

Assembly Guide SO-ARM101

This guide provides step-by-step instructions for assembling the SO-ARM101. Follow these steps carefully to ensure proper operation.

Required Tools:

- Phillips head screwdriver
- Small pliers (for handling cables)

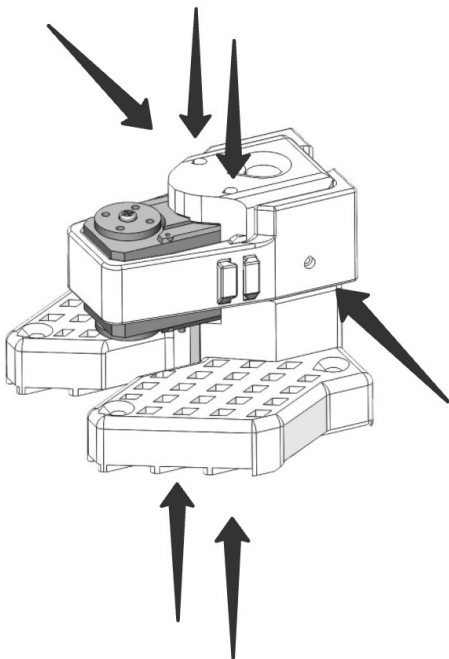
Step 1: Servos preassembly

Components needed:

- 5x STS3215
- 5x Servo Cables (from servo kit)
- 5x Motor Horns (from servo kit)
- 4x Passive Horns (from servo kit)
- 5x M3x6 Screws (from servo kit)
- 4x Long self-tapping screws (from servo kit)

Repeat next steps for each servo.

1. Install servo horn, secure with M3x6 screw.
2. Install passive horn, secure with self-tapping screw. Make this step only for 4x servos, one leave with only a servo horn. This servo will be needed for the very last wrist joint.
3. Connect one 3-pin cable.



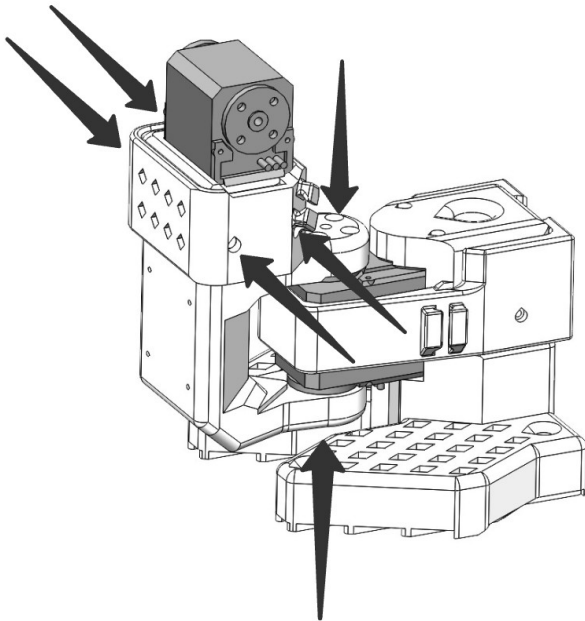
Step 2: Base assembly

Components needed:

- 1x Base_SO101
- 1x Base_motor_holder_SO101
- 1x STS3215
- 6x Self-tapping screws (from servo kit)

1. Place the first servo into the Base_SO101 (cable looking down).
2. Fasten the servo with 4 self-tapping screws (smallest screws). Two from the top and two from the bottom.
3. Slide over the first servo Base_motor_holder_SO101 and fasten it using two self-tapping screws (one on each side).

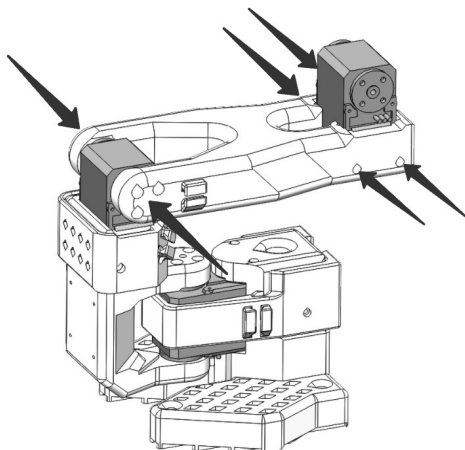
Step 3: Waist Joint Assembly



Components needed:

- 1x Rotation_Pitch_SO101
- 1x Motor_holder_SO101_Base
- 1x STS3215
- 8x M3x6 Screws (from servo kit)
- 4x Self-tapping screws (from servo kit)

1. Attach the Rotation_Pitch_SO101 part.
2. Tighten it with 4 M3x6mm screws on top and 4 M3x6mm screws on the bottom.
3. Add the Motor_holder_SO101_Base.
4. Slide the second servo in from the top (pay attention that cable is looking at us).
5. Fasten the second servo with 4 self-tapping screws.



