Case 14: The Reading Range Guitar

Contents

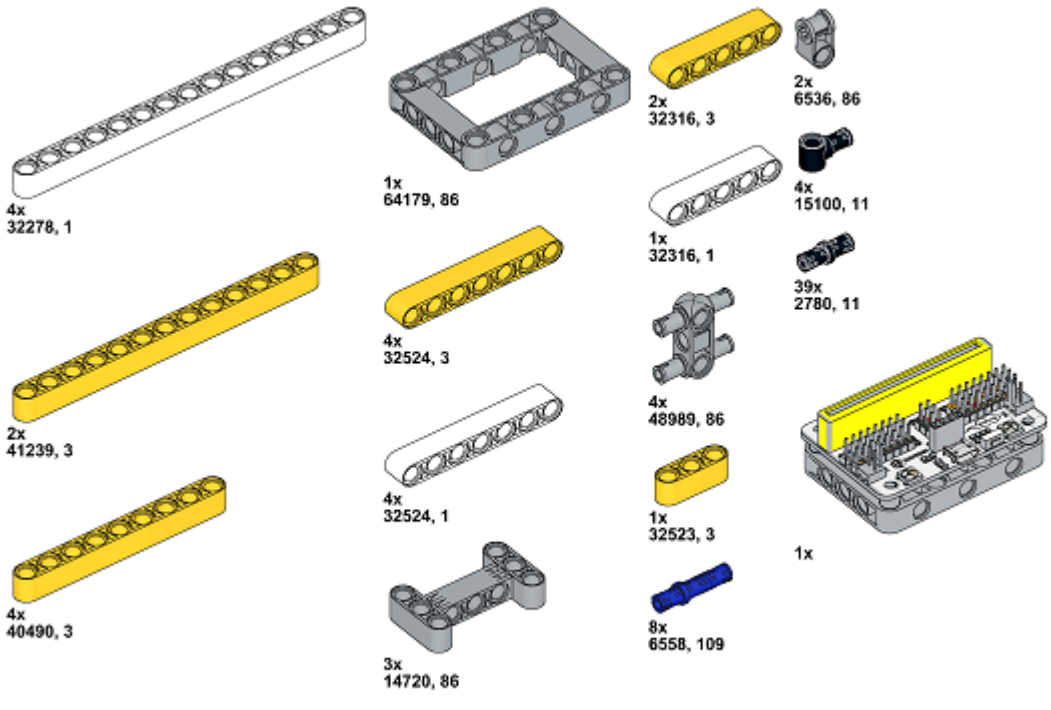
16.1. Purpose

To make a guitar that is able to read ranges.

16.2. Link:

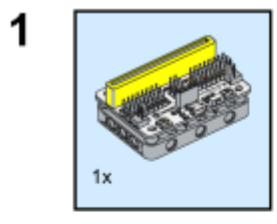
micro:bit Wonder Building Kit

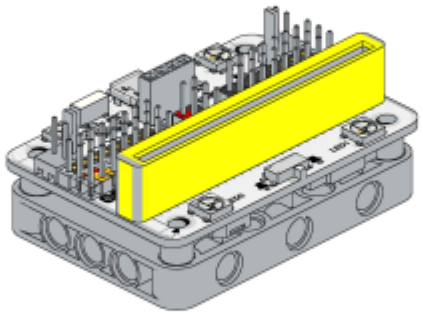
16.3. Materials Required

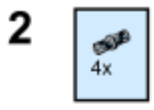


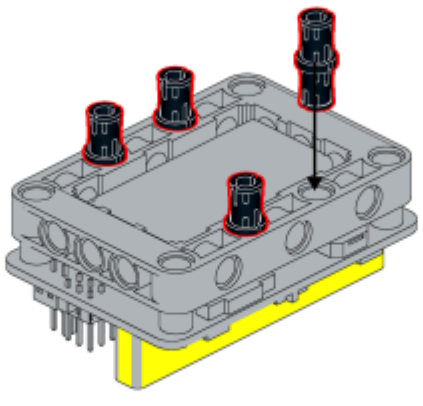
Video link: https://youtu.be/B_P8gOaA0Gc

16.4. Bricks build-up









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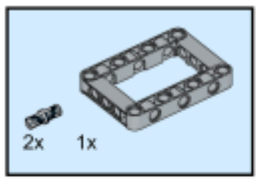

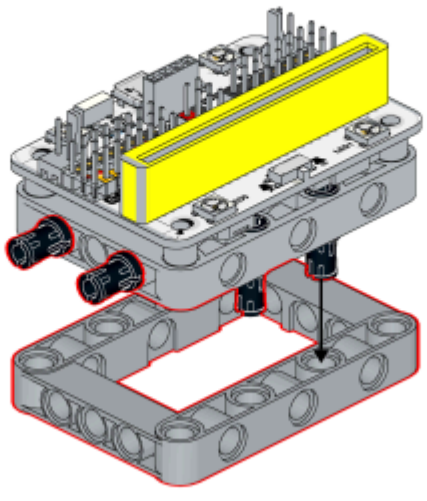

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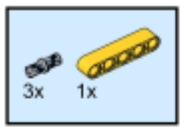

