

Reflections from an Artist Researcher

A History of Wave Farm at 25

ABSTRACT Wave Farm is a nonprofit organization that sponsors and preserves transmission art—a category that the organization has defined wherein artists and artworks intervene in the electromagnetic spectrum as a creative medium. In this essay, Andy Stuhl reflects on Wave Farm’s 25-year history from two vantage points: as a researcher of recent American radio history in which Wave Farm has played an active role, and also as the 2021–22 Wave Farm Radio Artist Fellow. The Radio Artist Fellowship is a recent initiative by Wave Farm that has increased the organization’s role in archiving an artistic genre that previously lacked institutional support in the United States, and it has brought Wave Farm into greater contact with scholarly radio studies. Moving through the various phases of the nine-month fellowship, the essay pans out to show how radio studies, Wave Farm, and the radio medium as a whole have undergone significant and interconnected changes over the past 25 years. **KEYWORDS** radio art, radio studies, archives, media history, transmission arts

One morning in July 2021, I drove down New York State Route 23 and kept my eyes peeled for a wood plank half-wall set partially into the lush greenery that flanked the road. A black, circular logo on the wall showed white lines radiating out from two words: *Wave Farm*. A local news segment aired through the car stereo, part of the *WGXC Morning Show*, which six days each week presents reporting and community updates to FM listeners across Greene and Columbia counties in the Upper Hudson Valley. I turned down a short driveway and parked at the near end of the long, skinny, two-story building that houses Wave Farm’s transmission arts residency program as well as WGXC’s main broadcast studio. Galen Joseph-Hunter, Wave Farm’s executive director, came out to greet me. I had arrived at a place that, far away from the metropolitan settings where most art scenes find their anchors, has become an international hub for artists whose medium is radio transmission.

I was there to spend two days in the Wave Farm Study Center in the course of my dissertation research, which traces the cultural meaning of automation in American radio broadcasting. The study center, with its collection of some 600 books on radio and sound art plus copious media holdings, offered a crucial resource as I began shifting focus from the industrial to the artistic side of my research object. Wave Farm’s own story, I had begun to realize, was also a consequential part of the history I wanted to gather; and I took the opportunity to interview artistic director Tom Roe (who is married to Joseph-Hunter) on the organization’s micro-broadcasting roots and on the technical setup that supported its full-power community station, WGXC. But my work, happily, was about to

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become entangled with Wave Farm in a third and more direct way: I learned shortly after this visit that the organization's Radio Artist Fellowship committee had accepted my application to be the next fellow. For nine months starting that fall, I would conjoin my research with Wave Farm's efforts to expand its Radio Art Archive. I would also gain the chance in an online workshop and in a radio art creation phase to test-launch some of the central notions emerging in my work: foremost, that radio artists might be uniquely capable of crafting interventions into some of the binds that "new media" seem to foist upon artists and audiences today.

In this essay, whose occasion is Wave Farm's 25th anniversary, I will try to depict the organization and its history through the multiple, specific lenses that my experience in this fellowship has offered. To understand the full importance of what Roe, Joseph-Hunter, and their many collaborators have built and continue to build requires, I believe, a zoomed-out perspective on historical shifts in how radio practitioners in the United States perceive the life of the radio medium. A kind of death, more accurately, often seems to attend the medium's intense commercialization from the perspective of its artists. Fellowship mentor Gregory Whitehead wrote in 1992 of radio's "gradual drift into such a flatly pedestrian state of mind" and noted that "artists have found themselves vacated (or have vacated themselves) from radiophonic space."¹ I had become interested in these kinds of narratives as I studied how automation has figured into changing values and practices in radio. American radio's industrial, technological, and artistic landscapes have morphed considerably in the two and a half decades since free103point9—the mobile broadcasting collective that would evolve into Wave Farm—began transmitting in Brooklyn. Wave Farm has undergone major transformations, too; yet its orienting aims from the 1990s remain focused and necessary, pushing against the same current Whitehead described. By casting Wave Farm as a changing participant in a changing landscape, I aim to show how the organization's history has both reflected and influenced the field of possibilities for what radio might become next.

