JOY-PI NOTE 2

3-IN-1 SOLUTION: NOTEBOOK, LEARNING PLATFORM AND EXPERIMENTATION CENTER



Joy-IT powered by SIMAC Electronics GmbH - Pascalstr. 8 - 47506 Neukirchen-Vluyn - www.joy-it.net

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1. GENERAL INFORMATION

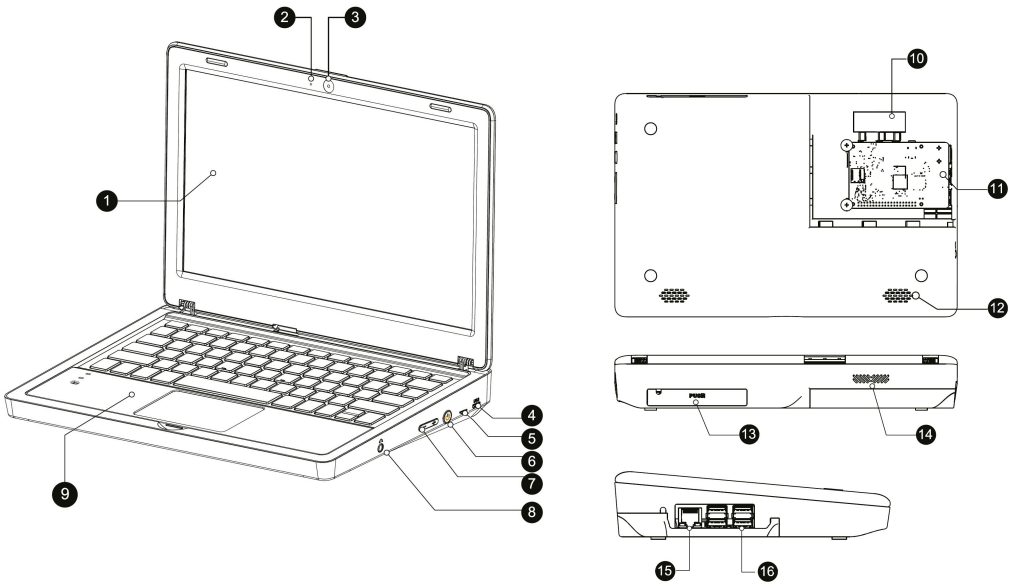
Dear customer,
thank you for choosing our product. Below we will show you what you need to bear in mind during commissioning and use.

Should you encounter any unexpected problems during use, please do not hesitate to contact us.

2. PREREQUISITES

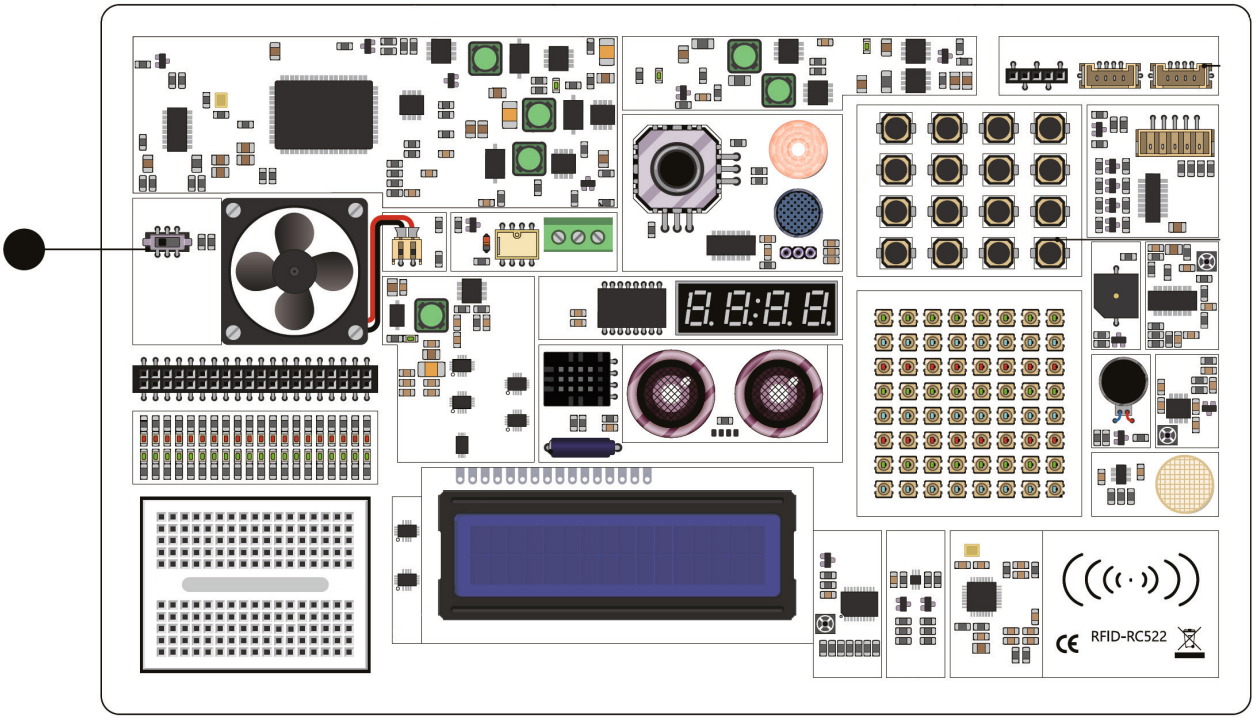
To operate the Joy-Pi Note, we recommend using a Raspberry Pi 5 or a Raspberry Pi 4 with at least 4GB of RAM. This is the only way to ensure trouble-free operation, in particular the use of Scratch applications.

