



I am Iron Man

Combat Golems in GURPS Technomancer

by Hans-Christian Vortisch

This article examines the impact of the widespread introduction of enchanted golems into the military, as mentioned in *Technomancer*. It includes notes on the development and tactics, and describes a number of typical designs in service.

History and Development of Combat Golems

"Back in 'Nam, the old Iron Men were a bitch to use. First you had to get them to the combat zone, which was a big problem. The Huey choppers could carry only two internally and two more suspended under their bellies, while our carpets wouldn't take more than one of those things. The latest Chinooks could carry six, but there were never enough of those around. Usually, we had to use trucks, but even a deuce-and-a-half couldn't transport more than six on the road, or half that off-roads. Our tin pals would sometimes sink into the soft ground up to the ammo belts, and although they could plow on by sheer strength, it slowed 'em down real good. The GLU-1A was armed with one Pig, but we would invariably add another one for increased firepower. There ain't nothing like a squad of Iron Men in a mad minute! Two thousand four hundred rounds down range. At least they carried their own ammo."

-- SGT Carlos Meiner, 101st Spellborne Infantry Division (Air Assault) "The Screaming Eagles"

Perhaps the most obvious advantage of combat golems over human soldiers is that they do not die. At least not like humans. Clearly any nation and particularly its soldiers will appreciate if somebody else is sent into the crossfire, and if that somebody doesn't object, then all the better.

From a less humane and more economical point of view, combat golems are plain cheaper than soldiers. The latest generation of titanium golems is slightly more than \$100,000 apiece, about as much as an M113A1 armored personnel carrier. That sounds pretty expensive. However, when all costs are factored in, it becomes clear that this is in fact dead cheap: no costs for food or other upkeep for the entire service life of the unit (which can be many years), no time-consuming and very expensive training, no widow's pension and no funeral. They achieve skill levels which can be considered more than adequate for grunts, without several expensive months wasted at boot camp and for MOS training. When a metal golem ceases functioning (which takes a lot of punishing) or is deactivated, the material can be salvaged and melted down for re-use.

Golems are never exhausted or hungry, they don't require even a minute's sleep and are tougher than most armored fighting vehicles (even though they don't have as much armor or hit points), with no maintenance being required. They do not protest against being sent on suicide missions and work tirelessly to dig miles of trench systems or deploy labyrinth networks of razorwire. They can also stand guard duty indefinitely if necessary. Golems can operate under any

conditions, in the arctic, in the desert, under the sea, on the moon, without requiring specialized survival equipment or even clothing.

Golems can operate most unsophisticated small arms and light support weapons, and retain very respectable close combat efficiency. The latter can't be underestimated, as targets are increasingly well protected by spells against conventional firearms. A ST 40 punch is less easily deflected. Also, their high strength makes them popular in infantry units, as they can carry more than their share in munitions, food and other necessities.

There are also numerous other fields of operations for golems in the armed forces. These include transport over difficult terrain (replacing mules in mountain units), power-loading and construction duties.

Of course, there are also drawbacks.

The Drawbacks

First, their appearance. The universal choice for combat golem enchantment has been metals of various kinds. Plastics, while almost ridiculously cheap and in possession of several desirable properties, lack the strength and durability to make them effective for issue to fighting units.

The very first combat golems in service with the U.S. military were made of simple iron, early enchantment techniques were not capable of utilizing more complex alloys. As research continued, new and better materials were employed. Almost all current designs use titanium.

The materials chosen for enchantment make them look decidedly alien, which can be a psychological problem in interaction with human soldiers. The very first prototypes looked like the stereotypical clay men (see p. TM106), while most production models have a distinct resemblance to seven-foot G.I. Joes -- blank face, perfect body. Golems can't be painted like a vehicle, as the paint chips off far too easily on the flexible surface. When the first units got to Vietnam, this was soon discovered to be a problem -- not the least because the ragtag look of the chipping paint was against regulations. Most metals are somewhat shiny, or at least they look exceedingly out of place in any natural environment. Experiments in 1970 with the spell Dye initially showed some promise, but since the effects wear off after a few days and it was discovered that the resulting monochrome golems offered little camouflage (like single-color fatigues), it soon faded from the scene. Also, the initial-issue iron golems suffered from heavy oxidation without extensive corrosion-control applications. A simple solution was soon found: Like human soldiers, golems are issued a set of heavy-duty clothing, both in camouflage and parade patterns. This makes them somewhat less susceptible to visual detection, eases interaction with humans and also offers some protection against the elements. Injection-molded plastic golems are factory-delivered in a chosen color (which makes them look like overgrown toy soldiers), but also usually wear uniforms for the same reasons.

