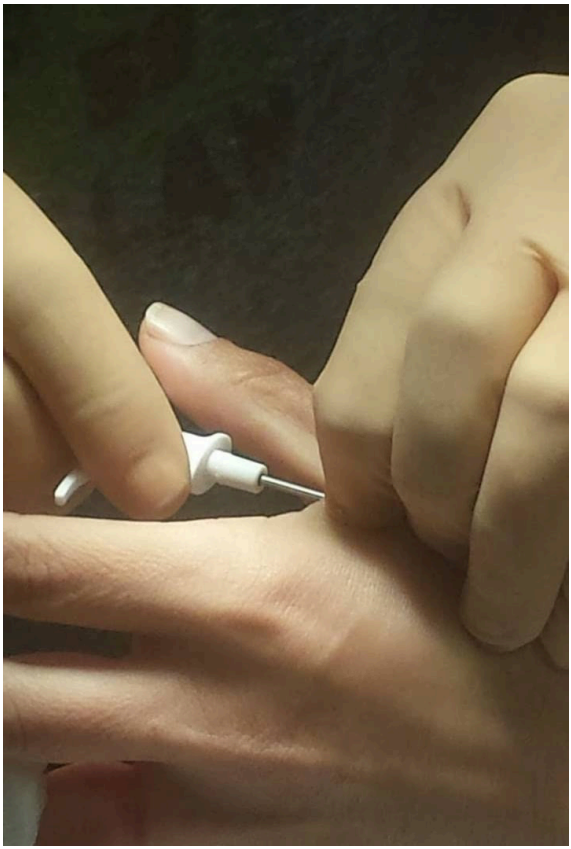
Human Augmentation Zine

HAZ-MAT

Makers Artists Techies



Welcome to issue 1! Here we are creating a space for our voices. And we're just getting started. ~Cyberlass

Human Augmentation

There is no one definition of what human augmentation is and who does it.

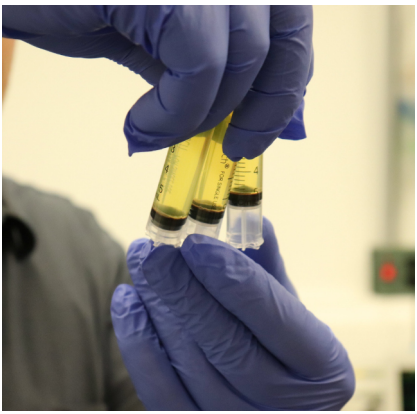
Body hackers

We change our bodies with science, art and technology.

We make

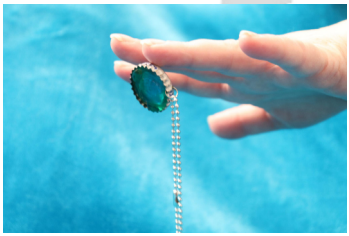
We create

We innovate

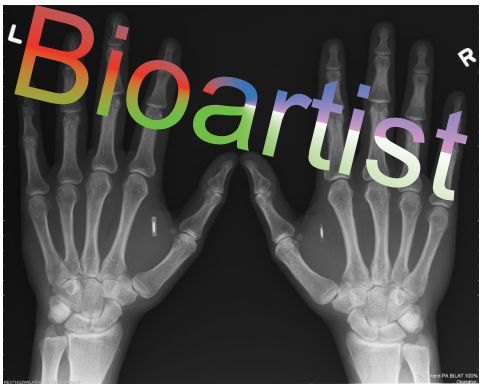


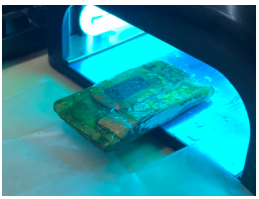
Biohackers

Grinders



Cyborgs





Human Augmenters

Art & Media

We'd love to see art from community members in the next issue.

