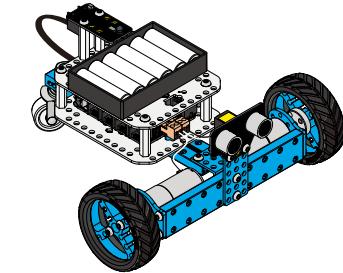
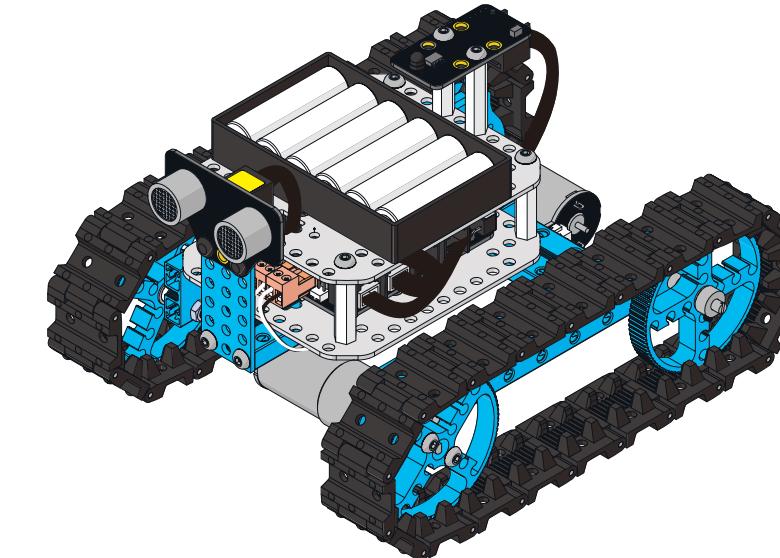




Starter Robot Kit IR Version

Robot Tank
Three-Wheeled Robot Car



MAKER WORKS TECHNOLOGY INC

Technical support: support@makeblock.cc
www.makeblock.cc



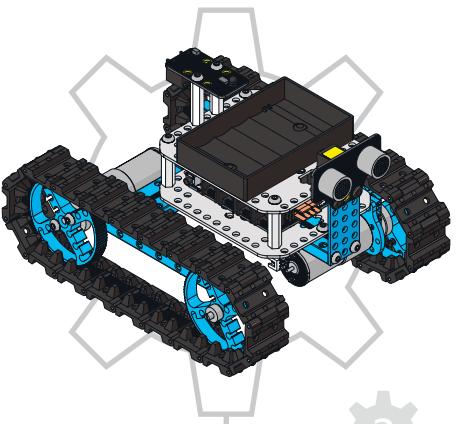
Quick Guide

Warning: Keep this kit out of the reach of small children or animals. Small parts may cause choking or serious injury if swallowed.

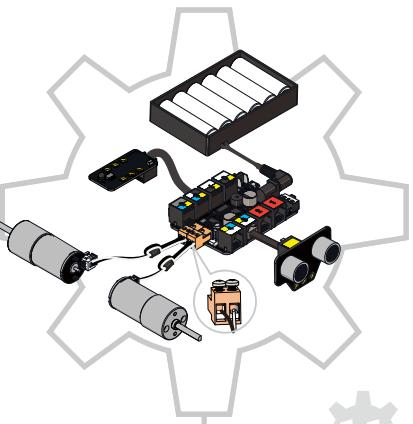
Makeblock Starter Robot Kit contains mechanical parts and electronic modules for you to start exploring the robot world which can be used to build a robot tank or a three-wheel robot car. It is also a great tool to learn mBlock and Scratch programming.



1
Parts List



3
Build the Robot Tank

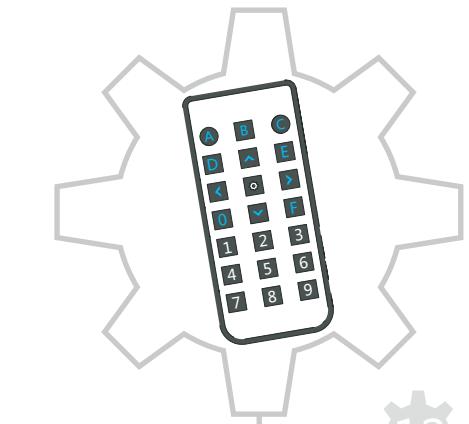


11
Wiring

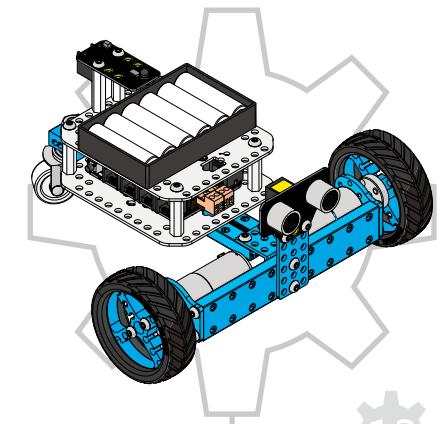
Check all components in parts list,
please contact Makeblock or the
distributor if any component lacked.

Follow our manual to build the
Robot Tank.

Do wiring. Install batteries for
your robot and remote control.



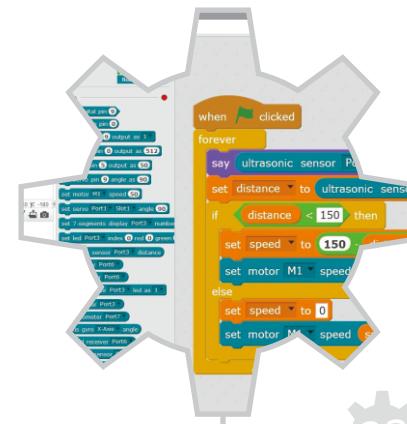
12
Remote control



13
Build three-wheeled Robot Car

Turn on the power of your robot,
control your robot with remote
control. Now it's time to play your robot!

Try another style:
Follow our manual to build the
Three-wheeled Robot Car.



22
Programming Guide--Further exploration

Advanced player can re-program to
the robot by mBlock or Arduino to
explore the wonderful robotic world.

Please visit
<http://learn.makeblock.cc/starter-robot-kit/>
to view the build and programming guide.

Parts List

Pictures for reference only

1× Beam 0824-96



1× Beam 0824-128



2× Beam 0824-144



1× Bracket 3×3



1× Plate 3×6



1× Bracket P3



1× Caster Wheel



1× Nut M8



2× DC Motor-25 Bracket



2× Shaft Connector 4mm



4× Timing Pulley 90T



2× Tire 68.5×22mm



36× Track



36× Track Axle



2× Threaded Shaft 4×39mm



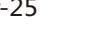
2× Shaft Collar 4mm



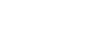
4× Flange Bearing 4×8×3mm



1× Hex Screwdriver



1× Cross Screwdriver



1× Hex Allen Key 2.5mm



2× Hex Allen Key 1.5mm



1× Wrench



20× Screw M4×8



12× Screw M4×14



4× Screw M4×22



12× Nut M4



4× Headless Set Screw M3×5



4× Screw M3×8



6× Plastic Ring 4×7×2mm



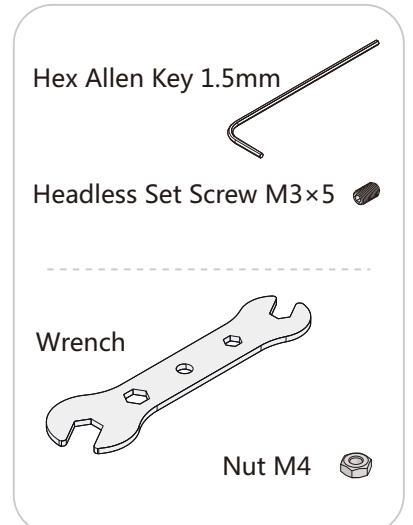
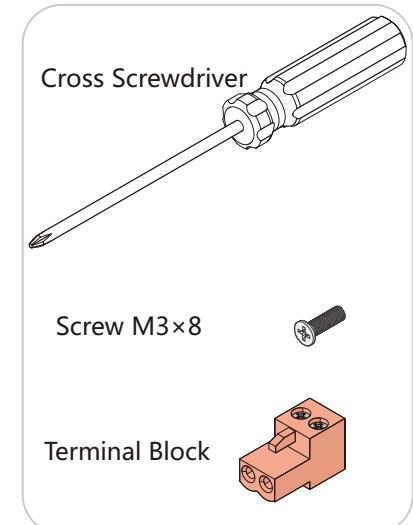
6× Nylon Stud M4×30