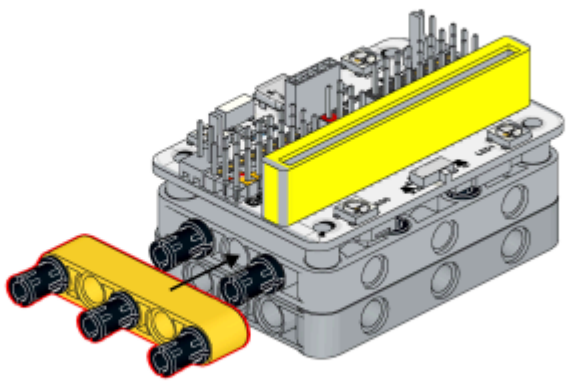

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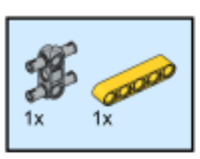

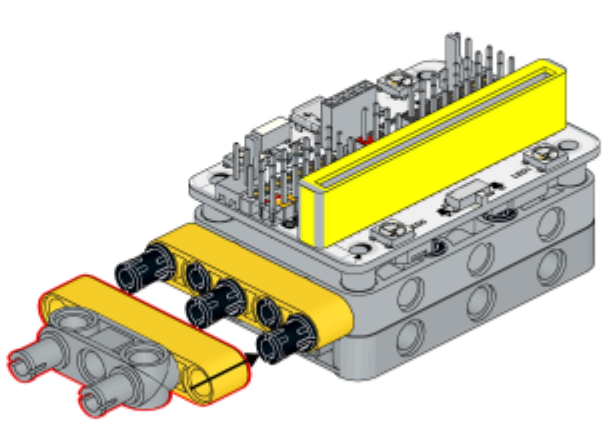

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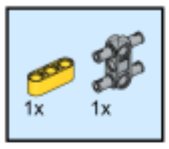

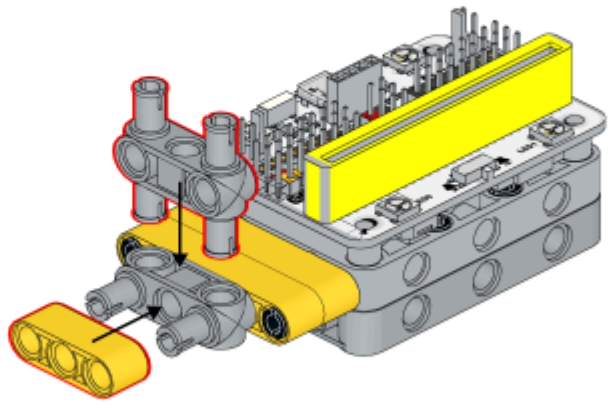

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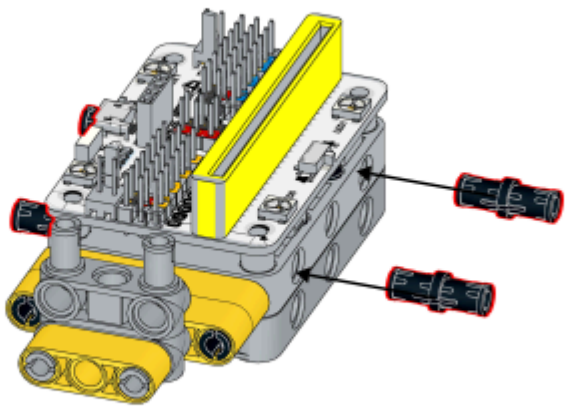

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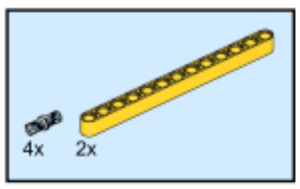

