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# iQ-Defocus

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User Manual

March 15, 2018





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# 1 INTRODUCTION

Important information: Read the manual carefully before using this device.

Inappropriate utilization may cause damages to the device, to the DUT (device under test) and/or other components of your setup.

Keep these instructions in a safe place and pass them to any future user.

## 1.1 Conformity

We, Image Engineering GmbH & Co. KG, hereby declare that the iQ-Defocus corresponds to the essential requirements of the following EC directive:

- Electromagnetic Compatibility - 2014/30/EU

## 1.2 Intended use

iQ-Defocus is used to defocus the automatic focusing system of a camera with high temporal accuracy.

A typical use of iQ-Defocus is to measure the camera release time in conjunction with the LED-Panel.

- Only suitable for indoor use.

## 1.3 Foreseeable misuse

### 1.3.1 Connect only to LED-Panel and DTS

iQ-Defocus cannot only be connected to LED-Panel and DTS. Usage with unsupported devices will cause irreversible damage to the iQ-Defocus.

## 1.4 General safety information

**Do not** open the device without any instructions from the Image Engineering support team or when connected to a power supply.



## 2 GETTING STARTED

### 2.1 Scope of delivery

iQ-Defocus is available in different product bundles. The available bundles are published at: <http://www.image-engineering.de>

#### **iQ-Defocus**

- iQ-Defocus
- 7.5 m extension cable for iQ-Trigger-T (6.3 mm TRS connector)

### 2.2 Commissioning

The iQ-Defocus comes ready to use. Follow the steps in chapter 3 to set up the measurement environment.



## 3 OPERATING INSTRUCTIONS HARDWARE

### 3.1 Setup

The Setup of the iQ-Defocus depends on the measurement periphery.

#### 3.1.1 Using iQ-Defocus on an iQ-Mobilemount

The iQ-Defocus is designed for seamless integration into the measurement workflow with the iQ-Mobilemount.

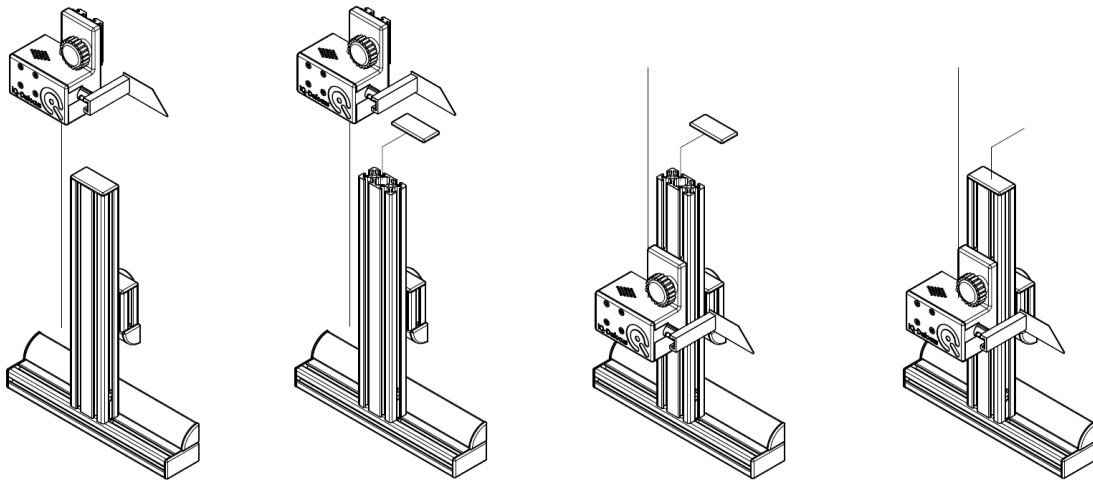


Figure 1: Attach the iQ-Defocus to the iQ-Mobilemount

To attach the iQ-Defocus to the iQ-Mobilemount:

- Remove the top cover of the iQ-Mobilemount (use a thin screwdriver as a lever)
- Make sure the tightening hand screw of the iQ-Defocus is loose
- Slide the iQ-Defocus into the grooves of the iQ-Mobilemount as shown in Figure 1
- Place the cover back on the iQ-Mobilemount



### 3.1.2 Using iQ-Defocus on a third party mount

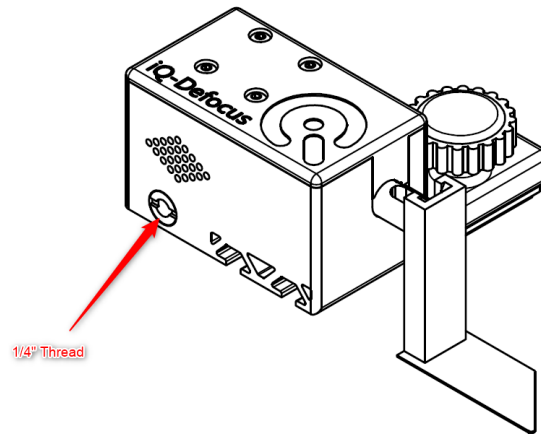


Figure 2: 1/4" Thread (tripod mount)

The iQ-Defocus can be attached to a tripod using the 1/4" thread on the bottom of the device. We recommend to use a boom stand when the iQ-Defocus is not mounted to the iQ-Mobilemount.

### 3.1.3 Adjusting for lens depth

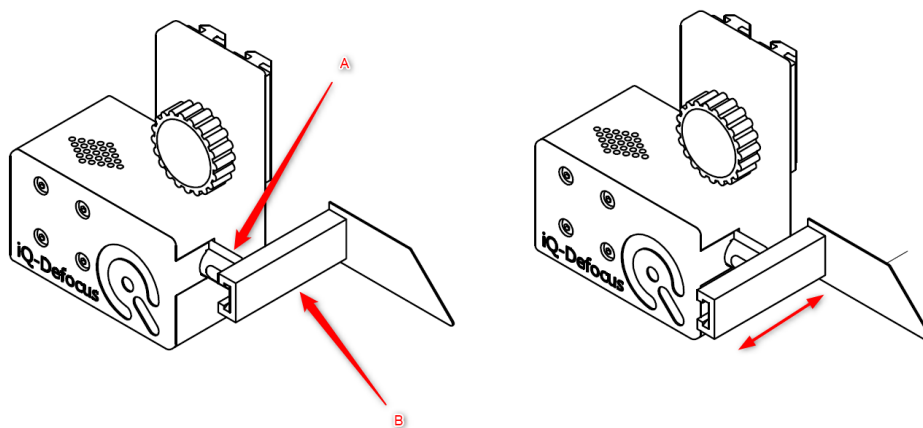


Figure 3: Adjusting for different lens depths

The iQ-Defocus shutterblade can be easily adjusted for different lens depths. Apply pressure to the clip (A) and slide the shutterblade adjustment profile (B) to the desired position.



