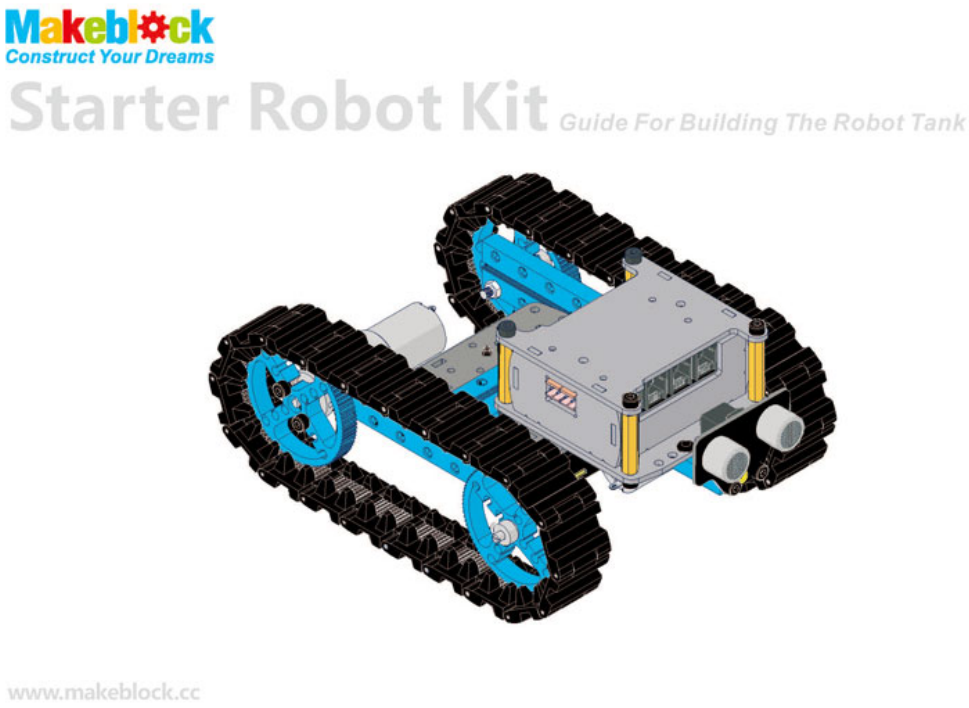
# Starter Kit Instructions (Me Base Shield):

## Let's make! Mechanical parts

Along this guide, we will build a robot tank with our starter kits (Don't worry if you buy other kits, they can finish the same thing: )

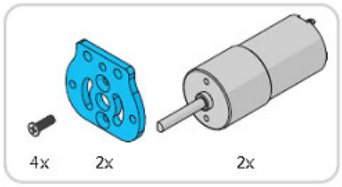


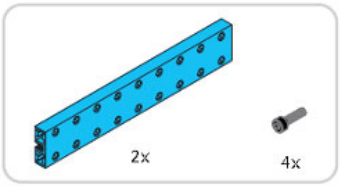

That's cool, uh-huh? A robot tank consists 3 parts, mechanical, electronic and code. Mechanical structure is the basic of whole system, it looks like skeleton of human. The electronic modules are nervous system, and the code is the neural signal in it. Amazing! We are building something intelligent now.

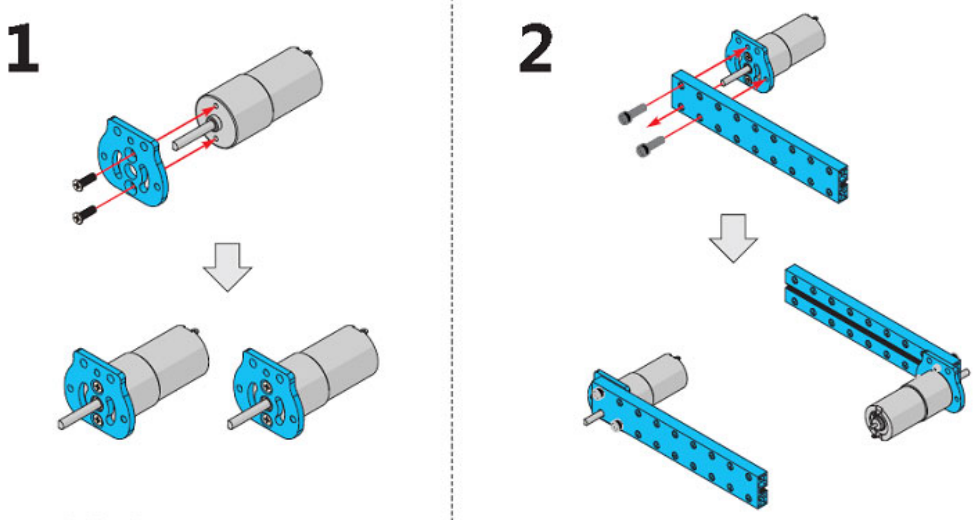
Next, let's start with the first section----mechanical structure. Anyhow, we should sketch the framework of our tank.

