robotistan

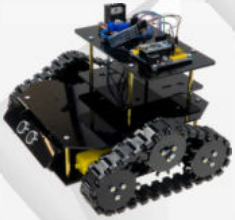
REX Evolution Series Super Star Transformers - 8 in 1

ArmBot

Immortal

RoboSonic

BTBot



Destroyer

FeelMotion

V-Tracker

Monster

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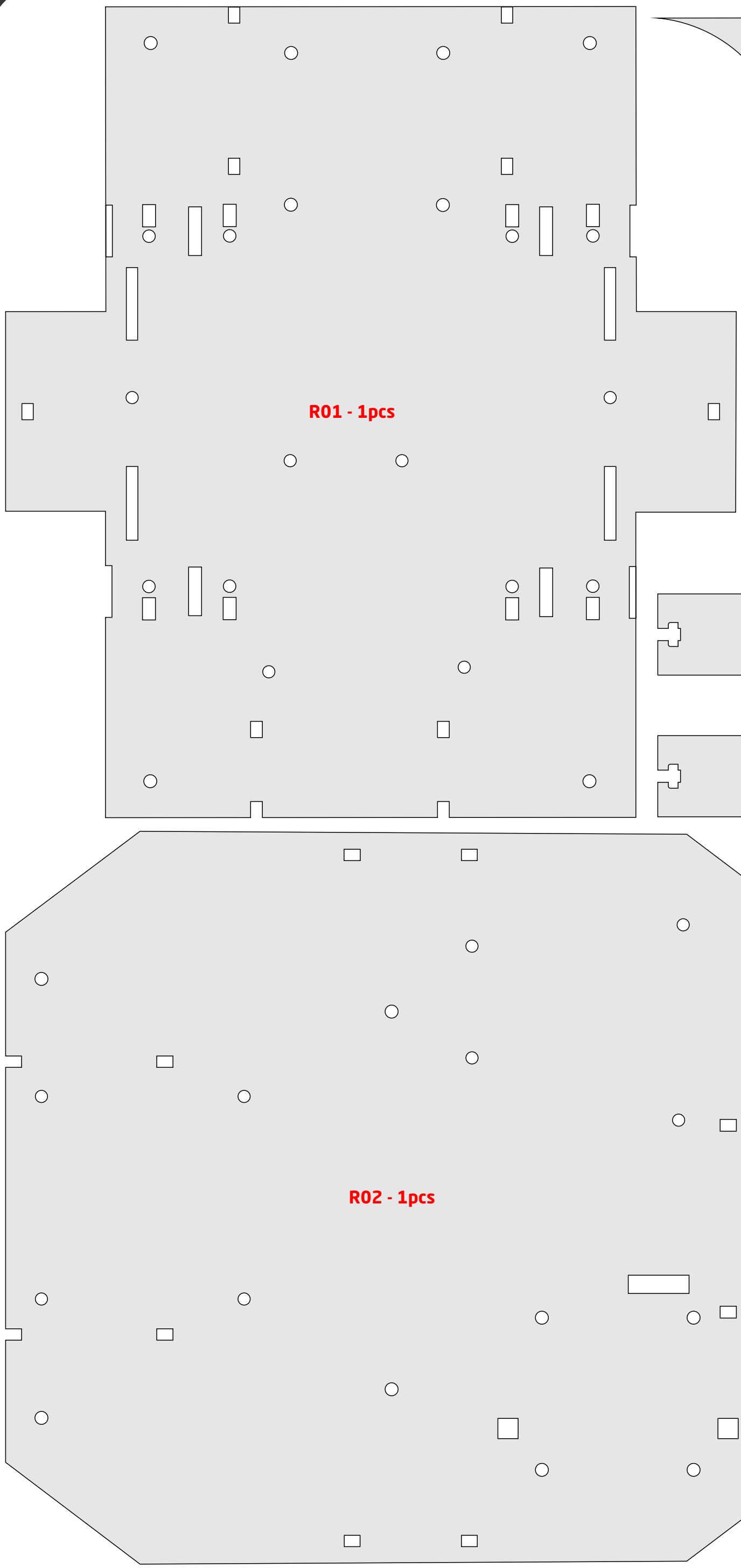

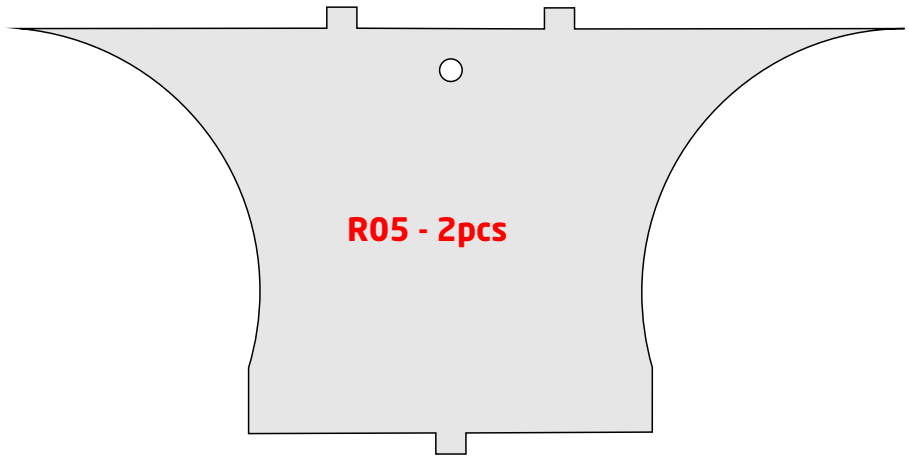

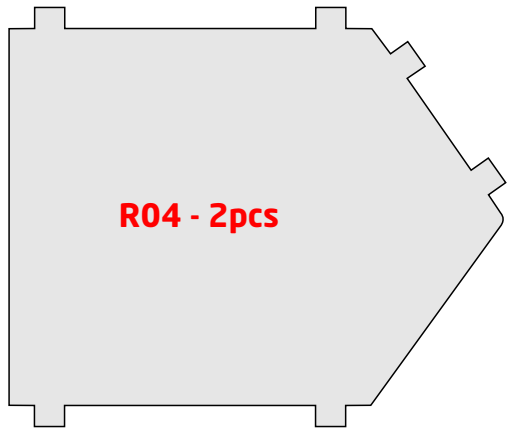

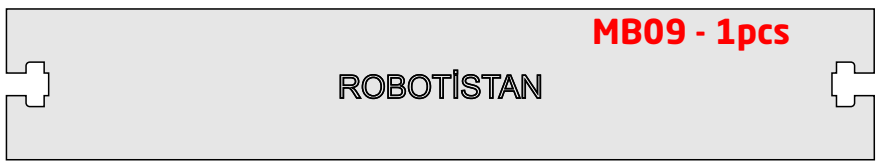

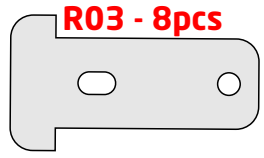

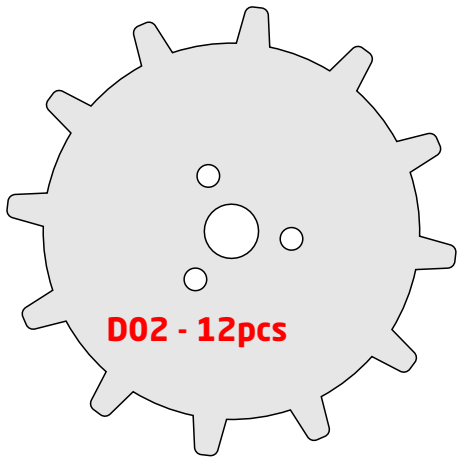

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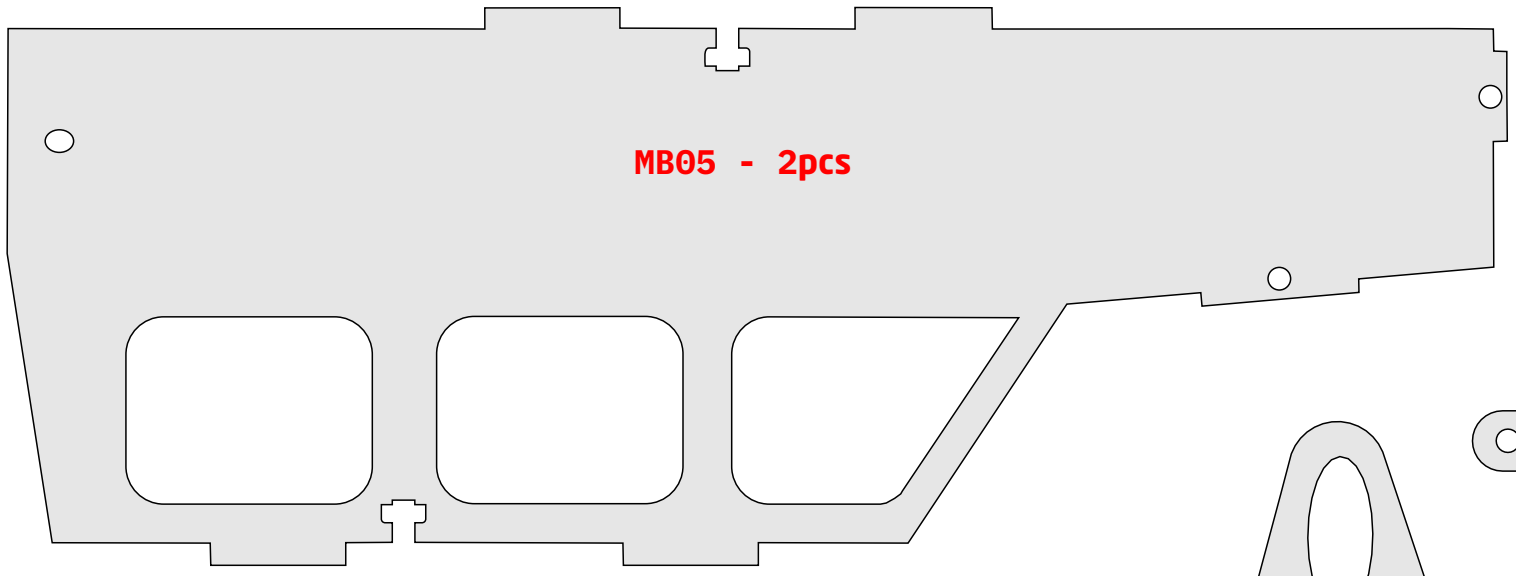

