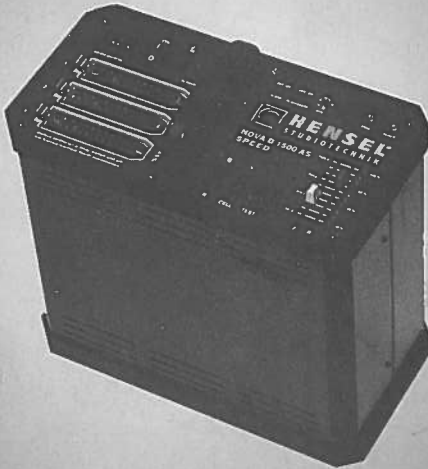


NOVA B

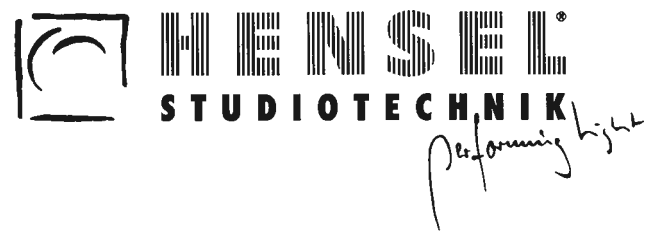
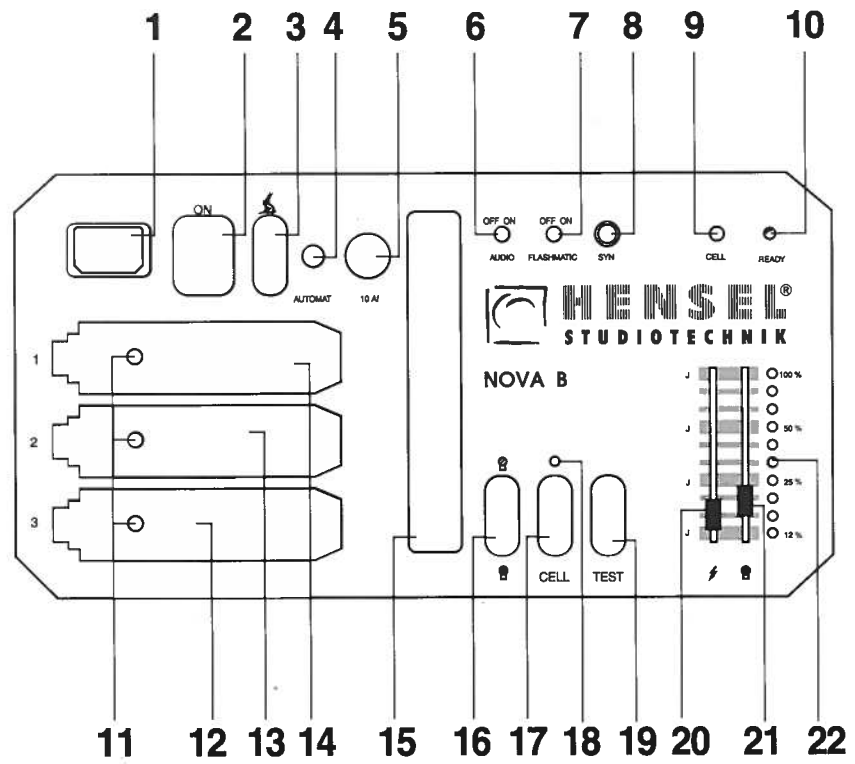
Kompaktgenerator

1500 S
1500 AS
1500 AS SPEED
3000 S
3000 AS



Bedienungsanleitung
user manual

 **HENSEL**
STUDIOTECHNIK
performing history



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1 Introduction

Dear Photographer,

in buying a HENSEL flash system, you have purchased powerful equipment of high quality. So that you are able to successfully and productively work with this system for many years, we are giving you some advice on the use of this high tech product. Only by observance of the information given do you secure your warranty, prevent damage and prolong the life of the equipment.

