

AN/SSQ-101 ADAR Sonobuoy

Passive Directional

The AN/SSQ-101 ADAR (Air Deployed Active Receiver) is a NATO A-size sonobuoy manufactured for the U.S. Navy which provides a commandable passive search capability. The ADAR sonobuoy is the receiver in a multi-static active receiver system.

When deployed the ADAR array utilizes a pentagon shaped horizontally oriented pattern of hydrophones to detect and beam form underwater sound waves. Each of the forty hydrophones is identical with locations along the circumference and radials of the array structure.

The analog output of each hydrophone is converted to a digital signal, serialized, beam formed and sent to the surface transceiver where it is broadcast on a five-watt minimum FSK modulated radio link. All beam-forming functions are accomplished within the sonobuoy with bearing information supplemented with a highly accurate digital compass.

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 depth setting and RF channel.

- EFS Selectable
 - RF Channel, Depth and Acoustic Band

- CFS Commandable
 - RF Channel and Acoustic Band

- 5 Watt Output 47-channel RF transmitter



SPECIFICATIONS

NSN: 5845-01-453-8699

PHYSICAL CHARACTERISTICS

Weight14.1 kg (31 lbs)
 Sonobuoy Launch Container.....LAU-126/A

PERFORMANCE DATA

RF Command Receiver.....UHF – single channel
 RF Transmitter Power Output.....5 W minimum
 RF Transmitter Operating Frequency47 Channel Selectable
 (136.000 to 173.500 MHz)
 Sensor/Audio Frequency.....250 – 1000 Hz
 Operating Life.....4.5 - 6.0 hours
 Operating Depth.....d1: 19.8 meters (65 ft)
 d2: 91.4 meters (300 ft)
 d3: 152.4 meters (500 ft)
 EFS Selections RF, Depth, Band
 CFS Selections RF, Band
 Launch Altitude.....12 to 9144 meters (40 to 30000 ft)
 Launch Speed.....0 to 370 KIAS
 Shelf Life 5 years in sealed container

MECHANICAL DEPLOYMENT SEQUENCE

Hydrophone array fully deployed with radial and chordal lines tensioned. Complete ADAR sonobuoy stabilized and fully operational within specified 240 seconds from water entry.

