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Quick Start Guide

BOSON Programming Starter Kit for micro:bit

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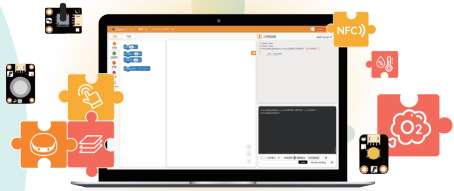
Introduction

BOSON Programming Starter Kit for micro:bit is a set of modularized electronic building blocks designed for beginners to learn coding and electronics. It aims to help students comprehend in-depth programming information from basic logic study to graphical programming education.



Kit Content

Input Module

i13 Motion Sensor

i1 Rotation Module

i2r Red Button Module

i9 Sound Sensor

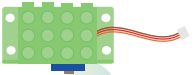
Output Module

o7 Voice Recorder Module

o6 Fan Module

o2r Red LED Module

Speaker Module



9g Metal Servo Module

Colorful LED Strip

Function Module

f1 Logic Gate Module-AND

f2 Logic Gate Module-OR

f3 Logic Gate Module-NOT

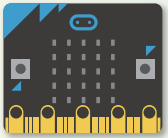
Power Module

m2 Mainboard-1IO

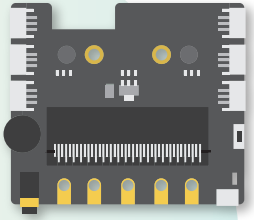
Battery Holder

Kit Content

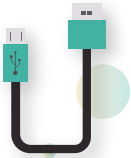
Others



micro:bit Board



micro:bit Expansion Board



USB Cable

BOSON Cable

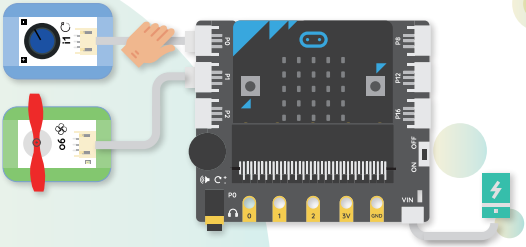
What is Boson?

Non-programming

Input Module | Power Module | Function Module | Output Module

The Boson is composed of **input modules**, **output modules**, **function modules** and **power modules**. Plug and play, and you can realize all kinds of creative functions by easily connecting modules to each other.

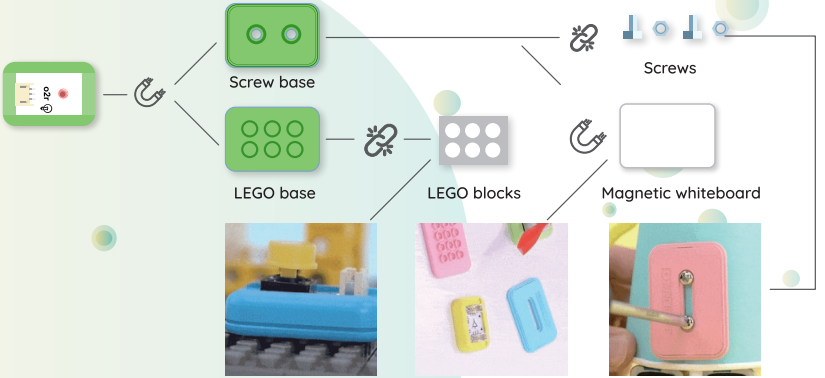
programming



Combine Boson with a **micro:bit board**, and program on Mind Plus Software, and then you can explore more creative possibilities!

What is Boson?

Designed with a multifunctional base, Boson modules can be fixed onto all sorts of surfaces to help you easily build your projects.



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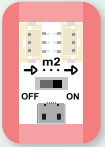
Build your first interactive project without programming!

Build your first interactive project without programming!

01 Preparation

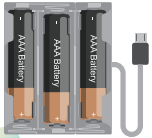
i2r Red Button Module



m2 Mainboard-110

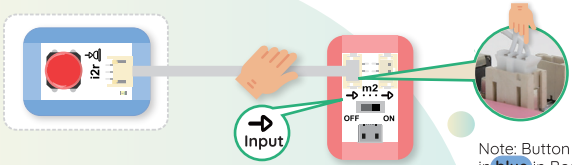
o2r Red LED Module

BOSON Cable



Battery Holder + Battery

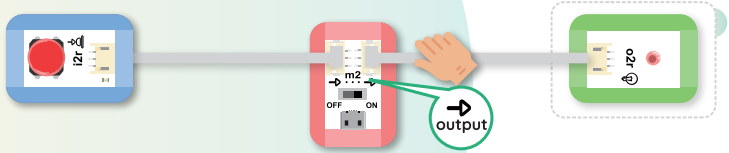
02 Connect the button module to the input (left) interface of the power board.



The cable's pin header should be plugged in completely so that it is not easy to pull it out.

Note: Button module belongs to the **input module**, represented in **blue** in Boson.

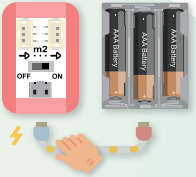
03 Connect the LED module to the output (right) interface of the power board.

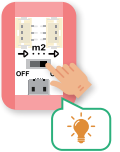


Note: LED module belongs to the **output module**, represented in **green** in Boson.

Build your first interactive project without programming!

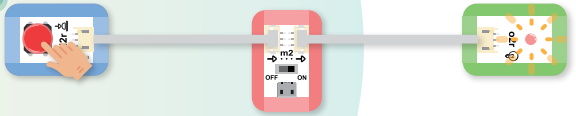
04 Plug the USB cable into the board when connected to the batteries, and then turn the switch to ON (the light on the board will light up).



