uArm Metal
Getting Started Guide

2016.06

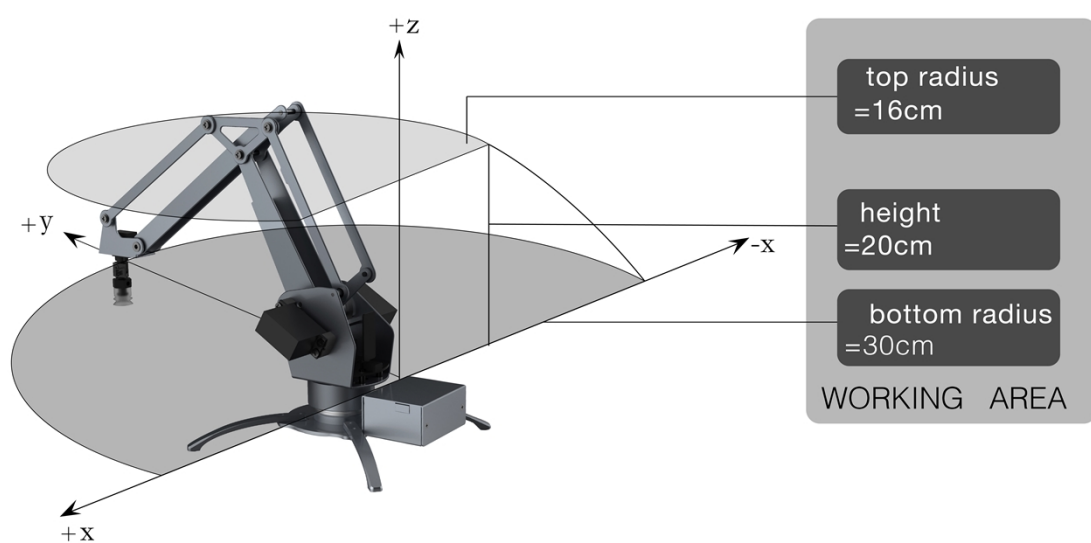# Contents

1. Safety Instructions

- Please don't put your hands in the highlighted area.

- When uArm is moving, please ensure that nothing that may get hurt or broken is within uArm's moving range.

+z

top radius
=16cm

+y

height
=20cm

-x

bottom radius
=30cm

WORKING   AREA

+x

2. Introduction of uArm Metal

2.1   In-the-box Parts List

Check if you get all of the following parts

① uArm Metal main body
② Power Adapter * 1
③ AC Cable * 1
④ Pump * 1 (with 2 screws)
⑤ USB Cable * 1
⑥ Foot Brackets * 4 (with 8 screws)
⑦ Screw Driver * 1

2.2   Download List

To make uArm move, you will need the following files:

·   **Driver (for Windows users ONLY)** - to enable uArm run smoothly on Windows platform

·   **uClient** – the software that you operate to control the movement of uArm

·   **Firmware** – to enable uArm recognize the operations you made via uClient

Download all the files here.

