

## **Panoramic Light „Majak“**

Operating Instructions

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## Usage purpose

The panoramic light „Majak“ is a special light for digital or analog recording of panoramas with a rotating camera. The rotating camera must take a panoramic picture by slit-like scanning of object and must have a possibility for the simultaneous rotating drive of the light.

„Majak“ is furthermore suitable for other slit-like scanning purposes for example in case of linear movement between a line camera and the object to be reproduced or in case of turn-table recordings.

The light is intended to be used in dry inner rooms only under supervision and for short operation until 10 minutes.

## General description and function

According to the basic principle of the camera only a narrow, mostly vertical gap is exposed during the recording at a specific moment. For that reason only such a gap is excellently illuminated instead of the whole scene.

A half-cylindrical parabolic reflector focusses the light of a halogen light tube in the certain recording direction in order to use a comparatively low light power very effectively for the illumination of large areas.

The panoramic light is offered in two variations:

- 1) 50.010 - Reflector pivoted by ball-bearings on a static centered pillar. This patented version is suitable in all combination with other panoramic cameras not being connected to other devices via a static layed cable and is especially suitable for our electronic panoramic cameras of the series KARLINE, but also for other comparatively forms of construction. The main advantage of this variation is the easy turning of the reflector without moving the connecting cable with it. As a result the mechanics of the camera is relieved and the cable guide is very easy. As far as the construction of the camera allows this we recommend to prefer this variation.
- 2) 50.011 - Static reflector assampled to the centered pillar in order to fasten to the rotating camera. This version is suitable for all types of cameras which have a fastening possibility (tripod thread) on top of the camera and a sufficient tough drive for the powering cable moving with it. A tripod support included in the delivery set makes possible to adapt in any special conditions.

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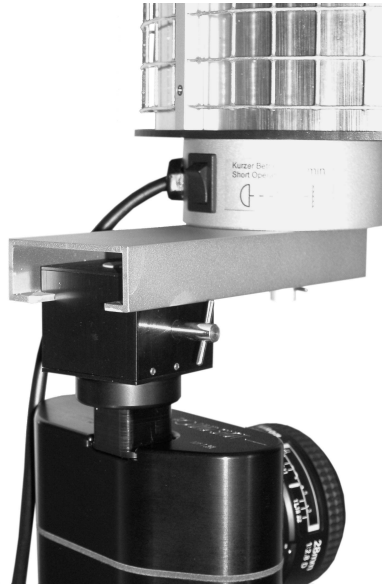
## Mount the light

### Variation 50.010:

The fastening of the light occurs directly on the photo tripod by  $\frac{1}{4}$ " - drill hole at the bottom. The camera is placed on top of the light and is fixed by the existing  $\frac{1}{4}$ " screw. The bow that has to be fixed afterwards serves for the mechanic coupling of the turning movement.

### Variation 50.011:

A two-pieced tripod support permits the directly fastening on almost every panoramic camera. Even if the fastening place lies not central to the recording axis it could be equalized by the moveable bar. The bar has to be fixed from below to the light and the base has to be fixed on top of the camera. The distance between the camera's fixing point and the light could be varied by moving the bar in the base while the angle is each adjusted at the fixing points. An eccentric clamp with a locking handle serves for the lockpin of the base. The fastening of the camera could be operated with a coin. To save the camera from unnecessary thermal radiation it is advisable to move the light as far as possible in the recording direction. The center of the light should possibly placed over the optical recording axis in order to avoid a parrallax. The tripod base plate was intentional provided with a large connecting surface to transmit occurring momenta of lever to the area of the camera case. If the available place around the drill hole is not enough, the screwing of a customary in trade tripod nut between the camera and the light or a restricted fitting for tripods are helping.



## Adjustment of synchronous running

Because of the selective focussing of the light an accurate synchronization between the light movement and the camera movement is very important. In other words, the light has to illuminate exactly these parts of the image

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which are recorded by the camera at the same moment. That assumes that there is no horizontal angle offset between camera and light.