1. First, Let's figure out the motors. Attach the motor and the DC motor-25 bracket with countersunk screw M3. Follow the instructions on the picture. This assembling type is used to fix the motor.

2. Attach the beam and motor by screw M4*14.

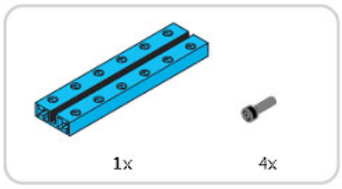


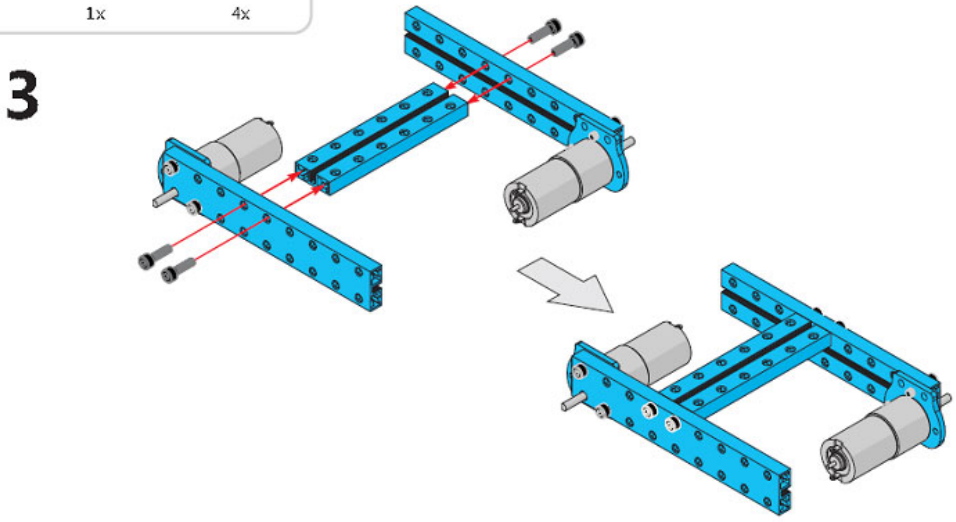





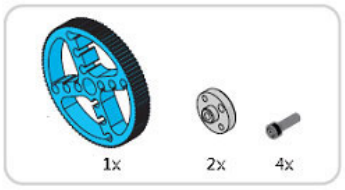

3. Construct the chassis of the tank. You might notice that the shorter beam is attached between the up-side of two longer beams. That's leave the space which is used to fix the battery holder.