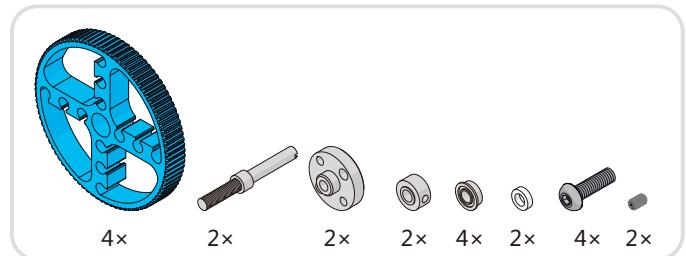
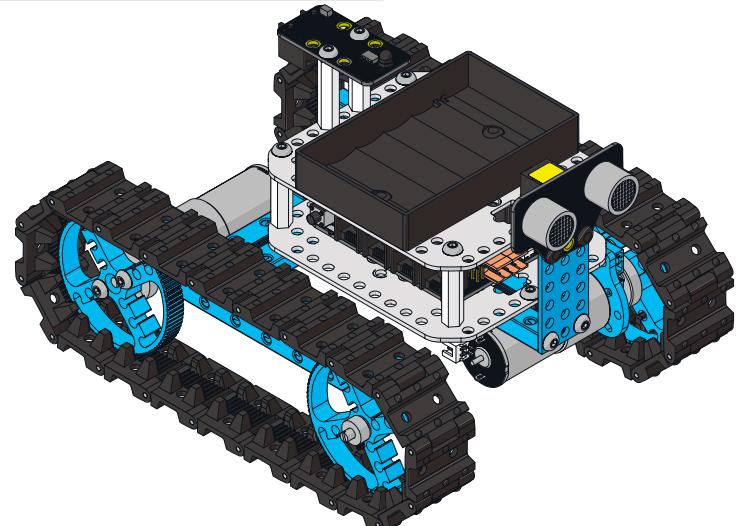
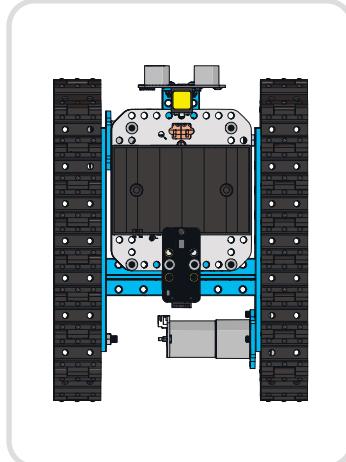
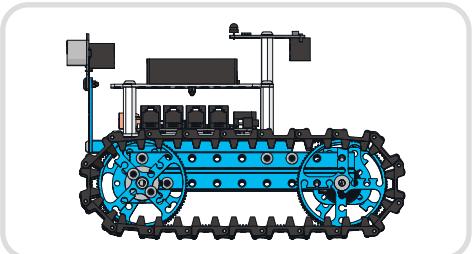
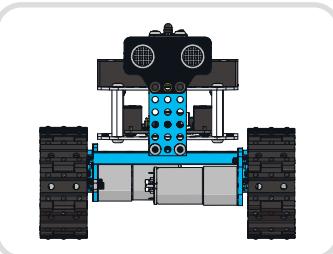
6× Nylon Stud M4×30



