

// EXPERT D 250 SPEED / D 500 / D 1000

Compact flash unit



USER MANUAL //

WWW.HENSEL.DE

HENSEL
■■■■■ PERFORMING LIGHT



HENSEL-VISIT GmbH & Co. KG
Robert-Bunsen-Str. 3
D-97076 Würzburg
GERMANY

Tel. +49 (0) 931 27881-0
Fax: +49 (0) 931 27881-50
Email: info@hensel.de
Internet: <http://www.hensel.de>

© HENSEL-VISIT GmbH & Co. KG, 2015

Distribution and duplication of this documentation is not permitted unless specifically authorized. Violation of this may result in payment of damages.

All rights, including rights created by patent grant or registration of a utility model or design, are reserved (DIN ISO 16016).

Subject to technical changes. Errors and omissions excepted. The listed data are guideline values and not to be regarded as guaranteed values in a legal sense. Values can deviate due to tolerances of construction parts.

03/2015

For Your Safety

This device was developed according to the latest standards of technology and manufactured, with greatest care and testing, from high-quality material.

However, its use can result in bodily injury and property damage.

Please note the general safety guidelines and warnings that precede each use when operating this device. Please read all of the enclosed instructions.

Please note the warnings in the documents and on the device.

Only use the device when it is in proper condition. Be aware of safety precautions and possible danger.

Keep this document available with the device.

Safety Precautions and Warning Notices

The warning notices are marked with the following danger icons and signal words according to severity:

Danger icon	Signal word	Explanation
	DANGER	Warning of danger which can lead to major or fatal injuries if disregarded.
	WARNING	Warning of danger which can lead to major or fatal injuries if disregarded.
	CAUTION	Warning of danger which can lead to injuries if precautions are disregarded.
	CAUTION	Warning of danger which can lead to property damage if disregarded.

Structure of Warning Notices

Warning notices are indicated by separation lines above and below. They are structured according to the following principle:

SIGNAL WORD



Type and Source of Danger

Explanations of the type and source of danger

- Measures to avert danger
-

Basic Safety Instructions

Safety Hints Pertaining to Emitted Optical Radiation

Electrical power is changed inside the flash tube to intensive optical radiation:

- Do not flash directly into eyes from a short distance because the emitted intensive optical radiation can cause eye and skin damage.
- Do not look directly into flash reflector; the flash may be accidentally triggered.
- In case of damage to skin or eyes caused by intensive optical radiation consult a physician immediately.

Working in Potentially Explosive Rooms

Working in potentially explosive rooms and environments is prohibited because small sparks develop upon triggering the flash.

- Never work in potentially explosive environments.
- Do not work near flammable material.
- Do not store flammable material in direct vicinity of flash generators and flash lamps to avoid fire hazards.

Ozone Formation

Closed rooms must be ventilated frequently to prevent excessive ozone formation which can result from the use of strong flash units.

Protecting Equipment from Moisture and Splash Water

Flash units need to be protected from moisture, wetness and splash water. Therefore, please do not place containers with liquids on the flash units.

Connecting Accessories

Do not connect accessories from other manufacturers, even if these look similar or identical.

Not in Use During Dust Development

Equipment that is not in use when doing work that results in strong dust development needs to be covered with suitable dust protection.

Safety Hints Pertaining to the Electrical System

Contact with the flash generator's capacitor voltage is life threatening. Therefore, opening the housing and repairs may only be done by authorized customer service personnel:

- Never open the device – high voltage, risk of death!
- The unit may only be connected to a power supply with working equipment grounding conductor.
- Use only lamp plugs with flawless contacts. Burned down or corroded plug contacts may cause a fire.
- Defective plugs may lead to defective plug sockets.
- To prevent damages, avoid leading cables across floors. If this cannot be avoided, make sure that the cable is not damaged by vehicles, ladders, etc. Damaged cables and housings need to be replaced immediately by authorized customer service personnel.

Explosion of Flash Tube

The flash tube is filled with xenon gas. There is negative pressure inside the flash tube. Plasma develops during flashing due to electrical energy being changed to radiation. This plasma development then causes positive pressure inside the flash tube. At the same time, the glass tube is exposed to strong mechanical forces. Minimal defects of the fused quartz glass, visually impossible to notice, may possibly lead to the explosion of the flash tube.

- In case the flash tube explodes, there is a danger of tiny glass particles flying around. The user of this equipment needs to make sure to protect himself by the use a safety glass dome.
- The flash tube can only explode during the flash process. Therefore, the flash head should never be directed at a person during flashing.

- Immediately disconnect the flash head from the generator if the flash tube becomes damaged. Electrodes carry high voltage!
- Flash tubes must only be changed by authorized and trained personnel.
- The flash tube must only be changed after the device is disconnected from the power supply and is completely discharged.

Risk of Burns from Reflector and Flash Unit

After flashing there is a risk of burns caused by the reflector and the flash unit due to hot parts on the housing or infrared heat radiation.

Preface

Dear customer,

By purchasing a compact flash unit of the Expert D product family you have selected a high quality and high performance product.

Below, we want to give you some details and hints on how to use this unit that will ensure successful and productive work with it in the coming years. Observing the information below entitles you to guarantee adjustments, prevents damages, and extends the operational life of the unit.

HENSEL-VISIT made all efforts to produce a safe and high-quality piece of equipment while observing all current rules and regulations. Stringent quality checks ensure our high quality standard even in large-scale production. Please do your part and treat the equipment with the necessary care.

In case of questions regarding the use of this equipment, feel free to call us any time.

HENSEL-VISIT GmbH & Co. KG

Table of Contents

For Your Safety.....	3
Safety Precautions and Warning Notices.....	3
Structure of Warning Notices	4
Basic Safety Instructions	5
Safety Hints Pertaining to Emitted Optical Radiation.....	5
Working in Potentially Explosive Rooms	5
Ozone Formation	5
Protecting Equipment from Moisture and Splash Water	5
Connecting Accessories.....	5
Not in Use During Dust Development.....	6
Safety Hints Pertaining to the Electrical System	6
Explosion of Flash Tube	6
Risk of Burns from Reflector and Flash Unit	7
Preface	8
Description	14
Normal Use	15
Following the Instructions	15
Technical Data	16
Equipment Description	18
User Panel	20
Scope of Delivery.....	21
Preparing for Initial Use	22
Remove Transport Cap	22
Inserting Halogen Lamp for Modeling Light	23
Mounting Glass Safety Dome	25
Power Supply	26
Switch On	26
Test Flash.....	28

Test the Modeling Light	29
Stand Mounting.....	30
Mounting to Ceiling or Pantograph.....	33
Repositioning Tilting Bracket and Handle.....	37
Mounting a Reflector.....	38
Removing a Reflector	40
Modeling Light	42
Mode FULL	42
Mode PROP	43
Turn off the Modeling Light	43
Automatic Modeling Light reduction AUTORED	44
Performance Output Adjustment	46
Manual Flash Trigger.....	47
Flash Check	48
Synchronization.....	49
Synchronization via Cord	49
Synchronization via Slave	49
Synchronization via Radio Remote Trigger	50
Activate Built-in Radio Receiver	50
Selecting Radio Channel	51
Daily Flash Counter	52
Reseting the Daily Flash Counter.....	52
PM Mode (in connection with Power Max L)	53
Activate PM Mode.....	53
Deactivate PM Mode.....	54
Exchange the Safety Glass Dome.....	55
Switch Off and Unplug the Mains Cord	56
Removing a Reflector	56
Removing Old or Broken Safety Glass Dome	57

Mount a New Safety Glass Dome.....	58
Mounting a Reflector.....	59
Connect the Mains Cord and Switch On.....	60
Replacing Flash Tube.....	61
Switch Off and Unplug the Mains Cord	62
Removing a Reflector	63
Remove Safety Glass Dome.....	64
Remove Broken Flash Tube	64
Mount a New Flash Tube	65
Correct Assembly.....	65
False Assembly.....	65
Mount Safety Glass Dome	66
Mounting a Reflector.....	67
Connect the Mains Cord and Switch On.....	68
Test Flash.....	69
Replace the Halogen Lamp for Modeling Light.....	70
Switch Off and Unplug the Mains Cord	71
Removing a Reflector	71
Remove Safety Glass Dome.....	72
Removing Halogen Lamp.....	73
Inserting Halogen Lamp.....	73
Mount Safety Glass Dome	75
Mounting a Reflector.....	76
Connect the Mains Cord and Switch On.....	77
Test the Modeling Light	78
Replacing Fuses of Modeling Light	79
Switch Off and Unplug the Mains Cord	79
Exchange of Fuses	79
Connect the Mains Cord and Switch On.....	80

Preparation for Storage or Transport.....	81
Switch Off and Unplug the Mains Cord	81
Removing a Reflector	82
Mount the Transport Cap	83
Cleaning	84
Maintenance Plan.....	85
Periodic Inspections	85
Disposal	85
Error Codes	86
Hot Error – Unit is Overheated.....	86
E1 Charging Error	87
E2 Discharging Error	87
E3 Temperature Error	88
E4 Ignition Error – Unit does Not Flash.....	88
E6 ZD Error.....	89
Updating Software.....	90
Customer Service	90
Accessories	91
Glass safety dome	91
Flash tubes.....	91
Halogen lamp for modeling light.....	91
Fuses.....	91
Radio trigger	91
Reflectors and softboxes	91
Additional accessories.....	91
Contact Information	92
Declaration of Conformity.....	93
Warranty	94
Limits of Liability.....	94

Description

The Expert D 250 Speed, Expert D 500 and Expert D 1000 are powerful compact flash units. Extremely fast flash recycle times and short flash duration hallmark this unit which can be used worldwide thanks to multi voltage. A bright, proportional modeling light which can be adjusted, high-quality performance electronics and the EH reflector connector are all housed in a solid housing made from aluminum profiles and metal side panels.

