

YFROBOT

Micro:Bit基础课程

Micro:Bit V2专属

第七课 声音大小

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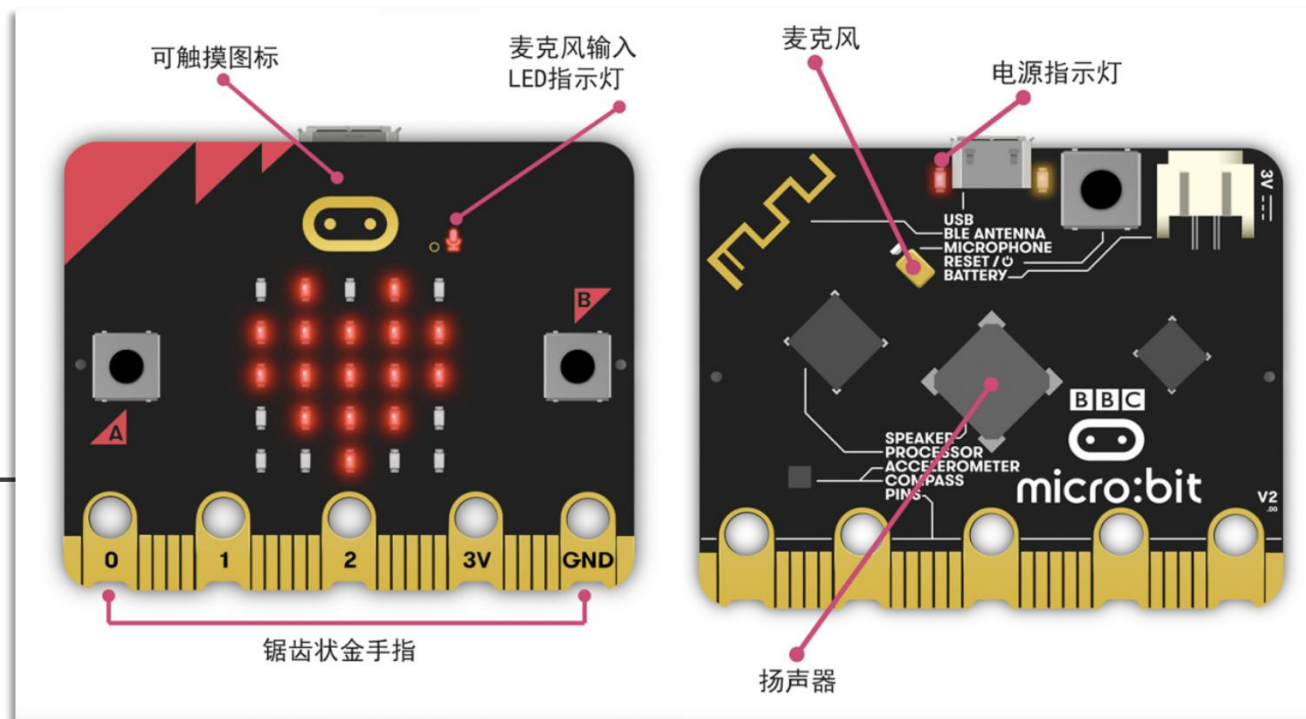
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V2主板新特征



