

AN/SSQ-101B ADAR Sonobuoy

Passive Directional

The AN/SSQ-101B ADAR (Air Deployable Active Receiver) is a NATO A-size sonobuoy manufactured for the U.S. Navy and provides a commandable passive search capability.

When deployed, the ADAR array utilizes a pentagon shaped, horizontally oriented pattern of hydrophones to detect and beam form underwater sound waves. All of the forty hydrophones are 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 augmented with a highly accurate digital compass.

This sonobuoy features Electronic Function Select (EFS) for use prior to load and launch. A UHF command downlink allows the operator to modify the sonobuoy's mode of operation after it has been deployed in the water via the Command Function Select (CFS). These functions allow the operator to select Processing Mode and RF channel.

The AN/SSQ-101B ADAR is air launchable from fixed or rotary-wing aircraft or can be deployed from the deck of a surface vessel. Descent of the sonobuoy is stabilized and slowed by a parachute.

- EFS Selectable
 - *RF Channel, Depth, Processing Mode and Acoustic Band*
- CFS and CMF Downlink Commandable
 - *RF Channel, Processing Mode, Acoustic Band, etc.*
- 5 Watt - 47 channel P1 Mode and 90+ channel P2 & P3 Mode RF transmitter



SPECIFICATIONS

NSN: 5845-01-629-8534

PHYSICAL CHARACTERISTICS

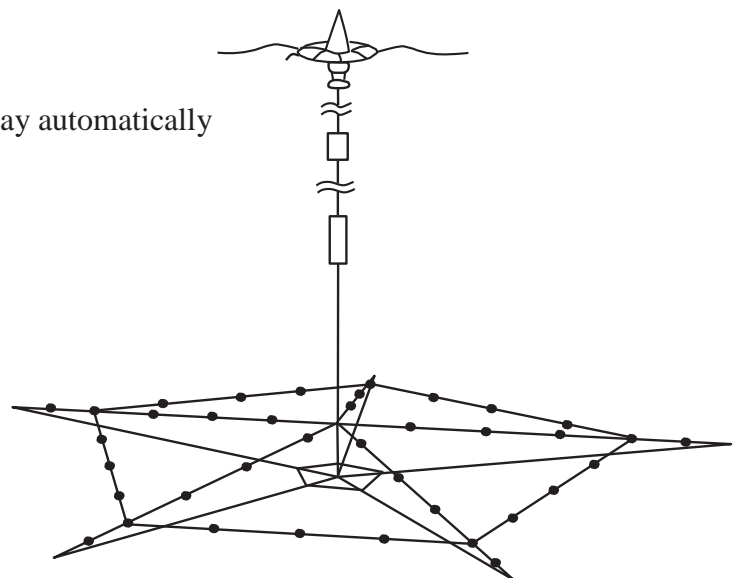
Weight14.1 kg (31 lbs)
Sonobuoy Launch Container.....LAU-126/A

PERFORMANCE DATA

RF Command Receiver.....UHF – single channel
RF Transmitter Power Output.....5 W minimum
RF Transmitter Operating Frequency47 to 90+ channel selectable
(136.000 to 173.500 MHz)
Sensor/Audio Frequency.....250 – 1000 Hz
Operating Life.....4.5 - 6.0 hours
Processing Mode Selection.....P1=IEER
P2=MAC
P3=Omni Audio
Operating Depth.....d1: 19.8 meters (65 ft)
d2: 53 meters (175 ft.)
d3: 91.4 meters (300 ft)
d4: 152.4 meters (500 ft)
EFS SelectionsRF, Depth, Processing Mode, Band
CFS SelectionsRF, Processing Mode, Band, etc.
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

Following descent to preselected depth, hydrophone array automatically deploys with radial and chordal lines tensioned.



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