Maximus (RUSE)

The Maximus (RUSE) is an overhaul of the original maximus_hmbt. R.U.S.E. stands for Reliability Upgraded Selected Equipment, extending the tank's service life by improving its performance with new and more powerful equipment than the Mk I and Mk II variants.

Upon entering service, it has been nicknamed the "Super Maximus" by its crews, and the moniker stuck more than its official designation.



About the Maximus(RUSE)

Following its early years in service, tank crews serving in the maximus_hmbt progressively reported faults with the design, which included things like a very limited operational range (due to the diesel engine with the fusion counterpart), slow responding APS¹⁾, and a lack of a dedicated place to store crew essential items such as spare parts, cigarettes, porno magazines and alcohol. Upon the receiving these complaints, the NSMC sent a request to NAM for an overhaul of the platform to extend its service life instead of designing a whole new vehicle.

The enhancement of the Mk II Maximus faced a lot of challenges to meet the demands of the NMSC; for example, to increase the operational range of the vehicle, as well as to power the new weapon systems. To achieve that, the powerpack had to be enlarged and updated, which translated to a longer rear hull to accommodate it.

Another interesting feature is that several of the tank systems, more importantly the Monoeyes, are enabled to be used through the crew's newly designed helmets. For example, the tank commander can just push the visor of his helmet down, set the visor's visual settings to his Monoeye and look around as if his field of vision was the optical system.

The turret was also changed to fit the new sensors and weaponry, replacing the original round shape with

sharp angles, and to further increase protection the front and the sides of the tank can be fitted with applique Nerimium plates. The sides of the turret, although made like that to fit extra mini-missile racks to supplement the ones on the back, are instead used to attach stowage bins, which the crew uses to house their belongings, supplies (although tools and extra tracks are usually stored over the track guards) and reconnaissance drones. Additional racks can be placed on the rear of the turret to carry additional equipment.

The inside of the tank was also changed, featuring a single monoeye for each crewmember, which is more of a measure of security in case one gets knocked out, since the gunner has another own separate sight to aim the gun, and the loader doesn't have any reason to use his in a combat scenario.

The overhaul was introduced in YE 37, and as is yet to be battle-tested.

Key Features

The Maximus has the following key features:

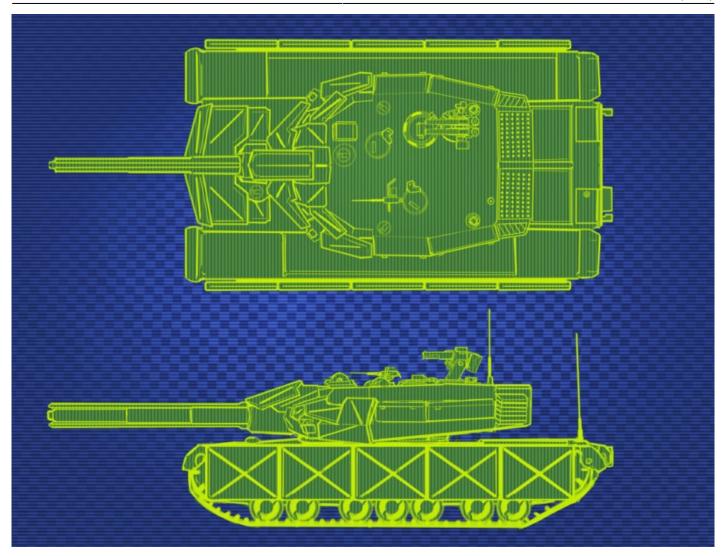
- Improved Heavy Armor
- Direct and Indirect fire support capabilities (The Main gun can also double as artillery as the new combat AI can offer the firing solutions)
- Improved Active and Passive Protection Systems

Appearance

The Super Maximus retains some of the appearance of the tank it replaces, still having a large and imposing chassis. The hull retains the same "pike-nosed" appearance even with the applique armor, but the turret was severely changed, increasing in size to accommodate a bigger armor thickness as well as providing more space for the systems on top and a better stowage capability for the cargo outside and the equipment inside.

The armored grill was replaced with a slightly raised armored plate that protects the top of the engine compartment in the rear of the tank when the back of the turret doesn't cover it. To access the engine for repairs, the plate needs to be removed.

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Statistical Information

Used By: Nepleslian Space Marine Corps, Private Contractors ("dumb" model)

Type: Heavy Main Battle Tank

Class: Na-K5-2
Designer: Terratech
Manufacturer: Terratech

Production: Limited Mass Production

Price: 50,000 DA (35,000 DA to make the "dumb" model)

Crew: Four

Maximum Capacity: Four inside, several outside on the hull

Passenger Capacity: Eight non-PA infantry, 4 PA

Width: 5.25m, 6m with Applique armor

Height: 3m, 3.5m with the RWS

Length: 13.5m

Weight: 112 tons

Speeds

Ground speed: 82 kph on road, 65 off road

Range: 2 days of uninterrupted use on full power load

Lifespan: 12 years

Damage Capacity

See Damage Rating (Version 2) for an explanation of the damage system.

