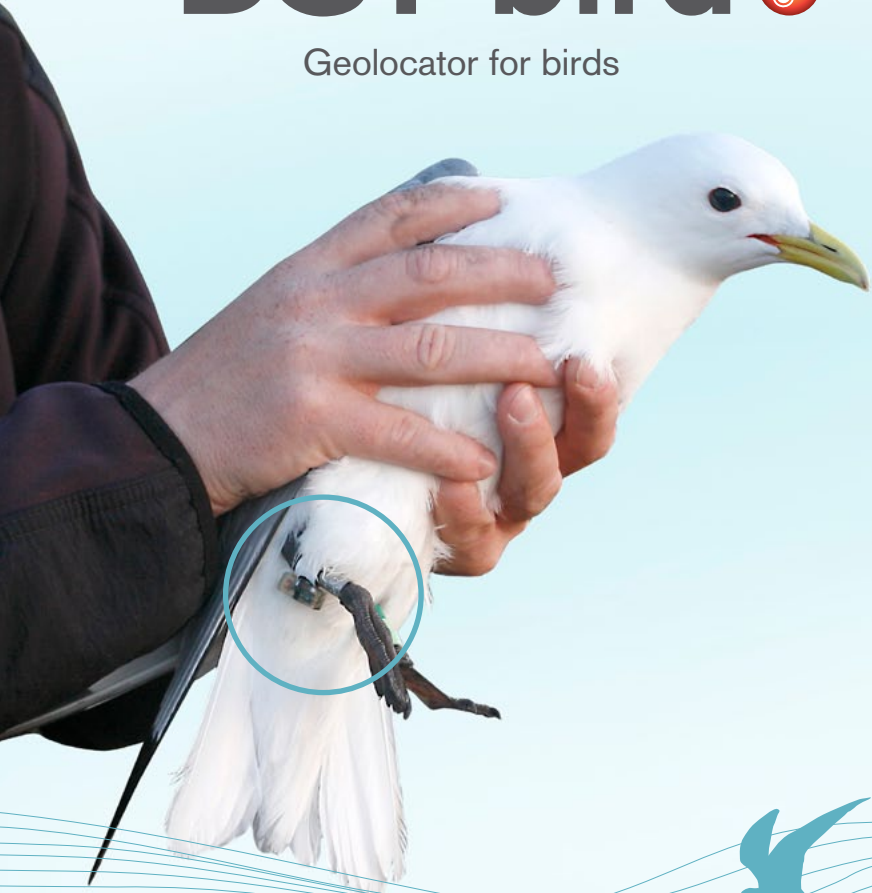


DST bird



Geocator for birds



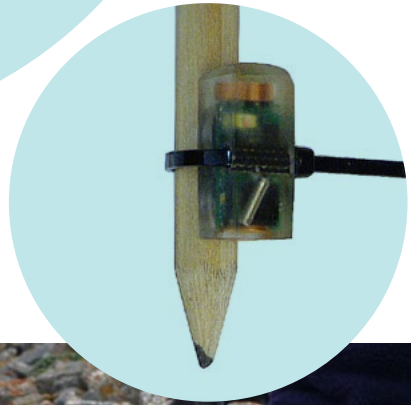
STAR : ODDI

Logging Life Science

www.star-oddi.com

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Star-Oddi is a leading edge manufacturer of equipment for research, specializing in the design of scientific equipment based on microelectronics and sensors.



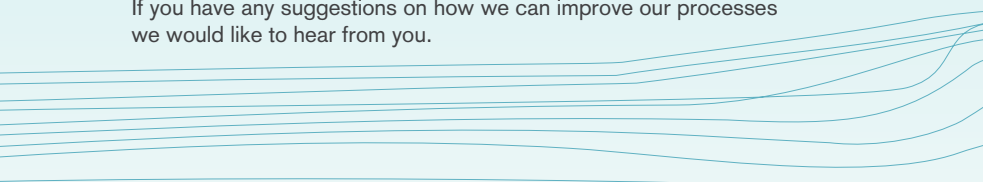
ADVANTAGES AT A GLANCE

- Measures temperature and light levels
- Takes 52,000 measurements in total
- 19 mm x 8,5 mm x 8,5 mm, 2 gr
- Battery life ~18 months
- Data can be easily imported into other softwares for geolocation analysis

COMMITMENT TO THE ENVIRONMENT

Star-Oddi is committed to the environment and is continually improving its manufacturing process to reduce waste and environmental impact. We strive to make our packaging reusable and recyclable to minimize the amount of materials that end up in landfills. We encourage our customers to recycle or reuse any packaging material you may receive from us.