In order to define the future of a medium, one has to first understand its past. A core focus of the Radio Artist Fellowship for its three years (and counting) has been to curate a Broadcast Radio Art Archive. Karen Werner and Jess Speer, the first two Radio Artist Fellows, seeded the archive with a diverse array of broadcast works, from those already canonized in experimental radio circles to those at risk of vanishing from their margins. Adding thoughtful recorded introductions, they set a standard for rich auditory annotation in step with the curation. The resulting archive includes 97 works at present, with very little artist repetition. Wave Farm presents this archive as a web resource and also over the air, rotating its entries through a program called *The Radio Art Hour* that it syndicates to other noncommercial stations. Fellowship mentor Joan Schuman maintains a project called Earlid that puts sound art curation to similar use across radio and online registers, forming an instructive parallel for this broadcast-first archive. While artists from around the globe appear in this collection, the project serves an especially urgent function in recovering and preserving radio art from the United States, where the genre had generally lacked durable institutional support prior to Wave Farm and like-minded organizations such as Chicago's Radius (founded in 2010). Wave Farm aligns here with

larger efforts like the Radio Preservation Task Force—whose conference director Neil Verma also serves as one of the four mentors to the Wave Farm Radio Artist Fellowship—in working to gather the widely distributed and all too often disappearing traces of historic broadcast audio into an accessible, enduring corpus.

The first section of this essay will expand a bit on the case for archiving radio and transmission art by way of a reflection on this component of the fellowship experience. Archive-building has been a central function for Wave Farm since well before it initiated the fellowship in 2019. Joseph-Hunter's 2011 book *Transmission Arts: Artists and Airwaves*, co-authored with Maria Papadomanolaki and Penny Duff, elaborated the creative field that Wave Farm had been defining and fostering since its early years as free103point9. It did so by cataloging 150 artists and artworks, many long predating the organization and many with roots in other fields like sound, installation, or performance art.² The book drew throughlines among the intentional and often highly unconventional uses that artists had found for electromagnetic transmission, and it became a likely first point of encounter with Wave Farm for researchers exploring adjacent arts contexts. The book's completion also represented the next major milestone for Wave Farm after WGXC's launch as an online station in 2009, and in retrospect it perhaps marks a neat turning point between a *planting* chapter in Wave Farm's history—a period of securing the core infrastructures for the organization's presence in Acra, New York, including the 29-acre parcel of land that it now calls home as well as the technical and legal trappings for WGXC—and a *growing* chapter in which Wave Farm has filled out those foundations while expanding an international audience for transmission art.

In the second section of this essay, I will turn from my archiving experience and reflect briefly on the workshop I hosted through Wave Farm in February 2022. With the title “Radio Deprogramming,” the workshop arose through three main elements: a still-developing term and concept from my dissertation; a 1992 transmission artwork by Christof Migone called *Radio Naked*; and, most importantly, a group of more than 20 internationally dispersed and highly engaged participants who shaped the central ideas and techniques across our four meetings. Planning and carrying out this workshop sharpened my sense of how an interface between academic radio research and the transmission arts community might work. It confirmed that Wave Farm has produced an opening for either world to be interesting and intelligible to the other.

To close, I will discuss the fellowship's third phase—an assignment to produce a radio artwork of my own—and how this work gave me a chance to trace a particular narrative arc for the last 70 years of American radio. Wave Farm stands out in this narrative by way of the burgeoning transmission arts movement and the alternate histories and speculative futures it proposes for radio technology. Gaining steam at the turn of the millennium, these art worlds generated a countercurrent to the industrial fervor around new media that variously promised to replace radio or to push it toward ever greater heights of commercialization. Today, as the ensuing platform monopolies earn new degrees of wariness and frustration, a fresh wave of artists and researchers looks to radio both for historical precedents and for autonomous media futures. Wave Farm's unique trajectory

from experimental rooftop transmissions to long-term institutional archiving has made the organization a key entry point for these newcomers, whichever direction we might look and listen.

