Ken Schmidt

The Outlaw Hunter P-3C seen at Diego Garcia en route to Operation Desert Storm.

Outlaw Hunter

By David Reade and LCdr. Rick Burgess

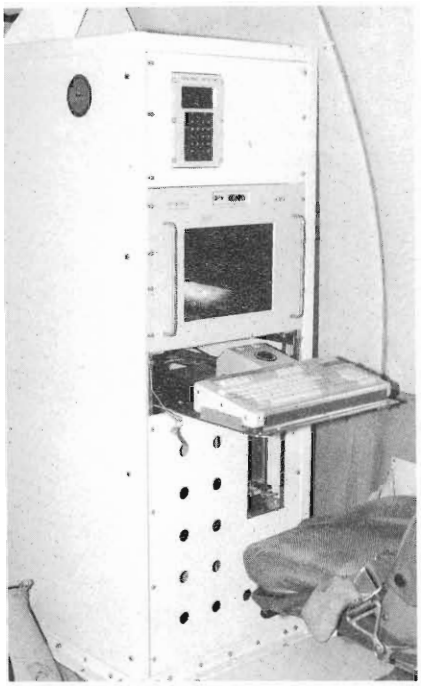
Within a few hours of the start of the coalition air campaign against Iraqi forces in Operation *Desert Storm*, a specially configured Navy P-3C *Orion* patrol plane detected Iraqi patrol boats in the northern Persian Gulf. The P-3 immediately vectored strike aircraft to destroy the targets and later provided the battle damage assessment of the action, which became the first naval engagement of the war.

The hapless Iraqi targets never knew what found them; they were victims of "Outlaw Hunter," an improved Over-the-Horizon Targeting (OTH-T) system installed in a P-3C proof-of-concept aircraft.

Developed by the Navy's Space and Naval Warfare Systems Command (SPAWAR) with the cooperation of Tiburon Systems, Inc., of San Jose, Calif., Outlaw Hunter traces its origins to the "Outlaw Shark" program developed in the mid-1970s by Lockheed Missiles and Space Company. Outlaw Hunter consists of three major avionics improvements to the P-3, coupled by tactical data processor to the Officer-in-Tactical-Command Information Exchange System (OTCIXS), the worldwide maritime command and control network. The union of the APS-137(V) inverse synthetic aperture radar with the Global Positioning System yields high-quality targeting data which can be immediately transmitted from the Advanced Tactical Workstation by satellite communications linked by OTCIXS to the battle group commander. The targeting information can then be used by the battle group commander to launch strikes by aircraft or cruise missiles. The Outlaw Hunter crew on station can update taskings, pass on contact reports, maintain a tactical plot of the battle area, and assess battle damage to the targets.

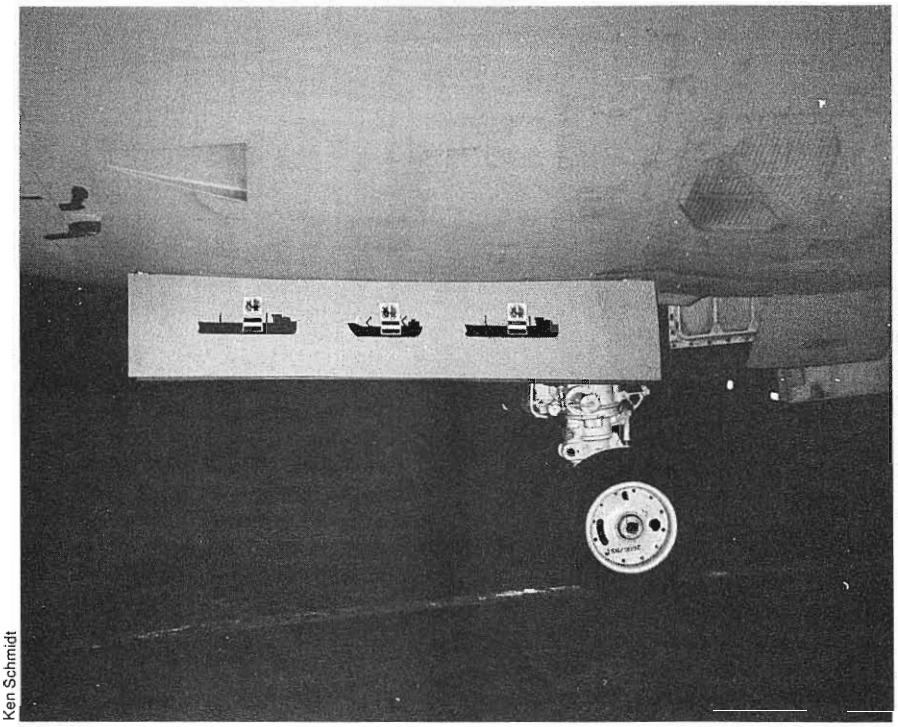
Designed to test the feasibility of the integrated targeting system on a fleet aircraft, the test-bed Outlaw Hunter P-3C was used to evaluate operator workload, engineering problems (including weight, placement of the stand-alone system in the aircraft, and location of antennas), and integration with existing aircraft systems.

