

# ATS SR3017 *Trident* Acoustic Receiver, Shore-Based

World's Most Reliable Transmitters and Tracking Systems



## The most sensitive acoustic receiver on the market...from the telemetry receiver leaders.

The SR3017 Receiver-Datalogger is designed to detect and decode binary phase-shift keyed (BPSK) acoustic signals like those used in the JSATS program. This shore-based version of the *Trident* Receiver includes high accuracy clock sync via GPS monitoring, and utilizes an external power supply. It also allows for RS-232 data offload via cellular modem or other remote communication method.

Using advanced digital signal processing (DSP) algorithms, the *Trident* is the most sensitive JSATS receiver available, which is why ATS was the only vendor selected to supply the original *Trident* Acoustic Receiver for the Army Corps of Engineers. The *Trident* beat out the competition in rigorous, head-to-head field trials conducted by the Corps. The message length is only 744 milliseconds in length, saving power and reducing signal collisions. Other code schemes on the market are considerably longer.

Both the transmitter frequency and the background noise level is recorded with each transmitter detected. Data files are stored as csv text files that need no special processing to read. Optional use of filtering software in the user interface provides a data file with very few false positives. The *Trident* features a removable flash memory card for data storage. A USB port may be used to set-up and check status of the receiver. An external GPS antenna is included, and the external power input voltage is internally regulated.

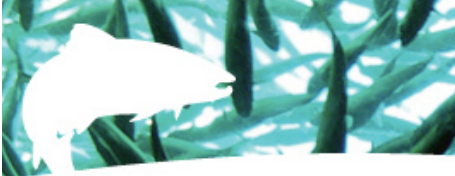
- Collects and interprets temperature, pressure and accelerometer data from ATS acoustic tags
- No need to change batteries; can operate indefinitely using shore-based 12 volt power supply or batteries
- Easy access to your data from the shore-based enclosure
- Part of a complete acoustic fish monitoring system that includes tags, tag programmer, and receivers

TRANSMITTERS  
RECEIVERS  
GPS SYSTEMS

**ATS**  
ADVANCED TELEMETRY SYSTEMS

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## ATS SR3017 Trident Acoustic Receiver, Shore-Based

### PACKAGE INCLUDES:

- Electronics enclosure, containing a DSP-driven decoder and supervisory processor with removable 32GB SDHC card. The NEMA type 4X enclosure features connection ports for the hydrophone, temperature sensor, GPS antenna, USB and RS-232 communication, and external power.
- Hydrophone integrated to shielded, marine-grade cable, 50 or 100 feet.
- Magnetic-mount external GPS antenna and cable.
- Temperature sensor and cable (for calculating signal velocity for 3D positions).
- Power cable for external 12V battery power (user-supplied).
- Software: includes user interface, 3D positioning software (post-processed using data from at least four receivers).

Optional: USB and RS-232 cell modem cables

### CLOCK

- Time is continuously set and corrected for drift via GPS

### MEMORY

- Removable 32 GB SDHC memory card

### FREQUENCY TOLERANCE

- Decodable JSATS transmitter  $\pm 0.5\%$

### HYDROPHONE SENSITIVITY

- -174 dB re 1uPa/V at 1 m

### HORIZONTAL PLANE DEVIATION

- 4dB or less

### VERTICAL PLANE DEVIATION

- 4dB or less,  $\pm 130$  degrees from vertical

### OPERATING TEMPERATURE

- 0-50 °C

### ENCLOSURE SIZE, TYPE

- 28 x 18.5 x 11.5 cm, NEMA type 4X

### WEIGHT

- 1200 g (2.6 lbs, enclosure only)

### MODES OF OPERATION

- Receiver detects, decodes and stores to memory all valid tag codes. The receiver also records ambient external temperature

### USER INTERFACE AND SOFTWARE

- LEDs indicate operational diagnostics. User interface software can interpret data from ATS manufactured sensor transmitters (temperature, pressure and accelerometer). Included software provides a graphical user interface to retrieve data and perform setup functions

### COMMUNICATIONS

- Direct connection to receiver via USB allows user to set up deployment site identification, clock synchronization, access to stored data. An RS-232 port allows for push or pull data retrieval via user-supplied communication device

### WARRANTY

- One year parts and labor on materials and workmanship



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