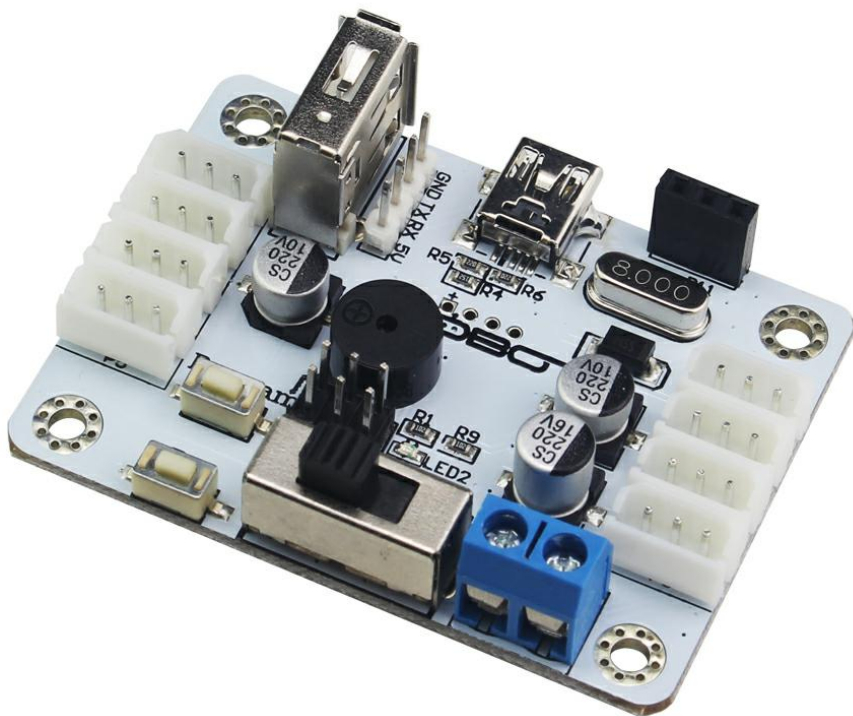


Bus Servo Controller

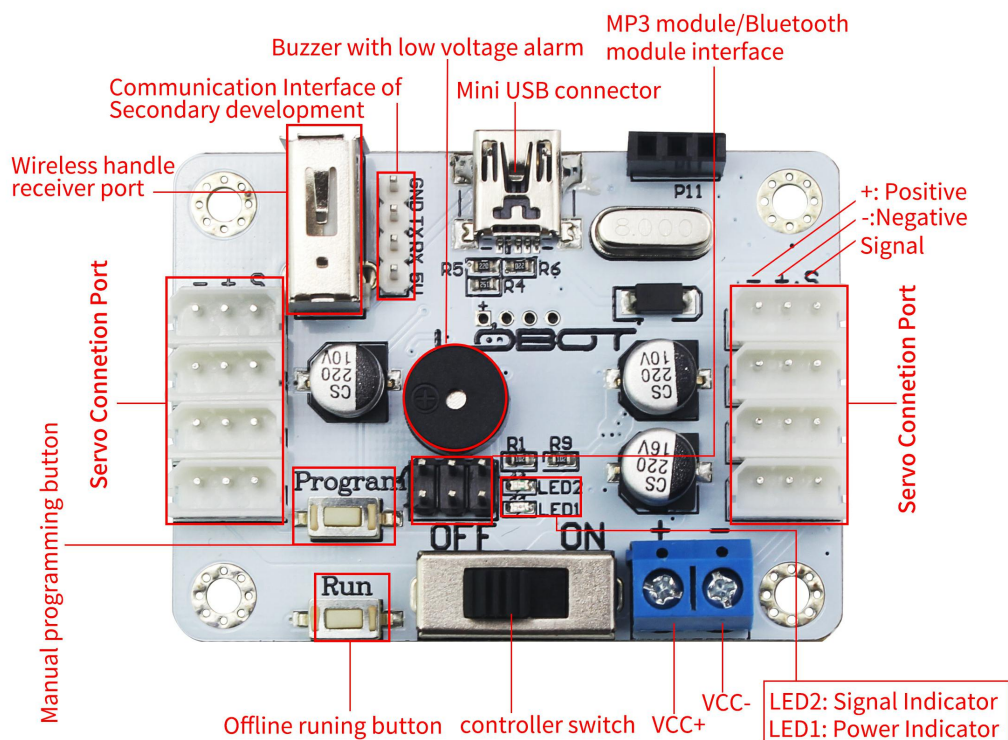
User Manual



Catalog


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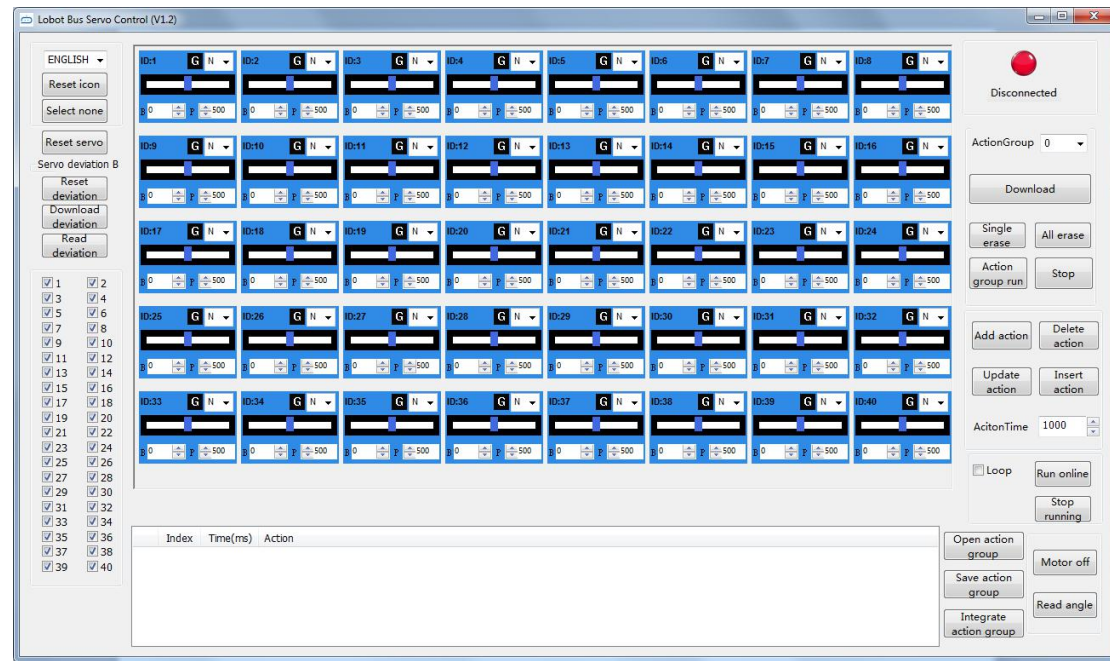
The instruction of servo controller are illustrated below



