Title: Oscillations

[redacted]

1. PROGRAM NOTES

This multi-media installation of embedded electronic iron instruments, projection, and sculpture transports the audience to *Oscillations*. A world where the ordinary is made unusual. This work attempts to disrupt the ideal proposition of the perfect housewife or the perfect domestic worker and aims to elevate and confront historical and ongoing contemporary issues of discrimination in the domestic and global labour force [3, 6]. Using the iron, as the iconic symbol of domestic labour, *Oscillations* addresses issues related to the gendered and racialized oppression of our world's domestic work force [5]. This project aims to separate the objects of domestic labour from their historical narrative and playfully create a new meaning and purpose for them [4]. Three irons and ironing boards have been hacked and retrofitted with embedded electronic instruments that together create a sonic network. Each instrument is fitted with a range of sensors that allow the player to interact intuitively with the instruments. The choice of interactive components has been designed to maintain the original integrity and form of the iron to enable the audience to connect with and now play a potentially familiar artefact from their domestic life. Ironing experience is not essential but highly preferred when playing these instruments.

Fig 1. Iron Instrument: Light and Easy Capitalism.

A style of granular synthesis is used to obscure the original source signal, to transform it, to decouple it from its original context. Order, context, and meaning are all destabilised. Three sets of samples have been used to sonify different

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aspects of the appliances experience in a human mediated world; 1. the factory; 2. the advertising; 3. the domestic. The ever so familiar and recognisable bleep of a washing machine turning on is split into thousands of tiny micro grains. Micro collages of the sounds of global entrapment, re-imagined in a somewhat other worldly, noisy new reality. Parameters of the granulator have been mapped to each sensor to work with its performativity and responsiveness. Sensor and parameter ranges have been tuned to enhance the sonic output of each instrument. Mappings are mostly repeated on each iron so that the audience can develop some familiarity when changing between instruments. The iron instruments are also fitted with a microphone to enable a type of networked connection that is responsive to the sounds of the environment and the other instruments [8]. A Bela board is installed in each ironing station and the granular patch was created using Pure Data. See table 1 for sensor mappings.

Table I. Sensor Mappings

Parameter	**Sensor**	**Location**
Grain Density	Potentiometer	Top of iron
Grain Size	Long Soft Pot Membrane Potentiometer	Shirt buttonholes
Sample Offset	Potentiometer	Iron temperature dial
Pitch	Force Sensing Resistor	Shirt buttonholes
Volume	Light Dependant Resistor	Soleplate of Iron
Patch on/off	Conductive Paint	Ironing Board
Random pitch	Microphone	Rear of iron
Random panning	Long Membrane Potentiometer	Shirt buttonholes
Random sample offset	Microphone	Rear of iron

