

ULTRA



Passive Directional Sonobuoy

AN/SSQ-53D(3)



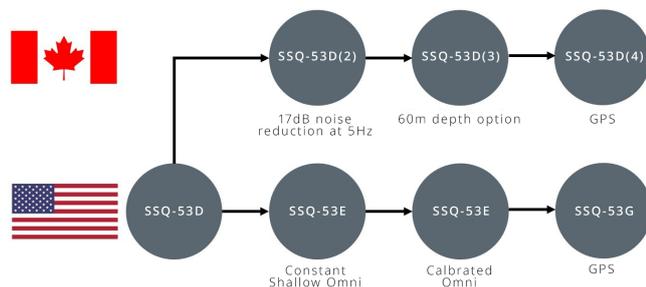
Key features

- Functionally the same as USN-approved SSQ-53D
- A-size
- Seawater-activated battery power source
- LAU-126A SLC compatible
- CAD and gravity launch technique
- Performance rated for sea state 6
- Compatible with all western sonobuoy processors
- Designed for shallow and deep water operations

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Overview

The Ultra SSQ-53D(3) Directional Frequency Analysis and Recording (DIFAR) sonobuoy provides directional and omnidirectional acoustic data over a wide frequency range. It has the best 5Hz passive acoustic performance on the market and is the lightest A-size DIFAR sonobuoy available. The SSQ-53D(3) is the only DIFAR NATO sonobuoy rated for sea-state 6 operation and is compatible with all western sonobuoy processors.



Evolution of the AN/SSQ-53D(3)

Technical Specification

The SSQ-53D(3) is designed for internal or external carriage and release from maritime patrol aircraft and maritime helicopters. All buoy settings are simple to choose and set manually through the EFS selector.

After release from the aircraft, a parachute limits the rate of descent to approximately 30 m/s. On water entry, a surface float is deployed, containing a VHF transmitter for acoustic data telemetry. Omni-directional and directional acoustic sensor signals are transmitted to an airborne or ship-based acoustic processor for passive detection of narrowband, broadband and transient submarine acoustic emissions.

Key benefits

- ITAR-free Canadian design
- Lightest A-size DIFAR sonobuoy on the market
- 5 year shelf life in sealed container
- 90 days unpacked storage life
- Best available 5 Hz passive performance
- GPS available in SSQ-53D(4)

NATO STOCK NUMBER
SSQ-53D(3): 5845-21-921-2055

Sonobuoy Characteristics	
Description	Passive Directional sonobuoy
Mechanical Characteristics:	A-Size Length: 914 mm (36.00 in) Diameter: 124 mm (4.875 in) Mass: 7.1kg (15.6 lbs) C of G: 38.7 cm (15.25 in) from the bottom end Ballistic Coefficient: 60 kg/m ²
Power Source	Seawater-activated battery
Deployment	Maximum Platform Speed: 370kts Maximum Platform Altitude: 9,144m (30,000 ft)
Temperature Range	Storage Temperature: -40 °C to +70 °C Air Temperature: 9144m (30,000 ft) Seawater Temperature: -2 °C to +35 °C
Operating Depth	EFS programmable settings Depths 30m 60m 120m 300m Time to full stabilisation 100s 125s 160s 240s
Operating Life	EFS programmable 0.5, 1, 2, 4, or 8 hours. Scuttles after 8 hours regardless of life setting
RF Channel	EFS Programmable Channels 1 to 99 (136 MHz to 173.5 MHz, 375 kHz spacing)
VHF Radiated RF Power	1 Watt nominal
Acoustic Frequency Range	Telemetry: 5Hz to 2400Hz
Sensitivity	Directional 122 ± 3 dB rel 1 µPa at 100Hz = 40 kHz pk dev Omni 122 ± 3 dB rel 1 µPa at 100Hz = 25 kHz pk dev
Variants	SSQ-53D(3) High Performance DIFAR SSQ-53D(4) GPS

