

The Los Angeles Silhouette Club

Herter's .401 PowerMag

By: Glen E. Fryxell

Photography by Glen E. Fryxell

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America has had an on-again, off-again fondness for the .40 caliber handgun. Every so often there has been a surge in popularity of a given .40 caliber cartridge or gun, then the surge subsides. A while later, there is another .40 caliber surge, which eventually tapers off once again. The .22, .38, .44 and .45 calibers hold steady appeal, day in, day out, but the .40 seems to come and go like the changing tides. This is the story of one such handgun; one very useful handgun cartridge, housed in one homely handgun.

The sixgun arrived at my local gun shop, well-wrapped and nicely oiled. Well, nicely oiled on the *outside*, the inside of this particular revolver hadn't seen a cleaning brush, cleaning solvent or lubrication in quite some time. After filling out the obligatory paperwork, I took it home and cleaned the gobs of powder fouling out of the ratchet and cylinder, and then brushed out heavy streaks of lead from the bore. The ammo that came with this **Herter's** .401 PowerMag revolver was loaded with cast bullets loaded on top of stiff charges of Unique. Hmmm, maybe this was a clue as to where those lead deposits came from (Unique is a wonderful cast bullet powder for loads in the 15,000-18,000 psi range, but not so good for magnum level pressures, especially with plain-based cast bullets).

While this revolver had been in transit, I had done a little sleuthing and found several boxes of factory new .401 brass, reloading dies and a suitable holster. I already had the moulds. OK, time for a little confession: the reason I "needed" to buy a .401 Herter's Powermag revolver was because some time ago I had bought an Ideal 40388 HP mould, and it needed a straight-cased .40 caliber magnum revolver to serve it up properly. Other moulds for the 10mm, .40-50 Sharps Straight and **Gordon Boser's** Ideal #401452 would also serve nicely. The stage was set.

The obvious ballistic origins of the .401 Herter's Powermag can be traced back to 1873 and the .38-40 Winchester (prior to this the only handgun cartridge with a bullet of similar diameter was the anemic .41 Rimfire, which had a reputation for bouncing off anything harder than the soft underbelly of a cheating card-sharp). The .38-40 was loaded with 200 grain .403" diameter lead flat nose bullets to around 1000 fps. However, with the introduction of smokeless powders, all of the .38-40's case capacity wasn't needed and that delicate, bottle-necked case (and its poor fit in the loosely cut chambers of the early black powder guns) was starting to be seen as a real detriment. However, the ballistics delivered by the .38-40 cartridge were widely heralded as superb. What was needed was a stronger straight case that would fit snugly in precisely cut straight chambers, and deliver the same 200 grain bullet at the same, or better, velocities. The underpowered .41 Long Colt (1877)

didn't cut it as a result of accuracy problems stemming from its undersized heel bullet. In 1924, Joplin, Missouri gunsmith **"Pop" Eimer** cut down some .401 Winchester Self-Loading cases to 1.25" for use in a **Colt** Single-Action Army (some reports say the case was based on the .30-40 Krag, but the net result is basically the same). He fit his revolver with a .403" .38-40 barrel and manufactured a custom cylinder for his wildcat. This round became known as the .40 Eimer Special (but one also occasionally finds it referred to as the .400 Eimer, or the .401 Eimer). Now keep in mind that this was before slow pistol powders were introduced (2400 didn't come out until 1933), and so the combination of faster powders and 1920s vintage steels meant that velocities were limited to about 1100 fps. Later, in the 1930s, Gordon C. Boser (of Springville, NY) revisited this concept with a very similar project based on the .401 WSL case cut to similar length, thereby creating the Boser .401 Special. Boser's project came about *after* the introduction of 2400 (and the revelations of **Elmer Keith's** and **Phil Sharpe's** high pressure loads), and he made good use of it. Boser's goal was to get more power out of the Colt SAA than could be safely done with the .44 Special (smaller cartridge diameter meant thicker cylinder walls, which could safely contain higher pressures). While the .401 Special could be comfortably (and functionally) loaded in the 1000 fps ballpark, the slow progressive burning curve of 2400 gave it the horsepower needed to deliver 1400 fps safely. Boser's work with the .401 Special ultimately led him to design the 195 grain **Lyman/Ideal** 401452 SWC for his wildcat, and his favorite load was reported to be 17.5 grains of 2400 for 1400+ fps. As we shall see, this combination is still a good one.