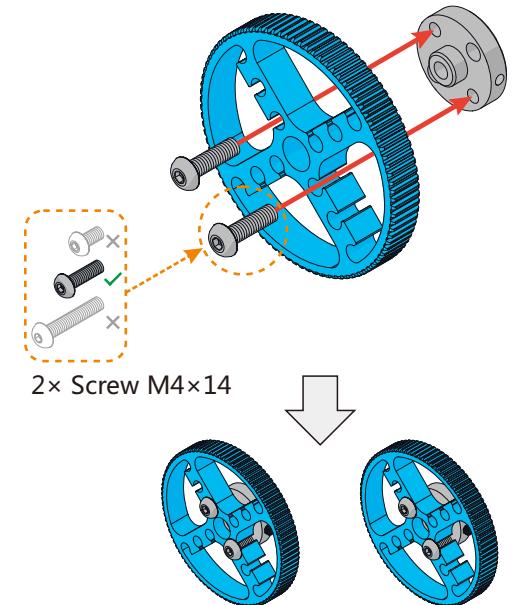
Tool Tips



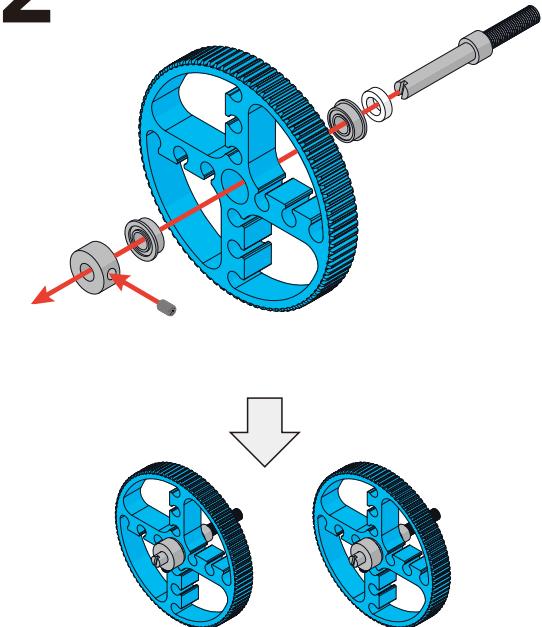
Build the Robot Tank

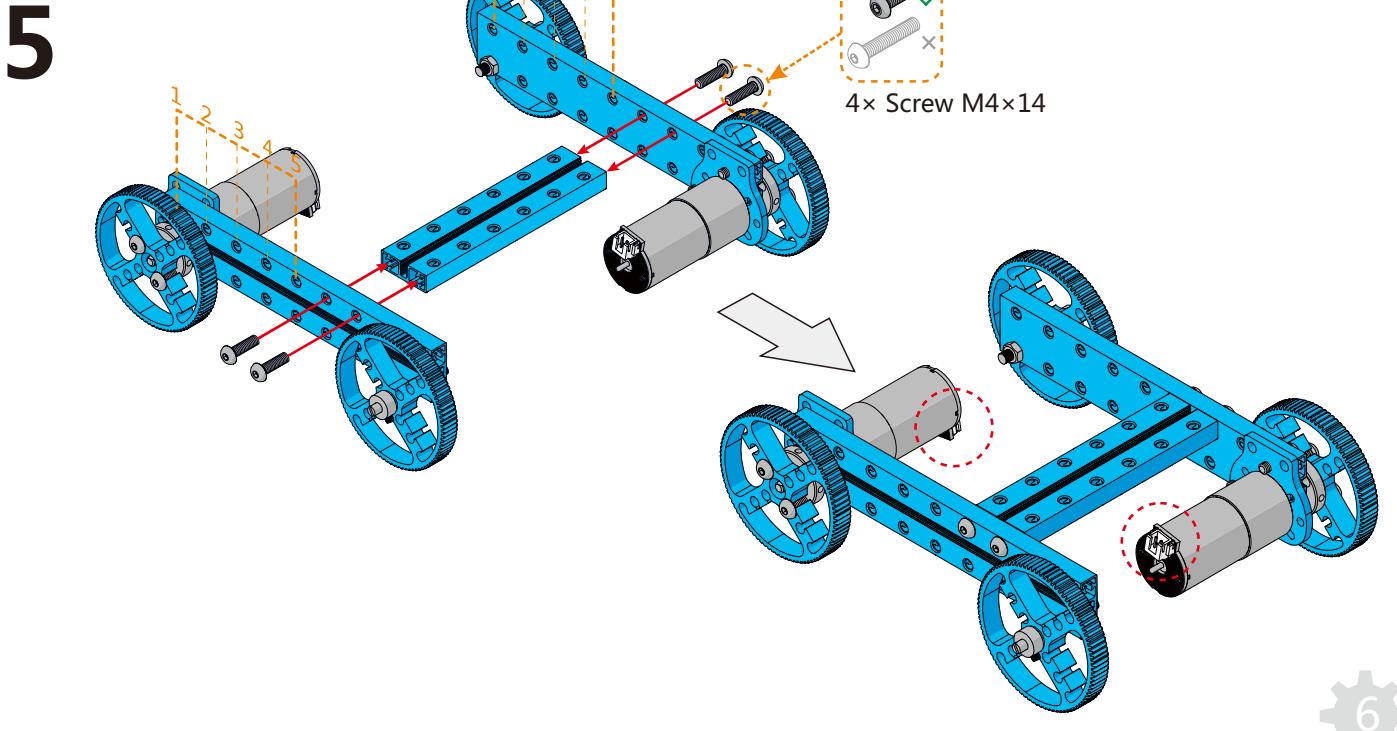
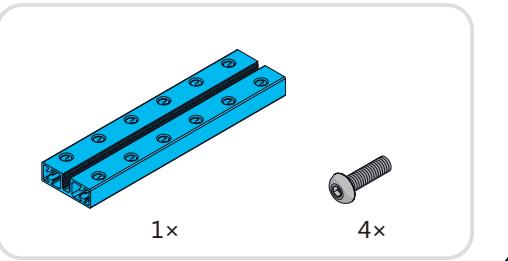
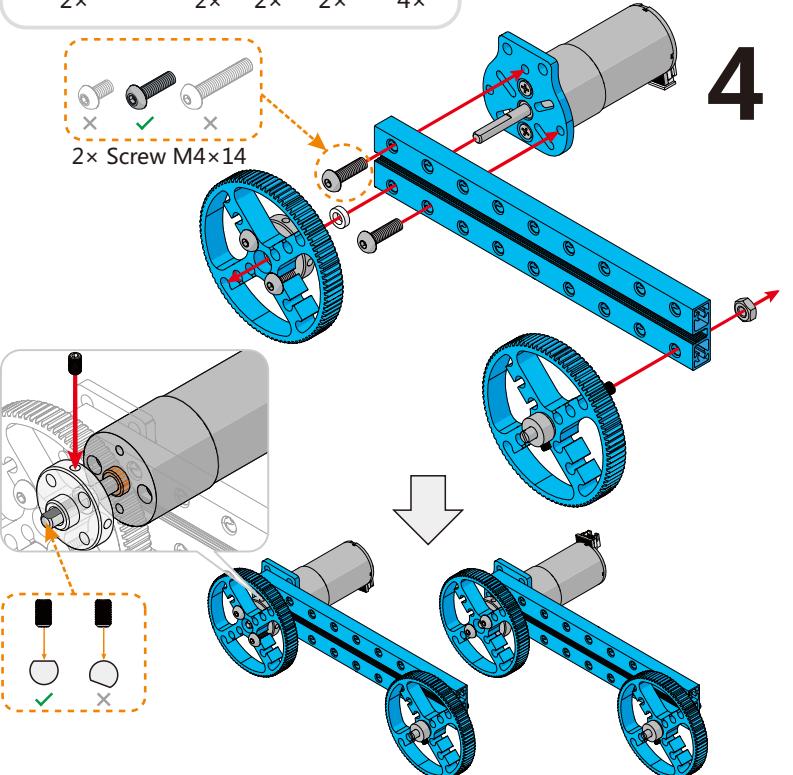
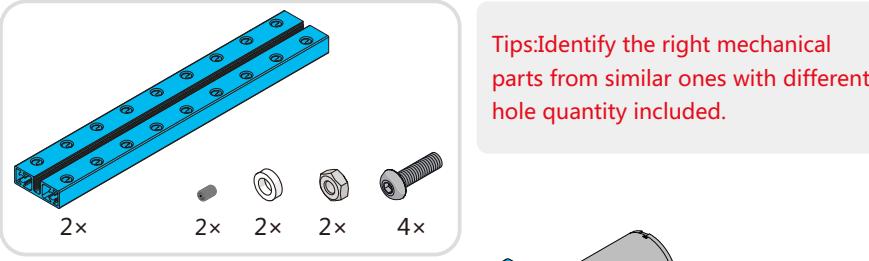
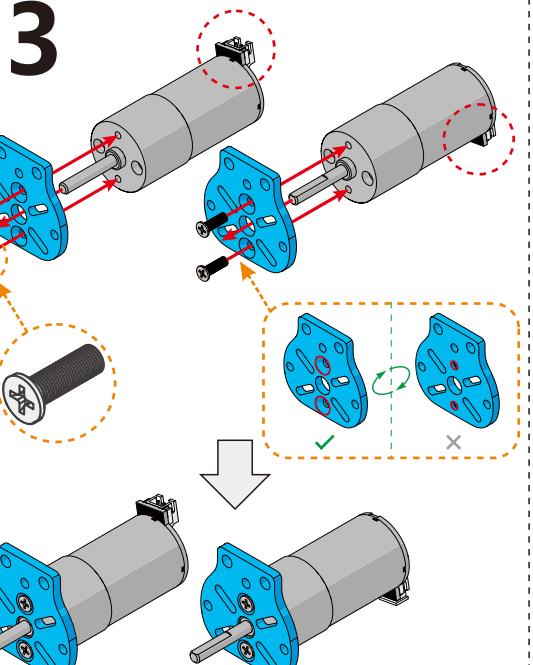
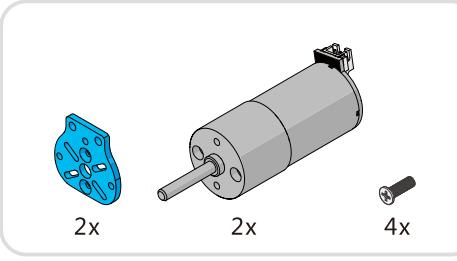


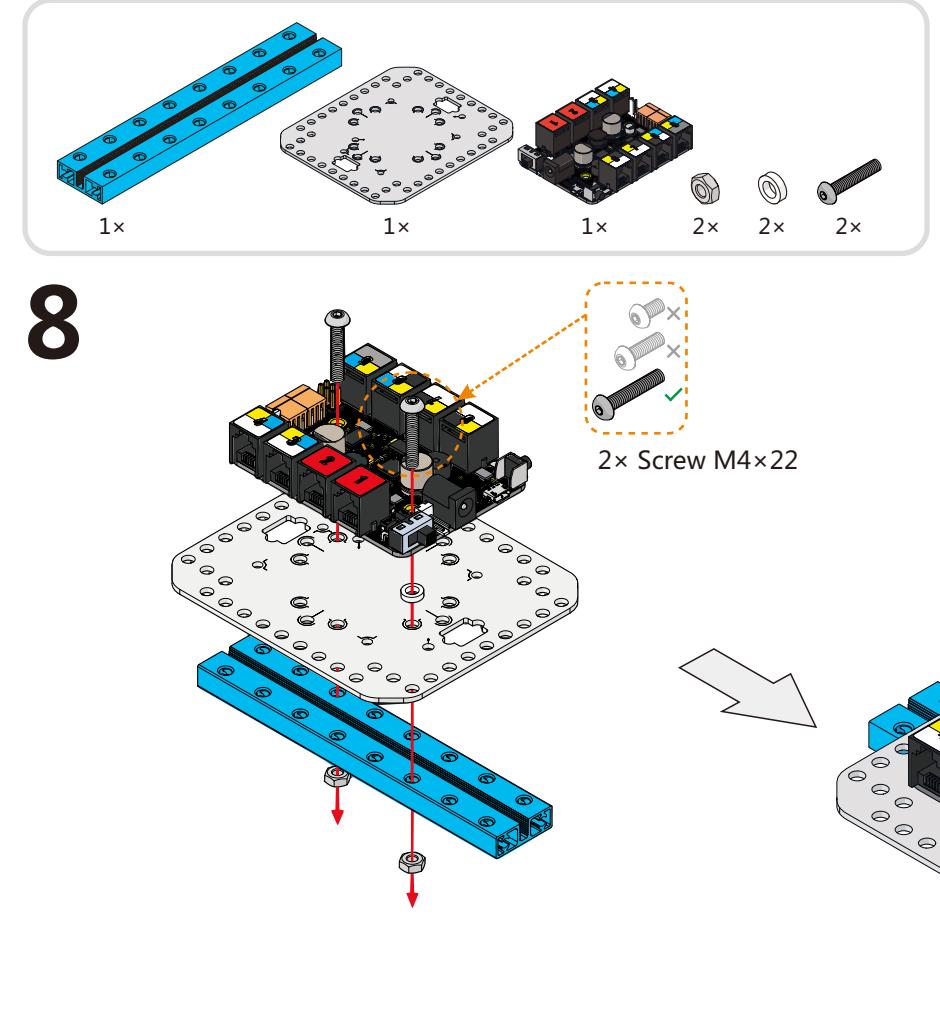
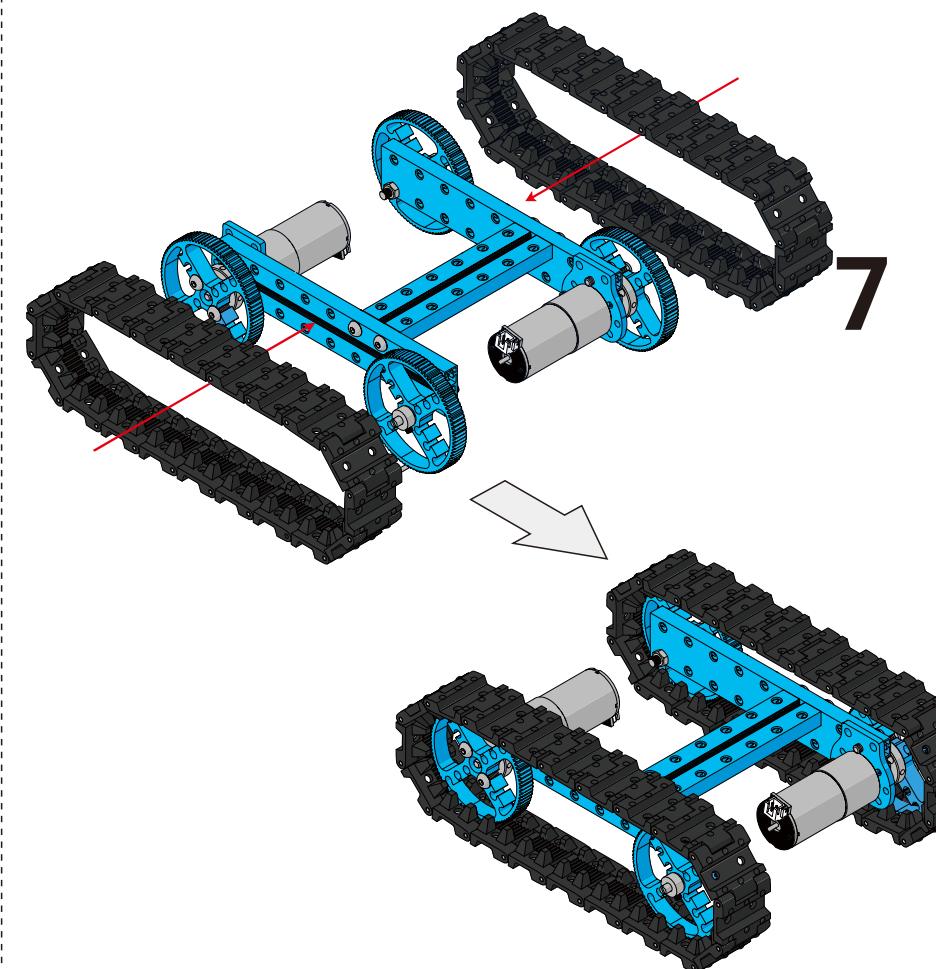
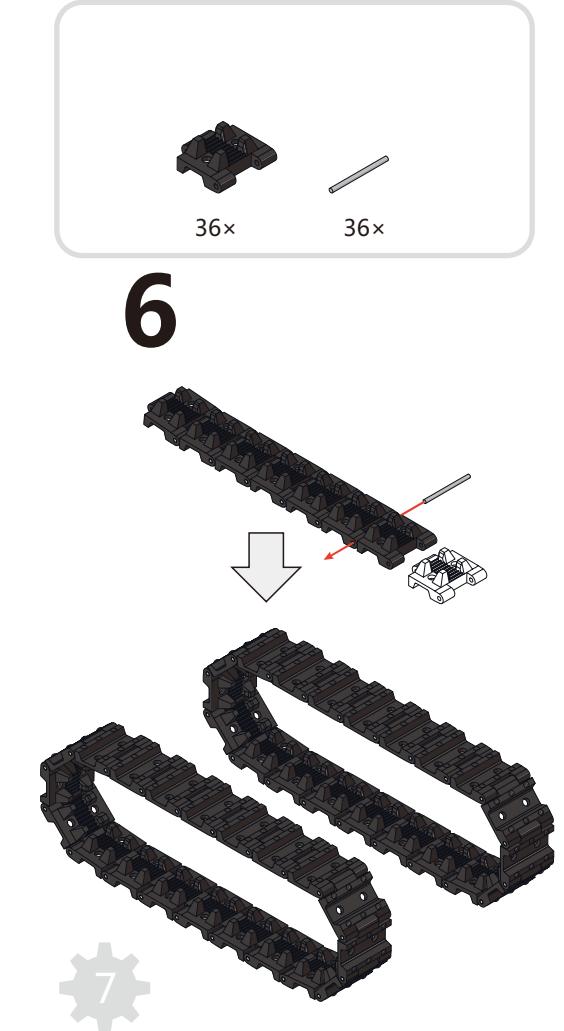
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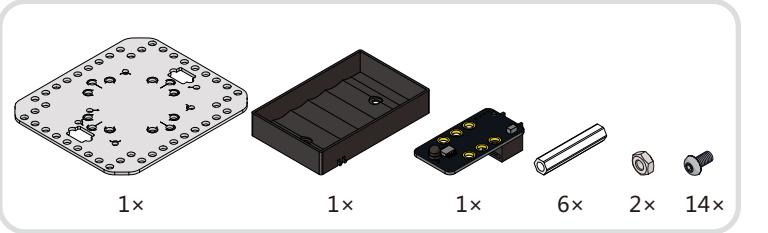