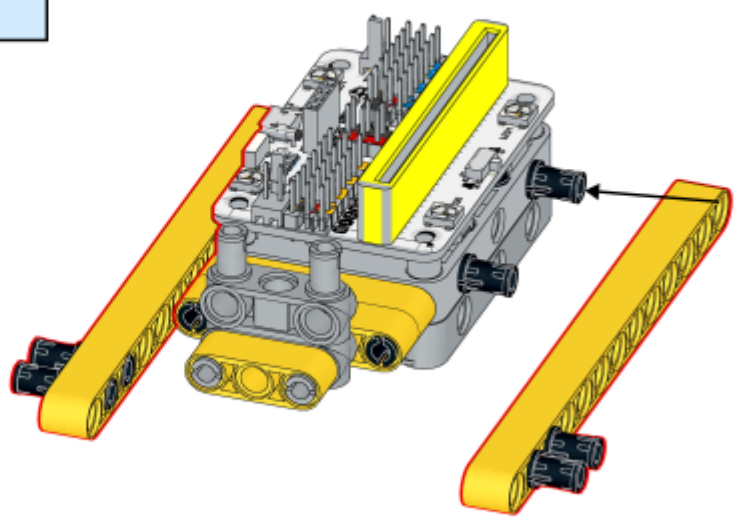

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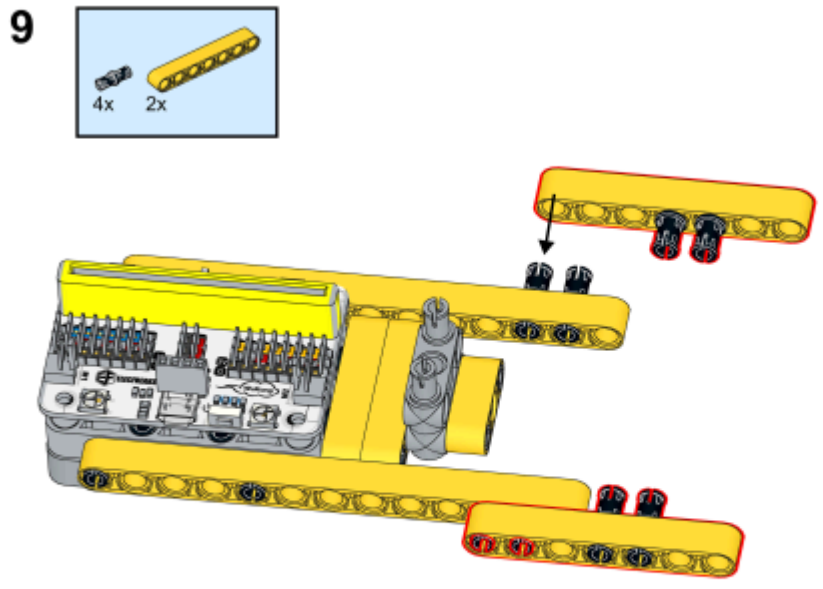

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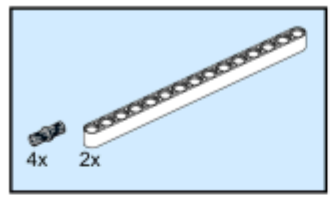

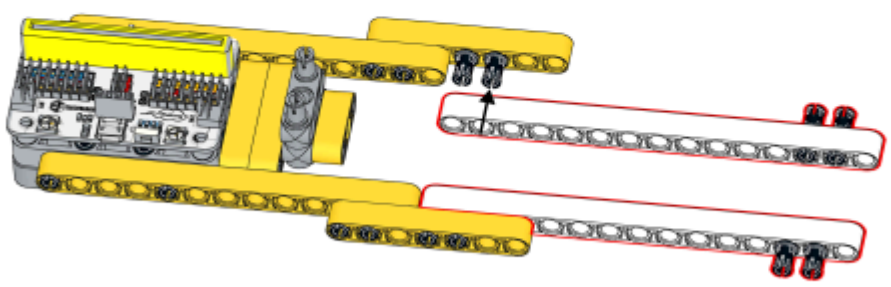

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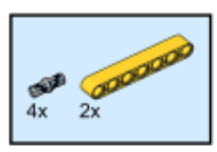

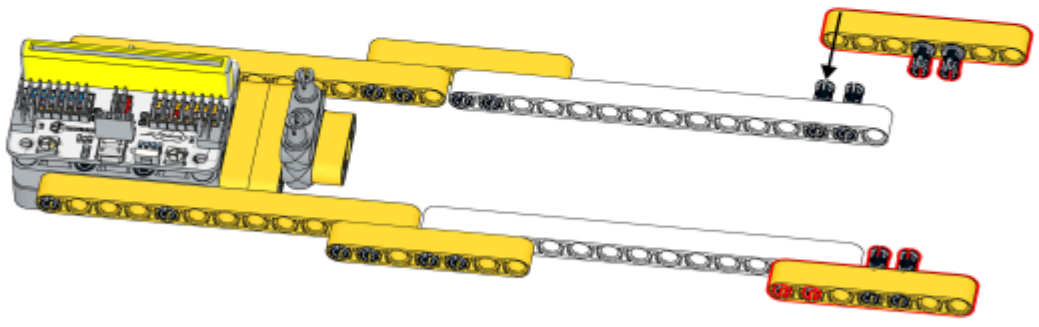

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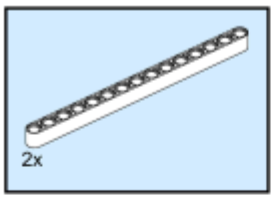

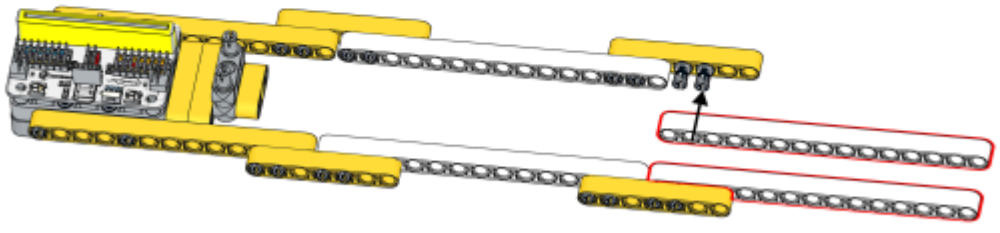

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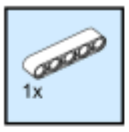

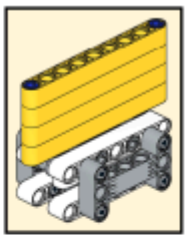

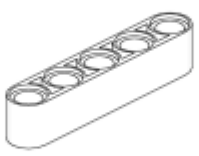

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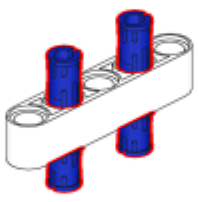

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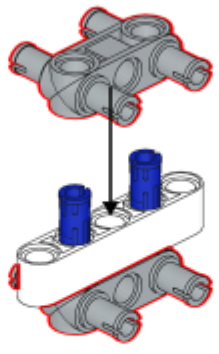

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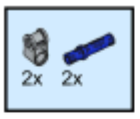

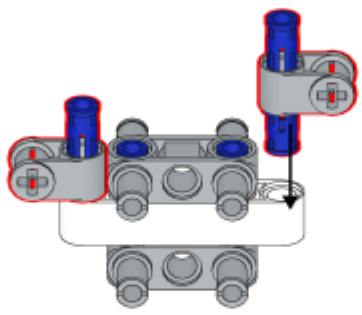

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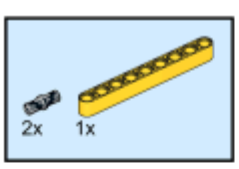

