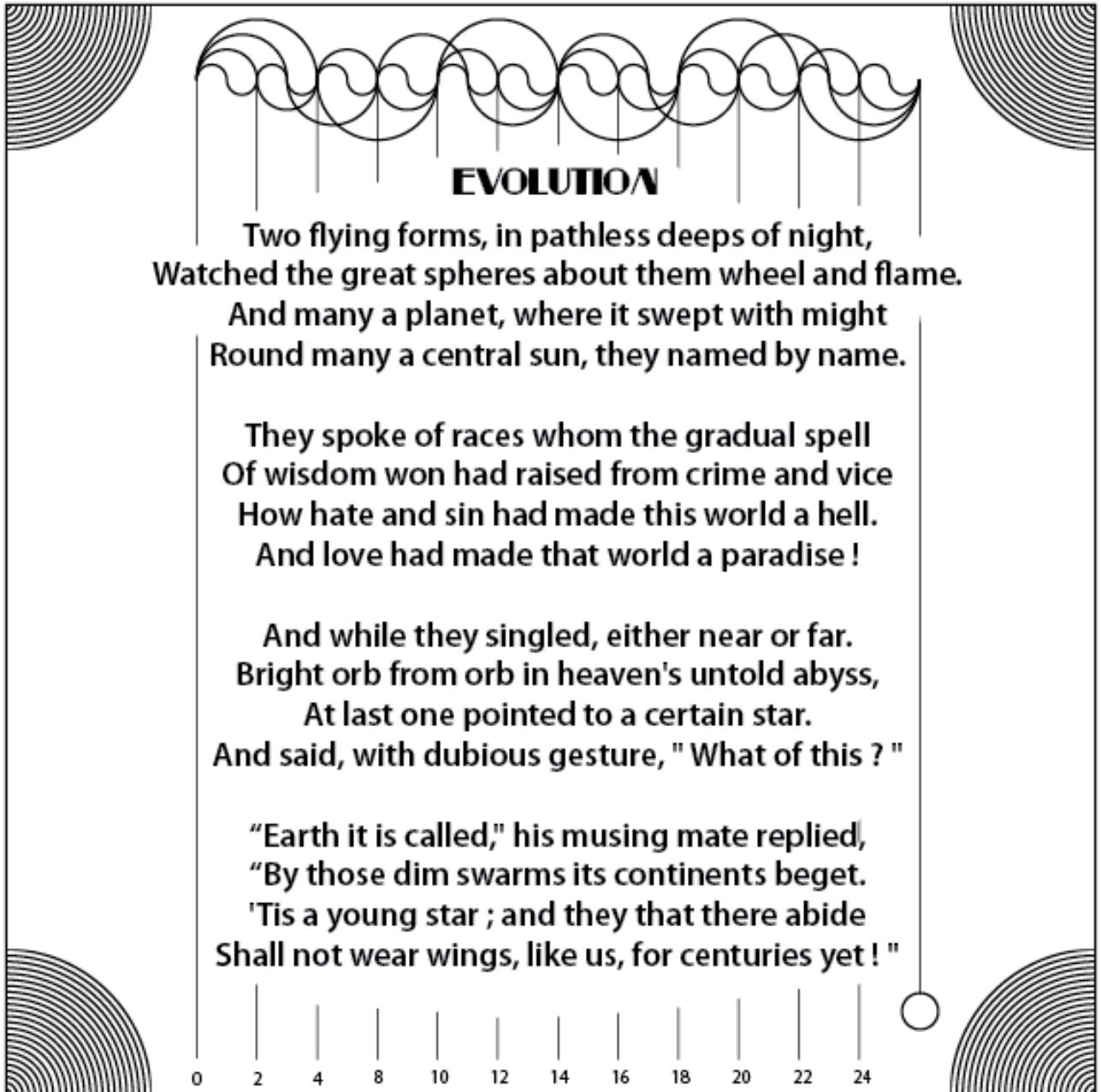
ANHARMONIUM was conceived and produced by TeZ at **Optofonica Lab /** Amsterdam / 2010 - in collaboration with:

- Alexander Myltsin
- Fonds BKVB
- AFK
- Sonic Acts
- FabLab Amsterdam
- SUBMultimedia
- Melkweg Media Room

CONTACT

TeZ
 Albert Cuypstraat 31-II
 1072 CL, Amsterdam
 The Netherlands

tel +31 644 211 195
 email tez@optofonica.com



EVOLUTION

Two flying forms, in pathless deeps of night,
 Watched the great spheres about them wheel and flame.
 And many a planet, where it swept with might
 Round many a central sun, they named by name.

They spoke of races whom the gradual spell
 Of wisdom won had raised from crime and vice
 How hate and sin had made this world a hell.
 And love had made that world a paradise !

And while they singled, either near or far.
 Bright orb from orb in heaven's untold abyss,
 At last one pointed to a certain star.
 And said, with dubious gesture, " What of this ? "

"Earth it is called," his musing mate replied,
 "By those dim swarms its continents beget.
 'Tis a young star ; and they that there abide
 Shall not wear wings, like us, for centuries yet ! "

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