GunDigest

ESSENTIAL GLOCK ACCESSORIES

Must-Have Glock Parts and Upgrades

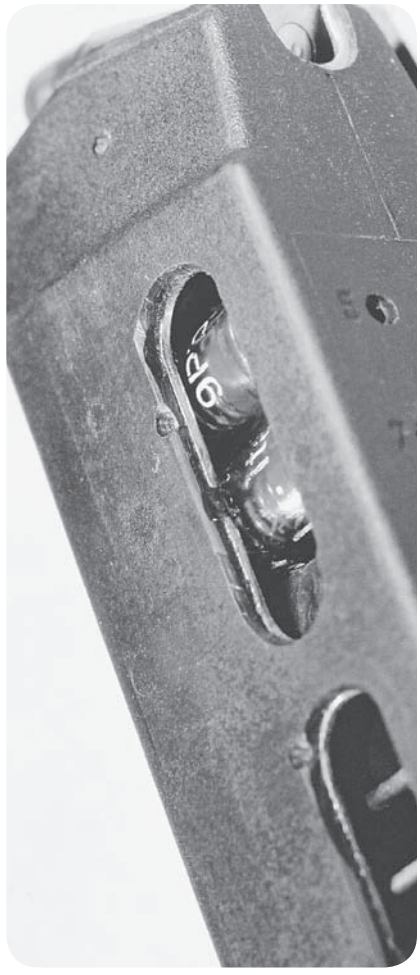
Magazines and Magazine Accessories

Like the Glock when it first came out, magazines for the Glock are unique. The magazines for the first model G-17s were very odd affairs to the American shooters who encountered them. Not only were they "plastic" but they were squishy, too.

The first Glock magazines were constructed by pressing a sheet metal shell into shape on three sides for the magazine tube. (Front and sides, no steel in the back.) The sheet metal channel was then held in place in the mould when the polymer was injected. The sheet metal acted as the inner walls of the magazine tube and provided shape and durability to the polymer tube.

The design had many advantages. First, it was highly corrosion resistant. The only part that had any chance of rusting was the liner, and it wouldn't rust easily. (The liners are nickeled spring steel and are meant to last a long time.) For its size, the Glock magazine had greater capacity than other magazines. The additional capacity was partly due to the Glock magazine being a fraction longer than other magazines of high-capacity 9mm pistols. Also, the shoulders where the double stack was funneled down to a single feed position are higher on the Glock tube. The third aspect that gave the Glock a few more rounds was that the tubes were a little larger in diameter. This was possible due to the polymer frame. (Some magazine pouches for 9mm high-capacity magazines won't take Glock mags, due to the slightly larger diameter.)

Most pistols have a frame that encloses the magazine, which then has grips attached to it. The drawback to the frame-and-grips design is that everything you do constricts the design envelope left over for the magazine tube. For all of its wonderful feel and shape, and for being a huge advance at the time, the Browning Hi-Power only holds 13 rounds. (Interestingly, John Browning's original design appears to be large enough to hold 17 rounds of 9mm ammunition. Wouldn't that have turned heads in the late 1920's?)



The polymer Glock magazine is metal-lined.

For an equally comfortable grip, the Glock G-17 holds 17 rounds. There is and was one drawback to the original design. The magazine would swell when stuffed full of 9mm ammo,and not fall out of the frame even when the magazine button was pressed. It was also a snug fit inserting it in the grip of the pistol when fully-loaded.

You see, in Europe, where the Glock was designed and intended as a military and police pistol, letting magazines fall to the ground is considered very bad form. In some circles it is even considered an abuse of issued equipment, and letting a partially-loaded magazine fall to the ground will get you a stern talking to. So, the first design of magazine would not fall out of the pistol. Well, sometimes it would, and sometimes it wouldn't. Consider the "falling" status of your magazine as a contest between the magazine spring trying to push the magazine out,and the magazine tube swelling when loaded. When full, it wouldn't fall out, too swollen. When empty, it wouldn't fall out – the spring couldn't push the lightweight empty tube hard enough to overcome the friction.

With just enough rounds to add weight, but not so many as to swell the tube, your old-style magazine will drop out when you press the magazine button. How many rounds? It's a question you'll have to answer for yourself. Some magazines drop with three or

Practical competition shooters drop the magazines in the dirt, mud, sand, etc. We expect them to take it, and Glock magazines do.

DROP IT!

"Drop free? We don't make drop free."

If you talk to a sufficiently indoctrinated Glock employee or rep, you will cause him just a bit of concern when using the term "drop free." The factory designations are "Non Fully Metal Lined" and "Fully Metal Lined." And there is only a passing thought paid to the various generations of designs, but there's great concern that you might be installing a magazine baseplate to add capacity in places where it isn't legal. The original intent was to keep the magazines in the gun, and the need to alter the design to accommodate the peculiar concerns of the American shooters came later. All other designs were made to improve the magazines for good, engineering reasons. That's us: as good Americans we're always causing trouble.

You'll find Glock magazines of all vintages, but as far as the factory people are concerned, there are two: the originals, and those "American magazines."

Yes, the hi-cap on the right is a no-name knockoff of the Glock, but the owner has tested it thoroughly and found that it works.

four rounds, others as many as six, some as few as two. And some will never drop.

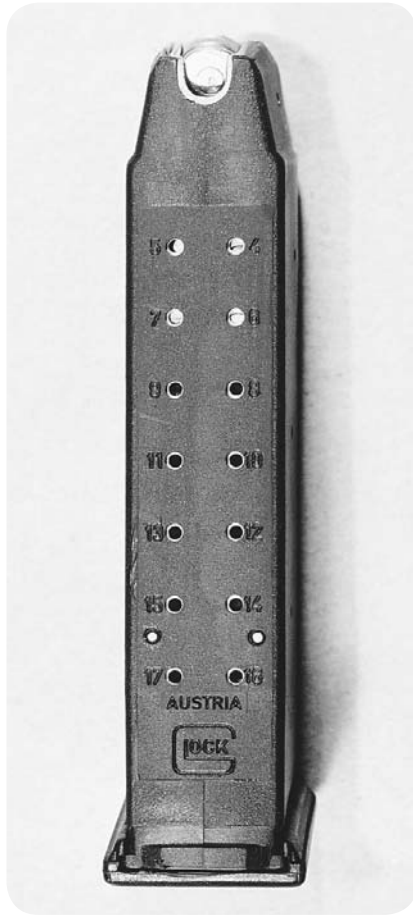
If you needed to reload while using one of those first magazines, you had to use your fingertips to pry it out of the gun. Remember, we're talking of a design offered for the Austrian military trials, where the potential buyers are considering its issue to soldiers. A machinegun crewman is not going to be trained in speed reloads, and if after using his pistol for a few shots in an emergency he has to pry the magazine out to top it off, so what?

In the USA, that attitude didn't go over very well. American shooters considered the magazine as almost a disposable part. When it was empty, especially for practical shooting competitors and law enforcement trainers, getting it out of the gun as fast as possible was the highest priority. Indeed, they were used to magazines that launched themselves out of the pistol when empty.

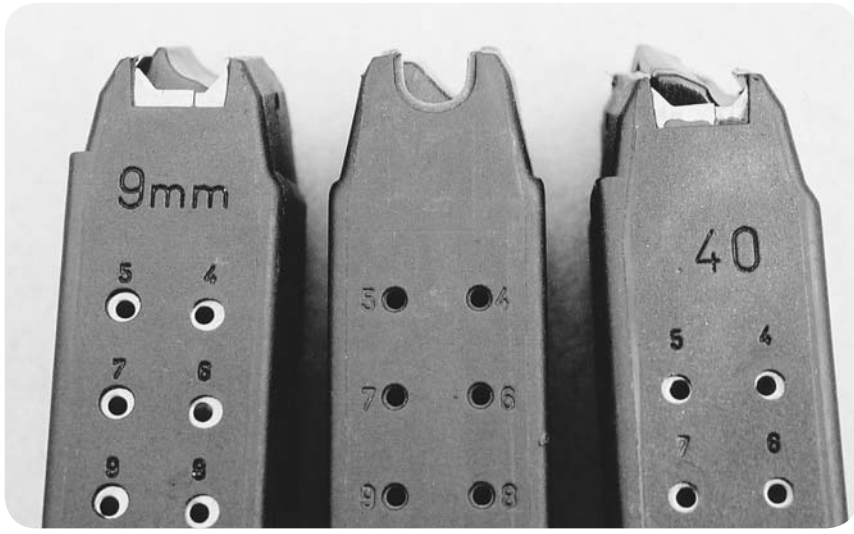
Where an Austrian soldier is issued one spare magazine and one in the gun for the pistol he is handed, and some European police departments issue only one magazine with a pistol, American shooters, competitors, and law enforcement officers viewed owning three or four magazines as an absolute minimum.

As an aside, when I first went through the Glock Armorer's course, we were offered guns and magazines at very good prices. Hold onto your chair, because back in those days, we were offered the opportunity to buy high-capacity magazines for $10.50 each. That's right, 10 dollars and 50 cents. The storage box for the original Glocks is a dead giveaway of the European attitude. One pistol, two magazines: one in the pistol and one beside the pistol.

The solution to the peculiar American insistence



The first Glock magazines didn't even have the caliber markings – just cartridge holes and the Glock logo.



Two drop-free mags flank a very early 9mm mag – so early it isn't even marked "9mm" because that was all Glock made at the time.

MAGAZINE DISTINCTIONS

So which Glock magazine do you have (in case it isn't marked) and how can you tell if the feed lips are within specs? Measure the feed lip gap with a pair of dial calipers. If your magazines lips have spread (or been dented, bent or altered) you can tell quickly. Measure the width of the lips with a dial caliper.

The allowable dimensions are:

9mm: .325" to .335"	.40: .360" to .370"	10mm: .360" to .370"
.357: .360" to .370"	.45: .425" to .435"	

If you have other magazines on hand, you'll quickly find that Glock magazines hold their rounds tighter and in some cases the feed lips extend forward farther than other designs do. Nothing good or bad either way, just the way it has to be for a particular mechanism.

One peculiarity: A .40 magazine can hold 9mm ammo, and feed it into the pistol. As a stopgap measure to keep a 9mm running, I would put it up there with running your car with the tires flat. What it does mean is that if you get some 9mm ammo mixed in with your .40 ammo, it will feed and chamber. It may even fire. It won't cycle the .40, and it won't damage the pistol – just your reputation as the "high-speed, low-drag" shooter at your club. More than once I've watched a Glock-shooting competition shooter have the dreaded "Nines in a Forty" malfunction. The pistol is immediately reduced to a hand-operated single-shot pistol. And if the range officer or safety officer figures out what is going on quickly enough (as in before the shooter finishes the stage), the shooter's score could suffer as well as his reputation.

One small detail long-time Glock owners have noticed, on their pistols and magazines, is the reluctance of Glock to give their competition any space. The pistols are not marked ".40 SW" but are only marked ".40." Ditto the .357 SIG, which is simply marked ".357" for caliber. Publications under the control of Glock make no mention of other manufacturers, even obliquely in the caliber designation. I don't blame them. I just find it curious. Is S&W going to die of envy because Glock won't mark their pistols with "S&W" or "SW" even in the caliber designation?

Nothing new in it, though. Colt for a long time marked their revolvers ".38 Special" instead of ".38 S&W Special." And even earlier than the .38 Special cartridge, they offered revolvers in ".38 Colt" and ".38 New Police" to avoid using the dread phrase "S&W" in the caliber marking or cartridge designation. Even today, the curious custom continues. Ruger refers to its .40 pistols as "40 Auto," and so marks them on the chamber of each.

As with the other parts, there are upgrades to followers. The armorer at a GSSF match can upgrade your mags for you.

on drop-free magazines was simple: make the sheet metal pressing a four-sided, solid internal affair, and insert the new tube into the mould before encasing it in plastic. The exterior of the magazine was changed slightly so as to make it possible to determine which type a magazine was without having to insert it into a pistol. The giveaway is the notch in the upper rear where the slide passes through to feed a new round, right above the caliber designation. (Some very old magazines won't be marked with the caliber at all, since when Glock only made 9mms they didn't bother to so-mark the magazines.)

The old magazines that wouldn't drop free have a rounded U-shaped notch. The drop-free magazines have a square U-shaped notch. Later iterations of the drop-free design have the sidewalls of the notch tipped outwards, so it is an angular slot. One other change made to the tube when going to the drop-free magazine was another American shooter-induced requirement. The top edge of the magazine shoulder was altered so it acted as a positive stop to magazine insertion.

Again, it is common in Europe to insert magazines with the slide forward. Or, if the slide is locked back, to carefully press the magazine in place. In the USA, we shoot until the slide locks back, drop the old and "slap" in a new one. (And sometimes slap it hard.) The old magazines could travel farther up into the frame than intended. The new shoulder prevented that problem. (If the magazine goes too high it wedges in place, sticks up too high, and the slide then can't go forward.) The stop ledge also solved a minor problem again caused by the American insistence on slamming the magazines into place. The magazine riding too high could cause wear and damage to the retaining notch of the magazine tube, and the ejector and magazine feed lips. With enough wear the magazine might bind when inserted, or fail to stay locked in place when fired.

One other change was to make the composition of the polymer of the magazine tube stiffer. The old magazines had a lot more flex to them, actually bulging when stuffed full of ammo. And in hot weather, partially-loaded old magazines could disassemble themselves when they were dropped. The stiffer polymer led to other problems, but we'll get to that in a bit.

When the new magazines hit the market, everyone who could do it ditched their old magazines in favor of the new. When the Assault Weapons Ban law was enacted in 1994, a whole lot of non-drop free magazines came back onto the market, and you are as likely to find the magazine you are looking at to purchase is an old non-drop as a new drop-free mag. After the ban sunset, we saw a flood of new, non-drop magazines, such that the older ones are probably going to become curiosities. They still work just fine and can be had cheap in many instances. If you come across some in good shape don't pass them up just because they don't drop free. As practice magazines they work just fine.

In competition, having a mixture of the old and new

Two non-drops, a 10-shot, and a no-name copy of the Glock magazine.

can be a problem. If you don't pay attention to the sequence in which you use your magazines, you may find yourself halfway between shooting boxes, trying to rip a non-drop magazine out of the gun against the clock. Also, since the old ones swell when loaded, you have to press them the entire length into the frame in order to seat them. A new-style Glock magazine is like any other pistol's magazine in that once you give it a running start it will whack in place and lock up without you having to press it the whole distance. In daily carry, a non-drop magazine can spare you the embarrassment of having your magazine drop out at inopportune times. I've never had the exquisite embarrassment of having a loaded magazine clatter to the floor in a public place, but I've talked to those who have. It is something you should avoid, if at all possible. An original non-drop magazine isn't going to fall out even if you remove your magazine catch entirely and do cartwheels down the hall. If you use a non-drop magazine as your carry magazine, just don't be needing a speed reload when the shooting starts.

As good as they are, Glock magazines still need TLC.

Why All the Fuss?

There has to be at least one reader out there who is scratching his (or her) head. Why all the fuss and exhortation over magazines? Well, without trying to start an "old shooter vs. new shooter" schism, unless you were shooting actively in the early 1980s (or earlier) you just can't realize what magazines used to be like. Early magazines were so bad they were considered almost disposable. Well, not all, but many.

For example, if you chose to shoot IPSC with a Browning Hi Power (the P-35) back in the "good old days," you could count on good magazines. They were expensive, but good. Since the good ones came from Browning, you could count on them. Wartime surplus P-35 magazines were often quite good. Other pistols were not so lucky.

Ever wonder why the Luger, for all of its good feel and great looks, never caught on in practical pistol competition? The magazines. (Okay, so the wrong-way safety, pitiful sights and creepy trigger were problems too.) If you had a Luger with a magazine with matching numbers, you never let that magazine get away from that pistol. Other magazines, even those made before wartime production was hurried, couldn't be counted on to work reliably.

Many other pistols had the same fault. Indeed, the entire reputation of pistols as being less reliable than revolvers is based on crappy magazines.

What of the legendary 1911? You could always tell a new practical shooter back in the early 1980's; he was the one throwing his "gun show bargain" magazines into the weeds. The first article I was ever supposed to be paid for concerned itself with the detailed and continuing struggle of finding and keeping good magazines running properly. And one of the first bits of advice I offered was to not be cheap with magazines – go ahead and pay the $12 it took to get good ones. (What can I say, they were 1979 dollars.)

Increasing the capacity of compact models makes the magazines a lot longer.

THE FIVE TYPES OF GLOCK MAGAZINES (AND TWO VARIANTS)

The ages of Glocks mags so far are five. The first ones were 9mm only, didn't drop free, and weren't even marked as to their caliber. They also had a baseplate without an internal retaining plate. The baseplate was held on by the sidelugs only. The first magazines are 9mm only.

The second magazine was the transitional non-drop. It came into being with the introduction of the G-22. Transitional mags have the caliber marked and a retaining plate inside. The baseplate has a hole through it so you can poke the retaining plate out of the way on disassembly. The transitional magazines have three sides of metal on the interior and do not drop. The rarest of these are the .40 caliber ones.

The third age of magazines are the drop-free. They have square slots on the top rear. The baseplate and retainer look the same as the transitional ones do, but the part numbers are different. Don't put Type 2 retainers and baseplates on a Type 3 magazine. The tolerance differences can lead to self disassembly.

The fourth magazine is the 10-shot. Ten-shot magazines are all drop-free. They use a different follower and magazine spring than their hi-cap brothers and sisters, but the retaining plate and baseplates are the same. The 10-shots were made during the Assault Weapons Ban and for a while were common as dirt. What with the expiration of that odious law everyone with any spare cash has gone out and bought hi-cap magazines.

The fifth magazine is a curiosity. It is a hi-cap made during the time of 1994 to 2004, marked "For Law Enforcement and Military Use Only." It simply is a drop-free magazine with the warning machined into the mould. If you weren't an LEO or military person, it was a crime to own one of these back then. It still is, in some jurisdictions.

The latest Glock magazines; the .45 GAP, are only of one kind: they are drop-free, tipped-out stripper slot, not marked LEO Only.