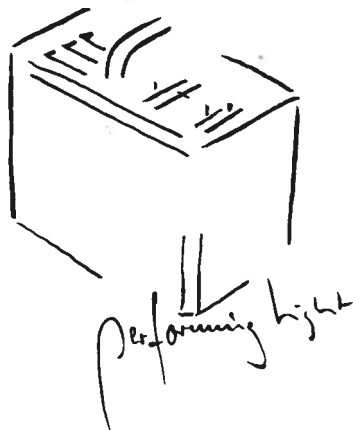
The firm HENSEL STUDIOTECHNIK has taken great care to manufacture a secure and high quality flash system under inclusion and observance of all current regulations. Strict quality control secure our quality requirements

even in mass production. Please take your part in this and treat the equipment with due care - your reward will consist of excellent pictures.

If you should have any questions on the use, then feel free to ask us at any time.

We wish you success and „good light“.

HENSEL Studiotechnik



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3 Hints on Safety

Generators store electrical energy in condensers by applying high voltages. These form a source of danger, which must be carefully excluded. Besides general rules on handling electrical appliances, the following safety measures must be observed. Therefore, please read and comply with safety hints within the user manual before turning the appliance on.

Proper use

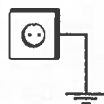
- The present generator is meant for studio use of professional photographers. Its goal is supplying electrical energy for certain fixed types of flash lamps.

Improper use



- The appliance may not be used for any other purpose than that described above, especially not for generation of electrical energy for flash lamps from other manufacturers or for other electrical appliances.
- Contact with the condenser voltage is perilous, and therefore opening of the generator case and repairs may only be made by authorized customer service.
- Do not route cables across the studio floor if possible, so that damage is excluded. If routing across the floor cannot be omitted, then it must be secured that cables are not damaged by vehicles, ladders, etc.
- Damaged cables and cases must be immediately replaced by customer service.
- Do not stick any objects into ventilation slits, lamp sockets or into the synchronization socket.
- Do not deposit any objects (tools, coffee cups, etc.) on the generator.

- Flash tubes may only be exchanged by authorized trained personnel. Exchange of flash tube and the adjusting lamp may only be effected with the appliance turned off, unplugged from the mains and discharged.
- Flash systems may not be used in environments with explosion hazard.
- Generators must be protected against humidity and spray water.
- Flammable materials, like furnishing fabrics, paper, etc. may not be stored in the immediate vicinity of generators and flash lamps to prevent fire hazards.
- Ventilation slits of generators must be kept free during operation and sufficient air supply must be ensured.
- Generators may only be used on supply lines (mains) with working protective conductor.
- Only lamp connectors with immaculate contactors may be used, burned or corroded contactors may cause explosions in the area of connectors and lamp sockets.
- Generators - hanging from pantographs or ceiling - must be doubly secured against falling down.
- Do not flash into eyes at short distance, because this can lead to eye damage.
- Do not look directly into the flash reflector, the flash lamp could be triggered inadvertently.
- Regularly air closed rooms to prevent buildup of inadmissible ozone concentrations, which can occur due to the use of high-powered flash systems.
- Do not connect accessories from other manufacturers, even if they use the same or similar connectors.
- During work in the studio generating much dust, the appliances must be covered with suitable dust protection (not during operation).



4 Technical Specifications*

Series	NOVA B	NOVA B	NOVA B	NOVA B	NOVA B
Model	1500 S	1500AS	1500 AS SPEED	3000 S	3000 AS
rated energie:	1500 J	1500 J	1500 J	3000 J	3000 J
aperture at 100ASA t 1/60, distance 2m, MH 3000 HI Reflector:	64.5	64.5	64.6	90.5	90.5
flash duration: t 0,5 [t 0,1]					
1 EH 3000:	1/1000 [1/250]	1/1000 [1/250]	1/1900 [1/500]	1/550 [1/150]	1/550 [1/150]
3 MH 3000 Speed:	1/2600 [1/800]	1/2000 [1/700]	1/4900 [1/1900]	1/1650 [1/500]	1/1550 [1/450]
flash sequence in sec. quick charge 100%:	.8 - 1.8 s	.8 - 1.8 s	.4 - 1.1 s	1.2- 2 s	1.2- 2 s
power control:	variable 4 f adjustable	variable 5 □ f adjustable	variable 5 f adjustable	variable 4 f adjustable	variable 5 □ f adjustable
power distribution:	symmetrical	asymmetrical or symmetrical 100%:33%:33%	asymmetrical or symmetrical 100%:40%:40%	symmetrical	asymmetrical or symmetrical 100%:33%:33%
flash connectors/ number of:	3	3	3	3	3
mains voltage:	230 V	230 V	230 V	230 V	230 V
weight kg:	5.3	5.3	6.95	7.3	7.3
measurements in cm length x width x height: (with handle)	31 x 16.6 x 24.7	31 x 16.6 x 24.7	31 x 16.6 x 31.9	31 x 16.6 x 31.9	31 x 16.6 x 31.9
code:	434	435	436	437	438

