C. Spencer Yeh The RCA Mark II

By Matthew Blackwell

In 1959, a two-ton mass of circuit boards, cabinets, wires, dials, and knobs was trucked from RCA Laboratories in Princeton, NJ to a building owned by Columbia University at 632 West 125th St. in Harlem. The pieces were taken up to the third floor via a freight elevator and assembled into the RCA Mark II, the first programmable electronic synthesizer and the centerpiece of the new Columbia-Princeton Electronic Music Center. The Center was the result of Rockefeller Foundation-funded research, undertaken by the composers Vladimir Ussachevsky and Otto Luening, into similar electronic music labs throughout Europe. Ussachevsky and Luening imagined an open, laissez-faire environment that would differ markedly from the overly structured European centers associated with state-sponsored radio stations.

This democratic vision drew experimental musicians and avant-garde composers from around the world to the EMC studios. Despite its novelty, however, the Mark II was left largely unused by these visiting composers, who preferred the smaller and simpler tape-based equipment. The machine cost $250,000; it stood at a forbidding seven feet tall and stretched the width of the room; it could take up to 12 hours to re-calibrate if a mistake were made. The user would control for pitch, timbre, volume, and envelope for each note individually with a typewriter-like hole-punch, creating a paper script to be fed into the machine. Only the machine's designers and engineers were even vaguely comfortable with it, and only the most intrepid of composers dared use it. The Mark II was an exclusive machine in an organization that prided itself on inclusiveness.

The composer most associated with the Mark II, Milton Babbitt, embraced its complexity as a means of fostering an academic musical elite. In a controversial 1958 article, "Who Cares If You Listen?," Babbitt argued that difficult music has no social responsibility outside of its own advancement. With this aim in mind, composers should be housed in universities, funded through foundations, and their careers made safe from the uncomprehending ear of the public. "Why should the layman be other than bored and puzzled by what he is unable to understand, music or anything else?" he asked. "I dare suggest that the composer would do himself and his music an immediate and eventual service by total, resolute, and voluntary withdrawal from this public world to one of private performance and electronic media, with its very real possibility of complete elimination of the public and social aspects of musical composition." With the Mark II, Babbitt found his ideal instrument: expensive, complex, perplexing.

Babbitt's dream didn't last. The Mark II became obsolete with the introduction of cheap and accessible synthesizers like the Buchla and Moog. After a few notable recordings in the 1960s, including Babbitt's *Philomel* (1964) and Charles Wuorinen's *Time's Encomium* (1968), the Mark II fell into disuse. In 1976, it was damaged when vandals broke into the EMC. It has sat

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completely unused since 1997, when the Freight Elevator Quartet coaxed out its last sounds. After a photo shoot that resulted in plumes of smoke erupting from the machine, it became an emblem of a bygone era.

In 2015, C. Spencer Yeh discovered the Mark II during a visit with a friend to the Columbia campus. In a series of sessions, he used contact and room mics to record the sounds of the machine itself. He twisted knobs, pushed buttons, flipped switches, pulled plugs, and rubbed the metal exterior to create a palette of sounds for use at live shows. Edited versions of three of these performances constitute *The RCA Mark II.*

The album pulls an audial trick, familiar in various forms from acts like Four Tet, Matmos, and Dawn of Midi, in which acoustic sound is manipulated to evoke tropes from electronic noise and music. At various points, cascading percussion created from flipped switches begins to resemble a failing hard drive, high-pitched squeals remind one of a dial-up modem, and hyper-manipulated clicks sound something like an analog version of the skips and glitches of scratched CDs in Oval's early oeuvre. The effect is a destabilized field in which references to acoustic, analog, and digital sound interact and overlap.

The thesis is clear: machines fail, and faith in technological progress — or progress via technology — is naive. We are always at the end of a succession of technological changes that we read as progress only because we are blind to the problems of our current technology. Milton Babbitt was wrong to correlate the advancement of human expression with mastery of a machine. The democratic principles of the EMC are fully realized, albeit belatedly, through the use of that most democratic of digital technologies — the laptop — to recast the RCA Mark II in properly human terms. Yeh samples the mechanical sounds of the Mark II to demystify the narrative of technological progress that it represents.

Implicit in this critique is a self-consciousness regarding the necessity of technology that Yeh has been struggling with in his praxis for years. In his violin work as Burning Star Core and in his solo work for voice, Yeh reduces his use of technology to a minimum, using only microphones with no added effects. This isn't an option here — he has to record, edit, arrange, perform, re-record, and re-edit his sounds in order to present the RCA Mark II as *The RCA Mark II*. Just as in Oval's early records, the technology used to demonstrate the fallibility of older forms of technology is seemingly celebrated itself through this process. The clicks of scratched CDs or the clunk of the Mark II's levers are transformed into dizzying compositions that come close to validating these failed technologies as necessary steps toward the miraculous editing technology that can so manipulate them. Yeh's contact mics, samplers, laptop, and editing software all conspire to indict the undemocratic Mark II, but in doing so remain silent as to their own limitations.

And yet, the present absence of this towering machine inspires a certain nostalgia, not for the early space age and its failed promises, but for physical presence, manual manipulation, and unmediated sound. Considered in this light, *The RCA Mark II* succeeds where it seems to fail, for in making clear the failure of old technology through the seemingly superior medium of the

new, the album draws attention to its own constructedness and the eventual failure of the technologies that brought it about. Its critique casts a wide net and thankfully ensnares itself. In another 60 years, it seems to suggest, samplers and laptops will look just as foreign as the Mark II, without any further progress toward the realization of human creative potential.

More about: C. Spencer Yeh