Design Engineers of The Republic

Thread

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Turns

Previously: Intro

Introduction

In the beginning, there where a large number of earth-analog nation-states fighting upon, and for, an earth-analog world. Or atleast parts of it.
One of these nation states, The Monarchy of [Group A] was nearly successful in taking over much of its sub-contenent. Recently, however, its hold has been slipping, allowing one of its vassals to complete a successful revolution against it, retaking lands captured for centuries in the process.
Now, The Monarchy of [Group A] and this newly styled Republic of [Group B] find themselves in a bit of a predicament. More or less evenly matched with the other, surrounded by smaller states that dont like either party, and now learning that weapons technology in the rest of the world has started to pass them by.

Well, good thing you group of state-sponsored engineers are hanging about to design whats needed.

Technology of the time

-Pistols are typically revolvers
-Rifles are mostly single-shot breach loading designs using metallic cartridges, although there are some repeaters on the market, which almost all use tube magazines
-Shotguns are mostly pump-action and load from a tube magazine, atleast where they arent break-action single shot designs
-Metallic cartridges utilize black powder and rounded bullets. They are also quite large. Some very new designs use "smokeless" powder, which is typically guncotton mixed with a solvent and a wax
-Ships, trains and the like use steam engines, while cars are almost universally battery powered(what few exist, anyways). There are also electric trams and the like, but in limited numbers. Internal combustion vehicles are severely limited, and are chain driven
-Telephones and telegraphs are in most places, although the telephones do have a limited range
-Radios are new, very large, and can only do Morse code
-Machine guns are manually operated and have a number of barrels. They are also quite large, often the size of field guns

-Uniforms are mostly in bright colors still, and armor is all but non-existent, excepting ceremonial pieces
-Aircraft consist of early lighter-than-air craft, some gliders, and balloons. Balloons dont count as lighter-than-air craft, as they are typically tethered to the ground
-Most

All in all, it is roughly 1900's technology

Equipment of a normal soldier

Long linen tunic
Britches
leather suspenders/belt combo
Leather shoes
Cloth leg wraps
Woolen greatcoat
Woolen blanket
Wooden canteen
Tin mug
Hat (exact details vary from unit to unit. Most are cloth, but there the similarities end)

-Standard soldier-
Service rifle
Bayonet
50 rounds ammunition
Leather cartridge case
Leather bayonet sheathe

-Officer-
Leather Holster
sidearm
50 rounds sidearm munitions
Sheathe
Sword

Starting Designs

Pattern 782 Standard Troop Rifle
A rolling block rifle firing the black-powder 10x60mm cartridge. Provisions are made for a bayonet to be mounted, and there are crude iron sights. However, there is no safety, indicators to show if the weapon is loaded or cocked, and almost no effort at

making the weapon "nice" to use. The weapon is 6ft long, although shorter variants do exist for cavalry, engineers, naval forces, artillery, mounted infantry, and military police. Each are differing lengths. The weapon weighs 7lb unloaded. Costs .5pp each
Pattern 784 Revolver A five shot revolver firing the black-powder 10x35mm cartridge. There are simple iron sights fitted. The weapon is loaded one round at a time from a loading gate on the left side of the weapon, as it is intended for cavalry and officers, who still ride horses in combat. Officers are granted single action versions, while the rank and file who are granted one are only given double action weapons. The weapon possesses a 6inch barrel, weighs five and a half pounds unloaded, and is typically an officer-only weapon. Costs .5pp each
Pattern 793 Revolving Cannon Our latest design, a six barreled, manually operated cannon firing a 37mm, 16oz projectile. Each turn of the handle fires a round, loads another, and ejects a third. While the crank can be turned continuously, the barrels do not turn for the entire cycle, which allows better accuracy. The weapon loads from a 10-round clip. This weapon is use as secondary armament on our warships, and as our main field gun. Costs 10pp each
10x60mmB black powder cartridge Obsoleted by the 10x60mm RS, unless in use with the Pattern 782 Troop Rifle A large shell used by the Pattern 782 STR and its many, many, many differing length variants. Not nearly as powerful as it could be, thanks to its black powder loading
10x30mmB pistol cartridge A rather oversized and yet weak(thanks to its black powder propellant) round used in the Pattern 784 revolver and much disliked by our troops. For whatever reason, only ball ammunition is available for military use
37mm cannon shell A large shell that fires a 37mm warhead weighing 16oz, used in the Pattern 793 Revolving cannon. Comes in HE and AP variants
Officer's Sword Varies from service to service, with no exact specification in any

800: Turn

800 Turn

By the year 801 the engineers of the Republics design team had settled into their work. Recognizing the drawbacks of the pattern 784 Revolver and its muntions, they spend the year working on a replacement, the Pattern 800 Jupiter Automatic Pistol, a long recoil, rotating bolt design with a fixed 8-round magazine, chambered in a 12.2x30mm rimless cartridge using one of the new forms of smokeless powder developed abroad. Seven of the engineers worked on the gun itself, the other three working on the new round.

(many rolls later)

(17)The munition group works hard, eventually developing a powerful pistol round using the new propellant called "Cordite". This round is powerful enough to kill most opponents, at least those in range. (5)Sadly, the new rounds are expensive to produce, as not all the kinks in large scale production are quite worked out at this time.

(8)Sadly, the engineers designing the actual weapon have a bit of a hard time with it. (14)The action of the pistol works well and screws up only rarely, (6) But the magazine is a buggy mess that loves to jam the weapon. Loading the thing is also rather difficult, as the engineers where unable to develop a reliable way to fill the magazine that doesn't take far longer than the revolver ever did. (20)(10) However, the weapon is extremely light and is somewhat easy to produce. Infact, loaded, the pistol only weighs about 2lb loaded. However, three of the engineers feel that they have a better idea of firearms design, and have become **Basic Firearms Engineers**

800 Designs

Pattern 800 Jupiter Automatic Pistol

- Chambered in the 12.5x30mm pistol cartridge
- 9in barrel, 8rd internal box magazine, weighs 2lb loaded
- Faulty magazine
- Cheap to make (.5pp each)

12.5x30mm pistol cartridge

- High power
- Expensive to produce

800 Facilities/Personnel

Five off-site factories producing ammunition (2x 10x60mm cartridge, 1x 10x30mm cartridge, 1x 37mm cannon)
One on-site factory complex with four production lines, each with 300pp worth of production
One on-site workshop, for designing new things
One on-site design studio
One harbor, mostly blocked by sediment and the scuttled hulk of a wooden sailing ship

Seven basic engineers
Three Basic Firearms Engineers

800 News

In international news, the first radio station to broadcast news started. It still uses Morse code and broadcasts crop prices and the weather, but its something. In addition, the first warship to have superimposing cannon has been built, armed with four turrets containing a pair of 10inch cannon, built by the far-off Oligarchy of Logmen

801: Turn

801 Turn

By the time the newyear rolled around, much more had changed in the base. Some new faces arrived, new designs where coming out of the workshop and being tested out in an joining field, and the visiting brass expressed hopes of an easy potential war with the monarchists.

The first design churned out this year, the Pattern 801 Light Revolving Cannon, was an unparalleled success. Firing the new (and also quite good) 10x60mm rifle cartage, the gun and its five barrels only weighs in at a total of 15 kilograms, costs about as much to produce as its larger cousin, the Pattern 793 Revolving Cannon, rarely fails to fire a round (and if it does, the round is ejected anyways), and feeds via a system that allows for potentially unlimited fire, as new rounds can be added at will.

However, there was also a second firearm designed this year, a lever-action revolving rifle entitled the Pattern 801 Revolving Rifle Mk1. Although not quite following the design specifications (inorder to allow for one feature it was decided that the round should be moved out of the cylinder into the breach before firing) the resulting rifle is quick to fire, removes cylinder gap (mostly by containing everything within a mostly sealed area), is easy to handle, and only costs slightly more than our current weapon. There are a few issues with the weapon (reloading can be a pain, ejecting fired rounds can take more time than putting the new ones and muck can get in thanks to its lever-action nature), but all in all it is well liked.

Two different forms of ammunition where developed this year, the 10x60mm centerfire rimmed rifle round, and the slightly odd 10x30mm smokeless "Special", which is a bullet that contains its own propellant. The former is perhaps the best rifle round currently in existence, as it hits like a horse, has a mostly flat trajectory, and is simple enough to produce, but the latter? The latter is something special. Despite the (comparatively) small amount of propellant and the fact that the single gun designed in any way to use it (the Pattern 801 Revolving Rifle Mk1) requires some significant modifications to use it the round is as good, if not slightly better, than most of this days pistol rounds, although the 12.5x30mm pistol cartridge still outmatches it slightly. However, by removing the need for the revolving rifle to eject the round, and the fact that it is slightly lighter than a standard rifle round the possibilities are worth considering. The cavalry in particular have expressed interest.

801 Designs

Pattern 801 Heavy Revolving Rifle
(Originally named the Pattern 801 Light Revolving Cannon)

A fire barreled, hopper fed, hand cranked weapon using the new 10x60mm rifle round. Weighs in at only 15kg, almost never fails to fire when it needs to, and well liked by its testing crews, who have worn out the two prototypes in gleeful abandon stresstesting it.
Costs 9.5pp each

Pattern 801 Revolving Rifle Mk1
First thing to consiter is that there are two forms of this lever action rifle, that chambered for the 10x60mm rifle round and that chambered for the 10x30mm "Special". Both are lever action, weigh around 8lb, are about 46 inches long, and have a 10-round rotating magazine wherein the projectiles are held in place via clips and pushed into the gun by the lever action. In the 10x60mm version the fired round is pulled back into place after firing and is removed via a hinged port on the right side of the gun and is fed into the gun from 5-round chargers (inserted into the same space). In the 10x30mm version the gun is loaded almost exactly the same way (the chargers are different), though it does not need to extract rounds. provisions are, of course, made for mounting a bayonet.
Oh, out of the ten rifles made (five of each type) we only know what has happened to seven of them, all of which have, quite simply been shot to death. Infact, the (now idle again) factories have had their workers making up rounds just to keep up with the demand.
Costs .6pp each

10x60mm centerfire cartage
A centerfire, smokeless, rimmed rifle cartridge used in the Pattern 801 LRC and the Pattern 801 RR Mk1. About as best as it can be for the time, though it is still a round-nosed round.

10x30mm "Special" round
A caseless centerfire round used only in certain versions of the Pattern 801 RR Mk1 (notated with a "B" after its name), this round is surprisingly powerful for what is in effect a pistol round that has to carry its case with it. However, its light weight and surprisingly low cost excite many of the officers who have seen it shoot.

801 Facilities/Personnel

Five off-site factories producing ammunition (2x 10x60mm(black) cartridge, 1x 10x30mm(black) cartridge, 1x 37mm cannon)
One on-site factory complex with four production lines, each with 300pp worth of production
One on-site workshop, for designing new things
One on-site design studio
One harbor, mostly blocked by sediment and the scuttled hulk of a wooden sailing

ship

Eight newbie engineers
Seven basic engineers
Two Basic Firearms Engineers
One Amazingly talented though still novice firearms engineer

801 News

In the confidential news this year we have received word that the Monarchist's Royal Design Core has started work once again. The leaders of our fair Republic are worried that they aim to go to war with us, and are in particularly worried about our fine nations naval forces. Or rather, the complete and utter lack thereof.

802: Turn

802 Turn

This year did not go well. The development of the Heroism Torpedo Boat was either stalled or explosive (as in, it exploded) all year, as did the 4" gun intended to go on it. There where torpedoes developed for it(along with launchers) which actually function somewhat, but are not all that useful (they have something like a two-kilometers range, aren't particularly quick, cost a fair deal, take an age to reload and miss more than half the time when fired at stationary targets well within their range (Aka, the blockage in the harbor)). As for the Trench-Broom, well, in some ways it is a revolutionary design, and in others it makes the testing crew cry out for a stick to use instead.

So, anyways, first up we have the Heroism Torpedo Boat, which was only built as scale models or as bits on the docks, since there isint a drydock or a good space to build a full-scale model. However, what parts where worked on had a habit of exploding amazingly. The trio of engineers who worked on it all survived though.

The 4" cannon intended to be mounted on it, designed by three novice engineers, similarly has(or rather had) issues blowing up, mostly due to some strange design decisions on their parts (like using pure nitroglycerin as a propellant, or only having

five threads in the breach).

The 14" torpedo system, however, works well enough, and our naval officers are looking forward for a few sets of launchers and torps to use in places where low range, speed, chance to actually hit the target and long loading times dont mean much (AKA, massed torpedo batteries in narrow points).

