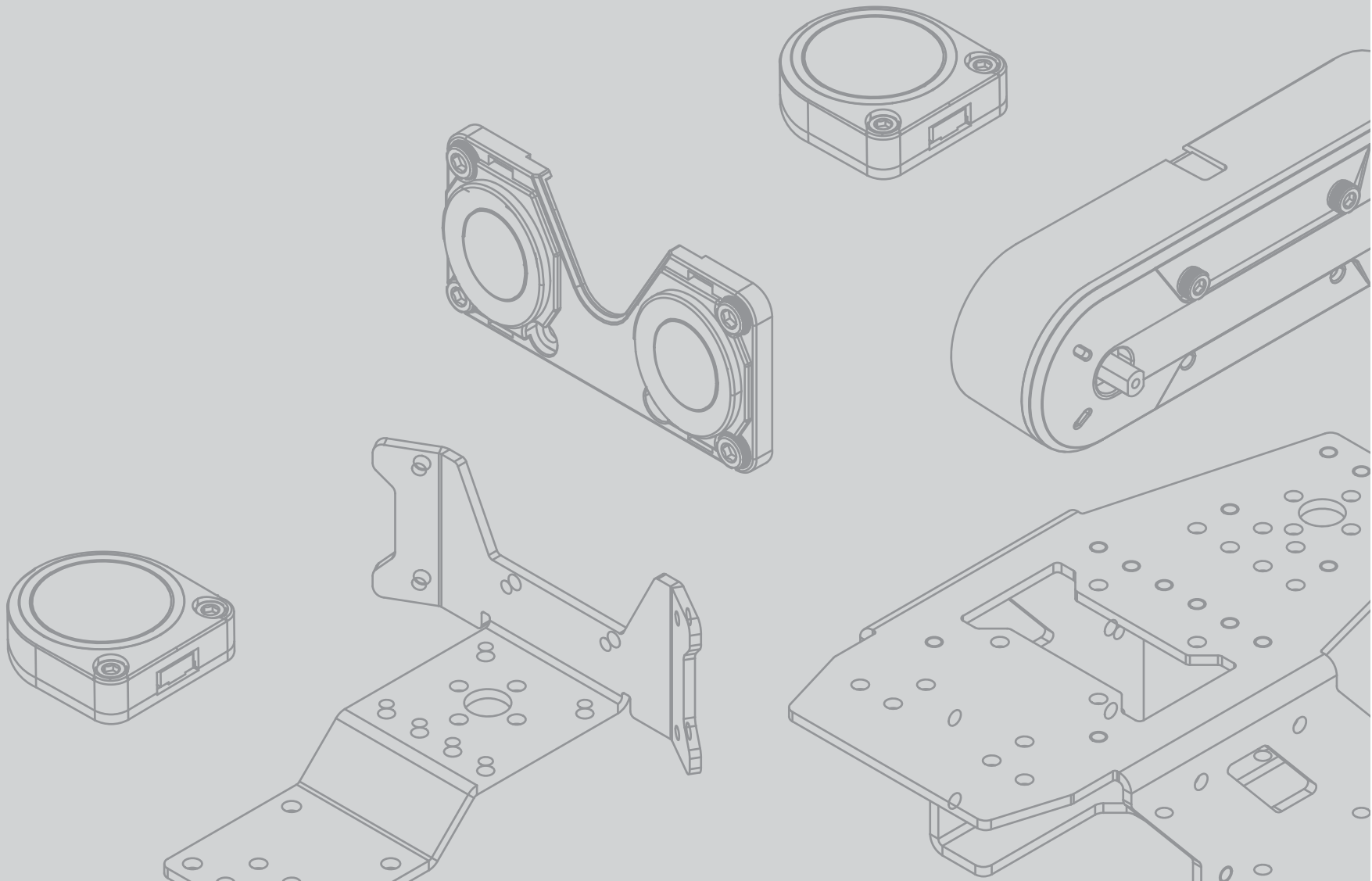


# MoonRover

## Extended



# READ BEFORE START

Dear parents, please read this guide carefully before assembling for the safety of your children while they are playing with the MoonBot Kit.

This product is designed for children aged 8 and older. Younger kids should play under the guidance of parents. Please assemble according to this manual step by step. Wrong assembly may cause broken parts or abnormal behaviors.

## WARNING:

1. Be cautious of sharp parts of metal pieces, that running parts may cause pinch.
2. Please assemble or disassemble them carefully.
3. Please keep this product away from heat or water.

## CAUTIONS:

1. DO NOT twist the servos when Power is ON.
2. DO NOT throw or drop Robot or any parts.
3. DO NOT cover the camera, as covering the camera will affect the recognition result of your MoonBot.

## POWER MODULE(Battery)

1. Do not disassemble the lithium battery module to avoid dropping, impacting or squeezing the lithium battery. Avoid using it in humid, low temperature (below 0 degree) and high temperature (above 50 degree). Keep away from fire and do not soak. ;
2. The charging process is a non-linear process. The first 95% of the electricity will be charged quickly, and the last 5% of the electricity will be used for a long time, which is normal;
3. Please charge when the power is at a low level. If the

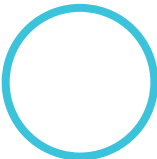
- battery is charged when the battery is at LED4 (100%), LED4 (100%) may be flashing at all times. At this time, it is not necessary to continue charging, and it can be used directly;
4. Although the lithium battery has a perfect protection circuit inside, it is necessary to avoid the following situations during use, overcharging, overdischarging, electrode short circuit, current backflow, high current output;
  5. When the lithium battery module is not used for a long time, please keep the lithium battery at 75% of the power for storage;
  6. Lithium battery has a certain service life, and its battery capacity will be attenuated with the use time. When the battery life cannot meet the daily use requirements, it is recommended to replace the new lithium battery module;
  7. The waste lithium battery module should be disposed of properly and should not be discarded at will.

\*因版本更新产品和说明书可能会略有不同, 不会影响安装和使用, 一切请以实物为准。

# SYMBOLS & LEGEND














Flip viewpoints



Caution

## Screw Case

 M3X4	 M3X8	 M3X12	 COPPER COLUMN	 M3X28
 BEARING	 WASHER  NUT	 R3035	 R3075	 R3045



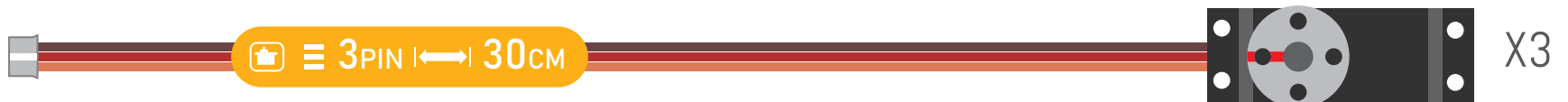
1:1

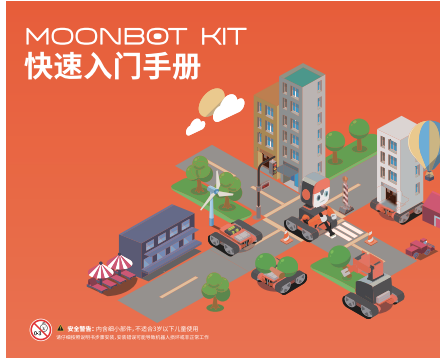


Please compare the length of the screw as shown in Figure 1:1.

# WIRES

You can use these wires to connect the modules, Please pay attention to the pin number and length of the wires.





## P22 MoonRover

Please complete the basics in the Quick Start Guide first. The construction of the Extended MoonRover will be carried out on the right side.