With the introduction of the .44 Magnum in the 1950s, America's case of "Magnumitis", festering since the late 1930s, suddenly erupted. Elmer Keith and **Bill Jordan** were asking the manufacturers to come out with a .40 caliber service revolver that was capable of reproducing the original .38-40 ballistics, except with a strong, modern, straight-case design. **George Herter** saw an opportunity for a wildcat that he had been playing with since the before the War, and in 1961 (3 years before the .41 Magnum was unveiled) he introduced the **"Herter's Famous Custom Grade Super .401 PowerMag Revolver"**. The cartridge was a .40 caliber magnum, housed in a 1.275" case, loaded to magnum level ballistics.



The stock Herter's .401 Powermag revolver.

Herter's did not actually manufacture the .401 Powermag revolver; rather they contracted with **J. P. Sauer & Sohn** to make it for them (using the same basic pattern as the adjustable sight **Hawes** Chief Marshall). The precision of German engineering is world renowned, and that reputation is supported in this well-made revolver. Features on this gun include: recessed cylinder chambers, frame-mounted firing pin, no hammer block, a 6.5" barrel, a very crisp trigger, tight cylinder lock-up, a lower (and checkered) hammer spur for easier cocking, and a cylinder gap that is both square and tight (.0035"). The bore slugs out at .403", and the rifling makes just under half a turn in 6.5" of barrel, so the twist is somewhere around 1 in 14". Loaded ammo mics .424" and fired cases come out of the gun at .431", revealing chamber

tolerances of around .007" (not unusual for a production revolver). Alongside the proof markings on the side of the barrel is the number "65", and since this gun was only made from about 1961 to 1971, this is presumably the year of manufacture. Aesthetically, the gun itself is homely, with the oversized grip frame, cheap black plastic grips and unusually high sights (the extra tall front sight can make it difficult to fit this gun in a holster), but mechanically it's a well-made gun.

The .401 Herter's PowerMag seems to have elicited a collective yawn from the popular gun press upon its introduction in 1961, as there was no mention of either the gun or the cartridge in **Gun Digest** or the **American Rifleman** during the early 1960s. There was a lot of ink spread over the .256 Winchester, .22 Remington Jet and the .41 Magnum during this timeframe, but the black sheep .401 Powermag was cut from the herd and left to forage on its own. This is rather odd, given that the cartridge was basically what Elmer Keith and Bill Jordan were pestering the manufacturers for. It seems that Herter's was *corporata non grata* in the mainstream gun press at the time (later, Herter's Powermag revolvers were briefly listed in Gun Digest from 1969-1971).

This silence, however, was countered by the classic, "over-the-top" ad copy in the Herter's catalog...

"The fabulous .401 Powermag... is the ideal large caliber revolver cartridge. Will kill any animal on the face of the earth, or shoot through the cylinder block of any automobile. It will flatten any human, no matter where you hit him... This is the finest big game or law enforcement revolver... With this revolver you can hunt deer, and all North American and African game..."

Wow! How could one possibly say no to a revolver/cartridge like that? Especially for only \$47?

A Field Test in the March 1966 issue of **Gun World** entitled "Herter's .401 PowerMag" (which was excerpted in the 1968 Herter's catalog), reported, "As for the Herter's Famous Custom Grade Super .401 Powermag Revolver, it represents a rare money's worth in terms of ruggedness of construction and in sheer power per dollar invested.

In the May 1968 issue of **Guns and Hunting** Larry Sterett was impressed with the .401 Herter's Powermag, and reported, "I doubt that you can buy a more rugged or better-made Magnum at anywhere near \$47." He went on to praise the design, the tight tolerances, the hand polished finish and crisp trigger. Good accuracy, and velocities of 1400-1500 fps, were obtained with choice handloads. Sterett also published a piece on handloading the .401 Powermag in the 4th edition of **Handloader's Digest**.

