

CLS Receiver

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HeinrichsWeikamp GbR

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1 Introduction ^(w)

Welcome. Thank you for choosing the CLS Receiver. Information about differences to other converters for your camera can be found in the *FAQ* (p 13) and the *Requirements* (p 3).

The CLS Receiver interprets the wireless data send by the Nikon SB-800 in CLS / 'Advanced Wirless Lightning' mode. The underwater strobe can be used as remote strobe in the Advanced Wireless Lightning system if connected to a CLS Receiver. Details about the CLS system can be found in the instructions of your Nikon digital camera as well as in the manual of the Nikon SB-800.



Each CLS Receiver adds an additional underwater strobe to the wireless system and can be used in one of the available groups. see *Master unit controls* (p 5)

Different models of the CLS Receiver are available to suit the sync cord and the strobe connected. see *Available Models* (p 15)

The positioning of the CLS Receiver to the strobe or strobe arm and the distance to the master strobe is crucial to assure the wireless data transfer. The working range can be modified by different settings of the master strobe see *Positioning* (p 7)

2 Requirements ^(w)

digital camera Nikon DSLR supporting iTTL.

 master strobe

The master strobe is necessary for the CLS system. The master strobe is a Nikon SB-800 with an underwater housing. The usage of the camera's strobe is either limited or not possible at all.

 remote strobe

The underwater strobe has to be able to trigger flashes 20 milliseconds (ms) after the previous. Hence the 'timing' of the underwater strobe has to be 20 ms or better (values below 20 ms).

 exceptions

TTL-compatible underwater strobes not fulfilling the timing requirements can be used in mode M offered by the CLS system. *Master unit controls* (p 5)

 A list of strobes fulfilling those requirements can be found in the *FAQ* (p 13).

3 Master unit controls ^(w)

Channels

Channel 1, 2, 3 and 4 are available. Using different channels more than one CLS system can operate at the same time at the same place.

Groups

Every channel offers the groups A, B and C as well as the master M. The number of underwater strobes for each group is not limited to a single one. Each group can be configured independently from the other groups.

Mode TTL

Mode TTL is the camera controlled TTL exposure mode. The exposure is calculated by one or more preflashes of the underwater strobes for each group separately. The controls of the master flash unit offer an independent exposure compensation for each group.

Mode M

Mode M is a manual mode which is power controlled by the master flash unit. With the SB-800 as master flash unit, values between 1/1 and 1/128 are available for the underwater strobes connected to a CLS Receiver. Strobes within a group configured as Mode M do not trigger preflashes.

Mode AA

Not available with the CLS Receiver and underwater strobes

4 Positioning ^(w)

The CLS Receiver has to be positioned in the frame of the master flash unit's exposure coverage with a distance of about 1 meter. The top of the CLS Receiver has to point to the master flash unit and there has to be no obstacle between the master unit the CLS Receiver.

Transmitting power of the wireless data

The transmitting power of the master unit changes with the mode for the master unit itself. The transmitting power is lower if the master flash unit is used for the exposure too. Hence the transmitting power is lower if the master flash unit itself is set to TTL (M TTL) or M (M M). It can be useful to reduce the transmitting power of the master unit if the CLS Receiver is close to the master unit and directly in front of it. The effect of the master flash to the photography can be reduced by setting it to the lowest manual mode or the lower limit of the negative flash exposure compensation in TTL mode.

The transmitting power of the wireless data is higher if the master flash unit is inactive for the exposure. Hence the master unit itself is in flash canceled mode (M ---). Use this mode if the wireless data is reaching the CLS Receiver with low power.

5 Configuration ^(w)

Settings will be made using the supplied magnet. The current configuration will be displayed using low-power flashes of the attached strobe. The configuration will be activated if the magnet is close to the magnetic switch (REED) on restart of the CLS Receiver. The underwater strobe has to be turned off for at least about 30 seconds if the system was used before to be sure that the CLS Receiver restarts.

