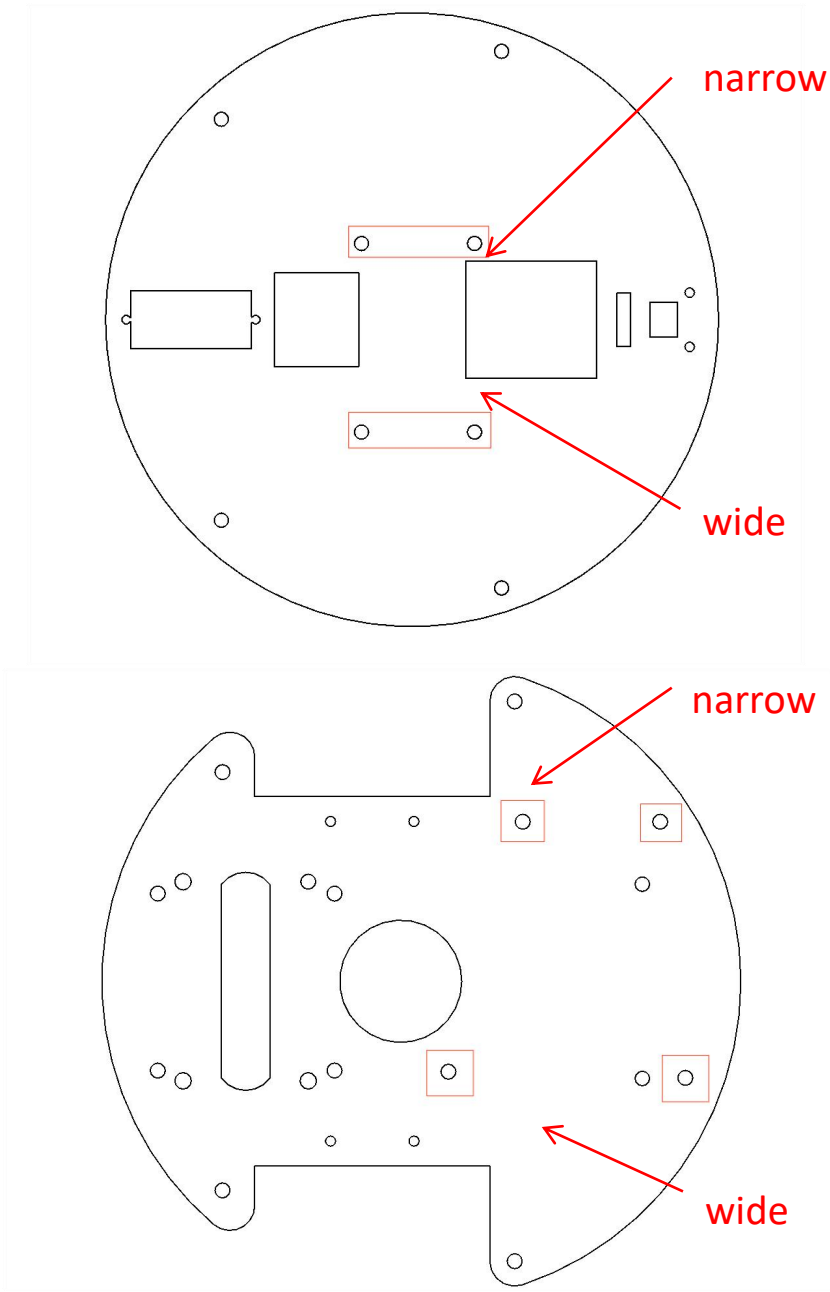
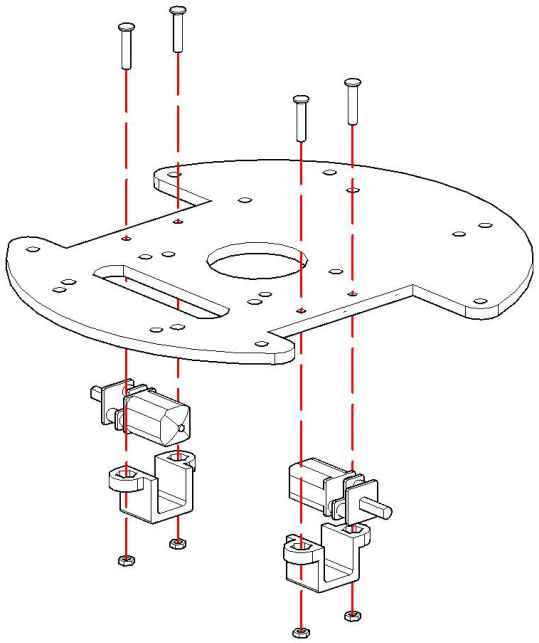
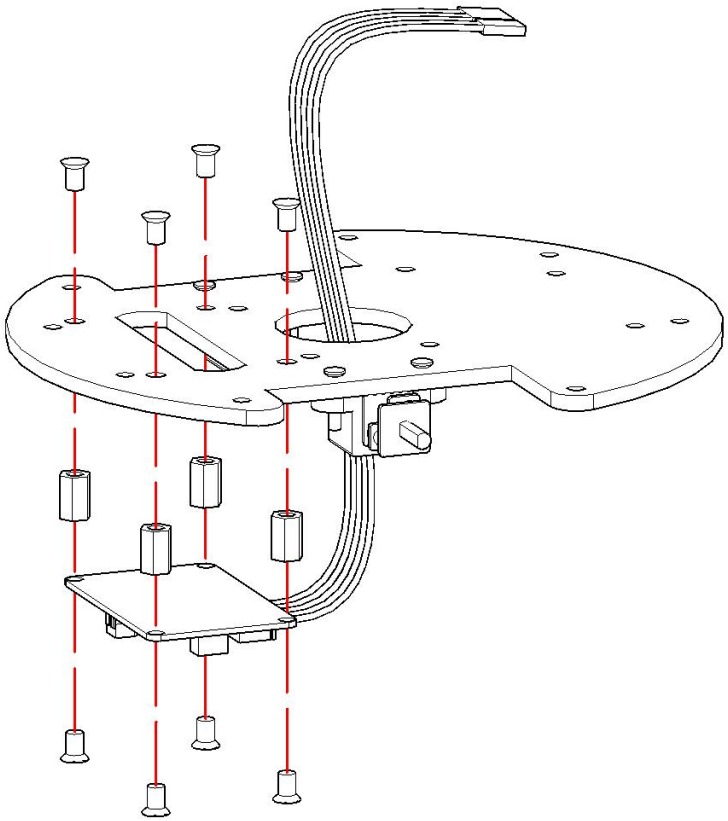
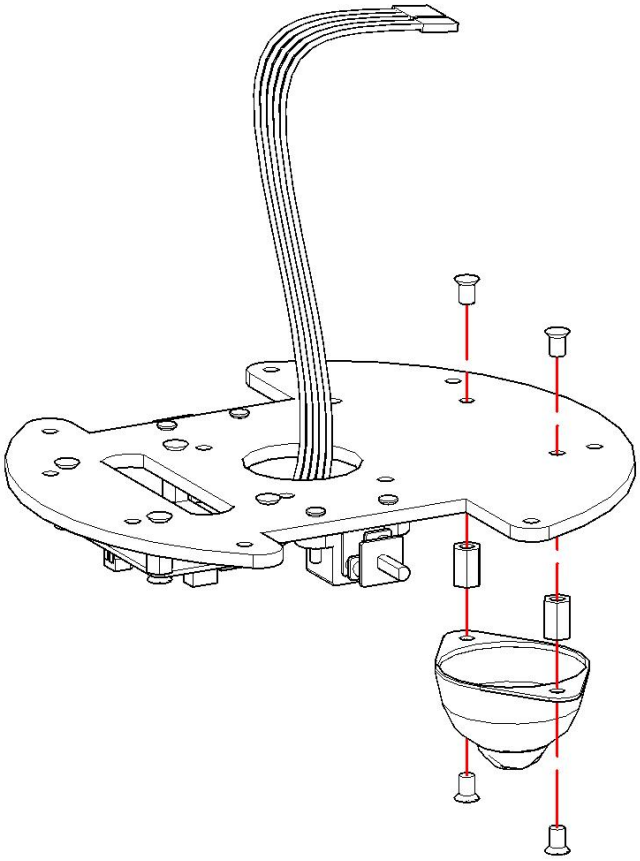
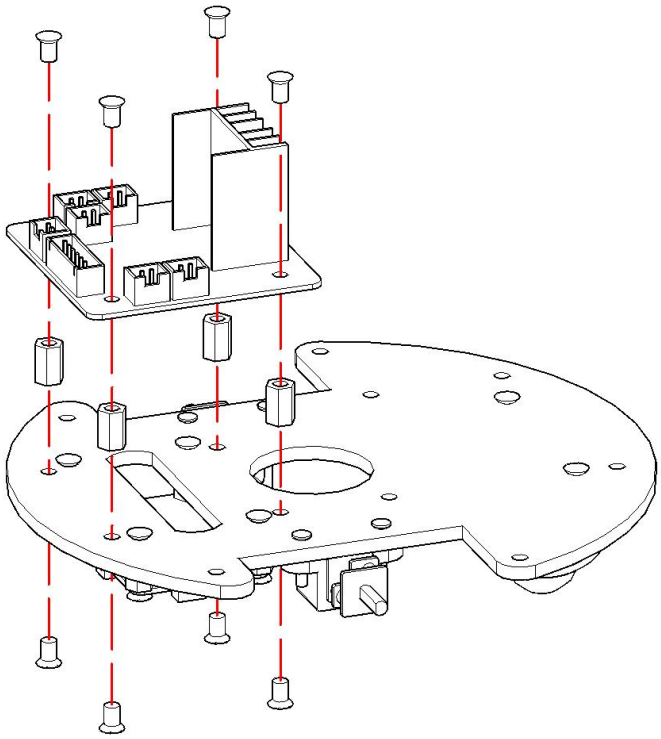
Step 0 Distinguish Between Front And Back

