

AN/SSQ-77C VLAD Sonobuoy

Passive Directional

The AN/SSQ-77C VLAD (Vertical Line Array DIFAR) is a NATO A-size sonobuoy manufactured for the U.S. Navy which provides a passive tactical search and surveillance capability to improve detection and tracking capability for the DIFAR system in a noisy, high traffic environment.

The VLAD concept utilizes a vertical line array of omni-directional hydrophones in place of the single hydrophone used in the standard DIFAR unit. A directional hydrophone is mounted at the array phase center and provides target bearing data.

The signal format for the VLAD sonobuoy is identical to that of the AN/SSQ-53F (DIFAR) and compatible with the AN/AQA-7 processor. All beam-forming functions are accomplished within the sonobuoy, with provisions for sea noise equalization and omni-directional phase tracking.

This sonobuoy features both Electronic Function Select (EFS) for use prior to loading and launching, and Command Function Select (CFS) to allow the operator to modify the sonobuoy's mode of operation after it has been deployed in the water. These functions allow the operator to select buoy life, depth setting, and RF channel.

- EFS Selectable
 - *RF Channel, Life, Depth*
- CFS commandable
 - *RF Channel, Life*
- High-power 96-channel RF Transmitter
- 1 Watt 96-channel RF transmitter
- Convergence zone receive beam



SPECIFICATIONS

NSN 5845-01-493-8889

PHYSICAL CHARACTERISTICS

Weight10.4 kg (23 lbs)

Sonobuoy Launch Container.....LAU-126/A

PERFORMANCE DATA

RF Command Receiver.....UHF – single channel

RF Transmitter Power Output.....1 W minimum

RF Transmitter Operating Frequency 96 Channel Selectable
(136.000 to 173.500 MHz)

Sensor/Audio Frequency..... 10 to 2400 Hz

Operating Life.....0.5, 1.0, 2.0, 4.0, or 8.0 hours

Operating Depth.....d1: 61 meters (200 ft)
d2: 152 meters (500 ft)
d3: 305 meters (1000 ft)

EFS selections.....RF, Life, Depth

CFS selections.....RF, Life

Launch Altitude..... 12 to 9144 meters (40 to 30000 ft)

Launch Speed..... 0 to 370 KIAS

Shelf Life 5 years in sealed container