ETHICAL HARDWARE KIT

Ethical Hardware Kit

How can hardware become more ethical, more decolonial, more sustainable? Maybe we need to get on our feet and become nomadic, get used to change. Nothing can stay the same if we take this seriously. The Ethical Hardware Kit is a fun way to take this seriously. It contains tools, materials and devices for building computational electric circuits from existing materials – stuff you can find locally. It even allows you, in a remote or rural area, to set up a tiny hacklab, as easily as you would set up a picnic somewhere. First, it requires you to move from metropolis to periphery. You take your backpack, walk to the place of your choice and unfold the three packages that come with the backpack on the ground. Each package unfolds into a hexagon-shaped piece of cloth inhabited by recycled, urban-mined, salvaged or self-made parts. Tutorials are stitched into textiles attached to the main cloth. These tutorials show you how to use these parts to make a loudspeaker (electronic kit), vegan leather out of kombucha (wetlab kit) or simply instructions to sit on a pillow and meditate (textile kit).

Ethical Hardware Kit: action in forest by Patrícia J. Reis and Stefanie Wuschitz, 2023
Photo © Janine Schranz

Concept and design: Patrícia J. Reis and Stefanie Wuschitz, in collaboration with Media Design students (Hackerspace Cultures) of the University of Arts in Linz, Austria – Melanie Steinhuber, Petra Francesca Weixelbraun, Florian Winkler, Alba
Curatorial work: Patrícia J. Reis
Textile design: Erika Farina

Contributors/experts: Gameli Adzaho, Seyram Avle, Milton Raggi, Mariá Antonia González Valerio, Saad Chinoy, Ira Agrivina, Hannah Perner-Wilson, Rajina Shresta

The hardware in the electronic kit can be used to measure electronic input (receiving a signal) and generate electric output (sending a signal). The tutorials also explain how to create materials that either allow or block electric current, known as conductive and non-conductive. Then, the core part of the Ethical Hardware Kit comes in: the Clay PCB board. A self-made circuit board, from clay and recycled silver, with an old microcontroller that takes care of the data-processing part. It is already programmed, so you can use the inputs and outputs for different purposes involving sound, light, motor movement or various measurements. With all these elements, you can assemble interactive circuits. You could, for example,

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sonify your measurements: the embroidered tutorial by Hannah Perner-Wilson provides instructions on how to make a speaker out of forest leaves, wire and old magnets.

The second module is designed for wetlab practices, incorporating tools and materials that are essential for wet laboratory work. This includes items required for measuring, mixing and ingredients that are essential for accomplishing wetlab protocols, fostering a multidisciplinary approach within our kit. The embroidered tutorial by Saad Chinoy provides instructions on how to make vegan leather out of kombucha.

Ethical Hardware Kit: wetlab kit by Patrícia J. Reis and Stefanie Wuschitz, 2023
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Textile design: Erika Farina
Contributors/experts: Saad Chinoy

The third module focuses on textile tools and materials, specifically curated not only for crafting textiles from naturally available materials but also for the reproduction of similar kits. This forward-thinking inclusion encourages sustainability and self-sufficiency by empowering users to replicate the kit, extending its impact and promoting a culture of collaborative making. The embroidered tutorial by María Antonia González Valerio offers instructions on how to use a pillow (the base of the textile-made backpack) for the practice of meditation and the state of being grounded.

Ethical Hardware Kit: textile kit by Patrícia J. Reis and Stefanie Wuschitz, 2023
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Ethical Hardware Kit: wetlab kit (detail)
by Patrícia J. Reis and Stefanie Wuschitz,
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