
Project Arbol: Deer-B-Gone: journal of a guerrilla sound installation

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***Project Arbol: Deer-B-Gone* is an outdoor sound installation of indefinite duration for twenty-three speakers. It takes on a guerrilla approach to sound installation art. Low-tech concepts and supplies, such as car amplifiers, aircraft cable, inexpensive cassette players, coupled with an overall irreverence for mainstream consumerism, created something like a Disney World theme park gone awry. The installation, which was site-specific, took place in a backyard in Princeton, New Jersey, USA. Yards and yards of cable were woven through the trees. Speakers were later mounted on the cable. Once in place, the speakers moved slowly along the cable. Each speaker played its own sound track. While there were some technical difficulties that plagued the project throughout its development and performance, overall *Project Arbol* proved to be a resilient installation.**

1. THE SOUND INSTALLATION

Project Arbol: Deer-B-Gone. Outdoor sound installation of indefinite duration for twenty-three speakers
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The synopsis of John Water's film 'Cecil B. Demented' portrays a young, gothic film-maker and his acolytes rebelling against the Hollywood film industry with the vision of returning to spontaneous, low-budget, guerrilla film-making. While the film was not made spontaneously (i.e. scenes were planned, rehearsed, etc.), it at least supports the *esprit de corps* of guerrilla alternatives in film production. Yet the film is a parody of itself. Not only does it mock Hollywood (embodied by Melanie Griffith's character, Honey Whitlock), but it also mocks Cecil B. Demented, displaying him as a misguided control freak flanked by a cast of devoted social misfits.

Like Water's movie, *Project Arbol* shares similar production features under a whimsical tone of irreverence. It is an outdoor sound installation of indefinite duration and, in this particular performance, was specifically designed for a large backyard with a good dozen or so large trees. Months of planning and preliminary work set the stage for an installation based primarily on a low-tech, makeshift design, reeking of potential disaster (in all good ways). Where Cecil B. Demented's desperation gradually leads him and his troupe to guns and violence, climaxing when

Demented commits self-immolation, our irreverent arsenal consisted of twenty-three Tupperware sweater boxes, each playing a unique sound track. *Project Arbol* also partook in an act of self-immolation/burn-up during the final moments of its performance (although this wasn't the intended outcome).

Project Arbol is a multi-layered commentary on mainstream consumerism.¹ The most obvious fascination with *Project Arbol* is that it worked, and was enjoyed by all onlookers. The flimsy, tenuous experimental nature of core elements like speakers cabled forty feet high in trees, all powered by Radio Shack automotive power supplies working in tandem with car windshield wiper motors and amplifiers meant to be mounted in car trunks, is visually bewildering. The audience gawked, compelled to ask, 'How did you get those speakers up in the trees?' Answer: the Missouri arm swing technique.²

Thus, we begin the commentary with the comparison between low-budget sound installations like *Project Arbol* (constructed by academic Ph.D. pranksters) and mainstream sound installations like those found in Disney World (designed by Ph.D. experts dubbed 'imagineers'). High-end production companies (including the film industry) are capable of cultural domination for the simple reason that they have the budget to lure pools of talent, and the advertising channels to convince the public that the fruits of these efforts are desirable in the first place. Team effort supported by massive corporate resources surpasses lone artists in technological advances in the creative arts. (What independent animation could compete with Shrek?) *Project Arbol* shamelessly displays its homespun feel. However, the irony of our installation lies in the dichotomy of intention and necessity. This is a guerrilla project poking fun at mainstream culture via the Tupperware plastic

¹Another sound guerrilla project similar in political vein is the Barbie Liberation Organisation, a group of concerned consumers who buy Barbies and G. I. Joes and swap their internal audio components. See the website: <http://www.sniggle.net/barbie.php>

²Missouri arm swing technique is achieved by tying a rope to a heavy, graspable object like a brick. Begin by swinging arm several times to gain momentum. Hurl brick up into air toward the V crossing of specified tree. More than one attempt may be necessary. Massive head injury may result from practice and execution.

sweater box; yet the project would not have been created had it not been for the stores and companies supplying us with these mass-produced items. *Project Arbol* relies exclusively on megastores, such as Wal-Mart, Radio Shack, Home Depot, and online electronic surplus stores for affordable supplies. Haunted by this dichotomy, we added a postmodern twist: the plastic sweater box is displaced from its original function. Removed from its designated home of the closet, the sweater box hangs from cables moving monotonously along in automaton-like fashion recalling its nascence on the assembly line where it was mass produced.

