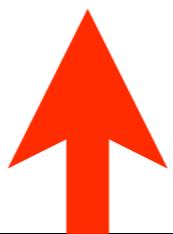




**GAMBIOLOGIA**

# Ciência da gambiarra



# GAMBIOLOGIA

# Ciência da gambiarra



## GAMBIOLOGIA



## Gambiarra + tecnologia

## Tecnologia

**Técnicas, conhecimentos, métodos, materiais, ferramentas e processos usados para resolver problemas ou ao menos facilitar a solução dos mesmos.**

## Gambiarra

**Maneira de usar ou constituir artefatos, através de uma atitude de diferenciação, improvisação, adaptação, ajuste, transformação ou adequação sobre um recurso material disponível, com o objetivo de solucionar uma necessidade.**



**gambiarra**



tecnologia  
gambiarra



**gambiarra**

**tecnologia**

**faça-você-  
mesmo**



**gambiarra**

**tecnologia**



**faça-você-  
mesmo**

**hack**

**gambiarra**

**tecnologia**



**faça-você-  
mesmo**

**hack**

**acumulação  
criativa**

**gambiarra**

**tecnologia**



**reuso**

**acumulação  
criativa**

**faça-você-  
mesmo**

**hack**

**design  
não  
minimalista**

**gambiarra**



**reuso**

**tecnologia**

**faça-você-  
mesmo**

**hack**

**acumulação  
criativa**

cultura pop  
tupiniquim

design  
não  
minimalista

gambiarra

reuso

tecnologia

acumulação  
criativa

faça-você-  
mesmo

hack





2008

campanha

*Festival Arte.mov  
Osso Design*



2008

**campanha**

*Festival Arte.mov  
Osso Design*

2009

**coletivo**

*Fred Paulino  
Ganso  
Lucas Mafra*



2008

**campanha**

*Festival Arte.mov  
Osso Design*

2009

**coletivo**

*Fred Paulino  
Ganso  
Lucas Mafra*

2015

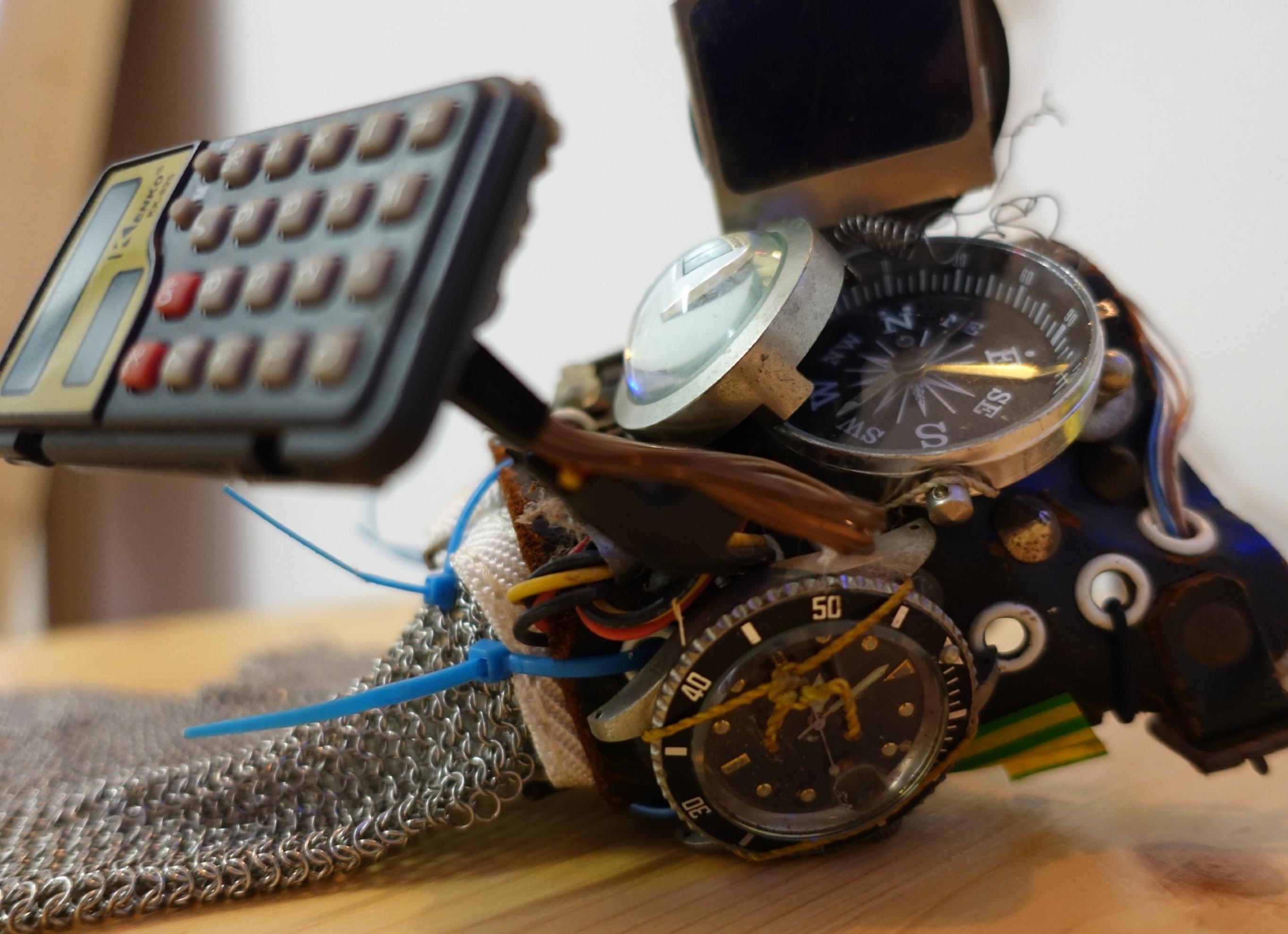
**plataforma**

*Facta  
Gambiólogos  
Educação  
CabraLab*















A man in a blue shirt stands to the right of the table, looking at the installation.





Sesc Carmo  
(São Paulo)

Sesc Carmo  
(São Paulo)

## MAQUINAÇÕES

SANCA/2012

### ARTISTAS, MÁQUINAS E A INVENÇÃO DO COTIDIANO

Ate meados dos anos 1980, a criação em arte eletrônica era baseada em trabalhos que operavam sobre plataformas analógicas – desde os televisores, antenas e suas transmissões até as mídias analógicas de gravação, como as fitas cassete ou Betamax. A partir da década de 1990, essa produção passa a operar majoritariamente sobre o ambiente digital. A digitalização do audiovisual, junto à universalização dos computadores e do acesso à internet, fazem migrar essa produção quase integralmente para o mundo binário e, mais recentemente, para o ambiente da computação móvel.

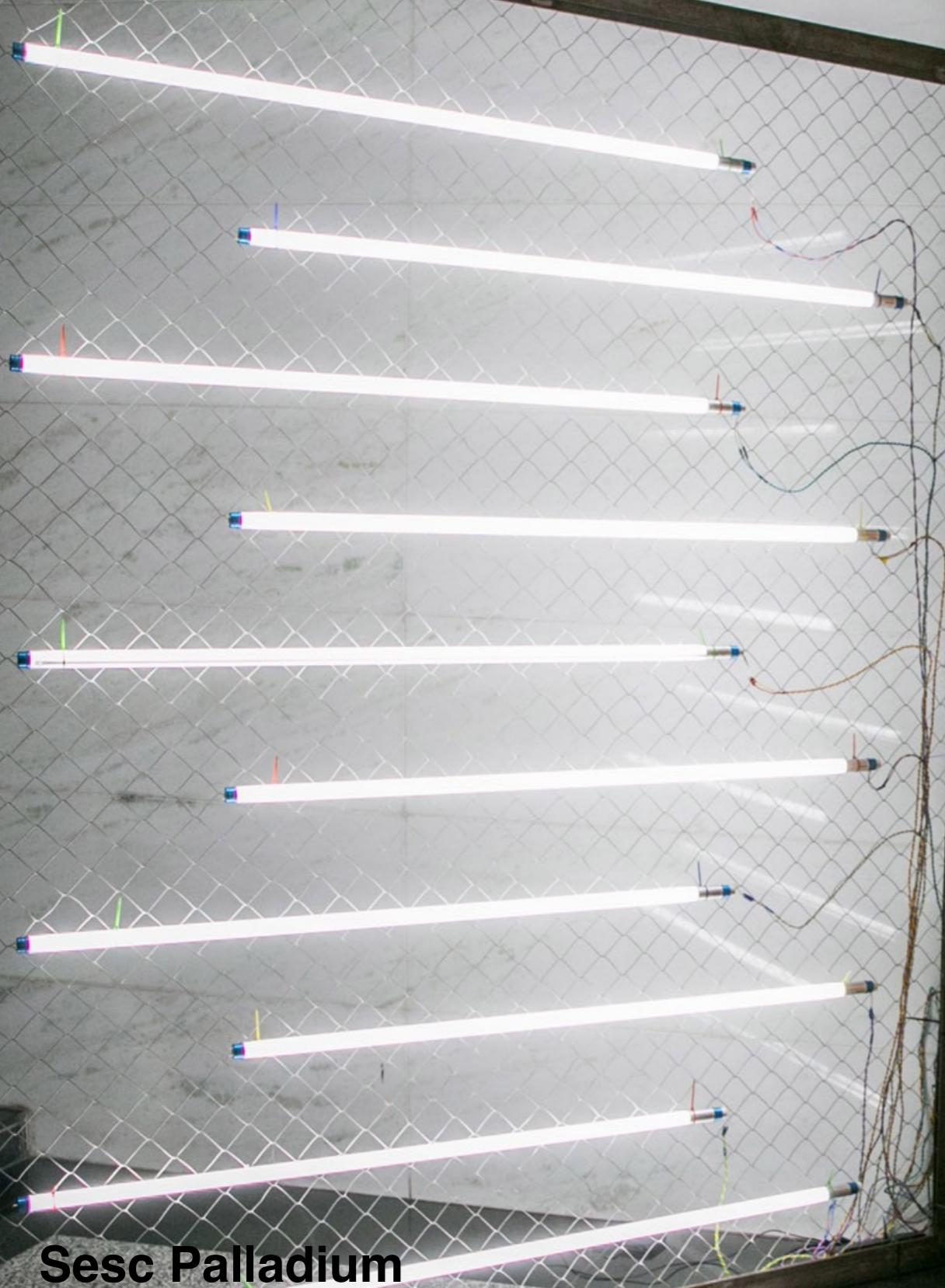
No entanto, em pleno 2018, após o boom da internet e em meio ao caos das redes sociais, há artistas que, mesmo incorporando a tecnologia em seus trabalhos, têm demonstrado um interesse cada vez maior no uso de soluções analógicas, mecânicas, improvisadas e de baixo custo. São criadores que desenvolvem obras tecnológicas em ambiente offline, não algorítmico, "desvirtual". Não abrem mão de atuar sobre os aparelhos técnicos (e jogar com os mesmos), mas propõem novas possibilidades sobre o seu uso, muitas vezes subvertendo a própria função dos componentes originais. De certa maneira, eles apostam na interação e não na intratatividade; e, com isso, sugerem uma lida mais humana com a tecnologia.

Esses "inventistas" atuam na interseção entre arte, ciência, tecnologia e vida. Transformam seus ateliês em oficinas, suas oficinas em laboratórios, seus laboratórios em extensão do seu viver. A partir da ideodesconstrução de engenhocas, sistemas ineditos, inquietudes com ou sem utilidade, eles estimulam a simbiose humana com a técnica e apresentam uma arte sem manual de instruções. Propõem maquinações peculiares sobre o meio artístico e o universo tecnológico. Relacionam a sua prática criativa com o lúdico, com a educação, com o social, com a invenção, com as mãos na massa e os pés no chão. Atuam sobre as máquinas para transformar as máquinas em ações.

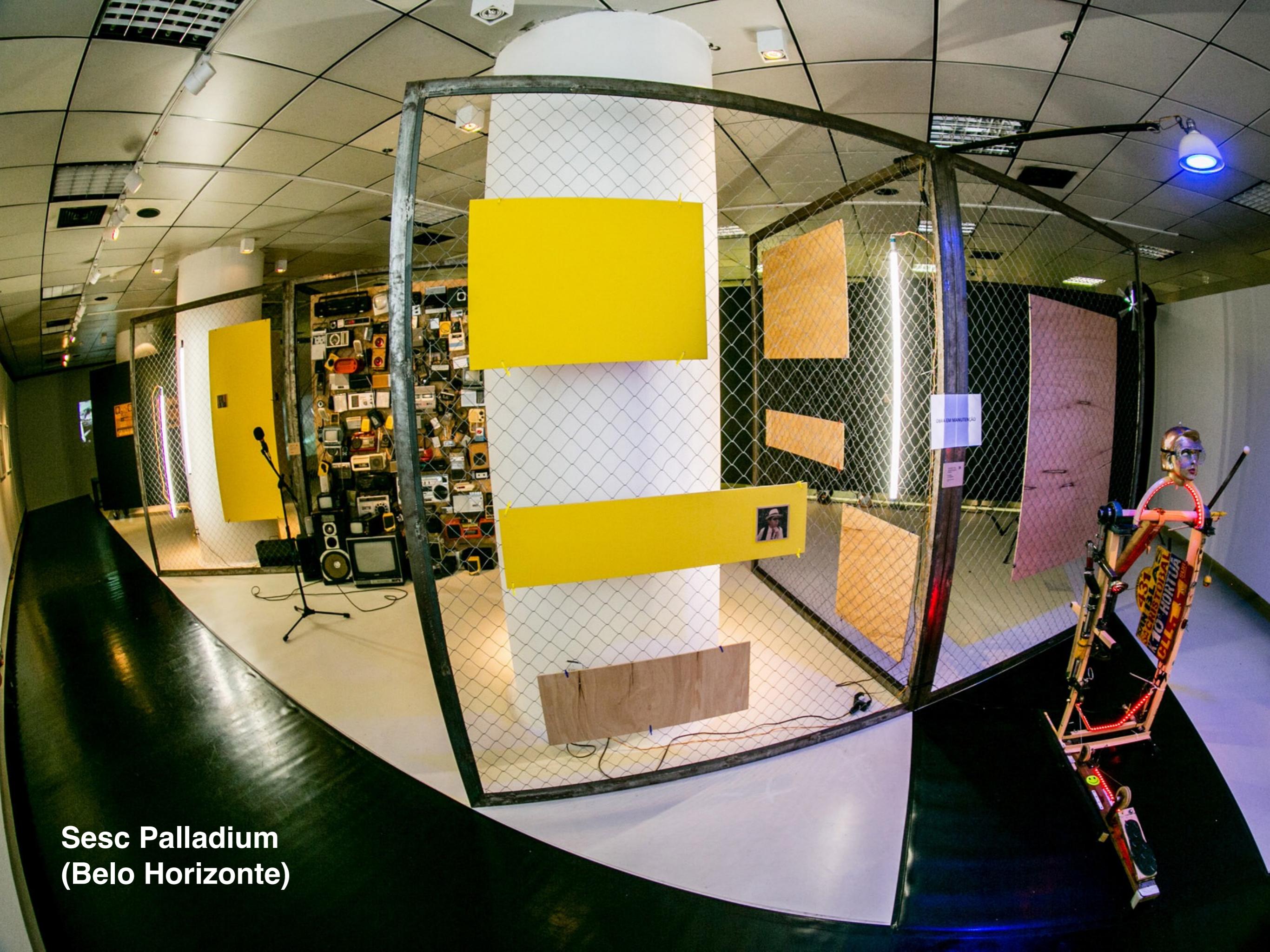
FRED PAULINO  
CURADOR

Machine-creations. Artists, machines and the invention of everyday life.  
Until the mid-1980s, electronic creation was based on analog platforms – from televisions, antennas and their transmissions to analog media for recording, such as cassette tapes or Betamax. From the 1990s onwards, this production passes to operate mainly on the digital environment. The digitalization of audiovisual, along with the universalization of computers and access to the Internet, makes this production almost entirely migrate to the binary world and, more recently, to the environment of mobile computing.  
However, in the middle of 2018, after the boom of the Internet and in the midst of the chaos of social networks, there are artists who, despite incorporating technology in their work, have demonstrated a growing interest in the use of low-cost, mechanical, improvised and low-tech solutions. They are creators who develop technological works in an offline environment, not algorithmic, "devirtual". They do not give up acting on technical devices (and playing with them), but propose new possibilities about their use, often subverting the original function of the components. In a certain way, they bet on interaction and not on intratativity; and with this, they suggest a more human reading with technology.

# Sesc Palladium (Belo Horizonte)



**Sesc Palladium**  
**(Belo Horizonte)**



## Oi Futuro Flamengo (Rio de Janeiro)



**Paulo Waisberg  
Clarissa Neves**



**Juliana Porfírio  
& Neville D'Almeida**





**Abraham Palatnik**

Zaven Paré





Ganso



Motta & Lima

Sara Lana

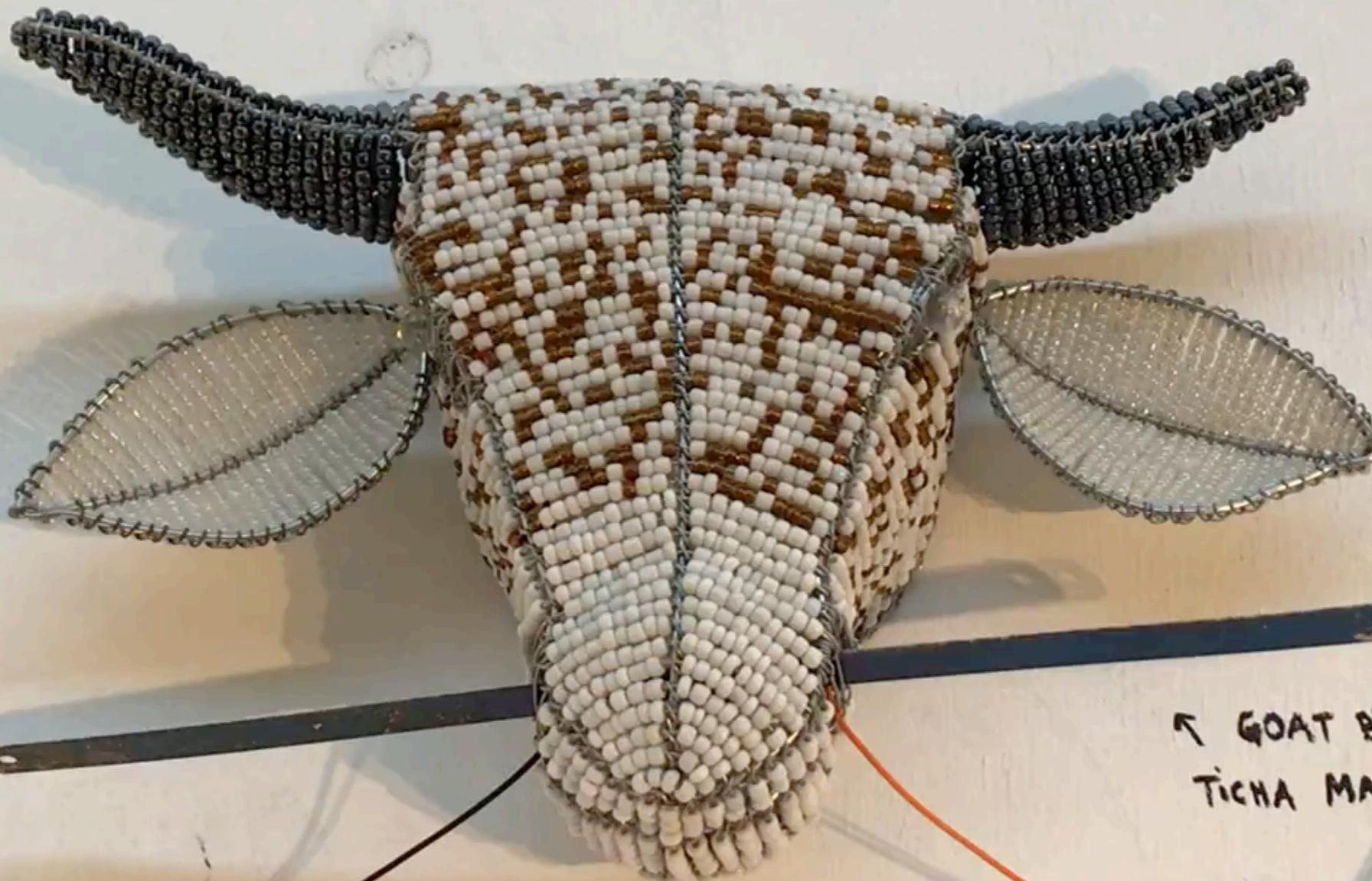




Ganso

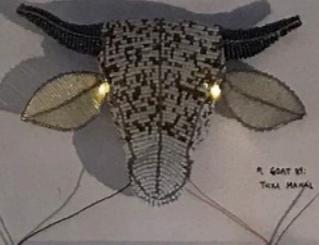
# GAMBIOLOGIA: THE TROPICAL SCIENCE OF MAKESHIFTS

Fred Paulino (BR)



↗ GOAT BY:  
TICHA MANAL

GAMBIOLOGIA:  
THE TROPICAL SCIENCE  
OF MAKESHIFTS  
Fred Paulino (BR)



A GOAT IN:  
TERRA HABIT

Gambiology is a Brazilian creative hub that adopts the country's tradition of *gambiarras* as a source of inspiration for works on art and technology.