The two variants come in the drop-free and the 10-shot magazines. Some drop free mags have a square slot on the back. There are also drop-frees with what cowboys would call a "Lazy U" slot, where the sides are angled outwards. Why the change? No word from Glock, but one Glock representative I talked to said the change was made to indicate that the magazine incorporated a new design in the inner tube assembly.

Another change first appeared on the 10-shot mags and involves the side of the taper. To make fast reloading easier, part of the taper was cut away to a sharper angle.

Yes, you can obsess over magazines. You could even spend time collecting nothing but magazines. Keeping them running is pretty easy: strip ands scrub them now and then, don't drop them too much, and don't loan them out.

The only things most owners worry about are 1) will they work, and 2) did I get them all back when I'm done shooting?

On the right is an early 10-shot 9mm magazine. On the left is the upgraded tube shoulder design.

Some magazines could always be counted on. S&W magazines were always dependable, but the DA/SA trigger of the S&W line was viewed back then as a hindrance to "good shooting." The trick was finding good magazines for a pistol that was suitable for competition or carry. The problem would quickly go away with the changes market forces brought about. Just as Glock was entering the market, the 1911 world was changed with the introduction of the Wilson-Rogers magazines. (Now sold in an improved version by Wilson as the 47D, and now replaced by the #500.)

Ruger entered the centerfire pistol field with their durable and reliable P-85 soon after the Glock appeared. In a few years the whole idea of cheap, crappy and unreliable magazines being the norm for pistols was overturned. The lousy ones still exist, but they aren't what shooters expect to be their usual gun purchase fate. Lousy magazines are to be strenuously avoided, because good ones exist. Such an attitude and situation was not the case before the early 1980s.

Today, you can buy ultra reliable and durable magazines for less than what they cost back then. But in the early 1980s, the idea that a high capacity 9mm pistol could be had with magazines as tough as rocks was almost as radical as the idea of a pistol with a plastic frame.

Disassembly

I know of more than one Glock owner who has never has his magazines apart. Partly because they never fail (at least in 9mm) but also partly due to the sometimes difficult disassembly procedure. While stripping the pistol is a piece of cake, getting the magazines apart can sometimes be a real hassle. The nature of the polymer is the problem. Since it is a slightly flexible material, the interlocking parts of the magazine have to be relatively large and strong to take the load. The magazine is composed of five parts; the tube, follower, spring, retainer and baseplate. (Some very old magazines were made without the internal retaining plate.)

The arrangement is the same as any other pistol magazine, the follower rests on top of the spring, the retainer on the bottom. The baseplate slides on the lips on the bottom of the tube, and the retainer locks the baseplate. On the Glock there is an additional retaining design. The lips on the bottom of the tube have square shoulders, that catch in the baseplate. The retainer, inside the tube at the bottom, prevents the tube from squeezing inwards and releasing those shoulders from their notches. That's your mission, should you choose to accept it, to get those shoulders out of the way.

The start is simple. Look at the bottom of the baseplate. Is there a hole? If

You want to make sure you have the correct baseplates on your magazines for proper function.

so, you have a later magazine. If there is no hole, you have an early magazine. (Or, curse your luck, an early baseplate on a later magazine. Get ready for some struggling.) On the later magazines, take the unloaded magazine and insert your handy-dandy Glock disassembly tool into the hole in the bottom of the baseplate. Push upwards on the retainer until you have pushed it up and out of the way, and it has

After you've pressed the internal plate out of the way (if it has one), squeeze the tube and slide the baseplate off.

Once you get it past the slide tabs, the baseplate moves easily.

snapped to the side or front of the tube.

Now squeeze the sides of the tube bottom while sliding the baseplate forward off the tube. The older, non-drop-free magazines were sometimes a struggle. The new ones, with their stiffer composition, can be even worse: a three-handed job. You have to squeeze strongly and flex the tube enough to clear the notches. I have seen some shooters who didn't have enough hand strength to accomplish this resort to using pliers or even a vise. Careful! You can crush the tube (not easily, but you can) and then you'll be in the position of explaining to the Glock warranty department just how it was you came to mangle a magazine. They might replace it. They might not. They aren't in the business of replacing perfectly good magazines just because you got a little heavy-handed in disassembly.

The early magazines lacking the internal plate are simple: Squeeze the sides to release the tabs from the notches in the baseplate, and slide the baseplate off. The softer composition of the early magazines does make the task easier, but it is not always easy.

With the baseplate off, remove the spring and follower. Wipe the dust, crud, grit and powder residue off everything. Refrain from lubricating it. Oil will simply attract dirt and grit, and you'll have to clean it sooner. If you want to use something to keep your magazine running smoothly, Mag Slick from Krunch Products is one option. As a synthetic and non-tacky lubricant it will smooth the internal parts function without attracting grit.

Reassembly is the infamous reverse order. Install the follower and spring, making sure you get them pointed in the right direction. Press the spring down, put the retainer in place (correct side: the little bump towards the baseplate) and start sliding the baseplate on. You'll need both hands and some dexterity. The trick is sliding the baseplate on, and keeping the retainer pressed out of the way, while you squeeze the rails to clear the little shoulders on the rails for the baseplate to slide fully into place.

After a few times, you'll either get the hang of it or you'll wait until your magazine malfunctions to go through it all over again. It will be a long wait in 9mm. In the G-22 you may have a shorter wait, as I have heard their springs don't last as long as they do in the 9mm magazines. My G-22 magazines and springs are 15 years old at this point, with a few tens of thousands of rounds through them, and are still working fine. But your mileage may vary.

Oh, and if you want to strip and clean your magazines, do them one by one. Don't be in the position of having a jumble of tubes, springs, followers

The Pearce extension does not increase the capacity of this G-26 past the former legal limit. It does make it easier to shoot.

and baseplates on the table, and not remember which ones went together. It may not really matter, but it is asking for trouble to mix parts in magazines that were working before you started. As a friend of mine has been known to comment: It's Murphy's Law, not Murphy's Suggestion.

Other Magazines

In the world of firearms accessories, it isn't unusual to find a bunch of manufacturers making parts, and parts only, for firearms they themselves don't make. The biggest example is the 1911 pistol. There are a dozen people who make magazines for it, and most every manufacturer (three dozen or more) of the pistol offers its own magazine as well. (The pistol manufacturers' magazines almost certainly comes from one of those dozen magazine makers, but since they buy hundreds at a time they can have their name put on them.)

You could buy a 1911, and then buy a lifetime supply of magazines for it, and not have two of any maker's magazines.

Not so the Glock. The reason? Polymer. The other magazine makers are all set up to make magazines out of steel. Whether they fold and weld or extrude the tube, they all make them out of steel. If you're set up to process sheet steel into magazines, making a new model for a different pistol is a matter of buying or making new pressing forms. If you want to make polymer magazines, you have to invest in a plastic injection moulding or casting machine (no small or cheap thing, by the way) and buy or make moulds for each magazine you plan to offer.

Why not make steel mags for Glocks? A steel magazine tube and the polymer magazine catch on a Glock don't go together well. The weight of a loaded magazine, the spring pressure pushing down on it, and the recoil of shooting all act to tear up the polymer magazine catch in short order when using a steel magazine in a Glock. There are metal and metalized polymer magazine catches, but why install a different mag catch just to use a non-Glock magazine? Also, the steel magazines need a bit more care.

Serious shooters who use steel-tubed magazines, especially the high-capacity ones, fuss over their magazines. You see, steel bends. Bend it far enough, and it takes a set, and it does not spring back from the bend. A serious competitor will measure the width of the feed lips of his or her magazines and note the distance in their log book. Once a month, or just before a big match, they'll measure the width again to make sure the lips haven't been dented or spread from use. If need be, they'll carefully adjust the feed lips.

All of that worry and fussing is wasted on Glock magazines. The lips don't bend, as the polymer coating offers enough protection to keep them from getting whacked hard enough to bend them. The polymer also acts to support the steel liner against fatigue from constant use. The polymer may peel away from the steel, crack, break off, flake or otherwise become very ugly looking. As far as Glock is concerned, as long as it still feeds reliably (defined by Glock as 100 percent) and locks the slide back when empty, it is not in need of replacement.

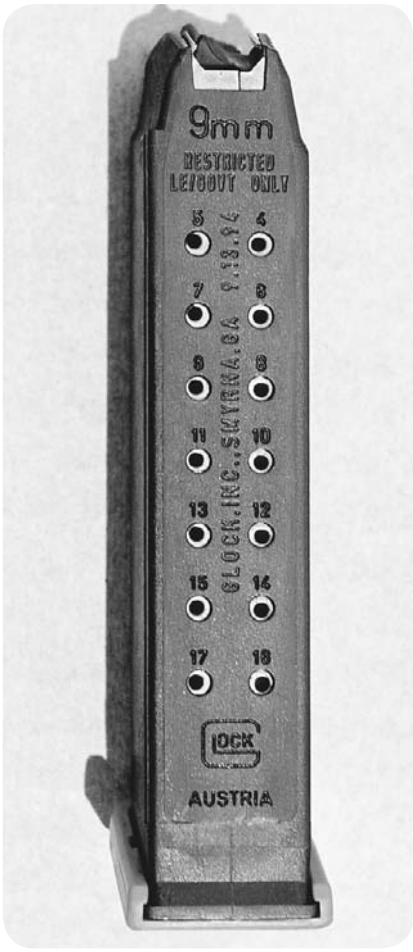
The best magazines for your Glock are factory originals. I have never had much luck with the steel aftermarket mags, but I have had good luck with one brand of aftermarket polymer, called Scherer. They made good polymer mags for the Glock, and the ones I have work flawlessly.

Capacity

You'll run into a lot of magazines that will only hold 10 rounds, despite the tube and frame size potentially allowing more. For those of you who have already forgotten, there was a law passed back in 1994 that mandated ten round capacity. Called "the Crime Bill" or "Assault Weapon Ban" or simply "the Mag Ban," the 1994 bill made the new manufacture of "high-capacity feeding devices" (government speak for magazine) against the law. New magazines up to 10 rounds could be made, and the old high-capacity mags

could still be owned, bought sold and traded. But no new ones could be made except for law enforcement agencies and the military. And the magazines produced for them had to be specially-marked so there was no doubt as to what they were.

Passage of the law simply caused prices to skyrocket. For a while, original-capacity Glock magazines were being sold for over $150 each. Then a few things happened. One, common sense crept in. A hundred and fifty dollars is a lot of ten-shot mags and ammo for practice, and shooters stopped being so eager for hi-caps. Second, the firearms wholesalers started working with police departments to trade up. A wholesaler could offer to trade a bunch of .40 caliber Glocks to a police department in exchange for their 9mm ones and all their magazines. To sweeten the deal, the wholesaler might even throw in night sights or compact versions for full-size guns. Having traded gun for gun, the wholesaler would then sell the guns to retailers with one high-cap magazine each, and offer the extra magazines at a fair but profitable price. After all, his cost in the traded-to-the-police new magazines is less than $15 each, so he can afford to be generous and sell the old ones he gets for a mere $40 wholesale.



Do you really need high-cap magazines? Perhaps not, but since you can have them, why not?

So, for those looking for magazines on the used market, that explains why most of the hi-caps you saw from 1994 to 2004 were 9mm. For a while, there was a huge screaming match going on about pre-ban magazines. You see, the law merely stated that magazines produced before September 13, 1994, were legal, and those made after were not but it made no mention of made where. That's right, the argument concerned overseas magazines.

By a strict reading of the law, every magazine on the planet manufactured before September of 1994 was a legal hi-cap magazine. Under the law, Glock could have traded those magazines from their current owners (with new, hi-cap ones for countries where there wasn't a capacity ban) and then imported those magazines here, and thus had an immense stockpile of legal hi-caps. They could have owned the pistol market in those 10 years.

When those in the government who hadn't previously figured it out found out, they kicked up a fuss and you'd have thought Glock and all the other importers were trying to import nuclear weapons or something. The end result was that the import paperwork never left the desk of whoever was supposed to

With luck, we won't have any more hi-cap bans and "LEO" markings such as this will simply be collectors' curiosities.

Magazines weren't the only article restricted by the Assault Weapons Ban of 1994. This isn't even a select-fire rifle!

approve the transfer. Well, it was a good try. Now it is all moot, as the law has expired.

One wag has suggested that we not adopt the terminology of the enemy, and thus we shouldn't be calling the 17-round G-17 magazines "high-capacity" magazines. They should be called "standard-capacity" magazines or "normal capacity and the 10-round ones should be "under-capacity" magazines. While I appreciate a good tongue-in-cheek joke, the government back then had defined them as "high-capacity" and any attempt at changing the terminology will probably get you branded as some sort of loony curmudgeon.

Some states still have a hi-cap bans on their books. The poor unfortunate souls who happen to reside in these places cannot get new hi-caps and cannot even buy old ones unless they had bought them before the state law was passed.

What to do now? Buy lots of hi-cap magazines, and get involved in politics to keep future bans from happening. Join groups, donate money, and send an occasional letter to your representative.

New Tubes for Old

In the old days, you saw tubes offered in magazines and parts catalogs offered as replacement magazines. Somehow, a tiny spark of rational thought had crept into the bill that became the Assault Weapons Ban of 1994. While new magazines were banned, old ones were still legal to buy, sell and trade. And existing ones could be repaired or replaced. Those tubes you saw for sale were to repair or replace existing magazines. It was against the law to use them to build a new magazine. The supply of replacement tubes for Glock pistols had not been as great as that for other pistols due to design. If you make magazines for, say, a 1911, you make them by bending sheet metal. To make some other design you modify the tooling that bends the sheet steel and make the new design.

To make Glock magazines, you need the sheet metal bending equipment to make the liners, but you also need the injection moulding equipment to finish the job. A much bigger investment.

The current maker of replacement tubes is Scherer. I have had good luck with their magazines. They are lined polymer and they work. You can also buy complete magazines now that the hi-cap law has sunset. You probably should lay in a supply of spare parts, if for no other reason than that you might lose or break some while cleaning. And you never know, if some sort of law ever passes again, you may find those spare parts very useful.

If your magazines break or fail to work, you can send them back to Glock. However, be aware that they will not replace magazines that are out-of-spec due to normal wear-and-tear or that have obviously been abused. What you're likely to get is one of three answers: 1) your magazines are used-up, it isn't Glock's fault, and you need to buy new ones; 2) your magazines work, and despite their shabby appearance they meet the Glock performance specs so you'll have to pay for shipping them back; or 3) they are worn-out and cannot be repaired, and how many new ones do you wish to buy?

Do you need hi-caps?

Ah, that's the question, isn't it? Yes, for some applications you sure do. For self-defense, law enforcement, and military applications, having a hi-cap mag is very

A QUESTION OF EXTENSION

The question always comes up, "How much does an extension increase capacity?" In order to answer that question at least partly, I used two of my own magazines as test subjects. One is a 9mm for a G-17, the other a .40 for a G-22. The test was simple: load them to maximum capacity with each of the extensions installed, and see if I could seat the magazine.

Since each round decreases the available space in a magazine by a constant value, why would seating be a problem? It is possible, if the variables stack up just right, to get the last round into a magazine without any extra space to compress the stack under the slide. You see, the rounds have to rise up into the slide's path. That means when the slide is fully forward it rests on top of and presses down the stack of rounds and magazine spring. If the stack doesn't have any extra travel left, you can load the magazine with X number of rounds but can't get it seated no matter how hard you try. In such a case, that particular magazine has a capacity of "X minus one" and you must take care when loading it. Otherwise you could load it up, forget about stripping off the top round, and find in the middle of a match that you can't get that magazine seated no matter how hard you hit it.

The situation is one that many AR-15 shooters are familiar with. It is possible to stuff magazines with one too many rounds. Some 20-round magazines will "hold" 21 rounds, and 30s will "hold" 31. I use quotation marks because while you can get 31 rounds in (as an example) and even get the magazine to seat (only with the bolt locked open), firing the first round will create a malfunction as the friction is too great for the bolt to overcome.

So I loaded the two magazines with each extension to as many as it would hold, then seated and fired the first round. I then pulled out the magazine and stuffed it full again. And then fired one round, repeating until I had fired each magazine 10 times fully-loaded. Why do all this to just one magazine of each? Magazines can vary in their capacity. I know, I know, they are industrial products created to be as identical to each other as possible. In the single-stack world, it isn't a problem. If you buy a truckload of Chip McCormick eight-round 1911 magazines (just as an example) you will die of boredom loading each to check capacity. They will all hold eight. No more, no less.

However, in hi-cap magazines, things are different. Otherwise identical tubes can hold a round more or less than other tubes. (Smaller rounds, especially the nines, and the rounds are double-stacked) If I used one extension on one tube and another extension on a different tube and came up with different capacities, I'd have to swap and try again. Better to simply do the check to one particular magazine in each capacity and see what happens. The resulting capacities are as follows:

9mm

Taylor Freelance +4: 23
Arredondo: 23
Grams: 23
Dawson: 22

.40

Taylor Freelance +4: 20
Arredondo: 20
Grams: 19
Dawson: 20

comforting. Were I to be in the position of going through doorways on a SWAT team for a living, or riding a helicopter on the payroll of the Army or Marine Corps, I'd sure feel a lot happier with more than 10 shots per in my magazines. (I'd also be comforted by the presence of lots of other firepower carried by those riding along with me.)

However, there has been a counter-current in regard to demand. In the 1990s, a large number of states changed their CCW laws to Shall-Issue from May (or Never) Issue. Carrying a full-sized gun concealed isn't easy. It is harder still if you are average or smaller in size. I'm 6'4" and 205 pounds, and I used to carry a full-sized 1911 all day. At the first opportunity I switched to a Light Weight Commander. When I got my hands on my first compact Glock, it was smaller and lighter still. Many other shooters who have CCWs have figured the same thing out. If you're going to carry a compact pistol, you aren't going to get 17 shots anyway. Since you can reload quickly, 10 is probably enough.

Scherer makes replacement tubes and assembled magazines. They're good, although snobs might prefer Glock-made mags.