In case of electronic cameras with an imaging preview and automatic return - for example the model KARLINE - it is very easy to adjust by taking a control recording and driving back to the starting point. Now the light is being turned relative to the camera, so that the center of the illuminated stripe overlaps exactly the recorded beginning of the image. A following test by recording allows the control and eventually correction.

In case of analog cameras with recording on a film this adjustment is not very critical because of a wider recording slit. However an existing viewfinder which allows to take a bearing on in the current recording direction is thereby very helpful.

## **Practical usage**

Like the usual photography not only manages with one guiding light, a panoramic camera using our light should be added by additional light sources which belongs to the room illumination. On the one hand it prevents the deepest shadow which arises compulsory with an single light on the object contours, and on the other hand it is leading to more dynamik and brilliance on the picture. Many practical usage cases have shown that our light is excellently suitable to be combined with the room illumination and furthermore enables a detailed recording full of contrast. Hereby also the colour temperature of the used halogen light is helpful, because it is well to combine with further light bulbs.

Illumination distances less than 2 meters are not totally focused, that leads to an avoidance of outshined objects in the close range. According to sensitivity and recording conditions the maximum distance of illumination could be about 50 meters or more.

## **Colour temperature**

According to the used halogen bulb and supply voltage the recommended type of halogen lights have a colour temperature of about 3200 K. Electronic cameras with automatic or half-automatic white balance can be optimal calibrated to this illumination. In case of analog recordings with films having daylight characteristic a colour correction filter (KB15/80A/LB-131/mired -131) is necessary.

## **Flicker characteristic**

If lights are working with alternating current it leads to a light modulation with its double frequency. In case of 60 Hz alternating current the light is modulated with 120 Hz, respectively 1/120 s. This appearance is especially

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known with fluorescent tubes as flickering effect, which originates from interferences with the recording time for the picture or with the exposure time. In case of high power halogen bulbs this effect is largely out of question because of the thermal inertia - such as in case of our light. Nevertheless, should a rest of this modulation be visual, for example in case of simultaneous room lighting with fluorescent tubes, then we recommend a extension of the exposure time, for example onto 1/30 s or the usage of an averaging function of the camera, such as it is possible in the type KARLINE.

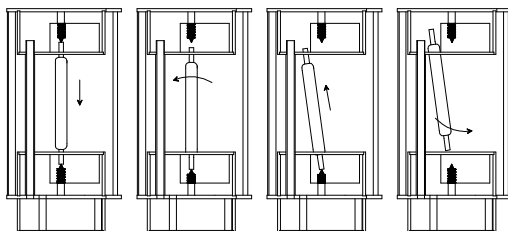
## Hints regarding the transporting case

The transporting case is tight-fitting padded with thermoplastic foamed polystyrene. The light always has to cool down until it is lukewarm before storing it in the case.

## How to change the light

**Before each change of the light the mains plug has to be pulled out and the cool down of the lamp is to wait for. Danger of burning!**

The defective lamp has to be carefully pressed down against the elastic lamp holder, with its top end at the back being tipped over into the omission of the case and then move it as far as it will go in the upper omission. Now it is possible, starting at the



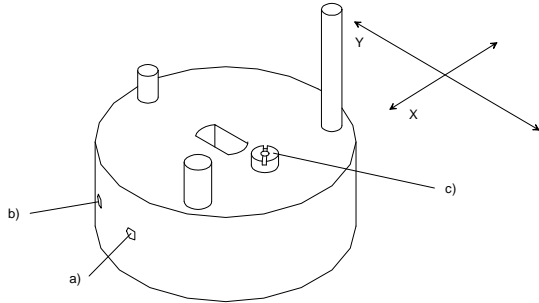
bottom, to move the lamp completely out of the light (see sketch). The insert of the new lamp processes just the other way round. The glass piston always should be held with a clean, dry and lintfree piece of cloth. If there is unintentionally skin contact the piston is carefully to clean with a lintfree piece of cloth and some spirit. While inserting the new lamp one has to be very cautious in order not to cock it, scratch it or to break it into pieces. The new lamp has to be centered and upright in the light. As a sign for the right position in the lampholder the lamp has to be easily turnable in a small angle range around its axes. **While turning on**, the lamp should **not be aimed at persons or objects situated in the near** because especially during the first run the lamp could burst by cracks of the glass piston.