Since most combat golems are made of solid metal, they tend to be heavy, even unloaded. All metal golems weigh at least several hundred pounds, usually accompanied by -ah- overly large boot sizes. This in turn means that golems need their own vehicles. The technomancers at TACOM were very disappointed when they realized during a rather embarrassing test of the first GLU-1A units that the M113A1 armored personnel carrier, which accommodates twelve fully loaded riflemen (under admittedly cramped circumstances), could transport a mere two GLU-1s, and that at extreme strain on the suspension. Didn't do any good to the seats, either. Weight is even more an issue in heli- and spellborne transportation.

Golems can't be repaired in the field or even at in-theater repair pools. Damaged units have to be sent back to the factory. This can be very inconvenient if you are drawing fire on the other side of the planet.

Operationally, golems are also less than perfect. They can't speak, have no initiative, and won't do anything unless told to do so by their commanding officer. The weak link is the Golem Direction Officer (GDO; soldier slang pronounces it God). The GDO is not as tough or as rugged as her charge. If she is incapacitated, so are her golems. This means that many of the advantages concerning operations in hostile environments are at least partly canceled out. Although they are tireless fighters, they are also extremely dumb and are unable to follow complex mission directives given to them in advance. The nature of warfare requires quick thinking and improvisation, something of which golems are simply not capable, despite their almost average IQ. Sometimes it is even necessary to disregard an order to achieve the mission. Therefore, golems always need somebody to coach and direct them. Being a GDO takes a lot of training and high discipline (both Tactics and specialized Leadership skills are required). The GDO always has to be very precise about her orders. Metaphors or easily misunderstood phrasing can be very dangerous. Also, GDOs have to ensure that their bonded golems don't run loose in case they get incapacitated. They are under strict orders to deactivate (destroy) them if wounded or threatened by captivity.

Combat golems come packed in factory-sealed crates and should only be opened by a certified golem direction officer. She will then "bond" the golem to her command. Theoretically, there is no limit to the number of units bonded to one person (giving the term "one-man-army" a whole new meaning), but operationally, there is a limit of how many golems can be actively directed. Depending on the tasks at hand, this can be anywhere from one to twenty. Combat units are usually small. In the U.S. Army, golem squads consist of four GLUs and two soldiers -- the GDO will command the bonded golems to also answer to her assistant. Being a GDO is not very popular, since possibilities for promotion are few, unlike in combat units where actual troops are led. The GDO's assistant is often the more experienced soldier. In some situations a single GDO may control dozens of golems, notably in transport and logistics units. Examples of golems used in these duties include the GLU-4 Blue Man-series that function as semi-intelligent trolleys, powerloaders, etc.

Combat Golems Today

In recent years, many of the problems described (and experienced!) have been solved by the installation of small cameras and radio links into the latest variants. This allows the GDO to command her golems from the safety of a rearward deployed armored command post vehicle or a spellborne observation carpet circling above, thus "leading from the back".

Some defense analysts and many peace activists have pointed out that increased use of golems in combat leads to a lower threshold of going into action. Since far less personnel are at risk in a golem operation, military leaders might be tempted to use them much more often, and with less reservation than if human lives (of their own side) were at stake. In addition, there's the problem of rogue golems after losing contact with them, for example through jammed communication lines.

Golem rights activists, lawyers and several religious factions have started to harass the nations known to employ golems, raising questions such as: Do golems have a soul? Is destroying a golem a sin against not taking life? Does deactivation compare to abortion? Who is responsible for the actions of a golem gone berserk? Do you, when enchanting a lifeless hulk of metal, try to

play God and therefore commit the greatest sin? Most of these questions have been ignored so far, but some have been answered, at least for the time being. For instance, the GDO is held responsible under International Rules of War for the actions of her bonded golems. Most large churches and religions have ruled that golems seem not to have a soul, and therefore can be treated like any other non-living object.

The Golem Squad in the 1990s

Under current U.S. Army doctrine, golem squads are attached at company level in all active combat units, typically as many as the company has platoons. Each golem squad consists of one GDO, usually a 2nd lieutenant (Rank 3), and her assistant, usually a sergeant (Rank 1), both with Leadership (Golem). Only the GDO actually bonds the golems, but she instructs them to listen to her assistant as well. Both are in charge of two combat golems each. Depending on unit set-up and the operation, the golems are usually commanded from a rearward command vehicle fitted with video displays and an array of radios and datalinks (as seen in *Aliens*).

