

Retra Flash Pro

by Nicolas Remy

Since 2018, there has been more innovation than ever in the underwater strobes market, so we've had plenty of options when we decided to try something new. Having had a good experience with their original strobe (loan over a few dives), we decided to give Retra another go and purchased two Retra Flash Pros (which I'll refer to as "RFP" for the rest of this review), which got delivered in July.

At the time of writing this review, my wife/photography partner Lena and myself have spent 75h45mins in the water shooting these strobes, in a variety of situations and trying many of the accessories available to suit them.

Outside: build quality and form factor

The RFP is a nicely built unit, with a brushed aluminum finish that looks good and eases heat dissipation. After dozens of hours diving this strobe "naked", a few scratches are visible on the outside body, but nothing affecting the functionality. I have since then installed the rubber protection rings (bumpers) and neoprene covers, which are nice

additions to protect your beloved new strobe. If you don't mind scratches, I would suggest the rubber bumpers are the only protection you really need, as they cover the edges of the strobe.

The RFP isn't a small strobe yet it remained easy to move around underwater, being 130mm long, it was easy enough tucking it close to macro ports. The three controls (2 dial knobs and 1 push button) are easy to grab and differentiate by touch, even at night using dry gloves. A "ready" light at the rear of the strobe indicates when the strobe is ready to deliver a full dump at the set power output. It also doubles-up as a battery-life indicator, and because it is bright, at night it can help distinguishing the markings around the dials.

Inside: some innovative features

Being one of the very latest strobes to hit the market, the RFP comes with several innovative features, some a first in the industry.

For starters, it can be connected to a smartphone via Bluetooth, to visualize useful data and customize functions. Examples include a low-



power mode (halves the power output across the range) and ability to fine-tune the focus light brightness. This is an evolutive strobe, and further customization capabilities are expected.

HSS (High Speed Sync) is another exciting capability: provided your camera and your housing LED circuitry (if you are using one) are capable of transmitting HSS signals, you can use the RFP at shutter speeds beyond the camera's maximum sync speed. Note I haven't experimented with this, as my housing's LED trigger doesn't support HSS.

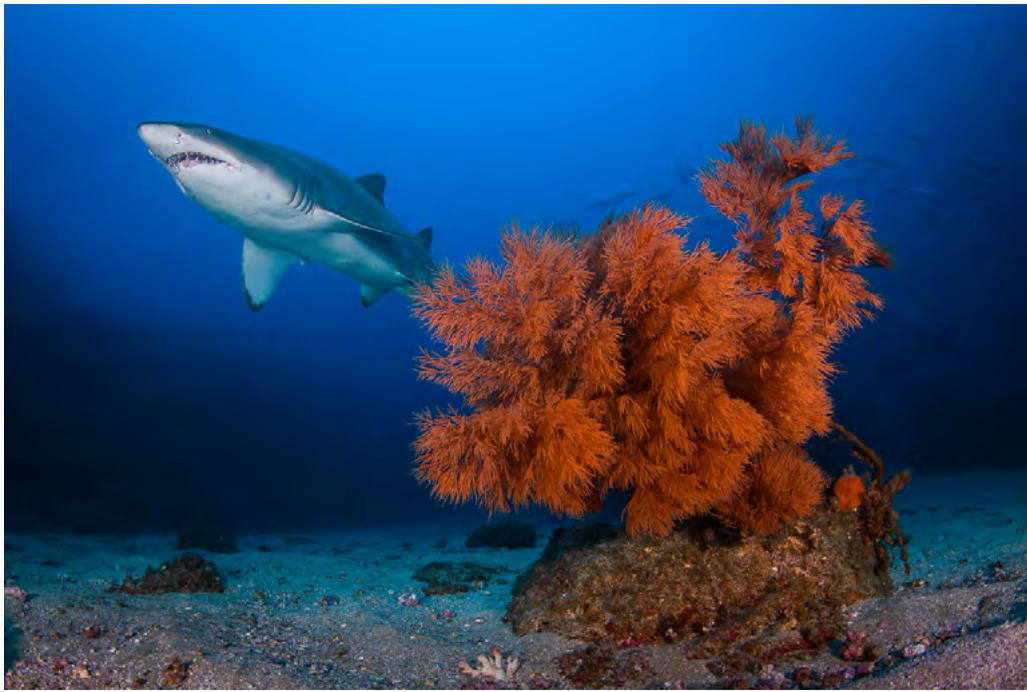
Lastly, the flash can be fired via the rear push-button (the same that controls the focus light), which opens-up other creative opportunities: think long exposures on tripod.