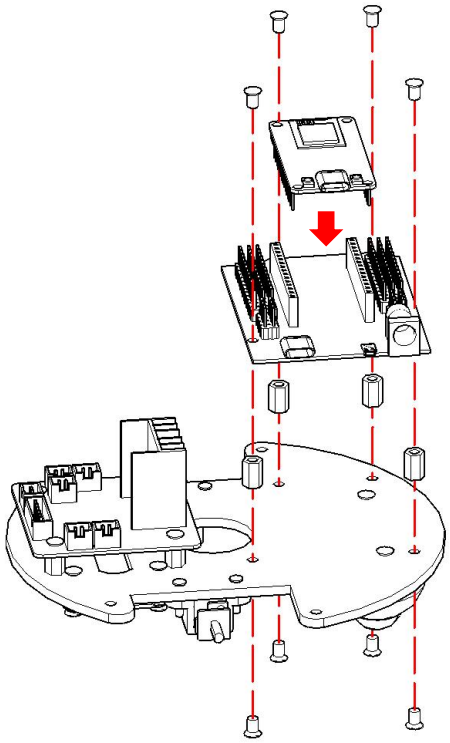
Parts List	Acrylic Base Plate*2
Splicing Diagram	
Notes	This is the front side as shown in the picture above and is assembled with the front side facing up.

