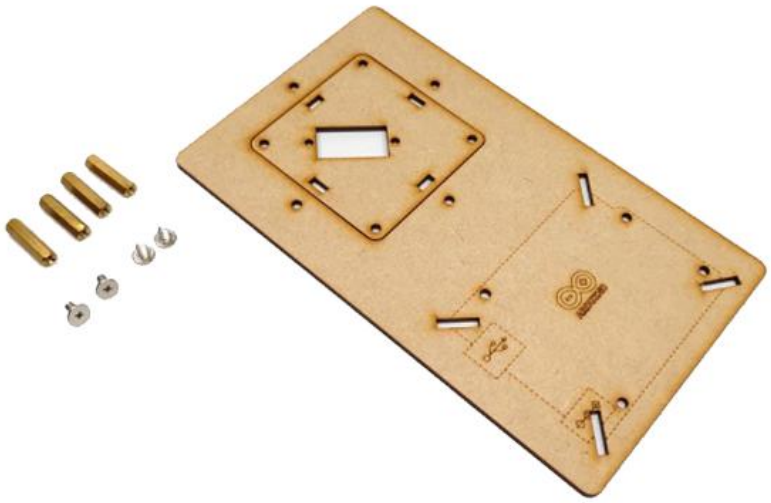
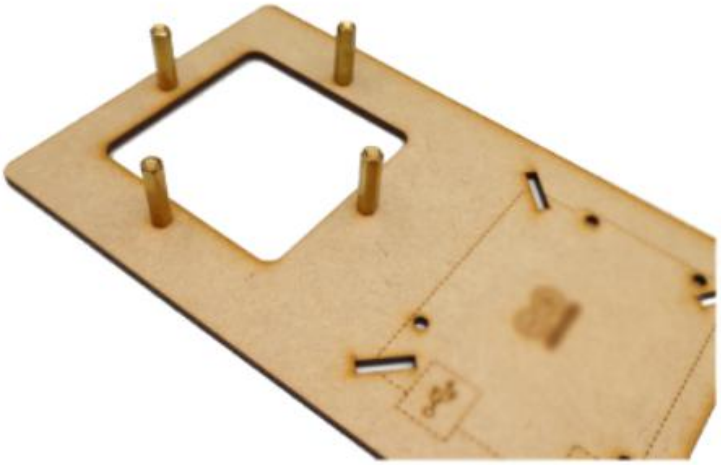

（Solar follow kit V2.0）

20210814

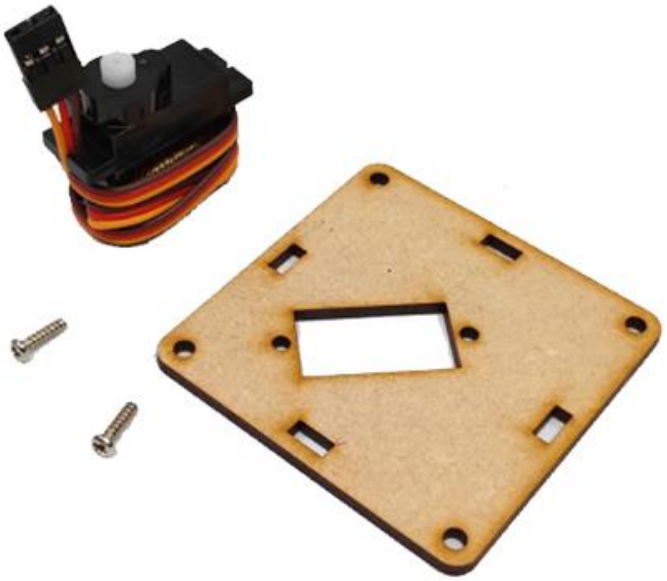
Use M3*25 copper pillar*4 and M3*8 screws.



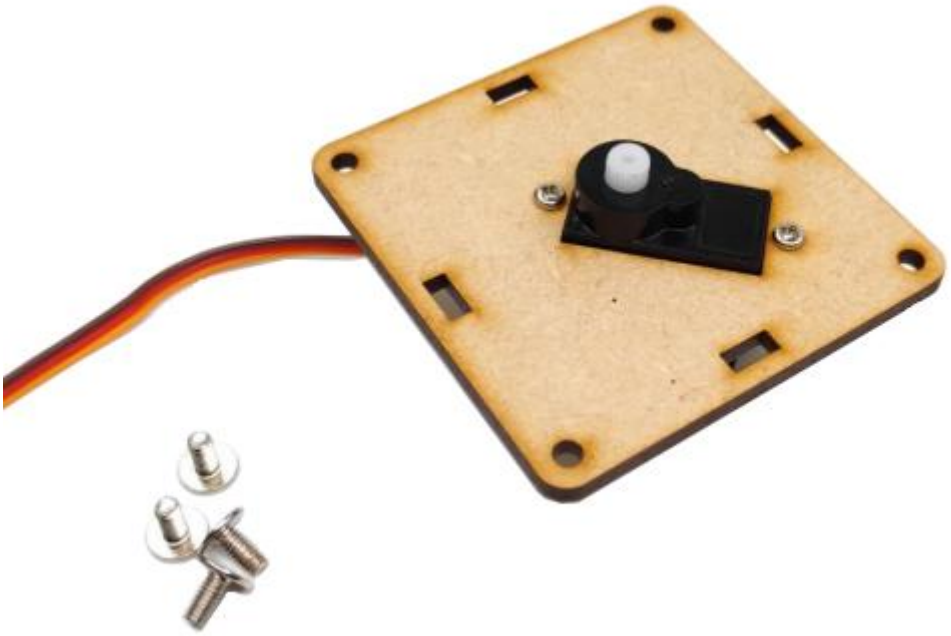
Fix the copper pillar from the bottom with screws.



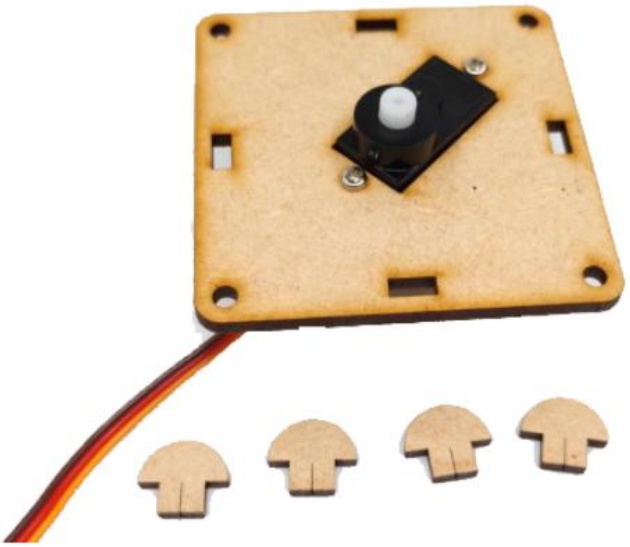
Use M2*12 screws to fix the servo.

