



DOBOT DT-MG-4R005-02E Robot Arm Kit Magican Plus Finished Device Instruction Manual

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DOBOT DT-MG-4R005-02E Robot Arm Kit Magican Plus Finished Device Instruction Manual



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Safety Instructions

DT-MG-4R005-02E

Dobot Magician Basic Version

Item no: 2899511

1 Intended use

The product is a robotic arm. The product is intended to be used in educational settings and general industrial use, including processing or delivering products or parts through end tools.

In commercial institutions, the accident prevention regulations of the Employer's Liability Insurance Association for Electrical Systems and Operating Materials are to be observed.

The product can be used in schools and training centres. The use must be supervised by trained personnel.

The product is intended for indoor use only. Do not use it outdoors.

Contact with moisture must be avoided under all circumstances.

If you use the product for purposes other than those described, the product may be damaged.

Improper use can result in short circuits, fires, electric shocks or other hazards. The product complies with the statutory national and European requirements. For safety and approval purposes, you must not rebuild and/or modify the product. Read the safety instructions and any accompanying instructions carefully and store them in a safe place. Make this product available to third parties only together with the safety instructions and any accompanying instructions.

All company names and product names are trademarks of their respective owners. All rights reserved.

Description of symbols

The following symbols are on the product/appliance or are used in this document or the accompanying operating/installation/maintenance instructions:

The symbol warns of hazards that can lead to personal injury.

The symbol warns of dangerous voltage that can lead to personal injury by electric shock.



WARNING

Indicates a hazard with a medium level or low level of risk which, if not avoided, could result in minor or moderate injury.



DANGER

Indicates a hazard with a high level of risk which, if not avoided, could result in death or serious injury.



NOTICE

A situation that, if not avoided, can cause personal injury or damage to the equipment. For items marked with such signs, depending on the specific situation, there is sometimes a possibility of significant

consequences.



NOTE

Provides additional information to emphasize or supplement important points in the main text.

Safety instructions



Read this document and the accompanying operating instructions carefully and especially observe the safety information. If you do not follow the safety instructions and information on proper handling, we assume no liability for any resulting personal injury or damage to property. Such cases will invalidate the warranty/guarantee.

General

- The product is not a toy. Keep it out of the reach of children and pets.
- Do not leave packaging material lying around carelessly. This may become dangerous playing material for children.
- If you have questions which remain unanswered by this information product, contact our technical support service or other technical personnel.
- Maintenance, modifications and repairs must only be completed by a technician or an authorised repair centre.

Handling

- Handle the product carefully. Jolts, impacts or a fall even from a low height can damage the product.

Operating environment

- Do not place the product under any mechanical stress.
- Protect the appliance from extreme temperatures, strong jolts, flammable gases, steam and solvents.
- Protect the product from high humidity and moisture.
- Protect the product from direct sunlight.
- Do not switch the product on after it has been taken from a cold to a warm environment.

The condensation that forms might destroy the product. Allow the product to reach room temperature before you use it.

Operation

- Consult an expert when in doubt about the operation, safety or connection of the product.
- If it is no longer possible to operate the product safely, take it out of operation and protect it from any accidental use. DO NOT attempt to repair the product yourself. Safe operation can no longer be guaranteed if the product:
 - is visibly damaged,
 - is no longer working properly,
 - has been stored for extended periods in poor ambient conditions or
 - has been subjected to any serious transport-related stresses.



Power adapter

Do not modify or repair mains supply components including mains plugs, mains cables, and power supplies. Do not use damaged components. Risk of death by electric shock!

- Connect the appliance to a wall socket that can be accessed easily.
- As power supply, only use the supplied mains adaptor.
- Only connect the power adaptor to a normal mains socket connected to the public supply. Before plugging in the power adaptor, check whether the voltage stated on the power adaptor complies with the voltage of your electricity supplier.
- Never connect or disconnect power adaptors if your hands are wet.
- Never unplug the power adaptor from the mains socket by pulling on the cable; always use the grips on the plug.
- For safety reasons, disconnect the power adaptor from the mains socket during storms.
- Do not touch the power adapter if there are any signs of damage, as this may cause a fatal electric shock! Take the following steps:
 - Switch off the mains voltage to the socket containing the power adapter (switch off the corresponding circuit breaker or remove the safety fuse, and then switch off the corresponding RCD protective switch).
 - Unplug the power adapter from the mains socket.
 - Use a new power adapter of the same design. Do not use the damaged adapter again.
- Ensure that cables are not pinched, kinked or damaged by sharp edges.
- Always lay cables so that nobody can trip over or become entangled in them. This poses a risk of injury.