### 1 MoonRover Obstacle avoidance

+19  
PSC

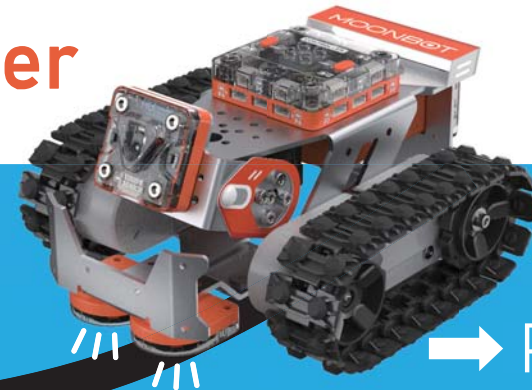
20min  
Estimated time



### 2 MoonRover Line Following

+9  
PSC

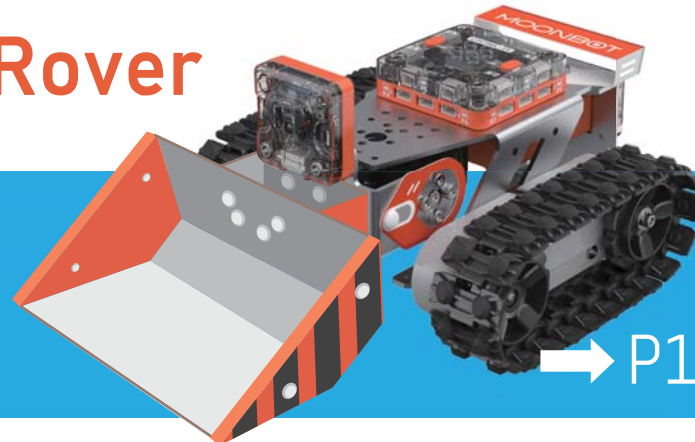
10min  
Estimated time



### 3 MoonRover Forklift

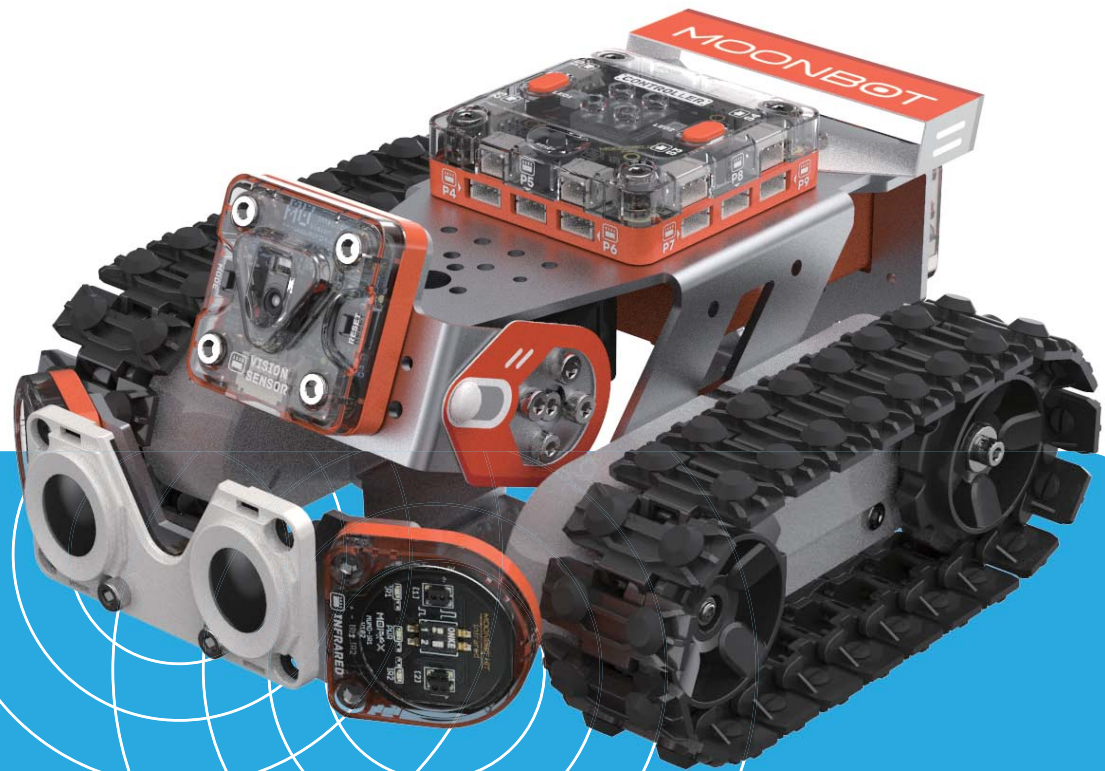
+12  
PSC

15min  
Estimated time



# 1 MoonRover

Obstacle avoidance

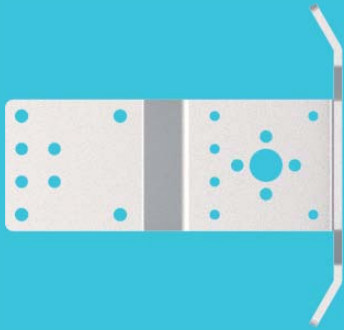


**+19**  
PSC

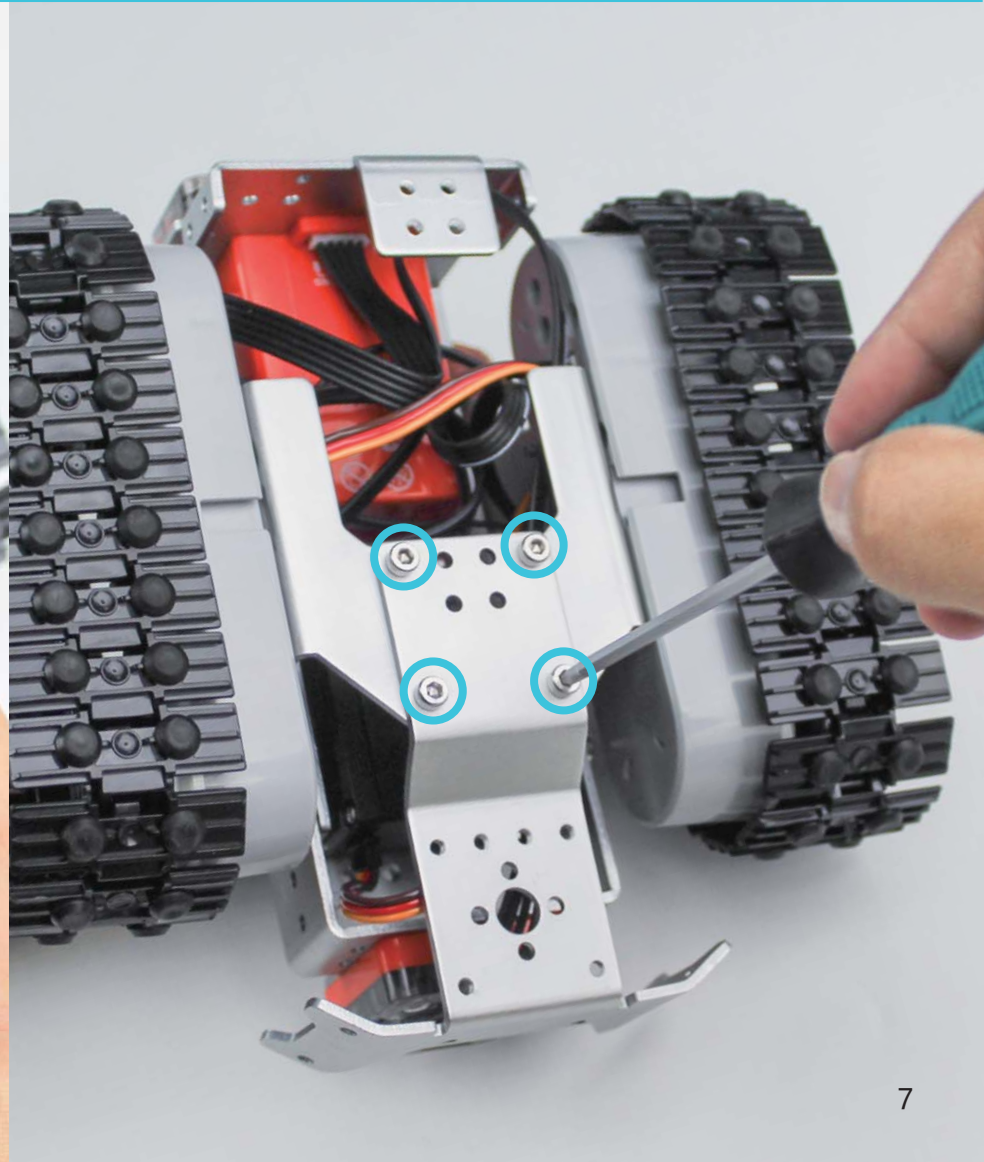
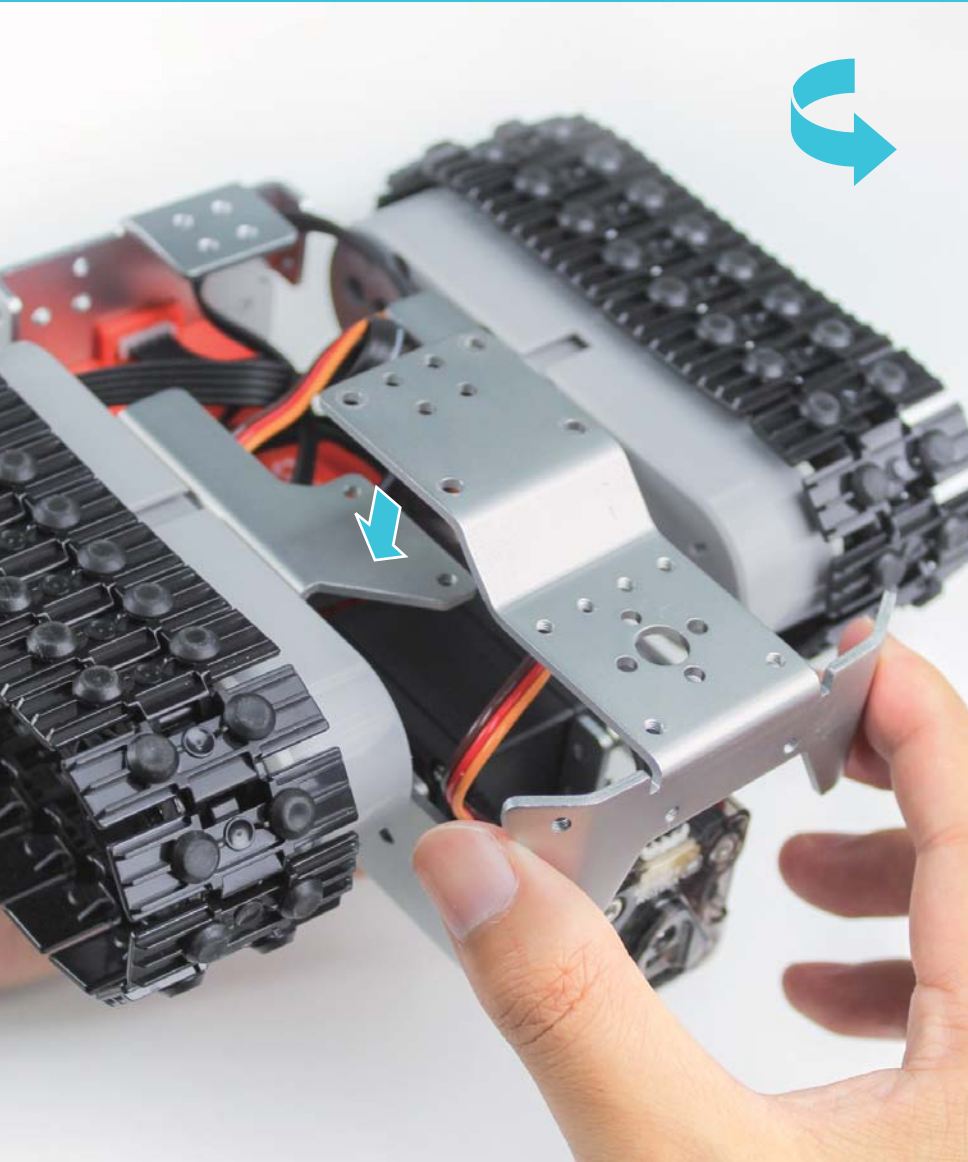
**20min**  
Estimated time



# 1.1



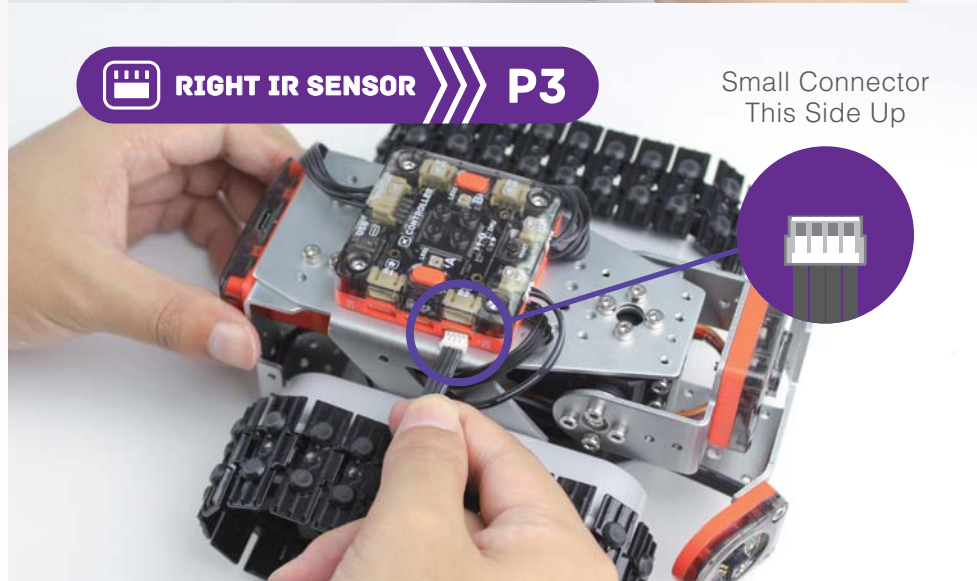
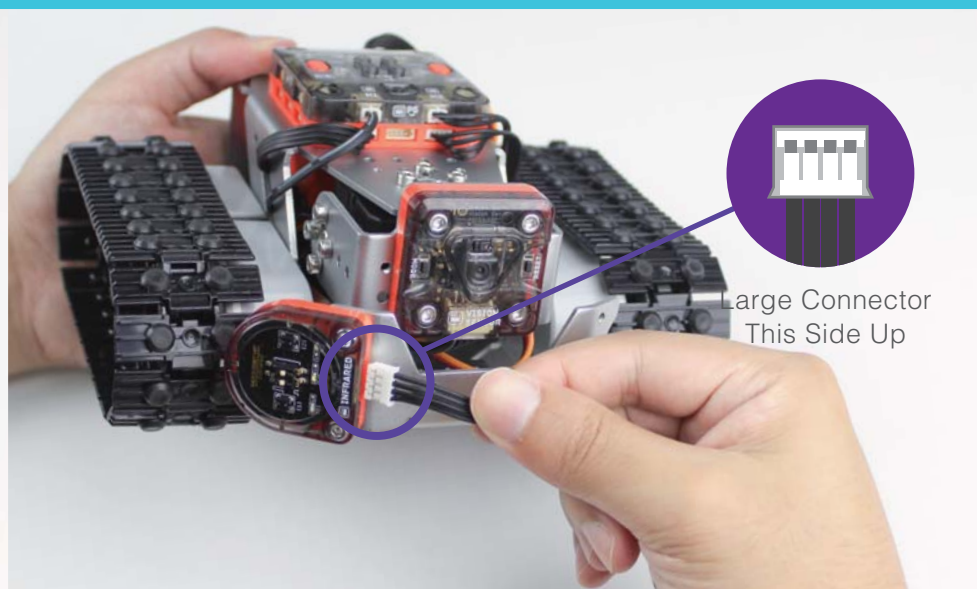
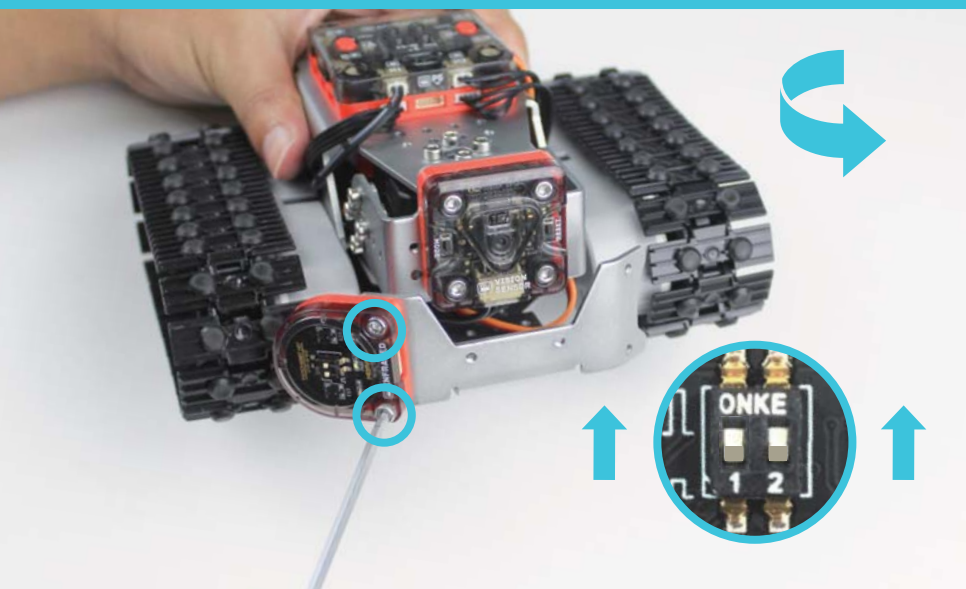
X4



