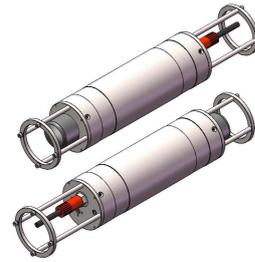


# UAL-AT2030-L1500

## Acoustic Transponder



### Overview

The UAL-AT2030-L1500 Acoustic Transponder Beacon is an acoustic device installed on underwater targets. It receives interrogation signals from positioning systems or deck units and transmits acoustic responses.

It features compact size, portability, high integration, and high receiving sensitivity.

It can operate with UAL series positioning systems or deck units to achieve high-precision underwater acoustic ranging.

The beacon also supports underwater target status monitoring, battery voltage measurement, and target depth measurement. These parameters can be transmitted to the UAL series positioning system or deck unit via acoustic commands, enabling underwater acoustic remote control and diagnostic functions.

When used with UAL series positioning systems, the system enables multi-target 3D underwater positioning.

The system is equipped with the latest control software, allowing configuration of beacon transmission parameters including:

- Signal transmission mode (single frequency, frequency modulation, etc.)
- Pulse width
- Transmission delay
- Beacon address
- Beacon status monitoring

The UAL-AT2030-L1500 has undergone extensive field testing and operational deployment. Its reliability and stability have been thoroughly verified and widely trusted by users.

## Technical Specifications

Specification	UAL-AT2030-L1500
Dimensions	$\phi 86 \times 460$ mm (including protective ring)
Weight	4.0 kg (in air) / 2.3 kg (in water)
Maximum Operating Depth	1500 m
Housing Material	Titanium alloy (main pressure housing)
Operating Frequency	20 kHz – 30 kHz
Signal Type	CW and LFM
Maximum Source Level	$\geq 185$ dB re 1 $\mu$ Pa @ 1 m (@ 25 kHz)
Transducer Directivity	Omnidirectional in horizontal plane, $\geq 180^\circ$ in vertical plane (@ 25 kHz)
Operating Mode	Interrogation – Response
Depth Measurement Range	0 – 1500 m
Depth Measurement Accuracy	7.5 m
Data Interface	RS232 (Baud rate 115200)
Operating Time	14 days standby in water + $\geq 48$ h continuous operation (at 4 s transmission cycle)
Battery	Rechargeable lithium battery pack, 22.2 V @ 3.5 Ah (77 Wh)
Charger	Input AC 220 V; Output DC 25.2 V @ 2 A
Temperature	Operating: $-5^\circ\text{C}$ to $+55^\circ\text{C}$ ; Charging: $0^\circ\text{C}$ to $35^\circ\text{C}$

## Technical Features

- After deployment underwater, the transponder automatically enters listening mode, monitoring interrogation signals and responding to qualified signals.
- Supports interrogation-response operation and acoustic command reception.
- Supports multiple address coding.
- Supports depth encoding function.
- Built-in battery enables long-duration underwater standby operation.

## Applications

- Underwater target tracking
- Underwater target status monitoring
- Offshore engineering construction
- Marine geological surveys
- Subsea engineering positioning

Installation Dimensions