There have also been ad hoc-formations consisting only of golems squads, for especially dangerous operations. Because of the transport problems and the relative inflexibility of the golems units, these all-golem formations (but including GDOs, of course) are usually small and used only in special combat situations.

The humans (or chimeras) in a golem squad are armed with 5.56x45mm Colt M4 assault carbines with six spare magazines and two M67 hand grenades (p. B209), wear PASGT vests and helmets (p. B211), and are in touch with each other, their golems and upper echelons via multi-way headset radios. The assistant often mounts a 40x46mmSR Colt M203A1 grenade launcher (p. HT121) under her carbine, with six or more grenades (usually a mix of HEDP and colored smoke or flares for signaling). Both also carry a 84mm Alliant M136 LAW (licensed version of the Bofors AT4, p. SO103) as a last ditch anti-golem weapon.

The golems are armed and equipped depending on the model issued (see below), but typically include heavy machine guns and automatic grenade launchers.

The whole squad is transported in the FMC M4 Loeb Golem Fighting Vehicle (GFV), which resembles an extra-wide pickup truck on tracks. Introduced in 1982, it is based on automotive components of the FMC M2 Westmoreland MIFV, using the same tracks, a 370 kW mana engine and two 7,200 kW advanced batteries. The forward cab is fully armored (PD 4, DR 45 all around), seating the GDO, her assistant/gunner and a driver. The GFV, colloquially known as "the rabbi", is fully equipped to serve as a command center for leading the golems, with video displays, extensive secure radio equipment, datalinks, a military GPS and inertial navigation system. A small cupola on the roof of the cab mounts a 12.7x99mm Saco-Browning M2HB heavy machine gun (p. HT119) and a 40x53mmSR Saco MK19 MOD 3 automatic grenade launcher (p. HT121). The HMG has 200 rounds ready-to-use and 600 spare rounds, while the AGL has 100 rounds ready-to-use and 500 spare rounds. Three LAW rockets are also carried against enemy golems and light armored vehicles. Four GLU-3 golems find room in the open-topped cargo bed. Combat weight is 24 tons with four GLU-3s.

Airborne units employ either the Sikorsky UH-60L Blackhawk helicopter (compare p. SO82), which can carry six fully equipped GLU-3 golems and two soldiers, or the Boeing CH-47D Chinook helicopter (compare p. SO82), which can carry three fully equipped GLU-3 squads (twelve golems and six soldiers).

Typical Golems

Cadillac Golem Co.: The World's Leading Combat Golem Manufacturer

The Cadillac Golem Company (CGC) was set up in 1967 as a subsidiary of General Motors Corporation and Manadynamics. Its main enchantment line is located in El Paso, Texas. It won the U.S. Army-sponsored Iron Man-program in 1968, and has since delivered most golem units to the U.S. military. The first Golem Life Unit (GLU)-equipped infantry squads were ready for service in May 1969. Golem units trickled into Vietnam from July 1969, and were widely used by 1970.

The GLU-1-series was the first combat golem in service anywhere. It was adopted as a fire support unit, replacing human operators in heavy weapons squads. Its high strength allowed it to fire even heavy machine guns unsupported, and also allowed it to carry extensive ammunition loads.

The GLU-1-series, while employed successfully in battle, revealed several disadvantages. A major drawback in Vietnam was its source material. Only pure iron could be used, and while exceedingly resistant to small arms fire and artillery shrapnel, it was susceptible to rust and overly heavy.

Cadillac GLU-1A Iron Man, 1969

The GLU-1A was the most numerous golem in U.S. Army service during the 1970s. It has Gunner/TL7 (MG)-13 and is armed with one 7.62x51mm Saco M60A1 machine gun (aka "the Pig", p. HT119), feeding via a flexible chute from a 500-round belt contained in a can mounted in a built-in socket on the lower back of the golem. Two spare 500-round ammo cans can be attached on a rack on the back, but reduce Speed to 5. Since the GLU-1A needs only one arm to fire its gun, a popular field conversion adds a second M60A1 for the left arm. This can't be connected to the onboard ammunition, and therefore feeds from a 100-round drum container attached directly to the weapon. If both guns are fired simultaneously, -4 applies to both rolls.