A built-in radio receiver for Hensel Strobe Wizard Plus and free- mask allow full remote control of this unit's functions like triggering, output regulation, and modeling light.

This manual describes the compact flash units together, Expert D 250 Speed, Expert D 500 and Expert D 1000. The features and operation are identical; the only difference is the performance. Please see „Technical Data“.

Normal Use

The compact flash units Expert D 250 Speed, Expert D 500 und Expert D 1000 are intended for professional use inside the studio. It is only to be used with the accessories described in this manual and approved by Hensel-Visit.

Following the Instructions

Following the instruction manual and all other pertinent documents is part of the intended use.

Technical Data

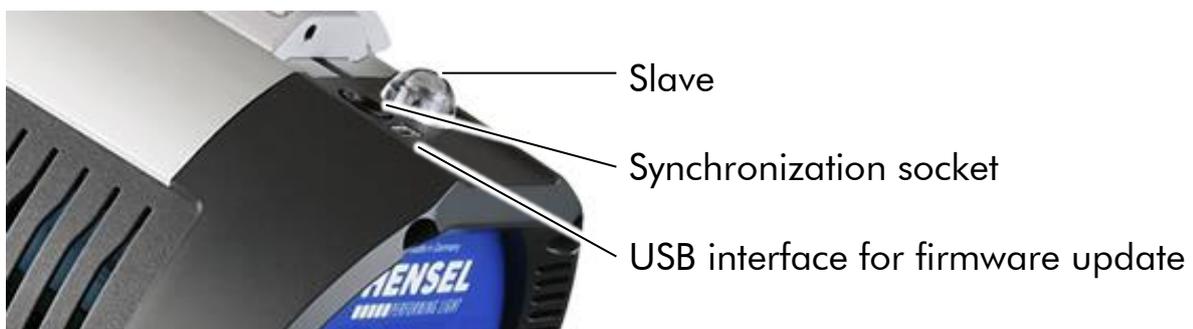
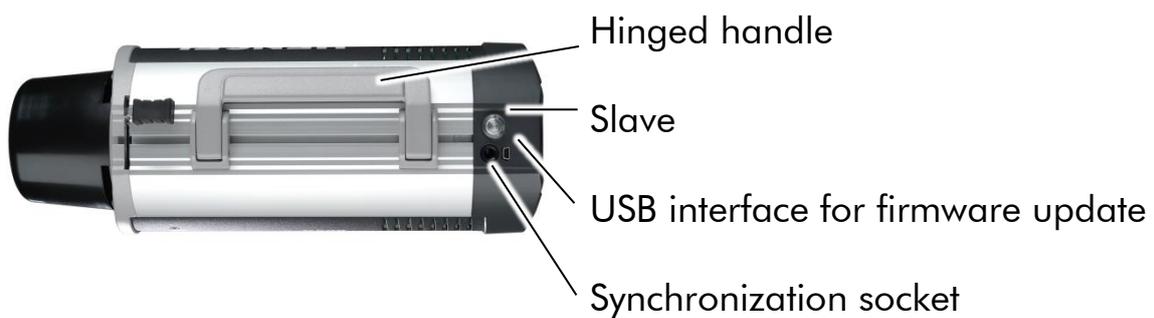
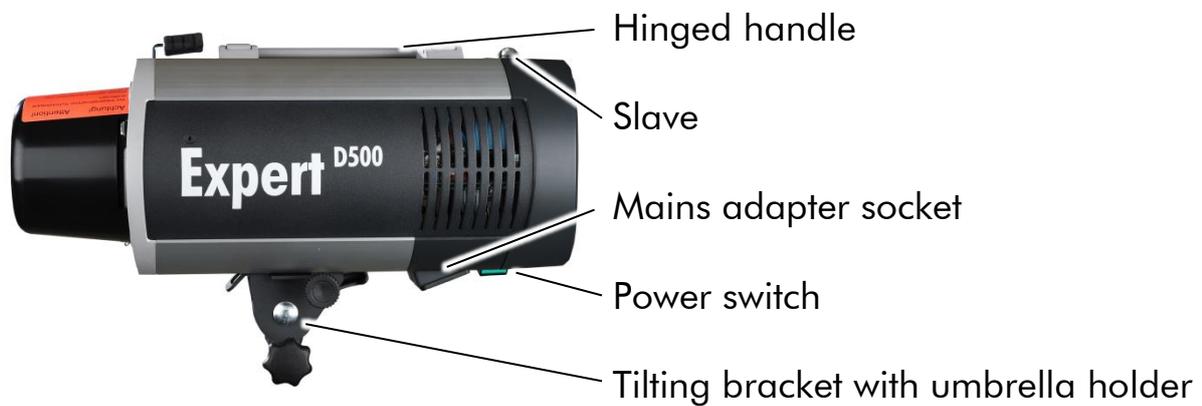
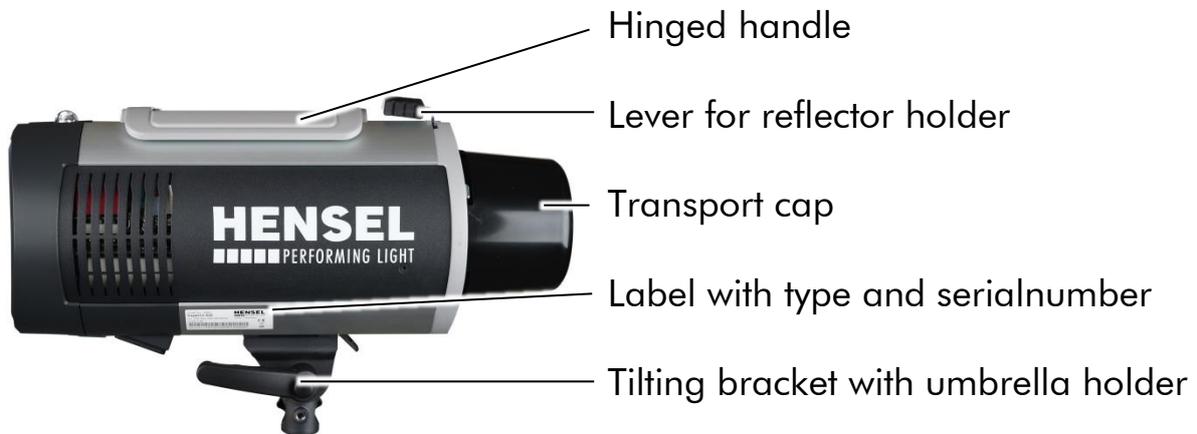
Unit type	Expert D 250 Speed	Expert D 500	Expert D 1000
Article number	8390	8350	8360
Listed performance output	250 J	500 J	1000 J
Lead aperture ¹	1 m = 64 2 m = 32	1 m = 90 2 m = 45	1 m = 128 2 m = 64
Min. flash duration ²	1/10.000 s at 64 Ws	1/5.600 s at 125 Ws	1/3.000 s at 250 Ws
Max. flash duration ²	1/4.000 s	1/2.000 s	1/1.500 s
Min. recharge time	0,04 s	0,11 s	0,14 s
Max. recharge time	0,2 s	0,5 s	1,0 s
Flash performance adjustment	9 f-stop	8 f-stop	
Weight	ca. 3,1 kg	ca. 3,4 kg	ca. 3,9 kg
Overall dimensions, L x B x H in cm	33x13,1x19,7	35x13,1x19,7	38,5x13,1x19,7
Glass safety dome	9454638, clear		
Flash tube	9450420, plug-in style, single coated		
Modeling light	300 W/G6.35/115 V bzw. 300W/G6.35/230V		
Modeling light adjustment	Off / full / proportional / autored		
Sync socket/voltage	6,3 mm socket, Mono / 5 VDC		
Built in radio receiver	StrobeWizard Plus and freemask		
Fuses	F 4 A H, 5 x 20 mm		
Input voltage	Multivoltage 90 – 230 V		

¹ Measured with 100 ASA, 1/60 s, 100 % output and 12"-reflector at a distance of 1m and 2 m.

² All times refer to the full width half-maximum time $t_{0,5}$.

