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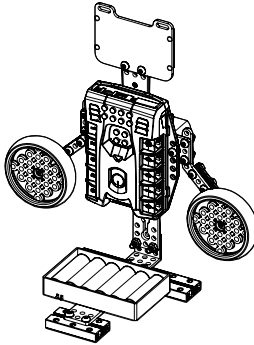
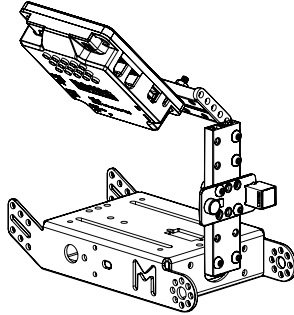
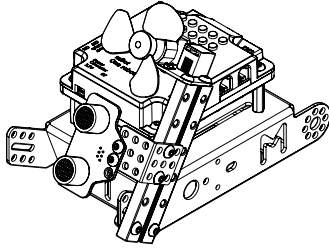
Makeblock Co., Ltd.

Technical support: tec-support@makeblock.com

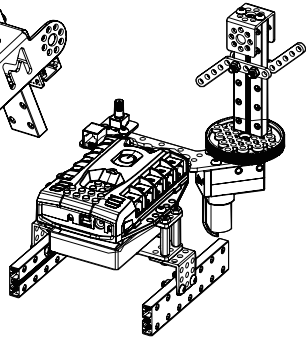
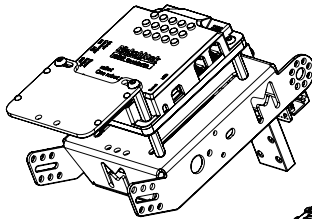
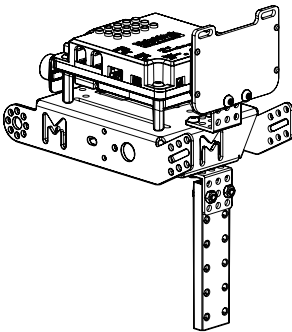
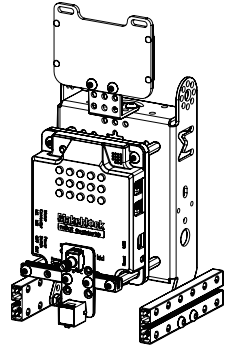
Tel: +86 (0) 755-26392228

Address: 4th Floor, Building C3, Nanshan iPark, No.1001 Xueyuan Avenue,
Nanshan District, Shenzhen, Guangdong Province, China





Perception Gizmos Add-on Pack
USER MANUAL



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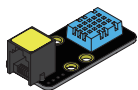
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P15 mBot Ranger Add-on Cases

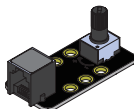
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Parts List



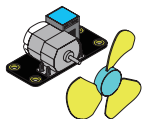
1 ×
Temperature and
Humidity Sensor



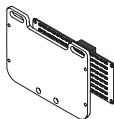
1 ×
Potentiometer



1 ×
Sound
Sensor



1 ×
130 Motor Pack



1 ×
LED Matrix 8×16



2 ×
Plate 45°



2 ×
Beam 0824-096



2 ×
Beam 0808-072



2 ×
Bracket 3×3



4 ×
RJ25 Cable



4 ×
M4×25mm Brass Stud



1 ×
Wrench 5mm&7mm



16 ×
M4×8mm Screw



20 ×
M4×14mm Screw



4 ×
M4×22mm Screw



10 ×
Plastic Spacer
4×7×3mm



20 ×
M4 Nut

Reference for Parts (Ratio 1:1)



M4×8mm Screw



M4 Nut



M4×14mm Screw



Plastic Spacer 4×7×3mm



M4×22mm Screw

Range Finder



mBot Ultrasonic Sensor (1)



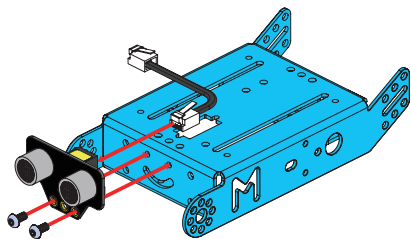
M4x8mm Screw (2)



mBot Chassis (1)



RJ25 Cable (1)



01

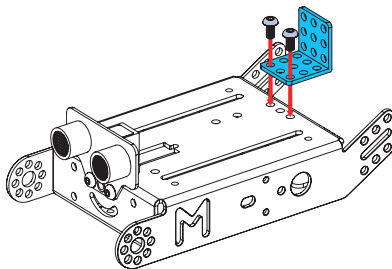
02



Bracket 3x3 (1)



M4x8mm Screw (2)



03

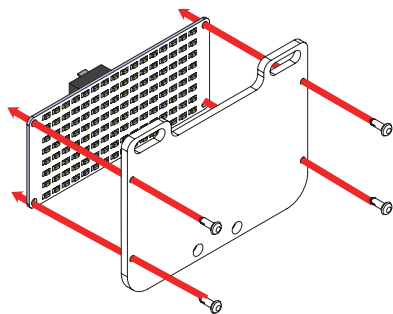
04



LED Matrix 8x16 (1)



Plastic Rivet R4100 (4)