Patrol Squadron (VP) 9, NAS Moffett Field, Calif., was the first fleet squadron to use Outlaw Hunter,



Tiburon Systems, Inc.

The Advanced Tactical Workstation installed in the aft fuselage of the Outlaw Hunter P-3C.



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Kills of Iraqi ships are tallied on the nose gear door of the Outlaw Hunter P-3C.

operating the aircraft in a fleet exercise and deploying it to the Indian Ocean prior to the Iraqi invasion of Kuwait. The aircraft was transferred to VP-19, which took it to the Persian Gulf War (with equipment upgraded for maximum performance) and flew it throughout the conflict with great success. The aircraft spent some time with VP-4 before being returned to VP-9 – when VP-19 was disestablished in mid-1991 – to join its follow-on, "OASIS I." Outlaw Hunter is now back with VP-4.

OASIS (Over-the-Horizon Airborne Sensor Information System) is the name of the follow-on operational testing phase of the OTH-T program. The OASIS phase involves down-scaling the equipment for integration into the Tactical Coordinator (TACCO) station of the P-3. The OASIS I system was hurried to the Persian Gulf but was too late to see action in the short war; this aircraft is now assigned to VP-46. OASIS II, with improved software, has been installed aboard a P-3C assigned to VP-26, NAS Brunswick, Maine. While Outlaw Hunter and OASIS I/II – which were all brought up to the same standard by the summer of 1992 – currently use the stand-alone equipment in the rear of the P-3's cabin, the follow-on OASIS configuration will include state-of-the-art technology and software to integrate the system into the TACCO station.

Implemented by SPAWAR on a "nonacquisition funding" basis, the OTH-T program is funded in the FY-93 budget. The Outlaw Hunter/OASIS system, when funded, could be backfitted into the existing P-3C fleet and incorporated into any follow-on aircraft. Given its excellent war record and the enthusiasm of battle commanders, the outlook is hopeful.

In the meantime, development is in progress to integrate the system into sea-based aircraft to expand the OTH-T capability available to the battle group commander. "Outlaw Viking" is a prototype system in an S-3B *Viking* undergoing engineering, operator workload, and carrier-suitability testing. In service, it will be operated by fleet air antisubmarine warfare squadrons, already familiar with the APS-137(V) radar installed on every S-3B.

"Outlaw Seahawk" is a similar program to integrate the APS-137(V) radar in an SH-60B *Seahawk* helicopter. Instead of transmitting targeting data directly from the helicopter over the OTCIXS, the helicopter transmits the data to its mother ship, which in turn relays the information to the battle group commander over the OTCIXS. ■

David Reade

The Oasis II P-3C assigned to VP-26 sports SATCOM and Global Positioning System antennas atop its fuselage.