

Patriot missile: Friend or foe to allied troops?

By Andrea Stone, USA TODAY

WASHINGTON — As U.S. forces pile up victories in Iraq and war planners rate how their military hardware worked, one weapon that failed miserably during the Persian Gulf War of 1991 has proved, once again, to be a disappointment.



U.S. Central Command says Patriots have improved to the point where they intercepted nine of Iraq's al-Samoud 2 and Ababil-100 missiles.

By Richard Pipes,
AP

The Army's Patriot air-defense missiles — sent to Kuwait and Iraq to knock down Iraqi missiles — apparently have downed at least two allied fighter jets and almost brought down a third since fighting began more than three weeks ago. The incidents have prompted calls to stop using the controversial missiles until investigators figure out what went wrong.

"Overall, the performance of the Patriot has been negative," says Joseph Cirincione, director of the Non-Proliferation Project at the Carnegie Endowment for International Peace in Washington, D.C. "They should be standing the Patriots down until we understand why it's shooting down planes."

U.S. Central Command says the Patriots, which had a dismal record in the last Gulf War, have improved to the point where they intercepted nine of the Iraqis' short-range al-Samoud 2 and Ababil-100 missiles in this conflict.

Even so, critics say the Patriots' apparent role in what may be the U.S. military's first downing of combat aircraft by its own air-defense missiles raises serious questions. More troubling is that the Army observed potential problems as long as three years ago, during an exercise in Georgia, when Patriots "shot down" several friendly aircraft.

"People are starting to ask whether the Patriot is up to snuff," says Victoria Samson, a missile-defense expert at the Center for Defense Information, a Pentagon watchdog group based in Washington. "Can it determine friend from foe?"

Investigators are asking that and other questions in three incidents:

- In the first incident, on March 22, a Patriot missile downed a British Tornado GR4 fighter-bomber near the Iraq-Kuwait border. The two-man British crew was killed.

- Two days later, a U.S. F-16 fighter jet fired on a Patriot missile radar 30 miles south of the Iraqi city of Najaf after the radar "locked on" to the aircraft, indicating it was preparing to fire.
- A Patriot battery is suspected in the strike April 2 on a U.S. Navy F/A-18 Hornet near Karbala. The pilot of the fighter jet, which was assigned to the aircraft carrier USS Kitty Hawk in the Gulf, was killed, the Pentagon announced Sunday.

U.S. Central Command spokesman Brig. Gen. Vincent Brooks said Iraqi surface-to-surface and surface-to-air missiles had been fired in the area where the Hornet was flying. That suggests a Patriot might have been firing at an Iraqi missile and hit the Hornet instead, or that an Iraqi missile might have hit the Hornet.

Another U.S. official, speaking on condition of anonymity, said, "It is possible it wasn't a Patriot. But we think it was. We're just not sure yet."

Army spokesman Col. Rick Thomas in Kuwait declined to comment while the incidents are being investigated. "Any discussion of possible scenarios would be speculative, and I'm not willing to do that," he said.

At a Senate hearing Wednesday, Lt. Gen. Ronald Kadish, head of the Pentagon's Missile Defense Agency, said the accidents may have been caused by both procedural and design flaws in the aircraft and ground systems that distinguish between friend and foe. However, Kadish said, there was no evidence yet of a radar or communications failure. He said overall, the performance of the Patriot has been "very, very good."

Dominating the skies

Others say the incidents are inexplicable given the U.S.-led coalition's dominance of the skies above Iraq. One Iraqi jet has dared to take off during the conflict, and it landed again almost immediately.

Critics say whether the Patriots were on automatic or under direct operator control, they never should have been allowed to target aircraft. "The Patriot really has no business firing at aircraft. There simply were no hostile aircraft threatening U.S. troops," Cirincione said. "Why the Patriots were taking that on as a mission is a bit of a mystery."

Theodore Postol, a missile expert at the Massachusetts Institute of Technology and a longtime critic of President Bush's missile-defense programs, dismisses the idea that the incidents resulted from mistaken identity. He said differences in the speed, altitude and trajectory of combat aircraft and ballistic missiles make it impossible to confuse the two on radar.

"This is a serious command error at minimum. Somebody's head should roll," Postol said. "There's no excuse for this."

