

MODEL 295-B ACOUSTIC TAG DATA LOGGER



HTI's *Model 295-B Acoustic Tag Data Logger (ATDL)* offers a cost-effective means of remotely recording the time-stamped presence of fish tagged with *Model 795 Acoustic Tags*. This solar powered, cableless, buoy is designed to withstand rigorous hydraulic and wind environments.

Engineered into an unsinkable, foam filled skiff, the *Model 295-B ATDL* doesn't require shore-based electronics. It is interfaced with a wireless access point for data transmission. This allows real-time monitoring of the system's status, as well as immediate notification of any system faults. The fiberglass deck provides easy access for servicing and keeps the electronics cool with a river-water air conditioning system. A white-light marker strobe flashes 3 feet (91 cm) above the waterline, which can be seen up to a mile away (1.6 km). And two 125 watt solar panels keep the entire system powered.

A Brief Overview:

- Self-contained, solar powered, cableless acoustic tag data logger.
- Compact, light, portable, battery powered.
- Detection ranges up to 1 km (3,280 ft).
- Real-time status notification.
- Wireless data transmission via encoded WiFi.
- Able to operate in tandem with *Model 290/291 Acoustic Tag Tracking Receivers*.

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MODEL 295-B ACOUSTIC TAG DATA LOGGER

Dimensions:	Length: 229 cm (90 inches). Width: 135 cm (53 inches).
Weight:	114 kgs (250 lbs.)
Power Supply:	Two 125 watt solar cells and two 100 a-h deep cell batteries
Operating Temp.:	0-50°C (32-122°F)
Power Consumption:	Approximately 9 watts
Batteries:	Recommend deep cycle 12 VDC battery. Life = battery amp hours (e.g., 180 amp hour battery will last approximately 180 hours).
Data Displays:	Using HTI <i>AcousticTag</i> software, real-time data can be viewed for in-field adjustments. HTI <i>MarkTags</i> software is used for post viewing and analysis.
Computer Req.:	Contact HTI for current minimum PC specs.
Frequency:	307 kHz standard

MODEL 795 ACOUSTIC TAGS – Also see separate spec sheet.

Acoustic Tag Model	Minimum Life In Air grams	Average Life in Days	
		3 sec PRI	10 sec PRI
<i>new Model 800 Micro Acoustic Tag</i>	0.5 g	Available 2010	
<i>Model 795Lm Acoustic Tag</i>	0.65 g	38 d	66 d
<i>Model 795LD Micro Acoustic Tag</i>	1.0 g	80 d	120 d
<i>Model 795LE Acoustic Tag</i>	1.5 g	51 d	93 d
<i>Model 795G Acoustic Tag</i>	4.5 g	90 d	Est.130 d
<i>Model 795X Acoustic Tag</i>	13 g	Est.180 d	Est. 300 d
<i>Model 795Z Acoustic Tag</i>	24 g	Est. 3 yr	Est. 4 yr

Life can be extended by decreasing PW and/or increasing PRI. All tags operate at 307 kHz. Length, diameter, & weight may vary +/- 10%. Life quoted is based on operating parameters of 1 msec pulse width, single pulse, at 10°C.

Tag Weight:	From 0.65 g to 24 g (in air), depending on model. See separate spec sheet.
Detection Range:	Up to 1 km (3,280 ft) in freshwater. For three-dimensional tracking ranges <300 m (984 ft) hydrophone separation recommended for freshwater. Noisy sites may reduce detection ranges.
Frequency:	307 kHz standard
Signal Encoding:	Proprietary encoded code-phase modulated signal improves signal-to-noise ratio by 11 dB. Can be used to extend detection range (e.g., typically by 100-350 m in freshwater), or increase resolution by reducing pulse width (e.g., from 5 msec to 0.4 msec), or some combination of both.
Pulse Repetition Rate:	Field programmable: 25 ping/sec to 1 ping every 16 sec
Pulse Width:	Field programmable: 0.5 msec to 5 msec
Individual ID:	Individual tag identification for up to 50,000 unique codes, standard
Tag Life Notes:	All tags operate at 307 kHz with an encoded signal. Length, diameter, and weight may vary +/- 10%. Life quoted is calculated based on operating parameters of 1 msec pulse width (PW) at 25°C. Life can be extended by decreasing PW.

ADDITIONAL NOTES:

Resolution:	Sub-meter three-dimensional resolution requires <ol style="list-style-type: none"> 1) Proper hydrophone geometry, 2) Known location of hydrophones, and 3) Adequate signal-to-noise ratio.
Computer Req.:	Contact HTI for computer specs.
Specifications:	All specifications subject to change without notice.
Demo Disk:	Contact HTI for demo CD for the <i>Model 290/291 Acoustic Tag System</i> .

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