The Gun Control Act of 1968 put a serious crimp on Herter's mail-order firearms business, and this praise amounted to "too little, too late" to save Herter's handgun sales. The .401 Powermag revolver was dropped from production around 1971.

Outside of Sterett's 1968 piece in the 4th edition of *Handloader's Digest*, there's not a whole lot of loading data out there for the .401 Powermag, and aside from Boser's pet load of Ideal #401452 over 17.5 grains of 2400, what one does find tends to focus on faster powers like Unique to obtain magnum level velocities. The loading data published in George Herter's "Professional Loading of Rifle Pistol and Shotgun Cartridges" only gives data for Unique, 5066 and Bullseye, with claimed peak pressures of about 27,000-30,000 CUP (the pressure data in the Herter's manual for the most part appears to be reasonable, but in places it is decidedly questionable, and seems to be tailored to promote Herter's products over their competition; for example in the .357 Magnum, loads with light charges of fast pistol powders using 135-158 grain bullets in the 520 to 850 fps range are listed as generating pressures from 22,000 CUP to over 43,000 CUP, which is clearly ridiculous; the same loads in .38 Special cases are shown as generating 11,000-13,000 CUP; I believe that the .357 Magnum was denigrated in an effort to showcase the .401 Powermag, the pressures reported for the .401 may be on the low side for similar reasons). I prefer to use slower powders for magnum level pressures, but loading data for the .401 Powermag using some of today's slower powders is lacking. So it was time to start working up loading data.

Dummy rounds were prepared by loading up the 40388 HP (165 grains) into an empty .401 Herter's Powermag case. Weighing it empty, then filling it with water from a syringe (through the flash hole) and re-weighing revealed a case capacity of 22.8 grains of water. A similar exercise with a 208 grain cast bullet revealed a case capacity of 21.3 grains of water. Choosing a pressure ceiling of 35,000 psi (typical for magnum revolvers) and ignoring the suggested powder charges, "Load From a Disc" calculations suggested that the 165 grain bullet could be driven to about 1600 fps at 35,000 psi, while the 208 grain bullet can be driven 1400 fps. A similar exercise with the 240 grain Lyman 403169 suggested that 1200 was a reasonable velocity goal. Likewise with the 270 grain **Rapine** bullet suggested that a little over 1100 fps should be achievable within these pressure limits. Not surprisingly, this is similar to the level of performance of the .41Magnum with similar weight bullets and suitable powders in long barreled revolvers.

Previous experience has shown that load density in magnum revolver rounds can be correlated to water capacity. Since Winchester 296 has a bulk density of 0.955, and since W296 performs at its best in case-filling loads, a sensible starting point for working up loads in a magnum revolver round such as this (i.e. a 1.28" case operating at 30,000+ psi, this analysis does not apply to longer, or bottlenecked, cases!) is at 95% of the water case capacity to fill the case to the bottom of the bullet (remember, we are admonished not to use W296 in reduced loads; also keep in mind that experience has shown that maximum loads for W296 are commonly as much as 105% of water capacity, making the 95% approach suitably conservative). This analysis suggests starting with 21.7 grains of W296 for the 165 grain HP and working up. Similarly for the 208 grain cast bullet, a suggested starting point of 20.2 grains of W296 is arrived at. Cross-checking these suggested starting loads by comparison with published load data for the dimensionally similar .41 Magnum reveals that 170 grain jacketed bullets have maximums at about 24.0 grains of W296, while the 210 grain bullets have maximums at 21.0-22.6 grains of W296.

Thus, these suggested starting points were deemed appropriate, and loads were worked up from there. None of the loads reported herein showed any signs of excessive pressure.

Bullets were cast from WW alloy, sweetened with about 1-2% tin. Given the fact that the throats on this revolver measure about .405" and the groove diameter slugs out at .403", and since most of these bullets fell from the blocks between .403" and .405", bullets were lubed in a .405" sizer die, leaving them essentially unsized and giving them the best possible fit to the throats. Homemade Moly lube (equal parts by weight beeswax and **Stay-Lube** Extreme Pressure Moly-Graf grease) was used throughout.



5 cast pistol bullets used in these tests.



5 cast rifle bullets used in these tests.