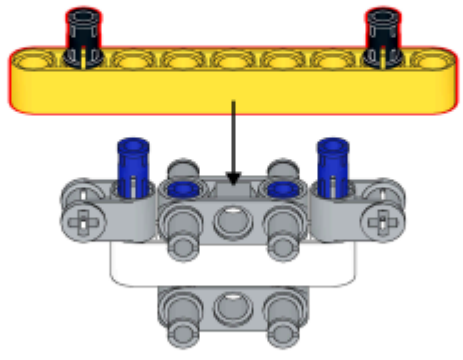

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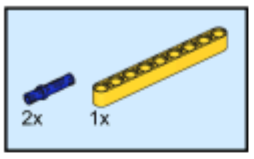

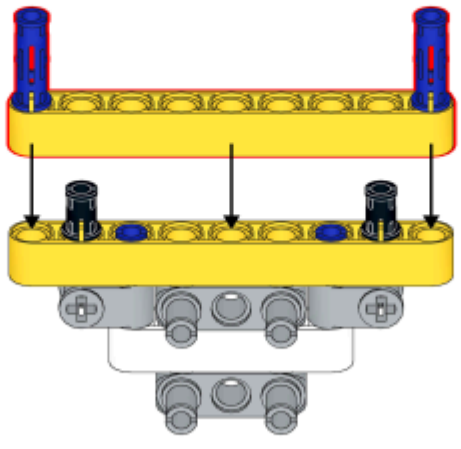

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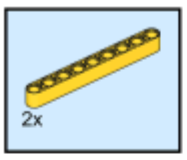

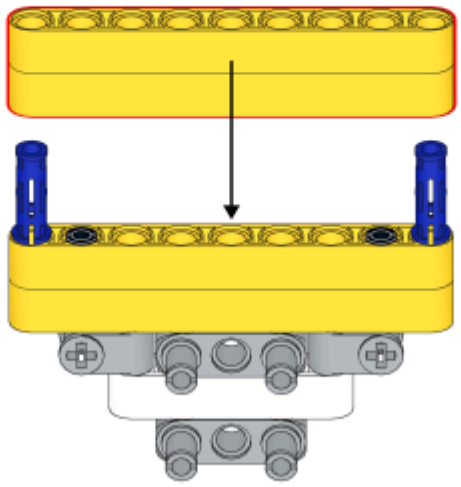

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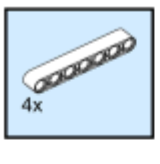

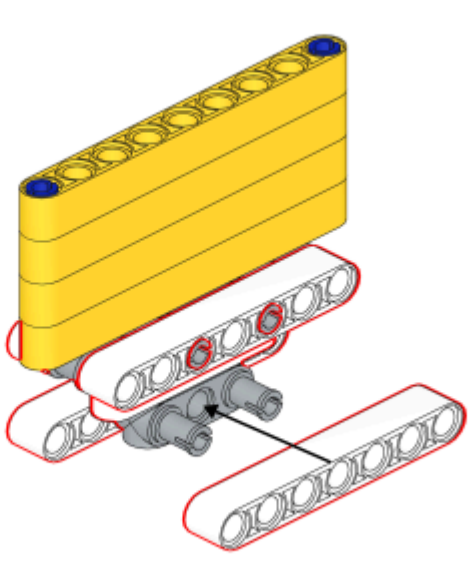

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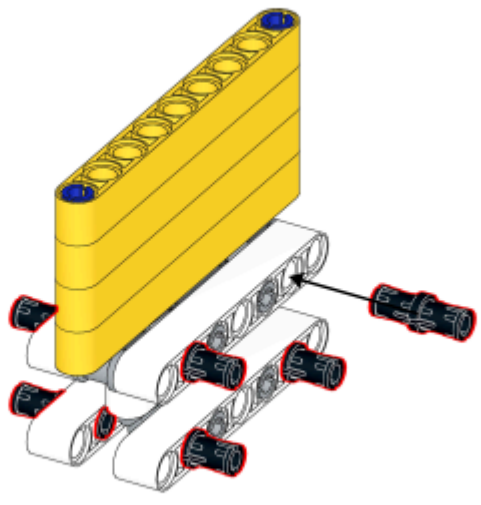

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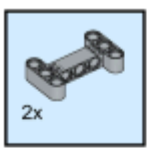