As an unintended consequence of the switch from 1994 to 2004 to 10-shot mags and compact carry guns, interest in the big calibers is greater than ever. After all, if you're going to be carrying only 10 shots, they might as well be the biggest 10 you can wrestle into the gun. Ten shots of .40 or .45 are a lot more comforting than 10 shots of 9mm. With the new magazines, the calculation gets a lot more interesting. Eight or 10 .45 bullets, vs. 15 9mm? And if those 9mms are +P or +P+?

All manufacturers had to comply with the 1994 AWB, not just Glock.

In many competitions, you don't need more than 10, then or now. In GSSF competition and in USPSA Limited-10 or Production Division, or IDPA matches you can't have more than 10 rounds in a magazine. In The Steel Challenge, if you need more than 10 you're losing in your class. (Some might argue if you need more than five you're losing, but we won't go there.)

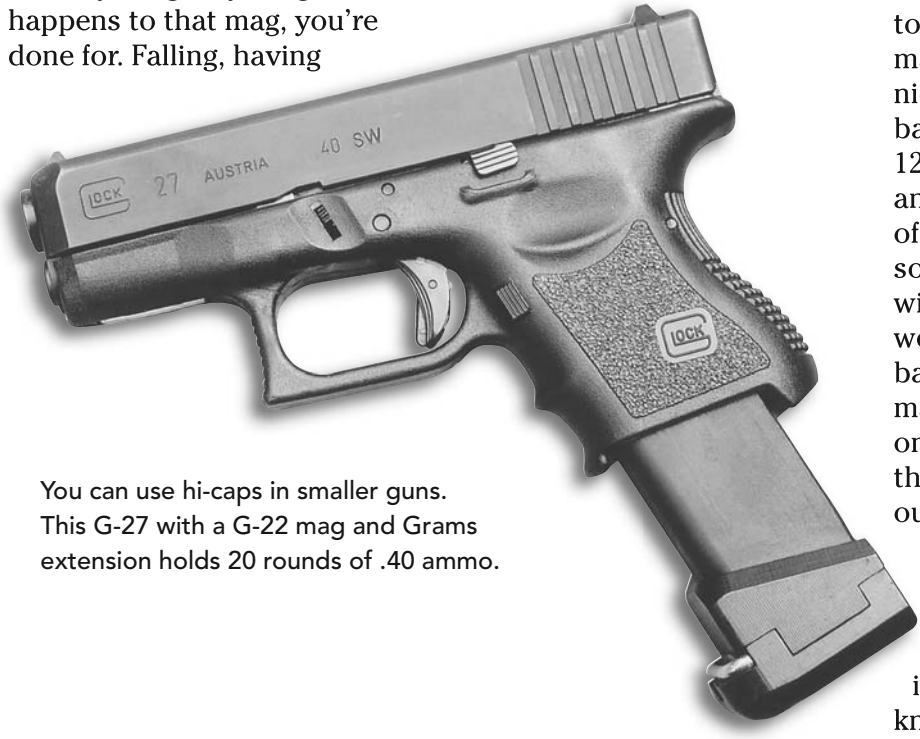
But in some competitions, more than 10 is not just nice but a must. If you're shooting bowling pins and are in the 9-pin category, 10-shot mags are a definite handicap. Shooting Open or Limited in a USPSA match with 10-shot magazines is a sure way to end up

losing. And limiting yourself to 10 shots at the American Handgunner Shoot-Offs is s sure way to lose crucial bouts in Open or Stock Auto. We now have the option, which we didn't for 10 years.

As I mentioned before, using a non-drop original magazine as a carry magazine makes sense if you're worried about dropping your magazine inadvertently. If all you have are drop-free magazines, a bit of paper tape can keep the magazine in and still allow you to do a reload. Yes, I've heard people argue that 17 is enough, and expecting to still be in the fight and reloading after emptying one magazine is beyond optimistic.

My view on reloads is that I'm not as worried about running out as I am about other problems. If you have only one magazine, and anything, anything at all happens to that mag, you're done for. Falling, having the gun or holster struck, whacking the baseplate on a door frame during the start of your fracas – oh, many things can render the magazine in your pistol inoperative. A spare magazine makes sense. If anything, the spare should be bigger than the one in the gun, not the same size or smaller. Packing and keeping concealed a magazine is a lot easier than concealing a pistol.

The Pearce extension on a G-36 bumps capacity from six to seven shots of .45 ACP and gives your (or at least my) little finger a place to rest.



You can use hi-caps in smaller guns. This G-27 with a G-22 mag and Grams extension holds 20 rounds of .40 ammo.

Non-Hi-Cap Baseplates

Even in the polymer world of Glocks, there is a perceived need for metal. One way to get empty or partially-empty magazines to eject cleanly is to increase their weight. Brass magazine pads do that quite nicely. The CPMi Glock brass baseplate for a G-20/21 weighs 1220 grains (about .174 lb.) and adds a significant amount of weight to a magazine. For someone who wants durability without too much extra weight, CPMi's aluminum baseplates will keep your magazine togethe, and add only a fraction of an ounce to the total empty weight of 2.75 ounces for a G-17 magazine.

The only drawback to getting aftermarket baseplates, whether they increase capacity or not, is magazine age. You have to know what version magazine

This G-30 .45 magazine already holds 10 rounds.

For USPSA/IPSC Production Division competition, this G-19 and its 10-shot magazines are very competitive. And they make a great carry package, too.

you have in order for the maker to get you just the right baseplate. (It goes without saying you're going to tell him model and caliber.)

On the other hand, if you want a larger pad for more-certain insertion but don't want to increase capacity and aren't too keen on adding metal to your polymer pistol, then Arredondo has the answer for you. (They have the answer even if you don't have an aversion to using metal accessories.) The Arredondo standard basepad fits both 10-shot and high cap magazines and doesn't add any capacity while doing so. The basepad is in two parts and uses the standard spring and follower. Disassemble your Glock magazine and set aside the factory baseplate and locking plate. Slide the upper half of the Arredondo pad over the top of the mag and press it down to the bottom. Press the bottom half over the magazine spring and hook the fronts of the two halves together. Now compress the rear ends toward each other. You may find using the included disassembly tool is an aid to getting the tab on the assembly compressed so the two halves can click together.

Once clicked, they will stay together until you use the disassembly tool. To take them apart, use the tool to compress the rear tab and unlock the halves. Pivot the halves apart, and slide the upper off the tube.

Increasing Capacity

There are a few ways to increase capacity. One is to go

The CPMI extensions can add a round or two, or not, depending on which one you get. They are frame-specific, so get the ones that will fit your Glock.

out and buy higher-capacity magazines. The other is to increase the capacity of the magazine you have.

Before we go any further, I would be remiss if I didn't tell you the following: DO NOT put any of the capacity-increasing gizmos we will be discussing onto a post-ban 10-shot magazine if you live in some place like California or New Jersey. Even if it works, it is a violation of state law, a felony, and subject to stiff fines and severe prison sentences. Back during the federal ban I almost bolted for the door the first time someone showed me how they had wrestled a +2 basepad onto a 10-shot magazine. Doing so in some states now is the same thing, differing only in the uniforms of the guys busting down your door.

The first of the capacity-increasing accessories were the Glock +2 baseplates. A pyramid-shaped hollow baseplate, the +2s simply replaced the existing flat baseplate and added two more shots to a magazine's capacity. (That is, two more 9mms and one more .40. They were never made for 10mm or .45.) They fell out of favor for a few reasons. One, they only added two shots. Two, they came off. If shooters were going to fuss over a new baseplate and add more shots, they wanted more than just one or two; they wanted as many more as possible. Now, if what you want is only an extra round or two, with minimum extra bulk, then the CPMi hollow Glock pads work for you. They add a round or two while adding less than half an inch to the overall length of your magazine. And they won't come off accidentally.

Manufacturers of competition replacement baseplates made them as long as the rules (if any) for those competitions allowed. Thus, capacity jumped up to +4, +6 and +8. Also, as I mentioned, the original +2 baseplates suffered an embarrassing problem: they came off. With the weight of the ammo, and the tension of the spring, the baseplate was under a lot of stress. The pyramid shape allowed for more leverage if something whacked the Glock +2. It isn't at all uncommon for police officers to whack their holstered gun against door frames, car doors and frames, vending machines and the like. The +2's had a tendency to pop off and spew the spring, follower and ammunition all over the floor or ground.

I'm not picking on police officers when I bring things like this up. They were the first ones to go into Glocks big, and you learn a whole lot of interesting things when you issue a thousand of anything to people who wear them all day and keep records.

If you have a +2 extension that has never come off of one of your magazines, great. Don't swap it to another tube. I've seen competitors at matches with duct tape applied to keep their +2s on. (Yes, it is an ugly sight. No, I don't know why they insist on using gray duct tape instead of using something more suitable like black.)

The higher-capacity baseplates like the Taylor Freelance, Arredondo, Grams and Dawson use a more secure method of attachment than the factory +2 arrangement and are not prone to sudden disassembly. The first three feature plastic machinings or castings, while the Dawson is machined out of aluminum and anodized in an array of colors.

The Taylor +4 and +8 extensions (actually +5 and +9 9mm rounds) use an aluminum plate they call the Fort Knox retainer, one that is bolted onto the back of the

Clockwise from upper left: a Dawson; an Arredondo; an Arredondo 10-shot-only; a Grams; and a Taylor Freelance.

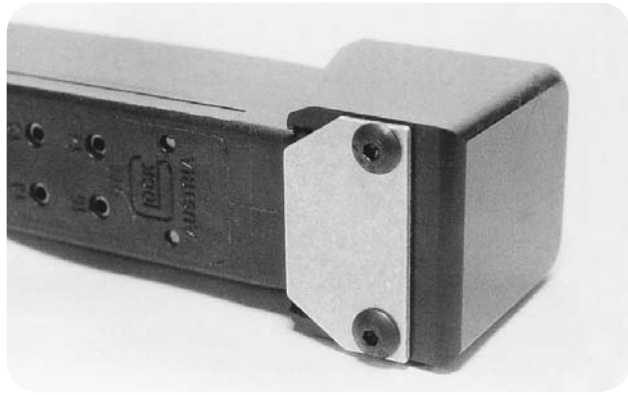
extension with a pair of cap screws. You couldn't knock it off with a ball peen hammer. Machined from blocks of delrin, they add very little to a mag's weight.

The Taylor Freelance isn't caliber-specific, as it uses the factory follower. But you will have to specify if you are using a 9mm/.40 tube or a 10mm/.45 tube. Also, tell them if it is an original or drop-free tube.

To install a Taylor Freelance, disassemble your magazine and set aside the baseplate, inner place and spring. Place the follower on the new spring, and insert into the magazine tube. Unscrew the locking screws from the Freelance extension and set the screws and retainer aside for the moment. Slide the bottom of the spring into the Freelance extension. Line the spring up so one of the forward coils is at the front of the tube, and wriggle the extension onto the mag tube rails. Once it is in place, screw the Fort Knox locking plate down. Disassembly is the traditional "reverse order."

The Arredondo extension uses an upper moulded collar and a clip-on bottom and comes with a new spring and a disassembly tool. As it does not replace the follower, you need only specify if it is a 9mm/.40 tube or a 10mm/.45, and whether or not it is a drop-free.

To install, disassemble your magazine and set aside the baseplate, inner place and spring. Place the Glock follower onto the Arredondo spring provided in the kit. Slide the upper collar over the magazine. It will stop on the bottom lip of the magazine tube. Insert the follower and spring. Then press the Arredondo baseplate onto the extension, compressing the spring between them. Once both sideclips have locked into place, you're done.



The Taylor Freelance Fort Knox retainer. This puppy isn't coming off accidentally.

To disassemble, use the provided tool to simultaneously press and unlock the sideclips. (Unload the magazine first, and keep your hand over the baseplate, as the spring will try to shoot it off the end of the tube.)

The Grams uses a pair of interlocking delrin parts that are held together by a steel "U" clip that passes through them. Disassemble your magazine. Replace the old spring with the new, longer spring and Grams follower. The Grams magazine extensions are caliber-specific, so you'll have to order the ones you need. You won't be able to swap them back and forth between 9mm and .40 unless you're willing to use the factory follower.

Slide the upper assembly down over the mag tube until it rests against the bottom lips. Use the Grams baseplate to compress the spring, and once nestled together, press the stainless U clip through to secure the assembly. Again, it's a bank-vault solid assembly that won't come apart when you drop it. To disassemble, pry the U clip out of the closed position, and pull it free of the assembly. Once free, the baseplate will try to shoot off, so restrain it.

The Dawson lives up to its nickname, "Team Awesome." It is a beautifully machined piece of aluminum with a sliding door as the retaining latch. Dawson machines a dovetail on the side of the baseplate and then machines and fits a door/latch that rides on the dovetail. The best part (besides the anodized colors)? The door has a retaining pin so it doesn't come off the baseplate.

To install, strip your magazine and place the factory follower on the Dawson replacement spring. Insert follower and spring into the magazine and compress it with the Dawson baseplate.

Tilt the baseplate to catch it on the rightside tube rail, then tilt it back until it is flush with the bottom of the tube. Slide the door shut. The Dawson is so trick and cool that I know competitive shooters who switched all their magazines over to Dawsons just for the look. It didn't hurt that they are hell for tough and guaranteed.

For competition, any of these is a hot ticket. The +4 is still short enough to stay under the Limited equipment rules of USPSA, and the +8 stays within the Open length restrictions. A G-17 with scope and compensator, fed a magazines with a +8 on it, can be stoked with 27 rounds of 9x21 ammo, keeping up with the 1911 hi-cap frames (17, plus nine, plus the one chambered.)

Beven Grams in particular extolls his extension as being "impact resistant." Thinking about it, I recall that every range I've been to West of the Rockies (Beven Grams is based in California) has range bays composed of river rock and parking lot gravel. (Here in Michigan we have sand. Sand, sand, and clay. In the rain they turn to mud.) I'm assured by the shooters in the Pacific Northwest that they have lots of slick mud. (In the rain, they use straw to cover the paths, leading their ranges to end up being composed of paths of stucco until the straw wears out or sinks out of sight. "Paths of Stucco." Sounds like the title of a romance novel.)

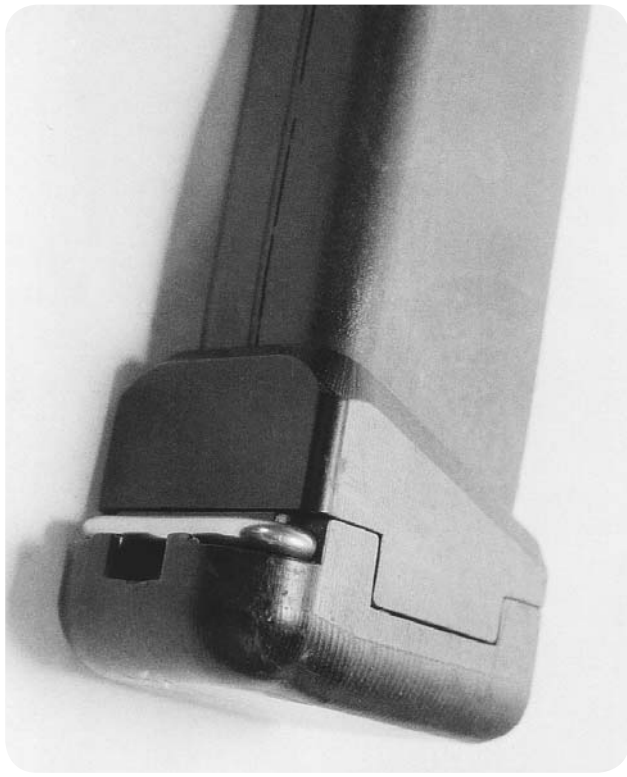
The Arredondo extension is easy to assemble, requires their tool to disassemble, and works like a champ. Tough,too.

While thinking this over, I could feel a test protocol forming in the back of my mind. Back when I was getting my degree, we used to play a game between classes called "Stopper Hockey." Back then, chemistry students had to form their own glass for reactant vessels, and many vessel designs required rubber stoppers. The bigger ones were the size of a hockey puck, so we'd kick them down the aisles between the chem benches. I decided to play a little "magazine hockey" as well as some other cruel abuses of fine pistol magazines.

I first borrowed seven magazines from a local law enforcement officer (he too wanted to know The Truth) and we met at the range. I borrowed from him four 9mm and three .40s, all full-size, hi-cap, LEO-Restricted magazines. (The test was first done during the Assault Weapons Ban.) We figured if we trashed the magazines he could always turn them back in to the departmental armorer for new ones. And the knowledge would be worth it. I also installed the Arredondo no-cap extension on one of my 10-shot Glock magazines.

What I didn't do was conduct the tests with a +2 baseplate. I already knew what the outcome would be and didn't feel like chasing magazine components around the range.

I installed one of each of the three (Taylor Freelance, Arredondo and Grams) hi-cap extensions on the 9mms and one each on the .40s. The Dawson I installed on a 9mm

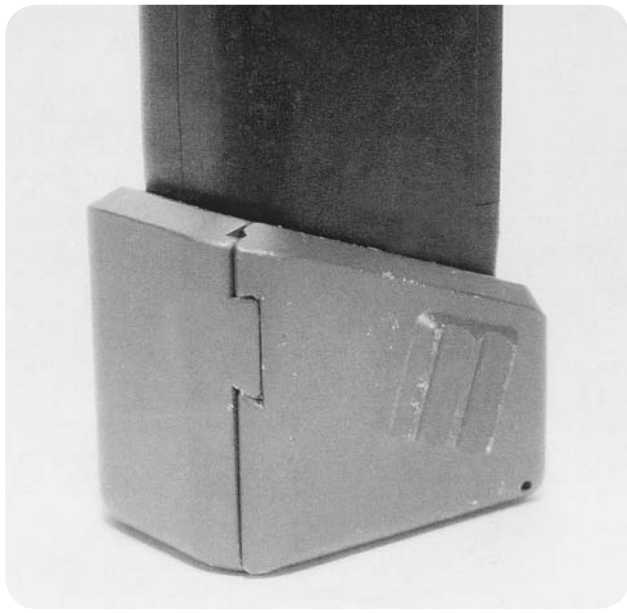


The Grams extension is machined delrin, tougher than a two-dollar steak, and easy to take apart and clean (if you ever need to).

tube. The installation went smoothly, and there were no problems in the few minutes it took to rebuild the eight magazines.

