

THE TIME OF THE BEAST!

AS WE'VE TAKEN A CHUNK OF SPACE CHECKING OUT SUPPORT GUNS IN THIS ISSUE, WHAT BETTER A TIME TO LOOK AT WHAT CAN BE CREATED TO MAKE THE "BFG" MORE FIELDABLE AND EASIER TO USE IN GAME. DAN GETS UNDER THE HOOD OF THE MIGHTY PKM TO CREATE SOMETHING THAT TRULY WILL BE A "BEAST" ON THE SKIRMISH FIELD!

If you've been playing Airsoft for a number of years now, you might occasionally find yourself looking to try something different to spice up your hobby. So it has been with me, where I typically play the role of sniper, I have now become quite interested in fielding something on the opposite end of the spectrum: a General Purpose Machine Gun!

With the bug firmly planted in my head now, the debate came down to what platform to settle on. As I am possessed of the stature and size relative to a Hobbit, weight and size considerations were forefront in my mind. If I couldn't easily handle it, I wouldn't use it. This naturally excluded larger and more cumbersome designs such as the M240B and MG 42, both of which are a beast to attempt to fire from an unsupported or standing position. Naturally the venerable M249 comes to mind, but everyone

has at least one 249 in their squad. I had always been keenly interested in chopped and lightened LMG / GPMG concepts, so something that could be externally modified without too much trouble was also important. As it happened, one of my friends mentioned he had an A&K PKM he was considering offloading as he rarely fielded it. This just so happened to fit perfectly within what I was beginning to envision in my head...



EXTERNAL MODIFICATIONS

Now, the PKM isn't exactly a featherweight itself; and one could rightly argue the length of the gun is right up there with some of its longer brethren too. In stock form I definitely agree with this sentiment and wouldn't be too inclined to operate such a beast outside of supported conditions. I enjoy a good challenge though, so with that in mind, we'll see about how much weight we can trim off and see about shortening her up considerably to make the gun more man portable.

Bone stock, the A&K PKM weighs 7320g (16.14 lbs.) with the box magazine and is a whopping

expensive (in the case of real ones), very difficult to source, or rely on the age old standby of just slapping an AR-15 buffer tube on everything. Most of these do not actually reduce length of pull much, if any. In my mind, the ideal solution would allow for a dramatic reduction in length, but also have the ability to fold to the side. While not absolutely necessary, folding stocks are a nice luxury for moving in and out of vehicles or tight structures.

Consequently, the first step in my project started with binning the OEM stock. As it happens, I'm a fan of SIG's 1913 rail interface for stocks, so the idea of an alternative morphed into creating a stock I chose to use SIG's collapsible

stock eventually a 1913 interface. Incidentally, the folder as usually found on the MCX. Rather than attempt



1180mm (46.45 in.) long. Most of that length is made up in the barrel assembly, which comes in at 635mm (25 in.) end to end. The stock and receiver are roughly approximate in length to one another if excluding the gas piston housing. The stock itself trends on the long side, which is perfectly fine for prone use, but doesn't help with shouldering and maneuvering the gun while standing; especially if you're of smaller stature, such as myself. While there do exist some aftermarket options for alternative stocks, they are typically quite

to make something fit the existing stock mounts, which consists of a pair of rather long AK-style tangs extending from a bracket that's riveted to the receiver (and thusly would have constituted needless bulk and weight), I opted to cut both off flush with the back of the receiver. The rest of the bracket was kept intact with the top rivets drilled out to make room for some M5 screws to secure the insert I would be fabricating. Then, a small block of 7075 Aluminum was slowly milled out on my ancient Unimat SL1000 to fit within the bracket. This would become the new base for a short 1913 rail. I installed the rail with a deliberate slight-left offset to account for allowing the stock to lay folded flat against the receiver. Fully retracted, this modification accomplished a 101.6mm (4 in.) total reduction in length compared to the original stock. The rubber buttpad also grips the shoulder much better than the slick metal buttplate that was previously there - and it folds beautifully out the way knocking off a whopping

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285.75mm (11.25 in.) in length versus the original stock!

With the stock out of the way, attention was then turned to the other end of the gun. I was able to do some of this modification myself – specifically the shortening of the gas tube housing. It was reduced in length by 76.2mm (3 in.). I wanted to keep this looking like a “functional” gas assembly rather than completely omitting most of these parts. Additionally, the mount surface for the bipod still exists here should I ever opt to use it.

The actual chopping of the barrel was hired out to Sharps Airsoft Chop Shop who was also tasked with remounting the gas block and front sight post and rethreading in 14mm CCW. Overall, this was a total of nearly 304mm (12 in.) in length removed from the barrel. I’ve installed a Dytac SLR Rifleworks Synergy compensator to handle our hypothetical recoil and ensure it will rattle teeth and light vegetation on fire with the muzzle blast from a short barrel firing mock 7.62x54R. I was going to remove the carry handle in the interests of saving weight, but decided to keep it on a solely aesthetic choice. At just a few grams of additional weight, it wouldn’t have budged the needle much.

One of the other considerations for me was optics mounting and some method of handling the front end of the gun. The first was accomplished by simply installing a short picatinny rail section on the top cover. The second

part was to take another section of picatinny and mount that to the flat bottom of the gas piston housing. This became home for a Zentico B-25U 45 degree adapter and an LCT RK-2 grip. The 45-degree foregrip makes reaching around the wide box mag a lot easier and more comfortable than trying to use something mounted inline. To finish it all off, I also installed a Noveske QD sling socket adapter and some additional screws to eliminate the traditional wobble in gas block area. Suffice it to say, there’s no movement in the front end on this thing.

