

UNDERWATER CAMERA HOUSING LEAK DETECTOR

Thanks for purchasing our Underwater Camera Housing *Leak Detector*.

This device is designed to give early warning to underwater photographers of small water leaks in camera and video housings.

Your *Leak Detector* will look similar to the one in this photo (below). It may have a longer or shorter wire, or a longer or shorter sensor strip, but there will be the two basic components:



1. Battery Holder/Circuit/LED assembly
2. Sensor Strip

When the device detects water leakage the bright LED (Light Emitting Diode) begins flashing steadily, warning the photographer of the problem. At this point the best course of action is to finish the dive as soon as safely possible (within recommended safe ascent rates and decompression tables) and after rinsing and drying the housing - remove the camera from the housing and check for damage to the camera and source of leakage in the housing. The *Leak Detector* works by sensing moisture in the lower part of the housing on the two Copper Sensor Lines (gold coloured) on the long fiberglass strip shown below.



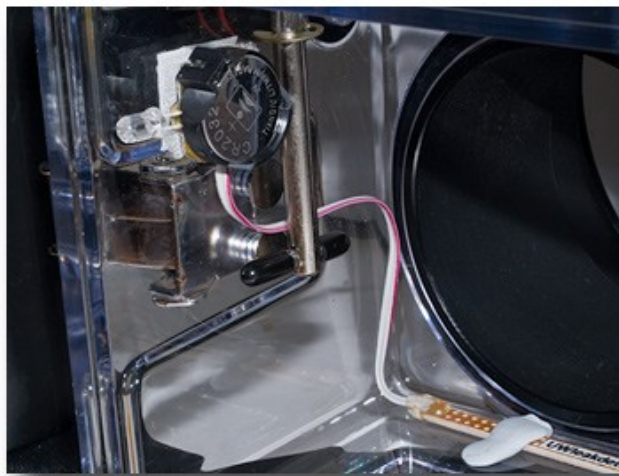
The copper lines are designed to be at the lowest part of the housing and facing the bottom of the housing, so that any moisture/water will touch the copper lines. The opposite side of the copper lines has a sticker with our website name on it (**UWleakdetector.com**) this surface should be facing upwards in the housing (see below).



IMPORTANT NOTE: The Battery Holder/Circuit/LED assembly are mounted in various positions dependant on the camera and housing type. But in all cases the LED should be visible to the photographer from the rear and preferably close to the camera's LCD screen. This way if the *Leak Detector* LED is flashing, it will be seen when the next photo is taken or reviewed.

Generally we will have provided you with a photo of our recommended position for both the Battery Holder/Circuit/LED assembly and the Copper Sensor Lines. If for some reason we have not provided a photo then [contact us](#) by e-mail before commencing installation.

Installing Your Leak Detector

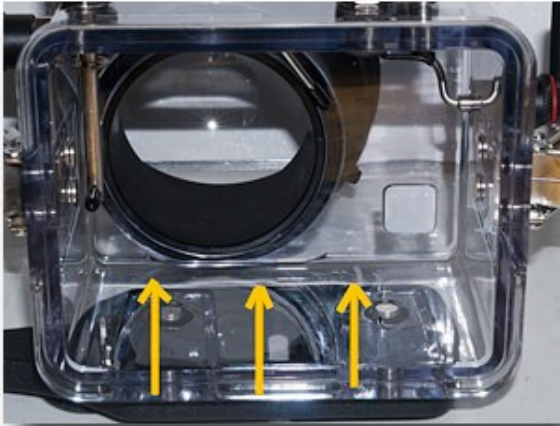


Typical Installation in an Ikelite Housing

First locate a suitable place to locate the Battery Holder/Circuit/LED Assembly - off the bottom of the housing. Ensure that there are no control arms or buttons likely to snag on any part of the Leak Detector and that it will not restrict the back cover, 'O' ring or the camera being installed in the housing. Importantly the LED light **NEEDS** to be clearly visible!

Also find a suitable location (* **See Important Note below**) for the Copper Sensor Lines in the lower part of the housing, preferably under the lens port or camera base plate. The Copper Sensor Lines need to lay along the lowest part of the housing, as this is where water will end-up in the event of a housing leak occurring.

If your housing has a removable front lens port, then we suggest that the Copper Sensor Lines are mounted directly below this port, as ports are the most common place for leaks and then it will sense a leak immediately it has begun. Also this front part of the housing is where water from a back cover 'O' Ring leak will end-up, as most photographers carry their camera housing slightly face down when swimming and descending. It is also the least visible place for the photographer to see any water.