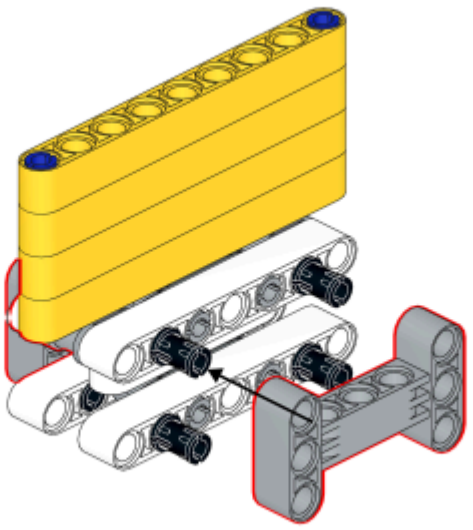

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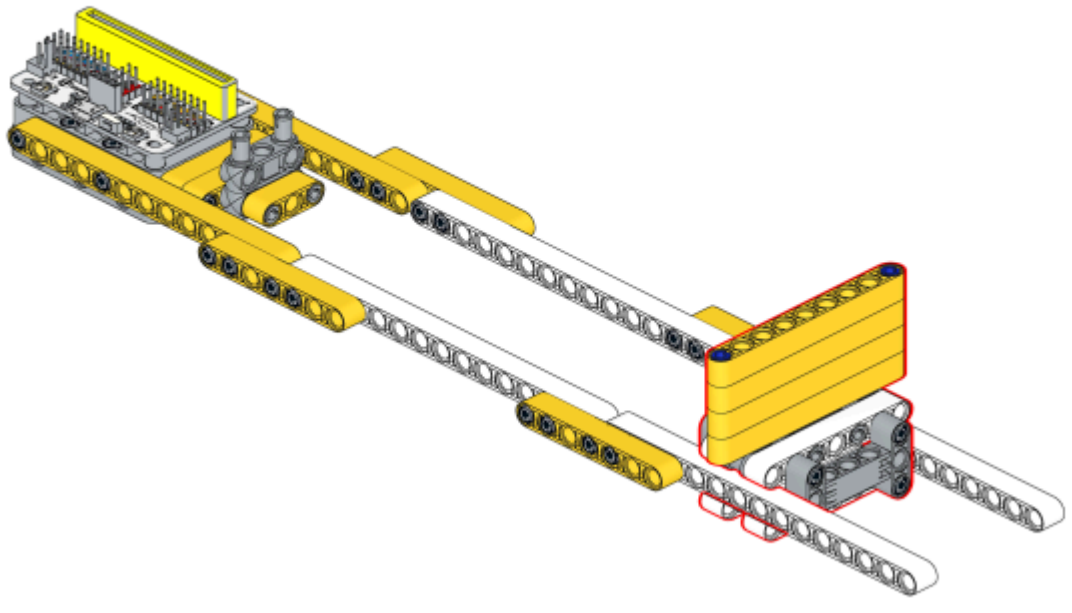

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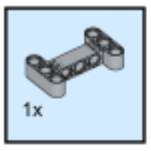

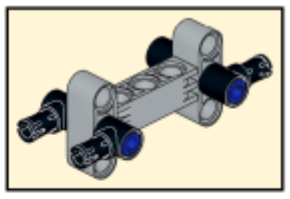

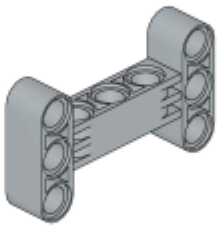

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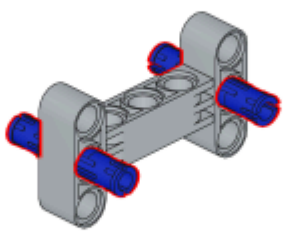

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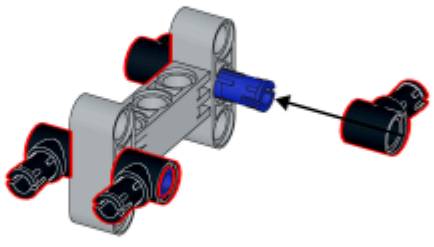
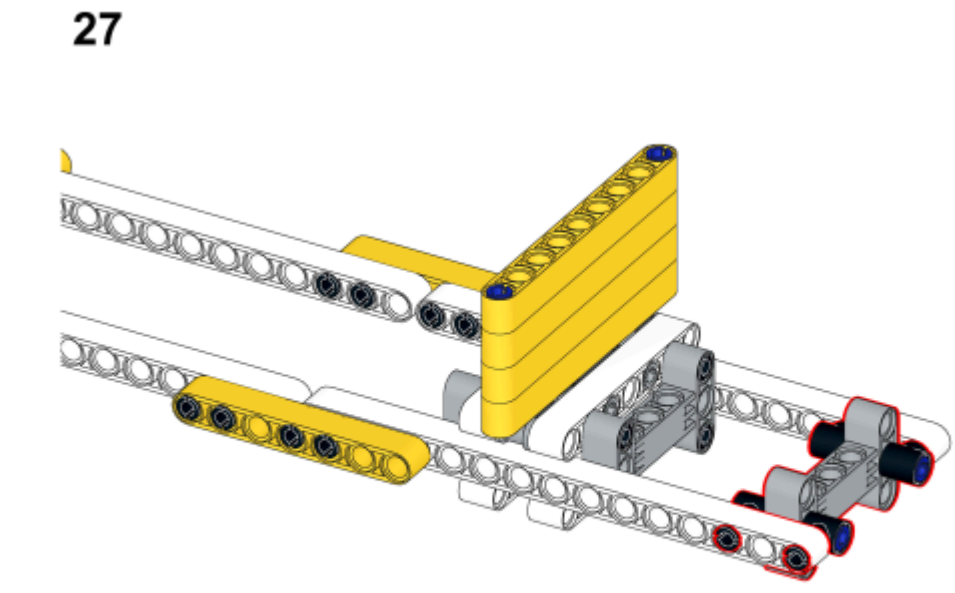


