// Expert D 500
Expert D 1000

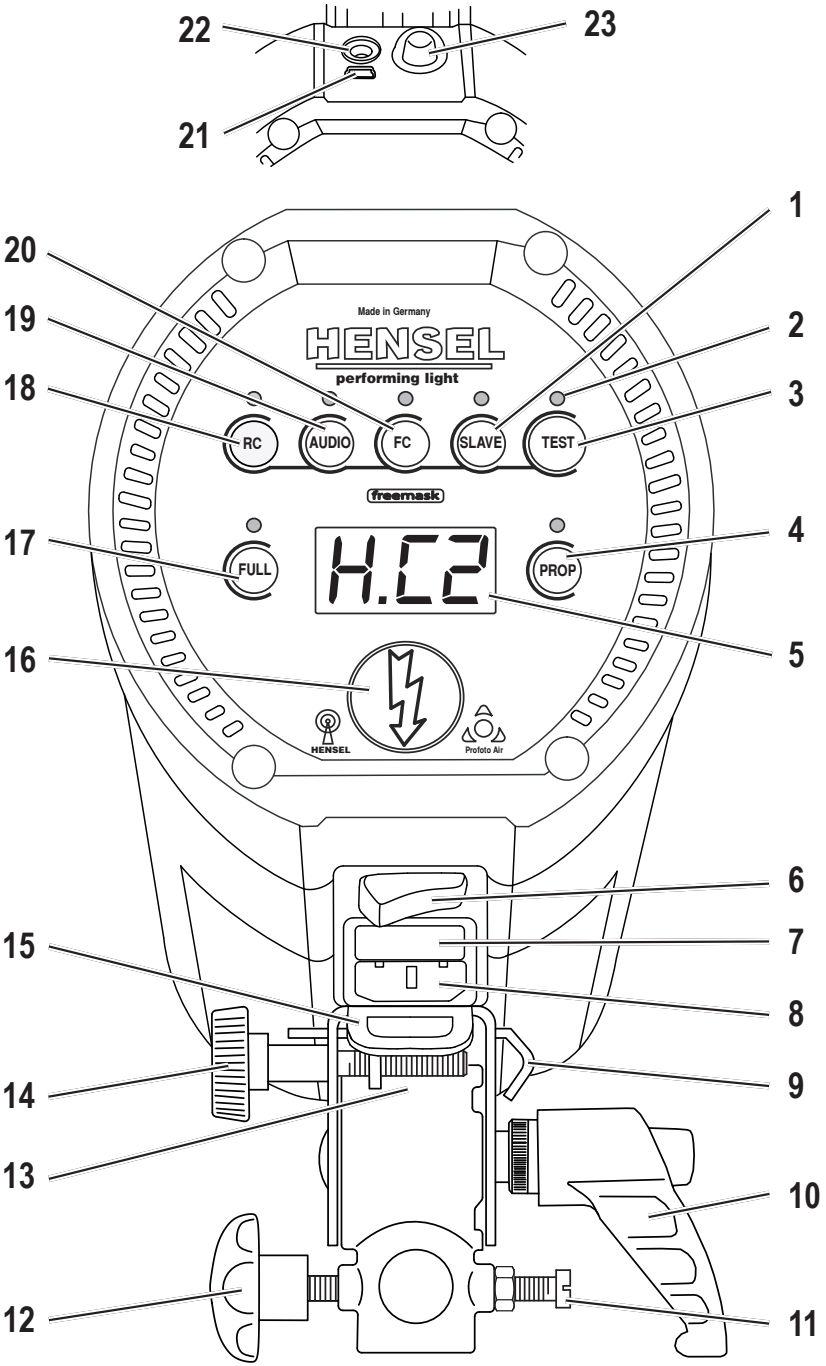
Compact flash

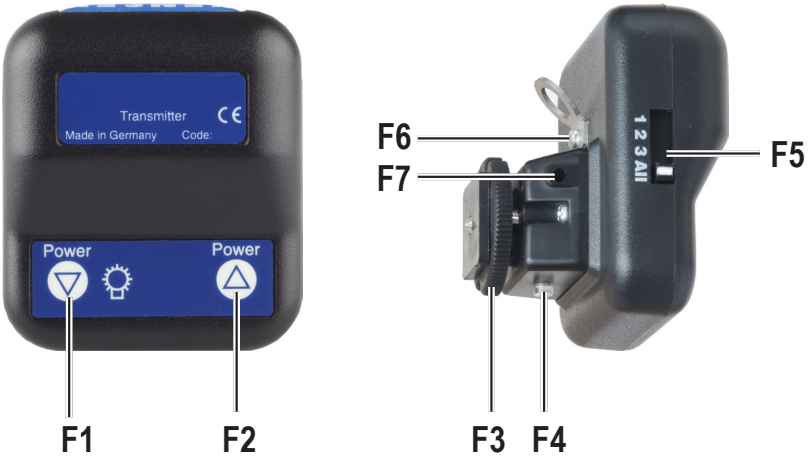


USER MANUAL

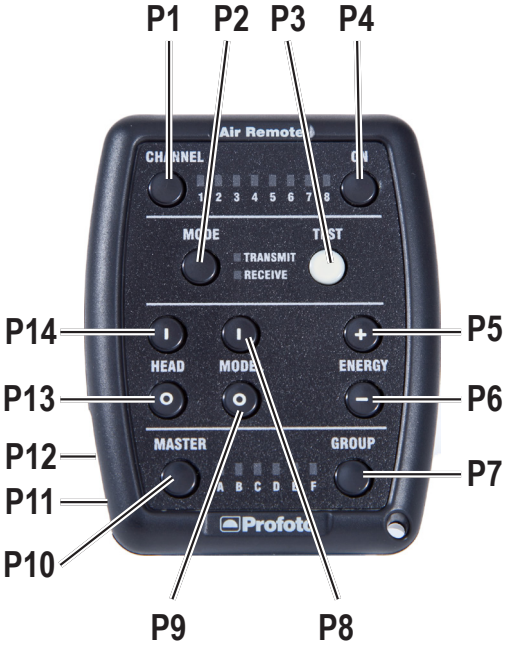
WWW.HENSEL.DE

HENSEL
performing light


22
23
21
1
20
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3
18
Made in Germany
HENSEL
performing light
RC
AUDIO
FC
SLAVE
TEST
freemask
17
4
FULL
H.C2
PROP
5
16
HENSEL
Profoto Air
6
15
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13
10
12
11



Strobe Wizard Plus / freemask



Profoto Air Remote



Profoto Air Sync

HENSEL
performing light

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Subject to technical changes. Errors and omissions excepted. The listed data are standard values and not to be regarded as guaranteed values in a legal sense. Values can deviate depending on component tolerance.

98.0010.00
Effective: 03/2012

1 Preface

Dear photographer,

By purchasing the Hensel-Visit compact flash unit **Expert D 500/1000**, 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. These will ensure successful and productive work with it in the coming years.

Observing this necessary information entitles you to warranty adjustments, prevents damages, and extends the operational life of the unit.

Hensel-Visit took great care and observed all pertinent regulations in order to manufacture a safe product of highest quality. Stringent quality checks ensure our high quality standard even in large-scale production.

Please add your part and handle the equipment with the necessary care.

If you have any questions regarding the use of this equipment, feel free to call us any time.

We wish you great success and „good light."

HENSEL-VISIT GmbH & Co. KG

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3 Safety instructions

In addition to the general rules for handling electrical equipment, the following safety precautions must be observed.

Read and observe the below listed information before initial operation of the equipment.

Supply a copy of the safety precautions when selling, leasing, or otherwise distributing this equipment.



ATTENTION!
Improper handling of the device, non-compliance with the safety hints below, or tampering with the safety features can cause property damage, bodily injury, electric shock, or even death.

Normal use

The compact flash unit **Expert D 500/1000** is 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.

Abnormal use

The equipment may not be used for any other purpose than described above, especially not for other electrical applications.