*板载扬声器

*带LED指示灯的麦克风

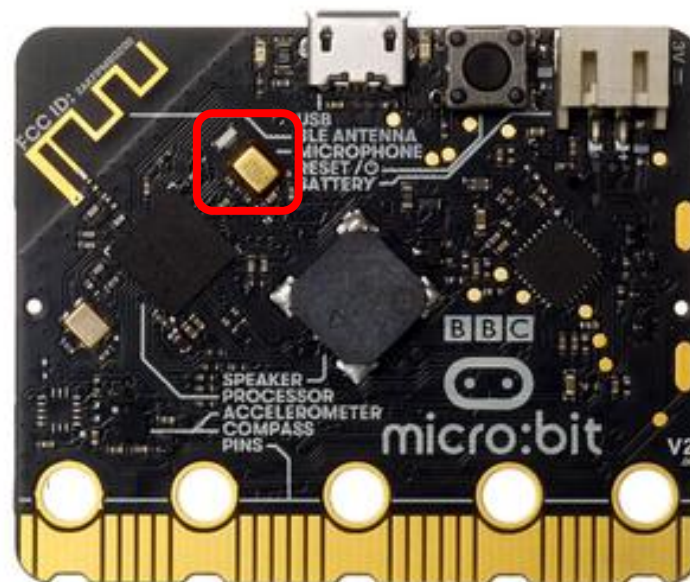
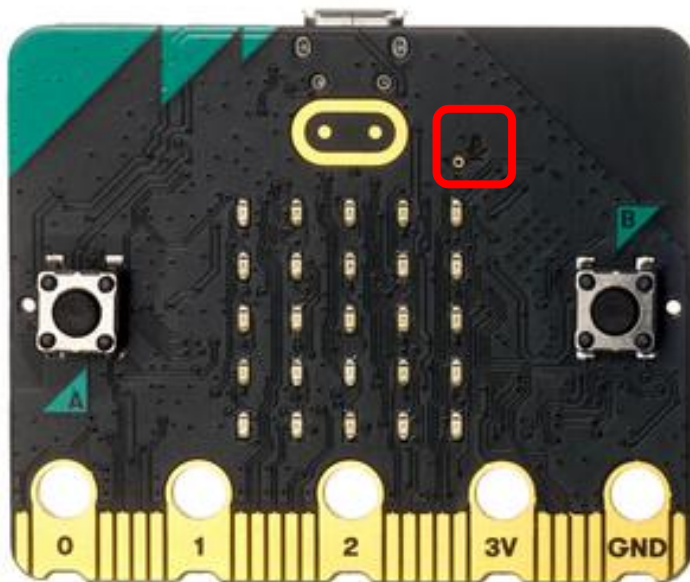
*触控式徽标

*内置睡眠/关闭模式，这意味着板可以在连接电池的情况下断电

*可向外部附件提供高达 190mA 电流的分立式稳压器

Part 1

学习目标



本次课我们要学习micro:bit V2板载麦克风，使用编程器MakeCode内置2.0程序块，实现检测当前环境声音大小，并显示于点阵上。