# 1.2



X2

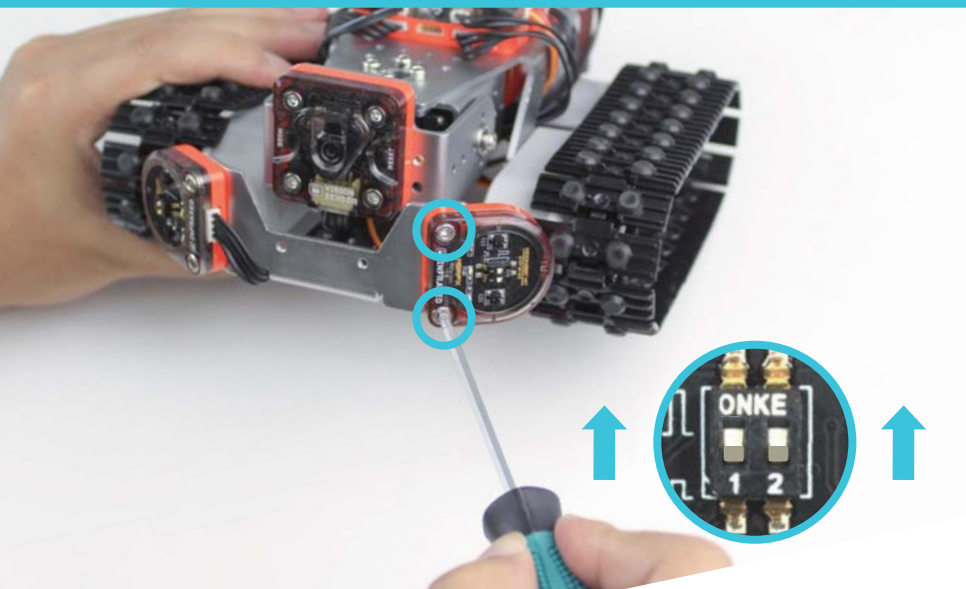




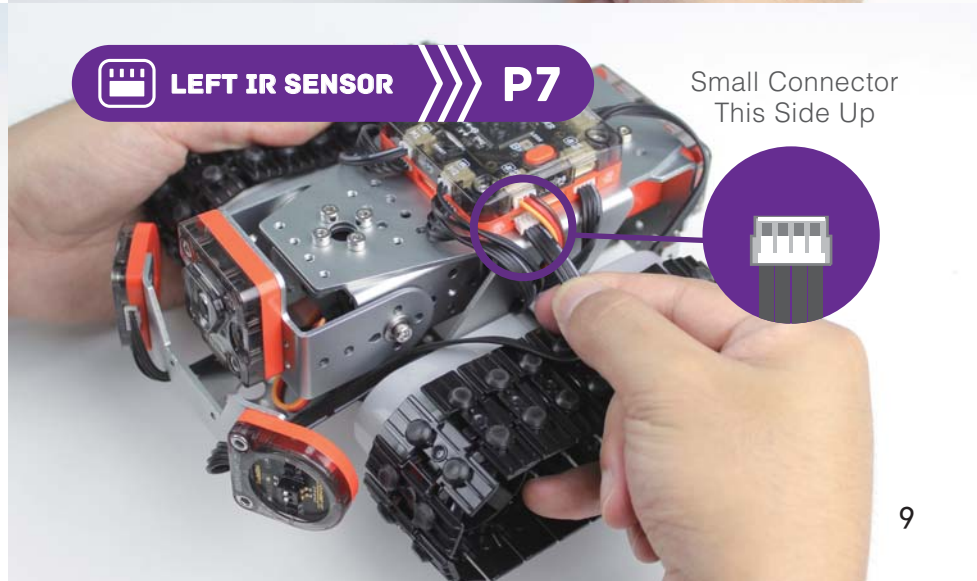
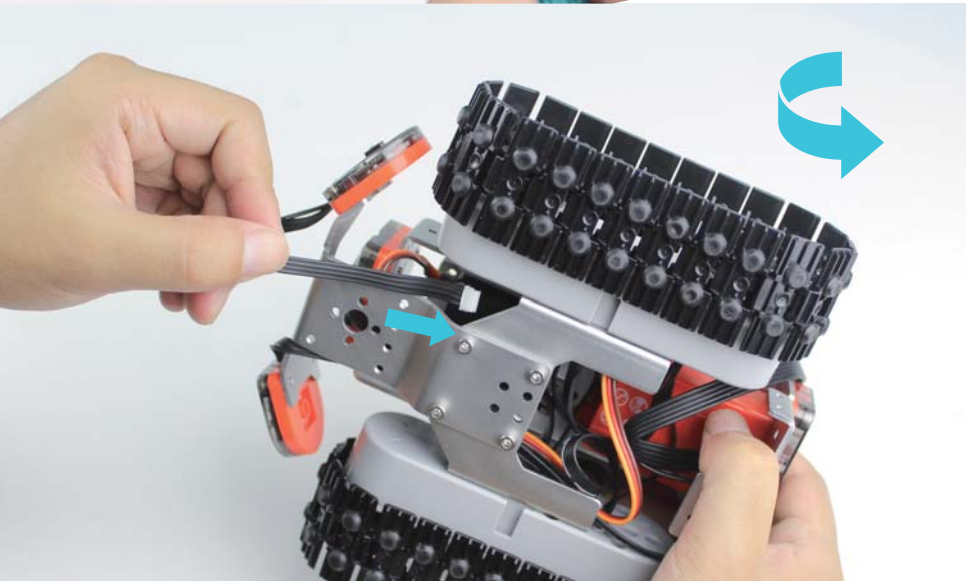
# 1.3



X2



Large Connector  
This Side Up



LEFT IR SENSOR >>> P7

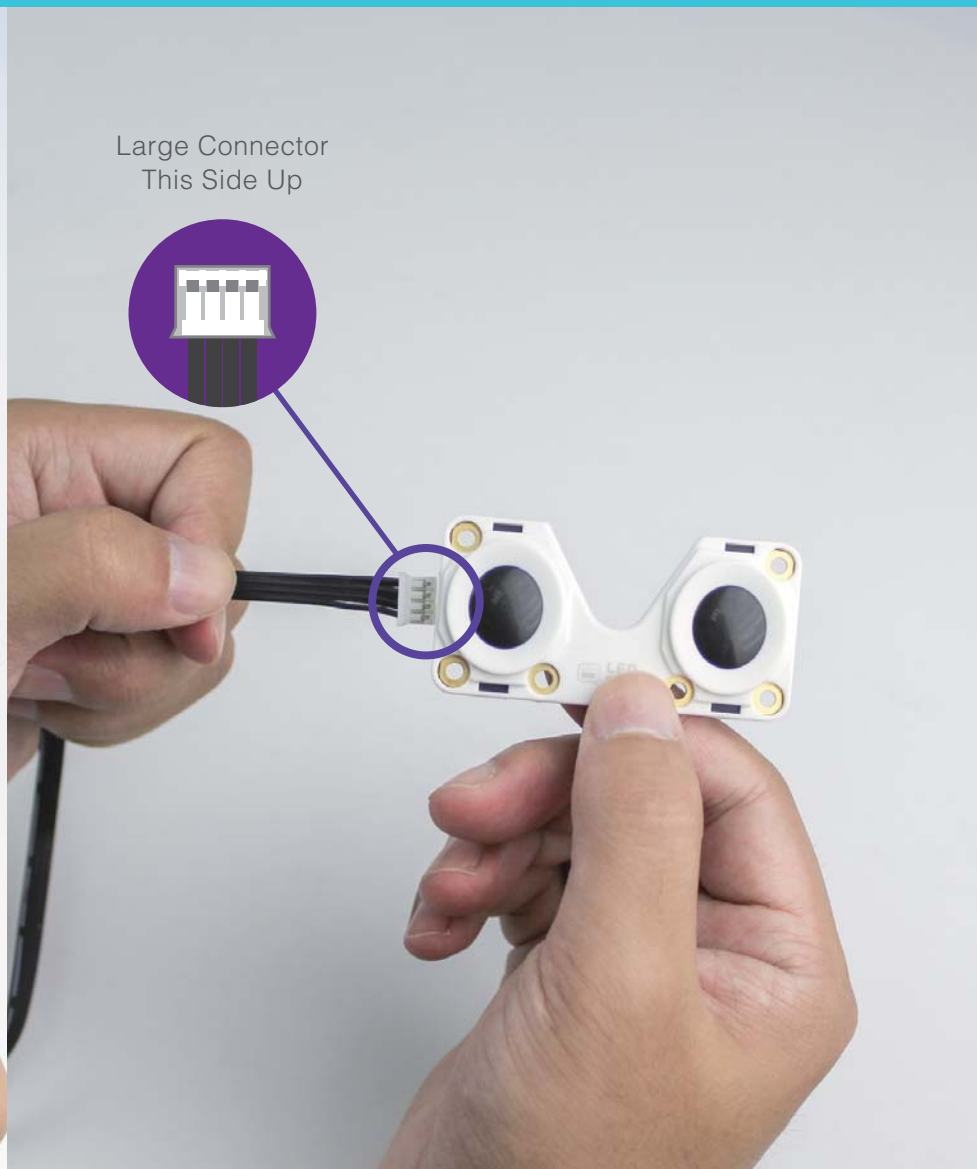
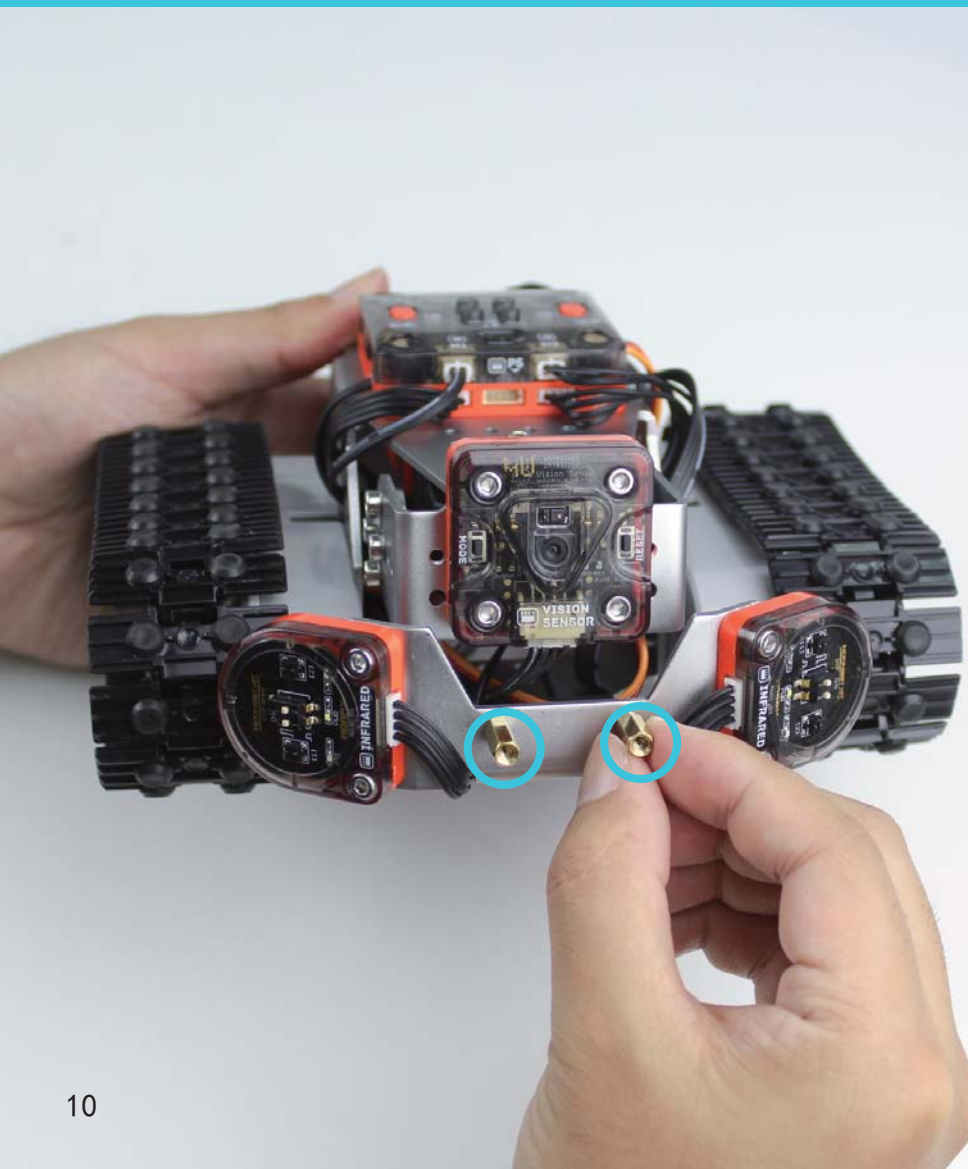
Small Connector  
This Side Up

