

e-book

Hamster Coding

Scratch 1

Written by ConceptOn



How to Use

This manual is designed for the educational utilization of the Hamster robot.

- Please use this manual as on-screen instructions when teaching the Hamster class.
- The contents are easy to understand. Just read them before the class.
- Worksheets can be downloaded from the Robomation website.
- This manual can be used to ensure the best lesson plan.
- For more information, contact us at 7concepton@daum.net.



Hamster Coding

Scratch 1

Let's get started with Hamster coding with the Scratch program!

The use of the Scratch programs will make coding more interesting!

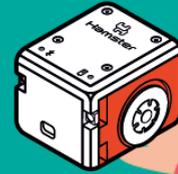


Today's Activity

Division	Description	Time
Introduction	Explore the problem. Why not get ready for Hamster coding with Scratch?	5min
Development	Find out a solution. Let's install the Scratch program and connect your Hamster. Solve the problem. Let's write the code for practice to operate your Hamster.	30min
Conclusion	Review today's activities. Let's talk about what you have learned and enjoyed.	5min

Shall we install
the program and
connect your Hamster
robot?

Then, write the code
for practice to make
your Hamster work.



Get ready

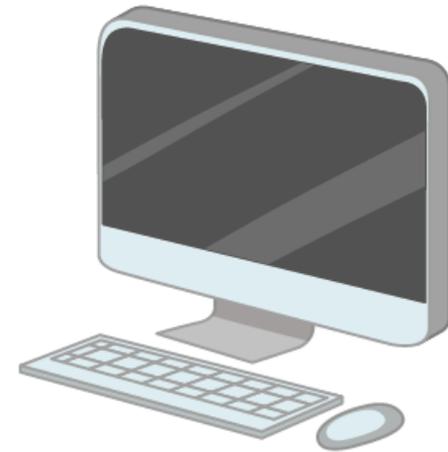
First, let's find out what is needed for Hamster coding.



1 Hamster



2 Bluetooth Dongle



3 PC

4 Writing supplies (pen and paper)

5 Charging cable

Install the program

Install the program in order
while viewing the linked
[Hamster school website](#).



Robot Coding Software: Scratch + Entry + PlayBot + JavaScript

Current Version: 2.1.0 (Release: 2024.06.28)

- When you install the Robot Coding Software, you can use Scratch, Entry, Playbot, and JavaScript.
- The device driver for the USB dongle is included in the installation file.

Download

The Robot Coding Software for Windows/MacOS includes the Scratch 3 Offline Editor (version 3.3.0).

The Entry Offline Editor is not included and must be installed separately.

The Scratch 3 Offline Editor includes AI blocks.

For Windows, it is recommended to use the AI blocks on Windows 10 64-bit or higher.

Computationally intensive AI (detailed face detection, object detection) requires relatively high computer specifications.

Entry Offline Non-included Version

Supported hardware: Hamster, HamsterS, Turtle, Albert School, UO Albert, Albert AI, Cheese Stick, Brown, Sally, Zerone, Beagle

1. Install the Robot Coding software.
2. Connect the Hamster robot to your PC.

Connect the Hamster robot to your PC



Pinkie

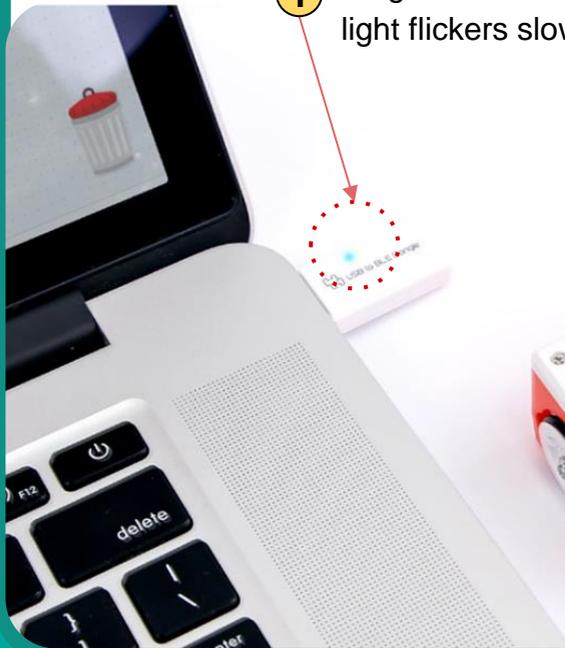
After installing the software, you need to pair your Hamster with a device to be used.