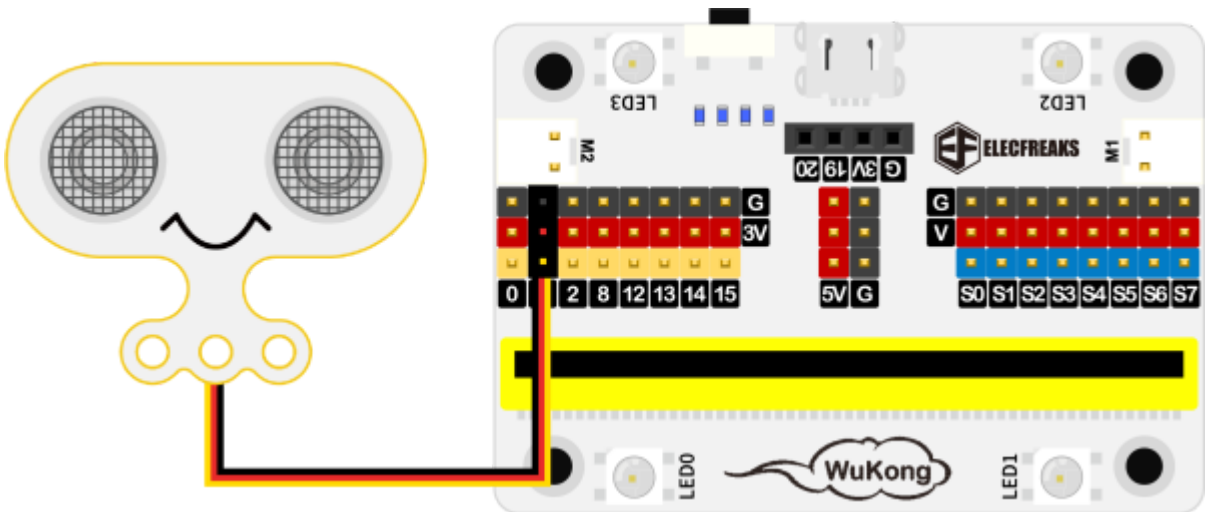


16.5. Installation Mthods of Hardwares

Install the sonar:bit with the bricks.

16.6. Hardware Connection

Connect a sonar:bit to P1 port on Wukong breakout board.