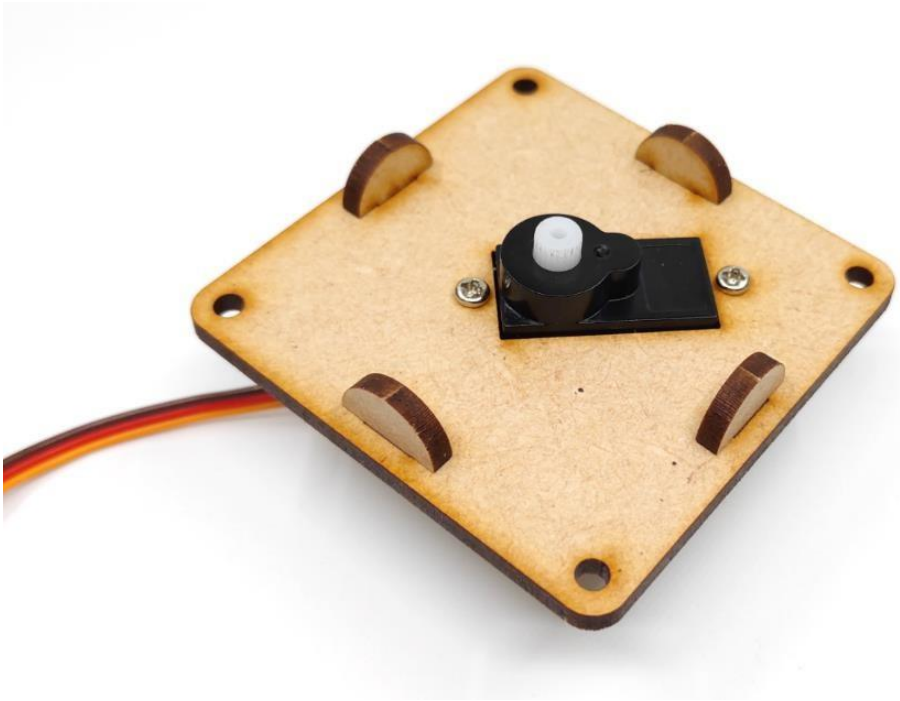


When fixing the steering gear; pay attention to the direction of the steering gear, and the main shaft is in the center of the base.

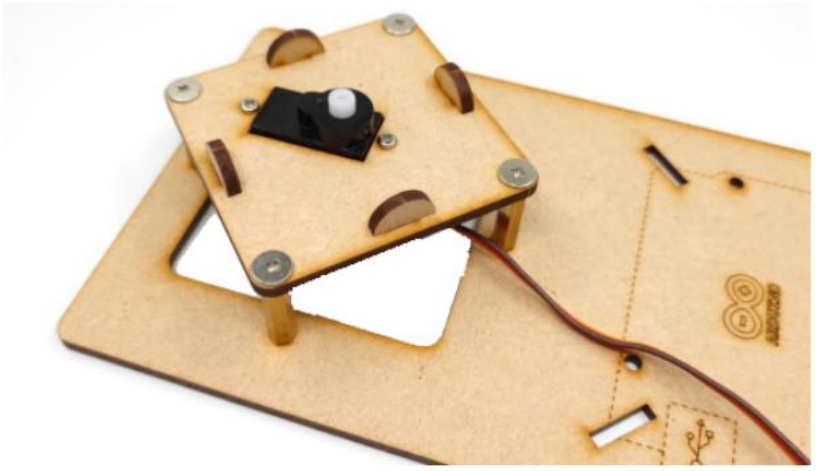


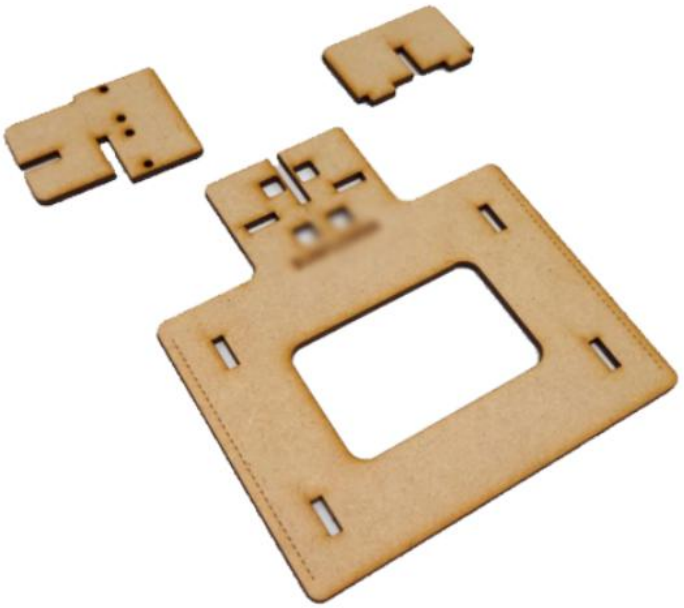
Insert the pin into the board around the board to fix it.