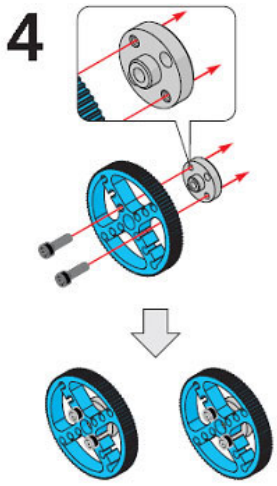


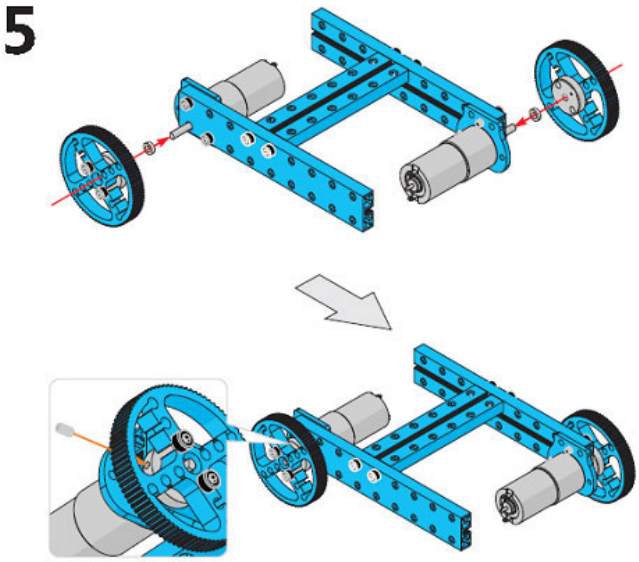



4&5. Connect the motor and Timing Pulley 90T with shaft connector. The headless screw is used to fix the pulley. If you have watch the motor shaft, you will find the section is not round. Tighten the headless screw on the flat surface of the shaft.



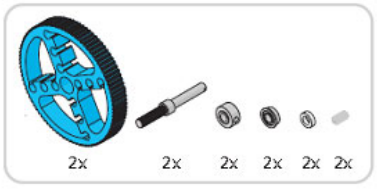



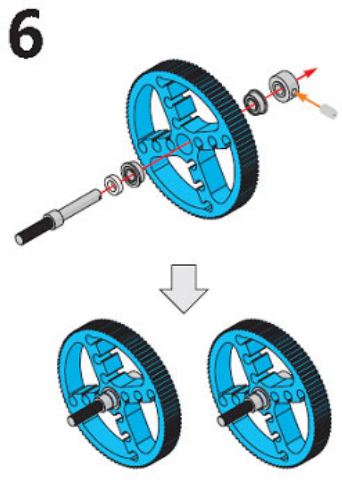







6&7. Connect other pulley with shaft and gasket. Pay attention to the order of connection.