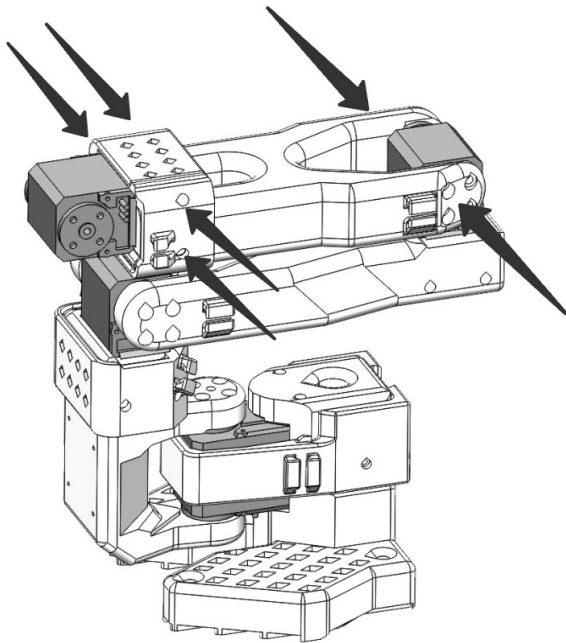
Step 4: Shoulder Joint Assembly

Components needed:

- 1x Upper_arm_SO101
- 1x STS3215
- 8x M3x6 Screws (from servo kit)
- 4x Self-tapping screws (from servo kit)

1. Attach the Upper_arm_SO101 with 4 M3x6mm screws on each side.
2. Insert servo №3 and fasten using 4 self-tapping screws (pay attention that cable is looking at us).

Step 5: Forearm Joint Assembly

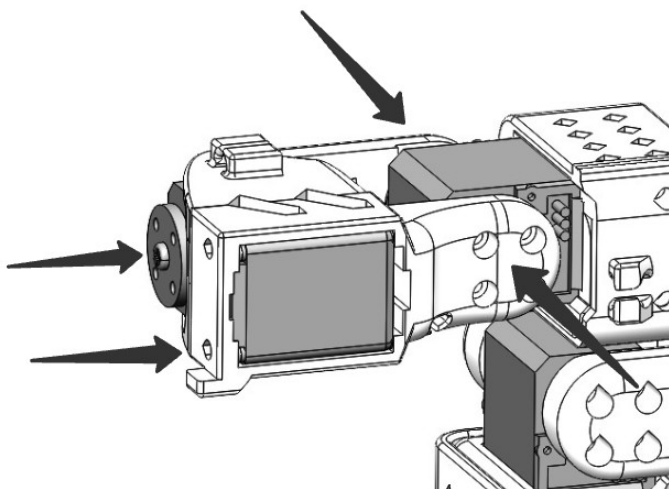


Components needed:

- 1x Under_arm_SO101
- 1x Motor_holder_SO101_Wrist
- 1x STS3215
- 8x M3x6 Screws (from servo kit)
- 4x Self-tapping screws (from servo kit)

1. Attach the Under_arm_SO101 with 4 M3x6mm screws on each side.
2. Add the Motor_holder_SO101_Wrist.
3. Insert servo №4 and fasten using 4 self-tapping screws (pay attention that cable is looking at us).

Step 6: Wrist Joint Assembly

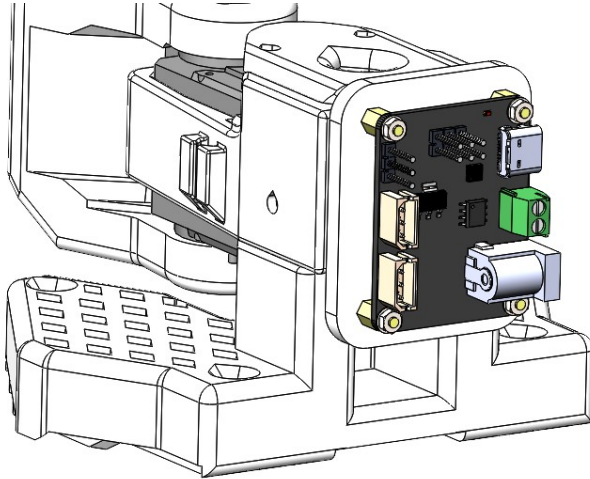


Components needed:

- 1x Wrist_Roll_Pitch_SO101
- 1x STS3215
- 8x M3x6 Screws (from servo kit)
- 2x Self-tapping screws (from servo kit)

1. Insert servo №5 into Wrist_Roll_Pitch_SO101 and fix it with 2x Self-tapping screws.
2. Attach this assembly and fix it with 4 M3x6mm screws on each side.