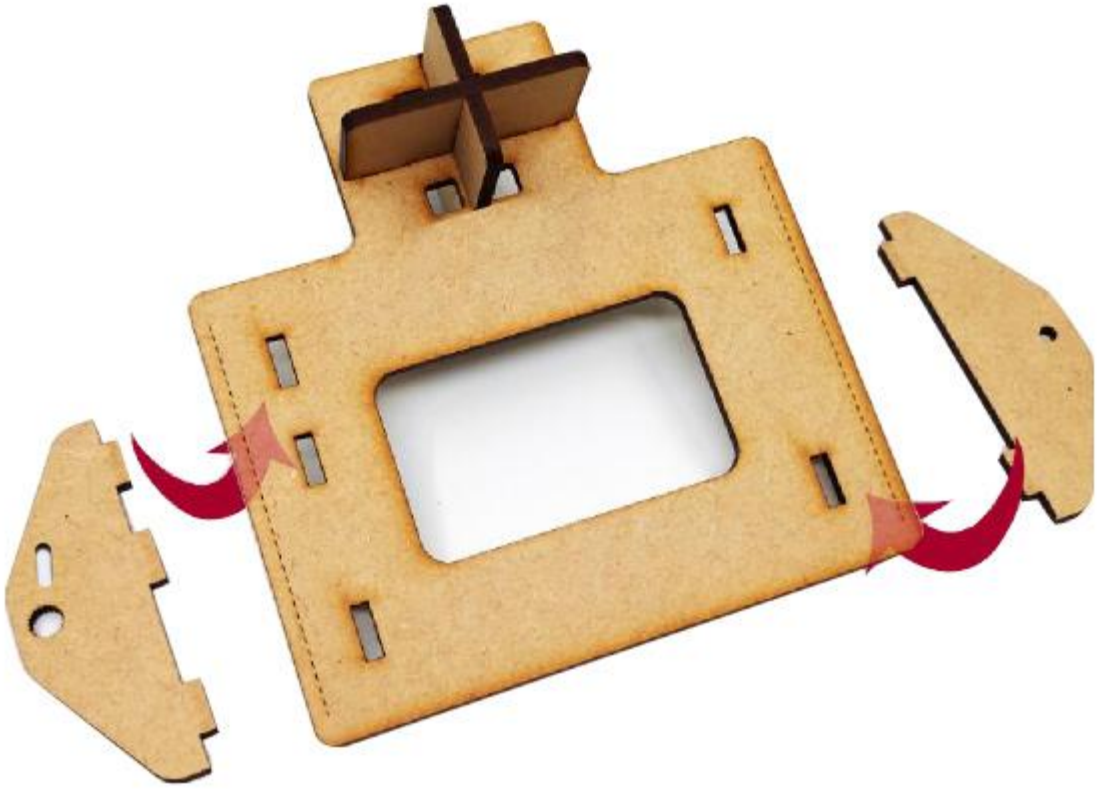


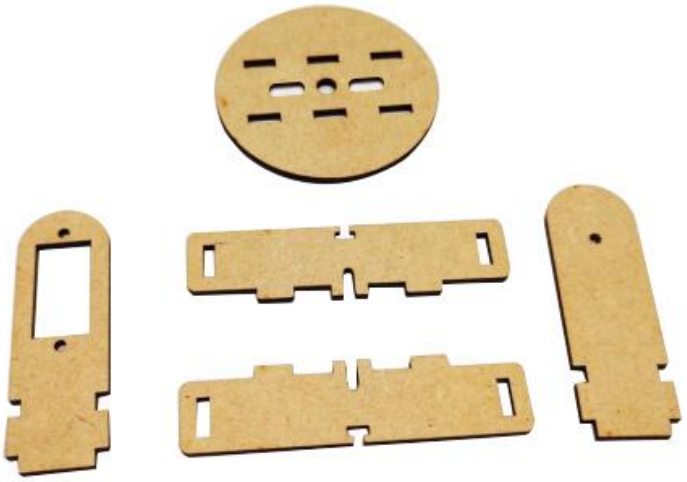


Fix it with M3*8 screws; as shown in the figure:

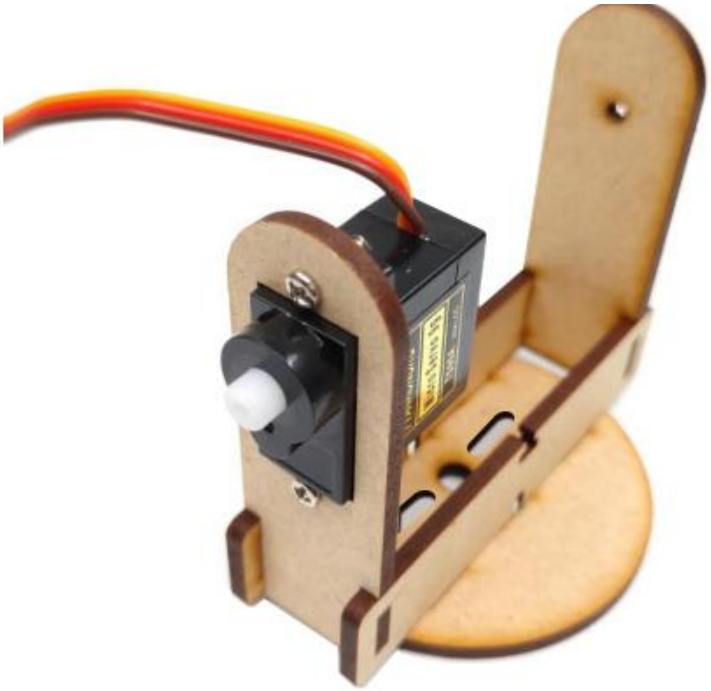




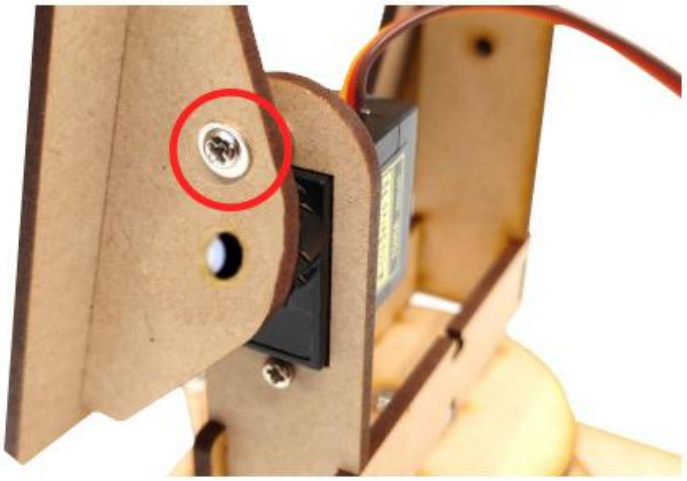




Use M2*10 screws to fix the steering gear; as shown in the figure:

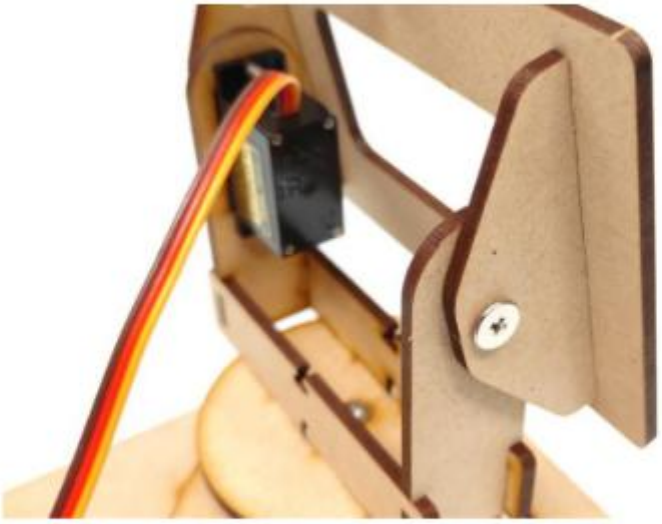


Use self-tapping screws to lock

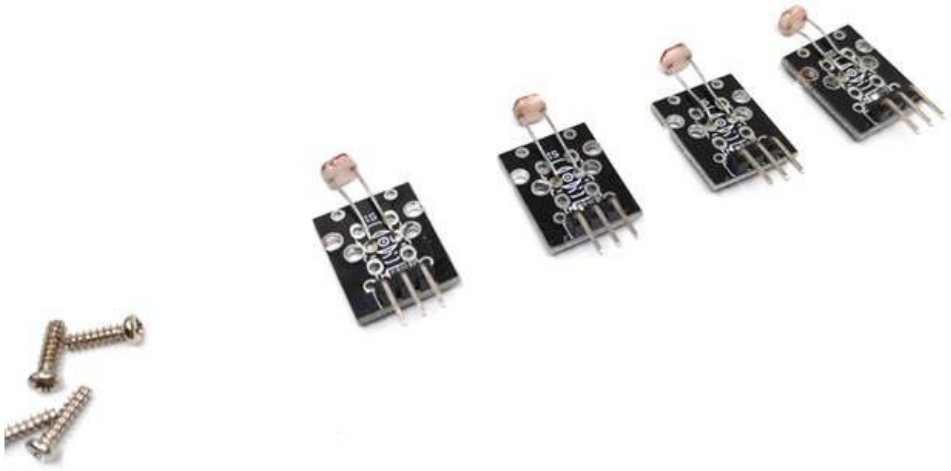


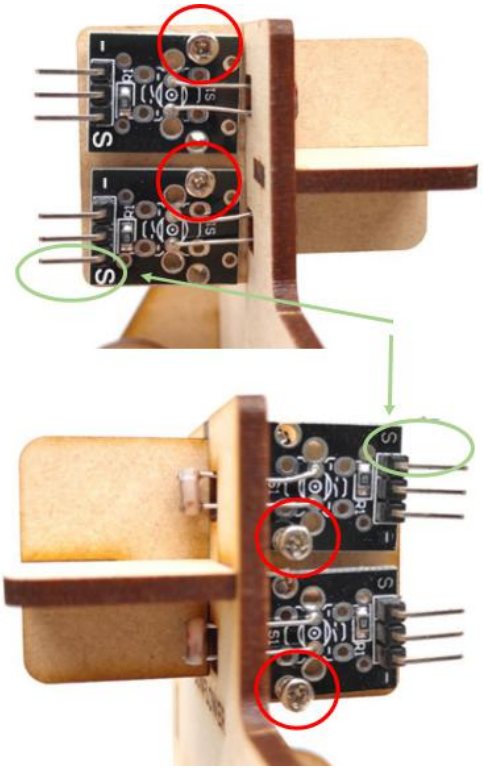
Use M2*12 screws; there is no need to overtighten the screws at this position, just click them.

The screw of the rotating shaft cannot be tightened, and space is required for rotation



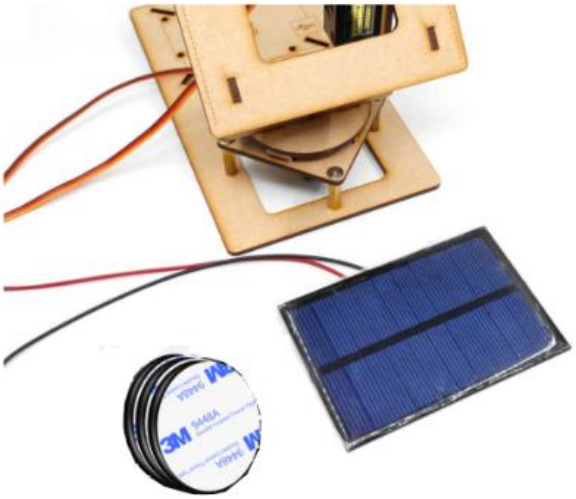
The photosensitive module is fixed with M2*12 screws



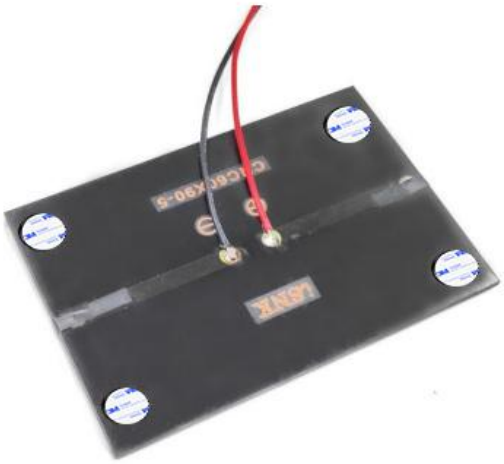


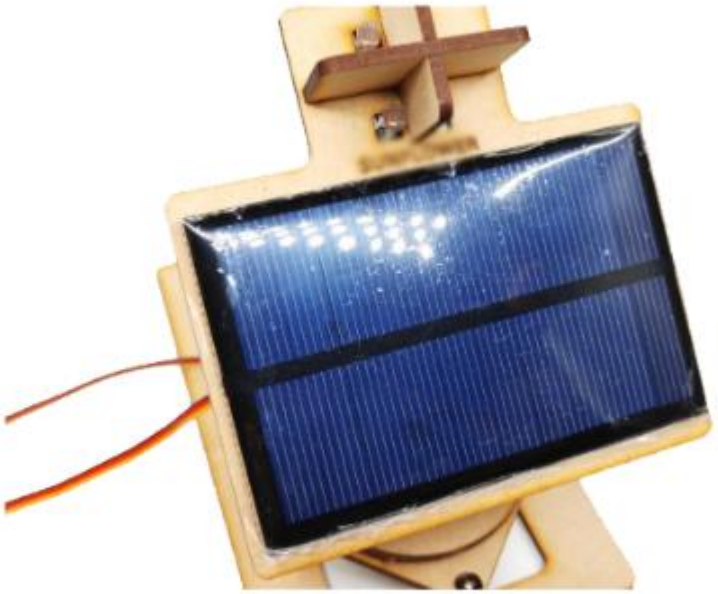
Please pay attention when the wiring sequence on the right and left is opposite.

