

# Passive Directional Sonobuoy

AN/SSQ-553G(B) & AN/SSQ-553G(C)



## Key features

- Functionally the same as SSQ-53D(3)
- G-Size
- 50% smaller, 28% lighter than the A-size SSQ-53D(3)
- Compatible with all western sonobuoy processors
- Designed for shallow and deep-water operations
- Performance rated for sea state 6 survival

## Overview

The Ultra Maritime SSQ-553G Directional Frequency Analysis and Recording (DIFAR) sonobuoy provides exceptional wide-band directional and omnidirectional performance in a compact package. The SSQ-553G takes its acoustic sensor and suspension system design from Ultra Maritime's A-size SSQ-53D(3) DIFAR sonobuoy, which has the best available 5Hz passive performance on the market.

The sensor was specifically developed for Ultra Maritime's SSQ-53D(3) and later adopted into the US SSQ-53F and UK HIDAR SSQ-955. While the compact G-size packaging necessitated modifications in the suspension system, the resulting performance of the SSQ-553G at very low frequencies (5-10Hz) is still excellent, and for frequencies above 10Hz, the SSQ-553G's acoustic performance is identical to the A-size SSQ-53D(3) DIFAR sonobuoy.

Engineered for reliable service in adverse environmental conditions, the SSQ-553G can be launched from a carousel, pneumatic launch tube, or free fall (gravity) chute.

# Technical Specification

The SSQ-553G is designed for internal carriage and release from maritime patrol aircraft and maritime helicopters. All buoy settings are simple to choose and set manually through 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 G-size DIFAR sonobuoy on the market
- 5-year shelf life in sealed container
- 90 days unpacked storage life
- GPS available in SSQ-553G(C)

## Sonobuoy Characteristics

Description	Passive directional and MSA receive sonobuoy	
Dimensions	'G' size Length:	419 mm (16.5 in)
	Diameter:	124 mm (4.875in)
	Mass:	5.1 kg (11.22 lbs)
Power Source	Seawater-activated battery	
Deployment	Maximum Platform Speed:	370 kts
	Maximum Platform Altitude:	9,144 m (30,000 ft)
Temperature Range	Storage Temperature:	-40°C to +70°C
	Launch Air Temperature:	-20°C to +55°C
	Seawater Temperature:	-2°C to +35°C
Operating Depth	EFS programmable settings	
	Depths:	30m 120m 300m
Operating Life	EFS programmable 0.5, 1, 4, or 6 hours Scuttles after 6 hours regardless of life setting	
RF Channel	EFS Programmable, 99 Channels (136 MHz to 173.5 MHz, 375 kHz spacing)	
VHF Radiated Power	1 Watt nominal	
Telemetry	FM (Conventional DIFAR format)	
Acoustic Frequency Range	Frequency Response:	5 to 2400 Hz range
Sensitivity	Directional:	122 ± 3 dB rel 1 µPa at 100 Hz = 40 kHz pk dev
	Omni:	122 ± 3 dB rel 1 µPa at 100 Hz = 25 kHz pk dev
Variants	SSQ-553G(C): GPS	



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NATO STOCK NUMBER  
SSQ-553G(B): 5845-21-914-4793