Reflector connector	Quick-change automatic for EH (10 cm)
Additional features	Thermical check of performance electronics
Daily flash counter, reset function	Yes
Built-in fan	Yes
Slave, switchable	Yes
Flash check, switchable	Yes
Modeling light stand-by	Autored
Internat power dump when reducing output	APD
Display	7-segment for flash energy/daily flash counter/channel display/autored/Error code
Control surface	Imprinted foil with keys, fluorescent, Hensel user logic
<p>Technical modification expected. The listed data are standard values which may deviate depending on component tolerances.</p>	

Equipment Description



User Manual Expert D 250 Speed / D 500 / D 1000



Label with type and serial number

Power switch

Mains adapter socket

Fuse and spare fuses



Mounting link for safety rope

Umbrella holder

Locking screw tilting bracket

Locking device stand mounting

Optional safety screw for suspended mounting



Mounting link for safety rope

Locking device umbrella holder

Locking device stand mounting

User Panel



Scope of Delivery

The standard scope of delivery includes:

- 1 Expert D 250 Speed or Expert D 500 or Expert D 1000
- 1 Flash tube single coated, plug-in style
- 1 Transport cap
- 1 Glass safety dome, separately packed
- 1 Modeling light (according to customer requirement), separately packed
- 1 Cable set: mains and sync cord
- 1 User Manual

Preparing for Initial Use

Remove Transport Cap

CAUTION

Risk of fire when using with transport cap



Heat which may cause fire develops during the flash process.

- Remove transport cap before use.
-



Lever for reflector holder

Transport cap

- Press the locking mechanism of the reflector holder against the spring tension until reaching the end stop.
- Pull out the transport cap straight from the holder and keep it for future usage.
- Carefully returning the locking mechanism of the reflector into its standard position with the help of the spring tension.

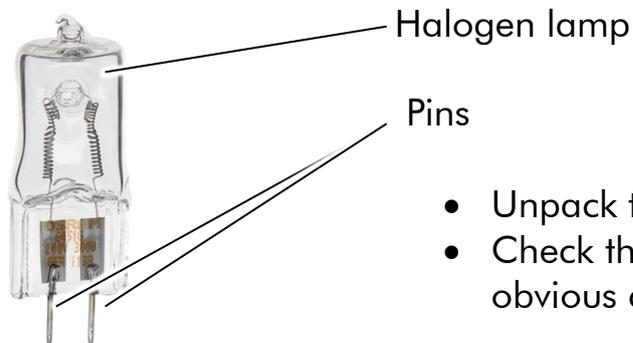


Protection of the flash tube during transport

- To remove the foam, pull it straight over the flash tube.

Inserting Halogen Lamp for Modeling Light

- Before replacing the halogen lamp, switch off the unit and disconnect it from its power supply.
- The modeling light has to match the voltage of the power supply.



- Unpack the halogen lamp.
- Check the halogen lamp for obvious cracks in the glass.



Lamp socket for modeling light

- Place the pins into the lamp socket.



- Push the lamp carefully into place by alternating the pressure on the pins until contacting the end stop.

Mounting Glass Safety Dome

Please unpack the glass safety dome and check it for obvious damages. If you find damages on the glass safety dome please contact your dealer, see paragraph "Addresses".



Springs holding the glass safety dome



- Tilt the safety dome slightly and insert it into one of the three springs.
- Then use gentle pressure to insert the safety dome first into the second spring.
- And then into the third spring until it locks into place.

Power Supply



Mains cord

- Plug the mains cord into the mains adapter socket of the compact flash unit.
- Connect the mains cord with the mains supply socket.

Switch On



Power switch

- Turn the unit on by pressing the power switch.

The fan starts turning and spins at maximum speed for a short period of time. After this the speed of the fan is controlled by the temperature inside the unit.



Display

After powering on, the first thing displayed is the version of the firmware.

Now electrical energy is fed to the capacitors where it is stored.



Flash readiness indicator

If the flash readiness indicator turns green the set energy is stored inside the unit.

The compact flash unit is now ready for use.

Test Flash

WARNING

Danger of eye and skin injuries due to optical radiation



An intensive optical radiation develops during the flash process which can harm unprotected eyes or skin.

- Do not flash into the face from short distances.



Flash readiness indicator

Key **TEST**

If the flash readiness indicator above the key **TEST** turns green, the unit is ready for use.

- To trigger a flash, press the key **TEST** once.

Test the Modeling Light

WARNING

Danger of eye and skin injuries due to optical radiation



An intensive optical radiation develops during the flash process which can harm unprotected eyes or skin.

- Do not flash into the face from short distances.



If none of both indicators is green, press the key **FULL**. The indicator above the button turns green and the modeling light is turned to maximum brightness.

If none of both indicators (**FULL** or **PROP**) is green, please check the halogen lamp for the modeling light for defects.

Stand Mounting

WARNING

Danger of bruising



When opening the locking screw of the tilting bracket you are in danger of bruising your hands and fingers.

- When opening the screw of the tilting bracket, hold the flash unit with the other hand to avert unwanted motion.
-

The flash unit can be attached to a stand mounting or pantograph via the tilting bracket. The tilting bracket allows the rotation of the flash unit of 360° and a tilting angle of approximately 180°.



Locking device, stand mounting

- Loosening the locking device stand mounting by turning it a few times.
- Please make sure that you don't turn it loose completely.



Locking device, stand mounting

- Put the flash unit on the stand mounting and tighten the locking device stand mounting.
- For rotating the flash unit on the stand mounting loosen the locking device stand mounting, turn the flash unit and tighten the locking device.



Locking screw, tilting bracket

- For tilting of the flash unit, loosen the locking screw of the tilting bracket.

If the tilting bracket's locking screw cannot be opened or closed far enough and you keep bumping against the housing, lift up (pull) the locking screw by pressing down on the axis of the locking screw.

The locking screw's serration loosens and you can turn the grip into a more favorable position for further opening and closing of the locking screw.



Locking screw, tilting bracket

- Tilt the flash unit into the desired position and tighten the locking screw of the tilting bracket again.

If the tilting bracket's locking screw cannot be opened or closed far enough and you keep bumping against the housing, lift up (pull) the locking screw by pressing down on the axis of the locking screw.

The locking screw's serration loosens and you can turn the grip into a more favorable position for further opening and closing of the locking screw.

Mounting to Ceiling or Pantograph

WARNING



Danger from falling objects

The fastening of ceiling mounted flash units can come loose and equipment could fall down.

- Use an additional safety screw on the tilting bracket.
 - Use a safety rope for additional protection.
-

WARNING



Danger of bruising

When opening the locking screw of the tilting bracket you are in danger of bruising your hands and fingers.

- When opening the screw of the tilting bracket, hold the flash unit with the other hand to avert unwanted motion.
-

The flash unit can be attached to a stand mounting or pantograph via the tilting bracket. The tilting bracket allows the rotation of the flash unit of 360° and a tilting angle of approximately 180°.

Secure the equipment with a back-up support when attaching it to ceilings or pantographs. Use the tilting bracket's safety screw and secure the device additionally with a safety rope.

Suitable safety ropes can be purchased from Hensel-Visit, see „Accessories“ and www.hensel.de.



Locking device, stand mounting

- Loosening the locking device stand mounting by turning it a few times.
- Please make sure that you don't turn it loose completely.
- Insert the tilting bracket of the flash unit into the stud of the pantograph or the boom.
- Tighten the locking device stand mounting.



Safety screw for suspended mounting

- Use an additional safety screw:
- Art.-No. 9979839 Screw hexagonal M6x16 DIN 933 ISO 4017 vz
- Art.-No. 9997919 Nut M6 DIN 934 ISO 4032



Safety rope artikelnummer 7690

Spring safety hook

Rope thimble



Mounting link for safety rope

- Pull the safety rope through a suitable opening of the pantograph.
- Fix the spring safety hook in the mounting link for the safety rope at the tilting bracket.
- Insert the rope thimble in the spring safety hook.
- Close the spring safety hook and tighten it.



Locking screw, tilting bracket

- For tilting of the flash unit, loosen the locking screw of the tilting bracket.

If the tilting bracket's locking screw cannot be opened or closed far enough and you keep bumping against the housing, lift up (pull) the locking screw by pressing down on the axis of the locking screw.

The locking screw's serration loosens and you can turn the grip into a more favorable position for further opening and closing of the locking screw.



Locking screw, tilting bracket

- Tilt the flash unit into the desired position and tighten the locking screw of the tilting bracket again.

If the tilting bracket's locking screw cannot be opened or closed far enough and you keep bumping against the housing, lift up (pull) the locking screw by pressing down on the axis of the locking screw.

The locking screw's serration loosens and you can turn the grip into a more favorable position for further opening and closing of the locking screw.

Repositioning Tilting Bracket and Handle

The position of the tilting bracket and the handle can be swapped. This lets you mount the flash unit in an overhead location like a ceiling.



- Loosen the two crosshead screws on the tilting bracket.
- Slide the tilting bracket forward along the guide rail of the housing.
- Put the tilting bracket aside until you have removed the handle.



- Loosen the two crosshead screws on the handle.
- Slide the handle forward along the guide rail of the housing.
- Insert the handle into the guide rail on the opposite side of the housing.
- Tighten fast the two screws of the handle.