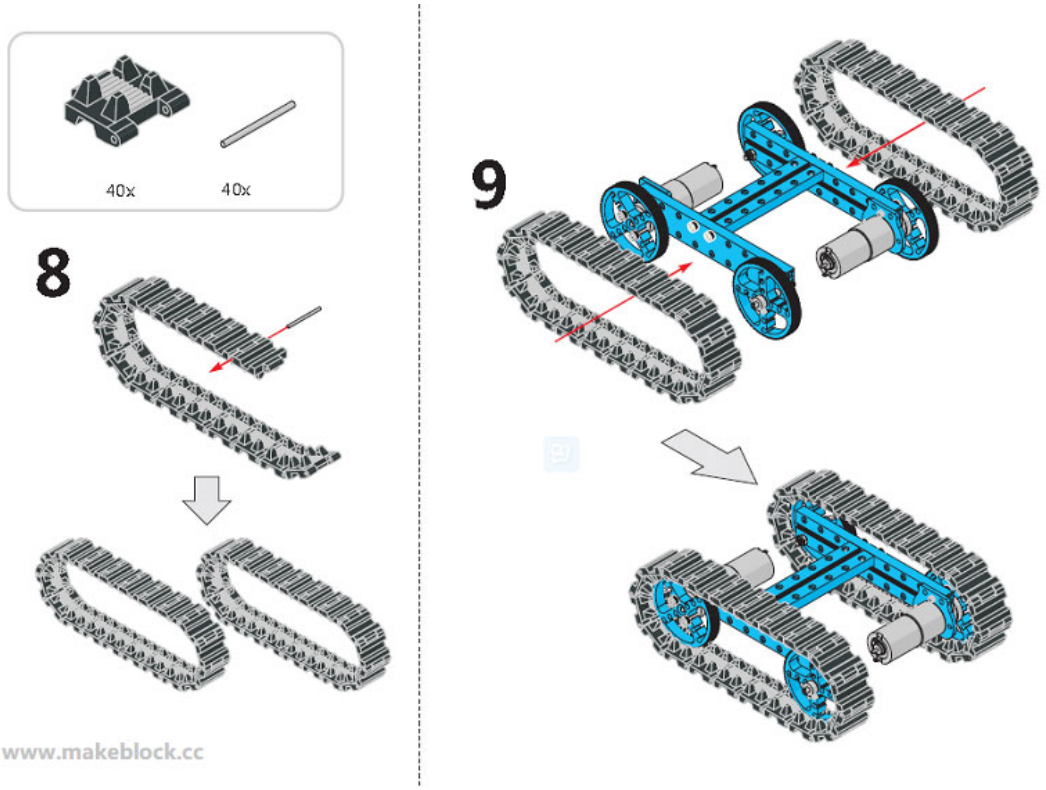







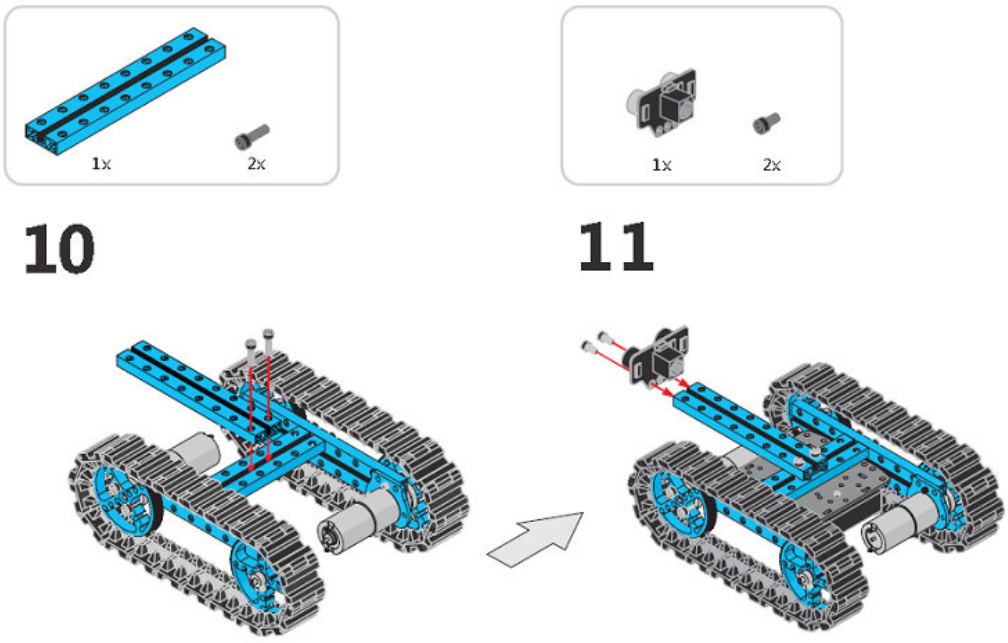



8&9. Add the track to the wheel.

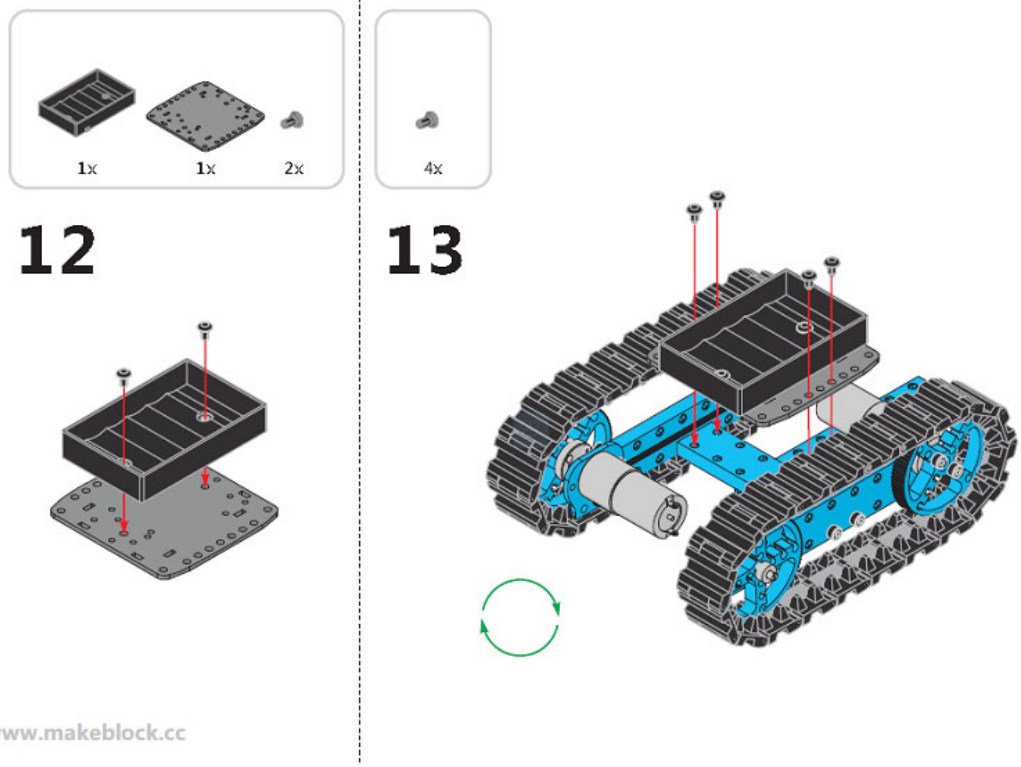



Since you finish this step, a micro tank has been made. Next, we will add the brain and eyes of robot.

