

# SEAFLASH 150DIGITAL

CANON  
NIKON

USER MANUAL



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# 1 WARNINGS

- Never try to open the unit - the internal high voltage is potentially lethal. The unit may be serviced only by authorised service centres.
- Shooting a flash close to eyes can seriously injure them.
- Use only the original charging unit and TTL cable which are delivered with the flash.
- Never connect two flashes together to a digital camera in a different way than the one recommended in this manual. Not strictly following the correct connections can result in a damage of the strobes and the camera.
- Never connect the flash to a camera that is different from the type listed in this manual. Before using the flash with a camera not listed in this manual contact Seacam.
- Never connect a power adapter or battery charger to the syncro connector.
- Never use this flash together with a different flash brand. Enquire first about its compatibility and special connections. Not following this can result a damage of the unit or the camera.
- Never shoot the flash directly into the lens of a digital camera. It can damage the camera picture sensor.
- Use the flash always following the directions of this user manual.
- Not paying attention to the recommendations of this user manual can cause damage to this unit or to the used camera.

## 2 CONTROLS AND PARTS



### CONTROL PANEL

- 1 - Power switch and mode selector
- 2 - TTL / MAN selector
- 3 - Ambient light meter for display
- 4 - LED display
- 5 - Ready light indicator
- 6 - Battery compartment
- 7 - Synchro cable socket

### FRONT

- 8 - Macro protection ring – removable for wide angle
- 9 - Slave sensor
- 10 - Bulb / Reflector
- 11 - Pilot light LED

## **BATTERY PACK**

- 12 - Power adapter socket
- 13 - Recharger LED indicator
- 14 - Data pin
- 15 - minus (-) Battery pin
- 16 - plus (+) Battery pin

### **3 COMPATIBLE CAMERAS**

The SEAFLASH 150DIGITAL is suitable for CANON and NIKON cameras. It is compatible with digital / film cameras in E-TTL, I-TTL, film -TTL and in manual mode.

#### **CANON**

The SEAFLASH 150 DIGITAL is compatible with the following CANON digital / film cameras listed in E-TTL, film-TTL and in manual mode. By using digital cameras all the special functions as, +/- flash compensation, automatic AF- light, pre exposure lamps, automatic standby, etc. are supported.

CANON EOS1DS MKIII, EOS1D MKIII  
CANON EOS1DS MKII, EOS1DNMKII, EOS1DMKII  
CANON EOS1D, EOS1DS  
CANON EOS5D

#### **NIKON**

The SEAFLASH 150 DIGITAL is compatible with the following NIKON digital / film cameras listed in I-TTL, film-TTL and in manual mode. By using digital cameras all the special functions as, +/- flash compensation, automatic AF- light, pre exposure lamps, automatic standby, etc. are supported.

NIKON D3X, D3  
NIKON D2X, D2H, D2S  
NIKON D700, D300, D200  
NIKON D80, D70

## 4 GENERAL DESCRIPTION

The SEAFLASH 150 DIGITAL is fully controlled by a micro processor. Some of the significant advantages of using a micro controller are the possibility of managing digital communication on a serial bus with a digital camera and the possibility of easily updating the firmware in order to guarantee compatibilities with future generation digital picture cameras (if possible). An additional advantage offers the digital display (4) which is the perfect interface between the user and the flash.

**Feature** The display (4) and ready flash indicator (5) are automatically dimmed by an ambient light photo diode (3). With this feature the display retains its perfect visibility in different light conditions.

In order to improve battery life and to make the battery management very fast, easy and safe for the user a lot of attention was given to the battery pack electronics.

This user manual contains important information. By reading it carefully you will learn about the many advantageous features of the flash which will help you take great pictures.

### **Firmware release number**

When the unit is switched on the LED display (4) shows first the firmware release number. A dot after the firmware release number (.) indicates it is for CANON – no dot means it is for NIKON.

## 5 BATTERY PACK MANAGEMENT

The SEACAM removable battery pack is located under the battery container cap (6). Unscrew the cap by turning to the left and close it by turning to the right.

**Information** You don't need to tighten the cap very firmly. Maintain / check the o-ring when opening and grease the

sealing surface regularly.

**Attention** Always prevent water or moisture from entering into the battery container or into the batteries. Close the battery container (6) before using the flash underwater. If no syncro cable is connected, close also the syncro socket (7) with the protection cap.

**Feature** The battery container is completely sealed. In case water enters due to an incorrect battery cup positioning or an o-ring failure, the unit will not be floated. Only battery pack and battery contacts can be damaged and have to be replaced.