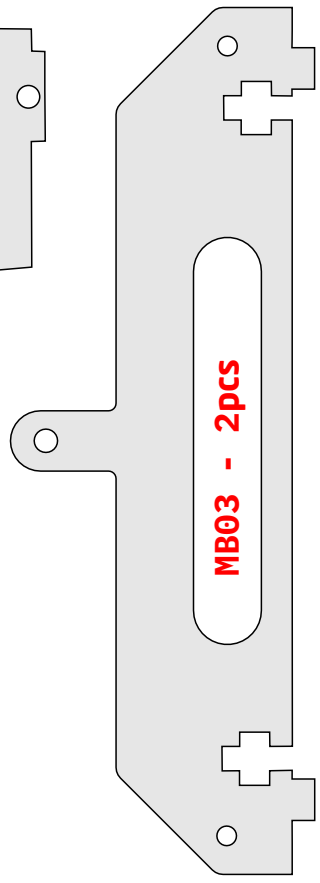

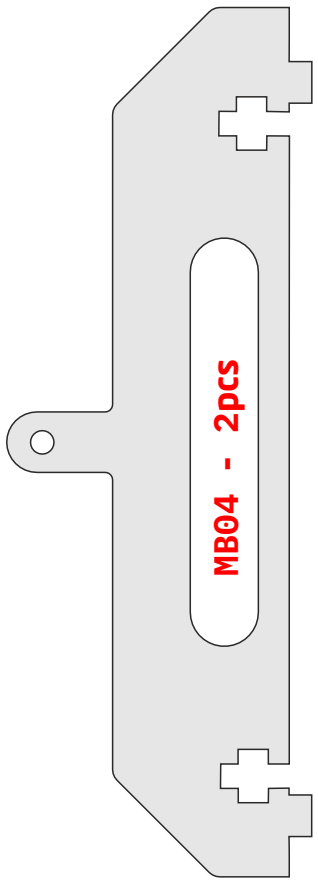

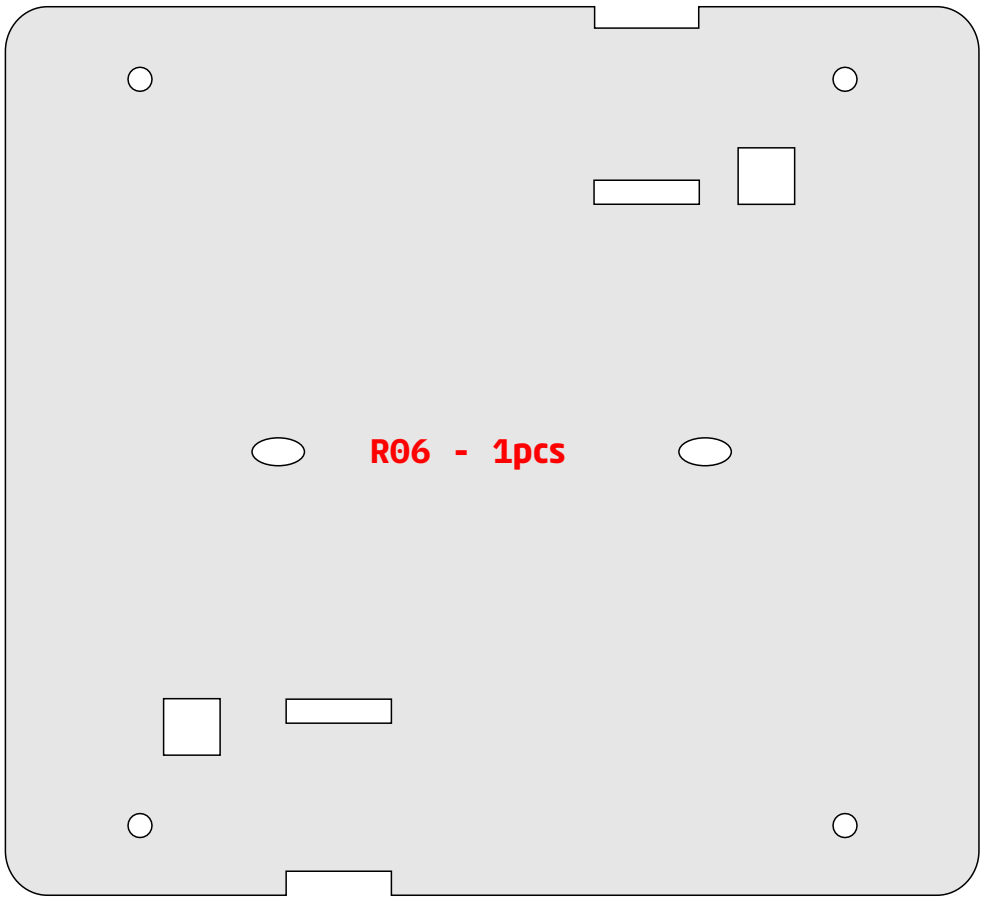

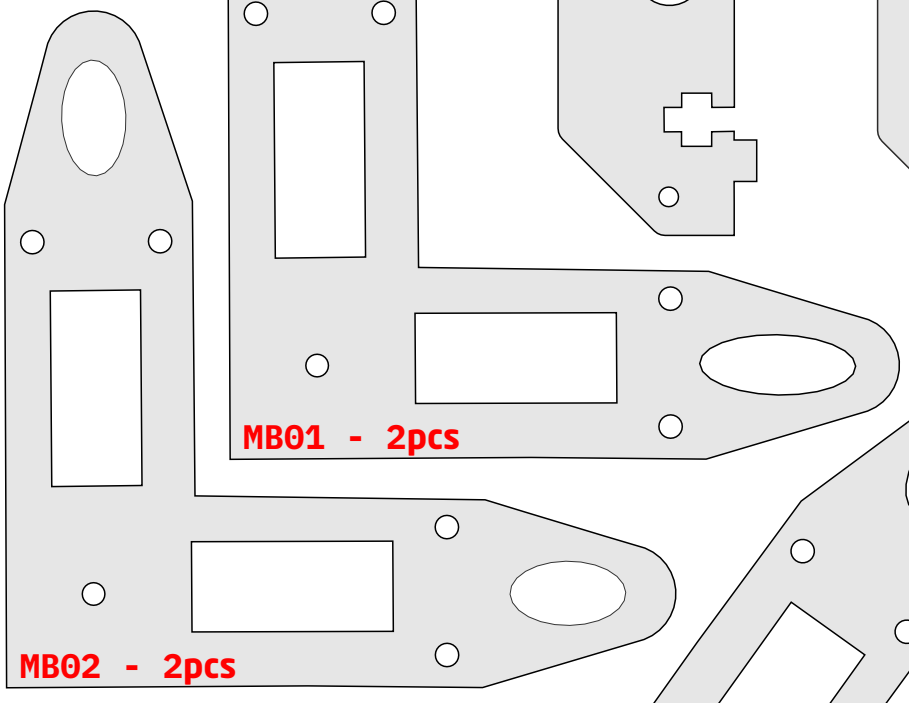

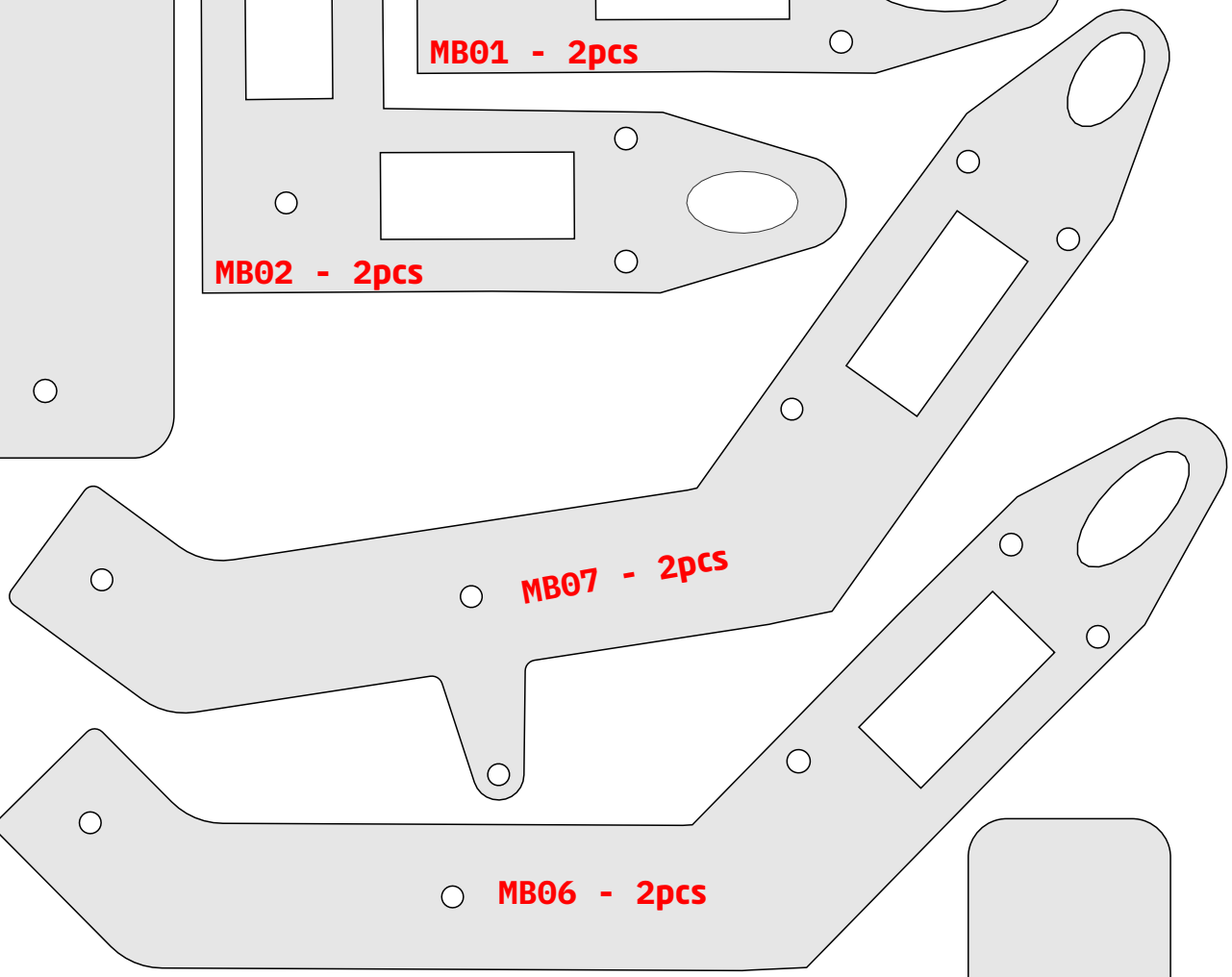

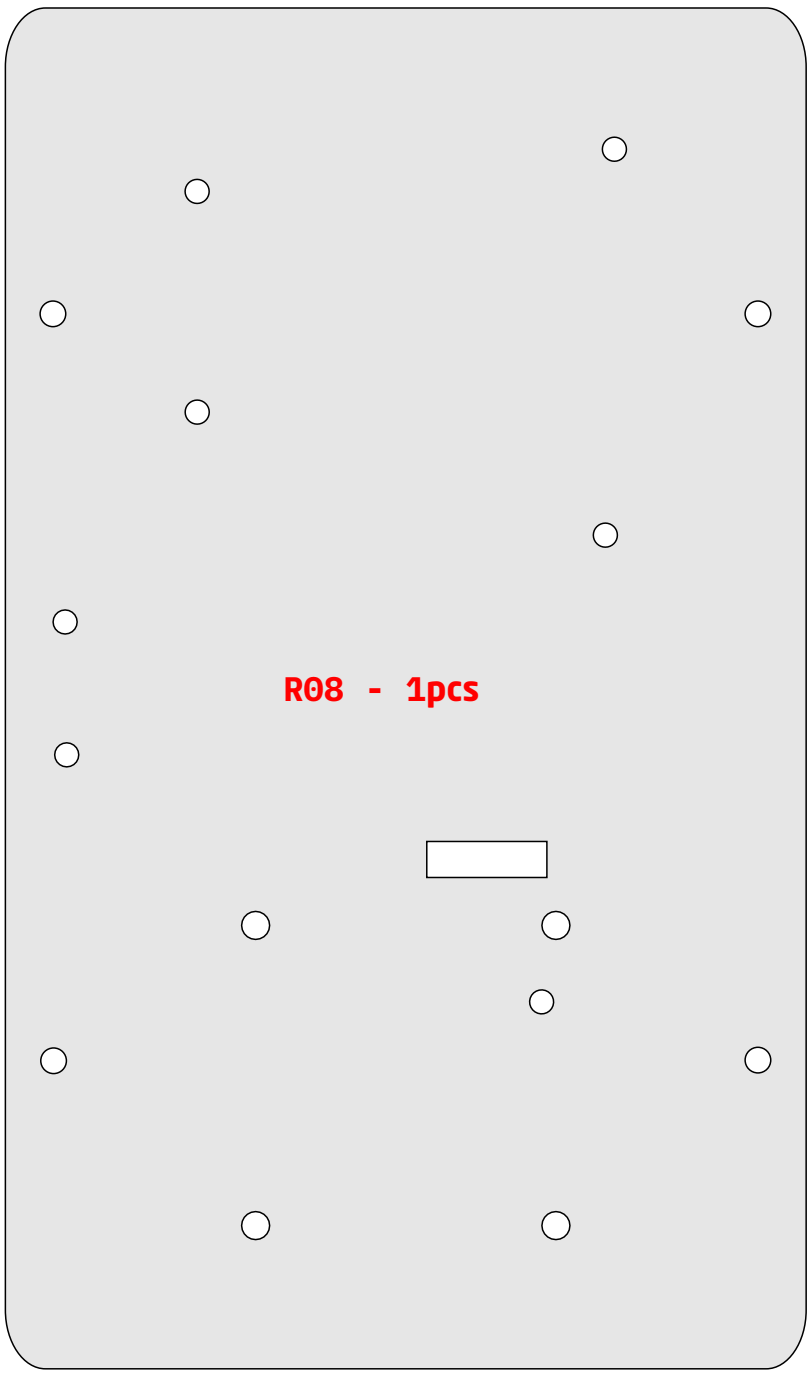

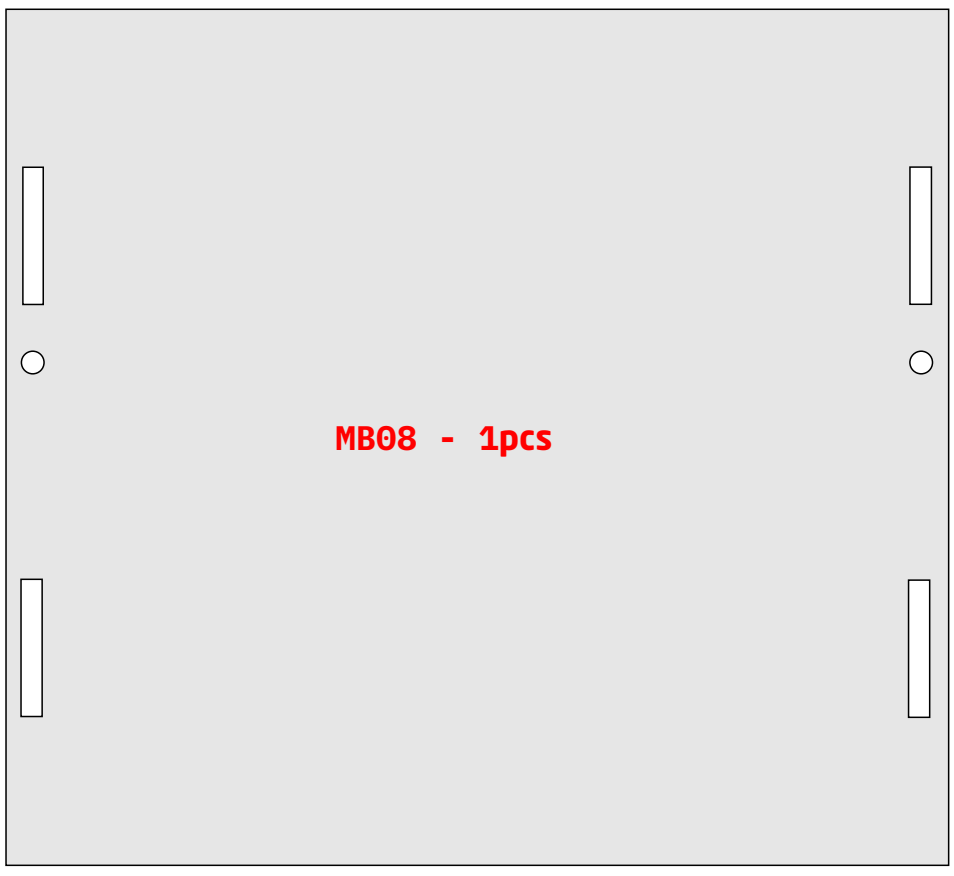

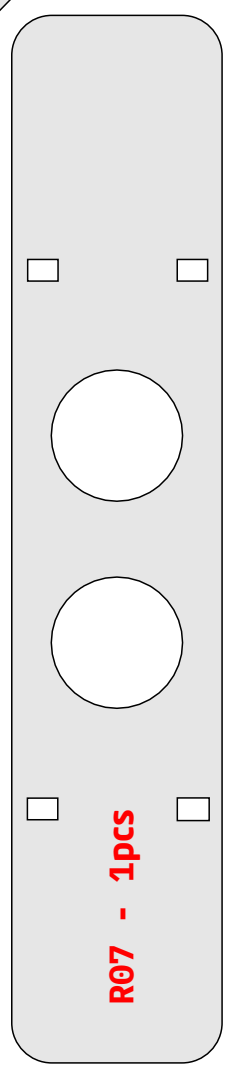

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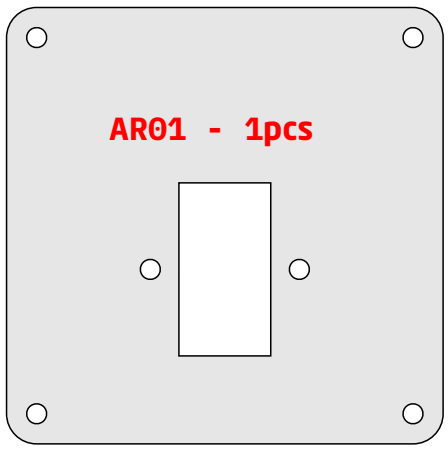

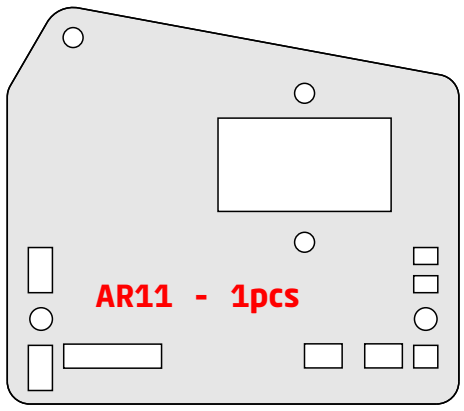

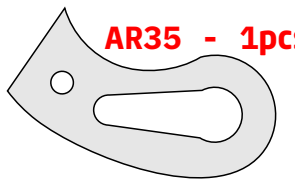

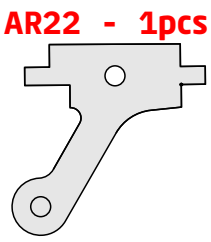

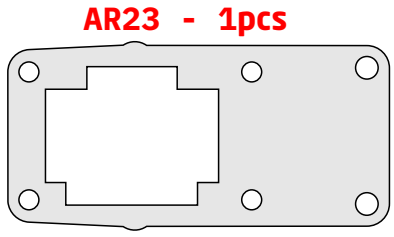

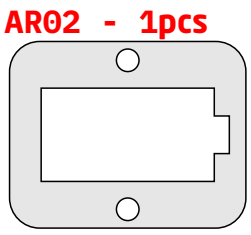

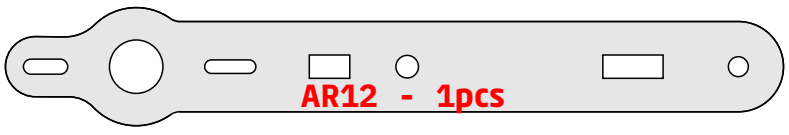

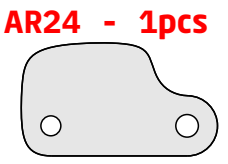

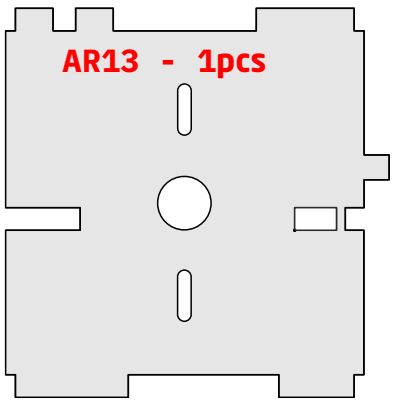

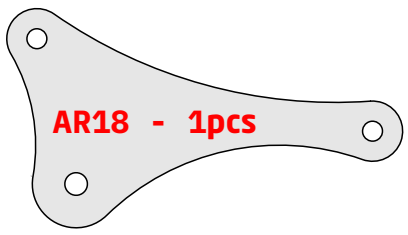

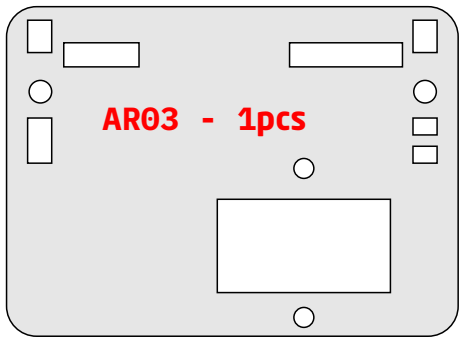

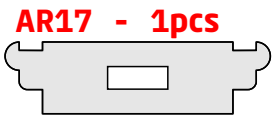

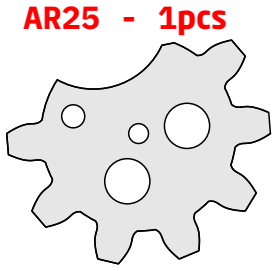

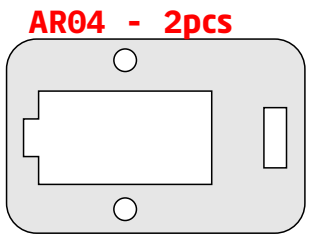

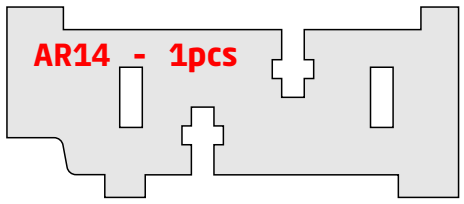

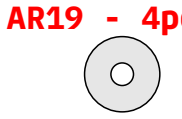

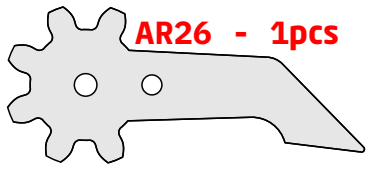

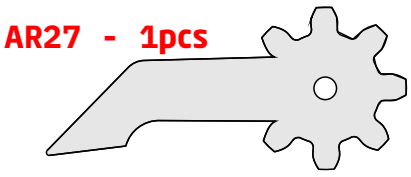

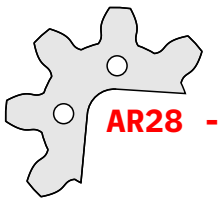

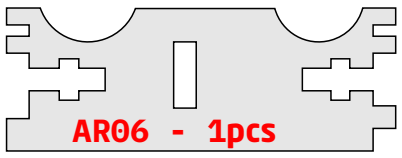

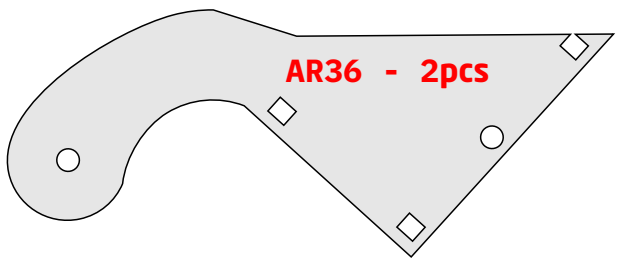

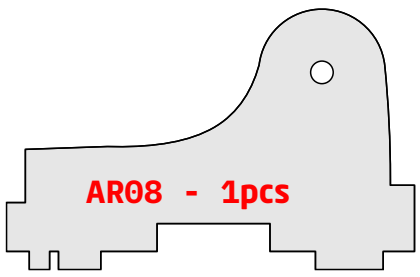

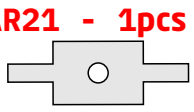

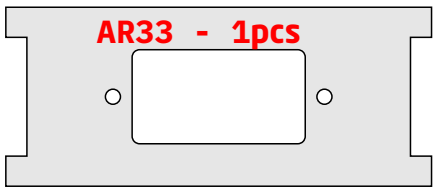

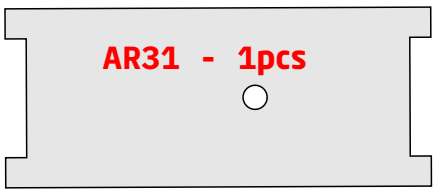

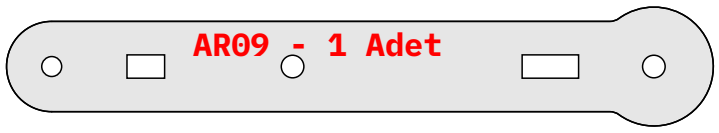

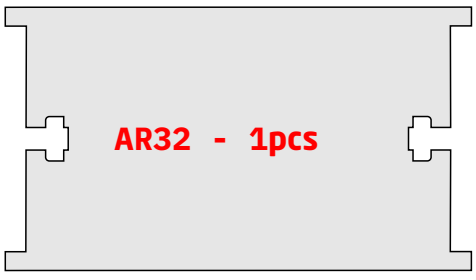

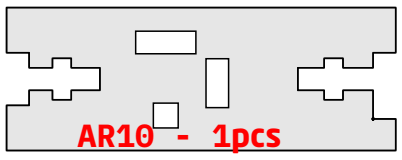

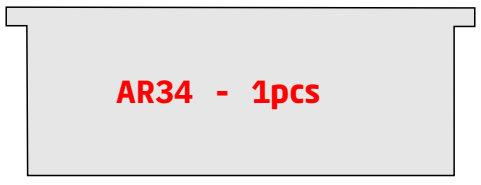

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50 mm M3 Metal Female-Male Spacer - 5 Pieces

45 mm M3 Metal Female-Male Spacer - 4 Pieces

20 mm M3 Metal Female-Male Spacer - 32 pcs

15 mm M3 Metal Female-Male Spacer - 8 Pieces

6 mm M3 Metal Female-Male Spacer - 4 Pieces

30 mm Extension Piece - 3 Pieces

5 mm Extension Piece - 3 Pieces

M3 50 mm YSB Phillips Screw - 4 Pieces

M3 30 mm YSB Phillips Screw - 30 Pieces

M3 12 mm YSB Phillips Screw - 30 Pieces

M3 10 mm YSB Phillips Screw - 50 pcs

M3 8 mm YSB Phillips Screw - 35 Pieces

M3 6 mm YSB Phillips Screw - 45 pcs

M3 Washer - 20 Pieces

M3 Fiber Nut - 15 Pieces

M3 Nut - 100 Pieces

M2.5-9.5mm screw - 12 pcs

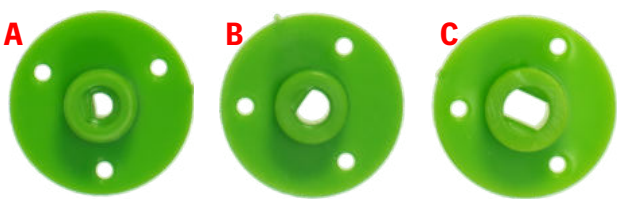
M2 screw and Nut - 24 pcs.

MB08 Spring - Suspension 4*24 mm - 4 Pieces

MB09 Spring - Suspension 8*53mm - 2 Pieces

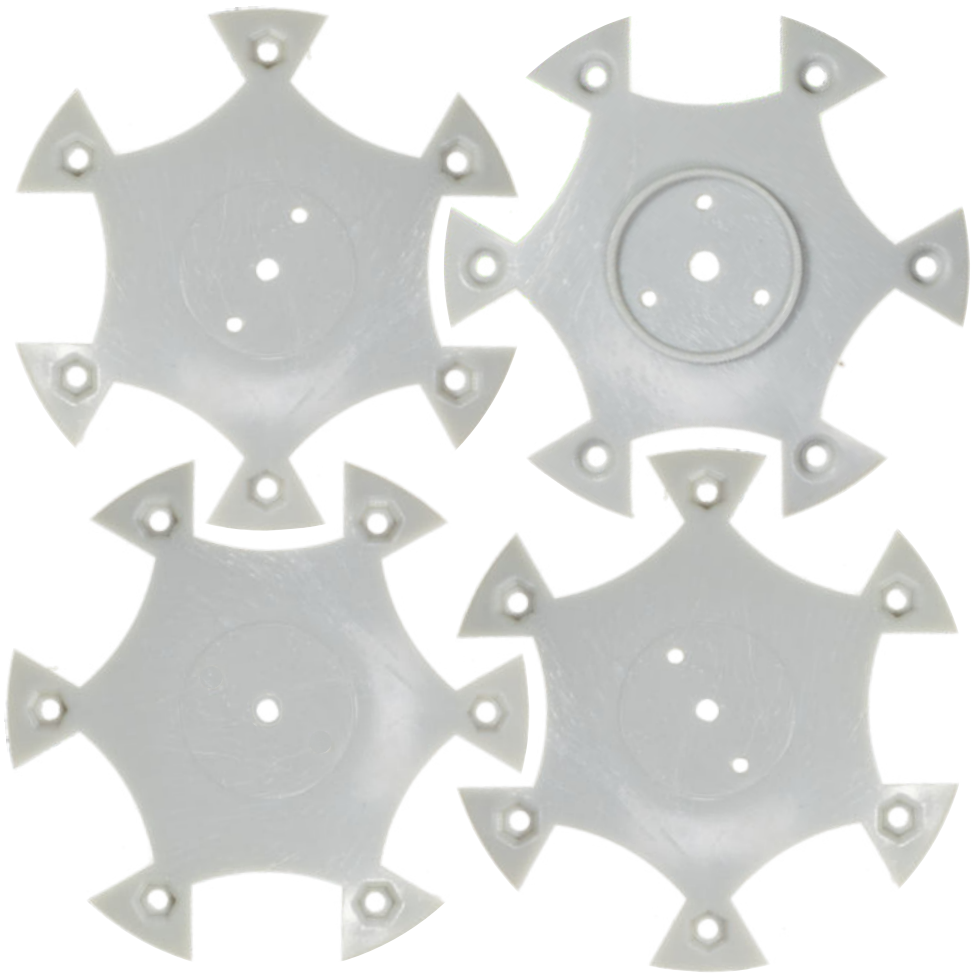
D03 - Pallet Link Set - 60 Pieces

70mm Omni Wheel Rubber Wheel and Shaft Set 12 Pieces



Engine Hub Set 16 Pieces(+4 pieces from C hub)

60mm Wheel Body and Rubber Set 12 pcs.



70mm Omni Wheel Body Set 4 Pieces

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Contents

What is REX?

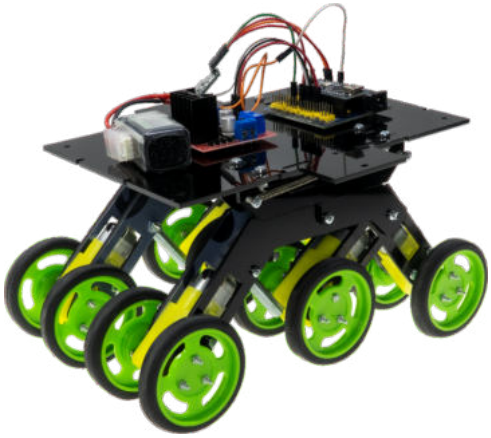
R.E.X; It is a transformable robot platform that belongs to the robotistan.com brand, made of durable plasiglass material, compatible with Arduino development board. R.E.X is a product that combines mechanical parts with different features that you can add to your robot. Thanks to this kit, you will have the mechanical parts needed by more than 8 robots with different functions in one set. There are 7 add-on packages with different features in the set. Thanks to these add-on packages, you have 9 transforming robots with a single set. Spacers and screws are also available in the sizes you will need to assemble the parts.

In addition, R.E.X helps develop a multitude of skills in children such as creativity, engineering, design and analytical thinking. R.E.X is a programmable robot produced for 9+ year old children to step into the world of robotics.

What Can You Do With R.E.X?

