



# AN/AQS-13F

## Dipping Sonar System



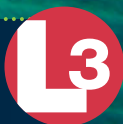
### Features

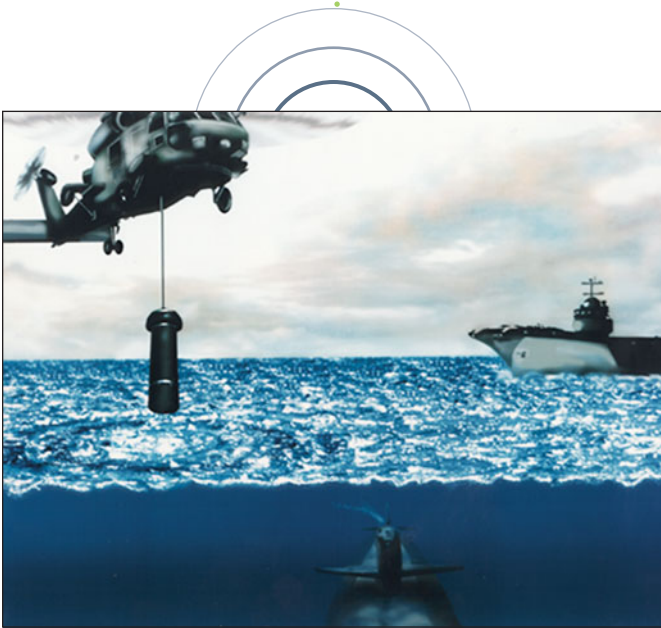
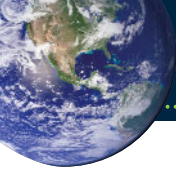
- **High source level provides long range search capabilities**
- **Shallow water signal processing for high reverberation areas**
- **Capability to control, process and display sonobuoys in a single integrated system**
- **High-speed reeling machine to achieve maximum depth and retrieve within 3.5 minutes**

The AN/AQS-13F is the US Navy's best inner zone ASW sensor. The long-range, active scanning sonar detects and maintains contact with underwater targets through a transducer lowered into the water from a hovering helicopter. The system provides target classification clues and can accurately determine opening or closing rates of moving targets. Active echo-ranging determines the target's range and bearing.

The AN/AQS-13F has been designed to provide rapid tactical response against the most advanced submarine threats. High-speed reeling allows a dip cycled to maximum depth to be completed within 3.5 minutes, while the azimuth and range indicator and receiver provide a video display for the operator.

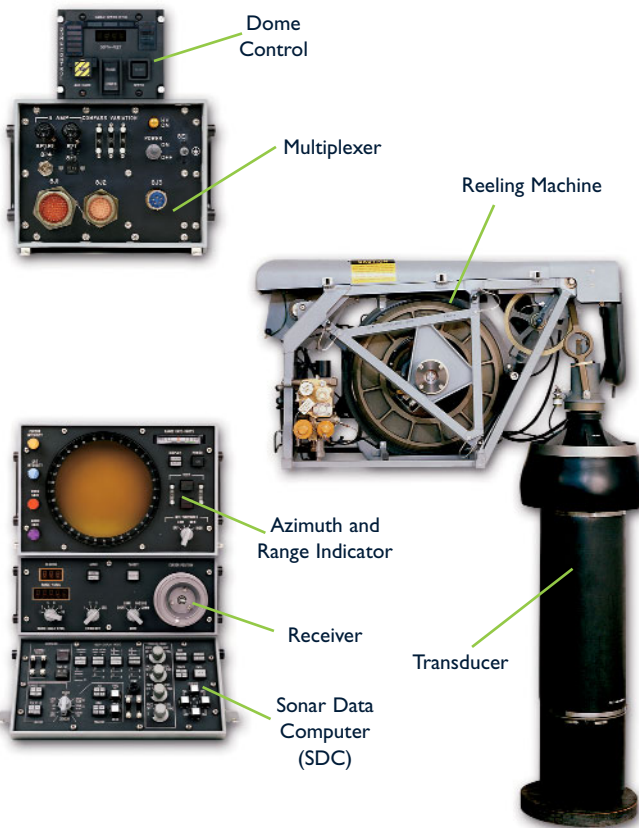
The system's Sonar Data Computer (SDC) uses digital processor techniques. This enhances detection capabilities in shallow water and reverberation-limited conditions while essentially eliminating false alarms from the video display. The higher energy transmitted with the longer pulse SDC mode, combined with the narrowband analysis, substantially improves the figure of merit in non-reverberant conditions more typical of deep water operation as well.





### Specifications

|                         |   |
|-------------------------|---|
| Operating frequencies   | 9.23, 10, 10.77 kHz   |
| Sound pressure level    | 215 dB/ $\mu$ Pa/yard   |
| 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<br>Comm mode at an SSB frequency of 8.087 kHz (UQC)<br>Passive |
| Visual outputs          | Range, range rate, bearing, operator verification   |
| Audio output            | Available audio: Binaural left and right channel with auto gain control<br>Also available: Summed audio constant level                      |
| System weight           | 284 kg (626.9 lb) max.  |
| Operating depth nominal | 440 m (1444 ft)   |



### Upgradeable

The AN/AQS-13F can be upgraded through replacement of the receiving, processing and display units. This upgrade offers a 14 dB improvement and features an improved beamformer, longer pulses, and an FM mode. It also offers the potential for embedded training, performance prediction and a further option of upgrading to a low frequency transducer system offering a performance capability comparable to a surface ship sonar.