3. OVERVIEW



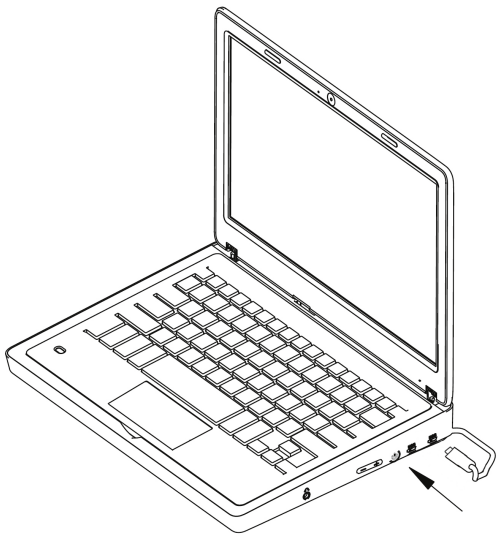
1. 11.6" IPS screen
2. Microphone
3. 2MP camera
4. USB-C power supply
5. Mini-HDMI output
6. Power button
7. Brightness control
8. 3.5mm headphone jack
9. Removable, wireless keyboard
10. HDMI
11. Raspberry Pi compartment
12. Speaker
13. Storage compartment
14. Ventilation opening
15. Network connection (Raspberry Pi)
16. USB connection (Raspberry Pi)

Tip: When using the Joy-Pi Note, you may want to use the GPIO connections of the Raspberry Pi independently of the sensors and modules connected via the Joy-Pi Note. In this case, the connection between the modules and the Raspberry Pi can be disconnected via a switch.



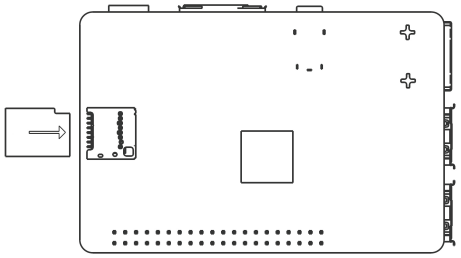
4. POWER SUPPLY

Your Joy-Pi Note can be powered via a suitable USB-C power source (5 V - 5 A).

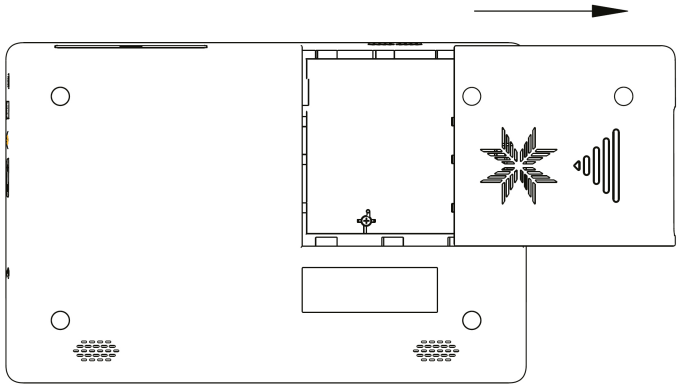


5. MOUNTING THE RASPBERRY PI

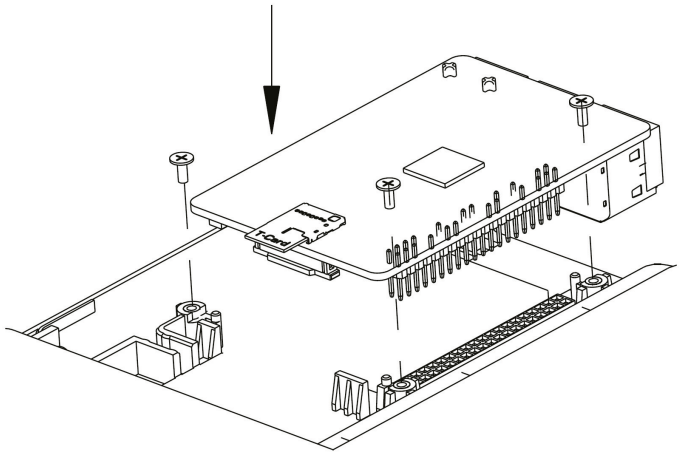
1. Insert the enclosed SD card into the SD card slot of your Raspberry Pi.