This term is commonly translated as 'jury rig' or 'fix hack' and refers to makeshift repairs or temporary contrivances, made only with tools and materials that happen to be at hand. Gambiology is the science of *gambiarras*. Through exposure, education and a set of collective initiatives, the project investigates how the Brazilian tradition to adapt, improvise, find simple and smart solutions for everyday problems can be applied to the context of electronic art.

In this workshop, we will collect unused objects from urban landscape and hack them in order to create up-cycled design objects. For that, we will explore the concept of "industrial coincidence", in which two industrial objects with distinct origins fit perfectly together. We will also provide basic electronics theory and materials that will be applied in the students' creations.

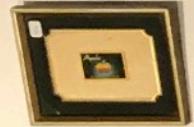
[WWW.GAMBIOLOGIA.NET](http://WWW.GAMBIOLOGIA.NET)

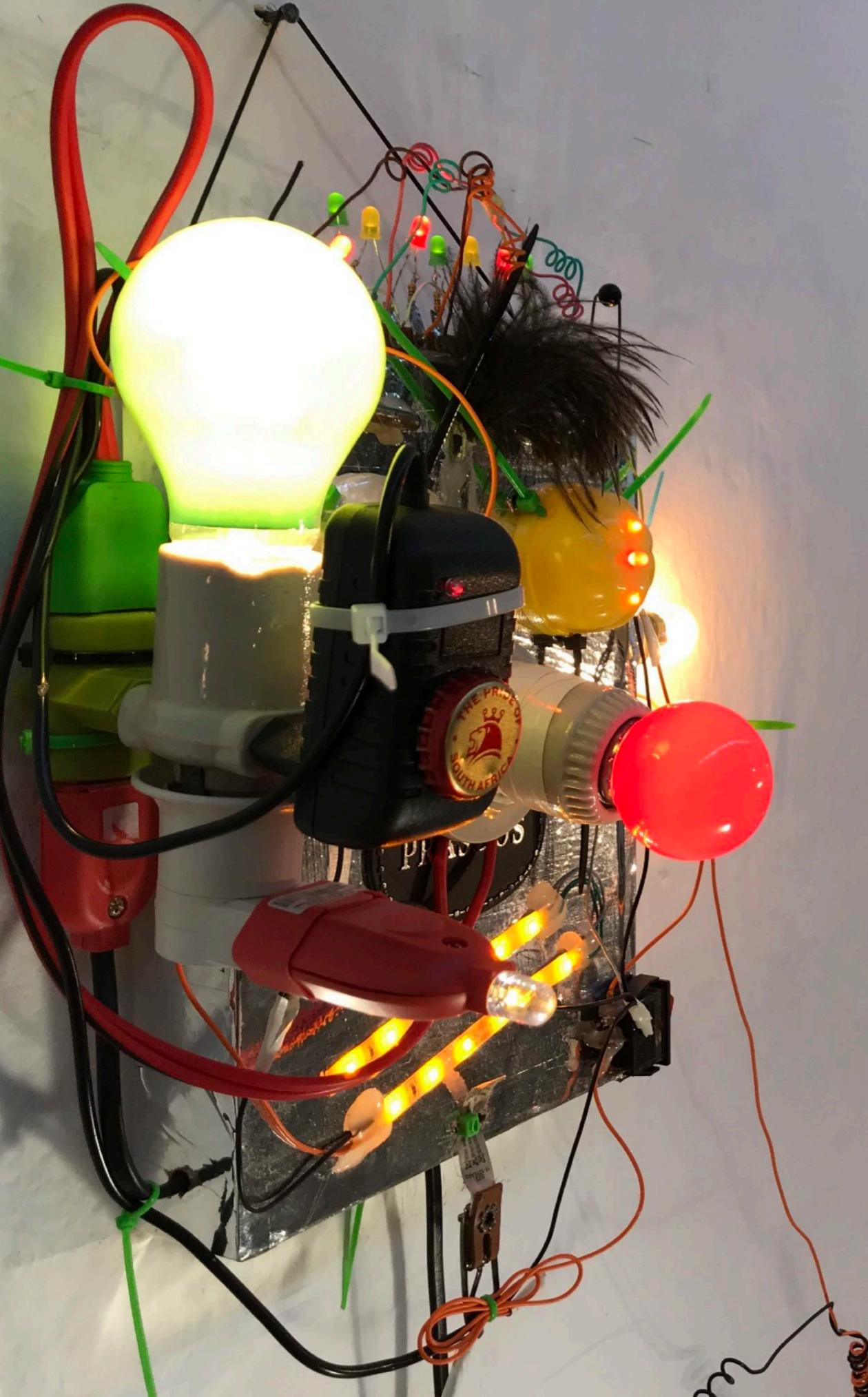


da Gama  
TEXTILES

PRODUCED IN  
SOUTH AFRICA

PRODUCED IN  
SOUTH AFRICA





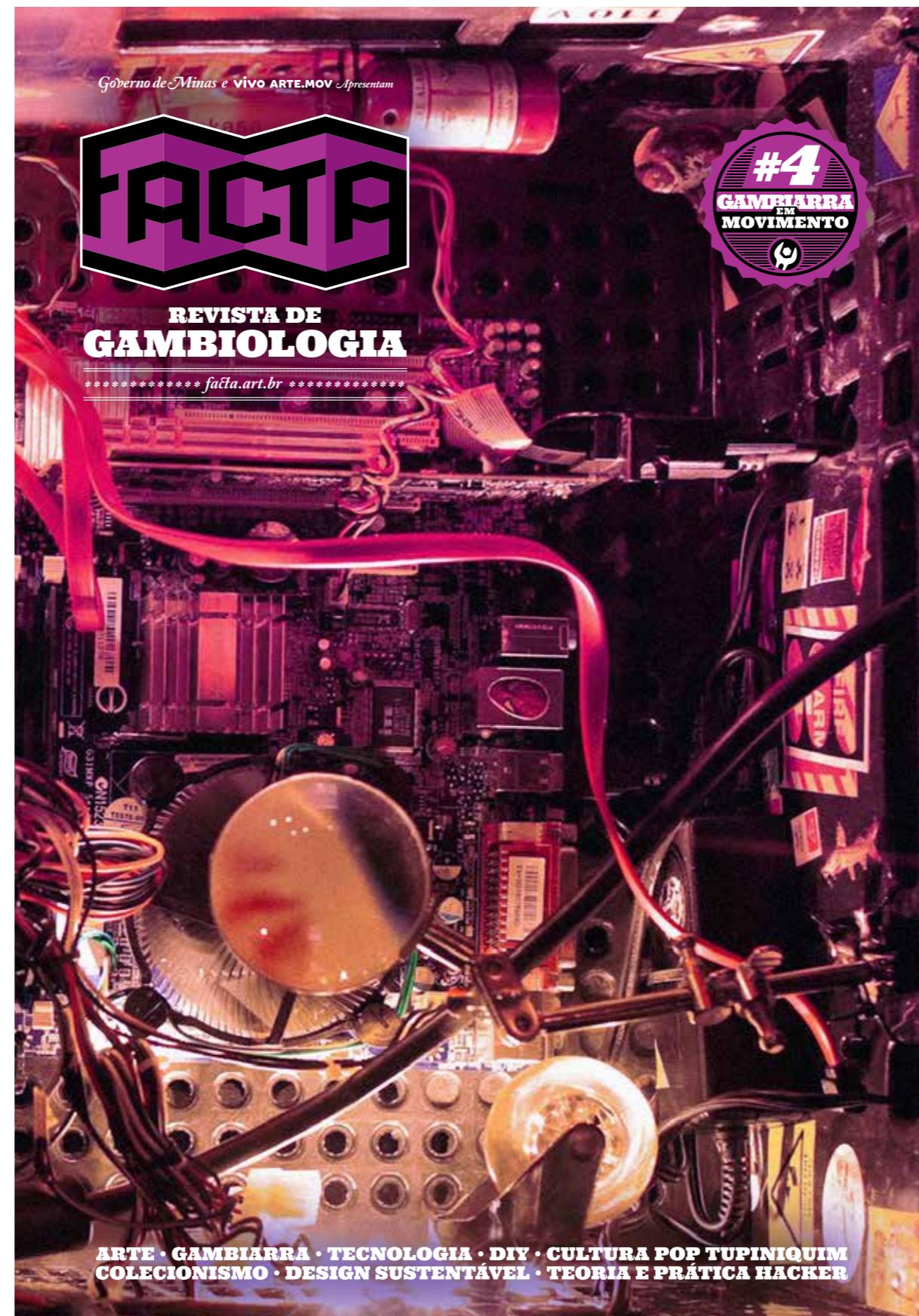
This time, a community discussion on "Smart Grids" will happen, and where in traditional terms of energy generation, made only with trees and rivers, now happens to be on land. Sustainability & the relevance of collective initiatives, like the project "Africa Smart Solutions for Everyone", improves forewarning about the content of electricity.

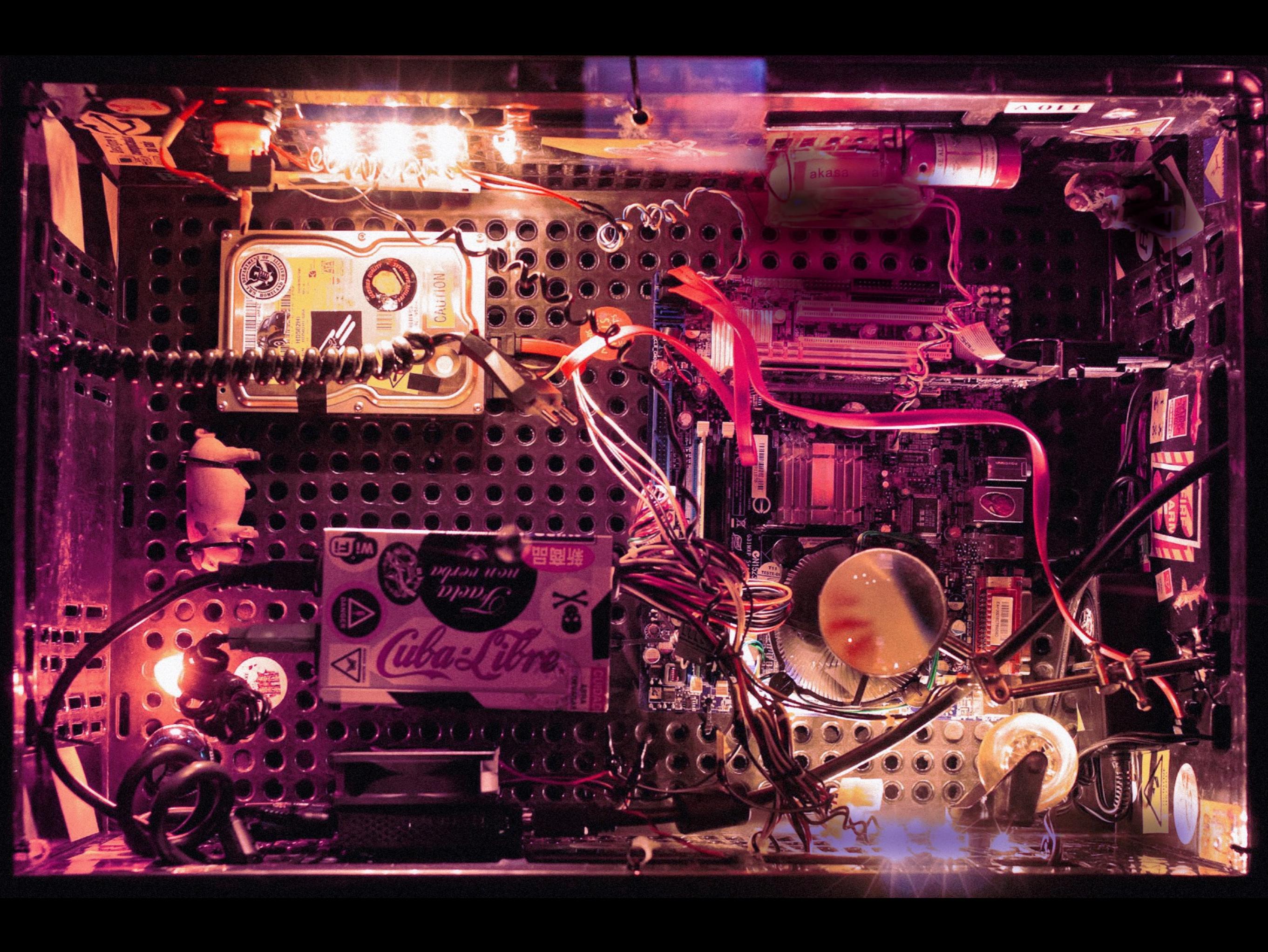
In this workshop, we will collect our own specific landscape and have them in order to create our own design objects. For this, we will explore the concept of "industrial coexistence", in which two industrial objects with distinct origins fit perfectly together. We will also provide basic electronics theory and explain the way it can be applied in the students' creations.

[www.samsolution.net](http://www.samsolution.net)









## Media And Margins In Brazil: Cannibalizing Technology

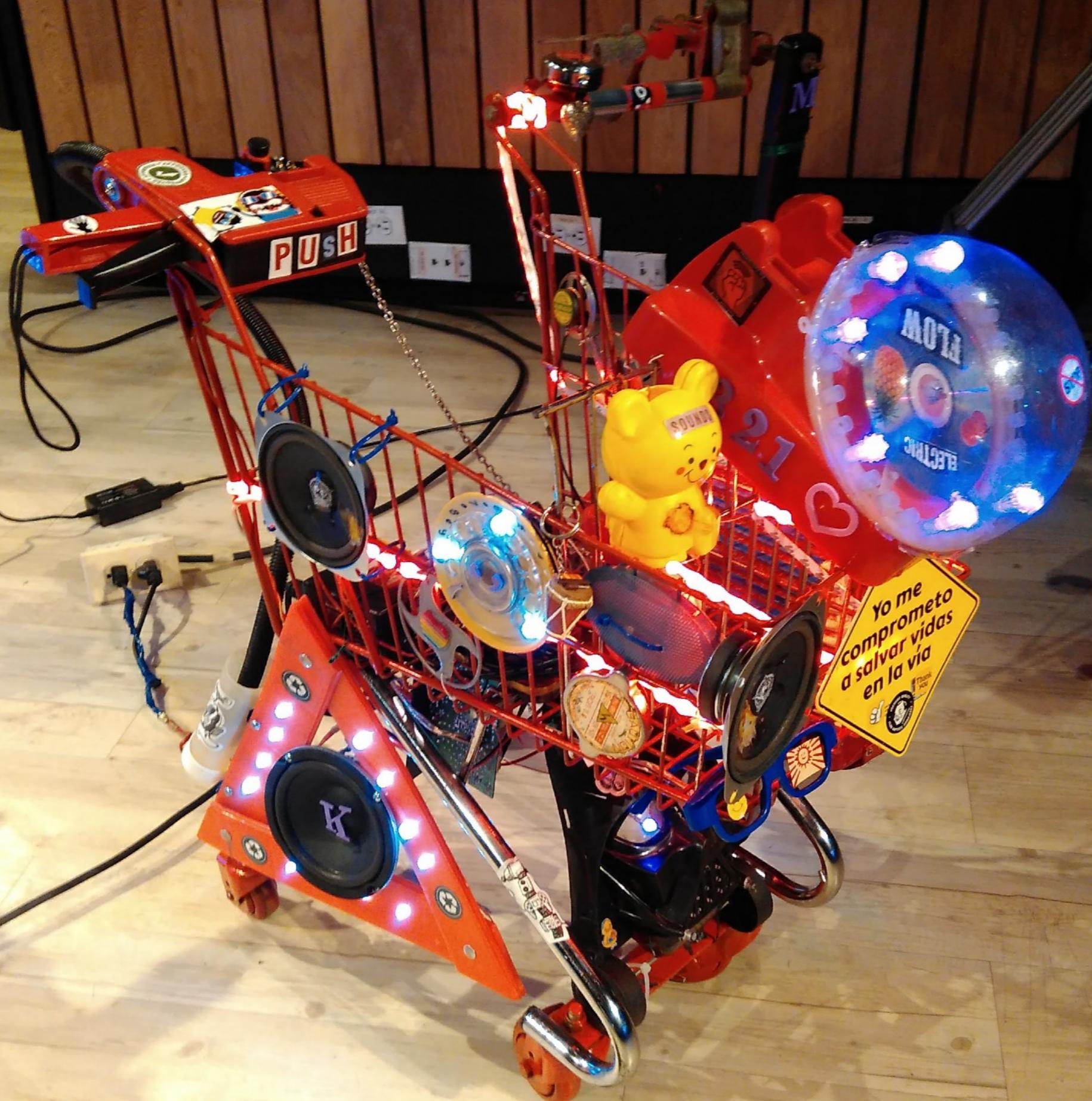


Gambiologia, the improvisational Brazilian art form that uses found objects and cheap materials in DIY improvisations, is also the name of an artists collective.