Ease of maintenance and flood resistance

To me, simplicity of maintenance has always been a big decision factor on selecting diving gear: this applies to rebreathers, housing, torches, and... strobes. In this department, the RFP is doing very well.

Firstly, the battery compartment's o-rings fit onto the removable battery cover: making them very easy to inspect. Secondly, these o-rings only need greasing every 10 dives or so. All this means a battery swap takes me less time than with Inons.

Besides being easy to maintain, the RFP has good flood resistance: dual o-rings secure the battery compartment, and a leak detector is integrated within the battery contacts,



Enough “oomph” to reach the background and illuminate the incoming shark. South West Rocks, Australia. Nikon D500 and Tokina 10-17 at 14mm. Nauticam housing. 2x Retra Flash Pro with WA diffusers, 1/25th @f/10, ISO 250

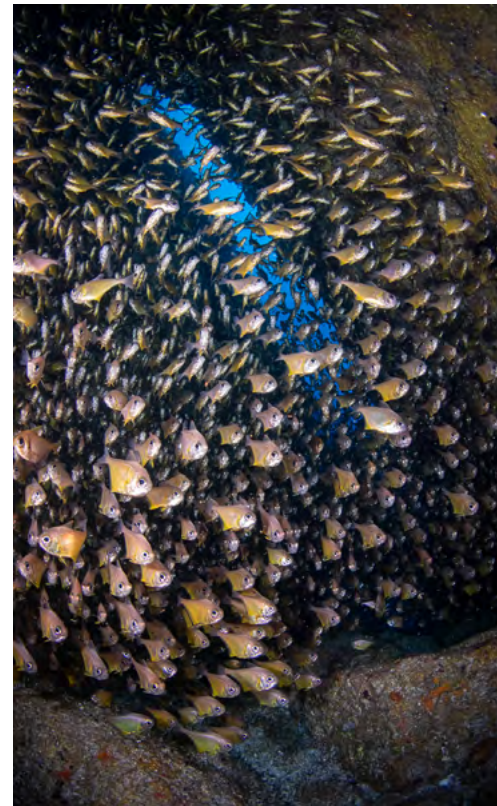
which will trigger a visual alarm with as little as 2ml water ingress. This alarm tells the diver to stop shooting and clean battery contacts with fresh, soapy water as soon as practical, and dry it. With this procedure, there is a good chance the strobe will work again - a great “save-the-dive-trip” feature!

Quality and quantity of light

The original Retra strobe already had the reputation to deliver quality lighting for wide angle shooting,

and Retra decided to further build on this strength, as the RFP comes with a circular ring flash and the front element is more strongly curved (dome shape). All this is designed to deliver a more homogeneous, softer light beam.

In the water, I found that design worked well and really enjoyed the very wide, even and warm light beam (4400K with wide-angle diffusers). The RFPs were very effective for wide-angle and large animals’ photography. Compared to experience I had with my Inons Z240s, I found it



The even, soft light makes it easier not to “burn” fish scales, South West Rocks, Australia. Nikon D500 and Tokina 10-17 at 10mm. Nauticam housing. 2x Retra Flash Pro with WA diffusers, 1/160th @f/13, ISO 640

Recycle time, battery capacity, and the optional Superchargers

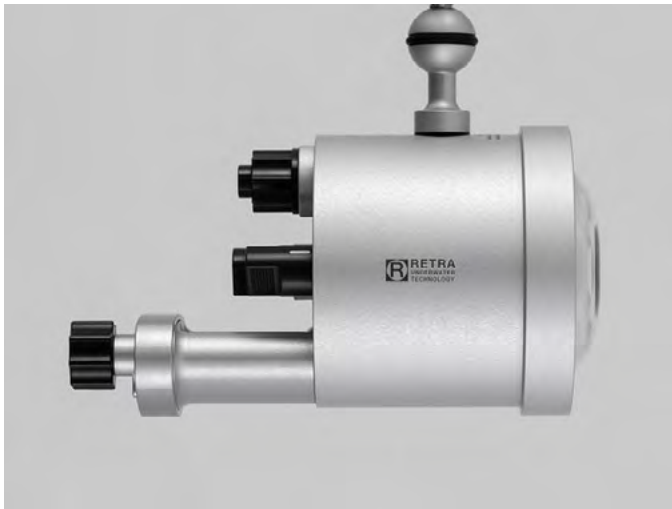
As noted above, the RFP pulls lots of light from the same 4 Eneloop pro batteries are used on our Inon Z240s (and other strobes), yet delivers a brighter and wider beam. With a more recent design, you would expect the RFPs to also be more energy-efficient, and they probably are, but in practice, enjoying this extra power meant we also took less shots than with our Inons Z240.