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## **Lamp adjust:**

50.010:

In usage of Inbus-Key (2,5 mm) at adjusting screws a) above and below the filament has to be justified vertical and centered in x-direction (take a bearing on pillars). Afterwards make the same adjustments at adjusting screws b) in y-direction.



50.011:

Loosen nuts c) carefully a little above and below until the lamp could be moved (do not touch the lamp with naked fingers!). Adjust the filament centered and vertical. Tight nuts c) again.

## **Safety hints - please note!**

The panoramic light has been shipped from the manufacturer in a condition meeting all safety requirements. To ensure a safe operation, observe the following safety hints. We do not accept any liability for damage to property or personal injury caused by inappropriate handling and operation or non-observance of these safety hints.

## **Purpose, operating conditions**

The light is exclusively intended, and has been approved only, for use in safety class I (with earthing contact) 230 V / 50-60 Hz AC. The device and its accessories must not be opened, modified or reconstructed.

The operation of the light is only allowed in its completely condition in accordance with delivery.

The device must not be used in damp locations or outdoors or under severe environmental conditions (moisture or high humidity, dust and flammable gases, vapours or solvents, strong vibrations). Strong shocks, vibrations or pushes especially during operation, should be avoided.

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## **Operation**

*Make sure that the enclosure and insulation are neither damaged nor destroyed. The light must not be covered during operation to allow its own heat to dissipate at all times!*

*Keep children away from the light!*

*During operation inflammable objects should be at least 1 meter away. During recording breaks the light is generally to switch off. The maximum continuous operation time of 10 minutes is to keep and afterwards an sufficient break for cooling down the light is to be intended. It should be avoided to look directly into the optical path of the lamp. In case of low distances this could lead to an intensive glare of the eyes.*

*In commercial facilities, the accident prevention regulations issued by the association for electrical installations and equipment shall be complied with, and the protective quality shall be tested in regular intervals. In schools, training facilities, DIY and self-help workshops, trained personnel shall be assigned to supervise the operation of power supply units.*

## **Important!**

Where there are doubts as to the safe operation of the device, or where safe operation is no longer possible, switch it off immediately and secure it against unintentional operation. This applies in particular when it is visibly damaged or when it gives off a strong smell, or the device fails completely.

**Under no circumstances may the enclosure be opened or enclosure parts removed!**

The suitability of the respective camera according to mechanic stability and heat-resistance during operation of the light is to be proved in each special case by the user. A lump sum aptitude garanty by the producer of the light is only given for cameras from own fabrication.

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## **Technical Data:**

Supply voltage	230 V
Safety class	I
Power consumption	300 W
Bulb	halogen-luminous bulb 300 W, socket R7s 118 mm, recommended: Philips Plusline Pro Small (5600 lm, UV-Block, 2000 h) ordering-number: 494382 XX
Tripod socket	¼ “
Illuminance in the focus	
3 m distance	ca 5000 lx
10 m distance	ca 100 lx
focused horizontal angle (3 m distance)	ca 5 °
delivery set	1 light completely with bulb 1 transporting tcase 1 manual
only for variation 50.010:	1 tappet-bow
optional for camera KARLINE:	1 tappet-fork with block
only for variation 50.011:	1 mounting bar, 1 tripod base plate

## **Guarantee**

This device is warranted by Dr. Clauss Bild- und Datentechnik GmbH within Germany for a period of 24 months, starting with the date of purchase from a dealer (a note of purchase should be produced as evidence). Dr. Clauss Bild- und Datentechnik GmbH will rectify during the warranty period free of charge any faults caused by defective material or workmanship and will at its own discretion repair or replace the defective part. Replaced parts/devices shall become our property. The original warranty period will not be extended by repairs or replacements. Any work performed by persons not authorised by us will make the guarantee null and void. This guarantee does not cover any damage caused by improper use, non-observance of the operating instructions, tampering by third parties or events of force majeure. We do not accept any liability for consequential damage resulting therefrom. This warranty does also not cover minor defects which have only an insignificant impact on the value or serviceability of the device. The bulb is excluded from guarantee.

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