Technical changes reserved. Measurements made at 230 Vac

* the information stated includes typical values, which are subject to change due to tolerances of the components used.

5 Overview of Controls

- 1 . . . Mains connector
- 2 . . . Main switch ON / OFF
- 3 . . . Quick charge / slow charge
- 4 . . . Automatic cut-out, for electronics
- 5 . . . Fuse for the modeling lamp 10 A quick
- 6 . . . Audio ON / OFF
- 7 . . . Flashmatic ON / OFF
- 8 . . . Synchronization socket
- 9 . . . Slave
- 10 . . Display for flash ready and overload
- 11 . . Plugmatic micro switch
- 12 . . Flash socket 3
- 13 . . Flash socket 2
- 14 . . Flash socket 1
- 15 . . Handle
- 16 . . Modeling lamp - flash check
- 17 . . Slave ON / OFF
- 18 . . Control LED for slave
- 19 . . Manual flash trigger
- 20 . . Flash power control
- 21 . . Modeling lamp control
- 22 . . Light emitting diode display for power contro

7 Starting Up

Acclimatizing

When moving the generator from one climatic zone to the next, the generator should stand in the room, in which it will be operated, for some time before starting it up. This prevents possible surface leakage currents due to condensing moisture.

Positioning

NOVA generators can be operated standing up or lying down. Several generators may be stacked lying down; the plastic protective strips have stops for locking.

Mains connection

Attention:

Before connecting the generator to the mains outlet, make sure that the mains voltage matches the information given on the type label of the generator. The type label can be found on the bottom of the appliance.

Flash generators may only be connected to mains outlets with ground connection.

Fuses

Outlets, in the building:

10A fuse outlets for NOVA 1500 (slow charging and quick charging)

16A fuse outlets for NOVA 1500 SPEED for quick charging (switch **3**, position **4**)

16A fuse outlets for NOVA 3000

Lamp fuses

The fuse **5** is a general lamp fuse. Fuses for 10 A quick must be used to prevent explosion of the halogen lamps.



Electronics

Electronics are protected by automatic cut-out 4. If the automatic cut-out should be triggered, then operation mode can be reinstated by pressing switch 4. In case of multiple triggering, there is probably a malfunction and the appliance should be sent to the HENSEL customer service for review.

Overload automatics

In case of very large series of subsequent flashes, the overload automatics can be triggered. The flash ready display 10 then switches to red „overheat“. After a few minutes of cooling down, the NOVA generator is again ready for operation.

Connecting lamps

All HENSEL flash heads fitted with a 20 pin connector can be connected to the NOVA generator.

Exceptions:

NOVA generators models 1500 SPEED and NOVA 3000 S or AS may only be connected to 3000 J flash heads.

Lamp heads / flash heads without cooling fan may not be used with the generator NOVA SPEED. During quick flash sequences, the flash tubes and therefore also the generator would be damaged.

EXPERT HEAD 1200 may not be used in quick flash sequences and only up to a maximum energy of 1200 J on NOVA generators.

Recommended for generators 1500 S and AS EH/MH are heads from 1500J, respectively for NOVA SPEED and NOVA 3000 S / AS EH/MH heads from 3000J.

The heads models 3200-3500, HT 4000 and HT 8000 are suited for all NOVA generator.



Third party manufacturers:

Even though similar lamp sockets and plugs are used by other manufacturers as well, lamps and flash heads from these manufacturers may **not** be connected to the NOVA generator. Corresponding adaptors are available as accessories respectively structural alteration by the HENSEL customer service is possible.