Before I describe the tests, let me tell you that I almost chickened out when it came to the Dawson extension. After all, it was aluminum. It wasn't going to break under anything I could come up with that would be a reasonable magazine test. But it was going to get gouged and scarred. It would look ugly when I was done. Did I want to do that to such an attractive manufactured object? Adding to my angst was the Dawson Guarantee. I was assured by Tom Hall at Dawson that they would replace any extension that I or anyone else was unsatisfied with. (I must admit that a little voice in the back of my head suggested abusing the extension and then sending it in for a pretty replacement. I slapped it down.) In the end, I figured that ugly was worth the knowledge.

Let the abuse begin!



This scarred old Dawson still works like a champ.

The Tests

The Sweeney "I can't believe he's doing that!" test regime started out with some dropping. Our latest club range improvement uncovered some large rocks that we've hauled to the side. (There's one we dug up that's the size of a Yugo. It has about the same performance as a Yugo, without the smoke.)

I dragged a chair over and sat there, dropping the magazines, baseplate hitting the rock, for a few minutes. Nothing broke or fell off. Then I spent a few minutes standing over the rock, dropping magazines, picking them up, and dropping them again. Still no problem.

Time to up the ante. I loaded the magazines and started over. No breakage. What surprised me was how rarely rounds launched themselves from the magazines when dropped. Some magazine

Sand and gravel didn't cause any of the extensions to falter.

The poor, abused magazines, hiding in their nest, hoping the author has run out of ideas.

Dropping magazines on rocks is bound to attract attention. But if you've got to know, you've got to know.

styles will launch one or many rounds each time they are dropped. I've seen dropped hi-cap 1911 mags that would snap the top round 180 degrees, leaving it rim forward. (Clearing the malfunction such a round creates can take a few minutes.) I've seen Colt 9mm submachine gun mags spew their entire contents when dropped. The Glock mags did fine.

Obviously, the rock problem wasn't much of one for the extensions and I was getting nowhere fast. I then went to the nearby range and proceeded to drop the magazines onto a steel plate lying on the ground. After a few minutes, I came to the realization that I simply wasn't going to uncover any problems. To soothe my disappointment I fired the rounds that were in the magazines, and was not at all disappointed. They all worked.

I set up a pair of steel drums adjacent to the lumber retaining wall of the enclosed range and proceeded to drop each empty magazine into the sand and kick it through the "goalpost." After a few attempts with each magazine I started over, "dribbling" each round with a series of kicks, then driving each through the "goal", impacting the lumber wall with a sharp smack.

On inspection, the magazines appeared fine. The extensions were intact and securely attached, and the feed lips of the magazines were unharmed. I wiped the exterior sand off with my

hands, loaded them and fired the rounds, again without failure.

Time to get serious. I loaded the magazines to start over. On the first kick, I left the magazines where they were and went back to the truck. Deliberately kicking a loaded magazine with running shoes on is not a good idea. As a matter of fact, it hurts. I put on a pair of boots and went back to kicking. After a good aerobic exercise session, I wiped as much of the sand off on my trousers that I could and got to shooting. Does anyone care to guess how many failures I had? All of you who bet against "none" owe your shooting buddies a soft drink. That's right, none. At this point, having fired enough practice ammo and photographs for the day, I packed up and went home.

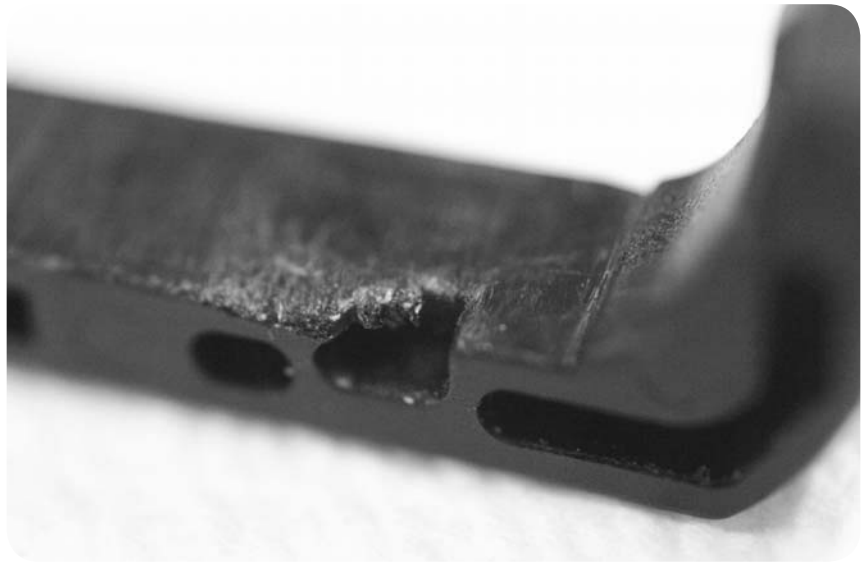
Once I'd done this, Robin Taylor, the editor of *Front Sight* magazine, asked me a sneaky question: "Got any aerosol gun cleaners?" Sigh. And just what does a degreasing/gun scrubbing aerosol do to the plastic composition of the various extensions? Unfortunately, I had a bunch of cleaners on hand and a limited supply of extensions. I could not test all extensions with all chemicals. On the good side, I was positive that the makers of the extensions went to some trouble to find polymers that would shrug off common firearms cleaning chemicals. (After all, they are going to be gun parts, right?) And, we all know what to expect from the Dawson extension, right? Any chemical cleaner that will attack the aluminum of his extension is something that will probably dissolve both the Glock magazine tube and you in the same few seconds. What you can buy over the counter won't have any effect.

So I dragged out the cleaners and installed the slightly scuffed extensions on my own magazines. Rather than kick the magazines I simply hosed the extensions and let them sit wet with the cleaner to dry in the warm air of the springtime breeze at the range. Once they'd been through the bath three times I proceeded to repeat the drop test. And to no great surprise, none of them failed. The pattern of what appears discoloration is simply the pattern of the cleaners as they evaporated off the plastic. The various extensions were not actually discolored, as wiping them with a clean cloth brought them back to their original (now scarred) appearance.

So I now have a bunch of really high-capacity Glock magazines for use in competition. I'm particularly fond of the Dawson extension, both in its design and this one's current scarred condition. Anyone who looks at the scuffs and gouges on it has to figure that I'm some sort of lunatic who will do anything in practice or at a match in order to gain a few extra points or a second off my time. Looking at the Dawson they have to wonder if winning would be worth the effort of beating me. Let them wonder.

Mag Catch Notch

Under hard use, the bottom of the notch on the magazine tube will get peened. The usual cause is slamming



While the magazines may last forever, the mag catch doesn't, if you take it out all the time. This is the mag catch from the training gun I used in the Glock armorer's course. Looks like a squirrel's been at it.

the magazine into the frame when the slide is locked back. The magazine rides up past the catch, and the bottom of the notch bangs against the bottom of the catch. If the peened area causes a problem fitting it into the gun, you can use an exacto knife to cut away the excess. If the magazine otherwise locks in place and functions as designed, Glock will not replace it just from peening.

Magazine Springs and Followers

Springs will always be with us. If you are going to go and do some really high-volume practice or competition, you should invest in spare magazine springs.

The problem isn't leaving them loaded but in using them. The repeated cycling is what wears out a magazine, not leaving it stressed. (At least not good ones.) I've had good luck for a long time with Wolff springs and recently with ISMI springs. I've been putting tens of thousands of rounds through an ISMI recoil spring for a 1911 that has not showed significant compression set yet.

Swapping magazine springs is simplicity itself. Disassemble the magazine, pry the old spring off the follower, insert the new spring in the same orientation, then reassemble. The trick lies in knowing when to replace your spring. You could just do it every few years. After all, at less than $10 per spring, if you replace them once every couple of years, you're still spending less on springs than you are on primers for reloading the ammo you shot in those same magazines. And springs don't cost anywhere near $10 each. The current Glock armorers catalog lists them at $3 each, with the usual shipping and handling charges.

At three bucks each, you should simply buy two spares for every magazine you own, and a couple of followers per caliber to round out the order. If you have magazine extensions on your tubes for competition use, you can get replacement springs from the makers of the extensions, or oversized springs from ISMI or Wolff and cut them to proper length. When cutting, don't go by overall length (the old ones may be shortened from use); rather, count the coils. The Dawson spring (which simply happens to be the one at hand as I type this) has 11 coils. So, when trimming a new, over-sized spring, cut it with sidecutters to 11 coils and bend the bottom coil to match the original.

The classic symptom of weak springs in 1911 pistols is when the otherwise reliable pistol stops locking open when the magazine is empty. That is also what Glock tells us in the armorer's course: if it locks back, it is bad. If it doesn't, it is fine. The dynamics of the Glock are slightly different, and what you'll likely see are feeding problems.

If you start getting rounds trapped under the slide and against the feed ramp, your spring is getting tired. The magazine extension baseplates come with their own, longer, springs. These springs have to lift an even heavier stack of rounds when you shoot. If you are going to use extended magazines in competition, invest in a set of spare springs and keep them with you.

As for the followers, you will be hard-pressed to wear them out. It is common for other pistols to have aftermarket followers that offer higher capacity. On some designs, changing the follower gets you one more round. No so the Glock. Can you wear out a follower? Theoretically, yes. I haven't seen one yet, but there has to be at least one high-mileage follower out there in constant use in a police training range that is ready to quit. They last so long that no one has been able to create a market for replacement followers, as there is in the 1911 world.

Abuse, however, is a different case. Sergeant Armando Valdes of the Miami PD described to me a failure he saw with their Glocks. It seems that some officers were not content to merely let their magazines fall to the ground during qualification or training. They would actually hurl the magazine down. "I saw them throw them down. Ripped out and thrown." He shook his head. "Gravity works. Why not just

let go and let them drop?" The magazines would eventually break the tab on the follower that locked the slide back when empty. A new follower solved the problem. I don't know what he did about the magazine tossing.

Really Hi-Cap

For a while, you could buy Glock magazines up to 33 rounds in capacity. Made by Scherer and Glock (and probably others, but I haven't seen them) the ones I tried all worked fine. While the Sherer magazines were offered on the open market, the Glock 33-round mags were strictly law-enforcement only. Not that there was a law against them (at least not until 1994-2004); Glock just felt they were only suitable for LEO use and sold them only to departments. We can now buy them with wild abandon, at least the Scherer magazines. Glocks are still controlled by Glock. Do you need them? As much as I hate to say it, probably not. They are quite large, bulky, and too long to pass muster for USPSA competition. But they are fun.

Magazine Reliability

All the old tricks for getting magazines to feed reliably went out the window when Glock mags hit the scene. In the old days (and even today for some magazines) we'd polish the inside, measure and bend or adjust the feed lips, deburr the inside of the tube and the follower, lube or coat the inside with some sort of non-sticky lubricant, and install extra-power magazine springs. Some magazines even came in for bending, sanding and polishing the exterior as well. I still remember the maker of my Caspian hi-caps squeezing the tube in a vise and then whacking it with a rawhide mallet to get the tube straight enough to drop free. Definitely something the faint at heart should not watch being done.

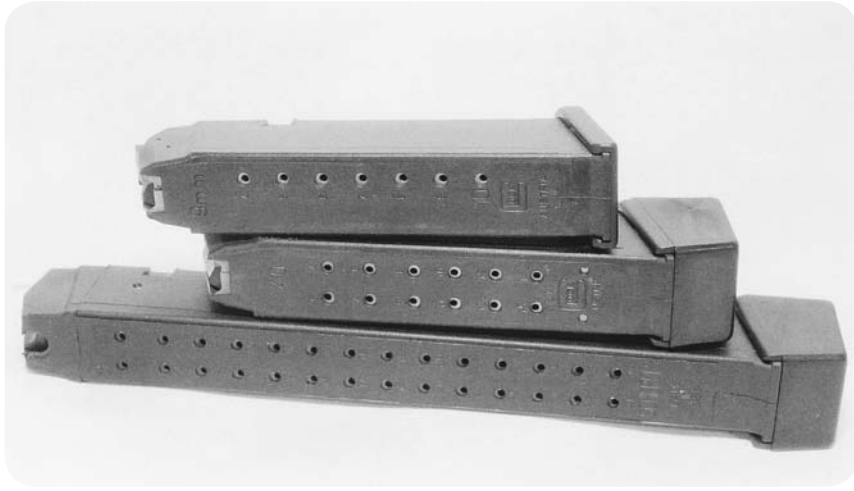
The only one of those that applies to Glock magazines is installing an extra power or new spring. That and keeping your magazine clean is about all you can or need do to keep your magazine working 100 percent of the time.

If you shoot at a range composed mostly of sand, your magazines will get gritty after being dropped a few times. At matches, you'll see competitors pumping brushes in and out of their magazines to keep them reasonably clean during the match. When they get home they'll strip and clean their magazines. You should, too.

Inspect the follower for ground-up bits of polymer that might bind it. Instead of a file, use a sharp knife to trim the bits off, like clipping stray threads from your clothes.

Sometimes when installing the capacity

The Glock LEO 33-shot hi-cap built for the G-18.



If you want the biggest, the 2- and 33-round magazines, the only way is to get them from Scherer. Glock sells their "big stick" mags only to police departments.

Just when you thought the warning labels were maxed out, here's another one.

extension, you'll run into a small problem: you don't get any increased capacity. When Glock designed their magazines, they weren't concerned with aftermarket capacity-increasing baseplates. (They probably view them as yet another point that proves just how strange the American shooters can be.) The dimensions of the bottom interior of the Glock magazine tubes are kept within tolerances that allow all Glock parts to fit and work. If your magazine doesn't allow the full increase, the insides of the extension and the tube aren't lining up. First, try the extension on another tube and see if it works there. If it does, then stick with it. If not, then you'll have to find the side that has the ledge and carefully bevel the corner there so the follower can ride down into the extension for full capacity.

If you have a magazine that sticks and doesn't drop free even though it is a drop-free design, don't go sanding it. While sanding is an accepted method of getting a steel magazine to gain clearance, the polymer of the Glock magazine won't sand. You simply kick up a fuzzy surface of fiber edges (sort of like velcro in appearance) and end up making your magazine even bigger and more of a problem.

What to do if a drop-free sticks? One solution I've heard of but never tried (I haven't had a drop-free stick on me) is to insert the offending magazine backwards into the gun overnight. By stuffing it partway (it won't fit far) front-to-back you're either squishing the magazine or stretching the frame and creating the clearance needed. (If it works, thank Robin Taylor. If it doesn't, swap magazines with someone else.)

One solution offered early in the Glock existence was to use an automobile rubber shine product to slick up your magazines. That one I never understood. First, if it is slick enough to go easily into the gun, how are you supposed to grab it to pull it off your belt? And what happens when your gooped-up magazine hits the dirt, sand, mud or gravel of the range floor?

Marking Your Magazines

At many matches, you'll go dashing through each stage, leaving a trail of dust, empty brass and expended magazines behind you. Especially if you're shooting with 10-shot magazines in Production Division and going through a large field course in a USPSA match.

Forty or 50 rounds later (I've heard of stages as big as 130 rounds!) you'll have your half-dozen magazines scattered behind you. You want to be sure and get all yours back.

So mark your mags. The easy way is to disassemble them and then degrease the baseplates. Once clean and dry, give them a coat of spray paint. No, it won't stick very well, nothing will, at least not to Glock parts. But enough will stick that you can tell which ones are yours.

The paint job can be renewed as needed and changed if too many others start using that color. You should also number your magazines. If you get into the habit of numbering them and then using them in numerical order (#1 to start, reload to #2, reload to #3, etc.) you can track down malfunctions. If you have an intermittent problem, but it always happens to #3, you can then test your adjustments on #3. By narrowing the problem to a single magazine you make your problem much less of one. If, on the other hand, you

A Glock LEO orange training baseplate.

One advantage to the orange baseplates is the ease with which you can mark them with a felt-tip pen.Too bad they're Law Enforcement Only.

have an intermittent problem but it never seems to happen to the same magazine twice in a row, then you still have a useful bit of information: the source is probably not your magazines.

Number your magazines with press-on numerals. Again, they won't stick for very long, but you aren't looking for a forever solution. You just want something that will stay on well enough to let you know which ones are which and that can be easily renewed when it falls off.

One trick I use on other magazines that doesn't last nearly as long on Glock magazines is to degrease the mag, stick the number on, then give a light overspray of clear polyurethane. The degreased surface lets the numeral stick. The polyurethane seals the edges of the adhesive on the numeral. Unfortunately, while the method works for months of use on steel magazines, the Glock tubes flex enough that the numerals come off in a few range sessions. The lack of adhesion to plastic/polymer is one reason some shooters use aluminum basepads for their magazines. Aluminum holds paint, and the stick-on lettering adheres well enough (especially with the poly overspray) that you can get months of use out of them before having to scrub and reapply.

One of the shooters at our club uses a label making machine, the kind that spits out a strip of adhesive-backed plastic label material. He prints up his name and the magazine number and applies it to the side of his magazines. When they get too tired or scarred he scrapes them off and applies new ones.

Or you can use a paint pencil, a metal tube that works like a felt-tip pen, but dispensing paint. The paint pen lets you write on surfaces and thus number them.

Glock makes bright orange baseplates for use in law enforcement training. By marking training-use only magazines with orange baseplates, a department can ensure that the heavy use and occasional abuse those magazine receive won't be cause problems on the street. The training mags get the dropping and kicking, and the heavy exposure to dust, mud and rain. Meanwhile the duty mags are tested, then left loaded in their pouches, protected. The bad news? The orange baseplates are LEO-only, and not for sale to the general public.