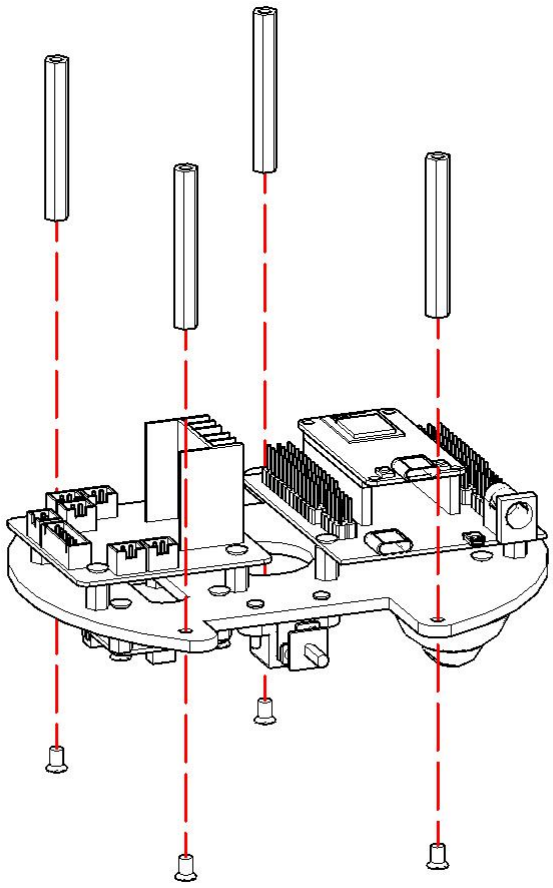
<table>
<tr><td colspan="4">Step 1Mounting The Motor</td></tr>
<tr><td rowspan="2">Parts List</td><td>N20 Motor*2</td><td>Motor Bracket*2</td><td>M2 Nuts*4</td></tr>
<tr><td colspan="2">M2*10 Flat Head Cross Screws*4</td><td>Acrylic Lower Base Plate*1</td></tr>
<tr><td>Splicing Diagram</td><td colspan="3">  </td></tr>
<tr><td>Notes</td><td colspan="3">1. Note that you need to place the nut into the corresponding position of the bracket hole before allowing the screw to pass through as shown in the diagram;
2. Note the orientation of the motor mount.</td></tr>
</table>

