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World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.

Posted on Monday, June 28 @ 05:29:49 PDT by davidc

by David Crane david@defensereview.com

The following article contains a link to the DREAD Weapon System Video. This is the first time this video has ever been shown to the public. The DREAD depicted in the video is a functional prototype that operates on a less-than-lethal mode. This prototype was dismantled for security purposes to protect the technology, after the making of this video. As of this posting, DefenseReview (DefRev) is the ONLY publication in the WORLD that has any written materials or video footage, or any information whatsoever, for that matter, on this revolutionary new weapon system.



The Weapon

Imagine a gun with no recoil, no sound, no heat, no gunpowder, no visible firing signature (muzzle flash), and no stoppages or jams of any kind. Now imagine that this gun could fire .308 caliber and .50 caliber metal projectiles accurately at up to 8,000 fps (feet-per-second), featured an infinitely variable/programmable cyclic rate-of-fire (as high as 120,000 rounds-per-minute), and were capable of laying down a 360-degree field of fire. What if you could mount this weapon on any military Humvee (HMMWV), any helicopter/gunship, any armored personnel carrier (APC), and any other vehicle for which the technology were applicable?

That would really be something, wouldn't it? Some of you might be wondering, "how big would it be", or "how much would it weigh"? Others might want to know what it's ammunition capacity would be. These are all good questions, assuming of course that a weapon like this were actually possible.

According to its inventor, not only is it possible, it's already happened. An updated version of the weapon will be available soon. It will arrive in the form of a...

tactically-configured pre-production anti-personnel weapon firing .308 caliber projectiles (accurately) at 2,500-3000 fps, at a variable/programmable cyclic rate of 5,000-120,000 rpm (rounds-per-minute). The weapon's designer/inventor has informed DefRev that future versions of the weapon will be capable of achieving projectile velocities in the 5,000-8,000 fps range with no difficulty. The technology already exists. The weapon itself is called the DREAD, or Multiple Projectile Delivery System (MPDS), and it may just be



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the most revolutionary infantry weapon system concept that DefenseReview has EVER come across.

The DREAD Weapon System is the brainchild of weapons designer/inventor Charles St. George. It will be 40 inches long, 32 inches wide, and 3 inches high (20 inches high with the pintle swivel mount). It will be comprised of only 30 component parts, and will have an empty weight of only 28 pounds. That's right, 28 pounds. The weapon will be capable of rotating 360 degrees and enjoy the same elevation and declination capabilities of any conventional vehicle-mounted gun/weapon.

The first generation DREAD (production version), derived from the tactically-configured pre-production weapon, will most likely be a ground vehicle-mounted anti-personnel weapon. Military Humvees (HMMWV's) and other ground vehicles (including Chevy Suburbans) equipped with the DREAD will enjoy magazine capacities of at least 50,000 rounds of .308 Cal., or 10,000 rounds of .50 Cal. ammo.

But, what is the DREAD, really? How does it work? In a sentence, the DREAD is an electrically-powered centrifuge weapon, or centrifuge "gun". So, instead of using self-contained cartridges containing powdered propellant (gunpowder), the DREAD's ammunition will be .308 and .50 caliber round metal balls (steel, tungsten, tungsten carbide, ceramic-coated tungsten, etc...) that will be literally spun out of the weapon at speeds as high as 8000 fps (give or take a few hundred feet-per-second) at rather extreme rpm's, striking their targets with overwhelming and devastating firepower. We're talking about total target saturation, here. All this, of course, makes the DREAD revolutionary in the literal sense, as well as the conceptual one.

According to the [DREAD Advantages Sheet](#), "unlike conventional weapons that deliver a bullet to the target in intervals of about 180 feet, the DREAD's rounds will arrive only 30 thousandths of an inch apart (1/32nd of an inch apart), thereby presenting substantially more mass to the target in much less time than previously possible." This mass can be delivered to the target in 10-round bursts, or the DREAD can be programmed to deliver as many rounds as you want, per trigger-pull. Of course, the operator can just as easily set the DREAD to fire on full-auto, with no burst limiter. On that setting, the number of projectiles sent down range per trigger-pull will rely on the operator's trigger control. Even then, every round is still going right into the target. You see, the DREAD's not just accurate, it's also recoilless. No recoil. None. So, every "fired" round is going right where you aim it.