3. Assembly Instructions
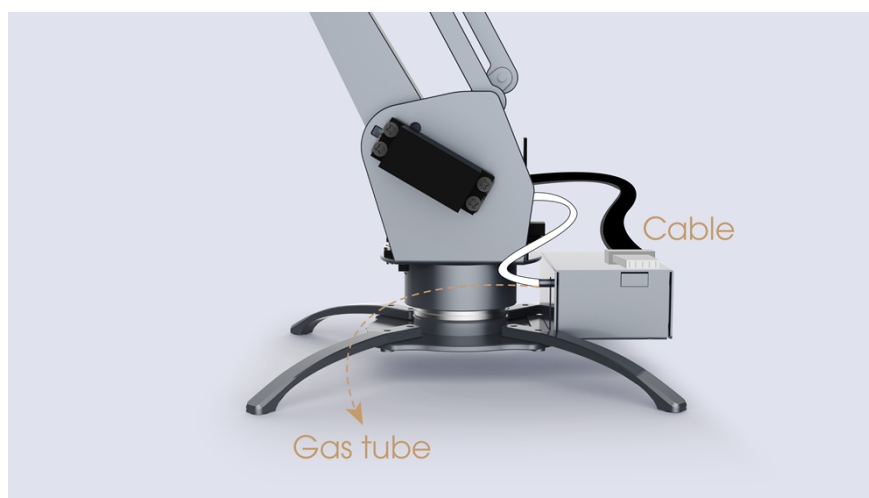
Step 1 - Install the 4 foot brackets

Please be aware the screws should be inserted from the bottom to top.
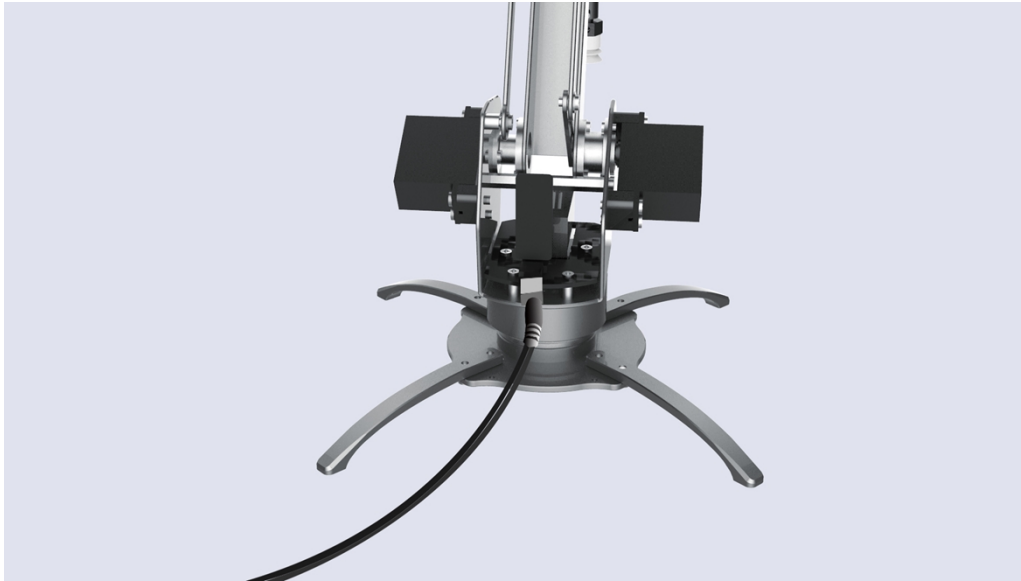
Step 2 - Install the Pump

Step 2.1 - Insert 2 screws to install the pump

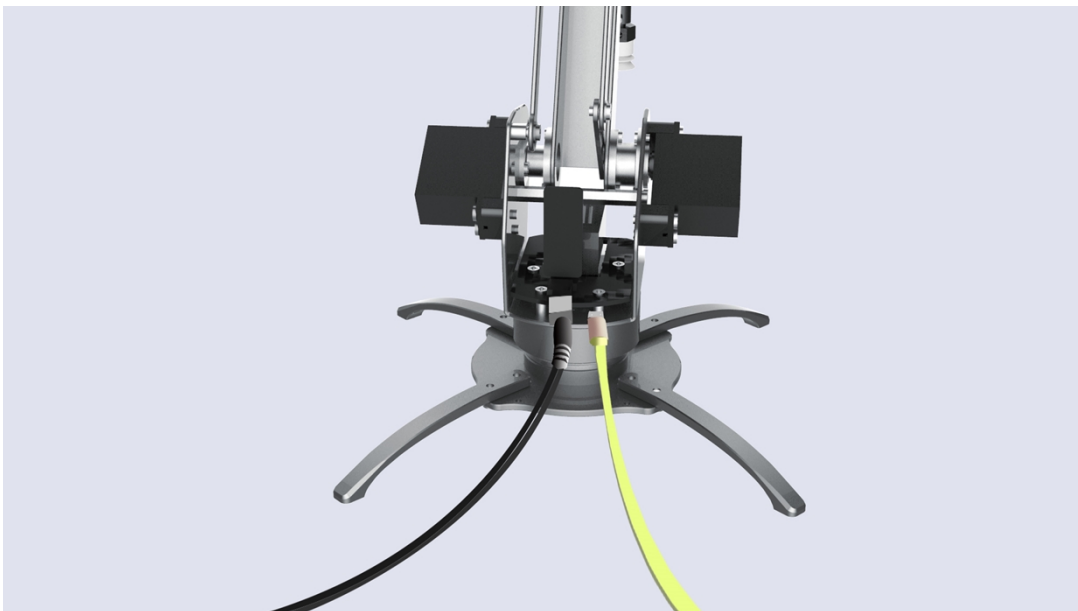**Step 2.2** - Attach the Cable and the Pipe