The battery pack has to be inserted into the battery container by aligning the 3 connecting pins. The battery fits only in one position (with battery LED at 2h position). The battery pack has to be removed by pulling up the metal ring to access the battery charger socket.

The battery pack is made of special high current capable Sanyo NiMH batteries. It is equipped with a built-in electronic circuit to make battery management easy, fast and safe. By switching on the flash the user can read the indication of the battery status.

During normal use the micro processor checks the battery status permanently and advises the user when it's close to being completely discharged. The flash stops and automatically switches off when the battery is fully discharged in order not to damage it.

## **.a General**

When the unit is switched on, the display shows first the firmware release number. Shortly there-after it shows the indication of available battery energy in 20% steps for two seconds.

**Information** To have a more accurate reading, it is advised to release the flash 2 or 3 times at full power, then switch the unit off and on again. This second reading will give a more accurate status of the battery energy level.

A 99% recharged battery pack can achieve ca.180 lamps at



max power.

With 40% power residual ca. 60 lamps at full power. This should be enough capacity for one dive without recharging.

When the battery is down to 20% the display and the ready flash indicator start to blink every minute for 4 seconds and an audible alarm sounds once.

When the battery is completely discharged a continuous alarm is emitted and two lines are shown on the display. After 30s the unit automatically shuts off in order not to damage the battery. If the flash is completely discharged and you try to switch it on again, the flash can start a series of on/off cycles without switching it on completely. Simply remove the battery pack and recharge the battery.

Do not leave the battery inside the flash when flash is not in use in order to avoid a slow and thorough battery discharge.

### **.b Battery recharge**

Prior to the first use the battery must be fully charged before disconnecting it from the power supply.

The battery can be recharged also if it is not fully discharged. For charging the battery pack has to be removed from the battery container and connected to the power supply.

After connecting the power adapter to the power adapter socket (12), the charge process starts and the control LED (13) starts to blink.

When the charging cycle ends the control LED (13) is permanently lit and the battery enters into trickle charge. It can now be disconnected from the power supply. (not necessary) It takes approximately 100 minutes for the empty battery pack to fully charge.

If an error is detected by the microprocessor, the charging process is stopped immediately and the control LED (13) starts to blink at a high frequency. In this case disconnect the power adapter, wait for the battery to cool down. If the control LED (13) recommences blinking at a high frequency the battery might be defective and must be serviced or replaced.

For all new NiMH batteries or for battery packs stored for a

long time, a few full charge/discharge cycles (4-7) are necessary to refresh the batteries for perfect conditions.

### **.c Battery maintenance**

As for all NiMH battery it's advised to fully discharge the battery when possible before charging it. To discharge the battery, leave it inside the flash and switch it on in high pilot lamp (P1) position. The flash will automatically shut off when the battery is empty. The battery performance will increase after a few full discharge/recharge cycles. If the battery pack is left inactive for a short period of time it can be fully recharged and reach its maximum energy level. After the recharge the display shows 99%.

**Important** To avoid batteries overcharge never try to recharge a fully charged battery pack!

**Attention** Never perform a series of full power shoots to discharge batteries. This will decrease flash lamp life and can also result in a flash damage.

Never short circuit any battery terminals – it will damage the battery pack!

## **6 SHOOTING MODES**

Three different shooting modes are available.

Select with the TTL / MAN selector (2) TTL mode or any manual setting - one aperture step up or down. With the power and mode selector (1) switch between standard (ON,P1,P2) or slave (SL) mode.

### **.a I-TTL , E-TTL, film-TTL**

The energy delivered by the flash is calculated by the camera to obtain the correct exposure. Set the TTL / MAN selector (2) to TTL. The display shows the character A (TTL-mode). When the flash delivers a full power lamp the user is advised of the possible underexposure by an audible beep and EE blinking on the LED display.

**Feature** After each shot the display blinks for 8 seconds,

showing the delivered energy in % on max flash energy, both with film and digital cameras. This feature allows the user to identify whether it is still possible to open or close the aperture.

### **.b Manual mode**

The user can choose the flash energy between 7 + 5 different steps.

**Information** With digital cameras no pre lamp is emitted. The display indicates the energy selected in % of max flash energy.

**Feature:** 12 different output energy steps can be selected (7 +5 – a sensitive stop is also possible between the 7 fixed positions)

### **.c Slave mode**

In slave mode (SL) the flash is triggered by the light sensor (9), placed inside the reflector. This sensor is very sensitive and allows the unit to work also with a certain distance between the main flash and the slave flash. Select the power required with the MAN selector (2).

