

Warranty and FAQ

Welcome!

Discover and share everything you can do at
diwo.bq.com

Ciclop 3D Scanner Kit

Congratulations! You are now part of the RepRap community.

Ciclop is a 3D Do It Yourself scanner kit. It is an open source project designed and developed by BQ.

We would like to thank you for choosing our Kit and we hope you will share your experience with us and others, to be part of this great community.

Welcome!

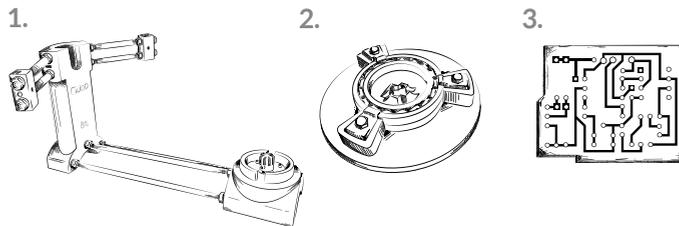
Visit www.bq.com/ciclop

where you will find all the information on: firmware updates, videos, usage recommendations for your scanner, etc.

Where to start

These are the boxes and guides you will find in your kit.

Boxes:



Guides:

1. **Assembly of the Disc and the Structure**
2. **Assembly of the Electronics**

The kit is divided into boxes and guides to help you set up your Ciclop 3D Scanner Kit. We suggest following the numerical order on the cover of each guide.

Information on the Warranty

You can consult the Warranty for this product via this link:

www.bq.com/warranty

Warnings relating to the Warranty

You can personalise your Ciclop and update it with the latest new features as they appear in the community. However, it is important that you understand that modifying the kit and integrating it with products other than those recommended on the www.bq.com website, will immediately invalidate the Warranty.

The Warranty covering the electronics will be invalidated if you make incorrect connections or if you modify the calibration of the motor drivers.

The Warranty of the printed parts will be invalidated in the event of breakage due to inappropriate handling during assembly. Some of these parts are small and fragile. You should therefore take great care when handling them during assembly.

Safety precautions

When using your Ciclop please follow these safety recommendations:

- Do not use cables that have not been approved by the manufacturer, nor any damaged connectors or loose sockets.
- Do not bend or damage the power cable. Do not touch the power cable with wet hands. Do not pull on the cable to unplug the charger.
- Do not throw the camera cable or the USB cable when they are connected to your computer or the electronics.
- Do not knock or drop the kit.
- Handle and dispose of the consumables carefully.
- In potentially explosive environments or near flammable chemical products, switch off the scanner. Always observe regulations, instructions and warning signs.
- Ensure that any small 3D-printed parts, and parts which could be dangerous for small children, remain out of their reach.
- Do not store or transport flammable liquids or gases or explosive materials in the same compartment as the kit or any of its parts or accessories.

Warning

This kit contains two Class 1 laser products according to the IEC 60825-1: 2014 standard. These lasers emit a wavelength of 650 nm. If there is any damage to the packaging or the laser lens, this could lead to laser emission superior to Class 1 levels, which could be dangerous for the eyes.

- Do not switch on the device if there is any damage to the packaging or the laser lens

FAQ

What is the BQ Ciclop 3D Kit Scanner?

Ciclop is an open source 3D scanner kit. Being open source means that the user can study, modify and share it with the community. Being sold in a kit, all the components can be acquired together and at a reasonable price.

Why has BQ created the Ciclop 3D Scanner Kit?

Because we want to contribute to the community and to encourage everybody to use, improve and develop these devices.

Who is the Ciclop 3D Scanner Kit for?

For any maker wanting to obtain a 3D model of a physical object. Designers can use this model as a starting point for their designs, whereas users can create replicas of physical objects which can later be printed.

It is important to be aware that it will not produce an exact replica of any physical object under any environmental conditions. The latest 3D scanner technology in existence does not allow exact copies of any object to be made, however, it can create excellent approximations.

Each user will discover its best application.

What can and can't be scanned with the BQ Ciclop 3D Scanner Kit?

Any object that fits within the scanned volume. You need to remember that it is not possible to scan hidden orifices or elements, transparent, very shiny or very dark objects, as the technology used by the scanner is based on vision.

What exactitude and resolution can the Ciclop 3D Scanner Kit reach?

The resolution is between 0.3 and 0.5 mm. It depends on both the lighting conditions and the calibration process.

Can the BQ Ciclop 3D Scanner Kit capture the colour of the surface of my objects on scanning them?

Yes it can.

Are special lighting conditions needed to scan with the Ciclop 3D Scanner Kit?

Good lighting conditions are needed, but nothing special: natural daylight or artificial light will suffice.

Can I modify the 3D model obtained from the objects scanned with the Ciclop 3D Scanner Kit?

Yes, any program that enables the point clouds or meshes to be modified can be used to modify the scanned models.

What software do I need to use the BQ Ciclop 3D Scanner Kit?

How do I get it?

Horus. This application is the essential component of the scanning process: it manages the communications, the capturing of data and synchronisation, the image processing and the point cloud generation and visualisation. You can get Horus here <http://www.bq.com/es/productos/ciclop.html>, or you can download the entire project from GitHub (<https://github.com/bq/horus>). More information at: <http://diwo.bq.com>.

Are these lasers safe?

Yes, Ciclop uses Class 1 line lasers of 650 nm, which have been certified as safe by the TÜV, in compliance with the IEC 60825-1: 2014 standard.

How does the BQ Ciclop 3D Scanner Kit work?

There are different ways of capturing the three-dimensional geometry of an object, such as laser triangulation, structured light or stereo vision. The first method offers higher levels of precision and resolution, but it also has its limitations in terms of the type of materials it can scan.

Ciclop uses laser triangulation, which is based on capturing the projection of a red light laser over an entire object using a camera. This projection allows the form of the object to be obtained, by constructing the point clouds.

Where can I find more information on the BQ Ciclop 3D Scanner Kit?

Visit diwo.bq.com

Technical support

Please see the link for our technical support website below. You can contact us if you need help or for any issue relating to your Ciclop:

www.bq.com/technical-support

Telephone: +44 207 048 01 42

Disposing of this Product Correctly



(Electrical and electronic waste). Applies within the European Union and in European countries with selective waste collection systems).

The presence of this symbol on the product, or on accessories or informative material which accompany it, indicates that at end of life, neither the product nor its electronic accessories (laser, cables, etc.) can be disposed of with other domestic waste. To prevent any damage to the environment or human health, separate these products from other types of waste and recycle them correctly. This will help promote the sustainable use of material resources. Household users should contact the retailer that they purchased the product from or the relevant local authorities to find out how and where they can recycle this product safely and without harming the environment. Business users should contact their supplier and consult the terms and conditions of the purchase agreement. This product and its electronic accessories should not be disposed of with other waste materials such as the box and non-electronic materials.