Set-up and initial operation

- Do not use flash units in explosive environments.
- Before connecting the equipment to the power supply, make sure that the mains voltage corresponds to the specifications listed on the unit's specification plate.
- Compact flash units and generators must only be connected to grounded power supply systems.
- Check the protective conductor function of the power supply before initial use.
- Only use plugs/connectors with flawless contacts. Burned or corroded plug contacts can cause fires. Defective plugs can cause substantial damage to the plug socket.
- Do not connect accessories from other manufacturers, even when these look similar or alike.

- To prevent damages and tripping hazards, avoid laying cables on the floor. If this is not possible, make sure that the cables cannot be damaged by vehicles, ladders, etc.
- Damaged cables and housings need to be replaced immediately by an authorized service department.
- Keep the minimum distance around the equipment unobstructed to ensure proper ventilation.
- Keep core ducts unobstructed during operation to ensure proper air supply.
- Do not insert objects into core ducts.
- Do not place any objects on top of the equipment (coffee cups, vases, containers filled with water, etc.).
- Protect the equipment from moisture, dripping or splashing water.
- Choose safe locations for set up and make sure that the equipment cannot fall into pools or bodies of water.
- Keep proper distance from flammable materials like decorative fabrics or paper to prevent the risk of fire.
- Secure the equipment with a back-up support when attaching it to ceilings or pantographs. Use the tilt bracket's safety screw **11** and secure the device additionally with a safety rope. Suitable safety ropes can be purchased from Hensel-Visit, see „14 Accessories“ on page 40.

Generators, compact flash units and flash heads



ATTENTION!
Defective flash tubes and false handling can pose a mortal danger.

A damaged flash tube can mean mortal danger because you could come in contact with the electrodes conducting high voltage. Therefore, never touch exposed electrodes inside the flash tube!

Before replacing flash tubes or modeling lights, the unit must be switched off and disconnected from the power supply (when using an AC mains drawer) or the generator. Even when the unit is switched off and properly disconnected from the power supply, the capacitor could still be highly charged in case of a malfunction. This means touching the device could pose a life-threatening danger.

