Hi!

A STARTER GUIDE

Mind+ and Calliope mini

Special features and fast transmission of the code
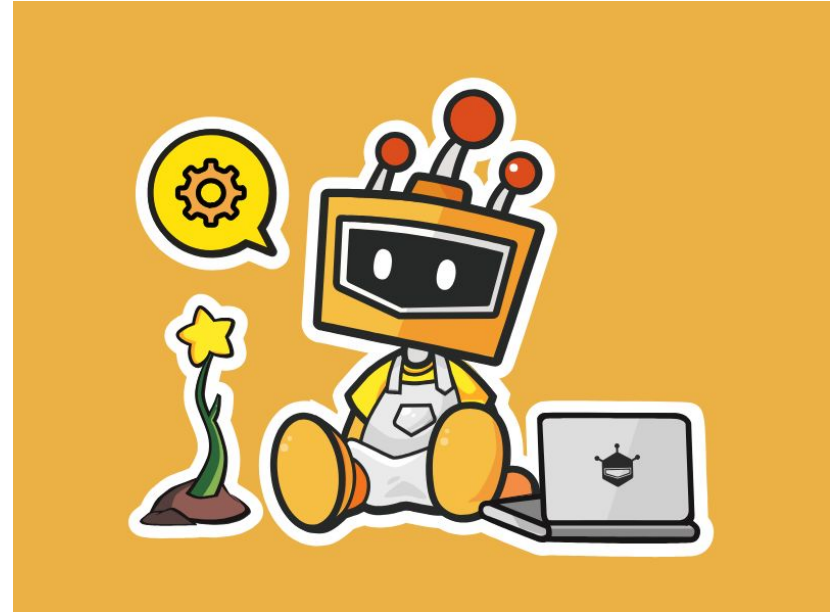
Similar to known Scratch environment

Offline mode (burn codes into board and run without a PC)
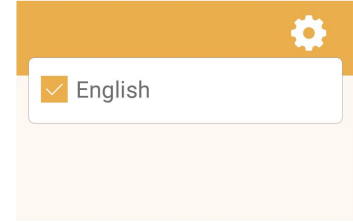Online mode (run codes with board always connected to PC)

Interaction application on the screen and the Calliope mini

Such as (1) control games on the screen with the Calliope mini, (2) use Calliope mini as a sensor for the application on the screen, (3) Calliope mini as a machine on the screen control takes place.

Intuitive programming of the Calliope mini

Download and Install

1 Download

Select your operating system and download the Mind+ Editor [BETA].
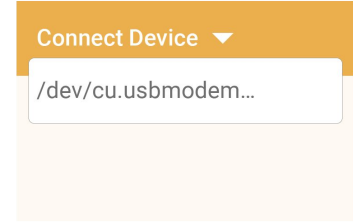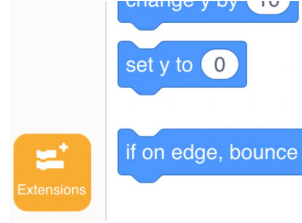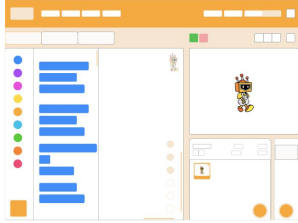
`MACOS` `WINDOWS`

2 Install

Now follow the instructions and install the Mind+ software.

3 Language

English

Open the Mind+ Editor and select a language.

Download and Install

1 You need:

Calliope mini
USB cable
Computer
Mind+ software

2 Calliope mini Extensions

- Click on "Extensions" in the lower left corner of the preview
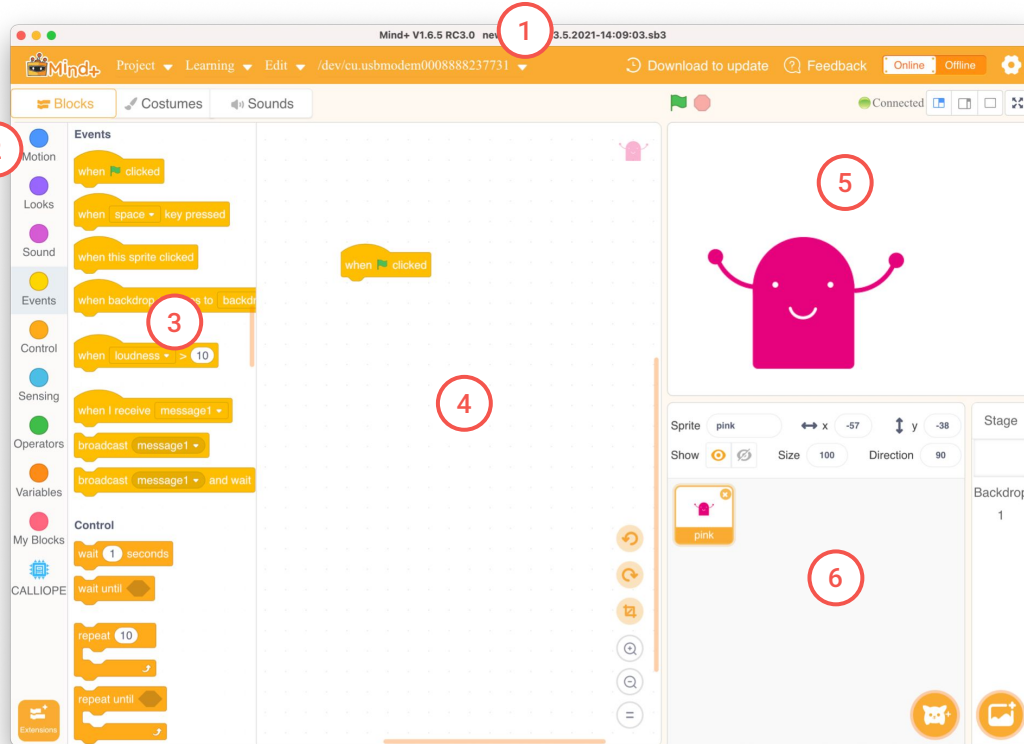- Click on "Board"
- Then select "Calliope mini"