Use double-sided tape to hold the solar panel in place

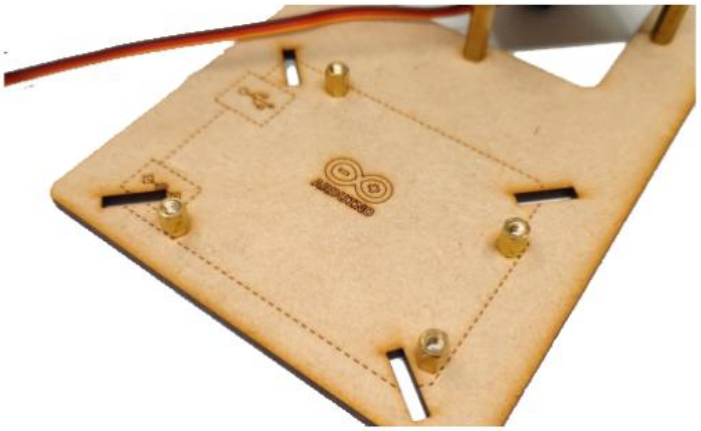


Paste the round double-sided tape on the back of the solar panel

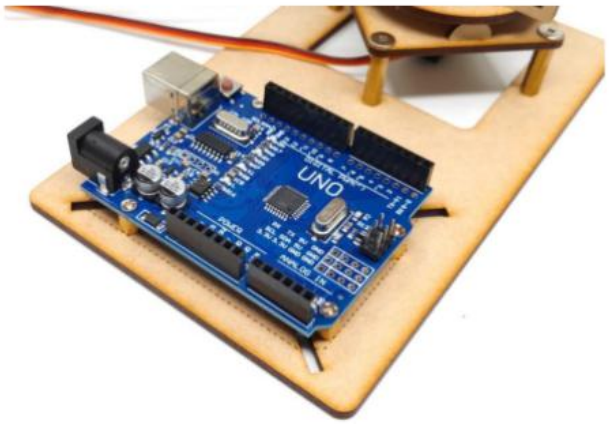




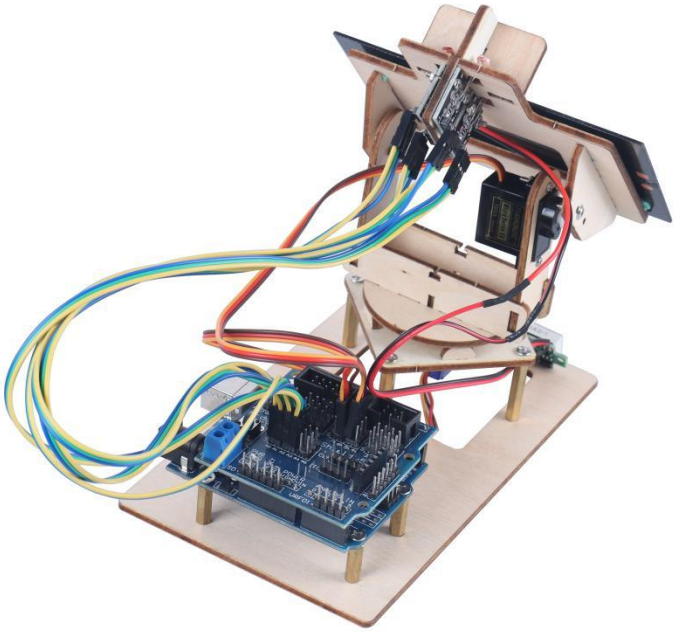
Use M3*20 copper pillars to fix the UNO main control board

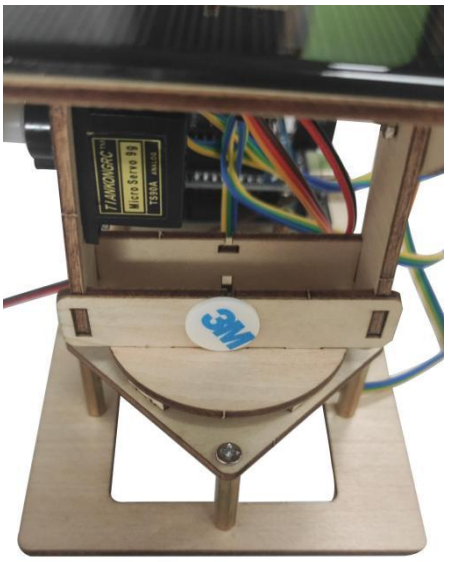


Install arduino motherboard



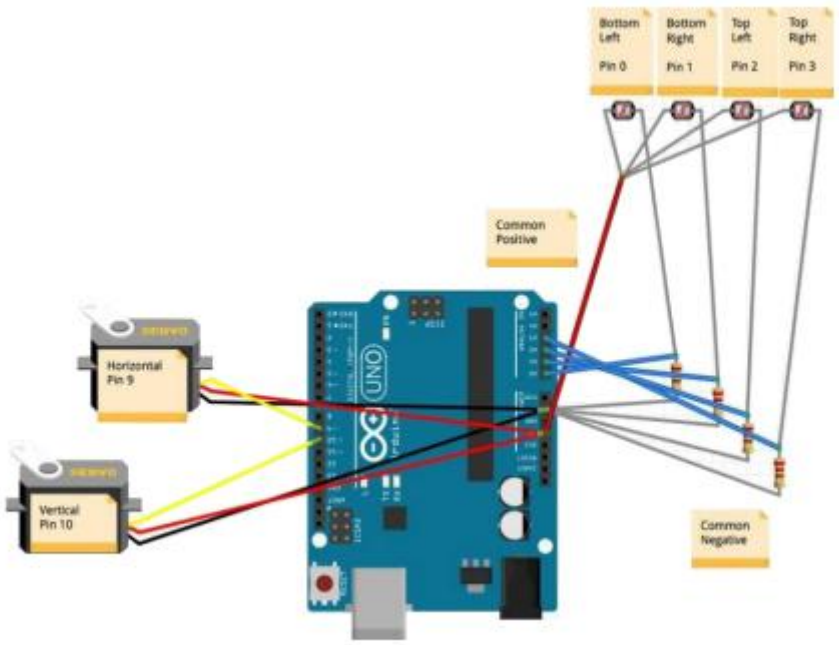

Pay attention to the wiring on the back of the solar panel and don't press it.
For the detailed wiring diagram, please see the subsequent wiring introduction, and also refer to the program notes.