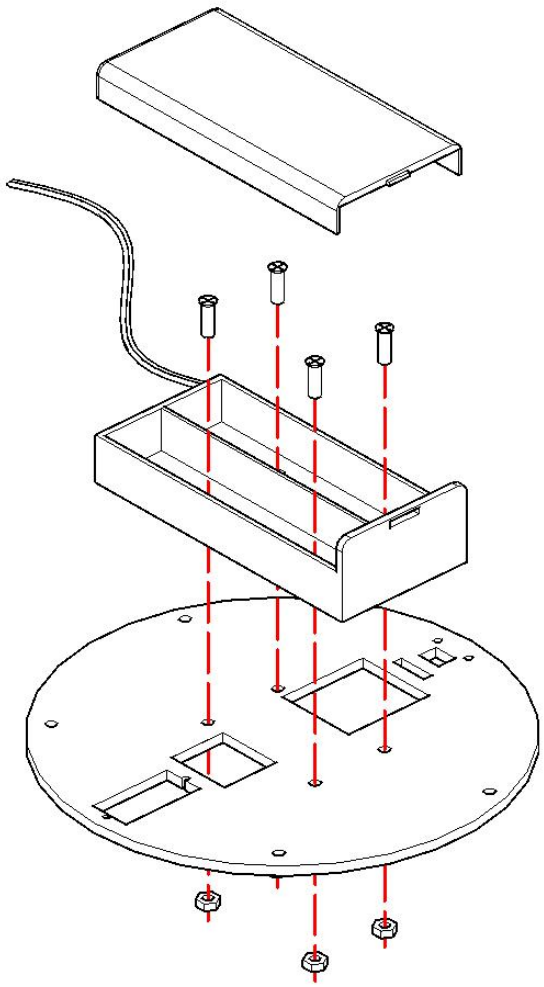
<table>
<tr><th colspan="3">Step 2 Mounting The Trace Sensor</th></tr>
<tr><td rowspan="2">Parts List</td><td>Trace Sensor*1</td><td>M3*7 Double Pass Copper Column*4</td></tr>
<tr><td>M3*6 Flat Head Cross Screws*8</td><td>5PIN XH2.54 to Dupont Cable*1</td></tr>
<tr><td>Splicing Diagram</td><td colspan="2">  </td></tr>
<tr><td>Notes</td><td colspan="2">1. First install the screws and copper post on the base plate in the picture;
2. Then align the tracing module with the copper post holes and lock the screws;
3. Finally, you can connect the snap-in cable to the interface of the module.</td></tr>
</table>

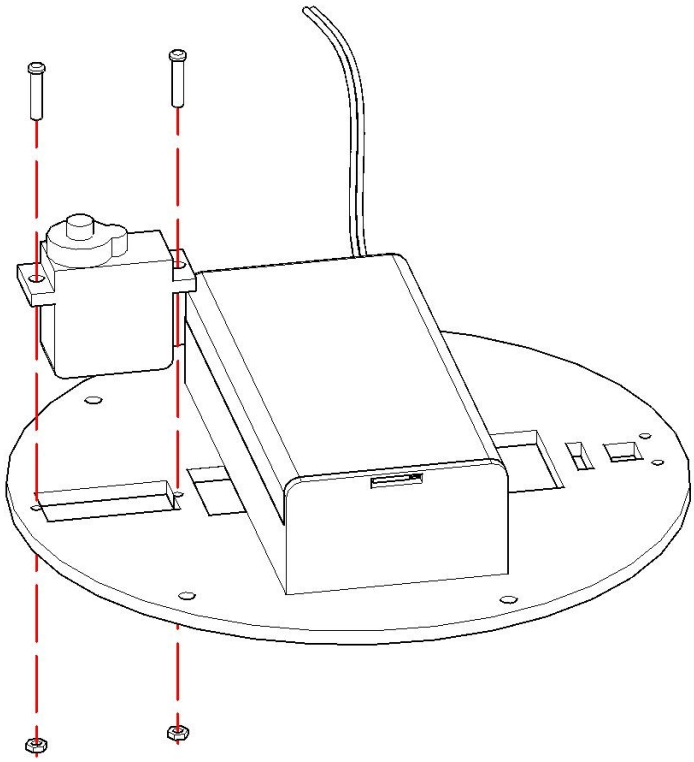
Step 3 Mounting Universal Wheel			
Parts List	Universal Wheel*1	M3*7 Double Pass Copper Column*2	M3*6 Flat Head Cross Screws*4
Splicing Diagram			
Notes	1. First install the screws and copper post on the base plate in the picture; 2. Then align the universal wheel with the brass post holes and lock the screws.		

