

## Robot-Arm-Assembly-Kit

The robot arm, made of aluminum, is moved by 6, independently controllable, 20 kg motors.

It is mounted on a beared rotary plate (360°).

The base-plate is made from 4.5mm thick acrylic and equipped with mounting-holes for all popular single-board-computers and microcontrollers.

The robot-arm can be extended by optional available supplies.



**Please download the detailed instruction from our website:**

<http://anleitung.joy-it.net>

**This will guide you, step by step, through the assembling process.**

**We also support you after your purchase.**

If there are any questions left or if you encounter any problems, please feel free to contact us by mail, phone or our ticket-supportsystem.

**E-Mail:** [service@joy-it.net](mailto:service@joy-it.net)

**Ticket-System:** <http://support.joy-it.net>

**Phone:** +49 (0)2845 98469 – 66 (11- 18 Uhr an Werktagen)

For more informations, visit our website

**[www.joy-it.net](http://www.joy-it.net)**

### Our information– and take-back obligation according to the electric law (ElektroG)

This crossed out garbage bin means that electric and electronic devices **does not** belong into the apartment-waste. You have to drop your devices at an approved location.

You must remove batteries and accumulators, which are not enclosed by the device, before dropping them.

Possibilities of return:

As end-user, you are allowed to return your device (which basically has the same functions as the one that you have purchased from us) to us for free for the disposal process. Small devices, where no dimension is larger than 25cm, can be provided to us, in normal household quantities, independently of the purchase of a new device.

Possible return at our company location during the opening times: JOY-IT Europe GmbH, Pascalstr. 8, D-47506 Neukirchen-Vluyn

Possible return in close vicinity: We send you a parcel stamp which you can use to send us your device for free.

Therefor, please contact us by mail at [Service@joy-it.net](mailto:Service@joy-it.net) or by phone.

Informations to the packaging:

Please wrap your device safely. If you do not have any suitable wrapping material, please feel free to contact us. We will supply you with a suitable wrapping. Please inform us if your device contains lilon batteries. In that case an additional warning-sticker needs to be put on the package.

Symbol on electronic devices:



### Declaration of conformity

As the manufacturer, we, the Joy-IT Europe GmbH, declare that our product Robot02 matches the essential requirements during the intended use:

EMV-Guideline 2014/30/EU RoHS-Guideline 2011/65/EU

You can request the detailed declaration of conformity at the following address:

JOY-IT Europe GmbH , Pascalstr. 8, D-47506 Neukirchen-Vluyn or by mail [service@joy-it.net](mailto:service@joy-it.net)

13.07.2017 Yue Yang director



Warning. This declaration of conformity only applies for our delivered components of the kit.

The motors keep the conditions of the EMV guideline during the use of the declared voltage.

By adding own parts, you become the manufacturer and need to ensure that your device matches the regulations.



# Safety informations

Dear customer, please note our following safety informations for protection against electric shock and injuries.

- Keep the manual and safety instructions! You need to hand these out when contracting the device out to another person.
- Use this device only for the intended use and only appropriate to the manual. Accord to the manual during the mounting. Only in this case it is ensured that the device is working properly. Read the manual completely and carefully before you start the assembling process.
- The robot-arm always needs to be placed on a stable and safe ground. Avoid the use of loose and shaky ground! We recommend to mount the base-plate (e.g. a table). For that, the baseplate is provided with holes with which the plate can be screwed to the base ground.
- Before using the device, make sure that the supply voltage matches the declared voltage. You must not vary from the declared voltage under any circumstances.
- Never touch the power plug with moist hands.
- All cables to the microcontroller and to the robot-arm needs to be undamaged. If damaged, you need to immediately replace the correlating cable.
- While working on the robot-arm, the power supply needs to be turned off and secured against repowering (e.g. by removing the power plug),
- Protect the device against moisture and rain. An usage in the rain, moist rooms or even under water must not approve under any circumstances.
- The consumption of alcohol, medication or drugs and sickness, fever and tiredness can impair your reaction and perception. You must not use the device in this case.
- This product is no toy and must not be used by children. Keep it away from them and store it at a place which is inaccessible for children. Protect the robot-arm against the use by unauthorized persons.
- Avoid that the motors come to a charged deadlock.
- Do not keep your hands, or other objects, in the operating-zone during the usage.
- **You must not under any circumstances move to or grab after humans or animals. Do not use the device close to animals!**
- Watch for exposed cables which could tangle up. Remove all cabled from the operating zone. When needed, mount exposed cables with cable-ties.
- The scope of delivery contains a lot of small screws, nuts and other small pieces. They can easily get lost and can be choked by kids and animals and lead to injuries or death. You also should not leave the wrapping material unattended.
- Only operate the robot-arm in its fully mounted condition. Any operation during the assembly process can lead to unexpected behaviour or even to injuries.
- Assemble the robot-arm only under your highest attention. Always watch your fingers.
- Wear gloves as the circumstances require to protect against possible bruises or cuts by components or tools.
- Because of the open construction of the device, sharp edges are unavoidable. Watch out for injury risks.
- Do not grasp into the engines.
- Because of the open construction of the device, uncovered parts and traces can appear. Accidentally discarded metal-parts can cause a short circuit.
- During the use of the robot-arm, vibrations can occur. Screws and nuts can come loose. These need to be retorqued regularly.
- The power supply needs to be equipped with an easily accessible switch which allows you to turn of the robot-arm in an emergency situation, without accesing the operating zone of the robot-arm.
- **While the power supply is active, a safe distance of 1 meter needs to be kept. Make sure that nobody comes below this distance. Depending on the programming, it can come unexpected movements. Persons and creatures which does not stick to this distance can suffer by bruises, excoriations and stitches. This especially applies for soft parts like eyes. There shouldn't be any objects in a distance below 1 meter. Objects in the range of the arm can be slinged away.**
- Every single motor needs a current of up to 2A. Take care of a powerful power supply. At the maximum charge of every motor, a current of 12A is needed. Power supplies of mobile phones are not suitable. Power supplies can heat during an overload which can damage the other devices.
- You become the manufacturer by applying changes to the arm or by adding components. You need to adopt measures so that nobody is getting har med.