

11 July 2007

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Taser XREP electric shotgun shell  
TASER International, Inc. via Scientific American

## [How Does the Electric Shotgun Shell Work?](#)

*It's almost impossible to remove*

Have you ever heard of Tasers? They are electroshock weapons, incapacitants used for subduing a person by administering electric shock that may disrupt superficial muscle functions. But what happens when you combine the shock of the Taser with the power of shotgun? The electric shotgun shell is the answer. Named Taser XREP by the manufacturing company bearing the same name, it's a projectile that can be fired from a conventional shotgun, used by many law enforcement agencies around the world. An abbreviation for Extended Range Electro-Muscular Projectile, the shell is a "self-contained, wireless projectile that fires from a standard 12-gauge shotgun" according to the company website. The best thing about it is that it combines the "shocking" power of a stunt gun with the range of a shotgun, meaning that it can be delivered at a maximum distance of 33 meters (100 ft). The shell weighs only 2.4 grams and has a volume of 1.6 cubic centimeters (0.1 cubic inch) and delivers an electric charge to the body of the target, incapacitating him until police officers or soldiers can immobilize them. Muzzle velocity is estimated at almost 100 meters per second (300 feet per second), so there's no time to duck it. But probably the most interesting thing about this unconventional munition is the fact that once it hits the target, it can't be removed by the victim. When something stings us, the instinct tells us to reach for the foreign object, grab it and pull it out of the skin. That is what the company relies on. A new and unique system embedded in the shell, called a reflex engagement electrode, completes an electrical circuit when touched by the human hand. When completed, the circuit discharges an electrical shock to the hand, which makes the muscles in the fingers contract, thus holding the projectile even tighter. This system not only prevents the victim from removing the projectile, it actually increases the skin area to which it delivers the shock, increasing its effects. Now, the actual weapon may be useful against even the most resistant persons, but the most interesting aspect is to see whether law enforcement officers will resort more to this weapon instead of tackling and cuffing the targets, as they do now. Oh, and in case you were wondering, "non-lethal" weapons caused the consequent death of at least 245 people that had been shot with it, between June 2001 and June 2007...