#### BALL AMMO



DIAMETERS: Ø.308 & Ø.500

One of the ammunition types the DREAD will be delivering downrange is the "Collision Cluster Round", or "CCR", that will be used to penetrate hard targets. The Collision Cluster Round (CCR) is explained in more detail on the [munitions page](#) of the DREAD Technology

White Paper (links below). The [DREAD Advantages Sheet](#) also lists all the other advantages that the DREAD Weapon System enjoys over conventional firearms.

And, all this from a weapon that doesn't jam. Remember how at the beginning of the article I wrote "no stoppages or jams"? The DREAD won't jam because, according to its inventor, it *can't* jam. The DREAD's operating and feeding mechanisms simply don't allow for stoppages or jams to occur. It thus follows that the DREAD Centrifuge Weapon will be the most reliable metallic projectile launcher/ballistic device on the planet. DefRev is not at liberty to publish exactly *why* the DREAD can't jam, since Mr. St. George



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hasn't given us permission to describe the gun's operating and feeding mechanisms in any detail.

The only thing the DREAD's operator will really have to worry about is running out of ammo, which isn't likely. Any reasonably skilled gunner (Humvee, APC, Apache attack helicopter, etc.--doesn't matter) should be able to avoid running through all 50,000 (or more) rounds of .308 Cal. or 10,000 (or more) rounds of .50 Cal. ammo prematurely, especially when he or she can dial down the DREAD's cyclic rate to 5,000 rpm or slower, if necessary. Even if it becomes necessary to increase the DREAD's magazine capacity to upwards of 100,000 rounds (.308 Cal.) or 20,000 rounds (.50 Cal.), and run the weapon all day and all night for weeks on end, this will have absolutely no effect whatsoever (positive or negative) on the reliability or durability of the weapon system. The DREAD is both heatless and frictionless, and doesn't generate any high pressures. So, there's virtually no wear and tear on the system, no matter how many rounds are fired through it back-to-back, even if it's run constantly on full-auto at 120,000 rpm, the whole time.

Here's the kicker: because it's electrically powered and doesn't use any powdered propellant for its operation, the DREAD Centrifuge Weapon is virtually silent (no sound signature), except for the supersonic "crack" of the metal balls breaking the sound barrier when they're launched. This makes the direction that the rounds are coming from, and their point of origin (firing source), very difficult for enemy forces to identify. It also allows the operator to communicate easily with his team, or with his command structure, *while* he's still firing on the enemy (with the DREAD). With the DREAD, he won't have to fight to communicate over his own weapon's firing report. And, since the gun doesn't generate any muzzle flash or heat (it's heatless and frictionless, remember?), it doesn't produce any flash signature or heat signature. So, identifying the gun itself with IR (infrared) sensors will be impossible. The vehicle that the DREAD is mounted on is the only thing that will display a heat signature. That leaves you with a difficult-to-detect/locate weapon with a virtually endless supply of ammo. Even if the DREAD-equipped vehicle does get identified and fired upon by the enemy, the risk of a catastrophic explosion from a bullet strike on the ammunition supply is zero, because the DREAD's ammunition doesn't contain any propellant. There's no gunpowder onboard to blow up. That just leaves the gas tank (vehicle's). Nothing's foolproof.

There's more. Since the DREAD/MPDS (Multiple Projectile Delivery System) is a centrifuge weapon, projectile velocity can be adjusted instantly back and



DREAD-3rd GENERATION

forth between lethal and less-lethal/non-lethal modes. This means it can be utilized just as effectively for embassy security and peacekeeping roles. As an embassy security weapon, the less-lethal/non-lethal mode would most likely be the way to go, in most cases. Less-lethal is usually adequate for any crowd control or riot control situations. However, let's say the crowd starts storming the gates, and now presents a lethal threat to the occupants inside. Well, just pull your Marines inside, switch your remotely-operated battery of DREAD's on over to lethal mode, and make survival above ground impossible for anyone outside the embassy. No one gets in. Same thing goes for military base security. Remote DREAD Centrifuge Gun Pods can be outfitted with heat and motion sensors, and left in unmanned areas. These remote pods can be either human-operated, or pre-programmed with both less-lethal/non-lethal and lethal protocols that will function automatically and not even require human operation. Mobile robotic platforms, including

remote-controlled Unmanned Ground Combat Vehicles (UGCV's), could also be outfitted with DREAD systems. And, the list goes on. The technology application possibilities/potential uses are virtually endless.