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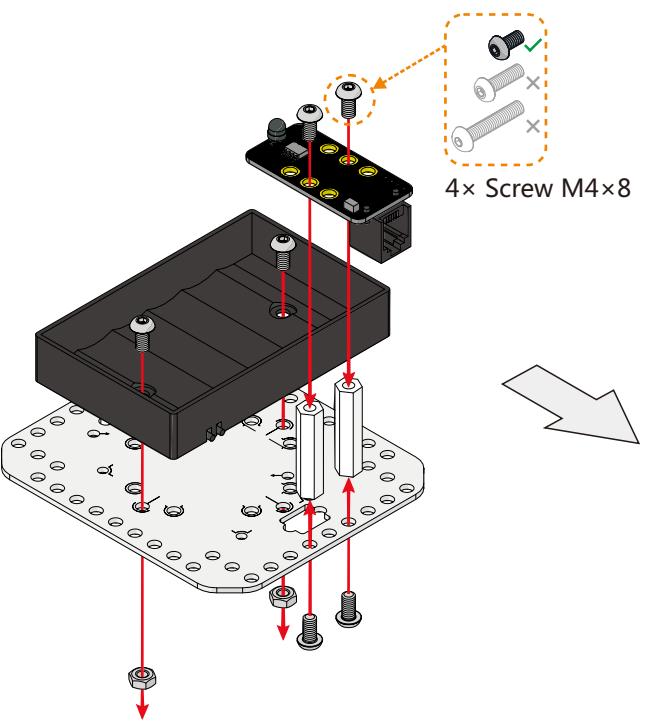




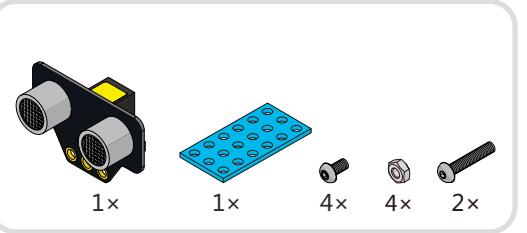
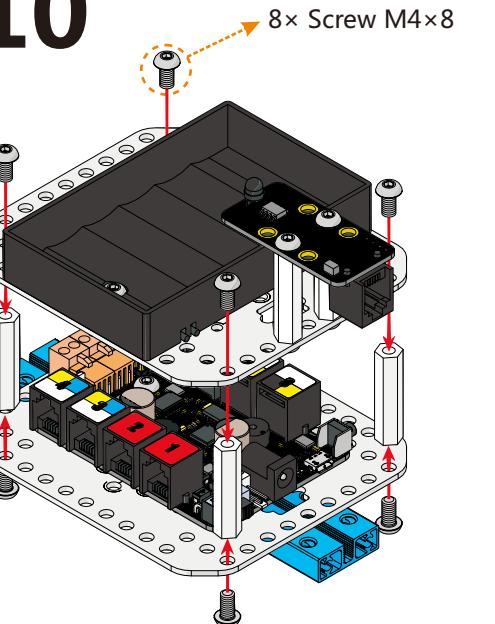




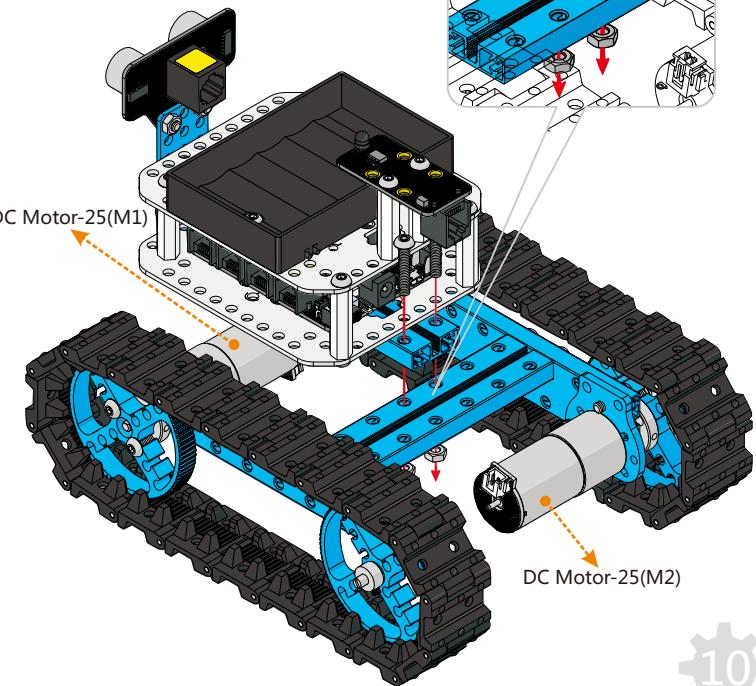
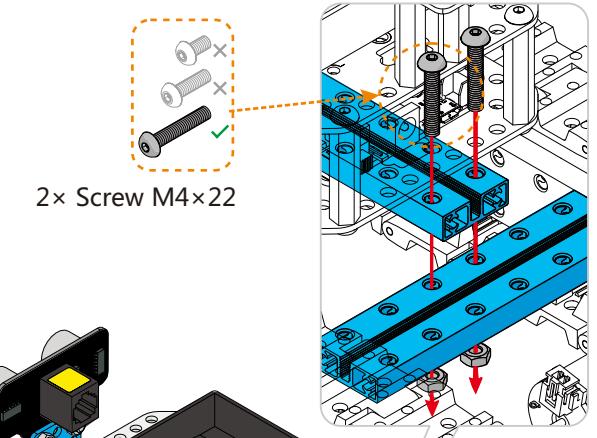
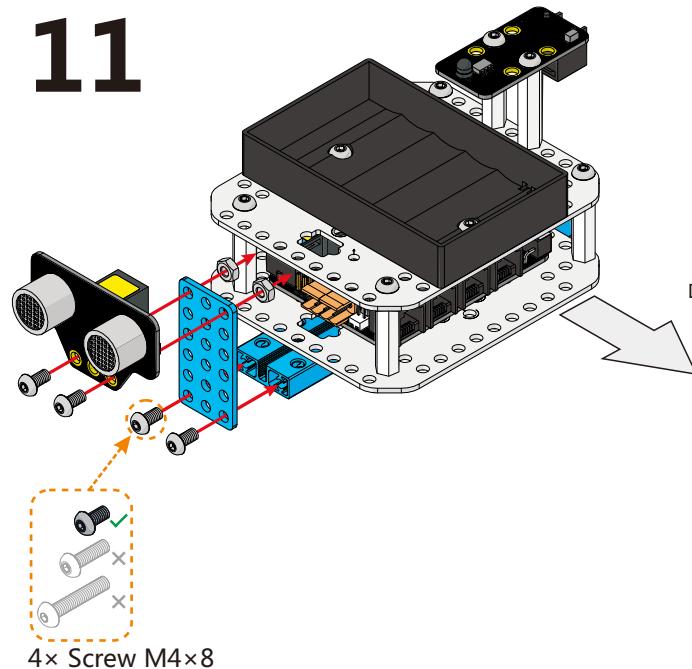
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10