# 1.4



六角铜柱

X2



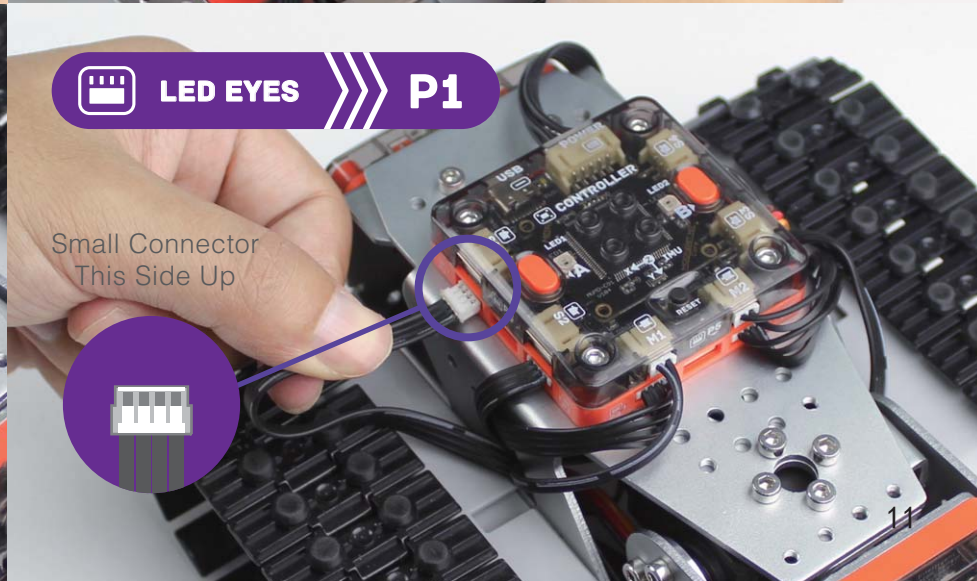
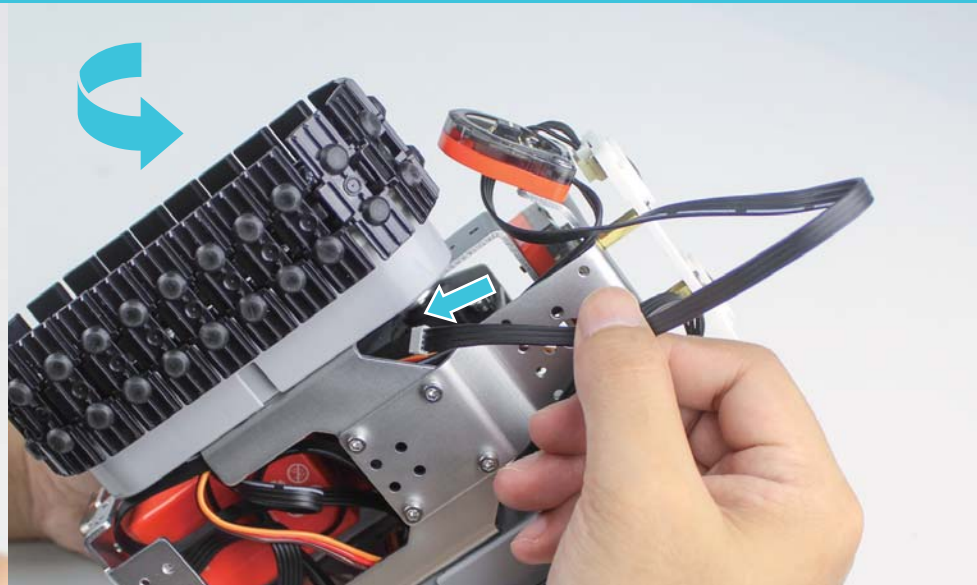
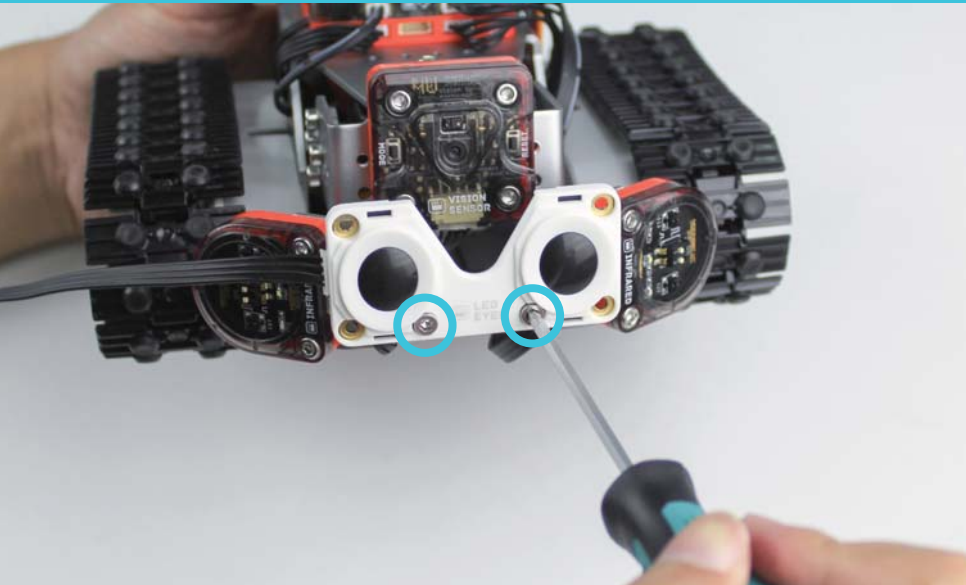