- You can use it as a multi-purpose platform.
- You can make a self-balancing robot.
- You can make a 24-tooth, tracked tank.
- You can make a remote glove-controlled robot.
- You can make an obstacle avoiding robot
- You can make a Bluetooth-controlled robot.
- You can make a monster monster robot.
- You can make an omni-wheeled robot that can rotate 360 degrees.
- You can make 4wd platform with robot arm.
- Can you make a mini scoop platform?
- Obstacle avoiding + Bluetooth controlled + Robot arm
- You can make an omni-wheeled robot.
- You can make robots in different scenarios by specifying the electronic components yourself.

Thanks to the add-on packages, you will have the opportunity to transform a body into 9 robots. When you have the add-on package that you want to transform R.E.X, you will be able to add another feature to your robot without the need for any extra external material.



MonsterBot

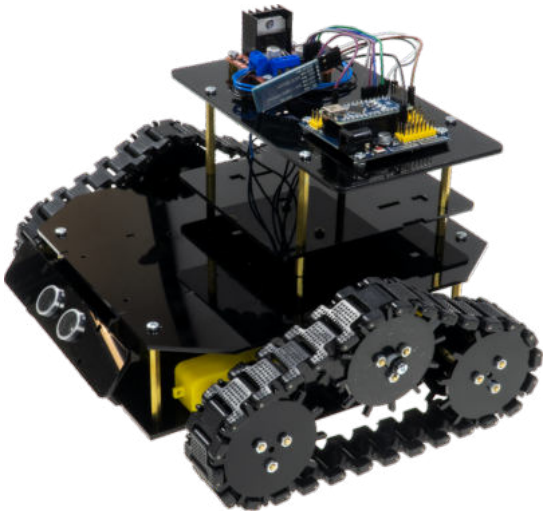
Do you want to hold a monster in your hand, do you want to dominate that monster and do useful projects for humanity, then you are imagining MonsterBot. Are you ready to meet MonsterBot?

There is no limit to what you can do with this beast. Thanks to its independent suspensions, there is no place it cannot climb, you will see it with your own eyes and say no more, you will not believe your eyes when you see that the upper platform remains stable while climbing, we are sure that what you can do with this robot, which has similar aspects to NASA's spacecraft Perseverance, is limited to your imagination!

As Derya Uluğ said, 'I have acquired a monster for myself and that monster is my masterpiece' Yes, this monster will be your masterpiece, we believe it!

What Can You Do With MonsterBot?

- You can have a robot that can adapt to the terrain conditions.
- How about a helper who can overcome all kinds of obstacles in your home?
- You can develop integrated systems with each other.
- You can carry out high-level projects for search and rescue activities.
- You can implement comprehensive projects with voice-controlled robots in military areas.
- In short, you can use this robot in whatever way you imagine.
- According to some rumors, the mountain overcomes all obstacles without saying hills and slopes.



Destroyer Add-on Pack

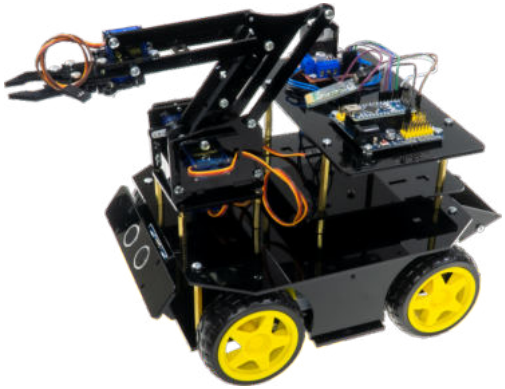
As the name suggests, the Destroyer is actually a destroyer tank.
Thanks to this tracked tank, you can transport your robot wherever you want regardless of the terrain conditions. Don't worry, he's a Destroyer, and he's a very popular robot with his charisma. Thanks to this tank, you can do many projects that can be beneficial for humanity.

What Can You Do With Destroyer?

- You can make a robot that adapts to any terrain thanks to its tracks.
- You can do whatever you want with a robot that can move in all directions.
- You can develop integrated systems with each other.
- You can realize high-level projects for search and rescue activities.
- You can implement comprehensive projects with voice-controlled robots in military areas.
- In short, you can use this robot in whatever way you imagine.

Electronic Add-on Pack

People who own the R.E.X 4 in 1 set will be able to add more features to R.E.X and have the opportunity to transform it into more robots, without the need for any external electronic materials, thanks to this add-on package.



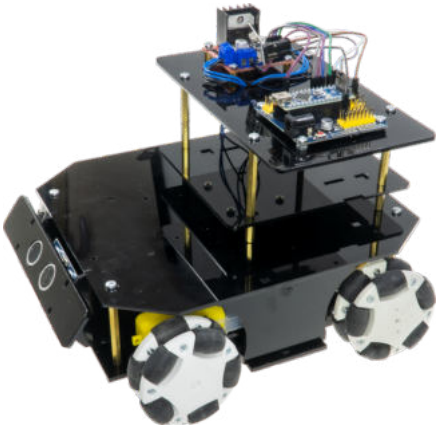
ArmBot

Tired of classic robot platforms? Then get ready to meet our new design, ArmBot! Now, robots will not only walk around, but also gain new abilities thanks to the mechanical arm we have added. There is no limit to what you can do with ArmBot! Moving things from one place to another has never been easier. Let's not forget that it has a small scoop on the back!
As Barış Manço said in his lines, "When it's evening, I shut up, everyone and everything comes to my cufflinks, it's time to join."

What Can You Do With ArmBot?

- You can have your transport work done by your robot.
- By establishing smart warehouses, you can have your products made by robots.
- How about a helper at home?
- You can develop integrated systems with each other.
- You can carry out high-level projects for search and rescue activities.
- You can implement comprehensive projects with voice-controlled robots in military areas.
- In short, you can use this robot in whatever way you imagine.

Tools Extension Pack
It is an add-on package that includes all the mechanical parts you need to add extra features to R.E.X with the Tools add-on pack.



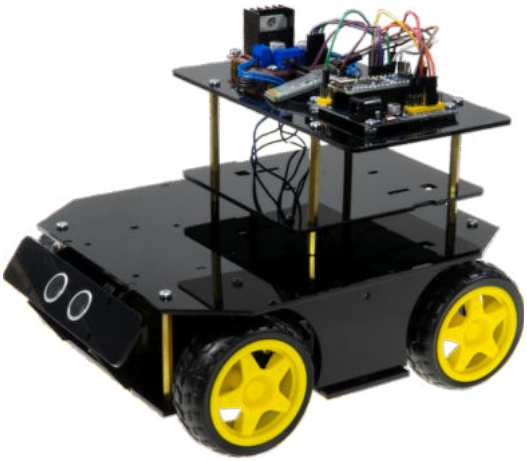
FeelMotion

Do you want to dominate a robot with your moves? Then get ready to meet FeelMotion. You can direct your robot with the gloves you will wear on your hand. Thanks to the omni wheels, you will receive a response in any way you want to move. You will feel the power of the glove on the robot without the need for any controller.
Controlling the robot has never been easier!
As Ferdi Özbegen said, "I have a feeling that you found the truth, he said this is the best." We say that you found the truth, let's move your robot.

What can you do with FeelMotion?

- You can have robots that are easy to control.
- You can do whatever you want with a robot that can move in all directions.
- How about a helper at home?
- You can develop integrated systems with each other.
- You can carry out high-level projects for search and rescue activities.
- You can implement comprehensive projects with voice-controlled robots in military areas.
- In short, you can use this robot in whatever way you imagine.

Plexi Glass Add-on Package
It is an add-on package that includes the plexi glass add-on package and the plexi and mechanical parts required for the tank and monster robot, which are not included in the R.E.X 4 in 1 set.

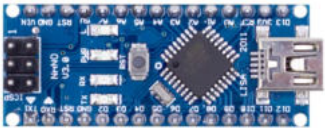


The purpose of R.E.X is to convert more than one robot to a platform.
But while doing these, it is to be able to do it without the need for an additional part or material from the outside. This is where add-on packages come into play. That's why a plug-in package is available for each feature and conversion. Another purpose of R.E.X is to accommodate multiple add-on packs. It is to be able to transform without the need for extra cutting and drilling tools without problems in more than one transformation.

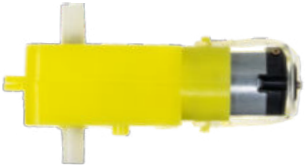
What You Can Do With Survivor Robot Kit - 4 in 1

- **Control via Bluetooth**: Turn the REX robot person into a robot that can be controlled wirelessly from your smartphone or tablet using the included HC06 Bluetooth-Serial Module You will be able to convert.
- **Balance Robot**: With the MPU6050 acceleration and gyro sensor included in the box, you will be able to build a balance robot that tries to stay in balance and succeeds.
- **Obstacle Avoiding Robot**: With the HC-SR04 Ultrasonic Distance Sensor included in the box, you will be able to make a robot that detects obstacles and can avoid any obstacle it detects.
- **Voice Control**: It is very pleasant to control your robot with voice command via a mobile application that you download to your smartphone or tablet. You will also be able to use this function with this kit.

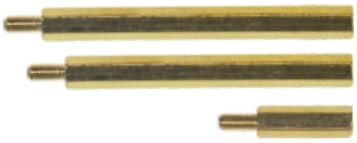
After getting to know the set contents, we will move on to the assembly phase. You can learn how all robot transformations are done during the assembly phase. Finally, you can examine the sample codes we have written for the robots you have converted in the software section, upload them to your robots and use them. The codes are for example purposes, you can make your robot more comprehensive by developing the codes yourself. You can access the detailed set content from the product's description on the site.



Arduino Nano
The Arduino Nano is a small, complete and breadboard friendly product based on the ATmega328P released in 2008. It is a smaller development counter with the same connections and features of the Arduino Uno card.



250 RPM Engine
The plastic gearmotor is an affordable and very useful product that you can use in simple applications. Since there is a shaft output from two separate points on the motor, it can be used easily for right and left use.



Metal Spacer
Metal spacers are materials that can be used to upgrade various circuit boards and mechanical materials. Made of brass material.

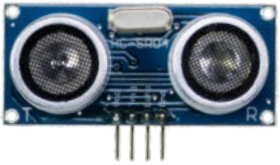
Bolt - Nut - Washer
Bolts are the connecting elements that are used to connect the parts to each other in a detachable way, with screw threads on the body part, and whose head is shaped like an allen-shaped, rectangular or different shape. Bolts are often used with a nut.

DC Motor Wheel
It transfers the linear motion of the robot from the motor to the wheels and converts it to horizontal motion. Thus, it allows the robot to move. It is attached to the engine in a snap-on manner without using any additional parts.

Jumper Cable
In short, we can say that it is a kind of connecting cables. It is very useful for connecting between breadboard and arduino. There are 3 types of jumper cables according to the presence of male and female inputs at the ends.

Acceleration and Gyro Sensor
It is a 6-axis IMU sensor counter with a 3-axis gyro and a 3-axis angular accelerometer, which is frequently used in various hobby, multicopter and robotic projects. Since there is a voltage regulator on the board, it can be operated with a supply voltage of 3 to 5 V.

Battery Holder
The battery slot is the box where the batteries are placed in order to transmit electric current to the devices working with dc current.



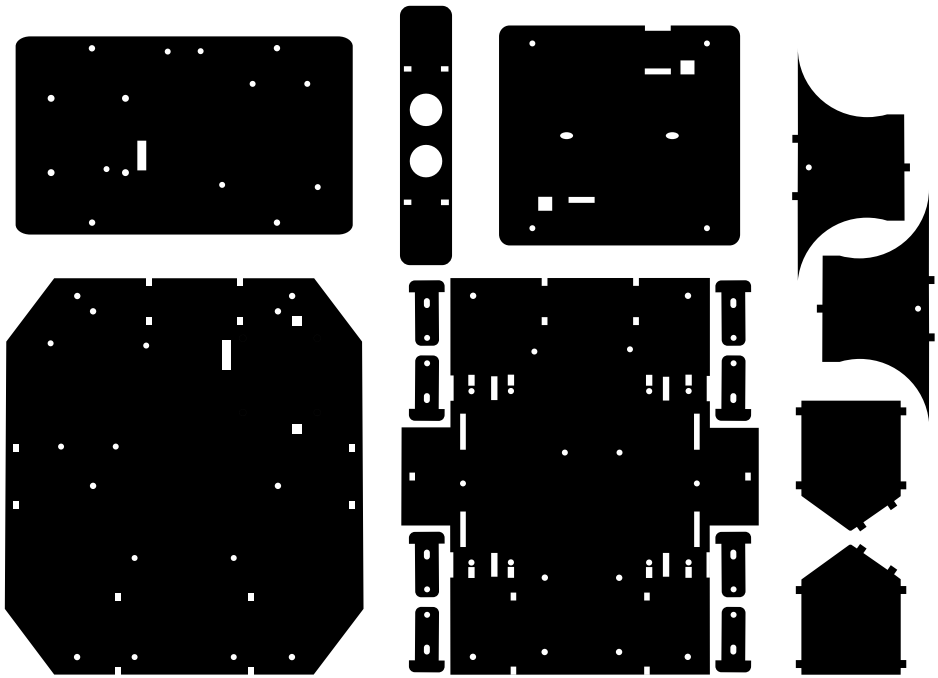
HC- SR04 Ultrasonic Sensor
It is a resource that calculates the distance to the object opposite using communication. The system we call sonar helps us calculate the distance of the object using sound waves. Such sensors are inspired by dolphins and bats.

Lipo Battery
A lithium polymer battery is a rechargeable lithium ion battery that uses a polymer electrolyte instead of the more common liquid electrolyte.

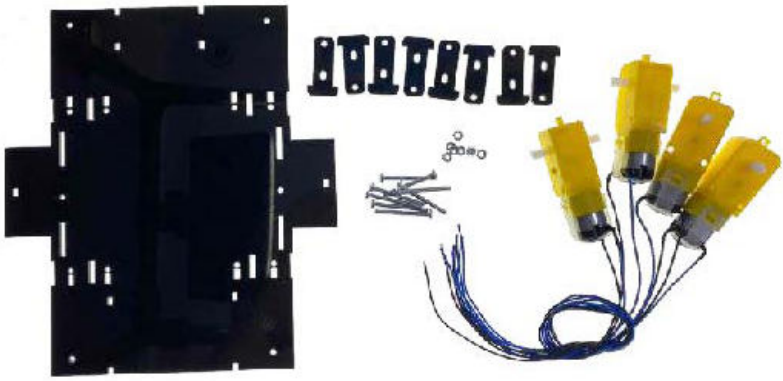
Mounting Cable
It is an assembly cable made for use in your circuits and breadboards. It comes in reels.

Insulating tape
In electrical installations, it is used to wrap the open ends and keep it away from electric current. Isolated electrical tapes are among the most important materials that electricians cannot give up.

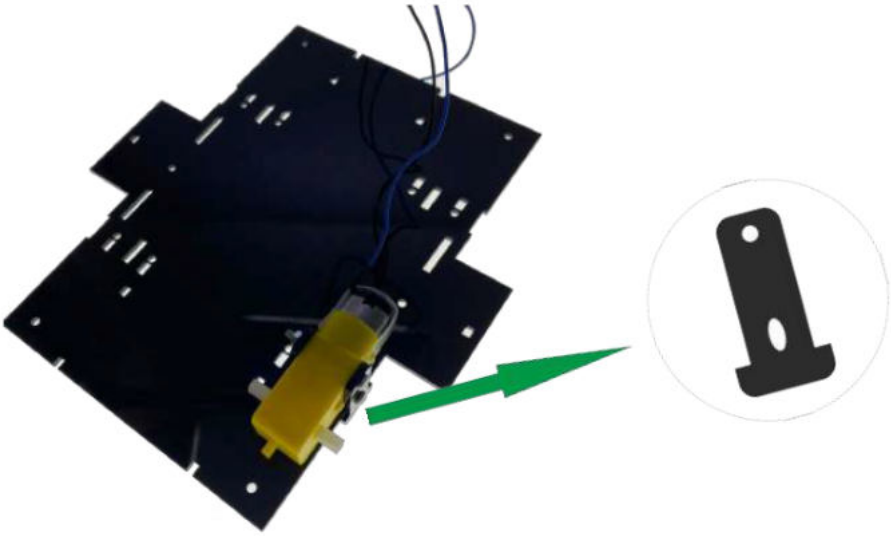
Survivor Robot Kit - 4 in 1 Setup
You can see all of the plexi parts in the Survivor Robot Kit - 4 in 1 Set in the image below. All the transformations made with this set will be made with the plexiglass pieces you see.



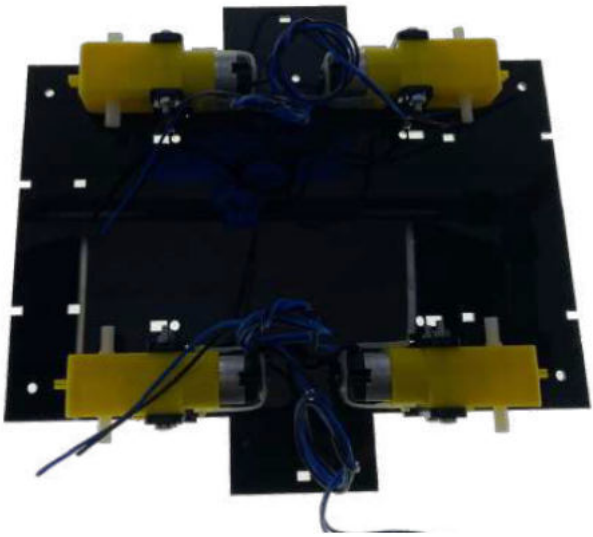
We will first start the installation by fixing the motors to the lower part of the chassis. You can see the parts required for the first step in the relative below. Plexi parts, Yellow dc motors, 8 pieces of 30 mm bolts and 8 nuts are required for this step. The cables are not soldered to the motors. There is a cable in the set for you to solder to the motors.



To fix the motors, use 8 T-plexiglass pieces included in the set and mount them with 30 mm bolts as in the image.

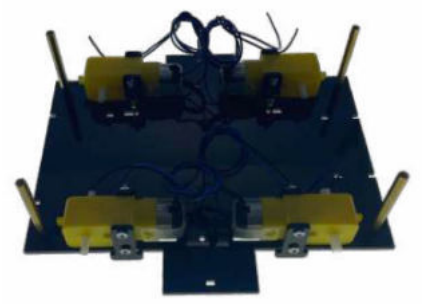


We fix it by applying the same process to all engines.



After fixing the engines, we can move on to fixing the top plate of the chassis. In order to fix the top plate, you need 4 50 mm spacers and 4 nuts that are included in the set. You can see it in the adjacent image.

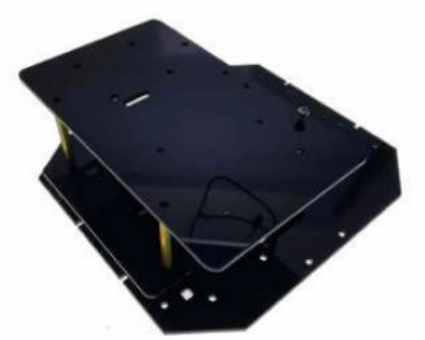
Fix the 50 mm spacers at four corners by means of nuts, as in the picture on the side.

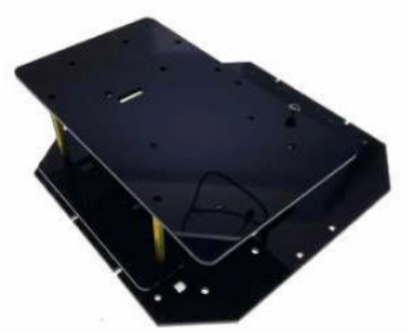


Next, it connects the top plate of the chassis. You can examine the materials required to assemble the top plate from the image on the side. 4 x 45 mm spacers, 4 x 15 mm spacers, 4 x 6 mm bolts are required.

Mount 4 pieces of 15 mm spacers to the top plate of the main chassis with 4 nuts as in the image on the side.

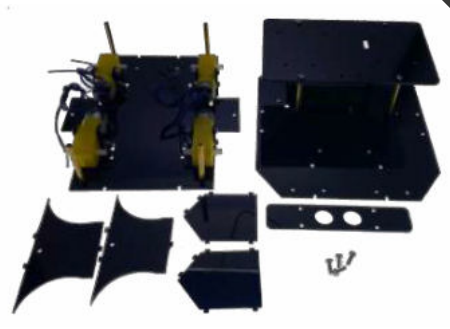
Place the bottom plate of the balance robot on top of the 15 mm spacers that you assembled in the next step. Then combine the 45 mm spacers with 15 mm spacers as in the image on the side.



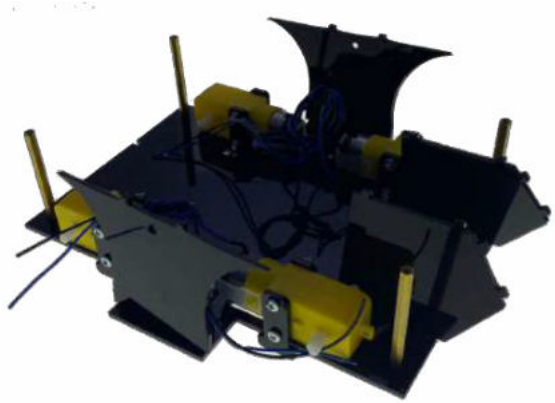


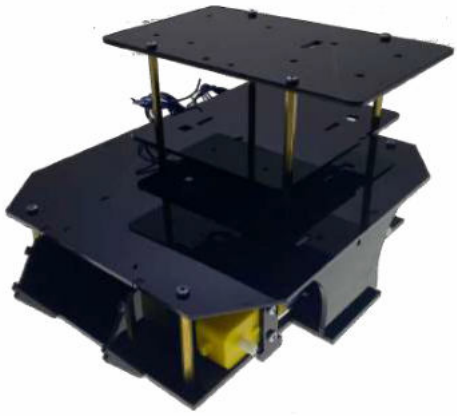
Then screw the top plate of the balance robot onto the 45 mm spacers with 6 mm screws as in the image on the side.