**Attention** In slave mode no TTL is available!

### **d. Dual flash operation with digital cameras**

There are different ways of operating two strobes with a digital camera. It is very important to note the information below to achieve perfect functionality without damaging your camera. Please read the following information very carefully!

### **IMPORTANT - FOR CANON USERS**

E-TTL use with CANON cameras requires S6 sockets on the flash and the camera. (with all the 6 wires connected to both strobes). Set both units to TTL mode. When the unit is connected to the camera, it automatically detects the camera transmission protocol. This is an easy method of using two flash devices in E-TTL or in manual mode.

If you want to shoot only one flash, just switch off the unused flash device.

## **IMPORTANT – FOR NIKON USERS**

For I-TTL use with NIKON cameras S6 sockets on the flash and the camera are recommended. Connect the main flash (master) always to the left socket – the 2.flash (slave) to the right socket.

If two strobes are used you have to use the dedicated **SEACAM - NIKON digital dual strobe connector (S-N DDSC)**. This circuit has to be placed inside the housing.

When using 2 flash devices, the master controls the slave. The master is directly connected to the camera (with all 6 wires connected to the camera). It calculates the required energy for the correct exposure and transmits the information by the TTL cable to the slave. The master can operate in TTL(A) or MAN mode, while the slave should always be left in the TTL(A) mode.

If different energy levels are required from the two strobes, in I-TTL mode, the user has to adjust the distance of the two flashes from the subject to achieve the desired effect. In manual mode the user can switch both flash devices to MAN and then manually select the desired energy level steps.

**Feature** When setting the slave to TTL(A) the slave always follows the main strobe in manual mode. If you need different manual settings you have to adjust the devices separately.

By using the **S-N DDSC** circuit in your housing it is still possible to connect an original Nikon SB flash to the left socket on the camera housing. You will keep all features of the system but the slave (SB) will work only in manual mode.

**Important** SEACAM suggests using two SEAFLASH 150DIGITAL only with the **S-N DDSC** circuit installed. This system has been fully tested and has been proven to work well. Using different flashes from the ones suggested can result in a damage of the camera and flash devices. Before connecting different flash brands enquire about their compatibility.

**Attention** On rare occasions during normal use the digital camera can lose the communication with the flash. If this happens, switch the camera and the flash off and on again in order to reset the communication between the units. If the

problem occurs repeatedly check and clean the camera hot shoe, the strobe connectors and wires.

Wires plugs and sockets must be absolutely dry to be working flawlessly. Water inside the connectors can stop the data transmission and TTL working mode.

## 7 PILOT LIGHT

A 3W power LED (11) generates a very bright pilot light. This light beam of 10° allows an easy and perfect setting of the flash. The Power LED has an output of about 180lm, equal to a 10W halogen bulb, and a life up to 100k hours. The LED will never need to be replaced.

The pilot light is switched on with the power switch (1) and can be set to 2 different light levels (P1,P2). P1 is the normal one and P2 the reduced one.

**Feature** When the flash is connected to a digital camera the automatic pilot light feature is available. The pilot light turns on automatically when the camera auto focus system needs more light to work. By setting set the power switch (1) to P1 or P2 you change to permanent pilot light steps as selected.

With CANON digital camera you have to set the AF selector to S and select the single shooting mode.

With NIKON digital camera you have to set the to AF selector to – S or M. No automatic function in C.

**Important** The automatic auto focus assist light will work only if the AF-illumination is activated in your camera menu. If you don't like this function deactivate it simply.

## 8 S.O.S. SAFETY MODE

For security reasons, to call attention your flash is equipped

with a true S.O.S. function. With the power switch (1) in the SOS position a true S.O.S. light signal is generated. This feature can also be used to test the flash.

**Attention** Use the S.O.S. signal only when really needed and never use it to discharge the battery.

## 9 DISPLAY ERROR CODES

If an error is recognized by the micro processor, a code is shown on the display, an audible alarm is emitted and all the activities of the flash are stopped. This error information is used to identify the cause and for security reason.

**HI** The temperature inside the flash is above 65°C. This happens if the unit was left in the sun or in a hot place. Allow the unit to cool down before switching it on again.

## 10 MAINTANANCE

Rinse your flash using fresh water after every dive in the sea and dry it carefully. Clean with a mild cleaner and lubricate the threads regularly.

S6 and N5 sockets require particular care and attention. Make sure that the contacts are given regular inspection that the plugs are clean and o-rings slightly lubricated.

### S6 SOCKET

The S6 plug is a very safe and sturdy plug in system. Its contact system is very precise and secure, combined with a 4 time o-ring sealing system which is easy to maintain. Plug in – tighten the nut – ready to go!