Out of freshly charged batteries, we typically got around 300-350 photos per charge when shooting wide angle, whereas in macro we reached around 600-800 shots, depending on subjects and conditions of course. This should be enough to cover a day of diving for most shooting situations.

In terms of recycle time, we haven’t felt constrained except when going above 50% power. At full power, you would need approximately 4 seconds between shots if you want to achieve consistent illumination. It

significantly easier to completely light a big scene, while minimizing hard shadows, backscatter and avoiding to “burn” fish scales.

Besides quality, the RFP also delivers quantity: this is a powerful strobe and we mostly found ourselves dialing it between 12 and 50% for wide-angle, 1-25% for macro and fish portraits.



The supercharger mounts onto the original battery compartment, where the battery cap would go. The battery cap then goes on top of the supercharger. Whilst it extends the overall length of the flash by 8.6cm, the supercharger can be grabbed to ease fine adjustments of the strobe orientation



is worth noting the RFP will still attempt to flash, even if the capacitors are only partially re-charged.

If you feel you need more autonomy or faster recycling at high powers, then it is worth looking into the optional supercharger.

The supercharger is like an additional battery compartment, plugging on top of the original one. It allows using 8 AA batteries instead of 4, to essentially double battery life and halve recycle time. Everything doubles-up so when changing batteries, you need to replace all 8 at one (and preferably charge them altogether), and inspect the 4 o-rings (two times double o-rings). Again, the o-rings are onto moving parts (supercharger, cover) so easy to inspect. With the pre-production superchargers I was using, the top lid was a bit tricky to take off: with the RFP resting on a table, I had to pull down the supercharger (after unscrewing the top knob) to let it pop out. No deal-breaker

Due to the 5 meters visibility we had in Botany Bay (Sydney, Australia) that dive, I used one single Retra Flash Pro with reduction ring and one macro ring, to minimize backscatter on this potbelly seahorse portrait. Nikon D500 and 60mm AF-S. Nauticam housing. 1/250th @f/11, ISO 100

though, and Retra assured me it will be a breeze with the final design.

In the field, I managed to take around 600 photos on both strobes with superchargers, vast majority at 50% power, a few above. This means the superchargers effectively doubled battery life, and I also noticed quicker recycle time.

Lastly, whether or not you are using the superchargers, pay attention to using batteries which are in “good shape”: to maximize autonomy, you



might consider a new set of Eneloop Pros, instead of the old faithful you’ve been using for the last 5 years. Also, when possible go for a “soft charging” (most smart AA batteries charging offer one), it will take longer than the default “fast charge” but will help with autonomy.



The beam is wide enough (approximately 130 degrees with wide-angle diffuser) to illuminate a 3-meters long shark with just 1 strobe, positioned top of the housing. South West Rocks, Australia. Nikon D500 and Tokina 10-17 at 17mm. Nauticam housing. 1/80th @f/8, ISO 200

Diffusers and reduction rings

Retra offers a range of reduction rings for the RFP, starting with the reduction ring which cuts down the strobe angle, making it easier to control the beam, e.g. for inward lighting. When diving in low visibility, you can stack up the macro rings to further reduce the beam angle, to help control backscatter (low viz snooting).

Diffusers-wise, there are three options: the wide angle and white diffusers both extend the beam coverage to approximately 130 degrees. The “wide angle” model also warms up the light to 4400K, which is well suited for blue water, making the water column bluer (rather than green/aqua). The white diffuser however keeps the original temperature of 4900K, certainly cooler, which is



A pair of Retra Flash Pros with LSDs, bumpers and neoprene covers, mounted on our Nauticam NA-D500 housing. In the foreground, the regular reduction rings, macro reduction rings and masks sets for the LSD snoot

more suited to reinforce a green water color. The “shark” doesn’t increase the beam coverage but will deliver even more warmth at 3900 K. This is best suited for shy pelagics on a blue background (think shark bellies).

Retra also offers a protective ring, which you would need to fit onto the strobes when not using any diffuser or reduction ring, to protect the front glass. In practice, I like so much the diffusers that I don’t see myself needing that extra ring at all. When I need the strobe to be stable face-down (e.g. to change batteries), I will mount the reduction rings.

All in one, I always dive with a pair of reduction rings in my drysuit pocket, while some diffusers are mounted on the RFPs by default.