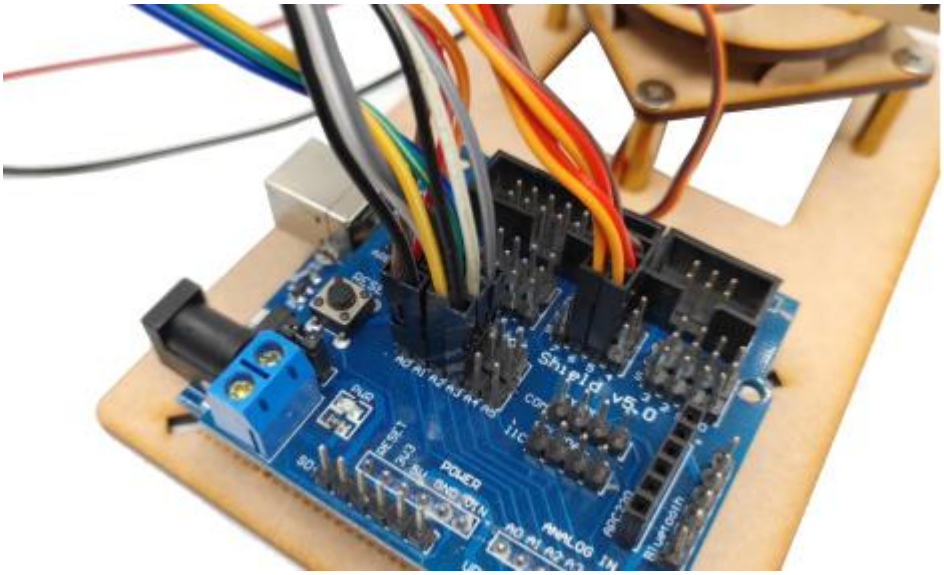




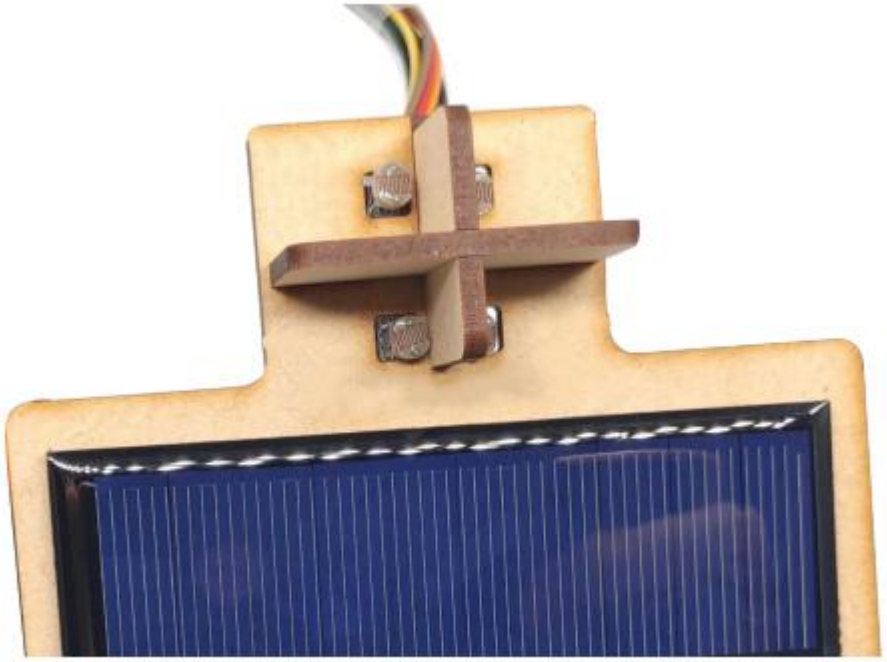

The solar panel can be directly connected to the supplied voltmeter. Other load equipment can also be connected.

Wiring diagram:

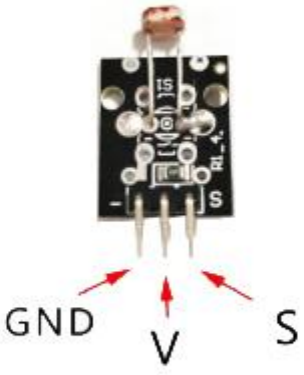


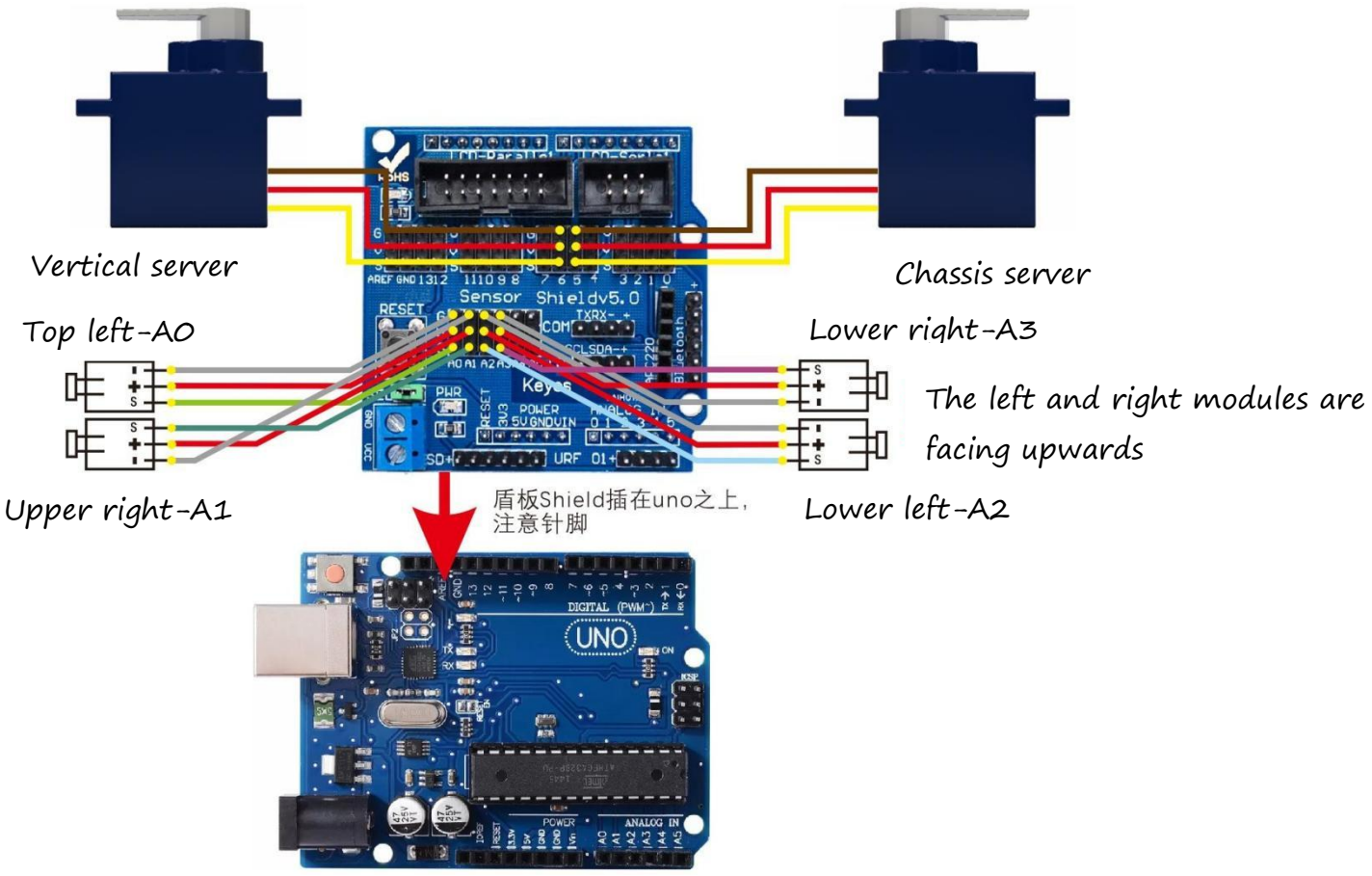
The location of the four photosensitive modules.