- Insert the tilting bracket into the guide rail on the opposite side of the housing.
- Tighten fast the two screws of the handle.

Mounting a Reflector

CAUTION

Risk of burns from reflector and flash unit



Heat which may cause burns develops at the head during the flash process.

- Before removing the reflector allow reflector and flash unit to cool-off.
 - Allow flash unit to cool off.
-

CAUTION

Glass safety dome may get damaged



When mounting a reflector the glass safety dome can be damaged.

- Do not touch the glass safety dome with the reflector.
 - While mounting a reflector place the flash unit on a stand.
 - Place the reflector evenly on the flash unit.
 - When mounting a reflector hold it with one hand.
-

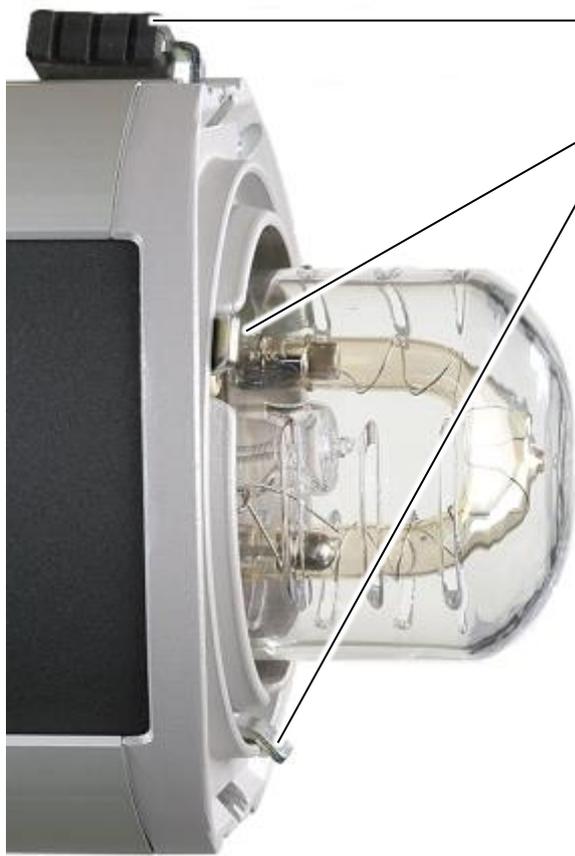
CAUTION

The system may become damaged if external products are used.



The system may become damaged when components are changed or accessories are connected.

- Only use original parts and HENSEL-VISIT accessories.
-



Lever of the reflector holder

Fingers

- Press the locking mechanism of the reflector holder against the spring tension until reaching the end stop.
- Put the reflector onto the unit and make sure that the 3 fingers are inside the reflector.



- Hold the reflector with one hand while carefully returning the locking mechanism of the reflector into its standard position with the help of the spring tension.
- Check the correct mounting of the reflector.

Removing a Reflector

CAUTION

Risk of burns from reflector and flash unit



Heat which may cause burns develops at the head during the flash process.

- Before removing the reflector allow reflector and flash unit to cool-off.
 - Allow flash unit to cool off.
-

CAUTION

Glass safety dome may get damaged



When mounting a reflector the glass safety dome can be damaged.

- Do not touch the glass safety dome with the reflector.
 - While mounting a reflector place the flash unit on a stand.
 - Place the reflector evenly on the flash unit.
 - When mounting a reflector hold it with one hand.
-



Lever of the reflector holder

Reflector

- Hold the reflector with one hand.
- With the other hand, press the locking mechanism of the reflector holder against the spring tension until reaching the end stop.



Lever of the reflector holder

- Remove the reflector from the unit and put it aside.
- Carefully return the locking mechanism of the reflector into its standard position with the help of the spring tension.

Modeling Light

The modeling light is switched on by using the key **FULL** or **PROP**:

Mode **FULL**: The modeling light is set at full power.

Mode **PROP**: The light output (brightness) of the modeling light is proportional to the flash output.

Mode **FULL**

The modeling light is set at full power, independent of the flash output.



Key **FULL**

- Press the key **FULL**, to turn the modeling light to full power.
- The indicator above the key turns green.

Mode PROP

The light output (brightness) of the modeling light is proportional to the flash output.



Key PROP

- Press the key **PROP**, the brightness of the modeling light is now proportional to the flash output.
- The indicator above the key turns green.

Turn off the Modeling Light

You can turn off the modeling light completely by either deactivating the **FULL** or **PROP** mode by pressing the respective key.



Key FULL

Key PROP

- Press the key **FULL** or the key **PROP**, to switch off the modeling light.
- If both indicators above the keys **FULL** and **PROP** are dark, the modeling light is turned off.

Automatic Modeling Light reduction AUTORED

The compact flash unit's modeling light is equipped with an energy saving mode. This conserves energy and extends the lamp's operating life. After a preselected time of 35 min in the **FULL** mode the modeling light is automatically reduced to level 9.

When set on **PROP** mode, this happens when the flash output setting is between 9.1 and 10.

The original output is restored when you touch any key.





Rotary switch

- Adjust the time by turning the rotary switch in 1 minute increments up to a maximum of 90 minutes.
- A setting of „--“ causes the function to switch off.

Performance Output Adjustment

The rotary switch adjusts the flash output over an output range of 9 f-stops (Expert D 250 Speed), from 2.0 (lowest output), and over an output range of 8 f-stops (Expert D 500 / D 1000), from 3.0 (lowest output) to 10 (maximum output):



Flash readiness indicator

Rotary switch

- The rotary switch adjusts the flash output in steps of 0.1 f-.
- Turning it counter-clockwise reduces the output in steps of 0.1 f-stops.
- The power dump takes a moment. The flash readiness indicator lights up to indicate restored flash readiness.

When the performance output is reduced, the stored energy is reduced via the internal **APD-Function**³.

³ APD: Automatic Power Drop

Manual Flash Trigger

WARNING

Danger of eye and skin injuries due to optical radiation



An intensive optical radiation develops during the flash process which can harm unprotected eyes or skin.

- Do not flash into the face from short distances.



Flash readiness indicator

Key **TEST**

If the flash readiness indicator above the key **TEST** turns green, the unit is ready for use.

- To trigger a flash, press the key **TEST** once.

Flash Check

The compact flash unit is equipped with a visual flash readiness indicator called **Flash Check**. When this function is activated, the modeling light shuts off after flashing and turns on again when the flash readiness is restored.



Synchronization

Synchronization between compact flash unit and camera can be optionally achieved via sync cord, the built-in slave, or a built-in radio receiver.

Synchronization via Cord

The synchronization process uses the latest semiconductor technology and warrants reliable triggering of the flash unit even when older camera models with mechanical contacts are used. The lower voltage of the sync plug ensures safe and reliable operation, also with the use of modern digital cameras.



Synchronization socket

- Plug the 6.3 mm jack into the synchronization socket of the compact flash unit.
- Connect the other end of the sync cord to the camera's sync socket. Please consult the user manual of your camera.

Synchronization via Slave

The built-in slave triggers the flash when light from another flash is detected (slave mode).

The slave is an impulse photo cell. It only triggers the flash when the striking light is brighter than the ambient light.



Synchronization via Radio Remote Trigger

The compact flash unit is equipped with radio receivers for the HENSEL Strobe Wizard plus and the HENSEL freemask system.

The optional radio remote triggers Strobe Wizard Plus and freemask are used to conveniently synchronize the camera and flash unit via radio remote control.

Please have a look at the user manual of the radio remote trigger.

Activate Built-in Radio Receiver



Selecting Radio Channel



- Press the key **RC** for approx. 2 s to switch the channels of the radio receiver.
- The display 5 is now blinking and shows the setting.
- Turning the rotary switch within 3 s lets you set the desired channel.
- Approximately 3 s after a key was last pressed, the channel is saved and the display stops blinking.

After the channel „H.C1“ come the channels „H.C2“ and „H.C3“ of Strobe Wizard Plus, directly after them the channels „H.F1“, „H.F2“ and „H.F3“ of the freemask receiver.

Daily Flash Counter



- Press the key **AUDIO** for one second.
- The number of flashes is shown in the display.
- The number range of the flash counter goes up to 999.

Reseting the Daily Flash Counter



- Press the key **AUDIO** for one second.
- The number of flashes is shown in the display.
- Press the rotary switch to reset the daily flash counter to 000.

PM Mode (in connection with Power Max L)

Hallmarks of the compact flash units of the Expert D series are their especially short flash duration times and fast recycling times - also when operated with a Power Max L. This results in a comparatively high power draw. In order to guarantee optimum functioning, the Expert D must be switched to a special mode when used in connection with a Power Max L.

In this mode, the modeling light is set to 100W and the „Flash Check“ function, which turns off the modeling light after flashing and turns it back on as soon as the unit has recharged and is ready to flash again, is activated.

Activate PM Mode



Mains socket

- Connect the compact flash unit to one of the power jacks on the Power Max L.

Power switch

- Switch the Power Max L on via the power switch.