Could you paint your baseplates? (The Glock orange ones are colored by the use of dyes in the mixed polymer.) Yes. If you find a paint that sticks and stands up to range use, let me know, will you?

Magazine Funnels

Having reliable magazines is just part of the equation. Getting them into the gun

as quickly as possible is the other part. While the basic design of any hi-cap magazine/pistol makes reloading easier than single stacks, funnels help. The tapered shape of the top of the magazine, and the larger than that top entrance in the frame, makes getting Glock magazines (and other hi-caps) into the frame a pretty smooth operation. But you can always make things better. If the magazine opening is larger, or larger and tapered, then getting the magazine in is even faster. And in some matches, faster is better.

The smallest "funnel" I have on hand is from Scherer. A simple plastic wedge that fits into the hollow rear of the frame, it helps guide magazines into place. Another simple method that also adds weight is the Seattle Slug from Taylor Freelance.

The Seattle Slug comes in two styles, brass and aluminum. The aluminum is light, and doesn't add much weight, but the brass adds a significant amount of weight to the Glock. Yes, light weight is one of the virtues of the Glock, but what is a virtue when you're carrying all day can be a liability when you're shooting in competition. The extra weight of the Seattle Slug helps dampen recoil, and the wedge lower portion guides your magazine on reloads.

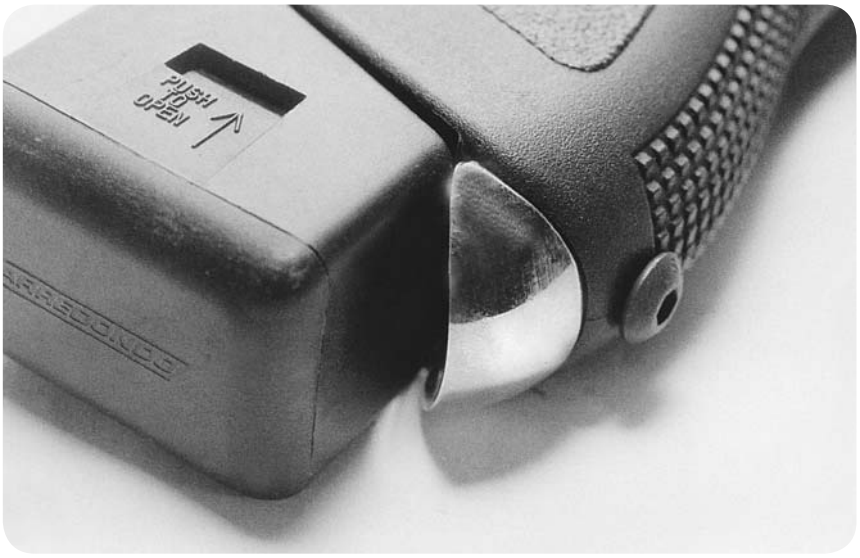
The small Scherer mag funnel, inserted in the hollow of the frame.

The Seattle Slug in a G-34 for competition.

In talking with Robin Taylor I found another use for the Seattle Slug. It seems police officers in his area have started using it, not to hit suspects with (very bad idea, by the way) and not just as an aid to speed-reloading. They plan to have it on their pistol as a tool to break car side windows. An officer in their area bought one right after he had to break a car window, and in the process of using his Glock sans Seattle Slug his magazine came out. The hard point of the Slug breaks windows and leaves the magazine intact.

For some competitions, bigger is better. (And for some competitions, no changes are allowed.) For the bigger ones, you need to go to something like the Grams or Arredondo magazine funnel. They circle the mag well, offering a funnel on the complete circumference of the frame.

The Grams comes in tungsten for a real addition



The Seattle Slug locked into the frame. The shipped polish is so good you can see my hands reflected when I took the photo.

of weight. For real speed, Dawson offers their Ice funnel. The body of the Ice funnel is aluminum but the inner face, where your magazine impacts it when guiding, is a slick polymer. It's a big hole you can't miss, and a slick surface that your magazine can slide over as you do your high-speed reload? How can life get better?

Reloading Methods

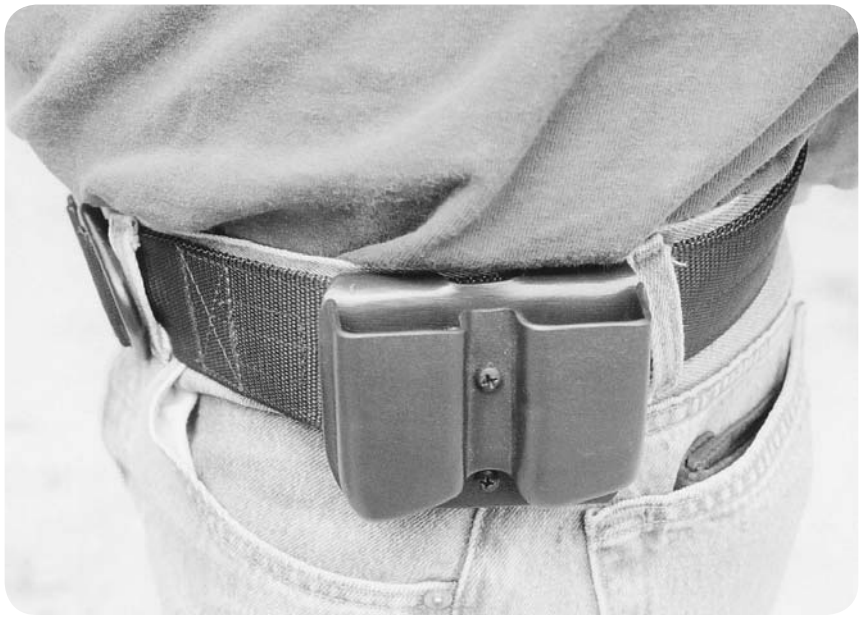
Not all ways of getting more ammo into your Glock are the same. And some will be required skills in some competitions.

Reloads fall into two categories with two approaches in each. The two methods are Competition/Speed reload, and Tactical/Retention reload. In all methods, you keep the gun high enough that you can watch what you're doing and still keep an eye out for trouble. You don't want to be reloading down at belt level, with your eyes off the world around you.

The speed load is the one we've all seen and marveled at. Properly done, you hardly have time to realize that the shooter has reloaded. Properly done, the down time between shots can be as small as a second flat. The competition load goes like this:

When the competitor decides he (or she) needs more ammo, he lets go with the off hand and begins reaching for the next magazine. As he reaches, and if his hand is small enough to require it, he shifts the gun slightly and pushes the magazine release button. As the first magazine falls free, he is already grasping the next one. Before the magazine hits the ground, the new magazine is off the belt, inserted and slammed home.

The variant of the speed load used in law enforcement has one difference: Here, the magazine button isn't pushed until the shooter has ALREADY grabbed the



If you're going to carry or compete with a Glock, you have to carry spare magazines somehow. A belt holder is so much more convenient than your pockets.

next magazine. A small detail but an important one. In the rough-and-tumble of an actual fight (as opposed to a competition) you can lose magazines. It would be a real shame to dump your only magazine, to then find out your spares have fallen and can't be found.

The important detail in the speed load is to be fast-slow-fast-slow-fast. That is, get your hand to the next magazine fast. Slow down enough to be sure you have a good grip on the magazine. (I've seen more than one shooter throw a magazine across the range, from being fast but not having a good grip.) Get the magazine from your belt to the gun fast, then slow down to make sure it is lined up properly. (And I've seen shooters throw a loaded magazine past the gun, trying to insert it at warp speed.) And finish by inserting it fast and in one motion. (Don't insert it, then take your hand off it, and then slam the magazine home. Don't take two or three motions to do what one can do.) Done at top speed, it doesn't look like a good shooter is slowing down, but they are.

In the old days, we used to try and get photographs of ourselves with the classic speed-load elements: Two fired empties in the air, old mag in mid-air and new mag in the left hand on the way to the gun. And no cheating by shooting one-handed already holding the spare mag!

A hi-cap carry setup for competition or concealed carry. With a G-17 on the other side, this shooter has 64 rounds ready to go. (Dawson on the left; Taylor Freelance on the right).

Tactical/Retention is different. Here, you aren't getting reloaded as fast as possible. You're reloading during a lull, or you're reloading on the line between firing strings. Or you're in an IDPA match and you aren't allowed a speed load. Why not? Simple: at the range you can pick up magazines and use them again. In a gun fight or in combat you may not be able to get back to where you dropped that magazine.

Infantrymen in combat units often have "dump bags," a bag where they can drop off their magazines once they've emptied them. Reliable magazines are not always easy to find. And you can never carry enough spare ammo, so ditching the few rounds left in a magazine (swapping mags before you run dry) is a bad thing. And dropping magazines onto the ground subjects them to dirt, dust, mud and potential damage. The less you abuse them, the longer they'll last.

So the tactical reload keeps your magazines on your person and saves every single round of ammo for future use.

There are two ways of doing a tac-load. The first, the old way, is often done by the old-timers who learned their reloading back when

Gunsite was still new. Here, you let go with your off hand, reach down and get your spare magazine, and then bring it up to the gun. Holding the new magazine between thumb and forefinger, you pop the old magazine out so it goes between your other fingers. Once you have a good grasp of it, you swap to the new one and insert it. The old magazine goes back into a pocket, *not* on your belt. Your mantra and standard procedure should be: belt magazines are fully-loaded, pocket magazines are partials. That way you don't go and reload a magazine into your Glock thinking it is full, only to find out is is only partially loaded.

The second method is to remove the old magazine, pocket it, then get the new one and insert it.

Why the difference? Some feel the older method is too dependent on fine-motor control and prone to breaking down under stress. The simpler method doesn't require that you balance two magazines in one hand.

Where does the old magazine go? Again, a pocket, or down your shirt, or in a dump bag, but not back on your belt or in a magazine carrier. Not until you can top it off. My friend Mas Ayoob found this out the hard way back in the 1980s at the IPSC World Shoot held at Bisley, England. (Yes, there was a time when a Subject of the Crown was trusted with a handgun.) He was both in the match as a competitor and as a range officer. He finished a stage, and then ran another stage. When it came time to shoot again, he checked that he had magazines in all of his mag pouches, and nodded that he was ready. Partway through the stage, he found out that some of the magazines were only partially loaded, and he set a record for number of speed loads per stage.

Is it a magazine you've shot some rounds from? Then it goes into the dump bag, or a pocket. Learn from the mistakes of others.

Glock Collectors

The field for collectors will be rich someday, assuming we can all own guns that far into the future.

Quick, wash the mud off that mag and find out if it is a collector's item. Oh wait, it's a Glock. You needn't wash the mud off, it will still work – and collectors haven't noticed magazines. Yet.

For instance, right now you can collect five different magazines for the G-17 alone. Now that the Assault Weapon Ban has been allowed to sunset, the LEO-marked magazines have added a sixth and seventh variant.

The five collectables right now are: Original Non-Drop Free, 1st Variant Drop Free, 2nd Variant Drop Free, 1st Variant Ten Shot, and 2nd Variant Ten Shot. The LEO-only magazines are those specially marked 1st and 2nd variant drop-free.

And each model adds three to five more to the total. The G-19, while it can use magazines designed for the G-17, has its own, including the 10 shot magazines. And the G-19 LEO marked magazines.

Some models will not have all the variants. Those models introduced after the changeover to drop free magazines (basically any model number 24 or higher) won't have the original design. And those whose size precludes capacity higher than 10 rounds won't have LEO marked or high capacity magazines. While the law was in effect, high capacity magazines introduced after September of 1994 were all marked "LEO Only," so as an example you couldn't find any .357 high capacity magazines not marked LEO until after 2004. When the law changed you could.

As you can see from the chart, during the time the AWB was in effect you could form a collection of Glock mags totaling 42 magazines. When the law sunset, the 12 LEO magazines immediately bumped the total to 59. (The real prizes would be the G-25 and G-28 .380 marked magazines) When the law changed and the high capacity magazines were once again available and manufactured without LEO markings in models where they haven't before been available, the total was 66. But wait, now the .45 GAP adds three more magazines to that – but no LEO, no 10-shot AWB/ 94-compliant magazines.

The real collectors, though, would set their goal on a higher prize: the transitional LEO magazines. The 1st and 2nd variant drop-free mags could potentially add another dozen to the total. On the matter of the 1st and 2nd variant LEO magazines, I had been assured by a Glock representative that the change to the 2nd variant had occurred after the Crime Bill went into effect in 1994. As a result, there were no pre-ban 2nd variant magazines extant, and no 1st variant LEO-only magazines. And yet the very next day one of my club members showed me his pre-ban 2nd variant drop-free magazine! Glock marked, with no funny business about LEO markings or somebody else's magazine tube.

So, for the purposes of collecting Glock magazines, all the variants are in the mix. The possibilities can make one dizzy, coming to a potential of 91 magazine variations! (And we haven't even considered the variations of the 33-round G-18 magazines that might exist.) And all this from one factory, starting with one design, just over 20 years ago. And who knows what's to come?

For the really serious collector, the future is brighter than ever. Many police departments have their magazines (and pistols) marked as to who owns them. As current officers retire, the supply of departmental-marked magazines trickles away. With 7,500 agencies using Glocks right now, if only one percent of them have Glock mark their magazines with the PD's acronym or logo, the collecting field opens even larger. ♦

Holsters

The field of holsters for your Glock covers five areas: Concealed, Open/Field, Competition, Duty, and Military/SpecOps. It wasn't that long ago that the selection of holsters for a handgun fell into two categories: Concealed and Everything else.

Up until even the 1950s men (and women) wore clothes made of heavier cloth than today. And before then, several layers' worth. When my grandfather was going to work, every man who wasn't a field hand wore a suit or jacket to work. Even if work meant taking it off, he wore the coat to the plant. Concealment back then meant making sure your coat was long enough to cover your holster.

For law enforcement duty, for hunting, and even many military applications, a specialized holster wasn't so different from all the others. Even when my Father got the government's Grand Tour of Northern France and Germany, "concealment" meant something in a pocket, and duty meant a flap holster on the web belt. The only competitions that required a holster were the police courses, PPC and whatever (if any) qualification course the department mandated, and fast draw. You could do it all with one holster, and that holster was leather. You've heard the phrase "accept no substitutes"; well, back then there weren't any to accept.

Today? Anyone who wears a suitcoat to work or out in public is either a banker or an off-duty police officer. And what do women wear? The trend for modern clothing is definitely towards selections from the shrink-wrap collection. Hide a gun? Get real. I live in a university town, and the parade of brand-new fashions is something to see. And the

To keep your holster and mag pouches under control, use the belt loops on your trousers.

The injection-moulded Blade-Tech. Less expensive than the kydex versions, and nearly as indestructible.

trend has been to lighter cloth and tighter fitting, to the point where many women here couldn't hide a wallet or even a credit card.

Today some competitions require expensive and complex holsters, and the law enforcement community has gone almost entirely to "security" holsters. That is, holsters that require a particular draw stroke to release the two or three safety catches and are less likely to let an assailant simply snatch the gun away. The military has long since given up on belt holsters. Even a soldier who is overweight doesn't have enough running belt space to hold everything that could be latched onto a belt. Military holsters, and those used by SWAT teams (they have many of the same equipment transport problems) have moved to the thigh.

And they have all come to be offered in synthetics. Oh, the leather mavens will tell you that dead cow wrapper (except for the horsehide aficionados) is the only thing at a real man uses, but the legion of plastic, nylon, synthetic and other petroleum-derived holsters continues to grow. And what would be more appropriate than a polymer holster for your Glock? As the owner of more leather holsters than synthetics, I guess I'll just have to referee that particular argument.

Glock makes holsters for their pistols, but there are only two designs. Most

A skinny belt is not at all useful, regardless of the holster.

MAGAZINE POUCHES

Why a spare magazine?

You'd think, what with your Glock holding 15 or 17 rounds, you wouldn't need a spare magazine. In an ideal world, you'd be right. But then, in an ideal world you wouldn't need to pack your Glock all day, now would you?

In the North Hollywood shootout, where the bad guys were all duded up in multiple layers of body armor and had illegally-modified automatic weapons, the responding officers needed extra magazines. I know what you're thinking: "What are the chances I'll need to reload, finding myself in a raging firefight against guys with machineguns?" One responding officer didn't need a spare magazine for extra ammo; he needed it because the one he was using was damaged. The magazine that went into his AR-15 had one if its feed lips severely bent, and it fed in slow motion as a result. (The rest of his magazines? Left in his car, or strewn across the street, proving once again Sweeney's Third Axiom: "If it isn't in your hands or on your person when the balloon goes up, it might as well be on the moon.")

Violent encounters are not like range sessions. Your signal to "start the stage" in real life may be getting tackled into a wall, or knocked to the floor. And if your one-and-only magazine gets damaged in that moment, then what?

You carry spare magazines as much for the need to replace a damaged one as for the need to replace an exhausted one. Luckily, carrying a spare magazine is not nearly as much of a hassle as carrying the pistol itself is. Especially Glock magazines, which (at least outside of the big cities like Detroit) if seen when your coat flies open in the wind, might very well be mistaken for a pager or cell phone. I've found myself in situations where I've taken my pistol off for whatever reason, only to discover later that I'm still packing the magazine.

A concealing jacket would keep the mags and light from getting taught on the chair.

A magazine pouch can be quite comfortable. When you find one that works, stick with it.

of the real action is from the independent holster makers. After all, with millions of Glocks out there, a holster maker would be engaging in suicidal marketing if he didn't offer at least some styles to fit Glock pistols.

As long as you don't just carry your Glock around in a paper bag, I'm not sure you can go wrong buying a holster. A good one, that is. Don't be tempted by prices that seem too good. They usually are.

The Carry Ensemble

Whether you are carrying concealed, on duty, competition or in a combat zone, you need more than just a Glock and a pocket. You need the pistol, spare ammunition, a holster, a way of carrying the ammunition, and something to attach it all to your body. (And in combat you need maintenance gear in your rucksack.) Some systems are entirely self-contained, like a double shoulder rig. But with that exception or a gym bag, anything you use to carry a pistol requires more gear. Those who love gear rejoice. Those who don't, dread the shopping.