**Typical Location of the Sensor Strip
for many DSLR and Compact
Camera Housings**

IMPORTANT NOTE: Ensure the location for the Battery Holder/Circuit/LED assembly leaves enough wire length for the Copper Sensor Lines to lay flat in the housing and that the wires do not interfere with any camera controls or 'O' rings. Also consider locating all of the components where they will allow removal of the camera from the housing without disturbing or removing the Leak Detector from the housing.

Once suitable locations are found, follow these instructions below step by step;

- The Battery Holder/Circuit/LED assembly has a piece of adhesive 'velcro' stuck to the rear of the assembly. Another piece of adhesive velcro (the same size) is attached to it at the time of purchase.



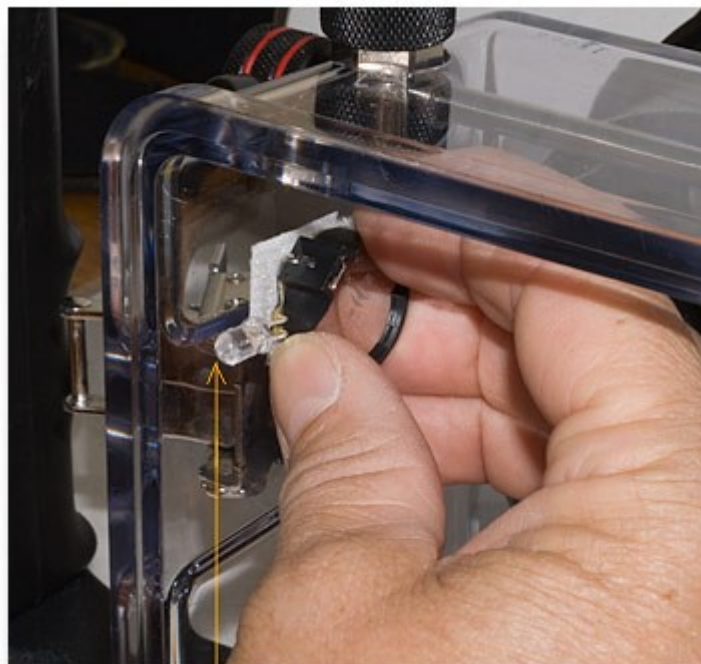
- Remove just the adhesive backing tape from the second piece of 'velcro' on the Detector Circuit / LED assembly. But leave the second piece of 'velcro' in position on the back of the Battery Holder/Circuit/LED assembly).



- Now push the Battery Holder/Circuit/LED Assembly into the selected position inside the housing. This will locate the second piece of adhesive-backed (sticky) 'velcro' onto the housing.

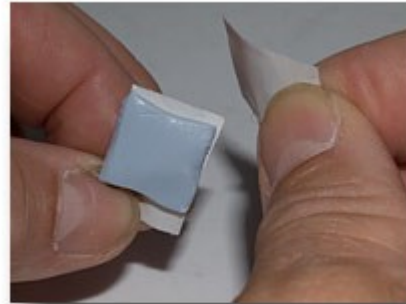
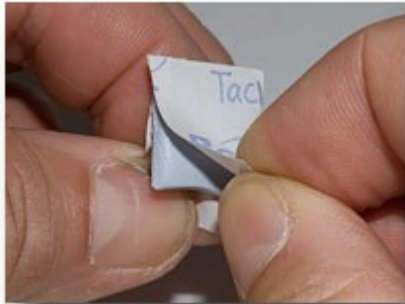


- Now the Battery Holder/Circuit/LED assembly are fully removable by pulling the two 'velcro' surfaces apart. Push firmly on the piece of 'Velcro' that is now stuck to the inside of the camera housing, to ensure the adhesive is stuck properly.



Make sure the position selected, leaves room for the housing rear-cover to fit without interfering with the LED light.

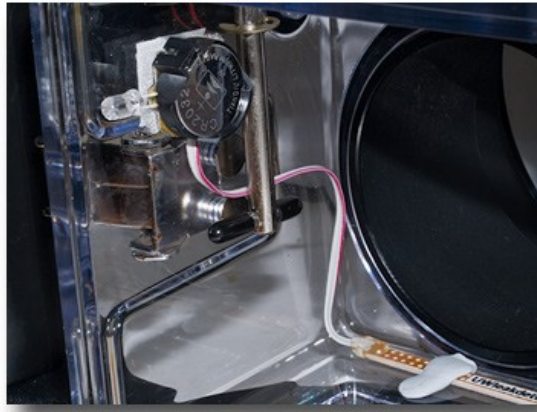
- Remove the paper packaging from the 'Blue Tack' adhesive putty.