4. Operation Instructions

Step 1 - Power on
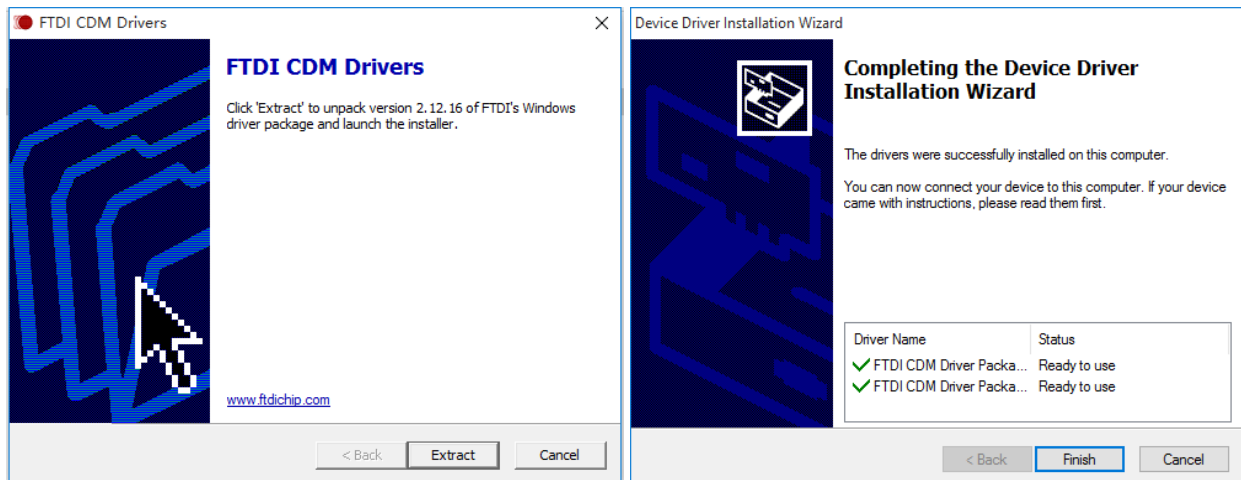

If the RED light is on, the uArm is powered.

Step 2 - Connect uArm to computer with USB

Step 3 - Install the Driver (for Windows users ONLY)

名称	^	修改日期	类型	大小
📁 _MACOSX		2016/6/15 19:31	文件夹	
🔴 driver		2016/6/15 19:31	应用程序	2,075 KB

Step 3.1 - unzip the driver file and run driver.exe

Step 3.2 - Follow the instructions to install the driver.

Step 4 – Ensure the firmware is the latest version

📁 avrdude	2016/6/14 14:31	文件夹	
📄 firmware_helper	2016/6/14 15:12	应用程序	7,833 KB
📄 msvcr100.dll	2016/6/14 14:39	文本文档	1 KB

Step 4.1 – unzip the firmware file and run *firmware_helper_exe*


```
Last login: Wed Jun 22 14:05:00 on ttys000
/Users/alex/Workspace/develop/uarm_metal/pyuarm/dist/firmware_helper ; exit;
                        /Users/alex/Workspace/develop/uarm_metal/pyuarm/di
st/firmware_helper ; exit;
Reading Firmware version from uArm...
Initialize uArm, port is /dev/cu.usbserial-AL01H3QZ...
Firmware Version: 1.6.1
Latest Firmware version: 1.6.1
You already have the latest version of Firmware installed in uArm!!!
Press Enter to Exit...
```