Halogen lamps and flash tubes may burst and must only be operated with properly mounted Hensel safety dome.



ATTENTION!
Contact with capacitor voltage can pose mortal danger.

Opening the housing or repairs of the unit must only be done by an authorized customer service provider.

Working with the equipment

- Do not flash into eyes at short distances since this may lead to eye damage.
- Do not look directly into the flash tube or the reflector. The flash could be triggered accidentally.
- Regularly air closed rooms to prevent build-up of inadmissible ozone concentrations which can occur due to the use of high-powered flash systems.
- Cover the equipment which is not in use with a proper dust guard when working in a dusty environment.

4 General

Description

The **Expert D 500/1000** is a powerful compact flash unit. Extremely fast flash recycle times and short flash duration hallmark this unit which can be used worldwide thanks to mulivoltage. A bright, proportional modeling light which can be adjusted over a wide 8 f-stop range, 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 Profoto Air, Hensel **Strobe Wizard Plus** and **freemask** allow full remote control of this unit's functions like triggering, output regulation, and modeling light.

This manual describes both compact flash units together, **Expert D 500** and **Expert D 1000**. The features and operation are identical; the only difference is the performance. Please see „5 Technical data“ on page 12.

Scope of delivery

Please check the scope of delivery before initial use.



Note:
The scope of delivery may vary depending on order configuration and country of delivery. Please see corresponding information on your delivery documents and order forms.

Standard scope of delivery includes:

- Expert D 500 or Expert D 1000
- Flash tube, single-coated, plug-in type
- Modeling light (according to customer requirement), included
- Tilting bracket, combined with umbrella holder
- Cable set: mains and sync cord
- Transport cap
- User manual

5 Technical data

Unit series/unit type	Expert D 500	Expert D 1000
Listed performance output:	500 J	1000 J
Lead aperture 100 ASA, t 1/60, 12" reflector, 100% output 1 m distance / 2 m distance :	1 m = 90 0/10 2 m = 45 0/10	1 m = 128 0/10 2 m = 64 0/10
Flash duration time (t 0,5 s) in sec. up to:	1/5.600 s	1/3.250 s
Flash tube:	code no. 9450420: plug-in style, single coated	
Minimal recharge time:	0.11 s	0.14 s
Recharge time at 100% performance:	0.5 s	1.0 s
Flash performance adjustment:	10-3 = 8 f-stops	10-3 = 8 f-stops
Modeling light:	300W/G6.35/115V or 300W/G6.35/230V	
Modeling light adjustment:	off / full / proportional / autored	
Sync socket/ voltage:	6.3 mm jack plug, mono / 5 VDC	
Fuses:	F 4 A H, 5 x 20 mm	
Input voltage:	multivoltage 90-230 V	
Reflector connector:	quick-change automatic for EH (10 cm)	
Weight:	ca. 3.4 kg	ca. 3.9 kg
Overall dimensions in cm:	LxWxH 35x13.1x19.7	LxWxH 38.5x13.1x19.7
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	

Technical modifications excepted.
The listed data are standard values which may deviate depending on component tolerances.

Unit series/unit type	Expert D 500	Expert D 1000
- Internal power dump when reducing output:	APD	
- Glass safety dome:	yes	
- Display:	7-segment for flash energy/daily flash counter/channel display/auto-red/Error code	
- Control surface:	imprinted foil with keys, fluorescent, Hensel user logic	
Code no.:	8350	8360

Technical modifications excepted.
The listed data are standard values which may deviate depending on component tolerances.

6 Summary of control elements

1 ..... Slave on/off **SLAVE**
2 ..... Flash readiness indicator
3 ..... Flash trigger **TEST**
4 ..... Modeling light proportional **PROP**
5 ..... Display for set energy/channel indicator/flash counter
6 ..... Power switch
7 ..... Fuses and spare fuses
8 ..... Mains adapter socket
9 ..... Umbrella holder
10 .... Locking screw tilting bracket
11 .... Safety screw for suspended mounting
12 .... Locking device stand mounting
13 .... Storage of replacement fuses
14 .... Locking device umbrella holder
15 .... Mounting link for safety rope
16 .... Digital rotary encoder for output adjustment/channel selection/group selection
17 .... Modeling light **FULL**
18 .... Radio receiver ON/OFF channel selection **RC**
19 .... Audio signal ON/OFF **AUDIO**
20 .... Flash Check **FC**
21 .... USB interface
22 .... Synchronization socket
23 .... Slave

7 Initial use

ATTENTION!
Please make sure that the unit is **not** *connected to a power supply when preparing for initial use.*

Acclimatization

When relocating the compact flash unit from and to locations with substantial temperature differences, place the unit in the surroundings where it is to be used and leave it there for some time. This prevents moisture built-up which can result in creeping currents.

Removing transport cap

The transport cap protects the flash tube and the glass safety dome during transport or when the unit does not have a reflector mounted.

➲ 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.

ATTENTION!
Do not switch on the flash unit with the transport cap attached. This could pose a fire hazard due to the heat development of the modeling light.