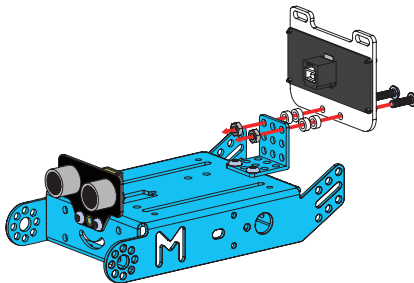
M4x22mm Screw (2)



M4 Nut (2)

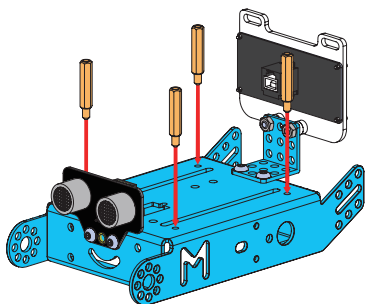


Plastic Spacer 4x7x3mm (4)





M4 x 25mm Brass Stud (4)



05

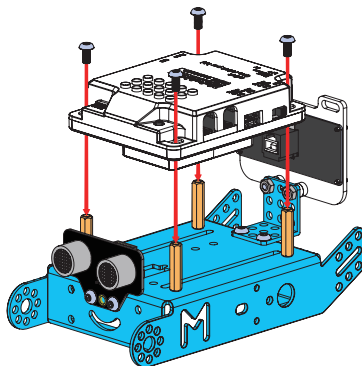
06



M4 x 8mm Screw (4)



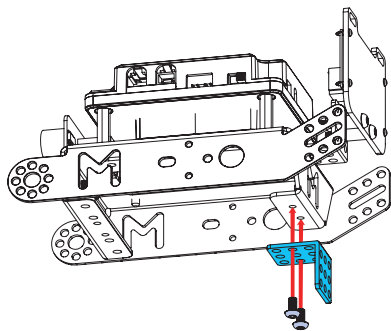
mCore (1)



Bracket 3 x 3 (1)



M4 x 8mm Screw (2)



07

08



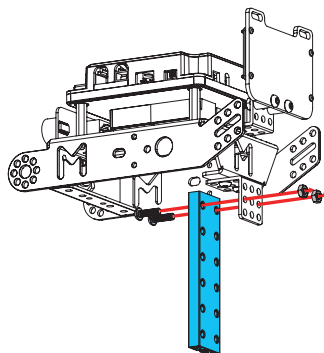
Beam 0824-096 (1)



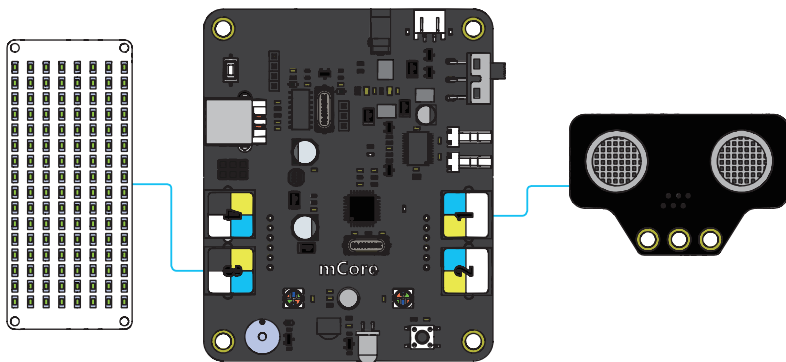
M4 x 14mm Screw (2)



M4 Nut (2)



Please refer to the figure below to complete the wiring.

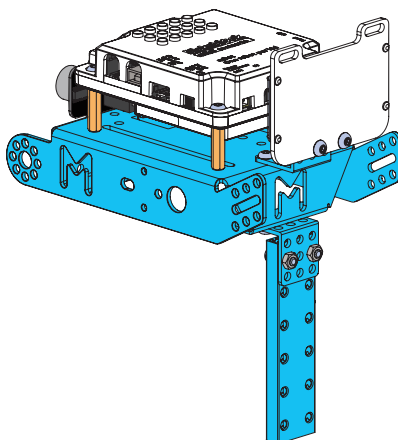


09





10

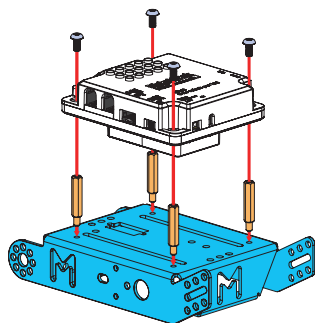
Good job!

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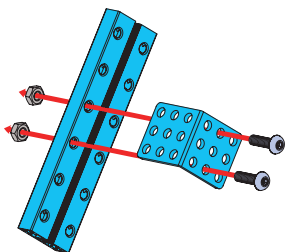
Energy-saving Fan

-  M4×25mm Brass Stud (4)
-  M4×8mm Screw (4)
-  mCore (1)
-  mBot Chassis (1)






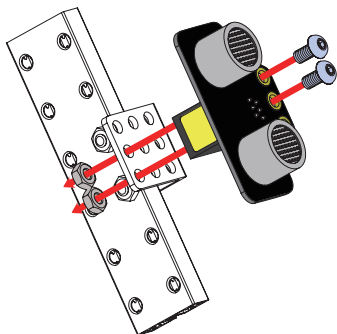
01

-  Beam 0824-096 (1)
-  Bracket 3×3 (1)
-  M4×14mm Screw (2)
-  M4 Nut (2)