11

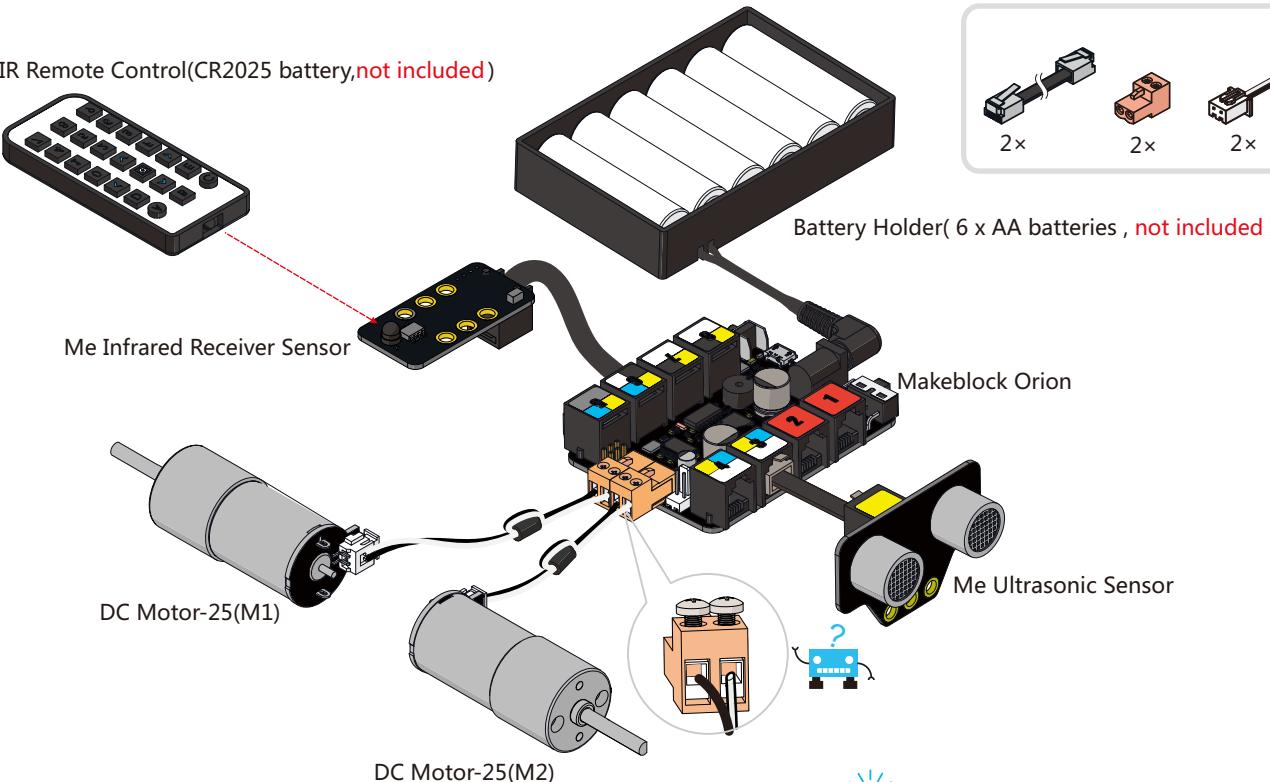


9

10

Wiring

Me IR Remote Control(CR2025 battery,not included)



You may need to switch the order of two wires to correct the rotation direction.

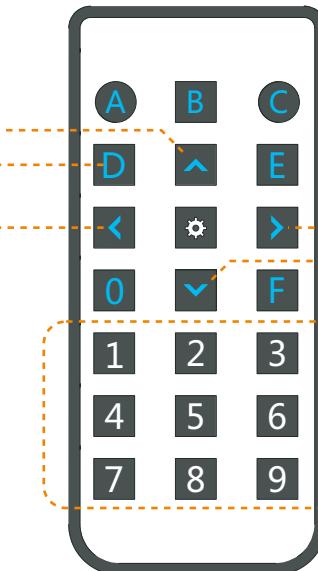
Working with remote control

—Construct It Once, Control It Everywhere

Forward
Switch mode
Left

Right
Backward

Speed



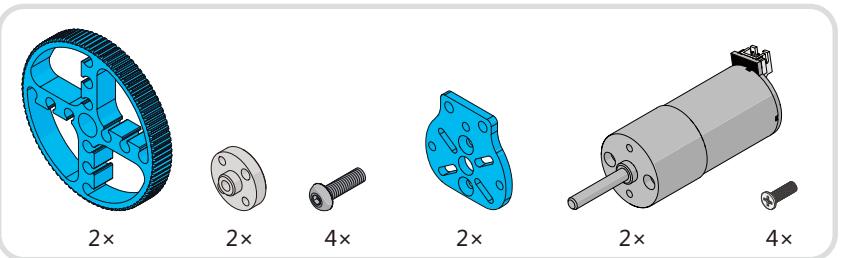
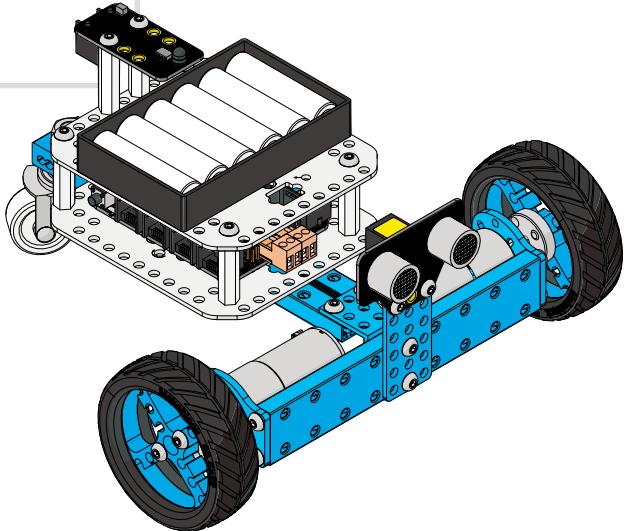
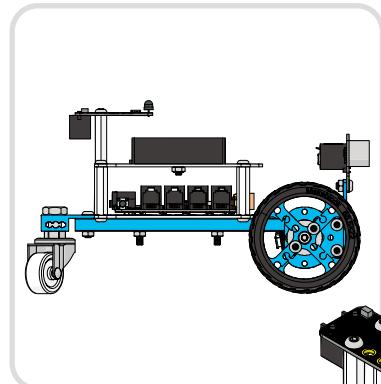
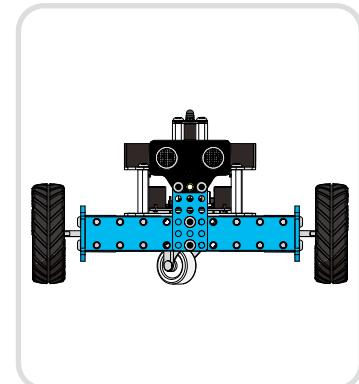
Remote control :
Press key D to switch modes

Manual mode :
Press direction keys for car direction and number keys for speed.