So, what's the upshot? It's DefenseReview's opinion that, if the DREAD Weapon System works as advertised, it will have a profound impact on U.S. infantry warfare capabilities. It has the potential to literally change the way we fight on the ground, and perhaps even in the air. No question, it will revolutionize both ground and air vehicular armament and firepower capabilities. The DREAD will have a similarly profound impact on U.S. embassy security and military base perimeter security capabilities. This paradigm shift in firepower isn't limited to the ground and air, either. The DREAD's complete lack of recoil will allow it to be fired from space-based platforms, i.e. satellites, without knocking them off of their respective orbital paths. Zero recoil, plus 8,000 fps projectile speeds, 5,000-120,000 rpm capability, and huge on-board ammunition supplies, equals a viable and relatively inexpensive option for satellite defense (and enemy-satellite neutralization), and possibly even a fast-realizable armament solution/alternative for a U.S. Space-based defense network.

Look out, DREAD's comin'.

Charles St. George, inventor of the DREAD/MPDS (Multiple Projectile Delivery System) Centrifuge Weapon (Centrifuge Gun), can be contacted via email at [leaderpropulsion@bellsouth.net](mailto:leaderpropulsion@bellsouth.net).

#### **DREAD Video Download Instructions:**

Right-Click Here, then click on "Save Target As..." to download and view the DREAD Weapon System promotional video. The DREAD video is 18MB long, and is in QuickTime format. If you don't currently have the QuickTime player on your system, you can download it here.

DREAD Brochure (Front)

DREAD Brochure (Back)

Click here to read about the DREAD Weapon System's advantages over conventional small arms.

The links below will take you to the specific pages of the DREAD Technology White Paper:

Page 1

Page 2

Page 3

Click here to view a color concept drawing of the 3rd Generation DREAD.

Click here to view a color drawing of the DREAD's Ball Ammo.

#### **Inventor's Background**

Charles St. George has been working in the small arms field for quite some time, now. He started Leader Dynamics, a small arms design and development firm, in Australia in 1978. This is where he designed and developed the Leader assault rifle. St. George left Leader Dynamics in 1981. In 1982, he formed Armtech (also in Australia). At Armtech, Charles and his team, four men total, including him, created the M18 Assault Rifle, which was subject of a tender. St. George and his team were able to put a technical data package (TDP) together for the M18 and produce a complete, fully interchangeable weapons family, i.e. a light machine gun, assault rifle, and submachine gun, plus 350 production drawings, in 90 days to satisfy the Australian government's 1986 Small Arms Replacement Program's Request for Tender (RFT). Keep in mind that the technical data package had to conform to D14 NATO trial

requirements.

During those 90 days, St. George's team also produced the video and brochures for the M18 weapons family. When they issued the Request for Tender (RFT), the Australian government didn't think that anyone in Australia would actually be able to submit a candidate weapon, especially not within the time deadline. Private companies ended up sponsoring the Armtech team, because the Australian government had said it would give preference to an Australian submission. Ultimately, this wasn't true. The Australian government, instead, gave preference to the Steyr AUG. They told the Armtech team that the M18 wasn't "combat proven". Keep in mind this was during peacetime.

The assault rifle version of the M18 later became the ART 30 bullpup rifle. The Bushmaster M17S is based on the ART 30 bullpup assault rifle. However, Bushmaster made some design changes to the rifle, so the M17S is significantly different from the Armtech ART 30, especially in the area of combat performance.

So, how does a guy go from designing/developing conventional small arms to creating a centrifuge weapon? Well, for a couple of years, before he even entered the infantry small arms field, St. George worked at Sharples Centrifuges (1964-1966). St. George simply combined his centrifuge knowledge with his knowledge of infantry small arms to create the DREAD.

It should also be mentioned that Mr. St. George was the Engineering Manager at [Barrett Firearms Manufacturing, Inc.](#) from July 2002 to April 2003.