Key SLAVE

Power switch

- Switch the compact flash unit via the power switch.
- Press the key **SLAVE** until you hear a beep tone.



Indicator

Display

The selected flash output and „bat.“ blink alternately in the display. Additionally, the indicator LED above the key **FULL** blinks.

The Expert D compact flash units stay in this mode once it is activated, even after they are switched off. No damage occurs if the Expert D are operated on a normal power supply when in Power Max mode

Deactivate PM Mode



Key **SLAVE**

- Press the key **SLAVE** until you hear a beep tone.

The PM mode is deactivated.

Exchange the Safety Glass Dome

CAUTION

Risk of burns from reflector and flash unit



Heat which may cause burns develops at the head during the flash process.

- Before removing the reflector allow reflector and flash unit to cool-off.
 - Allow flash unit to cool off.
-

CAUTION

Glass safety dome may get damaged



When mounting a reflector the glass safety dome can be damaged.

- Do not touch the glass safety dome with the reflector.
 - While mounting a reflector place the flash unit on a stand.
 - Place the reflector evenly on the flash unit.
 - When mounting a reflector hold it with one hand.
-

CAUTION

The halogen lamp or flash tube can burst due to oily residues on the glass parts.



Avoid touching the flash tube with bare hands to prevent its contamination with oily residue.

- Use cotton gloves to change the halogen lamp or the flash tube.
 - Carefully clean after touching the glass parts.
-

Switch Off and Unplug the Mains Cord



Power switch

Mains cord

- Turn the unit off by pressing the power switch.
- Unplug the mains cord from the mains supply socket.
- Unplug the mains cord from the mains adapter socket of the compact flash unit.

Removing a Reflector



Lever of the reflector holder

Reflector

- Hold the reflector with one hand.
- With the other hand, press the locking mechanism of the reflector holder against the spring tension until reaching the end stop.



Lever of the reflector holder

- Remove the reflector from the unit and put it aside.
- Carefully return the locking mechanism of the reflector into its standard position with the help of the spring tension.

Removing Old or Broken Safety Glass Dome



The safety dome snaps into place via three pre-installed springs

- Tilt the safety dome slightly so that it is released one by one from the mounting springs.
- Pull the safety dome lightly from the third spring and remove it completely.

Mount a New Safety Glass Dome

Please unpack the glass safety dome and check it for obvious damages. If you find damages on the glass safety dome please contact your dealer, see paragraph "Addresses".

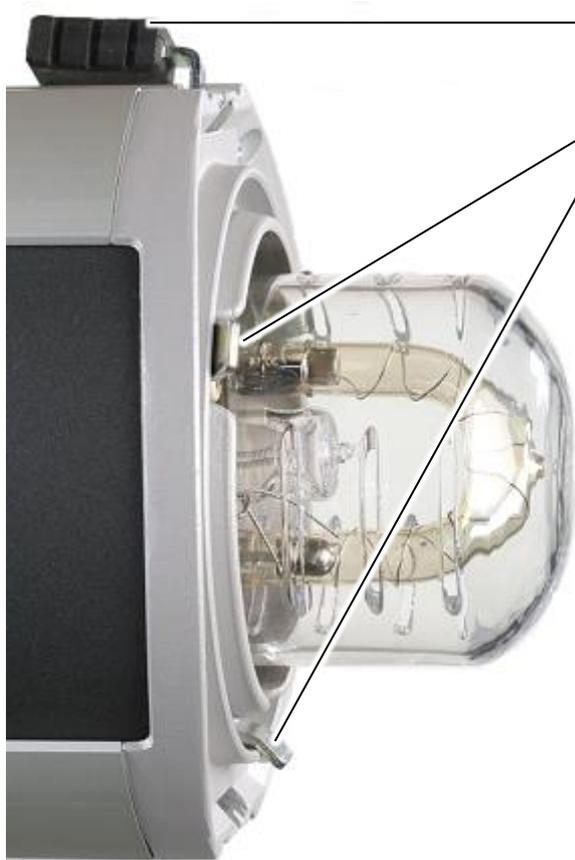


Springs holding the glass safety dome



- Tilt the safety dome slightly and insert it into one of the three springs.
- Then use gentle pressure to insert the safety dome first into the second spring.
- And then into the third spring until it locks into place.

Mounting a Reflector



Lever of the reflector holder

Fingers

- Press the locking mechanism of the reflector holder against the spring tension until reaching the end stop.
- Put the reflector onto the unit and make sure that the 3 fingers are inside the reflector.



- Hold the reflector with one hand while carefully returning the locking mechanism of the reflector into its standard position with the help of the spring tension.
- Check the correct mounting of the reflector.

Connect the Mains Cord and Switch On



Power switch

Mains cord

- Plug the mains cord into the mains adapter socket of the flash unit.
- Plug the mains cord into the mains supply socket
- Turn the unit on by pressing the power switch.

Replacing Flash Tube

DANGER



Risk of electric shock from defective flash tube

If the glass tube of the flash tube is defective, the electrodes may become exposed and cause an electric shock when touched.

- Switch off system via the power switch.
 - Open the trolley and disconnect the power cable from the generator.
-

CAUTION



Risk of burns from reflector and flash unit

Heat which may cause burns develops at the head during the flash process.

- Before removing the reflector allow reflector and flash unit to cool-off.
 - Allow flash unit to cool off.
-

CAUTION



Glass safety dome may get damaged

When mounting a reflector the glass safety dome can be damaged.

- Do not touch the glass safety dome with the reflector.
 - While mounting a reflector place the flash unit on a stand.
 - Place the reflector evenly on the flash unit.
 - When mounting a reflector hold it with one hand.
-

CAUTION

The halogen lamp or flash tube can burst due to oily residues on the glass parts.



Avoid touching the flash tube with bare hands to prevent its contamination with oily residue.

- Use cotton gloves to change the halogen lamp or the flash tube.
 - Carefully clean after touching the glass parts.
-

Switch Off and Unplug the Mains Cord

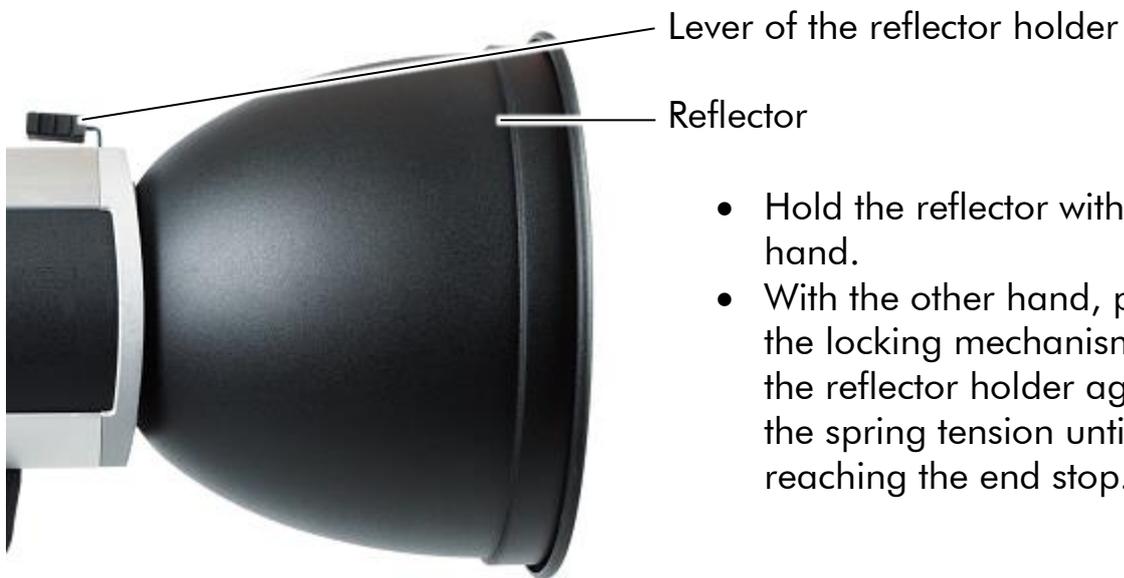


Power switch

Mains cord

- Turn the unit off by pressing the power switch.
- Unplug the mains cord from the mains supply socket.
- Unplug the mains cord from the mains adapter socket of the compact flash unit.

Removing a Reflector



- Hold the reflector with one hand.
- With the other hand, press the locking mechanism of the reflector holder against the spring tension until reaching the end stop.



- Remove the reflector from the unit and put it aside.
- Carefully return the locking mechanism of the reflector into its standard position with the help of the spring tension.