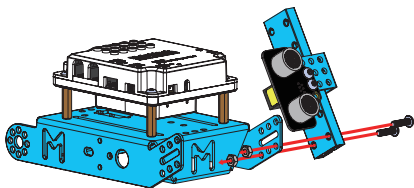
02

-  mBot Ultrasonic Sensor (1)
-  M4×8mm Screw (2)
-  M4 Nut (2)



03

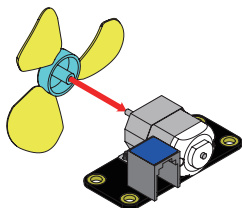
-  M4×14mm Screw (2)
-  M4 Nut (2)



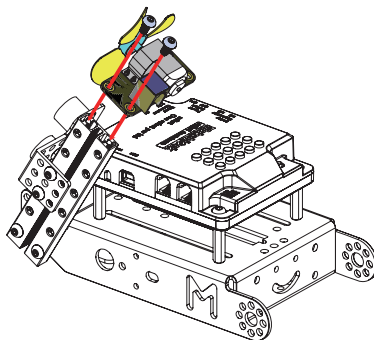
04



130 Motor Pack (1)



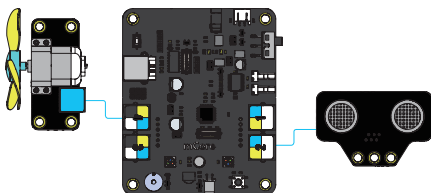
M4 x 8mm Screw (2)



05 06

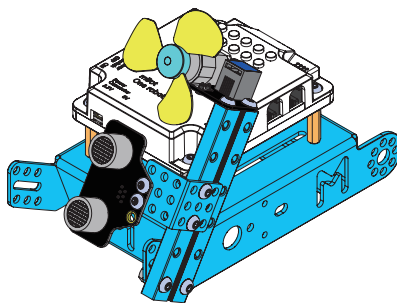
07 08

Please refer to the figure below to complete the wiring.






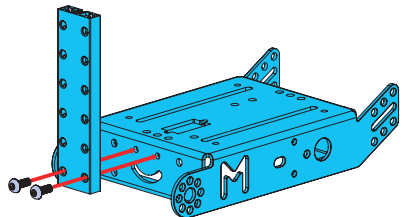
Good job!




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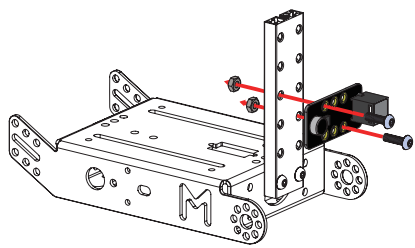


Sound Control Lamp




-  Beam 0824-096 (1)
-  M4 x 14mm Screw (2)
-  mBot Chassis (1)

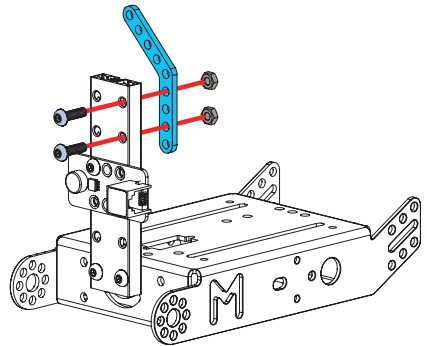






-  Sound Sensor (1)
-  M4 x 14mm Screw (2)
-  M4 Nut (2)

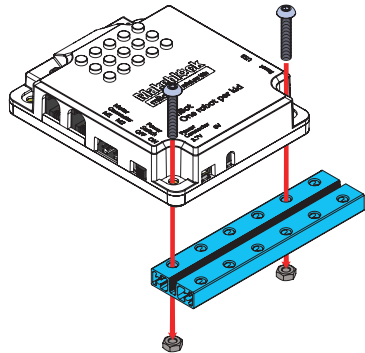


01 02
03 04

-  Plate 45° (1)
-  M4 x 14mm Screw (2)
-  M4 Nut (2)

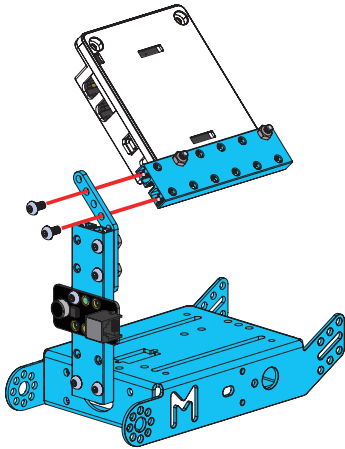


-  mCore (1)
-  Beam 0824-096 (1)
-  M4 x 22mm Screw (2)
-  M4 Nut (2)

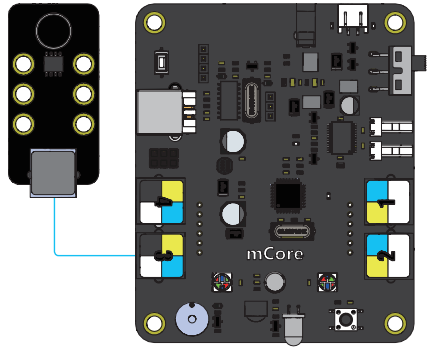




M4 x 8mm Screw (2)



Please refer to the figure below to complete the wiring.