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**Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.** (Score: 1)

by witor-brl on Tuesday, June 29 @ 12:18:43 PDT

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No recoil, no sound, no heat? Nice blurb but doubt its factually correct. <br /> No Recoil<br /> Laws of Physics state that for every action there is an equal and opposite reaction. Even small caliber weapons climb on full auto and thats not just due to the action of the piece.<br /> No sound<br /> Except from (1) whatever the power source is (2)the moving parts and (3) supersonic rounds moving at nearly 1 1/2 miles/second. The last in particular will be pointing right back at the firer.<br /> No heat<br /> Umm, friction equals heat, accelerating a steel projectile to 8000fps umpteen thousand times is gonna be generating quite a bit of heat.<br /> Regards, Tim

- [Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.](#) by fmadison on Tuesday, June 29 @ 13:07:33 PDT
- [No recoil is possible](#) by captain\_sako on Tuesday, May 17 @ 16:48:46 PDT

**Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.** (Score: 1)

by DavidCrane on Tuesday, June 29 @ 14:20:57 PDT  
([User Info](#) | [Send a Message](#)) <http://www.defensereview.com>

witor-brl, I noticed you just signed up as a member. Welcome to Defense Review. Hopefully, you're not a troll. While I'm capable of answering all of your points, I don't want to risk inadvertently divulging any technical/proprietary aspects that Mr. St. Charles doesn't want me disclosing. So, I'll just refer you to him, and allow him to answer any questions you might have. His contact email address is included with the story. Best Regards, David Crane Owner/Editor-in-Chief DefenseReview.com david@defensereview.com

**Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.** (Score: 1)

by GTurner on Tuesday, June 29 @ 15:15:42 PDT  
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It might be a very useful weapon, but the Ordnance Corps rejected the diesel powered .50 caliber centrifugal ball bearing flinger in WW-I, although that was because the diesel engine to run it wasn't maneuverable through the trenches. <br /> <br /> Such weapons do have the same recoil as other weapons (one of those simple laws of physics established prior to Newton), though no muzzle flash. <br /> <br /> "Hatcher's Notebook", circa 1947, talks all about it. The earlier version was set up to fling bearings across a wide horizontal arc to stop human wave assaults, though the early version was probably rather crude and limited by available material technology. <br /> <br />

- [No recoil directed to shooter](#) by captain\_sako on Tuesday, May 17 @ 16:50:25 PDT

**Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.** (Score: 1)

by DavidCrane on Tuesday, June 29 @ 16:26:01 PDT  
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GTurner, <br /> <br /> I understand the laws of physics, including this one: every action has an equal and opposite reaction. When I wrote no recoil, I meant no felt-recoil. In other words, recoil force is not transferred to the shooter. So, the shooter doesn't feel it. <br /> <br /> David

**Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.** (Score: 1)

by DavidCrane on Tuesday, June 29 @ 17:04:03 PDT  
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Almost forgot--Welcome to Defense Review, GTurner. We're glad to have you. Just FYI, I'm already aware of the previously unsuccessful attempts at centrifuge gun technology made by others during the 20th Century. <br /> <br /> David

**Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.** (Score: 1)

by Pretz on Wednesday, June 30 @ 22:21:17 PDT  
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This weapon seems like it would be extremely useful as an anti-missile system. You could mount one on vehicles to shoot down missiles. <br /> <br /> The real disadvantage of this weapon seems to be the fact that it shoots golf balls rather than bullets. They would have less range, a steeper trajectory, and would be more affected by wind. I wonder if it would be possible to modify the basic design to shoot bullets rather than balls.

**Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.** (Score: 1)

by DavidCrane on Thursday, July 01 @ 07:20:01 PDT  
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Let me ask you something, how hard do you really think it will be to dial these little .308 Cal. and .50 Cal. "golf balls" right into the target when 5,000-120,000 rounds-per-minute are flying out of that machine at speeds of up to 8,000 feet-per-second? I'm pretty sure Mr. St. George would tell you that the DREAD will be plenty accurate out to greater distances than you might imagine. These little "golf balls" will be flying very far, very fast--and there will be A LOT of them coming atcha'.

- [Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.](#) by Prettz on Thursday, July 01 @ 22:44:58 PDT

**Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.** (Score: 1)

by S2nd on Tuesday, July 13 @ 18:34:33 PDT  
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VERY interesting weapon with a lot of potential. I'm curious what the submachinegun looks like, since it looks like the centrifuge takes up a good amount of space. I'm also concerned about safety, since it seems that the slightest error in timing could send ten of those golf balls right in the face of the operator.

As for the recoil, I don't think it would be a big deal considering how the thing operates. A bigger issue is keeping the centrifugal force from spinning the base, but that can be solved with a flywheel spinning in the opposite direction.

**Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.** (Score: 1)

by shadowspawn on Saturday, August 21 @ 11:46:35 PDT  
([User Info](#) | [Send a Message](#))

Very interesting. (I didn't think much of the video. Sorry, but even ID's doom3's fake "UAC" videos have more punch, and they spent almost no money for them).

There was a kid's toy that did this also with ball bearings, it was a mail-order deal in the late 80's. and had a hand crank and gearing. this was back when you could stick freon cans on those bb guns that would spit out 3k-4k bb's in a minute.

There is a bit of recoil but its not what i think people are envisioning. its a small push, different physics involved then just blasting a .50 cal steel ball.

I think it's cool that it can claim to be jam-proof, any gun can if the blame is pushed on the projectile quality... but i'm wondering what happens if a ball is mis-shaped or somehow gets through the quality control. When dealing with bullets it's a different story; when dealing with ball bearings a few might come through off-round, depending on how much tolerance is needed.

I really like the concept of sticking it on a autonomous platform or stationary mount with AI and just setting it loose on a field, or to track anything moving. I do AI for video games, so its not like it'd take much to do. Also lead on an online realism combat-simulation game, so specs on distance/spread/speed would be fun to simulate. Or i could just guess from that video, if it was more-or-less to scale. :)

I also wonder if the ATF would consider a "mini" version of this an actual firearm.

I'd be interested in updates. This sounds so much more feasible and cost-effective then that "roman candle" (stacking charged projectiles in front of each other in the barrel) concept; it just depends on the spread, the training, and the overall speed since there are no real tracers to gauge flow when dealing with such a massive volume and from what I gather less cost and less points of failure to constantly monitor.

Some possible cons: Gyroscopic/bearing stress on ships or mobile platforms might be an issue and might raise the price due to new tolerances and lubrication/cooling methods. Also what happens if a catastrophic impact occurs on the unit while it's up to full operational speed... that sorta thing. But I'm sure the designer(s) are stress testing the hell out of the

thing with simulations and non-destructive testing, i can picture that they wince when thinking about slamming a few of these with a big weight at different locations when they are probably so dear to produce at this stage.

I'm also thinking that for training, again depending on the tolerance for the projectiles, a really good ratio of recouping/recycling used projectiles would be quite easy to obtain. This way (more) costs could be kept down during training.

**Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.** (Score: 1)

by mykrowyre on Wednesday, October 13 @ 12:53:32 PDT  
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This is NOT new technology. In fact, it proceeds the automobile. You can find plans for constructing such a device in the "Poor Man's James Bond" books.

It sounds good, but lets consider the already poor accuracy of ball ammo, and then add a backspin or sidespin (per inventors design) to it?

Because the projectile is rotating counter clockwise, when it leaves the barrel it will curve to the right so badly that you could practically shoot around corners.

With a backspin at the velocities mentioned, it would curve almost straight up.

This points out the glaringly obvious fact that the "re-inventor" has not actually tested this idea at the scale he is suggesting.

- [Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.](#) by mykrowyre on Wednesday, October 13 @ 12:55:07 PDT

**Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.** (Score: 1)

by Username on Monday, November 15 @ 15:54:20 PST  
([User Info](#) | [Send a Message](#))

the details for this device can be found at

<http://patft.uspto.gov/netahtml/srchnum.htm>  
enter the patent number, which is 6,520,169

For those of you that are inclined to read technical papers

**Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.** (Score: 1)

by J-Star on Monday, January 24 @ 09:28:14 PST  
([User Info](#) | [Send a Message](#))

Enthusiastic article... but I remain very sceptical.

First of all, as has been pointed out: no recoil is physically impossible. If that is indeed the claim, then I suggest you take this up with Sir Isaac Newton and tell him that his Third Law of Motion is null and void.

Secondly the claimed power usage suspiciously low. It detail only a claimed average and say nothing about peak power needed and the amount of energy that needs to be stored for sustained use.

And there are questions about burst sizes, spin-up/cool-down times, aiming and more.

---

Some simple physics, using fairly simple calculations and going with the "kindest" of claimed

values.

Weight of caliber 0.308 spherical steel round.

Volume =  $4 / 3 * \pi * \text{radius}^3$

Weight = volume \* density

Radius = caliber 0.308 = 0.308 inches = 7.82 mm.

Density = 7.8 grams / cm<sup>3</sup> (iron)

Weight: approx 2 grams per round.