Mounting/removing safety dome

ATTENTION!
Please make sure the flash tube or modeling light is not damaged during mounting/removing.

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

Mounting

➲ 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.

Removal

➲ 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.



Note:
Safety domes are available in different types. They can change the color temperature as well as the light characteristics!

Inserting flash tube

The compact flash unit has a plug-in flash tube, which you can replace yourself. Please observe the applicable safety precautions carefully.

Inserting the flash tube is described in the chapter on maintenance, note „Replacing flash tube“ on page 35.

Inserting halogen lamp for modeling light

The modeling light has a plug-in halogen lamp. Insert the included halogen lamp by observing the following instructions:



Note:
Avoid touching the lamp with bare hands since this leaves an oily residue on the glass surface which reduces the lamp's operating life. Use cotton gloves.

Make sure that the flash tube does not become damaged when inserting it.

➲ Place the pins into the lamp socket and push the lamp carefully into place by alternating the pressure on the pins until contacting the end stop.

ATTENTION!
Please regard the general safety precautions reference location and surroundings in the chapter „Set-up and initial operation" on page 8.

The compact flash unit can be used in any position. Please note that extremely tilted positions can lead to rapid warming of the unit, especially in connection with narrow-angle reflectors. In extreme cases, the result can be a thermal safety shut off!

Repositioning tilting bracket/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.

How to swap tilting bracket and handle:

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

Note:
Depending on the type of reflector attached, the position of the tilting bracket/handle can be moved to the unit's center of gravity.

Power supply



ATTENTION!
Make sure that the power supply corresponds to the information on the type label/technical data sheet before connecting the compact flash unit to the power supply. Compact flash units must only be connected to a grounded power supply.

The type label is located at the bottom of the housing. The compact flash **Expert D 500/1000** is solely approved for use with 115 V/230 V/ 50-60 hz operation.

It features multi-voltage technology which means the unit automatically adjusts to the applicable voltage (110 V - 240 V).

Fuse protection, building

Sockets intended for the connection of devices have to be protected with a minimum of 10 A.

Fuse protection, modeling light

The safety fuse **7** ensures the protection of the modeling light.

The compact flash unit **Expert D 500/1000** is protected by a 4 A Fuse which reacts quickly (F 4 A H).

The listed safety values apply when the unit is used with a 300 W halogen lamp.

(Please note „Replacing fuses“ on page 33).

Fuse protection, flash unit

The inside of the unit contains a built-in fuse. This fuse responds when the unit is damaged.



ATTENTION!
Only authorized service centers may replace this fuse, see „13 Customer service points“ on page 39.

8 Operation

Switch on/off

The main switch **6** switches the compact flash unit on or off. The unit is ready to flash as soon as the ready indicator **2** lights up.



ATTENTION!
The power switch must be accessible and operational at all times.

When turning on the unit, it defaults to the settings used last. This means the unit „remembers" the settings at switch-off.

Modeling light

The modeling light is switched on by using the key **PROP 4** or the key **FULL 17**. An LED above the key indicates the setting.

FULL: The modeling light is set at full power (300 W).

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

Automatic modeling light reduction (Autored)

The compact flash unit's modeling light is equipped with an energy saving mode. After a preselected time, the light is automatically reduced to level 9. When set on FULL mode, this happens regardless of the selected flash output. When set on PROP mode, this happens when the output setting is between 9.1 and 10. The default is set by the manufacturer at 35 min. This conserves energy and extends the lamp's operating life. The original output is restored when you touch any key.

How to set the switch-off time:

➲ Press the digital rotary encoder **16** twice in fast sequence (double-click).
The display **5** shows the selected switch-off time for ca. 3 s., e.g. A.35

➲ Adjust the time by turning the rotary encoder **16** in 1 minute increments up to a maximum of 90 minutes.
A setting of „**--**" causes the function to switch off.

Normal operation is resumed automatically 5 sec. after last using any control key.



Note:
Turning off the modeling light during longer breaks conserves energy and expands the operating life of the lamp.

Performance output adjustment

The rotary encoder **16** adjusts the flash output in steps of 0.1 f-stops over an output range of 8 f-stops.

- Turning it **clockwise** increases the output in steps of 0.1 f-stops.
- Turning it **counter-clockwise** reduces the output in steps of 0.1 f-stops.

The LED display **5** shows the selected performance output values from 3.0 (lowest output) to 10 (maximum output).

When the performance output is reduced, the stored energy is reduced via automatic power dump (**APD function**).



Note:
The power dump takes a moment. The flash readiness indicator **2** *lights up to indicate restored flash readiness.*

Flash Check

The **Expert D 500/1000** 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.

Activate or deactivate Flash Check with the **FC** key **20**.

Test flash

The key **TEST 3** lets you trigger a test flash manually. Holding down the key results in the fastest possible sequence of flashes.

Flash readiness

After switching the unit on, after flashing, and after adjusting the flash output, flash readiness is indicated on a green LED **2** located above the **TEST** key **3**.