• Body: 30 SP (Armor Scale)

• Shields: VSP, can create four different shield walls simultaneously

Interior

Differently from its predecessor, the Super Maximus is comprised of one compartment for the crew. The driver's seat is adjacent to the turret basket, so that the commander can kick his shoulders if the intercom is disabled. The tank turret, occupied by the commander, loader, and gunner is not quite roomy despite the bigger frame of the tank, but since the loader has an entire side of the turret for himself, the space is large enough for an ID-SOL to squeeze into if he lowers his seat slightly into the turret floor.

Despite the proximity, the crew must communicate via personal headsets with microphones on their helmets or secured at the neck for easy access. It is far too loud during maneuvers and combat for the crew to communicate without it. Alternately, kicking the driver's shoulders is another means of direction.

The commander's seat is more cramped with electronics and the new override controls to the gunner's station, which also doubles as the controls for the RWS mount over the turret. Each crewmember has the potential to control a single, armored monoeye mount on the turret (with the driver having his own next to his hatch), although each one can also be controlled by the commander. There are also regular periscopes in case the optical equipment is disabled.

Underneath and behind the commander's seat is a space dedicated to house the tank's combat AI. The equipment is protected by a reinforced Nerimium "box" and is right next to the tank's internal air conditioning unit.

The gunner's seat, right under and to the front of the commander's on the right side of the turret has the gun controls, while the loader's is situated beside the TC's seat. To his front, are the gun controls, which receives the firing solutions from the tank's Al situated on the back of the fighting compartment. The Al also operates the PLAs²⁾ on the turret that act both as an anti-personnel measure and the tank's APS³⁾.

A ready magazine of 20 155mm rounds is stored at the rear of the turret while the rest of the tank's main gun ammunition is stored in a compartment below and to the rear of the turret, behind that, the engine is stored in a separate section, at the rear of the hull. On the back of the turret there are two minimissile racks, each one carrying 60 missiles. To their front, over the tank's shot locker is a large blowout plate, which is also present under the hull beneath the secondary ammo storage.

The driver's seat is the safest place in the tank to when buttoned down, located right behind the thick frontal armor and a little to the left of the hull. The driver "sits" in what initially may look like an awkward position, like someone leaning too far down on their comfort chair. Despite that, the driver's seat is comfortable and driving the tank like that becomes no challenge, since the new helmet's visor, which can be linked to the driver's Monoeye, helps with the poor visibility. Should the monoeye be knocked out, the driver's hatch still has a set of periscopes for him to use.

Armor and Design

The Maximus was always intended to be a heavily armored monster, and the Super Maximus improved that. Its frontal hull is a V-shaped armored glacis, made even thicker by the overlapping applique armor plates. The tank's sloping hull is made of a composite material that consists of Nerimium and subsequent layers of Durandium Alloy allow the deflection of kinetic munitions.

Different from the previous models, the sides and rear of the tank also share the same composition, this decision was made since attacks can come from any direction in an urban environment, not just the front. Extra plates of the armor can be placed on the sides as applique, protecting the tracks and further improving the survivability of the tank.

Improving on the previous model, the new designs features a larger turret, allowing for more armor and to house the extra subsystems. The turret mounts the 155mm main gun at the apex, while to the right side of the main gun, there is a coaxial HPAR. It mounts explosive reactive armor modules atop of a V-shaped cast Nerimium and Durandium front. The sides of the turret are flat but thickly armored with layers of Nerimium and Durandium. The reactive armor and its distinctive V-shape lend the turret a clamshaped appearance.

To enhance on the previous model, the underside of the tank has made a little thicker, although it still remains the least protected part of the tank.

Little was changed in the NBC systems, and the the tank remains fully protected against all NBC threats and can work with a recyclable oxygen supply for a week. It is also rated for combat in a complete vacuum. The only new addition was an air conditioning system, which is mainly used to keep the computers cooled in a hot environment.

Also retaining the same philosophy as the original tank model that armor alone is useless against modern weapons, the Super Maximus carries the same VSP system. The main difference is that instead of drawing more power for the shields to absorb an attack entirely, the tank's AI sets it so that incoming fire is slowed down enough to barely scratch the armor, making the overall system more efficient.