ST: 30, **DX:** 12, **IQ:** 9, **HT:** 15/40

Speed: 6 (12 mph)

Armor: PD 3, DR 6

Weight: 1,500 lbs. unloaded, 1,560 lbs. with one gun and 500 rounds (Speed 6), 1,660 lbs. with two guns and 1,600 rounds (Speed 5)

Energy to activate: 800

Cost: \$42,000

Abilities: Fist-12 for 4d crushing damage. Throws grenades to 105 yards.

Weapon: Saco M60A1, 7.62x51mm -- Malf Crit, Dam 7d, SS 17, Acc 8, 1/2D 1,000, Max 4,200, Ewt 25, AWt 35, RoF 10, Shots 500, Rcl -1.

Cadillac GLU-1B Iron Man, USA, 1970

This model has Gunner/TL7 (Grenade Launcher)-13 and is armed with one or two 40x46mmSR Aerojet M174A2 automatic grenade launchers. The weapon feeds from a 12-round drum magazine loaded with M406 HE grenades. Up to eight drums can be carried in a built-in rack on its back. The M433 HEDP grenade (Dam 4d(10) plus 1d [3d], 1/2D 200) entered service in 1974.

When two guns are carried and both are fired simultaneously, -4 applies to both rolls.

ST: 30, DX: 12, IQ: 9, HT: 15/40

Speed: 6 (12 mph)

Armor: PD 3, DR 6

Weight: 1,500 lbs. unloaded, 1,560 lbs. with one gun and 48 rounds (Speed 6), 1,640 lbs. with two guns and 120 rounds (Speed 5)

Energy to activate: 800

Cost: \$41,650

Abilities: Fist-12 for 4d crushing damage. Throws grenades to 105 yards.

Weapon: Aerojet M174A2, 40x46mmSR -- Malf Crit, Dam 1d+2 [3d], SS 17, Acc 5, Min 15, 1/2D -, Max 400, Ewt 16, AWt 10, RoF 5*, Shots 12, Rcl -1.

GLU-1D Iron Man, USA, 1970

The GLU-1D is a dedicated fire support variant. It has three arms, one to hold the weapon and two to reload it. It has Gunner/TL7 (Recoilless Rifle)-13 and is armed with a 90x414mmR Watervliet M67C recoilless rifle (see under "Carl Gustav", p. HT122). Single rounds are carried in a 10-round dispenser on its back. Issue ammunition includes the M371 HEAT and M590 Canister rounds (Dam 2d, 1/2D 100, Max 350, AWt 6.8).

ST: 30, DX: 12, IQ: 9, HT: 15/40

Speed: 6 (12 mph)

Armor: PD 3, DR 6

Weight: 1,500 lbs. unloaded, 1,630 lbs with one gun and 10 rounds (Speed 5)

Energy to activate: 800

Cost: \$42,400

Abilities: Fist-12 for 4d crushing damage. Throws grenades to 105 yards.

Weapon: Watervliet M67C, 90x414mmR -- Malf Crit, Dam 6dx5(10) plus 6d [4d], SS 20, Acc 10+1, Min 30, 1/2D 400, Max 2,300, Ewt 35, AWt 9.25, RoF 1/4, Shots 1, Rcl 0.

Cadillac GLU-3B Silver Man, USA, 1979

Although the GLU-1-series proved satisfactory, the Army soon issued a requirement for a new family of golems. The new generation, the GLU-3-series, entered service in 1972. It was made of titanium and dubbed Silver Man. Stronger, tougher, lighter, more reliable and nearly impervious to rust and other environmental hazards, the GLU-3 was such a success that it continues to see service to this day, spawning even more variations than the older type. Since golems have become more widespread, it became more and more important to field anti-golem weapons. This has led to heavier armaments, and most current golems carry at least a heavy machine gun with armor-piercing ammo. The GLU-3B entered service in 1979 and is armed with a 12.7x99mm Saco-Browning M212 heavy machine gun (a modified M2HB, p. HT119). 300 M8 API rounds are carried (for light encumbrance). Since 1982, M811 SPDN (Dam 13d(2)+) rounds are available, and since 1991 M903 APS (Dam 17d(2)).

ST: 40, DX: 12, IQ: 9, HT: 15/40

Speed: 6 (12 mph)

Armor: PD 4, DR 12

Weight: 750 lbs. unloaded, 900 lbs with one gun and 300 rounds (Speed 5)

Energy to activate: 1,200

Cost: \$107,400

Abilities: Fist-12 for 4d+1 crushing damage. Throws grenades to 140 yards.