Number of flash heads connected

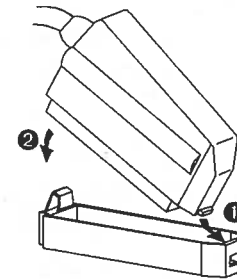
No more than 3 flash heads may be simultaneously connected at any time. This is also valid when using a splitter box.

Mechanical connection of lamp plugs

- Before connecting lamp plugs, switch off the generator using main switch 2.
- Only use flawless plugs and sockets.

The lamp plug is locked using a mechanical catch. For this, insert the plug into the flash socket 12, 13 or 14 slightly tilted forward and then press it tightly into the catch at the rear near the cable duct.

To disconnect the plug, press back the catch and pull the plug upwards at the back at the cable duct.



Plugmatic

The flash sockets 12, 13, 14 are fitted with the HENSEL safety system „PLUGMATIC“. This enables unplugging and replugging the flash plugs without danger. Only after the plug has been fully inserted is the triggering voltage enabled by micro switch 11.

Still, plugs should only be unplugged or plugged in when the generator is turned off.

7 Operation

Synchronization

Synchronization by cable

The generator is connected to synchronization socket **8** to the camera using a synchronization cable.

The synchronization circuit is made up of state-of-the-art semi-conductor technology and enables secure triggering of the flash even with older cameras with mechanical contactors.



Due to the many different electrical circuits in cameras for controlling synchronization, we cannot take any liability for possible damage to cameras triggering flashes. Please contact the camera manufacturer before using an unusual camera.

Synchronization by slave

The generator can be triggered by the built-in slave **9**. Triggering is then effected by an „incoming“ flash, which was emitted by another flash light. This mode of operation is switched on using switch **17** and displayed by control LED **18**.

Synchronization by infrared triggering system

For remote-controlled triggering, an infrared triggering system is available as accessory (Code No. 392).

Power control

The desired flash power is set using power control **20**. This covers a range of capacity of 4 aperture values for symmetrical generators and of 5 aperture values (for the choked sockets) for asymmetrical generators.

A display made of light emitting diodes **22** shows the setting in 1/3 aperture values (yellow) and whole diaphragm values (red).

Power distribution is effected through the three flash sockets **12, 13, 14** of the generators.

1500 S and 3000 S: symmetrical
 1500 AS and 3000 AS: relationship 100% : 33% : 33%
 1500 AS SPEED: relationship 100% : 40% : 40%

Uniform flash energy output for symmetrical generators is only achieved by using the same flash heads.

Distribution of flash power for output sockets

NOVA B 1500 S

Socket 1	Socket 2	Socket 3
100%	--	--
--	100%	--
--	--	100%
50%	50%	--
50%	--	50%
--	50%	50%
33%	33%	33%

NOVA B 1500 AS
NOVA B 3000 AS

Socket 1	Socket 2	Socket 3
100%	--	--
67%	33%	--
67%	--	33%
67%	16%	16%
--	16%	16%
--	33%	--
--	--	33%

NOVA B 1500 AS
SPEED

Socket 1	Socket 2	Socket 3
100%	--	--
60%	40%	--
60%	--	40%
60%	20%	20%
--	20%	20%
--	40%	--
--	--	40%

Readiness of flash

Readiness of flash of the generator is shown by

1. green light of the light emitting diode **10**;
2. acoustical signal (*see audio, page 15*);
3. modeling lamp turned on (*see flash check, page 15*).

Flashmatic

The NOVA generators have an automatic flash unload function. It can be switched on or off using the rotary switch **7**. If the flash energy is reduced using the power control **20**, then the generator will flash after about 3 s and then loads to exactly the value set.



- If flashmatic is turned off, then the first flash after flash power reduction still equals to the value set before. Therefore flash manually after turning off flashmatic and reducing power, so that wrong exposure is avoided.

Modeling lamp

The modeling lamp is switched using switch **16**.



Middle position:



Modeling lamp ON with flash check

Modeling lamp OFF.

Modeling lamp ON without flash check.

The modeling light of flash heads is automatically adjusted by the generators AS and SPEED. If a second head is connected, for instance, than total modeling light is automatically adjusted one aperture level lower than with one flash head.




Automatical reduction of modeling light by the generators NOVA B AS does not work with the EXPERT HEAD 1200 and the older FLASH HEAD 3200. These flash lamps can be reconstructed by authorized customer service in case of need.