Daily flash counter

The number of flashes triggered since last resetting the counter is displayed on the LED display **5**.

How to read the flash counter:

➲ Press the key **AUDIO 19** for one second.
The number of flashes is shown in display **5**.

The number range of the flash counter goes up to 999.

How to reset the daily flash counter:

➲ While in flash count mode, press the rotary encoder **16.**
The display **5** is reset to 000.

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 compact flash unit is connected to the camera via sync cord by connecting the 6.3 mm jack plug to the camera's sync socket.

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.



Note:
Based on a multitude of possible electronic circuits in different cameras which are used for synchronization, we are not liable for possible damages to the camera used for flash triggering. Please contact the camera's manufacturer before using a non-standard camera for such purpose.

Synchronization via slave

The built-in slave **23** triggers the flash when light from another flash is detected (slave mode).

This mode of operation is activated/deactivated with the **SLAVE** key **1**. The active setting is indicated via LED above the key.

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



Note:
Make sure that other bright, ambient light does not reach the photo cell. If this cannot be avoided, please use a cable or radio transmitter for synchronization.

Synchronization via radio remote trigger

The optional radio remote triggers **Strobe Wizard Plus**, **free-mask** and Hensel Profoto Air are used to conveniently synchronize the camera and flash unit via radio remote control. See „14 Accessories“ on page 40.

➲ In this set-up, you have to switch off the slave function with the **SLAVE** key **1**.

How to operate with optional radio remote triggers is described in the following chapters.

9 Operation Strobe Wizard Plus

Radio triggering The compact flash unit has a built-in radio receiver that can be used for flash triggering.

Radio remote control This radio connection also allows you to remotely control the modeling light.

Summary of control elements

Transmitter

F1 ..... Control key ▼ (flash energy and modeling light options)

F2 ..... Control key ▲ (flash energy)

F3 ..... Fixing nut for mounting on hot shoe

F4 ..... Test flash trigger

F5 ..... Channel selection switch

F6 ..... Mounting eye/locking screw for battery compartment

F7 ..... Socket for sync cord 2.5 mm

Setting transmitter

Mounting transmitter The transmitter does not have an ON switch. It is ready when connected to the camera via the hot shoe or a sync cord.

➲ Attach the transmitter to the hot shoe of the camera and secure it with the fixing nut **F3**.

- or -

➲ Depending on camera type, mount the transmitter to a flash rail and connect the transmitter socket **F7** to the camera via the included sync cord.

Setting channel Transmitter and receiver can be synchronized via three different channels. Up to three different work stations can be controlled separately. Additionally, the transmitter can also control all receivers together.

The setting is done via the **F5** key.

➲ Set the channel selection switch **F5** to channel 1, 2 or 3.

- or -

➲ Select the switch position **ALL** when all channels are to be controlled.

Setting receiver

The key **RC 18** on the flash head is used to activate the radio receiver and to set the channel.

➲ Briefly press the key **RC 18** until the LED above the key lights up **green**, or press the digital rotary encoder **16**.

Selecting radio channel

➲ Press the key **RC 18** for ca. 2 s to switch the channels of the radio receiver.
The display **5** is now blinking and shows the set channel, e.g. H.C1 for the first channel of **Strobe Wizard Plus.**

➲ Turning the rotary encoder **16** within 3 s lets you set the desired channel.

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

Approximately 3 s after a key was last pressed, the channel is saved and the display **5** stops blinking.

Output adjustment

The flash output is adjusted in steps of 0.1 f-stops with the two control keys ▼**F1** and ▲**F2** on the flash unit.

➲ Briefly press ▼ to reduce the output.

➲ Briefly press ▲ to increase the output.

The compact flash unit’s LED display shows the selected output values.

Switching the modeling light

Pressing the ▼ key **F1** longer (< 1 sec.) switches on the modeling light of the connected flash head. Depending on the connected flash head, the modeling light can be set to OFF – FULL – PROP – OFF.

10 Operation with freemask

The transmitter „**freemask**“ has all the functions of the **Strobe Wizard Plus** and is operated the same way. Output adjustment via the transmitter can only be done in the „C“-channels, not in the „F“ channels.

Additionally, the transmitter is used for the freemask method. „freemask“ is a photographic method to produce digital clipping masks. For this method, the camera takes two exposures in sequence. Exposure values and camera position remain unchanged for both exposures. The **freemask** transmitter controls the two flash groups used for both exposures:

- The flash group for the actual motif to be photographed.
- The flash group for the backlighting-like background lighting (mask lighting).

A mask layer is easily created with the help of image editing and thus the motif can be extracted.

The flash unit has three other „F“ channels besides the standard „C“ channels for this.

- The flash units for lighting the motif are assigned to the „C“ channels.
- The flash units for the lighting the background to be masked are assigned to the „F“ channels.

When selecting channels, (see „Setting receiver“ on page 24) the **freemask** receiver channels „F1“, „F2“ and „F3“ come after the **Strobe Wizard** channels „C1“, „C2“ and „C3“, e.g. H.F1 for the first channel.

