

BUOYTRACKER II



GPS-GLOBALSTAR LOCATION SYSTEM

Who's watching over your buoy tonight

BUOYTRACKER II is a unique system for remotely checking and monitoring the precise location of your buoy or other valuable asset, large or small almost anywhere on the globe.

BUOYTRACKER II builds on the successful BUOYTRACKER GSM system and uses GPS satellite positioning system, together with the GLOBALSTAR low earth orbit satellite data service and allows users to check the position of their buoy from a web page anywhere in the world; no special software is required. For larger networks, a PC based autotracker program is available to automatically locate any number of buoys or assets with information presented on chart or map. In addition, **BUOYTRACKER II** will watch over your buoy and alert you by email should it wander by more than 500m. **BUOYTRACKER II** features a low voltage alarm that will send a message if the host power falls to a dangerous level and sends a heartbeat message at regular intervals confirming correct operation.

BUOYTRACKER II is totally self contained and can run for up to 3 years on its internal batteries.

BUOYTRACKER II is small and installation is quick and simple. The device can be included at build time to be completely covert if required. Both the GPS antenna and GLOBALSTAR antenna can be fitted inside plastic or GRP buoys. The enclosure is sealed to IP-68 making it suitable for use in the open on deck in breaking waves.

BUOYTRACKER II is typically supplied packaged with internal batteries but can be offered with external DC power

BUOYTRACKER II is available without watch circle mode, but with real-time tracking. In this mode, the device will wake up at regular intervals and simply report it's position; ideal for tracking lone ocean crossings, surface drifters, etc.



FEATURES:

- Compact design
- Easy to install and hide
- Simple to operate
- Ultra low power
- GLOBALSTAR data module
- 12 Channel GPS
- Low battery alarm
- Heartbeat message
- Tracking mode

APPLICATIONS:

- Buoy position peace of mind monitoring
- Buoy network monitoring
- Covert monitoring
- Delivery monitoring
- Asset monitoring and tracking
- Vehicle/vessel tracking

OPERATION:

In operation, a user simply switches on the device, whereupon it will make several measurements of its position to be used as the centre of the watch circle. Each hour the system wakes up from low power mode, checks its position against the reference and if the position differs by more than 500m, an alarm is sent via GLOBALSTAR communications satellite network. Alarms are sent as emails and also to a web portal where the position can be seen on google maps.

Once an alarm message has been sent, the current position is used as the centre for a new watch circle, and checked once again in one hour. If the beacon has moved again, a new alarm is sent, if not, the beacon returns to sleep mode.

The system can accommodate inputs from external sensors such as hatch sensors, impact sensors, tilt sensors etc, please ask for additional information.

A GLOBALSTAR Service contract is required. Running costs are similar to a cell phone. Planet Ocean offer a fixed price annual contract covering one heartbeat message per day and 3 alarms a month.

SPECIFICATIONS:

ELECTRICAL

Input Power Supply: Alkaline battery 5.6v 54AH internal diode protection.

Power (Typical): Active: 70mA

Quiescent Sleep: 80µA

Battery Life: Typically three years from a fresh pack, one heart beat per day, one alarm message per month.

Storage: -40°C to +85°C

Battery Life: Typically three years from a fresh pack, one heart beat per day, one alarm message per month.

GLOBALSTAR MODULE

Frequency Bands: 1615MHz

Transmit power: 300mW

MECHANICAL

Length: 360 mm

Diameter: Main body 90mm dia.
Maximum 95mm dia

Weight: 2.2 kgs

Sealing: IP68. Immersion proof to 1m

GPS MODULE

Type: 20 Parallel Channel

Accuracy: 10m (nominal)

Update Rate: 1 second

Protocol: NMEA-0183

Sensitivity: -159dBm

The screenshot shows the COMTECH AA Buoy Tracker web interface. At the top, there's a navigation bar with 'Unit Control', 'Route Manager', 'Statusmap', and 'Logout'. Below that, there's a 'Unit List' section with a table of buoys. The table has columns for ESN, Unit Name, Message Time, Latitude, Longitude, Alarm, Alarm, Status, Message, and Last Message. Below the table, there's a map showing the location of the selected buoy (0-098142) over a coastal area. The map includes a scale bar and a 'Zoom Out' button. At the bottom, there's a 'MAPQUEST' logo and a '38 Total PAGE 1 OF 4' indicator.

ESN	Unit Name	Message Time	Latitude	Longitude	Alarm	Alarm	Status	Message	Last Message
0-098142	Buoy-001	2009/09/13 05:23:01	41.743487	2.912895	0000	0000	0	0	Y 30
0-098142	Buoy-001	2009/09/12 00:31:12	41.643195	2.800937	0000	0000	0	0	Y 30
0-098142	Buoy-001	2009/09/11 07:31:31	41.643294	2.800937	0000	0000	0	0	Y 30
0-098142	Buoy-001	2009/09/11 13:28:14	41.670900	2.778790	0000	0000	0	0	Y 30
0-098142	Buoy-001	2009/09/11 10:07:02	41.643195	2.800937	0000	0000	0	0	Y 30
0-098142	Buoy-001	2009/09/11 10:06:24	41.643195	2.800937	0000	0000	0	0	Y 30
0-098142	Buoy-001	2009/09/09 10:27:54	41.643195	2.800937	0000	0000	0	0	Y 30
0-098142	Buoy-001	2009/09/09 11:05:19	41.643195	2.800937	0000	0000	0	0	Y 30
0-098142	Buoy-001	2009/09/09 10:22:41	41.643195	2.800937	0000	0000	0	0	Y 30

REF: BUOYTRACKER-II iss C Sep 2009