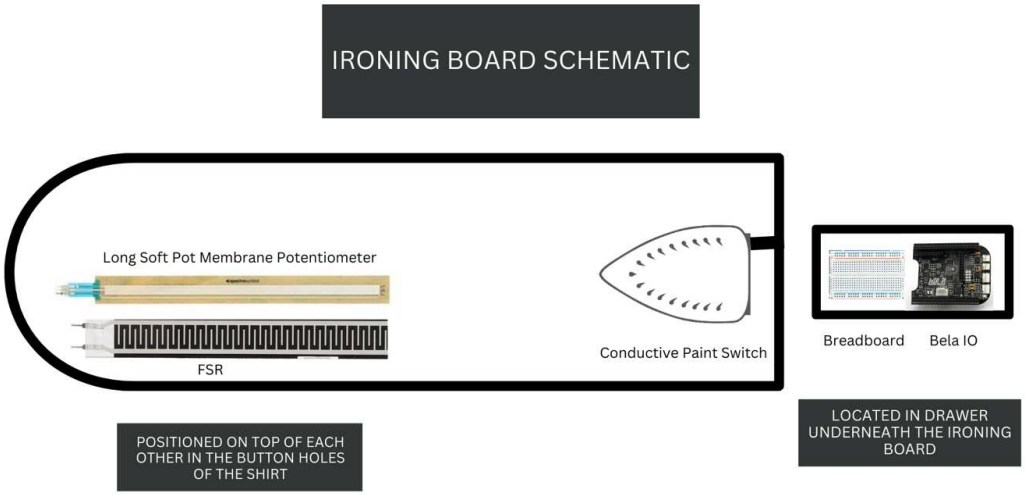


Fig 2. Ironing Board Schematic

Fig 3. Ironing Board and Iron Instrument

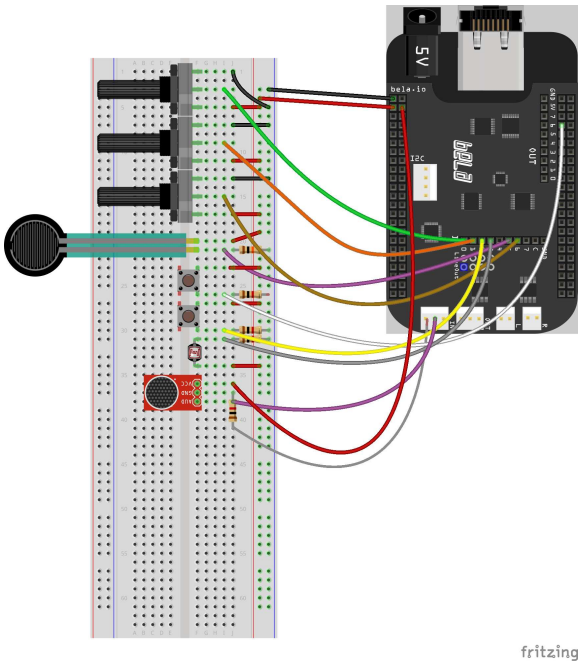


Fig 4. Bela Hardware Setup

Fig 5. Iron Instruments as a Performance Ecosystem

Projection is used to connect the audience with the conceptual underpinnings of the work and to create changes to the ambient lighting conditions for the photocell sensor in each iron instrument. Each ironing board station is fitted with a warehouse light shade and projector that displays the nimble fingers of the instrument builder assembling the iron instrument. A larger black and white conceptual projection that fills the wall behind the ironing stations creates an eerie feeling of the factory floor. The images are cyclic, repetitive and show different aspects of labour.

Fig 6. Projection Showing the Maker's Nimble Fingers

2. PROJECT DESCRIPTION

The audio-visual installation *Oscillations*, turns irons and ironing boards into electronic instruments, in an attempt to deconstruct stereotypical ideas of gender and its assigned roles [1]. The project aims to investigate the relationships we have with domestic objects, and ponder their structures and significance through the design and performance of an interactive ecosystem. The project uses a sonic

cyberfeminist lens to critically explore aesthetic and relational hierarchies at the intersection of sound, gender and technology [2].

3. MEDIA LINKS

- Video: https://youtu.be/qK6muKepMKE
- Audio: https://on.soundcloud.com/3C2FR

4. SPACE REQUIREMENTS

This work has been installed in a contemporary gallery setting and requires a minimum floor space of 5m x 5m up to the ideal room size of 8m x 8m. The ideal setting for the work is a gallery, however it can be adapted to fit in other indoor locations, provided there is enough floor space and room for ceiling rigging for projections.

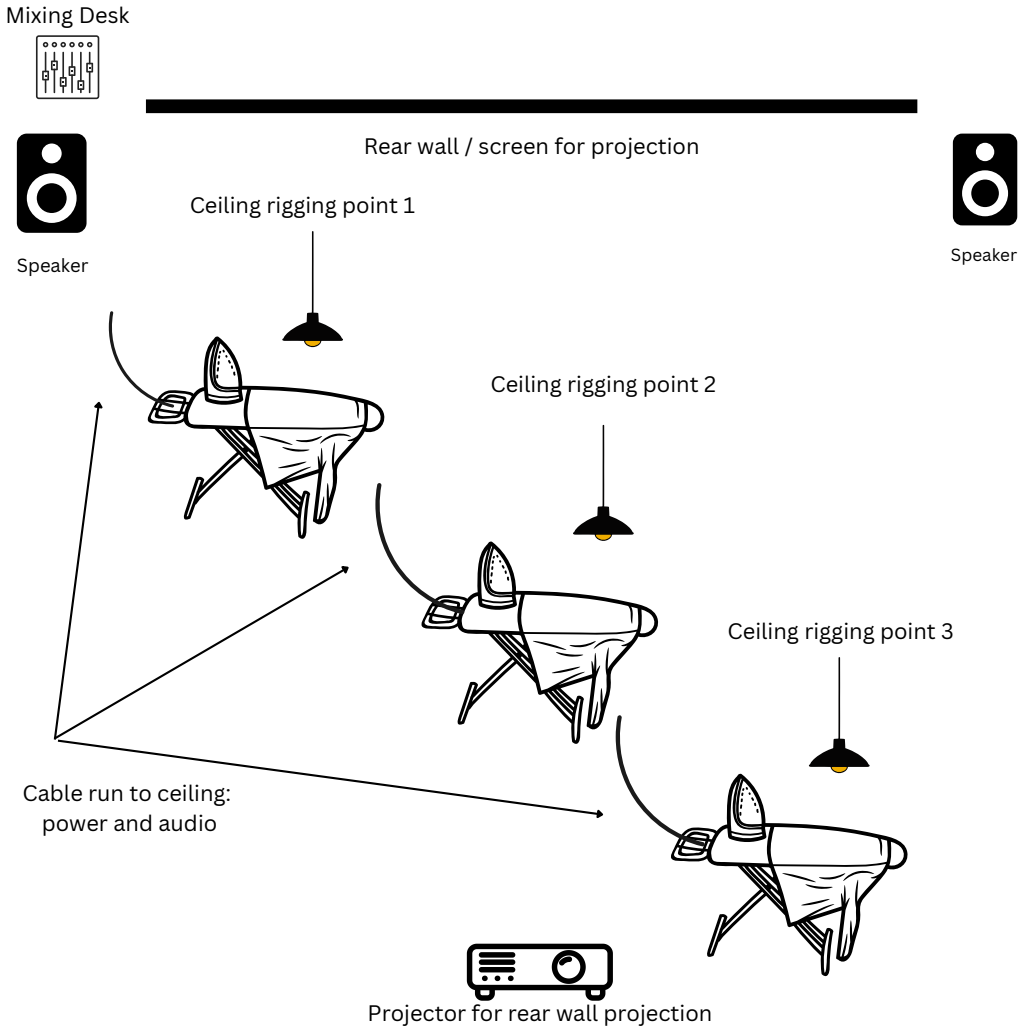
Audience interaction with the work is encouraged, but it is recommended that there be an attendant supervising the work and encouraging the interaction.

