

Passive Directional Sonobuoy

AN/SSQ-53D(3)



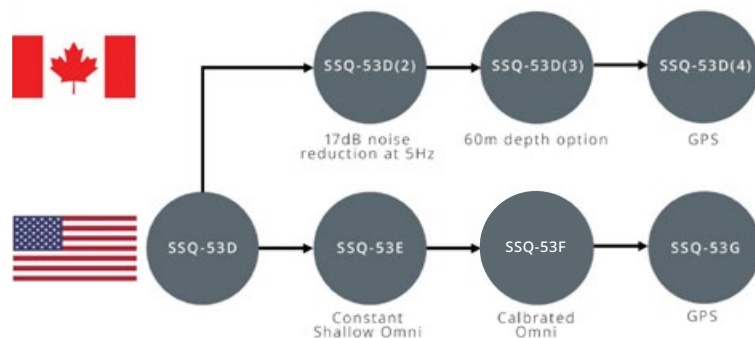
Key features

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

Overview

The Ultra Maritime 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 availability in SSQ-53D(4) is in development

Sonobuoy Characteristics

Description	Passive Directional sonobuoy	
Mechanical Characteristics:	'A' size Length:	914 mm (36.00 in)
	Diameter:	124 mm (4.875 in)
	Mass:	7.1 kg (15.6 lbs)
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 stabilization:	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	



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