And now, out main event, the Pattern 802 Trench Broom, firing the new 10x30mm special caseless ammunition from paper belts kept in "drums" underneath and to each side of the weapon. There where many setbacks in the design of this weapon, and yet for every setback there was a small leap of amazing design. The prototype at years end jams after almost every successful shot, the drum takes roughly two-hundred eighty seconds to replace, and its a bit of a awkward thing to use, but its light, cheap(for what it is anyways), and can be hit with a hammer before it breaks. The belt in particular is a bit of a sticking point as it is either too fragile or too stiff for reliable use in the gun, and often jams the weapon with bits from the belt.

802 Designs

Pattern 802 torpedo/launcher, 14"
A bronze-built torpedo using wet guncotton as an explosive, powered by an internal tank of compressed air. The weapon has a range of about 1.8 kilometers, a remarkable achievement for the method of propelling it. It weighs in at a little over 680lb and travels at 25 knots. Reloading a launcher (and then charging the torpedo with compressed air) takes nearly a quarter of a hour per launch.
Launchers cost 16pp each

Pattern 802 Trench Broom auto weapon
A mostly sheet-steel weapon, the Trench Broom is a high capacity, low weight, theoretically high rate of fire weapon firing the 10x30mm special round, kept in a paper belt, itself stored within large drums that reside around the sides of the weapon. These belts have been determined to be one of the main reasons for the jamming.
In any event, the weapon weighs about 3lb unloaded and is just over a foot and a half long.
One of these costs 1.2pp each

802 Facilities/Personnel

Five off-site factories producing ammunition (2x 10x60mm(black) cartridge, 1x 10x30mm(black) cartridge, 1x 37mm cannon)

One on-site factory complex with four production lines, each with 300pp worth of production still sitting idle
One on-site workshop, for designing new things
One on-site design studio
One harbor, mostly blocked by sediment and the scuttled hulk of a wooden sailing ship(now partially damaged by torpedoes)

8 newbies
5 basic engineers
1 basic naval engineer
3 basic firearms engineers
1 amazingly talented but unskilled firearms engineer

802 News

In other news, a directive has been received from the government to actually put something into production. It dosent say what to put into production, so long as something gets made and shipped out. Apparently elections are happening soon and the populace wants to know what this bunch of well paid engineers are doing out here besides making new guns our troops can use.

803: Turn

803 Turn

This year was a bit of a mixed bag for your engineers. Most of the projects they worked on failed in minor ways or weren't all that good. Two, however, shined in comparison. I will start with those.

The first of those successful designs was the new version of the pattern 802 torpedo which, although they dident do all that well on the new aspects of the design, their large list of what not to do helped them out significantly(infact, the same is true with all the designs that succeeded this year).
The new design is larger, longer, heavier, has a longer range, is faster, and is not quite as liable to wobble in the water, thus missing the target.

A second (more or less successful) group of two engineers (one new, one a basic firearms) worked on working out the bugs with the Pattern 800 Jupiter Automatic Pistol, which we all know had issues with the magazine. With the benefit of the work

papers from when first working on it, they come out with the Pattern 802 Jupiter Automatic Pistol, now featuring a removable box magazine that manages to hold the same number of rounds as the original without trying to jam the gun as the original did. It even managed to lower the cost of the actual pistol by a almost unnoticeable amount, although we now need to make extra bits for the magazines. Ohwell.

The third and final group, who where working on the trenchbroom, report that it was almost the trench boom this year. Thankfully, the pair of engineers(same composition as above) managed to catch the fault before it blew up in their faces. In any event, they have decided that the reason for the guns jamming was its large magazines and, specifically, the paper belt within. As a result, they have replaced this with a 30 round single-stack stick magazine that spicks out the side of the action. This doesn't actually lower the cost of the weapon, means that troops have to reload more often, but atleast most of the problems have been fixed.

And now, for the rest.
The work on the field gun stalled out when the engineers couldn't find a place to test their prototypes, which has resulted in a lot of half-done designs sitting in a pile in the workshop.
Those tasked with designing an artillery tractor spent the year arguing over exactly what type of wheel to use, if they should try using the new "diesel" engines being developed elsewhere, or if it should use petrol, and if it should be armed and/or armored. The protorype is currently sitting on the dock.

Elsewhere, the first batch of rifles and light revolving cannon come out of the factory and are delivered to eagerly awaiting forces, who try to stuff the old 10x60mmB rounds in and fail, leading them to complain bitterly, atleast until they are informed that there is a new type of munitions for them. Two ammunition factories switch over to the new type which are painted with a red stripe to show that they are the 10x60mmRS type round.
The request for the government to build a new arms manufacturing complex under some other group is shot down, hard. After all, they say, thats your job.

803 Designs

Pattern 803 Torpedo, 15.7”
A bronze-built torpedo using wet guncotton as an explosive, powered by an internal tank of compressed, hot air. The weapon has a range of about 2.4 kilometers. It weighs in at a little over 661lb and travels at 28 knots. Reloading a launcher (and then

charging the torpedo with compressed air) takes less time than the old style, although the launchers have changed a fair deal.
Launchers cost 16pp each

Pattern 803 Trench Broom Auto Weapon
A pattern 802 trench broom with the magazine replaced by a spring-fed stick magazine, sticking out the side, thus solving almost all the jamming issues with the gun. The testers loved it and the prototypes are missing or worn out by constant fire.
One of these and a few spare magazines costs 1.4pp each

Pattern 803 Jupiter Automatic Pistol
The older pattern 800 version, now with detachable box magazines that feed correctly! As expected, all prototypes are now missing, as the testers loved them to bits and demand more.

803 Facilities/Personnel

Five off-site factories producing ammunition (2x 10x60mmRS cartridge, 1x 10x30mm(black) cartridge, 1x 37mm cannon)
One on-site factory complex with four production lines, producing 1500 pattern 801 revolving rifles in 10x60mmRS and 32 pattern 801 light revolving cannon
One on-site workshop, for designing new things
One on-site design studio
One harbor, mostly blocked by sediment and the scuttled hulk of a wooden sailing ship(now partially damaged by torpedoes)

8 newbies
5 basic engineers
1 basic naval engineer
3 basic firearms engineers
1 amazingly talented but unskilled firearms engineer

803 Weapon Stocks

-Pattern 782 Standard Troop Rifle
34000 guns of various types
-Pattern 784 Revolver
5080 single action

3020 double action
-Pattern 793 Revolving cannon
390 guns
-Pattern 801 Revolving Rifle in 10x60mmRS
1500 guns
-Pattern 801 light revolving cannon
32 guns

803 Equipment of a normal soldier

Long linen tunic
Breaches
leather suspenders/belt combo
Leather shoes
Cloth leg wraps
Woolen greatcoat
Woolen blanket
Wooden canteen
Tin mug
Hat (exact details vary from unit to unit. Most are cloth, but there the similarities end)

-Standard soldier-
Service rifle OR pattern 801 revolving rifle in 10x60mmRS
Bayonet
50 rounds ammunition OR 100 rounds if equipped with revolving rifle
Leather cartridge case OR cloth charger pouches
Leather bayonet sheathe

-Officer-
Leather Holster
sidearm
50 rounds sidearm munitions
Sheathe
Sword

804: Turn

804 Turn

This year was a good year for us. While we did not do many things, those we did do turned out quite well.

To start with, we have the 804 Rifle Munition Program, tasked with developing a more powerful rifle round for the Pattern 801 Revolving Rifle, and also tasked with finding out if the old Pattern 782 Troop Rifle can use these modern rounds.
After much work, the engineers come out with the 10x60mmA rifle round, an aerodynamically stable bullet packs into its design a pointed tip, a boat-tail, and a copper jacket covering the whole thing. They also developed manufacturing processes that makes it easier and cheaper to produce than the RS or the B versions. Due to its flatter arc of fire, some work has to be done on existing weapons to take it into account.
While they where working on the ammunition they went and tested the new rounds on the old Pattern 782, the end result of which they determined that, with a slight modification to the bolt and the receiver, they can reliably utilize the new round in low-use areas, such as artillery crews, guard use, and similar. They did some work on a low power form of the round, but determined that that was only really possible if they used a "semi-smokeless" form of the round. That is, unless you wanted them to explode in ones face.

A second team of workers went to work on developing a modern test range for weapons development. The finished thing covers about one hundred acres and has a wide range of terrains, along with a small office block for people to work on artillery firing tables.

Finally, some work was done creating a dry dock for production of small (up to 300ton) vessels. A rail link connects it to a small dedicated factory and with our onsite factory complexes, for quick transfer of cannon and the like.

804 Designs

Standard Troop Rifle, Pattern of 804
A modification allowing use of high power smokeless ammunition in limited amounts, along with standardizing the length and updating their ironsights for flatter trajectories. Modifying existing pattern 782 rifles costs .02pp each, new build rifles cost .5pp each.

10x60mmA rifle ammunition
Designed for use in the Revolving Rifle, Pattern of 801(Type A), this round is as modern as anything else in the world.

804 Facilities/Personnel

Five off-site factories producing ammunition (2x 10x60mmRS cartridge, 1x

10x30mm(black) cartridge, 1x 37mm cannon)
One on-site factory complex with four production lines, producing 1500 pattern 801 revolving rifles in 10x60mmRS and 32 pattern 801 light revolving cannon
One on-site workshop, for designing new things
One on-site design studio
One harbor, mostly blocked by sediment and the scuttled hulk of a wooden sailing ship(now partially damaged by torpedoes)
One dockyard with yearly capacity of 300 ton
One world class firing range, with attached offices for range table calculation

7 newbies
6 basic engineers
1 basic naval engineer
3 basic firearms engineers
1 amazingly talented but unskilled firearms engineer

805: Turn

805 Turn

This year was a bit of a let-down compared to the success that was last year. of the four proposals made, only two made the cut.

To start with, we have the imaginatively named 75mm Artillery Cannon, which among other things was also tasked with creating their own arty shells, which may have caused most of the delays the project suffered from, along with the specifics of the proposed recoil absorption feature. Despite all that, the team was close to having an actually functional prototype at years end.

Next up, the camo/clothing development group, who spent all year yelling at eachother, touring textile mills, and trying to work out what shape load bearing equipment should take. So, in other words, no progress.

Now we come to our first actual bit of progress, the Swordfish Torpedo Boat Destroyer.
A 220-ton steam-powered(two engines, each with four high-pressure water boilers supplying steam to a turbine each(which also serve to provide the vessel with electricity)) and managing a top speed of over 30 knots, it is armed with a quartet of pattern 793 revolving cannon, with two in a forward mount and two single mounts located amidships and aft. The vessel is also equipped with a pair of torpedo

launchers for the Pattern 803 15.7" torpedo. Provisions are also made for the mounting of several pattern 801 Heavy Revolving Rifle in various points along each side of the vessel.
The pattern 793 turrets are lightly armored and open topped, and are rotated via electric motors. Low powered electric motors have also been fitted on the guns to actuate them, and in the case of the single-gun mounts there are also motors powering elevation of the guns.
Speaking of these secondary turrets, they are mounted below the arc of fire of the main turret, which does restrict their firing arc slightly.
Now, the two torpedo positions. The two single-tube launchers share a "ready storage room", which can hold but six of the crafts thirty-fish load. The remainder are held below deck. They also are not centerline mounted, which means that the craft has to fire one, turn around, and fire the other.
The vessel uses signal flags for communication, although the lanterns have been replaced with electric lights. Talk has been made of outfitting the vessel with electric spotlights, or even a radio.
For armor, the ship has nothing, not even coal bunkers. For whatever reason, coal is stowed amidships and down low, acting as basalt. As soon as the vessel was determined to be seaworthy, she was hoisted out of the still-blocked harbor and loaded on a special train, making a roughly 100mile trip to a port it can actually operate out of along track that can handle the clearances needed.

Finally, a new factory was built with a capacity of 575pp per year. In doing this, the untrained engineer assigned to the product has become specialized in architecture.

