# Lesson 1 Edit Action with PC Software

## 1. Purpose

Program an action to make MaxArm suck the block and place it to the side.

This lesson aims to help you master how to program action. If want to refer to the standard action, please view the provided action group file in folder "Appendix/3.MaxArm Action Group File".
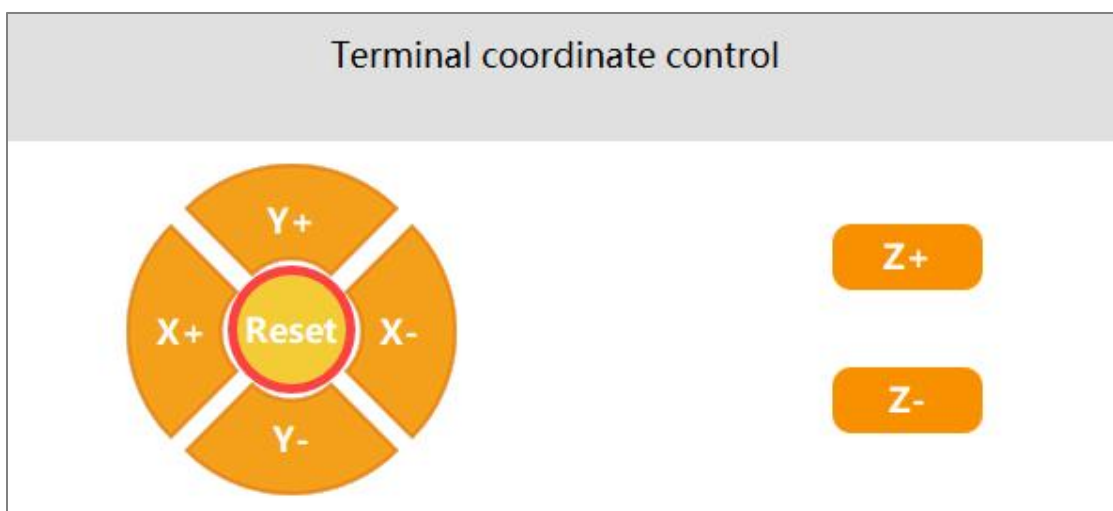
## 2. Action Realization

### 2.1 Action Design

1) Turn on MaxArm and connect it to computer with USB cable. Then open PC software.
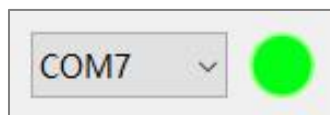


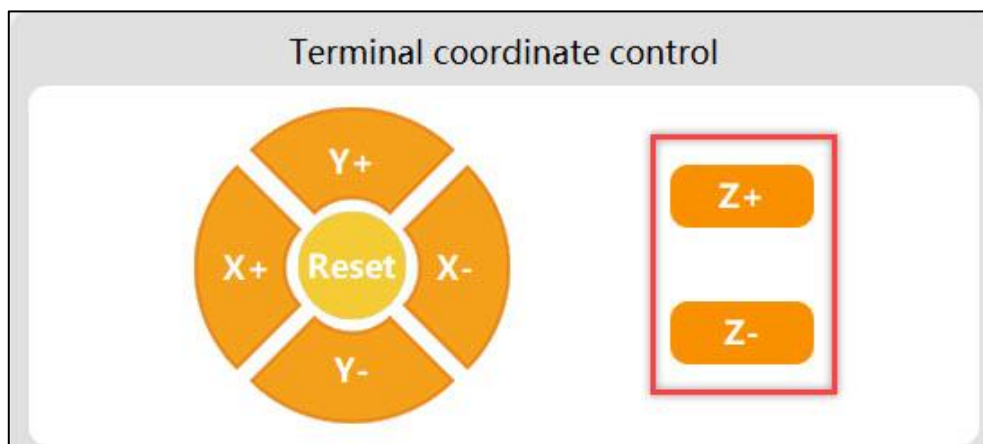2) Click "Reset" to make MaxArm return to the initial posture.



3) Change the running time to "500" ms, and click "Add action" to add the

initial posture of robotic arm as the first action.



| Index | Duration(ms) | X | Y | Z | Nozzle angle | Nozzle status |
|---|---|---|---|---|---|---|
| 1 | 500 | 0 | -163 | 212 | 0 | 0 |

4) Click "Z-" in end coordinate control area to get MaxArm lower to above the block.