## **N5 SOCKET**

Pay attention when plugging it in; hold it at the anti-kink sleeve of the spiral cord, completely pull the movable nut back and tenderly press the plug in as soon as tongue and groove click into place. Then tighten the nut.

**Attention** If no sync wire is connected, close also the sync socket (7) with the protection cap.

Due very special positioning of the o-rings both plug in systems are protected against re- suction of water. Keep all connections dry. Apply our contact oil regularly, which reduces corrosion and increases lifetime enormous. Grease all o-rings as usual – not too much!

## **11 STANDARD ACCESSORIES**

The flash is supplied with following accessories as standard:

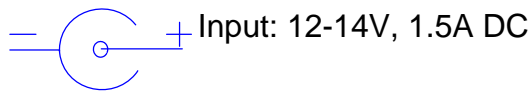
- Exchangeable battery pack
- Power supply  
Input: 100-240V~ 1,5A 50/60Hz  
Output: 12-14V 1.5A
- Car / boat power adapter  
Input **ONLY** to a 12-14V DC
- Macro protection ring, removable for wide angle shots
- Sync cable
- Protection cap for syncro socket
- Spare parts and maintenance set
- Neoprene bag for the accu pack

- User manual

## 12 CONNECTIONS

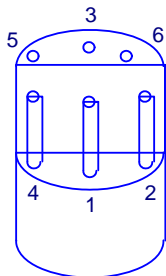
Connect the flash to the housing and the camera only as described below.

### Battery power supply plug



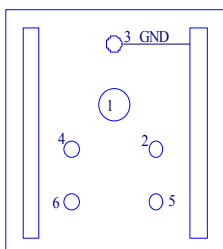
## CANON

### Syncro socket S6 (wires rear view)



Wires (rear) side

- 1 – Trigger
- 2 – Camera Data
- 3 – Ground
- 4 – TTL / Clock
- 5 – Ready / Clock
- 6 – Flash Data



### CANON digital 1/2 flash

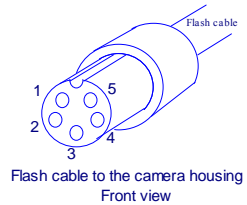
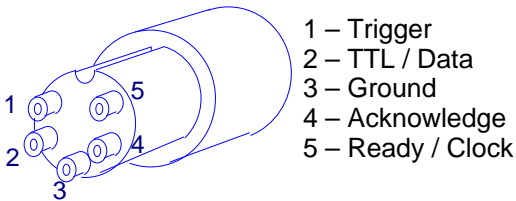
Connect all wires to the housing socket following the numbering



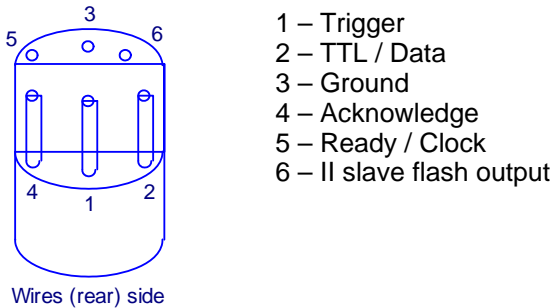
# NIKON

**Attention** Never connect two flash devices parallel to a digital NIKON camera. It can result in serious damage of flash and camera.

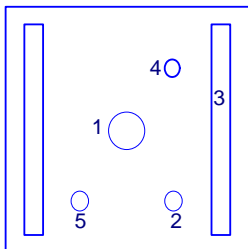
## Syncro socket N5 (wires rear view)