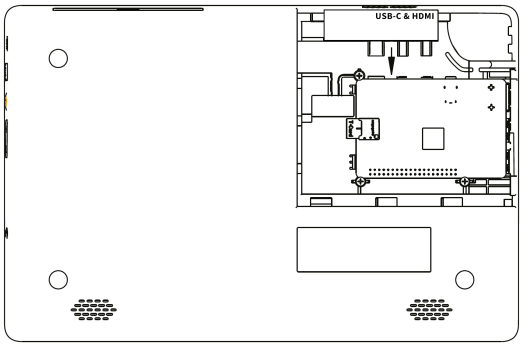
2. Open the Raspberry Pi mounting compartment on the back of your Joy-Pi Note by sliding the cover to the right.



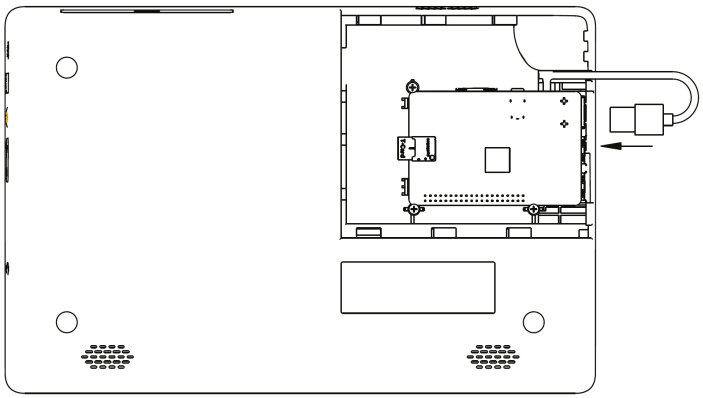
3. Insert the Raspberry Pi into the mounting compartment. Then insert the screws to secure your Raspberry Pi.