401 dies and the 10mm carbide dies.

Reloading dies for the .401 Powermag cartridge are available from **C-H/4D Tool and Die Co.** (<http://www.ch4d.com>). I got a set (new, but definitely old stock) from **Vega Tool Co.** (<http://www.vegatool.com/index.html>). This die set turned out to be from the original run of .401 Herter's carbide dies, made by C-H/4D, to Herter's specs. In this original run of carbide dies the carbide sizer ring was spec'd out too small by Herter's and seriously damaged the cartridge case during sizing. I contacted C-H/4D about this, and the nice folks there very promptly returned my e-mail (well after midnight, no less!) and offered to replace the defective Herter's sizer die with a tool steel die made to proper dimensions. A short time later, I had beautiful new .401 Herter's sizer die made to the proper dimensions (even though the original had been made to their customer's specs). I'm

not sure when this set of dies was originally made, but seeing as the oil on them had long since hardened into a varnish, it was likely a LONG time ago (quite conceivably 40+ years ago). Now that's good customer service! Thanks C-H/4D!

I also tried some experiments using my .40 S&W/10mm dies to reload the .401 Powermag. The carbide sizing die and flaring die worked like a charm, however seating could be a bit of a problem with oversized cast bullets. The 10mm dies were designed for .400-.401" bullets, and the larger bullets sometimes got hung up in the taper crimp portion of the die, causing difficulties in the seating operation. There were no problems with the Lyman TC in the 10mm dies (and taper crimping was found to be sufficient to prevent this bullet from inching forward during recoil).

The Ideal 40388 HP was the reason that I got into this project in the first place, and it didn't disappoint. This 165 grain HP-SWC was able to comfortably reach 1600 fps from the .401 Powermag, and do so with superb accuracy (5-shot groups of 1" at

25 yards). In fact, this bullet consistently produced the smallest groups of all of the bullets tested in the .401 Powermag. The barrel stayed clean when this plain-based bullet was lubed with Moly lube; yes, even at 1600 fps. This is a combination that I am looking forward to using to hunt pronghorn antelope. To get this load to shoot to the sights, I had to grind off about .040" off the front sight.

The 40398 RNFP (the classic .38/40 bullet) is easier to come by (this mould is still in production), and will comfortably shoot just as fast as the 40388 HP in the .401 Powermag. In general, this bullet was not as accurate as the 40388 HP, but accuracy was nonetheless acceptable.

The Ideal 401452 is Gordon Boser's SWC that he designed for his .401 wildcat. I would have been remiss not to include it in these tests! In contrast to his 429360 (which has a forward driving band diameter of .423"), the forward driving band on the 401452 is full groove diameter. I have shot the 410452 (sized .401") in my S&W 610 revolvers with poor results, but in the .401 Herter's Powermag (sized .405") it shoots just fine at 1400 fps. The Boser SWC can be a little cantankerous in terms of delivering top-notch accuracy, but with the right loads and sized to the right diameter, this bullet shoots reasonably well and provides a unique historical perspective on the whole issue of .40 caliber magnum handguns.

The **Mountain Moulds** SWC is an example of the custom mould tailoring that Dan offers. I went to his website (<http://www.mountainmolds.com/>) and input the data I wanted into his spreadsheet (Keith-style SWC, 73% meplat, .100" first driving band, .400" nose length, 55 degree bevels, 200 grains, etc.) and ordered the mould. A little over 3 weeks later the mould arrived in the mail. The spec sheet that accompanied it indicated an as-cast diameter of about .404" and a weight of about 203 grains (when cast with WW alloy). The mould itself is well made, and the bullets that drop from it are smooth and round, weighing 198 grains with my alloy (WW + 2% tin) and are .404" diameter. This bullet captures the philosophy of Elmer Keith in a form very well-suited for the .401 Powermag. This bullet was able to comfortably reach 1400 fps in the .401, and in general it gave mediocre accuracy. However, when paired with 18.0 grains of **Accurate Arms** #9, it shot very nicely. It also shot very well when paired with 10.0 grains of HS-6 for a 1000 fps utility load (and very similar to what Keith and Jordan were asking for back in the early 1960s as a service revolver duty load). The MM Keith-style SWC at 1400 fps is an excellent all-round hunting load for the .401 Powermag (and one of which I think Elmer would heartily approve...).