Using a kind muzzle velocity let's say 1000 m/s (that's 3333 fps).

Kinetic energy per round:  $E = m * v^2 / 2 = 1 \text{ kJ}$ .

Power (i.e. energy per time unit) required per round is 1kW. This means that with a claimed power usage of 150W we get an average sustained rate of fire of 9 rounds per minute.

Now supposing that the flywheel isn't already up to speed when we want to start firing, then for a fire rate of 30 000 round per minute, we need a peak power output of 500 000 W. Yes, that half a MegaWatt.

This power usage will increase in direct proportion to the density of the rounds (tungsten is dense) and firing rate; it will increase in squared proportion of the muzzle velocity (double velocity = quadrupled power requirement); and it will be proportional to the caliber cubed (!).

Producing that kind of energy for the gun will - unless the gun will - unless they are using powerful and thus heavy and spacious) batteries - generate a heat signature.

As for recoil... force equals impulse per time unit. Using the weight and muzzle velocity above (2 grams per round, 1000 m/s) we get an impulse per round that is 2 kgm/s. At the lowest claimed rate of fire (30 000 rpm) we get a recoil force of 1kN, the equivalent of lifting 100 kg or 220 lbs for as long as the weapon is firing.

This recoil force will increase proportionally with the density directly, the muzzle velocity directly, the rate of fire directly and the caliber cubed.

Further more we have the problem of aiming this weapon. A flywheel with that angular momentum will have considerable gyro forces acting upon it meaning that as soon as you are to alter pitch the entire thing will start rotating along the lengthwise axis.

As for its proposed use as a space-borne weapon we could of course mount two instances of the weapon to counter-rotate. But we still have the issue of preservation of angular momentum. How are you going to aim in pitch and track a moving target?

---

Using simple high-school physics reveals many questions about this supposed wonder-weapon. I suggest the editor ask for a proper demonstration of the weapon and request an answer to these questions:

- How much is the recoil in reality? Physics says it can't be null so how much is it really?
- What kind of power source is required? What kind of peak poutout is required of this source?
- What kind of structure is required to support the weapon while is revs up?
- What's the time for a "cold" start? I.e. from the weapon is activated until it can start firing?
- What kind of mechanics is required to aim the weapon?
- What is the maximum average rate of fire? I.e. sustained burst rate at a given burst size?

Without answers to these questions this article must remain a target for doubt.

with best regards

/Michael

- [Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.](#) by KingTiger on Tuesday, January 25 @ 21:21:28 PST

**Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof,**

**and Silent.** (Score: 1)

by KingTiger on Tuesday, January 25 @ 21:23:38 PST

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This dread weapon system peaked my interest. It seemed too good to be true...and I was right. I read up on the details on the weapon system on the patent site listed in a previous thread to familiarize myself with the system. Anyway, let me explain why it is HIGHLY UNLIKELY to be effective in combat.

As much as I believe that the "150 watt" power supply is dubious and 120,000 spm is misleading, these little trifles don't compare to the greatest flaw of all in the system...the ammunition.

First off, ball ammunition is highly inaccurate. The video showed a brief clip of the ammunition hitting a target. The holes generated were highly dispersed and the target was most likely less than 50 yards away (most likely indoors). Kind of phases out the impression that these balls are one behind the other. Since enemy engagements many times exceed several hundred meters, it doesn't bode well for DREAD. However, accuracy is not my big concern. Dispersing huge quantities of ammo should make up for the inaccuracy. The thing that will stop this system dead lies in two words...BALLISTIC COEFFICIENT.

Its all well and good that the DREAD can out ammo at 2500-3000fps, but how much of that energy actually reaches the target. I ran some computations using a ballistic analysis system. What I found was horrifying...to the Dread.