Belts

While a belt is optional for a shoulder holster, for all the others you need a belt. And not just any belt. A thin, skinny, flimsy dress belt is worse than no belt at all. A skinny belt can't anchor a holster in place. If you're trying to carry a handgun and not use a holster (called "Mexican carry") you're acutely aware of the potential of dropping your gun. You check it, you pay attention to it, and you readjust it if need be. Holster or not, you need a belt. A skinny belt doesn't secure the holster but gives the illusion of security. Also, the flapping of the gun in its holster against your side as you walk and move (with a flimsy belt) can quickly prove tiring. And it shows the gun through your jacket.

A flimsy belt also make the draw more difficult. A flimsy belt doesn't keep your Glock in the same place, or at the same angle. It really slows down your draw to have to frisk your waist playing "find the Glock" after the buzzer has gone off in a match, or you've suddenly realized that the fellow at the local party store is not asking for donations to the local homeless shelter.

For the longest time, "belt" meant leather. I wore a leather gun belt as a trouser belt (and gun belt, too) for nearly 20 years. The same belt. When it finally gave up, I looked around and found that the synthetics revolution had gotten to belts, too. One I have tried lately and found quite useful is a design usually called an "instructor's" belt or a "rigger's" belt. The one I'm testing and wearing now (and probably won't send back because it is just too comfortable, convenient and well-made) is a Galco. It is a heavy nylon weave belt, usually with a stiffener in it. (I got the stiff one.) The buckle is a slip-lock affair, and there is velcro on the tongue as an additional locking space.

The heavy mesh is strong enough to keep a holster in the proper orientation, and you can adjust it for the perfect combination of comfort and security. With

Getting dressed when you carry can take some time. But getting the gear "just right" makes the day so much more comfortable.

Glock makes their own holsters.They are spartan but serviceable.

the belt pulled tightly enough to lock the holster in place, it won't slide around your belt. And you don't have to exhale and go to the next notch as you would on a standard belt, if you needed a setting just a bit tighter than the previous notch.

While an instructor's belt like the one from Galco I have is very useful, and will pass muster if you wear jeans as standard work clothes, it won't go with a suit. For suit wear, you'll have to go with a leather belt and settle for a slightly Western look

Two double mag pouches, and you have plenty of magazines to get through a course of fire. Change to one double, and hi-caps, and you're set for life in the big city.

to your apparel. While you can get belts that are wide and thick around your waist, but narrow as a dress belt in front, I haven't found them comfortable. However, many shooters who carry do find such belts comfortable.

For competition, a holster and belt is something else entirely. The current state of the art in competition rigs calls for two belts. The underbelt is an all-velcro affair, and you slide it through your belt loops and pull it tight. Very tight. The underbelt locks to itself by velcro, and its entire exterior surface is a velcro attaching surface. The competition belt, with the holster and magazine pouches already attached, then attaches to the underbelt with another swatch of velcro. But then for many competitions you don't have to worry about concealment at all. Only speed and security during movement. And for those competitions that require concealment, you just use your daily concealed carry equipment.

Concealed Carry

A very large subject, as the requirements for concealed carry are not only as many as those who carry, but can vary over time and place. When I was working at the gun shop, concealed carry for me meant getting from the truck to the shop in the morning and back out at closing. I didn't carry concealed in the shop for a set of very good reasons: primary among them was that I didn't have to. But also I was in the back room most of the time fixing guns and had as many as five people at the front counter as my personal first line of defense.

Carry for me was simple and consisted of tucking my Light Weight Commander into my belt (in its Summer Special holster) and heading out. (I started packing before the Glock ever made it to the USA, even before Gaston Glock designed it. I stuck with

BE PREPARED

Carrying concealed is an awesome responsibility. And it can be a crushing legal burden. Many jurisdictions require a certain amount of class work, either range time for shooting competency, or classroom work for the law, before issuing a permit. While the legal minimum is not that hard to meet, it would be a good idea to learn more. For competency you can practice, you can take classes specifically to improve your shooting skills, and you can compete. Good competitions would be matches held under the auspices of the IDPA and USPSA.

Firearms classes can deal mostly with skills and tactics, such as at Gunsite, or heavily weighted towards legal responsibility and tactics, at Mas Ayoob's Lethal Force Institute. It would be a very good idea to invest the modest amount of money in getting a copy of Mas' "In the Gravest Extreme" (you can obtain a copy directly from Mas) which will give you a good grounding in the legal implications of concealed carry and lethal force.

And above all you should have an attorney. Find one, talk with him, make sure he understands what you do, why you carry and when you'll call him. The aftermath of a shooting incident is stressful enough without having to worry about how you're going to find an attorney at 2:00 AM to help you deal with the questions the nice detective has for you..

Glock mag holders can certainly get the job done.

my LW Commander for a long time after.) But selecting a holster isn't so easy for many people. Those with back problems may not be able to wear an in-the-pants holster. A crossdraw or shoulder holster may be comfortable, but for barrel-chested men and buxom women it may not be an easy draw.

The small-of-the-back is quite concealed, but don't plan on driving farther than across the parking lot while wearing one. A small-of-the-back holster is for those who stand and work. You also have to worry about falling while wearing one. The gun rides right over your spine, and a fall onto your back can be painful, debilitating and even end up with you losing the fight before it starts.

Ankle rigs? Fine, if you can get down and draw, and wear trousers baggy enough to cover the Glock and let you clear leather.

However you carry your pistol, it must remain concealed. Inadvertently letting your handgun show (let alone deliberately and incorrectly) is in most jurisdictions an offense called "brandishing." While it may only be a misdemeanor in many places, it is an offence great enough to quite often call for your CCW to be voided, and even have the handgun confiscated. Yeah, the arresting Officer has heard "the wind blew my coat open" or "it must have ridden up when I picked up the box" and all the rest of the excuses. Forget them. They won't help you much, if at all, when someone takes offense and complains.

So if you're going to carry concealed, it had better be Concealed.

Fobus

Fobus holsters and Glock holsters are both entirely synthetic, made from polymer, and retain their shape from having been cast or moulded that way. The Glock holsters are moulded in one piece, while the Fobus holsters are assembled from moulded sections.

Made in Israel, Fobus holsters are exclaimed to be "Combat Proven." You've got to take seriously something used by people whose idea of being properly dressed is to

Fobus makes very good holsters at a very attractive price.

walk out of the house carrying an M-16.

The Fobus holsters are made by moulding sections as flat pieces, then using rivets to hold them together. While it sounds like a pretty cheap way to make a holster, don't be deceived. In the interests of scientific inquiry, and the readers need to know, I tried to tear one apart with my bare hands. Ten minutes later I wasn't very far along, and I had some ideas about making an aerobic exercise video.

On the paddle holsters, you've got enough leverage to bend the paddle pretty seriously, and if you were to work at it I'm sure you could eventually rip it apart. But you'd have to have hand strength a lot greater than mine (and I'm no slouch) to rip the holster body into its two pieces. The Fobus is plenty tough enough to wear every day for a long time. And if it does go to pieces on you, the Fobus line is so inexpensive that buying another one is cheaper than the ammo for your next practice session.

In attending classes given by those who have had a lot more experience than I, I've discovered some interesting things: first, I was going about "Fobus destruction" all wrong. They can be torn off of you, and torn apart, with a lot less work than the way I was going about it. So I have to consider Fobus holsters as inexpensive carry holsters in a controlled environment. Carry in your store, where you have a counter between you and the bad guys? No problem. Out on the street, where attacks will not have a counter in the way? Not the place for Fobus.

A paddle holster is designed to be an easy-on and easy-off holster. You don't have to undo your trouser belt to take the holster off – it slides between your belt

HOLSTER TESTING

In order to see what a holster can do, you have to go to the range and try it out. Draw and dry-fire practice only tell you so much, and actual range time is needed to get a full picture of a holster's performance. But you're only at the range for a few hours, and the range isn't a normal environment.

In order to see if a holster is comfortable for daily wear, I have to wear it for longer periods than just at the range. So, as I sit here and write, I'm wearing a holster. You'd be surprised how many chairs aren't comfortable while "packing" and how many normal daily activities are precluded or made very clumsy by wearing a holster. Each day when I sit down to write, I'll have something different on, with a Glock in it. Which leads to other problems. What to do when the doorbell rings? It may be the postman, with something I have to sign for. It may be the UPS or FedEx driver. (Both of my regular drivers are knowledgeable about guns and would be more interested in what holster or gun I have on than alarmed that I'm wearing it.) Or someone with a petition. As a result, I keep a bathrobe by the front door, and put it on before answering. I'm sure the postman thinks I'm some kind of a slug, answering the door at three in the afternoon wearing a bathrobe.

At least with the concealment holsters, I can put on a sportscoat, so the postman will think I get out of the house now and then..

and trousers. The standard Fobus paddle holds the Glock in a slightly muzzle to the rear angle, with the trigger just above belt level. Friction retention in the holster is created by the moulded recess for the front of the trigger guard. Retention on your belt comes from two tabs in the paddle that hook on the back of your belt. Once the guard snaps into place, you have a good level of retention. It isn't going to resist snatching, but you're carrying concealed, right?

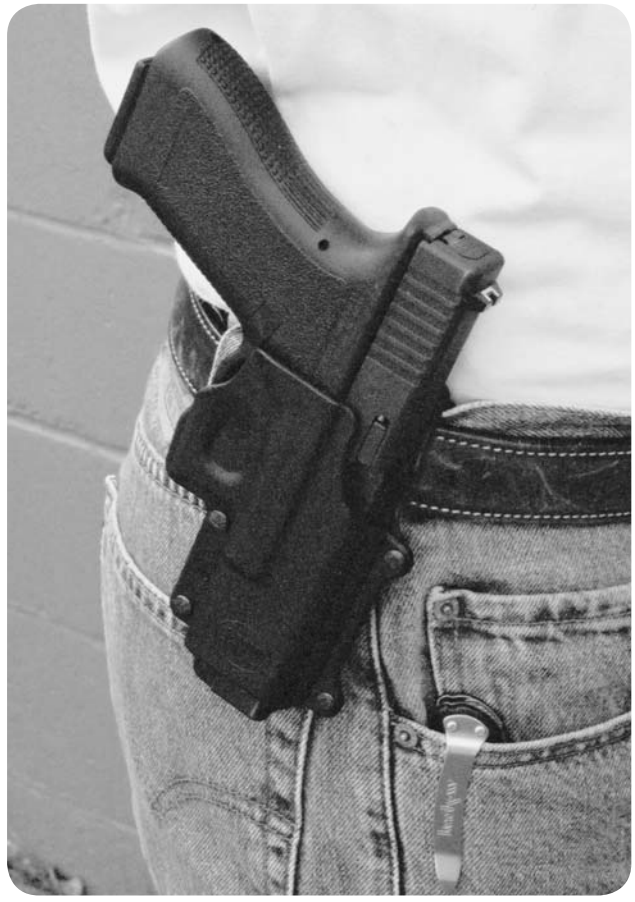
If you need more or less angle, then the Roto Paddle is what you need. On the Roto, the standard paddle back and holster body have two additional parts between them. The two parts can be rotated to change the angle the holster sits at. You access the locking screw from the back. Loosen, adjust, tighten, try. Repeat until you've got it just where you want it.

The Fobus mag pouches are constructed the same way, with the pouches riveted to the backer. You can have a single or double mag pouch, and you can also have a light holder for the Streamlight M3 or M6 light. The Streamlight attaches to the light rail on the front of the frame of 3rd generation Glock pistols. You may not need light very often, but when you do you need it very much.

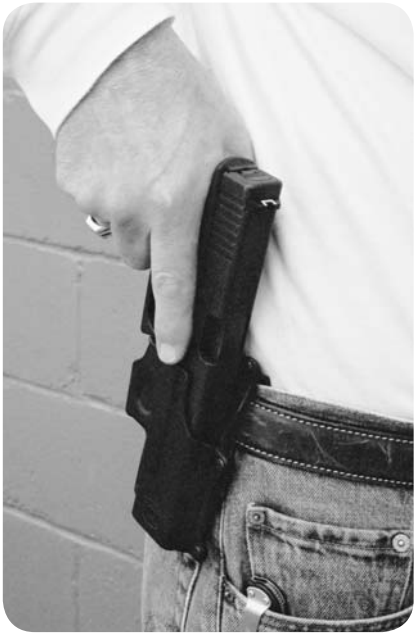
Galco

Some companies still stick with leather. Galco makes synthetics but believes that there is still a place for leather. The holster I have is the COP three-slot. It is a thumbbreak holster with a friction adjustment retention system. The adjustment screw is next to the triggerguard, and has enough adjustment that with it you can tighten the holster to the point where you couldn't get the Glock out. The point of friction and thumbbreak is to keep the

Fobus mag holders are as low-bulk and low-weight as they come.



A G-22 in a Fobus holster.



On the draw, the covered guard keeps your finger off the trigger.

The Galco COP holster, with two front slots for straight-up or canted positioning and the rear slot to keep the gun tight to your body.

Glock with you even during the rough and tumble of an altercation.

The three slots let you change the angle at which the holster sits on your belt. Some like a pistol straight up and down, while others like the "FBI cant" where the muzzle is pointed behind you. It all comes down to comfort and speed of draw. I'm tall, with a high waist and long arms. A straight-up holster for me can require contortions to execute the draw. Quite often I find that I need the FBI cant just to keep from having to dislocate my shoulder in order to get the Glock out.

For a magazine carrier, the COP mag pouch compliments the COP three-slot, and since Glocks have such high capacity I don't feel the need for two spare magazines. Instead, a combination magazine and

The Galco COP holder for magazine and SureFire light.

flashlight carrier lets me pack my SureFire Nitrolon 6P along with a spare magazine. The flashlight rests behind the magazine, a minor point of contention among concealed carry circles and CCW mavens. Yes you'll probably need the flashlight more often than the spare magazine and it would be nice if you could get the light out without revealing the spare magazine. But under stress your hand will grab the first thing it encounters during a speed reload, and you don't want to be trying to reload your empty Glock with a compact flashlight.

On the other hand, every time you produce the flashlight, you're risking flashing the butt of a magazine to anyone who happens to glance down as you grab for some light. As I've mentioned, brandishing is taken seriously in some areas. And many who have no love for gun owners will complain at even inadvertent viewing of hardware.

One way to avoid the problem of brandishing is to reach for your flashlight only with your strong hand. That is, with your right if you are right-handed, and the light (and spare mag) are on your left side. Reaching with the right you needn't brush your jacket back to grab the light. Or, if you use your left, practice reaching straight up under the edge of the coat, rather than sweeping the front of it back to the mag and light pouch. But we're getting dangerously close to training matters, and away from gear specific to Glocks.

The Galco COP mag holder has two tension adjustment screws, again to keep the gear on you. If you set them tight enough to retain them when you're running, you can still easily produce either the magazine or light when you need them. The light pouch has a nice feature: a hole in the bottom to clear the flashlight button. Surefire lights work from a push button on the end cap. The clearance hole ensures that you don't turn on your light simply by pressing it into the pouch.

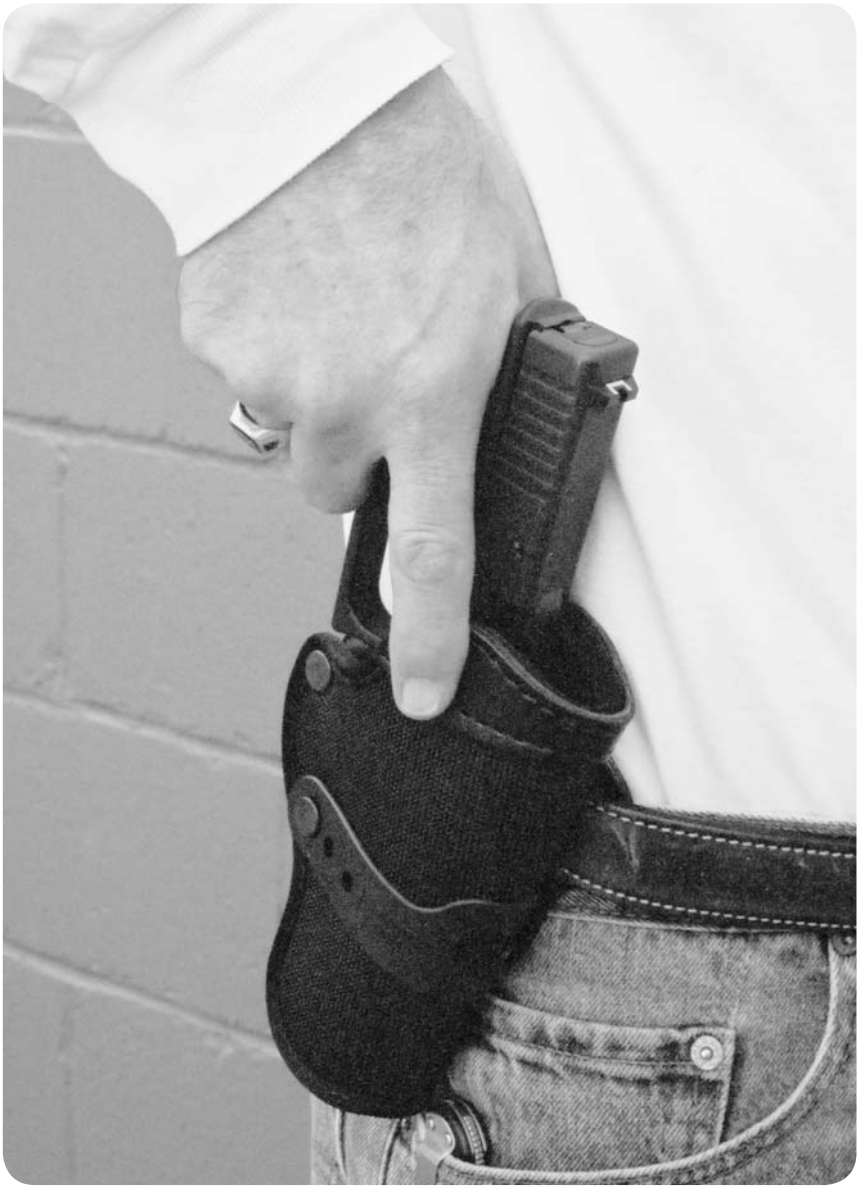
The Shooting Systems Avenger, with its trailing slot to pull your Glock close for concealment.