As the last step, we will finish by assembling the upper and lower parts of the main chassis.
The parts that we have assembled until this step are in the image on the side.



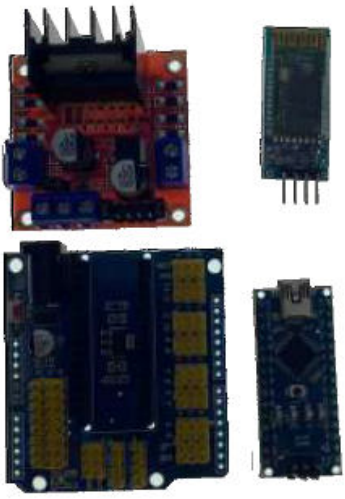
First of all, we place the right - left and front plates in their appropriate holes, as seen in the image at the bottom. At this stage, parts may fall and you may need to be careful. Then we screw the top plate with 6 mm bolts as in the second image. In this way, we finish the assembly of the plexi parts.





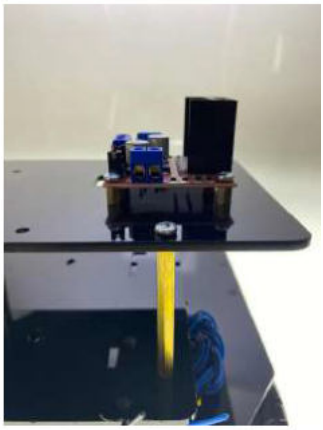
In this section, you will see the electronic assembly stage of Survivor 4 in. First the electronic part of the bluetooth controlled version. Then you will see the electronic circuit diagrams and code sections of the 4 transformations, namely the obstacle avoidance, voice control and balance robot.

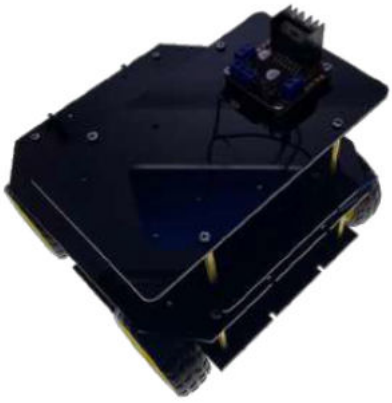
Bluetooth Controlled Survivor Robot



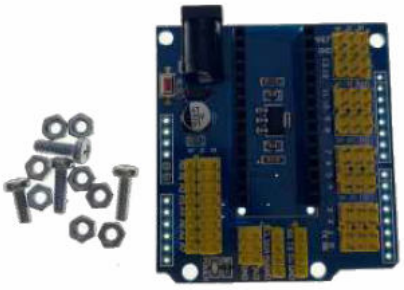
The necessary electronic materials for the Bluetooth-controlled survivor robot are included in the set. You can see the materials in the adjacent image.

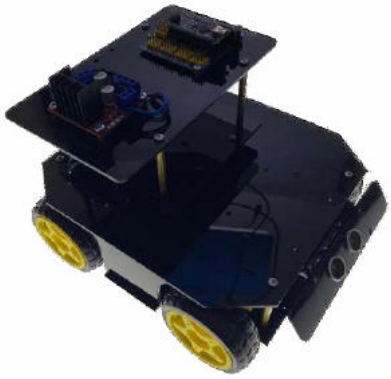
First, mount the motor driver on the upper part of the chassis as in the images, using a 6 mm spacer and 6 mm screws.



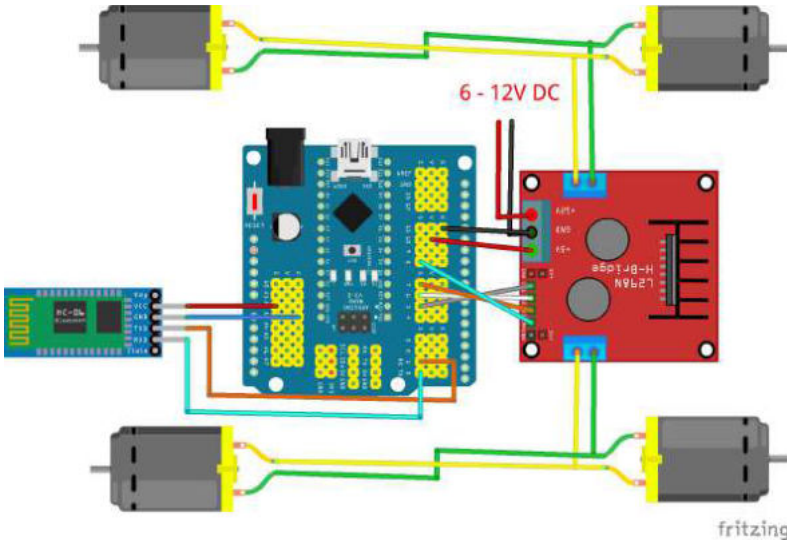


Then, mount the nano sensor shield to the upper part of the chassis with 12 mm bolts as in the image. The point to note here is that you need to attach one nut to the bottom of the sensor shield and one nut to the end of the bolt. In other words, a nut is used instead of a spacer to raise the board from the chassis.

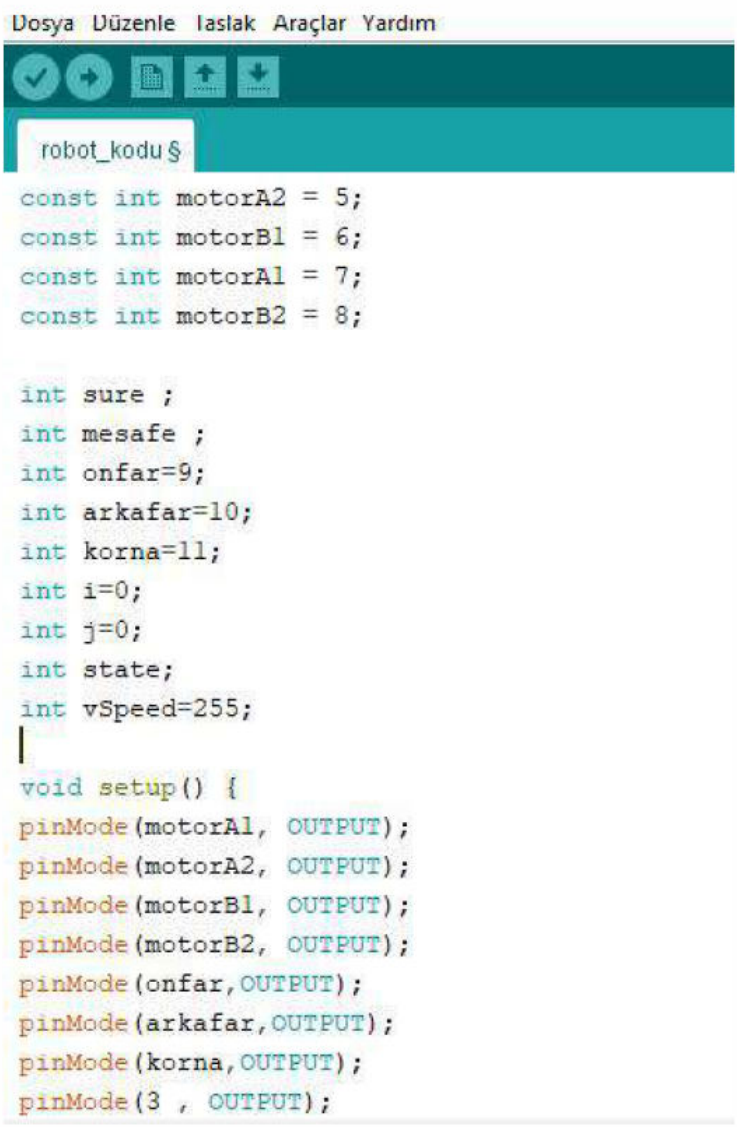




After mounting the motor driver and sensor shield, you can proceed to the cable connections. Make the necessary connections between the arduino and the motor driver by taking the help of the circuit diagram at the bottom. The cables will not be soldered to the motors. You have to solder the cable that comes out of the set yourself. If you want to see how to solder, you can find it on the tip page.



After assembling the circuit part and making the connections, we can move on to the software part. You can see the entire software visually at the bottom. You can write your code in a manual shape with the help of the image. If you want, you can access the entire software with the short link and QR code at the bottom of the software.



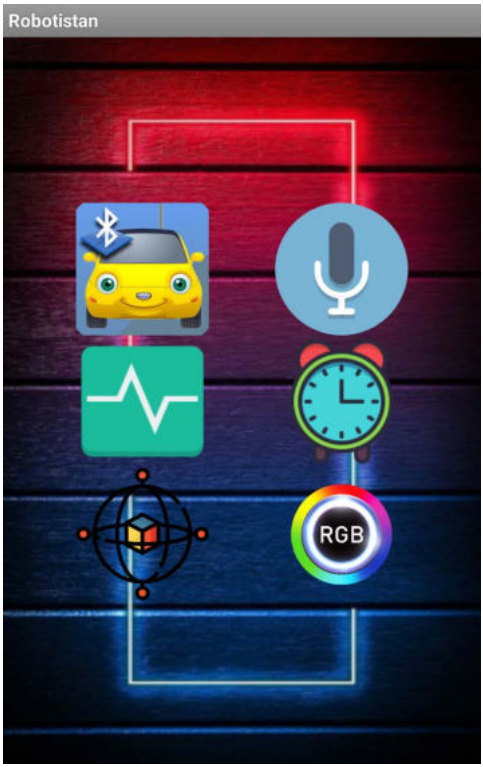
```
pinMode(4 , INPUT);
Serial.begin(9600);
}

void loop() {
if(Serial.available() > 0){
state = Serial.read();
}

if (state == '0'){
vSpeed=0;}
else if (state == '1'){
vSpeed=100;}
else if (state == '2'){
vSpeed=180;}
else if (state == '3'){
vSpeed=200;}
else if (state == '4'){
vSpeed=255;}

if (state == 'F') {
analogWrite(motorA1, vSpeed); analogWrite(motorA2, 0);
analogWrite(motorB1, vSpeed); analogWrite(motorB2, 0);
```

```
}
else if (state == 'G') {
analogWrite(motorA1,vSpeed ); analogWrite(motorA2, 0);
analogWrite(motorB1, 100); analogWrite(motorB2, 0);
}
else if (state == 'I') {
analogWrite(motorA1, 100); analogWrite(motorA2, 0);
analogWrite(motorB1, vSpeed); analogWrite(motorB2, 0);
}
else if (state == 'B') {
analogWrite(motorA1, 0); analogWrite(motorA2, vSpeed);
analogWrite(motorB1, 0); analogWrite(motorB2, vSpeed);
}
else if (state == 'H') {
analogWrite(motorA1, 0); analogWrite(motorA2, 100);
analogWrite(motorB1, 0); analogWrite(motorB2, vSpeed);
}
else if (state == 'J') {
analogWrite(motorA1, 0); analogWrite(motorA2, vSpeed);
analogWrite(motorB1, 0); analogWrite(motorB2, 100);
}
else if (state == 'L') {
analogWrite(motorA1, vSpeed); analogWrite(motorA2, 150);
```

You can access the whole code from the short link or qr code.
http://rbt.ist/s6f

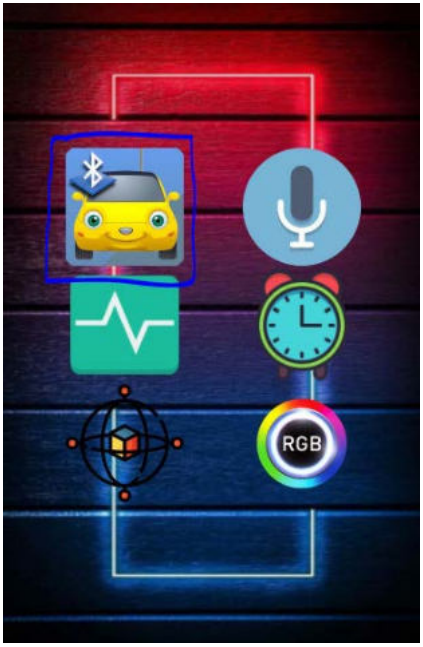
In order to control the Survivor robot via a phone or any android device, you need to download and install the Arduino Bluetooth RC Car application on your device. You can download the application by typing Arduino Bluetooth RC Car in the search section of the application market of your Android device. The image of the application is located at the bottom.

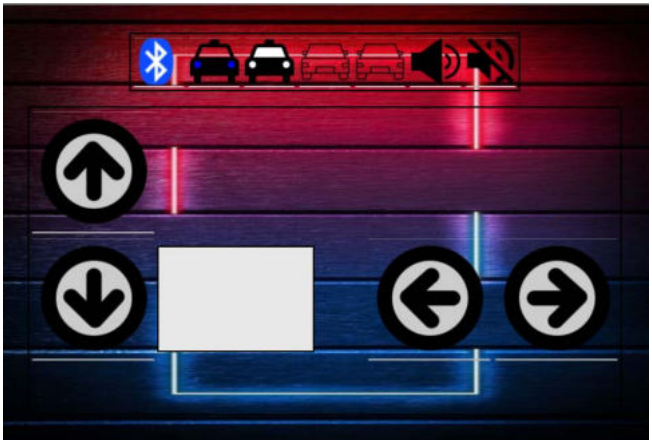
With Robotistan's own mobile application, you can control 6 different projects from a single application.



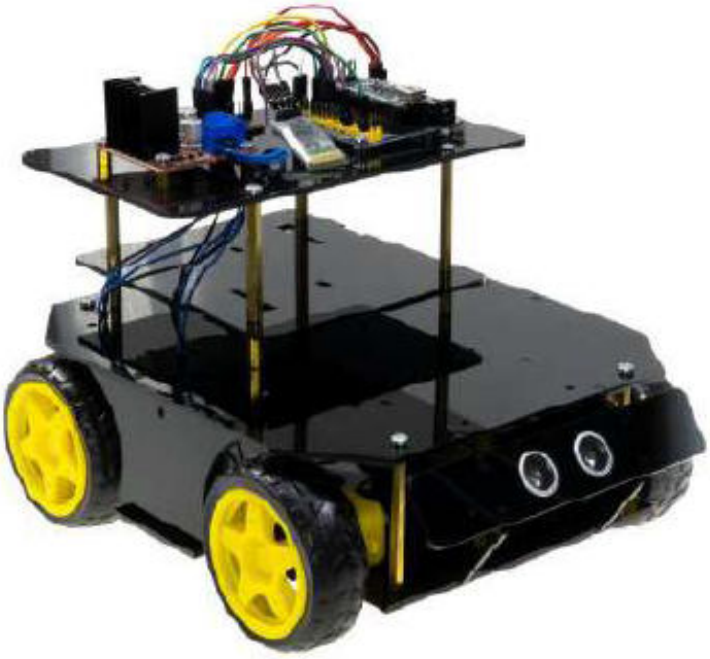
Let's install the application on your android device with the QR code.

You can control your robot from the button in the image.





Survivor robot bluetooth controlled version; After the mechanical, electronic and software parts are finished, it will look like the image at the bottom.

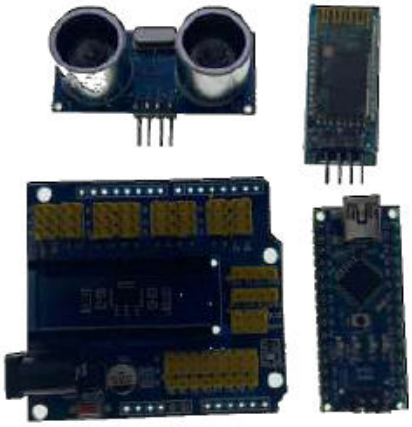


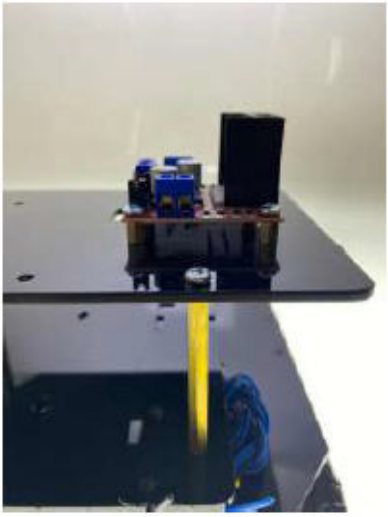
Survivor Robot Obstacle Avoidance Mode

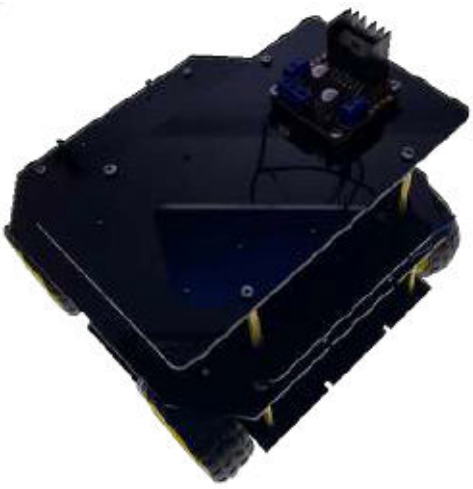
What is an obstacle avoiding robot; A robot that stops or changes direction when it sees an obstacle is called an obstacle avoiding robot.

Do not think of this mod of the Survivor robot as just an obstacle avoiding robot. We show it as an obstacle avoiding robot just to set an example for you. You can make multiple robots using the distance sensor, such as an obstacle avoiding robot, an obstacle following robot, a robot that does not fall off the table.

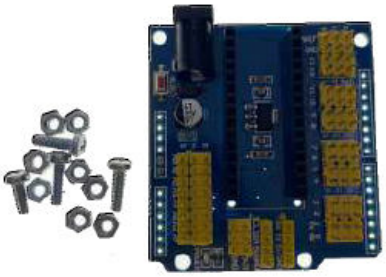
You can see the electronic materials required to make the obstacle avoidance version of the Survivor robot in the image on the side.

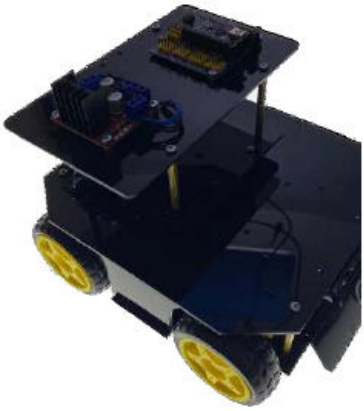




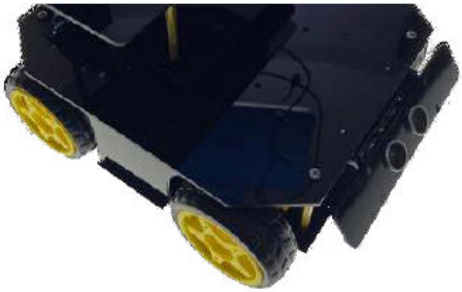


Then, mount the nano sensor shield to the upper part of the chassis with 12 mm bolts as in the image. The point to note here is that you need to attach one nut to the bottom of the sensor shield and one nut to the end of the bolt. In other words, a nut is used instead of a spacer to raise the board from the chassis.

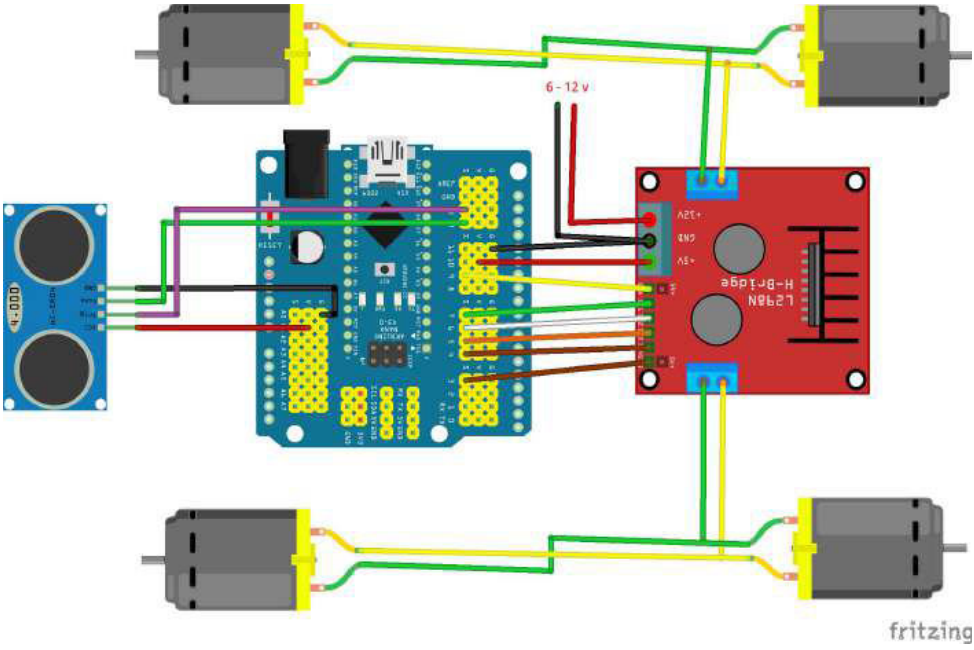




Finally, fix the distance sensor by placing it on the part in front of the robot as in the image.



After mounting the motor driver, sensor shield and distance sensor, you can proceed to the cable connections. Make the necessary connections between the arduino and the motor driver by taking the help of the circuit diagram at the bottom. The cables will not be soldered to the motors. You have to solder the cable that comes out of the set yourself. If you want to learn about how to solder, you can find it on the tip page.