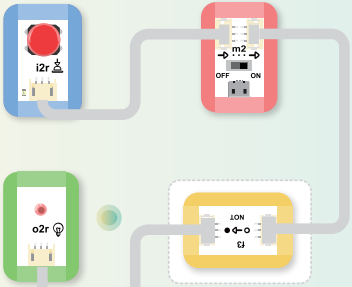


Note: Power board belongs to the **power module**, represented in **red** in Boson.

05 Press the button to start your first project!



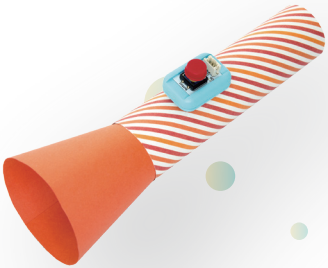
06 Now, try adding a Logic Gate Module-NOT into the project and observe the light.



Please plug the cable in the direction of the arrow indicated

Note: Logic Gate Module-NOT belongs to the function module, represented in yellow in Boson.

07 Last, build a simple flashlight model for your project using the materials around you.



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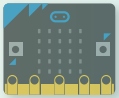
Program
Boson Modules with micro:bit

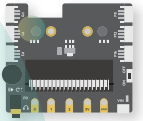
01 Preparation

i1 Rotation Module

o6 Fan Module



micro:bit Board



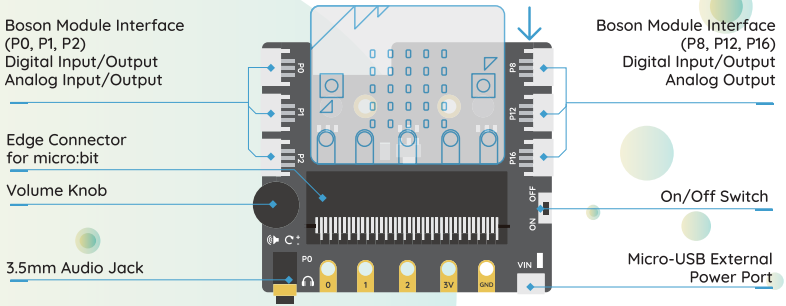
micro:bit Expansion Board

PC(USB interface)

USB Cable

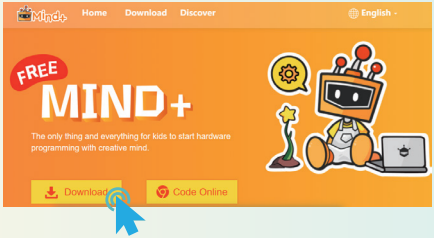
Program Boson Modules with micro:bit

Plug the micro:bit into the expansion board and connect to the Boson

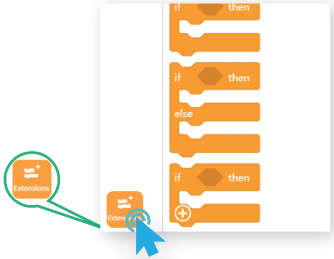


Note: Since the micro:bit USB power is limited, please connect to an external power source via the expansion board's micro-USB port while using Boson modules, and please note that this USB port cannot be used to upload programs.

02 Visit the website www.mindplus.cc,to download and install the mind plus programming software.

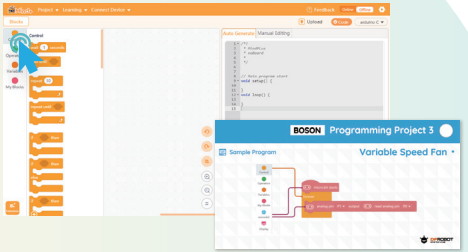


03 Open mind plus, click the “Extension” button at the bottom left corner, and then select micro:bit related code blocks.

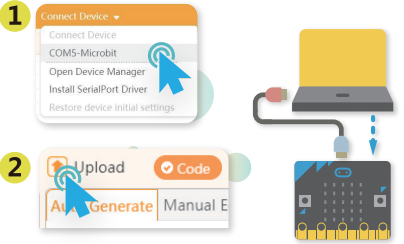


Program Boson Modules with micro:bit

04 Refer to the project card, then drag and snap blocks to the program.

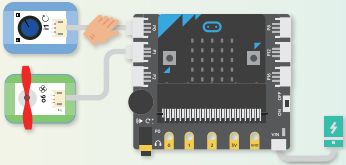


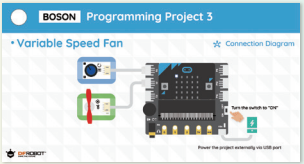
05 Connect micro:bit to a PC, then choose the connected device after installing the serial port driver. Click “upload”to upload codes to the micro:bit board.



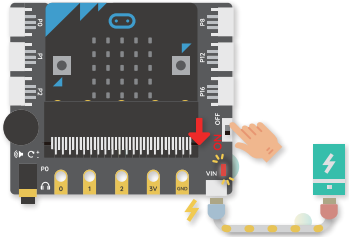
Connect the micro:bit USB port with the computer when downloading the program.

06 Refer to the project card, then connect the Boson modules to the main controller board.

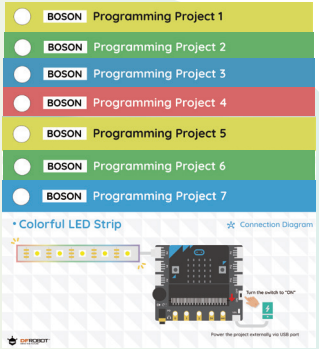




07 Connect the external power source to the expansion board, and turn the switch to ON!



Product Reference Material



There are 12 Project Cards in this kit