AQS-18(V)-3

Dipping Sonar System

Features

- **Long pulses (700 msec) and high source level provide long range detection**
- **Shallow water signal processing for high reverberation areas**
- **Capability to control, process and display sonobuoys in a single integrated system**
- **Adaptable reeling machine designs are compatible with a wide range of helicopters**

The AQS-18(V)-3 is the export version of the latest AQS-13F US Navy helicopter-borne dipping sonar. The long-range active scanning sonar employs a transducer lowered into the water from a hovering helicopter to detect and maintain contact with underwater targets and to provide target classification clues. Active echo-ranging determines a target's range, bearing and opening or closing rate relative to the aircraft's position.

Incorporated into the AQS-18(V)-3 are sonar engineering advancements including digital technology, improved signal processing, extensive use of hybrid integrated circuits and upgraded operator displays. The Adaptive Processor Sonar (APS) increases detection capabilities in shallow waters and reverberation-limited conditions, while essentially eliminating false alarms from the video display. The APS is a digital processor that uses Fast Fourier Transform techniques to provide narrowband analysis of the uniquely-shaped CW pulse and to improve operation in non-reverberant conditions more typical of deep water.

The AQS-18(V)-3 dipping sonar is specifically designed for ASW helicopters, which are often required to search in inherently difficult areas such as shallow water high noise areas, coastal regions, constrained passages, high-density shipping lanes and areas of concentrated naval activity.

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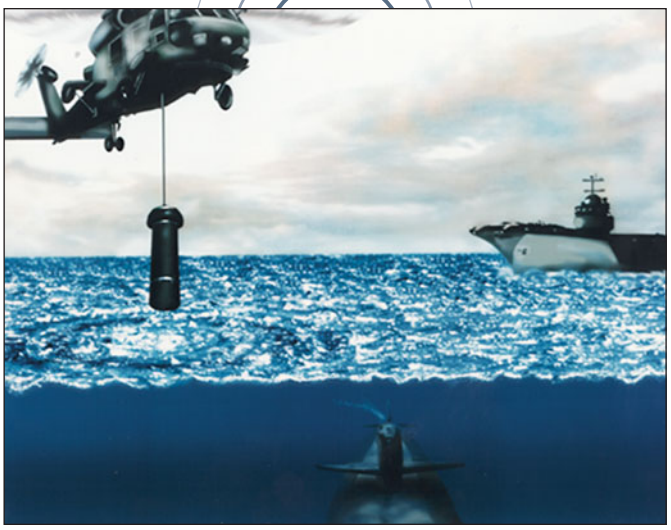

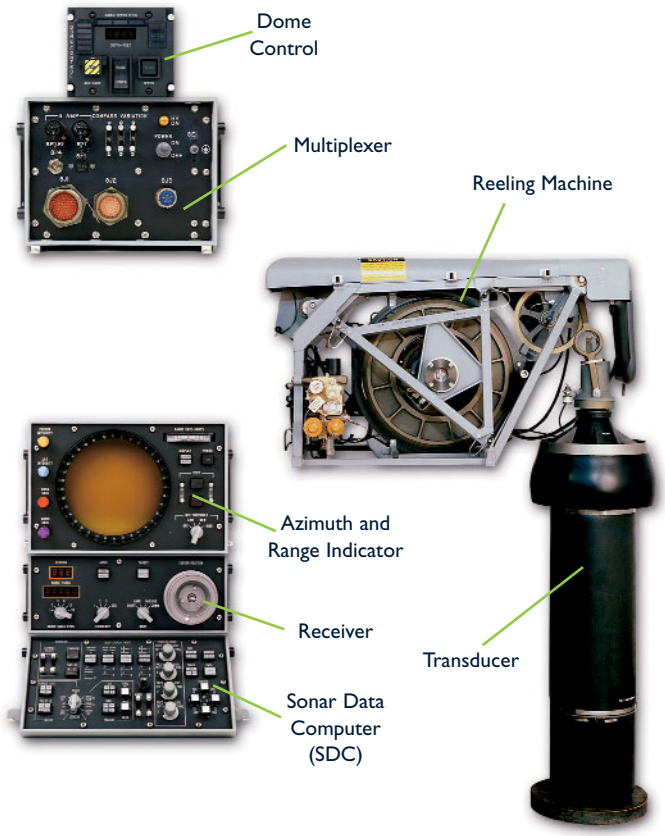

Specifications

Operating frequencies	9.23, 10, 10.77 kHz
Sound pressure level	215 dB/µPa/yd
Range scales	1, 3, 5, 8, 12, 20 kyds
Operational modes	Active: 3.5 and 35 ms rectangular pulse with MTI, 200 or 700 ms shaped pulse Passive: 500 Hz bandwidth between 9–11 kHz Comm mode at an SSB frequency of 8.087 kHz (UQC)
Visual outputs	Range, range rate, bearing, operator verification
Audio output	Available audio: Binaural left and right channel with auto gain control Also available: Summed audio constant level
System weight (does not include mounting base or interconnect cabling)	280 kg (617.4 lb) max.
Operating depth nominal	440 m (1444 ft)

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