# 1.5



M3X4

X2



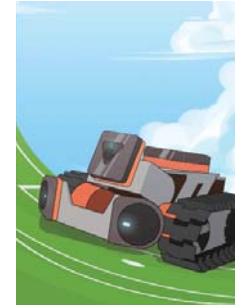
LED EYES

P1

Small Connector  
This Side Up



# Turn on the Obstacle avoidance



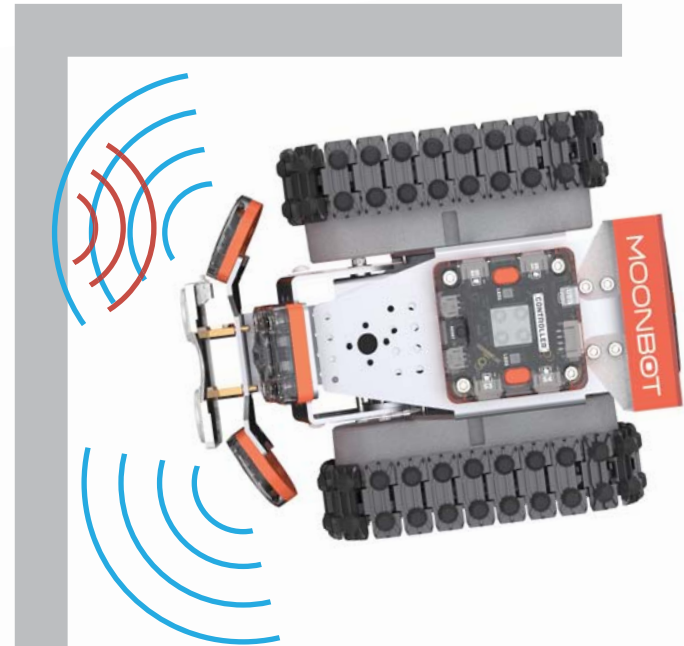
MoonBot

Controller

MoonRover



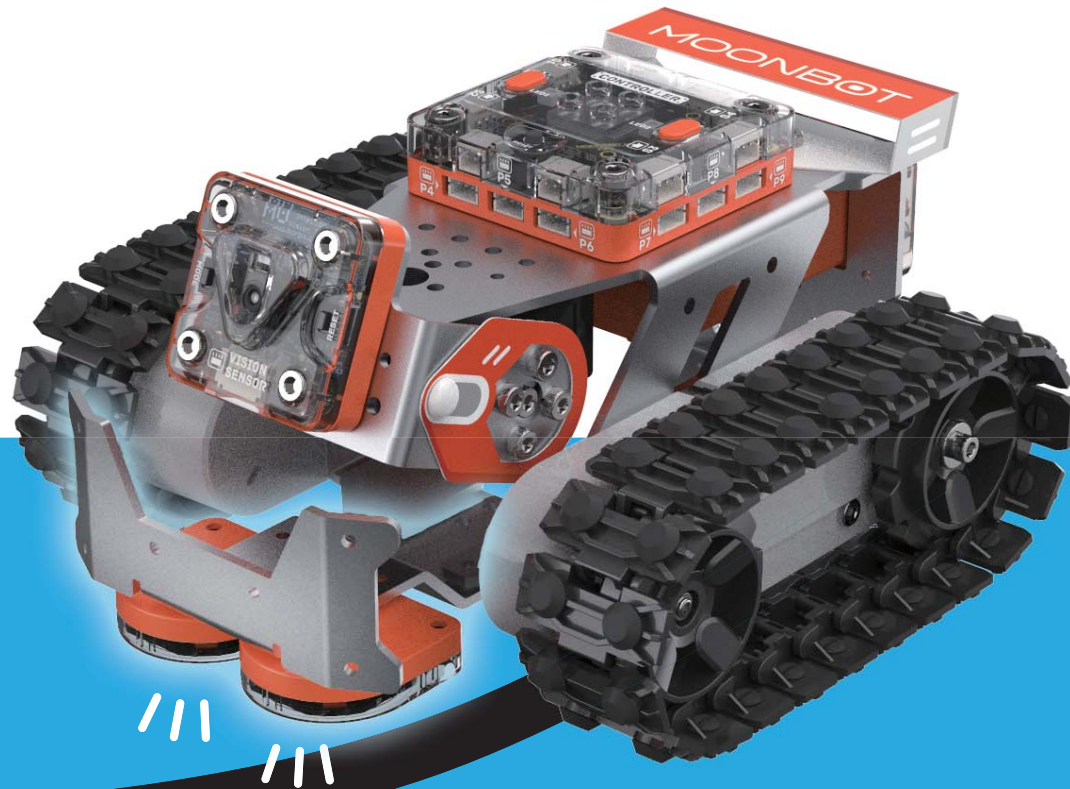
Clicking this button in the APP can switch the obstacle avoidance: the infrared module senses the obstacles on the front and side and makes the car turn.





# 2 MoonRover

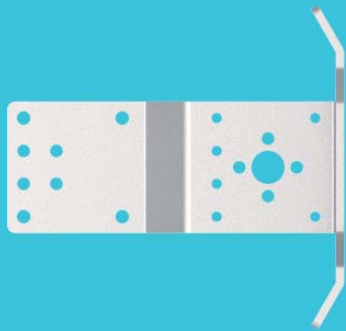
Line Following



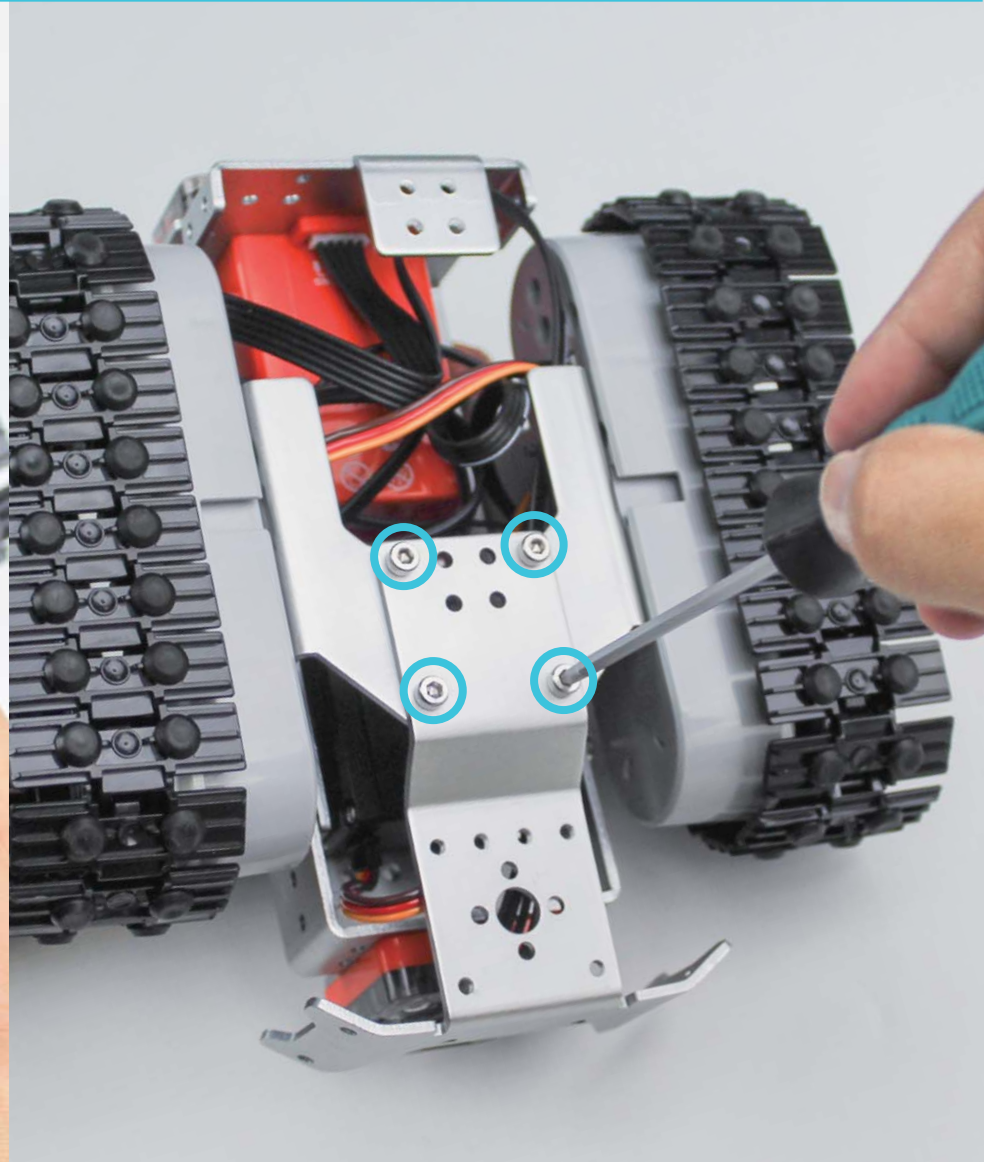
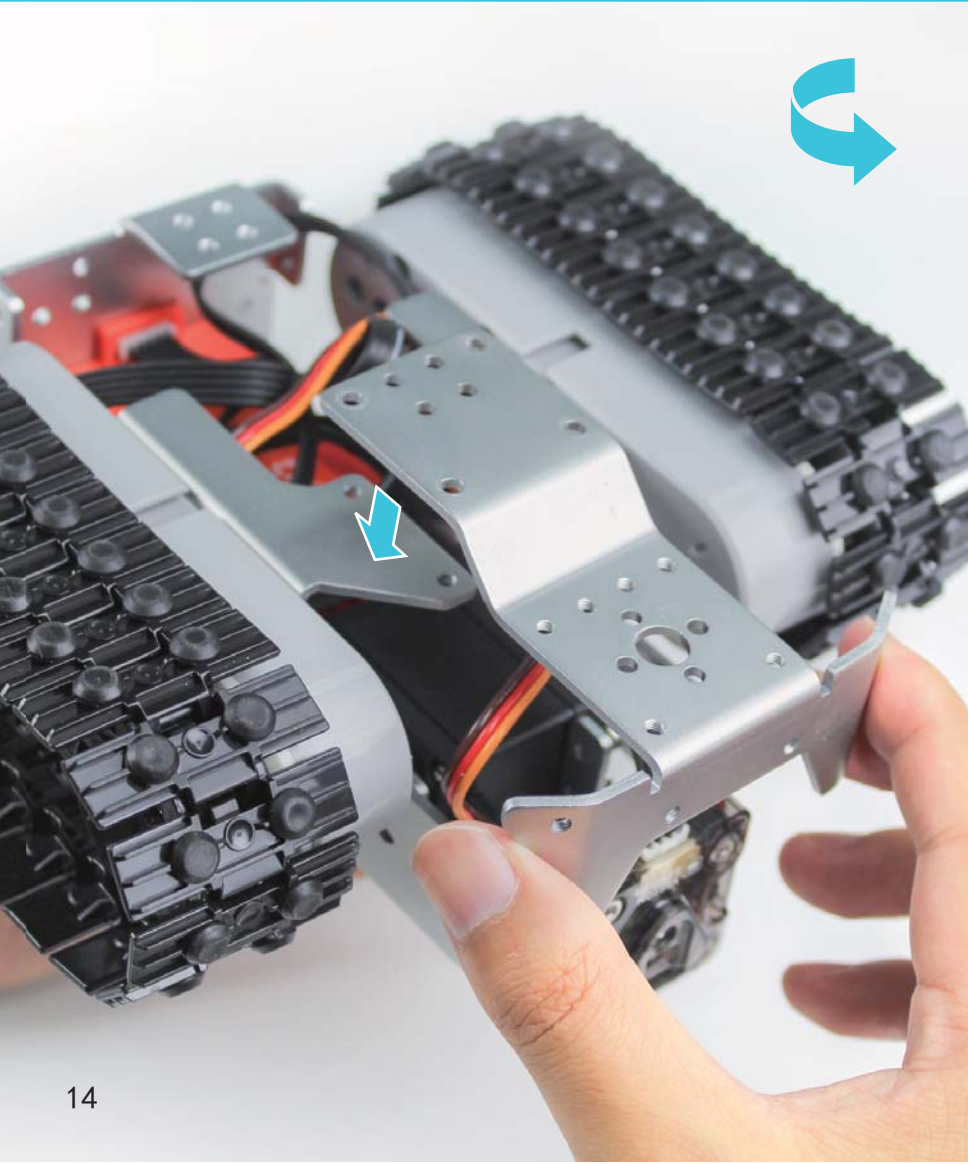
+9  
PSC