Place the mouse cursor over "Z-" button and hold down the left button to lower MaxArm quickly. Click to make fine adjustments.

5) Set the running time to 800ms and click "Add action" to add current action to action data list.

| 2 | 800 | 0 | -163 | 100 | 0 | 0 |
|---|---|---|---|---|---|---|

6) Set the running time to 800ms and click "Z-" to lower MaxArm to the top of block. Then click "Add action".

| 3 | 800 | -8 | -171 | 88 | 0 | 0 |
|---|---|---|---|---|---|---|

7) Click "Suck" in nozzle suction control area and set the running time to 500ms. Then click "Add action".

| | 4 | 500 | -8 | -171 | 88 | 0 | 1 |
|---|---|---|---|---|---|---|---|

8) After sucking the block, click "Z+" to lift MaxArm and set the running time to 800ms. Then click "Add action".

| | 5 | 800 | -8 | -171 | 152 | 0 | 1 |
|---|---|---|---|---|---|---|---|

9) Adjust the value of x and y axes to make MaxArm turn to the left. Set the running time to 1500ms and click "Add action".

| | 6 | 1500 | 152 | -11 | 152 | 0 | 1 |
|---|---|---|---|---|---|---|---|

10) Adjust the value of z-axis to lower MaxArm. Set the running time to 800ms and click "Add action".

| | 7 | 800 | 152 | -11 | 96 | 0 | 1 |
|---|---|---|---|---|---|---|---|

11) Add a transition action. Set the running time to 200ms and click "Add action".

| | 8 | 200 | 152 | -11 | 96 | 0 | 1 |
|---|---|---|---|---|---|---|---|

12) Click "Release" in suction nozzle control area to put down the block.

13) Set the running time to 500ms and click "Add action".

| | | | | | | |
|---|---|---|---|---|---|---|
| 9 | 500 | 152 | -11 | 96 | 0 | 0 |

14) Click "Z+" to lift MaxArm. Set the running time to 800ms and click "Add action".

| | | | | | | |
|---|---|---|---|---|---|---|
| 10 | 800 | 152 | -11 | 184 | 0 | 0 |

15) Click "Reset" ans set the initial posture as the ending action. Then set the running time to 1200ms and click "Add action".

| | | | | | | |
|---|---|---|---|---|---|---|
| ▶ | 11 | 1200 | 0 | -163 | 212 | 0 | 0 |

16) The following table are the compete data of action group. If want to adjust an individual action, you can directly double click the corresponding parameters to modify.

| | Index | Duration(ms) | X | Y | Z | Nozzle angle | Nozzle status |
|---|---|---|---|---|---|---|---|
| ▶ | 1 | 500 | 0 | -163 | 212 | 0 | 0 |
| | 2 | 800 | 0 | -163 | 100 | 0 | 0 |
| | 3 | 800 | -8 | -171 | 88 | 0 | 0 |
| | 4 | 500 | -8 | -171 | 88 | 0 | 1 |
| | 5 | 800 | -8 | -171 | 152 | 0 | 1 |
| | 6 | 1500 | 152 | -11 | 152 | 0 | 1 |
| | 7 | 800 | 152 | -11 | 96 | 0 | 1 |
| | 8 | 200 | 152 | -11 | 96 | 0 | 1 |
| | 9 | 500 | 152 | -11 | 96 | 0 | 0 |
| | 10 | 800 | 152 | -11 | 184 | 0 | 0 |
| | 11 | 1200 | 0 | -163 | 212 | 0 | 0 |

## 2.2 Run Action Group

After action programming , click on running icon, as shown in the image below, to check the running effect of action group.
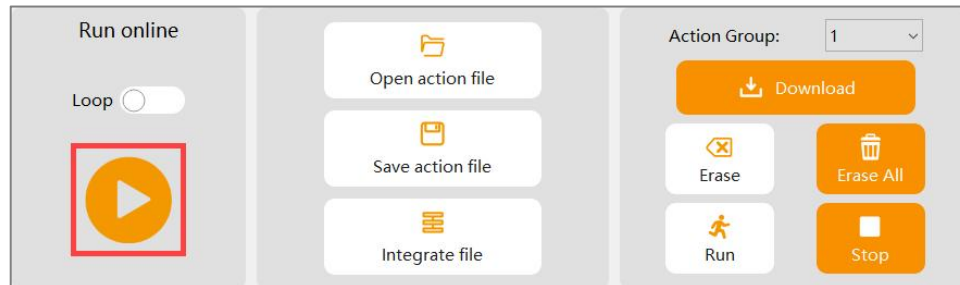


