F-POD Acoustic Release

This acoustic release fits in place of the lid to F-PODs that are AR-enabled. The F-POD plus AR is positively buoyant. A video guide to using it will be put on the Chelonia YouTube channel.

AR-enabled F-PODs have a small electrical connection plug on a lead that is folded down over the circuit board when not in use.

Anchoring

A small anchor is sufficient because the drag on it will be low, so something like the brake disk from a lorry is a good choice.

Tethering

The retrieval line compartment - from the middle of the copper band down – holds up to 80m of line with a breaking strain of 130kg or more. This should allow retrieval of the anchor and should hold the POD at the surface but stormy conditions etc may drag the anchor or lead to failure of the line over time. Packing the line into the compartment must be done carefully to ensure no snags when released.

Acoustic Triggering

AR-enabled PODs have code to run a detection process that enables the POD to recognise its own distinctive tone sequence that then tiggers release. This can only occur when the POD is 'awake' and logging. Some logging of 'near-misses' is built into the operation of these F-PODs to inform Chelonia of how the triggering process is working in different environments. F-PODs can be set, as shown below, to remain in a low power mode, logging only temperature, angle and battery levels, until a set start time at which normal logging starts.

Timed Release

A fixed time for release can be set to any hour roll-over, even years ahead, so the AR can be used without a deck unit where the deployment site can be reliably accessed at that future time or soon after. The fixed release time can operate when the POD is not 'awake' and logging.

Batteries

The AR uses two user-rechargeable Lithium PP9 cells that will power at least 20 release cycles and retain their charge for over 5 years.   Their voltage can be checked with a voltmeter without opening the battery compartment.

Duration

A lithium rechargeable F-POD logging alternate minutes can be set to release in a 1-month window, one year ahead, with a forced release at the end of that. Release windows much further ahead are also possible by delaying the start of the F-POD as shown above.

Video guide for users … will be placed on https://www.youtube.com/@FPOD

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