

Battery Railgun

The **Battery Railgun** is a common and prevalent improvised weapon across the galaxy, first making its common appearance around war zones, riot zones and frontiers late in [YE 36](#).

About

The Battery Railgun frequently built from salvaged components readily available as scrap or from off-the-shelf items from hardware stores available to anyone. Better still, ammunition is widely available too, and the system is capable of taking other gauss-ready projectiles with user modification.

The exact build of individual units can vary wildly, as can the accuracy, velocity, and lethality of the system. Trigger and launch mechanisms for the gauss gun may be manually operated, or using control software installed onto a hobbyist's single-circuit-board computer or a smartphone.

It has a tendency to appear in the hands of users in areas of civil unrest or on frontiers where firearms are scarce. Users range from terrorists to freedom fighters, bounty hunters to pirates, or even soldiers of different nations with nothing else available to them. Plans for the gun can be found online, and vary greatly from person to person.

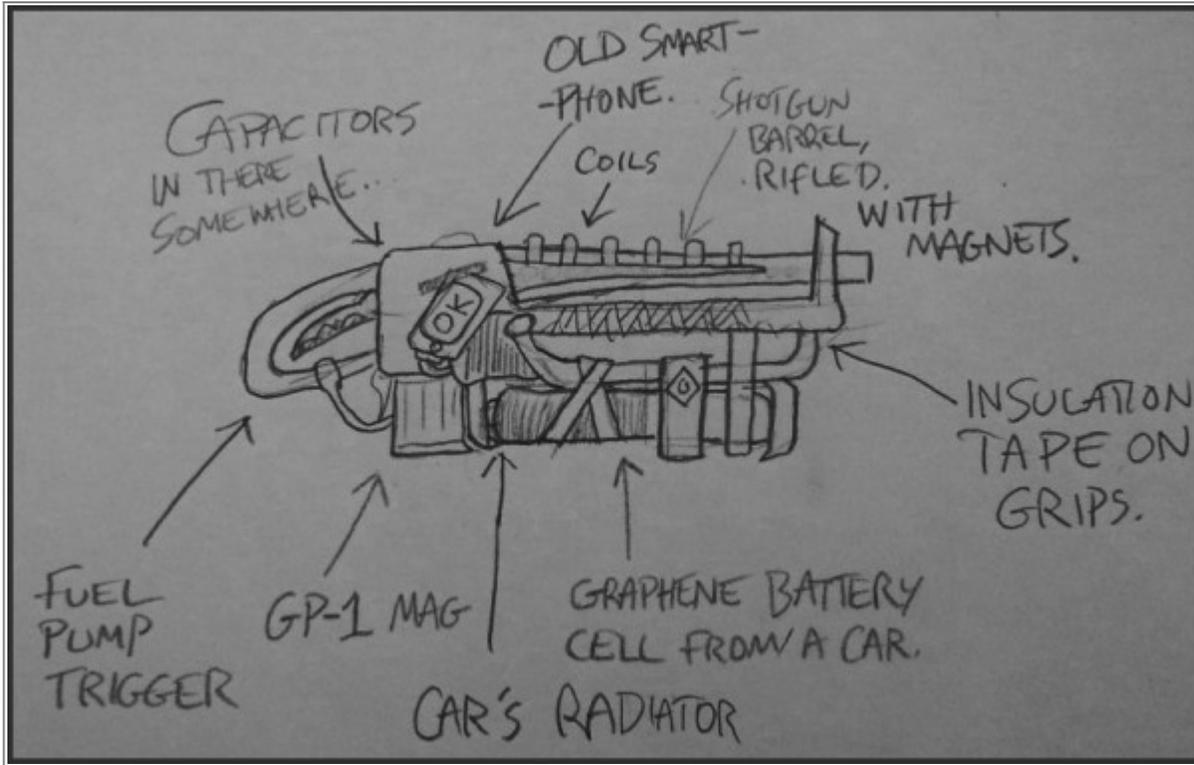
No big-name manufacturer is willing to fund mass-production of this weapon, due to the copyrights, and different nation's citizens lay claim to building the first one, but signs point to Nepleslia. Apocryphal accounts of improvised railguns being used by citizens go as far back as YE32 as a toy or lab project being pressed into action against attacking Mishhuvurthyar.