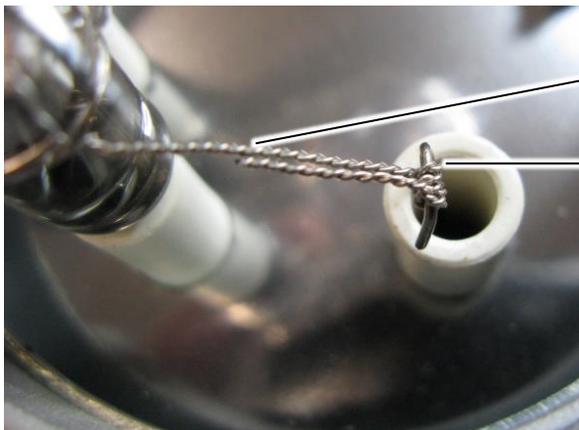
Remove Safety Glass Dome



The safety dome snaps into place via three pre-installed springs

- Tilt the safety dome slightly so that it is released one by one from the mounting springs.
- Pull the safety dome lightly from the third spring and remove it completely.

Remove Broken Flash Tube



Ignition wire

Connecting pin

- Unwind the ignition wire from the connecting pin.



- Carefully pull the flash tube from the plug base.
- Remove all glass debris if necessary.

Mount a New Flash Tube

- Unpack the flash tube.
- Check the glass body of the flash tube for obvious cracks and defects.



- Place the flash tube on the plug base and carefully push the flash tube in until reaching the end stop.
- Pull the flash tube out again approximately 0.5 mm so that the glass body can expand upon warming.

Correct Assembly



- Wrap the ignition wire onto the connecting pin and afterwards onto itself facing the glass body.
- If the remaining ignition wire is too long, it can be cut with a caliper.

False Assembly



- If the ignition wire is wrapped loosely onto the connecting pin the unit might not flash properly.
- If the ignition wire is not wrapped onto itself facing the glass body, the ignition voltage flows via the metal parts of the unit to the protecting earth.

Mount Safety Glass Dome

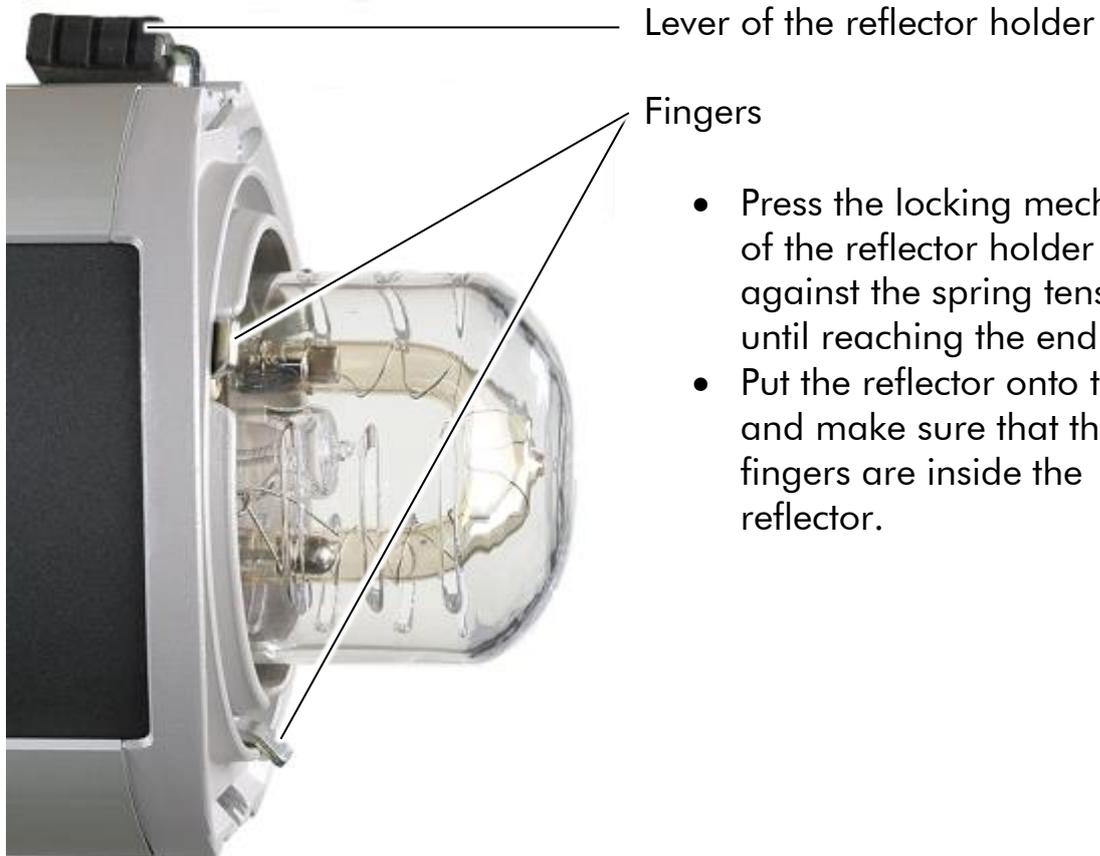


Springs holding the glass safety dome



- Tilt the safety dome slightly and insert it into one of the three springs.
- Then use gentle pressure to insert the safety dome first into the second spring.
- And then into the third spring until it locks into place.

Mounting a Reflector



- Press the locking mechanism of the reflector holder against the spring tension until reaching the end stop.
- Put the reflector onto the unit and make sure that the 3 fingers are inside the reflector.



- Hold the reflector with one hand while carefully returning the locking mechanism of the reflector into its standard position with the help of the spring tension.
- Check the correct mounting of the reflector.

Connect the Mains Cord and Switch On



Power switch

Mains cord

- Plug the mains cord into the mains adapter socket of the flash unit.
- Plug the mains cord into the mains supply socket
- Turn the unit on by pressing the power switch.

Test Flash

WARNING

Danger of eye and skin injuries due to optical radiation



An intensive optical radiation develops during the flash process which can harm unprotected eyes or skin.

- Do not flash into the face from short distances.



Flash readiness indicator

Key **TEST**

If the flash readiness indicator above the key **TEST** turns green, the unit is ready for use.

- To trigger a flash, press the key **TEST** once.

Replace the Halogen Lamp for Modeling Light

CAUTION

Risk of burns from reflector and flash unit



Heat which may cause burns develops at the head during the flash process.

- Before removing the reflector allow reflector and flash unit to cool-off.
- Allow flash unit to cool off.

CAUTION

Glass safety dome may get damaged



When mounting a reflector the glass safety dome can be damaged.

- Do not touch the glass safety dome with the reflector.
- While mounting a reflector place the flash unit on a stand.
- Place the reflector evenly on the flash unit.
- When mounting a reflector hold it with one hand.

CAUTION

The halogen lamp or flash tube can burst due to oily residues on the glass parts.



Avoid touching the flash tube with bare hands to prevent its contamination with oily residue.

- Use cotton gloves to change the halogen lamp or the flash tube.
 - Carefully clean after touching the glass parts.
-

Switch Off and Unplug the Mains Cord



Power switch

Mains cord

- Turn the unit off by pressing the power switch.
- Unplug the mains cord from the mains supply socket.
- Unplug the mains cord from the mains adapter socket of the compact flash unit.

Removing a Reflector



Lever of the reflector holder

Reflector

- Hold the reflector with one hand.
- With the other hand, press the locking mechanism of the reflector holder against the spring tension until reaching the end stop.



Lever of the reflector holder

- Remove the reflector from the unit and put it aside.
- Carefully return the locking mechanism of the reflector into its standard position with the help of the spring tension.

Remove Safety Glass Dome



The safety dome snaps into place via three pre-installed springs

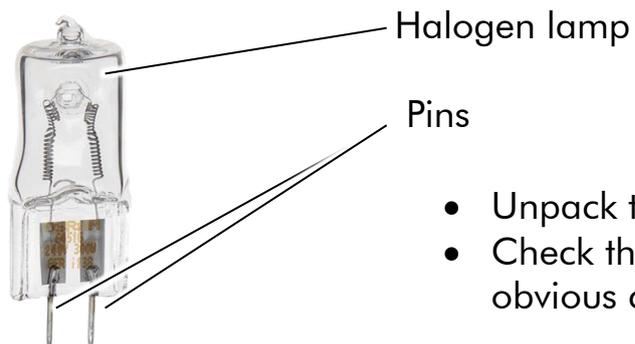
- Tilt the safety dome slightly so that it is released one by one from the mounting springs.
- Pull the safety dome lightly from the third spring and remove it completely.

Removing Halogen Lamp



- Carefully pull the lamp from its plug connector.

Inserting Halogen Lamp



- Unpack the halogen lamp.
- Check the halogen lamp for obvious cracks in the glass.



Lamp socket for modeling light

- Place the pins into the lamp socket.



- Push the lamp carefully into place by alternating the pressure on the pins until contacting the end stop.