If you have any suggestions on how we can improve our processes we would like to hear from you.





DST BIRD

DST bird is a tiny geolocator intended for migration studies of birds. The data logger measures and records light level and temperature.

All measured data is stored in the logger's internal memory. When the logger is retrieved after the measuring period, recorded data is uploaded into the supporting SeaStar software where it can be viewed and analyzed in graphic and tabular form. Each measurement is displayed with its date and time. The same logger can be reused as long as the battery lasts.

The very small and lightweight logger opens up new possibilities for bird scientists to tag smaller birds that little migration information exists on. With large amount of temperature and light datapoints from loggers, the scientist is able to analyse bird migration routes with approximate geolocation (latitude and longitude) at given dates and times by comparing data from loggers to existing weather data collected by authorities.



In order to use DST bird a communication box and SeaStar software is needed. The user sets the start time, start date and sampling interval before starting the recorder. Sampling interval can be set in second(s), minute(s) and/or hour(s).

With default programming light and temperature are recorded at the same time. It is possible to define different sampling intervals for the two parameters. Data can be imported into more advanced software packages for geolocation analysis, such as PatternFinder from Star-Oddi.

DATA STORAGE TAGS (DSTs)

Data Storage Tags have been manufactured and developed by Star-Oddi since 1993. DST is a miniature underwater data logger available with different sensors such as temperature, depth, salinity, tilt, magnetic field strength and acoustic signals. The DSTs are used worldwide in research projects, including bird tagging and environmental monitoring.



LIGHT INTENSITY



TEMPERATURE

DST BIRD TECHNICAL SPECIFICATIONS

Sensors	Temperature and light
Size (length x diameter x height)	19 mm x 8,5 mm x 8,5 mm
Weight in air	2 gr
Temperature range	0°C-30°C (32°F-86°F)
Light range	10-400 Lux
Memory	52000 measurements in total*
Memory type	Non volatile EEPROM
Resolution temperature	0.1°C
Accuracy temperature	Better than +/- 0.5 °C
Response time temperature	Time constant (63%) reached within 18 sec.
Resolution light	2 lux
Accuracy light	+/-25 lux
Response time light	Immediate
Sampling interval	In second(s), minute(s), or hour(s)
Number of sampling intervals	1 to 7 intervals within the measurement period**
Minimum sampling interval	1 second
First recording	User defined in the software
Communication	Wireless through communication box
Battery lifetime	18 months***
Data retention	25 years
Housing material	Epoxy
Attachment hole	2 mm
Depth survival	150 m

*Divided between temperature and light.

**It's possible to shift between different intervals within the measurement period, for example having different intervals during night and daytime or specific months.

***For sampling interval of 10 minutes or greater and within the range 0°C-30°C.

Changes could occur without notice

PERSONAL SERVICE

Customers are Star-Oddi's best advisors. We are always looking for new ideas and ways to improve our products. Please contact us if you have any suggestions for us.

STAR-ODDI LTD.

Founded in Iceland in 1985, Star-Oddi has become recognized as one of the world's leading manufacturers of technology for research and industrial use.

Since 1993, Star-Oddi has been manufacturing the Data Storage Tag (DST), a miniature data logger. DST's are ideal for various types of research where small reliable loggers are needed.

THE STORY BEHIND THE NAME:

THE SAGA OF STAR-ODDI (STJÖRNU-ODDI)

Oddur Helgason lived and worked in Flatey, Skjalfanda, in northern Iceland in the twelfth century. He was a hired labourer on a farm and stood out because of his outstanding knowledge. He used a lot of his time analyzing the movements of the sun, moon and stars resulting in his nickname Star-Oddi.

Star-Oddi's work is considered to be one of the greatest engineering achievements of the Viking Age. His research enabled Vikings to sail over long distances and find their way back home. Scientists have shown that he made remarkably exact observations, centuries ahead of his time.



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