Nomenclature Information

- Designer: No known sole designer
- Manufacturer: Individual
- Name: Battery Railgun
- Type: Gauss Gun
- Role: Improvised Weapon, Anti Personnel
- Length: Varies Wildly
- Mass: Varies Wildly

Appearance

Individual units can vary wildly, but they will have common components, as listed below under Pricing. For example's sake, here are the plans for an assembled Battery Railgun as created by [Luca Pavone](#).



(drawn by Luca, too)

Discharge Information

- Muzzle Flash: White flash either the length of an outstretched hand or a whole forearm.
- Retort: An electric whine followed by a very loud crack.
- **Projectile/Beam Appearance:** Red hot battery followed by a trail of electricity. Easy to spot from a distance.
- Effective Range Anywhere between point-blank and 200 yards.
- Rate of Fire: Varies. Can range from various types of manual action, to semi-automatic or fully automatic magazine fed.
- Recoil: Varies, usually considerable enough for someone to hold the weapon with two hands.

Ammunition

Electrochemical Power Cell	
Battery Type	Damage
Rechargeable D Battery	Tier 2, Medium Anti-Personnel-5, follow up Acid and Shock
Rechargeable C or AA Battery	Tier 2, Medium Anti-Personnel-4, follow up Acid and Shock
Rechargeable AAA or AAAA Battery	Tier 1, Light Anti-Personnel-3, follow up Acid and Shock
D Battery	Tier 2, Medium Anti-Personnel-4, follow up Acid
C or AA Battery	Tier 1, Light Anti-Personnel-3, follow up Acid
AAA or AAAA Battery	Tier 1, Light Anti-Personnel-2, follow up Acid

An off the shelf electrochemical battery purchasable at a hardware store, corner shop, stationery shop or garage, purchased in packs. The majority rely on some sort of electrochemical cell (which in turn uses

either acid or alkaline bases) using either standard batteries (Zinc-carbon, zinc-chloride, alkaline, lithium, lithium-ion) or rechargeable (nickel-metal hydride, nickel-cadmium, nickel zinc).

The battery is induction heated - heating the chemical contents to render them volatile while at the same time making the outer-body of the battery flexible. When shot, wind-resistance peels the outer-edges of the battery back and then cools it if enough range is available, creating a primitive shaped penetrator at long range. The round's heavy mass means the inertia and follow-through of the shot is often quite heavy. Depending on the class of the battery, if a hardened copper separator is used the round will remain hard striking its target, giving it better penetration. If not, the round flattens.

Upon impact, the edges of the battery split and splash the vaporised hot chemical contents around the target as well as giving possible heavy metal poisoning to the enemy. The acidic effect is also shown to be reasonably effective in attacking Powered Armour by striking areas like the head or the joints, either splashing visors, destroying rebreather equipment, weaponry or locking up and chewing through joints.

Interestingly, rechargeable rounds tend to do the most damage - becoming the most acidic and also issuing a high voltage low amperage stunning-charge as they strike the target before secondary effects kick in.

Sometimes, a user may score thin one side of the metal casing: meaning when it breaks on collision, the contents will be sprayed uniformly in a given direction. If the barrel is properly rifled, a cheap laser range-finder can usually help a user judge how many rotations the shot is going to make, thus on collision with the target making it squirt toward an enemy behind cover if there's an object the same distance from them to hit.

Weapon Mechanisms

The weapon works by first loading a battery into the chamber. Depending on the how the weapon is laid out, the loading mechanism can differ hugely from weapon to weapon: Some borrowing parts from existing weapons and using revolver chambers, pump shotgun magazine tubes, or even modified magazines while others hand-load similar to a breech-loaded shotgun.

First, the round is held in place between a set of carefully controlled civilian grade electro-magnets. Unable to move, the battery is heated to a controlled temperature using induction heating for effect, depending on what the user is actually intending the gun to do. Advanced versions usually include a temperature cutoff point.

Once ready, the battery holder slides down and the magnets pull the round through the barrel, exactly the same way a railgun works - flinging it with some accuracy into the target.

Often, the barrel is borrowed from a conventional weapon, rifled specifically for the battery.