## 3.2 Using iQ-Defocus with other IE measurement devices

### 3.2.1 LED-Panel V4 (timing measurement)

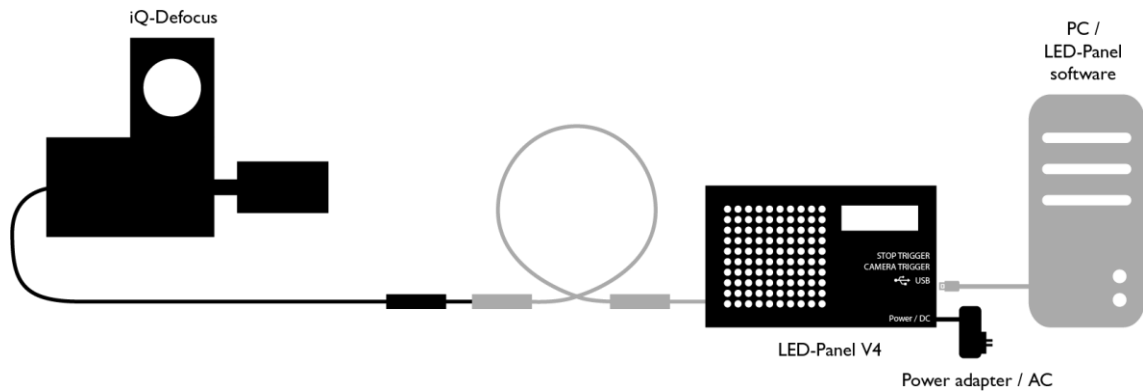


Figure 4 Connection scheme iQ-Defocus and LED-Panel V4

Mount iQ-Defocus in front of the device under test and connect the TRS connector (6.5 mm “jack plug”) to the LED-Panel V4 (over optional extension cable).

For details on how to measure different timings (shutter lag, autofocus time ...) and how to interpret the taken pictures, please refer to the LED-Panel manual.

### 3.2.2 DTS (Dynamic Test Stand)

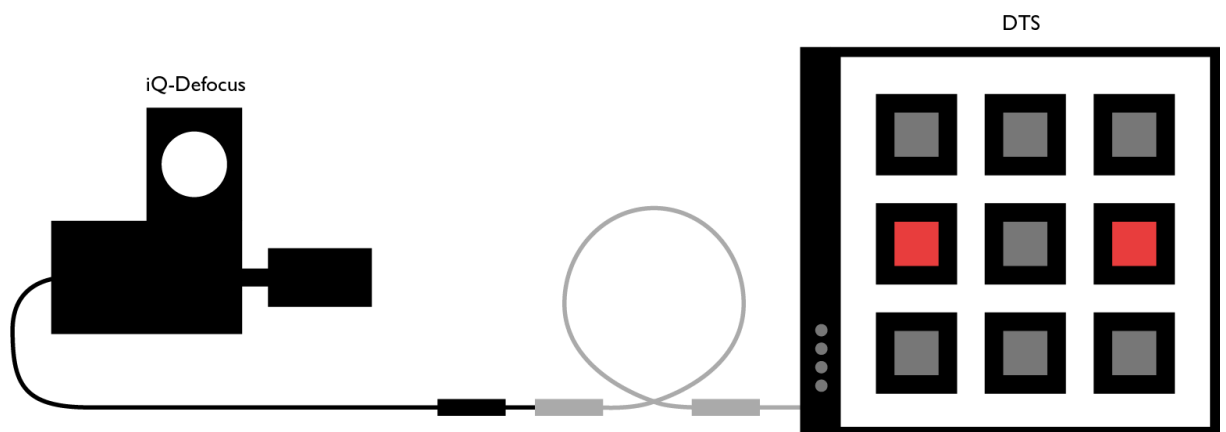


Figure 5 Connection scheme iQ-Defocus and LED-Panel V3

Mount iQ-Defocus on the device under test and connect TRS connector (6.5 mm “jack plug”) to the DTS (over optional extension cable).

For details on how to measure global flicker or modulated light mitigation probability, please refer to the DTS manual.



### 3.3 Care instructions

- Always store the iQ-Defocus in the supplied case
- Avoid contact with water
- Do not use any chemical cleaning agents
- Use compressed air or a dust blower to remove dust

## 4 ADDITIONAL INFORMATION

### 4.1 Storage and transport

Ensure that the iQ-Defocus is fixed and the device is wrapped properly for transport to avoid damages of the shutterblade. Unplug all cables/devices from iQ-Defocus before storage/transport.

### 4.2 Disposal instructions

After the service life of iQ-Defocus, it must be disposed properly. Electrical and electromechanical components are included in iQ-Defocus. Observe your national regulations. Make sure that iQ-Defocus cannot be used by third parties after disposing of it.

Contact Image Engineering if assistance for disposal is required.

## 5 TECHNICAL DATA SHEET

Refer to the technical data sheets. It can be downloaded from the website of Image Engineering at: [www.image-engineering.com](http://www.image-engineering.com).