Pairing? What is it?



Sunny

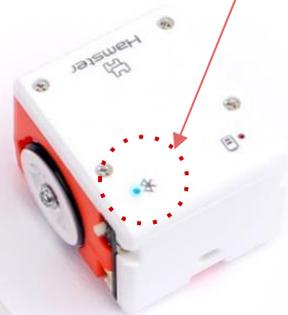
- 1 Plug the Bluetooth Dongle into the USB port of your PC, and check if the blue light flickers slowly.



- 2 Turn on Hamster and bring it close to the Bluetooth Dongle.

If the Bluetooth connection indicator is turned on or flickers blue, they are successfully paired with each other.

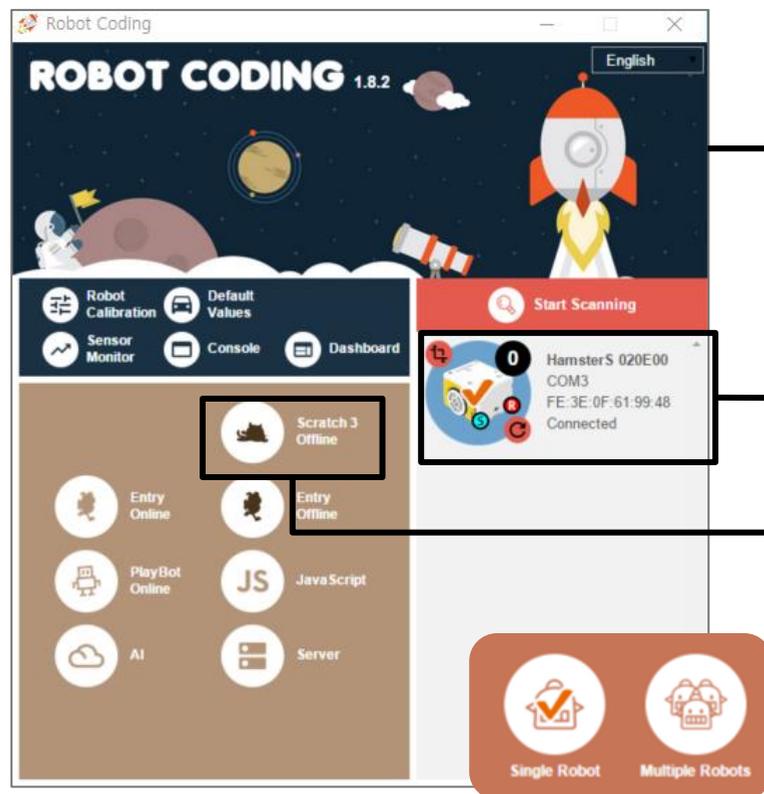
When paired, your Hamster is connected with the Bluetooth Dongle as a pair. Once connected through Bluetooth, they need not be paired again.



Pairing means registering other devices, such as PCs, tablets, and mobile phones, with Hamster.

Open the program

When opening the program, turn on Hamster and plug the Bluetooth Dongle into the USB port of your PC.



Open the program

1

Run the Robot Coding program.

2

Check if your Hamster robot is connected with the Bluetooth Dongle (through its LED light colors).

3

Click on Scratch 3 Offline.

4

Click on "Single Robot" and then "New File."



Exercise 1

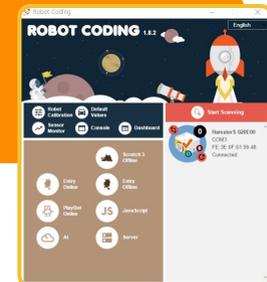
Get ready for Hamster coding by yourself.

1. Pairing



What color are the USB dongle and Hamster's Bluetooth indicator flickering?