Another layer of commentary addresses a regional and political issue: the ever-increasing deer population in central New Jersey. Even in bucolic Princeton, heated and unresolved debates over what to do with the darn deer persistently dominate local news.³ *Project Arbol* is a mock deer deterrent. It takes an apolitical stance (although some may construe it as psychological warfare). We guessed that the barrage of sound coupled by the frightening presence of moving Tupperware speakers would scare away the deer (not really knowing what we already knew about the relentless spirit of the deer, resolved to hold court in our streets and driveways). This experiment failed miserably as expected, as noted by numerous deer walking through the installation during the performance. The final commentary, that of human encroachment on nature, ties the two above themes together. (The deer problem wouldn't exist if there were more land for them and more natural predators around like wolves and less houses and mega-shopping facilities near Princeton.) Again, the moving speakers and their inherent commercial essence is an incongruous match with the elegant majestic trees.

From the inception of the piece, we wanted the sound to be independent or autonomous in each speaker. Sound design for this piece already had a built-in postmodern twist by virtue of the fact that *anything* emitted from a Tupperware speaker moving through trees is absurd. But we did have an aesthetic guideline: the sounds had to convey some sense of independence so that when paired with the visuals, a synergy from the two would create an aural/visual fantasyland or strangeness. The truth is that neither one of us really could imagine aurally the quality of sound emitted from a moving Tupperware speaker high in the air. Would the sound quality be decent? Bad? Heinous? And how would sound quality ultimately affect the sound design of the project? Therefore, sound design was put on hold until about

three-quarters of the way through the project when certain technical logistics were intact:

- speakers were tested and functioning,
- motor construction was completed, tested and functioning,
- speakers on cables were tested and in motion, and
- layout of the speakers amongst the trees was confirmed.

It was only at this point that we could get a sense of what to expect visually and aurally and, indeed, these technical and spatial elements were critical in determining the sound design (see Conclusion).

Project Arbol is a site-specific work. The relationship of the trees within the yard mapped out how we designed the placement of the speakers. With this visual map of speaker placement, the sound designer composed, on a Macintosh computer, seven themes or musical vignettes. Each vignette, roughly a minute long, consists of many tracks of individual sounds. Approximately eighty per cent of the sounds were original synthesised material, twenty per cent were sampled. Five of these vignettes became 'zones' in the yard. The names in figure 1 provide a basic description of the material. For example, Zone 4 'Speed' consisted of rhythmic, driving drum sounds. In Zone 1 'Ambient', one could hear mellow chime sounds, etc. Zone 2 'Nostalgia' was based on an electric guitar sample from Ennio Morricone's 'Once Upon a Time in the West'.

These vignettes are heard in their entirety from time to time. However, the majority of the work recorded on the tapes is snippets of these cells that are tweaked and remixed *ad infinitum*. And while the themes dominate their specified zones, occasional snippets from other themes appear. There were two speakers hanging randomly named the 'renegades'. These two speakers were equipped with FM receivers that would receive signals from a Theremin situated on the sidelines of the yard. An audience member could at any time play with the Theremin and the sound would come out of the renegade speaker. (This was the only 'interactive' component in the installation.) The audience was invited to walk freely around the yard experiencing the blending of the zones. We felt relatively confident that no one was going to get hit over the head from a falling speaker. (We also had two subwoofers playing low frequency sounds, one hidden under a pile of leaves in the centre of the yard and the other hidden in a bush near the installation control location.)