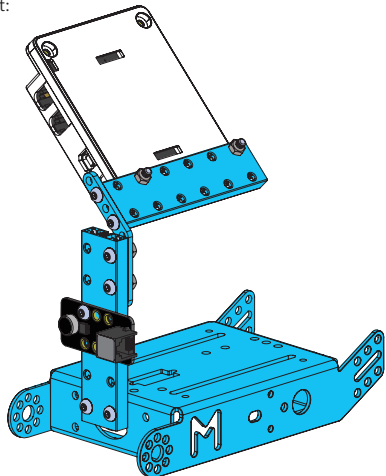
05

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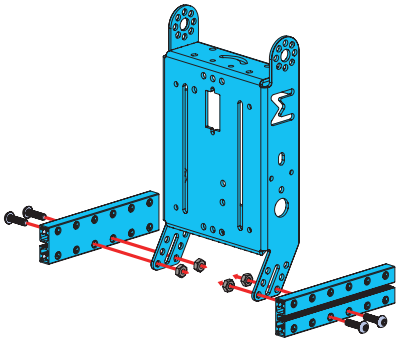
Good job!

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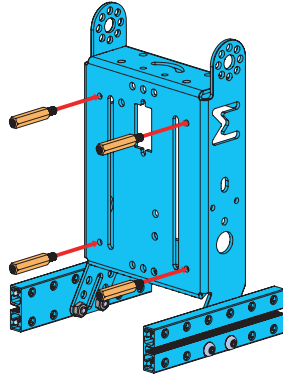
Knob Robot

-  mBot Chassis (1)
-  Beam 0824-096 (2)
-  M4×14mm Screw (4)
-  M4 Nut (4)






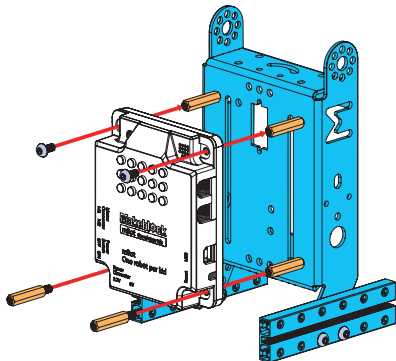
01

-  M4×25mm Brass Stud (4)





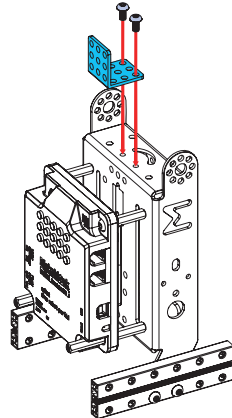
02

-  mCore (1)
-  M4×25mm Brass Stud (2)
-  M4×8mm Screw (2)



03

-  M4×8mm Screw (2)
-  Bracket 3×3 (1)



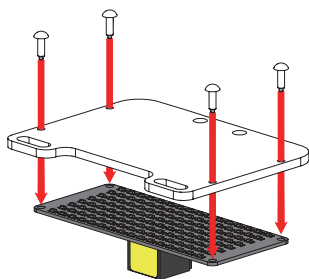
04



LED Matrix 8×16 (1)



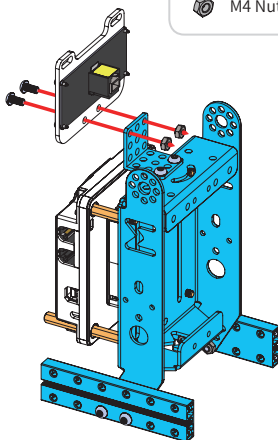
Plastic Rivet R4100 (4)



M4×8mm Screw (2)



M4 Nut (2)



05

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Beam 0808-072 (1)



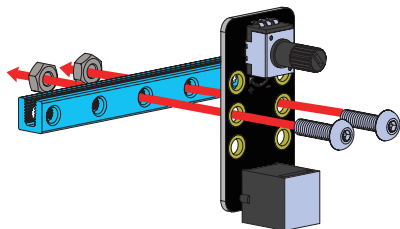
Potentiometer (1)



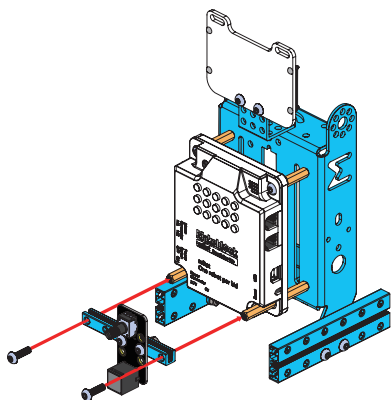
M4×14mm Screw (2)



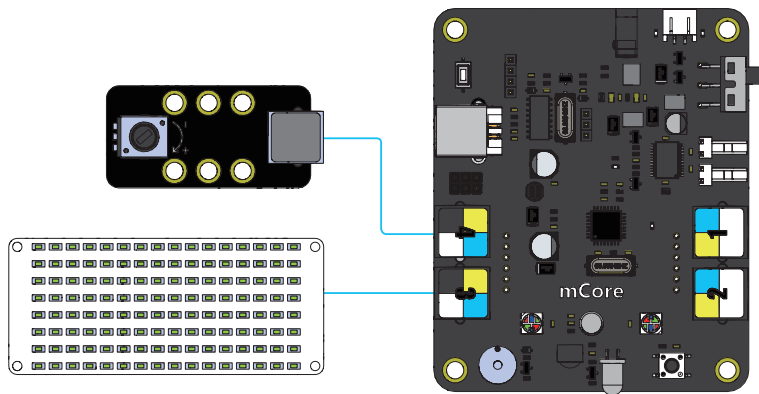
M4 Nut (2)



M4×14mm Screw (2)



Please refer to the figure below to complete the wiring.