805 Designs

Swordfish Torpedo Boat Destroyer
Armament:
-1x twin-mount pattern 793 revolving cannon
-2x single-mount pattern 793 revolving cannon
-2x single-tube Pattern 803 15.7" torpedo launcher, with 30 total torpedoes and 6 held in readiness at any given time
-A number of mounts for heavy machineguns along the sides of the vessel(typically 6x Pattern 801 Heavy Revolving Rifle)
Communications:
-signal flags
-electric lights
Propulsion:
-2x power plants consisting of single steam turbine, four water-tube boilers and two electric generators each turning one screw
Top speed: 32 knots
Range: 3000nmi
Equivalent Cost(in PP):129 for armaments(not counting modifications or smallarms)

805 Facilities/Personnel

Five off-site factories producing ammunition (2x 10x60mmRS cartridge, 1x 10x30mm(black) cartridge, 1x 37mm cannon)
One on-site factory complex with four production lines of 300pp each and one of 575pp
One on-site workshop, for designing new things
One on-site design studio
One harbor, mostly blocked by sediment and the scuttled hulk of a wooden sailing ship(now partially damaged by torpedoes)
One dockyard with yearly capacity of 300 ton
One world class firing range, with attached offices for range table calculation
one

6 newbies
1 untrained architect
6 basic engineers
1 basic naval engineer
3 basic firearms engineers
1 amazingly talented but untrained firearms engineer

805 News

In international news, a trio of siblings (consisting of two females and their brother) constructed and flew the first heavier than air craft for a grand total of six seconds. The first diesel powered seagoing ship returned from her first voyage, a small nation almost on the other side of the globe adopted a semi-automatic rifle as their standard smallarm, and a worker strike near our border with the Monarchy was put down by royal troops armed with smokeless repeating bolt action rifles, helmets, and blackpowder revolvers. As most of the workers where from our nation, the government has gotten quite angry, and has demanded recompense. The Monarchy, thus far, has ignored our demands.

806: Battle Report, Turn Report

806 Battle Report

We interrupt our regularly occurring layout to bring you this important message. Late this year the Republic declared war upon the Monarchy after they refused to give up an alleged fugitive from justice. According the the Republican government, the individual in question was seen planting explosive devices at no less than three high-value targets, consisting of an ammunition factory and two strategic military bases.

Mobilization of military forces by both sides(along with their allies and/or vassals) is now well underway. Fighting has been confined between the two main powers, and in most respects is identical to that of a few years ago.
Well, with a few exceptions.
Each side has been issuing new multishot rifles to their front line troops with the Monarchy using their bolt-action Mk1* Airus(named for their crown prince) in a 30-30 round and the Republican forces using the lever action Pattern 801A Revolving Rifle. Of the two the Pattern 801A is the more powerful(as the cartage used in the A variant is the same size as their old blackpowder rifle) and is slightly lighter, but the Airus is able to reload more quickly and better handles the recoil of firing.
In addition, Republican forces have been issuing new automatic pistols while Monarchy forces have been issuing helmets in bulk. While the helmets are unable to handle the large rounds fired by either the Pattern 801A or the Pattern 803 Jupiter, they have saved many a life from shrapnel and near misses.
There have been a few new larger weapons seen in combat aswell. From the Republic there have been a large number of Pattern 801 Light Revolving Cannon(basically their pattern 793 Revolving Cannon using their standard 10x60mm round), while from the Monarchy there have been a few "Hailstorms" seen on the battlefield, mostly delivered late in the year. These are large(really large) watercooled, belt fed weapons using their standard rifle round.

On the seas, there have been a large number of hit and run attacks on Monarchy ports and shipping by a pair of Republican torpedo boat destroyers, which are armed with their revolving cannon and a number of their light revolving cannon, but oddly no torpedoes.

806 Turn Report

Well, that year was eventful. Fighting was almsot entirely a stalemate (beyond naval

actions anyways), something attributed to the lack of modern artillery.

In any event, this year was a year of good progress, even if it was not all the progress we planned to have.

First off, we have the Pattern 806 Field Gun, nicknamed the "Ratio". This weapon (which weighs in at almsot two thousand kilograms) is by far the most accurate direct-fire artillery piece our engineers have seen, and is able to hit targets nine kilometers away when used as a indirect fire piece. The weapon has a new, innovative "split trail" carriage, along with a liquid-based recoil absorption system, which means that the gun does not need to be relaid after each shot. The weapon is also amazingly cheap for what it is. Our officers have noted that it is on the heavy side for our horses, and having seen our earlier work on a artillery tractor wonder if another design for one could be worked on.

Its munitions, however, are disappointing. Early work on them where unmitigated failures, but the problems where caught in time to work on them. However, there are only two forms of shell for the gun(consisting of a wimpy impact-detonated HE round and a solid round thats more likely to explode than penetrate), and both are rather mediocre, in addition to costing a fair deal more than anything else like them.

Now we come to the Pattern 806 HMG, an air-cooled, closed bolt belt fed weapon using our standard 10x60mm rounds. This weapon has proved to have a problem here and there (the action could use work), but in most respects it is a reliable, durable weapon that can be made for (comparatively) almost nothing and is shockingly light. By itself it weighs in at only 28kg, to which its tripod and similar kit add an extra 20. Being air-cooled it is intended to be supplied with quickly changeable barrels, although this has proved to be mostly unnecessary in testing.

Next up, a team of engineers had been working on a new artillery complex, which has resulted in a trio of 300pp lines optimized for handling artillery pieces (at the moment, the 75mm gun and the revolving cannon are all that apply here).

Last but not least, one of our engineers was put to work clearing out the harbor, with help from our small navy.

In governmental shenanigans news, we have had a new draft of engineers assigned to us, along with a number of factory complexes. Five new factories have been built to handle munitions production, and a total of four 250pp production lines and a 300ton drydock have been freed up for our use. We have also received a new batch of engineers, consisting of seven basic and five newbies.

806 Designs

Pattern 806 75mm field gun "Ratio" A 2000kg, rapid fire artillery piece with recoil suppression and a split trail carriage. Tad heavy for horses, and is able to fire at targets out to 10km. Costs 10pp each
75mm shells, Pattern 806 Comes in two flavors, a low powered HE round and a solid shell that likes to shatter on impact with a hard target.
Pattern 806 HMG A 28kg (48kg with all its kit) belt fed and air-cooled heavy machinegun with some issues with its action and no problems elsewhere. In fact, in all other respects it is significantly above average. Costs 5pp each (Yes, 5pp. Its that cheap)

806 Facilities/Personnel

Five off-site factories producing ammunition (2x 10x60mmRS cartridge, 1x 10x30mm(black) cartridge, 1x 37mm cannon) Five off-site factories tooling up to produce ammunition One on-site factory complex with four production lines of 300pp each and one of 575pp(optimized for smallarms) One on-site artillery complex with three 300pp production lines Four offsite and widely dispersed factories, each with a capacity of 250pp One on-site workshop, for designing new things One on-site design studio One harbor One onsite dockyard with yearly capacity of 300 ton One offsite drydock with yearly capacity of 300 ton One world class firing range, with attached offices for range table calculation 10 newbies 1 untrained munitions engineer 1 untrained architect 13 basic engineers 1 basic naval engineer 3 basic firearms engineers 1 amazingly talented but untrained firearms engineer

807: Battle Report, Turn Report, Rumours

807 Engineer Assignment

Possible engineering assignments:

M2 Battlehelmet (1N 2B)
- 1x newbies
- 2x basic engineer

75mm field gun shells (2N 1U 2B, 1xS)
- 2x Newbies
- 1x untrained munitions engineer
- 2x basic engineer

Truck engine (1N 4B)
- 1x newbies
- 4x basic engineer

80mm mortar (2N 2B)
- 2x newbies
- 2x basic engineer

80mm mortar rounds (2N 2B)
- 2x newbies
- 2x basic engineer

Swordfish early-life upgrade (2B, 1S)
- 1x basic naval engineer
- 1x basic engineer

Small-arms factory (3B, 1U, 4xS)
- 3x basic firearms engineers
- 1x amazingly talented but untrained firearms engineer

Expand Drydock production (1U, 1xS)
- 1x untrained architect
- 2x newbies

807 Production Assignment

Production:

On-Site factory complex
- General (300pp): Torpedo (18.75 launchers/turn)
- General (300pp): Jupiter Pattern 803 Automatic Pistol (600/turn)
- General (300pp): 75mm field gun Ratio (30/turn)
- General (300pp): M1 HMG (115/turn)
- Small-Arms (575pp): M1 HMG (60/turn)

On-Site Artillery Complex
- Artillery (300pp): 75mm field gun Ratio (30/turn)
- Artillery (300pp): 75mm field gun Ratio (30/turn)
- Artillery (300pp): 75mm field gun Ratio (30/turn)

Off-site (dispersed)
- 3x General (250pp): Revolving Rifle (1250/turn)
- General (250pp): Pattern 803 Trench Broom (~180/turn)

On-site Naval
- Dockyard (300t): Swordfish TBD: 1.3/turn

Off-site Naval
- Dockyard (300t): Swordfish TBD: 1.3/turn

Produces:
75mm Pattern 806 Field Gun Ratio: 120/turn
M1 Pattern 806 HMG: 175/turn
Swordfish TBD: 2.6/turn
Revolving Rifle: 1250/turn
Trench Broom: ~180/turn
Torpedo: 18.75 launchers/turn
Jupiter Pattern 803 Automatic Pistol: 600/turn

807 Battle Report

The war this year has taken a turn for the destructive, with both sides wheeling out modern artillery pieces. For the Republic, their piece is the Pattern 806 "Ratio" field gun, capable of firing at a distance or delivering witheringly accurate fire in a direct fire role. The Monarchy has wheeled out their quick-fire "striker" field gun, lobbing 25lb shells at targets. Of them, the "ratio" is by far the best in direct fire roles, even with the Strikers purpose designed ammunition for the job(a shrapnel shell that turns it into a giant shotgun), while both guns are let down by poor HE performance at range. According to rumors, both sides have been hard at work attempting to correct this

deficiency.
In addition to this, Republic shock troops have been attacking trenches at short range with their recently produced pattern 803 Trench Broom(their second try at such a weapon), a rapid fire weapon firing the 10x30mm "special" round and their more prevalent Jupiter pistols. However, these attacks have been largely countered by the rapid deployment of machineguns and infantry via truck(least, when said trucks are not shifting about field guns) while the Republican forces have largely been unable to move up reinforcements to exploit these gaps in the lines. Likewise, Republican forces have begun producing their own machineguns that have made the Monarchy unable to storm Republican trenches.

At sea, the two initial Republican naval vessels have been joined by two more, both equipped with torpedo launchers (single tubes, one on each side). These have been hammering ports and any ships unlucky enough to find them, and have been noted to be able to hit a single target with their guns while making the extreme maneuvers necessary to get off both tubes. At the same time, what arty has been able to be spared from the front is so thinned out as to be almsot useless.

So, to recap: War on land is messy trench warfare with one side equipped with helmets and using trucks to bring up some reinforcements and the other side using deadly direct fire arty(when they can bring it up fast enough) and proto-SMGs. At sea, its a curb stomp for the Republic.

807 Turn Report

Well, here we go. Our Generals report that the only reason our armies are not driving on their capital is due to our lack of anything to, well, drive. Particularly over their trenches.

So, lets begin with what we did do this year.

To begin with, we have the Pattern 807 Field Helmet, which is constructed out of a single piece of steel and a cloth inner. The outer structure of the helmet is face hardened and made out of a light weight but high strength helmet that results in being able to stop one of our rifle rounds at medium to long ranges, and can stop a round from a Jupiter at anything other than close range. However, its design can get in the way of a soldiers movement, particularly while crawling. This is, in part, due to the slight "spongyness" of the metallic section's suspension over the inner part.
Anyways, the helmet comes painted in a flat, earth like tone, and is also fitted with a net, into which small bits of foliage or cloth can be affixed to lessen a soldiers ability to be seen. The helmet is also quite cheap to produce.

Next up, we have a set of new shells for our field gun, consisting of HE(in two forms), a useful AP round, and a illumination round. Sadly, our engineers where unable to find a

smoke producing agent they felt safe with. Anyways, the HE shell consists of a standard shell body with not inconsiderable power and a choice of two detonators screwed on the rear. One is for impact, and detonates when the shell is stopped, and the second is a quickly-adjustable timed fuse.
The AP shell, which is still just pure AP with no high explosive within it(something that our navy would rather have), is able to penetrate a considerable amount of armor(upwards of 20cm), due to the fact that all that is fired is a small rod of highly dense material. The hole it leaves is small, but hopefully it will fail to penetrate the back of whatever its fired at and bounces around inside. This is now termed APDS by our engineers.
Finally, we have our illumination round, which is able to light up a considerable area for about 150 seconds.
And if all that was not good enough, making the shells is cheaper than ever before.

And now, the 55hp gasoline engine we developed, a four stroke, four cylinder engine that is absolutely minuscule, runs whenever one wants it to, and is shockingly cheap. One of the engineers assigned to this mentioned something about it to someone in a letter and since then the number of requests from private firms(particularly ones that make motorcycles) has skyrocketed.
Congrats, you have something from 1965 here
Following in our design line up, I present the Pattern 807 Mortar of 80mm, a fantastically strong, quick to set up, accurate, long ranged and *cheap* mortar that has a drawback only in its weight, which is on the heavy side. To cope with this, the weapon is designed to travel as three segments consisting of the barrel, the bipod, and the base plate.
The shells for the weapon are, as is seemingly standard, on the pitiful side. Now, the shell consists of one of two warheads, mounted on a finned shaft. Up to three additional propellant charges can be fitted to this shaft, and one is contained within. The expensive part of the shells are the warheads themselves, which come in HE and Fragmentation.