10&11. First, add a beam above the chassis. After that, we have meet our first electronic module——Me-ultrasonic sensor. Me Ultrosonic Sensor is used to messure the distance, from 3cm to 4m. With the Arduino library we provide, you can get the distance directly and use the module easily. That is the eye of our tank. Don’t worry about controlling now, we will figure it out later.

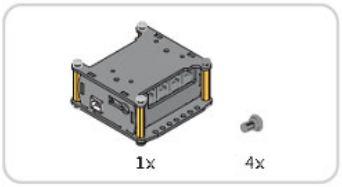



12&13. Fix the battery holder below the chassis. We need an acrylic board which could provide additional screw hole.

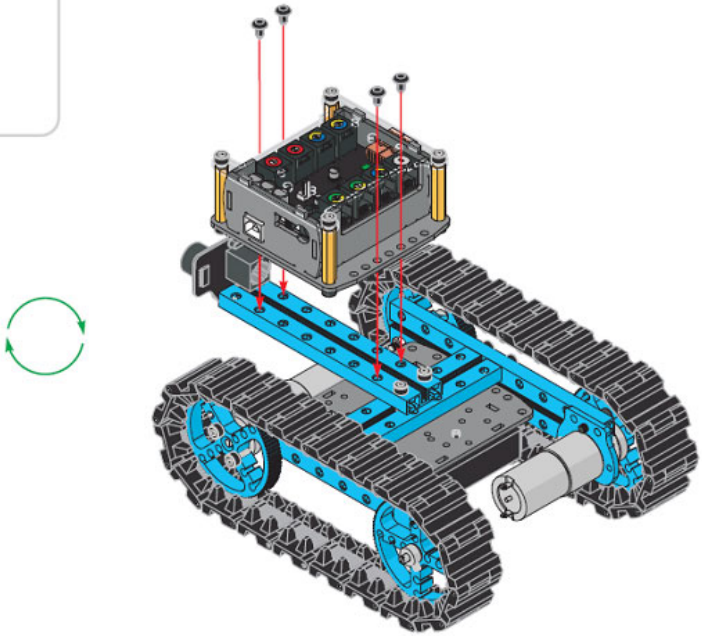



14&15. Fix the Arduino box on the chassis of the tank. Before that, please follow the instruction to assemble the Arduino box. The box is consisted of Meduino and base shield which brings out most of the Arduino Pins to the uniform 6pin RJ11 connectors. You can

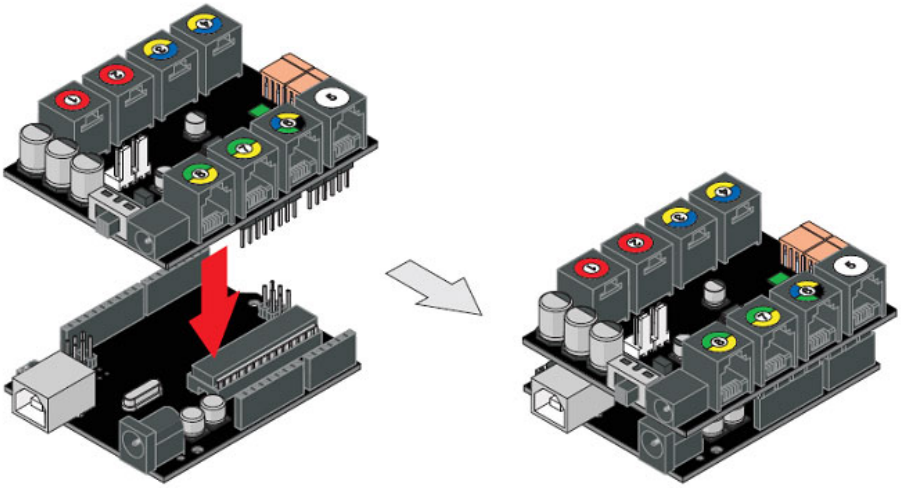
connect variety of sensors to the base shield to achieve the data of temperature, pressure, light and etc. That is the brain of our robot.