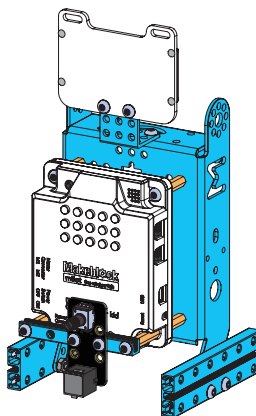


09

10

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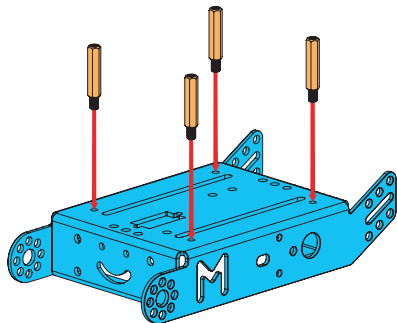
Weather Station



mBot Chassis (1)



M4 x 25mm Brass Stud (4)



01



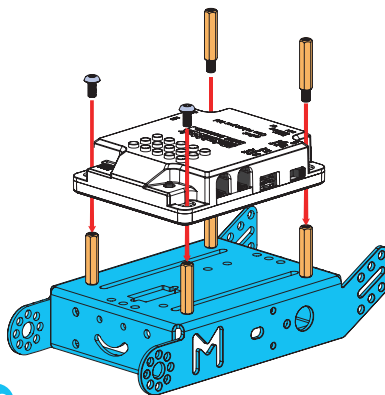
mCore (1)



M4 x 25mm Brass Stud (2)



M4 x 8mm Screw (2)



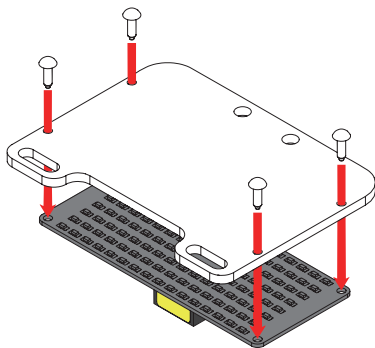
02



LED Matrix 8 x 16 (1)



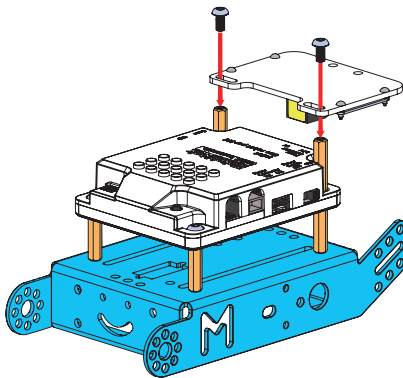
Plastic Rivet R4100 (4)



03



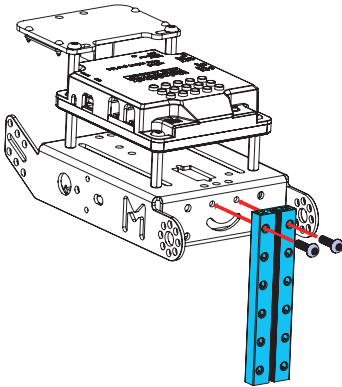
M4 x 8mm Screw (2)



04



Beam 0824-096 (1)
M4×14mm Screw (2)



05



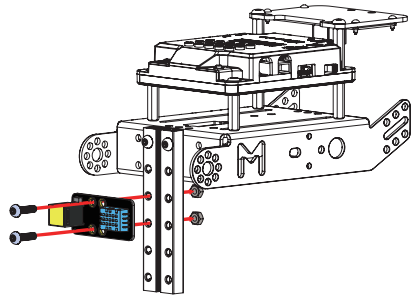
Temperature and Humidity Sensor (1)



M4×14mm Screw (2)



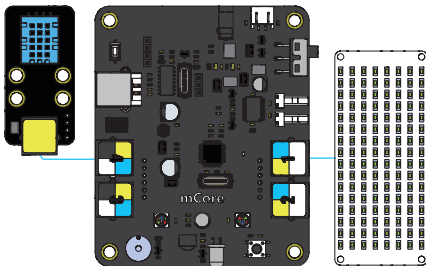
M4 Nut (2)



06

Please refer to the figure below to complete the wiring.

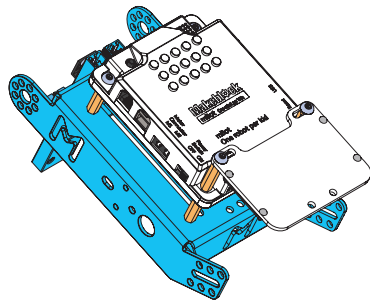
07








08

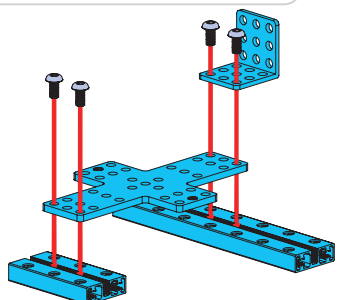
Good job!

