

Aircraft Wreckage Location and Documentation

The MS 1000 is an effective search tool for locating and documenting aircraft wreckage. Unlike side-scan sonar that must be towed to obtain a readable image, scanning sonar is typically tripod-deployed, and the operator has the advantage of time to interpret multiple multiple scans of the same target at different scale ranges and view it at different resolutions. Once a likely target is identified, the system can then be used – even in zero visibility – to efficiently guide a diver or ROV to any target of interest.

Images and photograph courtesy *Peter Diving Services, Russia*



Vitaly Latartsev, General Director of *Peter Diving Services* (Russia), sitting on the port wing of the recovered Hawker Hurricane shown in the sonar image.

The Hawker Hurricane was a British single-engine aircraft developed originally for the Royal Air Force (RAF). The more than 14,000 Hurricanes built by the end of 1944 made it to all theaters of the Second World War. This Hurricane was forced to land on a frozen lake but broke through the ice before recovery was possible. The plane remained “lost” for 50 years until it was located using the MS 1000 by *Peter Diving Services*.

The sonar image above was collected by simply lowering the high resolution scanning sonar head on a cable from the survey vessel.



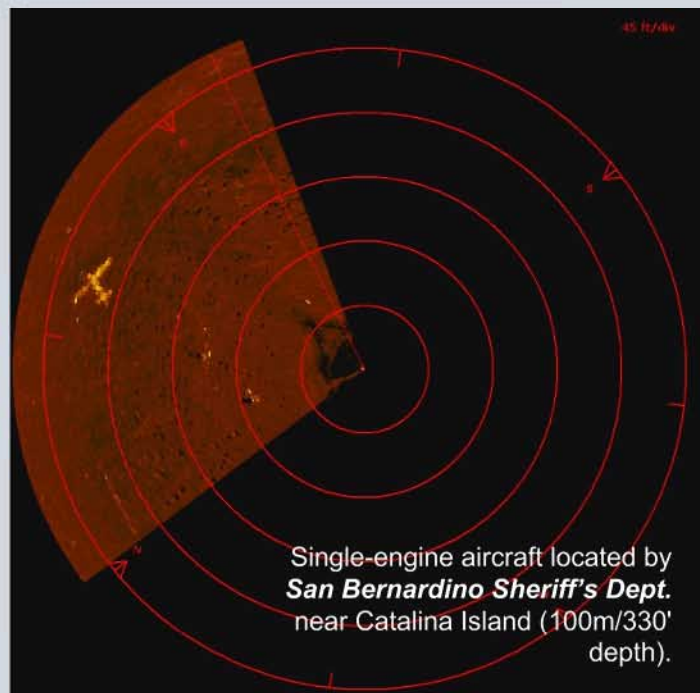
Sonar system configuration to locate and document aircraft wreckage:

- Computer with MS 1000 PC-based Sonar Software
- "Splashproof" MS 1000 Interface Unit (operates with either a 120/240 VAC or 9-30 VDC supply voltage)
- Kevlar operations cable (75m-100m [255'-330'] recommended)
- 675 kHz High Resolution Scanning Sonar Head with fan beam transducer (or Multi Frequency High Resolution Sonar Head) with compass option
- Tripod
- Handcontroller
- GPS

Integrate the GPS with the MS 1000 software and then use the MS 1000 "**Trackplotter**" module to show the areas of sonar coverage and geo-reference targets of interest.

Sonar Operation's Tip:

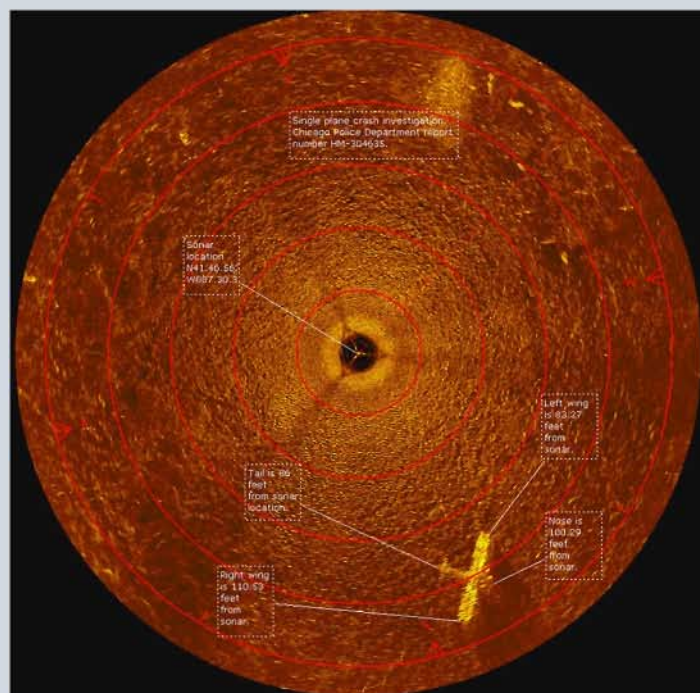
Wash the sonar, tripod and Kevlar cable with clean fresh water after every use, and allow to thoroughly dry before packing the gear for long-term storage.



Single-engine aircraft located by **San Bernardino Sheriff's Dept.** near Catalina Island (100m/330' depth).



"Typical" MS 1000 with a 100m (330') Kevlar operations cable and deployment tripod.



Wreckage of single-engine plane located by the **Chicago Police Marine Unit.**