Step 4.2 – Check the firmware & ensure it is the lastest version

- You will get the **No. of uArm port** and whether your **firmware** is the latest version at this step.
- After that, Press *Enter* to Exit.
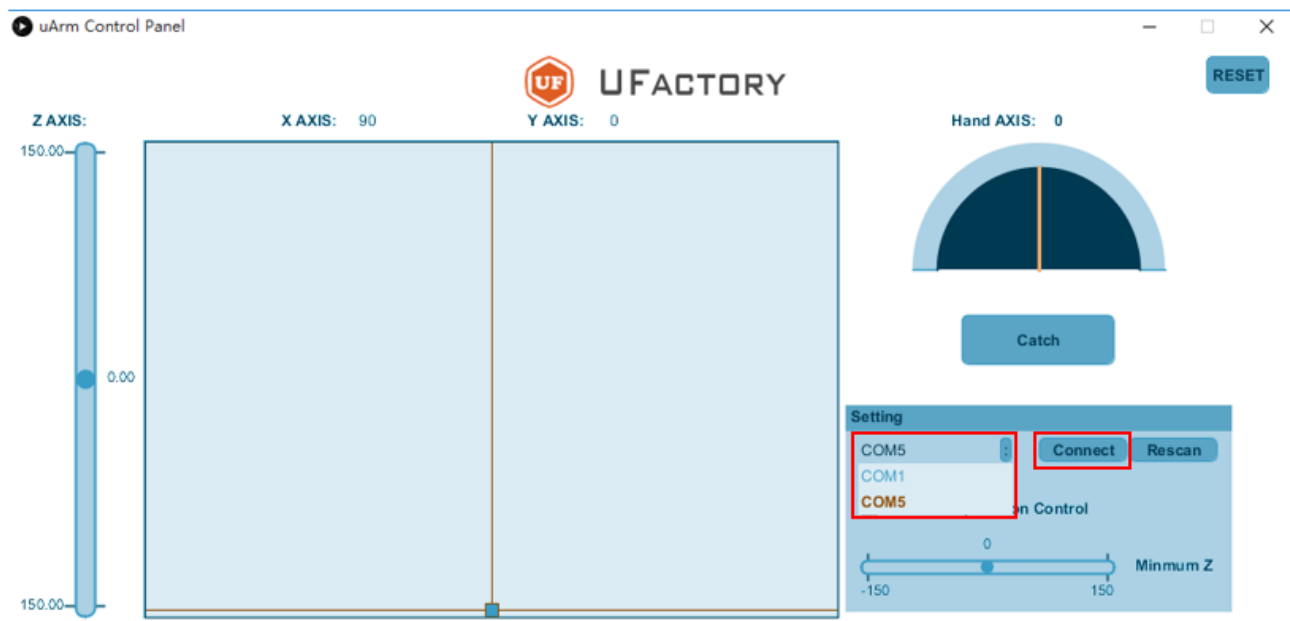
Step 5 – Connect uArm to uClient

data	2016/6/14 15:54	文件夹	
lib	2016/6/14 15:54	文件夹	
source	2016/6/14 15:54	文件夹	
uarm_client	2016/6/14 15:54	应用程序	86 KB