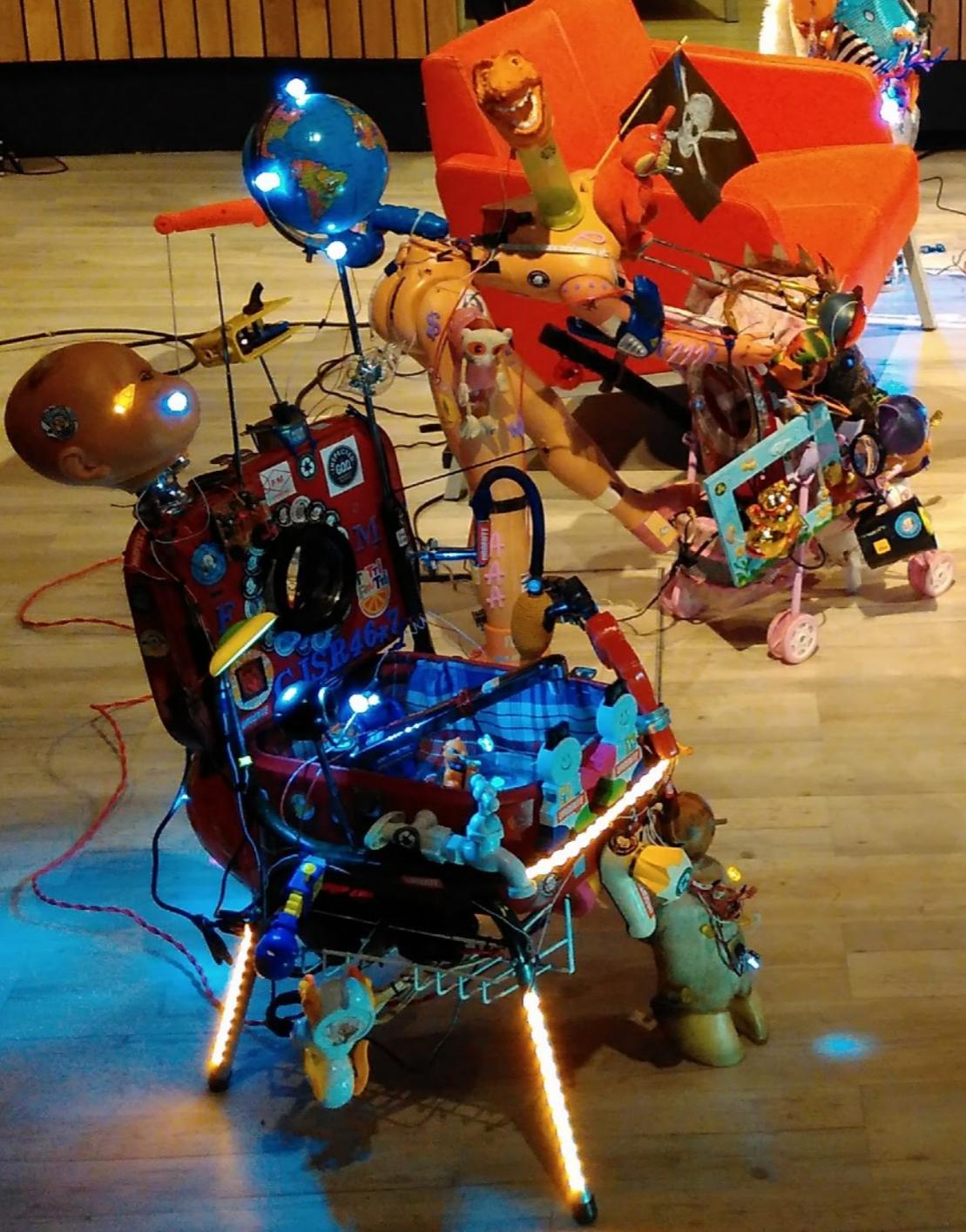








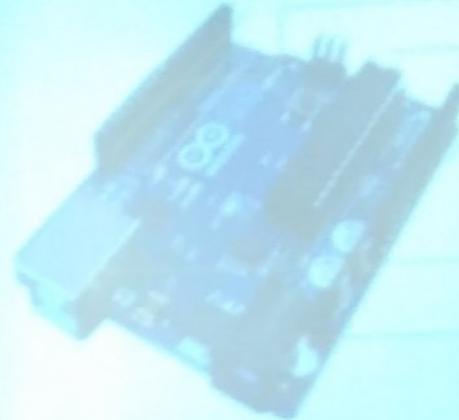








## Arduino Uno



Pinos digitais (input e output)

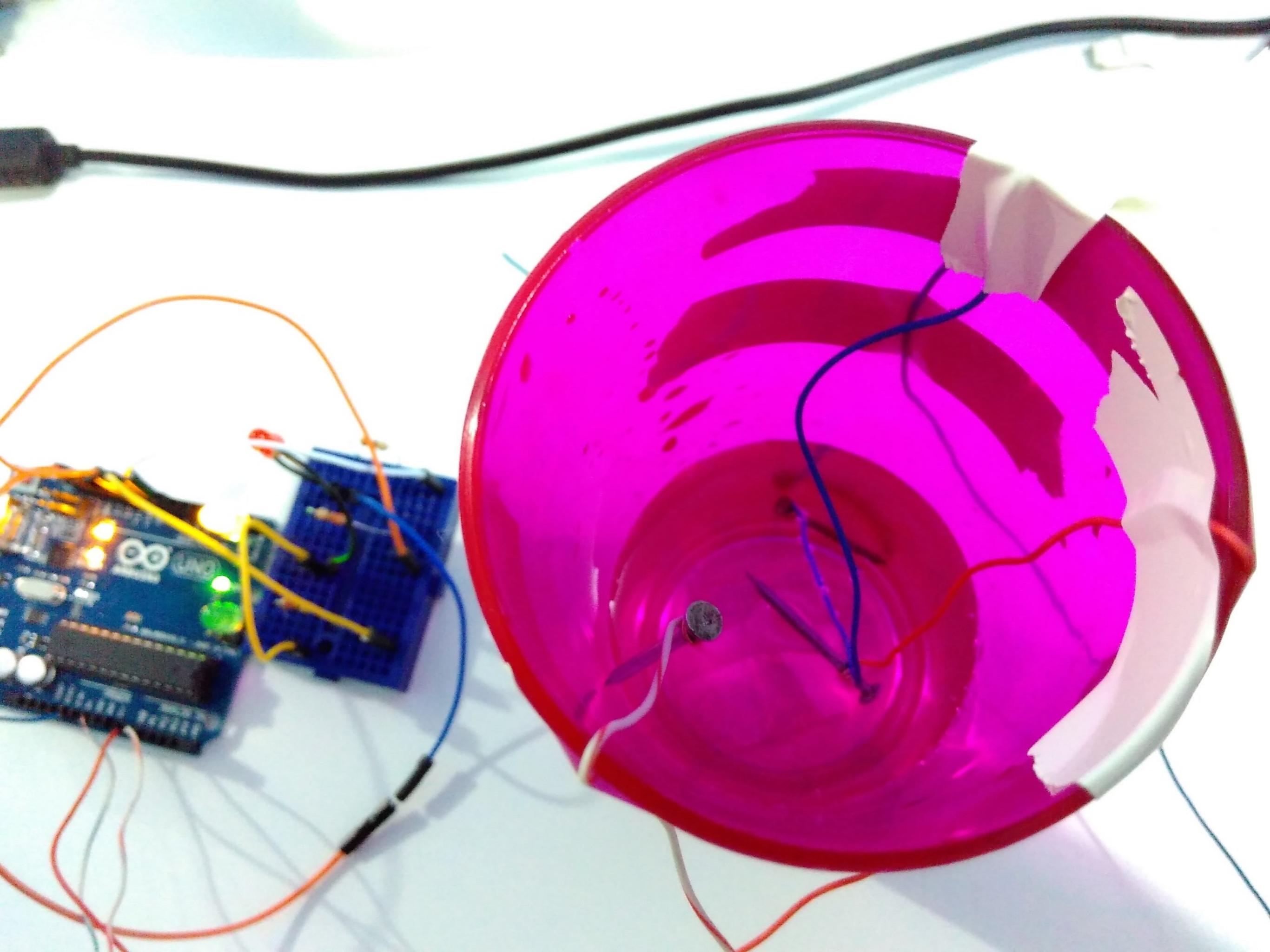
Processador

Pinos analógicos (input)

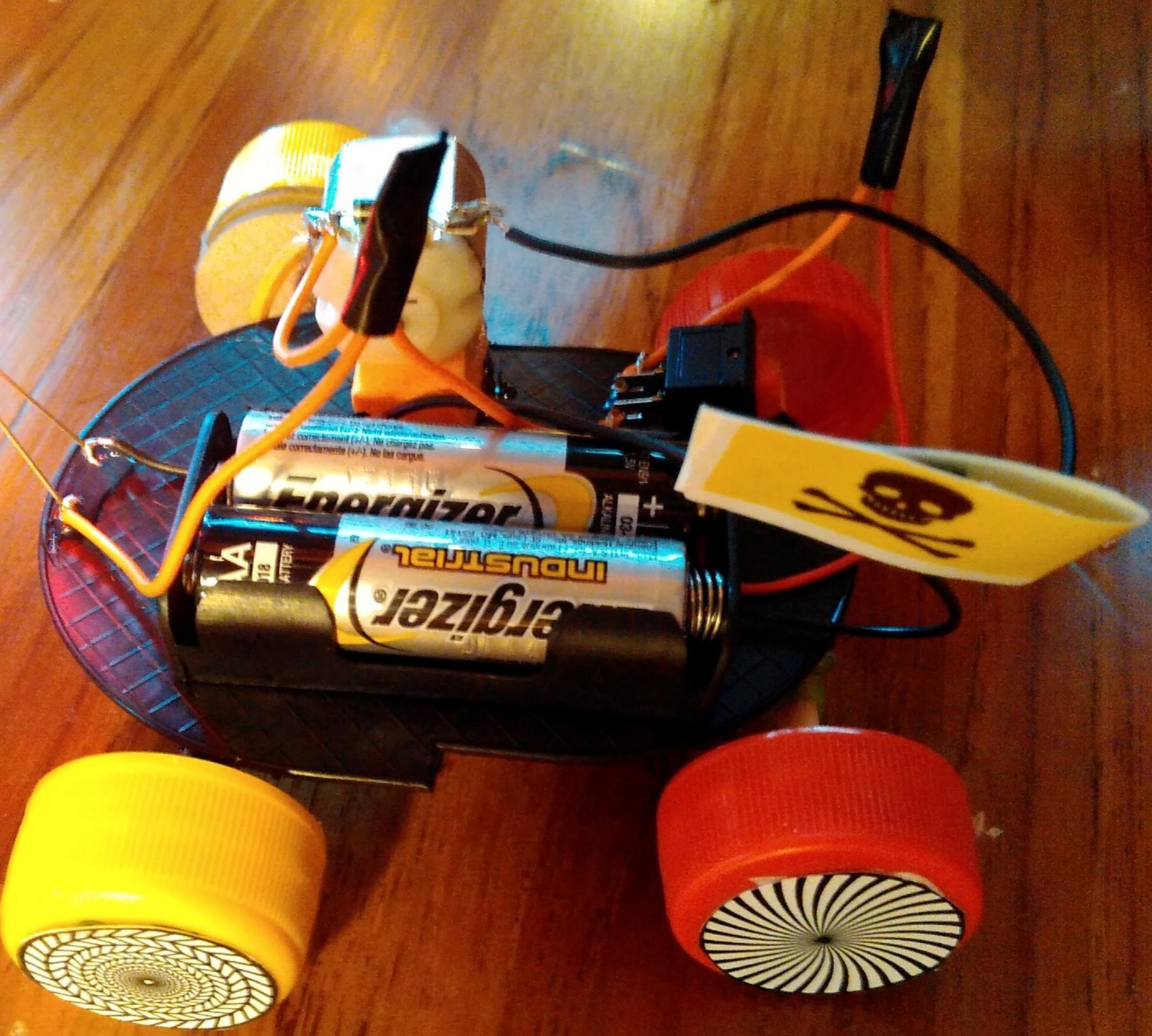
Porta USB (comunicação com o computador)