3 Connect

Now the Calliope mini can be connected to Mind+.
To do this, select "Connect Device".

The user interface

1. **Menu bar**
2. **Categories**
3. **Programming blocks**
4. **Programming area**
5. **Stage**
6. **Characters library**

Categories

A program code consists of commands that are executed in sequence. You put these commands together in the form of program blocks like a puzzle.

The program blocks are grouped into different categories/groups in the block library. They have an individual color depending on the category.

Blocks that control the Calliope mini can be found at the bottom after you selected the Calliope mini board in Extensions ▸ Board.

- Position, motion...
- Display, scaling, color...
- Sounds and music
- Events: Start, key...
- Control: waits, branches, loops...
- System functions: Time, cursor position...
- Logic, comparison, mathematical functions, chance...
- Variables
- Own functions
- Blocks for the Calliope mini

LEVEL
BEGINNER

Chameleon

With the help of the **pins** you can turn your mini character into a chameleon.

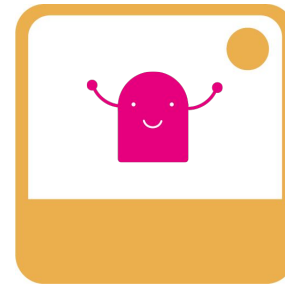If the touch pins of the Calliope mini are touched, the mini character changes its color and the background.

Preparation
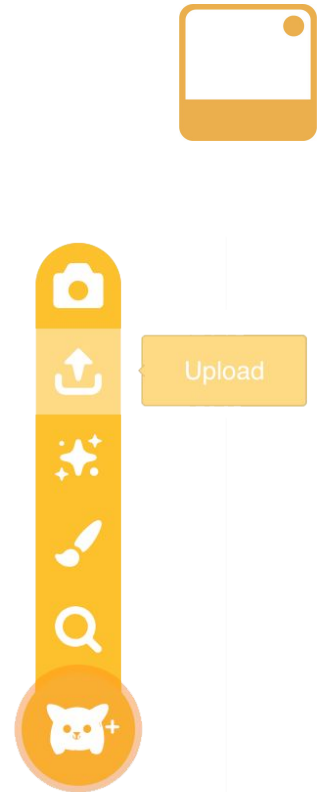
Add the prepared character:

① Select your mini character

② Open costume view

③ Click on "Upload"

④ Load the prepared costumes from the pictures folder into the costume library.

You can download the costumes here.

DOWNLOAD

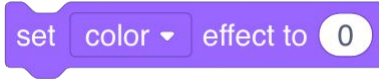*pink.png, pink_links.png, pink_rechts.png, pink_oben.png, ice_d.png

Upload

Code blocks

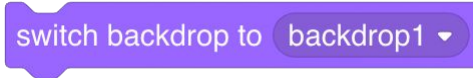You can find the blocks you need in the following categories:
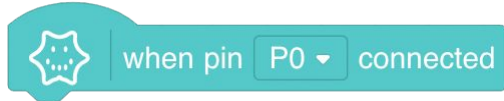
Looks

Calliope

Operators

set color ▾ effect to 0

Changes the specified effect by the amount.

switch backdrop to backdrop1 ▾

Changes the stage's backdrop to the specified one.

when pin P0 ▾ connected

Event - when Calliope mini Pin 0 is connected.

pick random 1 to 10

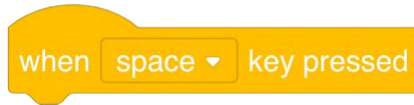Selects a random number between the two specified limits.

Code blocks

You can find the blocks you need in the following categories:

Events

Variables

when 🚩 clicked

To start the script, the flag has to be clicked.

when space key pressed

When the specified key is pressed, the script activates. The event will only be triggered again after the event is released.
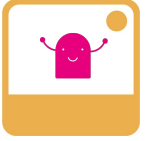
Make a Variable

Defines a new variable.