ARCHIVES IN THE AIR

When I began adding entries to the Wave Farm Broadcast Radio Art Archive, I switched gears from my heavily print- and writing-centered dissertation research to a historiography of broadcast sound in broadcast sound. I soon found that it felt wrong to apply to radio art the same logics of analytic capture that students learn to use with textual records. Most printed documents seem to want to persist, to advocate for their own copying and re-indexing. Radio art, in a strange way, often seems to do the opposite. It tends toward the ephemeral and the spontaneous. Recordings often exist only partially or not at all, or they lack the documentation that might let a listener start to guess the context in which their authors imagined they might be heard. Despite the many cold trails, searching in this manner was a more delightful than frustrating process: Time and again I experienced the fleeting and mystifying kind of one-time sonic encounter that is, for some radio artists, perhaps the real goal of such broadcasts. As artist Sarah Kanouse described in a 2011 article on a set of transmission works she developed at Wave Farm, broadcast sound inverts the spatial or textual record's frequent use to solidify or close off parts of the past. Its "persistent dissipation suggests that the past cannot be so easily settled."³ Wave Farm's artist-led archiving efforts, in contrast to the kind of collections that trained archivists assemble for research libraries, privilege ongoing flexibility to expansion and reconceptualization.

Navigating radio art history is also an unusual task of listening within and against definitions, often to work that rejected or exceeded definitions in the first place. Radio art, for one thing, is distinct from transmission art, the latter being a term that free103point9 put into circulation and that became the organizing category for its charter as a nonprofit when it incorporated in 2002. Transmission art is a "sub-genre of the media arts" composed of "works where the electromagnetic spectrum is an intentional actor (either formally or conceptually) in the work. . . . Transmission art encompasses works in which the act of transmitting or receiving is not only significant, but the fulcrum for the artist's intention."⁴ Radio art has many meanings across the various cultural contexts where radiophonic traditions have emerged, but Wave Farm's definition of the term aims to encompass these with an emphasis on artistic manipulation of the practices, formats, and conventions that make up broadcast radio⁵—as opposed to the many other radio uses like Wi-Fi, astronomy, walkie-talkies, etc., etc., that transmission artists explore. Radio artists arrange sounds to air over AM or FM, variously deploying or discarding the principles about good radio sound that have accreted in the first broadcast medium's first hundred years. What constitutes artistic intent is a more slippery matter than what constitutes broadcasting, though the latter grows increasingly blurry as podcasting continues to adapt radio conventions to different distribution structures.

This work and these frictions helped me understand how and why archiving has been central to Wave Farm's mission and development—since its early days as free103point9,

and in the organization's outlook now toward the work that lies ahead of it. Roe recounted to me that the free103point9 collective would loan out its transmitter to artist parties with a set of long-playing audio VHS tapes. These tapes stored and then recirculated each happening that the transmitter found itself co-conspiring in. Twenty-five years on, these tapes form part of a collection of sounds that Wave Farm has actively helped bring into hearing. They record the process of transmission arts growing into and beyond their definitions. With the organization's additional turn, in the last few years, to radio art, this field too is getting a deserved shoring-up. Transmission and radio are not metaphors that can be inconsequentially mapped onto other media, as music streaming platform designers often like to attempt. Documentation and preservation insist that bodies of work and lines of creative inquiry have flourished under radio's material circumstances that would not have come about the same way under others. Fellowship mentor Anna Friz has shown this in her own artworks that use FM transmission as both instrument and outlet, as well as in academic studies of the larger field across which artists redefine radio transmission.⁶ Archiving is a necessary push for the long-term life of the movements Wave Farm cultivates, not to mention a great service to their researchers.