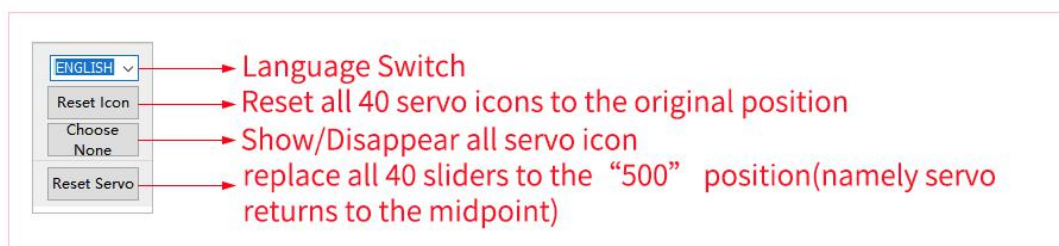
Set ID numbers for LX-16A bus servo according to our tutorial video or LX-16A servo user manual.

Introduction to the PC software interface

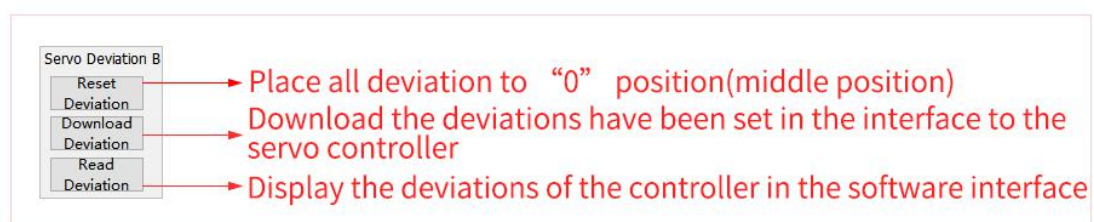
Double click PC software icon  Lobot Bus Servo Control , the interface as shown below



