

## 13. Case 11: Following with A Fixed Distance

### 13.1. Purpose

- Programme to set the TPBot following another car with a fixed distance.

### 13.2. Material

- 1 x [TPBot](#)

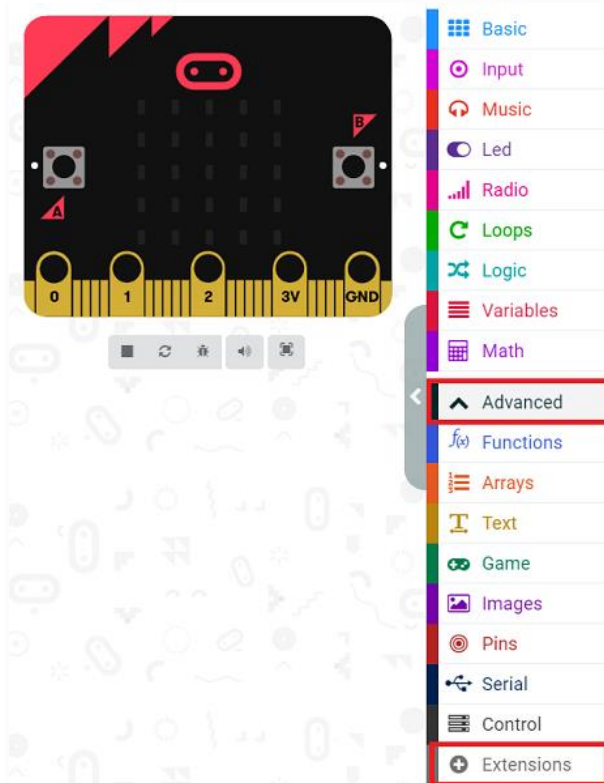


### 13.3. Software

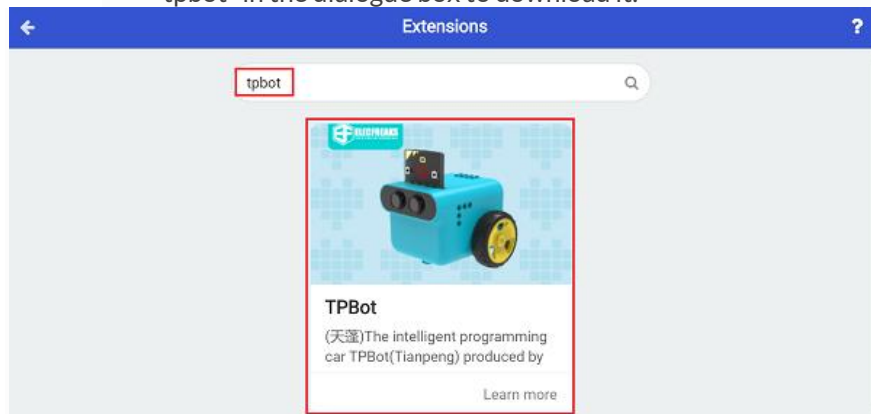
[MicroSoftmakecode](#)

### 13.4. Programming

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

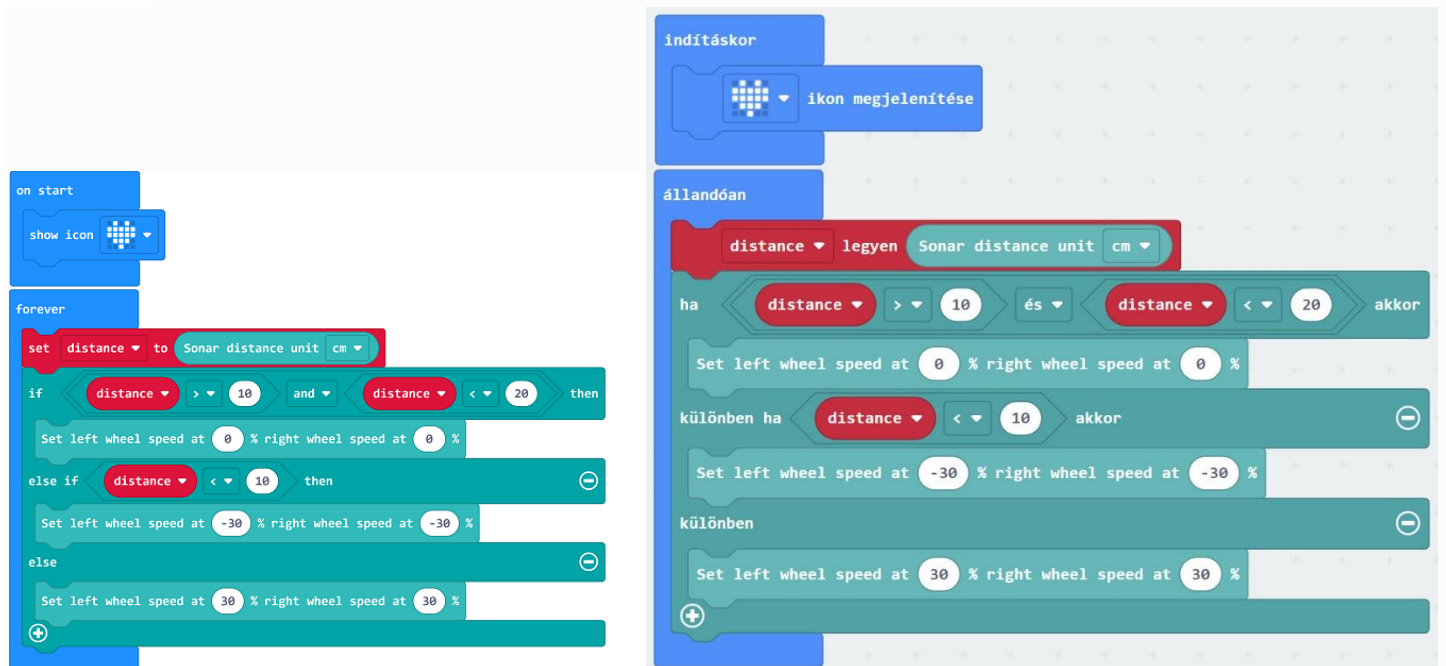


- We need to add a package for programming. Click “Extensions” in the bottom of the drawer and search with “tpbot” in the dialogue box to download it.



## ##Sample

- Set an icon on the micro:bit display.
- Save the variable as the distance detected from the TPBot to its front car in the forever brick, judge if the the distance is between 10 and 20(exl. 10&20), if yes, set the speed of both wheels in 0; if the distance is below 10, set the speed of both wheels in -30%; or set the speed both in 30%.



## Link

- Link: [https://makecode.microbit.org/\\_9ugK1pVyPE8M](https://makecode.microbit.org/_9ugK1pVyPE8M)
- You may also download it directly below:

## 13.5. Conclusion

Power up to show an icon on the micro:bit display and the TPBot keeps a distance to its front car. It goes slower if the distance detected was close or it goes forward if the distance detected was far; and it stops if the distance detected was between the set interval value.

## 13.6. Exploration

## 13.7. FAQ

Q: The car does not work with the code in the wiki.

A: It should be the batteries that are lack of power, please try to fix it by adding the value of the speed in the code.