This brings us back to the principal guerrilla component: the Tupperware speaker. In order to give *Project Arbol* some credibility, if not superficially, the Tupperware sweater box was christened Modular Eco-Modulating Self-contained Mobile Art Array, or

³The start of the cull suffered an unexpected setback for about a month this year after a coalition of animal-rights activists and hunters persuaded the state Fish and Game Council to deny the township a permit'. From 'Deer cull is finished for the season', *Princeton Packet*, 21 March 2003.

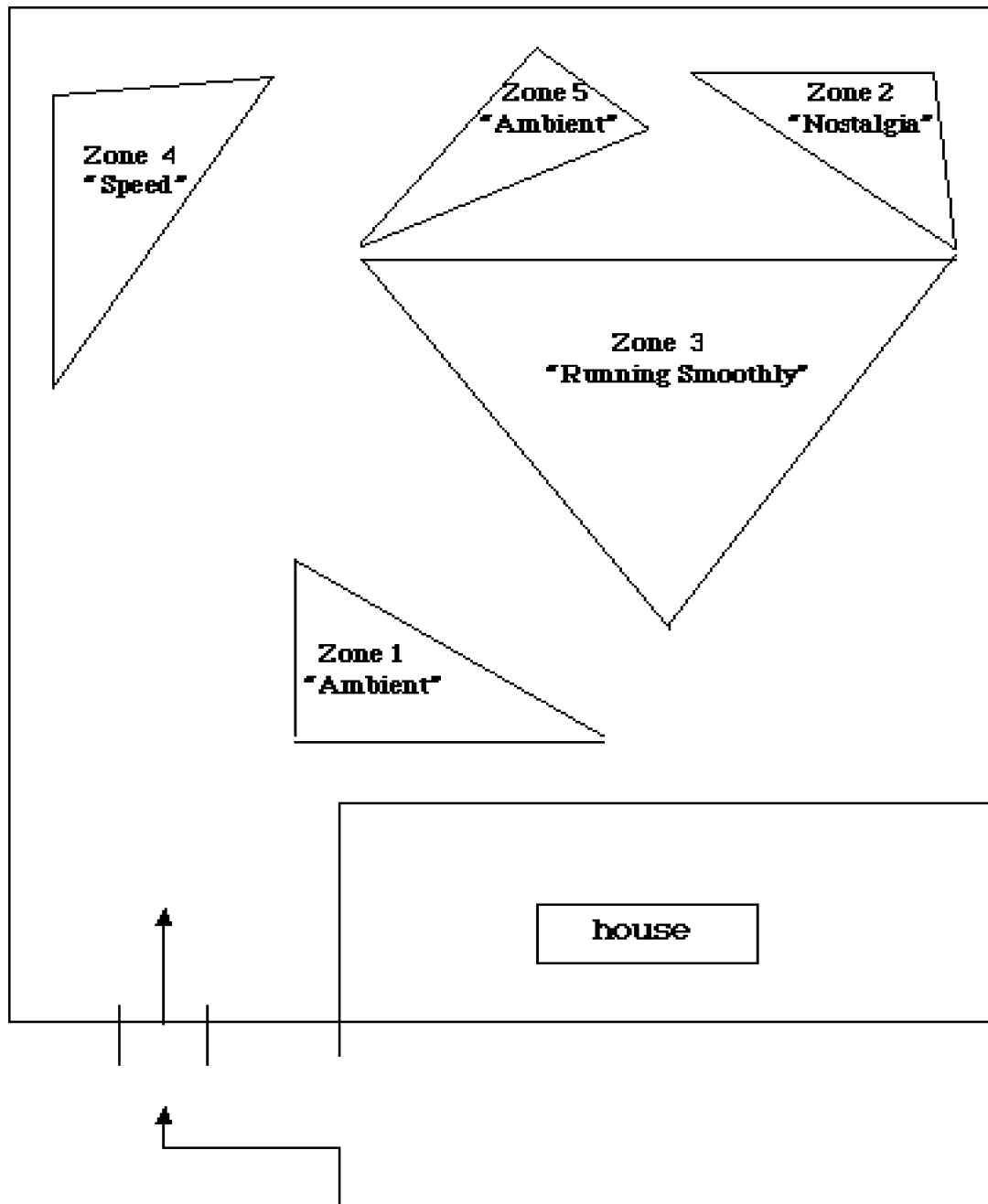


Figure 1. Layout of sound zones.