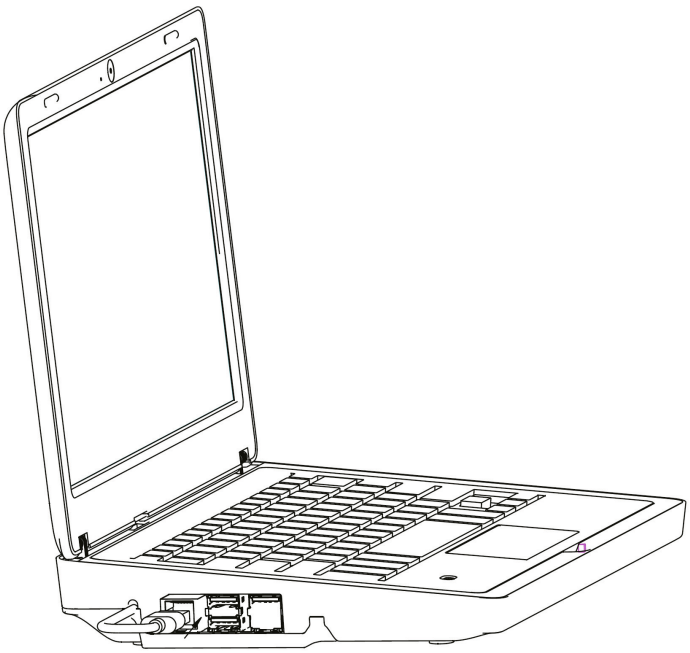


4. Connect the adapter board to the HDMI & USB-C interfaces of your Raspberry Pi.

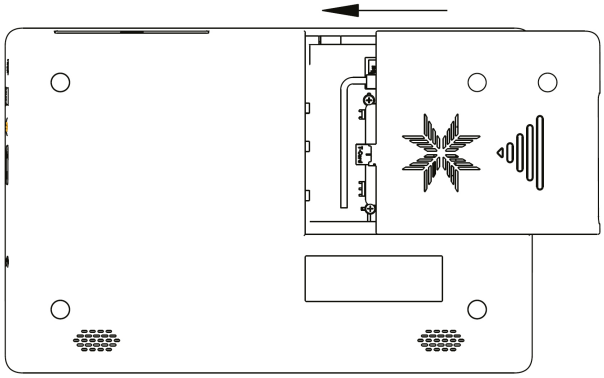


5. Then take the USB camera cable and connect it to one of the USB ports on your Raspberry Pi.

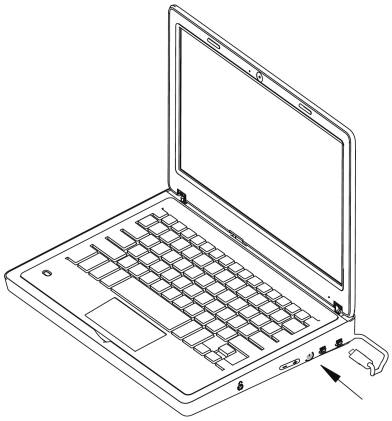




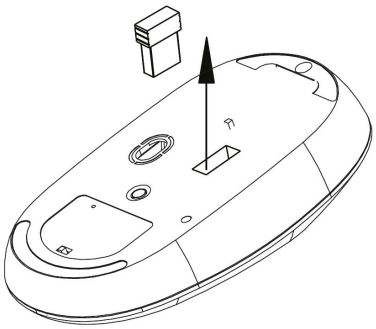
6. Close the cover.



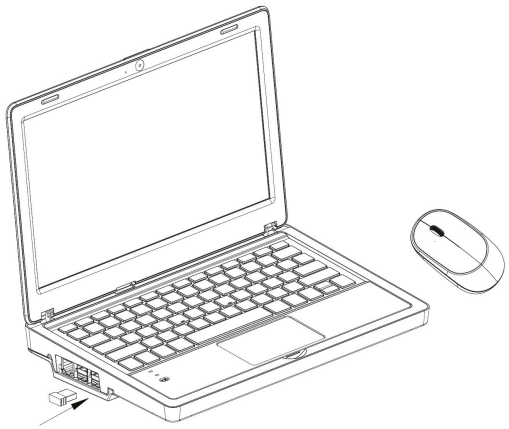
7. Connect your power supply to the Joy-Pi Note.



8. Remove the receiver from the storage compartment of the wireless mouse.

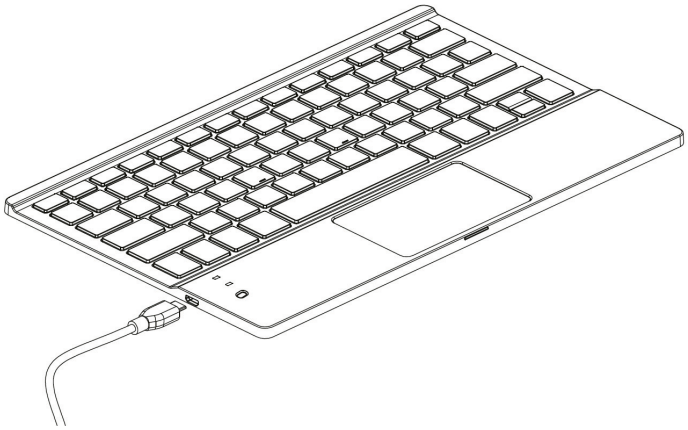


9. Then insert the receiver into one of the USB ports on your Raspberry Pi.

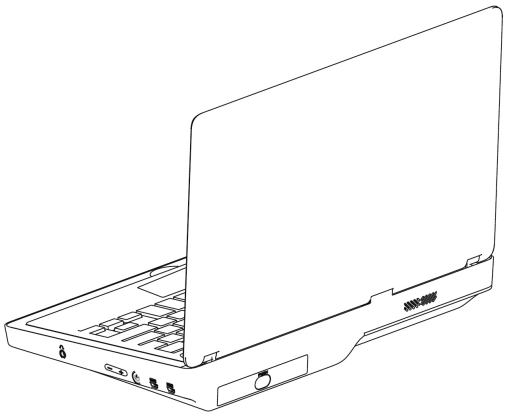


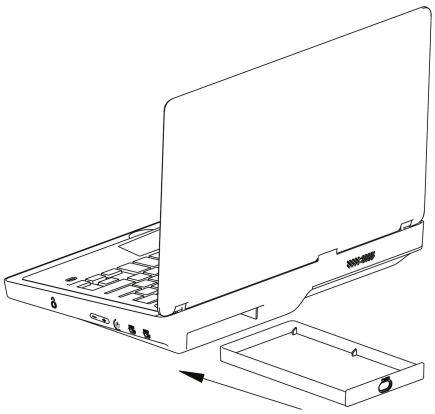
10. Now set the switch of the wireless mouse and keyboard to ON.

