

# U.S. prepared if Iraq uses jammers

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*Editor's Note: CNN Access is a regular feature on CNN.com providing interviews with newsmakers from around the world.*

**ATLANTA, Georgia (CNN) – With a plan for a possible war against Iraq sitting on President Bush's desk, there is a disturbing report that "smart bombs" in the U.S. arsenal, which would likely be used in any strikes on Baghdad, may have an Achilles heel.**

A cheap, easy-to-get device could interfere with the weapons' guidance systems, possibly disrupting surgical strikes and endangering civilians the bombs were designed to avoid. The Wall Street Journal reported Tuesday

CNN anchor Kyra Phillips discussed the report with CNN military analyst, retired Air Force Maj. Gen. Don Shepperd who explained how such "smart" weapons work.

**SHEPPERD:** The JDAM is Joint Direct Attack Munition, and basically what it is, it's a satellite-guidance component that is put on the tail of a weapon. It moves the fins, it directs it to the set of coordinates that you program in.

Unfortunately, it has been called a satellite-guided weapon. It is not satellite guided. It is guided by an inertial navigation system (INS) that guides it to the coordinates. The Global Positioning System (GPS) mode of it basically updates and makes the INS more accurate. So, it is satellite-assisted, not satellite-guided.

**PHILLIPS:** OK, big difference. So then, let's talk about this article and ... these jammers -- you are able to purchase one on the Internet for 40 bucks. Is in the same type of jammer that the U.S. military would use?

**SHEPPERD:** Well, I will stay away from what the U.S. military would use, but it is the type of jammer that Saddam Hussein might use in Iraq.

Basically, it is very cheap to jam GPS signals. You can do it with these low-powered and cheap jammers. However, when we designed the weapon, we had this in mind. And what happens when the weapon basically gets information that it has lost the satellite signal, or it is being confused and jammed, it then reverts to its INS mode, its Inertial Navigation System.

It makes it less accurate, but let me give you kind of a range: Let's say it is a 5-meter, or 15-foot, bomb with the GPS signal. It would go, maybe, to a 15- or 20- meter, a 45-, 50-, 60-foot bomb without it. Therefore, it doesn't mean -- with a blast radius of, say, 150 feet -- that it is a useless bomb by any means. It is just less accurate than it would be with the GPS signal.

**PHILLIPS:** Well, in an area like Baghdad, it is not like Afghanistan with this vast desert area. It is very small, so accuracy is so crucial. So does this concern you at all?

**SHEPPERD:** It does concern us, and of course, when you degrade the accuracy of precision munitions, it is still a concern. When you go in downtown Baghdad, in populated areas, and you want to hit a military vehicle that is next to a hospital, you want it to be very, very accurate. You want a 5-meter bomb. And if it is jammed, and goes to 15- or 20-meter, it could affect the accuracy. So Saddam Hussein has to think that by jamming it, it could divert some of our weapons into his populated areas, if he cares.

**PHILLIPS:** Well, general, have GPS signals ever been jammed in battle? Do we know that?



Military analyst retired Air Force Maj. Gen. Don Shepperd

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**SHEPPERD:** Again, I need to stay away from that. It is possible to jam GPS signals in battle. Whether or not it has tually been done and the effect of it is not something that I care to discuss right now, but it is possible. It just makes them less accurate and not useless.

**PHILLIPS:** Can we talk about what we really know with regard to the extent of our GPS's vulnerability?

**SHEPPERD:** Well, the GPS is vulnerable in that you can jam satellite signals. There is a commercial and a military use, and the commercial side is used to locate the military signal, if you will. So the military is much harder to jam, and it is a different signal entirely, but we are vulnerable.

On the other hand, again, it doesn't mean the weapons are useless, it just means that, maybe, their accuracy is two or three times the 5 or 10 meters that you would like to have.

**PHILLIPS:** Are efforts underway to upgrade the satellites?

**SHEPPERD:** There are constant efforts to increase the reliability of the signal. All of those are highly classified. We won't be told what they are doing out there, but we are constantly looking at upgrading this accuracy and making sure the signals are reliable.