

# ATS SR3001 *Trident* Acoustic Receiver

World's Most Reliable Transmitters and Tracking Systems



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

The ATS SR3001 Trident Acoustic Receiver is designed to be a self sufficient data logging system for the detection of Juvenile Salmonid Acoustic System (JSATS) coded transmitters. Using advanced digital signal processing (DSP) algorithms, the Trident is the most sensitive JSATS receiver available, which is why ATS was recently selected to supply the model SR3001 Trident, predecessor to the SR3000 Trident, for the Army Corps of Engineers. The SR3001 Trident beat out the competition in rigorous, head-to-head field trials conducted by the Corps.

The JSATS systems uses a binary phase shift keyed (BPSK) code pulse to achieve a code set of over 65,000 individual ID's. The pulse train contains a 7-bit Barker code, 16-bit tag ID code, and 8-bit cyclic redundancy check (CRC). The message length is only 744 microseconds in length, so the start on-time saves power and reduces signal collisions as compared to the standard timing code sets currently on the market.

The Trident features a removable flash card for data storage, or the data may be retrieved via PC through a USB port. The USB port may also be used to check the function and battery status of the receiver.

- Completely Submersible Electronics Package
- Retrieve Data via Removable Memory Card or USB Port
- Complete Tracking System consists of Tags, Tag Programmer, and Receiving Equipment

*View of Trident hydrophone*



TRANSMITTERS  
RECEIVERS  
GPS SYSTEMS

**ATS**  
ADVANCED TELEMETRY SYSTEMS

ANTENNA SYSTEMS  
CODED ID SYSTEMS  
CONSULTING

## World's Most Reliable Transmitters and Tracking Systems



TRANSMITTERS  
RECEIVERS  
GPS SYSTEMS  
ANTENNA SYSTEMS  
CODED ID SYSTEMS  
CONSULTING

  
ADVANCED TELEMETRY SYSTEMS

470 FIRST AVE NW · ISANTI, MN 55040  
sales@atstrack.com · www.atstrack.com  
763-444-9267

## ATS SR3001 Trident Acoustic Receiver

### GENERAL

- Depth rating: 70 m, minimum
- Operating Temperature: 0 - 50 °C
- Data storage capacity: Thirty-two gigabytes of removable memory
- Frequency tolerance: Decodable JSATS transmitters +/-0.5%
- Hydrophone Sensitivity: -174 dB RE 1UpA/v AT 1M(+/-3dB)
- Horiz. Plane Deviation: 4dB or less
- Vert. Plane Deviation: 4dB or less, +/- 130 degrees from Vertical

### PHYSICAL

- Size: 15 cm diameter, 76 cm long (6 x 30")
- Weight: 4.5 kg (10 lbs)
- Buoyancy: Positively buoyant

### MODE OF OPERATION

- Receiver detects, decodes, and stores to memory all valid tag codes. Additionally, the receiver records environmental information including (optional) ambient external temperature (°C) and deviation from vertical (degrees).

### DIAGNOSTIC INFORMATION

- Receiver records at user defined intervals, battery voltage, and number of beacon tags detected since last diagnostic check.

### OPTIONAL SENSORS

- Ambient temperature (°C) and position in degrees relative to the vertical hydrophone position (tilt)

### COMMUNICATIONS

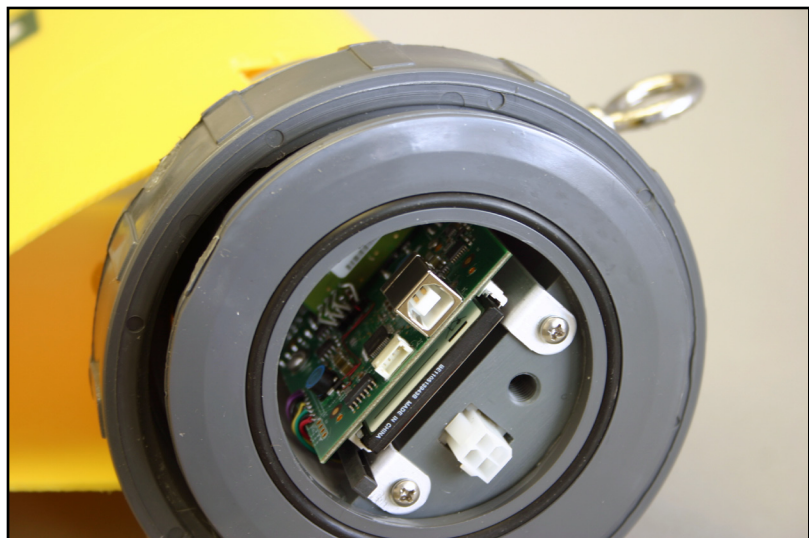
- Direct/cabled communication: Direct connection to receiver via USB allows user to set up deployment site identification, clock synchronization, access to stored data, and links to diagnostic sensors.

### PC USER INTERFACE

- Included software provides a graphical user interface to retrieve data and perform setup functions.

### WARRANTY

- One year parts and labor on materials and workmanship



*View of Trident electronics, USB port, SD card, and 4-pin power connector*