The Super Maximus also has the same the driver's safety measures against land mines and IEDs⁴⁾, in the form of a dynamic safety seat. This removes all contact between the driver and the tank's hull, save for

the pedals, which removes the driver from the shockwaves produced by a blast. The only visible difference is that the seat is now padded for more comfort

The spall liners that are placed throughout the vehicle to protect the crew members from flying pieces of metal within the tank were also upgraded from the ballistic mesh to the Nepleslian-made SynAraS. It is recommended that these are checked after every engagement, even if the crew didn't think they had been hit.

Since not all incoming fire is kinetic in nature, the exterior armor of the Maximus is coated in heat and energy absorbing materials to reduce the power of energy beams and blasts and supplementing the Durandium between the sheets of Nerimium. It remains the SOP to reapply the coating after each mission.

Onboard Systems Descriptions

The Super Maximus even more sophisticated than its predecessor.

Engine

Completely replacing the obsolete Diesel engine, the Super Maximus uses eight UCF-04a on its power pack to power the entire tank, no longer being only a supplementary power supply. This resulted in a bigger operational range and overall better performance than its diesel predecessor, allowing the Super Maximus to maintain its original speed despite the added weight.

Each UCF unit is located in separate "cells" on the engine compartment of the tank, and although the tank can function with only six and still reach full power, the other two are there as a replacement for any faulty unit.

To cool the engines, the tank possesses two superchargers to draw the air from outside into the air filters in an atmospheric environment; if the tank is operating in a vacuum, then it can be set to run on a "closed loop" before being deployed, although this comes at the cost of less efficiency.

Electric Turret

The Maximus' turret is fully electronic and has a traverse speed of 36 degrees per second. If the electronics are out, the turret can still be slowly rotated by hand crank. A monoeye commander is situated next to his cupola with a 360 degree view, and each crewmember has his own monoeye. In addition, the gunner has his own set of dedicated optical sights for the gun, and there are also normal periscopes if the optics are out.

Cargo Capacity

Although the inside of the tank is very cramped, and only really carries the crew and ammo, all of the other cargo for the Super Maximus is stored outside. To the sides of the turret there are two large stowage bins on each side, which allow the Nepleslian crew to carry vital supplies to their survival and functioning, such as water, booze, rations of cigarettes and porno magazines.

Additional tools to work on field repairs for the vehicle, as well as spare parts are stored over the track guards along the sides on on the top of the tank's hull, or over the engine deck as long as they don't block the air intakes for the engine.

Fire Suppression

Inside the tank there are several fire extinguishers placed and automatically triggered in case of a fire.

ACE AI Suite

A welcome addition by its crews from the previous model was the introduction of the A.C.E. ⁵⁾ Al. Located behind and below the commander's seat and next to the engine compartment, the Al handles the fire control system for the main gun, the PLA and several other subsystems like the shield projectors.

Monoeyes and Optical Sights

Throughout the turret and on the front of the hull of the tank there are a total of four Monoeyes to be used by the tank's crew. Each crewmember has their own, but the commander can override each one as he sees fit. These sensors have a variety of uses to the crew, included but not limited to providing target acquisition and range finding for the weapons, feeding visual and sensor data to the tank's crew and the onboard AI, providing direct laser comms between units in the event the electronic counter measures are activated.

Electronic Counter-measures

To replace the old counter-measures system, the Super Maximus possesses the brainspammer, which is designed to complement the ACE AI Suite and is also supposed to be a step-up in relation to the Noisemaker.

Weapons Systems

Main Gun

The main gun of the tank was left virtually unchanged, the only new additions were a couple more ammo types for the gun.

Coaxial HPAR

"Slaved" to the main gun is an HPAR that can be used by the gunner. The choice to revert the coaxial weapon to the same one used by the Maximus' predecessor (the K-4) was mainly due to the seemingly ineffective power of the PLA against armored infantry.

Commander's RWS

Sitting behind the commander's hatch is the Remote Weapon System. With the introduction of the overhaul, the option to instead fit two HPARs (side by side) on the mount instead of the usual 30mm chaingun was added.

Nepleslian Miniature Missile Systems

Another new weapon system added to the Super Maximus were two racks of the famous Minimissile System used in the power armors. The missiles are located on the back of the turret, and the casing for the rack is designed so that in the event that one rack is hit and detonates, the blast is directed upward. Each one of the two racks can fit a total of 60 minimissiles, and a further extra two racks can be fitted on each side instead of the usual stowage bins.

PLA-01a

Situated around the turret of the tank are four PLAs. The laser arrays act as both the active defense system of the tank against solid munitions like missiles, as well as a measure to deal with non-power armored infantry.

Loader's Weapon Station

Located in front of the loader's hatch there is a na-k1-w3100 for when the main gun isn't being used and does not need a loader to tend to it.

OOC Notes

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1) 3

Active Protection System

2)

Pulse Laser Array

4)

Improvised Explosive Device

5)

Advanced Combat Executive

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