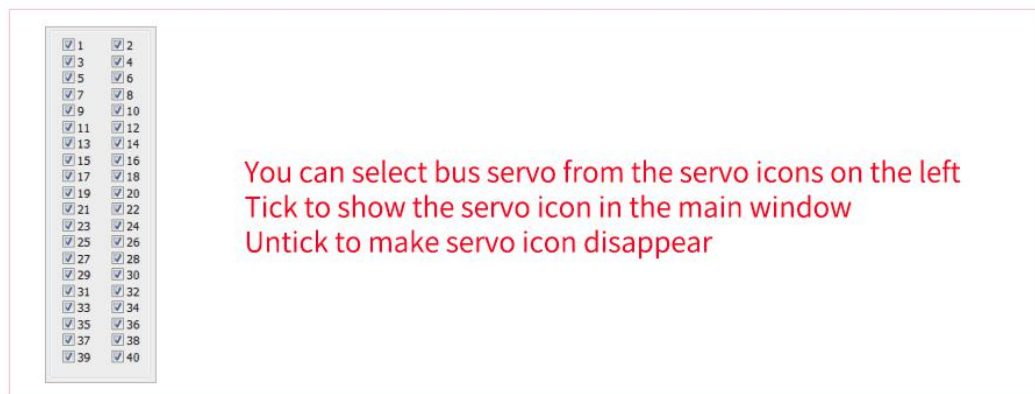
1. Global Operation Window



2. Deviation Operation Window



3. Servo Icon Selection Window



4. The Introduction of the Servo Window function



The servo slider can be free to drag (the range is 0-1000). The P value will change as the slider moves, and it can visually show the rotation position of the servo at this time.

Because some of the installation deviations will happen in the process of robot production. sometimes we need to use the function of "Deviation Adjustment" to make some fine-tuning. B represents servo deviation which ranges from -125~125.

When the deviation of each servo is adjusted, click the "Download Deviation" button, then the all deviations will be downloaded to the controller. If you want to modify the deviation later, please click on the "Read Deviation" button, the deviation will automatically show in the interface.

Summary: It is because of the existence of P and B values, so the actual position of the servo should be $P + B$

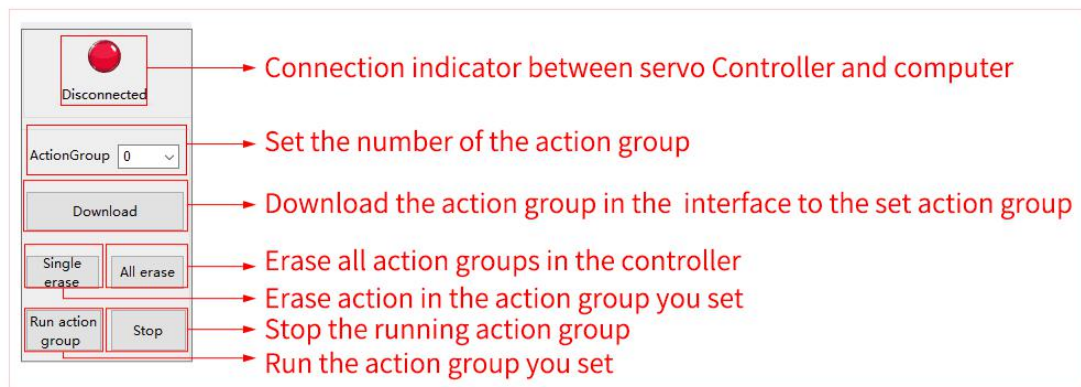
5. The introduction of Action Date Display Area

| Index | Time(ms) | Action |
|-------|----------|---|
| 1 | 1000 | #0 P1500 #1 P1500 #2 P1500 #3 P1500 #4 P1500 #5 P1500 #6 P1500 #7 P1500 #8 P1500 #9 P1500 #10 P1500 #11 P1500 #12 P1500 #13 P1500 #14 P1500 #15 P1500 #16 |
| 2 | 1000 | #0 P1500 #1 P1500 #2 P1500 #3 P1500 #4 P1500 #5 P1500 #6 P1500 #7 P1500 #8 P1500 #9 P1500 #10 P1500 #11 P1500 #12 P1500 #13 P1500 #14 P1500 #15 P1500 #16 |
| 3 | 1000 | #0 P1500 #1 P1500 #2 P1500 #3 P1500 #4 P1500 #5 P1500 #6 P1500 #7 P1500 #8 P1500 #9 P1500 #10 P1500 #11 P1500 #12 P1500 #13 P1500 #14 P1500 #15 P1500 #16 |