I believe that this **NEI** bullet is their design #208 (.406-260-GC) with the GC shank left off. It is a plain-based bullet that's a little bit RNFP, and a little bit SWC. It drops from the mould oversized (about .409") and weighs 233 grains. I sized it .405" with no headaches. 1250+ fps was no problem with this good-looking bullet, and it was very accurate, consistently turning in 5 shot groups of 1 1/4" or less. This is another excellent all-round bullet for the .401 Powermag, and one that should penetrate very deeply.

The Lyman 403168, 403169 and Rapine 270 FP were all designed for .40

caliber rifles, but they are also of the right diameter and weight to be useful in the .401 revolver as well. The full-length cylinder of the Herter's revolver leaves plenty of room for heavier than normal bullets to be seated long. For example, even the long 270 grain Rapine bullet can be thought of as a SWC and crimped in the upper grease groove for an OAL of 1.727", and still have over .050" clearance to the front of the cylinder. The relatively fast (1 in 14") twist of the .401 Powermag stabilizes these longer bullets just fine.

I chose to try the Ideal 403168 because the weight (207 grains) and diameter were right for this revolver. 1400 fps was easily attained, but this bullet has a long nose and short bearing surface, a poor combination for top accuracy. There are better bullets for the .401 Powermag.

The 245 grain Lyman/Ideal 403169 FP (and its 239 grain HP kid brother) are another story. More than ample bearing surface leads to more concentric engraving, and hence very good accuracy. These bullets can be driven at 1200-1250 fps and deliver fine accuracy from the .401 Powermag (5-shot groups of 1 1/2" at 25 yards). The simplest way to load these bullets is to use the top lube groove as a crimp groove, but they can also be loaded to taper crimp onto the ogive. The 403169 is still available, and while the HP mould is no longer made, those who want the HP to hunt with can use the Forster HP tool and drill HP cavities into their ammo loaded with the 403169 FP. This pair constitutes two more excellent hunting bullets for the .401 Powermag.

The Rapine .406250 weighs 270 grains when cast of WW alloy. Sized .405" it can be seated to use the top grease groove as a crimp groove and still leave plenty of room in the .401's cylinder. This bullet has plenty of sectional density, and can be comfortably launched at 1100+ fps from the .401 Powermag. Accuracy is good with 2400, and there is ample adjustment in the sights to get this heavyweight to print to point of aim. This bullet just seems to have "big pig" written all over it...

2400, AA #9, H110 and W296 were able to reach the targeted velocity levels comfortably. Likewise, all powders delivered good accuracy, but overall I would say that 2400 and Acc. Arms #9 were the slight leaders in this category. In this cartridge, H110 showed a sensitivity to sub-freezing temperatures, with velocities dropping as much as 100 fps below those seen at moderate temps. 2400 did not display this tendency -- velocities when the temperatures were in the mid-20s were virtually identical to those measured in the mid-70s. The best accuracy was delivered by the 40388 HP, followed by the NEI RNFP, the Mountain Molds Keith SWC and the 403169 (both FP and HP).

A set of walnut grips were made for this gun (I had to get those awful black plastic grips off the gun!). Also, the front sight was ground down by about .040" to get point of aim and bullet impact (for the lighter bullets) to line up. This puts the gun spot on with the lighter bullets when the rear sight was fully elevated, and still leaves plenty of front sight adjustment for the heavy bullets.

I was impressed enough with the performance of this revolver that when a



The revolver with the walnut grips in place.

second one happened along a little while later, in very nice condition, and at a friendly price, it was also added to the safe. This second .401 was made in 1966, also has .405" throats, and has a cylinder gap of .005". At some point, someone did a very

nice trigger job on this revolver. It shoots just as nicely as the first one, and also needs to have the front sight shortened.