Other

The Battery Railgun (or any improvised weapon, for that matter) is usually frowned upon in Yamataian

controlled territories and stigmatised as a 'terrorist weapon', commonly in the hands of rioters against heavy-handed government control. Particularly rife areas of drawn out conflict may see police outlaw the use of electric cars and reduce hardware shop stock - but that only forces potential users to be more creative.

Despite the stigma, it doesn't stop some Yamataian engineers and tinkerers from building such a gun when the chips are down in extended sieges or when ammo runs dry. Some documented examples of such improvised weapons show up from NMX POWs, usually from camps where Nepleslians and Yamataians are mingled together and shared their various escape plans and pooled their knowledge in secret.

The opinion takes a reverse turn in the Nepleslias, where it's commonly seen as a science fair project that's gone out of control, and frequently finds itself used in gang warfare or home defence. The Nepleslian hard-on for armaments construction at early ages and throughout life draws them to building such weapons when they're out on the Nepleslian frontiers where law isn't always there to protect. Nothing says 'Get off of my Property!' much like a fist-sized hole, and a *serious* case of acid reflux.

The DION military frowns on such improvised weapons in the field, but it's rumoured that IPG Commandos will build their own Battery Railguns for missions, then disassemble and scrap each component for deniability. Meanwhile, amongst other independent operators, be they on the right or wrong side of the law, the weapon is popular for its unpredictability and how easy it is to throw together. Though, mass purchases of consumer-grade batteries are usually quite suspicious.

Some popular variants

- **Thunderbird** - [Luca Pavone](#)'s personal Battery Railgun, it appears to have been modelled off of a semi-automatic double barrelled shotgun, and it fires a pair of AA batteries from a pair of re-purposed GP-1 magazines. However, it has a tendency to shock him!
- **Hellraiser** - Found on the outer fringes of Yamataian worlds, or worlds where government overreach and/or corruption runs rife. The cut-up batteries turn into a spray of burning hot acid in flight to tear riot armour apart. Protestors usually find their massed fire to be quite a riot with the crooked cops.
- **Minuteman** - One of the most commonly passed around variants in the Nepleslias, it's a tough-wearing piece usually adapted to firing regular gauss projectiles, and is usually seen firing two-inch lengths of rebar in a breech-load rather than batteries at raiding pirates or Mishhuvurthyar. Off of my property! **zwp-BLAU!**
- **Thor** - A pump-action variant firing D batteries that was assembled by Nepleslian POW's in NMX controlled camps. Post-war, it's found popularity amongst IPG Commandos since its action was refined into better reliability. They'll never share how it works exactly though because they take great lengths to dispose of them.

Hazards

Poorly assembled, or even fine tuned machines with enough of a bump to their chassis tend to react unpredictably to users. Some possible hazards of using the Battery Railgun include:

- Entire weapon falling apart harmlessly in your hands because the bolts weren't screwed on tight

enough or there wasn't enough duct tape.

- The main battery that powers the railgun falls out or the contacts become loose, making the weapon power down.
- Battery overheats in the induction heating process and explodes on user.
- Battery exploding as its fired.
- The battery doesn't line up in the barrel, and upon firing, smacks against the barrel and sprays acid at the user.
- Cooling systems fail and the gun starts overheating.
- Electric shocks to user.
- Barrel melts.

And plenty more can go wrong using these things depending on the user's construction skills or luck.

Pricing

Here are the recommended retail prices for individual components. Prices can vary wildly.

Magnet Coils: 500 DA (used in electrical cars) **Barrel:** 60DA **Simple firing Computer:** 200DA (often an old smartphone) **Laser Rangefinder:** 40DA (any hardware store) **Trigger mechanism:** 1.99 DA (any hardware store) **Cooling plates:** 40 DA (car parts) **Hypercapacitor:** (150 DA or more, depending on quality of gun) **Insulating casing:** often electrical tape or plastic wrap (optional) **Electric car powercell:** 200 DA (usually about the size of a large shoe-box) **Transmission cabling:** 20 DA

Bulk Retail AA Battery Pack of 100 Copper-topped Batteries: 100 DA **Bulk Retail AA Battery Pack of 100:** 80 DA

OOC Notes

This page was originally created on 2014/11/28 01:15 by [Luca](#) and co-written by [Osaka/Osakanone](#).

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