10min  
Estimated time

# 2.1



X4

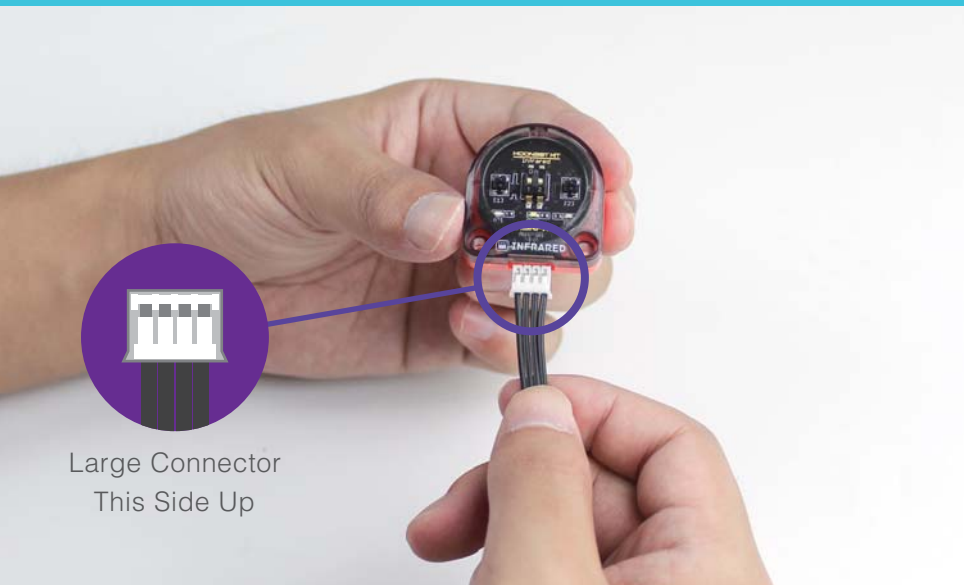




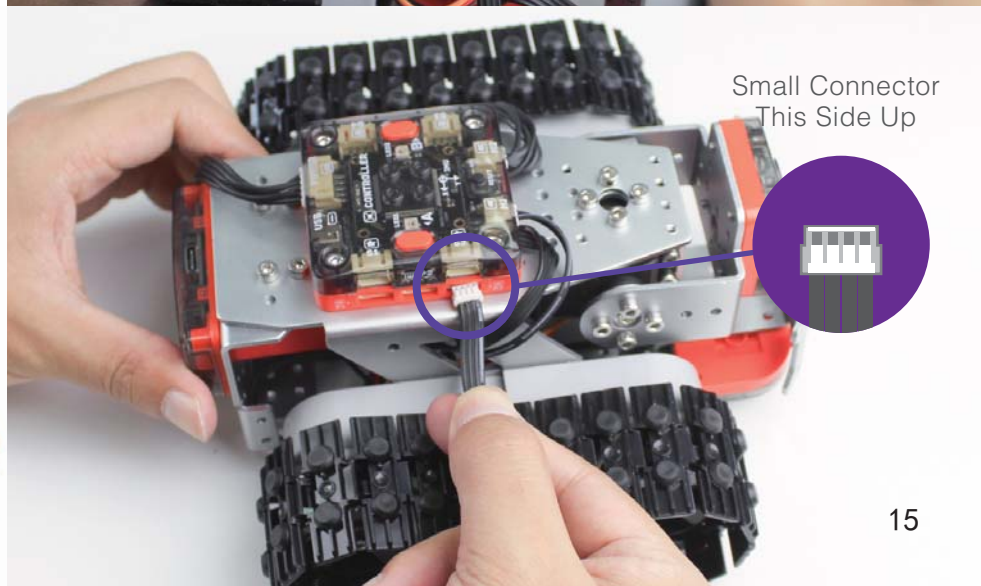
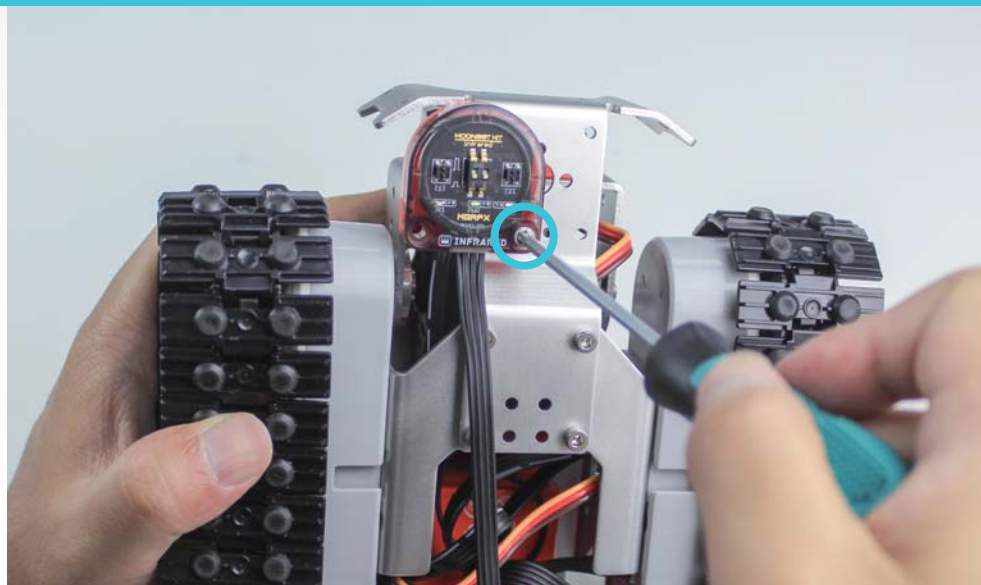
# 2.2



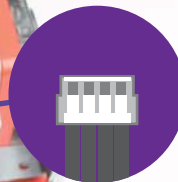
X1



Large Connector  
This Side Up



Small Connector  
This Side Up



# 2.3



M3X8

X1



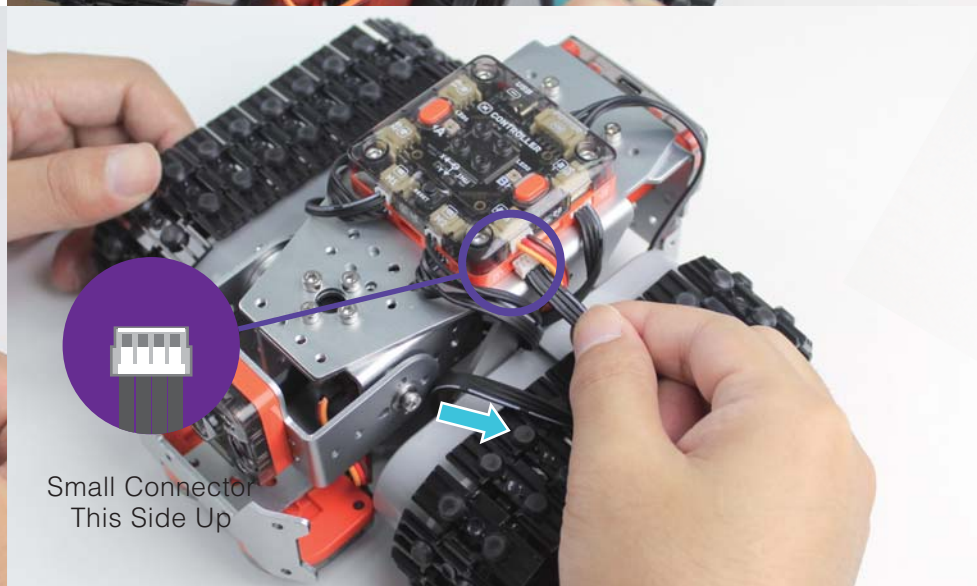
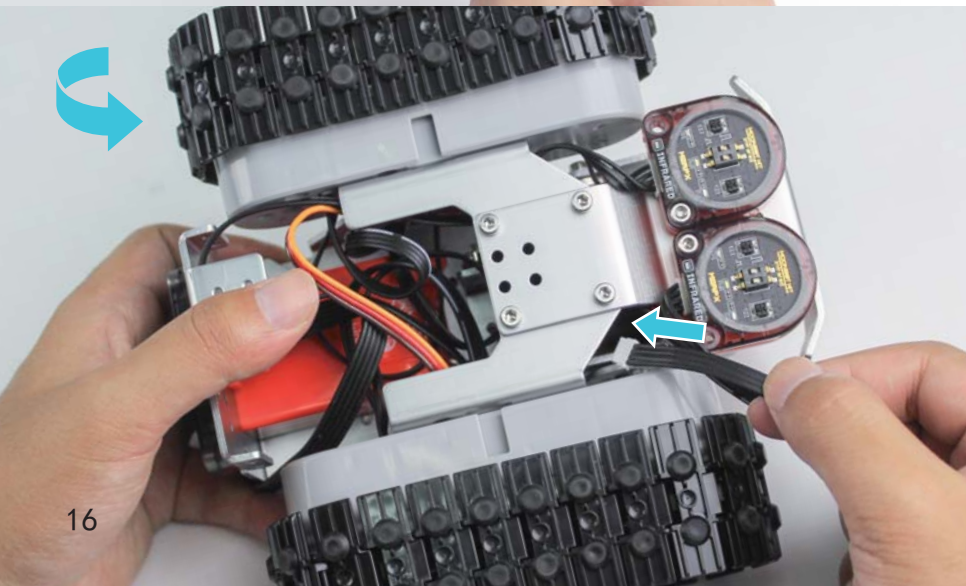
4PIN



18CM



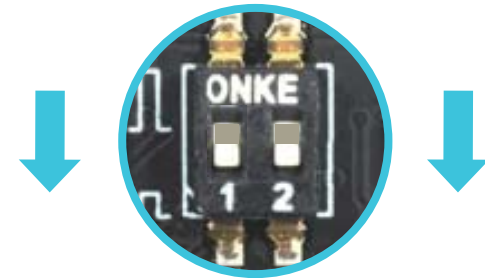
Large Connector  
This Side Up



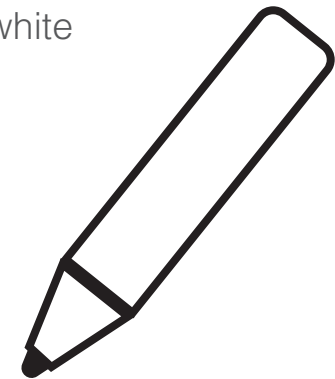
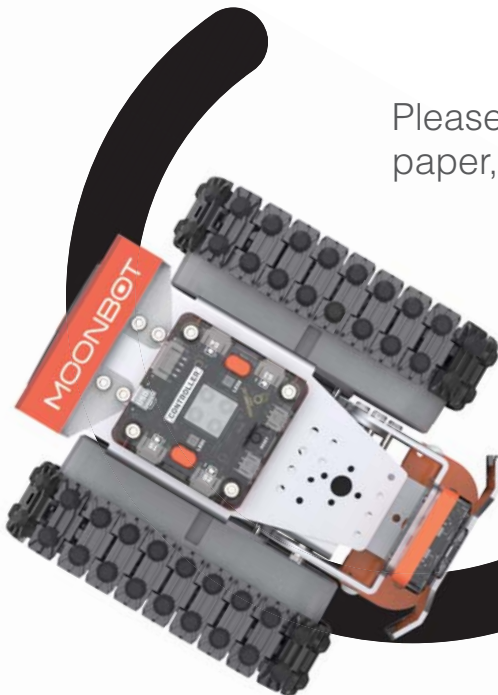
Small Connector  
This Side Up



Move the four small switches to the lower end to switch the infrared to the short distance inspection mode.