## Syncro socket S6 (wires rear view)



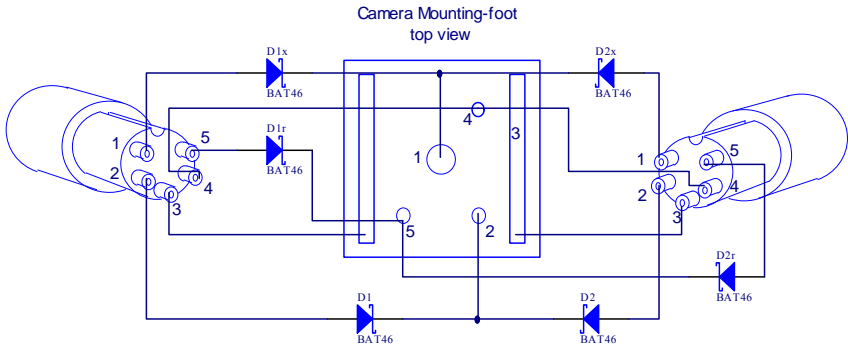
## NIKON digital/film 1 flash



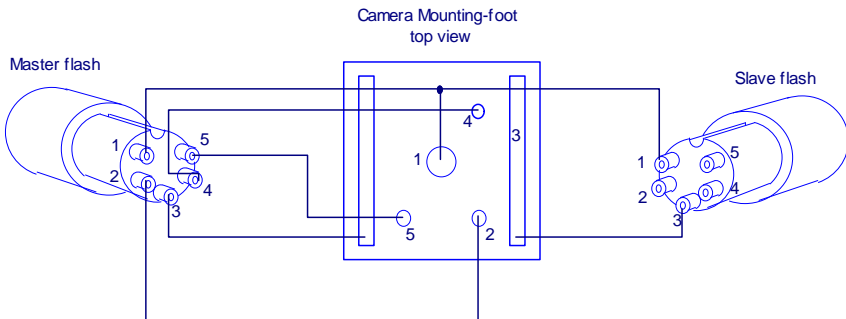
Camera Mounting-foot  
top view

Connect all wires to the housing socket following the numbering.

## Nikon film 2 flash

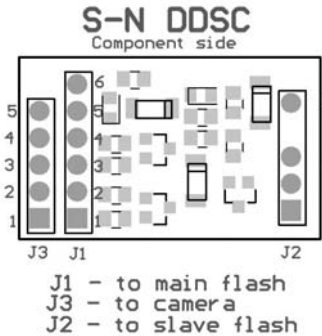


**NIKON digital 2 flash** no digital dual strobe connector (S-N DDSC) installed.



**NIKON digital 2 flash S-N DDSC SEACAM - NIKON digital**

dual strobe connector installed.



(connection on component side)

Connect all wires to the housing socket and to the camera hot shoe following the numbering

- J1 main strobe (master)
- J2 2. Strobe (slave)
- J3 camera (hot shoe)

## FLASHARM FIXATION

Use the M8 stainless steel insert thread at the bottom of the flash to fix the SEAFLASH 150 DIGITAL on a flash arm. The M8 ball adapter is the best way to connect it to our reliable FLASHARM system. (not included in delivery). Clean the thread regularly and grease slightly.

## 13 TECHNICAL DETAILS AND FEATURES

- CANON digital E-TTL / film-TTL
- NIKON digital I-TTL/ film-TTL
  
- Energy 150 Ws
- Uw-guide number 14 - ISO 100 / 1m at full power
- Coverage light angle 130°
- 180 flashes at full power
- Recycle time 0,1 – 2 sec.
  
- Manual light level selection in 7 + 5 different steps
  
- Color temperature 4400°K
  
- 10° Power LED, 110lm in 2 manual power steps and automatic mode, continuous burn time 3h.
  
- Slave sensor, high intensive for all manual settings
- True S.O.S. safety signal for 6h.
  
- Synchro socket S6 or N5
  
- Automatic charger, integrated in the accu pack, fully controlled by  $-\Delta U$ , temperature and time, charging time 100 min.
  
- High quality Sanyo NiMH battery pack, NiMH 7.2V 1.85Ah, easy to change akku pack with integrated charger.
  
- Dimension  
Flash L x Ø: 190 x 110 (120) mm, 2100 g,  
Akku pack L x Ø: 135 x 40 mm, 300 g
  
- Depth rating -80m / 240 ft

## **14 WARRANTY**

A 24 month warranty from the date of invoice for function and tightness applies to the flash delivered. This warranty is valid within the EU member countries – for non EU member countries the warranty of the country to where the article is delivered applies. Warranty repairs do not extend the warranty time.

This warranty does not apply in the event of accidental damage, negligence, improper handling, damage to cables, water entering at improperly closed battery container cup or connections, disregarding of operating conditions and operating instructions, as well as unauthorized repairs or changes by a third party.

Syncro cables, batteries, flash bulb and consumables parts are not covered by warranty. If the warranty seal is broken the warranty immediately expires.

SEACAM shall not be liable for direct or indirect damage to persons and devices or (build in) cameras and reserves the right to make technical changes or replacements.

## **15 GENERAL**

If you have any question regarding this unit please contact us.

SEACAM service  
C.v.Hoetendorfstrasse 40  
8570 Voitsberg  
Austria  
phone +43 / 3142 / 228850  
telefax +43 /3142 / 228854

e-mail [office@seacam.com](mailto:office@seacam.com)  
[www.seacam.com](http://www.seacam.com)



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