After assembling the circuit part and making the connections, we can move on to the software part. You can see the entire software visually at the bottom. You can write your code in a manual shape with the help of the image. If you want, you can access the entire software with the short link and QR code at the bottom of the software.

There is no need for an android application for the obstacle avoiding version of the Survivor robot, your energy will be enough for your robot to work.

You can access the entire code from the short link or QR code.

http://rbt.ist/no1

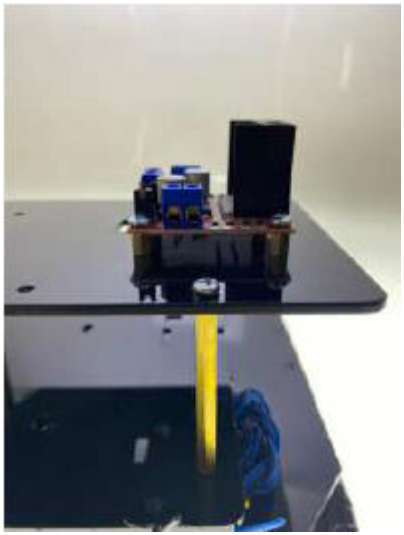
Survivor Robot Voice Control Mode

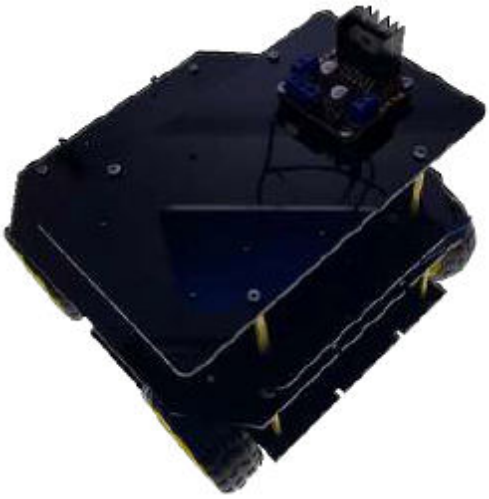
What is Survivor robot voice control? It connects to the robot via bluetooth via mobile application and gives direction to your robot with certain commands. We can show you the commands such as go forward, come back, turn right etc.

You can see the electronic materials required for the Survivor robot voice control mode in the side show. If you notice, they are the same materials as the bluetooth control mode.

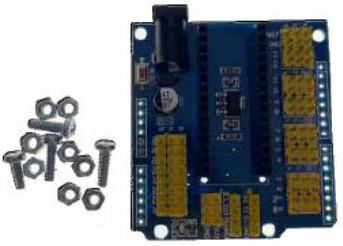
Because there is no hardware difference between sound control and bluetooth control. Only software and android application are different.

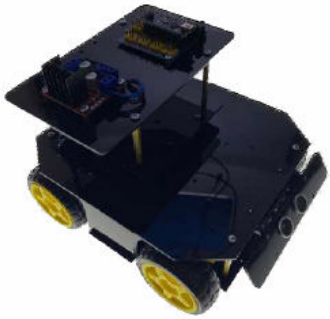
First, mount the motor driver on the upper part of the chassis as in the images, using a 6 mm spacer and 6 mm screws. Don't forget to put the nuts on the ends of the spacers.



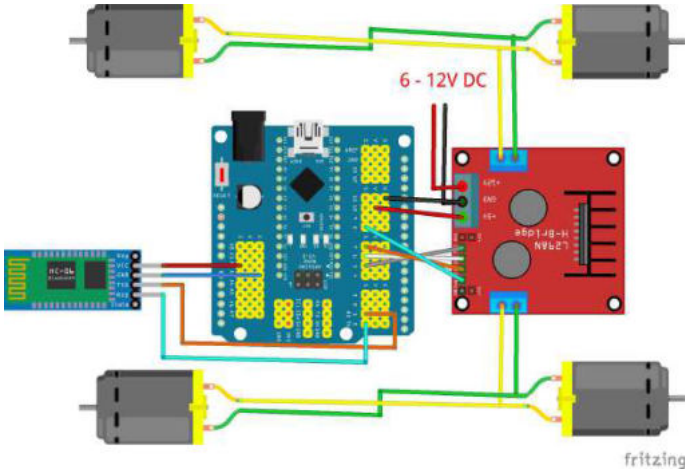


Then, mount the nano sensor shield to the upper part of the chassis with 12 mm bolts as in the image. The point to note here is that you need to attach one nut to the bottom of the sensor shield and one nut to the end of the bolt. In other words, a nut is used instead of a spacer to raise the board from the chassis.





After mounting the motor driver and sensor shield, you can proceed to the cable connections. Make the necessary connections between the arduino and the motor driver with the help of the circuit diagram at the bottom. The cables will not be soldered to the motors. You have to solder the cable that comes out of the set yourself. If you want to see how to solder, you can find it on the tip page.

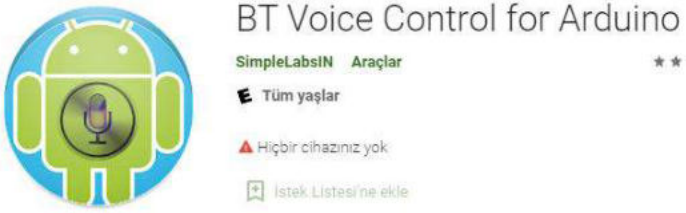


You can access the entire code from the short link or QR code.

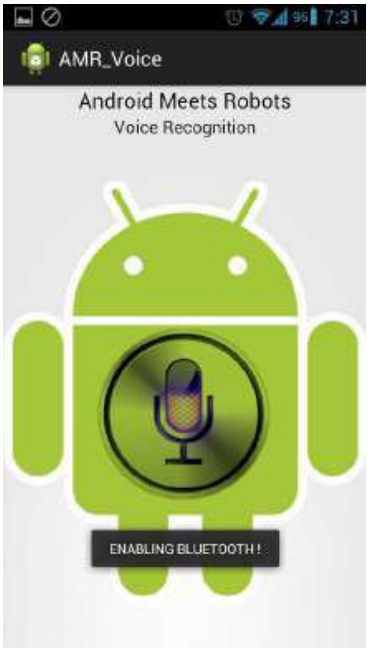
http://rbt.ist/u5i

Survivor Robot Voice Control Mode

In order to control the Survivor robot via a phone or any android device, you need to download and install the BT Voice Control for Arduino application on your device. You can download the application by typing Arduino Bluetooth Voice Control into the search section of the application market of your Android device. The image of the application is located at the bottom.



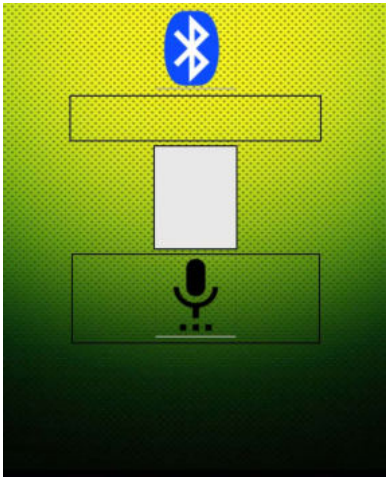
After downloading the Android application, pair and connect with the bluetooth module. You must be connected to the internet as the application uses the google base. After connecting, touch the microphone icon and speak (forward, backward, right, left). Your robot will function according to the command you say.



Survivor Robot Voice Control Mode

You can use the robot with the robotistan mobile application. After opening the application, you can log in to the relevant application by not clicking the marked button.

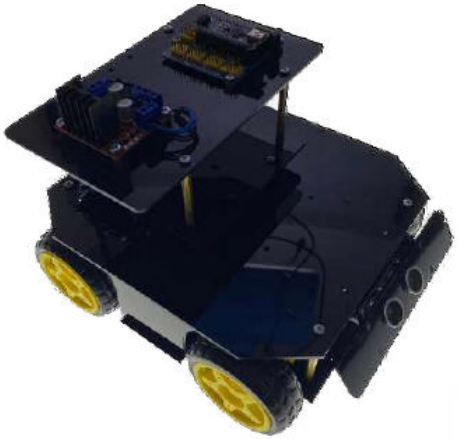
After clicking, we make the bluetooth connection by clicking the bluetooth icon on the page that opens. Then we can start using by starting the microphone sign. The fact that we can see the plus of the Robotistan mobile software on the screen compared to the other mobile software, so we can understand whether the robot detects what we want or not.



With Immortal, you will have a robot that challenges the balance. Even if his balance is disturbed, he will recover and continue to stand. If you think such a robot is perfect for my projects, get ready to meet him!

What Can You Do?

- It will be a very successful robot in carrying things because it always stays in balance.
- You can do whatever you want with a robot that can move in all directions.
- You can develop integrated systems with each other.
- You can realize high-level projects for search and rescue activities.
- You can implement comprehensive projects with voice-controlled robots in military areas.
- In short, you can use this robot in whatever way you imagine.



We will use the upper two plates of the 4 in 1 chassis for the balance robot transformation. For this, we will remove its two motors and its upper two plates.

As a first step, disconnect the cables of the motors connected to the motor driver. Then, remove the two-layered plexiglass piece in the red circle from the body by unscrewing the 4 nuts holding it.

When you remove the top two plates, it will look like the image on the side.

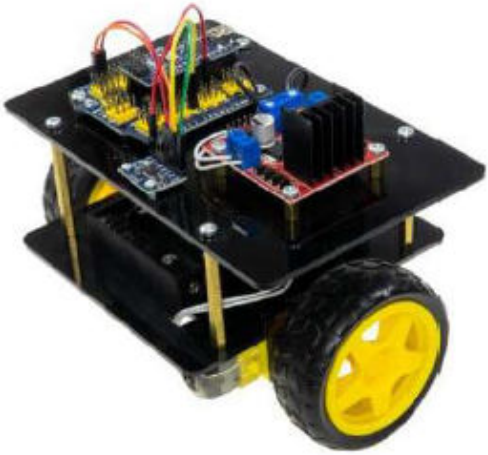
2 motors are required to move the balance robot. To assemble these motors, 4 pcs of 30 millimeter bolts, 4 pcs of nuts and 4 pcs of motor fixing parts are required. You can see the necessary materials in the image to the side.

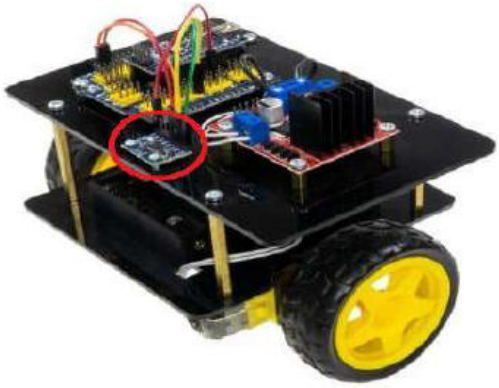
Mount the motor as shown in the picture using 2 motor fixing parts and 30 millimeter bolts. Do the same for both engines.

After assembling both engines, the final state will be as in the image. The cable will not be soldered to the motors, you have to solder the cable in the set yourself. If you want to learn about how to solder, you can check the tip page. After this step, the mechanical assembly phase is finished. You can proceed to the electronic assembly stage.

You can see the materials required for the electronics of the balance robot on the side. One of the most important parts of this robot is the mpu6050 gyro sensor.

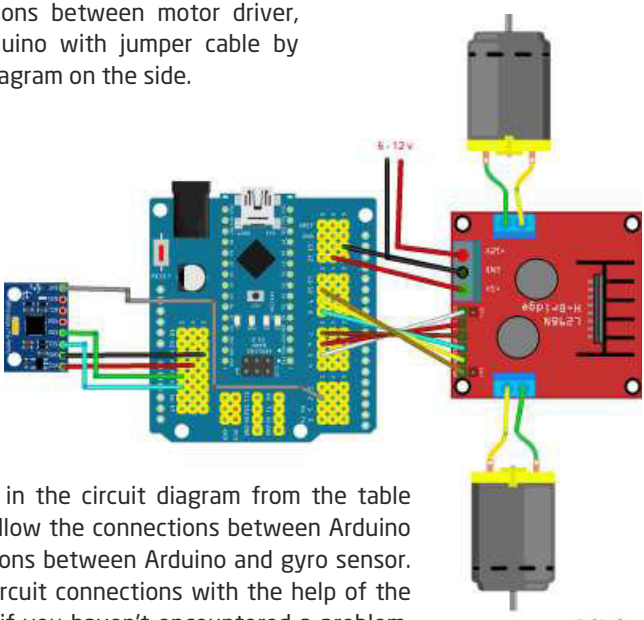
Fix the motor-driver in the same way with 4 x 6 mm spacers and 4 x 6 mm bolts. Assemble the Arduino nano shiled with 8 nuts, with one nut remaining between the board and the chassis with a 12 mm bolt.





Mount the mpu6050 sensor on the red marked area with the M2 bolt and nut included in the set as in the image. After completing this process, the assembly of the balance robot will be finished. If you have not encountered a problem until this step, you can proceed to the electronic assembly part.

Make the necessary connections between motor driver, arduino and gyro sensor, arduino with jumper cable by getting help from the circuit diagram on the side.



You can see the connections in the circuit diagram from the table below. You can more easily follow the connections between Arduino and motor driver and connections between Arduino and gyro sensor. After making the necessary circuit connections with the help of the circuit diagram and the table, if you haven't encountered a problem, you can move on to the software part.

Bileşen Pimi	Arduino Pimi
MPU6050	
Vcc	+5V
Zemin	Gnd
SCL	A5
SDA	A4
INT	D2
L298N	
IN1	D6
IN2	D9
IN3	D10
IN4	D11

Now we need to program our Arduino nano card to stabilize the robot. This is where all the magic happens; The concept behind it is simple. We have to check whether the robot is leaning forward or backward using the MPU6050, and then we need to turn the wheels if it leans forward, and the wheels in the forward direction if it leans backwards. In the opposite direction.

We also need to control the rotational speed of the wheels, if the robot is slightly disoriented from the middle position, the wheels will turn slowly and the speed will increase as it moves away from the center position. To achieve this logic, we use the PID algorithm with the center position as the set point and the disorientation level as the output.

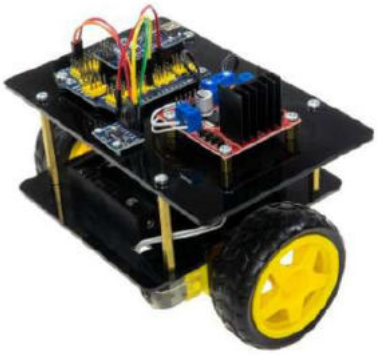
We use the MPU6050, a 6-axis accelerometer and gyroscope sensor, to know the current position of the robot. To get a reliable position value from the sensor we need to use the value of both the accelerometer and the gyroscope because values from the accelerometer have noise issues and values from the gyroscope tend to drift over time. So we have to combine both and get the yaw slope and roll value of our robot, for which we will only use the yaw value.

Sounds a little dizzying, right? But don't worry, we have ready-made libraries that can perform PID calculation and also get yaw value from MPU6050. When we add the Libraries into the Code, you will be able to reach the PID values automatically.

You can access the entire code from the short link or QR code.

Http://rbt.ist/san

After the mechanical assembly, electronic assembly and software installation are completed, you can see the final version of the balance robot in the image below.



Do you want to hold a monster in your hand, do you want to dominate that monster and do useful projects for humanity, then you are imagining MonsterBot. Are you ready to meet MonsterBot?
There is no limit to what you can do with this beast. Thanks to its independent suspensions, there is no place it cannot climb, you will see it with your own eyes and say no more. We are sure that you will not believe your eyes when you see that the upper platform remains stable while climbing. What you can do with this robot, which has similarities with NASA's spacecraft Perseverance, is only limited by your imagination!

What Can You Do With MonsterBot?

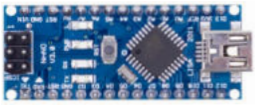
- You can have a robot that can adapt to the terrain conditions.
- How about a helper who can overcome all kinds of obstacles in your home?
- You can develop integrated systems with each other.
- You can realize high-level projects for search and rescue activities.
- You can implement comprehensive projects with voice-controlled robots in military areas.
- In short, you can use this robot in whatever way you imagine.
- According to some rumors, the mountain overcomes all obstacles without saying slope.

Let's Get to Know the Content of the Monster Add-on Pack

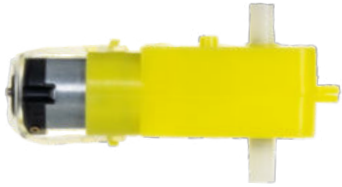
Lipo Battery
A lithium polymer battery is a rechargeable lithium ion battery that uses a polymer electrolyte instead of the more common liquid electrolyte.

Tensile Spring
Tensile springs are obtained by helically winding a round wire made of metal or metal alloy. It is used to provide a more stable grip on rough terrain by the wheels on the right and left sides of the Monsterboa.

Insulating tape
In electrical installations, it is used to wrap the open ends and keep it away from electric current. Isolated electrical tapes are among the most important materials that electricians cannot give up.



Arduino Nano
The Arduino Nano is a small, complete and breadboard friendly product based on the ATmega328P released in 2008. It is a smaller development counter with the same connections and features of the Arduino Uno card.

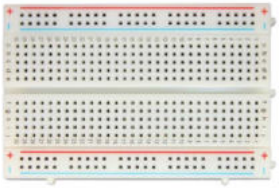


250 RPM Engine
The plastic gearmotor is an affordable and very useful product that you can use in simple applications. Since there is a shaft output from two separate points on the motor, it can be used easily for right and left use.

Metal Spacer
Metal spacers are materials that can be used to upgrade various circuit boards and mechanical materials. Made of brass material.

Jumper Cable
In short, we can say that it is a kind of connecting cables. It is very useful for connecting between breadboard and arduino. There are 3 types of jumper cables according to the presence of male and female inputs at the ends.

HC-06 Bluetooth Module
It is designed for use of Bluetooth SSP (Serial Port Standard) and wireless serial communication applications. The necessary pins are taken out thanks to the circuit board in order to enable fast proto ping and to be used comfortably in breadboard, arduino and various circuits.



Breadboard
In your small circuit works and by sticking it on the circuit boards, you can perform the proto pping process quickly, create your circuits.
you can work.

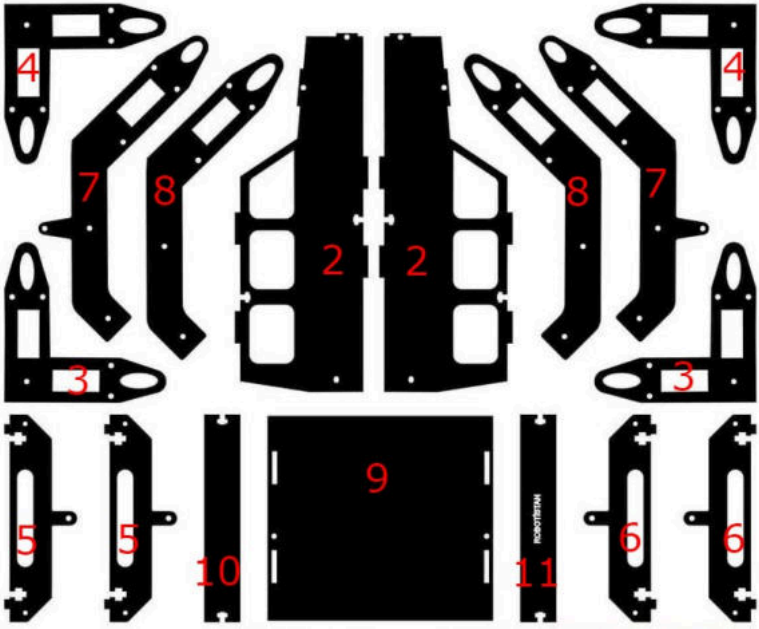
Be gentle during assembly to Lütfen plexi parts. Since they do not have much flexibility, they can break.

I would like to remind you that this product is open to development. Until you develop it yourself, it will not be the final product. This product and manual has been prepared to guide you. You can revise the mechanical and electronic parts of the Monster robot according to you.

If you encounter any problems with the product, do not hesitate to contact us. Your positive and negative feedback is always valuable to us :)

When you buy the Monster robot add-on package, the installation may seem a bit complicated. Actually, the logic of the installation is quite simple. In the guide, I will go step by step and explain how to assemble it in simple language.

First, let's recognize and name the plexiglass parts in the attached package. I numbered all the plexiglass pieces as you can see in the image below. This numbering process will make it easy to identify parts during installation.



step 1

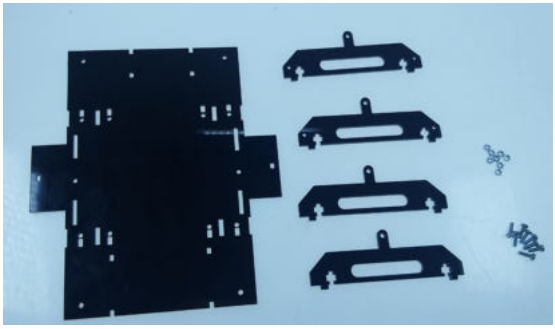
There are 3 kinds of bolts in the set. You will use these bolts to mount M3 30 mm YSB Motors, respectively. You will use the M3 10 mm YSB chassis to assemble the plexiglasses to each other. You will use it on the M3 12 mm YSB chassis where there are movable joints.

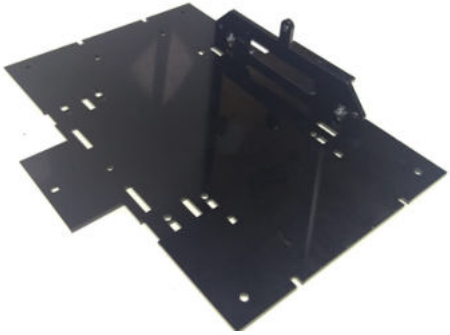
There are also 2 types of nuts. One is a fibrous m3 nut and the other is a regular m3 nut. I will tell you where fiber nut should be used. You can mount with a normal nut where I did not specify.