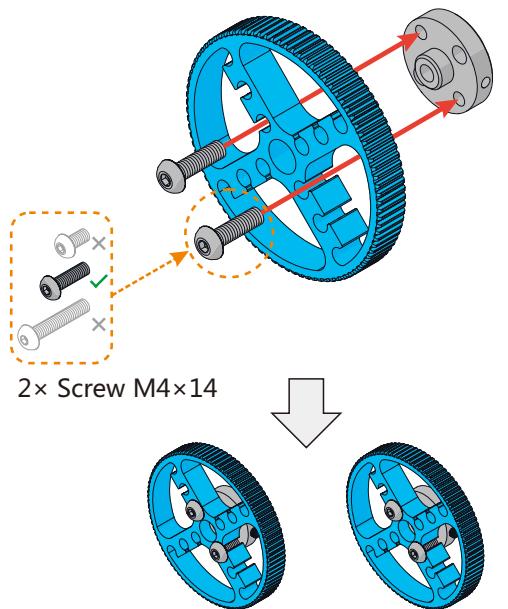
Ultrasonic obstacle avoidance mode:
The car will run and avoid obstacle automatically. No response when press any keys until you switch mode.

Now it's time to play your robot!

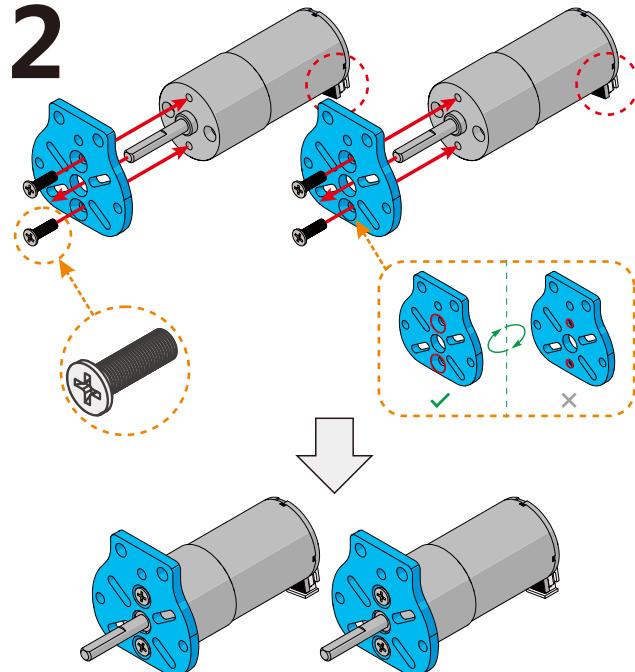
Build three-wheeled Robot Car

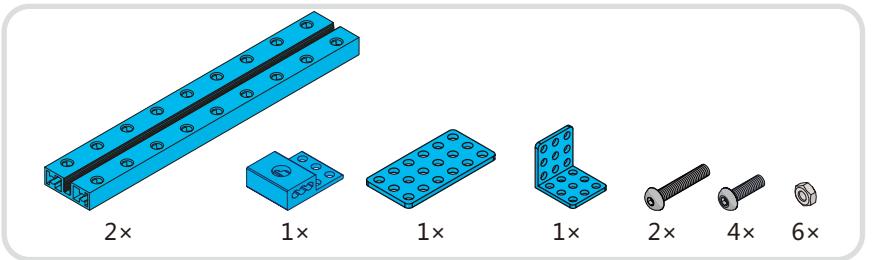


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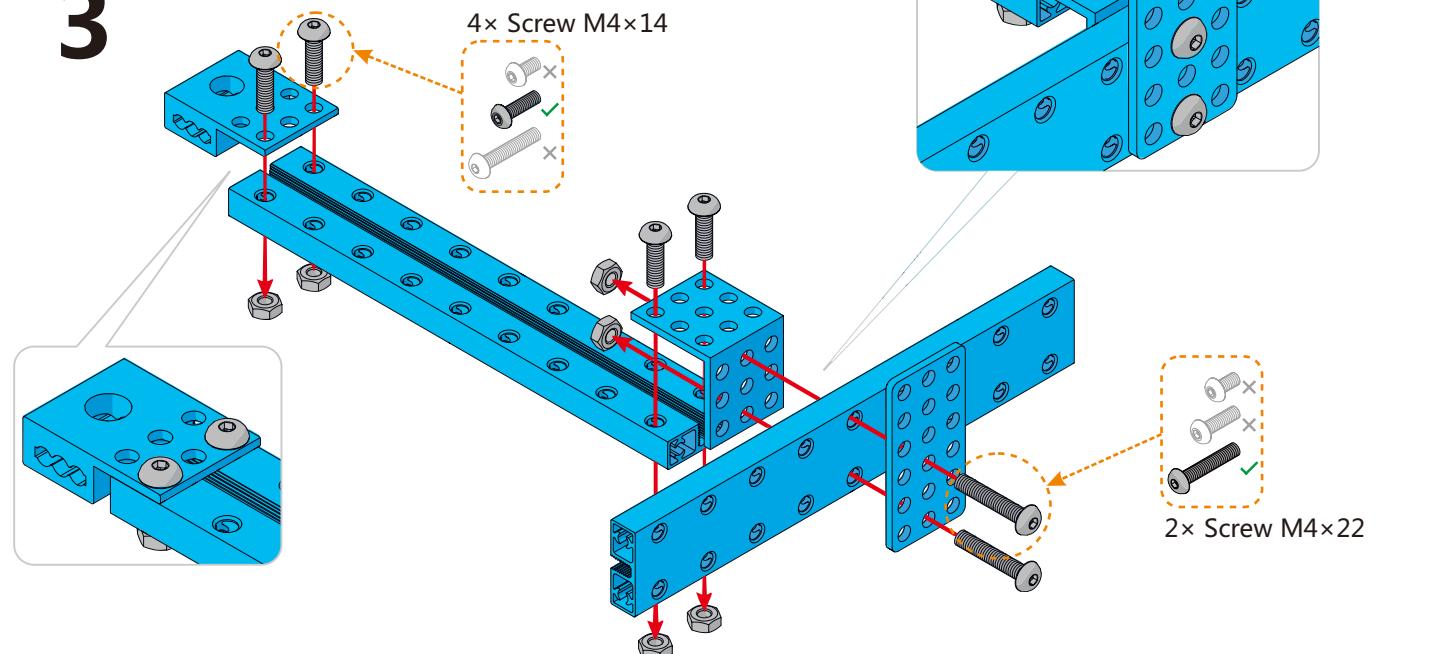


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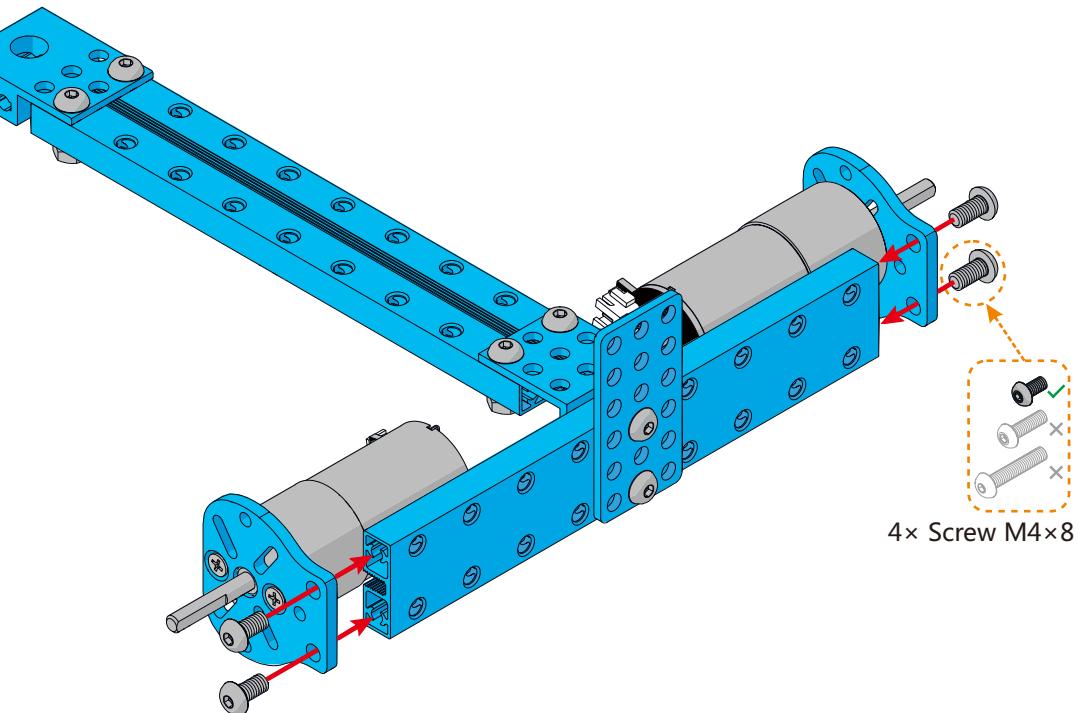


