

Multiple Less Lethal

(Expanded Topically From Previous Title & Inclusive Thereof)

By:

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Contents:

- 3. Introduction
- 5. Well Equipped Rioters...What Is The Problem?
- 9. Historical Less Lethal Weapons
- 13. Modern Less Lethal Weapons
- 18. Examples Of Multiple Less Lethal Solutions
- 27. Recommendations
- 28. Conclusions

Introduction:

Always & Never:

We never plan on having enough or the right kind of Less Lethal Force, never bring enough ammunition or use it fast enough to make a difference against huge crowds and never make sure what we have will be effective against inexpensive and widely distributed countermeasures.

We always allow people to be injured or killed, always permit looting and allow property to be destroyed then never do anything to prevent authorities from having to resort to Lethal Force because they lack the means to prevent it. Any enemy may provoke us at any time using the crowds.

We have always had the power to never allow these things to happen...

Will it always be that we never use it?

Is This The Future Or The Past?



Daily Mail UK Libya US Embassy Invasion Photo:

Well Equipped Rioters With Gas Masks, Shields & Lethal Weapons:

What Is The Problem?

- 1) Gas Masks May Be Ordered For As Little As \$6.00 (US) Via The Internet Or Simply Stolen From Military Or LE Sources.
- 2) Laser Dazzlers And Searchlights May Be Neutralized By Cheap, Commercially Available Filtered Safety Glasses.
- 3) Sound Barriers And Hearing Protection Can Reduce Sound Based Countermeasure Range To That Of Thrown Rocks.
- 4) Blunt Trauma And Radiation Methods May Be Attenuated Beyond Effective Use By Cardboard And Metal Foil Shields.

Well Equipped Rioters With Gas Masks, Shields & Lethal Weapons:



Clockwise From Upper Left: Levantium Egypt Photo, Mashable Ukraine Photo, Daily Mail UK Photo, Dalje.com Photo.

Well Equipped Rioters With Gas Masks, Shields & Lethal Weapons:

Resistant Crowds Despite Use Of Riot Agents & Armored Vehicles



Clockwise From Upper Left: Peter Crawford Photo, Cherson & Molsky Photo, UK Daily Mail Photo, Le Monde Photo

Well Equipped Rioters With Gas Masks, Shields & Lethal Weapons:

What Is The Answer?

- 1) Countermeasures Against One Do Not Necessarily Work Against Another Form Of Less Lethal Weapon...
- 2) Countermeasures Against Multiple Less Lethal Weapons May Not Be Present At A Single Civil Disturbance...
- 3) One Less Lethal Method May Be Used To Eliminate Or Limit The Effectiveness Of Another Less Lethal Countermeasure...
- 4) Varying The Types Of Less Lethal And Having Different Effective Ranges Available Also Limits Effective Countermeasures...

Historical Less Lethal Weapons:

- 1) Let's Skip Over Contact Weapons; Too Little, Too Late
- 2) Fire Hoses & Water Cannon; Great, But Within Limits
- 3) Riot Gases; Sprayers, Launchers & Problematic Canisters
- 4) Direct Fire Weapons; Blunt Trauma & Entanglement

Water Cannon: Effective But Low Capacity Traditional Riot Weapon



Clockwise From Upper Left: Naval Brass Water Cannon, Wider Web Armored Vehicle Photo, EXM SideWinder Long Range Riot Monitor, ThisIsNotTrueEnding Armored Vehicle Photo, MSNBC Photo (NOTE: Requires Large Vehicle To Transport Water Tank)

Riot Gases: Traditional Low Capacity Canisters, Launchers & Sprayers



Clockwise From Upper Left: Typical Tear Gas Grenade, Spike's Tactical Shorty 37mm, Advanced Weapons Inc. CrowdBuster, S&W 8.25" 37mm Cartridges, CTS Riot Gas Dispensers (NOTE: All Low Capacity, Short Range, Low Rate Of Fire Weapons).