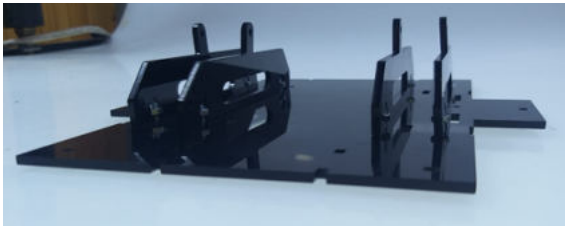
Before starting the assembly of the product, you must have soldered the cables in the set to all motors. The guide is prepared assuming that the cable sent to the motors is soldered.

As the first step, start by assembling the parts 5 and 6, which are used to fix the right and left legs to the main body of the monster robot. Make the parts to be used ready for assembly by getting help from the first image.

Then assemble with 8 pieces of 10 mm bolts and 10 pieces of nuts as in the second image. The important point here is that you need to assemble the parts numbered 6 to the outside. Part 6 is the part with two holes on it.







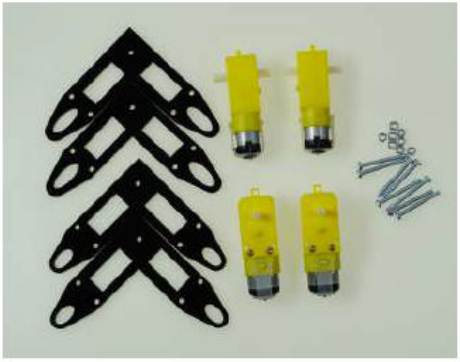
step 2

As the second step, you will assemble the feet. You will use parts 7 and 8 in this step. In addition, you will complete the assembly with 2 motors, 4 30 mm bolts and 4 nuts.

I would like to remind a critical point while assembling. Parts number 7 must be on the outside. That is, part 7 of the left leg, to the left outer part. Assemble by using 30 mm bolts and nuts, with the right leg side to the right outer part.

step 3

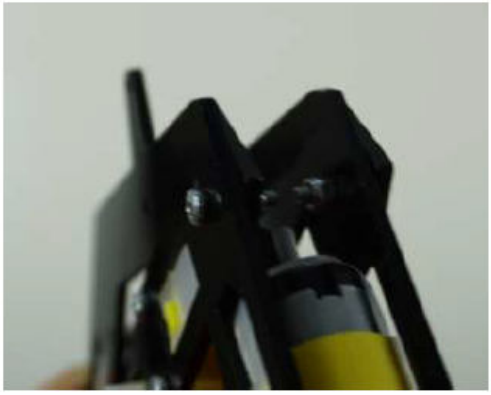
In step 2, you assembled the back parts of the left and right feet. In this step, you will assemble the front parts of the left and right legs. Assemble 4 motors to 3 and 4 plexi parts with 30 mm bolts and 4 nuts, from outside to inside as in the image.

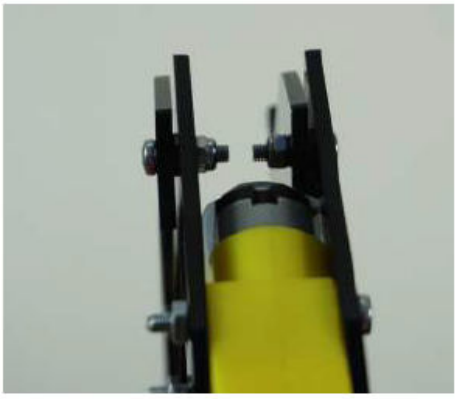


step 4

You will assemble the foot pieces you made in steps 2 and 3 in this step. The critical point in this step is that the piece you made in step 3 is mobile. As you can see in the first image, they are the final versions of the montages you made in the 2nd and 3rd steps. In the second image, the way it will appear after applying this step. The parts numbered 7 must be assembled in such a way that the left and right parts remain on the outside. For a leg, 2 12 mm bolts, 2 washers and 2 fibrous nuts will be used.

Since the piece made in step 3 is movable, you should put a stamp between it and the money made in step 2. You can perform this step with the guidance of the 3rd and 4th images. Do these steps for both feet.

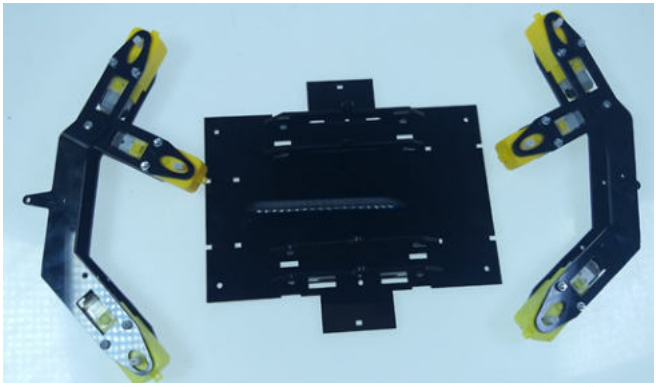




step 5

Now you will see that the monster robot is slowly starting to take shape. In this step, you will assemble the parts 5 and 6 that you assembled in Step 1, and the parts you assembled in step 4. In this step, you need to pay attention to the direction of the right and left legs.

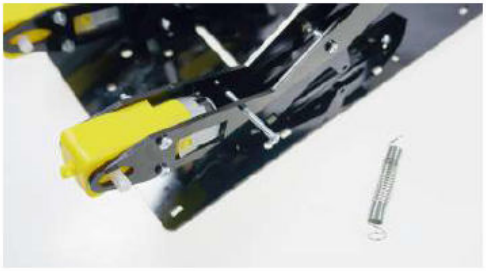
Assemble the feet to the main body with the help of the visuals, with 4 pieces of 12 mm bolts, 4 pieces of fibrous nuts and 4 pieces of washers. Repeat these steps for both legs.



step 6

The biggest feature of the Monster robot is that it has great mobility in rough terrain, thanks to its unique springs. In this step, you will mount the 7.51 mm spring on the monster robot. There are two parallel holes in the legs consisting of parts 7 and 8. Fix the spring by passing 30 mm bolts and nuts through these holes.

Pass the other end of the spring to the protrusion on the motor with the help of a pair of pliers, to the motor under the guidance of the Visuals. Repeat these steps for both legs.



Then, make the assembly of the springs that help the upper table to return to its former form, with reference to the visual. You can assemble 2 pieces of 5*22 mm springs for one side, using 3 pieces of 10mm bolts and 3 pieces of bolts, as in the images.

Step 7

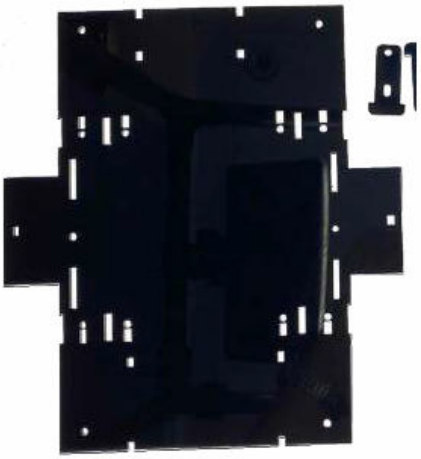
If there is no problem in 6 steps so far, finally install the 12 wheels in the set. After attaching the wheels, the assembler robot will look like in the image.

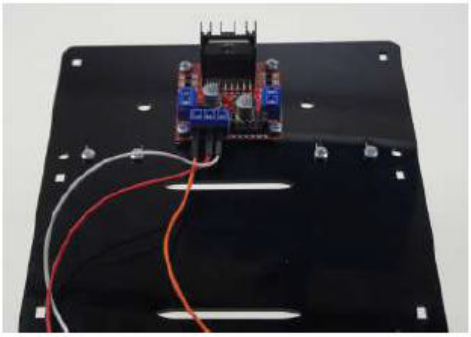
Step 8

In step 6, the monster robot is completed. However, the monster robot has a special cap to protect its electronics. You can use it in two different ways, as the top cap of the platform can be easily removed and attached. The cap consists of parts numbered 2, 9, 10, 11. Assemble with 10 pieces of 10 mm bolts and nuts, taking reference from the visuals. Make sure that the part number 11, written Robotistan, comes to the front.

Monster Robot Installation Phase

The locations of Arduino and motor drivers are clear for Monster robo. Using 6 mm bolts, mount it between the arduino and the plexi so that there is only one nut left. Assemble the motor driver Belt using 6 mm bolts and 6 mm spacers.





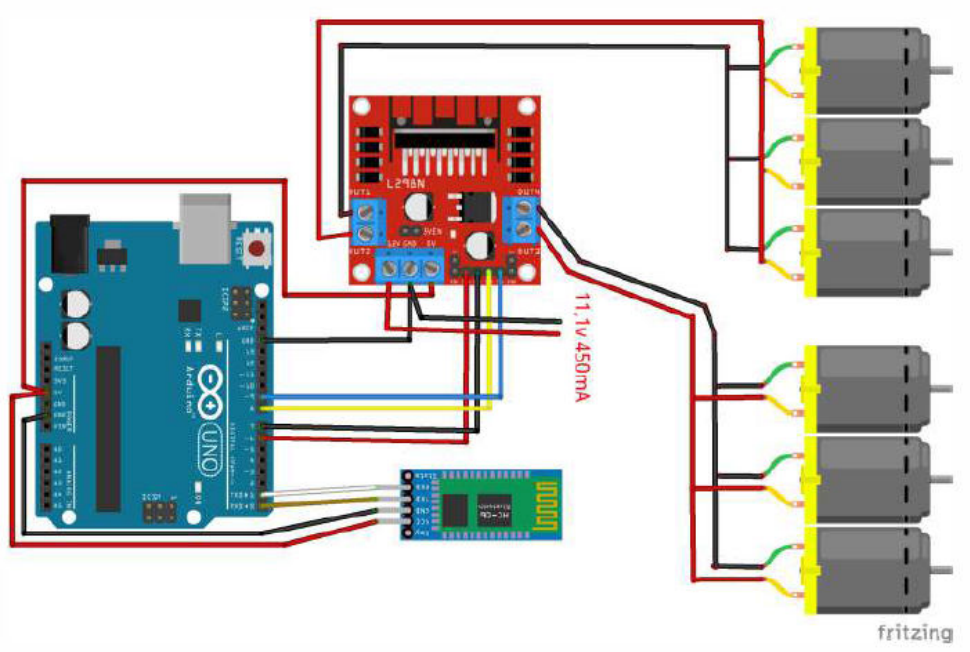
After all the mechanical assembly processes are completed, your monster robot will look like the one in the image below.

Monster Robot Installation Phase

You can see the circuit diagram of the Monster robot in the image below. You can set up your circuit with the guidance of the schematic.

Connect the IN1 pin of the L298N motor driver to the 6th pin of the arduino, the IN2 pin to the 7th pin of the arduino, the IN3 pin to the 8th pin of the arduino, the IN4 pin to the 9th pin of the arduino as in the image.

Connect the motors to the L298N motor driver by making two groups of three and connecting the + and - pins in parallel as in the image.



Now that you have done all the assembly and circuit setup, you can load the code into the arduino. I have added the entire code visually at the bottom. If you want, you can write the code manually by looking at it. If you want, you can access the entire code by scanning the short link or QR code on the bottom tarp.

```
int val;
int zb;
void setup() {
// put your setup code here, to run once:
Serial.begin(9600);
pinMode(9,OUTPUT);
pinMode(8,OUTPUT);
pinMode(7,OUTPUT);
pinMode(6,INPUT);
}
// put your main code here, to run repeatedly:
void loop()
{
if(Serial.available()>0)
{
int data= Serial.read();
Stop();
if(data=='R')
{
digitalWrite(9,HIGH);
digitalWrite(8,LOW);
digitalWrite(6,HIGH);
digitalWrite(7,LOW);
}
else if(data=='L')
{
digitalWrite(9,LOW);
digitalWrite(8,HIGH);
digitalWrite(6,LOW);
digitalWrite(7,HIGH);
}else if(data=='F'){
digitalWrite(9,LOW);
digitalWrite(8,HIGH);
digitalWrite(6,HIGH);
digitalWrite(7,LOW);
}else if(data=='B'){
digitalWrite(9,HIGH);
digitalWrite(8,LOW);
digitalWrite(6,LOW);
digitalWrite(7,HIGH);
}
}
}
void Stop()
{
digitalWrite(9,LOW);
digitalWrite(8,LOW);
digitalWrite(6,LOW);
digitalWrite(7,LOW);
}
```

The application that we control the Monster robot runs on android operating systems because it is open source. But there are similar applications running on IOS operating systems. You can revise the code part according to the los application and use it.

https://www.kisa.link/OXVa

Application Link
https://www.kisa.link/OXVi

As the name suggests, the Destroyer is actually a destroyer tank. Thanks to this tracked tank, you can reach your robot wherever you want regardless of the terrain conditions. Don't worry, he's a Destroyer, and he's a robot that is highly appreciated for his charisma. Thanks to this tank, you can do many projects that can be beneficial for humanity.

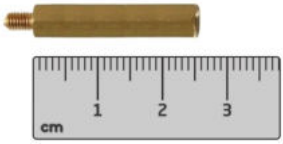
What Can You Do?

- You can make a robot that adapts to any terrain thanks to its tracks.
- You can do whatever you want with a robot that can move in all directions.
- You can develop integrated systems with each other.
- You can realize high-level projects for search and rescue activities.
- You can implement comprehensive projects with voice-controlled robots in military areas.
- In short, you can use this robot in whatever way you imagine.

Let's Get to Know the Content of the Add-on Package

Palette
They are parts produced from elastic material to create a tracked vehicle. Metal pins are used to attach the pallets to each other.

Plexi Gear Part
The threaded parts are designed to provide the movement of the elastic pallet parts.



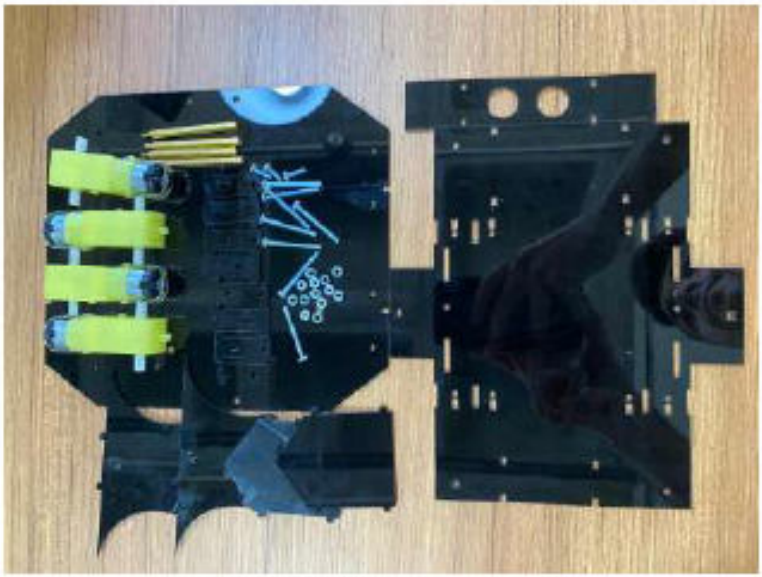
Metal Spacer
Metal spacers are materials that can be used to upgrade various circuit boards and mechanical materials. It is made of brass material.

Engine Hub
It is used to fix the plexi gear piece to the motor.

Fiber Nut
It is a type of nut that is tightened with fiber to prevent loosening in places where there is shaking and vibration, and it is still very difficult to loosen.

Bolt - Nut - Washer
Bolts are the connecting elements that are used to connect the parts to each other in a detachable way, the body part is screwed, the head is hexagonal, rectangular or shaped in different ways. Bolts are often used with a nut.

If you have previously installed the base version of R.E.X or one of the other versions, it will be quite easy to install the tank add-on package. It will be enough to simply remove the wheels on it, attach the plexi gears and put the packages on it. For the sake of detail, I will explain the assembly steps, assuming you have not installed it before. We will perform these assembly processes with the materials shown in the image.



Assembly of Plexi Gears

When creating plexi gears, a total of two plexi gear wheels per motor. There should be a total of 12 plexi gear wheels.

There are two different models of plexi gear wheels. The model with motor hub is designed for motor mounting. The wheel without a motor hub is designed to be mounted on the body of the platform. First, we will assemble the gears that will be attached to the engine.

Before starting the assembly, set the materials in the image on the bottom side.

Fix the 20 mm spacers to the plexi thread part with a nut. then assemble a second piece of plexiglass so that it remains between the two spacers.

Then, mount the motor hub to the end of the spacer with three 6 mm bolts.

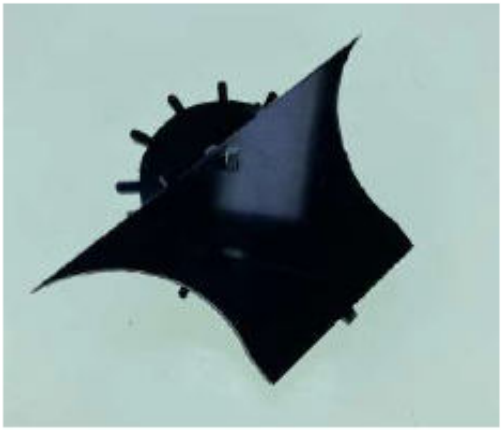
Body Gear Part Assembly

The difference of this gear compared to the other gear group is the absence of a motor hub. This gear is fixed directly on the chassis. First, pass 3 pieces of 20 mm spacers through one of the gears. Then fix it with 3 nuts.

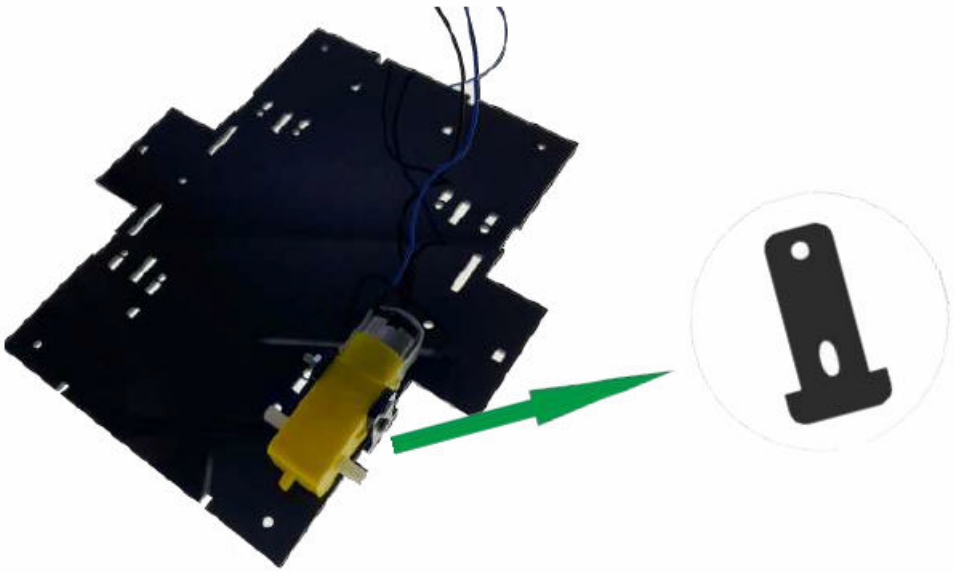
Then pass one more thread on the opposite side and fix it with a 6 mm bolt. Pass the 50 mm bolt through the 30 mm plastic spacer. Then pass the plastic spacer and the screw through the middle of the gears.

Pass the 5 mm plastic riser piece to the outside part of the gears, as shown in the image.

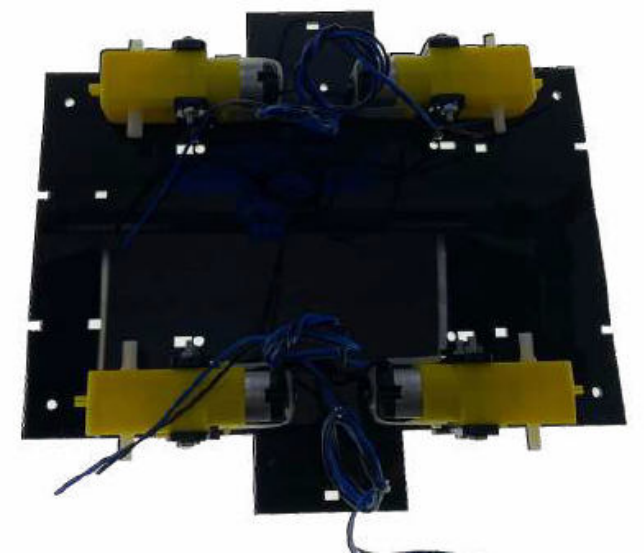
Then pass the exposed end of the screw through the side part of the chassis and fix it with a fibrous nut as in the image. We perform these operations in gears used on both sides.



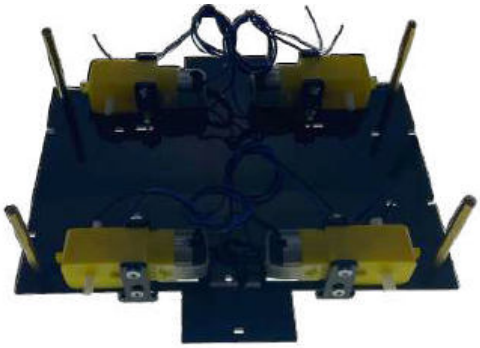
To fix the motors, use 8 T-plexiglass pieces included in the set and mount them with 30 mm bolts as in the image.



We fix it by applying the same process to all engines.

