ULTIMA SUPPORT!

WWI-ERA AIRSOFT REPLICAS, BOTH AEGS AND GBBS CAN BE HUGELY TREASURED ITEMS, AND KEEPING WITH OUR WWII THEME IN THIS MONTH'S AIRSOFT ACTION, DAN TAKES AN UP CLOSE AND PERSONAL LOOK AT A RARE BIRD INDEED, THE ULTIMA MG42!

Even in its heyday, Ultima was a relatively unknown and obscure company, producing just a handful of models mainly of the MG42 variety, but also the Sturmgewehr MP44 and MG3. In 2022, you will be hard pressed to find evidence of their former existence now. This particular example has passed a few hands before being graciously loaned to me by my friend for this article. The original owner was a US serviceman stationed in Japan and purchased this from a local shop and brought it back with him when he returned to the states. From there, it found its way into the hands of a WWII enthusiast who eventually hung up his spurs and sold it to my friend for a song and a dance.

There are scarcely any details regarding this unique AEG, save for what little references can be gleaned

from scouring the dark recesses of the Internet and mostly defunct collector's forums. The Ultima MG42 was not entirely produced by Ultima; it actually uses a Shoei of Japan body. But where it departs heavily from the Shoei is in the AEG conversion department. Inside you will find a custom CNC machined AEG gearbox and arguably one of the weirdest arrangement of internals that could be the only result from the unholy trinity of a Steyr AUG, RC servos and inspiration from ICS. It is unknown how many examples of the Ultima MG42 were actually produced, but I've seen some anecdotal remarks that less than 100 to 200 examples were made.

Owing to age and the inevitable breakdown of parts, this particular MG42 is no longer stock. From what I have gathered, and depending on the version, these would have normally been fitted with either Tokyo Marui or Systema gears and powered by the now-ancient Marui EG700 motor. The only website still carrying a product listing is DEN Trinity shop in Hong Kong where these have been out of stock for years. Retail price would have been US$1800 - US$2350 depending on whether it was the "standard" or "deluxe" version. Spare drum magazines fetched a princely sum of US$290 apiece. Aside from gears and presumably some other internal changes, the main difference between the two versions is the standard shot in the nature of 0.63 – 0.68J (260 – 270 FPS), whereas the deluxe was likely intended for export and had a higher velocity of 1.49J (400 FPS.)

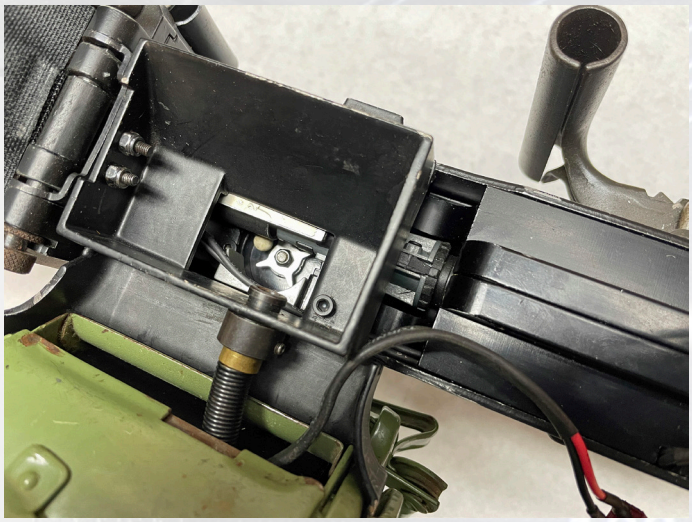
REAL DEAL AND REPLICA

Despite its impressive size, this MG42 is deceptively well balanced at 7.57kg (16.7 lbs.) with the drum magazine and steel bipod affixed, owing largely to the mostly 2.9mm aluminum body construction and good weight distribution. The grip panels and stock are actually made from ABS, which have been cleverly painted to mimic real wood in a manner that would make Tokyo Marui blush with envy. This was not how they were normally outfitted from Ultima, but rather was a bespoke touch from the former owner. Whether through original design or addition, there are a number of real MG42 parts used here. The bipod, sights, charging handle, stock mount, barrel change door and more are all real steel components. Even the drum magazine has been converted from a real MG42 drum!

Once you pop open the dust cover you begin to get a glimpse of the oddities concealed inside. To get a full appreciation of the peculiarities of this AEG, we need to start with the magazine first. As it is converted from a real MG42 drum, the magazine is perhaps one of the best feeling and most solidly constructed drums one might encounter in airsoft. It has a 1600 BB capacity and is operated by a continuous-rotation RC style servomotor operating a

feeder assembly that looks borrowed from the M240 design. The servomotor is powered off the gun, so technically it's designed to feed and fire in sync, as opposed to requiring the end user to constantly work a switch like a hi-cap magazine.

Contrary to typical LMG/GPMG airsoft designs, this does not feed directly into the hop up chamber. Rather, it pours BB's in from above into a hopper through a spring-steel Bowden tube. From there,



the BB's fall into a CNC machined feeder assembly that looks similar to a much abbreviated version of the Cyclone paddles found in the Tippmann A5 paintball marker. This "paddle" is powered by yet another RC servomotor that spins the paddle via an O-ring stretched over a brass pulley. The paddle then

pushes the BB's into a single-track channel that's been machined into part of the gearbox shell. This channel curves towards the back of the gun before making a vertical rise up and into the bottom of the hop up chamber, which is based off the Tokyo Marui AUG design. In this case, it has what I believe is a G&P brand AUG hop up chamber fitted. It is arguably the most byzantine and unnecessarily complicated feeding mechanisms I have personally seen. There is certainly room enough to have just fitted a direct-feed system and skipped all the complication.