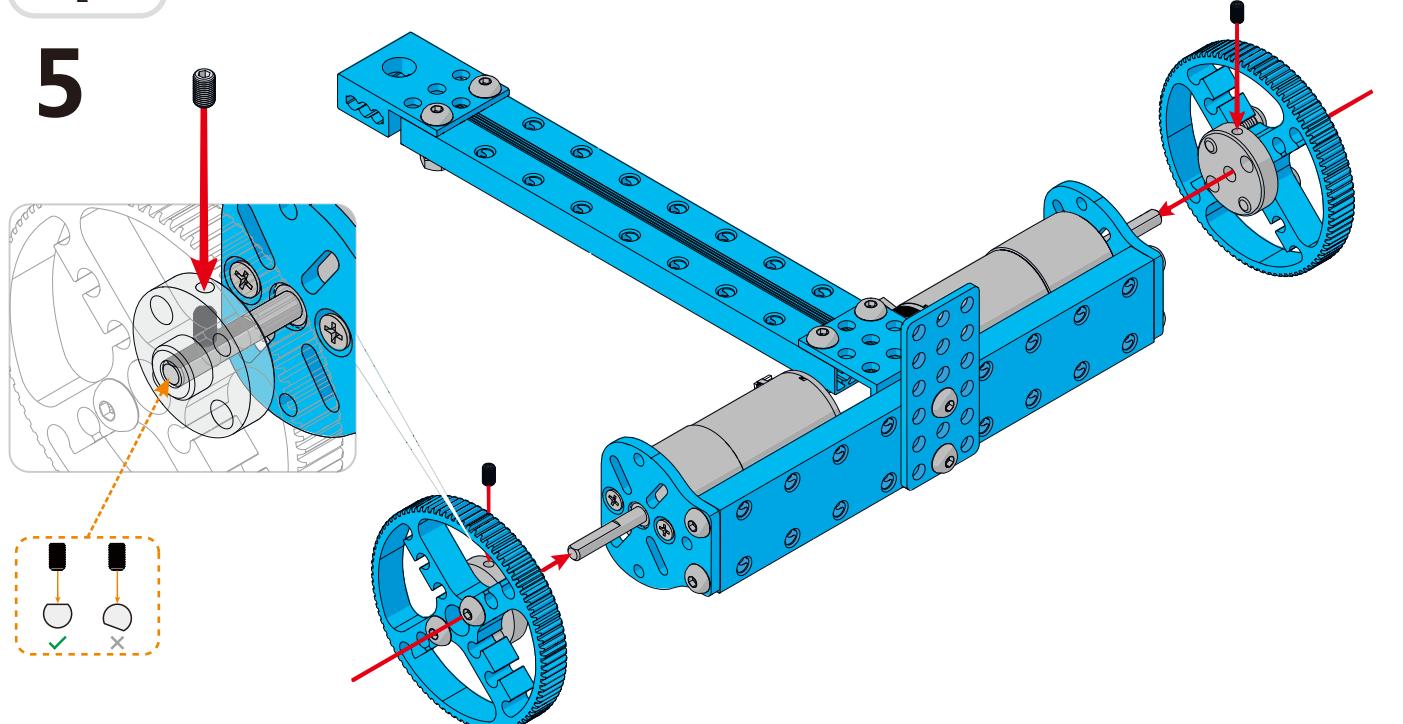


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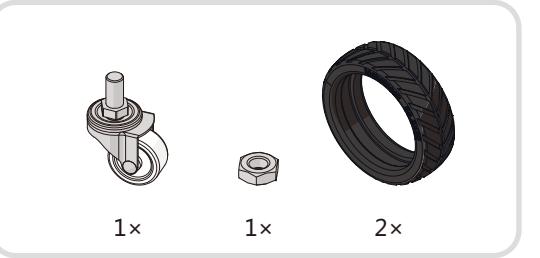
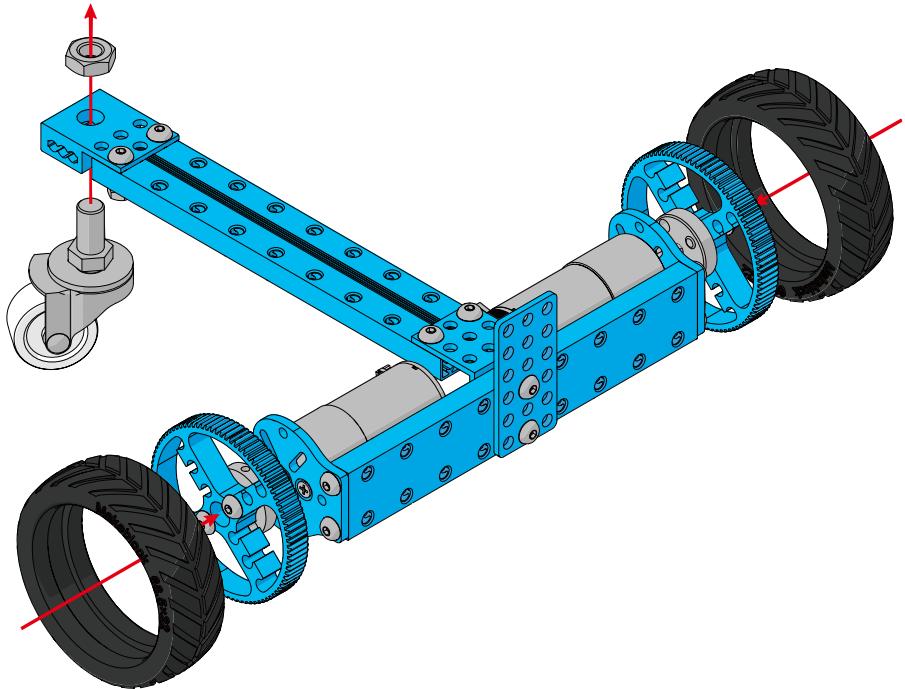


4

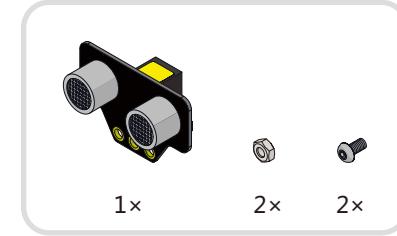


**5**

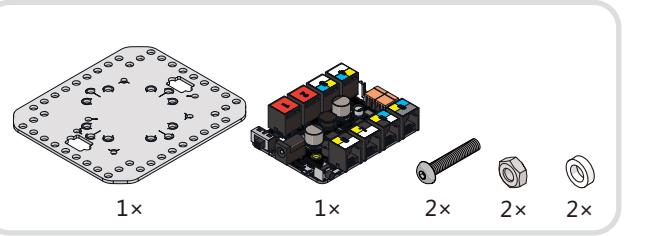
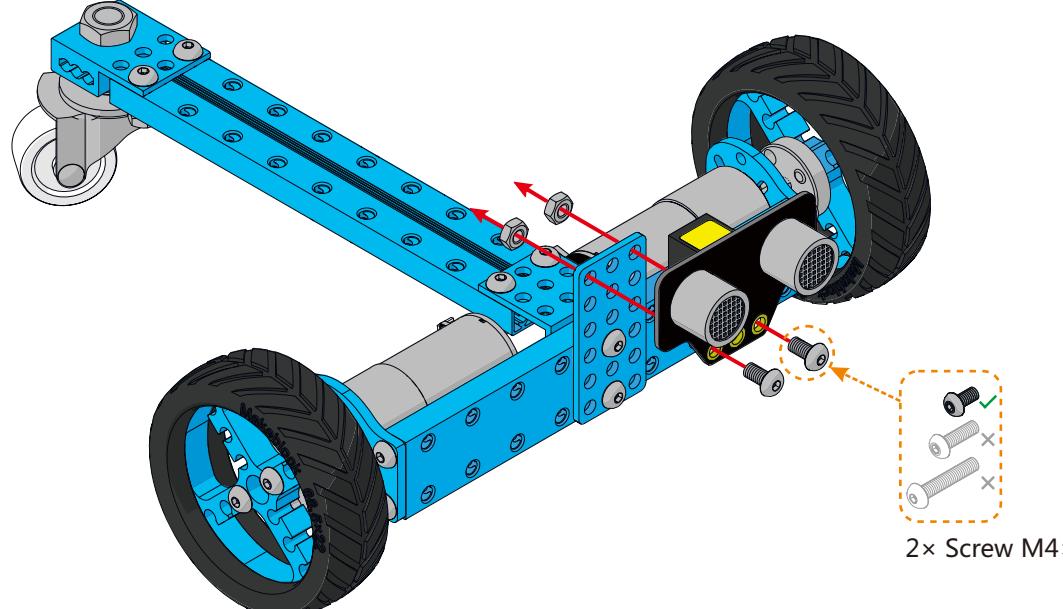
17