- Connect your strobe
- Hold magnet in place as shown
- Turn on the strobe. The strobe has to be set to TTL or (if a manual strobe is used) to the lowest manual power setting

A few seconds later, the attached strobe will fire two low-power TTL flashes with a 0,3sec. interval. The configuration mode is now selected and the magnet has to be removed. Do not turn off the strobe during the configuration process. The CLS Receiver will read the standard configuration and save it to all menus if the configuration mode is stopped during the configuration process. After the double flash the current setting will be displayed using low-power TTL flashes with an interval of approx. 1sec. With the help of the magnet the settings can be increased, the current setting will roll-over to 1 if the maximum setting is reached. Hold magnet near to the reed contact. The changed setting will be displayed with the low-power flashes again. You can only increase the current setting if the display procedure is finished, that means no flash for more >1sec was fired. After several seconds of idle time the Digital Adapter 2 changes into the next menu using a fast double flash. You can change the settings of the next menus in the same way. After menu 5, a double-flash shows you that all settings were successfully saved. Turn off the strobe now and turn it on after some seconds again to use your new settings.

Menu 1 - Channel

Channel 1, 2, 3 and 4 are available to separate CLS systems. see *Master unit controls* (p 5)

standard configuration: Chanel 1



Menu 2 - Group

Group A, B and C are available. Each group can be configured individually from the master strobe. The underwater strobes in use can be separated into groups in case the exposure configuration shall be different. see *Master unit controls* (p 5)

standard configuration: Group A

Menu 3 - Strobe selector

The characteristic of the underwater strobes on the market differ significantly. The exposure characteristic has to match the underwater strobe connected to the CLS Receiver. It is important for Mode TTL as well as for Mode M that the configuration is correct

CLS Receiver Version Standard (*Available Models*
(p 15))

Options: (1) Sea&Sea YS-250, (2) Standard, (3) Hartenberger 250 HS TTL Digital

standard configuration: Sea&Sea YS-250

CLS Receiver Version Subtronic (*Available Models*
(p 15))

Options: (1) Subtronic Maxi/Midi/Nova, (2) Subtronic Mini, (3) Standard
standard configuration: Subtronic Maxi/Midi/Nova

Standard: Underwater strobes by Inon, Ikelite, Sea&Sea (excluding YS-250), Nikon (Mode M only) With some strobes Mode M is available only (see *Master unit controls* (p 5))

Menu 4 - suppression of the primary preflash

Please don't change this configuration unless you contacted HeinrichsWeikamp. The Mode M shall be used if the underwater strobe is not able to trigger preflashes. (*Master unit controls* (p 5))

standard configuration: (1) normal operation, primary preflash will be triggered

Menu 5 - suppression of additional preflashes

Please don't change this configuration unless you contacted HeinrichsWeikamp. The Mode M shall be used if the underwater strobe is not able to trigger preflashes. (*Master unit controls* (p 5))

standard configuration: (1) normal operation, additional preflashes will be triggered

6 Handling ^(w)

Configure the CLS Receiver to match the underwater strobe connected. see *Configuration* (p 9) Menu 3

The CLS Receiver will start when the strobe connected is turned on. As soon as the CLS Receiver receives wireless data on its channel for the group selected, the CLS Receiver reacts accordingly. A few seconds after the connected strobe is turned off the CLS Receiver turns off too.

Example

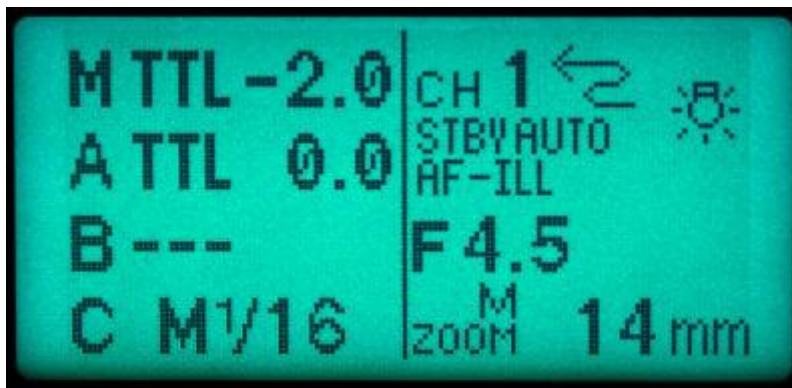
Channel set to 1. Only those CLS Receivers configured to channel 1 in Menu 1 will respond to the wireless data send by this master strobe.