Settings for the freemask method

Settings for one work station

freemask transmitter

➲ Set the channel selector switch **F6** to **All** or the selected channel.

Motif lighting

➲ Set all flash units for the motif lighting on „C“ channels (C1, C2, C3).

Mask lighting

➲ Set the compact flash unit for the mask on „F“ channels (F1, F2, F3).



Note:
In this case, the slave of the **Expert D 500/1000** *needs to be switched off with the* **SLAVE** *key* **1** *to prevent triggering the first group of flashes. All other slaves can be switched on.*

Camera

➲ Set the camera on fastest possible continuous shooting speed.

➲ Set the number of exposures to „2“ if your camera supports this.

This guarantees the highest exposure frequency setting with two consecutive exposures (depending on camera).

The transmitter will trigger the flash group needed for lighting the motif (C1, C2, and C3) and then trigger the flash group needed for lighting the mask (F1, F2 und F3).

Currently, all cameras support exposure series speeds from 3 pictures per second to (in theory) 500 exposures per second.

Settings for several work stations

If several separate work stations (up to 3) exist within a radio range, each work station must have a channel assigned to it.

➲ Set the channel selection switch **F6** on **1**, **2**, or **3.**

➲ Assign the same „C“ channel to lighting the motif.

➲ Assign the same “F” channel to lighting the mask.

Example:

station 1:	transmitter channel 1	motif C1	mask F1
station 2:	transmitter channel 2	motif C2	mask F2
station 3:	transmitter channel 3	motif C3	mask F3

11 Operation with Profoto Air

The compact flash unit is equipped with a built-in radio receiver for Profoto Air radio remote controls. The Profoto Air system is available in two versions:

Profoto Air Sync — This unit allows you to trigger individual flash units via 8 channels.

Profoto Air Remote — This unit allows you to synchronize, adjust flash output, and remotely control the modeling light.

Furthermore, the Profoto Air units have additional options which can be used to control flash units and cameras without integrated Profoto Air receiver.

Basic functions

Channels — Profoto Air Sync/Remote units transmit via 8 different channels. The **Expert D 500/1000** has 8 Profoto channels. Work at 8 different stations is possible without interfering with each other.

Groups — Additionally, the Profoto Air Remote and the **Expert D 500/1000** include the option of assigning the units to be triggered to up to 6 groups and then control these jointly.

- All flash units assigned to the same group are controlled together.
- Several generators/compact flash units can be assigned to one group.
- In master mode, all compact flash units assigned to the same channel can be controlled regardless of their group assignment.



Note:
For additional information about the multitude of Profoto Air unit's functions and how to use them, please see the manufacturer's applicable operating manual.

Summary of control elements

P1..... Channel selection key **CHANNEL**

P2..... Mode transmitter/receiver **MODE**

P3..... Test flash flash/camera **TEST**

P4..... On/off key **ON**

P5..... Flash output increase **ENERGY +**

P6..... Flash output reduction **ENERGY -**

P7..... Group selection key **GROUP**

P8..... Modeling light ON **I**

P9..... Modeling light OFF **O**

P10 ... Select all groups **MASTER**

P11 ... Synchronization socket flash **OUT**

P12 ... Synchronization socket camera **IN**

P13 ... Flash head off **O** (standby On)

P14 ... Flash head on **I**

Preparing transmitter

Mounting transmitter

The transmitter has a hot shoe adapter. The camera is synchronized via this or a separate cable.

➲ Attach the transmitter to the camera's hot shoe.

- or -

➲ Connect the transmitter's socket **P12 IN** to the camera with the included sync cable.

Switching transmitter on/off

➲ Switch the transmitter on by pressing the **P4 ON** key.
The LEDs are blinking and show the current settings.

➲ Press the **P4 ON** again to turn the transmitter off.

The transmitter turns off automatically after 30 minutes of inactivity.

Transmitter/receiver mode

Profoto Air Sync/Remote units can either be used as a transmitter or as a receiver.

➲ Press the **P2 MODE** key until the LED **TRANSMIT** lights up.
This sets up the unit as a transmitter.

- or -

➲ Press the **P2 MODE** key until the LED **RECEIVE** lights up.
This sets up the unit as a receiver.

Remote trigger

Channels

The transmitter has 8 different channels for synchronizing flash heads. The compact flash unit has 8 Profoto Air channels. This lets you control up to 8 work stations separately.

Channel setting

All units that are supposed to work together need to be set on the same channel.

Transmitter

The setting is done with the channel selection key **P1**.

➲ Press the channel selection key **P1** until the desired channel 1-8 is indicated on the LED bar.

Expert D 500/1000

The Profoto Air channels of **Expert D 500/1000** are designated with P1- P8 and are shown on display **5**, e.g. P.1A for channel 1 and group A.

➲ Briefly press the **RC** key **18** several times until the LED above the key lights up **orange**.

➲ Press the **RC** key **18** for ca. 2 s to change the channels of the radio receiver or press the digital rotary encoder **16**.
The display **5** is now blinking and shows the set channel, e.g. P.1A for channel 1 and group A of **Profoto Air**.