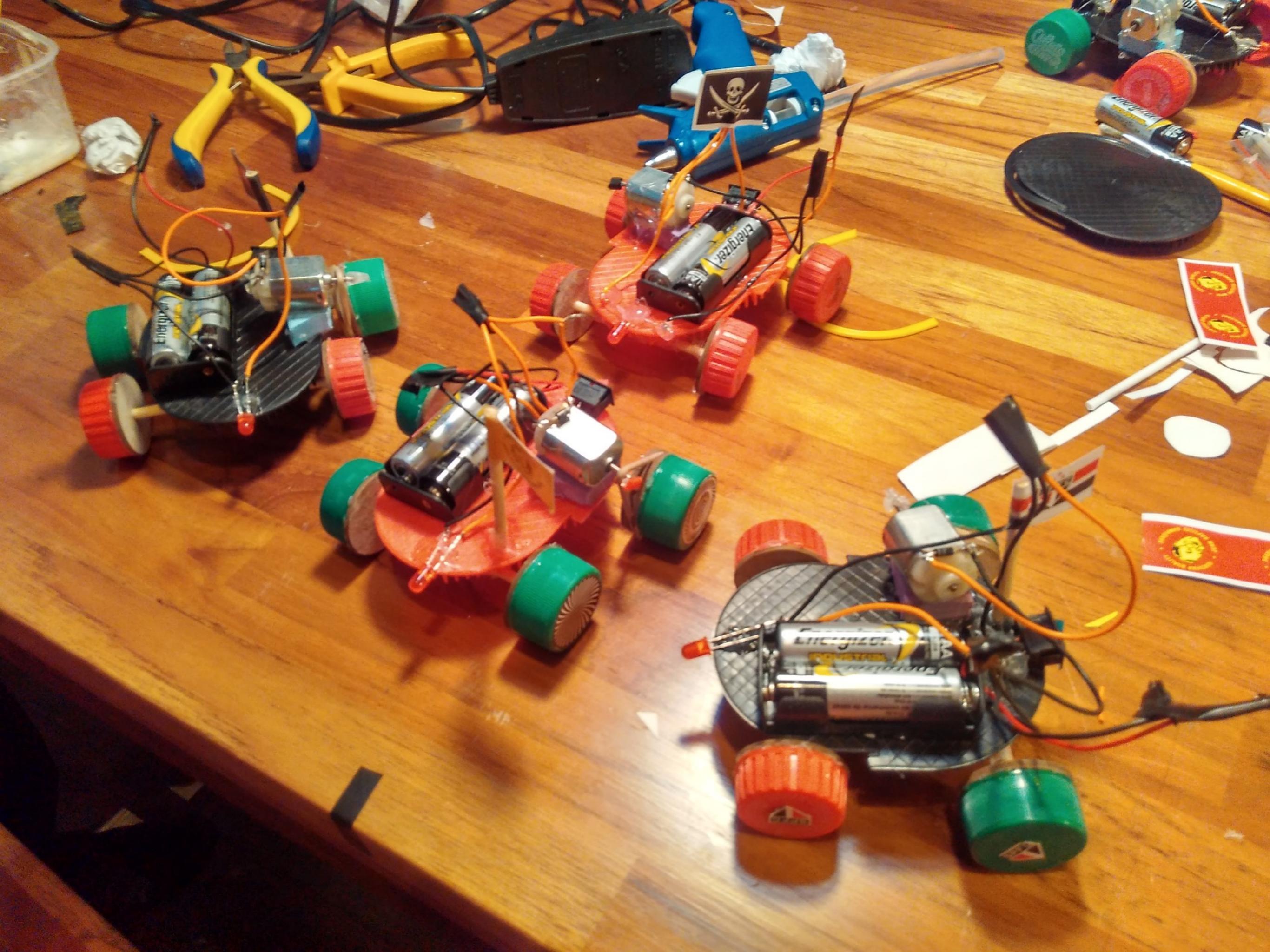
Alimentação DC



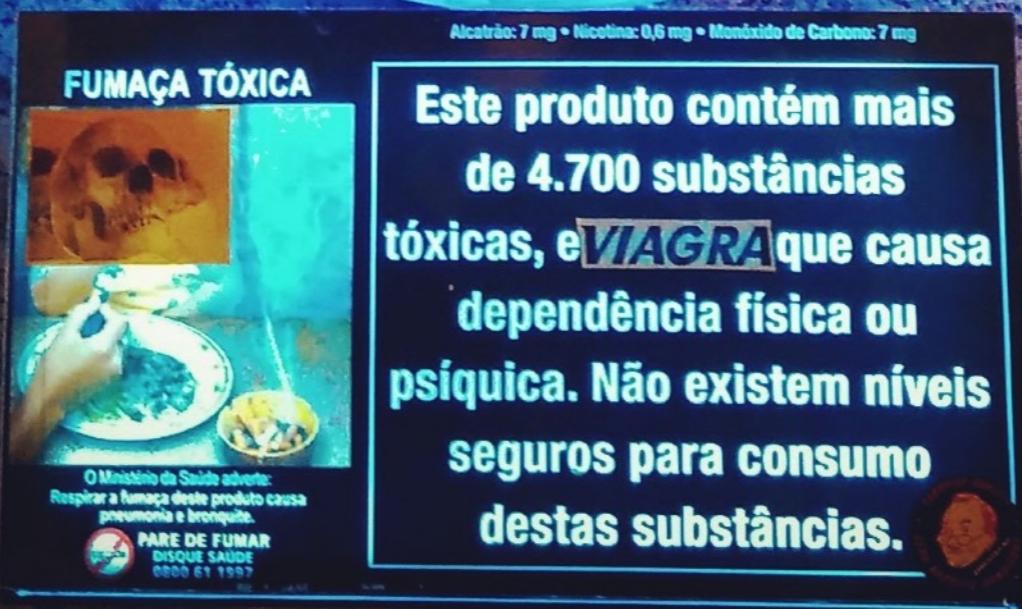


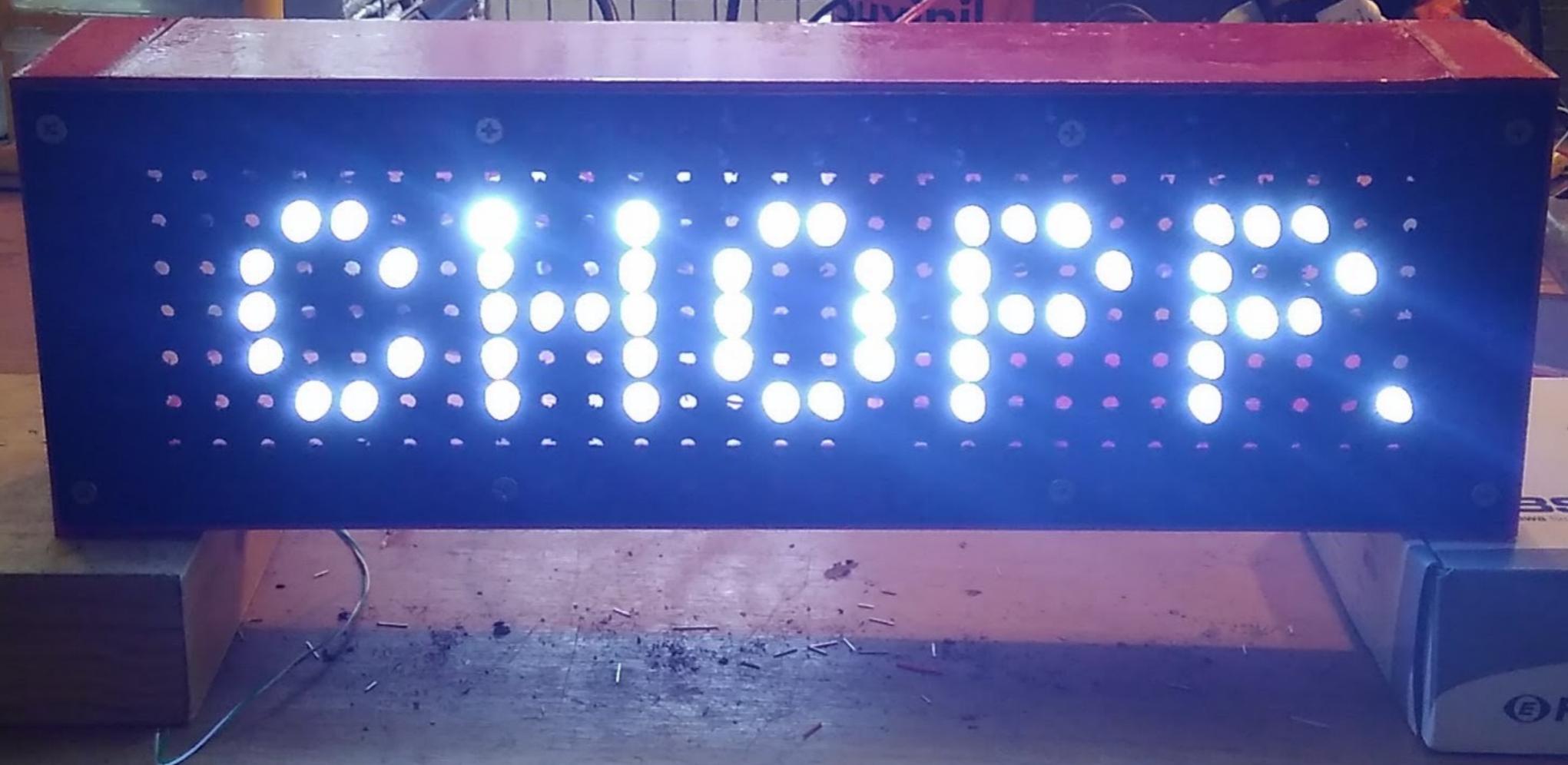












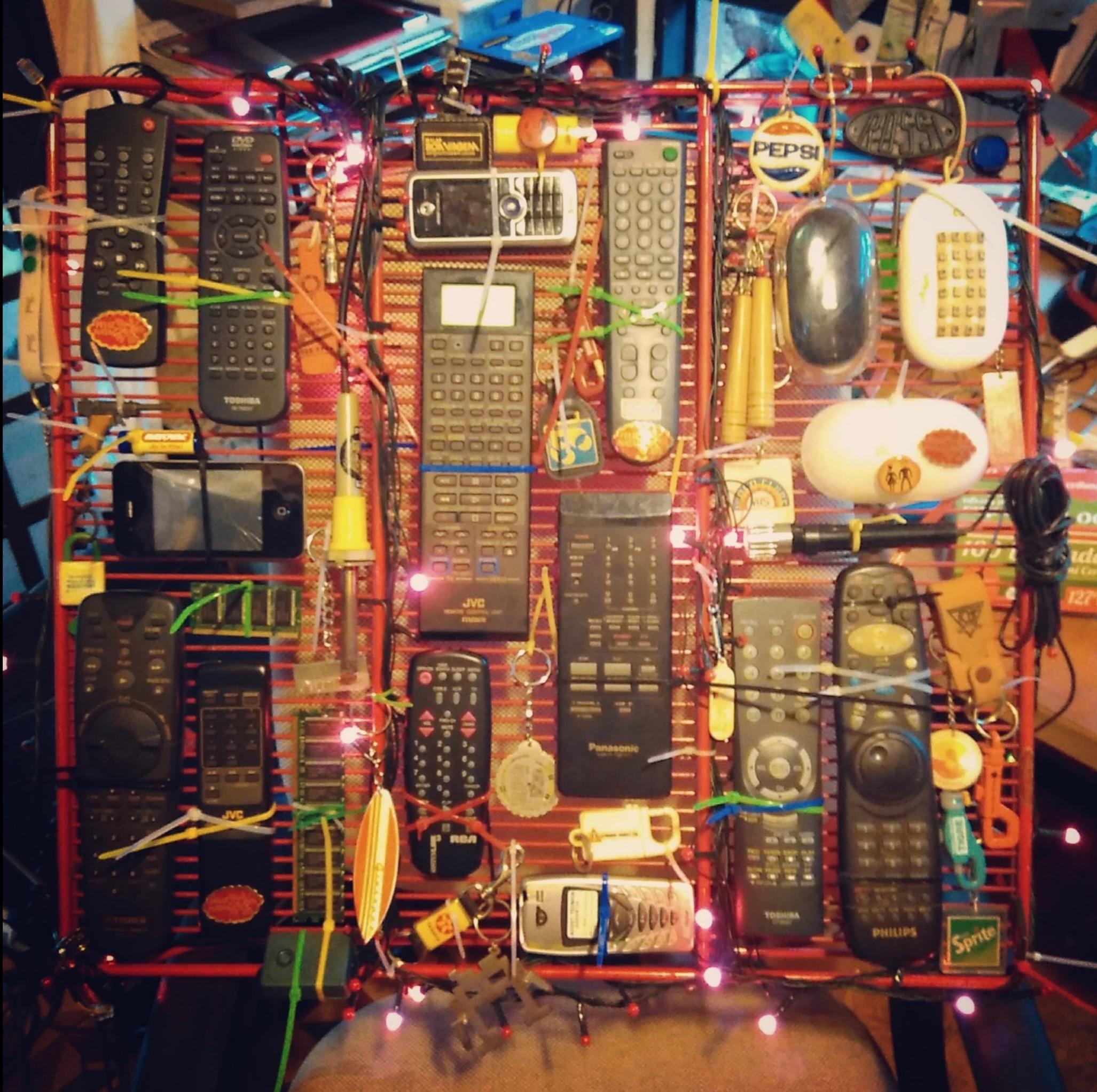
FURUKAWA











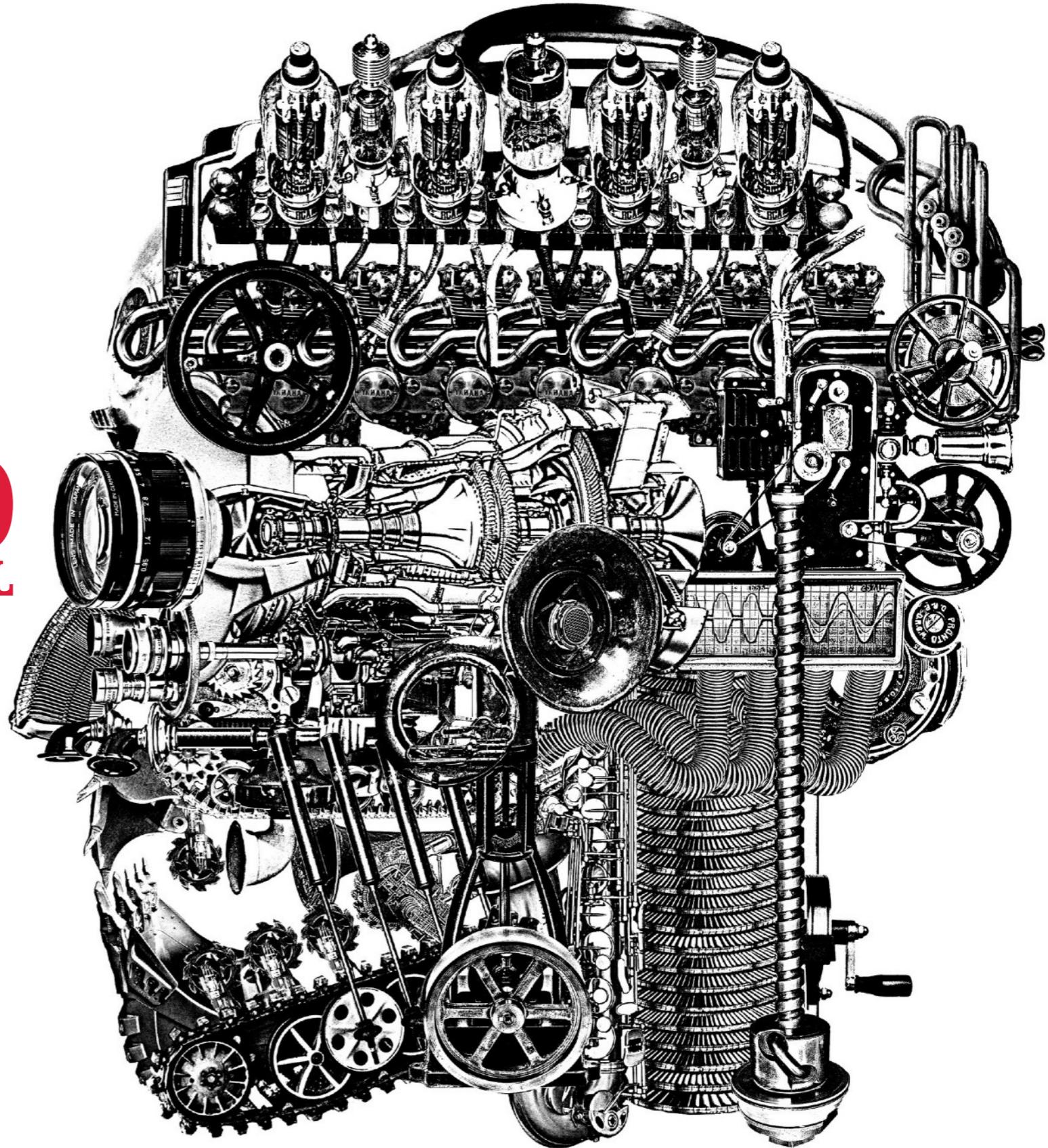






# GAMBIÓLOGOS 2.0

A GAMBIARRA NOS TEMPOS DO DIGITAL





Coletivo Gambiologia

# BANCO DE SANGUE



Coletivo Gambiologia



Coletivo Gambiologia

# Coletivo Gambiologia





Coletivo Gambiologia

# Coletivo Gambiologia



Coletivo Gambiologia



**Carlos Teixeira**



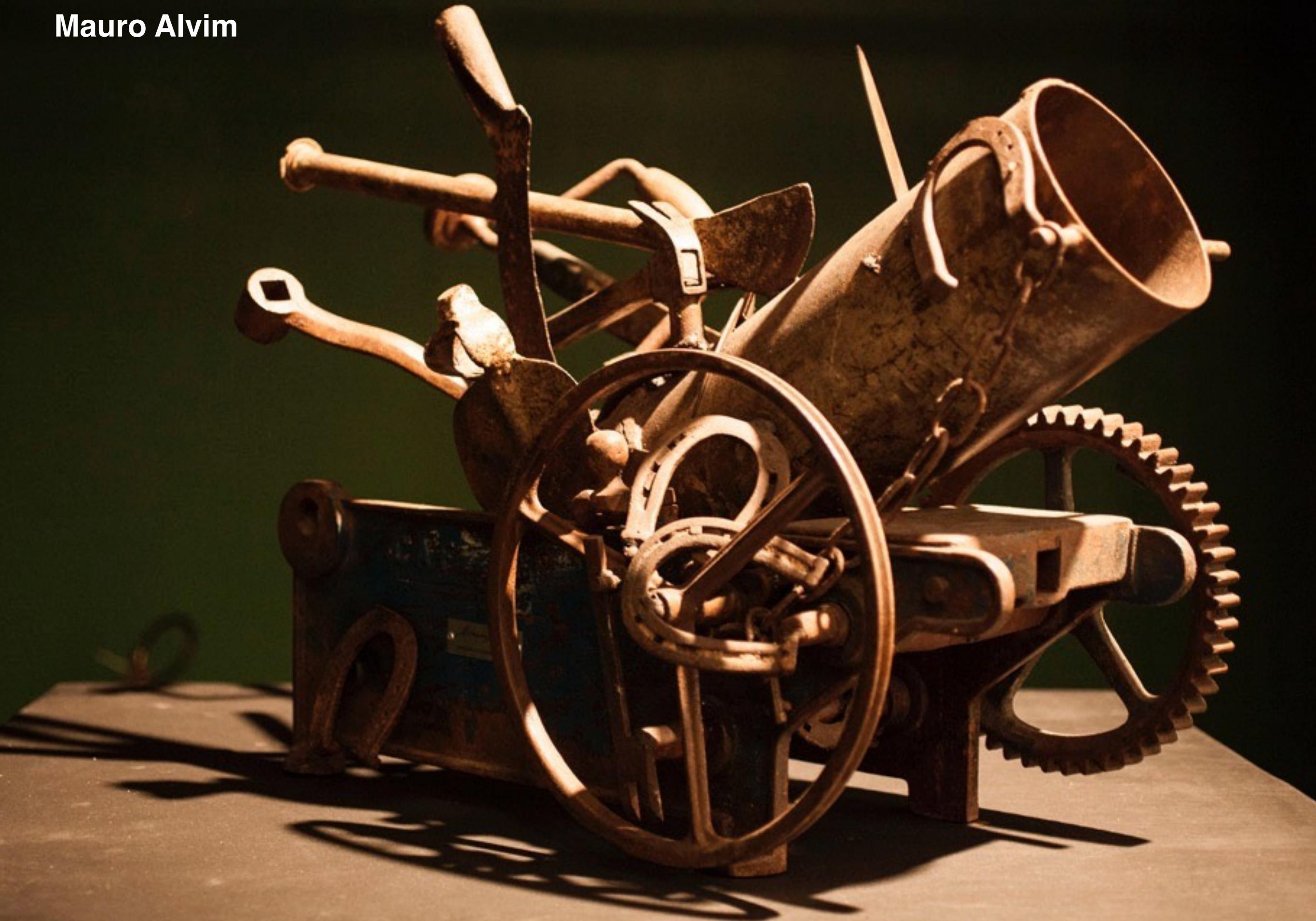
**Farnese de Andrade**



**Lucio Bittencourt**



Mauro Alvim



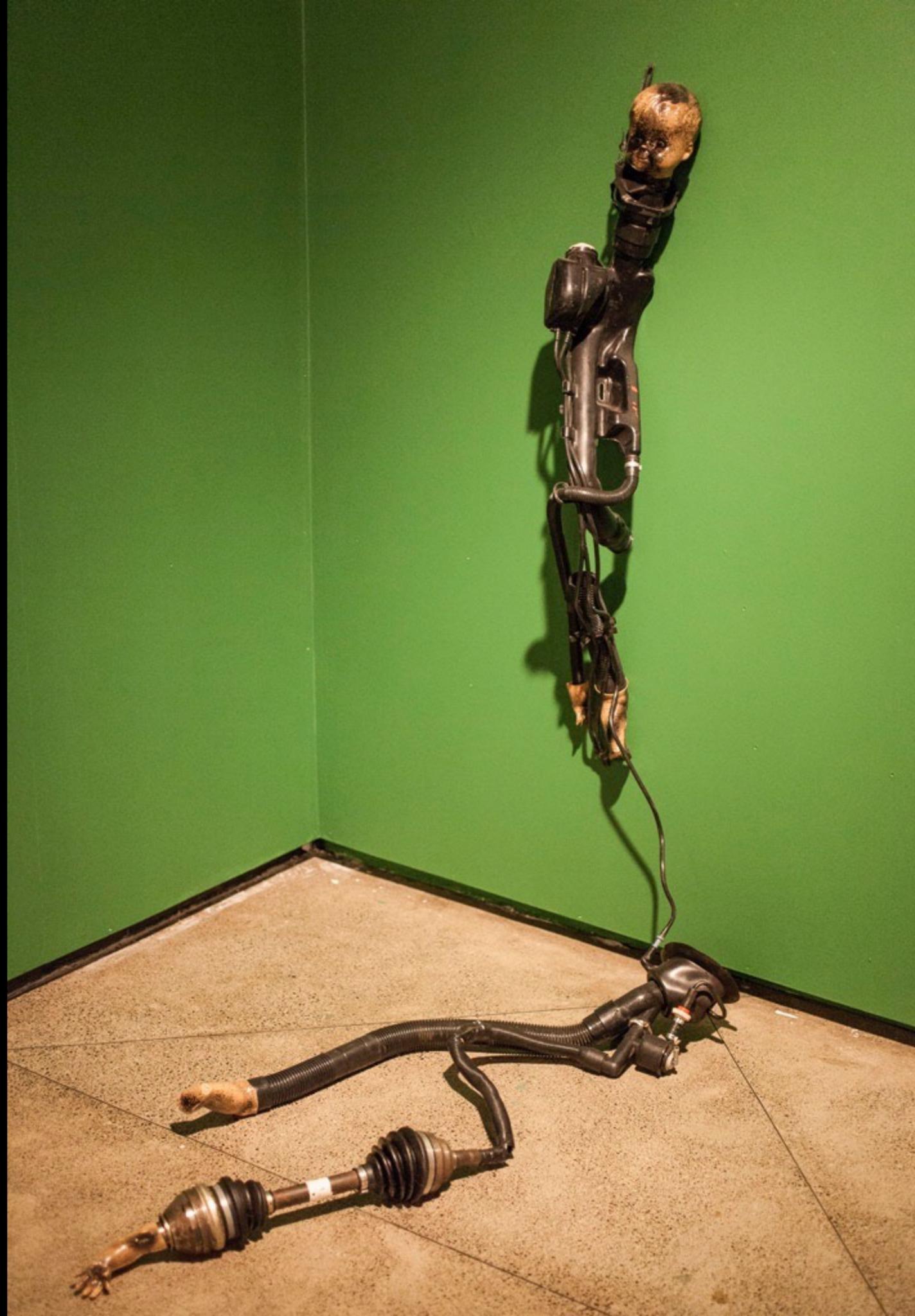
**Bispo do Rosário**



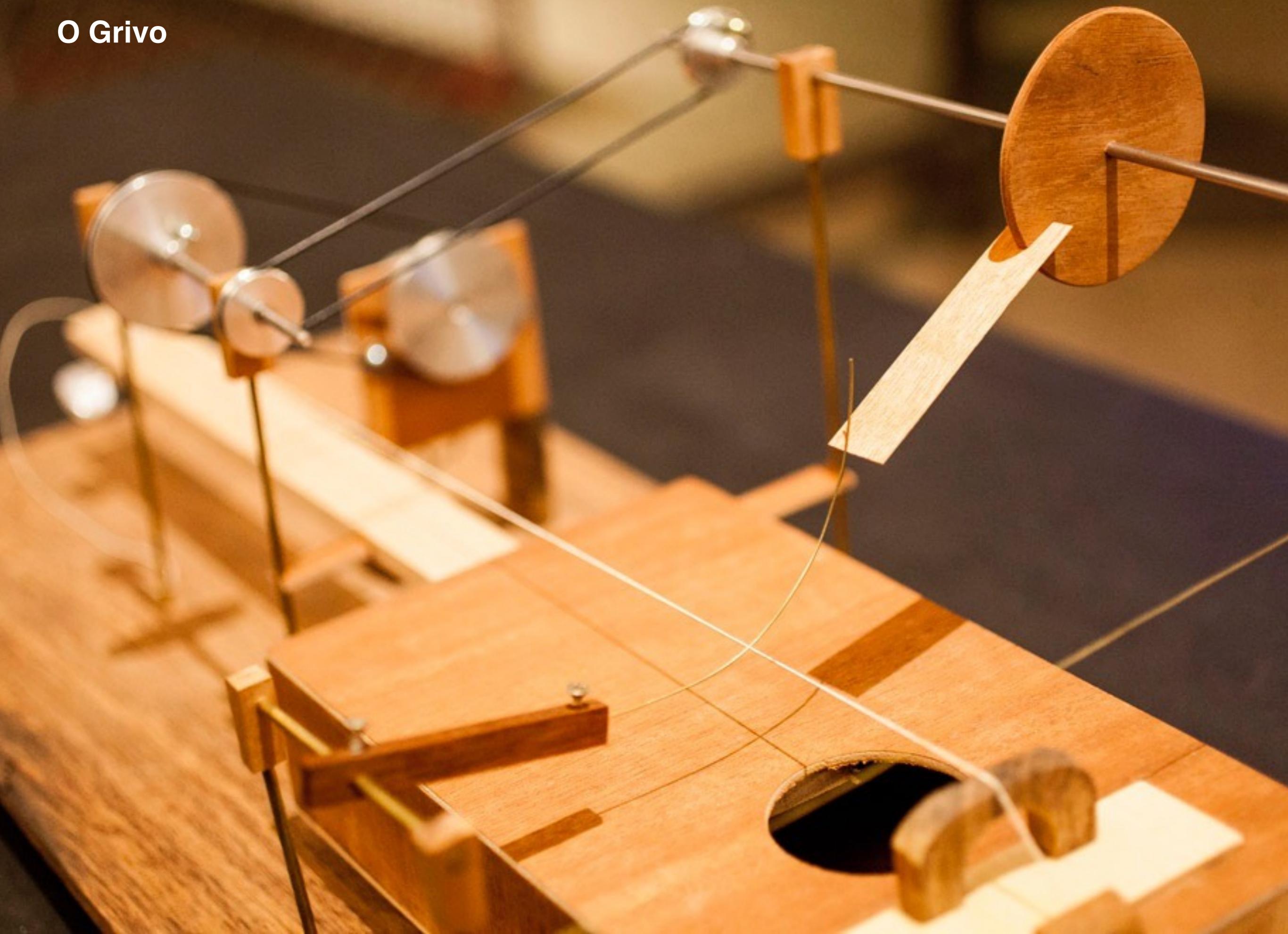
**Paulo Waisberg**



Marepe



O Grivo



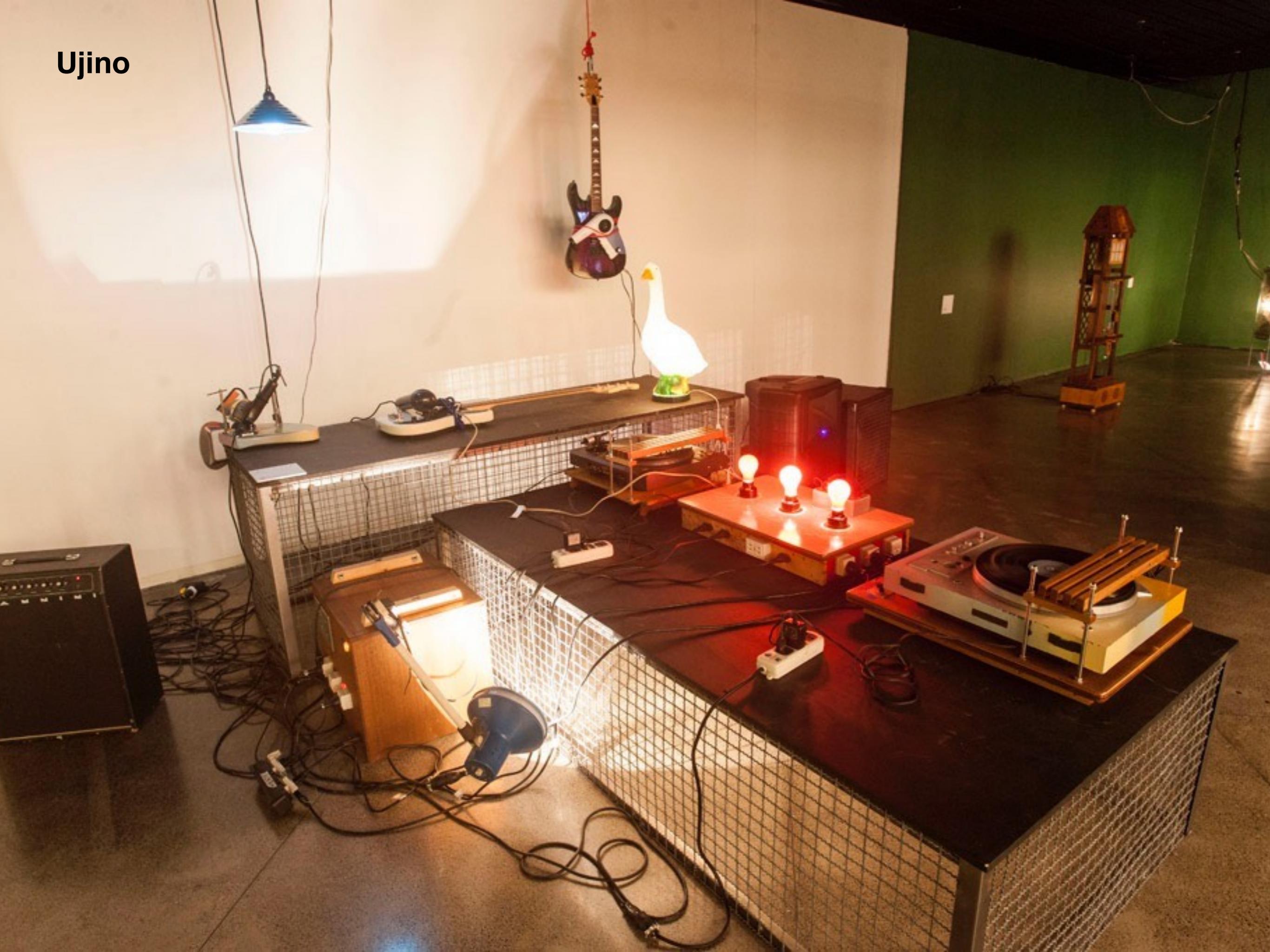


Mariana Manhães

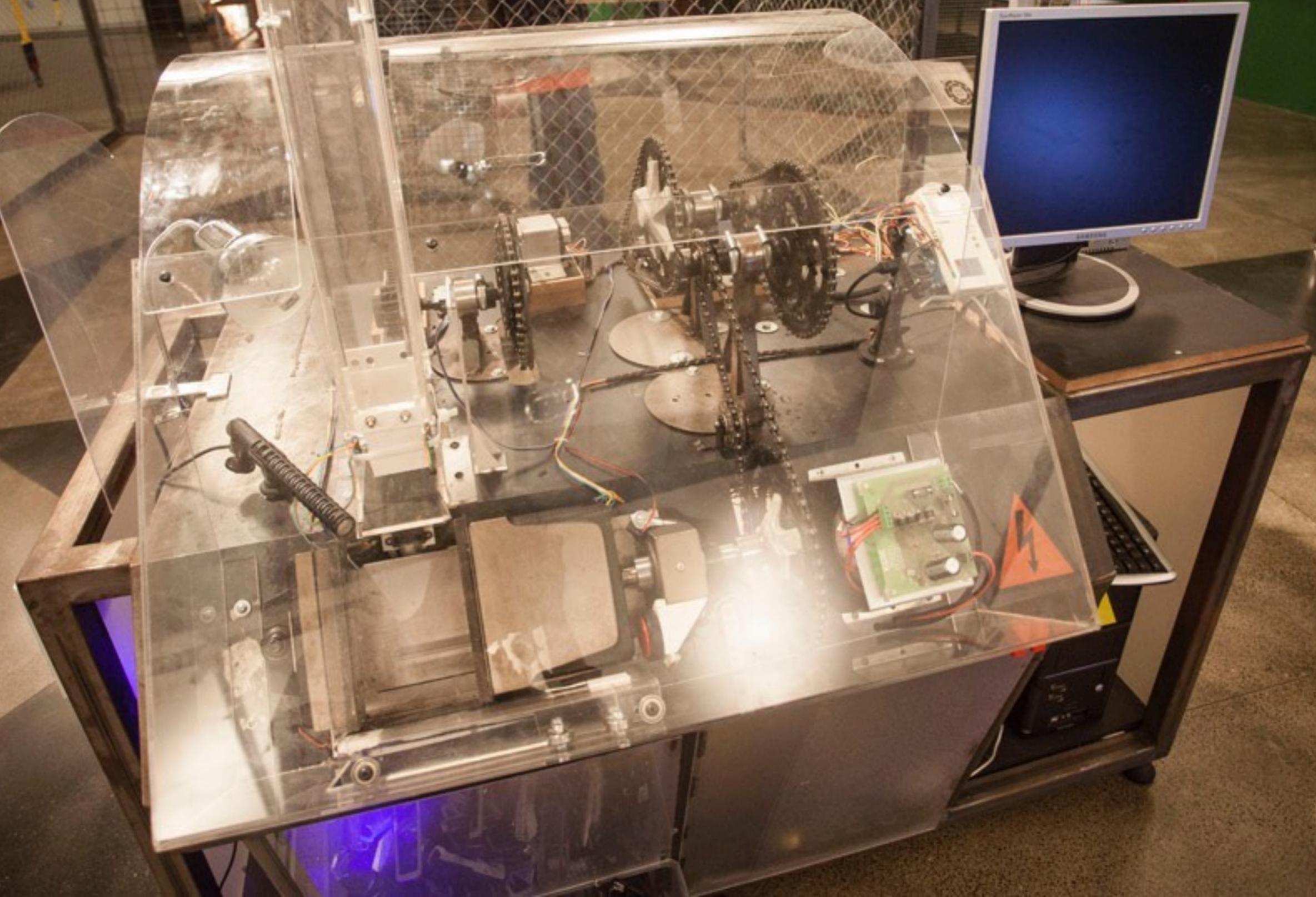
Leandro Aragão



**Ujino**



Lucas Bambozzi



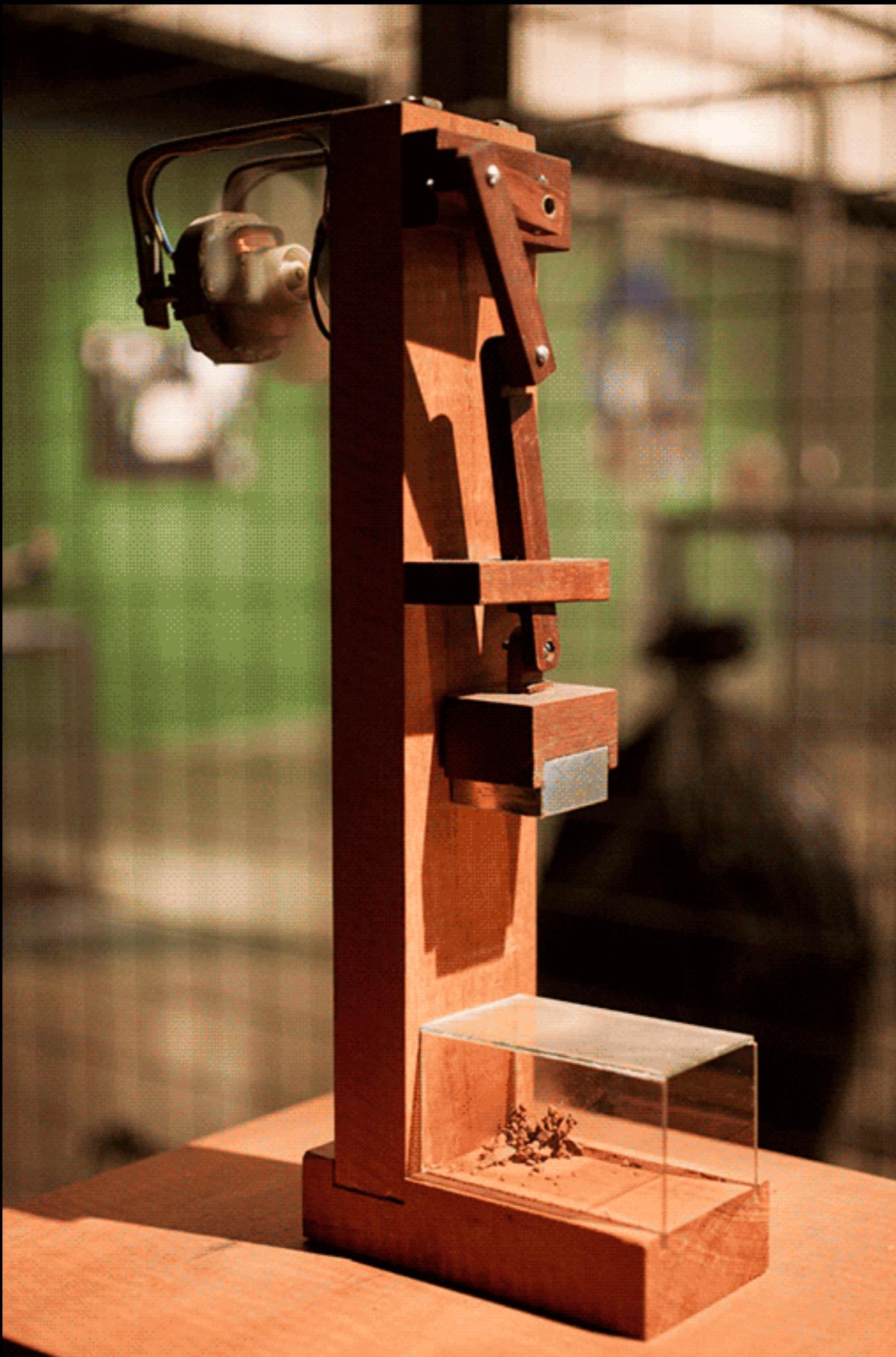
# Dirceu Maués



**Dirceu Maués**



**Aruan Mattos e  
Flavia Regaldo**



ON



Anos 70 e 80

Anos 90

Anos 2000

90s