Tip: If the power LED on the keyboard starts to flash, then the battery level is low. Simply connect a microUSB cable to the keyboard to recharge the battery.



11. Your Joy-Pi Note has a storage compartment on the back. You can open the compartment by pressing it lightly. Use it for a power bank or to store your electronic components.

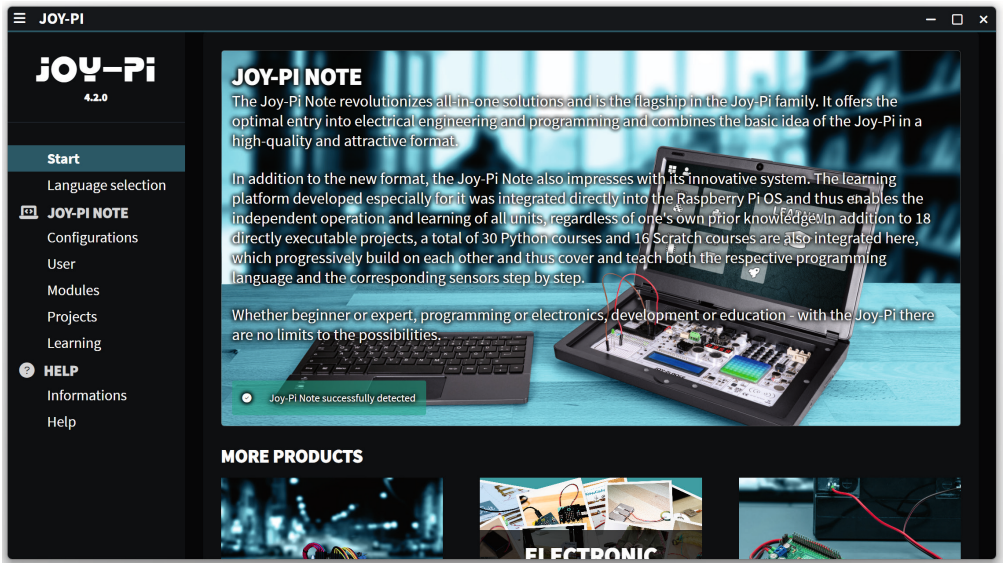




6. EDUCATIONAL SOFTWARE

After starting your Joy-Pi Note, you can start the preinstalled learning center.

Then you can choose between the following programs:



Main menu of the learning software

CONFIGURATIONS
Access to the module libraries & scripts.

USERS
Access to the user administration to change the password and to reset the statistics.

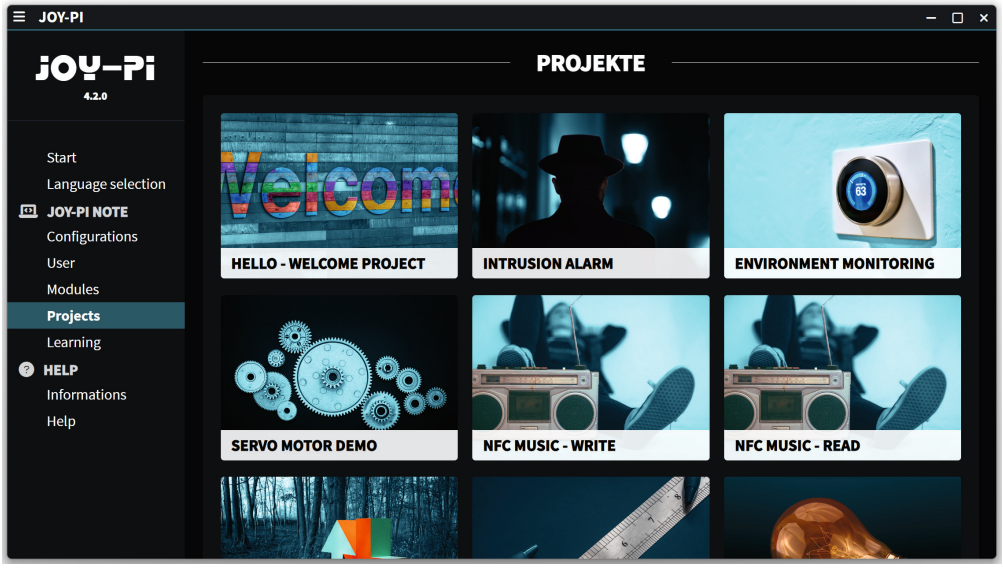
MODULES
Overview of all modules available on the Joy-Pi Note.

PROJECTS
Immediately executable sample programs that combine different modules with each other.

LEARNING STATIONS
Central learning environment of the Joy-Pi Note, where all the basics of programming and the built-in modules, both for Python and Scratch, are explained step by step.