➲ Set the desired channel by turning the digital rotary encoder **16** within 3 s.

Setting group

The group setting lets you combine individual flash heads. This allows you to jointly control the settings of the flash heads contained in this group.

Triggering of the flash heads is done via the channel assignment. Additionally, the transmitter can control all groups together (master mode).

Transmitter

The setting is done with the **P7** key.

➲ Press the group selection key **P7** until the desired group is shown in the LED bar.

- or -

➲ Press the **MASTER** key **P10** to select all groups.
The complete LED bar lights up and all flash heads with the same channel are controlled regardless of group assignment.

Expert D 500/1000

The compact flash unit can be individually assigned to a group. The selected group (letter A-F) is shown in display **5**.

How to change the flash channel's group assignment:

➲ Press the **RC** key **18** for ca. 2 s or press the digital rotary encoder **16**.
The display is now blinking.

➲ Set the desired group (A to F) by **simultaneously pressing and turning** the digital rotary encoder **16** within 3 s.

After 5 s the display returns to its former setting and shows the selected performance output.

Checking channel/group assignment

➲ Press the **RC** key **18** for ca. 2 s or press the digital rotary encoder **16**.
The display **5** is now blinking and shows the channel and the group.

Remote control

Setting power output

The keys **P5** +and **P6 –** are used for adjusting the flash output **ENERGY** of the controlled flash unit. Briefly pressing the key adjusts the power in steps of 0.1 f-stops, pressing the key longer (> 2 s) adjusts the power in full f-stop steps.

➲ Press **P5** +to increase the power

➲ Press **P6 –** to decrease the power

The generator's LED display shows the set output values.

Flash head on/off

The controlled flash unit can be switched on and off via the keys **P13** and **P14**.

➲ Press **P13** to switch off the flash heads assigned to the group Standby on, a dot in the display lights up.

➲ Press **P14** to switch on the flash unit assigned to the group.

Setting the modeling light

The controlled flash heads' modeling lights **Model** can be switched on and off on the generator via the keys **P8** and **P9**.

➲ Press **P8** to switch on the modeling light.

➲ Press **P9** to switch off the modeling light.

12 Maintenance



ATTENTION!
The compact flash unit must be switched off and disconnected from the power supply before doing any maintenance work to it.

The compact flash unit **Expert D 500/1000** requires little user maintenance.

To guarantee the electrical safety, the outside of the unit must be cleaned regularly from dust and dirt.



Note:
Only clean the unit dry!

Regular maintenance

National safety regulations require the maintenance and inspection of any electrical system and equipment in regular intervals. Compact flash units, generators, and accessories must be inspected at regular intervals to ensure operational safety. An annual inspection of such equipment ensures the user's safety and retains equipment value.

Replacing fuses



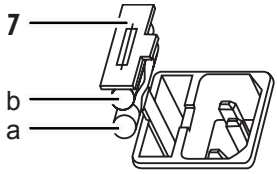
ATTENTION!
Fuses must not be „patched up" or otherwise bypassed. Only use spare fuses that match the below listed value and have the response rating "fast".
The compact flash unit must be switched off and disconnected from the power supply before replacing the fuse.

Safety fuses for operation with 300 W halogen lamp: F 4 A H, 5x20 mm.

Only use fuses with „high switching capacity", type "H", according to EN 60127-2/1 or IEC 127-2/1. The wrong safety fuse can increase the danger of the halogen lamp bursting in case the coiled filament melts.

How to replace a fuse:

➲ Open the safety drawer **7** with a small screwdriver and pull it out.



Note:
The drawer can only be pulled out approximately 1 cm.

Inside the drawer are two fuses. The rear fuse **a** is an active fuse, the front fuse **b** is a spare fuse.

➲ 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.

Note:
The handle of the compact flash unit contains additional spare fuses **13**.
Replace spare fuses after removal und insert them into the proper space.

Updating software

If necessary, the compact flash unit's software can be updated via the USB interface **21** located on the top side of the housing.

➲ Contact your customer service center, see „13 Customer service points“ on page 39.

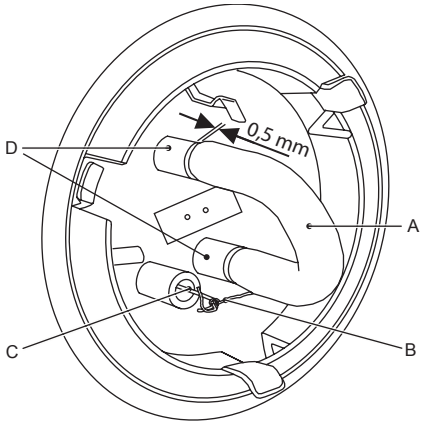
Replacing flash tube

The compact flash unit's flash tube is plug-in. In case of a defect, it can be replaced by the user.

ATTENTION!
Switch off the unit and wait at least 15 minutes for the capacitor voltage to deplete before replacing the flash tube.
Avoid touching the flash tube with bare hands to prevent its contamination with oily residue. This would reduce the flash tubes operating life. Use cotton gloves.