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



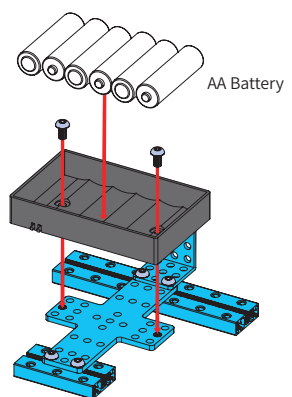
Roly-poly

-  Ranger Plate for Battery Holder (1)
-  Ranger Beam 0824-48 (1)
-  Ranger Beam 0824-112 (1)
-  Bracket 3x3 (1)
-  M4x8mm Screw (4)






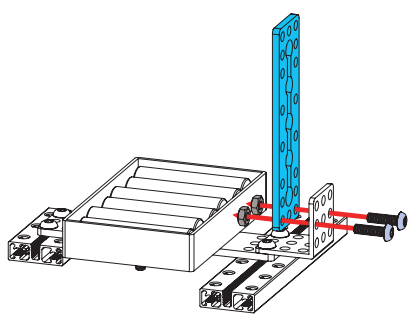
01

-  Ranger Battery Holder (1)
-  M4x8mm Screw (4)







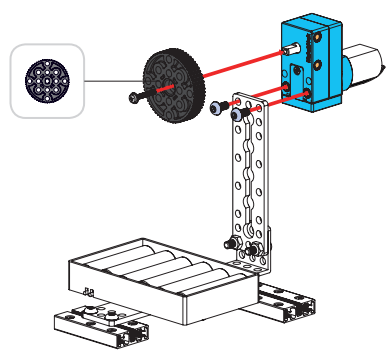
02

-  Ranger Plate 0324-88 (1)
-  M4x14mm Screw (2)
-  M4 Nut (2)



03

-  Ranger 180 Encoder Motor (1)
-  Ranger 62T Wheel (1)
-  Ranger M2.5x12mm Screw (1)
-  M4x8mm Screw (2)



04



Ranger Plate T-type (1)



M4 x 14mm Screw (2)



M4 Nut (2)

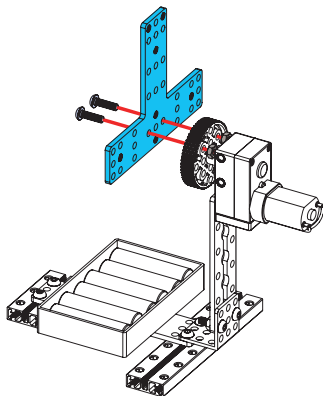


Plate 45° (2)



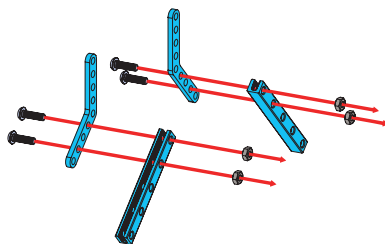
Beam 0808-072 (2)



M4 x 14mm Screw (4)



M4 Nut (4)



05

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Ranger 90T Wheel (2)



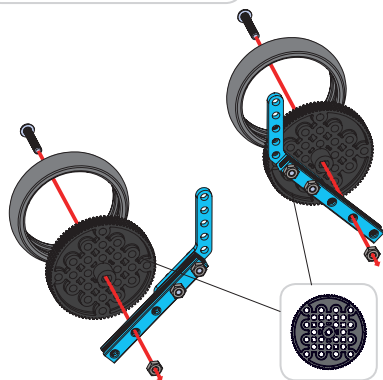
Ranger 90T Tyre (2)



M4 x 22mm Screw (2)



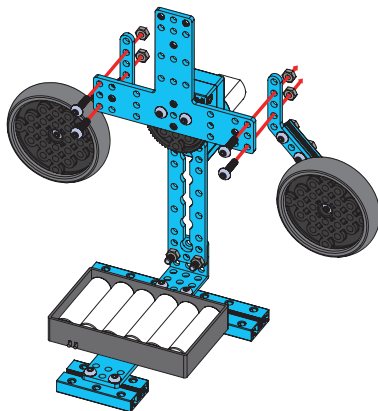
M4 Nut (2)



M4 x 14mm Screw (4)



M4 Nut (4)





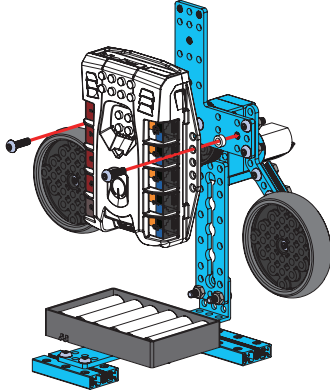
Me Auriga (1)



M4 x 14mm Screw (2)



Plastic Spacer 4 x 7 x 3mm (2)