Low Velocity Direct Fire Weapons: Blunt Trauma & Entanglement

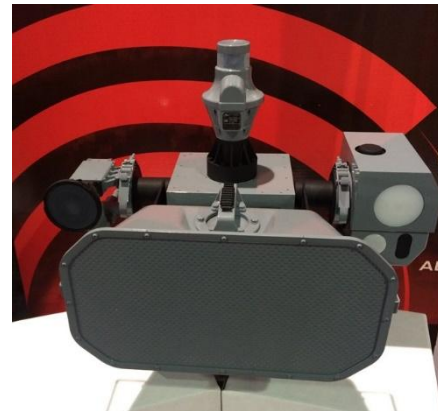


Clockwise From Upper Left: Fiocchi Rubber Buckshot, Less Lethal Africa Polymer Centerfire, CS 37mm Baton, True-Flight 37mm Rubber Projectile, CTS 12 Gauge Slugs & Rubber Buckshot, Chinese Internet Net Launcher, Punch Bean Bag Rounds.

Modern Less Lethal Weapons:

- 1) Directed Energy; Light, Sound & Microwaves
- 2) Directed Energy: Low Power Laser Dazzlers
- 3) Simple Countermeasures To Light, Sound & Microwaves
- 4) Simple Countermeasures To Single Color Laser Dazzlers

Directed Energy: Light, Sound & Microwave Emitters



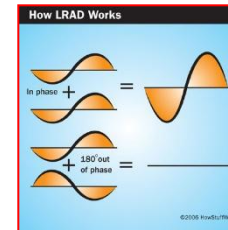
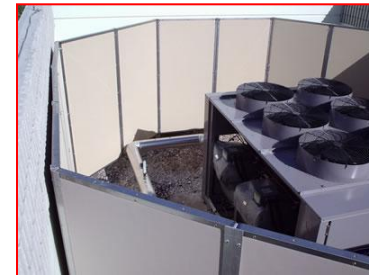
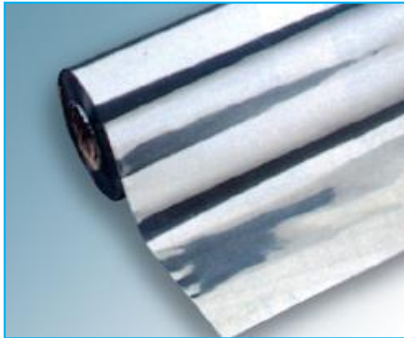
Clockwise From Upper Left: Army Active Denial, Chinese LED Dazzler, LRAD/Dazzler, IEC Banshee RWS, NLW Multiple Less Lethal Remote Weapon Station (NOTE: Low Capacity Canister Projectors)

Directed Energy: Low Power Laser Dazzlers



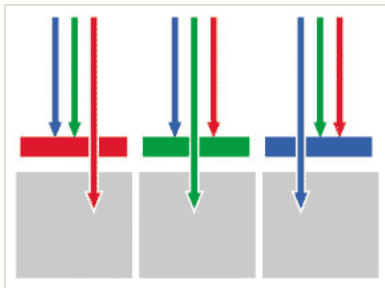
Clockwise From Upper Left: LE Systems Photo, BE Meyers Photo, FLIR Aerius Photonics Photo, LE Systems Photo

Simple Directed Energy Countermeasures: RF & Acoustic Shielding



Clockwise From Upper Left: Lindgren RF Enclosures, Leader Tech Foil, NoTimeForFlashcards Foil Shield, Acoustiblok Sound Barrier, Acoustiblok, Howard Leight Photo, WikiPedia LRAD/NCT, Retmeishka Shield, Panasonic Microwave Door.