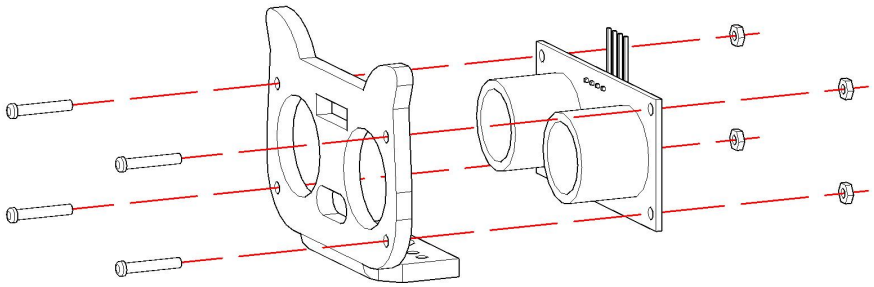
Step 4 Mounting The Motor Drive Module			
Parts List	L298N Motor Drive Module*1	M3*7 Double Pass Copper Column*4	M3*6 Flat Head Cross Screws*8
Splicing Diagram			
Notes	1. First install the screws and copper post on the base plate in the picture; 2. Then align the motor drive plate with the copper post holes and lock the screws. 3. Pay attention to the orientation of the motor drive plate.		

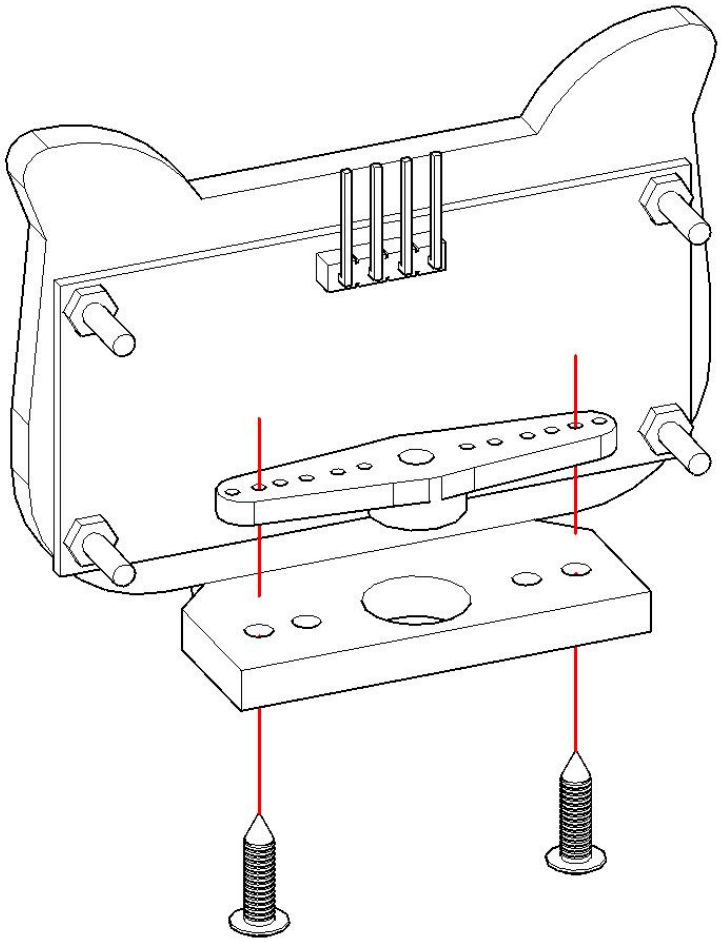
<table>
<tr><th colspan="3">Step 5 Mounting Controller Board And Expansion Board</th></tr>
<tr><td rowspan="2">Parts List</td><td>ESP32 Controller Board*1</td><td>Expansion Board*1</td></tr>
<tr><td>M3*7 Double Pass Copper Column*4</td><td>M3*6 Flat Head Cross Screws*8</td></tr>
<tr><td>Splicing Diagram</td><td colspan="2">  </td></tr>
<tr><td>Notes</td><td colspan="2">1. First, install the screws and copper posts on the bottom plate in the picture;
2. Then align the expansion board with the copper post holes and lock the screws;
3. Finally, insert the motherboard into the corresponding holes of the expansion board.</td></tr>
</table>