Outras  
plataformas





100

100

100

100







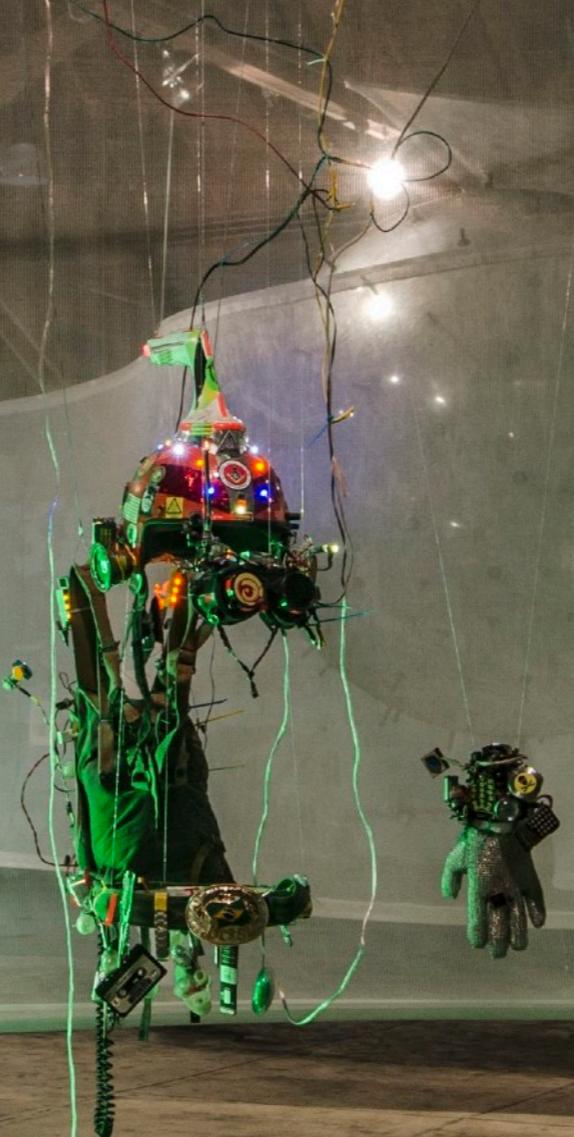
# SEEKING SILICON VALLEY

SEPTEMBER 12 - DECEMBER 8, 2012

The 2012 Biennial exhibition features work by emerging and established artists from around the world.

Curated by Anne Rubin, SIAI Curator, and Diane Kleeman, Open Studio Director, *Seeking Silicon Valley* explores the history of Silicon Valley while also exploring what its growth means for the future. The exhibition features work by established and emerging artists who have been invited to reflect on the impact of technology on our everyday lives. Through their work, artists will draw from the movement's technological, economic, political, and aesthetic qualities to consider the exponential process. Our hope is that the artwork featured in this exhibition will provoke visitors to think and dream as they investigate the how Silicon Valley has changed the way we work, play, and communicate globally.

Curated by Anne Rubin, SIAI Curator, Diane Kleeman, Open Studio Director, Michelle Nagy, Curatorial Fellowships, and Heidi Miller, Curator