Blade-Tech

The hottest thing (which was just on the horizon in the first edition of this book) is Kydex. A synthetic produced in sheets, Kydex is so tough that you would have a tough time piercing it with a heavy-

duty knife, or even driving a nail through it. Kydex fabricators like Blade-Tech fold the sheets and mold them to a dummy or real gun. They then use industrial cutting tools to create belt loops, relieve the trigger guard area, etc. The result is a holster with friction retention (you can get thumb breaks on some models) that is impervious to solvents, wear, impact, and can even be painted. (Ugly, but painted.)

For those who don't need a custom-molded holster, Blade-Tech offers injection-molded holsters as well. If the standard leather holster is a 3-4 on a toughness scale, the injection-molded ones come in at about 9, and the Kydex at 11.



The stiff open top of the Shooting Systems makes it a snap to re-holster one-handed.

Shooting Systems

The Shooting Systems Advanced Super Avenger is a dual-purpose holster. It can be a concealed carry holster, and it can be an open carry holster if you don't have to worry about attempted gun grabs. (A detective carrying openly might not find it secure enough, but someone packing in a less travelled but still dangerous area might.)

The Super Avenger is a holster in the style known as the Askins Avenger, with friction retention and a slight FBI cant. The back of the holster is wide and has a trailing slot that pulls the holster into you when you pull your belt tight. You won't find it wobbling back and forth as you walk or run. The open top ensures fast and clear access, and the adjustable retention keeps it secure.

The synthetic materials of the construction keep it rigid, yet washable. If you take a dunk, or sweat through your holster, you can scrub it clean. I don't know if it is "dishwasher safe" (the most common joke about Glocks) but washing it would be easily enough accomplished by dunking it in soapy water, dunking it in clear, toweling it dry and letting it air dry for a day.

Advantages and Disadvantages

The big advantage for most rigs is comfort, closely followed by concealability. A properly fit holster on your belt is going to be almost as

comfortable as you can get, although not as comfortable as the best open carry holsters. Except for women. The ladies will be hard-pressed to find a comfortable holster. The curve of their hips cants the gun in and presses the rear of the slide into the body. (Except for runway models, of course, who have no hips.)

For the ladies who have to carry, the way to get a good holster is to find a gun shop that is understanding, and try on all kinds of holsters. Also, ask around at your CCW class and at the gun club and see what the experiences of other women has been.

One example not to follow for the ladies is the television show which is now in syndication (and on cable somewhere) called "Silk Stalkings." The female lead, Mitzi Capture, always wears very tightly-tailored suits. In Miami (where the show was set) the heat and humidity would have been oppressive with any but the lightest fabric. The show expected us to believe she could carry concealed a full-size pistol like a 1911, Beretta 9mm or a Glock. I don't want to pick on the show too much, as every television cop show is guilty of it at one time or another. Just don't use television as your guide to what will cover your carry gun.

The draw can be be quick, and unless you are anorexic there is room to carry what you need. The disadvantage to concealed carry is the need for a jacket for concealment, even in the summer. (Q: How do you spot police officers off duty in the summertime? A: They're the ones wearing windbreakers, hawaiian shirts or an untucked tee shirt over another tee shirt.) Women will find clothing styles particularly unsuited for concealment of a firearm.

Fanny Packs

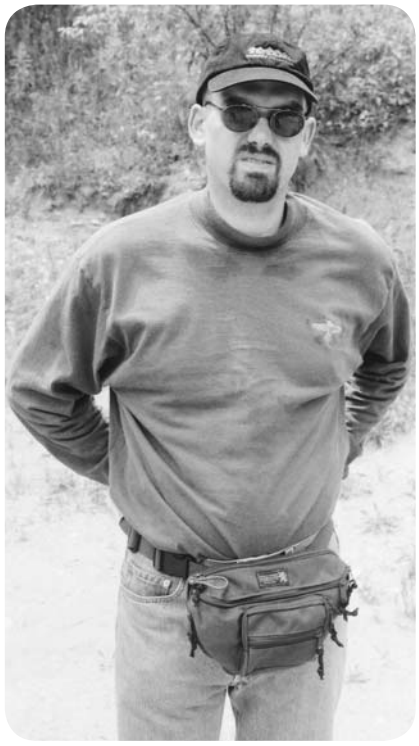
Yes, yes, we all know that fanny packs are merely "concealed" carry waist bags. Except not everyone knows that. And even those who do don't always think every bag they see is a gun bag. And even if they do, it is after all concealed.

The trick to using a fanny pack (and why do we call them "fanny packs" when we wear them in front?) is finding one both comfortable and quick while still being secure.

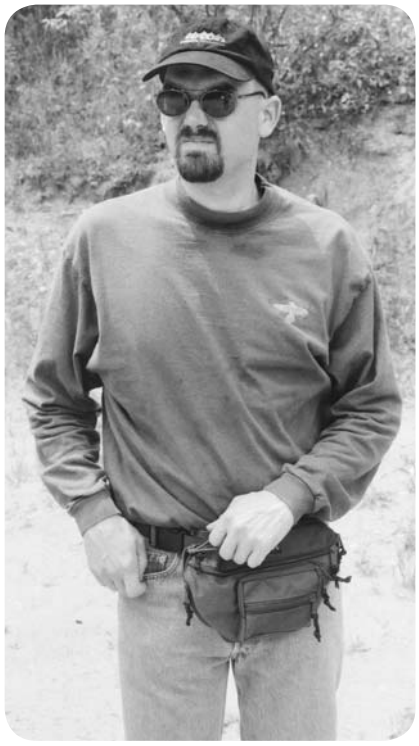
The London Bridge Trading Company #1528A on my desk is all that. Made of heavy-duty Cordura nylon, it promises to deliver years of use. The layout is the standard fanny pack/holster, with a circumferential two-tab zipper that acts as the breakaway for the outside. Once you position the zippers at the corner you need (upper right for right-hand use, upper left for lefties) you need only pull the strap with your off hand to open the pack.

One design feature I like on this one is the holster. Rather than stitch the holster to the backing, the backer is one piece of velcro and the holster is wrapped in the other half. You can remove the holster and position it where you want, at the angle

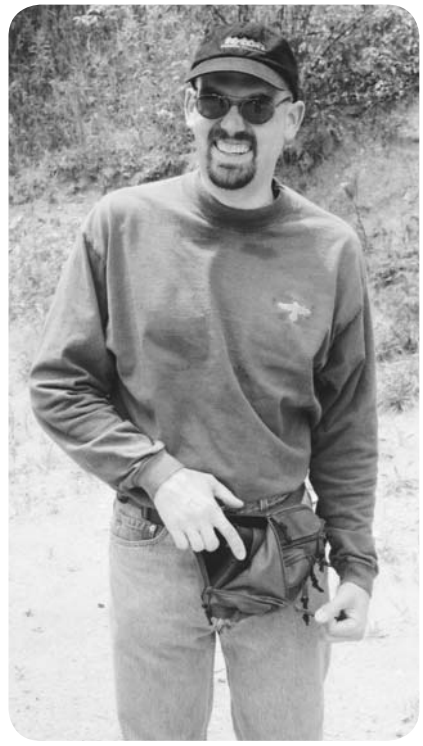
The London Bridge fanny pack. The velcro makes it possible to position the gun anywhere you want in the pack.



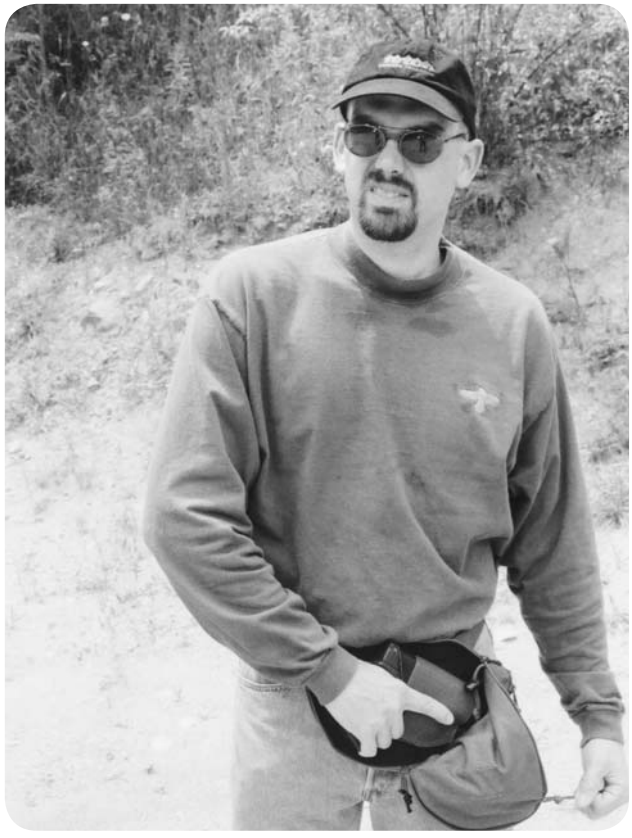
Just another fanny pack.



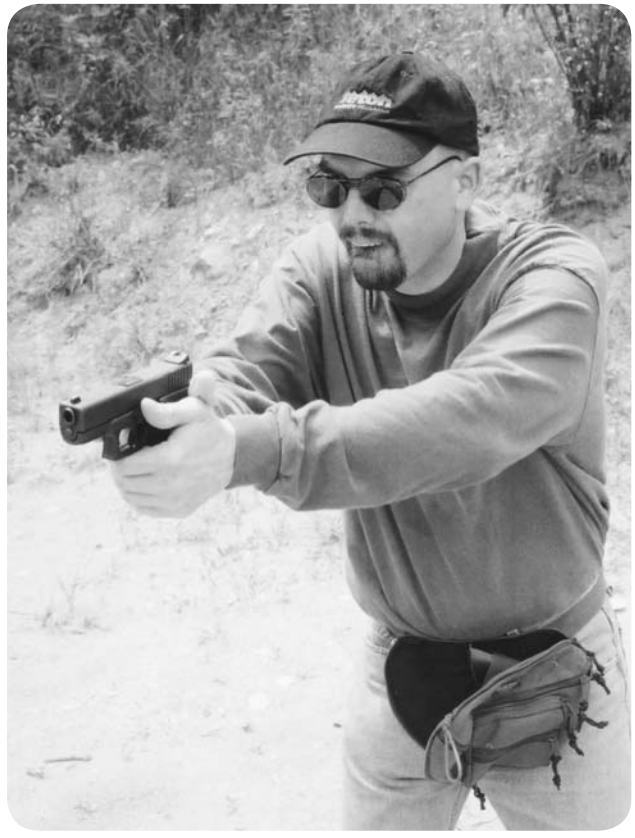
Pull the corner cord. . .



. . .and the cover peels away.



Hey! There's a Glock in there!



And now it's out.

you want, for best comfort and security. The front flap has several zippered compartments, with room for spare magazines, a flashlight, and whatever else you might want to keep in your fanny pack.

The waist belt is large enough to go around most users, with 56 inches of reach at full extension. (Nothing personal, but if you need the whole strap, you've got more pressing medical problems than where to hide a carry gun.)

One trick to wearing a fanny pack as a method of concealed carry is to keep the waist belt snug. If you let the strap out a bit, you'll find that when you go to break it open the bag will lift off your body and you'll have to really pull to get the leverage to open it. And a snug pack is less likely to bounce around while walking. A bouncing pack can beat you up in short order.

Another trick I learned while using fanny packs as a means of carrying camera gear is to add a carabiner to your waist. Carabiners are the spring-catch aluminum loops that rock climbers use. The spring-loaded clip lets you snap them onto many things. I snap one through a loop on the waist belt and then over my trouser belt. Since the buckle on the waist belt is behind us while we're wearing it, someone can quickly unsnap the waistbelt and make off with your fanny pack. The carabiner keeps it attached to you. The only drawback is that if someone does try to snatch your gun-bearing (or camera-laden) fanny pack, they'll be trying to snatch it while it is still attached to you. It may be startling, but more so for him than you.

I wore the LBTC fanny pack on my trip to South Africa for the IPSC World Shoot in 2002. In South Africa, your firearms must either be locked in a safe or in your possession. Your import permit is your carry permit. I tucked a 10mm into the fanny pack for my trips outside of the match. If anyone spotted it for what it was, they didn't let on with any inadvertant facial expressions. As far as I could tell, I was just another tourist with a camera and fanny pack.

Advantages and Disadvantages

The fanny pack is a self-contained unit. The gun, spare ammo, the flashlight and anything else you carry in it are all there. And it all comes off and goes back in in a flash. But it is obvious. And it is also, like a purse, an object of attention even if it isn't recognized as a gun bag. Properly adjusted (snug to the body), a fanny pack is quite comfortable.

A couple of disadvantages with many styles is the model-specific holster that's built in, and many are built to be "handed," that is, right- or left-hand only. The London Bridge Trading Company model I tested can switch right or left, and if the holster doesn't fit well enough you can inexpensively swap it with another replaceable holster to velcro to the fanny pack interior back.

Open/Field

The Open and Field category is something of a jumble. On one end we have places like Arizona with Open carry, and on the other hand we have once a year hunters who want a backup gun but want it protected from the weather and brush. As a resident of Arizona, or a working cowboy, you would want something comfortable, reasonably secure (but not necessarily snatch-proof), reasonably quick, and good looking. And did I mention comfortable? As an Open carry holster, where you'll be wearing it all day, comfort is just as important as it is for concealed carry. But you don't have to worry about it being bulky as long as it isn't so large as to get in the way. A good Open Carry/Field holster is also one that you can conceal if you need to.

There is one drawback to a very comfortable holster: you forget it's there. How can this be a problem, you ask? When I went through the handgun class at Gunsite lo, these many years ago, one of our club members who was in the class had turned his trip into an expedition. After the Gunsite class he was going to go to the West Coast and do some scuba diving. (Glenn was ambitious, and we were all younger then.)

After the week's class was over he piled into the car with the rest of his group and headed out. Glenn fell asleep, and when they stopped for gas, he volunteered to go get coffee. Walking across the parking lot, he entered the local fast food place and started barking out the coffee order. (Glenn can be an overwhelming experience to the first-timer.) When the kid behind the counter didn't move, he asked "What's the problem?" The teenager pointed at his belt and said "This is California." Glenn was still wearing his .45! After a quick trip back to the gas station to stuff his gun, holster and spare magazines into the trunk of the car, he collected the coffee, and they zoomed out of there before anyone else could ask questions.

I've had to leave my gun in the car on several occasions when I forgot I had it and found I needed to enter a place where its possession was forbidden. And more than once I remembered just as I was reaching for the handle to the entrance, with its no-guns reminder sign.

A working cowboy also has to worry about the handgun (a Glock in our example, in case anyone has forgotten what the title of the book is) staying in place while riding, walking, working and occasionally falling. One other type of open carry would be a high-risk occupation where the idea is to make it clear you are armed, and not hide the gun. A gun shop, pawn shop or jeweler in a rough neighborhood would carry openly. (If the law allowed it.) I've seen owners in party stores (the corner snack, liquor and lotto store) who carried openly. Maybe it's just a Detroit thing, but it doesn't bother me. However, in many places it isn't allowed even in your own store. Check your local laws before deciding to work while armed. (and consult your attorney.)

Many holsters in the Open/Field category, like concealed carry, depend on friction as the retaining method. Since many shooters don't trust friction, you'll have quite a selection of holsters with thumbstraps. Hunters want a reasonable amount of comfort but are almost always looking for more protection.

Protection comes at a price, as the only thing that really protects a handgun

An open carry holster can be so comfortable that you forget you have it on.

is a flap. A flap holster is going to be slower than any other holster. In many jurisdictions, you can't get protection by carrying your handgun under your coat while hunting, as it is then concealed. In many places carrying concealed is tacitly approved while hunting, but in others it is forbidden. And if you're counting on your hunting activity protecting you while carrying concealed (protecting you in the legal sense) then you'd better be very careful to divest yourself of the handgun as the first act to end the days hunting. I have heard of more than one case of a hunter carrying concealed (legally so, while hunting) who was "too tired" to take the handgun off for the drive home, and found themselves in hot water when they stopped for a cup of coffee.

The Shooting Systems Super Avenger mentioned earlier would make an excellent open carry holster. It's secure from accidental loss, fast on the draw, comfortable and durable. You would get many years of use out of it. The Fobus holsters would also serve you well.

Advantages and Disadvantages

The big advantage is comfort. A properly fitted open carry holster is as close to un-noticed carry as you can get. Un-noticed to you, that is. Everyone else will see it. Arizona is an Open-carry State, and I remember one instance where I was filling my truck up with gas on the Interstate. I was inside the store stocking up on road snacks when the fellow who had been hanging around and chatting up the counter help leaned over the counter and whispered to her, "He's got a gun!" She replied in a normal voice, "Looks like a .45. This is Arizona."

A good open carry rig can also be very fast, but at the expense of security. An open-topped holster doesn't present any barrier to someone attempting to snatch it, so you must always keep an eye out for people getting too close. An open carry holster with a flap for protection, such as a hunting rig, would offer more security, but at the expense of speed.

Security holsters are more than pouches to hold a pistol.

Your situation dictates the style holster you invest in. If you're living in Arizona (you lucky dog) and carry daily, then an open-topped holster will do. If you're only going to carry when hunting, then a more secure holster is for you.

Duty

The Duty category is simple to define: police officers in uniform. The proliferation of gear has added much weight to the belt of police officers, to the point that there are now suspenders to hold up the belt. One weighty addition is the security holster. Security holsters are more than pouches to hold a pistol. They depend on multiple security straps, or a rocking motion to unlock the pistol. The idea is to make it difficult for an unauthorized user (read: bad guy) from snatching the pistol from its holster.