Step 7: Control Board Fixing

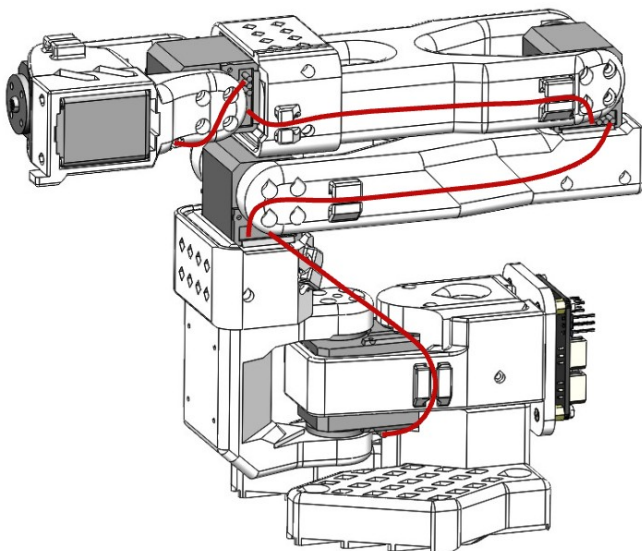


Components needed:

- 1x WaveShare_Mounting_Plate_SO101
- 1x WaveShare Bus Servo Adapter
- 4x M2x8 screws

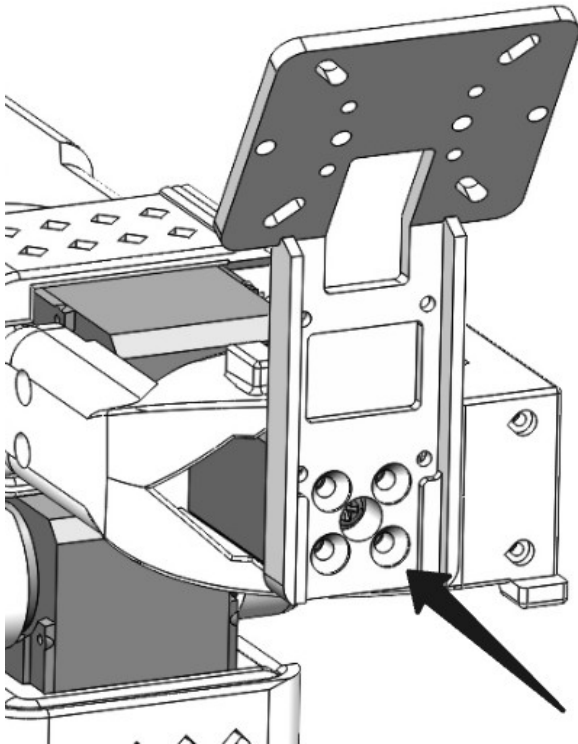
1. Attach WaveShare Bus Servo Adapter to the WaveShare_Mounting_Plate_SO101 and fix it with 4 M2x8 screws.
2. Slide it down on the Base_SO101 from the assembly step 1.

Step 8: Cables Connecting



1. Connect all cables from the servos to each other in a chain.
2. Cable from first servo connect to WaveShare Bus Servo Adapter.

Step 9: Gripper Holder Attachment



Components needed:

- 1x Camera holder (RB9.01.060.071)
or Servo plate (RB9.01.060.080)
- 1x Parallel Gripper SO-ARM101
- 4x M3x6 Screws (from servo kit)
- 4x Self-tapping screws (from servo kit)

1. Depending on what type of Gripper you want to connect attach to the Wrist Joint horn Camera holder or Servo plate and fix with 4 M3x6 screws.
2. Attach the Parallel Gripper to the Camera holder or Servo plate and fix with 4 self-tapping screws.
3. Connect cable from the Parallel Gripper to the servo №5 .

Your SO-ARM101 is now assembled.