Media

Some recommendations from the community. These suggestions have not be screened. Please let us know if any are problematic. More media suggestions welcome.

Podcasts

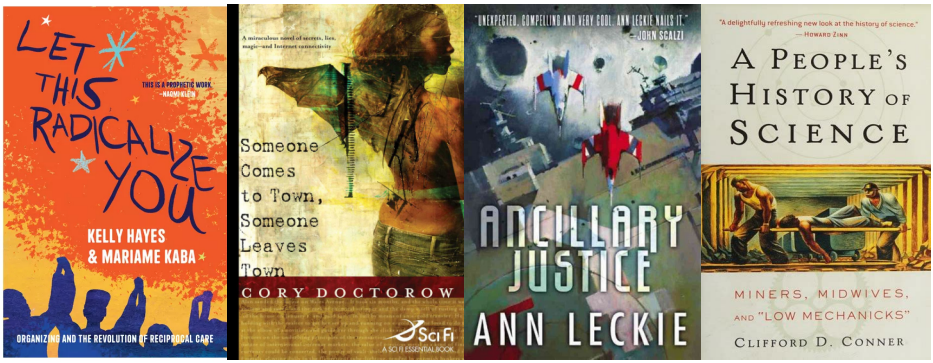
- Science Solved It
- The Male Gayz
- Oh No Ross and Carrie
- Stuff You Should Know
- Chalk Talk Climbing
- Darknet Diaries
- Stuff You Missed in Histor
- The Worst Idea of All Time
- 2 Cyborgs and a Microphone
- Stuff to Blow Your Mind
- Village Global's Solarpunk
- Stuff They Don't Want You To Know
- Smash Fiction
- Sawbones
- Dangerous Minds
- Synthesizer Library Podcast

Guides & websites

- Biohack.me
- Bugmenot.com
- Open Access Guerilla Cookbook [Github]
- https://www.gutenberg.org/
- https://openlibrary.org/

Books

- Nexus trilogy
- Down and Out in the Magic Kingdom
- Let This Radicalize You
- Daemon
- Freedom (tm)
- Ecology without nature
- Someone comes to town, someone leaves town
- Invisible Women
- Overclocked (a collection)
- The Silver Cord
- The Culture series (Ian banks)
- Demon Seed
- Altered Carbon
- Ancillary justice
- A People's History of Science: Miners, Midwives, and "Low Mechanicks"



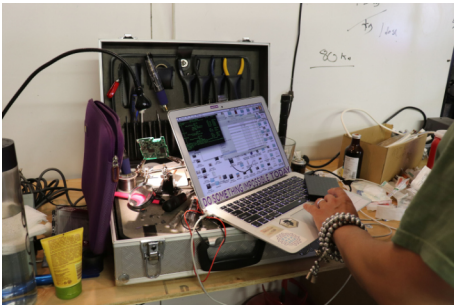
GRINDFEST 2022

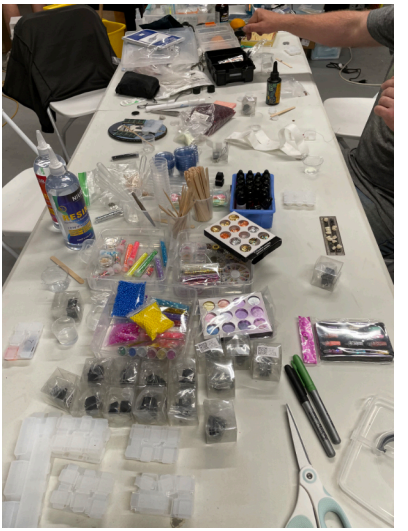
2022 was the return of Grindfest, an annual human augmentation event for biohackers (Grinders).

After two years of cancellations due to Covid-19, Grindfest was held with safety at the forefront and excitement to see everyone again.