## 2.3 Save and Download Action

1) Click "Save action file" to save the action file for later debugging. Here the action group file is named with "20".
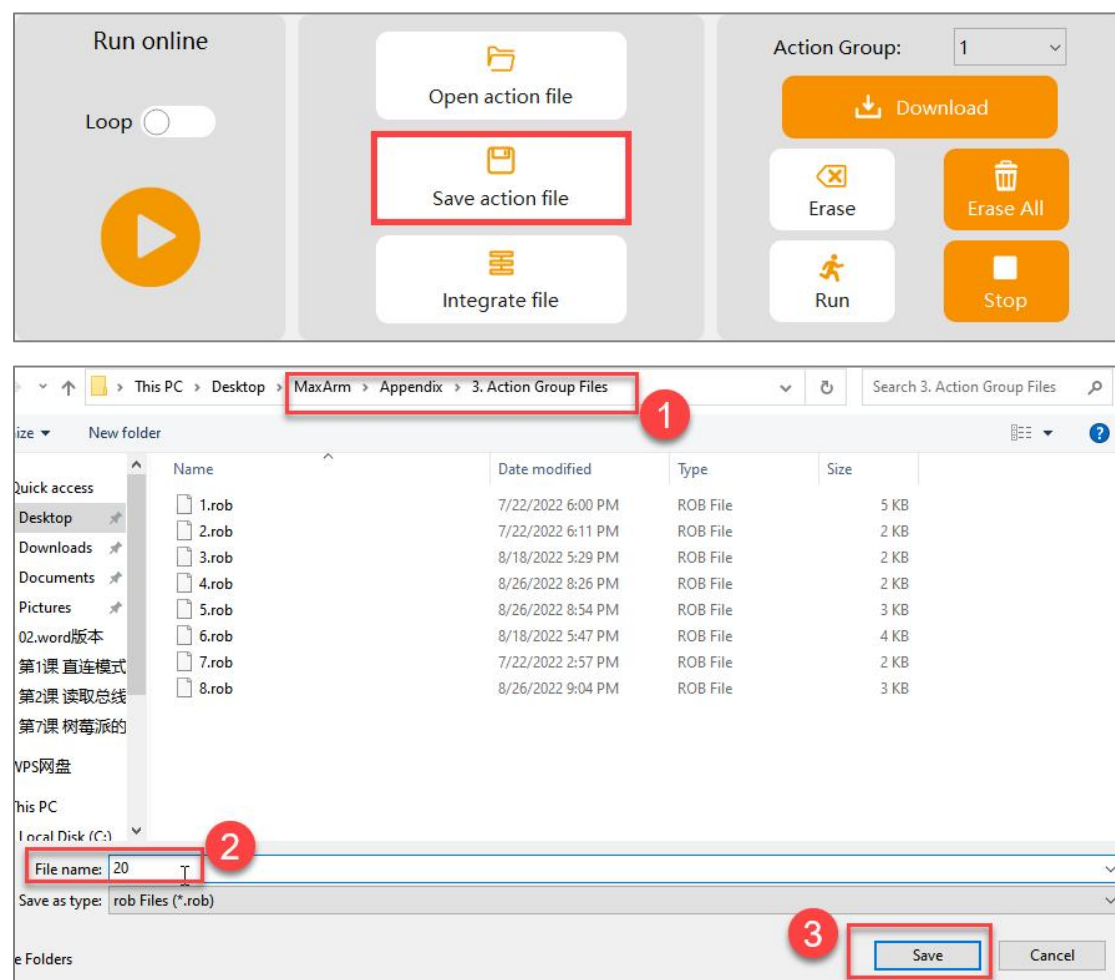
2) After saving the action file, download action group to the corresponding action group number. Select "20" in action group selection box and click "Download".



After downloading, the prompt "Action group is downloaded" will pop up.