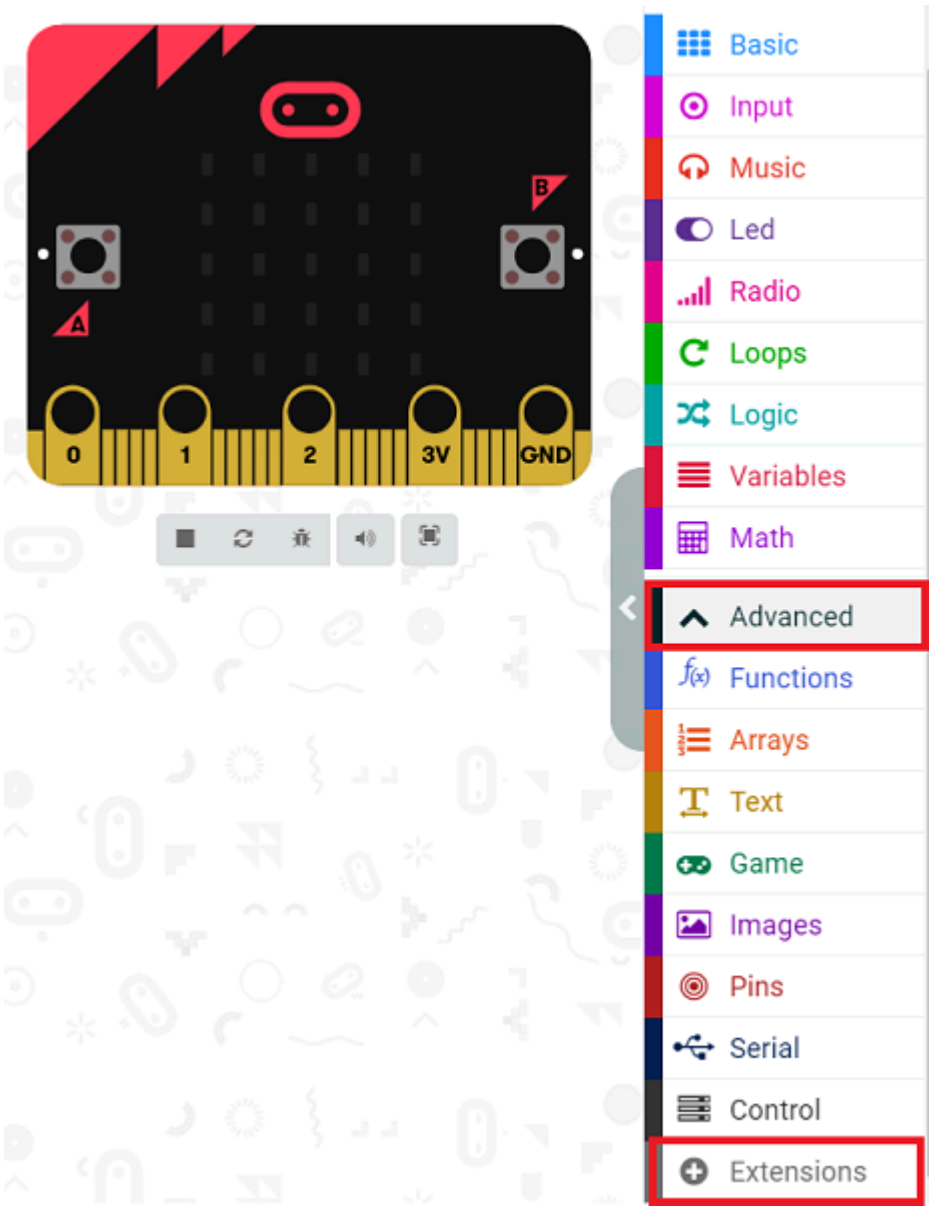
16.7. Software Platform

MakeCode

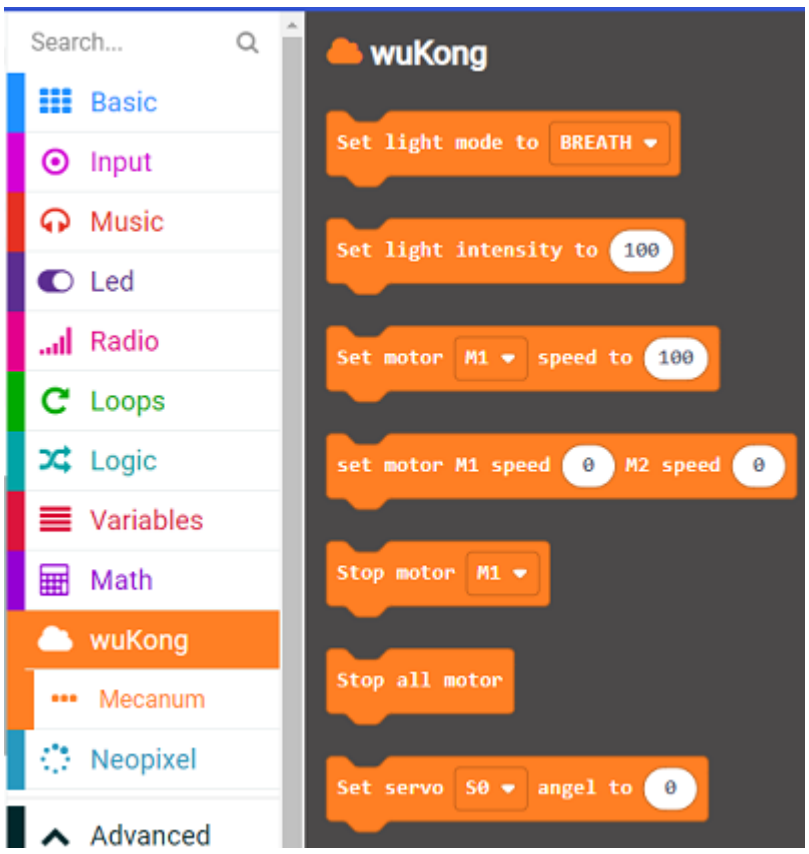
16.8. Coding

Add extensions

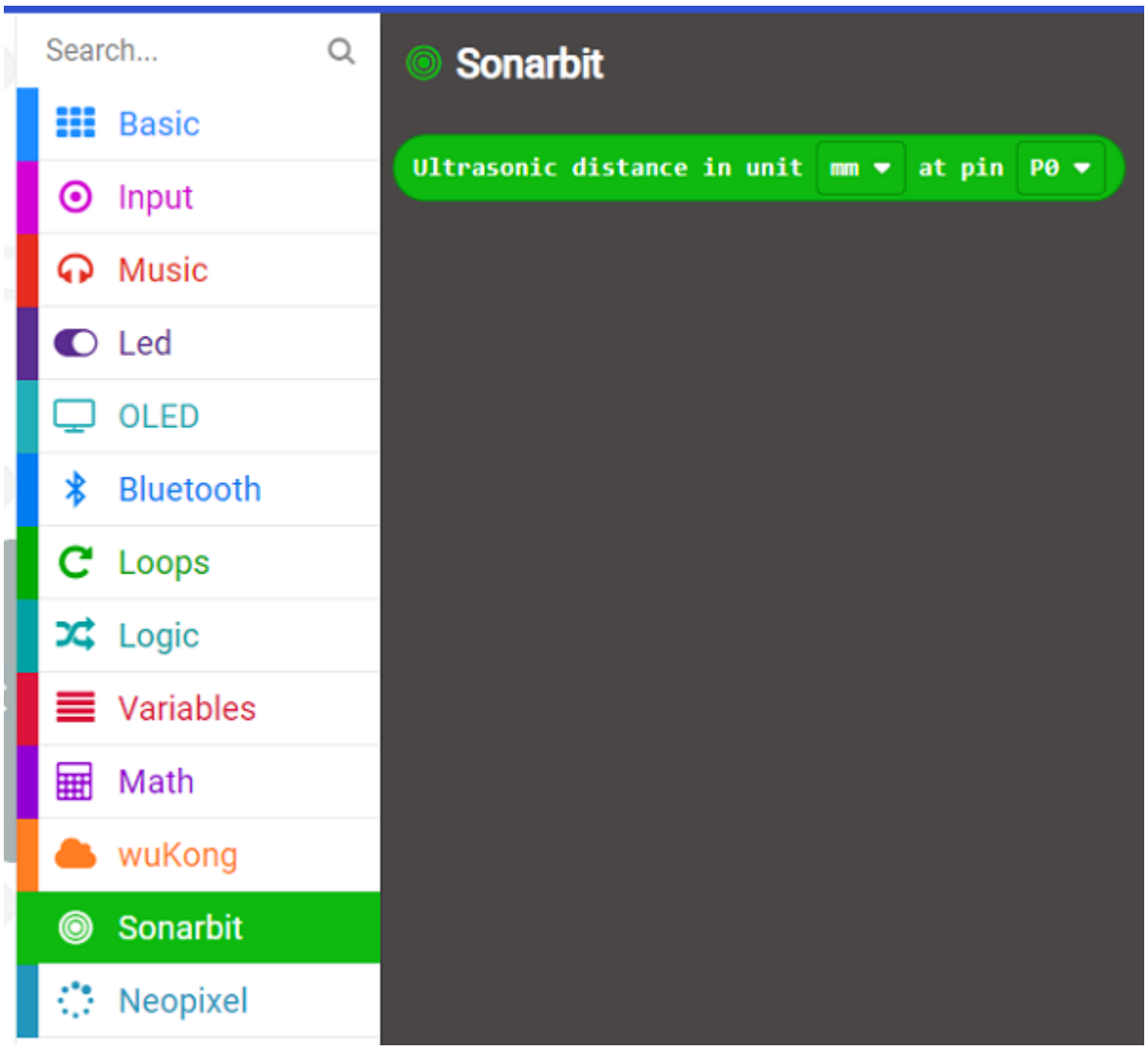
Click “Advanced” in the MakeCode to see more choices.



