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**Self-Propelled Acoustic Target (SPAT)**  
The Reusable ASW Training Target



# Self-Propelled Acoustic Target (SPAT)

## A Recoverable ASW Training Device Offering the Best Blend of Price, Performance and Flexibility for Range and Open Water

Lockheed Martin's Self-Propelled Acoustic Target (SPAT) Mod 1 is characterized by performance unsurpassed by any other recoverable target. Superior operational features and ease of maintenance make anti-submarine training exercises faster, easier, more effective, and more affordable.

SPAT is a reusable underwater vehicle that simulates the acoustic and dynamic characteristics of an operating submarine. SPAT provides a realistic moving target for Anti-Submarine Warfare (ASW) training without the cost and risk associated with the use of an actual submarine as the target.

Because SPAT responds to torpedo and sonar activity, it has long been a preferred anti-submarine warfare training target for surface ships, submarines, helicopters, fixed-wing aircraft, and acoustic homing torpedoes. SPAT is fully compatible with most ranges, and incorporates retrieval aids for open-water use. SPAT uses state-of-the-art technology to provide new capabilities and achieve higher reliability and simplified maintenance in this affordable ASW training target.

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## SPAT Mod 1 Specifications

### SPAT Mod 1 System Components

- SPAT Mod 1 Vehicle
- Fire Control
- Launcher
- Test equipment
- Documentation
- Workshop Equipment

### Physical Data

- Diameter: 10 in. (25.4 cm)
- Length: 155 in. (393.7 cm)
- Weight: <400 lbs (<181.5 Kg)

### Dynamics

- Speed Range: 4 to 12 knots
- Depth: 3 to 300 meters in depth
- Endurance: 5 hours at 4 knots, 3 hours at 6 knots, 1 hour at 12 knots

### Acoustic Link

- 16 commands: standard set or user definable

### Launch Options

- Designed for deck or helicopter launch

### Tracking Pinger

- Type: standard, user defined; optional MK72, MK84, or BUTEC range (*synchronized*)

### SPAT Recovery

- SPAT is positively buoyant, painted International Orange for high visibility
- End of run pinger emits acoustic signal
- Strobe light flashes after end of run
- RADAR reflecting balloon deployed automatically at end of run
- End of run prediction available from run program
- Dye marker (*Option*) deploys at end of run

### Turnaround

- 30 minute turnaround time from recovery completion to launch
- Turnaround consists of: replace battery; replace two O-ring seals; download data from previous run; reprogram (*call up prerecorded scenario file*); launch

### Salient Acoustic Features

- Programmable passive tonals
- Active Acoustics
- Programmable power level
- True echo repeater with programmable characteristics
- Responds to multiple incoming sonar signals

### Flexibility

- Can be used for open-water training for the littoral battlefield as well as on the range
- Organic to the Fleet
- Launches from surface ship or helicopter
- Substitutes for the submarine in most ASW training exercises

### 30-Minute Turnaround Between Runs

- Run data downloads to fire control
- Programs upload from fire control
- Run changes easy to make from fire control

### Maintainability

- 50 hours between maintenance events
- Low consumable cost at turnaround and maintenance
- Built-in self-test with automatic failure identification
- 20-year life expectancy

### Easy to Field

- Low on-board space demand
- No special support utilities needed
- Existing personnel trained to use SPAT
- Easy to handle: <400 lbs, 13 feet long

- **An ASW training target for surface ships, submarines, helicopters, and acoustic homing torpedoes**
- **Programmable acoustic signature, vehicle dynamics, and training levels**
- **ASW training on an acoustic range or in the open ocean for the readiness advantage**
- **Only two people required for operation and quick turnaround**