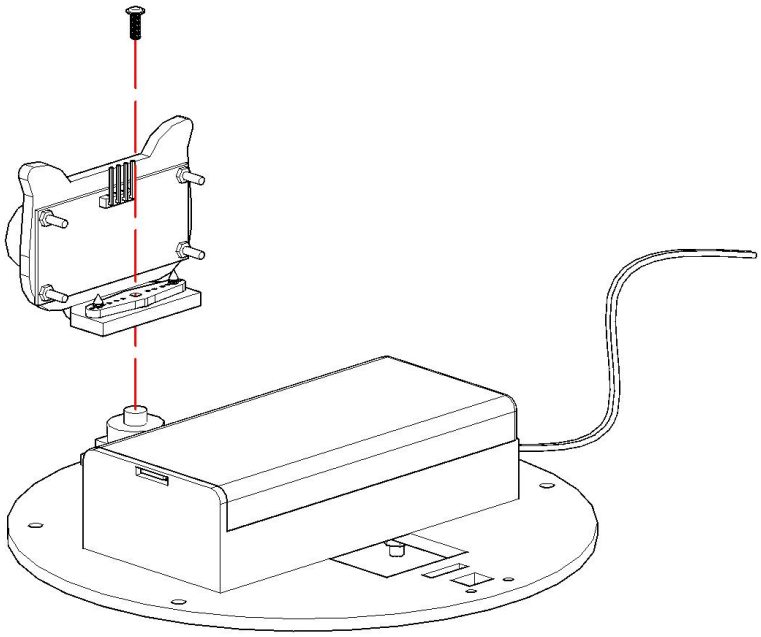
Step 6 Mounting Supporting Copper Columns		
Parts List	M3*40 Double Pass Copper Column*4	M3*10 Flat Head Cross Screws*4
Splicing Diagram		
Notes		

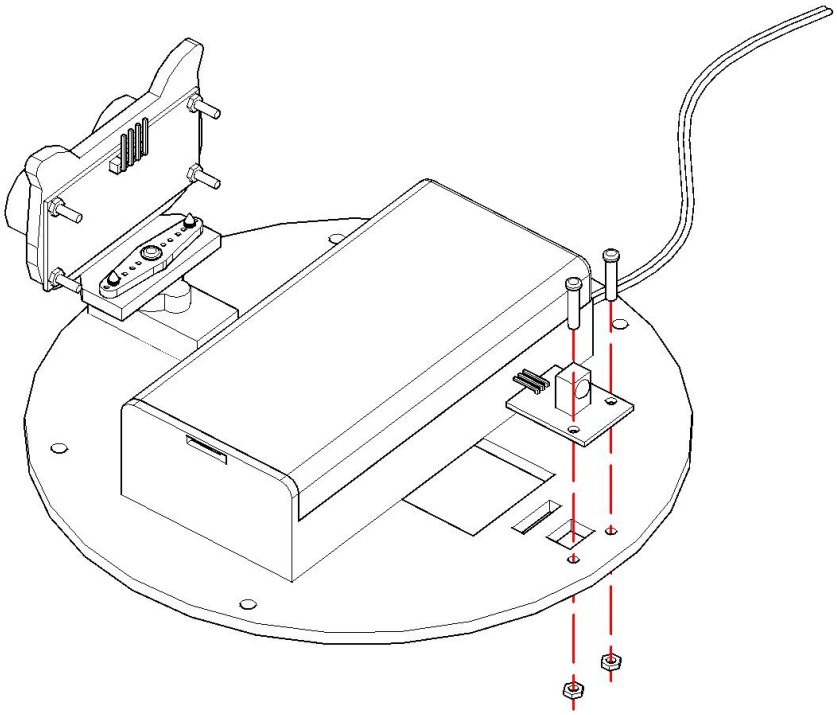
Step 7 Mounting the Battery Box		
Parts List	Acrylic Upper Base Plate*1	M3*10 Flat Head Cross Screws*4
	M3 Nuts*4	18650 Battery Box*1
Splicing Diagram		
Notes	1. Pay attention to distinguish the front and back of the base plate (if you forget, please refer to the first step); 2. Pay attention to the orientation of the battery box.	