Within its working range, the LSD+RFP combination provides a pleasant, even illumination whilst isolating the subject from the background & ambient daylight. Photo taken mid-day in the shallows, Sydney, Australia. Nikon D500 and 60mm AF-S. Nauticam housing. 1x Retra Flash Pro + LSD (no mask), 1/250th @f/13, ISO 100

Snooting with the Retra Flash Pro + LSD combination

I really enjoy snoot photography and was excited to see how Retra’s popular snoot would perform on their latest strobe.

I had tried an LSD snoot onto my Inon Z240 for a couple of dives, but I found this combination difficult to use, as the Inon’s focus light is off-center which, in turn, meant I couldn’t trust it to precisely aim the snoot. Rather, I would result to trial & error, or lock focus and snoot before looking for a suitable subject, which arguably hindered productivity.

Since the RFP has a central focus light, I am happy to report this hinderance is all gone: the focus



The warm and even light helps nicely lighting big scenes, South West Rocks, Australia. Nikon D500 and Tokina 10-17 at 10mm. Nauticam housing. 2x Retra Flash Pro with WA diffusers, 1/60th @f/10, ISO 200

light allows to precisely predict where the center of the snooted area will be, which means I kept shooting with autofocus on, adjusting my snoot's position to each and every subject, making it possible to capture even swimming subjects like cuttlefish. I observed that 50% brightness was sufficient to aim with the focus light under daylight. At night, it can certainly be dimmed down to optimize battery life.

Another positive is the buoyancy of the LSD snoot: it is slightly negative, not too different from the

Retra diffusers or reduction rings. This means that swapping between diffuser/rings/snoot is not only very fast (the locking mechanism can be operated one-handed), but also it will have little impact on the buoyancy of your whole underwater rig, which is key to shooting comfortably.

In terms of power, I found myself needing to shoot the RFP+LSD between 33% and 100% power, to achieve good lighting and black backgrounds in bright daylight (the smaller the masks hole you use, the more strobe output you need).



For macro too, we found diffusers useful when we needed a soft light, think low aperture shots with a nice soft bokeh, Sydney, Australia. Nikon D500 and 105mm AF-S. Nauticam housing. 2x Retra Flash Pro with WA diffusers, 1/200th @f/5.6, ISO 160

a generous working range, meaning there is flexibility in how far you position the LSD from the subject, while still getting even lighting (no hotspot).

Final thoughts

Having uses these strobes for 75h45 and counting, I would buy them again if presented with the same choice. I enjoy the creative possibilities they gave me, be it for the abundance of light/power available, or the wide range of accessories which allows to switch lighting techniques very quickly. I also like that they are easy to maintain, and well protected against the risk of flood.

Furthermore, the Retra Flash Pro is an evolutive platform. Since I purchased the strobes a firmware update has already enhanced the accuracy of the battery indicator, and more functional upgrades may come via the Bluetooth app. Also, Retra keep investing in their range of accessories, with some new reflectors just announced as I am writing this

Knowing how powerful the RFP is, requiring this much power was somehow a surprise. This is due to the RFP's very wide beam: whilst the LSD is designed to capture and concentrate a lot of the strobe's light (it's an optical snoot), some of the beam just does not reach the optical system.

Depending on how extensively you use the LSD under daylight, and whether you always use the focus light to aim like me, it might be worth considering the supercharger.

Last but not least, the LSD has

The first photo was shot with 2 RFPs and wide angle diffusers (1/250th @f/8, ISO 100). Within seconds, I turned off one of the strobes and swapped a diffuser for the LSD, and was ready to capture long-exposure shots of the same male cuttlefish (0.8sec @f/20, ISO 100). Both captured with a Nikon D500 in Nauticam housing, in Sydney, Australia.



review.

This review reflects my personal observations and opinions, as well as thoughts from my wife and photography partner Lena. We have not been paid by Retra for this review and are not receiving any incentives on sales. We have purchased our two Retra Pro Flashes and most accessories on our own, Retra have provided the ones we missed to allow for a more complete review.

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Image by Alex Mustard

Image lighting with 2x Retra Flash PRO.



Retra Flash PRO:

- **150Ws** flash power
- **500 lumen** pilot light
- **4900K** flash color temperature
- Recycle time with Supercharger:
1.9s (100%) - 0.9s (50%)
- **Standard features:** Multi-level battery indicator, Leakage detector, High-Speed-Sync (HSS), Double O-Ring sealing, Bluetooth connectivity, 2 Year Warranty