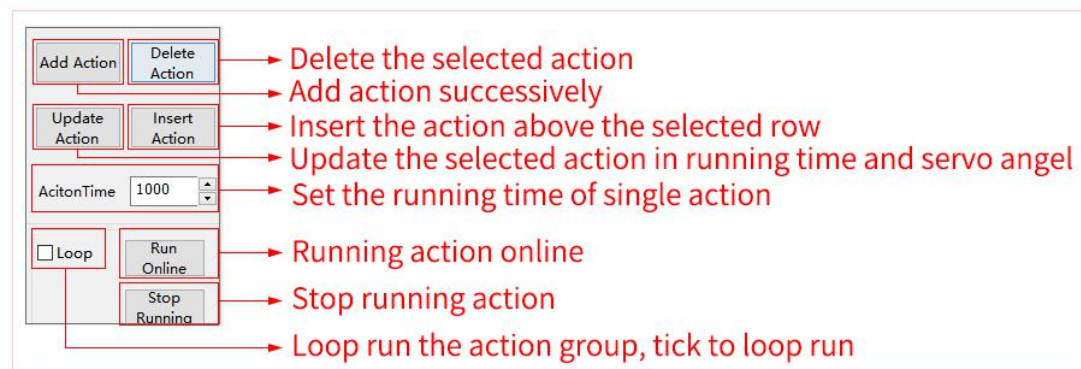
Indicates what is the number of the servo, P indicates the position of the servo, and

T indicates the time that the servo is running to that position.

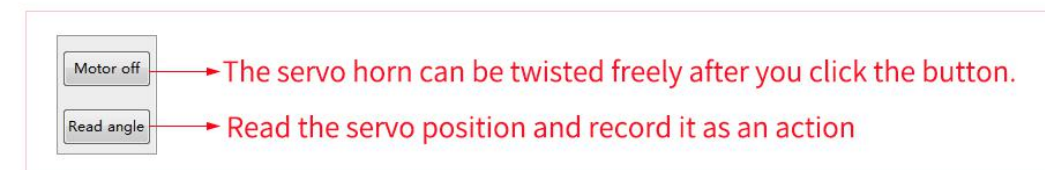
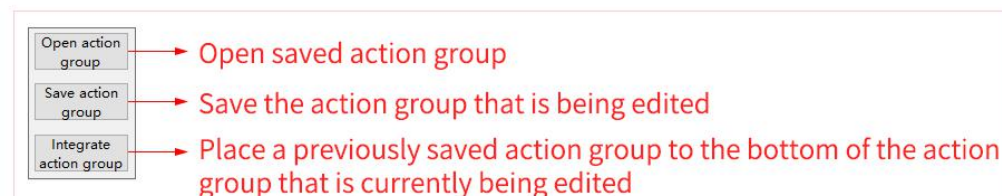
6. Download and invoke action group window



7. Online action debugging window

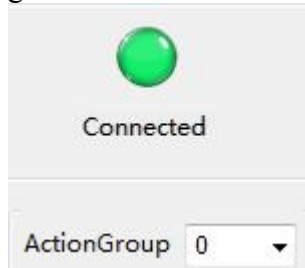


8. File operation window



Single servo debugging

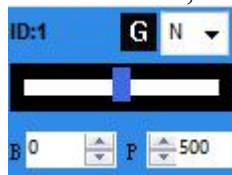
(1)when servo controller is connected to the computer, the interface indicator turn green indicates that connecting is successful.



(2)Connected to the power supply. Make sure the power supply of your 7.4 V lithium battery is not lower than 6V.(The voltage is 8.4V when 7.4V lithium battery is fully charged , make sure that the voltage is not less than 6V, full power state is better)

(3)Pull the ID:1 slider

Pull the slider, the servo will rotate as the slider moves.



Place the slider to the position of 0, 200, 500, 700, and 1000 respectively and add actions in turn,you can change T value manually.