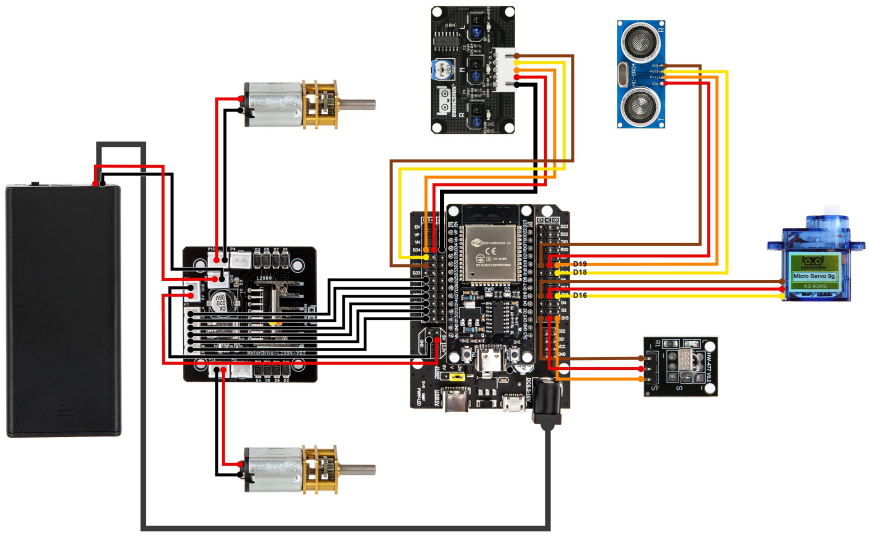
Step 8 Mounting the Servo			
Parts List	Servo*1	M2*10 Round Head Cross Screws*2	M2 Nuts*2
Splicing Diagram			
Notes	1. Note the orientation of the servo shaft.		

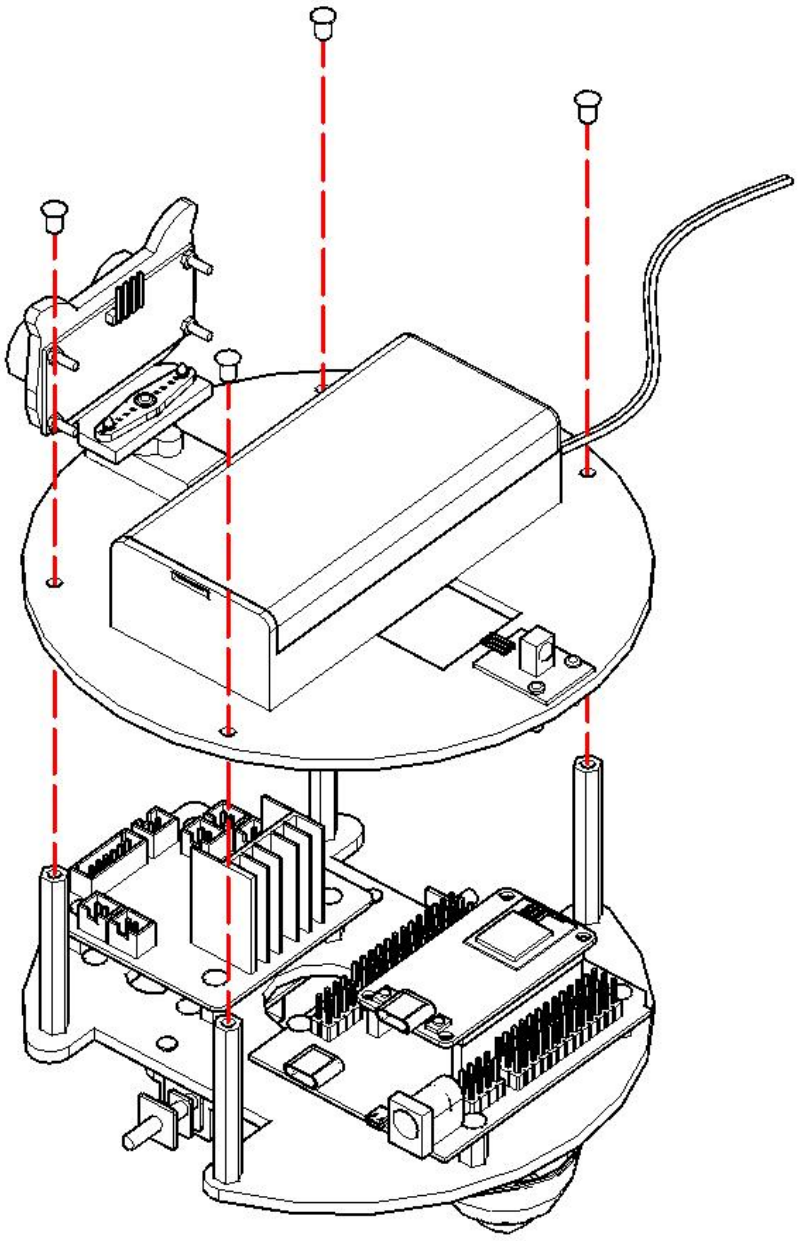
Step 9 Mounting Ultrasonic Sensor		
9.1 Fixed Ultrasonic Sensor		
Parts List	Ultrasonic Sensor*1	Ultrasonic Sensor Bracket*1
	M1.6*10 Round Head Cross Screws*4	M1.6 Nuts*4
Splicing Diagram		
Notes		