2. Open the software



Have you opened the Scratch Offline program?

Check Scratch blocks

While checking blocks, let your Hamster connect to your PC.

Block

Click the Scratch Offline block and (Hamster) Hardware block to see!

Motion
Looks
Sound
Events
Control

Sensing
Operators
Variables
My Blocks
HamsterS

Scratch includes Hamster hardware blocks!

Let's look at the blocks used for Hamster coding.



Exercise 2

Let's write the code as follows so that your Hamster can move accordingly.

① Move forward for 2 s.

② Move backward for 4 s.

③ Left rotate for 3 s.

④ Right rotate for 4 s.

⑤ Move forward for 2 s and then come back.

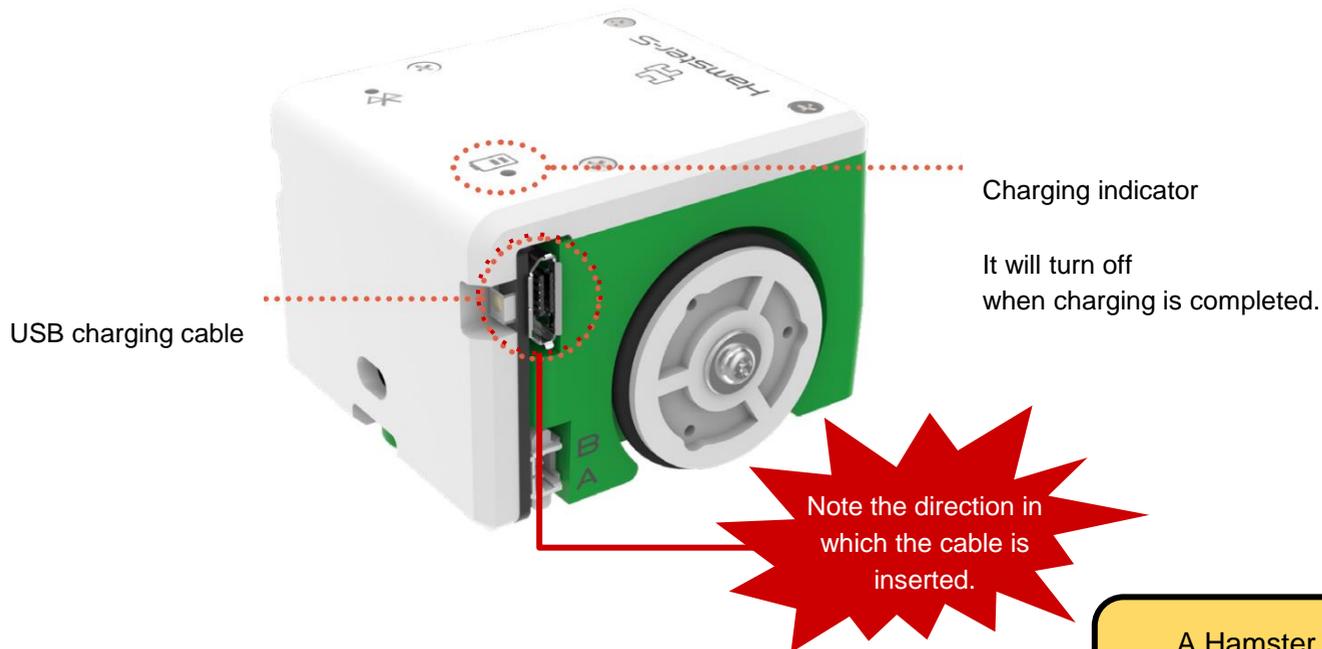
⑥ Keep left rotating.

* Please check the Scratch blocks and write more code for practice to run your Hamster.

Learn how to charge your Hamster

By using a USB cable

You can charge your Hamster using the cable included in the product.



A Hamster robot can be fully charged in about 30 min!
(Continuously available for about 60 min).

Let's Review

- 😊 What did you learn today?
- 😬 Did you encounter any difficulties?
- 😍 What interested you the most about Hamster robot?

See you
again!

