

## Argos Systems (no GPS)

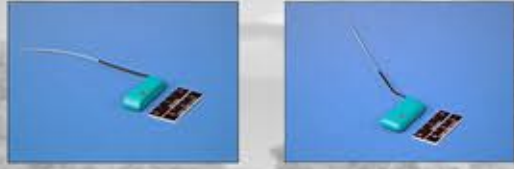
Telonics is a leader in the design and manufacturing of Argos PTTs for terrestrial mammals, marine mammals, sea turtles, and birds. This is the same technology provided by Telonics to NASA for the personal beacons on board the Space Shuttle. NASA level reliability and performance applied to the wildlife field.

### Avian Backpack and Tailmounted Units

Argos units as small as 16 g are available in backpack, legband, neckband, or tailmount configurations for a variety of species.



Ask about our New TAV Solar powered Avian Configurations



Telonics supplies Argos implantable systems for sea duck tracking. This technology can be used where external backpack attachments cannot be used.



Telonics is the leader in the development of Argos transmitter necklaces on psittacines. These designs can withstand crushing forces of a Macaw beak.

Avian systems start at USD1845

## Terrestrial Argos Systems

Telonics developed the first successful Argos tracking collars for caribou in the early 1980s. Thousands of animals have been tracked using this technology since those early deployments.



## Marine Argos Systems

Telonics manufactures Argos transmitters for marine mammals and sea turtles. Argos positions are most suitable for long range migration studies. These "Doppler-based positions" provide 100 m to 800 m typical accuracy.



### A new Argos application...

Telonics supplies Argos trap-site transmitters that can relay status of a remotely deployed trap without having to actually go to the trap-site. Captured animals can be handled faster and subjected to less stress.

Argos units pricing starts from USD995

## Telonics VHF Systems

Telonics is introducing a new generation of VHF telemetry systems. Users now have the ability to control which sensor data they will acquire from VHF telemetry. Using a powerful programming tool, Telonics Product Programmer (TPP), users can program activity, mortality, and temperature sensors and data collection scenarios. These VHF systems can also be used as dataloggers.

TPP allows the user to adjust pulse rates and duty cycles to control the operational life.

We supply configurations for small mammals and birds to large plains game and predators.

Large animal systems designed to last 3-5+ years still use our unique hermetic (waterproof) packaging technology to achieve the best reliability and performance over the entire operational life of the system.

Standard configurations are shown on the website, but in addition, Telonics also makes hundreds of special configurations for specific studies and customized applications.



Prices range from USD150 up to about USD350.



Implant VHF systems can monitor body temperature and heart rate for physiological studies.

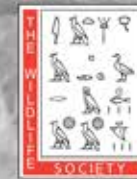


Let us know your requirements and we can help.



Telonics is a pioneer in the design and manufacturing of the most advanced forms of wildlife telemetry.

Stanley M. Tomkiewicz  
stan@telonics.com



## Terrestrial, Avian and Marine GPS Systems

Telonics offers several GPS systems with different data recovery options ranging from storing data on-board the unit for later recovery, to remote downloadable systems using Spread Spectrum Transceivers (SST), to satellite data links for Argos, Globalstar and Iridium. All systems are fully FCC and IC certified. We can help you select the most efficient system of data transfer for your application and budget.

Telonics offers powerful and user friendly support utilities. Telonics Product Programmer (TPP) is used to program data collection and data transfer settings in GPS systems. Telonics Data Converter (TDC) is used to recover data from SST systems, interface to satellite data recovery systems, and download datalog memory at the end of a study. TDC creates Excel spreadsheets and plots positions in Google Earth. Processed data files can be imported into other database programs and GIS for more in-depth analysis.

Telonics has also pioneered the rapid fix technologies in the form of QFP (Quick Fix Pseudorange) used for marine and now terrestrial studies. QFP-GPS systems last longer or provide more positions (3 x as many). This technology allows the unit to obtain all the necessary information to postprocess a GPS position in less than 4 seconds (as compared to 30-60 secs for a standard GPS position). Processing QFP-GPS positions is user friendly and fully automated in TDC. Results are comparable in accuracy to standard GPS positioning.

### GPS Marine

Units can also send data on dive characteristics including number of dives, length of dives, dive profiles, time spent at various depths, maximum depth of dive, and other information.



- All marine systems include QFP technology

## Satellite Based Data Links for GPS Systems

### - GPS/Iridium

- Complete Global Coverage
- Two Way Communications
- Always Available for Real Time Data Transfer
- Supports Geo-fencing and/or Alternate Schedules for Data Collection



Configuration	Estimated Weight with Collar (g)	Operational Life - 2 Years
TGW-4570-3	700-1100	3 hour fix interval with daily data uplinks
TGW-4670-3	1100-1200	50 min fix interval with daily data uplinks

The Monthly Service Fee is ~\$10 to \$14. There is a one time activation fee of \$40 per transmitter. Low monthly service fees direct from Iridium

Iridium systems range in price from about USD2400 to USD2500



### - GPS/Globalstar

- Extensive Coverage, but not quite Worldwide
- Simplex One Way Communications
- Always Available for Real Time Data Transfer and Mortality Detection

Globalstar systems range in price from about USD2200 to USD2400



Model	Estimated Weight with Collar (g)	Operational Life 2 Years
TGW-4460-3	416-582	30 fixes per week, 6 uplinks per week
TGW-4560-3	700-1100	10 fixes per day, 2 uplinks per day

The Monthly Service Fee is ~\$8 to \$14. There is a one time activation fee of \$30 per transmitter.

### Globalstar Recon - Low Cost GPS with Globalstar Link

Globalstar Recon start at USD995



Model	Estimated Weight with Collar (g)	Fixes and Uplinks per day	Life in Years 16 hours VHF weekly	Life in Years 8 hours VHF daily	Monthly Service Fee
RECON	700-1100	3	7.3	5.8	\$9
		4	5.9	4.8	\$11
		6	4.2	3.7	\$16

Marine systems range in price from about USD2200 to USD3200



### - GPS/Argos

Systems range in price from about USD2500 to USD2700



Configuration	Estimated Weight with Collar (g)	2 YR Operational Life
TGW-4480-3	416-582	5 hr fix interval / Argos uplink 8 hrs every 12 days
TGW-4583-3	700-1100	1 hr 15 min fix interval / Argos uplink 8 hr every 12 days

### GPS Store on Board

Systems range in price from about USD1700 to USD1900



Configuration	Estimated Weight with Collar	GPS/QFP Locations One year	GPS/QFP Locations Two years
TGW-4000-2	-62	3 hr fix interval	12 hr fix interval
TGW-4100-2	-80	1 hr 20 minute fix interval	3 hr fix interval

### GPS Spread Spectrum - Remote Download GPS

Systems range in price from about USD2900 to USD3100



Configuration	Estimated Weight with Collar (g)	Standard GPS*	GPS with QFP**
TGW-4490	416-582	4090	12270
TGW-4590	700-1100	8760	26280

