

## Liquid Taser

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The “September 11<sup>th</sup> 2001” led to an increased sensibility in the various security areas. The need for “Less-Than-Lethal Weapons” and “Non-Lethal Weapons” is obvious with respect to an enhanced safety area for the task forces without the necessity to use conventional shot guns, but having something in their hands for an effective deterrence when they are faced with rumouring crowds or when targeted persons have to be arrested.

The Taser is one appropriate system to enable the police forces with a stand-off capability. But what means “Taser”? The effect of a Taser causes cramps as it is known from sports. The muscles are controlled by the central nervous system with small electrical currents. The Taser now induces from the outside a current to the muscles causes extremely strong contractions in the muscles which leads to a temporarily immobility of the targeted person. The induced electrical power to the human bodies is between 7 and 26 Watts with pulsed voltages of about 50.000 Volts and resulting currents in the milli-ampere regime. The currents are uncritical for the human beings. Often this technology is called also “Electro-Muscular Disruption” (EMD).

The principle of function was already invented by Jack Cover in 1976. He was a fan of the science fiction hero of novel Tom Swift and therefore called his product „Thomas **A. Swift Electronic Rifle**“ or short **TASER**.

There are several Taser systems discussed and offered like the Air Taser or the Plasma Taser. The **Liquid Taser** has the big advantage compared to the other mentioned systems that it provides the capabilities of

- being used against moving targets
- being able for multiple firings
- being effective for ranges up to 10m

Additionally the Liquid Taser is absolutely non-lethal.

The **Liquid Taser** generates two fluid channels which act as galvanic connections from the Taser to the targeted persons. The current strokes are led via the fluid channels. Even if the reservoir of the liquid is empty after several shots the system can be used as a conventional shocker.