My calculations for the ballistic coefficient of .308 dimpled tungsten balls arrived at roughly .055. A .308 smooth lead ball (44 gr.) has a ballistic coefficient of .043 (just for comparison). Obviously, the BC changes with velocity, but .055 is a good, and fair approximation of the BC. So a .308 tungsten dimpled ball would weigh about 50 grains and would have 999 or so ft/lbs muzzle energy when traveling at 3000 fps. Not bad until I saw the results under STP (Standard Temperature and Pressure). By the time it has reached 25 yards, its velocity was 2579 fps and ME in ft/lbs was 738. At 50 yards: 2195 fps and 535 ft/lbs. 100 yards: 1537 fps and 262 ft/lbs. 200 yards: 914 fps and 93 ft/lbs. 300 yards: 711 fps and 56 ft/lbs. At 300 yards it has dropped 84 inches. those results are very telling. At 300 yards, the projectile would have as much stopping power as an airgun (albiet a VERY powerful one). The poor penetrating power of spheres (the USS Constitution and early iron clads can attest to that) only adds insult to injury. Even if you boosted velocity to 5000 fps, the projectiles would only have 88 ft/lbs of KE at 300 yards. Do the math, and you will see the truth. The Dread is Dead. There is no way that the military is going to deploy a weapon system that is SO INEFFICIENT in ballistics test, and ultimately killing power. Muzzle Energy is one thing, but terminal energy is another.

I hope I didn't appear to be attacking the Dread. First time I read its literature I was fascinated by its possible potential. I still believe it can be used very effectively in "less than lethal" roles and in close quarter combat.

P.S. First time poster. Mistakenly posted a reply to the last comment. My bad.

**Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.** (Score: 1)

by CommonSense on Saturday, May 14 @ 03:59:01 PDT

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Stealth? While it may be quieter than a machine gun, it's hard to imagine it being "stealthy" if it's firing supersonic projectiles. In addition, such a weapon could produce a rather unusual acoustic footprint which, if anything, might make it easier to track?

No recoil in space? There is a BIG difference between no "felt" recoil on a vehicle-mounted weapon and the effects on an orbiting satellite. As many others have correctly pointed-out, firing projectiles is going to produce an equal and opposite thrust on a spacecraft. That's basic physics. And in space, VERY little thrust is required. Take, for instance, the problems they are having with outside excursions on the International Space Station, which some at NASA believe is being caused by the seemingly insignificant thrust caused by imperceptibly minor outgassing from the astronauts' space suits, being enough to push the entire huge space station out of position! Or consider the very weak thrust of NASA's ion drive, or the upcoming solar sail. In space, seemingly insignificant thrust can be enough to alter a satellite's trajectory. The idea that you could propel, not xenon ions or a short burst of cold gas from a spacecraft's thruster, but actual metallic objects off a satellite at 5,000 fps and not have any effect is ridiculous!

The contention that this device could be used as a "Star Wars" Missile Defense System is

also ridiculous. (Hey, why spend trillions on space-based lasers and sophisticated kill vehicles, when we can just shoot-down incoming ICBM's with a fancy satellite-mounted BB gun?) Even if you could solve the substantial targeting and tracking problems, you would then have the seemingly impossible task of getting decent projectile grouping over the huge distances involved. KingTiger was concerned about dispersal patterns from only 50 yards, what kind of spread do you think you would get from this weapon after, say, 1,000 miles? And even if by some miracle you were able achieve laser-like grouping over unlimited distances, you still have the issue of speed. An ICBM is traveling very fast, over 15,000 MPH, more than 4x faster than even a 5,000 fps round! Because of its speed and trajectory, it's been stated that you need a velocity of at least 7km/s (and preferably faster) to successfully intercept an ICBM in flight. As an example, in an early 90's Star Wars shoot-down test, the interceptor closed-in on the target at over 13.4 km/s, that's over 44,000 fps!

Then there's the safety issue of deploying this sort of weapon for anti-sat defense. Things in space often tend to stay there for very long periods of time, and traveling at velocities where even a fleck of paint can cause damage. Space debris is becoming a big problem. Firing just one of these weapons in space could result in tens of thousands of these "Collision Cluster Round" projectiles orbiting the Earth, endangering innocent spacecraft not at a "mere" 5,000 fps, but at orbital velocities (for low earth orbit, about 5 miles per second), where even a single one of these special "hard target penetrating" projectiles might, for instance, be able to penetrate the crew cabin on the shuttle? Is this really a weapon that we want to be deploying in space?

"Safe" from enemy hits? The article talks about the "danger" of taking an enemy hit to the propellant in the ammo for a traditional weapon and exploding, and how with this weapon there is no such danger. But remember that in this case, the "propellant" is the kinetic energy stored within the operating weapon itself.