General safety notes

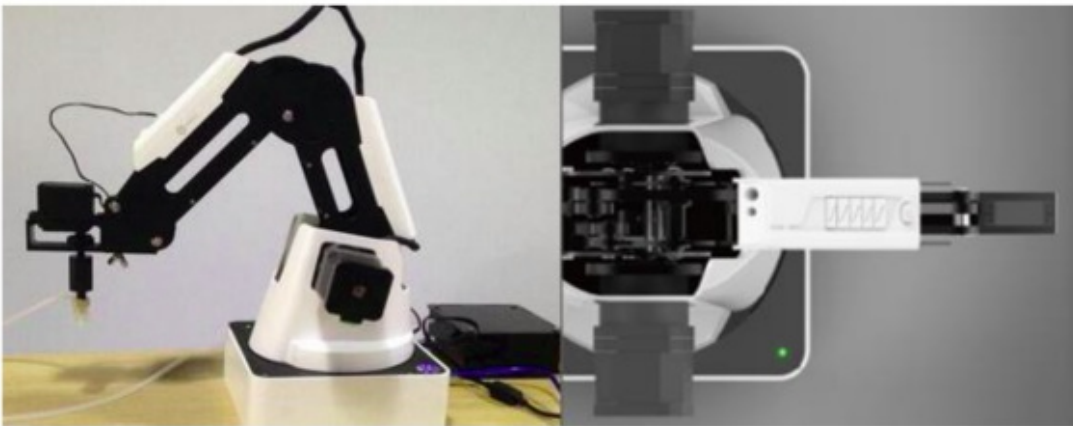
The robotic arm is electrical equipment. Non-professional technicians cannot modify the wire, otherwise, it is vulnerable to injury the device or the person. The following safety rules should be followed when using the robotic arm.

- You should comply with local laws and regulations when operating the robotic arm. The safety precautions in this document are only supplemental to local laws and regulations.
- The DANGER, WARNING, and NOTICE marks in this document are only supplemental to the safety precautions.
- Please use the robotic arm in the specified environment scope. If not, exceeding the specifications and load conditions will shorten the service life of the product even damage the equipment.
- Before operating and maintaining the robotic arm, the personnel responsible for the installation, operation, and maintenance must be trained to understand the various safety precautions and to master the correct methods of operation and maintenance.
- Highly corrosive cleaning is not suited to cleaning the robotic arm. The anodized components are not suitable for immersion cleaning.
- People cannot repair and disassemble the robotic arm without professional training. If there is a problem with the robotic arm, please contact Dobot technical support engineer in time.
- Please comply with the relevant laws when disposing off the product.
- There are small parts in the packing box. Keep them away from children to avoid any accidents.
- DO NOT let children play with the robotic arm alone. All processes need to be monitored while running. After processes have finished, turn off the equipment promptly.

- DO NOT put hands into the workspace of the robotic arm while running to avoid bruising or pinching.
- Be careful when carrying and installing the robotic arm. Follow the instructions on the packing box to put down the robotic arm gently and place it correctly in direction of the arrow.
- Commissioning of the incomplete machine is prohibited until it has been installed in a machine and the whole machine complies with the provisions of the Machinery Directive (2006/42/EC).
- It is prohibited to modify or remove the nameplates, instructions, icons, and marks on the robotic arm and the related equipment.
- Refer to Magician Lite Quick Start along with the packing box before using it.

Precautions

- Please make the Dobot Magician in the workspace with a 45° angle between the Forearm and Rear Arm (as shown in **Figure 1.1**) before starting up. If the LED indicator turns red after starting up, it indicates that the Dobot Magician is at a limited position. Please make the Dobot Magician in the workspace



- Dobot Magician will move slowly to the specific position when shutdown. DO NOT put hands into the workspace of the Dobot while running, to avoid bruising or pinching. Only once the LED indicator completely turns off, the Dobot Magician can be powered down.
- If the coordinates of the Dobot Magician shown on the DobotStudio are abnormal, please press the Reset button on the back of the base to reset Dobot Magician or click Home on the DobotStudio page to perform homing.
- During resetting, Dobot Magician will disconnect from the PC automatically and the LED indicator on the base turns yellow. About 5 seconds later, if the LED indicator turns green, it indicates that the reset is successful.
- During homing, Dobot Magician will rotate clockwise to the limited position and then return to the homing point automatically, and the LED indicator on the base turns blue and is blinking. After homing, if there is a beep sound and the LED indicator turns green, it indicates that the homing is successful.
- Please turn off the Dobot Magician completely first before connecting or disconnecting external equipment, such as Bluetooth, WIFI, stick controller, infrared sensor, color sensor, etc. Or, it causes damage to your device.
- Please wear the laser protective eyeglass when using the laser module. Please protect your eyes and skin from the laser.
- The heating rod will produce high temperature up to 250°C when using the 3D printing module, please be careful.
- Please DO NOT operate or turn off Dobot Magician when burning firmware, to avoid machine damage.