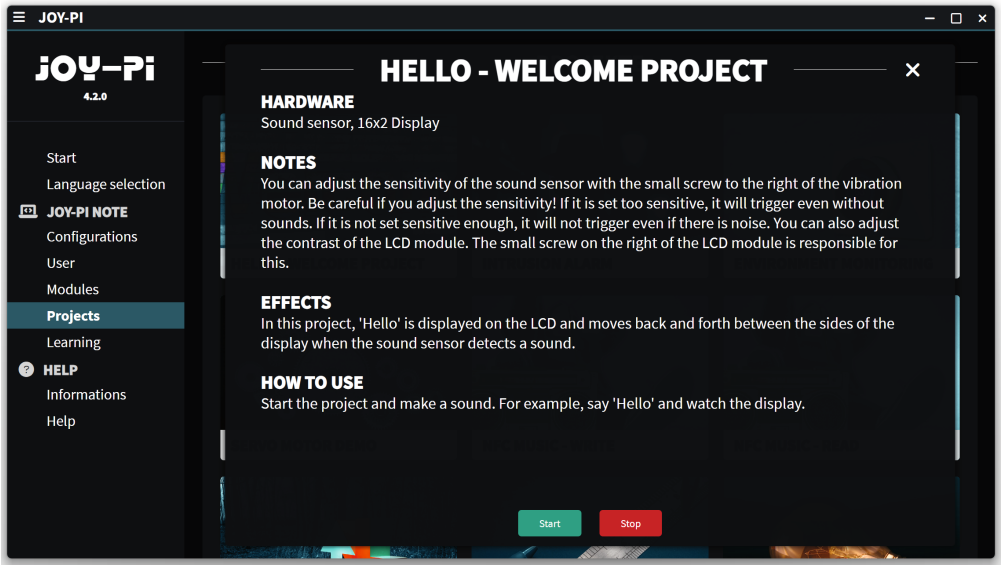
6.1. PROJECTS

The projects offer you an ideal start to get an initial overview of your Joy-Pi Note and the sensors and modules installed in it. You don't need any experience or programming knowledge. The individual projects are easy to start, run and discover without any effort.



Project overview

Simply start a project of your choice by pressing the **Start button**. The project will then open automatically.



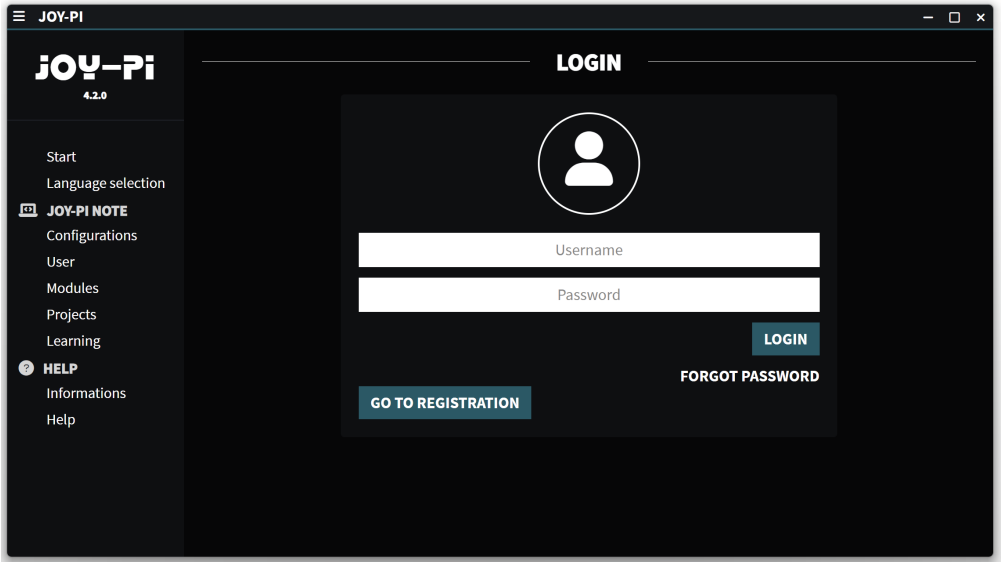
Individual project

After starting a project, the summary is displayed. Here you can find out which sensors and modules are used by the project, what needs to be considered, what triggers the project and how to operate it.

Simply start the project with the "Start" button. You can end the project again by using the arrow at the top left to return to the project overview or by pressing the "Stop" button.

