

HOLMAKERS PROJECT

**Motivating secondary school students towards STEM careers through
hologram making and innovative virtual image processing practices with
direct links to current research and laboratory practices**

Erasmus+ KA2 2017-1-PL01-KA201-038420

Replicating the Portable Holography Kit

1. Introduction

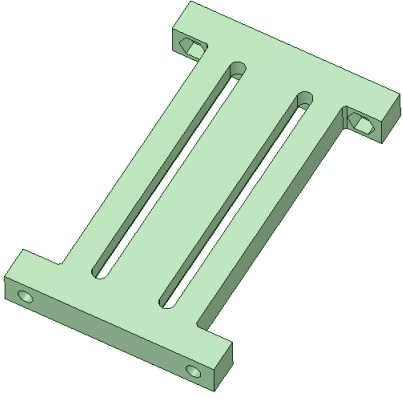
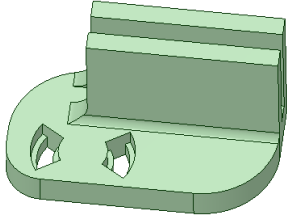
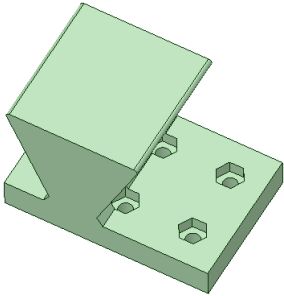
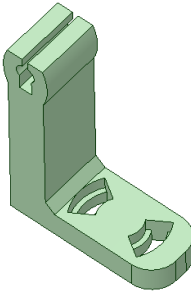
The Portable Holography Kit is mainly composed of 3D printed parts, so you should have access to 3D printer. In this document you will learn how replicate your own kit.

2. List of the parts

Below you will find the list of needed components of the kit.

2.1 3D printed parts.

Printable parts included in the kit can be downloaded from this location:
<https://holomakers.eu/wp-content/uploads/2019/08/3D-printed-parts.zip>

<p>Base of the kit</p>  <p>x2</p>	<p>Holographic film holder</p>  <p>x1</p>
<p>Base for placing the object</p>  <p>x1</p>	<p>Laser diode holder</p>  <p>x1</p>

2.2 Other elements

2.2.1 Screws and nuts

In the kit, M4 screws with a hexagonal socket head are used. You will need 2 screws M4x16mm to connect together base of the kit and 8 screws M4x14mm to connect rest of 3D printed parts. Additionally 10 nut M4 will be needed.

2.2.2 Plexiglass plates

Two plexiglass plates of dimension 5x10cm each will be needed.

2.2.3 Laser diode

As a laser source, popular 5mW red laser diode is used. Choose the laser which is powered with 3V voltage and 6mm housing diameter.

2.2.4 Power supply

The laser source is powered with two batteries R6. It is convenient to put batteries in battery holder.

2.2.5 Plasticine

Plasticine is used for stabilizing the object.

2.2.6 Holographic film

Finding a holographic film supplier can be difficult. One of the companies where you can buy such a film is Geola Digital uab. You should ask for photopolymer GP3C.

3. Combining all parts together

Here you can find an instruction how to combine all parts of the kit:

https://holomakers.eu/wp-content/uploads/2019/11/Holomakers_holokit_manual.pdf

<https://holomakers.eu/get-started-with-the-holokit/>

Declaration

This report has been prepared in the context of the HOLOMAKERS project. Where other published and unpublished source materials have been used, these have been acknowledged.

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