The master strobe itself will be triggered with TTL control and a flash exposure compensation of -2.0 EV. The working range for the transmitted wireless is less than with M:--- for this setting.

Group A is set to regular TTL exposure without any exposure compensation.

Group B is inactive.

Group C is set to manual mode with 1/16 manual power. The CLS Receivers configured to group C will not trigger any preflashes because the mode is set to manual.



7 FAQ ^(w)

Which underwater strobes fulfill the requirements?

by May 2008

- Subtronic Nova
- Subtronic Mini
- Subtronic Maxi
- Sea&Sea YS-250
- Hartenberger 250 HS TTL Digital
- Inon Z 240 III
- Inon Z 240 II
- Ikelite DS 51

What is possible with a strobe not fulfilling the requirements?

If it is a modern TTL compatible strobe with incompatible timing, mode M is still available. This mode may fulfill the requirements for the given photographic setup.

Is it necessary to configure the CLS Receiver before using it?

Yes, the strobe type connected to the CLS Receiver has to be configured in Menu 3 if it is not the pre-configured one. This configuration of Menu 3 is necessary for both modes, TTL and M. The manual steps in mode M are not matched to the underwater strobe connected if the CLS Receiver is not properly configured.

What is the difference to the Digital Adapter?

The DigitalAdapter evaluates the preflashes and mainflashes of the primary strobe and triggers the underwater strobe accordingly. The DigitalAdapter is a TTL solution for almost any digital camera.

The CLS Receiver operates with digital data sent by an Advanced Wireless System including channel, group and exposure compensation information.

What is the difference to the Remote Slave Unit RSU?

The RSU is a photo sensor which triggers strobes over much larger distances than the CLS Receiver. The RSU is not a TTL-adapter. It can be used with almost every camera if the primary strobe does not trigger any preflashes. Preflashes of the camera and TTL signals are not supported. All common underwater strobes (including strobes without TTL support) known by us can be used with the RSU photo sensor.

The CLS Receiver is a full featured TTL data receiver for the CLS/'Advanced Wireless Lightning' System.

What is the difference to the external converter?

The external converters connects the underwater strobe directly to the camera. The strobe connected via the external converter is the primary strobe. More than one strobe can be connected to the external converter with a dual sync but all those strobes shall be identical models and will be triggered with the same signal. With the CLS Receiver different strobe models can be connected to the photographic system at the same time and configured independently by using the group option. The strobes with the CLS Receiver are additional strobes that can be switched on and off during the dive to assist or replace the master flash unit.

8 Available models ^(w)

Version Standard

for

- Sea&Sea YS-250
- Inon, Ikelite, Nikon, Sea&Sea
- Hartenberger

Version Subtronic

for

- Subtronic
- Inon, Ikelite, Nikon, Sea&Sea (excluding YS-250)

Version Standard Motormarine

with

4-pin bulkhead to connect Sea&Sea Motormarine sync cords

Version Standard and Version Subtronic are equipped with a 5-pin Nikonos compatible bulkhead with two spring loaded pins. Inserts have to be used if the sync cable is build for bulkheads without spring loaded pins (standard cable provided by Subtronic) to be compatible with the 5-pin Nikonos bulkhead of the CLS Receiver

9 Technical data ^(w)

Dimensions

Diameter about 29 mm

Height about 23 mm (Version Motormarine: about 22 mm)

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