**6**

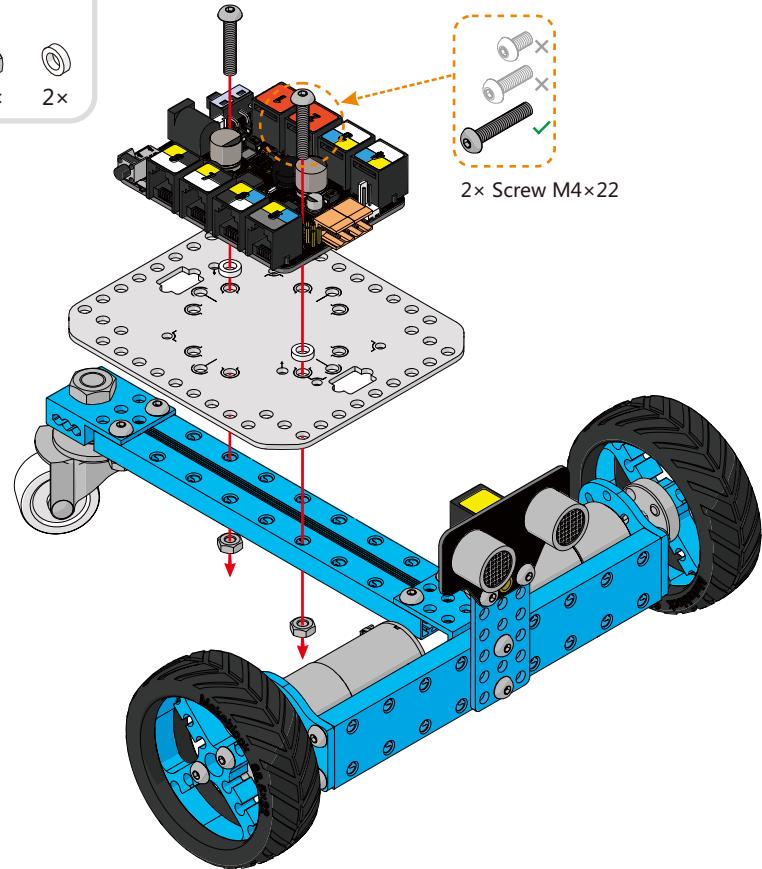
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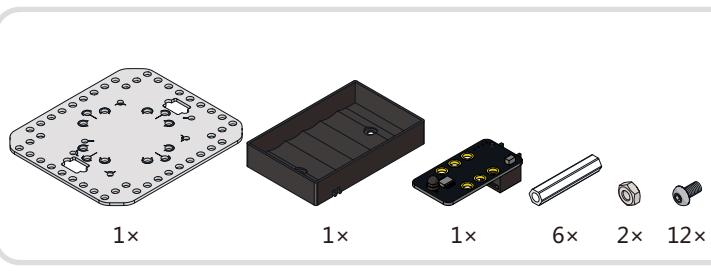


7



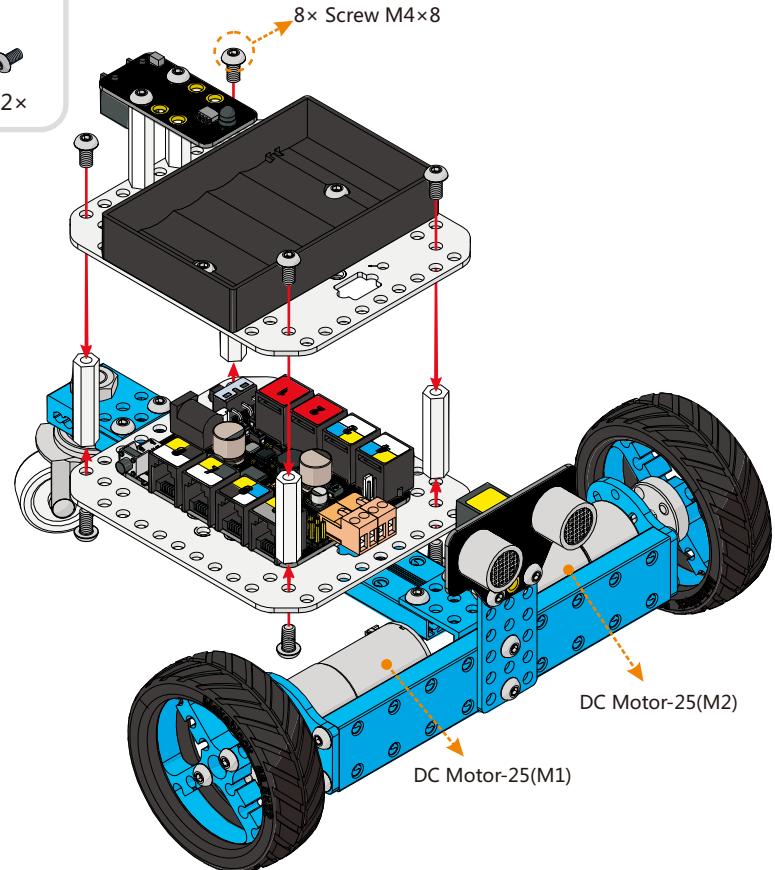
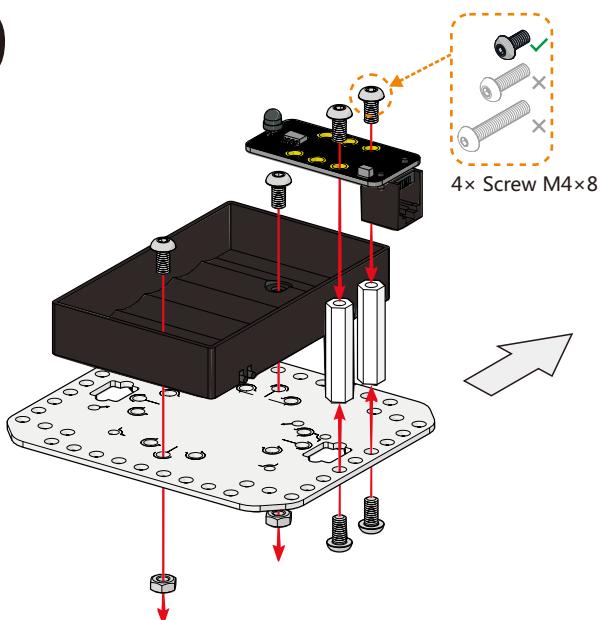
8





Please follow page 11 for wiring and remote control.

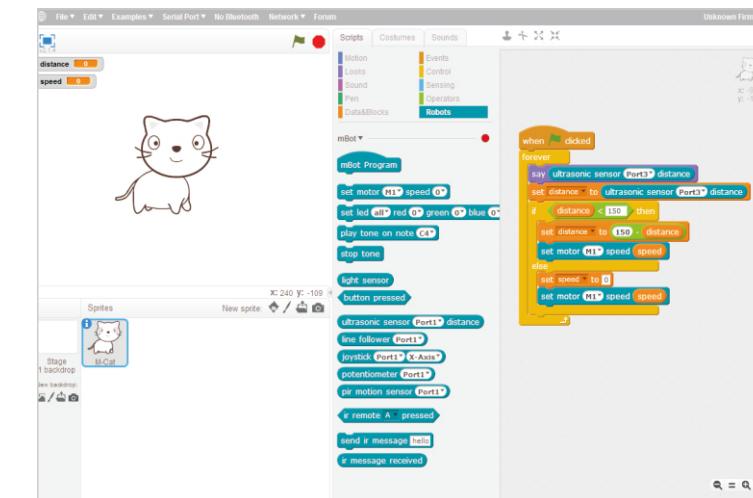
9



21

Programming--Further exploration

Working with mBlock--Hack the Physical World



The Starter Robot Kit support mBlock perfectly which allow you re-programming your robot by simply drag and joint the blocks of mBlock. No more difficult coding.

mBlock is a free modified version of Scratch 2.0 developed by MIT Media Lab, mBlock add some hardware-related blocks in the original Scratch, with these blocks, users can read sensors, control motors and even a whole robot.

Besides blocks for the basic microcontroller functionalities, analog and digital writes and reads, PWM outputs. There are also blocks for each specific electronic modules, such as ultrasonic sensor, temperature sensor, light sensor, DC motor driver, stepper driver, etc. With these blocks, it's simple to interact with many kinds of electronic modules.

Visit the following URL for more details:
<http://learn.makeblock.cc/learning-scratch>

Working with Arduino IDE --Learn Programming the Fun Way

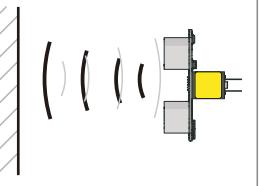
Arduino is an open-source electronics prototyping platform based on flexible , easy-to-use hardware and software.The Arduino software consists of a development environment (IDE) and the core libraries. The IDE is written in Java and based on the Processing development environment.

Visit the following URL for more details: <http://learn.makeblock.cc/learning-Arduino>

Download the library zip package: <https://github.com/Makeblock-official/Makeblock-Library/archive/master.zip>

22

Electronic modules on makeblock--Further exploration

	<p>Ultrasonic module works for measuring distance from 3cm to 400cm.</p>	
	<p>Me 7-Segment Display is a display module with four digit tube which can show some data ,such as speed ,time ,score etc.</p>	
	<p>Me RGB LED module contains four programmable RGB LEDs. Color of each LED can be set by editing components of red, green, and blue.</p>	
	<p>Me Joystick is normally used to control the move direction of object.</p>	

see more on makeblock platform

Kits on Makeblock--Further exploration