Following this, we have the Swordfish Type B development, which consists of taking the twin-mount turret off and putting a new one for a 75mm cannon on. The end result is a far slower turning turret that can hold our field gun along with a (rudimentary) range finder(consisting of the iron sights on the weapon being fitted with a multi-prong arrangement representing the width of a man at different ranges).

Finally, we built some new factories, expanded another, and added another slip to the drydock. The appropriate section has been modified to address these changes.

807 Designs

Pattern of 807 Battlehelmet
Able to protect against 10x60mm rounds at medium and long ranges. Slightly encumbers used due to "spongyness". Built in camouflage w/ ability for end user to add more.
Costs .05pp each

Pattern of 807 Gasoline Engine
Produces 55hp
Extremely light weight
Costs 1pp each(!)

Pattern of 807 80mm Mortar
Maximum range of 2km
Weighs 60kg total, designed to be split into three parts for transport
Shockingly accurate at medium to short ranges(under 1k)
Costs 2.5pp each

Pattern of 807 75mmR shells
For the Pattern 806 75mm Field Gun "Ratio", now with greater penetration(for AP) and far larger explosive damage.
-HE, choice of impact or timed fuze
-APDS
-Illumination(lasts 150 seconds)

Pattern of 807 80mmM shells
For the Pattern 807 80mm Mortar
Consists of warhead(HE or Fragmentation) and finned section
Up to four total propellant charges(with all, able to be fired out to 2km)
Warheads are low powered and complex to produce

Swordfish Type B
(Variant of the 805 Swordfish Torpedo Boat Destroyer)
Armament:
-1x single-mount pattern 806 "Ratio" Field Cannon(NOTE, SEVERELY REDUCED TURRET SPEED. BASIC RANGEFINDER EQUIPPED)
-2x single-mount pattern 793 revolving cannon
-2x single-tube Pattern 803 15.7" torpedo launcher, with 30 total torpedoes and 6 held in readiness at any given time
-A number of mounts for heavy machineguns along the sides of the vessel(typically 6x Pattern 806 HMG)
Communications:
-signal flags
-electric lights
Propulsion:
-2x power plants consisting of single steam turbine, four water-tube boilers and two electric generators each turning one screw
Top speed: 32 knots

Range: 3000nmi
Equivalent Cost(in PP):92 for armaments(not counting modifications or smallarms)

807 Facilities/Personnel

Thirteen off-site production plants producing ammunition (5x 10x60mmA cartridge, 1x 10x30mm(black) cartridge, 1x 37mm cannon, 2x 10x30mm Special, 2x 12.5x30mm, 1x 15.7" Torpedo, 1x 75mmR(old) cannon rounds(Changing over to new type as we speak))
One on-site factory complex with four production lines of 300pp each and one of 600pp
One on-site artillery complex with three 300pp production lines
Five offsite and widely dispersed factories(ON LOAN), each with a capacity of 250pp
Four dispersed factories, each with 300pp of capacity
One on-site workshop, for designing new things
One on-site design studio
One harbor
One onsite dockyard with two slips, each of 300 ton
One offsite drydock(ON LOAN) with yearly capacity of 300 ton
One world class firing range, with attached offices for range table calculation

9 newbies
1 untrained munitions engineer
1 basic munitions engineer
1 untrained architect
11 basic engineers
1 basic armor engineer
1 basic naval engineer
1 basic firearms engineers
2 talented basic firearms engineers
1 amazingly talented but untrained firearms engineer
1 good engineer

807 Equipment Stocks

LONGARMS
-Pattern 782 Standard Troop Rifle
 32700 guns of various types
-Pattern 801 Revolving Rifle in 10x60mmRS
 5200 guns
-Pattern 803 Trench Broom
 130
SIDEARMS
-Pattern 784 Revolver
 5020 single action
 2700 double action
-Pattern 803 Jupiter Automatic Pistol
 1200
LIGHT HEAVY WEAPONS
-Pattern 801 heavy revolving rifle
 75 guns
-Pattern 806 MG
 120
ARTY
-Pattern 793 Revolving cannon
 330 guns
-Pattern 807 75mm Field Gun "Ratio"
 95
OTHER
-18.75" Torpedo Launcher
 8

NAVY
-Swordfish Torpedo Boat Destroyer
--Pattern 793 Revolving cannonx4
--Pattern 806 HMG x6
--Pattern 803 15.7" torpedo launcherx2
 4 Vessels

807 Rumours

Have a scuttlebutt report on their stuff, as far as we can tell about it in any event!

Their main rifle is a ten-shot, bolt action(cock on close, rear lugs) with non-adjustable iron sights. It is 42 inches long, weighs round about eight and a half pounds, and it looks as though the magazine was intended to be detachable but that it was decided to lock in place. In addition, its bayonet lugs appear to have been an afterthought.

Their helmet is a steel shell supported(with a bit of a gap) by a cloth and leather inner, with netting that goes over the whole thing.

Their machinegun is watercooled, belt fed, and has long range ironsights weigh in in at about 45lb. it is the same length as their rifle.

Their pistols are a slightly modified form of their vintage pistol, the only change being that the shape of the chambers(and the ammunition) is such that it is faster to reload. For a pinfire, anyways. Still blackpowder, still for officers.

Their field pieces appear to have a range of 13000 yards, fire 25lb shells, and dont quite have all the range tables they need yet. Their shells are also low powered, but that is something they are apparently working on.

From what we have been able to get off of some officers, they developed a form of body armor that they never decided to actually produce. However, private companies have been making knockoffs for sale to officers.

They have a truck, which uses a diesel engine (which appears quite advanced, it produces roughly 100hp and is smaller than a horse) and weighs in at 2.5 ton. Apparently, its something of a workhorse, able to haul about four tons of stuff. They dont have that many of them, and thus mostly use them to haul around big things, like artillery. Efforts are being made to make them cheaper, according to scuttlebutt anyways.

Theres alot of muttering about a ship designed to blow our TBDs out of the water, along with a torpedo system for ports to use.

808: Battle Report, Turn

808 Engineer Assignments

- Radio-Set, Man-Portable (3B1N)
  1 basic naval engineer
  2x Basic Engineer
  1x Newbie

- Mule Truck (4B1N1G)
  1 basic armor engineer
  3x Basic Engineer
  1x Newbie
  1 good engineer

- Camouflage Uniforms (1B1N)
  1x Basic Engineer
  1x Newbie

- Grenade (1B1U, 1xS)
  1 basic munitions engineer
  1 amazingly talented but untrained firearms engineer

- Mortar Rounds (1U, 2B, 1xS)
  1 untrained munitions engineer
  2 talented basic firearms engineers

- Training Program (3B2N)
  2x Basic Engineer
  1 basic firearms engineers
  2x Newbie

- Truck Factory: 1x 300pp engine line, 3x 300pp vehicle line (1U1B2N, 1xS)
  1 untrained architect
  1 basic engineers
  2x Newbie

- General Purpose Factory (2B2N)
  2x Basic Engineer
  2x Newbie

808 Production Assignment

On-Site factory complex
- General (300pp): Torpedo (18.75 launchers/turn)
- General (300pp): Jupiter Pattern 803 Automatic Pistol (600/turn)
- General (300pp): 75mm field gun Ratio (30/turn)
- General (300pp): Helmet (6000/turn)
- Small-Arms (600pp): M1 HMG (120/turn)

On-Site Artillery Complex
- Artillery (300pp): 75mm field gun Ratio (30/turn)
- Artillery (300pp): 75mm field gun Ratio (30/turn)
- Artillery (300pp): 75mm field gun Ratio (30/turn)

Off-site (dispersed)
- 2x General (250pp): 80mm mortar (total 200/turn)
- 1x General (250pp): Helmet (5000/turn)
- General (250pp): Pattern 803 Trench Broom (~180/turn)
- 3x General (300pp): Revolving Rifle (total 1500/turn)
- 1x General (300pp): M1 HMG (60/turn)

On-site Naval
- Dockyard (300t): Swordfish B TBD: 1.3/turn
- Dockyard (300t): Swordfish B TBD: 1.3/turn

Off-site Naval
- Dockyard (300t): Swordfish B TBD: 1.3/turn

Produces:
75mm Pattern 806 Field Gun Ratio: 120/turn
M1 Pattern 806 HMG: 180/turn +5/turn
Swordfish B TBD: 4/turn +1.3/turn, changed to B model
Revolving Rifle: 1500/turn +250/turn
Trench Broom: ~180/turn
Torpedo: 18.75 launchers/turn
Jupiter Pattern 803 Automatic Pistol: 600/turn
Helmet: 11,000/turn +11,000/turn
80mm mortar: 200/turn +200/turn

808 Battle Report

So, in this year we see the introduction of a number of new weapons and vehicles from both sides, as the Monarchists come out with their first naval vessel, the under-armed Z-Class, which weighs in at 800 ton but carries less armaments than the significantly smaller Swordfish. Speaking of which, a new type of Swordfish has been seen sailing about, with its main gun turret having been redesigned to mount one of the deadly Republican field guns.

In combat, the Swordfish has the clear advantage in anything up to the worst the sea can throw at them, with clear speed and maneuverability advantages(although it takes a lucky hit fom a 37mm cannon to do much damage to the Z-class). The new type of Swordfish is actually less capable in this regard, as its new turret is unable to keep on target as the ships make their wild maneuvers to avoid the guns of the Z-Class. After a long drawn out engagement between nearly the entire naval forces on both side(which mostly consisted of the two Z-Class ships built trying to lure the school of Swordfish into range of shore batteries and the Swordfish using their small speed advantage to keep from being targeted) resulted in the loss of one Z-Class and the near loss of her sister, to three casualties on the Republican side, which consisted of the loss of two-thirds of the new ships(unable to use their maneuverability as much due to their slower turning turrets) and one of the older craft that was hit by a lucky shot. Likewise, most of the damage done to the two Monarchist vessels was from the 75mm cannon or from torpedoes, with the lighter guns on the swordfish not doing much besides make the (exposed) bridge crews take cover.

In the trenches, the war has also taken a turn for the worse on both sides, as the Monarchists rush heavy guns to the front and the Republicans use their new 80mm mortars (which are light enough to be carried by infantry on the attack) to better hit enemy trenches. Fighting also now occurs at night, as the Republican forces have developed illumination rounds which, coupled with efforts to bring troops as close to the enemy's trench before they assault have resulted in the Monarchists loosing much of their first rank trench system. Not even the rapid deployment of men and guns have been able to retake their losses.

With the war heating up further, word has come that each sides allies and vassals have been readying for war with new vehicles and weapons. Some of these have been made available for refinement and use by the two main powers, and may indicate that new fronts may be opened soon. The new equipment has received mixed responses, as in many cases it does not match up with what generals where told to expect. However, this new equipment has come far too late to affect this years combat, and will not be discussed here.

808 Turn

Well, while our allies hemmed and hawed about sending us aid and about possibly opening a second land-based front to this war, our engineers have been hard at work in the labs.

So, starting from the top, we begin with the Pattern 808 RS-MP. Weighing in at over two hundred pounds of this, that, and other things (including the oak chests that hold everything during transit), the RS-MP is costly, not particularly reliable, and(of course) heavy. However, it is blessed with a long range(in good conditions) and in using little exotic material.

Next up, we have the Mule Truck, intended to fill the gaps in our own logistics system. Sadly, due in part to its... Interesting engine arrangement(with one engine per axle, and located on said axle) our engineers have, at this point, been unable to complete the design this year.

Moving quickly on, we have the work done on our uniform update, which was detailed to be based on a dull, lightly patterned fabric and come in various articles of clothing, consisting of three forms of pants, a winter coat, and a shirt. Many features of the old uniform will be kept as a result, such as the leather shoes and puttees. After quite a bit of work, mostly in finding civilian factories who can manufacture the cloth and then make the actually uniform components, the engineers announce that they have finished, if not quite to requirement than certainly close enough.
The resulting clothing... Is not the best. The particular type of wool used in the cloth is stiff, the dyes used run, the manufactures skimped at times in the actual quality, and in the end the uniform is not all that different than those currently in existence.