Wave Farm is an arts organization, not an academic institution, but its history has been contemporaneous with a ferment in academic research and writing that today uses the "radio studies" banner. Michele Hilmes published *Radio Voices: American Broadcasting, 1922–1952*, which has earned frequent credits as a pivotal text in launching a "cultural turn" or "second wave"⁷ of radio historiography in 1997—the same year that Roe, with Greg Anderson and Violet Hopkins, launched free103point9 in New York City. Often drawing on cultural studies, the works continue the project of theorists like Stuart Hall to interpret mass media as interfaces between popular culture and national or transnational identity formation. They differ sharply from the inventor-centric texts that took center stage in a previous wave of American radio histories. Today, radio studies is a vibrant field that connects researchers and practitioners across disciplinary and geographic boundaries. Its outputs are well represented in Wave Farm's study center library; and Wave Farm crops up reliably in conversations at radio studies conferences.

Various unexpected categories emerged in my search for radio artworks to archive. Radio art had, I learned, gained a number of converts during the COVID-19 pandemic as sound artists and musicians turned to FM microbroadcasting when gallery and performance spaces could not safely open. But one lineage of work was especially notable for its intersections with both Wave Farm and academic spheres: broadcast pieces that engage Black studies and the Black radical tradition through archival sound and auditory collage techniques. *The People's Radio*, by Sadie Woods, and *BLACKBODY, WHITE NOISE*, by Ricardo Iamuuri Robinson, were both produced during the artists' residencies at Wave Farm in 2021. Woods's composition deftly re-imbues songs from Motown and other musical traditions with militant political meaning by juxtaposing them with speech recordings, notably Fred Hampton's 1969 address "Power Anywhere Where There's People." Robinson used sculptural installation and original music alongside broadcast program samples in a sonic foray against anti-Blackness, tracing an orbit between Frantz Fanon's 1952 *Black Skin, White Masks* and a futurist transmission practice. In New York

City, the We Be Imagining initiative and its Black Siren Radio project, whose work airs on Columbia University–affiliated station WKCR-FM, have been developing an auditory collage method that remixes and re-amplifies Black scholarship. Their 2020 work *Mourning Good: A Remix Celebrating Black Life*, produced by the initiative’s director J. Khadijah Abdurahman, exemplifies this approach in an extension of words and ideas from Ruha Benjamin. These three, among other works, opened my ears to a flourishing mode of quotation and recirculation that relies on radiophonic methods to exceed limits that more linear, textual citational practices would impose.

RADIO RE-ARTICULATIONS

Radio histories take on an important warning function, as post-millennial media systems seem to be following similar cycles of artistic expansion and industrial consolidation to those that characterized radio in the prior century. At the time of free103point9’s founding, American radio had entered a phase of intense monopolistic concentration and financialized hollowing out. Roe, in our interview, cited the Telecommunications Act of 1996 as the single most pivotal event in radio’s transformation across the years that he had been listening and broadcasting. He is hardly alone in this belief. The legislation has been rigorously criticized by enough media analysts that there would be little point in my delving into it here, but it dealt its principal blow to radio by lifting limits to the number of stations a single company could own in any given broadcast market. Many of my interviewees have described the law’s passage as a turning point in broadcast radio, in terms of its employment prospects and in terms of radio’s overall sound.

Joseph-Hunter notes the nearly audible sense of decay that had set in as a kind of ground against which free103point9’s figure emerged:

The principal inspiration for starting free103point9 was the collective’s shared view that the existing radio airwaves were dead zones that needed to be revived, and their conviction that the opportunity to communicate thoughts and new ideas was being wasted by a handful of corporations intent on using the nation’s airwaves solely for profit. First and foremost among free103point9’s concerns was that the community lacked access to its own airwaves.⁸

If the 1996 act accelerated a tendency toward corporate control and centralization—one that Susan Douglas argued was embedded in American radio before 1920⁹—it may have also helped usher in a period of what I call re-articulations for the medium. Roe’s recollection of the time leading up to his New York move supports this notion: The pirate radio communities he participated in as a broadcaster in Tampa suddenly began drawing interest from former commercial station owners whom the ascendant monopolies like Clear Channel (today reincarnated as iHeart Media) had forced out of the market. Chances to form politically uneasy but tactically advantageous alliances arose, and movement organizations like Indymedia and the Prometheus Radio Project embraced them where necessary, as Christina Dunbar-Hester documented in *Low Power to the People*.¹⁰ Contingent, messy allegiances between left-wing community radio activists and

church group broadcasters assisted the drive for legislative change that in 2010 resulted in the Local Community Radio Act. This legislation won back LPFM licensing possibilities that had been opened in 2000 only to be effectively closed off under lobbyist pressure from the National Association of Broadcasters. free103point9, later as Wave Farm, was an active contributor to these efforts, pushing forward a broadly agreed-upon (among broadcasters below the large end of the scale) revitalization plan for the radio medium even while exploring its experimental fringes.

