



[<< Back to Article](#)

## New Gun Fires 'Laser of Lead'

Stewart Taggart  09.28.01 | 2:00 AM



The Metal Storm Variable Lethality Law Enforcement pistol is fully electronic and can fire three rounds in 1/500<sup>th</sup> of a second. Plans for the prototype weapon include a fingerprint detection system for additional security.

[View Slideshow](#) 

SYDNEY, Australia -- It may not be ready for George Bush's "first war of the 21st century." But it may well be ready if there's a second.

In perhaps the most audacious upgrade of high-speed weaponry since the introduction of the Gatling Gun, Australian inventor Mike O'Dwyer has developed a machine gun that can fire bullets at a rate of 1 million rounds per minute.

Firepower like this is causing the U.S. and Australian militaries to sit up and take notice.

Both are funding deeper research into O'Dwyer's ideas, which he cooked up in his garage during more than a decade as an Australian retail store executive.

Osama bin Laden, however, needn't worry. The research is long-term and isn't expected to yield any new lethal weapons anytime soon.

Even so, the implications of the new technology's ability to change warfare are immense. And somewhat amazingly, the theory is pretty simple.

Rather than use mechanical firing pins to shoot bullets one by one, O'Dwyer's gun holds multiple bullets in the barrel -- one behind the other.

Electronic charges set off in different parts of the barrel, just fractions of a second apart, fire the bullets in blindingly fast succession using traditional gunpowder.

The result is akin to a laser beam of lead and it offers several advantages over a regular machine gun.

First, the new gun is solid-state and electronic, meaning there are few mechanical parts to jam.

Second, more bullets can be fired with one squeeze of the trigger before the gun recoils.

But perhaps most remarkable of all, the unique ballistics of firing projectiles close together means that the bullets farther back of the pack actually push those in front of them, thereby increasing bullet velocity.

O'Dwyer has filed for at least 58 patents on the invention, and the U.S. and Australian militaries together have put up roughly \$50 million for further research.

In the United States, the [Defense Advanced Research Projects Agency](#) (DARPA), the central research and development organization for the Department of Defense, is engaged in several studies of the technology, says Jan Walker, a spokesperson for the agency.

DARPA's primary interest is developing a high-performance sniper rifle for special operations, Walker said.

"The technology offers high accuracy, low weight as compared to a .50 caliber rifle, increased lethality, a high rate of fire and electronic controls," Walker said.

Just how lethal? That depends on how many rounds you want to fire and how many barrels you want to put to use. In a test firing of 36 barrels, lashed together and firing full bore, the gun reduced a series of 15 wooden doors to toothpicks in just two-tenths of a second.

The feat earned O'Dwyer's technology a place in the [Guinness World Records](#) for the fastest firing ballistic weapon, said company spokesman Peter Wetzig.

However, DARPA has also been examining the technology as a potential replacement for landmines.

By lashing together a series of rapid-fire barrels filled with mortars and using remote control for when and where they fire, the technology could allow friendly forces to pass through a mined area unhindered.

It could then be used to hit an enemy advancing through the same area with a huge destructive force -- all delivered in the blink of an eye.

And it's portable, meaning there's no messy leftover mines to dig up that could injure local friendlies years after a conflict is over.

Since 1997, the United States has refused to endorse an international treaty banning future production and use of traditional landmines. This has been largely due to worries that the United States would have to replace its installed base of roughly 1 million traditional landmines in the 155-mile long and 2.5-mile wide demilitarized zone between North and South Korea.

The new technology has potential as a landmine replacement, but Walker stresses that kind of application lies far down the line -- and may never prove suitable.

Meanwhile, other military uses for the technology could include installing it aboard robots to clear the way for ground troops or aboard jets to provide protective cover for reconnaissance planes.

But these applications are also somewhat tentative, Walker said.

Meanwhile, O'Dwyer is keen to develop civilian applications for the technology.

For instance, multiple laser-guided, fire-fighting, foam canisters could be launched in rapid succession to help snuff out high-rise building fires where traditional ladders can't reach.

Similarly, laser-guided fire-fighting canisters could be used against industrial fires where explosions present a major safety threat.

O'Dwyer has also adapted the technology for a police revolver. The all-electronic handgun uses the technology to ensure the gun can only to be fired if its user is wearing a special ring that emits an electronic signal.

This means the gun would be worthless if it is taken from a policeman by an assailant.

In addition, the gun can fire both lethal and non-lethal projectiles. But so far, no police forces have stepped up to buy them.

When New York's World Trade Center was destroyed on Sept. 11 by two hijacked civilian airliners, O'Dwyer had just returned to Australia from a series of speaking engagements in the United States and Europe to plug the technology.

"The level of activity for us has increased dramatically in light of events in the U.S.," said O'Dwyer's executive assistant, Sally Kaye.

Australia's Deloitte Touche Tomatsu, a global accounting and consulting firm, has placed [Metal Storm Ltd.](#) -- O'Dwyer's company, listed on the Australian Stock Exchange -- on its list of "rising stars."

"We haven't come across anything quite as unique, or as revolutionary, as what Metal Storm has in terms of technology," says Julia Bickerstaff, a Sydney-based technology specialist at Deloitte. "Thus, it's kind of hard to compare (it) to other companies."

Others who are similarly impressed include America Online's founder James V. Kimsey. In March, Kimsey invested about \$1 million in Metal Storm in a private placement for a 0.4 percent stake in the company.

On Friday, Metal Storm's shares closed at \$1.14 Australian dollars a piece.