

## Datasheet

# Lightweight Actuation Transponder (LAT)



### Description

Part of Sonardyne's Coastal Acoustic product range, the Type 8044 Lightweight Actuation Transponder (LAT) is a low cost acoustic device that provides cable-less, through water control of subsea electrical equipment. Applications for the LAT include activating the inflation of buoyancy bags and opening or closing valves. The LAT can also be interrogated from the surface to determine its position on the seabed and provide confirmation of electrical activation.

The output from the LAT can be configured to provide multi-width and multi-pulse electrical outputs to suit a wide range of requirements. A rugged underwater connector ensures reliable activation.

The LAT is remotely controlled from the surface using a low-cost deck unit supplied with a dunking transducer and 10 metres of cable. The deck unit is used to program the acoustic identity of the LAT from several thousand available and then test the unit prior to deployment. Once in the water, the deck unit can measure ranges to the transponder and after sending a secure actuation command, relocate the transponder.

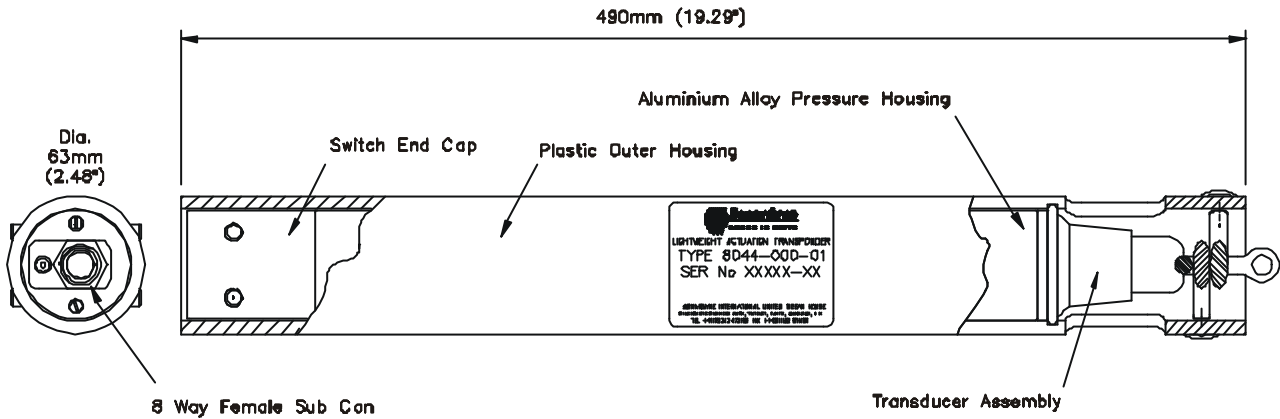
### Key Features

- Provides acoustic command and control of subsea electrical devices
- Configurable signal output to suit customer electronics
- Depth rated to 500 Metres
- Up to 4½ years deployment with Long-life Lithium battery pack
- Rugged, compact design
- Robust underwater connector
- Thousands of secure identities; field programmable with deck unit
- Compatible with ROV-Homer and Homer-Pro relocation systems and Scout and Prospector positioning system

LATs are also compatible with Sonardyne's ROV-Homer and Homer-Pro target relocation systems. Deployed at a point of interest, the LAT can be interrogated, weeks or years later, to provide range and direction guidance to a ROV pilot or diver wishing to home back on to it

# Specifications

## Lightweight Actuation Transponder (LAT)



Feature	Type 8044
Depth Rating	500 Metres
Operating Frequency	HF (35-50kHz)
Transmit Source Level	185dB re 1µPa @1m
Receive Sensitivity	<110dB re 1µPa
Number of Unique Addresses	3609 (Field Program)
Switch On	Continuously Operating (No On/Off switch)
Battery Life	Alkaline 18 months Lithium 34 months Lone Life Lithium 52 months
Max Actuation Current	120mA increasing with shorter pulse widths (Higher currents available)
Actuation Pulse Voltage	10-15V DC
Actuation Pulse Width	2 Second typical (other options available upon request)
Actuation Pulses Per Command	1 Typical (other options available upon request)
Total Number of Actuations	<100,000 (2 seconds @ 1mA)
Connector Type	8 way Sub con MCBH8FAL/2-0 Bulkhead Female
Mechanical Construction	Plastic/ S/Steel / Aluminium Alloy (Anodised)
Dimensions (LxDia)	63mm (2.4") x 490mm (19.3")
Weight in Air	1.7Kg
Weight in Water	0.4Kg
Deck Unit	Type 7967-000-02 (Includes Transducer and 10 metres of cable)

### Ordering Information

Type 8044-000-01 Lightweight Actuation Transponder (LAT)  
 Type 7967-000-02 LAT Surface Control System