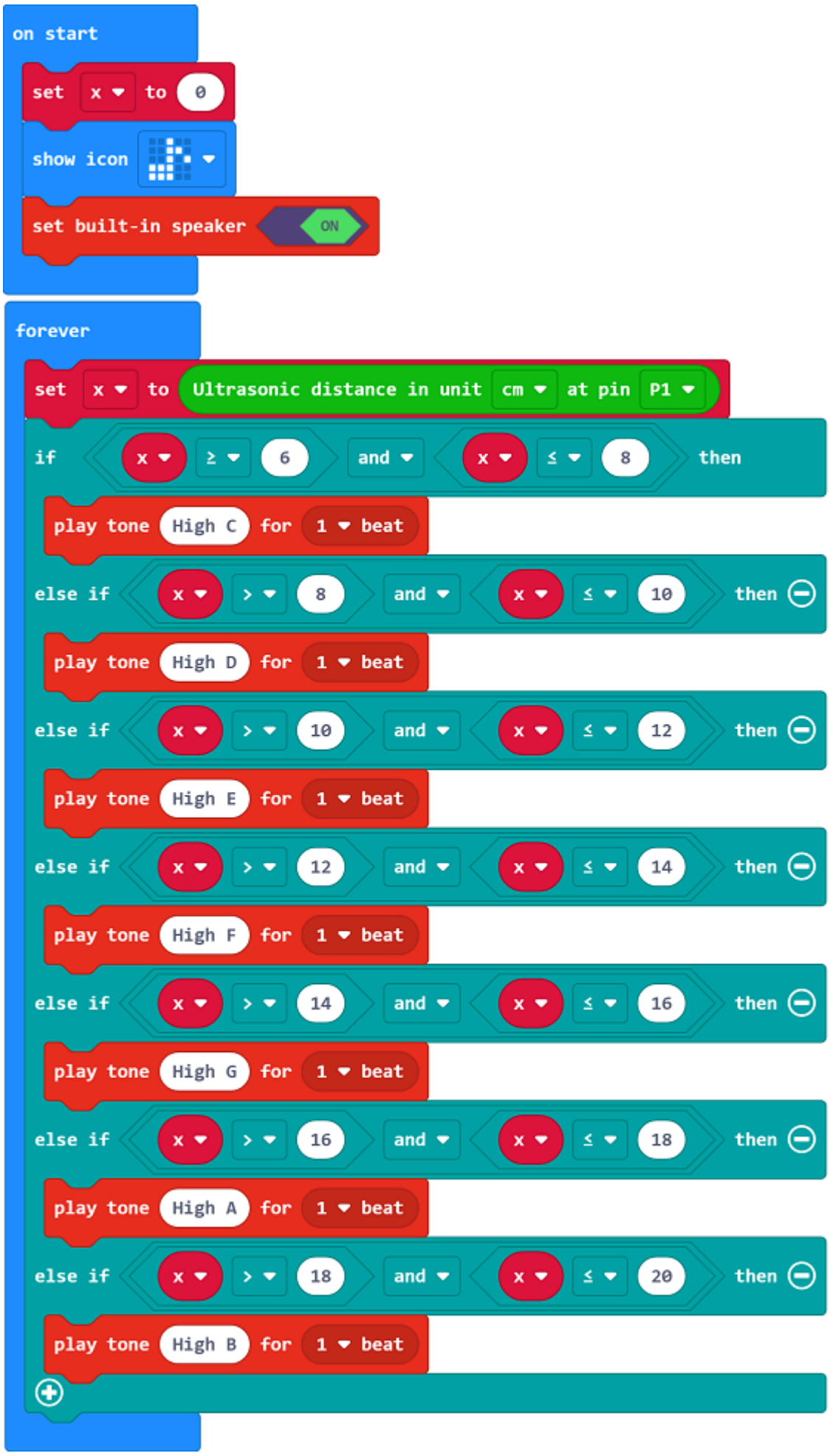
Search with Wukong in the dialogue box to download it.



Search with https://github.com/elecfreaks/pxt-sonarbit in the dialogue box to add the sonar:bit extension.


Search...
Basic
Input
Music
Led
OLED
Bluetooth
Loops
Logic
Variables
Math
wuKong
Sonarbit
Neopixel
Sonarbit
Ultrasonic distance in unit mm at pin P0

Program



Link:https://makecode.microbit.org/_1YvYtE8RM8oL

Result

By detecting the value of the distance between the ultrasonic sensor and the baffle only, the buzzer is controlled to emit different tones.