This automatic reduction of light emission does not exist with NOVA S generators. For these, the modeling light is adjusted accordingly using control **21**.

To have proportionality between modeling light and flash, the controllers **20** and **21** must be set to the same value. Because there are no halogen lamps as modeling light, which can be regulated over such a large power range as the flash, there is only approximate proportionality between flash and modeling light in the lower power range.


Flash Check

If this mode is switched on (switch **16** to setting ) , then the modeling light is turned off after a flash and is turned on only after the generator has been recharged to the adjusted power level. This shows correct charge as well as readiness to flash. Also, the mains connection is relieved during the charging phase.

Audio

Readiness to flash after charging is signalled with a tone. This tone can be turned on/off using the rotary switch „Audio ON/OFF" **6**.

Slow charge

To enable operation of high-powered generators in mains networks with low load, the generator can be charged with a longer charging time. This is turned on using switch **3** from setting  to normal setting.

Test flash

By pressing the pushbutton **18**, the generator can be triggered manually.

8 Maintenance

The NOVA B generator is in need of little maintenance by the user. To secure electrical safety, the appliance must be regularly cleaned of dust and dirt on the outside.

Attention:

Before cleaning the appliance, it must be unplugged from the mains. Only clean with a dry cloth.

Maintenance and repairs may only be made by authorized customer service.

Replacement of fuses

If replacement of fuse **5** should become necessary due to its melting, then this may only be done when the appliance is disconnected from the mains.

Attention:

It is very important to replace fuses only with those with 10A, quick (10Af). In no case may fuses be „repaired“ or shunted!

Regular inspection

National safety regulations require regular inspection and maintenance of electrical systems and appliances. Generators and accessories must be regularly checked for safe operation. Yearly inspection of the appliances serves the safety of the user and protects your investment in the system.

Return to customer service

To secure optimum protection of the appliances during shipment, original packaging should be retained for each model type.



9 Disposal



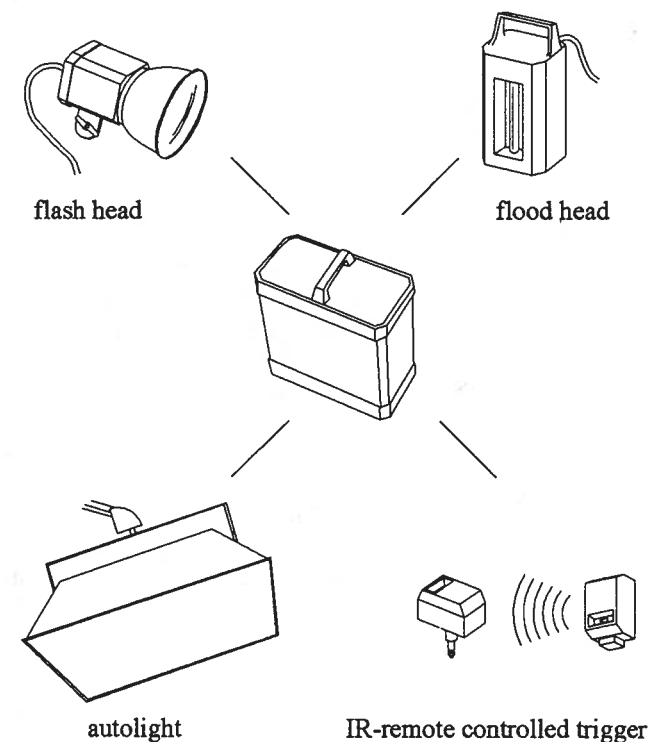
Packaging of the generator must be separately disposed of and recycled.

Worn out and broken appliances must be disposed of by electronics recycling.

10 Accessories

There is a wide range of useful accessories available for the professional photographer.

Before connecting flash heads, their maximum load must be observed (*see „connecting lamps“ on page 10*).



11 Customer Service

Works customer service

with 24 hour express service:

HENSEL Studiotechnik Tel.: 0931/27604
Vertriebsgesellschaft mbH
- Serviceabteilung - Fax: 0931/273799
Florian-Geyer-Str. 3
97076 Würzburg

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Flash heads



Frontprojektion
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