09

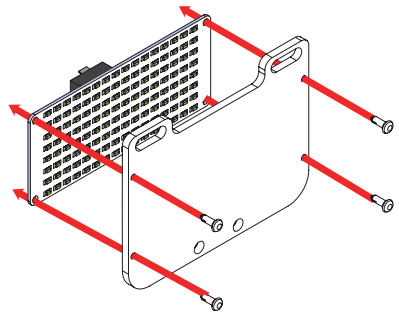
10



LED Matrix 8 x 16 (1)



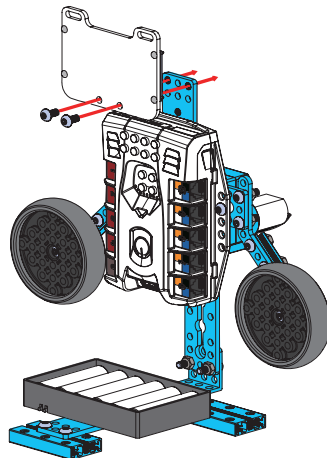
Plastic Rivet R4100 (4)



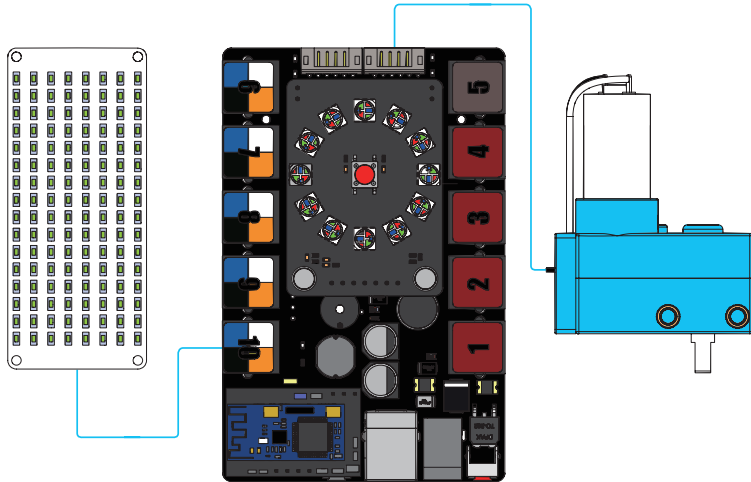
11



M4 x 8mm Screw (2)



Please refer to the figure below to complete the wiring.

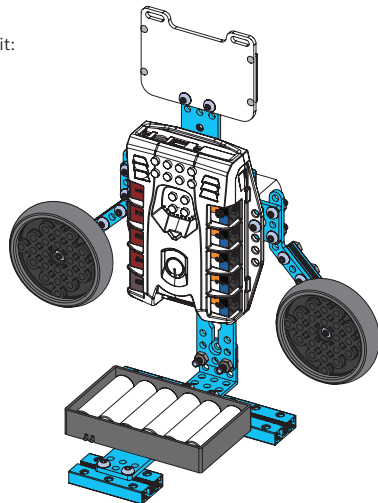


12




13

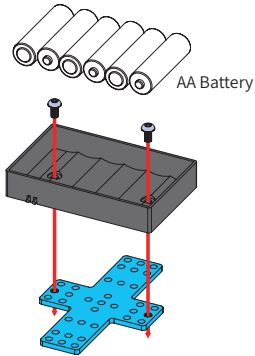
Good job!

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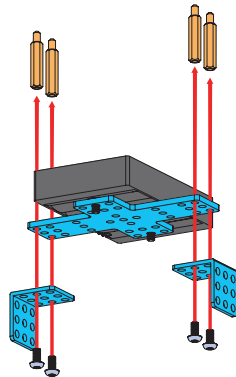
Music Box




-  Ranger Plate for Battery Holder (1)
-  Ranger Battery Holder (1)
-  M4 x 8mm Screw (2)

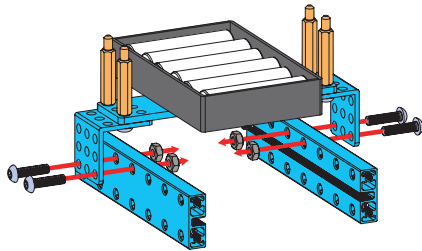




01 02
03 04

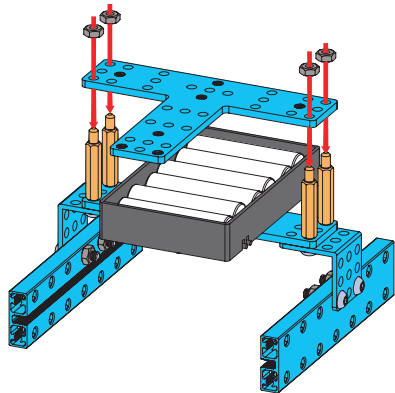
-  M4 x 25mm Brass Stud (4)
-  M4 x 8mm Screw (4)
-  Bracket 3 x 3 (2)



-  Ranger Beam 0824-112 (2)
-  M4 x 14mm Screw (4)
-  M4 Nut (4)



-  Ranger Plate T-type (1)
-  M4 Nut (4)

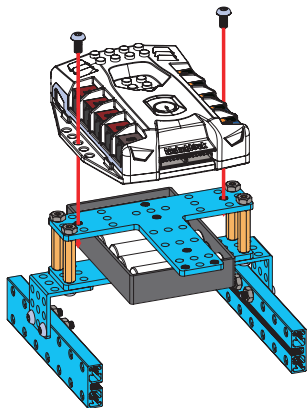




Me Auriga (1)