Step 5.1 – Click on uClient.exe to launch the APP.
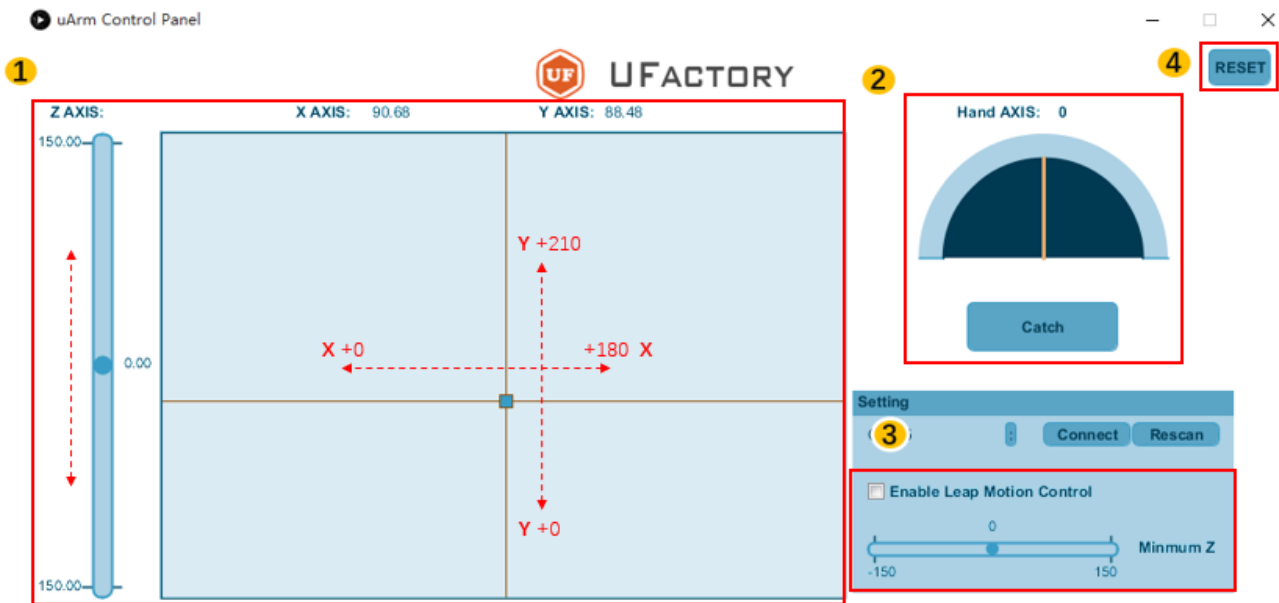

Step 5.2 – Download JRE (for first-time users)

- You will be asked to download **JRE** (Java Runtime Environment) IF your computer does not have one. Press OK , download JRE, and run JavaSetup8u91 .
- This download requirement will not pop up again after you finish JRE setup.
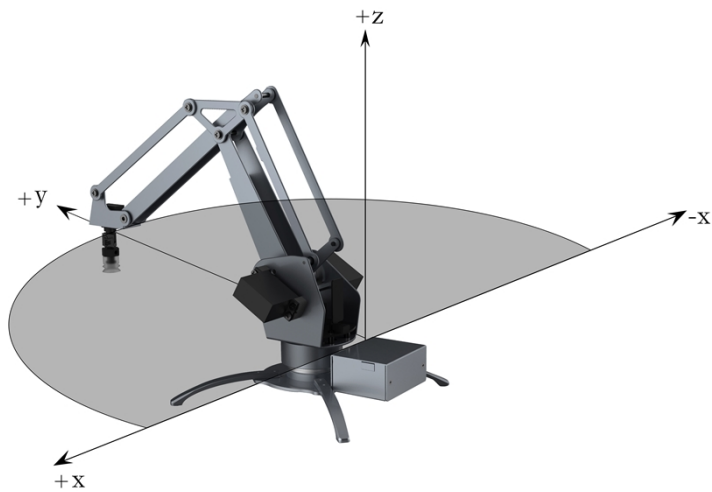

Step 5.3 – Select the right COM AND Click Connect

- COM No. for uArm may vary.
- Click *Rescan* if uClient does not detect the COM for uArm.
- If there are blue lights flashing, uArm is connected with uClient, and you don't need to click Connect again.