Loaded with suitable expanding bullets, like the Ideal 40388 HP, the .401 Powermag revolver is just about ideally suited for larger vermin (e.g. coyotes, feral dogs, badgers, porcupines, etc.) and light medium game (up to about 150 pounds, such as pronghorn antelope). Loaded with the 403169 HP, or a non-expanding flat-point bullet, like the fine Mountain Moulds 200 grain Keith-style SWC, the NEI 233 grain RNFP, or the Lyman 403169, big mule deer and black bear are reasonable prey. I will be hunting with these revolvers in the near future.

From the perspective of today's craze with .40 caliber handguns, the .401 Powermag is a case of Herter's being decades ahead of the market (so, clearly, were the visionary efforts of "Pop" Eimer and Gordon Boser). The sinusoidal market appeal of the .40 magnum, first born in 1924, revisited just before WW II, again in 1961, and in the mid-1980s (with the **Bren Ten**) may be coming into phase again. Wouldn't a **Freedom Arms** five gun in .401 Magnum make a spectacular deer/antelope gun? "The .401 Freedom Arms" has a nice sounding ring to it, dontcha think? And the cartridge small enough to fit in the FA 97 platform! The .401 is a fine hunting cartridge and one whose time may have come (again).

- Glen E. Fryxell

Warning: All technical data mentioned, especially handloading and bullet casting, reflect the limited experience of individuals using specific tools, products, equipment and components under specific conditions and circumstances not necessarily reported in the article or on this web site and over which The Los Angeles Silhouette Club (LASC), this web site or the author has no control. The above has no control over the condition of your firearms or your methods, components, tools, techniques or circumstances and disclaims all and any responsibility for any person using any data mentioned. **Always consult recognized reloading manuals.**

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Loading data for the .401 Herter's PowerMag

.401 Herter's cases (made by Norma)

CCI 350 primers

All bullets cast of WW alloy + 2% tin

Homemade Moly lube (equal parts by weight beeswax and Moly grease)

Bullet	Powder	Charge	Velocity (FPS)	Comments
Lyman 40388 HP (165 grains)	AA #9	20.0	1608	Very accurate
Lyman 40388 HP (165 grains)	2400	19.5	1608	Very Accurate
Lyman 40388 HP (165 grains)	H110	24.0	1590	Very accurate
Lyman 401043 (174 grains)	AA #9	20.0	1570	
Lyman 401043 (174 grains)	2400	19.5	1615	
Lyman 401043 (174 grains)	H110	24.0	1600	So-so
Ideal #401452 Boser's SWC (199 grains)	AA #9	18.0	1427	
Ideal #401452 Boser's SWC (199 grains)	2400	17.5	1442	2" groups
Ideal #401452 Boser's SWC (199 grains)	H110	21.0	1408	
MM 200 Keith SWC (198 grains)	AA #9	18.0	1405	Accurate
MM 200 Keith SWC (198 grains)	2400	17.5	1408	
MM 200 Keith SWC (198 grains)	H110	20.5	1396	
MM 200 Keith SWC (198 grains)	HS-6	10.0	1031	Very accurate
Lyman 403168 (207 grains)	AA #9	18.0	1421	
Lyman 403168 (207 grains)	2400	17.5	1401	
Lyman 200 TC (210 grains)	AA #9	17.0	1307	Taper crimp, very consistent
Lyman 200 TC (210 grains)	2400	17.5	1401	
225 grain NEI FP (233 grains) (#208 w/o the GC shank)	AA #9	16.0	1247	Very accurate
225 grain NEI FP (233 grains) (#208 w/o the GC shank)	2400	15.0	1258	Very accurate
225 grain NEI FP (233 grains) (#208 w/o the GC shank)	H110	19.0	1294	Very accurate
225 grain NEI FP (233 grains) (#208 w/o the GC shank)	HS-6	10.0	1014	Accurate
Lyman 403169 HP (239 grains)	AA #9	15.5	1213	Very accurate
Lyman 403169 HP (239 grains)	2400	14.5	1244	Accurate
Lyman 403169 HP (239 grains)	H110	18.4	1220	Mediocre
Lyman 403169 (245 grains)	AA #9	15.0	1197	Accurate
Lyman 403169 (245 grains)	2400	14.2	1204	
Rapine 403250 FP (270 grains)	AA #9	15.0	1148	
Rapine 403250 FP (270 grains)	2400	14.0	1129	Accurate

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