Parallels between the 1997 radio climate and the present situation surrounding platformized media are likely self-evident: Monopolization runs rampant, and many of the artists, writers, and technologists who once helped define the World Wide Web as a creative space express that it is dying under the pressure of unchecked commercial dominance.¹¹ A political articulation of the sort that resulted in low-power FM licensing has yet to materialize. One can't help but wonder if more willingness to look to older media for inspiration could help in the search for effective tactics. And Wave Farm's role in this small but significant change of tides for radio at large should provide evidence that artist support should be among paramount concerns for whatever strategy does materialize.

These lines of reasoning were at the forefront when I began considering what kind of workshop I wanted to plan for the fellowship's second phase. Jess Speer, the prior year's fellow, had convened a very successful workshop around a specific radio artwork: 1992's *Leap of Faith*, by Jacki Apple with Keith Antar Mason. I began to form an idea around a particular work (coincidentally, also from 1992) that figured heavily in the conceptual writing I had done for my dissertation: Christof Migone's *Radio Naked*, which arose as a series of short textual prompts directing a radio programmer to subvert conventional broadcast routines. *Radio Naked* had helped me sketch out a category I called "deprogramming"—a historically and materially contingent creative disposition that orients itself against over-codified media routines. I used the online workshop as a chance to subject this concept to remodeling by a small audience, confident that Wave Farm's networks would draw out a diverse range of perspectives and hopeful that a radio art syllabus would help participants channel their frustrations with media systems into the production of micro-interventions in *Radio Naked*'s vein. The 20-plus participants who attended the four workshop sessions, from a wide array of time zones and artistic backgrounds, delivered on these hopes and more. Following conversations on radio history and the artwork by Migone (who joined us as a respondent for the final session), participants found new articulations between deprogramming and decolonial, queer, multisensory, and more media dispositions. Their work culminated in several dozen collaboratively workshopped and sonified prompts, ranging from tools to aid the creative process all the way to playful sabotage plans.¹²

FRESH CURRENTS

The transition from free103point9 to Wave Farm began in 2004, when Joseph-Hunter and Roe purchased the land in Acra, New York, that is now the organization's home.

While the pair continued organizing transmission art events in Brooklyn, they also set about quickly hosting others at this new Hudson Valley site. The *Tune(Out))side* performance event in 2005 built on the organization's city-based *Tune(In))* series to welcome artists and local community members to the new setting. The next major transition would be the founding of a radio station there.

Earlier I noted the synchronicity between Wave Farm's 1997 origin as free103point9 and a groundswell in culturally attuned radio research. Another coincidence of timing, a decade later, helps situate Wave Farm's trajectory in a larger radio context—this time against an industrial rather than academic backdrop. In 2006 Wave Farm began preparing an application to build a full-fledged community radio station. The organization had learned that the FCC would soon open a rare filing window for full-power FM broadcast licenses. With help from the nonprofit Future of Music Coalition, Roe spearheaded Wave Farm's entry into the complex and competitive application process. In 2008 the FCC awarded Wave Farm a permit to begin constructing its station. WGXC launched as an online station in 2009. It would hit the FM airwaves in early 2011 and has remained there since.

Also in 2006 Google, in a disastrously timed bid to prove it could extend its web advertising prowess into older media, acquired the largest radio automation vendor in American markets. Investors wanted the internet giant to show that the ad-auctioning systems that had become its main revenue driver could work in more media than just the web. Commercial radio, it hoped, would be a proving ground.¹³ Google failed to account, however, for the distaste that its subsequent partnership with Clear Channel would generate among a larger radio community; nor could it anticipate the point of no return that the 2008 recession would mark for the massively debt-burdened Clear Channel. In 2009 Google abandoned its radio project and salvaged what audio advertising infrastructure it could toward the launch of a music streaming platform.