- Next locate the Copper Sensor Lines at your pre-determined location. Use the supplied piece of 'Blue Tack' adhesive putty to hold the Sensor Lines in place. Make sure the *Uwleakdetector.com* sticker is facing upwards and the actual copper strips are facing downwards.



- The 'Blue Tack' should be pushed downwards on to the top of the Sensor Strip, overlapping to touch the housing on each side. This will stop the Copper Sensor Lines moving and interfering with the camera's controls, but allows the Leak Detector to be easily removed.



- Check that the wires connecting the Battery Holder/Circuit/LED Assembly and the Copper Sensor Lines are not interfering with any controls, 'O' Rings, shafts or base plates. This is how the final fitment should look. Note how the wires have been routed behind the control shaft in this example (an Ikelite Housing). Also the camera can be installed on its base plate and inserted in the housing, without moving any of the the *Leak Detector* components at all. This is not always possible for every camera/housing combination. But if it is possible, this is the most convenient way to install your *Leak Detector*.
- [Click here](#) to read about using Ladies Sanitary Pads in the bottom of your housing. This may help save your camera in the event of a minor flood..... and they cost very little.

Before Use

- Fit the 3 Volt Button Cell (that was supplied with your Leak Detector) into the Battery Holder with the Positive (+) side facing outwards (see Photo below)



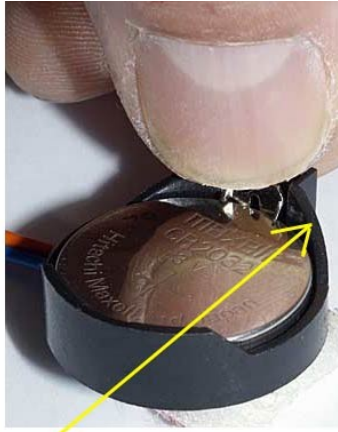
NOTE: You can use any of the following batteries part numbers to power your *Leak Detector*: CR2016, CR2025 or CR2032. The only difference between the three battery types listed, is there life span in use. The larger numbers batteries have the largest capacity and will last the longest. But all batteries listed will usually have a life-time of up to one year. We have simply given you all options available to make it easy to get a replacement battery at almost any corner store or supermarket. DO NOT fit any other type of battery to this circuit, as it will NOT work. The above three are the only batteries suitable!

To test the circuit is working;

- Briefly touch a damp finger onto the copper sensor lines; the LED should begin flashing. Then dry the moisture from the Copper Sensor Lines with a tissue.
- Now touch your damp finger (briefly) one more time; the LED will stay on (without flashing). Then dry the moisture from the Copper Sensor Lines with a tissue.
- Now touch your damp finger one more time and the LED will turn off. Then dry the moisture from the Copper Sensor Lines with a tissue.
- With the battery installed and the LED off, The Leak Detector is now in "Detecting Mode" and ready for use.
- Once you have determined that your circuit is working correctly for the first time, you can utilise a metal paper clip or any bare metal surface to short across the copper sensor strip lines (small knife, small screwdriver blade etc.) to determine that the circuit is working. You don't need to use a damp finger every time.
- **Make sure the the copper lines are completely dry and then instal the *Leak Detector* in the housing – up against the ‘velcro’ previously installed.**
- **Fit your camera to the housing and check that nothing is interfering with sealing 'O' Rings/Controls/Sealing Surfaces and that the camera functions correctly without any physical interference from any of the *Leak Detector* components.**
- Your now ready to go take some underwater photos - with the added security of early warning in the event of any water finding its way into your housing.

To Change the Battery

Life expectancy for the battery can be up to one year, but regularly check the battery level to see it is still working, particularly after it has been sitting without use for more than a week.



**Push clip
in this direction
to release Battery**

- If you experience any difficulties installing your *Leak Detector*, or simply can't understand the instructions, or if you would like to ask a question, then simply click on [this link](#) and let us know your problem or question and we help guide you through the process.

For any other information or enquiries please contact:

Jeff Mullins via e-mail at sealink@iinet.net.au