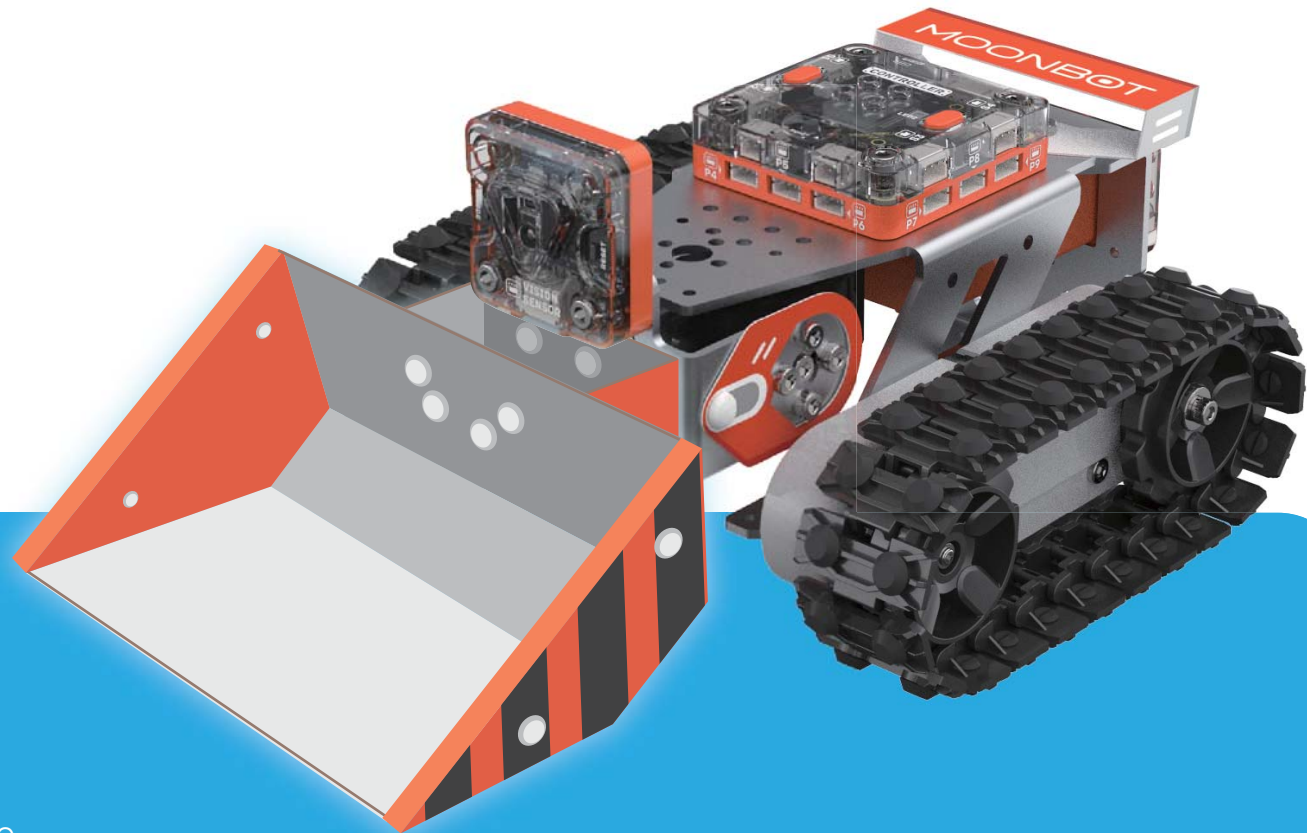
Please draw or print 8~10mm thick black lines on white paper, or use black electrical tape.



\*Suitable for non-glare indoor use

# 3 MoonRover

Forklift



**+12**  
PSC

**15min**  
Estimated time

# 3.1



M3X12

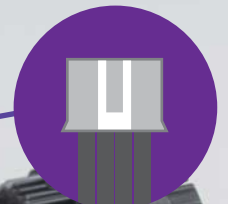
X2



Install the vision sensor up to this location

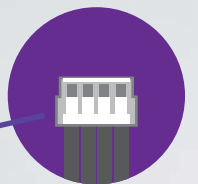


Large Connector  
This Side Up



VISION SENSOR

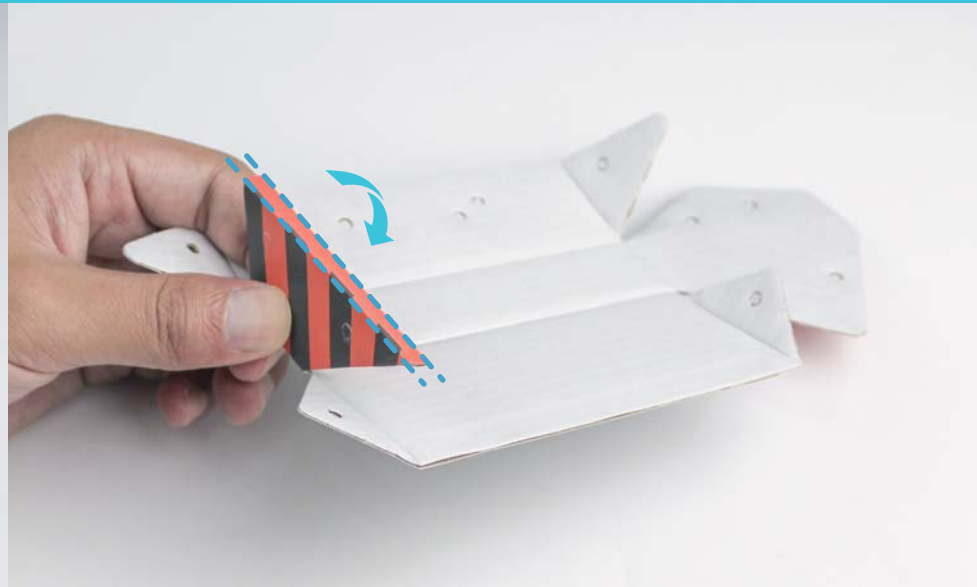
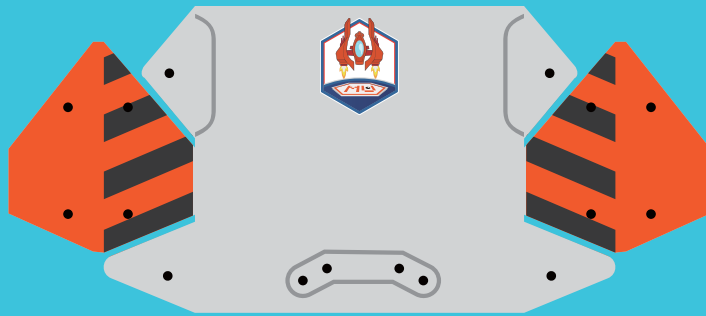
P9



Small Connector  
This Side Up



# 3.2

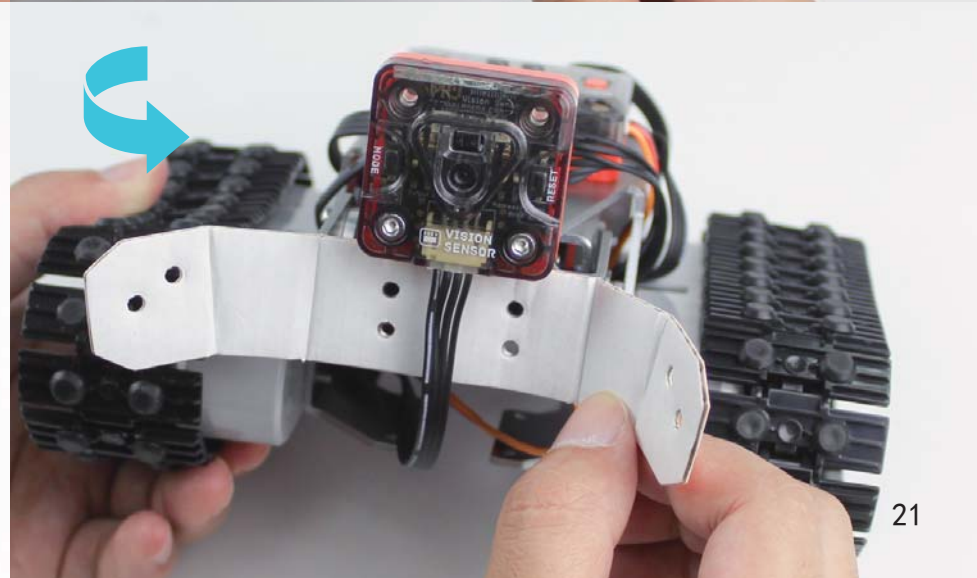
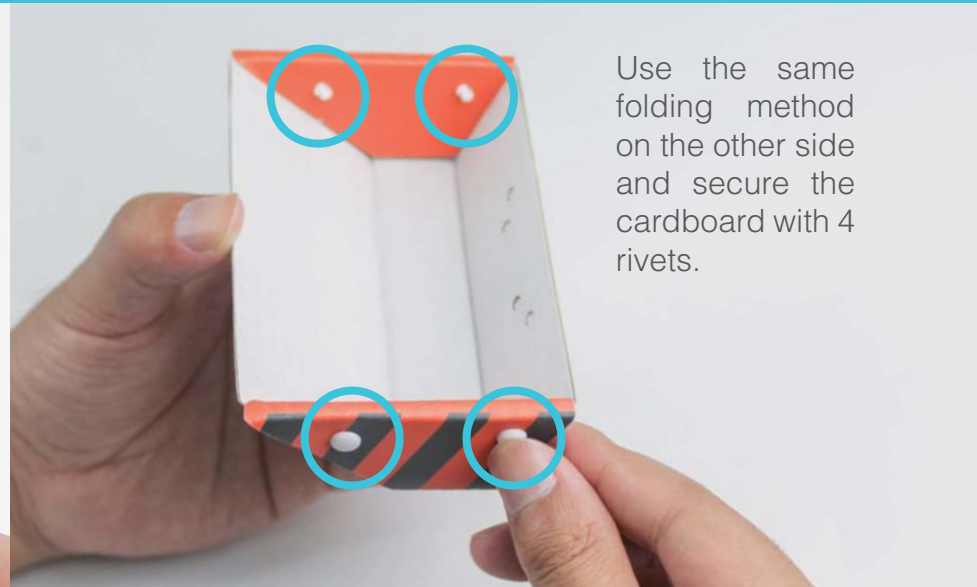
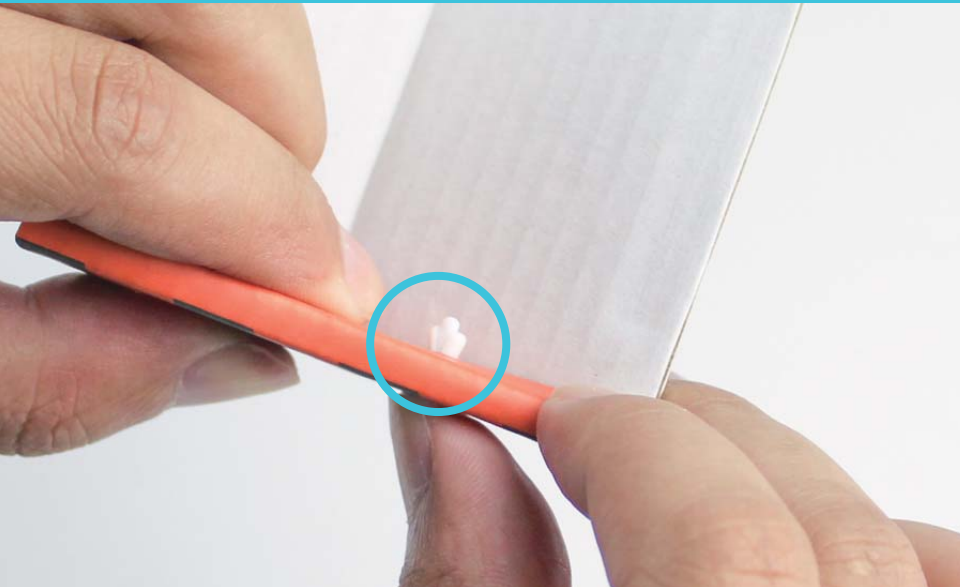




