



Nano GPS Collar



An innovative, state-of-the-art tracking collar developed specifically for the requirements of researchers working with wildlife.

- Long-range, automatic data transfer, up to 24 km. (depending on field conditions, requires line of sight)
- Multiple user settings to ensure best performance
- Factory support 365 days per year
- Optional “Iridium Base Station” transmits data by satellite to online database

Specifications

| General Information | |
|---|-------------------------|
| Weight | 10.5 to 24 grams |
| Dimensions (main module including batteries) (Bottom) | 30 mm x 18 mm x 22 mm |
| Dimensions (antenna module) (Top) | 30 mm x 14 mm. x 13 mm. |
| Color | Black or Brown |
| Housing Construction | Conformal Coating |

| Main Features | |
|---|--|
| User programmable GPS schedules (set interval between GPS locations or set specific times of day) | |
| GPS positions automatically transmitted by UHF transceiver to mobile base station* | |
| Optionally, GPS positions transmitted from base station by Iridium to online database** | |
| Lightweight conformal housing built for extreme temperature environments | |
| Configurable "GPS additional time" for better precision | |
| Temperature range of operation is -40° C. - + 60° C. (Depending on battery technology) | |
| Ergonomic housings specifically designed for your study species | |
| VHF transmitter Optional | |

*Requires mobile base station

**Requires Iridium enabled base station (you won't need this at the university study site)

| Other Features | |
|------------------|---|
| GPS Module | 33-Channel GPS receiver |
| GPS antenna | Active Patch for better GPS performance |
| Power | Lithium Thionyl Chloride Batteries |
| Battery Life | Contact Telemetry Solutions, depends on GPS schedule |
| Warranty | 1-year parts and labor for manufacturing defects |
| Customer Support | 365 days per year, included 08:00 – 21:00 (PST/PDT) |
| Memory Size | 65,000 lines of data (GPS positions, sensor output, etc.) |

| Optional Features | |
|---|--|
| Iridium base station | Data uploads to internet |
| Remote environmental data collection by Bluetooth | For Example, Temperature, environmental sensors in close proximity to animal, etc. |
| VHF Frequency Range | 148 - 170 MHz |

| Primary Data Management | |
|--------------------------------------|---|
| Data uploads to mobile base station | Extract in Telemetry software then export to GIS |
| Real time information on each collar | Using Base Station Info App |
| Export data formats | KML, UTM, Latitude/Longitude ddd;mm;ss.ss |
| Data displayed | ID, Date & Time, Latitude, Longitude, Altitude, Time to Fix, Maximum GPS signal strength received, Number of satellites used to obtain position, GPS battery Voltage, Temperature (C.°) |
| Export data file types | KML, CSV, plot on Google Maps |

Figure 1- Screenshot showing data files in user software after downloading from base station.

What sets us apart

- Custom manufactured for humane use, smaller housings than industry conventional products
- No additional cost for collecting GPS positions remotely from collars
- Conformal Housings will provide for a small overall package under the neck and on top of the neck for better animal comfort and survival
- GPS additional time for better precision (user controls)
- Collar adjustment in 10 mm. increments
- Up to 20 unique, daily GPS positioning schedules (user controls)
- 365 day per year direct from factory customer support

Mobile Base Station & Base Station Info App



- Automatically collects GPS data from collars
- No directional antennas required
- No human operator required
- App is a time saver in the field

| General Information | |
|-------------------------------|---|
| Weight | ~180 grams |
| Dimensions (without antennas) | 97.5 mm wide x 86 mm. deep x 30 mm. tall |
| Color | High-Visibility Hunter Orange |
| Housing Construction | Impact Resistant ABS |
| Power | Internal, rechargeable battery with optional external 12-volt power |

| Main Features |
|--|
| Automatically collects GPS data from collars, no human operator required |
| Compatible with Base Station Info App (See YouTube for app information) |
| 4-day continuous use on a full battery charge |
| Recharge by USB from computer or 5-volt charger |
| Red, green and yellow LEDs indicate operational status |
| On/off switch via app |
| Memory stores up to 3 million GPS positions |
| Temperature range of operation is -20°C. - +60° C. |
| User software compatible to facilitate wireless GPS collar programming |
| Stores GPS positions for download into User Software |
| No directional antennas required |
| Can be left in the field to collect data on its own |

Iridium Enabled Base Station and App



- Automatically collects GPS data from collars
- Automatically sends GPS data to internet
- No human operator required
- Battery powered with solar backup

| General Information | |
|-------------------------------|-----------------------------|
| Weight | 2.3 Kg |
| Dimensions (without antennas) | Depends upon battery chosen |
| Color | Grey |
| Housing Construction | Waterproof ABS plastic |
| Power | 7.5 Ah Lithium polymer |

| Main Features |
|---|
| Automatically collects GPS data from collars, no human operator required |
| Transmits collected data via Iridium satellite to online database |
| Solar charging for battery |
| On/off switch inside housing |
| Green LED indicate operational status |
| Compatible with Base Station Info App (see YouTube for app information) |
| Memory stores up to 3 million GPS positions |
| Temperature range of operation is -10° C. - +55° C. (Optional -40° C. - +55° C lead-acid) |
| Designed to be left in the field to collect data on its own |

| |
|--|
| Stores GPS positions for download into User Software |
| No directional antennas required |
| Data transmission fees apply |

Base Station Info App



- Shows base station's battery voltage
- Displays each whitelisted GPS
- Displays amount of data downloaded from collar
- Displays most recent contact between collar and base station
- Displays collar voltage

| Main Features | |
|---|--|
| Android and iOS compatible | |
| Works with multiple base stations simultaneously | |
| Displays base station battery voltage | |
| Displays every whitelisted GPS device in base station | |
| GPS list sortable by GPS remaining to download, collar nickname, last contact & most recent GPS | |
| Continuously searches for additional base stations | |
| Color coding indicates current base station's current action | |
| Audible tones indicating a remote GPS data download in progress | |
| Different tones indicating the end of a remote GPS data download | |
| Displays each GPS devices' GPS remaining in collar memory | |
| GPS battery voltage | |
| Date and time since last connection between last collar and base station | |