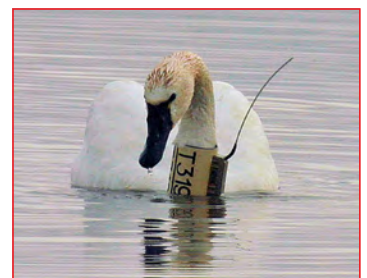




Turning Tracking and Monitoring into Knowledge.

***We make the most reliable and most accurate
birdborne PTTs in the world today.***

- ◆ PTTs available under 9.5 grams
- ◆ GPS PTTs are available in many sizes and weights, under 22g
- ◆ Custom attachments are available (e.g., crane leg bands, swan neck collars, even parrot-proof neck collars)
- ◆ 3-panel solar GPS PTT mounted to leg band for cranes; only such unit in the world
- ◆ Reinforced units available for deep diving birds down to 250 m
- ◆ The highest % of quality Argos locations with our PTTs (up to 82% 3, 2, 1 LCs in one study over 2.5 years)
- ◆ Longest battery life in the business
- ◆ Our Solar PTTs can last 2-5 years or more
- ◆ Superior customer service
- ◆ VHF transmitters available with our PTTs, for line-of-sight tracking on the ground
- ◆ Argos receiver available to relocate downed PTTs





Turning Tracking and Monitoring into Knowledge

North Star Science and Technology, LLC has been in business since 1998. Our founders and management staff are wildlife scientists and environmental scientists who helped to pioneer the technology that we provide today. We are not the largest wildlife telemetry company in the world, but we are one of the very finest; and thus, you can trust your project to North Star. We stand behind our products like no other company in the business, and we offer the highest level of customer service possible. Ask me for a few examples, and I will be happy to share (blakehenke@msn.com). Furthermore, we are always developing new products and enhancing the ones that we have, so if we do not have exactly what you are looking for “off the shelf”, please inquire with us; as we may be developing what you are looking for.

With regard to our birdborne PTTs, let me share some key features and advantages of North Star’s product line. **We use a true TCXO (temperature compensated crystal oscillator) in all of our PTTs, to ensure high percentages of 3, 2, and 1 location classes (LCs) from Argos (typically 20-50%).** The TCXO controls our output frequency, not software; and it ensures that the output frequency of our PTTs is highly stable no matter what the ambient temperature may be. The high quality location estimates from our PTTs prove to be very accurate and reliable in the field.

Regarding location accuracy from Argos PTTs, there are studies available in the literature and Argos puts out their own information, which I encourage you to read. Here is an important point to bear in mind: **The higher quality location classes (LCs) from Argos are more accurate and more reliable than lower quality LCs, and there is a difference among PTT manufacturers.**

North Star clients tell us that our units routinely get a significantly higher percentage of 3, 2, and 1 LCs than other PTTs on the market. In one field application in the Chesapeake Bay region of the USA, three bald eagles were tracked with our 80 gram PTTs. Over 2.5 years, all three of those PTTs got 80-82% 3, 2, and 1 LCs!

There are many factors that contribute to the LCs that Argos assigns to each location estimate, including the number of messages received per satellite pass, the geometry of the satellite passes, the strength of the signal, the level of noise at the same frequency in the same region, whether or not your PTT transmitted the day before, the condition and orientation of the antenna, and the stability of the transmitted signal (among many other smaller factors, too). On this last factor, stability of the transmitted signal, our PTTs outperform our competition, and it makes a significant difference in data quality. We also offer the longest battery life in the business.

Don’t be fooled by some of the marketing add-ons and frills that some of our competitors offer. Most of these either do not work as advertised, or else they are unnecessary. We make the best birdborne PTTs in the world today, so trust your project to North Star. Client references are available on our [www](http://www.northstarst.com) site, www.northstarst.com.

On a final note, since 2003 our Bi-Annual Grant Program (managed by the American Bird Conservancy) has provided dozens of free PTTs (worth hundreds of thousands of dollars) to critical research projects throughout the world. Don’t you want your purchasing decisions to support a company that gives back to the research community we serve?