Mounted in plain sight, nearly a yard across, and even shaped like a bulls-eye, this weapon makes for a large, easy and very inviting target to the enemy! So what happens to you and your fellow soldiers if it takes a significant "hit" while it's spinning at full speed? And all of those many armor-piercing ball bearings are suddenly released at 5,000 fps+ in sweeping 360 degree arcs? What was it the article said about embassy security, something about making survival for anything above ground impossible? Even assuming KingTiger's criticisms regarding range are accurate, what would the "friendly" kill zone be if this happened? I think I'd prefer if they did hit my gas tank!

**Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.** (Score: 1)

by Centauro97 on Wednesday, May 18 @ 18:11:14 PDT  
([User Info](#) | [Send a Message](#))

I'll keep this brief since it's already been stated above.

"SNAKE-OIL salesman?"

The video was all about "concept" but little about true performance.

If we need to hit "bad guys" with golf balls, we'll call Tiger.

Show us a something outside a garage-borne ideal.

**Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.** (Score: 1)

by Volt on Thursday, May 26 @ 21:06:07 PDT  
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It would have recoil. But would the recoil entirely consist of the spinning disk slowing down in RPM?

- [Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.](#) by JohnBoy on Thursday, July 21 @ 13:00:58 PDT

**Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.** (Score: 1)

by JohnBoy on Thursday, July 21 @ 13:01:59 PDT  
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Correct me if i'm wrong but I thought that the newton says for every action there is a reaction.

For every force exerted there is a counter force exerted. But when you fire a gun, you're not exerting any force. The bullet doesn't exert any force to my understanding, but it's the momentum that creates the recoil. Conservation of momentum says that for the exiting bullet at such high velocity, there's going to be a "kick back" effect on the body from which it exited.

**Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.** (Score: 1)

by kamil on Wednesday, January 04 @ 08:43:29 PST  
([User Info](#) | [Send a Message](#))

hi,

i'm not a gun expert, i just find the concept very interesting. as for the previous comments, sorry but i don't see your point at all.

- is it somewhere mentoined, that the gun has any moving parts at all? it's an electrically-powered centrifuge weapon. the rotation of the bullets could be done with an **electro-magnet** just fine, without the bullets touching the inside of the centrifuge. which i think solves most of your concerns.

kamil

**Re: World Exclusive Video! DREAD Weapon System: Devastating, Jam-Proof, and Silent.** (Score: 1)

by EarlScheib on Tuesday, December 13 @ 06:38:36 PST  
([User Info](#) | [Send a Message](#))

I've read the story, I'm reasonably sure I understand the weapon, and I watched the video (nineteen MB download & I'm on dial-up! ;). All in all, I don't think I would buy a used car from Mr. St. George.

**Conservation of momentum** (Score: 1)

by FlavorD on Wednesday, January 04 @ 10:55:22 PST  
([User Info](#) | [Send a Message](#))

Sorry, Mr. Crane, but the simple fact is that you don't know what you're talking about. You first claim that there is no recoil, but then claim that you meant that only that there is none felt by the shooter.

That is NOT what you meant, as we can see from your comment that satellites could use the DREAD without having their orbits affected. That is simply wrong, especially as you have also failed to account for the rotation of the centrifuge. On earth, it is easy to forget that spinning something also involves conservation of momentum. When we spin a toy airplane over our heads, the only reason that we do not spin slightly in the opposite direction is that we have our feet on the ground resisting this spin. We pass this counter-spin off to the incredible mass of the earth.

Anyone who has ridden motorcycles can tell you the effect of the spinning of the engine. I could feel my bike tilt right just from twisting the throttle while in neutral.

Helicopters ALL have some mechanism to counteract the body spin that they would have while being essentially frictionless in midair.

Satellites spinning up the DREAD would by definition have a counterspin that would turn the satellite off its presumably well-chosen angle. Rockets, compressed air, or being able to spin the DREAD in the opposite direction would be necessary to stop that spin.

Either you are trying to slip by with that comment about "without knocking them off of their respective orbital paths" (ignoring the problems you didn't want to bring up), or you didn't consider this.

It also just occurred to me that even if there is some way that the recoil from letting the ball go is transferred wholly to the centrifuge, that will have significant effect on the rotational speed. There is simply no practical way that you could fire thousands of balls per minute and not have it significantly effect the rotational speed of the mechanism. It strains credulity to think that the system is timing an equal power burst to exactly counteract the recoil, especially when it apparently is firing them so closely together as the article implies.

In my inexpert opinion, this thing DOA.

- [\[No Subject\]](#) by FlavorD on Saturday, February 18 @ 22:33:29 PST



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