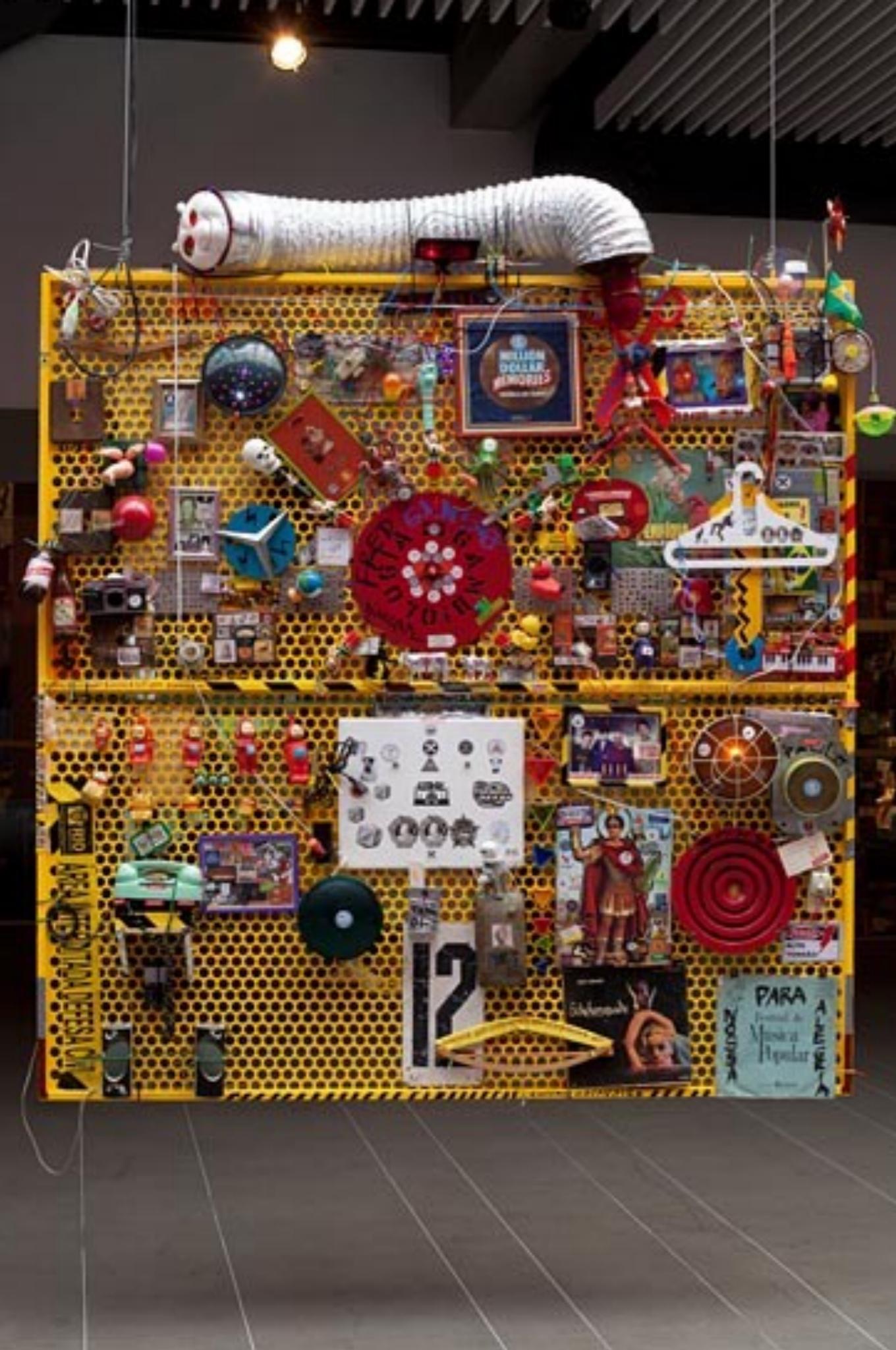


DANGER  
ELECTRICAL HAZARD

TRICERATOPS  
SAO GEORGINHO

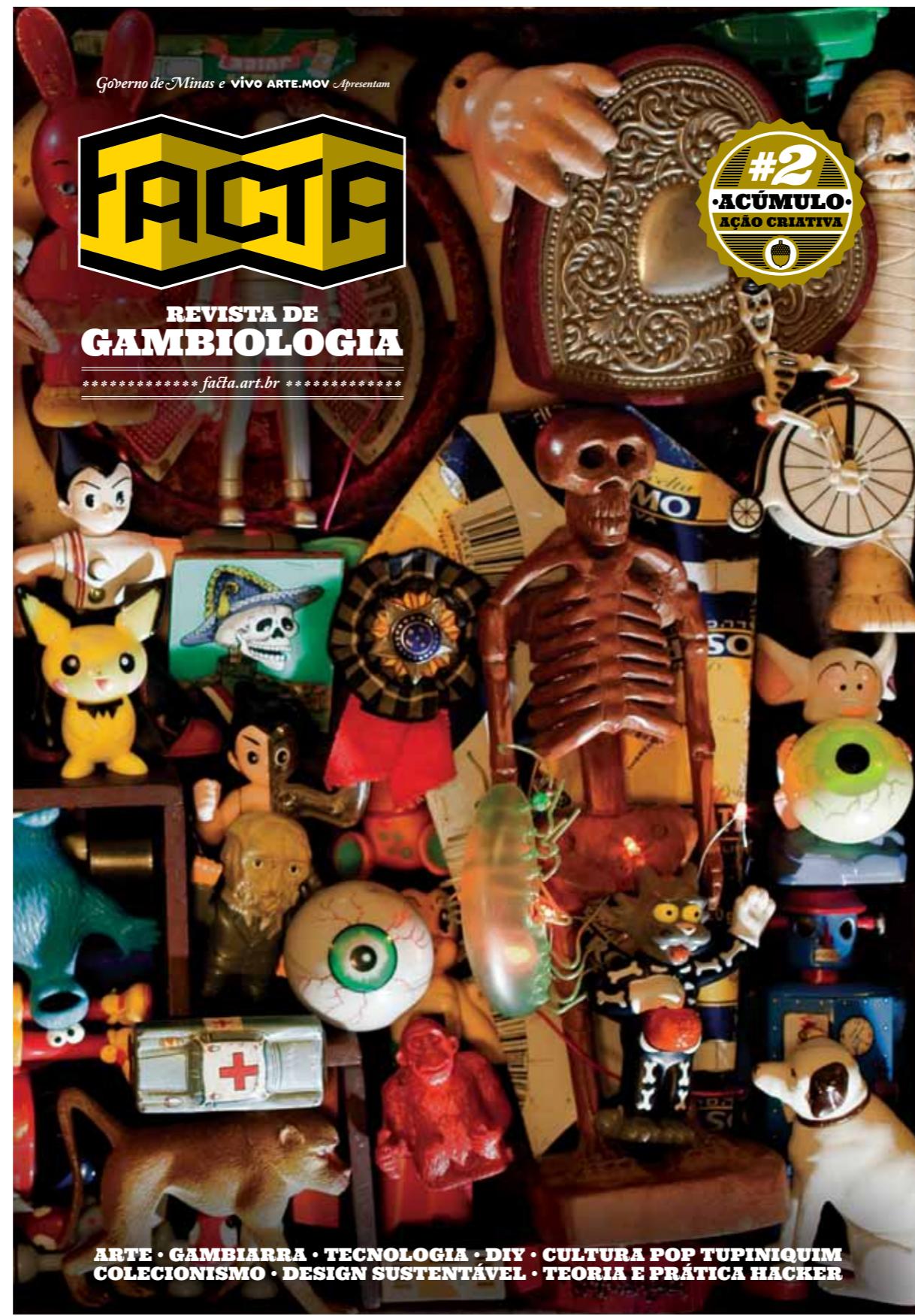
THIS MACHIN













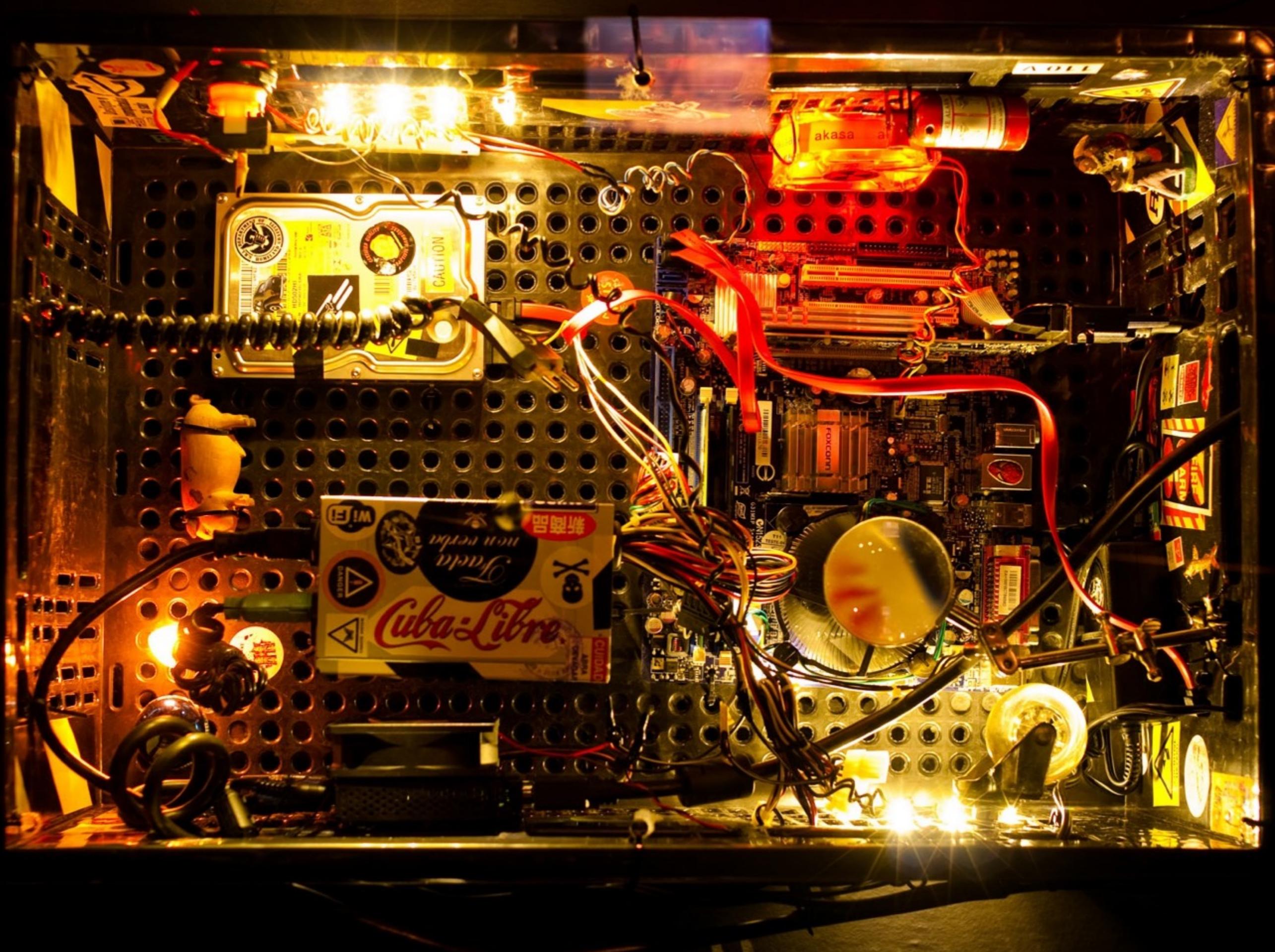


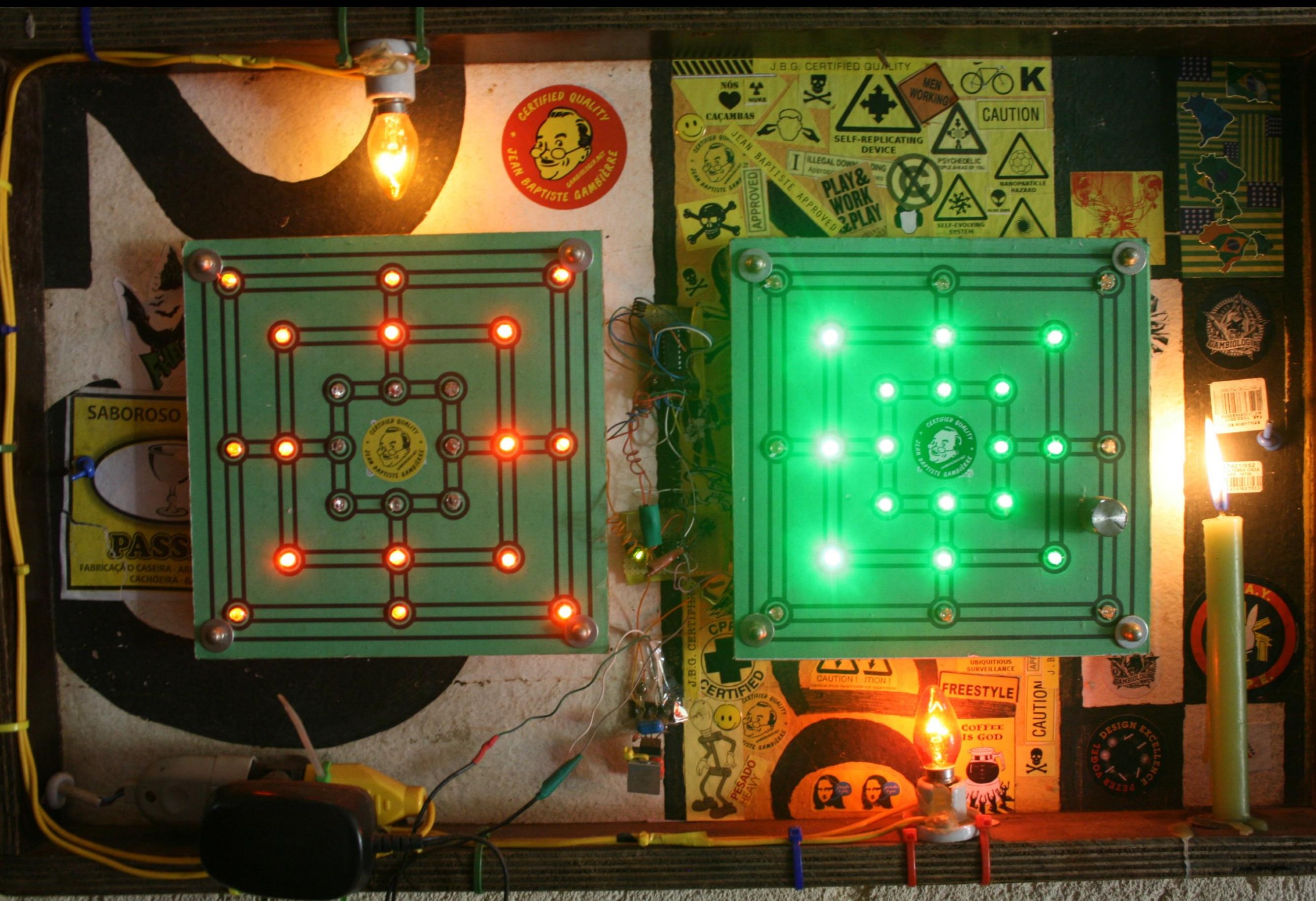
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1 - 2  
2 - 3  
3 - 4  
T H E  
E N D  
- O

























STEREO







GANGEE



Photo by: [unclear]

Governo de Minas e VIVO ARTE.MOV Apresentam



REVISTA DE  
**GAMBIROLOGIA**

\*\*\*\*\*facta.art.br\*\*\*\*\*



ARTE • GAMBIARRA • TECNOLOGIA • DIY • CULTURA POP TUPINIQUIM  
COLEÇÃO • DESIGN SUSTENTÁVEL • TEORIA E PRÁTICA HACKER











**vivo ARTE.MOV** apresenta

# workshop introdução aos estudos gambiológicos

#eletrônica #gambiarras #tecnologia #iluminação #antropofagia #design #áudio  
#reciclagem #adesivos #faça-você-mesmo #LEDs #brasil #utilitários #improviso

com Fred Paulino e Lucas Mafra » gambioologia.net » BH

25 a 28 de maio • quarta a sábado

CIEG » Centro Integrado Educacional de Guaxupé » R. Nova Resende, 180  
inscrições gratuitas + informações: [www.marginalialab.com](http://www.marginalialab.com)

realização: MARGINALIA LAB  
parceria: CARAVANA DIGITAL, vivo  
patrocínio: GOVERNO DE MINAS GERAIS, LEI ESTADUAL DE Fomento à Cultura, GOVERNO FEDERAL DO BRASIL

CERTIFIED QUALITY BY JEAN BAPTISTE GAMBIERRE

GAMBIOLOGIA.NET APRESENTA

# OFICINA EXTRAORDINÁRIA DE GAMBIOLOGIA

"INTRODUÇÃO AOS ESTUDOS GAMBIOLÓGICOS"

VAGAS LIMITADAS

DATA → 04/05  
A PARTIR DAS → 14 HORAS

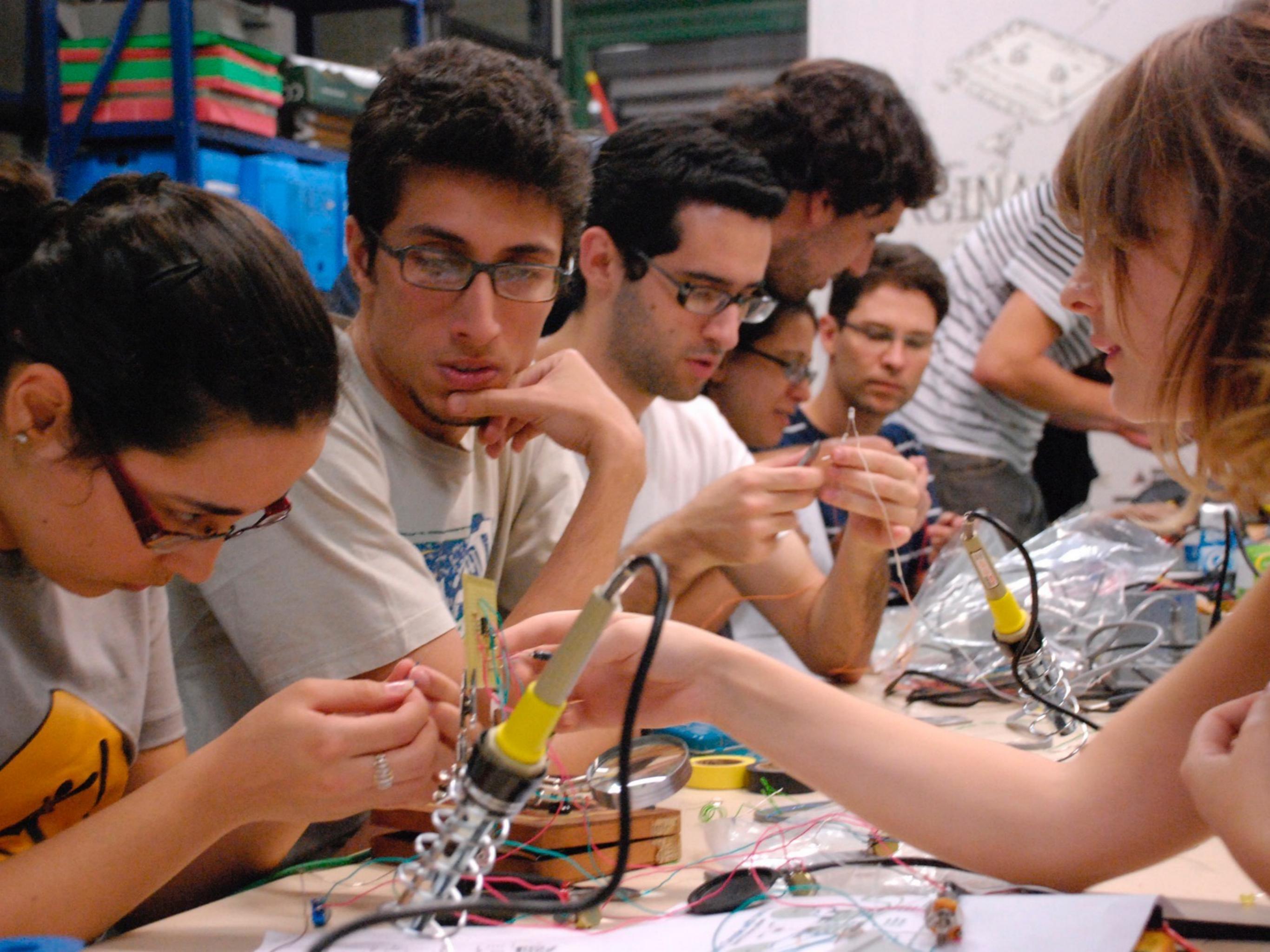
LOCAL → ATELIÊ GAMBIOLOGIA  
R. VIÇOSA 260 → STO ANTÔNIO → BH → MG  
INFORMAÇÕES → (31) 8815 5490

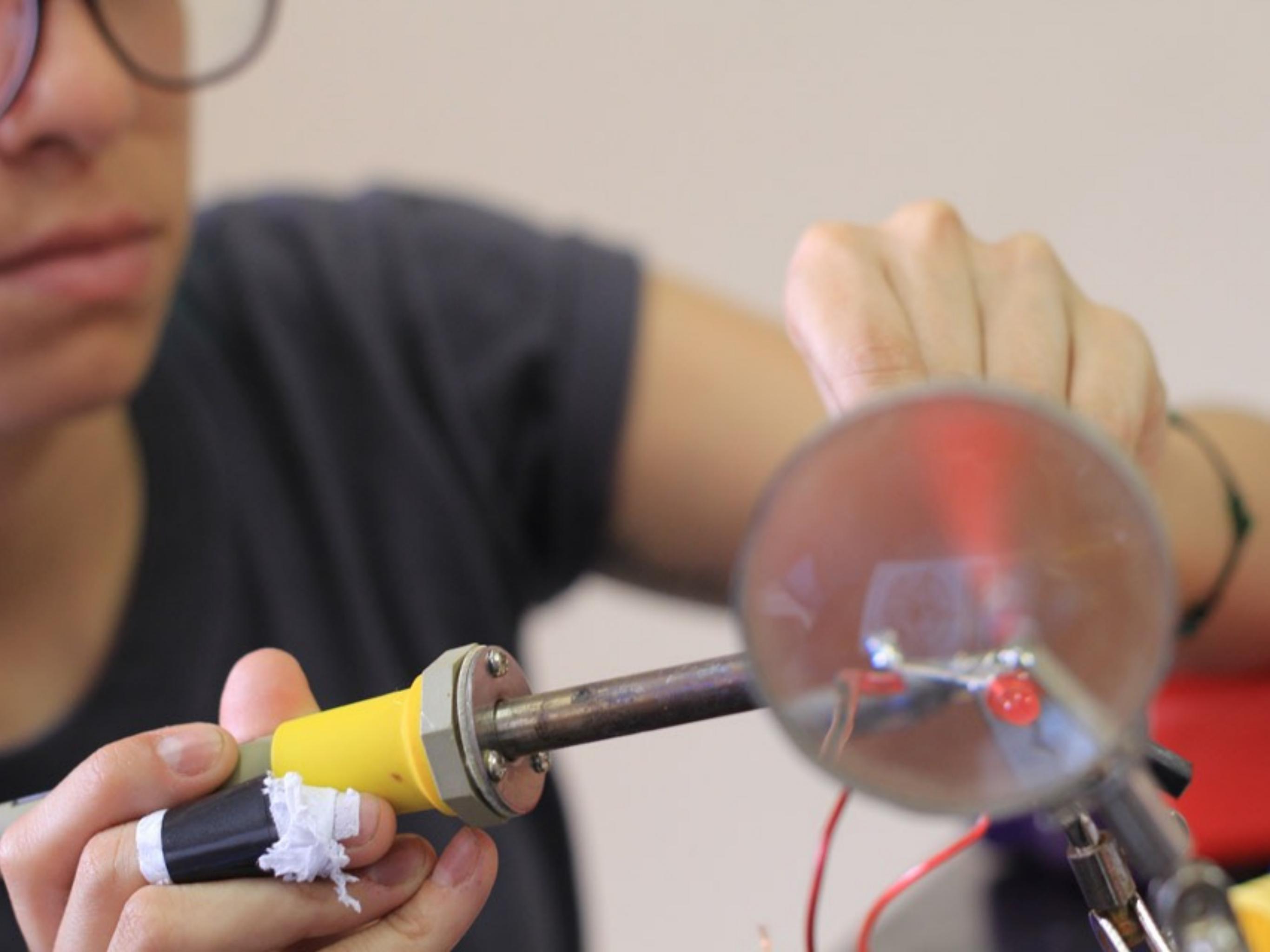
APOIO CULTURAL

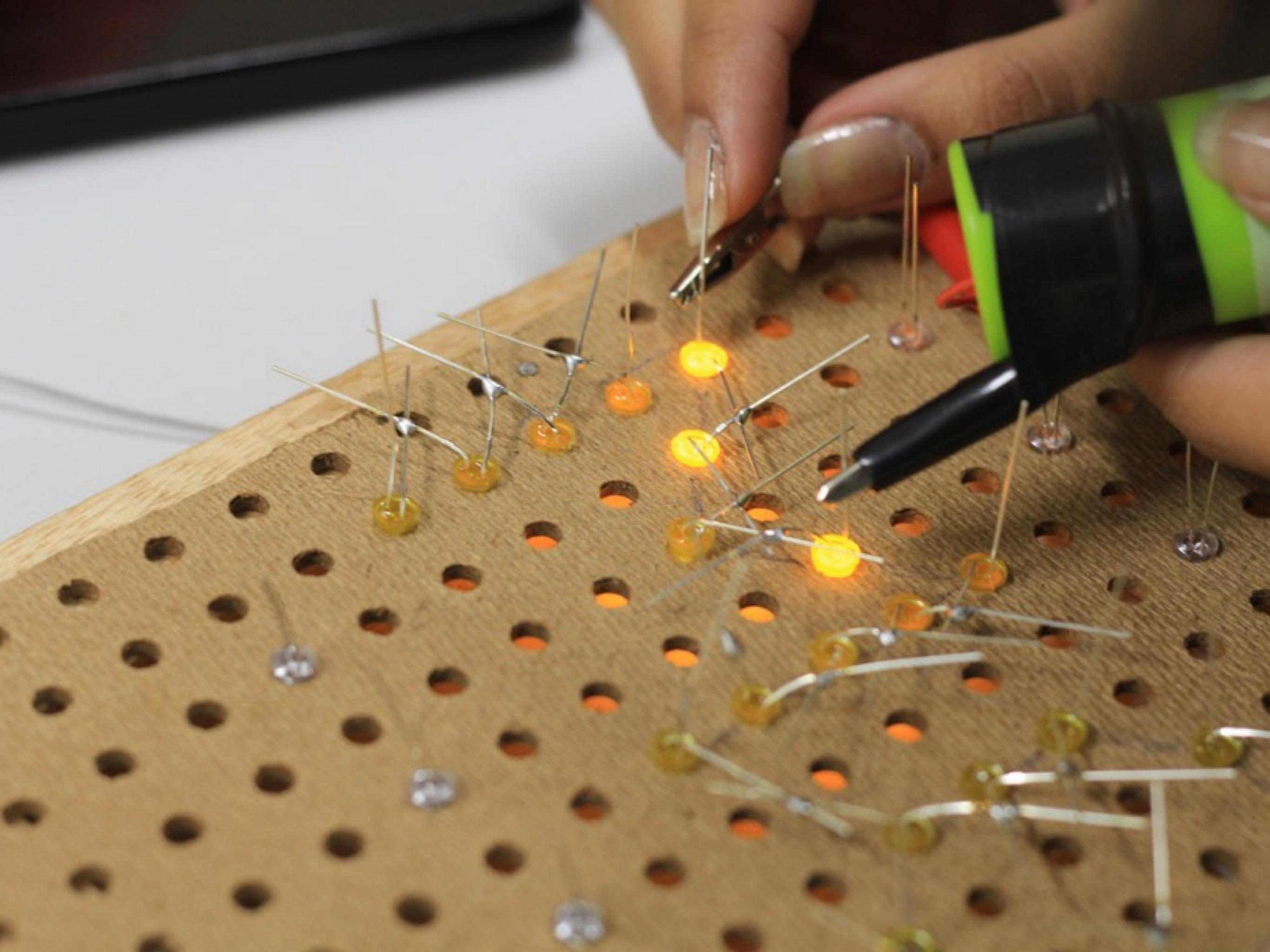
Secretaria de Fomento e Incentivo à Cultura  
Ministério da Cultura  
GOVERNO FEDERAL DO BRASIL  
PAÍS RICO E PAÍS SEM POBREZA

MATERIAL DO ALUNO:

- \* SUCATAS ESTÉTICAS
- \* FONTES DE CELULAR
- \* CABEÇAS DE BONECA
- \* BRINQUEDOS VELHOS
- \* ELETRÔNICOS EM DESUSO
- \* ADESIVOS









SESI

SESI























Las Autoridades Sanitarias advierten:







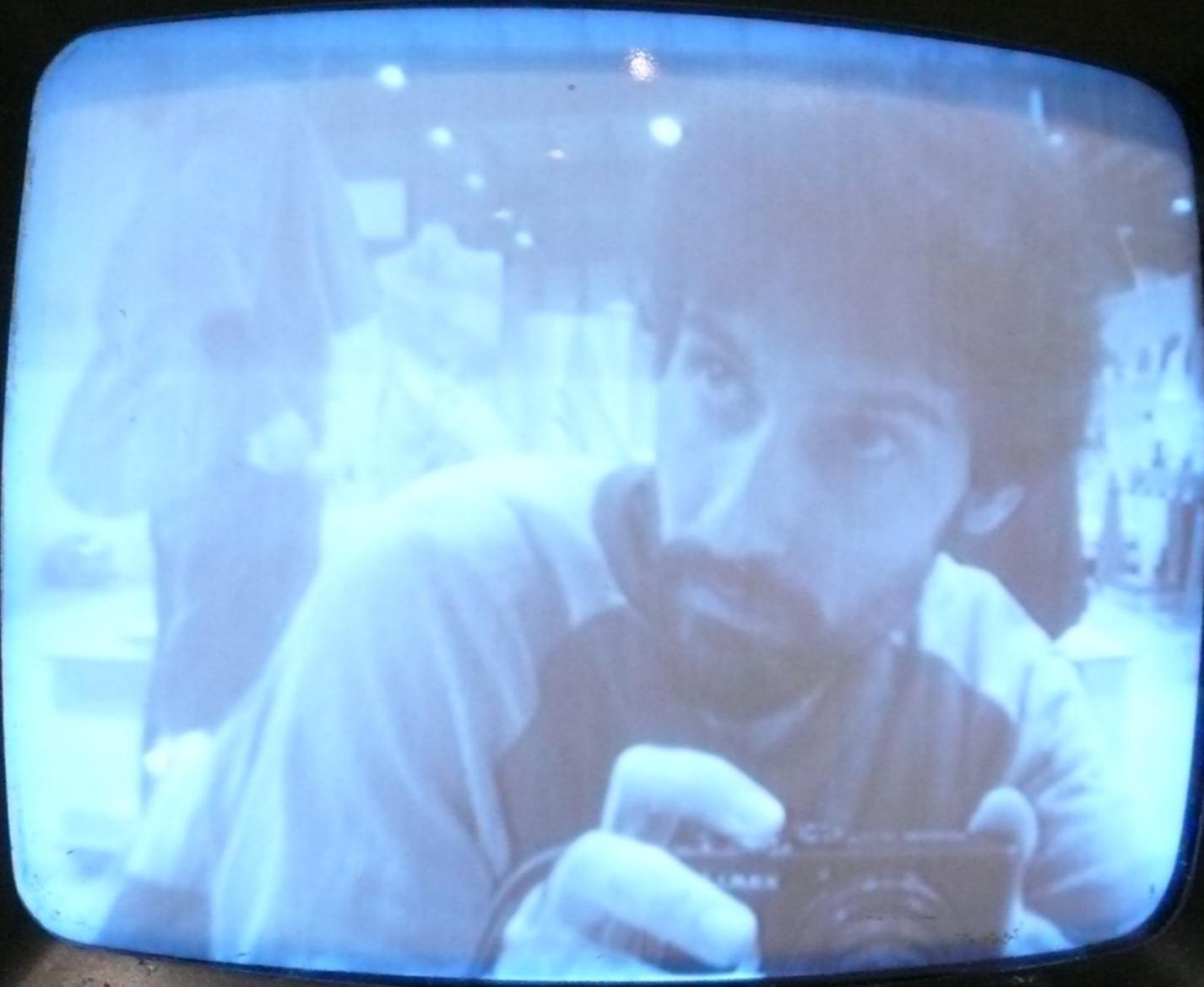








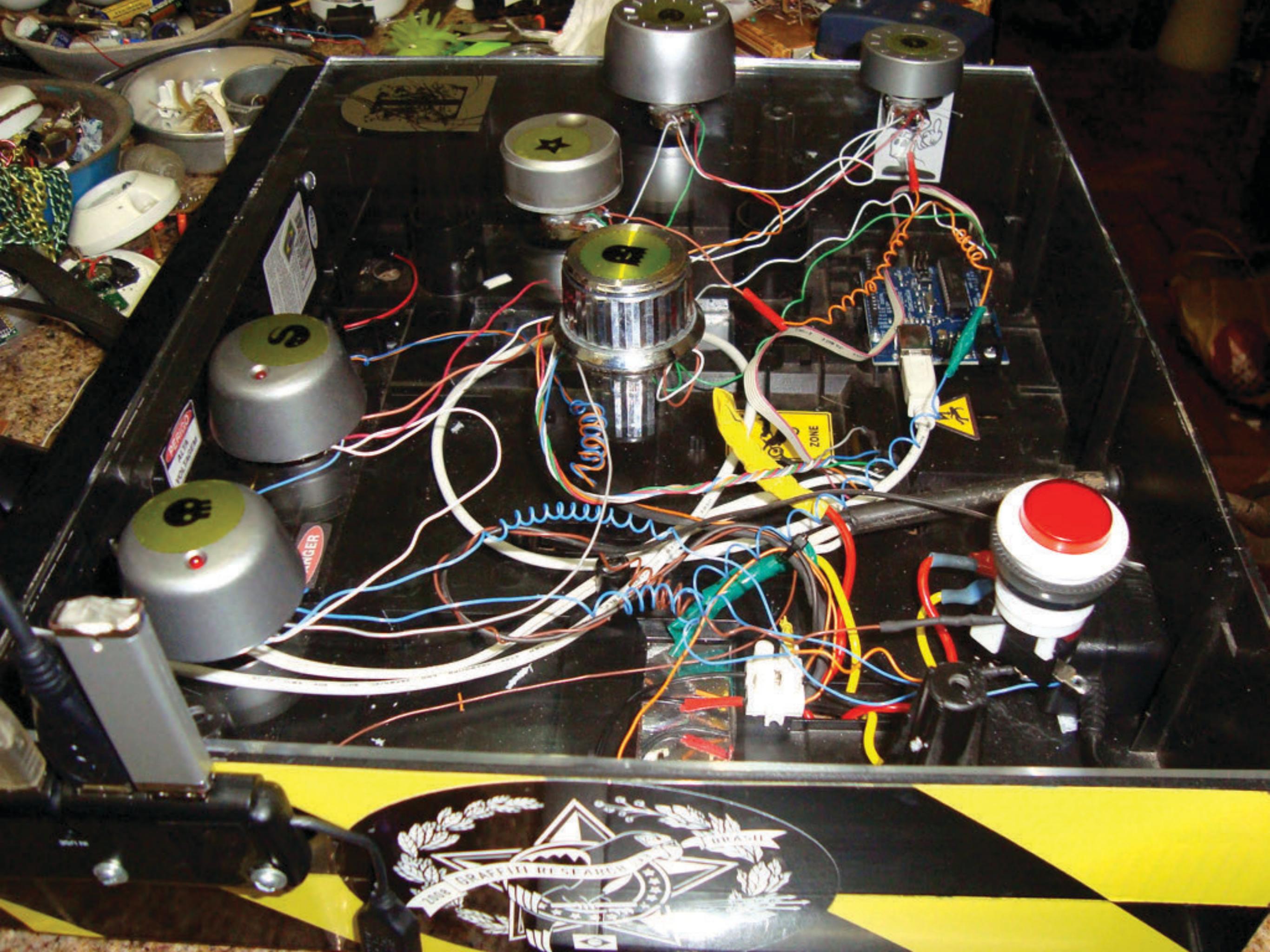




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VOL  
03  
反資本主義 /







# GAMBIÓLOGOS

A GAMBIARRA NOS TEMPOS DO DIGITAL



EXPOSIÇÃO COLETIVA

19/NOV A 15/DEZ / DE 14H ÀS 21H  
TERÇA A DOMINGO

ALCÂNDRA G · ANTONIO VIEIRA · ALEXANDRE MATTOS · ENRICO MAGALHAES · TONY MATTOS · FERNANDO ANDRA · FERNANDO  
BANDEIRA · FLÁVIA RODRIGUES · FRÉDÉRIC BELLON · GUTO COSTA · GUTO LALAI · JÉSSICA ALMIR · JÉSSICA WILHELY · LIAZETTA AGUIAR  
· LUCAS MAFRA · MARCELA ANTUNAK · MARCELO AGÉO · MARINA MARECHAL · MELVIN MAGRIES · PAULO RICARDO MARCHI  
PESQUINA · RICARDO NEVES · RICARDO VASCONCELOS · RITA ROSA · RODRIGO BRASILEIRO · SÁCIO POLVORA

ABERTURA: QUINTA 18/NOV ÀS 20H  
LANÇAMENTO DO CATALOGO: 08/DEZ

ESPAÇO CENTOEQUATRO · PRAÇA DA ESTAÇÃO · BH

[WWW.GAMBIOLOGOS.COM](http://WWW.GAMBIOLOGOS.COM)



**Paulo Waisberg e Pedro Morais**











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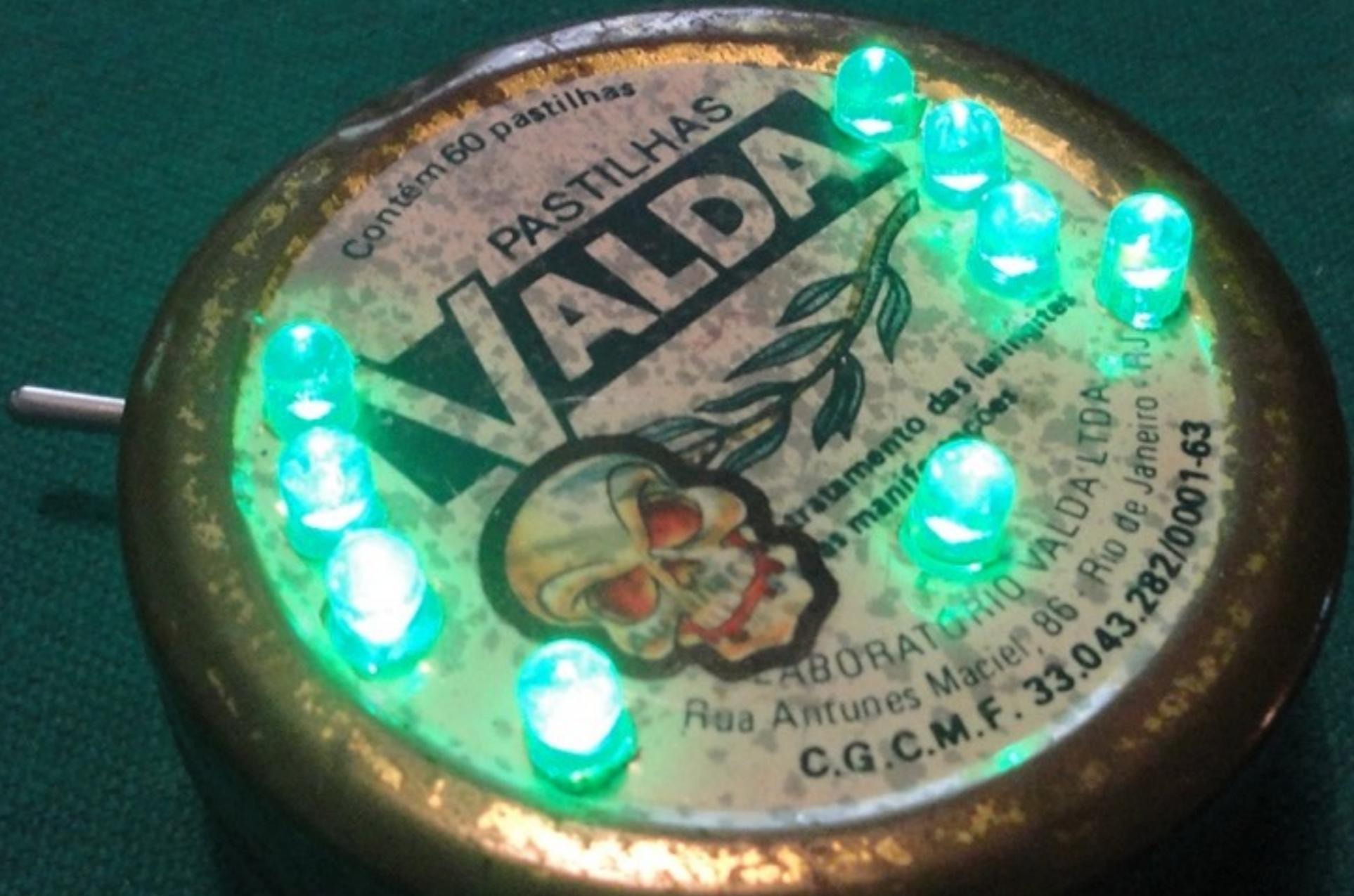