Weapon: Saco-Browning M212, 12.7x99mm -- Malf Crit, Dam 9d(2)+, SS 20, Acc 14, 1/2D 1,500, Max 6,800, Ewt 60, AWt 90, RoF 10*, Shots 300, Rcl -1.

Cadillac GLU-3S Shield Man, USA, 1982

This is a special operations golem for use with hostage rescue units. It has Shield-13, carries two very large shields and a backpack cradle. A hostage or incapacitated person can be strapped into the cradle and carried into safety by the golem, protected by the shields and its bulk. Only a small number are in service. Some were adopted by the FBI's Hostage Rescue Team and similar units.

Cadillac GLU-3U Silver Man, USA, 1990

The GLU-3U has Gunner/TL7 (Autocannon)-13 and is armed with a 30x113mmB MDHC M298 ASP-30 autocannon. This fires M798 HEDP rounds with alloy cases from a 135-round belt at medium encumbrance. The PGU-25/B SPDN round is also available (Dam 6dx3(2)++).

ST: 40, **DX:** 12, **IQ:** 9, **HT:** 15/40

Speed: 6 (12 mph)

Armor: PD 4, DR 12

Weight: 750 lbs. unloaded, 980 lbs with one gun and 135 rounds (Speed 4)

Energy to activate: 1,200

Cost: \$109,400

Abilities: Fist-12 for 4d+1 crushing damage. Throws grenades to 140 yards.

Weapon: MDHC M298 ASP-30, 30x113mmB -- Malf Crit, Dam 6d(10) plus 1d[2d], SS 20, Acc 13, 1/2D 2,000, Max 4,400, Ewt 110, AWt 120, RoF 7*, Shots 135, Rcl -1.

Foreign Designs

DIM TA-1 Balám, Mexico, 1981

The Mexican Titanio Almadeo Modelo 1 is a titanium golem similar to the GLU-3B, but instead of the humanoid head, it has one modeled after a jaguar, and is often found camouflaged with that cat's distinctive fur pattern. In Mexico, it is more commonly known under its Mayan nickname Balám, meaning jaguar. It has Gunner/TL7 (Machine Gun)-13 and is armed with a 12.7x99mm DIM HK25G2 heavy machine gun licensed from H&K of Germany. 300 API rounds are carried (for light encumbrance). SPDN rounds (Dam 13d(2)+) were introduced in 1981, while APEX ammunition (Dam 13d(2) plus 1d-4 [2d]) is imported from Norway since 1988.

ST: 40, **DX:** 12, **IQ:** 9, **HT:** 15/40

Speed: 6 (12 mph)

Armor: PD 4, DR 12

Weight: 750 lbs. unloaded, 875 lbs with one gun and 300 rounds (Speed 5)

Energy to activate: 1,200

Cost: \$106,400

Abilities: Fist-12 for 4d+1 crushing damage. Throws grenades to 140 yards.

Weapon: DIM HK25G2, 12.7x99mm -- Malf Crit, Dam 9d(2)+, SS 20, Acc 14, 1/2D 1,500, Max 6,800, Ewt 35, AWt 90, RoF 8*, Shots 300, Rcl -1.

Uralvagonzavod G-82A, USSR, 1983

The standard Soviet combat golem of the 1980s and early 1990s, this effective titanium unit has been exported widely. It is slightly smaller than contemporary Western designs, making it cheaper both in material and enchantment costs (always an issue for the mana-low Russians). It has Gunner/TL7 (Machine Gun)-13 and is armed with the powerful 14.5x114mm Izhmash ANG-14.5 heavy machine gun (fires the same round as the KPV, p. HT120) with 100 rounds. This is typically a 2:1 mix of API and SAPHE (Dam 16d(0.5) plus 1d-4[2d]). It is fired in three-round limited bursts.

ST: 35, **DX:** 12, **IQ:** 9, **HT:** 15/35

Speed: 6 (12 mph)

Armor: PD 4, DR 12

Weight: 650 lbs. unloaded, 790 lbs. with one gun and 100 rounds (Speed 5).

Energy to activate: 1,000

Cost: \$90,600

Abilities: Fist-12 for 4d crushing damage. Throws grenades to 122 yards.

Weapon: Izhmash ANG-14.5, 14.5x114mm -- Malf Crit, Dam 11d(2)+, SS 20, Acc 15, 1/2D 2,000, Max 8,900, Ewt 90, AWt 50, RoF 3**, Shots 100, Rcl -1.

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*For more inspiration, listen to Black Sabbath and acquire a second-hand **Jane's Infantry Weapons**.*

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