Click “Run Online” button and observe the rotation effect of servo

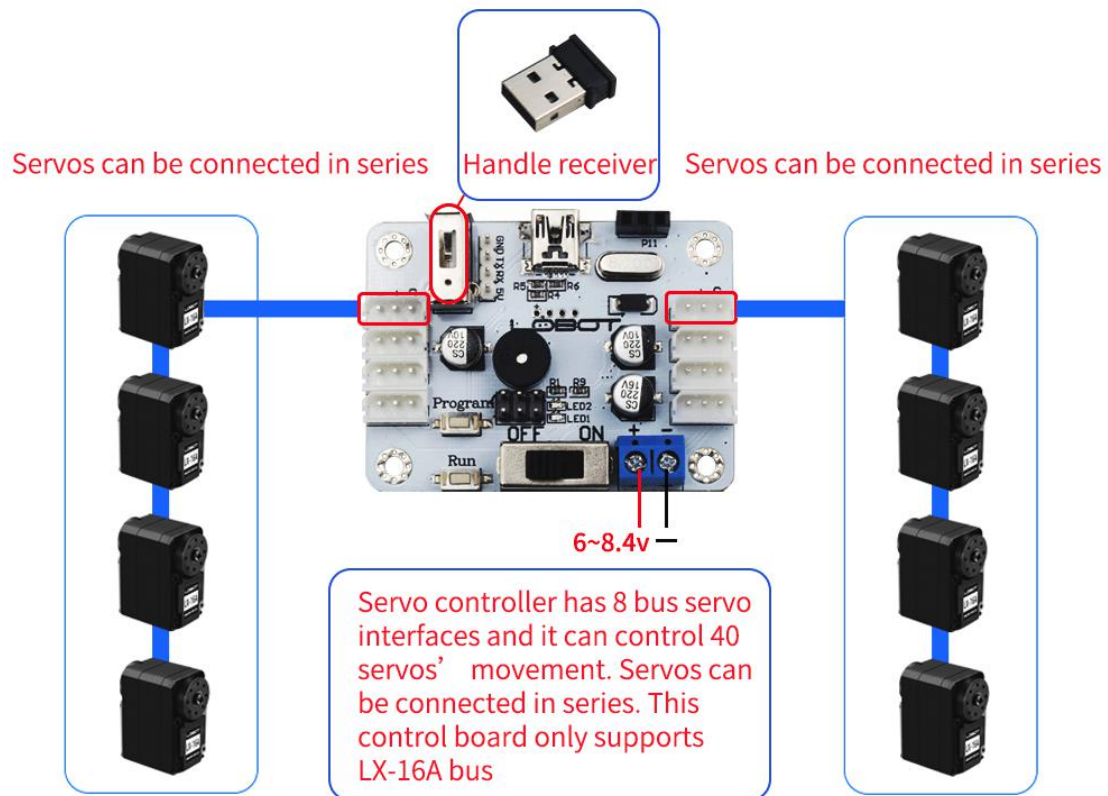
| | | | | | |
|---|---|------|---|--|------|
| 1 |  | 500 | 2 |  | 1000 |
| 3 |  | 1500 | 4 |  | 2000 |
| 5 |  | 2500 | | | |

(4)Click “Run Online” button and observe the rotation effect of servo.

(5)Click “Save Action Group” to save the action group you edited and name the file name.

(8)Restart the software, then click “Open Action Group” to open the file you just saved.

Servo controller wiring diagram



Both the servo and handle receiver interface adopt anti-plug design that minimizes false wiring when wiring.

The introduction of wireless handle button


The handle requires 2 AAA batteries(self-provided), Open the power switch of the handle, you can run action groups saved in servo controller

After the handle and receiver docking succeed, the green light on the handle is bright indicating the docking is successful.