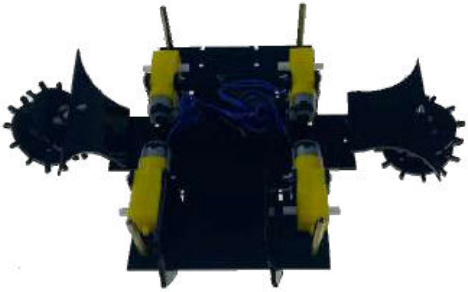


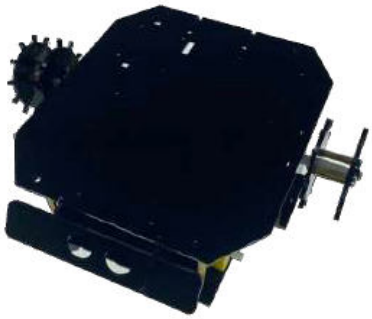
After fixing the engines, we can move on to fixing the top plate of the chassis. In order to fix the top plate, you need 4 50 mm spacers and 4 nuts that come out of the set. You can see it in the side image.



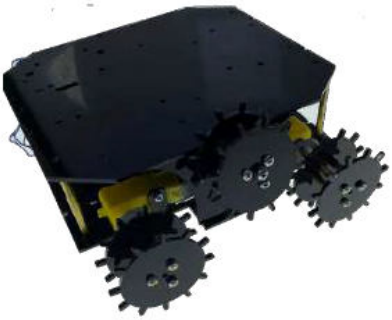
Fix the 50 mm spacers at four corners by means of nuts, as in the image on the side.

Next is fixing the gears between the lower and upper plate. As in the image, place the gears on the right and left sides so that they remain between the two plates. In the same way, fix the part on which the distance sensor will be fixed, as in the image, so that it remains between the two plates.





After installing all the gears, attach the silicone pallets that are included in the set on the gears as in the image. In this way, you will have completed the installation of the package with the tank on the R.E.X base platform.

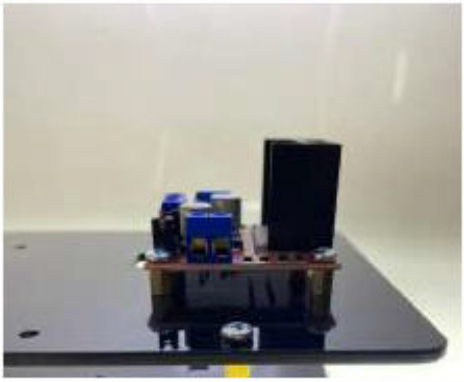


If there is no problem in the assembly of the chassis and pallet gears mechanically, you can proceed to the assembly of the electronic circuit. It is quite easy to montage electronic materials.

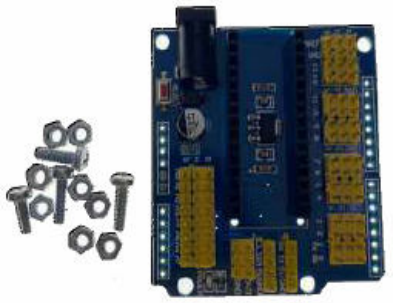
You can see the electronics required for the R.E.X Evolution Series Robot Kiti Destroyer side by side.

If you notice, they are the same materials as the bluetooth control mode. Since the tank is bluetooth controlled, there is no difference in hardware, only there are differences in the design of the chassis.

First, mount the motor driver on the upper part of the chassis as in the images, using a 6 mm spacer and 6 mm screws. Do not forget to put nuts on the ends of the spacers.

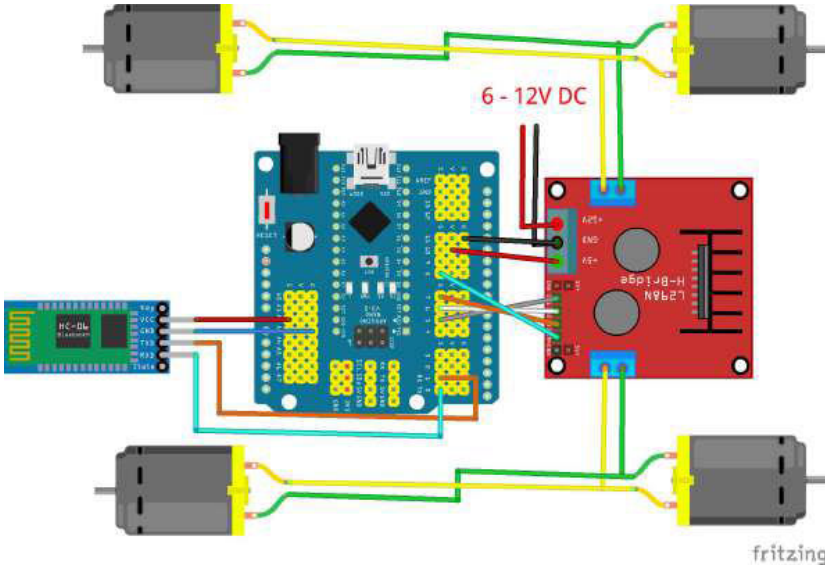


Then, mount the nano sensor shield to the upper part of the chassis with 12 mm bolts as in the image. The point you should pay attention to here is that you need to attach one nut to the mind of the sensor shield and one nut to the end of the bolt. That is, a nut is used instead of a spacer to raise it from the counter-chassis.



Tank Extension Package Installation Phase

After mounting the motor driver and sensor shield, you can proceed to the cable connections. Make the necessary connections between the arduino and the motor driver with the help of the circuit diagram at the bottom. The cables will not be soldered to the motors. You have to solder the cable that comes out of the set yourself.

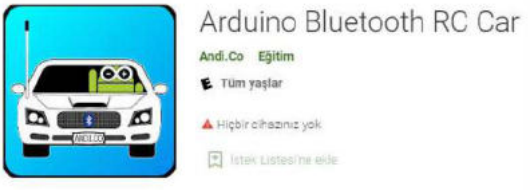


After assembling the circuit part and making the connections, we can move on to the software part. You can see the entire software visually on the bottom side. You can write your code in a manual shape with the help of the image.

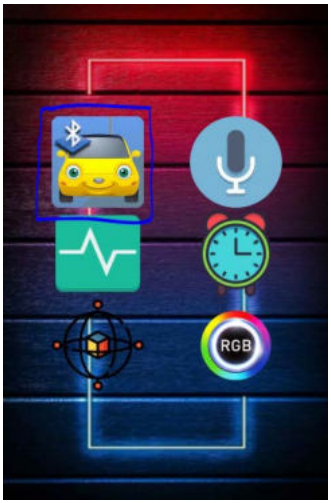
You can access the entire code from the short link or qr code.

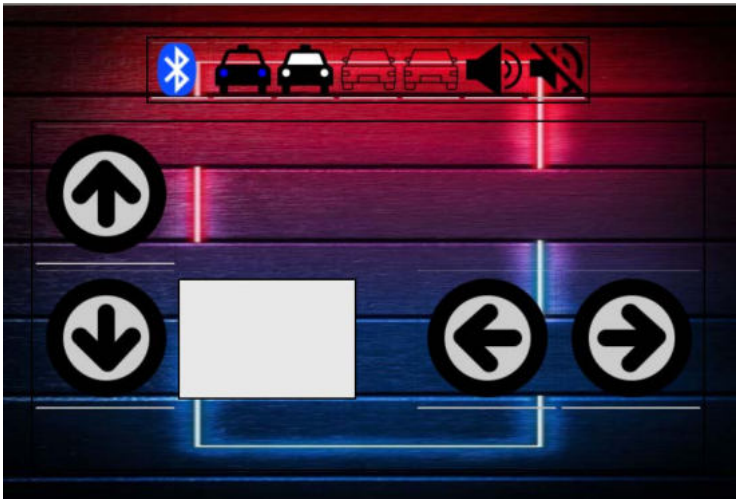
http://rbt.ist/s6f

In order to control the Survivor robot via a phone or any android device, you need to download and install the Arduino Bluetooth RC Car application on your device. You can download the application by typing Arduino Bluetooth RC Car in the search section of the application market of your Android device. The image of the application is located at the bottom.



You can control your robot with Robotistan's own mobile application. You can open the control screen from the button in the image and start using it.

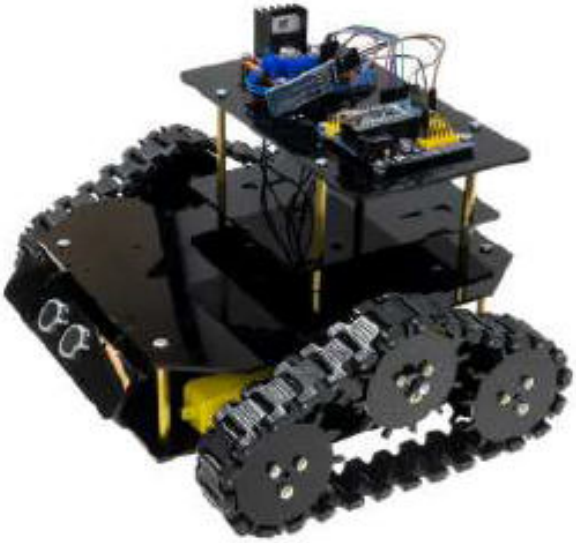


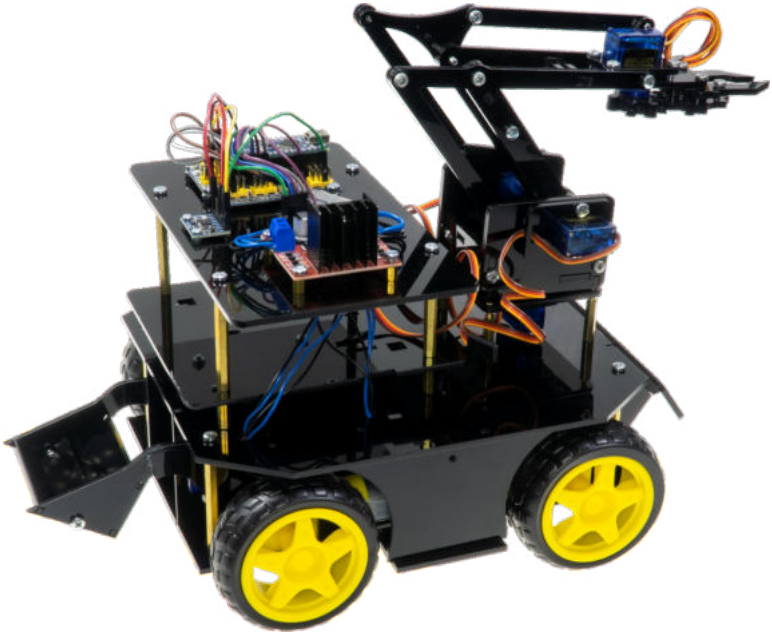


After the mechanical, electronic and software parts of the destroyer robot are assembled, the final version will look like the image on the side.

If you want, you can add a more relaxed atmosphere by attaching the plexi parts of the balance robot to the top of your tank. You will need to move the electronic part to the chassis of the balance robot.

He looks like a real monster :)





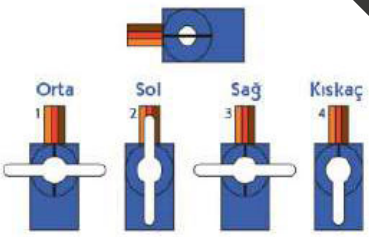
Tired of classic robot platforms? Then get ready to meet our new design, ArmBot! Now, robots will not only walk around, but also gain new abilities thanks to the mechanical arm we have added. There is no limit to what you can do with ArmBot! Carrying things from one place to another has never been this easy :) Let's not forget that there is a small scoop on the back!

What Can You Do?

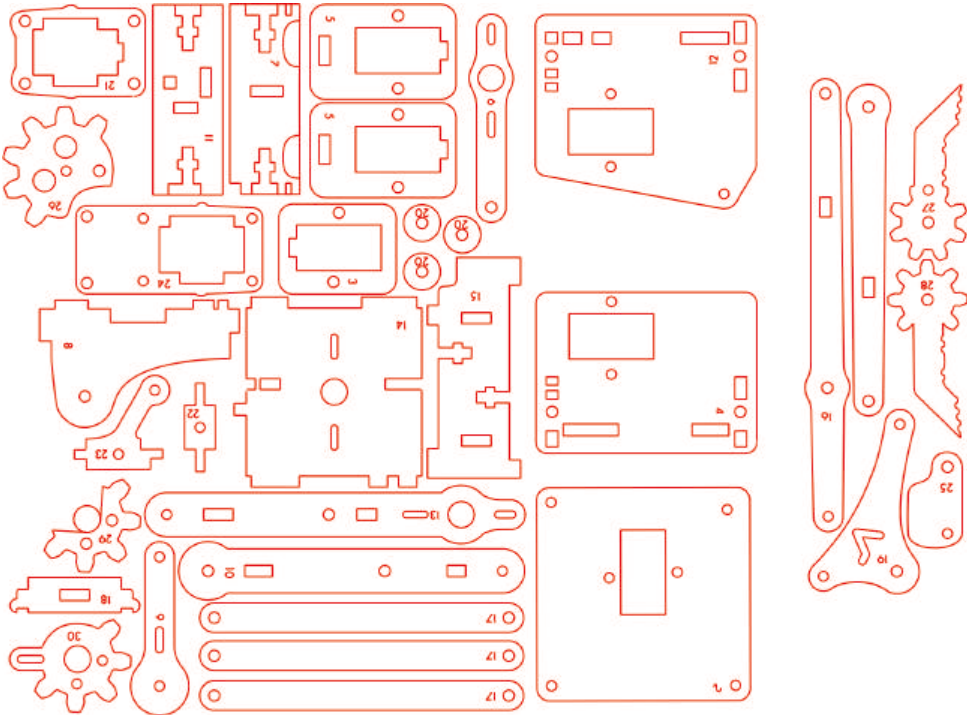
- You can do your transport work with your robot.
- You can make your products to robots by establishing smart warehouses.
- How about a helper at home?
- You can develop integrated systems with each other.
- You can realize high-level projects for search and rescue activities.
- You can implement comprehensive projects with voice-controlled robots in military areas.
- In short, you can use this robot in whatever way you imagine.

Now that we have the necessary information about the robot arm attachment and package, we can move on to the assembly stage. Before the assembly phase, you need to calibrate the motors.

Note: Before proceeding to the assembly stage, you must calibrate the motors as follows. Otherwise, you may not be able to perform motor calibrations after assembly and your robot arm motors may not work as you want. Do not force the servo motors to turn by hand.

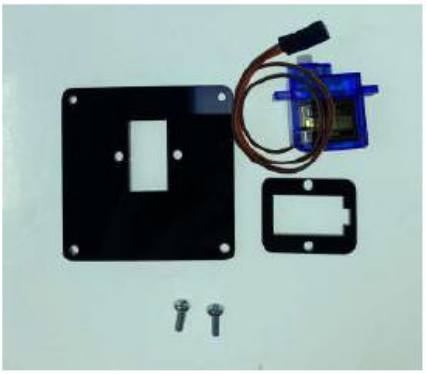


You can see the list of plexi parts included in the add-on package in the image below. It will be helpful for you not to mix the parts.

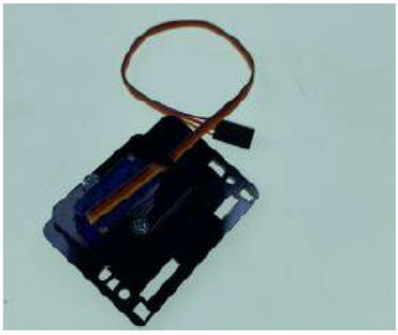


NOTE: There are two different types of holes in Plexi parts. Some holes are 2.6mm, some holes are 3mm. The 2.6 mm holes are designed for the screw to pass hard, there is no mistake.

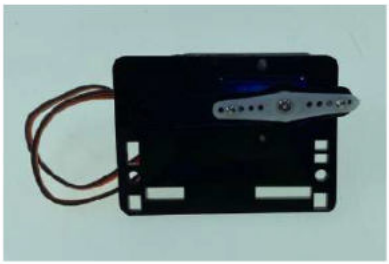
As the first step, pass the 3rd part through the servo of the middle part as in the image and screw it to the 2nd part with 2 8 mm screws as in the image.



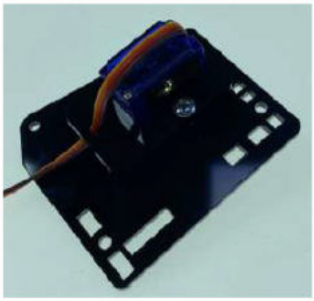
For the assembly of the left side of the robot arm, take the parts 4 and 5 and the left side servo motor and mount them with 8 mm screws. Do not over tighten the screws, you may damage the parts.



Then, assemble the servo head coming out of the servo motor's package to part 6 with two screws coming out of the servo motor's package as in the picture. your own.

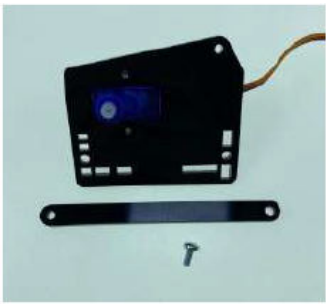


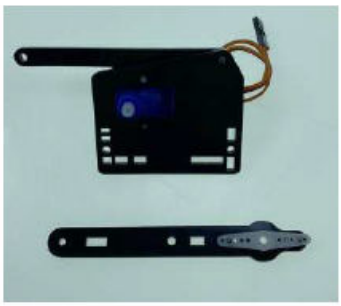
Next is the assembly of the right side parts. Pass the servo motor of the right part from the part number 5 as in the image. Then, assemble it to the part number 12 without using a nut. Again, do not damage the parts by tightening the extra screws.

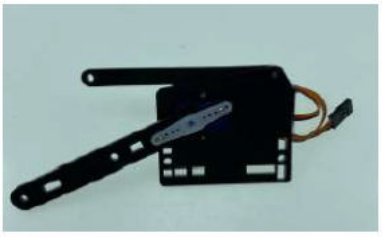


Screw the white servo head to the part number 13 with the 2 screws coming out of the servo package as in the picture.

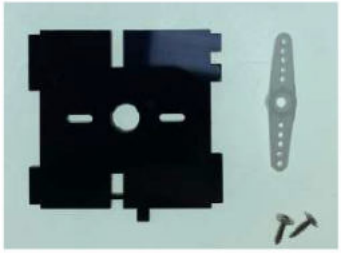
Attach the piece 13 to the servo motor attached to the piece number 12 that you have assembled before, at 90 degrees. Then, mount the 17th piece to the 12th piece using 6mm screws as in the image.

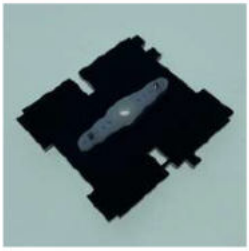






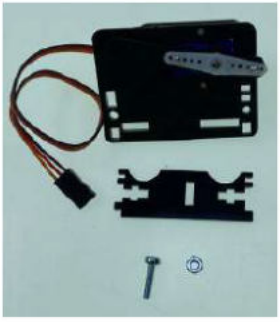
You may think that it is a very complicated assembly method, but after this step, you will see that the robot arm is formed. Next is the creation of the middle part. You can think of piece 14 as the base of the robot arm. Assemble the servo motor head with two sharp screws as shown in the picture.

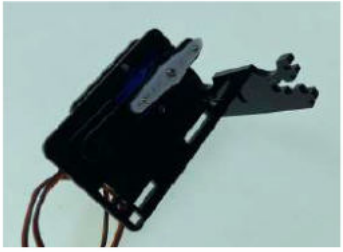




Assemble the parts 8, 9 and 10, as in the picture, with 9, 10 and 8 overlapping, respectively, with 10 mm screws and without using nuts.

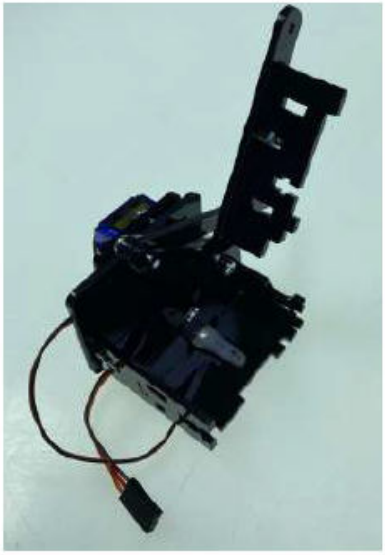
Now we're going to start putting the left and right parts together using the middle part. First, mount the left part to part 7 with a 12mm screw. Again, do not over tighten the screw.



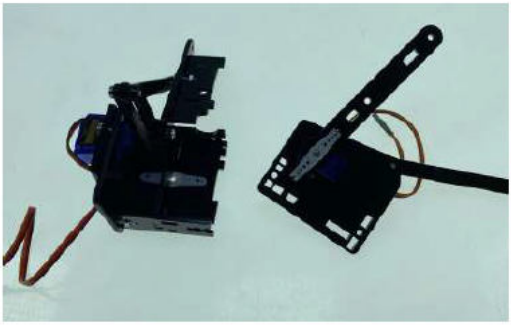


Then place the left and middle part on the sole as in the image.

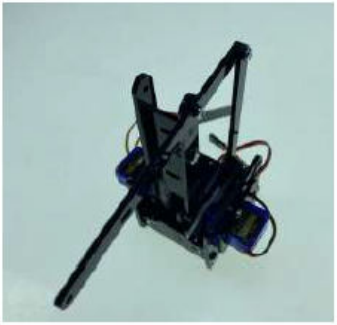
Assemble the 15th part to the 10th part using a 12 mm bolt as in the image.



