RADIO ROCKS
DOVE BRADSHAW
Radio Rocks
1999
Edition of 90
Lithograph
Printed by Rasmus Urwald of Edition Copenhagen, 2005
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DOVE BRADSHAW
RADIO ROCKS
LARRY BECKER CONTEMPORARY ART
PHILADELPHIA
2008
The inclusion of noises in [music]… is an admission of the liveliness of sound whether it originates inside or outside the boundaries of art.

John Cage

Dove Bradshaw’s latest *time-sculpture*, Radio Rocks with its randomly received live sound, heralds a new element of Indeterminacy in her work. Beginning in 1969 she embraced Indeterminacy with the unpredictability of birds and materials particularly susceptible to weather and atmospheric conditions, the chance positioning of elements, the gradual erosion of salt and stone by water, and the introduction of inherently unstable substances such as acetone, mercury, and sulfur. In 1994 Bradshaw first exploited pyrite’s instability in order to weather sculptures outdoors; in 1998, upon learning that it was used in crystal radios she conceived of this, her first sound-sculpture. In the last few years designs for these radios were developed in consultation with inventor Robert Bishop who built them according to her plans.

For this exhibition three cone-shaped sculptures were each composed of different stone—Wissahickon schist, Pocono sandstone and a basalt mixture. Their shapes were chosen to evoke ancient cairns used as Neolithic astronomical markers and function here also as multidirectional antennas. Within each sculpture there were three radios each designed to receive frequencies from a different zone—local, world band short wave, and outer space. Galena, fluorite, pyrite, and tourmaline acted as non-linear mixers and were computer programmed to attract random local and world-band frequencies. Hematite acted as a mixer continuously channeling Weather Radio. Live radio emissions from Jupiter were transmitted on a dedicated line from a radio telescope at Lanihuli Radio Observatory in Kaneohe, Hawaii. Random radio storms including *S-Bursts*—bursts of less than a hundredth of a second occurring during storms lasting for two or three hours—and *Bow Shocks*—the sound of solar windflow hitting Jupiter's magnetic field were captured live. Each sculpture incorporated a third receiver, using technology developed by the satellite industry, which continuously picked up microwave sounds identified as echoes of the Big Bang. Levels were set at a murmur—the outer space sounds invoked celestial harmonies that from the quieter time of Pythagoras have been referred to as the “Music of the Spheres.”
The illustrations on these pages represent working drawings.
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Pyrite crystals
Radio Rocks
Dove Bradshaw 9/8/08

Pyrite
World Band Short Wave
Hematite
Weather Radio Waves
Wissahickon Schist
FLEX Open Case Guts of Radio Local Waves
Fluorite, black tourmaline, hematite
Galena and pyrite
RADIO ROCKS
DOVE BRADSHAW
Bar.ssa Lucrezia De Domizio Durini
Bolognano • Italy
Baronessa Lucrezia Durini Commission
Permanent Installation, Bolognano, Italy

Local, world band shortwave, and microwave frequencies
41 x 35 x 35 inches

Baronessa Lucrezia Durini commissioned the first permanent installation of *Radio Rocks* for the Second International Free Forum Bolognano in June, 2006. Lucrezia Durini, a patron of the arts and Joseph Beuys supporter, created a permanent art environment in the village by acquiring a dozen buildings and inviting celebrated artists to make works for *vetrinas* and store fronts. Each evening the works are illuminated until morning. The ancient town with its medieval streets and glass-encased tableaux evokes a Felliniesque experience. The environs are further enriched by *Piantagione Paradise*, Beuys’ utopian gesture to reinstate biodiversity by planting 7000 varieties of trees.

*Radio Rocks* is the only work dedicated to sound and occupies an enclosed vitrine in the central piazza. Speakers incorporated within the vitrine walls amplify the sound at a level that harmonizes with the quiet rippling of the nearby town fountain. By employing amulets of galena and pyrite crystals to access local, world band short wave and microwaves, Bradshaw returns, in part, to one of her earliest bodies of work, *Reliquaries*, 1972-73. In these small glass-encased boxes she ‘captured’ detritus of artists, filmmakers and composers of particular significance to her to symbolize their spiritual power to inspire. Similarly, the murmur of her *Radio Rocks* mingles human evocations with echoes of the Big Bang.
Pyrite, crystals, conglomerate rock with pyrite, gold tipped cat-whisker, microcomputer and electronics for the transmitter, theremin, radio, Tesla coils, MP3 player, capacitor, speakers

Commissioned by Colorado College, Colorado Springs to commemorate one of Tesla’s 1899 Colorado Springs experiments.

The two Tesla coils—one to transmit and one to receive are meant to duplicate one of his Colorado Springs experiments. In Tesla’s case he sent pure energy: In this case one coil transmits energy that is modulated by the signals from the mp3 player and are received by the second Tesla coil and demodulated by and amplified by the *Radio Rock*. The capacitor is constantly tuning the receive coil over a range of frequencies. This is possible because Tesla coils are resonant circuits. Whatever frequency the receiving coil is resonant to will be the main signal received. While the strongest signal may often be the signal transmitted by the transmitting Tesla coil—it should also receive other signals such as those produced by lightning, auroras, solar flares and many other sources.

Dove Bradshaw, artist
Robert Bishop, inventor
Original Radio Rock
1998
SOUNDS

1. Jovian bow shock – sound of solar windflow hitting plasma which makes up Jupiter's surrounding magnetic field. Plasma is an electrically neutral highly ionized gas and is a phase of mater distinct from solid, liquid and normal gas. Some of this ‘plasmic’ dust is poured into the Jovian magnetosphere by one of its moons, Io, and its volcanoes resulting in prodigious dust streams. Jupiter’s atmosphere is very dense compared to the neutral gas in Earth's atmosphere.

2. Jovian electron cyclotron emissions – intense narrow-banded emissions, generated by energetic electrons spiraling along the magnetic field lines of Jupiter and its magnetized moons. The frequency bands of the electron cyclotron frequency, a characteristic frequency of the plasma surrounding the planet.

3. Jupiter Ion Acoustic waves

22. Jupiter S Bursts – Radio bursts from Jupiter were found to come in two forms: long bursts (or L-bursts) lasting up to several seconds, and short bursts (or S-bursts) that have durations of less than a hundredth of a second. The S-bursts occur from 200 ms to 1 ms or sometimes for short bursts during radio storms lasting for up to two or three hours.

Sounds are captured by the Cassini-Huygens mission in cooperation with NASA, the European Space Agency and the Italian Space Agency. The Jet Propulsion Laboratory, a division of the California Institute of Technology in Pasadena, manages the mission for NASA's Science Mission Directorate, Washington, D.C. The radio and plasma wave science team involved in these discoveries is based at the University of Iowa, Iowa City. These descriptions are taken from some members of the team.
PHOTOGRAPHIC CREDITS

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DOVE BRADSHAW

RADIO ROCKS

Larry Becker Contemporary Art
43 North 2nd Street
Philadelphia
May - June
2008

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