➲ Remove the safety dome, see „Mounting/removing safety dome“ on page 15.

ATTENTION!
Should the glass body of the flash tube be broken, do not touch the electrodes while replacing the flash tube!
In this case, use fully insulated pliers to unwind the wire and remove the flash tube!



➲ Unwind the wire **B** from the connecting pin **C.**

➲ Carefully pull the flash tube **A** from the plug base **D.**

➲ Place a suitable, new flash tube on the plug base **D** 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.

➲ Wrap the wire **B** onto the connecting pin **C**.

Suitable flash tubes for compact flash unit **Expert D 500/1000**, see chapter „14 Accessories“ on page 40.

Replacing modeling light

The halogen lamp of the compact flash unit's modeling light is plug-in. In case of a defect, it can be replaced by the user.



ATTENTION!
Before replacing the halogen lamp, switch off the unit and disconnect it from its power supply. Wait at least 15 minutes for the halogen lamp to cool off.

Avoid touching the flash tube with bare hands to prevent its contamination with oily residue. This would reduce the flash tubes operating life. Use cotton gloves instead.

➲ Remove the safety dome, see „Mounting/removing safety dome“ on page 15.

➲ Carefully pull the lamp from its plug connector.

➲ Insert a suitable lamp.

Ensure that the lamp is fuse protected according to regulation, see „Replacing fuses“ on page 33.

Maximum modeling lights to be used are:

300W/G6.35/115V resp. 300W/G6.35/230V

The modeling light has to match the voltage of the power supply.

Error messages

In case of an error, an error code is shown in display **5**. 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 „13 Customer service points“ on page 39.

Error E4 **Unit does not flash.**

If several units are on the set, the misfiring of individual units is shown in the display.

Possible causes can be a spent flash tube or an internal equipment problem.

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

This error message disappears on its own after a short period of time.

Error E5 **Unit is overheated.**

In case of this problem, the modeling light shuts off and the unit stops flashing.

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

➲ Keep the unit switched on so that the fan continues to cool the flash unit.
Remedy or improve the situation by switching off the modeling light.

The error message disappears once the unit has cooled off.

Error E1
Error E2
Error E3
Error E6

Internal faults of unit.

These error codes signify substantial errors. These problems can only be fixed by customer service.

➲ Switch off the unit immediately and remove it from the set.

➲ Send the unit to the nearest customer service with indication of the error code.

Warranty

The warranty period for the compact flash unit **Expert D 500/1000** depends on the country of delivery.

You can obtain information pertaining to warranty periods on the Internet pages of the distributing companies.

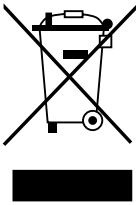
Normal usage, meeting the safety requirements in the instruction manual, and adhering to the information therein are prerequisites for this warranty. Unauthorized manipulation and tampering with the unit void any warranty claim.

Flash tubes, modeling lamps, protective glass covers, and defective cables which are caused by improper handling are excluded from the warranty.

The warranty includes replacement of faulty parts and the time required for installation by a qualified technician.



Note:
You may send the unit free of charge to one of the customer service points, see „13 Customer service points“ on page 39. Please include a short description of the defect.



Disposal

The packing material of the compact flash unit needs to be sorted and recycled as necessary. Retired and defective electronic equipment must be recycled in accordance with regulation.

13 Customer service points

Manufacturer's service

HENSEL-VISIT GmbH & Co. KG
Robert-Bunsen-Str. 3
97076 Würzburg
Tel.: +49 (0)931 278 810
Fax: +49 (0)931 278 815 0
E-Mail: info@hensel.de

Service points listed in the Internet

Additional national and international service and distribution addresses can be found on the web page of Hensel-Visit GmbH & Co. KG:

www.hensel.de

14 Accessories

Safety dome

clear, uncoated	code no.: 9454638
clear, single-coated	code no.: 9454637
matt, uncoated	code no.: 9454639

Flash tube

Expert 500, plug-in, single-coated	code no.: 9450420
Expert 1000, plug-in, single-coated	code no.: 9450420

Halogen lamp for modeling light

300 W/230 V	code no.: 128
300 W/115 V	code no.: 1280

Reflectors and softboxes

With small connector diameter (10 cm) for the EH/Expert/ Integra unit series

Replacement fuses

Safety fuses F 4 A H	code no.: 9412400

Radio trigger

Strobe Wizard Plus transmitter	code no.: 3950
Strobe Wizard Plus receiver	code no.: 3951
freemask transmitter	code no.: 3955
Profoto / Hensel Air Sync	code no.: 3965
Profoto / Hensel Air Remote	code no.: 3966

Additional accessories

Safety rope	code no.: 769
Sync cord, various lengths	
Umbrellas	

Additional information about accessories can be found on the Internet page of HENSEL-VISIT GmbH & Co. KG:
www.hensel.de

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16 EU declaration of conformity

about electro-magnetic compatibility and electrical safety

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

Notes

HENSEL

performing light



WWW.HENSEL.DE