Fig 7. Audience Interacting with Instruments

The work can also be activated through performance by the artists.

Fig 8. Ironing Performance in Gallery Setting

5. FLOOR PLAN AND LOGISTICAL REQUIREMENTS



5.1 Ceiling Rigging

In order to create a factory feel and aesthetic, ceiling rigging points are required for the warehouse light shade projectors and audio/power cables for each ironing station. See image:

Fig 9. Projection Rigging Detail View

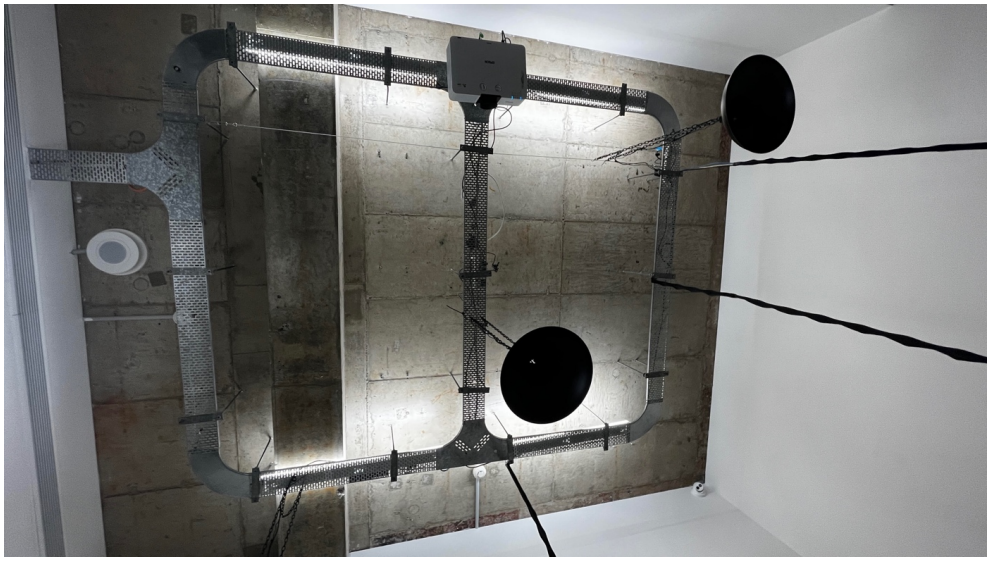


Fig 10. Projection Rigging Ceiling View

Fig 11. Oscillations Installation in Gallery Setting

5.2 Installation time

Install: 4 hours
Deinstall: 3 hours

6. EQUIPMENT REQUIREMENTS

The following table lists technical requirements for the installation.

Table II. Technical Requirements

Item	Supplied by	Notes
2 x Speakers	Conference Organisers	Can be 5" studio monitors or small PA speakers.
Small mixing desk	Conference Organisers	Minimum of 3 stereo channels Plus FX
Projector (HD)	Conference Organisers	For the main back wall projection
Ladder	Conference Organisers	For rigging projectors and cable runs
Rigging points for warehouse light shade projectors and audio cabling	Conference Organisers	Able to carry a 4kg / lamp shade load. Could be wire, hooks etc. Rigging points for 1kg /cable run power and audio cable.
Cabling	Conference Organisers	Audio cable – mixing desk to speakers 4 x extension leads 4 x 4 outlet power board
Reusable cable management	Conference Organisers	Velcro ties or rubber mats to cover cables on floor
Ironing boards	Artist	3 x Wooden ironing boards with Bela boards
Iron instruments	Artist	3 x iron instruments

7. FEASABILITY

The work has been installed at NorthSite Contemporary Gallery in Cairns, Australia as part of the Ironing Maidens Pressing Topics exhibition. The work was on display for 3 weeks in two different gallery spaces and activated by two performances and an artist talk.

Fig 12. Oscillations: The Ironing Maidens Factory in Gallery 2 at NorthSite Contemporary Arts, Cairns

Fig 13, Oscillations: The Ironing Maidens Factory installed in a 5m x 5m studio space at NorthSite Contemporary Arts, Cairns.

ACKNOWLEDGMENTS

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ETHICAL STANDARDS

This work has been partially supported by the [redacted] candidate fund. All images used throughout this document were taken by the author with consent from those participants in the images. There are no observed conflicts of interest.

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