The stock PKM comes fitted with an AK style grip; in this case, it’s very much like the real version as it doesn’t house a motor, so is instead retained via a long screw. I personally am not a fan of the relatively skinny nature of the grip, so I modified the more ergonomic Magpul K2 AK grip to fit. This has a slightly more vertical grip angle and the thicker grip feels much nicer in the hand.

The final touch was to purchase some inert linked 7.62x54r . I drilled a hole through one of the cartridge cases and threaded the feed tray so I could keep it affixed via a screw. This is a more elegant solution than simply zip-tying it in place.

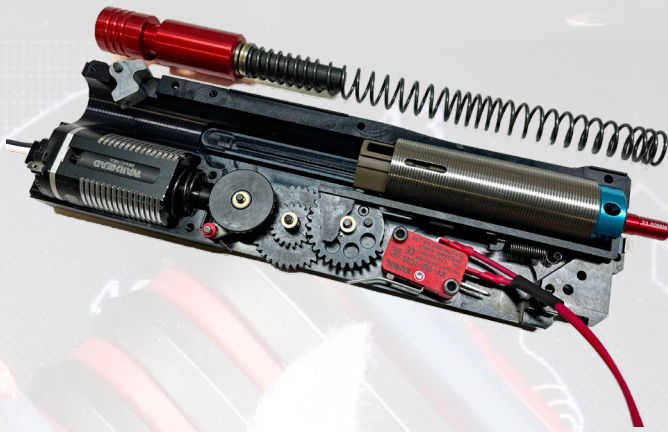
INTERNAL MODIFICATIONS AND UPGRADES

A gun this far modified should not be content with



mere stock internals, and thusly will be given the full internal treatment!

One area we can shed some nice weight from is the gearbox. The A&K's gearbox is a heavy chunk



of mystery metal that tops in at portly 1310g (2.9 lbs.). By using a Retro Arms CNC 7075 ALU gearbox, I can drop that down to 257g (9.1 oz.). But mainly I wanted this gearbox because of the generous shimming room and concentric 8mm bushing holes, something the A&K boxes often come up short on.

Like most GPMG and LMG platforms, the PKM does not have a semi-auto function and only fires in full auto. The aim here then is to build a nice and efficient full auto setup that can be run hard without heating up. In this case, the excellent Warhead brushless motor will get me to the bottom of that 5000 round box mag with little effort. A set of SHS 16:1 gears gives it a slight, but not excessive, increase in rate of fire over conventional 18:1's. Local field velocities for GPMP/LMG's is 450fps with a .20g, so this will be outfitted with a Guarder SP130 spring to get it field legal.

The compression parts consist of a Lonex cylinder head with a ¾ ported cylinder from ZCI and (trailing) the Aztech Xtreme piston and piston head combo. FLT 8mm bushings and a Lonex anti-reversal latch finish it out. I've installed a higher amperage rated trigger switch and rebuilt the wiring harness assembly out of 16AWG Alphawire Ecowire. Moving to the accuracy side, we've got a Lambda Five SUS304 cold-forged stainless steel barrel with an R-Hop fitted and installed into the regular hop up chamber.

Finishing out our internal upgrades is the Bullgear PKM insert for the box magazine. This is a nicely assembled 3D printed chassis that houses a new and much improved motor with a CNC rotary arm and greatly improved wiring. A rheostat dial is also fitted that allows for adjusting the speed of the motor as well, which is definitely a bonus when increasing your base rate of fire. I've also added in a bit of thin rubber

sheeting on the inside of the box mag to dampen the traditional rattle made by the "tactical maraca."

After much extensive work has been done, I feel I've definitely met the goal of having my "Ultimate PKM" built. I've managed to shave off a total of 2260g (5 lbs.) in weight and reduced the length of the gun by 330mm (13 in.) or 513mm (20 in.) with the stock folded. The ergonomic improvements and reduced length of pull makes this handle like an entirely different gun now. It is easily run off the shoulder and on the move, while the folding stock assembly compacts the build even further, allowing easier ingress and egress from vehicles. Without turning to more exotic and expensive materials, such as carbon fibre and titanium, this is probably about the lightest and shortest setup possible. For now, I'm quite happy with the massive improvements and am looking forward to hitting the field with this beast! **AA**

SPECIFICATIONS

- A&K PKM
- Dytac SLR Synergy Mini-Compensator
- LCT RK-2 grip with Zenitco B-25U 45 degree adapter
- Noveske QD socket
- Magpul K2 pistol grip
- SIG collapsible stock
- Blue Force Gear VCAS sling
- Lambda 6.05 SUS304 inner barrel
- Prometheus purple bucking
- R-Hopped
- MAXX 21mm CNC air nozzle
- Guarder tappet plate
- Lonex double O-ring aluminum cylinder head
- 70D AirPad
- Aztech Xtreme CNC aluminum piston head
- Aztech Xtreme piston
- SHS 16:1 gears
- FLT 8mm bushings
- Guarder SP130 spring
- Warhead standard torque brushless motor
- Retro Arms CNC gearbox shell
- Retro Arms CNC spring guide
- Reinforced trigger switch
- 16 AWG Alphawire Ecowire
- Bullgear Custom PKM box magazine insert
- Joules: 1.84J / 446 FPS
- ROF: 22 RPS w/11.1v
- Weight: 5.48kg / 12.10 lbs.
- Length: 838.2 / 33 in.
- Length (folded): 66.75mm / 26.25 in.