M4 x 8mm Screw (2)



05



Ranger 180 Encoder Motor (1)



Ranger Plate 135° (1)



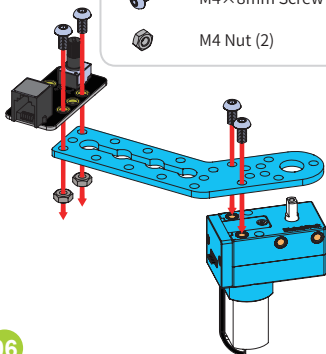
Potentiometer (1)



M4 x 8mm Screw (4)



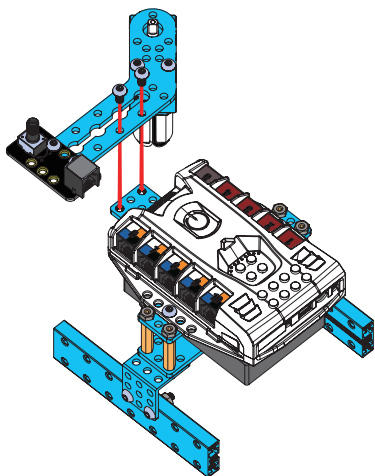
M4 Nut (2)



06



M4 x 8mm Screw (2)



07



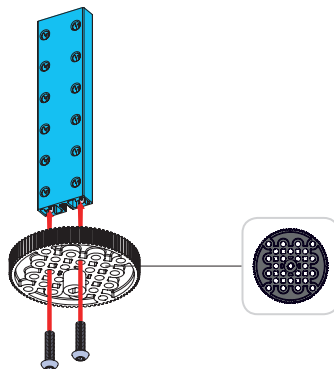
Beam 0824-096 (1)



Ranger 90T Wheel (1)



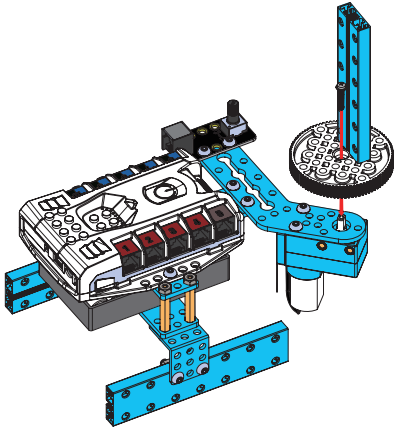
M4 x 14mm Screw (2)



08



Ranger M2.5*12mm Screw (1)



09

10



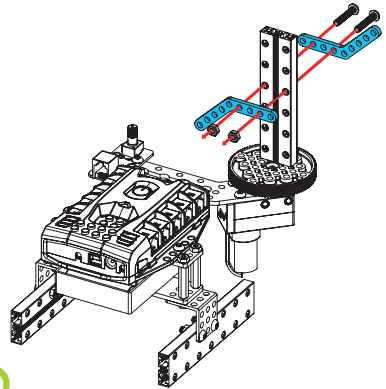
Plate 45° (2)



M4×22mm Screw (2)



M4 Nut (2)



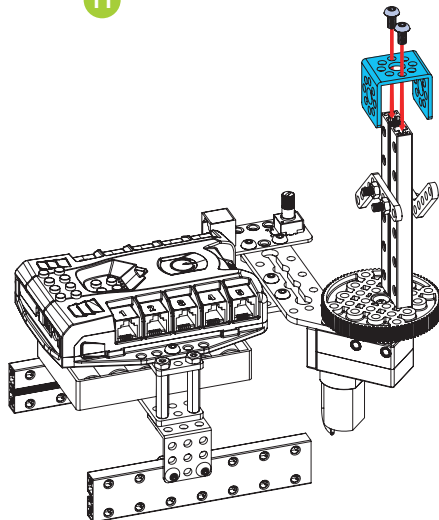
11



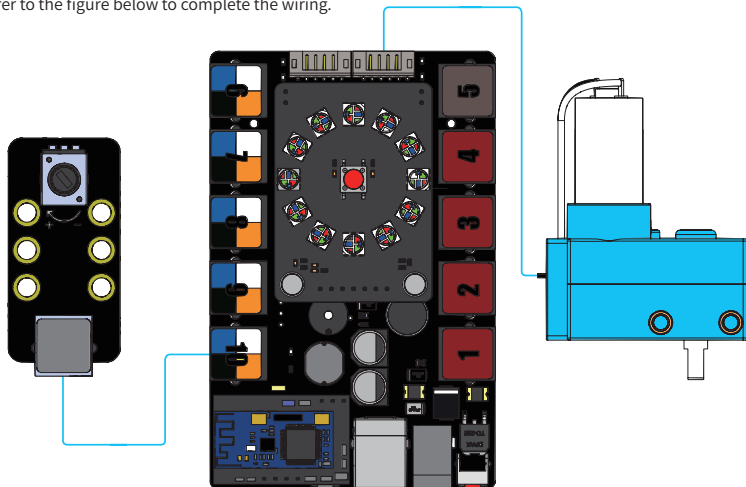
Ranger Bracket U1 (1)



M4×8mm Screw (2)



Please refer to the figure below to complete the wiring.



12

13

Good job!

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