Simple Countermeasures To Single Color Laser Dazzlers:



Clockwise From Upper Left: BeamQ 190-540nm Laser Safety Glasses, Wicked Lasers Inc. Safety Glasses, Inexpensive Chinese Internet Multiple Frequency Safety Glasses, Wikipedia Photo Filter Principles Graphic.

Examples Of Multiple Less Lethal Solutions:

- 1) Non-Developmental Man Portable Multiple Less Lethal
- 2) Non-Developmental Vehicle Mounted Multiple Less Lethal
- 3) Wide Area Multiple Frequency Scanning Laser Dazzlers
- 4) Widder-Battelle Long Range Direct Fire Impact Weapon
- 5) Royal Arms Multiple Disruptor Less Lethal Direct Fire Weapon
- 6) MACE OC/CS/UV Dye Riot Agent Advanced Delivery System
- 7) Irresistible Nano-Pharmaceutical “REM Sleep Hytonia” Riot Agent

Example Of Non-Developmental Man Portable Multiple Less Lethal:

QUAD-NL Launcher: High Volume OC, 3-Shot TASER, Laser Dazzler, 12" 37mm Side Loader, High Intensity Light

Combined Systems Fire Extinguisher OC Projector:



Meyers GLARE-MOUT:



SureFire M3LT-S:



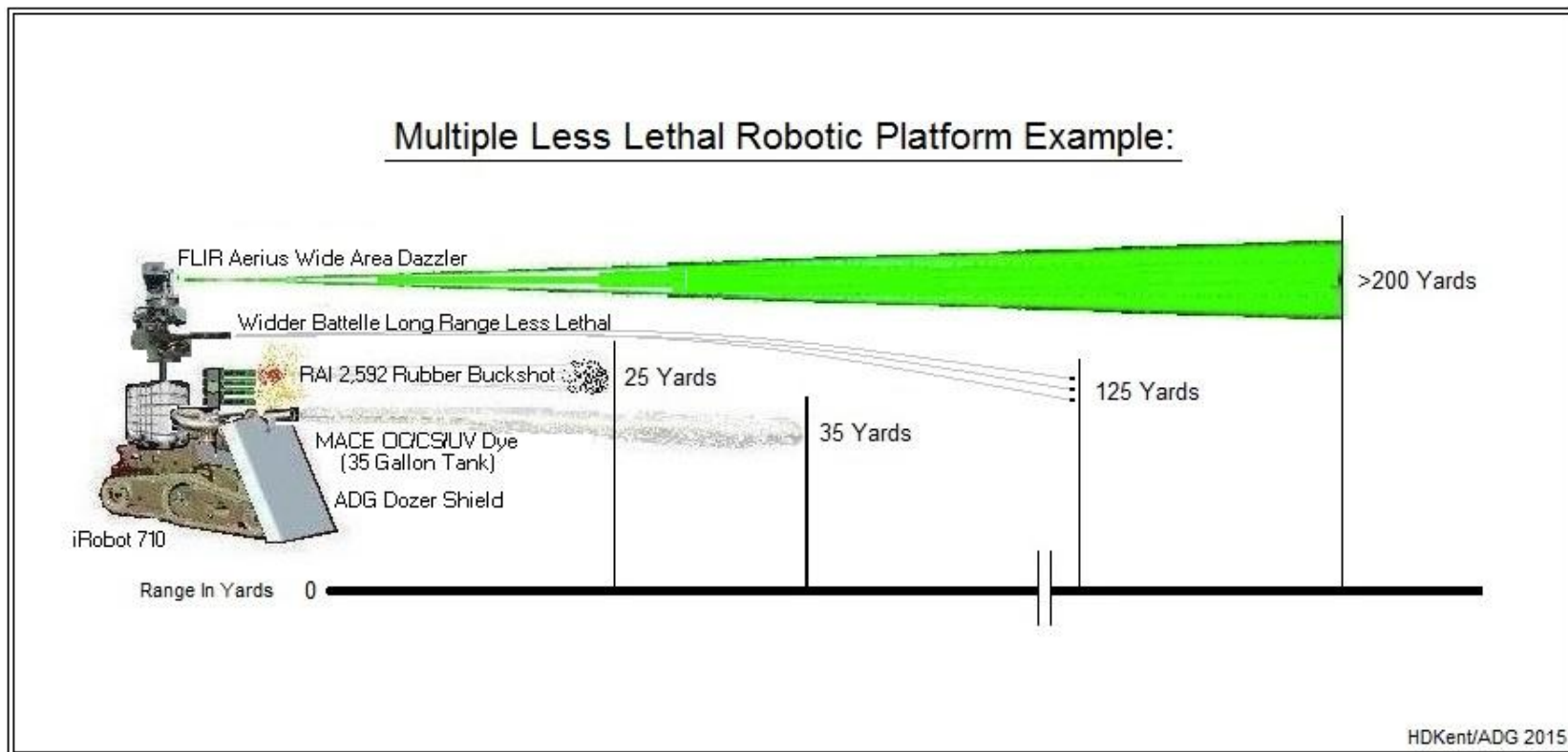
TASER X-3:



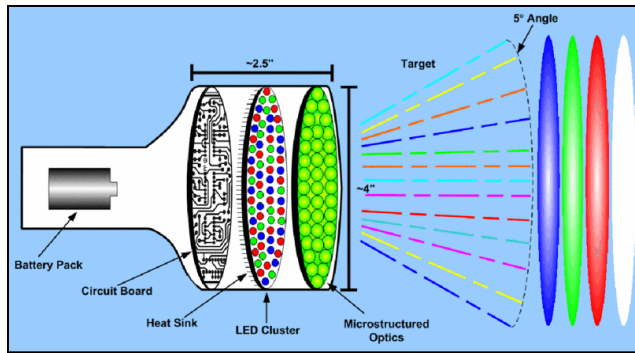
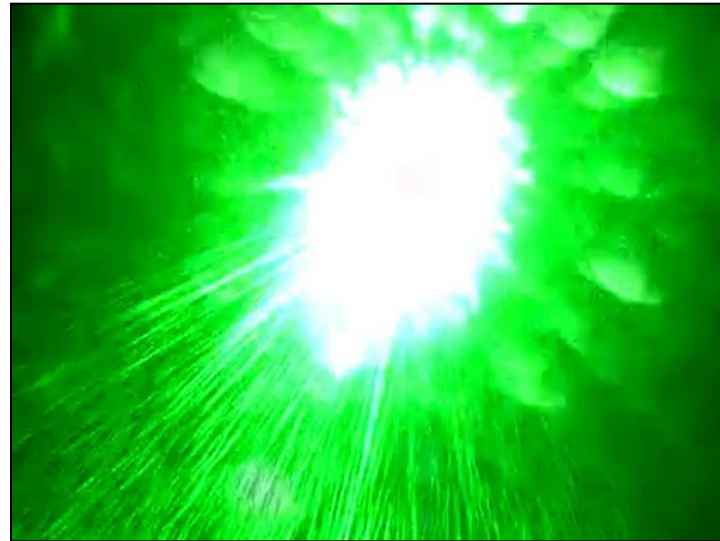
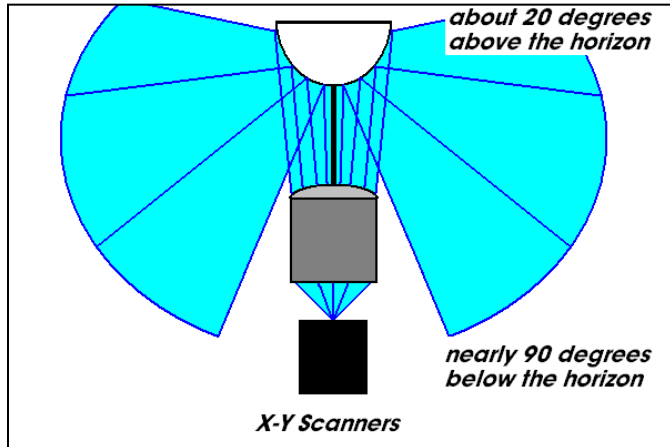
HKent/2011