SKILLS

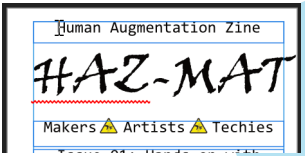
Classes for soldering, working with resin and suture were held throughout the event.



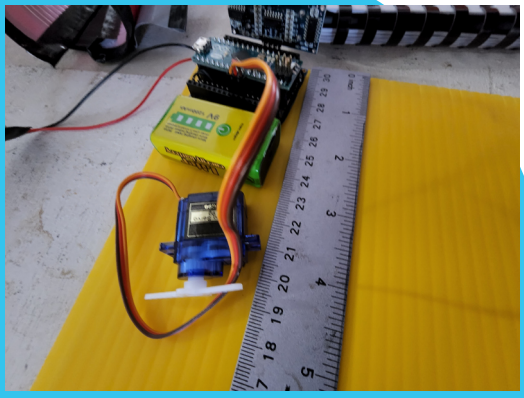


PROJECTS

Community Project - Human Augmentation Zine (HAZ-MAT)



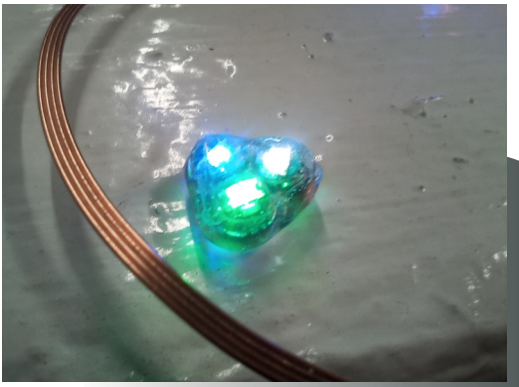
Lab Build Project - Sonic distance measurer using an ultrasonic sensors and Arduino

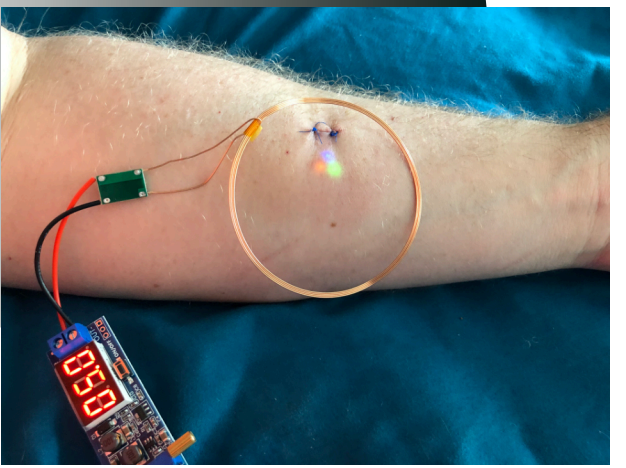


GRINDFEST 2022

PROJECTS

As happens at Grindfest, a project was created and completed. This year the onsite build was LED implants. Small LEDs were coated and tested for quality of illumination of the different color LEDs under the skin.





HIGHLIGHTS

One highlight of the event was a well-received reading of "Punks and profiteers in the war on death" by the author Jacob Black.

Campfire with song and fire dance

Annual electric knife fight

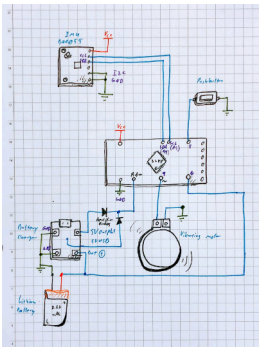
Cardinal: Haptic Compass

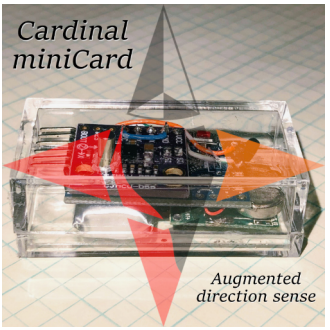
Brian McEvoy

Cardinal is a project to make an implantable haptic compass. Haptic means that you receive data with your sense of touch. Folx have built wearable versions into belts and armbands studded with vibrating motors where the north-facing side vibrates. One grinder mentioned they have issues with existing models when riding bicycles.