6.2 LEARNING

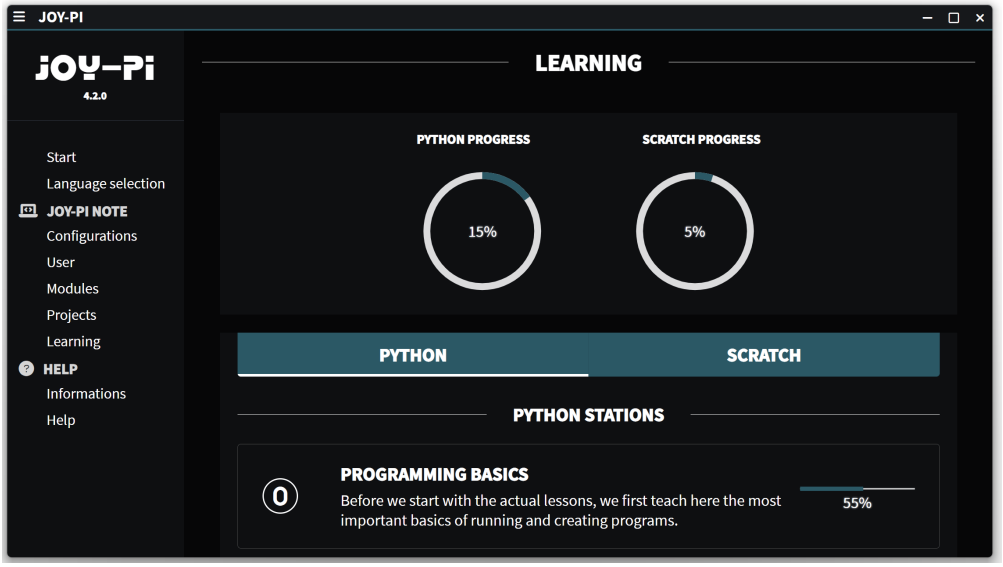
Once you have opened the learning area, you will first be taken to a login area. The Joy-Pi Note user accounts are used to register your personal learning progress. In this way, individual progress can be recorded and constantly improved, even for several users.



User login

To enter the learning area, first log in with your user data. If you have not yet created your own user, you can do so by clicking on the "**Go to registration**" button . Simply follow the wizard and complete your registration. All you have to do is enter a login name and a password **of at least six characters**.

Once you have logged in, you can choose between two programming languages: *Python* and *Scratch*.

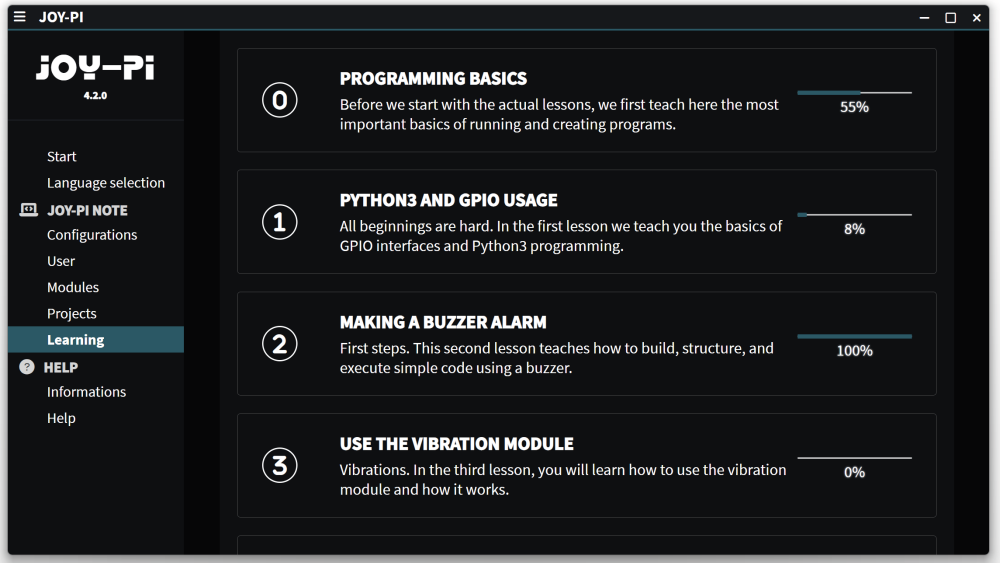


Selection of the programming language

Python is a comparatively easy programming language to learn. Here you will not only learn the basics of the language, but also how to directly control the sensors of your Joy-Pi Note.