Example Of Non-Developmental Vehicle Mounted Multiple Less Lethal:

Multiple Less Lethal Robotic Platform Example:



Wide Angle / Multi-Frequency / Scanning Laser Dazzlers:



Clockwise From Upper Left:

The 0 To 100+ Meter Variable Velocity Less Lethal Machine Gun:



9-Shot Group at 100 Meters During 11 Aug Demonstration

Battelle
The Backbone of Innovation

9-shot group fired during the 11 Aug demonstration at ARDEC with the M4 attached to a fixed mount. Doppler radar data for the shots is shown in the table on the next page, under shots 12-20 in the high velocity mode column. Shot 18 impacted low and missed the paper. The un-circled shots were from rounds loaded with 25% more propellant.

Battelle Proprietary

10-Shot Group at 30 Meters During 11 Aug Demonstration

Battelle
The Backbone of Innovation

10-shot group fired during the 11 Aug demonstration at ARDEC with the M4 attached to a fixed mount. Doppler radar data for the shots is shown in the table on slide 23, under shots 6-15 in the low velocity mode column.

Clockwise From Upper Left: Widder-Battelle Less Lethal Round Patent Drawings, Battelle Compact Less Lethal Electrically Fired Variable Velocity Projector (Semi- & Full Automatic), 30 & 100 Meter Semi-Auto Demonstrations.

The 0 To 100+ Meter Variable Velocity Less Lethal Machine Gun:

Multi-Shot Three Velocity Prototype Weapon

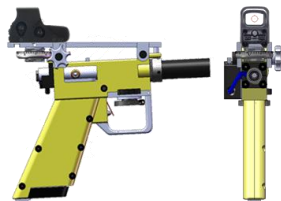


Table of Selectable Muzzle Velocity

Velocity Selector Position	Muzzle Velocity
1	87 m/sec.
2	95 m/sec.
3	109 m/sec.

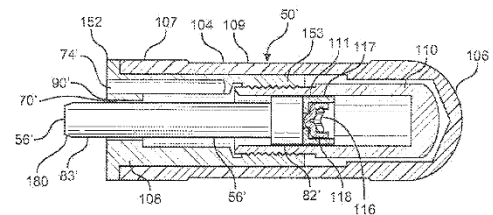


FIG. 9

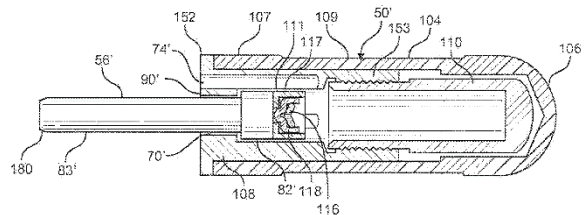


FIG. 10

Multi-Barrel Direct Fire Less Lethal / Lethal Weapon System:

Performance of RAI Riot Projector Cartridges vs. Conventional Shotgun Rounds:

The Most Powerful Anti-Riot Armament In The World

Rubber Pellet Less Lethal Round Comparison:

12 Gauge 2.75" 00 Buckshot 9 Pellet Load:

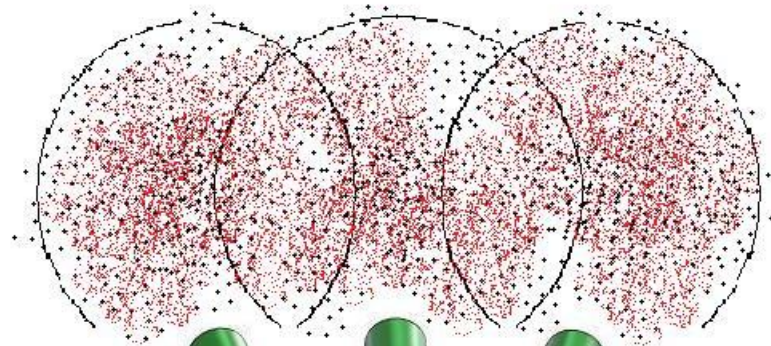


RAI Extended Riot Projector, 00 Buckshot 54 Pellet Load:

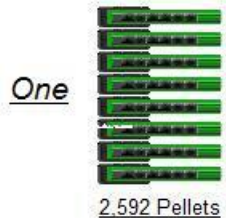


- * Electrically Fired 12 Gauge Extended Payload Projector Tubes
- * Three & 12 Round Lightweight, Trainable, Reloadable Launchers

Combined OC-No.4 Rubber Buckshot From "Duckfoot" Projector:



(4) x "12-Pack" Installation:



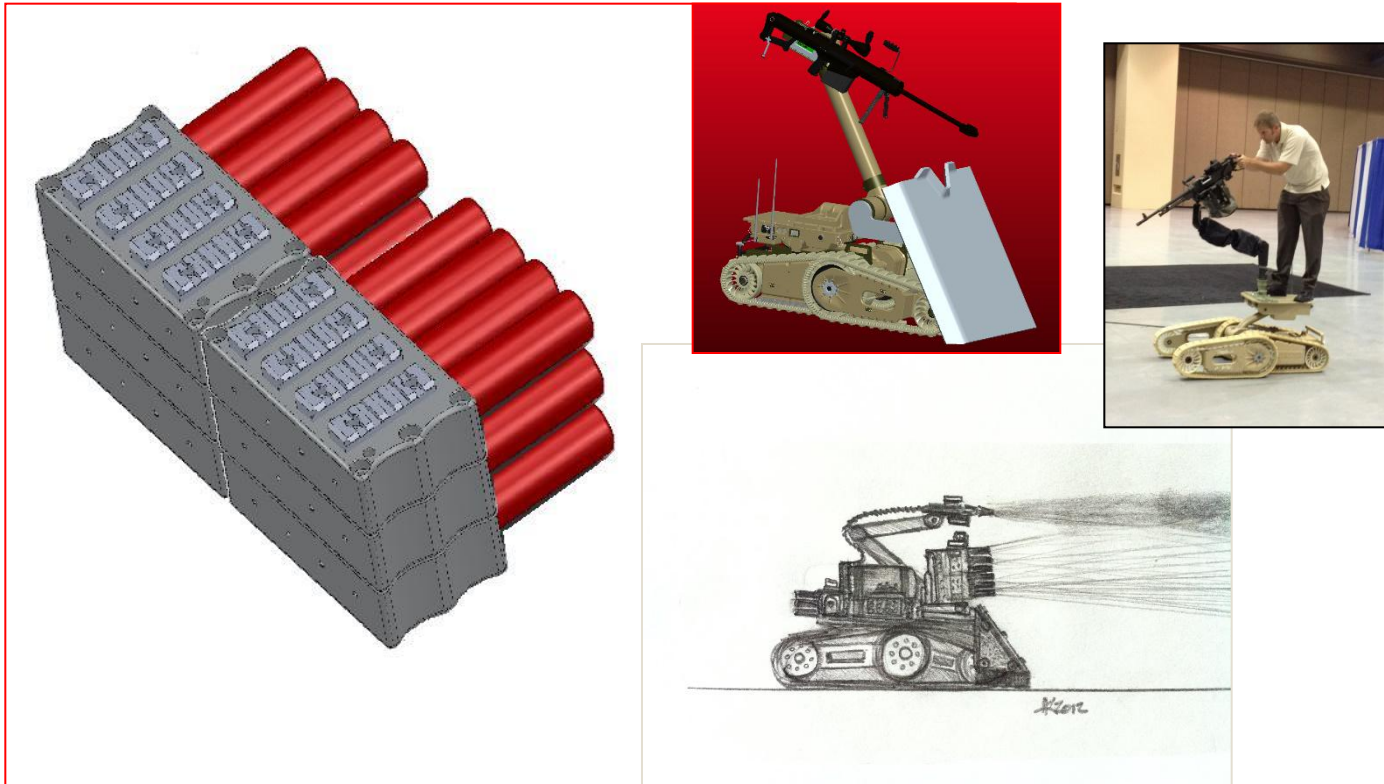