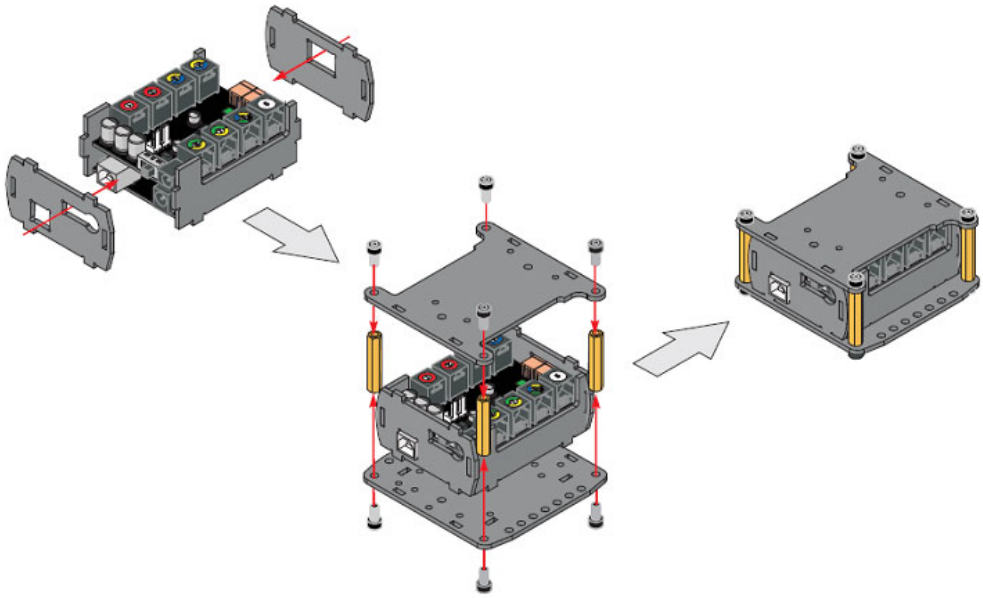



**14**



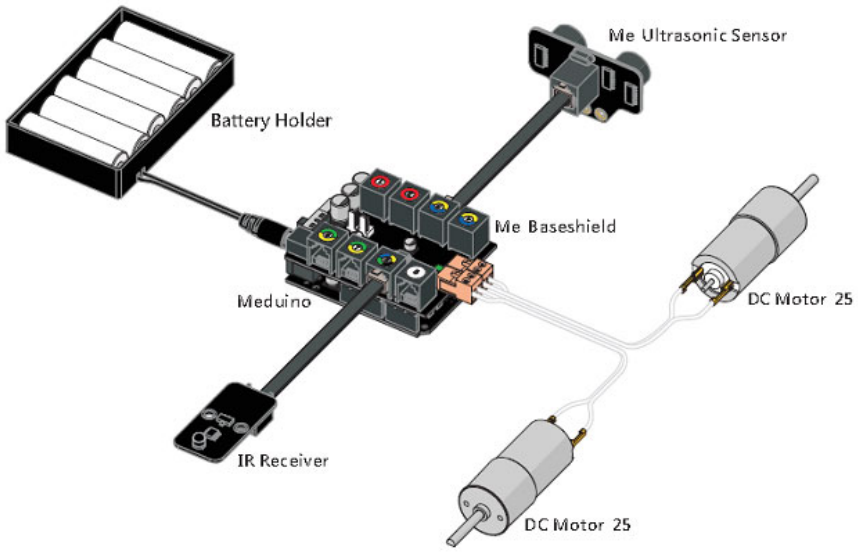








16. Connect DC motor, battery holder and Me-ultrasonic sensor to the Me-baseshield. IR receiver is shortened from Infrared Receiver Decode. This module is designed for controlling the robotics by receiving the commands from the infrared remote control. Pay attention to the power plug, you should plug it into the Me-baseshield rather than the Meduino board.






Until now, we have a complete tank with hard structure and electronic modules. Next, Let's use Arduino to make it move!