Details about the incidents are sketchy, but there are some clues.

After the shootdown of the British Tornado, Air Force Gen. Richard Myers, chairman of the U.S. Joint Chiefs of Staff, said "procedures and electronic means to identify friendly aircraft and to identify adversary aircraft ... broke down somewhere."

All allied aircraft carry an "Identification Friend or Foe" system. The IFF is similar to the electronic "transponders" that U.S. civilian aircraft carry to enhance their radar image, transforming that image from an unidentifiable blob to a sharp, data-laden icon on trackers' radar screens. The IFF in a military aircraft sends an encrypted, automatic response when detected by a radar signal.

Samson, of the Pentagon watchdog group, said it's possible that the Tornado's IFF wasn't working.

Postol said the British jet might have turned off its IFF or been flying at an angle in which its IFF signal was blocked. More likely, he said, was that the Tornado was flying outside a designated safe corridor reserved for friendly aircraft.

"My best guess is the Tornado was in the wrong place at the wrong time," Postol said.

That theory might have gained adherents when a Patriot radar later "painted," or began to track, a U.S. Air Force F-16, squashing speculation that the Tornado's IFF system may not have been compatible with U.S. air defenses. The U.S. fighter jet responded by firing a radar-seeking HARM missile that destroyed the Patriot battery's radar. No U.S. soldiers were injured, and the jet was not hit.

Army officials said that in the F-16 incident, the Patriot crew was taking cover from Iraqi artillery and had placed their system in automatic mode when their radar mistakenly identified the U.S. jet as a target.

Air Force Secretary James Roche said April 1 that the incident may have been caused by inexperienced pilots unfamiliar with operating near Patriot batteries. He said pilots hunting for Iraqi missile batteries are now required to check with surveillance aircraft or other ground radars before firing.

Air Force — as well as Navy, Marine and Army — pilots have long trained with Patriot batteries. And not always with good results.

During a combat identification exercise in March 2000 at Fort Stewart in Georgia, Patriots had difficulty distinguishing friendly from enemy aircraft. "We had issues with the Patriot," said a retired Air Force pilot, who spoke on condition his name not be used. "They 'shot down' an entire four-ship formation of F-16s and 'shot down' other aircraft."

That was an exercise, and no planes were actually hit. But the pilot noted that a Patriot almost shot down a U.S. tanker aircraft for real during the 1991 Gulf War. Disaster was averted only when the crew realized its mistake and detonated the missile in mid-flight. The retired pilot said Patriots are much more deadly than Iraqi surface-to-air missiles, which coalition aviators could out-maneuver. Without quick action by a Patriot's ground crew, it is virtually impossible to escape a Patriot in flight.

System 'didn't work'

Rushed into service during the 1991 Gulf War, the Patriot was designed to shoot down enemy aircraft but was modified hastily to take down Iraqi missiles.

The Army initially claimed high intercept rates. Later studies showed the system severely wanting. A General Accounting Office report estimated that 9% of Patriots hit their mark. Israelis determined that Patriots intercepted no more than one of the 39 Scuds launched at Israel by Iraq. Two years ago, former Defense secretary William Cohen declared, "The Patriot didn't work."

Since then, the Army has spent more than \$3 billion to upgrade the system. Though the first Patriot missiles exploded near their targets, sending them off course, the newest PAC-3 model destroys incoming missiles by hitting them. It is not clear which of several generations of Patriot missiles were involved in the "friendly fire" incidents. Kadish said only four PAC-3s were fired in Iraq because they were in short supply when the war started.

All versions, however, use the same upgraded radar, which is supposed to allow crews to track and discern as many as 100 objects at a time.

Raytheon, the Patriot's prime contractor, said it is cooperating with the investigation and has referred all calls for comment to the Army. But spokesman Steve Brecken defended the contractor, saying, "The media is just assuming" that Patriots shot down the coalition fighters. "It hasn't been borne out yet. Everyone is jumping to conclusions."

Perhaps, but Samson said critics are likely to seize on the system's problematic performance in two Gulf Wars to argue that the Pentagon's larger missile defense program may be flawed.

"It's kind of a litmus test for missile defense as a whole," she said.

Contributing: Dave Moniz