Who is Studio HILO?

Studio HILO creates playgrounds for independent yarn manufacturing and empowers people for local production. The HILO Spinning Machine (and Software) is an open source project by Studio HILO and allows users to produce their own customized yarn.
More information: www.studiohilo.com

What can you do with the HILO Spinning Machine/Software?

With hardware (HILO Spinning Machine) and software (HILO App) you can create different kinds of yarns. The software helps you to design and plan the yarn digitally – for weaving or knitting textiles. The hardware allows you to spin and twist the personalized yarn, all you have to do is to insert raw fibres of your choice (e.g. wool, flax, plastics) and press play. This is a tool for prototyping and experimenting!

How does this instruction work?

We made a step by step instruction for materials order, hardware construction and software control. Just follow the order of the folders and in each folder you will find a readme.pdf that instructs you – please read it first of all.

What are the steps?
1. Introduction
2. Order_Material List
3. Prepare_3-D and laser cutting
4. Build_HILO Spinning Machine
5. Download_HILO App
6. Connect_Arduino
7. Documentation_HILO Software
8. How to start?

What is the status quo of this project?

We documented every part for the HILO Spinning Machine 3.0 / Software but we continue working on both. This project is at an early stage of development, every piece of hardware and software is in beta version.

How to reach out for support?

We built this, but we need your help to adjust and improve the current prototype. Send us your ideas, experiments, bugs and improvements. We are happy to see our project grow!
Get in touch with us via diy@studiohilo.com

Have fun!

_____

How to start Documentation of HILO open source spinning wheel

How to start?

Studio Hilo created a new hardware and software (HILLO app) open-source spinning machine. With this machine you can create different kinds of yarn by spinning en twisting fibers, threats ore unseals material. Experimenting and find the edges is on yours.

We document it every part but we still working on the machine, so please be aware the project is in a beginning stage of development. We put our second prototype online.
If you in to a new kind of working and exploring is this something for you, but still it's also up to you to going into testing en reshape it.

We made a step by step instruction for the Material list, Hardware and Software.
Just follow the consecution of the folder. In each folder you will find a pdf. Please read it first and than start to build.

We built it but we need your help to adjust and improve the current prototype J
Please write us new ideas, bugs you find and parts you have for improvement.

Mail for Open Source: diy@studiohilo.com

Studio HILO

We are studio HILO, Co-founder Sara Diaz and Natalija Krasnokova and Vera Castelijns…. Alan and Tiago???? (steal this from the website but needed to shape it)

Studio HILO prototyping a new way to create textiles, This project challenges the process of yarn production in the same way 3-D printers are revolutionising manufacturing. The HILO machine and software enable users to determine the textile properties at the very beginning of its production process: the yarn spinning.

Inspired by the ancient textile technique Ikat, in which yarn was dyed partially by hand to create patterns, evolved the idea of combining the complex ancient method with digital tools to reduce the technical complexity of the process. The aim was the fusion of analogue textile techniques with digital information processing: Weaving and computers are digital systems that work strictly with binary codes. This allows the transmission of information between both media. Such a combination opens up a new path in textile design, where the design process emphasizes the original material and begins with the fibers of the yarn. Yarn is the basic element for any textile construction.

The HILO software translates a digital pattern or an image into different yarn properties. By mapping the pixels of the image, it can translate different shades of colours into yarn thicknesses, from very light and loose to hard and thin. It can also resize the image to fit the desired textile dimensions and define either knitting or weaving technique. This results in textiles with unique tactile and aesthetic qualities. A finished piece can be applied in fashion, interior, industrial design or functional textiles.

The vision behind the project goes beyond the spinning machine and software. Established in 2018 as studio for digital textile education, Studio HILO offers workshops and trainings on sustainable yarn manufacturing, open hardware and digital spinning processes. By giving access to a European community of designers, researchers, small manufacturers and SMEs they create the possibility to experiment with local yarn manufacturing.

Introduction
- · We built it but we need your help to adjust and improve the current prototype
- · Please write us new ideas, bugs you find and parts you have for improvement.
- · Who is Studio HILO & what are we doing
- · Mail for Open Source: diy@studiohilo.com

Material list

Pdf. Attachment Material list

Excel sheet -
Recommend suggestions ordering – and links

Hardware

Follow the instructions pdf in the Hardware folder.

<u>hardware</u>

Start Building:

1. Extrusion's

Mechanics

1. Drafting system
2. Elevator

Electronics

Pdf. Datasheet and scheme

1. Arduino
2. motor shield
3. stepper motor driver
4. stepper motor
5. power supply

Software
Folder the instruction pdf in the Software folder

<u>Software</u>

1. Start Hilo app
2. Arduino
3. Processing
4. Activating app