

aural-visualiser 1000: physical interaction design for materializing moments

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ABSTRACT

The aural-visualiser 1000 is a prototype that reorients a user towards understanding the world from an auditory perspective instead of a primarily visual one. By attending to everyday audio instead of vision, the device asks the user to pay attention to the world in a more embodied way. Developed as a means of experimenting with the capacity of physical interaction design to support being present in the world differently, it records audio from everyday life and creates mementos for later reflection and interpretation. The mementos, paper receipts with abstract sound visualizations on them, offer a means of remembering experiences as they were to be there, instead of as they were recorded through image or video.

CCS CONCEPTS

• **Human-centered computing** → Interaction design.

KEYWORDS

RtD, attention, presence, senses, images, interaction design, aesthetics, expressions

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1 INTRODUCTION

The aural-visualiser 1000 (av1000) is a functional design concept that asks its users to pay attention to the world in a new way. By emphasising the aural and auditory component of an experience in place of the usually dominant visual component [13], it seeks to reframe that experience and increase the sense of the user's being in the world. Because our lives are increasingly mediated by technologies that rely on visual media and screen-based experiences, other senses are concomitantly being excluded from how we know

the world. Jean-Paul Sartre has described the dominance of vision to know the world a “medusa glance” that “petrifies everything it comes in contact with,” [10]. Ong has described this as “sight-dominance” where situational thinking has become more abstract [12], and Heidegger's conception of what makes the modern age is “the conquest of the world as picture” [9]. We see this clearly in contemporary technology culture. Instagram, for example, prioritises the image over the real in obvious ways—where generating an image of an event or experience for social dissemination and reflection is seemingly more meaningful than the event. For its part, the smartphone has evolved to capture experiences seemingly in their entirety: as a pocket-sized high-quality camera joined to a large resolution screen, GPS, and cloud storage it is ubiquitous, acting as a surrogate memory. The recording of an event becomes truer than being there, and the image produced becomes the memory itself.

2 INSERTING CONTENT ELEMENTS

As an antidote to a recorded image being truer than direct experience, av1000 extracts and analyses the energy and attributes of nearby sound. In doing so, it produces visual representations of that sound for the user to save, compare and consider later. These representations correspond to the recording, but do not recreate it. The artefact encourages exploration of sounds in everyday life and gives a user perspective on their immateriality and elusiveness, letting them store a representation of meaningful events or hidden aspects of everyday life that supports reflection on and reminiscence of the real experience, rather than a simulation of it [1].

The design of av1000 is meant to foreground a different sense in the world and demand paying attention in a new way. As a functioning RtD [4, 18] research product [11], it inquires towards a different mode of knowing the world through sound. Formally, av1000's design process was influenced by Hallnaš and Redström's notions of slowness and abstract information appliances [8], where the aesthetic quality of the device is focused to become an expression of listening. By recording and storing audio as a kind of memory, the device invites reflection on experience and builds a record and repository of audio that have been defamiliarized [2], offering a site for later reflection [3, 7, 15] and reminiscence [6] via printed mementos that store an experience, after Pierce and Paulos' ideas of energy mementos [14].

The ear-in-a-cup connected by wires is used to capture sound with av1000 (Figure 1). An electret microphone is surrounded by a silicone housing and enclosed in a 3D-printed shell. The concave sides of the shell were to make it more ergonomic and allow for

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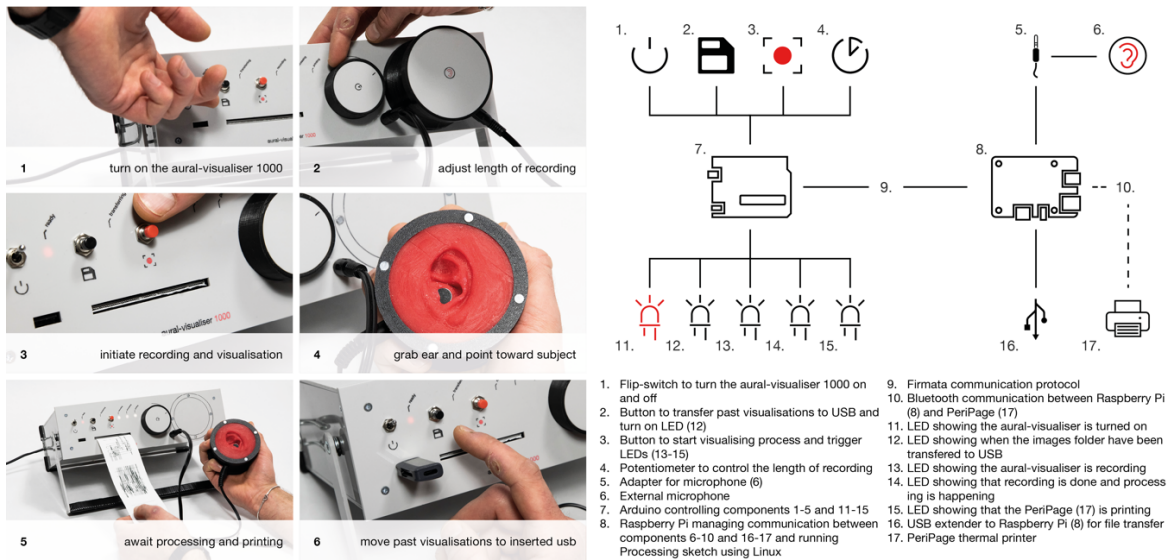


Figure 1: The aural-visualiser 1000 in use (left), schematics (top right), and story of use (bottom right).

wrapping the cord around it. After the first iterations of the ear, we decided on using red silicone, to both distance it from a human and to relate it to the artefact more strongly. As a device that produces mementos, we embedded a certain complexity into the visualizations and incorporated a temporal element [17] to give them more depth and character, as well as to make them more evocative. As with nearly all parts of av1000, we also designed the iconography ourselves. This was to achieve consistency throughout the design. With how unusual the artefact is, we attempted to make its aesthetic simple and its functionality straightforward. While it is a novel and alien product, its use shouldn't be itself alienating. To convey that av1000 is a device to be brought with you, we added a cable hook and the rubber corners at the bottom in order to embed the idea of portability into the device, supporting the notion that the sensing apparatus is one you can—and should—bring with you into the world.

3 CONCLUSION

This demo lets others experience the aural-visualiser 1000, a device that pays attention to the world via sound rather than sight. The av1000 asks a user to listen to their surroundings and choose the parts of it that matters to them, at the same time focusing on an overlooked and sometimes neglected components of everyday life—sound. It produces a memento that represents recorded sound but does not recreate it. It asks that its user develop skill and virtuosity as well as interpretive flexibility to find meaning in the printout, itself a clue to the experience lived by the user. The aural-visualiser 1000 prompts the user to live in the world and engage with it purposefully in the present, making meaning by investigating and recording interesting moments for later reflection [3, 15] and interpretation [5, 16].

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