# 3.3



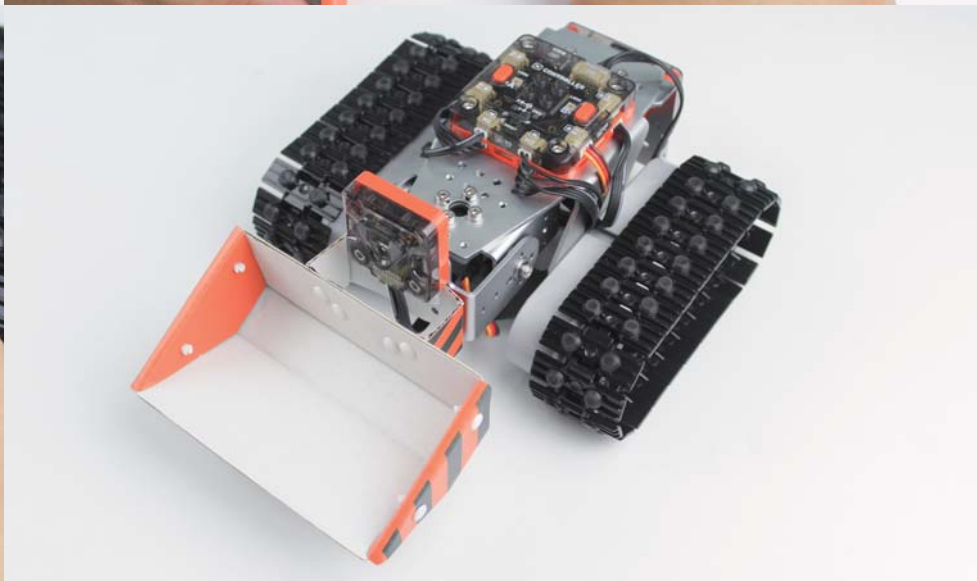
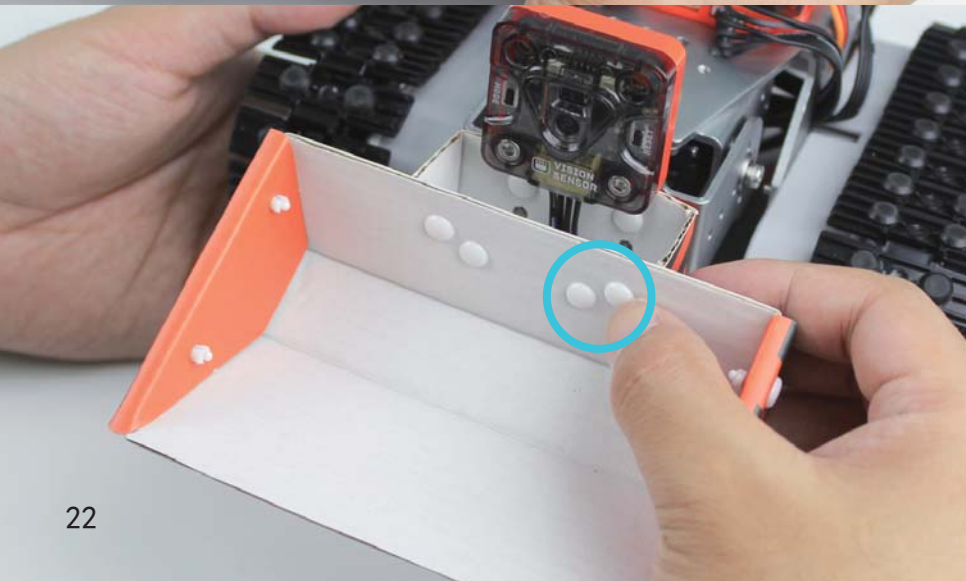
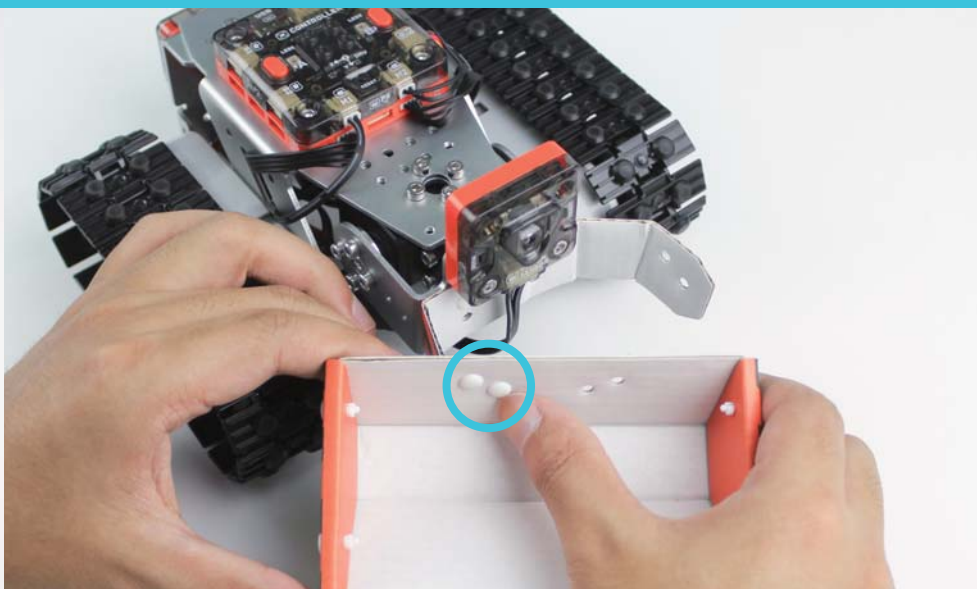
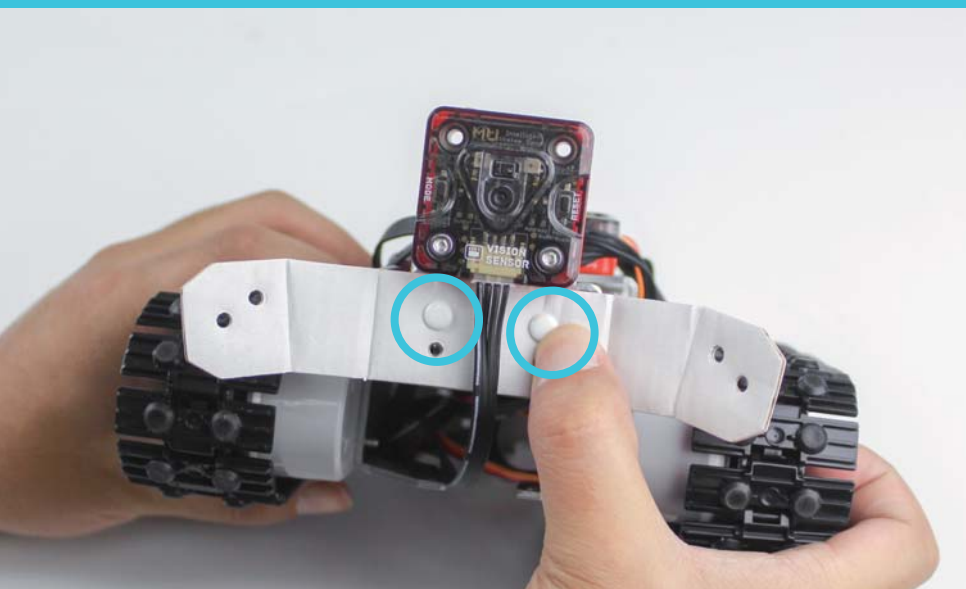
X4



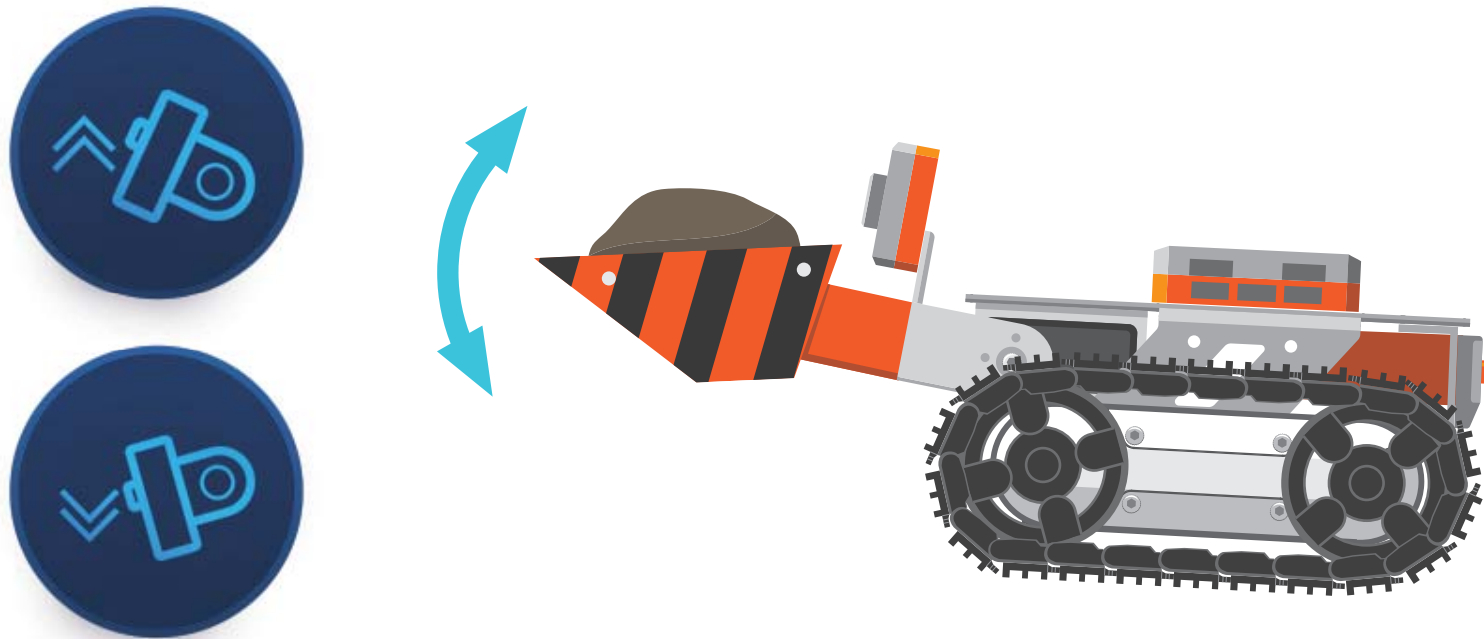
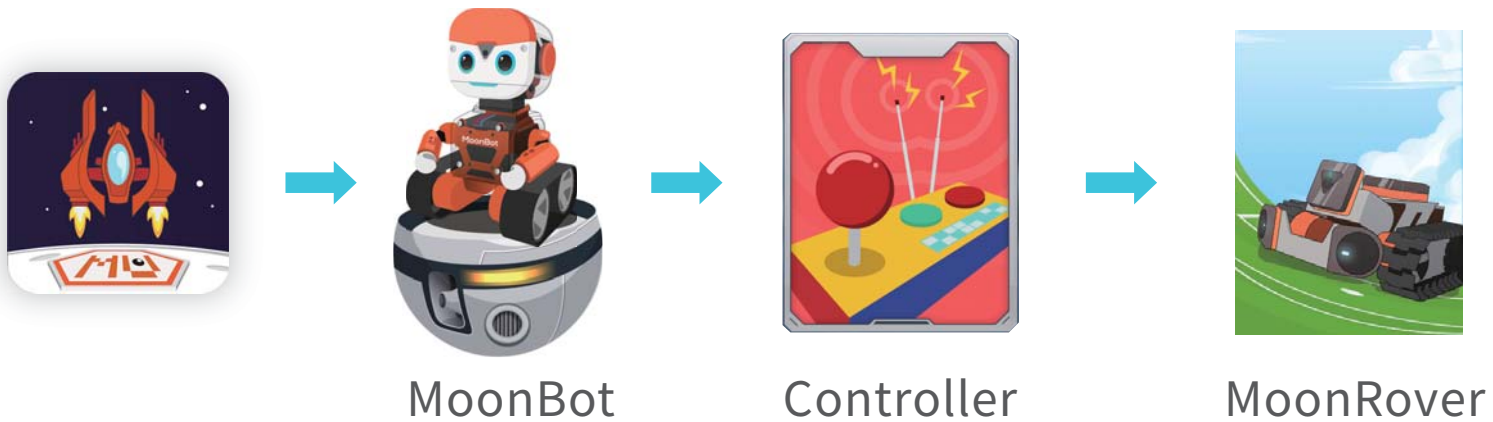
# 3.4



X6



# Remote control via app





# DISCOVER MORE

[wiki.morpx.com](http://wiki.morpx.com)



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