Dobot User Manual

V 1.1
Let’s Dobot

Dobot’s dream is to bring industrial robot arm into our daily life, let everyone enjoy the pleasure of playing it and empower developers to do delicate work and creative applications.

With innovative and professional design and more than 10,000 hours of work, we have managed to reach high-standard industrial precision and stability, while keeping Dobot at an affordable rate for consumers. Dobot supports more than 7 control methods, making it easy to use for everyone. We believe, the Dobot in front of you is not only a cool robot to have on your desktop, but also a new world to have fun in digging out the unlimited possibilities.
Robot Arm and Accessories

1. Joint 1
2. Joint 2
3. Joint 3
4. Joint 4
5. Suction Cap

Gripper 90° Adapter Bracket Laser & laser Holder Pen & Pen Holder
Dobot Controller
Dobot Framework

Teach&Playback
Laser engraving
Draw
Write
Mouse&Keyboard
Leap motion
EEG
...

PC
DobotApplication
DobotTools

Control APP [iOS/Android]
Voice Control [Android]

Mobile device

USB-UART

Laser
Suction Cap
Gripper
......
Reference Frame
Quick Start Guide

STEP 1: Download Software and Install Arduino Driver

- Download software from our website: dobot.cc/download.
- Install Arduino drivers. You can download Arduino from www.arduino.cc or directly from our website.
STEP 2 : Setup your Dobot

- Connect the stepper motors.
- Connect the angle sensors: loosen the neighbor screws before inserting the sensor modular.
- Connect the servo and air tube.

⚠️ Note: servo cable connection order: orange to white; red to red; brown to black.
STEP 3 : Start Dobot

• Put Dobot in the following recommended position
• Power up
• Reset

⚠️ Info about the recommended position:
(1) When Dobot is powered up at a limited position, it will be locked up and not capable of moving.
(2) The angle sensors have more accurate readings when it is positioned in less than 45° regarding the horizontal plane, which gives a good start for Dobot.

⚠️ Info about Reset: Dobot requires a reset to get the current angle sensor reading after powering up.
STEP 4: Run the software (DobotApplication/DobotTools) and Play!

1. Jog Button: hold the button to move robot.
2. Axis/Linear Switch: switch between Joint Jog and Linear Jog.
3. Pump: turn on/off the pump.
4. Teach Velocity: change the jog velocity for teaching.
5. Current State Description: information about current coordinate, moving mode, joint angle and etc.
6. Saved Point List: table of saved points, which can be edited.
7. Vel & Acc: adjust the moving velocity and acceleration during playback.
9. Save Point/ Delete the Selected Row/ Start Playback/ Pause The Playback/ Set Loop Number

Important Note: Choose the right Baud Rate.

<table>
<thead>
<tr>
<th>Version</th>
<th>Baud Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>v1.0 (KS)</td>
<td>256000</td>
</tr>
<tr>
<td>v1.1 or later</td>
<td>9600</td>
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</table>
**Support**

1. More information available on our official website [dobot.cc](http://dobot.cc).
2. Software and detailed instructions can be found on [dobot.cc/download](http://dobot.cc/download).
3. Share your joy and creative ideas on [forum.dobot.cc](http://forum.dobot.cc).
4. If you have further questions, please send email to [support@dobot.cc](mailto:support@dobot.cc).

**Specification**

<table>
<thead>
<tr>
<th>Number of Axis</th>
<th>4</th>
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<tbody>
<tr>
<td>Weight</td>
<td>3kg</td>
</tr>
<tr>
<td>Dimension base</td>
<td>170mm * 150mm</td>
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<tr>
<td>Payload</td>
<td>500g</td>
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<tr>
<td>Position repeatability</td>
<td>0.2mm</td>
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<tr>
<td>Material</td>
<td>Aluminium Alloy 6061</td>
</tr>
<tr>
<td>Controller</td>
<td>Arduino Mega 2560</td>
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<tr>
<td>Commuication</td>
<td>UART/Bluetooth</td>
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<tr>
<td>Power Supply</td>
<td>12V/5A DC</td>
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<table>
<thead>
<tr>
<th>Joint</th>
<th>Working Range</th>
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<tbody>
<tr>
<td>Joint 1 base</td>
<td>+135° to -135°</td>
</tr>
<tr>
<td>Joint 2 rear arm</td>
<td>+85° to -5°</td>
</tr>
<tr>
<td>Joint 3 forearm</td>
<td>+95° to -10°</td>
</tr>
<tr>
<td>Joint 4 rotation servo</td>
<td>+90° to -90°</td>
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