Next up, we have things we throw to make go boom! Or sometimes, fit to end of gun, load special shiny bit, and that make go fly to go boom!
ahem
Anyways, the Pattern 808 Fragmentation and High Explosive hand grenade, designed to work when thrown by hand or by rifle, are best described as tall, slightly ribbed cylinders (about two inches in diameter) with a socket at one end for fitting to a rifle or to a stick and a four-second timed fuse inside. The fragmentation qualities of the weapon are... poor, perhaps directly due to the massive explosive load of the bombs. In addition, the actual weight of the grenades is quite large, weighing in at two pounds!

Following along, we have those poor sods who where tasked with making our mortar rounds better do their jobs. Sadly, not only where they unable to do this, but they also nearly lost one of their member, when an untrained munitions engineer attempted to increase the payload by strapping one of the prototype 808FHEs to a warhead and nearly lost their life to go along with their arm.

There where a group of engineers tasked with building a training center. After misplacing their orders, they spent the year mostly on holiday, teaching each other things now and then. So, atleast they got something out of it.

One team was tasked with building a factory complex for the production of trucks and truck engines, which they managed to get open before the year officially ended.

However, a quite similar group tasked with constructing a general equipment factory, but due to some rather horrific problems with the ground where unable to do much more than get down a cornerstone.

In good news of this year, our grand and glorious allies to the north have sent us a number of designs for equipment from within their own military, which consist of a shockingly large siege mortar, a 6" naval gun they have had in use for a fair few years now, and a agricultural tractor typically used to move about field guns in rough terrain by their army. We received nothing from the south, mostly due to their most advanced designs being from us.

A grand total of nine engineers where sent to join us, of whom eight had no formal training past highschool.

Now, lets talk about our supply situation, shall we? Our nation is one of wide forests(mostly of evergreens), stereotypical hills and tall mountains. We are blessed with large deposits of coal, copper and iron and have highly fertile farms in the south. Two smallish oil fields have historically been able to fulfill our needs, but the expected demand for diesel and gasoline will likely affect this. Large foundries produce steel, even though the flux needed comes mostly from without our lands. Aluminum is mostly imported, typically as bauxite from those places that provide us with flux.

808 Resource Situation

Workforce: Unhindered	****	
Food: Limited imports [Importing]	**	
Coal: No supply problems [Exporting]	*****	
Iron: No supply problems [Exporting]	*****	
Steel: Imported Flux [Exporting]	***	
Aluminum: Imported, minimal usage	*	
Rubber: No supply problems [Importing]	**	
Advanced parts: No supply problems	*	
Advanced electronic parts: No usage		
Ethanol /Methanol: No supply problems	*	
Special fuels: No supply problems	*	[Note: most rocket fuels belong here]

Special Materials: No supply problems * [Note: Hydrogen and the like will go here] Explosives: No supply problems ** Diesel: No supply problems * Gasoline: No supply problems * *MORE MATERIALS WILL BE ADDED IN TIME*

808 Designs

Pattern 808 RS-MP A six unit radio set with range of roughly 10 miles with its provided antenna in hilly areas. Weighs in at 200lb. Often breaks, and can only send or receve at one point. Costs 15pp each
Pattern 808 Fragmentation and High Explosive hand grenades -HE high powered Weighs 2lb -FRAG High explosive yield, mediocre fragmentation damage Weighs 2.25lb -Both are able to be used as rifle grenades and count as ammunition.
Uniform Revision of 808 Winter coat, three types of pants, buttondown collared shirt. Dyes run, fabric is stiff, not much of a change in the end. Local industry will provide this, dont worry about making it.

808 Facilities & Personnel

Thirteen off-site production plants producing ammunition (5x 10x60mmA cartridge, 1x 10x30mm(black) cartridge, 1x 37mm cannon, 2x 10x30mm Special, 2x 12.5x30mm, 1x 15.7" Torpedo, 1x 75mmR(old) cannon rounds(Changing over to new type as we speak))

One on-site factory complex with four production lines of 300pp each and one of 600pp
One on-site artillery complex with three 300pp production lines
Five offsite and widely dispersed factories(ON LOAN), each with a capacity of 250pp
Truck Complex consisting of 1x300pp engine line and 3x300pp vehicular lines
Four dispersed factories, each with 300pp of capacity
One on-site workshop, for designing new things
One on-site design studio
One harbor
One onsite dockyard with two slips, each of 300 ton
One offsite drydock(ON LOAN) with yearly capacity of 300 ton
One world class firing range, with attached offices for range table calculation

2x good engineer
1x basic naval engineer
1x basic armor engineer
1x basic munitions expert
3x basic and talented firearms expert
1x highly talented basic firearms expert
12x basic engineer
1x untrained but amazingly talented firearms expert
1x untrained munitions expert, maimed
1x untrained but talented firearms expert
15x Newbie

808 Equipment Stocks

LONGARMS
-Pattern 782 Standard Troop Rifle
32380 guns of various types
-Pattern 801 Revolving Rifle in 10x60mmRS
6590 guns
-Pattern 803 Trench Broom
276
SIDEARMS
-Pattern 784 Revolver
4810 single action
2380 double action
-Pattern 803 Jupiter Automatic Pistol
1750
LIGHT HEAVY WEAPONS
-Pattern 801 heavy revolving rifle(Still used on the front line)
38 guns

-Pattern 806 MG
 265
-Pattern 807 Mortar
 185
ARTY
-Pattern 793 Revolving cannon
 315 guns
-Pattern 807 75mm Field Gun "Ratio"
 205
-Make of 807 42cm siege mortar
 3
-Make of 792 6" naval gun
 31
OTHER
-18.75" Torpedo Launcher
 18 launching systems
-807 Helmet
 98000
-Make of 799 Artillery Tractor
 38

NAVY
-Swordfish Torpedo Boat Destroyer
--Pattern 793 Revolving cannonx4
--Pattern 806 HMG x6
--Pattern 803 15.7" torpedo launcherx2
 3 Vessels
-Swordfish TBD Type B
--Pattern 806 75mm field gun x1
--Pattern 793 Revolving cannonx2
--Pattern 806 HMG x6
--Pattern 803 15.7" torpedo launcherx2
 2 Vessels

808 Standing contracts with external suppliers

-Provision of 808 uniform revision clothing, in full

808 Acquired Designs

-Make of 799 Artillery Tractor
A tractor typically used in agriculture. Runs on two single-piece tracks, which are used to steer. Top speed of 12mph unladen. Weighs 9 ton.
Costs 10pp each(plus engine cost)

--Make of 799 75hp gasoline engine
A large, heavy and now outdated gasoline engine producing 75 horse power.
Provided with the 799 artillery tractor
Costs 10pp each

-Make of 807 42cm siege mortar
A 42cm/16 heavy siege mortar that is able to lob a shell 14.2km every eight minutes weighing in at 140 tons. For transport the gun breaks down into 10 segments. The gun requires specialized construction before it can fire, which according to its makers can take a week.
Costs 55pp each

-Make of 792 6" naval gun
A 6"/40 screw-breach gun firing single-piece ammunition, provided by our northern neighbor. Weighs 7ton w/ mounting (consists only of gunshield and actual mount) and has recoil buffers. The gun is able to get off between five and seven rounds a minute at a range of about 14km.
Costs 20pp each

808 GM Notes

Note: Due to reading back up on how your rifle works, its going to be nerfed a fair deal after this turn. Namely, increased reload times thanks to the structure of the magazine and decreased accuracy due to the size and weight of recoil of the round. The helmet may also get nerfed slightly.

There is NOTHING comparable to the Hague, St. Petersburg treaties, Geneva accords, or the International red cross in this universe.

808 World News

World news report, 808

In news this year, we have a large number of new innovations military applicable things. Among these are:

-The Monarchy has commissioned the worlds first military airship, the HMIAS Wene, which is of semi-rigid structure and is armed with a number of machineguns and a pair of cannons. Oddly, during its tour to show it off to the Monarchy's people its two cannons where missing.

-The Gaus navy has commissioned the first submarine to be propelled both by electric engines and by a diesel engine. It is armed with three externally mounted torpedoes and a pair of torpedo tubes.

-Experiments in the Oligarchy of Logmen with heavier-than-air-craft for scouting have given birth to the first seaplane. It is unarmed and has a crew of one.

-A mass-produced passenger car is put into production, running off of an engine designed to use high-strength alcohol or gasoline. Due to its use of an assembly line where the car, not the workers, move along it production costs are even now dropping steadily. It is estimated that within a decade nearly anyone will by able to purchase one if they wish.

-The first railway locomotive to exceed 100mph does so in Denland

-The IDS Bulldog is laid down, and has sparked something of an arms race. Unlike other battleships, she is armed with a uniform set of main armament guns and few secondary armaments. She is also powered by steam turbines and possesses the superimposed turrets first put into use in 801 by the Oligarchy of Logmen.

Designs

By Type

Small Arms & Ammunition

Pistols

Pattern 784 Revolver

Starting Design
Obsoleted by the Pattern 800 Jupiter Automatic Pistol
Uses the 10x30mmB pistol cartridge

A five shot revolver firing the black-powder 10x35mm cartridge. There are simple iron sights fitted. The weapon is loaded one round at a time from a loading gate on the left side of the weapon, as it is intended for cavalry and officers, who still ride horses in combat. Officers are granted single action versions, while the rank and file who are granted one are only given double action weapons. The weapon possesses a 6inch barrel, weighs five and a half pounds unloaded, and is typically an officer-only weapon. Costs .5pp each

Pattern 800 Jupiter Automatic Pistol

Designed in 800
Uses the 12.5x30mm pistol cartridge
Obsoleted/Upgraded by the Pattern 803 Jupiter Automatic Pistol

Original Proposal: A new modern pistol using the modern long recoil, rotating bolt action where both the bolt and barrel are firmly locked together as the whole system recoils backwards, only unlocking after bullet has left the barrel. The barrel is 9 inch long and it has a fixed 8 round magazine in side the hand grip.
(8)Sadly, the engineers designing the actual weapon have a bit of a hard time with it. (14)The action of the pistol works well and screws up only rarely, (6) But the magazine is a buggy mess that loves to jam the weapon. Loading the thing is also rather difficult, as the engineers where unable to develop a reliable way to fill the magazine that doesn't take far longer than the revolver ever did. (20)(10) However, the weapon is extremely light and is somewhat easy to produce. Infact, loaded, the pistol

only weighs about 2lb loaded.
Chambered in the 12.5x30mm pistol cartridge 9in barrel, 8rd internal box magazine, weighs 2lb loaded Faulty magazine Cheap to make (.5pp each)

Pattern 803 Jupiter Automatic Pistol

Designed in 803
Uses the 12.5x30mm pistol cartridge
Obsoletes/Upgrades the Pattern 800 Jupiter Automatic Pistol

Original Proposal: Lets have a go at fixed our pistols magazine.
A second (more or less successful) group of two engineers (one new, one a basic firearms) worked on working out the bugs with the Pattern 800 Jupiter Automatic Pistol, which we all know had issues with the magazine. With the benefit of the work papers from when first working on it, they come out with the Pattern 802 Jupiter Automatic Pistol, now featuring a removable box magazine that manages to hold the same number of rounds as the original without trying to jam the gun as the original did. It even managed to lower the cost of the actual pistol by a almost unnoticeable amount, although we now need to make extra bits for the magazines. Ohwell.
The older pattern 800 version, now with detachable box magazines that feed correctly! As expected, all prototypes are now missing, as the testers loved them to bits and demand more.

Rifles

Pattern 782 Standard Troop Rifle

Starting Design
Obsoleted by the Pattern 801 Revolving Rifle
Upgraded by the Pattern 804 Standard Troop Rifle
Uses the 10x60mmB black powder cartridge

A rolling block rifle firing the black-powder 10x60mm cartridge. Provisions are made for a bayonet to be mounted, and there

are crude iron sights. However, there is no safety, indicators to show if the weapon is loaded or cocked, and almost no effort at making the weapon "nice" to use. The weapon is 6ft long, although shorter variants do exist for cavalry, engineers, naval forces, artillery, mounted infantry, and military police. Each are differing lengths. The weapon weighs 7lb unloaded. Costs .5pp each

Pattern 801 Revolving Rifle Mk1

Designed in 801
Uses the 10x60mmA rifle ammunition
“B” variant uses the 10x30mm “Special” round

Original Proposal: A cross between a rifle and revolver, it carry's 7 rounds in a revolver cylinder operated by a large leaver below the trigger guard. The cylinder cams back and forward to seal the breach. To do this the end of cylinder is bored out so that it can slide over the barrel. It uses the 10mm smokeless cartridge, or the new 10mm smokeless special. Weight 8lb?
However, there was also a second firearm designed this year, a lever-action revolving rifle entitled the Pattern 801 Revolving Rifle Mk1. Although not quite following the design specifications (inorder to allow for one feature it was decided that the round should be moved out of the cylinder into the breach before firing) the resulting rifle is quick to fire, removes cylinder gap (mostly by containing everything within a mostly sealed area), is easy to handle, and only costs slightly more than our current weapon. There are a few issues with the weapon (reloading can be a pain, ejecting fired rounds can take more time than putting the new ones and muck can get in thanks to its lever-action nature), but all in all it is well liked.
First thing to consiter is that there are two forms of this lever action rifle, that chambered for the 10x60mm rifle round and that chambered for the 10x30mm "Special". Both are lever action, weigh around 8lb, are about 46 inches long, and have a 10-round rotating magazine wherein the projectiles are held in place via clips and pushed into the gun by the lever action. In

the 10x60mm version the fired round is pulled back into place after firing and is removed via a hinged port on the right side of the gun and is fed into the gun from 5-round chargers (inserted into the same space). In the 10x30mm version the gun is loaded almost exactly the same way (the chargers are different), though it does not need to extract rounds. provisions are, of course, made for mounting a bayonet.
Oh, out of the ten rifles made (five of each type) we only know what has happened to seven of them, all of which have, quite simply been shot to death. Infact, the (now idle again) factories have had their workers making up rounds just to keep up with the demand.
Costs .6pp each

Experience, 806
Of the two the Pattern 801A is the more powerful(as the cartage used in the A variant is the same size as their old blackpowder rifle) and is slightly lighter, but the Airus is able to reload more quickly and better handles the recoil of firing.