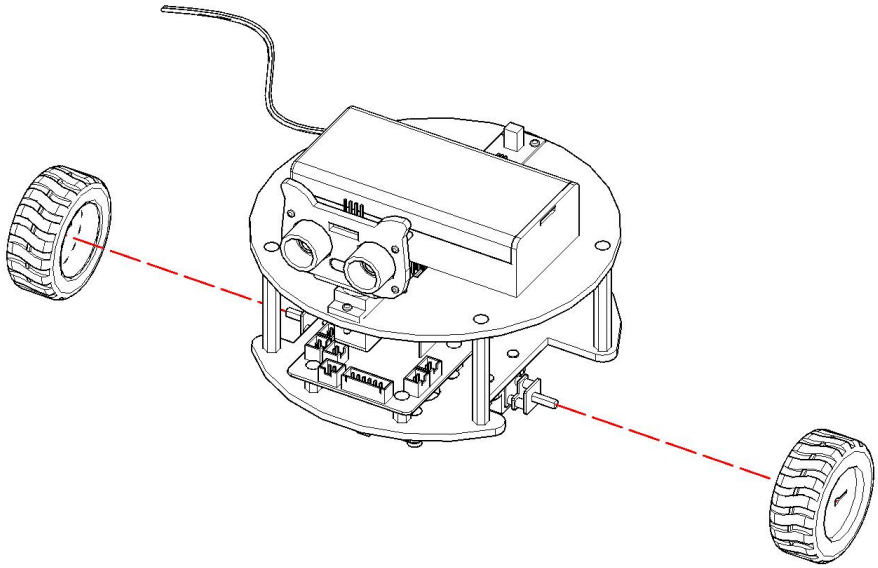
Step 9 Mounting Ultrasonic Sensor		
9.2 Mounting the Servo Rocker Arm		
Parts List	"1" Shaped Servo Rocker Arm*1	M1.4*5 Self-Tapping Screw*2
Splicing Diagram		
Notes		

Step 9 Mounting Ultrasonic Sensor	
9.3 Fixed Ultrasonic Sensor Bracket	
Parts List	Small screw from servo package*1
Splicing Diagram	
Notes	

Step 10 Mounting the IR Receiver Module			
Parts List	IR Receiver Module*1	M2*10 Round Head Cross Screws*2	M2 Nuts*2
Splicing Diagram			
Notes	1. Note the orientation of the IR module.		

Step 11 Wiring	
Wiring Diagram	
Notes	1. Note the distinction between XH2.54 terminal wire and DuPont wire 2. Note that the ESP32 board and L298N motor driver board need to be connected to the battery cable

Step 12 Combine Upper And Lower Base Plates	
Parts List	M3*10 Flat Head Cross Screws*4
Wiring Diagram	
Notes	

Step 13 Mounting Wheels	
Parts List	Wheels*2
Wiring Diagram	
Notes