☑ effect

The variable's value.

set my variable to 0
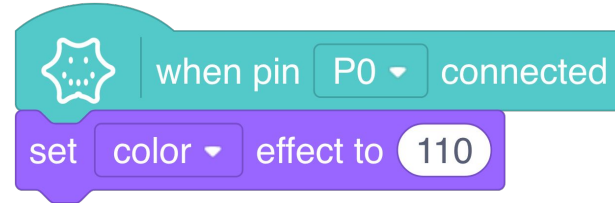
Defines the amount of the specified variable.

Chameleon

Change colors on touch.

1. Select the mini character in the character library and add the block "when Pin 0 connected".

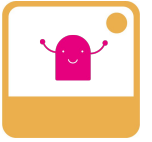2. Add the block "set color effect" and select a color by entering a number between 0-200.

Press ⓪ to test your program.

NOTICE! In addition, you must also touch the "-" pin with another finger. The "-" pin is in the upper right corner.

Chameleon

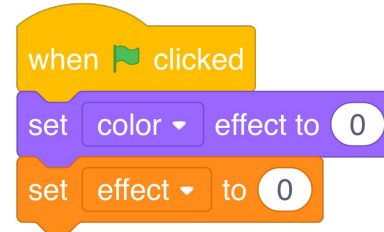HINT! That way you can display what values you have to enter for the desired color.

For that you can display a variable.

You can also simply try out different values.

If the check mark is active the variable will be displayed on your stage.

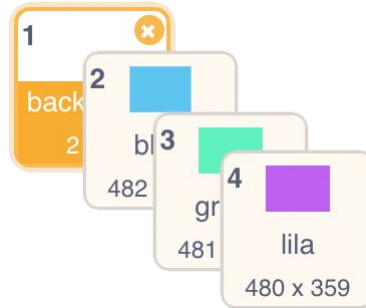If the start flag is pressed, the color effect and the variable effect are reset.

If the space key is pressed the color effect changes by 10 and the variable effect is increased by 10.
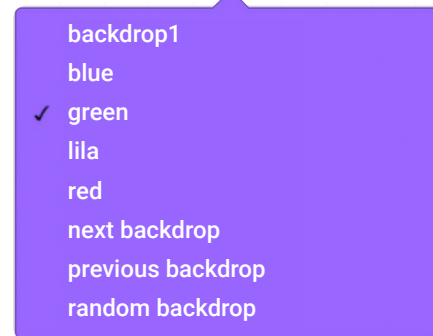
Chameleon

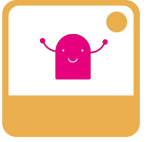Change the color of the background. In order to do that you create different backgrounds.

Backdrops

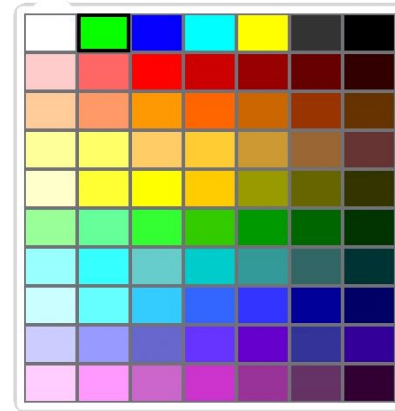Use the "switch backdrop to" block to control them.

Chameleon

Let the RGB LED on your Calliope mini glow.

Now let the RGB LED on your Calliope mini light up.

Add the block "set rgb-led" and select the desired color.

Chameleon

Repeat steps 1 - 3 for pins 1 and 2.

1 Add "when Pin 0 connected" and select pin

2 Add "set color effect" and select color effect

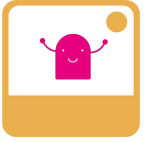**3** Add "switch backdrop to" and select a backdrop


```
when pin  P0 ▼  connected
set  color ▼  effect to  110
switch backdrop to  green ▼
set rgb-led ●
```

```
when pin  P1 ▼  connected
set  color ▼  effect to  10
switch backdrop to  red ▼
set rgb-led ●
```
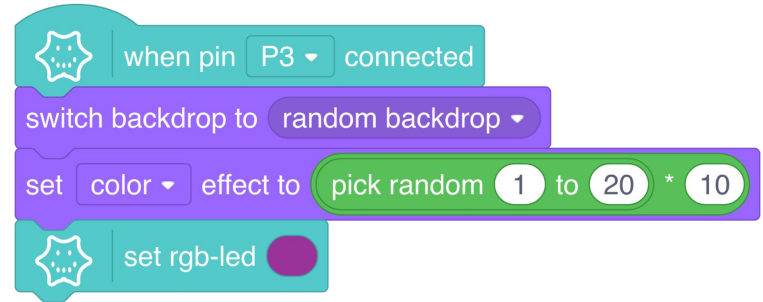
```
when pin  P2 ▼  connected
set  color ▼  effect to  130
switch backdrop to  blue ▼
set rgb-led ●
```

Chameleon

For pin 3 we have come up with something special.

Read the code and try to understand what happens.

If you have any questions, please do not hesitate to contact us.

You can contact us at +49 (0)30 4849 2030

or by e-mail: info@calliope.cc

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