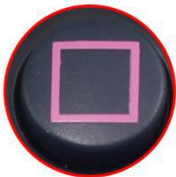






Each button on the handle corresponds to an action group.The corresponding number can be found in the following table



Wireless handle decode table

| | Description | Comments |
|---|---|----------|
|  | Forced to stop current action group running and run the 0 th action group once | |

| | | |
|--|---|--|
|  <p>up</p> | <p>Press to keep running group 1st , release to run 0th action group once</p> | |
|  <p>down</p> | <p>Press to keep running 2nd action group, release to run 0th action group once</p> | |
|  <p>left</p> | <p>Press to keep running 3rd action group, release to run 3rd action group once</p> | |
|  <p>right</p> | <p>Press to keep running 4th action group, release to run 4th action group once</p> | |
|  | <p>Run 5th action group once</p> | |
|  | <p>Run 6th action group once</p> | |

| | | |
|---|--|--|
|  | Run 7 th action group once | |
|  | Run 8 th action group once | |
|  L1 | Run 9 th action group once | |
|  R1 | Press to keep running 10 th action group, release to run 10 th action group once | |
|  L2 | Run 11 th action group once | |
|  R2 | Press to keep running 12 th action group, release to run 12 th action group once | |
|  | Run 13 th action group once | Press the select button first, then press the Δ |

| | | |
|---|--|---|
|  +  | Run 14 th action group once | Press the select button first, then press the × |
|  +  | Run 15 th action group once | Press the select button first, then press the □ |
|  +  | Run 16 th action group once | Press the select button first, then press the O |
|  +  SELECT+L1 | Run 17 th action group once | Press the select button first, then press the L1 |
|  +  SELECT+R1 | Run 18 th action group once | Press the select button first, then press the R1 |
|  +  SELECT+L2 | Run 19 th action group once | Press the select button first, then press the L2 |
|  +  SELECT+R2 | Run 20 th action group once | Press the select button first, then press the R2 |

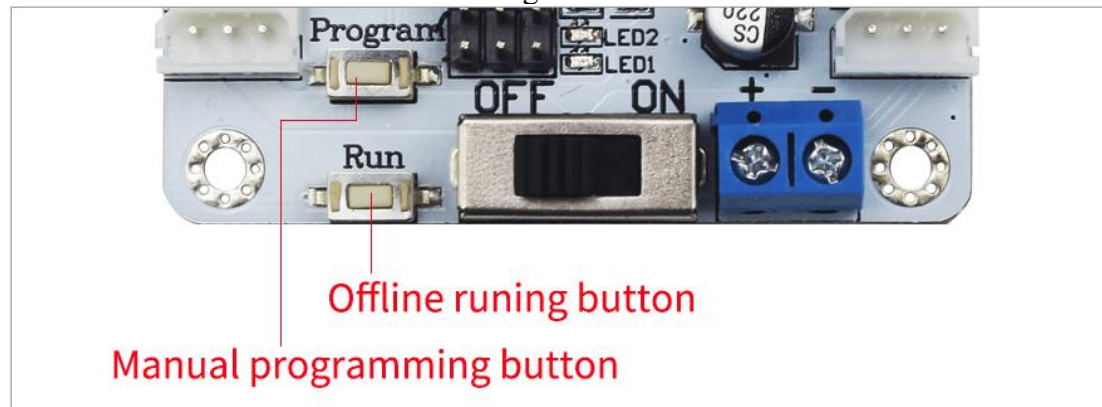
Warm Tips: The mode keys and joysticks are not set up the function, do not press the these buttons otherwise it is possible to make mistakes.

(The wireless handle need to be purchased separately from our store)

About offline running

Offline running means: disconnected from the computer and the robot works automatically

1. Download the action file that needs to be run offline to No.100 action group;
2. Press the white button "offline running button" on the controller.



3. Press once to run offline once; press and hold for 3 seconds (until the blue light flashes), it will be running all the time.
Pressing the button again during cycle operation it will come back to run once.

4. Restart the controller to remove the cycle run.

Offline button programming

1. Press and hold the "Manual Program button" for 3 seconds, you can release when you hear the sound of beep. At this point the blue light on the servo controller flashes the interval of 1 second , indicating that it has entered manual programming mode.
2. Change the angle of the servo arbitrarily, and then short press "Program" , release button, and then hear the sound of beep indicating that the action location has been recorded .
- 3.Repeat the second step until the action group is finished.
- 4.Long press the "Manual Program button" button for 3 seconds, you can release when you heard a sound of beep. It means the actions you just edited have been saved into No.100 action group, and the blue light back to the light state.
- 5.Press the white button "offline running button" on the servo controller,short press the button, you can start running action that has been edited once, long press, you can make actions loop running. Short pressing the button again during the cycle running it will back to run once.
6. If you need to make servo stop running, please turn off the power switch.