These two entirely unconnected events, viewed from a long-term vantage on American radio's life cycles, combine to mark a significant moment of flux. On one hand, a mega-corporate project to refashion all media in the image of new media—to conscript them under what media analysts would a while later term the platform economy—deemed its radio efforts unsuccessful and exited the medium for good. On the other, a network of independent and low-power (as it were) practitioners made a significant passage from the medium's technical and organizational margins into what many radio listeners would consider radio proper.

To say that 2009 marked the start of a general corporate exodus from radio and a rapid influx of artists controlling airwaves would be a far too neat simplification. The American broadcast radio industry remains heavily commercial and heavily monopolized. Even within its noncommercial sector, the programming strategies of National Public Radio and its affiliate stations are far less inclined toward artistic experimentation than state-sponsored broadcasters elsewhere have been. But with WGXC's launch, transmission art gained a major institutional foothold within a tier of the medium that, in the United States, had previously been closed to it. Just as significantly, WGXC is an

ongoing, practical articulation of transmission art's priorities in terms of noncommercial radio's priorities and vice versa.

For the final phase of my fellowship with Wave Farm, I tried to produce a sense of this historical shift in a radio art composition called *25 Hz*. Some two dozen audio clips from 1951 to the present, among them both a Google Radio Automation promo and a major transmission artwork that Wave Farm had helped facilitate—*The Joy Channel*, by Anna Friz and Emmanuel Madan—provided the source material for a collage that set radio automation history against reactions from musicians and sound artists. (Blaring over each splice in the sound collage was a 25 Hz cue tone of the sort that early radio automation systems used to trigger their program changes, hence the title.) I aimed to conjure a sense that, as automation gained more and more responsibility over the airwaves across the last 70 years, a new kind of voice had risen up not just to lament but to reinvent a more “human” radio.

Equally important to the piece itself is its mode of distribution: The piece aired, as artworks by the prior two fellows had, through the Radia Network. Radia, which promises “new and forgotten ways of making radio,” formed as “a concrete manifestation of the desire to use radio as an art form.”¹⁴ Stations that participate in this international collaboration take turns syndicating artworks to the others. Syndication, a broadcast practice that followed the top-down distribution of the “golden age” network era with a more lateral model, was closely bound up with early radio automation. Through Radia, independent and noncommercial stations have repurposed this technique as the basis for a major renewal in radio art circulation. Wave Farm is so far the only Radia station located in the United States. Twice a year it contributes artworks by resident artists or fellows to air across Europe, Canada, Oceania, and elsewhere through 30 (and counting) syndicating stations.

At the end of May 2022 I returned to Wave Farm for a culminating broadcast where we aired *25 Hz* for the first time, and where fellowship mentors helped me reflect on the prior nine months. As it happened, a new installation work had just reached completion. Yvette Janine Jackson's *Underground (Codes)* joined the truck-mounted AM transmitter, the radio telescope receiving station, the floating and solar-powered “Pond Station,” and the others in a total of 12 (as of this writing) sculptural transmission artworks that populate Wave Farm's woodland campus.¹⁵ In Jackson's new work, a pair of sound compositions—2017's *Destination Freedom* and a companion piece she produced for the installation—play through steel “projection cowls” from artist Charles Lindsay. These white structures, which resemble steamship vents, rise eight or so feet off the forest floor on either side of the pine-needle-matted path that winds its way up from the Wave Farm Study Center. They appeared in eye-catching slivers between the trees at first as I walked uphill and as Jackson's haunting historical soundscape started to become audible over the birds and insects. This first encounter with the piece seemed a fitting analog to how I had first encountered Wave Farm itself, and to how new listeners must encounter it each day through WGXC: a strange and unexpected break, in the woods or in the airwaves, where invigorating sounds grow steadily clearer. ■

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