*Equals
Over
14*

AA-12s With Drum Magazines:



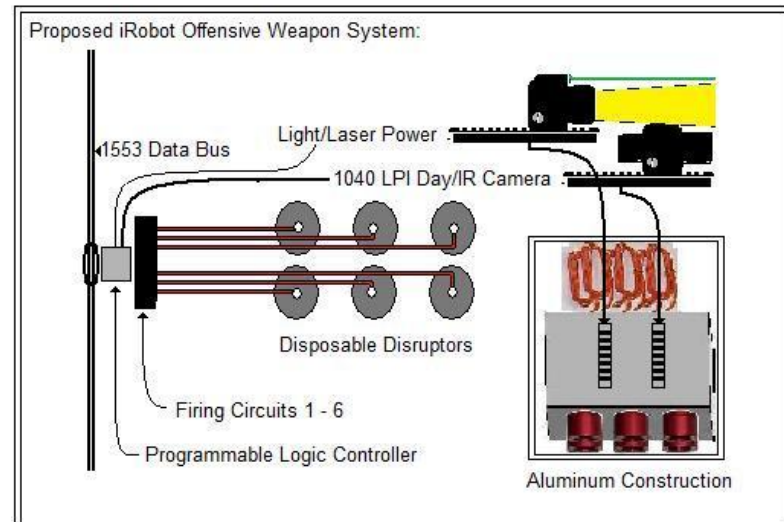
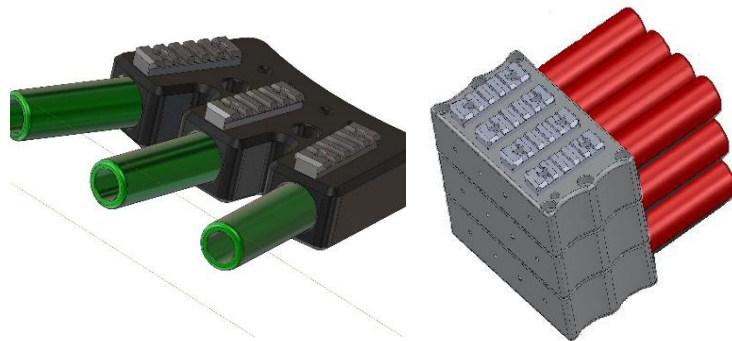
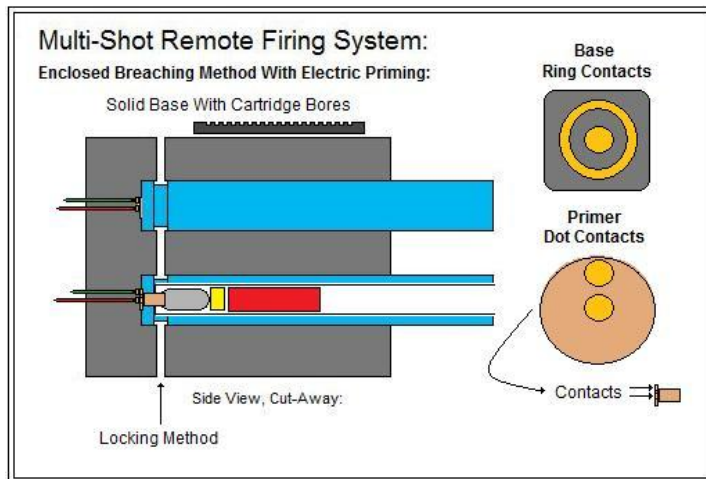
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Multi-Barrel Direct Fire Less Lethal / Lethal Weapon System:

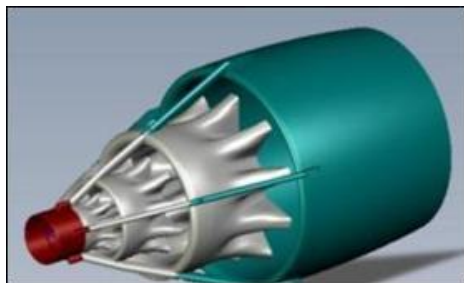


Royal Arms International Multi-Barrel Direct Fire System: 9 psi Overpressure, 54 x 00 Rubber Buckshot + OC, Rubber 12 Gauge Slug, Beanbag, EOD Clay & AP Rounds, Lead & Steel Shotgun Pellet Loads, Shotgun Slugs, OC Irritant Shells.

Multi-Barrel Direct Fire Less Lethal / Lethal Weapon System:



Commercial High Capacity & Extended Range Riot Agent Technology:



Clockwise From Upper Left: Flowdesign.org RAP Nozzle, Long Range RAP Vortices, 55 Gallon Palletized Reinforced Chemical Agent Tank, MITM Long Range Pressure Washer, MACE UV Dye Marker/OC/CS Gas.

Irresistible Nano-Pharmaceutical “REM Sleep Hytonia” Riot Agent:

Nano-Particulate GABA-Glycine Powder Hangs In The Air, Penetrates Gas Mask Seals & Clogs Filters:

How muscles are paralyzed during sleep: Finding may suggest new treatments for sleep disorders

Date: July 17, 2012

Source: University of Toronto

Summary:

Two powerful brain chemical systems work together to paralyze skeletal muscles during rapid eye movement (REM) sleep, according to new research.

“(the natural) **neurotransmitters gamma-aminobutyric acid (GABA) and glycine caused REM sleep paralysis** in rats by “switching off” the specialized cells in the brain that allow (skeletal) muscles to be active. This finding reversed earlier beliefs that glycine was a lone inhibitor of these motor neurons.”

This paralysis keeps people still even as their brains are acting out fantastical scenarios; it's also the reason people sometimes experience sleep paralysis, or the experience of waking up while the muscles are still frozen.”

Recommendations:

- Combine Direct Fire Projectors, Riot Agent Sprayers, Wide Area Multi-Frequency Dazzlers & Long Range Precision Blunt Trauma Weapons.
- Create Man Portable & Vehicle Mounted Multiple Less Lethal Systems.
- Add Electrical Stimulation Weapons For Individual Control Situations.
- Reduce Size & Power Requirements Of Directed Energy Weapons.
- Research Advanced Bio-Mimetic Human Disabling Riot Agents.
- Avoid Using Low Capacity Or Easily Counter-Measured Systems.

Conclusions:

- Commercial Technology May Be Co-Opted For Military Purposes.
- Urban Riot Situations Will Escalate In The Future As The Ability Of Repressive Regimes To Use Lethal Force On Their People Decreases.
- Popular Uprisings Can Topple Governments, Which When Going From Democracy To State Sponsor Of Terrorism Is To Be Discouraged.
- Multiple Forms Of Complimentary Less Lethal Weapons Can Resist Potential Countermeasures Better Than Single Methods.
- Future Less Lethal Weapons Should Have No Possible Resistance Countermeasures Or None Available To Rioters.

Credits:



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With Special Thanks To:



www.Accurate-Mag.com

&

Dr. Jeffrey Widder, PhD.

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The Business of Innovation



NDIA White Paper Series, Joint
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