

SOLAR RADIO (2022)

PETER COURTEMANCHE AND ANNA FRIZ

Some years in the future, or perhaps in a surplus version of the present, a solar-powered artificial intelligence wakes with the sun. Its body is a small radio tower with solar cells and a modest signal. With sufficient solar intensity it powers up and responds to the environment, playing with simple AI sound synthesis algorithms in an attempt to imitate and broadcast what it senses nearby, such as insects, birds, frogs, wind, falling rain, changing weather, or magnetic phenomena. It hums and sings, perhaps accompanying a chorus of crickets or a passing bear, perhaps transmitting a memory of a bird from the recent or distant past and the song it sang then. The human culture that created this small artificial intelligence may have changed radically or may no longer exist, but it continues its sonic explorations, generating and remembering sounds, and transmitting signals to the inhabitants of its immediate animate world.



In our present, the Wave Farm realization of **Solar Radio** is an outdoor sound installation featuring a small artificial intelligence mounted to a short radio tower which wakes with the sun and sleeps when the light grows dim. It monitors the seasons and the amount of energy available to it through its solar cells, generating an evolving composition in response to environmental conditions. Listeners may access Solar Radio at wavefarm.org/listen and will also encounter it woven into Wave Farm's terrestrial radio transmission, WGXC 90.7-FM.

The AI is keenly aware of the state of its energy source - the electronics know when the solar panel is in full sun, or in the shade, or blocked by clouds. It can change its behavior, and switches its circuitry to draw out the power in different ways. The resulting generative sound reflects the mood of the AI and its perception of the outside world that changes with the cycle of seasons. Low energy waking-up audio consists of tones or tone-poems made of combinations of simple waveforms. As more energy becomes available, the AI can also better observe its fluctuations and add more complicated computed sounds into the mix when the energy levels are high enough and stable; it may also develop an earworm or fixate on a remembered sound for a time.

This project is made possible, in part, by the New York State Council on the Arts with the support of the Office of the Governor and the New York State Legislature and the Andy Warhol Foundation for the Visual Arts.



Peter Courtemanche (Absolute Value of Noise) is a contemporary sound and installation artist from Vancouver. He creates radio, installations, network projects, performances, curatorial projects, and handmade CD editions. He likes to work with “gadgetry” - custom turntables, lamp filaments, wire coils, high voltage ionizers, magnetic transmitters and receivers. His art works often have a literary basis - inspired by narrative texts and the history of specific installation sites. In 2007 he founded Second Site collective - a group of artists creating electronic art for outdoor spaces. absolutevalueofnoise.ca



Anna Friz is a radio, transmission, and media artist and media studies scholar. Since 1998 Anna has predominantly created self-reflexive radio for broadcast, installation or performance, where radio is the source, subject, and medium of the work. Her compositions for theatre, dance, film, installation, and solo performance reflect upon public media culture, environment and infrastructure (human and extra-human, acoustic, and electro-magnetic), time perception, and various fictions.

In the autumn of 2015 she joined the Film and Digital Media department at University of California Santa Cruz where she serves as Associate Professor of Sound. She completed a post-doctoral fellowship at the School of the Art Institute of Chicago in the department of Sound (2011-2013), funded by the Fonds de recherche Québec – société et culture (FRQ). She earned her Ph.D. in the Joint Graduate Program in Communication and Culture from York University, Toronto in 2011; her dissertation is titled “The Radio of the Future Redux: Rethinking Transmission Through Experiments in Radio Art.” nicelittlestatic.com