



## MARK-REPORT (mrPAT) TAG

This second-generation pop-up tag features increased floatation to support a greater variety of tethers, and improved premature release detection.

### Background and application

The mrPAT is a small, fisheries-independent Argos location reporter ideal for large scale dispersal and movement studies. At just 40 grams, it is the smallest tag in Wildlife Computers pop-up family. It is also the most cost effective, allowing for larger sample sizes and greater assurance of results.

Programming is simple and can be done online prior to shipment. Wildlife Computers arranges for the Argos platform numbers, preassembles the tags with tether and anchor, and loads your selected settings. We take care of all the prep, so tags are ready to deploy on arrival. This makes it simple for research partners, such as sport and commercial fishermen, to assist with deployments.

The mrPAT incorporates a specialized Argos transmitter developed by Wildlife Computers. It generates 0.5W of radiated power output at 401.678 MHz.

After a specified time interval or on an absolute date, the release pin burns through, separating the tag from its tether. The tag then floats to the surface and begins transmitting to Argos. Doppler locations are calculated, marking the last known site of the tagged animal. The pop-up coordinates are available for viewing and downloading in the Wildlife Computers Data Portal.

### Leading design for optimal performance

The mrPAT design is a culmination of Wildlife Computers 20+ years of experience manufacturing pop-up archival tags.



127 x 28 mm

- Low drag eliminates oscillations while under tow, maximizing retention and minimizing impact on the study animal.
- The battery provides ballast, offering stability while the tag is under tow and good keeling while floating and transmitting.
- The robust nose holds the release pin in tension rather than in shear.
- Transmitted data indicate if the tag was attached to the animal at time of release. For example, the Daily Temperature Range which gives the min and max values for each GMT day for the last 100 days of deployment or the Temperature Status Message which gives the current temperature at the time of transmission.
- Premature release-detection supports prompt reporting once the tag is separated from the animal.

### Technical Specifications

Dimensions	127mm (length) x 28 mm (diameter)
Weight in air	40 grams
Pressure rating	2000 m
Operating Frequency	401.678MHz
Operating Life	Up to 2 years
Sensors	Temperature, Tilt, Wet/Dry
Temperature Range	-20 to 50°C / Resolution: 0.05°C / Accuracy +/-0.1°C
Communication	Via USB port using Wildlife Computers USB Communications Cable