



MINIATURE SONOBUOYS A NEW GENERATION OF SONOBUOYS FOR MANNED AND UNMANNED PLATFORMS

Features

- Greater area search performance than existing sonobuoys
- >40% weight and 35% volume reduction per MSA field
- G-Size Source
- F-size Receiver
- Compatible with existing gravity launchers and new Sonobuoy Mission Pod
- Two-event safety criteria
- Customisable and selectable depths
- Manual (AFS) and Remote (RFS) Programming
- Command Downlink
- GPS fitted as standard
- Legacy and STANAG 4718 Telemetry modes

Miniaturised sonobuoys are a key enabler to allow the conduct of ASW from unmanned fixed-wing and rotary-wing platforms, and significantly reduce the size and weight burden on manned platforms, extending time on station.

Ultra Electronics has developed miniaturised versions of the highly successful SSQ 955 HIDAR and SSQ 926 ALFEA buoys to deliver an increased capability in a smaller package. The new Mini-HIDAR and G-ALFEA buoys deliver a multi-static sensor field with a 2dB increase in multi-static active performance compared to the existing buoys, enabling a typical 35% increase in area search performance for the same probability of detection.

The Mini-HIDAR receiver buoy has been enhanced with an extended wideband frequency coverage, in-buoy Active Intercept detection and Underwater Locator Beacon detection for even greater utilisation. The G-ALFEA supports multiple selectable waveforms

allowing for multi-static operation against fast and slow moving targets in both deep and littoral waters.

The miniature sonobuoys are fully compliant with STANAG 4718 whilst also offering a legacy interface mode to allow operation from current sonobuoy processing systems, and are compatible with existing gravity launchers as well as the Sonobuoy Mission Pod.

Smaller
Lighter
35% better multi-static
performance





Miniature Sonobuoy Variants

G-ALFEA Active Source

This new lightweight high power, low frequency electro-acoustic source buoy is intended for use with HIDAR or Mini-HIDAR multi-static receivers for MSA search, localisation and tracking.

It's features include:

- High source level
- 1.6-2kHz bandwidth, allowing multiple pings from different sources concurrently
- 3 depths (similar to ALFEA), changeable via downlink command
- Extensive ping library, including all ALFEA waveforms
- Autonomous ping capability
- Full backward compatibility with ALFEA command set
- ALFEA, CFS and STANAG 4718 Downlink Commands
- ALFEA and STANAG 4718 telemetry modes
- Manual (AFS) and Remote (RFS) programming for UAS operation
- GPS
- 1-8 hours life setting; changeable via downlink command
- 7.8 kg / G-Size form factor

Mini-HIDAR (F-size)

Acoustic Receiver

This new lightweight receive buoy provides both passive and high dynamic range MSA receive functions. It is designed for use with G-ALFEA or ALFEA source sonobuoys.

It's features include:

- High performance passive directional sensor for narrowband, broadband and transient detection
- Directional vertical line array for MSA receive function to provide higher gain
- A wideband omnidirectional sensor for acoustic intercept, classification and marine mammal detection.
- 3 depths (similar to HIDAR)
- HIDAR and STANAG 4718 telemetry modes
- Full backward compatibility with HIDAR
- Selectable frequency bands mode (STANAG 4718)
- Wideband modes: 10kHz to 20 kHz / 20 kHz to 40 kHz (STANAG 4718)
- Active Intercept Alerts (20 Hz to 40 kHz)
- Underwater Locator Beacon (ULB) Alerts

- STANAG 4718 Downlink Commands
- Manual (AFS) and Remote (RFS) programming for UAS operation
- GPS
- 1-16 hours and 'extended' life settings; changeable via downlink command
- 10 hours guaranteed life, 16 hours with power management
- 3.5 kg / F-Size form factor

Deployment

Platform speed:
50 kts to 375 kts

Platform altitude:
55 m to 9,144 m
(180 ft to 30,000 ft)

RF Channel

Selectable via AFS/RFS/Downlink:
1 to 99 (136 MHz to 173.5 MHz,
375 kHz spacing) 5 sub-channels in
STANAG 4718 telemetry modes

VHF Radiated RF Power

1 Watt nominal, adjustable
via Downlink

Temperature Range

Sea water operating:
- 2°C to + 35°C

Un-packaged non-operating:
- 40°C to + 55°C, to allow external
carriage / deployment to 15 kft

Packaged:
- 50°C to + 70°C

Sea State

Operate: Sea State 5
Survive: Sea State 7

Seawater Salinity

1.5% to 3.6% by weight,
with low salinity option

Storage Life

Packaged: 7 Years

Un-packaged: 90 Days



making a difference

Ultra Electronics
COMMAND & SONAR SYSTEMS
Knaves Beech Business Centre
Loudwater
High Wycombe
Buckinghamshire HP10 9UT
England
Tel: +44 (0)1628 530000
Fax: +44 (0) 1628 524557
www.ultra-css.com
www.ultra-electronics.com

Ultra Electronics reserves the right to vary these specifications without notice.
© Ultra Electronics Limited 2018.
MAF Reference code B047v5
Printed in England PR/CE/0718