Mount Safety Glass Dome

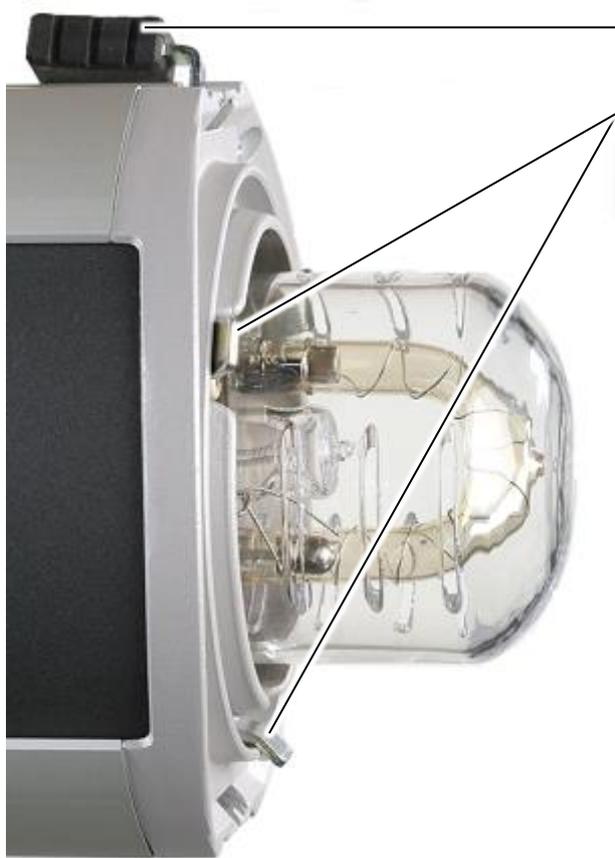


Springs holding the glass safety dome



- Tilt the safety dome slightly and insert it into one of the three springs.
- Then use gentle pressure to insert the safety dome first into the second spring.
- And then into the third spring until it locks into place.

Mounting a Reflector



Lever of the reflector holder

Fingers

- Press the locking mechanism of the reflector holder against the spring tension until reaching the end stop.
- Put the reflector onto the unit and make sure that the 3 fingers are inside the reflector.



- Hold the reflector with one hand while carefully returning the locking mechanism of the reflector into its standard position with the help of the spring tension.
- Check the correct mounting of the reflector.

Connect the Mains Cord and Switch On



Power switch

Mains cord

- Plug the mains cord into the mains adapter socket of the flash unit.
- Plug the mains cord into the mains supply socket
- Turn the unit on by pressing the power switch.

Test the Modeling Light

WARNING

Danger of eye and skin injuries due to optical radiation



An intensive optical radiation develops during the flash process which can harm unprotected eyes or skin.

- Do not flash into the face from short distances.



If none of both indicators is green, press the key **FULL**. The indicator above the button turns green and the modeling light is turned to maximum brightness.

If none of both indicators (**FULL** or **PROP**) is green, please check the halogen lamp for the modeling light for defects.

Replacing Fuses of Modeling Light

DANGER

Danger of electric shock



Danger of electric shock exists during installation and removal of system components.

- Switch off the system and pull the plug.

Switch Off and Unplug the Mains Cord



Power switch

Mains cord

- Turn the unit off by pressing the power switch.
- Unplug the mains cord from the mains supply socket.
- Unplug the mains cord from the mains adapter socket of the compact flash unit.

Exchange of Fuses



Safety drawer

- Open the safety drawer with a small screwdriver and pull it out.
- Inside the drawer are two fuses.



Fuse a

Fuse b

- Remove the defective fuse **a**.
- Take out the spare fuse **b** and insert it into the rear holder.
- Carefully push the drawer back into the housing until it locks into place.

Connect the Mains Cord and Switch On



Power switch

Mains cord

- Plug the mains cord into the mains adapter socket of the flash unit.
- Plug the mains cord into the mains supply socket
- Turn the unit on by pressing the power switch.

Preparation for Storage or Transport

CAUTION

Risk of burns from reflector and flash unit



Heat which may cause burns develops at the head during the flash process.

- Before removing the reflector allow reflector and flash unit to cool-off.
 - Allow flash unit to cool off.
-

CAUTION

Glass safety dome may get damaged



When mounting a reflector the glass safety dome can be damaged.

- Do not touch the glass safety dome with the reflector.
 - While mounting a reflector place the flash unit on a stand.
 - Place the reflector evenly on the flash unit.
 - When mounting a reflector hold it with one hand.
-

Switch Off and Unplug the Mains Cord

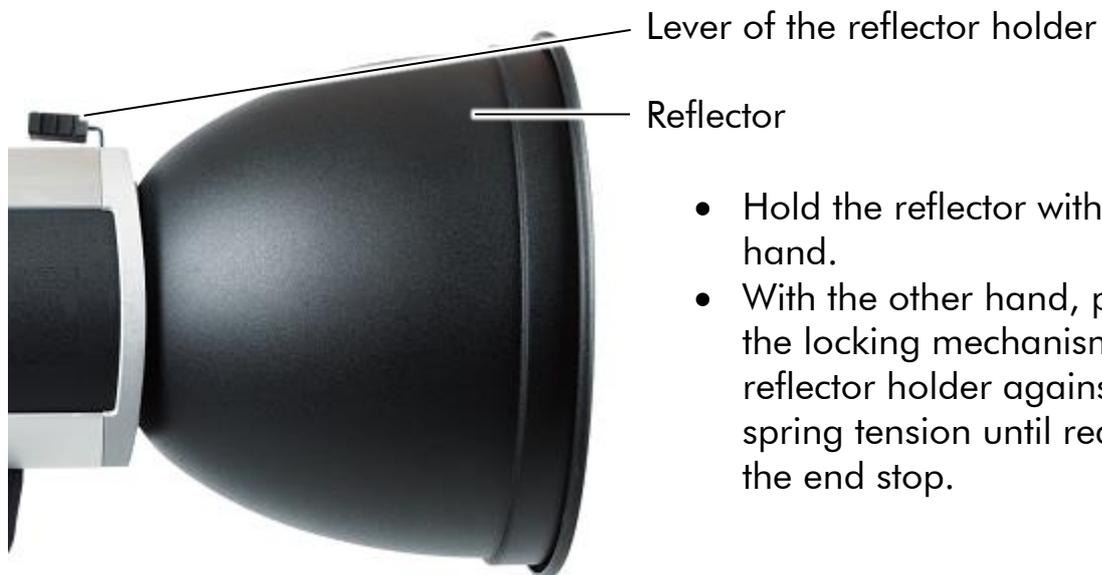


Power switch

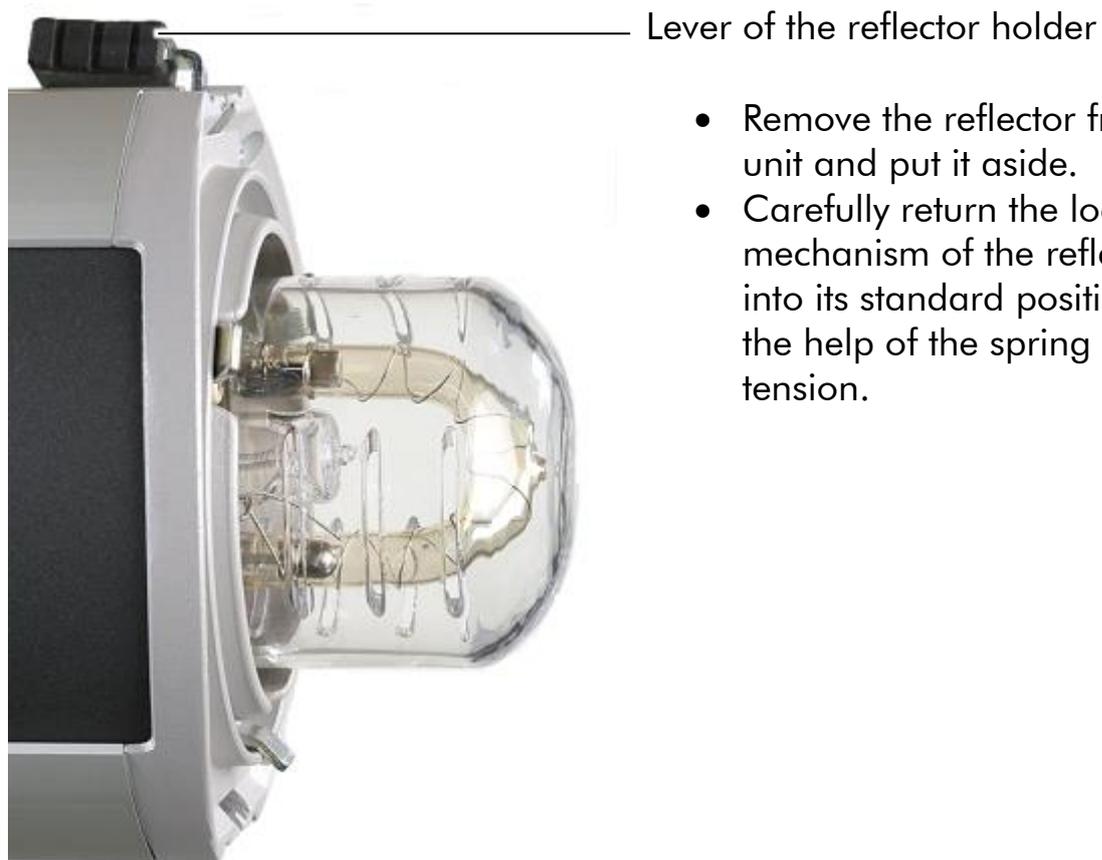
Mains cord

- Turn the unit off by pressing the power switch.
- Unplug the mains cord from the mains supply socket.
- Unplug the mains cord from the mains adapter socket of the compact flash unit.