In this step, combine the right part that you assembled before with the middle part as in the image.



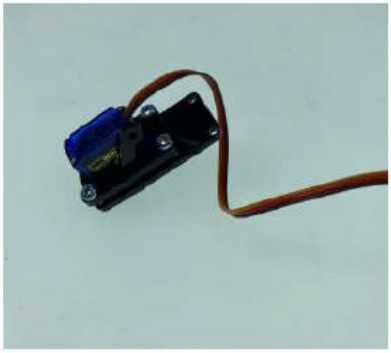
Installation of the center base is complete. Now, using 6 mm screws, assemble part 16 to parts 10 and 17 as in the image. You need to move the servo motor easily with this wear.



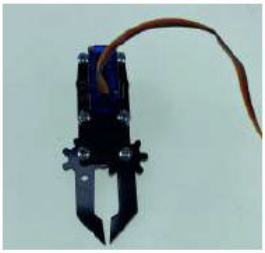
Then, assemble the coins 17 and 19 with 6 mm screws as in the image. Then assemble the unnumbered part to the part number 19.

You can see the state after this step in the image on the side.

If you have not encountered a problem until this part, you can proceed to the assembly of the gripper of the robot arm. Thread the gripper servo through part 21. then pass the parts 22 and 23 between the parts 24 and 21 and screw them to the part number 24 with 8 mm screws as in the picture.



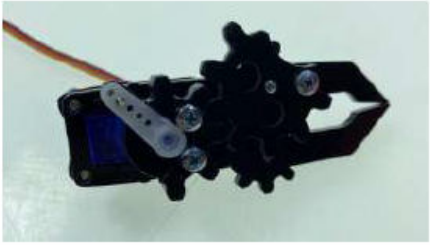
First pass the piece 27 through the 12 mm screw to the piece no 24. Then fix it to the corresponding piece 26 or 25 with an 8 mm screw as in the picture.



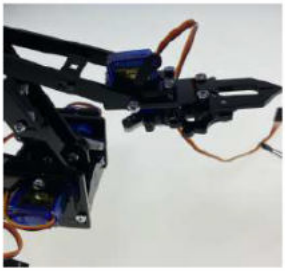
Fix the servo head coming out of the servo motor to the part number 30 using the pointed screws as in the image.

Assemble part 29 with 6 mm screws, as shown in the image, so that it is on part 30.

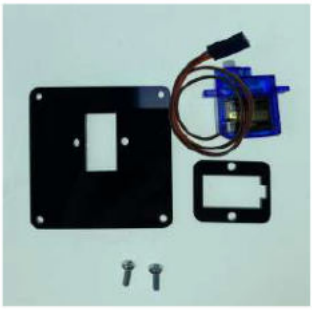
Attach the piece 29 and 30 that you have combined to the head of the servo motor. Then fix part 26 to part 27 with 12 mm screws as in the image. After this step, the clamp assembly will be completed.



You can combine the clamp that you assembled in the previous step with the robot arm. Fix the clamp to the parts 22 and 23 with 8 mm screws as in the picture.

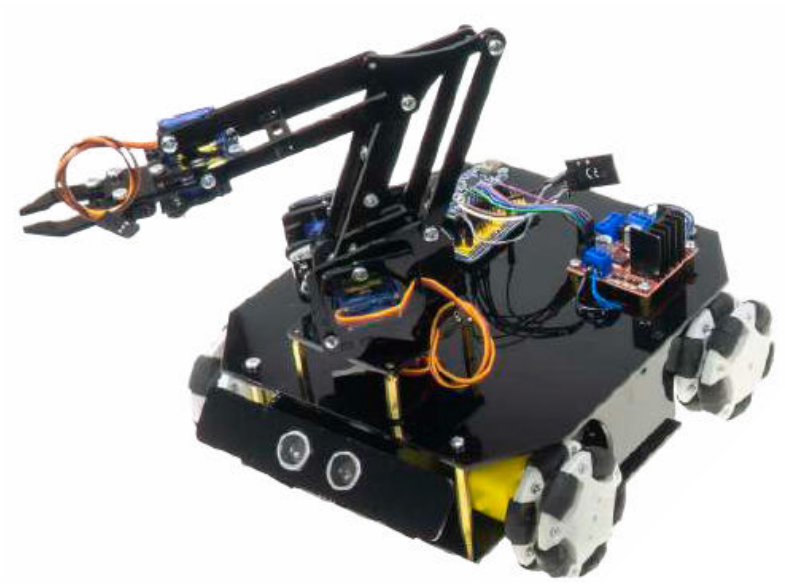


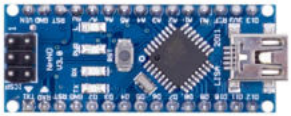
As the last step, pass the center servo through the 3rd part and then fix it to the 2nd part with 6 mm screws. Do not forget to attach the spacers included in the set to part 2.



After completing all the operations, the final state of the robot arm will look like the image on the side.

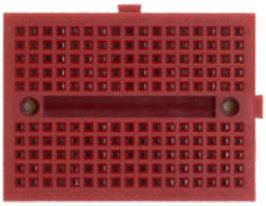
You can control the robot arm with development cards such as arduino alone, or you can use it by creating more than one scenario by attaching it to the rex as in the images.



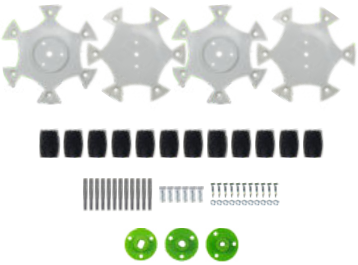


Arduino Nano
The Arduino Nano is a small, complete and breadboard friendly product based on the ATmega328P released in 2008. It is a smaller development counter with the same connections and features of the Arduino Uno card.

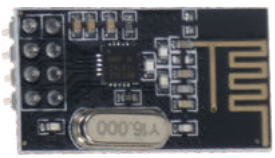
Jumper Cable
In short, we can say that it is a kind of connecting cables. It is very useful for connecting between breadboard and arduino. According to the presence of male and female inputs at the ends, there are 3 types of jumper cables.



breadboard
In your small circuit work and by sticking on the circuit boards, you can perform the prototyping process quickly and run your circuits.



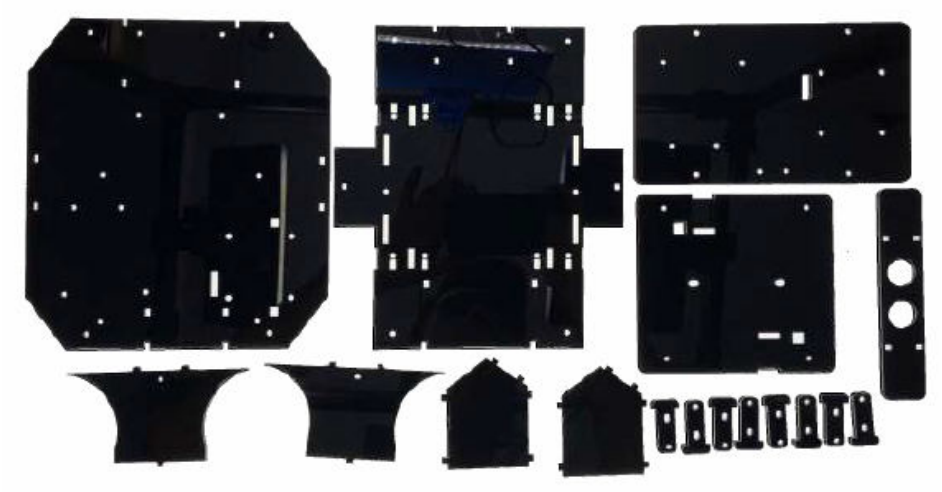
Omni Wheel
It is designed to add 360º maneuverability, easy turn and the ability to move directly to the side. Omni wheels are very simple to use, robust and durable.



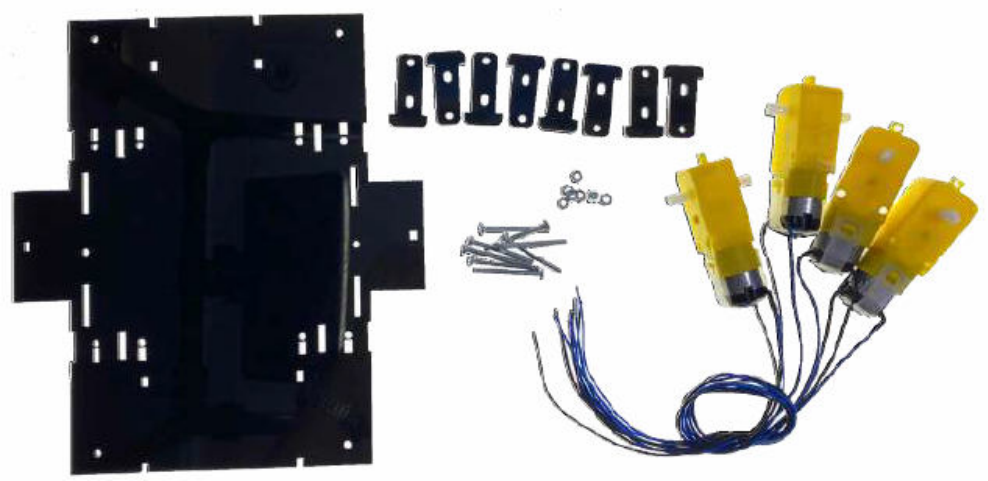
NRF24L01 Module
It is a transceiver module using the NRF24L01 chip. It is a module with low power consumption that allows you to communicate wirelessly at 2.4GHz frequency.

Glove
When controlling your robot wirelessly, you will need to install the transmitter part on the glove.

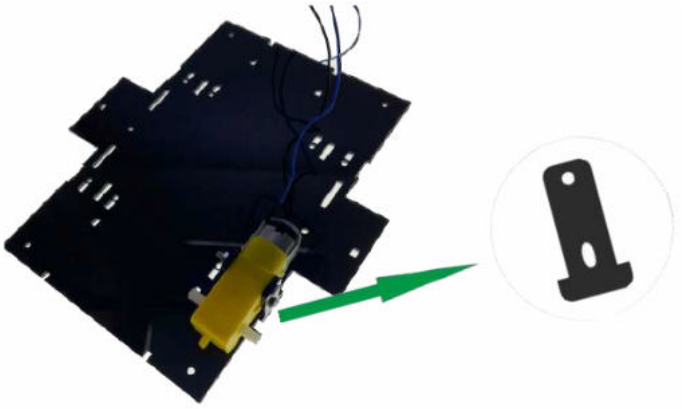
The installation of the FeelMotion robot is the same as the installation of the 4 in 1 robot. Only the electronics and wheels are different.



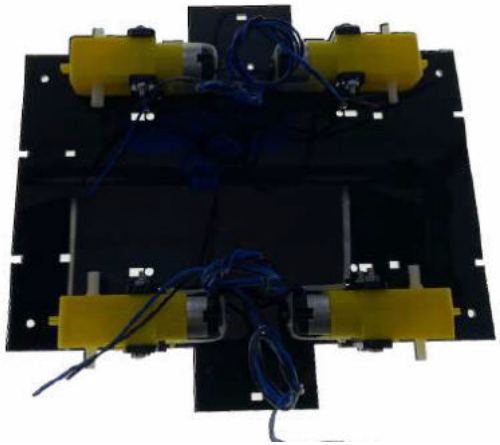
We will first start the installation by fixing the motors to the lower part of the chassis. You can see the parts required for the first step in the relative below. Plexi parts, Yellow dc motors, 8 pieces of 30 mm bolts and 8 nuts are required for this step. The cables are not soldered to the motors. There is a cable in the set for you to solder to the motors.



To fix the motors, use 8 pieces of T plexiglass included in the set and mount them with 30 mm bolts as in the picture.

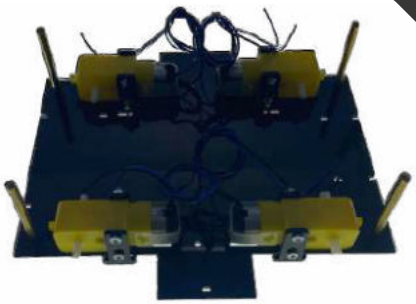


We fix it by applying the same process to all engines.



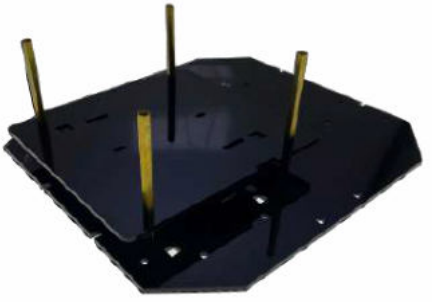
After fixing the engines, we can move on to fixing the top plate of the chassis. In order to fix the top plate, you need 4 50 mm spacers and 4 nuts that come out of the set. You can see it in the side image.

Fix the 50 mm spacers at four corners by means of nuts, as in the image on the side.



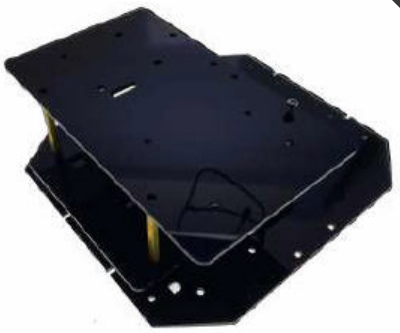
Next, it joins the top plate of the chassis. You can examine the materials required to join the top plate from the image on the side. 4 x 45 mm spacers, 4 x 15 mm spacers, 4 x 6 mm bolts are required.

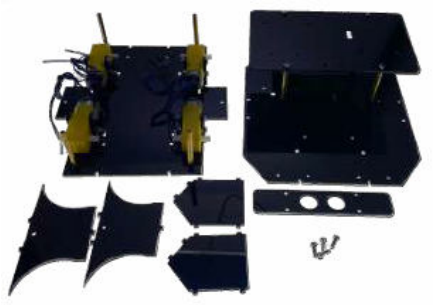
Mount 4 pieces of 15 mm spacers to the top plate of the main chassis with 4 nuts as in the image on the side.



Place the bottom plate of the balance robot on top of the 15 mm spacers that you assembled in the next step. Then, combine the 45 mm spacers with the 15 mm spacers as in the image on the side.

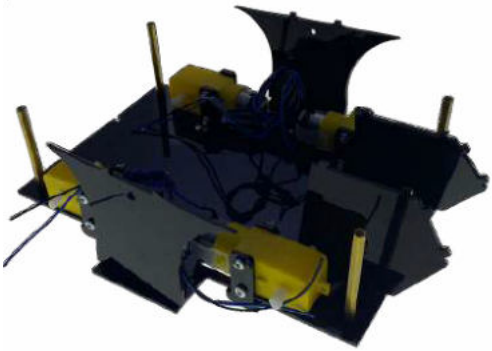
Then, screw the top plate of the balance robot on the side with a 6 mm screw, as in the image, so that it is on the 45 mm spacers.





As the last step, we will assemble the upper and lower parts of the main chassis.
The parts that we have assembled until this step are in the image on the side.

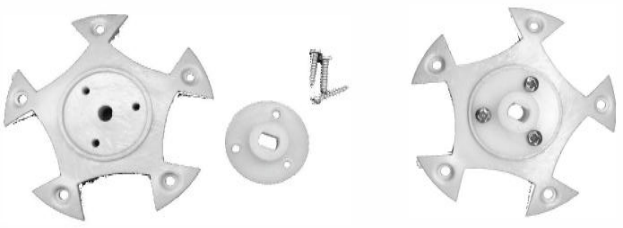
First of all, we place the right - left and front plates in their appropriate holes, as seen in the image on the bottom. At this stage, parts may fall and you may need to be careful. Then we screw the top plate with 6 mm bolts as in the second image. In this way, we complete the assembly of the plexi parts.



After installing the chassis of the robot, you can proceed to the assembly of the omni wheels. Omni wheels consist of 9 parts in total. We can accept plastic parts that make up the outer scaffolding as the main part. Then, if we need to go in order, the rubber parts that provide movement, the necessary hub part to connect the wheel with the motor and the necessary connection bolts. We can sort it.

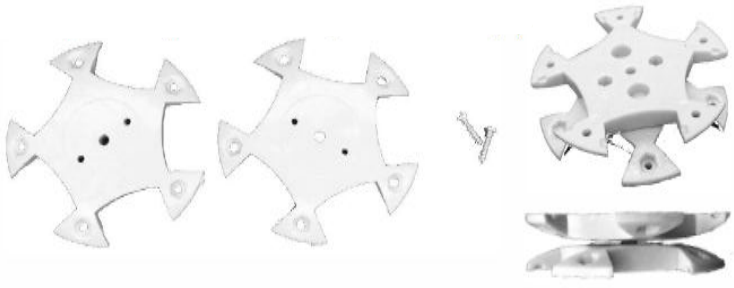
Step 1

As the first step, mount the hub, which is used to fix the motor, on the main body plastic part, with 3 pointed screws as in the image. After completing the assembly process, set it aside for use in another step.



step 2

In this step, you will assemble the two main body plastic parts together. In fact, omni wheels are made up of two wheels. In order to join the two wheels, mount these two main body parts to each other with 2 pointed screws as in the image.



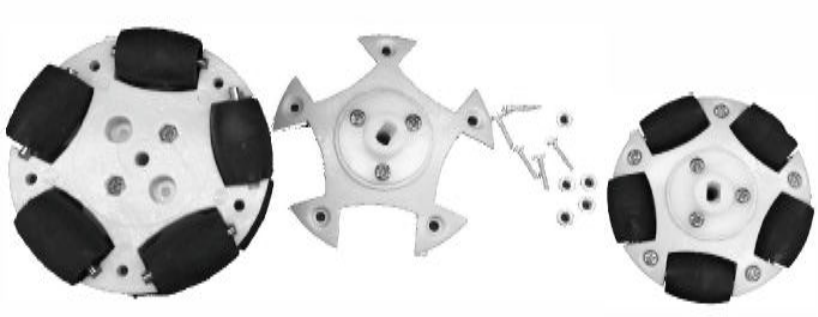
step 3
You will see that your omni wheels are slowly starting to take shape. In this step, you will assemble the rubber parts that allow the wheels to move 360 degrees. First, pass the small metal rods that come in the set, through the rubber parts, as in the image. Place the rubber parts, to which you pass the metal rods, on the main body that you joined in step 2, as in the image.

step 4
In this step, assemble the upper main body plate with 5 bolts and 5 nuts, as in the image, so that the metal rods and rubber parts do not fall.

step 5
If you have completed the assembly steps without any problems until this step, your omni wheel will look like the images below. This means that you have completed half of the wheel.

The assembly of the other half of the wheel will be the same as in steps 3 and 4. First, pass the small metal rods in the set through the rubber parts as in the image.

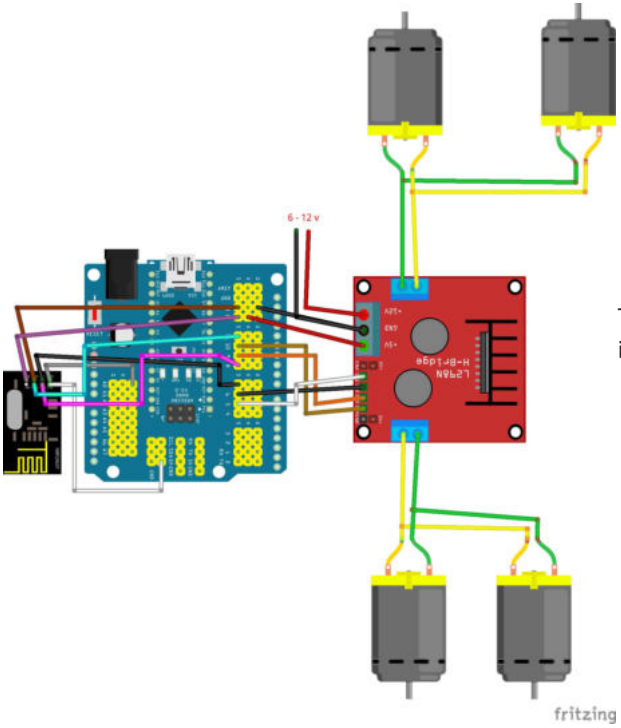
Then, place the rubber parts on the other half of the main body that you did not assemble, as in the image. Fix the piece you made in the first step with 5 bolts and 5 nuts as in the picture, so that rubber parts and metal parts do not fall in this step.



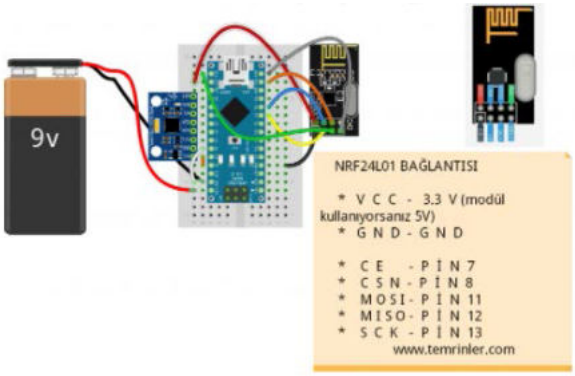
The left side of your Omni wheels will be as in the images.

After mounting the omni wheels, you can move on to mounting them on the chassis.
Then you can set up the electronic circuit.

You can reach the electronic circuit diagram from the image below. Since the connections in the circuit diagram are mixed, you can make the connections by taking help from the tables on the sides.



The circuit diagram to be installed on the Robot.



The second circuit diagram is the circuit diagram to be installed on the glove.

When you install the circuits on the gloves and the robot, it will be as in the images. You can install the chassis of the robot in more than one mode. You can see all the fashions in the images.

After you set up your circuit according to the circuit diagram, you can access the codes of the product via the short link.

http://rbt.ist/xbg

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youtube.com/robotistan

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