MESMAA (mes'maaaaaa). The history, development, and crucial role of MESMAA in the shaping of *Project Arbol* began with the logistical nightmare of making it work. To achieve technical autonomy, each speaker needed to be equipped with its own car amplifier (Wal-Mart), CD player (Amazon.com), woofers and tweeters (Radio Shack).⁴

Wiring (Home Depot) from the amplifier eventually led to the main power source, a motherboard (dubbed

⁴Since the car amplifier had stereo outs, we decided to splurge and create a MESMAA in stereo. Project Arbol was actually emitting 46 + 2 (subwoofers) discrete channels of sound.

the 'Grid') of low-tech proportions situated openly in the yard. The Grid plays an important role in the guerrilla aesthetic. Unlike many installations where components are hidden from the public, *Project Arbol* demystifies technology by exposing it.⁵ All the components and materials ranging from MESMAA to

⁵This aesthetic follows a sound installation tradition as seen in the works of various artists, such as Terry Fox and Rolfe Julius, to name a few. Also Hans Joachim Dietrich's work, *Electronic Light-Sound-Object*, is an 'exposed' work, much of which is strung together by alligator clips, as seen in Ihor Holubizky's article, 'Very nice, very nice' in *Sound by Artists* (Toronto: Art Metropole and Walter Phillips Gallery, 1990).



Figure 2. Front, inside and side view of MESMAA.

the Grid show the intention to reveal instead of hiding behind a veil of technical mystery and intrigue.

Our original plan envisioned a portable CD player, thinking that this would not only give us good sound quality at a reasonable price, but also make it possible to synchronise all the CD players more or less when the power was turned on. After creating one prototype speaker in which all the electronic components were stuffed, screwed or crammed gingerly into the sweater box, we discovered immediately our first major technical glitch: the CD player would skip at loud volumes and/or low frequencies. Since we couldn't afford to purchase high-quality anti-skip CD players, we resorted to plan B (one of many) that replaced each CD player with a cassette player. We guessed that this would be a step down on many levels, mainly in sound quality and the prospect of synchronisation. Tape is tape. This was a rather disappointing moment, but we forged on. We purchased the necessary cheap cassette players online (Amazon.com) and started again. After testing the revised prototype, we were surprised that there was relatively little sound difference between the CD Player and the cassette player. Tape is tape, but it seems that Tupperware is also Tupperware . . .

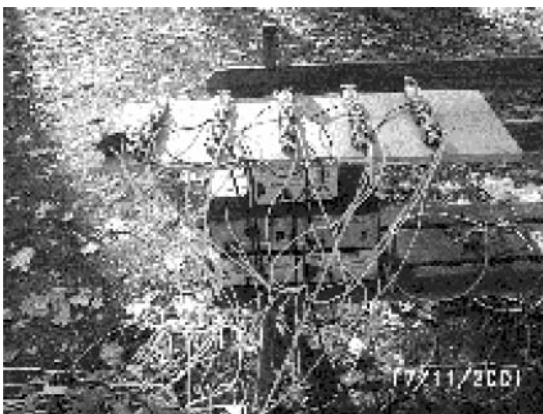


Figure 3. The 'Grid'.