Due to relatively low speed of the servomotors, the feed and cyclic rates are always at odds with one another. It is possible that the drum mag will actually overfill the hopper faster than the ability of the paddle to feed BB's into the hop up chamber. This can induce a state where the BB's get packed into the hopper too tight and the paddle starts slipping on the O-ring and fails to feed. As such, rather than try to perform long strings of sustained fire, the optimal method of use is to fire short controlled bursts instead. With good trigger discipline, you can get to the bottom of the drum magazine without issue.

There is a large square-cut window on the underside of the body, which is there to help facilitate assembly and disassembly. Unfortunately, this also

means the bottom pulley and O-ring are exposed to the elements or inopportune objects that might dislodge the O-ring from the pulley; the latter has actually happened once during an event. And let me tell you… it's a pain to try and reinstall that O-ring in the field without tools and a dental pick handy!

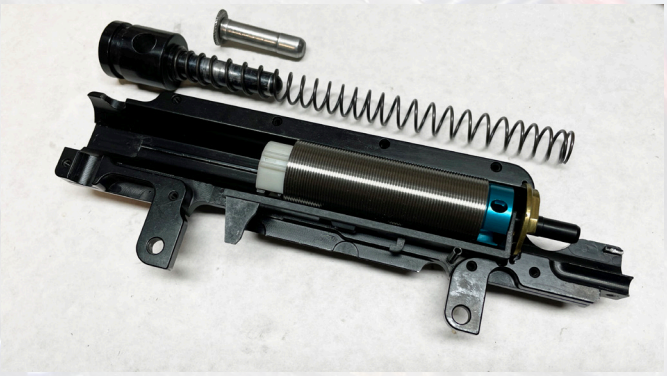
The inner barrel is of an unknown brand and measures 565mm long and is a 6.01 diameter bore. It's also free-floating the entire length, save for a plastic support that near the end of the crown. The outer barrel is a large-diameter thin metal tube that is retained via a friction fit. There's a chintzy little aluminum retainer that's designed to fit over the hop-up chamber and keep it pressed against the gearbox plate. The fit is so poor that the previous owner used some heat shrink to take up the slop. Obviously, this setup is anything but precision. Interestingly, I have

found the best method to removing the outer and inner barrel assemblies is through the barrel-change door on the receiver.

UPDATING AN OLD WARHORSE!

Moving over to the gearbox proper, this is a beastly bit of overbuilt CNC machined aluminum that has a lot of extra material that mostly exists to fill in voids within the receiver. This has a quick-change spring guide assembly, which can be conveniently accessed through the back of the receiver when the buttstock is removed. ICS fans will notice that it's also a split-style gearbox, where the upper component houses the compression parts and the lower houses the gears and motor.

Inside we find an AUG length air nozzle, followed by a conventional mix of V2 compression parts and gears. The previous owner had at some point outfitted this with some old-school Super Shooter 32:1 gears and half-rack steel piston. It was also sporting a Guarder Bore-Up cylinder, silent-type mushroom piston head and bore up nozzle. There was also a V 3 tappet plate installed, which I assume was done on the mistaken assumption that since the AUG



system uses a V3 gearbox, this should follow suit. On the contrary, a V2 tappet plate is what is required in this gun. All of this was gutted out when the gun received a "modernization update", including the original wiring loom, which was quite mangled and in dire need of replacement. Presently, this has been equipped with a Warhead brushless motor, 16 AWG low-resistance Alphawire Ecowire, SHS 18.65:1 gears, Angel Custom KRATOS piston, a ZCI stainless steel cylinder, a Lonex POM Piston head, Guarder tappet plate, and a 70D AirPad and Lonex double O-ring cylinder head.

There's an unusual brass ring that acts as the front-face of the gearbox and indexing point for the hop up chamber. This actually is an unfortunate design misstep as it leaves the entirety of the front of the cylinder head unsupported, which causes all the stress from the piston impacting the cylinder head to transfer directly into the cylinder lugs. At some point in the past this caused both of the original aluminum lugs to shear completely off. In a conventional V2 gearbox, this would have been a "kill shot" and meant scraping the shell. But fortunately with this shell there is enough material thickness and clearances that I was able to install a set of thick steel screws coming in from the exterior of the shell to act as replacement lugs for the cylinder head.

The grip frame is a clamshell design that can be separated to reveal the motor, bushings, and gearset. This is also where the trigger switch is found. There is no manual safety on this gun or any means of rendering it incapable of firing other than disconnecting the battery. The safety is actually cosmetic in function only and does not move or operate. Years ago, when I first received this gun in for repair, we were having issues with it burning through the trigger switches. The original switch type used had a very low 2.5-amp rating for what the system is typically pulling. I managed to track down some switches of the same footprint that had a higher 10-amp rating, and this seemed to mostly solve the problem. Still, these switches are inadequate for the realities of airsoft use. Thusly, for serious use, one would benefit from the efficiencies and large amperage reduction a brushless motor would bring to the table.

The Ultima MG42 is a unique and interesting historical curiosity in the footnotes of airsoft history. As they go, MG42's of any variety are relatively rare to spot on the field and fewer still will have heard of Ultima, much less it's shared parentage with Shoei. Owing to the age and its rather peculiar design, it may not be as eminently skirmishable or as reliable as more modern designs, but there's no denying that there is an intrinsic charm in stretching the legs on this old warhorse from time to time! AA