Pattern 802 Trench Broom Auto-Weapon

Designed in 802
Uses the 10x30mm “Special” Round
Obsoleted/Upgraded by the Pattern 803 Trench Broom

Original Proposal:
Chambered in 10x30mm Special.

A somewhat bulky weapon, looks like a short-barreled, boxy version of the existing rifles, loaded from cylindrical cassettes, each containing a disposable paper belt that holds 120 of the new caseless pistol rounds. The gun itself uses a slightly overcomplex gas-boosted recoil system to load the pistol rounds automatically, and with an impressive rate of fire, around 1000 RPM.

Weight 20 pounds loaded.

Quite inaccurate, even when fired carefully, and has a tendency to overheat when fired continuously.

As the name suggests, it's intended for use in trench systems or other enclosed areas, sweeping the wielder's line of sight clean of unprotected infantry.

And now, out main event, the Pattern 802 Trench Broom, firing the new 10x30mm special caseless ammunition from paper belts kept in "drums" underneath and to each side of the weapon. There where many setbacks in the design of this weapon, and yet for every setback there was a small leap of amazing design. The prototype at years end jams after almost every successful shot, the drum takes roughly two-hundred eighty seconds to replace, and its a bit of a awkward thing to use, but its light, cheap(for what it is anyways), and can be hit with a hammer before it breaks. The belt in particular is a bit of a sticking point as it is either too fragile or too stiff for reliable use in the gun, and often jams the weapon with bits from the belt.
A mostly sheet-steel weapon, the Trench Broom is a high capacity, low weight, theoretically high rate of fire weapon firing the 10x30mm special round, kept in a paper belt, itself stored within large drums that reside around the sides of the weapon. These belts have been determined to be one of the main reasons for the jamming. In any event, the weapon weighs about 3lb unloaded and is just over a foot and a half long. One of these costs 1.2pp each

Pattern 803 Trench Broom Auto Weapon (Mk II)

Designed in 803
Uses the 10x30mm “Special” Round
Obsoletes the Pattern 802 Trench Broom Auto Weapon

Original Proposal: Have a single engineer spend the year working on a simple shoulder stock for the Trench Broom, then, presumably for most of the year as I can't imagine any competent engineer failing to quickly develop a way of sticking a curved board to a gun, improve the belt system however he can.
The third and final group, who where working on the trenchbroom, report that it was almost the trench boom this year. Thankfully, the pair of engineers(same composition as above) managed to catch the fault before it blew up in their faces. In any event, they have decided that the reason for the guns jamming was its large magazines and, specifically, the paper belt within. As a result, they have replaced this with a 30 round single-stack stick magazine that spicks out the side of the action. This doesn't actually lower the cost of the weapon,

means that troops have to reload more often, but atleast most of the problems have been fixed.
-Pattern 803 Trench Broom auto weapon A pattern 802 trench broom with the magazine replaced by a spring-fed stick magazine, sticking out the side, thus solving almost all the jamming issues with the gun. The testers loved it and the prototypes are missing or worn out by constant fire. One of these and a few spare magazines costs 1.4pp each

Pattern 804 Standard Troop Rifle

Designed in 804
Upgrade of the Pattern 782 Standard Troop Rifle
Obsoleted by the Pattern 801 Revolving Rifle (except as upgrade)
Uses the 10x60mmA rifle ammunition (rear-area troops)

Original Proposal: How about we include a testing project on using the 10x60mmRS round in the old Service Rifle and - if that should not work with minimal modifications - using a jacketed round with only 1/3rd the propellant weight (and therefore roughly the muzzle velocity of BP weaponry) instead? It will not perform as well, but should still lead to a lower cartridge weight and - more importantly - the elimination of the blackpowder smoke.
While they where working on the ammunition they went and tested the new rounds on the old Pattern 782, the end result of which they determined that, with a slight modification to the bolt and the receiver, they can reliably utilize the new round in low-use areas, such as artillery crews, guard use, and similar. They did some work on a low power form of the round, but determined that that was only really possible if they used a "semi-smokeless" form of the round. That is, unless you wanted them to explode in ones face.
A modification allowing use of high power smokeless ammunition in limited amounts, along with standardizing the length and updating their ironsights for flatter trajectories. Modifying existing pattern 782 rifles costs .02pp each, new build rifles cost .5pp each.

Support Weapons

Pattern 801 Heavy Revolving Rifle

Designed in 801
Uses the 10x60mmA rifle ammunition
Originally named the Light Revolving cannon.
Obsoleted by the Pattern 806 HMG

Original Proposal: A scald down Pattern 793 Revolving cannon, it uses a new high power smokeless cartridge of 10x60mm. Along with the smaller round, it has 5 barrels to the 793's 6. The clips like wise take more cartridges.
The first design churned out this year, the Pattern 801 Light Revolving Cannon, was an unparalleled success. Firing the new (and also quite good) 10x60mm rifle cartage, the gun and its five barrels only weighs in at a total of 15 kilograms, costs about as much to produce as its larger cousin, the Pattern 793 Revolving Cannon, rarely fails to fire a round (and if it does, the round is ejected anyways), and feeds via a system that allows for potentially unlimited fire, as new rounds can be added at will.
A fire barreled, hopper fed, hand cranked weapon using the new 10x60mm rifle round. Weighs in at only 15kg, almost never fails to fire when it needs to, and well liked by its testing crews, who have worn out the two prototypes in gleeful abandon stresstesting it. Costs 9.5pp each

Pattern 806 HMG

Designed in 806
Uses the 10x60mmA rifle ammunition
Obsoletes the Pattern 801 Heavy Revolving Rifle

Original Proposal: Machine Gun 06/MG06 A gas-operated light machine gun, it fires the new smokeless 6.5x50mm round at ca 300 rounds per minute from either a 30-round magazine or a belt. It also mounts a bipod. Target weight is 11kg, length 120cm. Maximum firing range about three kilometres, effective about 700 meters.

Should there be time, the engineers are supposed to design a tripod and a removable water cooling system.
Now we come to the Pattern 806 HMG, an air-cooled, closed bolt belt fed weapon using our standard 10x60mm rounds. This weapon has proved to have a problem here and there (the action could use work), but in most respects it is a reliable, durable weapon that can be made for (comparatively) almost nothing and is shockingly light. By itself it weighs in at only 28kg, to which its tripod and similar kit add an extra 20. Being air-cooled it is intended to be supplied with quickly changeable barrels, although this has proved to be mostly unnecessary in testing.
A 28kg (48kg with all its kit) belt fed and air-cooled heavy machinegun with some issues with its action and no problems elsewhere. In fact, in all other respects it is significantly above average. Costs 5pp each (Yes, 5pp. Its that cheap)

Grenades

Pattern 808 Fragmentation Grenade

Designed in 808

Original Proposal: Fragmentation Grenade Pattern 808 This is a simple, egg-shaped grenade. It consists of a four-second fuse, which is initialized by releasing a safety lever (which itself is secured by a pullable ring). The body is cast iron, and is intended to splinter during detonation. It is filled with smokeless powder. There is a small threading on the bottom of the grenade, allowing it to accept a stick to throw it further. This increases the grenade's weight from 3/4kg to one kg.
Anyways, the Pattern 808 Fragmentation and High Explosive hand grenade, designed to work when thrown by hand or by rifle, are best described as tall, slightly ribbed cylinders (about two inches in diameter) with a socket at one end for fitting to a rifle or to a stick and a four-second timed fuse inside. The fragmentation qualities of the weapon are... poor, perhaps directly due to the massive explosive load of the bombs. In addition, the actual weight of the grenades is quite large, weighing in at two pounds!

Pattern 808 Fragmentation and High Explosive hand grenades
-HE
 high powered
 Weighs 2lb
-FRAG
 High explosive yield, mediocre fragmentation damage
 Weighs 2.25lb
-Both are able to be used as rifle grenades and count as ammunition.

Ammunition

10x60mmB black powder cartridge

Starting Design
Used in the Pattern 782 Standard Troop Rifle
Obsoleted everywhere else by the 10x60mm centrefire cartridge

A large shell used by the Pattern 782 STR and its many, many, many differing length variants. Not nearly as powerful as it could be, thanks to its black powder loading

10x30mmB pistol cartridge

Starting Design
Used in the Pattern 784 Revolver
Obsoleted together with the revolver

A rather oversized and yet weak(thanks to its black powder propellant) round used in the Pattern 784 revolver and much disliked by our troops. For whatever reason, only ball ammunition is available for military use

12.5x30mm pistol cartridge

Designed in 800
Used in the Pattern 800 Jupiter Automatic Pistol

Original Proposal: The Jupiter cartage is 12.5 x 30mm and built in the modern metallic type, useing "smokeless" powder
(17)The munition group works hard, eventually developing a powerful pistol round using the new propellant called "Cordite". This round is powerful enough to kill most opponents, at least those in range. (5)Sadly, the new rounds are expensive to produce, as not all the kinks in large scale production are quite worked out at this time.
12.5x30mm pistol cartridge High power Expensive to produce

10x60mm centerfire cartridge

Designed in 801
Obsoleted by the 10x60mmA rifle ammunition
Used in the Pattern 801 Revolving Rifle Mk1
Used in the Pattern 801 Heavy Revolving Rifle

...
Two different forms of ammunition where developed this year, the 10x60mm centerfire rimmed rifle round, [...]. The former is perhaps the best rifle round currently in existence, as it hits like a horse, has a mostly flat trajectory, and is simple enough to produce.
A centerfire, smokeless, rimmed rifle cartridge used in the Pattern 801 LRC and the Pattern 801 RR Mk1. About as best as it can be for the time, though it is still a round-nosed round.

10x30mm “Special” Round

Designed in 801
Used in the Pattern 801 Revolving Rifle Mk1 “B”
Used in the Pattern 802 Trench Broom Auto Weapon

Original Proposal: The base of the bullet is hollowed out and fined with gunpowder, then sealed with a cap and a small hole to facilitate ignition.
Two different forms of ammunition where developed this year,

[...], and the slightly odd 10x30mm smokeless "Special", which is a bullet that contains its own propellant. The latter is something special. Despite the (comparatively) small amount of propellant and the fact that the single gun designed in any way to use it (the Pattern 801 Revolving Rifle Mk1) requires some significant modifications to use it the round is as good, if not slightly better, than most of this days pistol rounds, although the 12.5x30mm pistol cartridge still outmatches it slightly. However, by removing the need for the revolving rifle to eject the round, and the fact that it is slightly lighter than a standard rifle round the possibilities are worth considering. The cavalry in particular have expressed interest.
A caseless centerfire round used only in certain versions of the Pattern 801 RR Mk1 (notated with a "B" after its name), this round is surprisingly powerful for what is in effect a pistol round that has to carry its case with it. However, its light weight and surprisingly low cost excite many of the officers who have seen it shoot.