Removing a Reflector

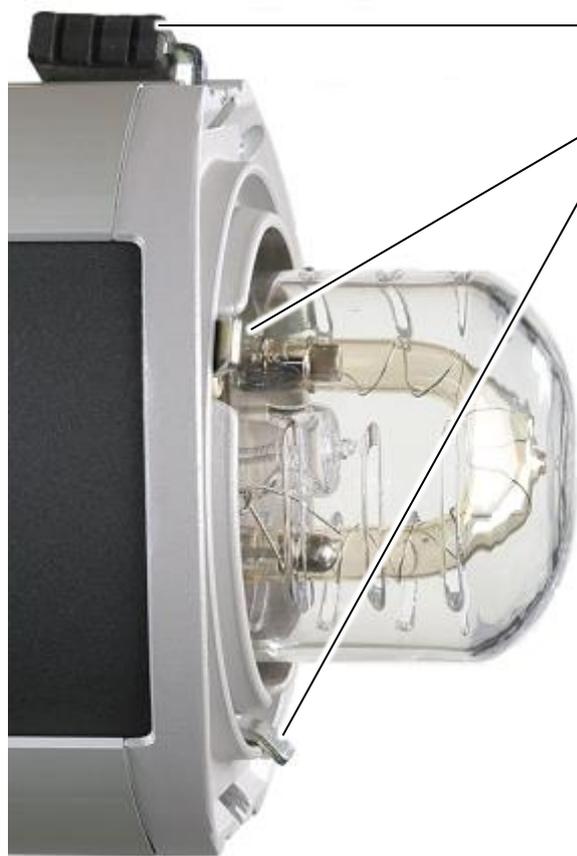


- Hold the reflector with one hand.
- With the other hand, press the locking mechanism of the reflector holder against the spring tension until reaching the end stop.



- Remove the reflector from the unit and put it aside.
- Carefully return the locking mechanism of the reflector into its standard position with the help of the spring tension.

Mount the Transport Cap



Lever for reflector holder

Fingers

- Press the locking mechanism of the reflector holder against the spring tension until reaching the end stop.
- Put the transport cap onto the unit and make sure that the 3 fingers are inside the wholes of the transport cap.



- Hold the transport cap with one hand while carefully returning the locking mechanism of the reflector into its standard position with the help of the spring tension.
- Check the secure mounting of the transport cap.

Cleaning

DANGER

Danger of electric shock



Danger of electric shock exists during installation and removal of system components.

- Switch off the system and pull the plug.
-

CAUTION

Risk of injury from broken glass



The glass tube may break during cleaning.

- Wear gloves and safety goggles.
 - If the flash tube cannot be cleaned, it must be changed.
-

The Flash unit needs little maintenance by the user. The outside of the equipment must be cleaned periodically of dust and dirt to ensure electric safety.

Maintenance Plan

Clean the system regularly as described in the section 'Cleaning'.

Periodic Inspections

National safety regulations require that electric systems and devices be inspected and maintained in regular intervals. Devices and accessories must be checked regularly for operational safety. An annual inspection of the system insures the safety of the user and retains the value of the equipment.

Disposal

The packaging materials must be separated for recycling. Obsolete or defective equipment must be turned in to recycling facilities.

Error Codes



Display

In case of an error, an error code is shown in display. In this case proceed as follows:

- Switch off the unit.
- Wait a few seconds.
- Switch the unit on again.

If the error code persists, check if the problem can be remedied according to the following list or contact customer service and state the error code, see paragraph „Customer service points“.

Hot Error – Unit is Overheated



In case of this problem, the modeling light shuts off, the fan blows at full speed and the unit stops flashing.

- Keep the unit switched on so that the fan continues to cool the flash unit.

Possible causes can be extensive flashing, high ambient temperatures with full modeling light, covered core ducts, unsuitable reflectors or a defective fan.

E1 Charging Error



Time out error while charging the unit. Possible cause: Flash tube might still glow after the flash.

This error code signifies substantial error. These problems can only be fixed by customer service.

- Switch off the unit immediately.
- Send the unit to the nearest customer service with indication of the error code.

E2 Discharging Error



Time out error while discharging the unit.

This error code signifies substantial error. These problems can only be fixed by customer service.

- Switch off the unit immediately.
- Send the unit to the nearest customer service with indication of the error code.

E3 Temperature Error



Capacitors are overheated.

This error code signifies substantial error. These problems can only be fixed by customer service.

- Switch off the unit immediately.
- Send the unit to the nearest customer service with indication of the error code.

E4 Ignition Error – Unit does Not Flash



Unit does not flash. This error message disappears on its own after a short period of time.

You may need to replace the flash tube or send the unit in for service.

E6 ZD Error



This error code signifies substantial error. These problems can only be fixed by customer service.

- Switch off the unit immediately.
- Send the unit to the nearest customer service with indication of the error code.

Updating Software

If necessary, the compact flash unit's software can be updated via the USB interface.

Contact your customer service center.

Customer Service

Keep the original packing material in case shipment becomes necessary. It provides maximum protection during transport.

If shipment to our customer service department becomes necessary, send the equipment to the below listed address for repairs and include a description of the problem:

HENSEL-VISIT GmbH & Co. KG

Service

Robert-Bunsen-Str. 3

D-97076 Würzburg

Phone number: +49 (0)931/27881-0

Accessories

Glass safety dome

Description	Article number
Clear, uncoated	9454660
Clear, uncoated	9454638
Clear, single-coated	9454637
Matt, uncoated	9454639

Flash tubes

Description	Article number
plug-in, single-coated	9450420

Halogen lamp for modeling light

Description	Article number
300 W / 230 V	128
300 W / 115 V	1280

Fuses

Description	Article number
Safety fuses F 4 A H	9412400

Radio trigger

Description	Article number
Strobe Wizard Plus transmitter	3950
Freemask transmitter	3955

Reflectors and softboxes

All reflectors and softboxes with small connector diameter (10 cm) for the EH unit series.

Additional accessories

Description	Articlenumber
Safety rope	7690

Additional information about accessories can be found on the Internet page: <http://www.hensel.de>

Contact Information

In case of questions concerning the shipment for repair reasons, for orders, or for questions about the equipment please contact us at:

Internet: www.hensel.de

Email: info@hensel.de

Telephone: +49 (0)931/27881-0

Fax: +49 (0)931/27881-50

Mail: HENSEL-VISIT GmbH & Co. KG
Robert-Bunsen-Str. 3
D-97076 Würzburg

Declaration of Conformity

Manufacturer: HENSEL Studiotechnik GmbH & Co.KG
Robert-Bunsen-Str. 3
97076 Würzburg
Germany

Owner of Certification: HENSEL Studiotechnik GmbH & Co.KG
Robert-Bunsen-Str. 3
97076 Würzburg
Germany

Test Report: of August 12, 2010

Product: **EXPERT D 500,
EXPERT D 1000**

Description: **Emission and Interference Resistance**

Standards: EN 61000-6-2:2005
EN 61000-6-3:2007

This declaration of conformity is made by the above mentioned manufacturer according to article 10, paragraph 1, of the governing EU- directives 2004/108/EC referring to electromagnetic compatibility and safety for bringing the statutory instruments of the Member States into lines with each other. This declaration does not make any statement according to requirements of other provisions concerning the electromagnetic compatibility and safety.

Description: **Low Voltage Directive**

Standards: EN 60065:2002+A1:2006+Cor.:2007+A11:2008
EN 60598-1:2008+A11:2009
EN 60598-2-9:1989+A1:1994

This declaration of conformity is made by the above mentioned manufacturer according to article 10, paragraph 1, of the Governing EU- directives 2006/95/EC referring to electrical items for usage within specified voltage limits.

This declaration of conformity is the result of testing samples of the products submitted, in accordance with the provisions of the relevant specific standards.

Date: August 12, 2010

Manufacturer


E. Stumpf
Managing Director -
HENSEL Studiotechnik GmbH & Co.KG

Warranty

For new VISIT or HENSEL equipment, we grant end-consumers a warranty period of 24 months from the date of invoice and 12 months for distributor products. Flash tubes, lamps, safety caps for glass tubes, rechargeable batteries, batteries, cables and plugs are not included in the warranty (unless the fault verifiably existed already at the time of delivery).

The warranty adjustment applies only if the equipment is used as intended and according to the information in the instruction manual.

In case of unauthorized modifications or unauthorized repairs, the warranty claim expires.

The sales receipt or the delivery slip is proof of warranty. For equipment which was purchased abroad, the warranty that is valid in the respective country applies.

Limits of Liability

We are not liable for bodily harm or property damage incurred due to improper use and resulting from using the equipment contrary to the information in the instruction manual. We are also not liable for consequential damage (loss of compensation etc.) which may be caused by a defect of our equipment.

HENSEL

■■■■■ PERFORMING LIGHT



WWW.HENSEL.DE