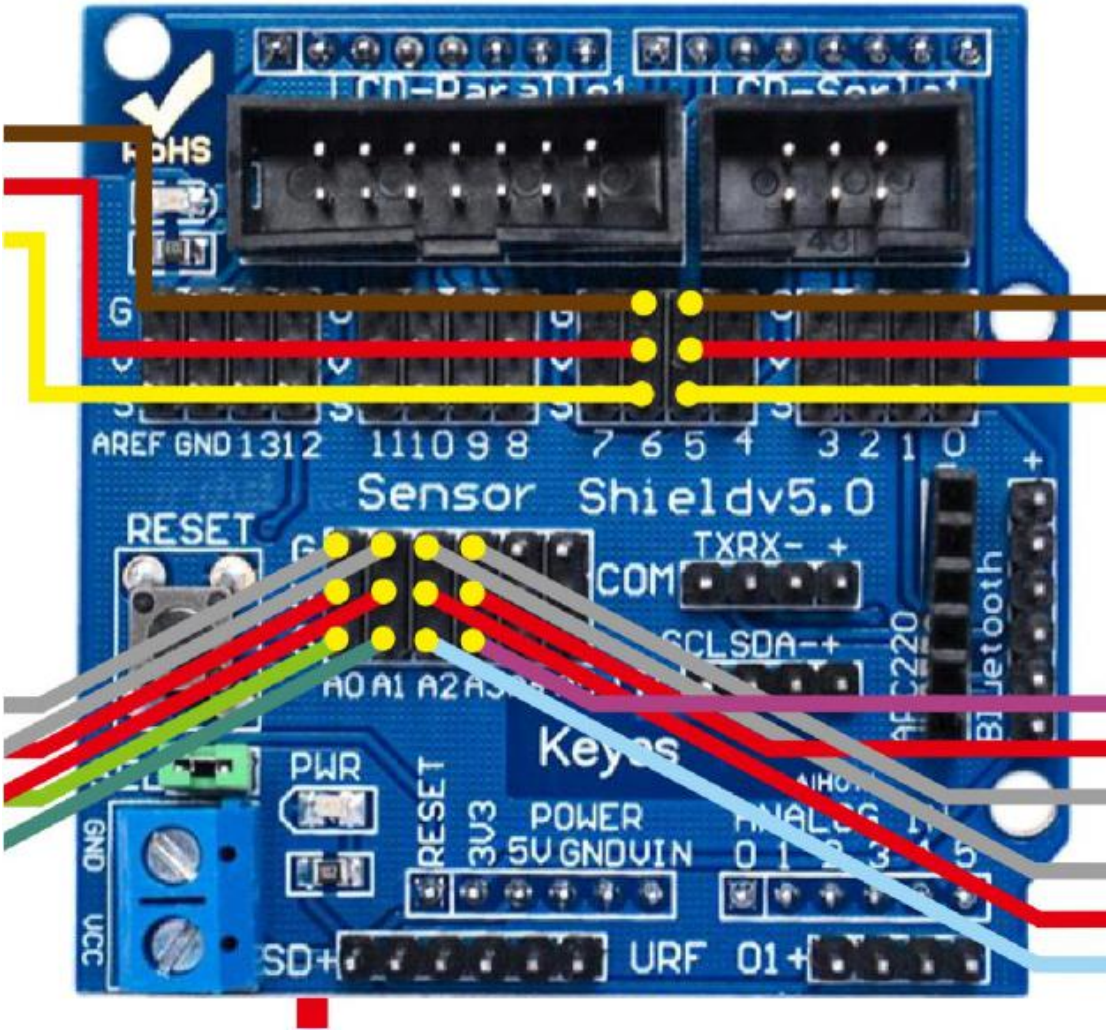


The wiring sequence of the photosensitive module is GND-on the left, VCC + in the middle, S signal on the right



The color of the line is only for the convenience of distinguishing, and has nothing to do with the actual use of the line color. For the wiring position in the program, the VCC of all devices is connected to power +, GND is connected to power -, and those with a shield can be directly connected to the corresponding port.