10x60mmA rifle ammunition

Designed in 804
Used in the Pattern 801 Revolving Rifle Mk1
Used in the Pattern 801 Heavy Revolving Rifle
Used in the Pattern 804 Standard Troop Rifle
Used in the Pattern 806 HMG

Original Proposal: A 10x60mm aerodynamic round with a hard copper jacket and using smokeless powder, it is designed to be used with the Repeating Rifle Mk 1. Tests should be done with the Service Rifle, too. Should the round be too powerful, also adapt a modification (the 10x60mm SL (standard, low-powered) which only uses 1/3rd of the propellant.
After much work, the engineers come out with the 10x60mmA rifle round, an aerodynamically stable bullet packs into its design a pointed tip, a boat-tail, and a copper jacket covering the whole thing. They also developed manufacturing processes that makes it easier and cheaper to produce than the RS or the B versions. Due to its flatter arc of fire, some work has to be done on existing weapons to take it into account.
Designed for use in the Revolving Rifle, Pattern of 801(Type A),

this round is as modern as anything else in the world.

Heavy Weaponry

Light Cannons

Pattern 793 Revolving Cannon

Starting Design
Uses the 37mm cannon shell

Our latest design, a six barreled, manually operated cannon firing a 37mm, 16oz projectile. Each turn of the handle fires a round, loads another, and ejects a third. While the crank can be turned continuously, the barrels do not turn for the entire cycle, which allows better accuracy.
The weapon loads from a 10-round clip.
This weapon is use as secondary armament on our warships, and as our main field gun.
Costs 10pp each

Artillery

Pattern 806 75mm Field Gun “Ratio”

Designed in 806
Uses the 75mm shells Pattern 807

Original Proposal: 75mm Field Cannon Mk. I
A rifled breechloader, this 75mm cannon uses self-contained shells (that is, including the smokeless powder). They are mounted on a two-wheeled (with a third wheel for stabilization) carriage. They employ a recoil system designed to keep the carriage itself stable while the gun fires, leading to a significantly higher firing rate.
There are three shell types available: A time-fuzed shrapnel shell, an impact-detonated HE shell and an AP shell for use against ships (when used in a coastal defense role).

First off, we have the Pattern 806 Field Gun, nicknamed the "Ratio". This weapon (which weighs in at almsot two thousand kilograms) is by far the most accurate direct-fire artillery piece our engineers have seen, and is able to hit targets nine kilometers away when used as a indirect fire piece. The weapon has a new, innovative "split trail" carriage, along with a liquid-based recoil absorption system, which means that the gun does not need to be relaid after each shot. The weapon is also amazingly cheap for what it is. Our officers have noted that it is on the heavy side for our horses, and having seen our earlier work on a artillery tractor wonder if another design for one could be worked on.
A 2000kg, rapid fire artillery piece with recoil suppression and a split trail carriage. Tad heavy for horses, and is able to fire at targets out to 10km. Costs 10pp each
Experience, 807: Of them, the "ratio" is by far the best in direct fire roles, even with the Strikers purpose designed ammunition for the job(a shrapnel shell that turns it into a giant shotgun), while both guns are let down by poor HE performance at range. According to rumors, both sides have been hard at work attempting to correct this deficiency.

Pattern 807 80mm Mortar

Designed in 807
Uses the Pattern 807 80mmM shells

Original Proposal: 80mm Mortar A simple steel tube mounted on a steel plate. Its angle can be changed using a bipod (which includes a rudimentary sight). A finned mortar shell is dropped into the tube, and is fired by an impact detonator on the bottom of the tube.
Following in our design line up, I present the Pattern 807 Mortar of 80mm, a fantastically strong, quick to set up, accurate, long ranged and *cheap* mortar that has a drawback only in its weight, which is on the heavy side. To cope with this, the weapon is designed to travel as three segments consisting of the barrel, the bipod, and the base plate.
Pattern of 807 80mm Mortar Maximum range of 2km Weighs 60kg total, designed to be split into three parts for

transport
Shockingly accurate at medium to short ranges(under 1k)
Costs 2.5pp each

Experience, 808: [...] the Republicans use their new 80mm mortars (which are light enough to be carried by infantry on the attack) to better hit enemy trenches.

Make of 807 42cm Siege Mortar

Acquired in 808
Uses the Make of 807 42cm Siege Mortar Shell
Real-life analogue: 42cm Gamma Mörser

A 42cm/16 heavy siege mortar that is able to lob a shell 14.2km every eight minutes weighing in at 140 tons. For transport the gun breaks down into 10 segments. The gun requires specialized construction before it can fire, which according to its makers can take a week.
Costs 55pp each

Make of 792 6" naval gun

Acquired in 808
Uses the Make of 792 6” shell
Real-life analogue: QF 6 inch/40 naval gun

A 6" (152mm)/40 screw-breach gun firing single-piece ammunition, provided by our northern neighbor. Weighs 7ton w/ mounting (consists only of gunshield and actual mount) and has recoil buffers. The gun is able to get off between five and seven rounds a minute at a range of about 14km.
Costs 20pp each

Torpedo Launchers

Pattern 802 Torpedo/Launcher, 14”

Designed in 802
Obsoleted by the Pattern 803 Torpedo/Launcher 15.7”

Original Proposal: Armament: 4-3 14 in torpedo tubes mounted front and rear

The 14" torpedo system, however, works well enough, and our naval officers are looking forward for a few sets of launchers and torps to use in places where low range, speed, chance to actually hit the target and long loading times dont mean much (AKA, massed torpedo batteries in narrow points).
A bronze-built torpedo using wet guncotton as an explosive, powered by an internal tank of compressed air. The weapon has a range of about 1.8 kilometers, a remarkable achievement for the method of propelling it. It weighs in at a little over 680lb and travels at 25 knots. Reloading a launcher (and then charging the torpedo with compressed air) takes nearly a quarter of a hour per launch. Launchers cost 16pp each

Pattern 803 Torpedo/Launcher, 15.7”

Designed in 803

Obsoletes the Pattern 802 Torpedo/Launcher 14”

Original Proposal: Torpedo Mk. II: A 40cm diameter and 300kg weapon, this torpedo is to be driven by a compressed-air generator and carries a 50kg warhead with an impact detonator. A gyroscope serves to stabilize the torpedo course. The air is heated using burning alcohol in an attempt to increase both range and speed.
The first of those successful designs was the new version of the pattern 802 torpedo which, although they dident do all that well on the new aspects of the design, their large list of what not to do helped them out significantly(infact, the same is true with all the designs that succeeded this year). The new design is larger, longer, heavier, has a longer range, is faster, and is not quite as liable to wobble in the water, thus missing the target.
A bronze-built torpedo using wet guncotton as an explosive, powered by an internal tank of compressed, hot air. The weapon has a range of about 2.4 kilometers. It weighs in at a little over 661lb and travels at 28 knots. Reloading a launcher (and then charging the torpedo with compressed air) takes less time than the old style, although the launchers have changed a fair deal. Launchers cost 16pp each

Ammunition

37mm cannon shell

Starting Design
Used with the Pattern 793 Revolving Cannon

A large shell that fires a 37mm warhead weighing 16oz, used in the Pattern 793 Revolving cannon. Comes in HE and AP variants

75mm shells, Pattern 806

Designed in 806
Used with the Pattern 806 75mm Field Gun “Ratio”

Original Design: There are three shell types available: A time-fuzed shrapnel shell, an impact-detonated HE shell and an AP shell for use against ships (when used in a coastal defense role).
Its munitions, however, are disappointing. Early work on them where unmitigated failures, but the problems where caught in time to work on them. However, there are only two forms of shell for the gun(consisting of a wimpy impact-detonated HE round and a solid round thats more likely to explode than penetrate), and both are rather mediocre, in addition to costing a fair deal more than anything else like them.
Comes in two flavors, a low powered HE round and a solid shell that likes to shatter on impact with a hard target.

75mmR Shells, Pattern 807

Designed in 807
Used in the Pattern 806 75mm Field Gun “Ratio”
Obsoletes the 75mm shells, Pattern 806

Original Design: 75mm field gun shells This project aims to design a total of five shells for the Ratio field gun: An impact-detonated HE shell, a time-fuzed shrapnel shell, an AP shell for use against ships, a smoke round, and an illumination round in order of priority.

Next up, we have a set of new shells for our field gun, consisting of HE(in two forms), a useful AP round, and a illumination round. Sadly, our engineers where unable to find a smoke producing agent they felt safe with. Anyways, the HE shell consists of a standard shell body with not inconsiderable power and a choice of two detonators screwed on the rear. One is for impact, and detonates when the shell is stopped, and the second is a quickly-adjustable timed fuse.
The AP shell, which is still just pure AP with no high explosive within it(something that our navy would rather have), is able to penetrate a considerable amount of armor(upwards of 20cm), due to the fact that all that is fired is a small rod of highly dense material. The hole it leaves is small, but hopefully it will fail to penetrate the back of whatever its fired at and bounces around inside. This is now termed APDS by our engineers.
Finally, we have our illumination round, which is able to light up a considerable area for about 150 seconds.
And if all that was not good enough, making the shells is cheaper than ever before.

Pattern of 807 75mmR shells
For the Pattern 806 75mm Field Gun "Ratio", now with greater penetration(for AP) and far larger explosive damage.
-HE, choice of impact or timed fuze
-APDS
-Illumination(lasts 150 seconds)

Experience, 808: Fighting also now occurs at night, as the Republican forces have developed illumination rounds which, coupled with efforts to bring troops as close to the enemy's trench before they assault have resulted in the Monarchists loosing much of their first rank trench system. Not even the rapid deployment of men and guns have been able to retake their losses.

Pattern 807 80mmM shells

Designed in 807
Used in the Pattern 807 80mm mortar
Upgraded by the Pattern 808 80mmM shells

Original Proposal:80mm mortar shell
A finned mortar shell, it includes both warhead and propellant. An additional three powder charges can be fit, though, extending its range.
The warhead is available in impact-detonated HE and a smoke

round.
The shells for the weapon are, as is seemingly standard, on the pitiful side. Now, the shell consists of one of two warheads, mounted on a finned shaft. Up to three additional propellant charges can be fitted to this shaft, and one is contained within. The expensive part of the shells are the warheads themselves, which come in HE and Fragmentation.
Pattern of 807 80mmM shells For the Pattern 807 80mm Mortar Consists of warhead(HE or Fragmentation) and finned section Up to four total propellant charges(with all, able to be fired out to 2km) Warheads are low powered and complex to produce

Pattern 808 80mmM shells

To be designed in 808
Used in the Pattern 807 80mm mortar
Upgrades the Pattern 807 80mmM shells

Original Proposal: For the shells, we can have our two munitions engineers (the untrained one and the basic one), a basic engineer, and let's say three newbies work on it. The should probably allow us to get it sorted out how we want. (Using 1 untrained munitions engineer, 1 basic munitions engineer, 1 basic engineer, 3 newbies)

Make of 807 42cm Siege Mortar Shell

Acquired in 808
Used in the Make of 807 42cm Siege Mortar

Properties unknown.

Make of 792 6” shell

Acquired in 808
Used in the Make of 792 6” Naval Gun

Properties unknown.

Ships

Small

Swordfish Torpedo Boat Destroyer

Designed in 805

Now we come to our first actual bit of progress, the Swordfish Torpedo Boat Destroyer. A 220-ton steam-powered(two engines, each with four high-pressure water boilers supplying steam to a turbine each(which also serve to provide the vessel with electricity)) and managing a top speed of over 30 knots, it is armed with a quartet of pattern 793 revolving cannon, with two in a forward mount and two single mounts located amidships and aft. The vessel is also equipped with a pair of torpedo launchers for the Pattern 803 15.7" torpedo. Provisions are also made for the mounting of several pattern 801 Heavy Revolving Rifle in various points along each side of the vessel. The pattern 793 turrets are lightly armored and open topped, and are rotated via electric motors. Low powered electric motors have also been fitted on the guns to actuate them, and in the case of the single-gun mounts there are also motors powering elevation of the guns. Speaking of these secondary turrets, they are mounted below the arc of fire of the main turret, which does restrict their firing arc slightly. Now, the two torpedo positions. The two single-tube launchers share a "ready storage room", which can hold but six of the crafts thirty-fish load. The remainder are held below deck. They also are not centerline mounted, which means that the craft has to fire one, turn around, and fire the other. The vessel uses signal flags for communication, although the lanterns have been replaced with electric lights. Talk has been made of outfitting the vessel with electric spotlights, or even a radio. For armor, the ship has nothing, not even coal bunkers. For whatever reason, coal is stowed amidships and down low, acting as basalt. As soon as the vessel was determined to be seaworthy, she was hoisted out of the still-blocked harbor and loaded on a special train, making a roughly 100mile trip to a port it can actually operate out of along track that can handle the

clearances needed.
Armament: -1x twin-mount pattern 793 revolving cannon -2x single-mount pattern 793 revolving cannon -2x single-tube Pattern 803 15.7" torpedo launcher, with 30 total torpedoes and 6 held in readiness at any given time -A number of mounts for heavy machineguns along the sides of the vessel(typically 6x Pattern 801 Heavy Revolving Rifle) Communications: -signal flags -electric lights Propulsion: -2x power plants consisting of single steam turbine, four water-tube boilers and two electric generators each turning one screw Top speed: 32 knots Range: 3000nmi Equivalent Cost(in PP):129 for armaments(not counting modifications or smallarms)
Experience, 807: These have been hammering ports and any ships unlucky enough to find them, and have been noted to be able to hit a single target with their guns while making the extreme maneuvers necessary to get off both tubes. At the same time, what arty has been able to be spared from the front is so thinned out as to be almsot useless.
Experience, 808: In combat, the Swordfish has the clear advantage in anything up to the worst the sea can throw at them, with clear speed and maneuverability advantages(although it takes a lucky hit fom a 37mm cannon to do much damage to the Z-class).