Cardinal's scope is to build a compass that vibrates when facing north and is unaffected by nearby iron. I picked a single direction because an implant with four or eight vibrators would be enormous.

I used an Inertial Measurement Unit (IMU) that relies on gyroscopes and accelerometers instead of magnetic fields. I chose the BNO055, which does the heavy math with an onboard processor. The hardware is not open-source, and the units are spendy compared to an IMU without processing.

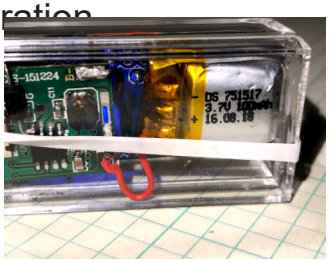


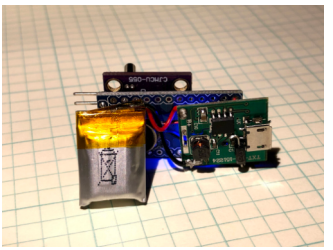


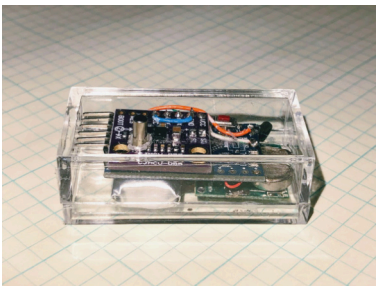
The current prototype uses an Arduino Mini Pro due to its availability and easy programming. The other PCB in the enclosure is a battery charging module with an additional diode that keeps the processors powered during charging.

Constant power is vital since the IMU develops a "memory" as it runs, resulting in more reliable readings. I have to realign the module every few hours by facing north and pressing a button.

After operating for forty-eight hours, it can go half a day without significant drift, but I must start over if the battery dies. I designed the logo like a compass rose so I can apply it to any stationary object to orient myself for calibration.







I finished the proof-of-concept stage, the Arduino sketches are available on GitHub, and I made an Instructable. My blog has a day-by-day build log, including two abandoned hardware models and the different ways I wore the Cardinal during testing.

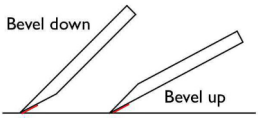
Find more at:

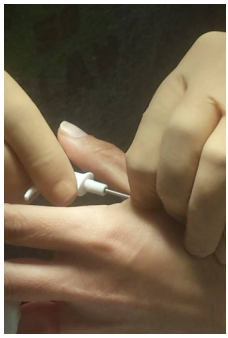
- https://www.instructables.com/MiniCard/
- https://github.com/24Eng/Cardinal
- http://www.24hourengineer.com/search?q=%22InCompass%22&max-results=20&by-date=true

Getting Hands on with RFID Injection

Cassox

Materials





- Detergent
- Diluted bleach
- Sterile drape
- Injector with RFID or NFC tag
- Antiseptic soap
- Antiseptic swab (e.g. chlorhexidine or iodine)
- Gauze and wrap
- Gloves

Note: Know your risks. Research the procedure and aftercare. Have an idea of what is typical and what might require medical attention. This is a low-risk type of body art but it isn't zero-risk. Seek medical attention at the first signs of infection or complication.