Part 2



课前准备

器材准备：

- Micro:bit主板 V2*1
- USB数据线*1
- 一台可以上网的电脑

然后将Micro:Bit通过USB连接电脑，电脑会弹出一个名为“MICROBIT”U盘，

MakeCode编辑器登陆网址：

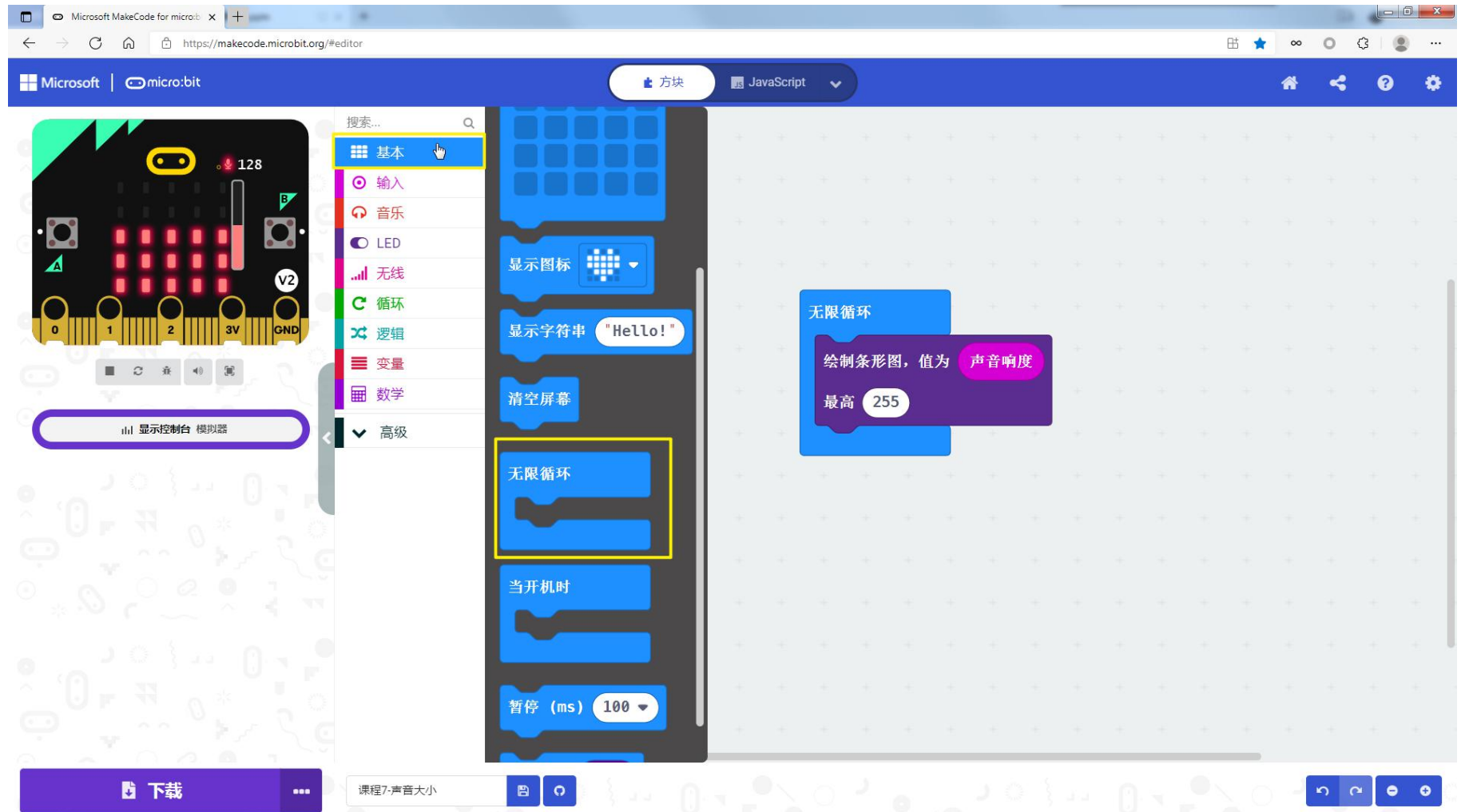
<https://MakeCode.Micro:Bit.org> ，即可进入了编程页面。