Step 6 – Control uArm via uClient

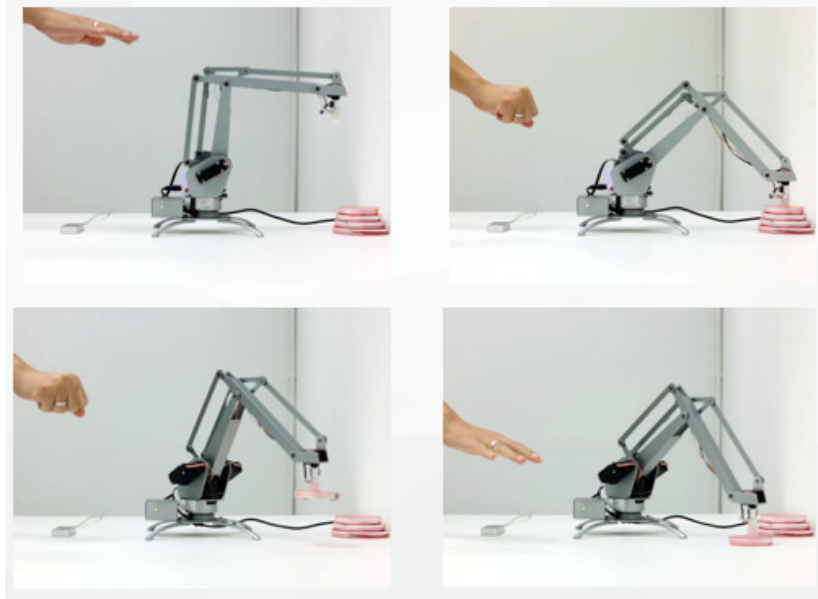**1** **Control uArm movement along X, Y, Z Axis.**

2

Control the end-effector (Suction Cup/Gripper/Universal Holder)

- You may rotate the suction cup **from 0° to 180°** by moving the yellow line. Rotation does not apply to Gripper or Universal Holder.

- Click *Catch/Release* to pick/release (for suction cup) or grab/release (for gripper). Catch/Release does not apply to Universal Holder.

③

Leap Motion Control (alternative to mouse control)

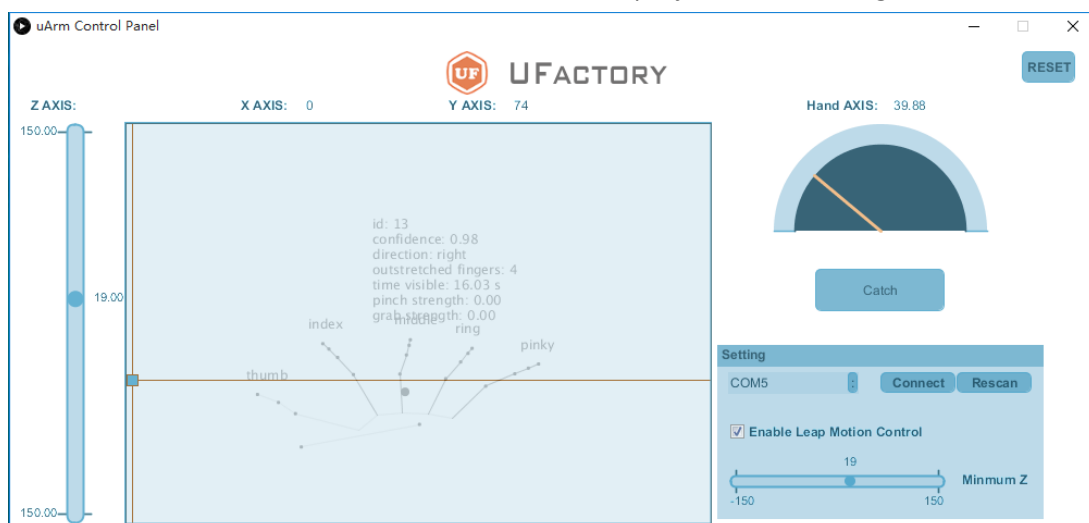IF you have a Leap Motion Controller, you may control uArm in this way.

- To enable Leap Motion Control, please:

  ① **Connect** Leap Motion Controller to PC, and **tick** the box in uClient

  ②Place the Leap Motion Controller in a way that you are facing the flashing GREEN light

  ③Ensure that you have downloaded Leap Motion APP (for PC)

- Leap Motion is activated when the uClient interface displays the following:

- You may change the minimum Z value of Leap Motion Control.

④

You may reset uArm to the default position.

5. Community Support

Welcome to the uArm Community!

Now, start your journey with robot enthusiasts, makers, artists and scientists all around the world.

Official Forum: https://forum.ufactory.cc/

Feel free to ASK, SHARE, and DISCOVER !

For more help and services, please go to Support Page or email to info@ufactory.cc