Swordfish Type B

Designed in 807
Variant of the Swordfish Torpedo Boat Destroyer

Original Proposal: Swordfish Early Life Upgrade Mount a 75mm Ratio cannon instead of the two bow 37mm cannons. Include mounting points for the M1 HMG.
Following this, we have the Swordfish Type B development, which consists of taking the twin-mount turret off and putting a new one for a 75mm cannon on. The end result is a far slower turning turret that can hold our field gun along with a

(rudimentary) range finder(consisting of the iron sights on the weapon being fitted with a multi-prong arrangement representing the width of a man at different ranges).
Swordfish Type B (Variant of the 805 Swordfish Torpedo Boat Destroyer) Armament: -1x single-mount pattern 806 "Ratio" Field Cannon(NOTE, SEVERELY REDUCED TURRET SPEED. BASIC RANGEFINDER EQUIPPED) -2x single-mount pattern 793 revolving cannon -2x single-tube Pattern 803 15.7" torpedo launcher, with 30 total torpedoes and 6 held in readiness at any given time -A number of mounts for heavy machineguns along the sides of the vessel(typically 6x Pattern 806 HMG) Communications: -signal flags -electric lights Propulsion: -2x power plants consisting of single steam turbine, four water-tube boilers and two electric generators each turning one screw Top speed: 32 knots Range: 3000nmi Equivalent Cost(in PP):92 for armaments(not counting modifications or smallarms)
Experience, 808: In combat, the Swordfish has the clear advantage in anything up to the worst the sea can throw at them, with clear speed and maneuverability advantages(although it takes a lucky hit fom a 37mm cannon to do much damage to the Z-class). The new type of Swordfish is actually less capable in this regard, as its new turret is unable to keep on target as the ships make their wild maneuvers to avoid the guns of the Z-Class.

Vehicles

Artillery Tractors

Make of 799 Artillery Tractor

Acquired in 808

Uses the Make of 799 75hp gasoline engine

A tractor typically used in agriculture. Runs on two single-piece tracks, which are used to steer. Top speed of 12mph (18km/h) unladen. Weighs 9 ton.
Costs 10pp each(plus engine cost)

Trucks

Pattern 808 “Mule” Truck

[To be designed in 808]

[Original Proposal]: "Mule" Truck
The Mule Truck mounts two [Pattern 807 Gasoline engine], one for the front and one for the rear wheels. They are used together when carrying load, but can be disengaged if one is defect or the truck is travelling empty. It also mounts a towing attachment for towing field guns.
In an attempt to reduce cost, only the critical parts are made of steel, with the cabin and loading area made of wood. The target weight of the truck is 2-2.5 tons, with a maximum targeted load of four tons.

Aircraft

Electronics

Radio

Pattern 808 RS-MP

[Designed in 808]

[Original Proposal]: Radio Set, man-portable
This radio set consists of a total of four chests/backpacks (with straps to to transport them on the back) in the man-portable variant.
Two chests contain the actual radio, and have to be linked to transmit and receive. One chest contains a battery and a hand-powered generator for recharging the battery on longer operations. The fourth chest contains a multi-part pole, which can be raised to increase the range of the radio through a

longer (and higher) antenna. In a fixed role (with electricity available through an engine or the electrical net, for example), only three of the chests are needed. If the antenna is fixedly mounted, only the two radio itself is needed. Range should be about 20-30km with extended antenna, up to ten km without. It uses morse code for communications. This is inspired by the US pack set.
So, starting from the top, we begin with the Pattern 808 RS-MP. Weighing in at over two hundred pounds of this, that, and other things (including the oak chests that hold everything during transit), the RS-MP is costly, not particularly reliable, and(of course) heavy. However, it is blessed with a long range(in good conditions) and in using little exotic material.
Pattern 808 RS-MP A six unit radio set with range of roughly 10 miles with its provided antenna in hilly areas. Weighs in at 200lb. Often breaks, and can only send or receve at one point. Costs 15pp each

Other

Engines

Pattern 807 Gasoline Engine

Designed in 807

Used in the Pattern 808 Mule Truck

Original Proposal: 40kW Truck engine A 40kW engine made for a truck.
And now, the 55hp gasoline engine we developed, a four stroke, four cylinder engine that is absolutely minuscule, runs whenever one wants it to, and is shockingly cheap. One of the engineers assigned to this mentioned something about it to someone in a letter and since then the number of requests from private firms(particularly ones that make motorcycles) has skyrocketed.
Pattern of 807 Gasoline Engine Produces 55hp Extremely light weight Costs 1pp each(!)

Make of 799 75hp gasoline engine

Acquired in 808
Used in the Make of 799 Artillery Tractor

A large, heavy and now outdated gasoline engine producing 75 horse power.
Provided with the 799 artillery tractor
Costs 10pp each

Infantry Equipment

Officer's Sword

Varies from service to service, with no exact specification in any

Pattern 807 Battlehelmet

Designed in 807

Original Proposal: M2 Battlehelmet
Each soldier receives a steel helmet which features a neck protection and a small sun shade, and has a chin strap (imagine basically a Stahlhelm).

To begin with, we have the Pattern 807 Field Helmet, which is constructed out of a single piece of steel and a cloth inner. The outer structure of the helmet is face hardened and made out of a light weight but high strength helmet that results in being able to stop one of our rifle rounds at medium to long ranges, and can stop a round from a Jupiter at anything other than close range. However, its design can get in the way of a soldiers movement, particularly while crawling. This is, in part, due to the slight "spongyness" of the metallic section's suspension over the inner part.
Anyways, the helmet comes painted in a flat, earth like tone, and is also fitted with a net, into which small bits of foliage or cloth can be affixed to lessen a soldiers ability to be seen. The helmet is also quite cheap to produce.

Pattern of 807 Battlehelmet
Able to protect against 10x60mm rounds at medium and long ranges. Slightly encumbers used due to "spongyness". Built in camouflage w/ ability for end user to add more.
Costs .05pp each

Pattern 808 Uniform

Designed in 808

Original Proposal: M2 Battleweave

A fairly simple woven wool fabric intended for use in military uniforms, both warp and weft are made with an irregular pattern of dull-colored yarns. Serves well both to keep the soldier comfortable, and to break up his outline in a variety of environments.

A new uniform is designed to take advantage of this innovation. It features a comfortable shirt, three types of trousers (short, normal and winter) and a winter coat.

Moving quickly on, we have the work done on our uniform update, which was detailed to be based on a dull, lightly patterned fabric and come in various articles of clothing, consisting of three forms of pants, a winter coat, and a shirt. Many features of the old uniform will be kept as a result, such as the leather shoes and puttees. After quite a bit of work, mostly in finding civilian factories who can manufacture the cloth and then make the actually uniform components, the engineers announce that they have finished, if not quite to requirement than certainly close enough.
The resulting clothing... Is not the best. The particular type of wool used in the cloth is stiff, the dyes used run, the manufactures skimped at times in the actual quality, and in the end the uniform is not all that different than those currently in existence.

Uniform Revision of 808
Winter coat, three types of pants, buttondown collared shirt.
Dyes run, fabric is stiff, not much of a change in the end.
Local industry will provide this, dont worry about making it.

Facilities

On-Site Workshop

Initial Facility

One on-site workshop, for designing new things

On-Site Design Studio

Initial Facility

One on-site design studio

Harbour

Initial Facility

One harbor, mostly blocked by sediment and the scuttled hulk of a wooden sailing ship(now partially damaged by torpedoes)

World-Class Firing Range

Built in 804

Original Proposal: Begin establishment of a general purpose testing range for our weaponry. Should include a small-arms range (taking care that the area behind the targets is resistant to those small arms, of course), a large open space for testing artillery and explosives, and several observation bunkers for hiding in observing the testing.
A second team of workers went to work on developing a modern test range for weapons development. The finished thing covers about one hundred acres and has a wide range of terrains, along with a small office block for people to work on artillery firing tables.
One world class firing range, with attached offices for range table calculation

Enemy Designs

Small-Arms

Unnamed Blackpowder pistol

Summary: - Blackpowder pistol, officers only - Probably similar to our (obsolete) Pattern 784 Revolver
First encountered in 806, no description
Rumours of 807: Their pistols are a slightly modified form of their vintage pistol, the only change being that the shape of the chambers(and the ammunition) is such that it is faster to reload. For a pinfire, anyways. Still blackpowder, still for officers.

Mk1* Airus

Closest Equivalent: Pattern 801 Revolving Rifle

Summary: - Bolt-action, .30-30 round (7.62x51mm) - Ten shots, iron sight - 42 inches (106cm) long, almost 4kg
First encountered in 806 Each side has been issuing new multishot rifles to their front line troops with the Monarchy using their bolt-action Mk1* Airus(named for their crown prince) in a 30-30 round and the Republican forces using the lever action Pattern 801A Revolving Rifle. Of the two the Pattern 801A is the more powerful(as the cartage used in the A variant is the same size as their old blackpowder rifle) and is slightly lighter, but the Airus is able to reload more quickly and better handles the recoil of firing.
Rumours of 807: Their main rifle is a ten-shot, bolt action(cock on close, rear lugs) with non-adjustable iron sights. It is 42 inches long, weighs round about eight and a half pounds, and it looks as though the magazine was intended to be detachable but that it was decided to lock in place. In addition, its bayonet lugs appear to have been an afterthought.

Hailstorm Support Weapon

Closest Equivalent: Pattern 806 HMG

Summary: - Water-cooled machine gun - Belt-fed, using their .30-30 (7.62x51mm) round - About 20kg - Ca. 106cm long
First encountered in 806 These are large(really large) watercooled, belt fed weapons using their standard rifle round.
Rumours of 807: Their machinegun is watercooled, belt fed, and has long range ironsights weigh in in at about 45lb. it is the same length as their rifle.

Heavy Weapons

Artillery

Striker Field Gun

Closest Equivalent: Pattern 806 75mm Field Gun “Ratio”

Summary: - Range of 13000 yards (12km) - 25lb shell (5.5kg) - Current (807) issues with low-powered shells and ranging tables
First encountered in 807: The Monarchy has wheeled out their quick-fire "striker" field gun, lobbing 25lb shells at targets. Of them, the "ratio" is by far the best in direct fire roles, even with the Strikers purpose designed ammunition for the job(a shrapnel shell that turns it into a giant shotgun), while both guns are let down by poor HE performance at range. According to rumors, both sides have been hard at work attempting to correct this deficiency.
Rumours of 807: Their field pieces appear to have a range of 13000 yards, fire 25lb shells, and dont quite have all the range tables they need yet. Their shells are also low powered, but that is something they are apparently working on.

Ships

Z-Class

Summary: - 800t ship - Less armament than the Swordfish Torpedo Boat Destroyer - Probably armoured (no effect of Pattern 793 Light Revolving Cannons 37mm Blackpowder cannons except on superstructure)
First encountered in 808: So, in this year we see the introduction of a number of new weapons and vehicles from both sides, as the Monarchists come out with their first naval vessel, the under-armed Z-Class, which weighs in at 800 ton but carries less armaments than the significantly smaller Swordfish.

Vehicles

Truck

Summary: - Diesel-powered truck - 2.5t total weight - 4t of capacity
First encountered in 807 However, these attacks have been largely countered by the rapid deployment of machineguns and infantry via truck(least, when said trucks are not shifting about field guns)
Rumours of 807: They have a truck, which uses a diesel engine (which appears quite advanced, it produces roughly 100hp and is smaller than a horse) and weighs in at 2.5 ton. Apparently, its something of a workhorse, able to haul about four tons of stuff. They dont have that many of them, and thus mostly use them to haul around big things, like artillery. Efforts are being made to make them cheaper, according to scuttlebutt anyways.

Other

Helmets

First encountered in 806 While the helmets are unable to handle the large rounds fired by either the Pattern 801A or the Pattern 803 Jupiter, they have saved many a life from shrapnel and near misses.

Design Ideas