Disposal



This symbol must appear on any electrical and electronic equipment placed on the EU market. This symbol indicates that this device should not be disposed of as unsorted municipal waste at the end of its service life. Owners of WEEE (Waste from Electrical and Electronic Equipment) shall dispose of it separately from unsorted municipal waste. Spent batteries and accumulators, which are not enclosed by the WEEE, as well as lamps that can be removed from the WEEE in a non-destructive manner, must be removed by end users from the WEEE in a non-destructive manner before it is handed over to a collection point. Distributors of electrical and electronic equipment are legally obliged to provide free takeback of waste. Conrad provides the following return options free of charge (more details on our website):

- in our Conrad offices
- at the Conrad collection points
- at the collection points of public waste management authorities or the collection points set up by manufacturers or distributors within the meaning of the ElektroG

End users are responsible for deleting personal data from the WEEE to be disposed of. It should be noted that different obligations about the return or recycling of WEEE may apply in countries outside of Germany.

Technical data

Power supply

Mains power supply..... 100 – 240 V/AC, 50/60 Hz
Input power supply 12 V/DC, 7 A

Wi-Fi module

Wi-Fi standard IEEE 802.11b/g/n (HT20)
Wi-Fi frequency 2.412 – 2.462 GHz
Wi-Fi range..... Indoor: 180 m Outdoor: 310 m

Wi-Fi transmission power 19.9 dBm @ 11b, 1 Mbps

19.9 dBm @ 11b, 11 Mbps

19.0 dBm @ 11g, 6 Mbps

17.0 dBm @ 11g, 54 Mbps

18.0 dBm @ 11n, HT20, MCS0

16.8 dBm @ 11n, HT20, MCS7

17.4 dBm @ 11n, HT40, MCS0

16.0 dBm @ 11n, HT40, MCS

Bluetooth module

Wireless frequency band..... 2.402 – 2.480 GHz

Wireless range 100 m

Wireless transmission power -14 dBm to +8dBm

Environment

Operating temperature -10 to +60 °C

Declaration of Conformity (DOC)



EC Declaration of Conformity

We

Shenzhen Yuejiang Technology Co., Ltd.

Company's address

Room 2003, Building 2, Changwen Park, Nanshan iPark, No.3370, Liuxian Blvd,
Nanshan District, Shenzhen City, Guangdong Province, China

declares that the product described is in conformity with

The MD Directive(2006/42/EC), RED Directive (2014/53/EU), RoHS Directive(2011/65/EU)

Applicable Harmonized standards:

IEC 60204-1:2016 / EN 60204-1:2018, Annex I of 2006/42/EC,
EN ISO 12100:2010, EN ISO 10218-1:2011,
EN 60950-1:2006, EN 301 489-1, EN301 489-17, EN 62311:2008, EN 300 328.

Product Name

DOBOT Magician

Product Model

DT-MG-4R005-02E

Trade Mark



Name and address of the representative authorized to compile the technical file

DOBOT Europe GmbH

Werner-Heisenberg-Str.2, 63263 Neu-Isenburg, Germany

Responsible for making this declaration is

Manufacturer ☒

Authorized representative established within the EU ☐

Aug. 14, 2023

Ye Weizhi

Shenzhen City, China

Deputy Director of R&D

Issue date and Place

Name and position

Signature and company stamp

ye weizhi

Documents / Resources

	<p>DOBOT DT-MG-4R005-02E Robot Arm Kit Magican Plus Finished Device [pdf] Instruction Manual</p> <p>DT-MG-4R005-02E, DT-MG-4R005-02E Robot Arm Kit Magican Plus Finished Device, DT-MG-4R005-02E, Robot Arm Kit Magican Plus Finished Device, Kit Magican Plus Finished Device, Plus Finished Device, Finished Device, Device</p>
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References

- [User Manual](#)