It is time to contemplate the yards and yards of speaker wire and cable involved in this piece. Not only was speaker wire needed to go to the Grid (as mentioned above) but also aircraft cable (Home Depot) supporting the speakers was woven throughout the trees in the yard. It is also time to contemplate that all speakers and motors had to be powered and all this stuff was connected to the Grid which was running on five twenty-amp power supplies. (Our guerrilla budget could not allow us to buy more.) An unexpected twist of fate occurred with our revised MESMAAs. Since the power supplies could not give a steady stream of juice to all the speakers and motors consistently, each cassette player experienced the 'yo-yo effect' – the sound on the tape would rise or lower depending on the amount of juice flowing to the cassette player at that moment. Hence, all dreams or visions of a unanimous sound stability were abandoned. What was the positive outcome of this tragedy? In the true Cageian spirit, accidents can be good and *Project Arbol* can and will run smoothly if the budget is there! Despite technical setbacks, the piece fulfilled many other expectations: an installation off the beaten path, away from mainstream sites like the Guggenheim or Whitney; an installation where people could loiter, chat, meet on blind Internet dates, eat, drink, bring children, encourage play, and most important, that could provide a clean bathroom nearby. This brings us to the poetic, timely self-immolation of the Grid. Performing under great stress, three of its five power supplies gave up, bit the dust or blew up within minutes of the closing time of its final run. Even the smell of burning power transistors and transformers did not scare away the deer.

2. CONCLUSION

Designing sound for outdoors has its own parameters that greatly affect technical and compositional considerations. Below are some guidelines developed from what we learned as a result of creating this installation.



Figure 4. One angle of *Project Arbol:Deer-B-Gone*.

We hope that our insights will not only provide guidelines for our future projects, but also for other artists working in this domain. Sound dissipation and inexpensive speakers were two elements affecting the sound quality in *Project Arbol*. (If high-fidelity sound quality is sought, consider designing an installation with partitions or something to isolate and/or directionalise the sound. Investing in a few quality speakers would be worthwhile.)

- Inexpensive playback devices (cassette players, CD players) offer very limited volume output in outdoor settings. The overall volume of *Project Arbol* was surprisingly quiet resulting from having to lower the volume of the cassette players which were distorting when set at high volume levels (in efforts to make them louder).
- Speaker cones exposed directly to the elements need to be weatherproofed. We used a rain protective product called ‘Nikwax™’ sprayed directly on the speaker cones. This seemed to work well, but we don’t know the ultimate durability of this. We have also experimented with putting plastic bagging over the speaker cones. Although less aesthetically pleasing, it proved effective and was not detrimental to the sound quality. We also siliconed all areas of the MESMMA potentially vulnerable to water seepage. (The Grid was placed indoors during the evenings.)
- The sound design of *Project Arbol* is very flexible. One person suggested making each cassette tape with the same tone so people could hear how the tone was affected by space, movement, and cheap cassette players. (An interesting idea, although didactic. It was the intention of the sound designer to make a collage of sounds in order to give the effect of fantasy.)
- Assembling 23 MESMAAs was extremely time consuming.⁶ In this sense, *Project Arbol* was not a

⁶Many of the sound installations by sound artist Robin Minard contain thousands of piezo speakers, reflecting the labour involved. See his book *Silent Music* (Heidelberg: Kehrer, 1999) for pictures of these installations.

good example of spontaneous guerrilla tactics. However, in the guerrilla spirit, we believe in reusing and have designed the installation in such a way that various components like the wiring and speakers can be removed and reused for other projects (and reinstalled back into *Project Arbol*). Also, the installation can be disassembled, packed, and transported to other sites.

3. SPECIFICATIONS

Total crew size: two

Site of installation: a large backyard with trees

- 23 MESMAAs consisting of:
 - 23 car amplifiers
 - 46 woofers
 - 46 tweeters
 - 21 cassettes players
 - 2 FM receivers
 - Velcro
 - Nikwax™
- 2 subwoofers
- 5 power supplies
- 5 car windshield wiper motors
- Yards and yards of aircraft cable and speaker wire
- Assorted hardware

Optimal weather conditions: late spring – early fall

Project Arbol:Deer-B-Gone can be seen and heard at: <http://www.cs.princeton.edu/~prc/Arbol/>

You may also secure a sixty-five-minute, 5.1 surround sound DVD of *Project Arbol* from this website for the cost of reproduction and shipping.

REFERENCES

- Lander, D., and Lexier, M. 1990. (eds.) *Sound by Artists*. Toronto, Ontario: Art Metropole and Walter Phillips Gallery.
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- Princeton Packet Online*. 2003. Deer cull is finished for the season. 21 March.