FLORESTA

OUTROS  
MUNICÍPIOS

82  
Topper

KUSAKI



Lucas Mafra

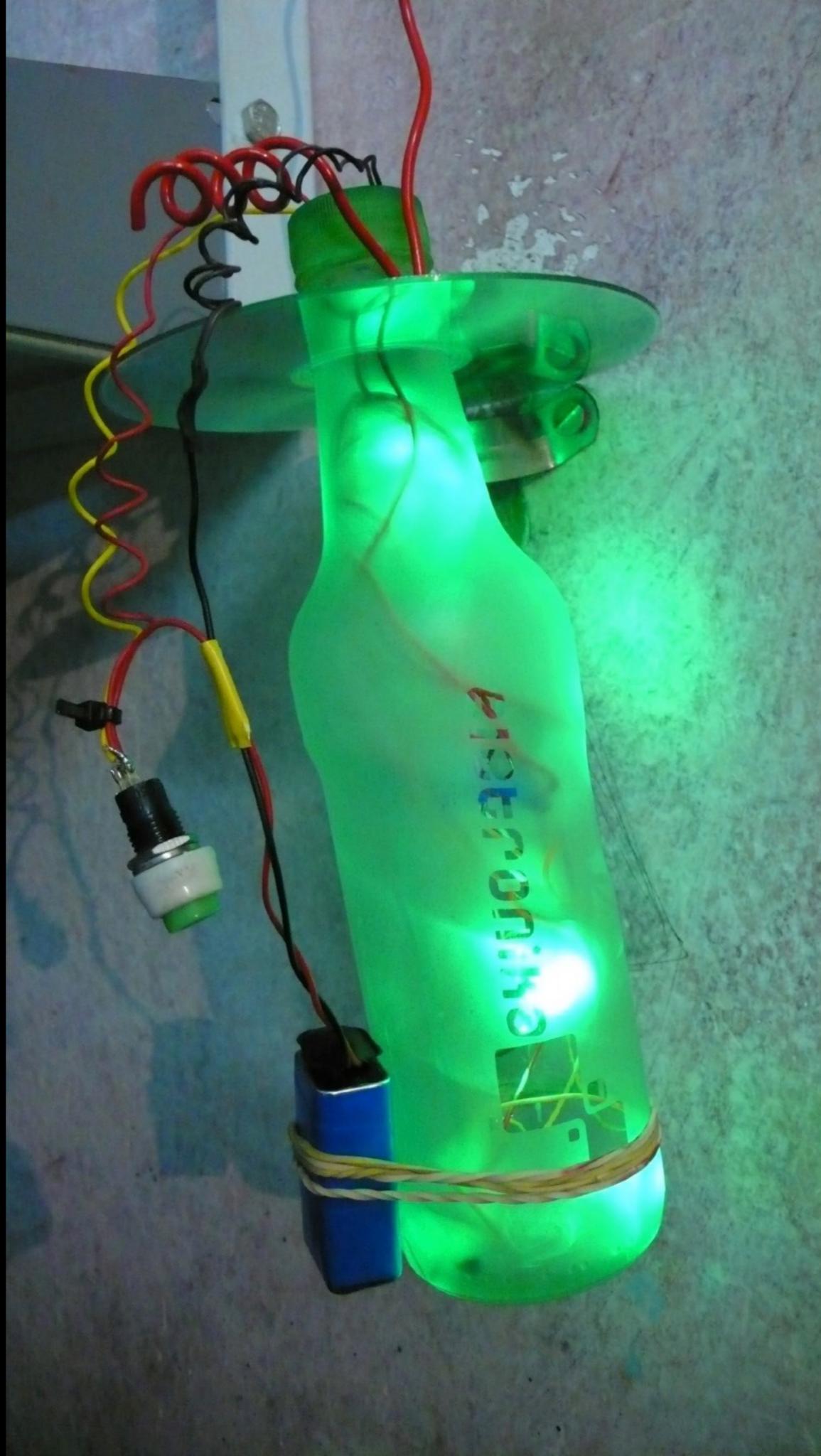


Lucas Mafra



Lucas Mafra





**ouate imprégnée**  
**SHELLSOG**

NETTOIE-POLIT  
FAIT BRILLER CHROME NICKEL  
CUIVRE ALUMINIUM  
SANS ACIDE

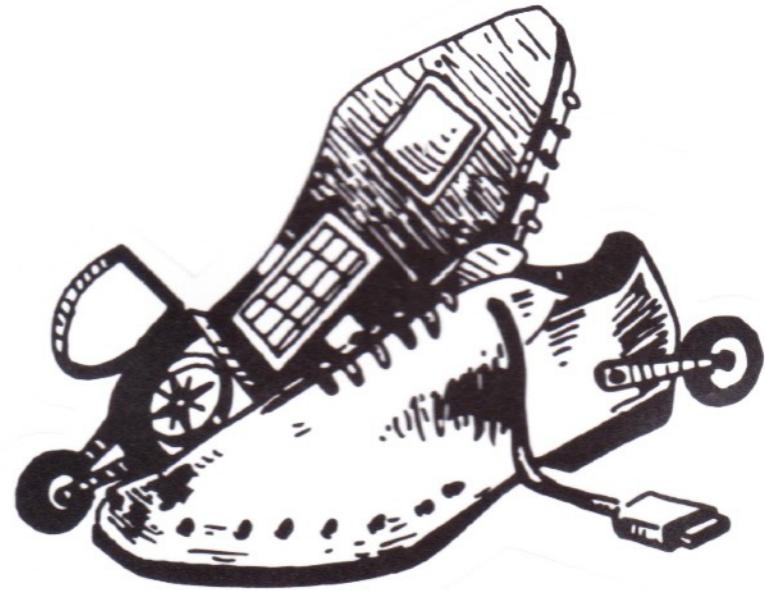
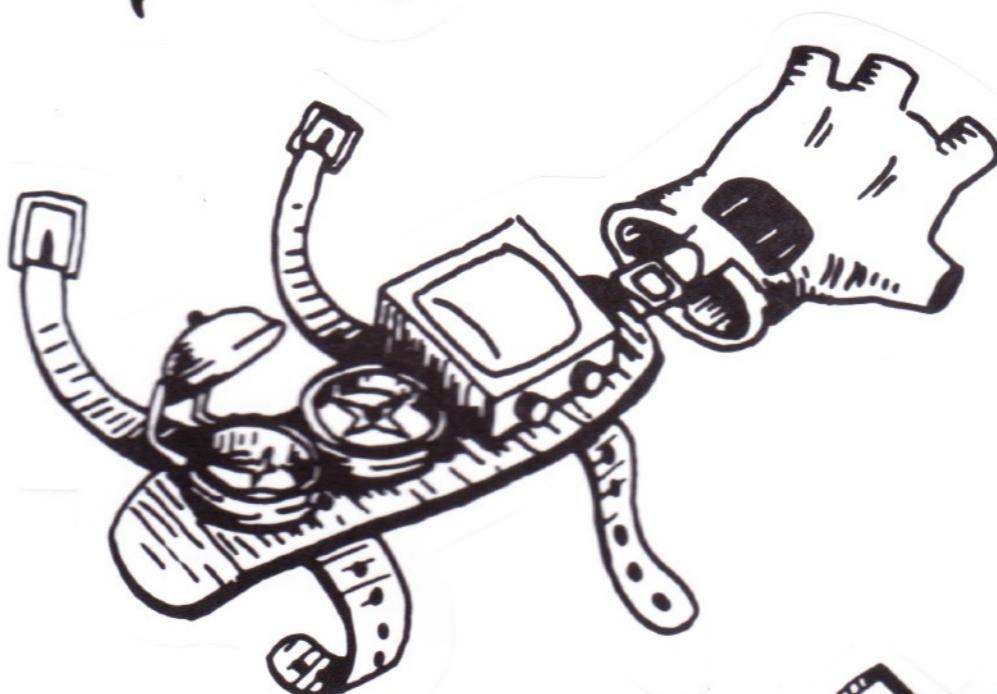
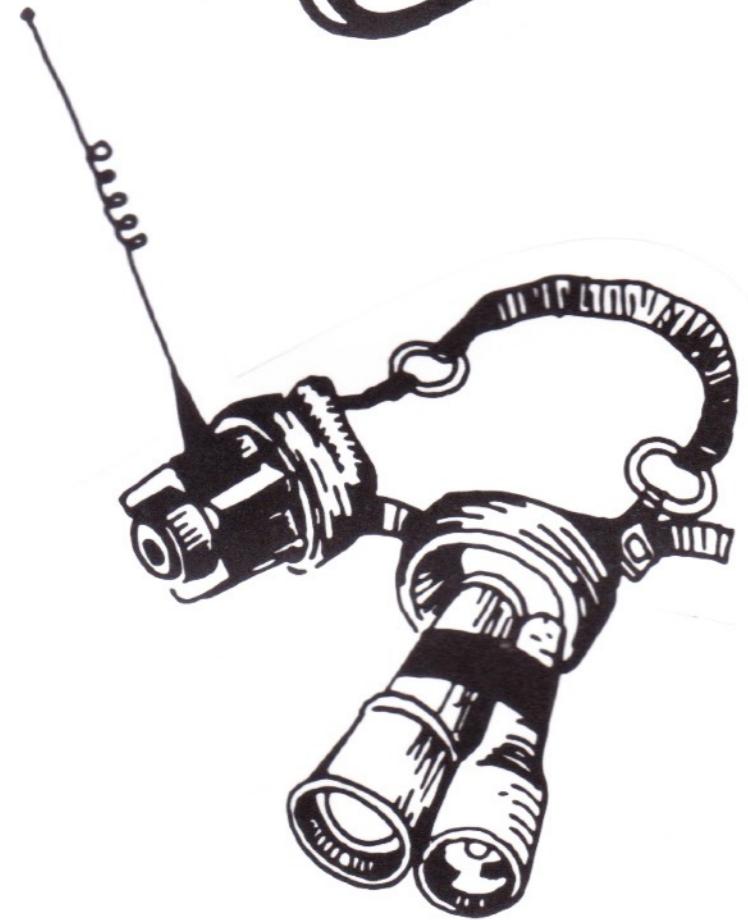
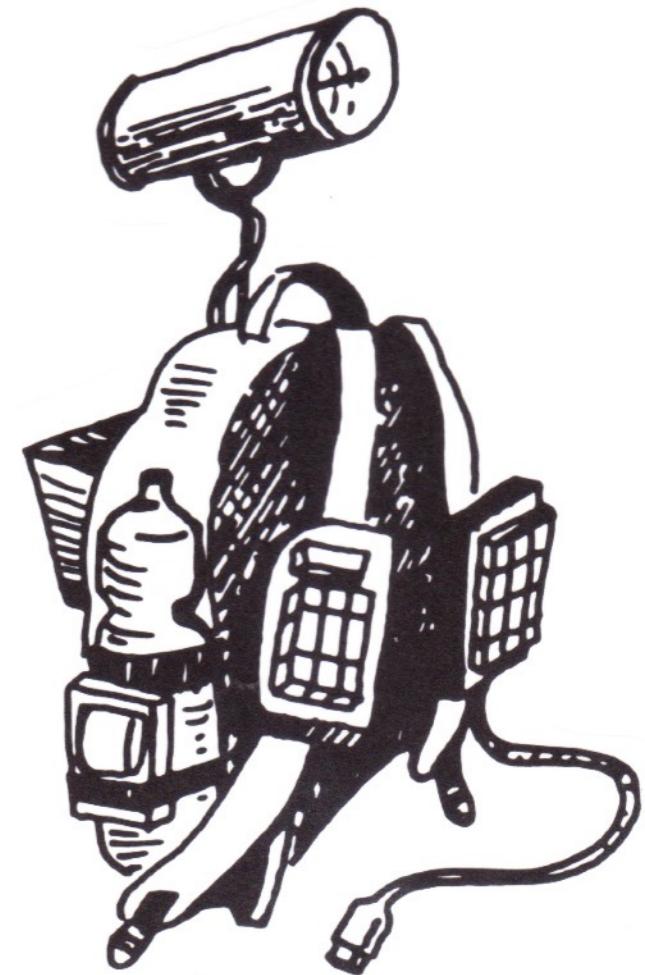
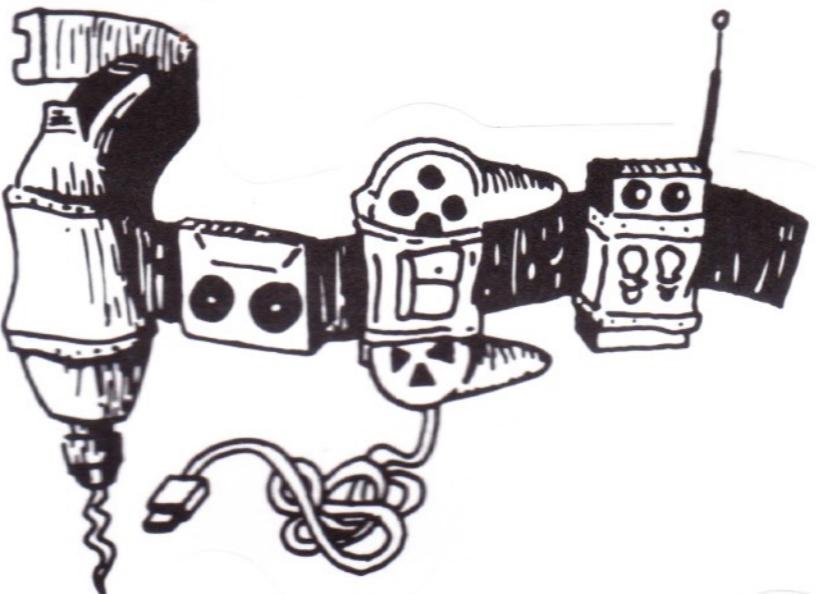
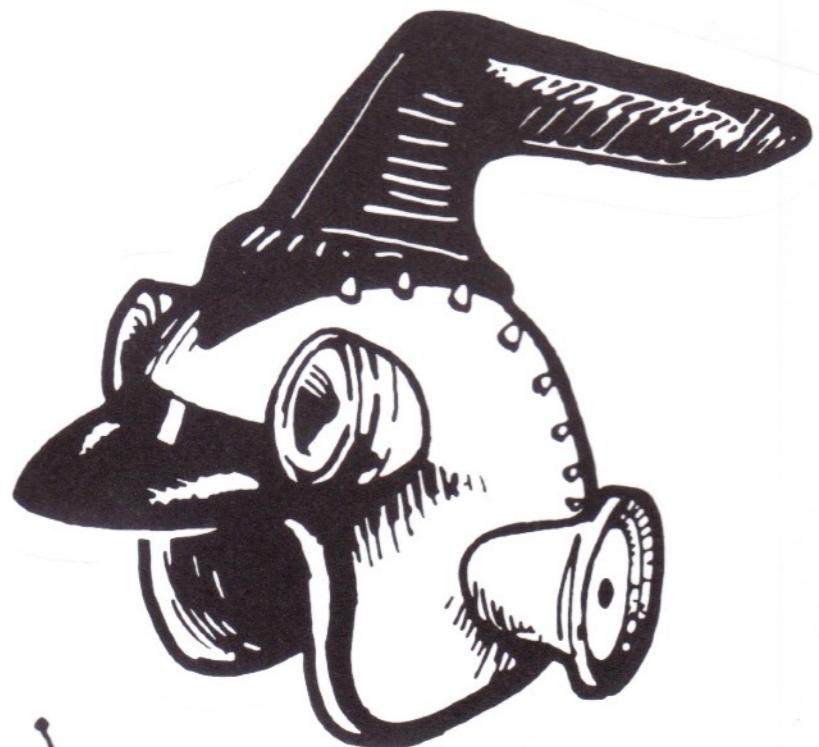
**SHELLSOG**

**ouate imprégnée**



**Rodrigo Minelli**





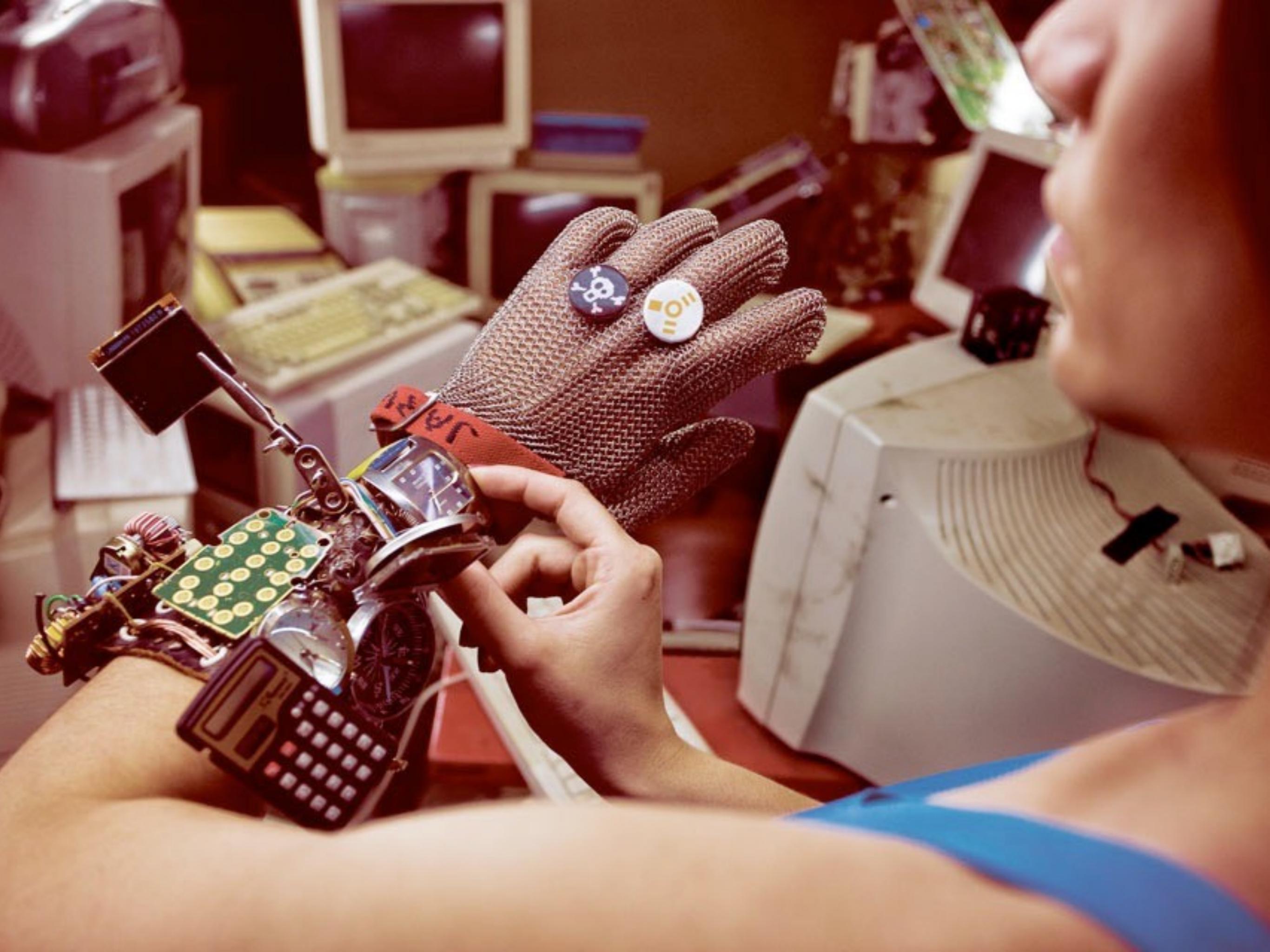
**Osso Design / Alexandre B.**







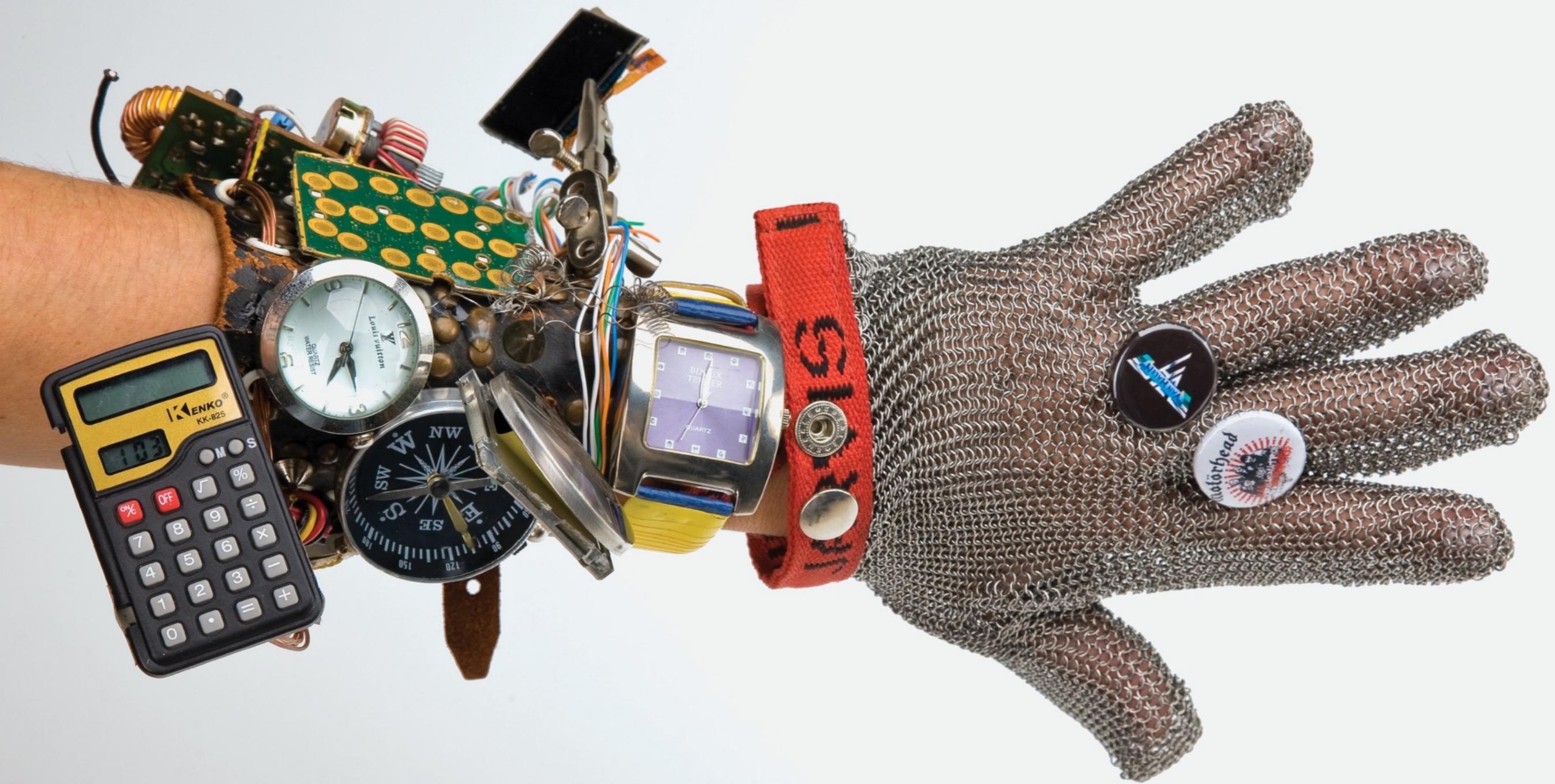


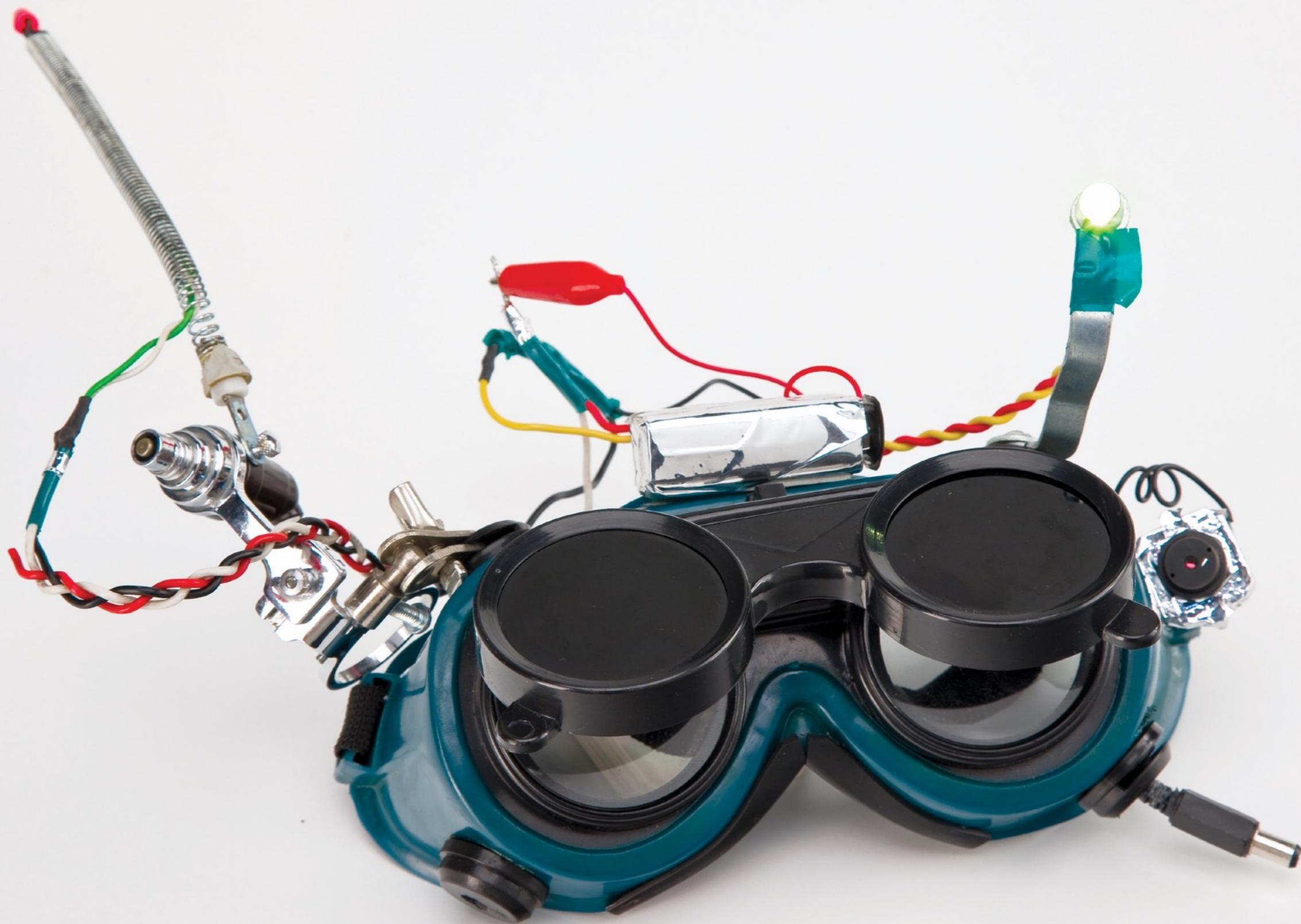




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*“Gambiologia é um trabalho de construção de eletrônicos com sotaque antropofágico. Por meio de aparelhos reciclados, traz um novo significado para o contexto tecnológico, ao assumir uma postura de recontextualização criativa de materiais normalmente entendidos como refugo.*

*A elaboração de artefatos de maneira improvisada retrata a espontaneidade do cotidiano das metrópoles e propõe uma reflexão sobre a perecibilidade, deteorabilidade e reinvenção da tecnologia, em um contexto em que o excesso de objetos fora de uso acumulados sobre a superfície do globo é uma questão crucial.”*

**Marcus Bastos**





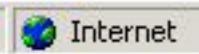
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Joppa xanthostigma, **Gam. Biologia** Centr.-Amer. 1885, Hym. 1, p. 196, <J. Kriechbaumer  
does not refer to this species and I can hardly believe it to be ...

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