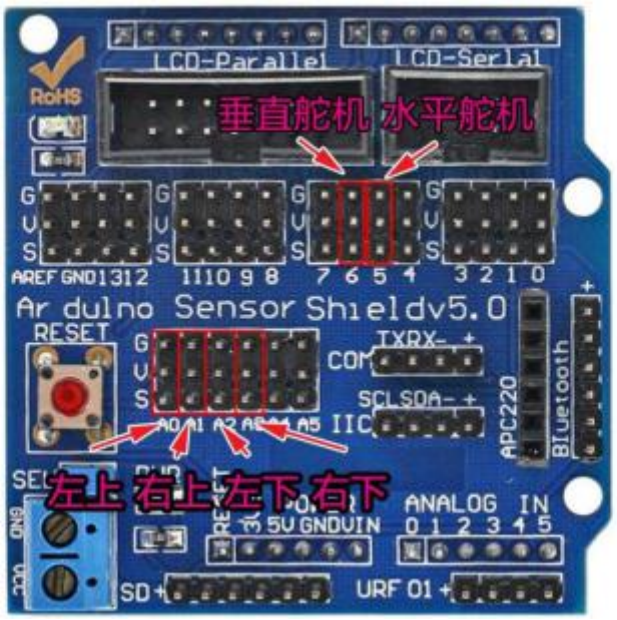





Enlarged view of center position

Horizontal steering servo 5# Vertical servo 6# The servo wire is brown GND, red VCC, and yellow is the signal.

The 4 photosensitive modules are respectively connected to the upper left of A0 (facing the solar panel, not from behind), the upper right of A1, the lower left of A2, and the lower right of A3. The 3 wires of each module are GND, Vcc, and S signals.




*Shield*

*The shield board is inserted on the Arduino UNO, and the pins of the shield board are aligned with the cable holes of UNO. The function of the shield board is similar to the wiring board, and it can be easily connected to the steering gear and other equipment. The pin numbers of the shield board correspond to the ports of UNO one by one. Each port has a GND*

*(Abbreviated G), VCC (V) and S signal connector. No breadboard wiring is very convenient.*

Frequently Asked Questions:

FAQ:

1. The panel always moves in the direction of weak light, or the up and down is abnormal, the left and right are normal or vice versa

Answer: The position of the photosensitive module is inconsistent with the position in the program, or the direction of the steering gear is inconsistent with the preset, just modify the rotation direction of the steering gear in the program (180-angle), if it is already 180-, remove 180-, Just keep the angle value.

2. The solar panel is connected but the Arduino cannot be started

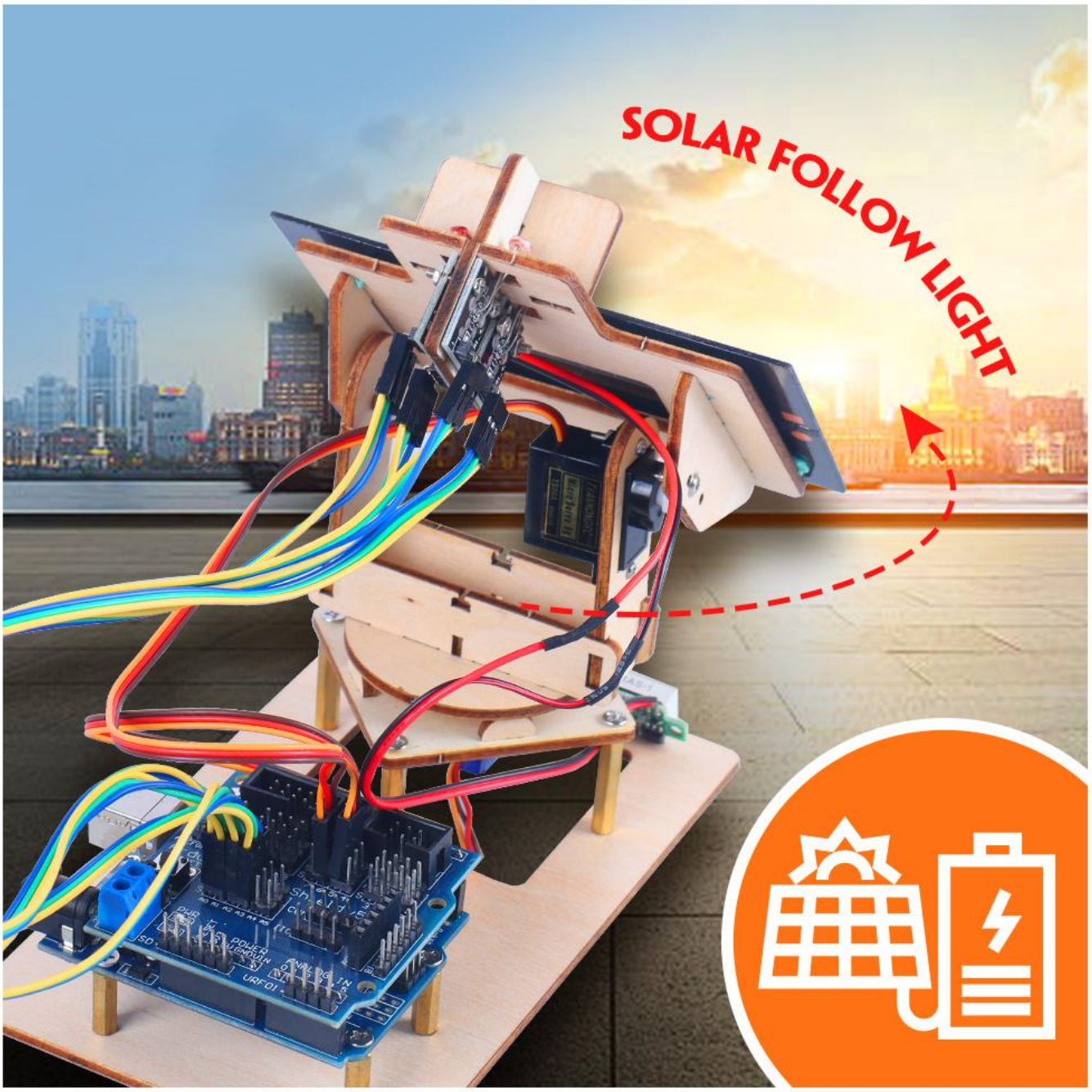
Answer: In the schematic model, the power of the solar panel is not enough. It can only support devices with small loads, such as small motors.

3. The direction of movement is opposite to the direction of the light

Answer: The angle parameter of a certain servo is wrong. Change it to 180 degrees minus the angle and the other way around. (If there is already 180-, remove 180-)

4. The power-on self-test is normal, and then it stops moving to one side

Answer: The wiring of the photosensitive modules on the left and right sides cannot be mirrored, and the wiring on one side is reversed. The order of the 3 legs of the photosensitive module on the right is up S, middle +, down -. On the left is up-, down S. Not symmetrical! ! ! Don't all head in the same direction for good looks.


SOLAR FOLLOW LIGHT