Steps

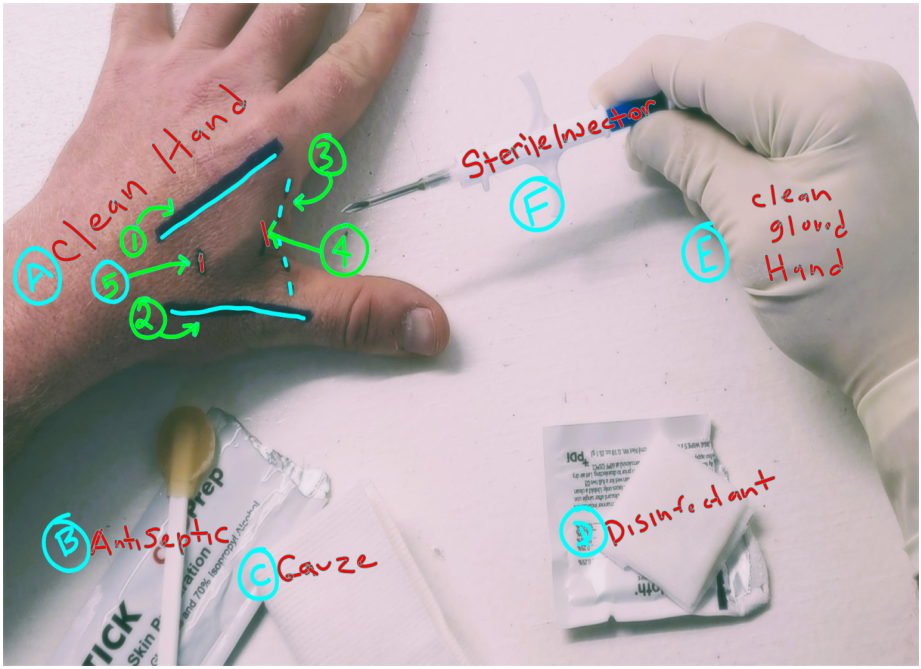
1. Select a workspace - A flat surface like a table is typically used. Clean with a detergent and then disinfect with a disinfectant like a bleach solution. Place a sterile drape. Open and arrange injector, antiseptic, gauze, and wrap.

2. Wash hands - Both recipient and artist wash hands using an antiseptic soap such as CHG. Artist then dons gloves.

3. Antisepsis - Site of insertion is cleaned with antiseptic from center outward using circular motions and then allowed to dry.

4. Place Implant - Pinch and roll skin near site of insertion and then tent skin. Injector is passed through skin bevel upward. Expect resistance until needle passes through to subcutaneous layer. Depress plunger with retracting the injector. Pinch insertion site immediately upon withdrawal of needle.

5. Aftercare - Apply pressure to insertion site using gauze until bleeding stops (normally around 10 minutes.) Apply a new clean piece of gauze and wrap. Keep clean and dry for 24 to 48 hours and then resume normal activity.



A. These are the metacarpals of the thumb and finger.

B. Past this line, the skin is thicker and more sensitive. Stick with the posterior skin of the hand.

C. These two lines represent possible approaches to place the transponder. The standard approach is shown in blue and the Lee approach in yellow. Either direction can be used.

Community Events

TBD 2024, Jan 2023

biosummit.org

April 28-30, 2023
Austin, Texas, USA

$200

the-odin.com

May 26-28, 2023
Tehachapi, CA, USA

Pay what you can

Grindfest.org

at DEFCON 

Call for Papers closes 31 March 2023

Aug 10-13, 2023

TBD, last year was $360

Community Resources

Businesses

Augmentation Limitless
augmentationlimitless.com

The Odin
The-odin.com

Dangerous Things
https://dangerousthings.com/

Community Organizations

Biohack.me forum
https://biohack.me/

Four Thieves Vinegar Collective
https://fourthievesvinegar.org/

Biocurious Community Lab
https://biocurious.org/

Counter Culture Labs
https://www.counterculturelabs.org/

Human Augmentation Institute

https://www.humanaug.org/

Content Wanted

Art

Stories

Tutorials

Projects

Media suggestions

Community submissions
can be sent to
HazmatZine@gmail.com

Want to help make the zine?
Join #zine-hazmat on the
Slack (biohack.me) or email us.