

DG

FLUGZEUGBAU GMBH



OPERATING MANUAL FLASH LIGHT "SAFETY-FLASH"

TYPE: DG-800 AND
DG-SINGLE SEATERS

VARIANTS: ALL WITH SINGLE CANOPY

Issued: May 2017

Owner:

Ser. No.:

Registration:



The technical content of this document is approved under the authority of DOA Ref. EASA.21J.530.

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October 24, 2017

This flash light is to be operated in compliance with information and limitations contained herein.

These instructions must be carried on board.

The flash light is not suited for operation as an anti collision light as defined in aviation regulations and may not be used as such.

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0 Manual Contents

0.1 Log of Revisions

Any revision of the present manual, except actual weighing data, must be recorded in the following table and in case of approved Sections endorsed by the responsible airworthiness authority.

The new or amended text in the revised page will be indicated by a black vertical line in the right hand margin, and the revision No. and the date will be shown on the bottom left hand of the page.

No	Page	Description	Date	approval
1	all	Initial issue	May 17	Oct. 24,2017

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Installation plans

The following wiring and installation plans are part of this operating manual.

Installation for all types and variants:

GKSF-EP-001 and Z226.

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1 Introduction

In the following text the amendments to those sections of the flight manual which are affected by the installation of the FLASH LIGHT will be given.

2 Section 1 of the flight manual (General)

2.1 System description

A circular FLASH LIGHT is attached to the forward fuselage nose around the opening for the air-ventilation inlet see figure 1. The FLASH LIGHT consists of a circuit board on which 9 high power LED's are assembled which is casted together in a ring made of epoxy resin. This ring is shaped in such a way that it exactly fits the outer shape of the forward fuselage and hence does not influence the aerodynamic quality of the fuselage nose. The electronic is based in a small aluminium –box in front of the front seat separately.



Figure 1, fuselage nose of the DG-single seater with FLASH LIGHT/Safety-flash

To achieve an optimal visibility in most terrains the FLASH LIGHT flashes with white LED's. The FLASH LIGHT is operated by a manual switch or can be connected to a FLARM anti-collision warning device. It always emits a series of 3 consecutive flash pulses, which last 20 milliseconds.

In case of a connection with a Flarm device it has to be connected to the How2Soar "Rechenknecht" and must be operated by the given instructions from How2Soar.

2.2 Power consumption

The FLASH LIGHT has a peak current draw of about 4,5A during a flash, when operated at 13.5 V. For lower voltages, the current is also lower. The average power consumption depends also on the alarm stage of the FLARM, see table 1.

Due to the high peak currents, the FLASH LIGHT has to be operated with a separate Battery of min 7,2 Ah. A Lithium-Iron-Phosphate (LiFePo) battery with a minimal capacity of 10 Ah is recommended. To avoid radio interference in FLASH LIGHT operation due to long cable lengths and resulting strong voltage drops, the FLASH LIGHT battery has to be positioned in the baggage compartment. For this reason it is not allowed to operate the FLASH LIGHT together with the normal installed battery or the internal power supply batteries for motor-glidern.

If not yet installed in the baggage compartment, an additional battery of min 7,2 Ah or a LiFePo Batterie of min 10 Ah has to be installed with separate power-lines from Battery to Elektronik-Box of the FLASH LIGHT.

If a 7,2 Ah dryfit battery is installed a upstream DC-DC-enhancer with an output of 14,8 V can be installed in front with the Electronic-box. This gives a total available flash-time of approx. 7 hrs in the same brightness. But be careful, if the voltage of the battery is dropped too low, this can result in damage to the battery. To prevent this, check that the battery is fully charged before installation.

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3 Section 2 of the flight manual (Limitations)

3.1 Limitation placards

Directly below the placard Cockpit Check the following placard is installed:

FLASH LIGHT off?

4 Section 4 of the flight manual (Normal procedures)

4.1 Pre-flight inspection

Respect the following additional item of the pre-flight inspection:

FLASH LIGHT off?

Warning: The light emitted by the high power LED's on the FLASH LIGHT is extremely bright and could be harmful to the human eyes, when looking into it directly from a close distance. The person helping out with the aero tow could be glared by the flash. Therefore the FLASH LIGHT should only be switched on after release of launching.

4.2 Control

The FLASH LIGHT can be switched on or off with the switch marked „FLASH LIGHT“ on the instrument panel.

If the FLASH LIGHT is connected to the FLARM by the “Rechenknecht” of How2Soar the control must be followed by the given instructions of How2Soar. These instructions have to be amended to these operating instructions.

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5 Section 7 of the flight manual (Sailplane and systems description)

5.1 Cockpit, cockpit controls and placards

Switch for Flash Light (at a suitable place on the instrument panel)

Up on
Down off

Flash light on off

6 Section 8 of the flight manual (Sailplane handling, care and maintenance)

6.1 Function test on the ground

To verify the FLASH LIGHT is serviceable, the FLASH LIGHT has to become switched on now, the FLASH LIGHT should give 3 flashes every 3 seconds.

6.2 Software settings of the FLARM device

If the FLASH LIGHT is connected to a Flarm-unit by a How2Soar-“Rechenknecht” please refer to given instructions from How2Soar. These instructions have to be amended to these operating instructions.

6.3 Maintenance

The flash light is maintenance free.

In case of a defect the flash light has to be replaced analogous to “Installation instructions TM DG-G14”.