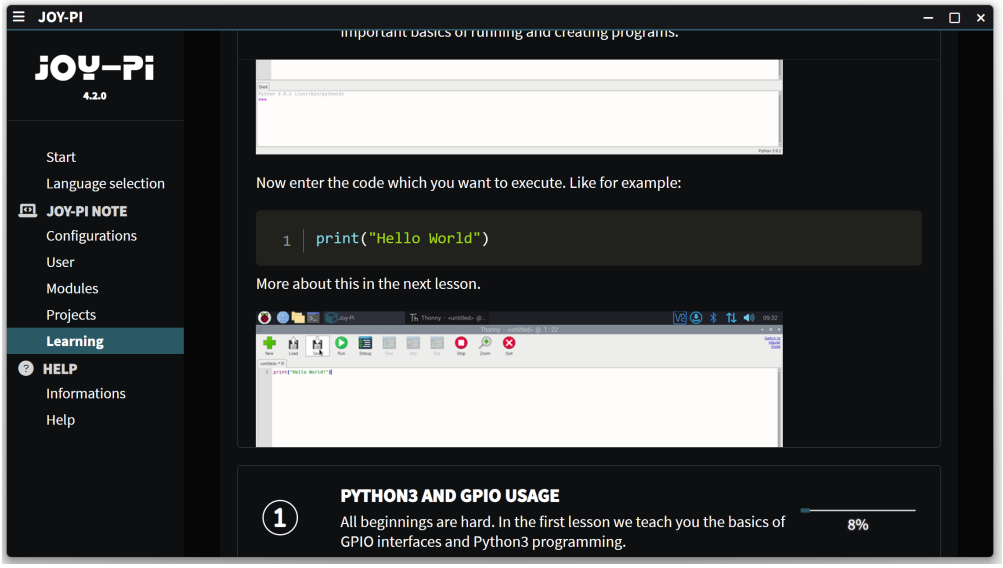
In contrast to Python,*Scratch* is a block-oriented programming language that is primarily aimed at children and young people. Graphical blocks can be used to create applications that teach the basics and logic of programming.

As soon as you scroll down, you will be taken to all the lessons in your selected area. If you click on a lesson, it will open automatically.



Python lesson overview

Here you can work your way through the lesson step by step. All important information, explanations and codes are brought closer to you here.



Python single lesson

7. REINSTALLING THE LEARNING SOFTWARE

If you want to reinstall the educational software, for example because you want to use a new microSD card, this is of course no problem. You can always find the latest version of the Joy-Pi software at **Joy-Pi website**.

Simply create a fresh installation of the Raspberry OS and then follow the installation instructions on the Joy-Pi website.

8. CONTROL OF THE SENSORS & MODULES

In addition to the projects and learning lessons, you can of course also create your own projects with your Joy-Pi Note. To make your work and overview easier, we have created an overview for you below that shows you how to access the individual modules of your Joy-Pi Note.

MODULE	CONNECTION
DHT sensor	0x38
RGB matrix	0x66
Touch sensor	GPIO17
Buzzer	GPIO18
Servo motor	GPIO19
Infrared	GPIO20
Relay	GPIO21
Tilt sensor	GPIO22
PIR sensor	GPIO23
Sound sensor	GPIO24
Vibration motor	GPIO27
Stepper motor	Step 1 - GPIO5 Step 2 - GPIO6 Step 3 - GPIO13 Step 4 - GPIO25
Ultrasonic sensor	Trigger - GPIO16 Echo - GPIO26
Light sensor	0x5C
16x2 LCD display	0x21
7-segment display	0x70
RFID module	CE0
Joystick	CE1

9. INFORMATION & TAKE-BACK OBLIGATIONS

Our information and take-back obligations under the German Electrical and Electronic Equipment Act (ElektroG)

Symbol on electrical and electronic equipment: 

This crossed-out garbage can means that electrical and electronic appliances **do not** belong in household waste. You must hand in the old appliances at a collection point. Before handing them in, you must separate used batteries and accumulators that are not enclosed by the old appliance.

Return options:
As an end user, you can return your old appliance (which essentially fulfills the same function as the new appliance purchased from us) for disposal free of charge when purchasing a new appliance. Small appliances with no external dimensions greater than 25 cm can be disposed of in normal household quantities regardless of whether you have purchased a new appliance.

Possibility of return at our company location during opening hours:
SIMAC Electronics GmbH, Pascalstr. 8, D-47506 Neukirchen-Vluyn

Return option in your area:
We will send you a parcel stamp with which you can return the device to us free of charge. To do so, please contact us by e-mail at Service@joy-it.net or by telephone.

Packaging information:
Please pack your old appliance securely for transportation. If you do not have suitable packaging material or do not wish to use your own, please contact us and we will send you suitable packaging.

10. SUPPORT

We are also there for you after your purchase. If you still have any questions or problems arise, we are also available by e-mail, telephone and ticket support system.

E-mail: service@joy-it.net
Phone: +49 (0)2845 9360 - 50

For more information, please visit our website:
www.joy-it.net

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