Miltech Simulations MH60

Acoustic and Antisubmarine Operations

Tip
This page only applies to MH60 Romeo.

The Acoustic and ASW System on the MH60R enables detection, localization, and engagement of submerged submarines using a suite of deployable and onboard sensors. It utilizes sonobuoys and/or sonodippers to receive acoustic data.

Sonobuoys

A sonobuoy is a small, expendable sonar system dropped into the ocean from an aircraft or helicopter. Once in the water, it transmits acoustic data back to the aircraft for submarine detection and tracking. They can be Passive (e.g., DIFAR): Listens for noise from submarines (e.g., propellers, engines) or Active (e.g., DICASS): Emits pings and listens for echoes to determine range and bearing. For the terms of MSFS Simulation, either way is identical.

Sonobuoys as modeled in MSFS have a limited transmitting range, and duration of approximately 5 minutes. Few seconds after releasing, the sonobuoy will begin transmitting data to the aircraft on the MD ACST Page

Sonobuoys will remain floating on the surface of the water, and their position is visible from the air as a yellow buoy.

Sonodipper

A Sonodipper is a nickname for the MH-60R’s retractable, active dipping sonar system, officially known as the AN/AQS-22 ALFS (Airborne Low-Frequency Sonar). It consists of a large sonar dome that is lowered into the water by winch when the helicopter hovers. Unlike sonobuoys, which are expendable and left behind, the Sonodipper is a reusable system that provides real-time active sonar data, including precise range and bearing information on submerged targets.

Sonodippers shall remain underwater to receive any data from nearby submarines. This can sometimes be inconvenient as the pilot shall fly very close to the water.

Loading and Deploying Acoustic Elements

Sonobuoys

Use the pilot's side Keyset, under WPNS page to load/unload sonobuoys. This will get you a full load of 25 buoys to release.



Pilot's side Keyset, WPNS Page

Note
Wait 10-15 seconds between each sonobuoy launch. If two buoys are launched too close of each other, they may only show a single return on ACST Page.
In the real aircraft, a wait time of a few seconds is also necessary to rebuild the pneumatic pressure required to launch sonobuoys.

To release, turn on the MASTER ARM switch on the Armament Control-Indicator (ACI) panel, then press the BUOY LAUNCH button. This will deploy one sonobuoy from the left side of the helicopter.



ACI Panel, note MASTER ARM on. Press BUOY LAUNCH to deploy

Sonodipper

Use the pilot's side Keyset, under WPNS page, to load/unload sonodipper. Sonodipper will be visible as soon as loaded, it is recommended to do this as you are flying over water.

Sonodipper does not require arming or releasing. It will begin transmitting as soon as the aircraft is flying above water, and sonodipper is under water.

Using Acoustic Elements

Please note that ACST Pages **will only fuction as depicted with Miltech Mission Hub**, and when using compatible mission modes (Submarine Attack, Submarine Intercept). More information: Broken mention

Use the ACST Button on the Mission Display to open the Acoustics page. Use PG UP and PG DN buttons on the right side bezel to alternate between Sonobuoy and Sonodipper.

We recommend using the Copilot MD for Acoustics, as this display is replicated on the ASW Console in the cabin.

Sonobuoys



Acoustics Page, Sonobuoy

Up to four Sonobuoy instances can be displayed simultaneously. Releasing multiple buoys increases the accuracy of target localization. The vertical axis on the display represents the **bearing to the detected source**, in degrees, while the horizontal axis shows the **distance**, in yards.

Target returns typically appear as **dark spots** on the display. Sonobuoys are relatively cheap and expendable sensors, which means their acoustic returns often include a significant amount of background noise or interference, and have a limited range.

Sonodipper



Acoustics Page, Sonodipper

The Sonodipper is a more advanced and precise system compared to sonobuoys, offering greater range and accuracy. Like sonobuoys, it presents contact information on a two-dimensional axis, with bearing to the target on the vertical axis and distance in yards on the horizontal axis. The Sonodipper can accurately determine both range and bearing to a contact, which appears as a green dot on the display. Additionally, the Hydrophone Scope shows the current depth of the sonar transducer below the water surface.