Part 3

编程实验

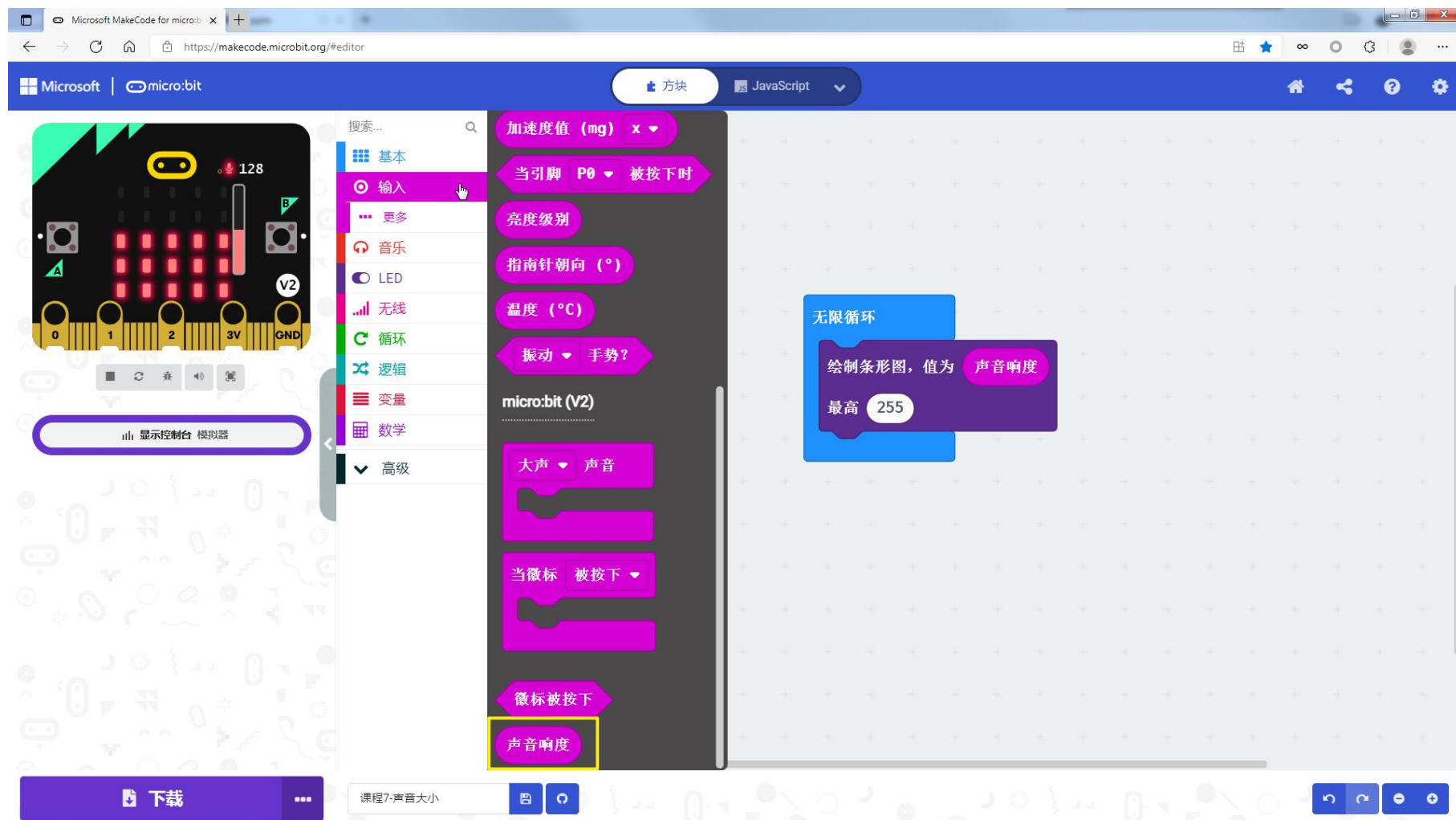
基本栏
无限循环程序
块



Part 3

编程实验

输入栏
声音响度程序
块



Part 3

编程实验

LED栏
绘制条形图程序
序块

The screenshot shows the Microsoft MakeCode for micro:bit editor interface. On the left, there is a virtual micro:bit board with a grid of red LEDs. The central panel displays a block-based program. The 'LED' category is selected in the left sidebar. The program consists of the following blocks:

- An '无限循环' (Infinite Loop) block containing:
 - A '绘制条形图，值为' (Draw bar chart, value) block with a '声音响度' (Sound volume) block connected to it. The '最高' (Maximum) value is set to 255.
 - A '绘制条形图，值为' (Draw bar chart, value) block with a '0' value. The '最高' (Maximum) value is also set to 0.

The '声音响度' block and the second '绘制条形图' block are highlighted with yellow boxes. At the bottom of the editor, there is a '下载' (Download) button and a volume control slider.

Part 3

编程实验

组合程序

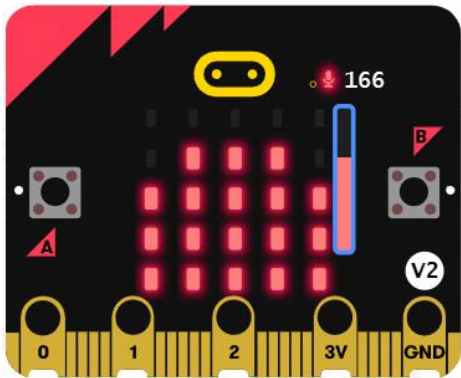
https://makecode.microbit.org/_UqwAp946U4fH

Microsoft MakeCode for micro:bit editor interface. The browser address bar shows <https://makecode.microbit.org/#editor>. The interface includes a micro:bit simulator on the left, a block palette on the left with categories like '基本', '输入', '音乐', 'LED', '无线', '循环', '逻辑', '变量', '数学', and '高级'. The main workspace contains a script starting with an '无限循环' (Infinite Loop) block, followed by a '绘制条形图, 值为 声音响度' (Draw bar chart, value of sound volume) block with a '最高 255' (Maximum 255) block. The bottom status bar shows '课程7:声音大小' (Lesson 7: Sound Size) and a '下载' (Download) button.



Part 4 “

拓展思考



本次课实现检测环境声音强度，并显示于LED屏幕。（屏幕显示点越多，则表示声音强度越强）

今天的课程你学会了吗？

如果学会了就给自己一个顶呱呱吧~

现在布置一个课后作业给你哦~

思考下，利用光照传感器、声音传感器做一个楼道声光控灯~~





谢谢观看!

Micro:Bit 基础课程