The extra security adds weight. How secure can they be? Properly locked in, you can suspend your weight from the Glock locked in its holster. You can let someone yank away to their hearts content, and your Glock won't leave the holster. But they do weigh some.

And if you are going to use a security holster you must practice with it. If you are accustomed to a straight-up draw, then the rocking motion or the extra straps you'll have to defeat will be new. You must practice a couple of hundred times (thousands would be much better), spread over a couple of weeks, to accustom yourself to the new holster. If you do not, the security rig will be secure from you, too, and not just the bad guy.

Competition

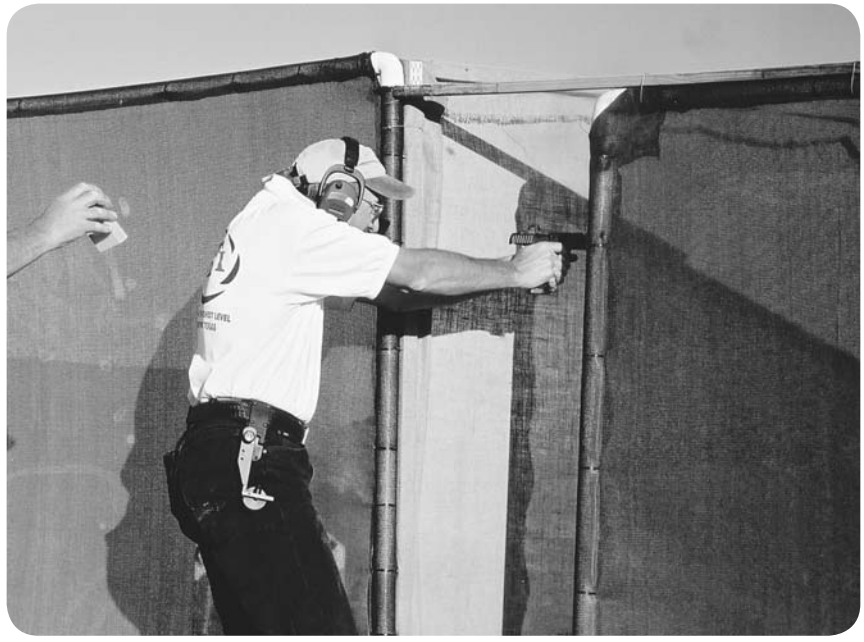
For the most part, competition means speed. When the results of a match hinge on a few tenths of a

second difference in shooting times, speed of draw matters. However, dropping your pistol in the dirt is not just a bad show but a match disqualification. So even while fast, a competition holster has to be reasonably secure or there isn't much point in using it.

In the early days of competition, friction was king. Holsters kept their pistols and revolvers (this was pre-Glock) by friction, usually an adjustable tension screw that drew the leather tighter around the muzzle or trigger guard area. Competitions that call for real-world holsters still depend on friction. An IDPA-approved holster (you can only use a holster on the approved list in an IDPA match) will depend on friction.

As mentioned before, the holster and its magazine pouches are attached (in some cases clamped and screwed right to) an outer belt that then velcros to the underbelt.

The holster and magazine pouch are not positioned for comfort. They are positioned either for maximum speed and accessability, or in some rare instances positioned to meet the location requirements of the match. A full-house competition rig will have a shooter bristling with gun and magazines. They may not even be able to sit down comfortably. And the only way to carry such a rig concealed would be to use a poncho or tarp.



A competition holster is so minimal it might not even be recognized as a holster.

A thumbstrap will keep your Glock in, but it's secure only against gravity. In a struggle, your gun will come out as easily for the bad guy as it will be for you.

The Garcia Universal latched.

The Universal has a rear latch that your finger unlatches and you grasp the pistol and swipe it.

At a three-gun match, your holster had better be secure or you'll be DQ'd. This shooter (Mike Voigt) has a secure holster.

Modern competition holsters use a different approach than friction to keep you and your Glock together. The current speed approach is to use cammed locking latches that hook onto the trigger guard. Think of the latch on the door to your house. The cam on its front lets it swing shut and latch. The lack of a cam on its rear surface keeps it latched. The trigger guard latch uses a cam with the two surfaces at right angles to each other, rather than opposite each other. Your Glock can go down into the holster and come up out of it but can't tip forward and fall out. (At least not when properly adjusted.) At the muzzle, a rubber muzzle plug keeps your Glock stable and positioned for the draw.

Many competition holsters are referred to as "skeleton" holsters. Since they don't depend on anything except the trigger lock and muzzle plug, there is no cover or wrapper. You have the belt plate, the trigger lock and cover, the muzzle plug and whatever bars are needed to bolt them together. From a distance your Glock appears to simply float next to your belt.

One essential feature of a skeleton holster is the lock. While the draw is fast on a skeleton, security is not always so good. So, there is a setting (lever, knob, button) that locks the Glock in place regardless of what you're doing. Well, almost regardless. If you're in a 3-Gun match

(rifle, pistol, shotgun) and have to carry your handgun while using a rifle or shotgun, be careful. Even locked in, if you strike the Glock with enough force (swinging rifle, butt whacks pistol, pistol goes flying) you can drop the pistol. In every instance, you will be disqualified and your shooting for that match is over.

The skeleton holster I use is a Universal, with all aluminum construction except for the muzzle plug. The locking is done by a "press-turn" setting on the side knob. Once locked, the Glock won't come out without a serious impact. Unlocked, it is secure enough for walking around and helping on the stage with your squad.

Some holsters even dispense with the rubber muzzle plug. instead they use a pin in the base of the locking block, and you must drill a small hole in the front of your trigger guard. The pin rides in the hole, and keeps the Glock from rotating out of the holster. A short lift and the Glock is free, but until you lift it won't fall out.

A non-plug holster that doesn't require drilling your trigger guard is the Arredondo. The locking hook is not just spring loaded, but cammed into place by the front of the trigger guard. On the front top of the housing, Arredondo has installed a tension adjustment screw. The nylon screw bears up against the dustcover of your pistol, and keeps it from pivoting out from under the hook. While

California Competition Works makes a very secure magazine holder.

plenty secure, it still gives a speedy draw.

Another holster of this type, which I must confess I'm growing fond of, is the Universal Shooting Academy "Xtreme" holster. The Arredondo and Xtreme holsters both can give a new shooter quite a scare. From a short distance there doesn't appear to be a holster at all: the gun is somehow attached, but not enclosed. The cammed hook and the locating screws keep the gun in place. The Xtreme also features a locking lever on the rear of it.

If you want to have extra security at the small risk of not being able to draw from the still locked holster, leave the lever down. When you go to draw, your fingers grasping the frame should push the lever out of the way. When it works, it is 'way fast. When it doesn't, you'll give yourself a wedgie. Most shooters lock the holster between stages and leave it unlocked after loading and before the start buzzer.

For a lot of shooters accustomed to a holster actually enclosing a handgun, a competition holster can be a scary thing. Properly adjusted, it is as secure as any other holster. But it's fast, really fast.

For the competitions that require speed, like the Steel Challenge, IPSC and the American Handgunner Shoot-Off, a skeleton holster is almost a requirement. As one example, in the Steel Challenge your holster selection can make or break your match standings. The match requires up to 25 draws against the clock. If your holster slows each of your draws "only" by two tenths of a second, your total match time is already inflated by five full seconds. In a match where a few tenths can mean the difference between winning and not winning, five seconds is an eternity.

Magazine pouches for speed competition are friction-retention designs, and quite often minimal in construction. If you are a prudent competition shooter, crank the tension knob until it takes a healthy yank to get each magazine clear. Under the stress of competition you are going to get that magazine out, no problem. But if you don't crank the tension knob to keep the magazines in their pouches, you might swipe your magazines off going through a doorway, or turning a corner.

One design of magazine pouch comes from California Competition Gear. Instead of a friction knob, California Competition Gear pouches use the friction of a tight fit of their nylon straps to retain your magazines. At first, you distinctly feel as if you are going to need help getting the magazines into the pouches, and how will you get them out? But while they feel tight, under the stress of competition you won't have any problem snatching one out.

Of all the goodies we're talking about and lusting over in this chapter, competition gear is by far the most expensive. An underbelt and top belt can easily run $50-$75. You'll need at least three mag pouches (four or five if you shoot a 10-shot gun in Production Division) and they run close to $20 each. The holster itself can easily run $150, and some are closer to $200. Before you've even pulled your Glock out to start shooting, you've dressed yourself in over $350 worth of leather or plastic. Add the cost of a Glock, three hi-caps or five 10-shot magazines and the ammo to fill them, and you've gotten pretty quickly to the $1000 level.

Some feel the cost of shooting is high enough to scare off new competitors. All I can do to offer a comparison is ask if anyone has priced the cost of rebuilding or replacing a blown engine on a dirt bike lately? Or looked at the cost of anything with an internal combustion engine on it? (My next door neighbor goes through $6000 worth of tires for his little race cars each season. Expensive to shoot? Compared to what?)

Fun costs money, at least in our capitalist system. For the cost to fun ratio it provides, shooting is a very inexpensive sport.

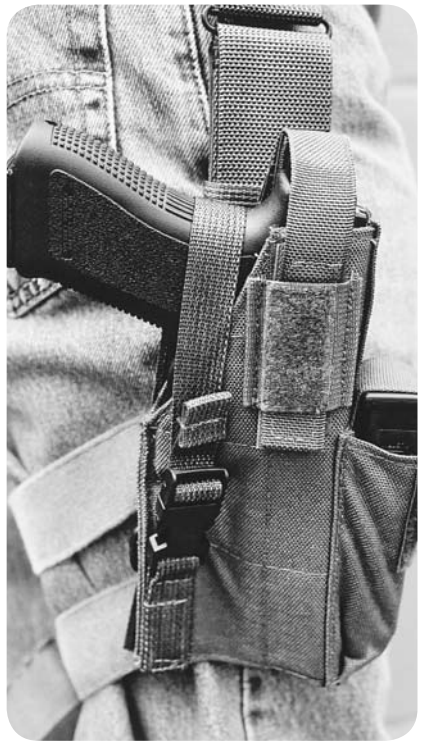
When USPSA/IPSC decided to get "practical" they disallowed holsters that used tie-downs. Then police and military decided they needed to put pistols there, so what to do?

Military/SpecOps

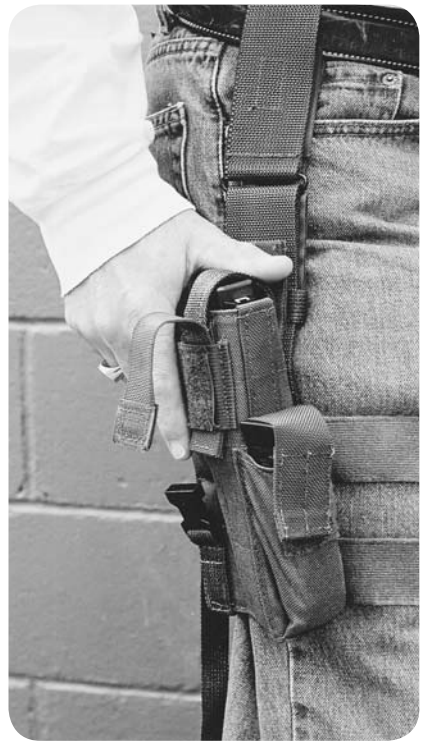
One recent article I read on military equipment likened the modern infantryman to a pack mule. The amount of gear each soldier or Marine has to carry is impressive. Rucksack aside, the weight and volume of the personal gear of rifle, rifle ammunition

and magazines, grenades, canteen or canteens, personal medical pouch, bayonet, entrenching tool, an extra knife or two, a flashlight or weapon-mounted light, and all the pouches and web gear to carry – it is all quite impressive. (Let's not forget the body armor, which is getting lighter with every generation of progress, but still weighs a few pounds.)

And he also has to carry his share of the team equipment. That gear can be machinegun ammo, an extra barrel for the machinegun, map, GPS unit, radio, mortar rounds or other mortar parts, pop flares and smoke grenades, and such mundane gear as spare batteries for anything electronic. (The modern military uses so much gear that requires power that



A London Bridge tactical with the airborne strap. note the mag holder on the front of the holster and the quick-secure velcro second strap.



With the quick-secure strap out of the way an the airborne strap unlocked, the draw is quick with the thumb break strap.

London Bridge leg straps are elastic, and you can attach extra gear to them with the velcro strips.

The Naval Special Warfare model, with full flap.

Velcro holds the flap up once you've unlocked it.

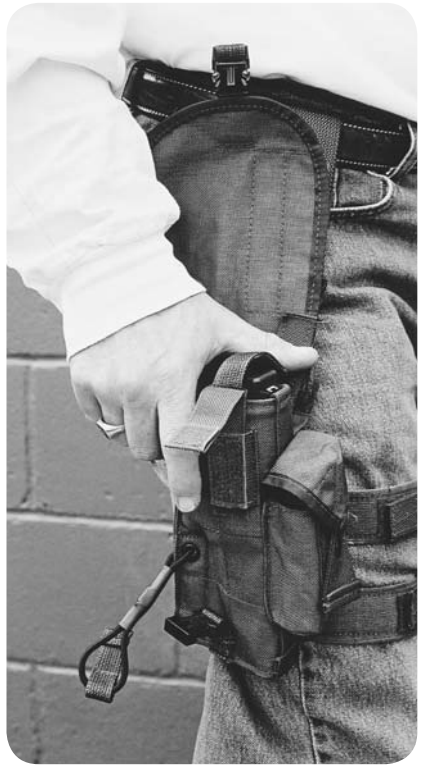
A flap keeps the gun protected so you won't grind it up on pavement or walls.

a rifle platoon carries the equivalent of a shelf-full of batteries down at the local big-box store.) Add to that load any of a vast panoply of military gear for special occasions, like night vision equipment and specialized grenades or explosives, handcuffs or plastic zip-strips, a gas mask or supressor for his main or backup weapon, and you can see why some joke that at least one meal a day should be oats and hay.

The SWAT officer doesn't have to carry stuff like belted ammo or spare barrels for the machinegun (can you imagine living in that city, or working in a department that needs belt-fed machineguns, let alone one that needs spare barrels for same on a call-out?)

The London Bridge elastic airborne strap.

Once you're on the ground (or off the boat, etc.) pull the tab or the strap and get it off the gun.



Again, the final security is the thumb break strap.

mortars and other military gear. But every officer does need to carry a mace canister, handcuffs, a radio, gas mask and the team equipment.

With all this gear, where to put the handgun? In military units it isn't a universal problem, as not everyone who is in the armed forces is authorized to carry a sidearm. However, a lot more carry sidearms now than when the first edition of this book went to press. The requirements of the war in Iraq and Afghanistan find our soldiers, airmen and Marines in close quarters quite often. Also, they spend a lot of time riding in vehicles.

There are a lot more pistols in use now than just a few years ago. Every SWAT officer carries a sidearm. (And a radio, another piece of gear to lash on somewhere.) And there isn't any room on the belt.

One possibility is to build a holster into the equipment carrying vest. We have been seeing a lot more vest-mounted holsters in Iraq. The main reason: vehicles. As with WWII GIs, and every war since, American servicemen and women do not walk. In an up-armored Humvee, trying to get a rifle out of the "ready" rack and onto the bad guys can be impossible. But a holstered handgun, in a holster on the vest, can be drawn and fired out the window. I've even seen some handguns simply tucked into the mag pouch of the vest. The obvious utility there is that it can be turned to be right or left-handed without re-rigging a holster. Still, with a holster somewhere besides the vest, taking the vest off still leaves you with a handgun, a comforting detail in many locations and situations. The obvious solution is to pack two handguns. However, that is a solution that is subject to departmental regulation, availability of said second pistol, and a willingness to pack the extra weight.

The London Bridge NSW mag pouch has a full flap for more protection.

The NSW pouch closed, using velcro and a snap.

The Shooting Systems tactical holster. Fastex buckles and elastic keep it secure. A thumb break snap keeps the Glock in.

Also, in military use the gear attached to the trouser belt is generally considered to be personal or "bug-out" gear, Level One gear. That is, if you have your trousers on you have enough stuff to give you a chance at getting to more equipment in an emergency, or escaping and getting to another unit.

But the waist is a location packed full of gear, and a waist belt or trouser belt-mounted handgun holster can interfere with web gear or an equipment vest. (And for those of us with a trim waistline, the available space is limited indeed.)

So, the thigh holster came into being. And a curious thing it is. You see, when Westerns ruled the movie screens, holsters went down the leg. For a fast draw with a hanging arm, low is good. And since the climactic shootout was a staple of the Western script, a holster had to be fast or the wearer couldn't prevail in the shootout. Low, however, can be clunky for everyday use. When IPSC was organized, one type of holster specifically disallowed was the low-mounted holster that wasn't attached directly to the belt, and required a leg strap. The idea was to get rid of the irrelevant western fast-draw rig.

Enter a couple decades later the military/police tactical thigh holster. Yes, it can be a bit clumsy, but compared to mounting it in a trouser belt or waist belt, it is a suitable solution. Slower than a belt holster, it is still fast enough.

The best units have an adjustable drop. Not everyone has the same length leg, and to get the holster in the right spot requires adjustment. The leg strap should be wide, at least an inch and a half wide, so it doesn't roll up or bind. And you should have a solid thumb break strap to secure your Glock.

One addition that is vital if you need it, and a curiosity if you don't, is the airborne strap. Jumping out of perfectly good aircraft isn't easy on equipment. What with the banging of stuff on the aircraft while getting in and getting out, and hitting the ground upon arrival, things can get lost. The airborne strap offers an additional level of security while jumping. Once down, you unsnap the strap and fold it out of the way. On the ground, you depend on the thumb break strap for security. (The airborne strap is also insurance while rappelling.)

All tactical thigh rigs have a spare magazine pouch. Reaching around to get the spare magazine isn't fast, or sometimes even elegant, but the desire is practicality. If you have the holster, you have the handgun and spare ammunition for it. Mounting the spare magazine pouch someplace else can make the reload faster, but at the risk of separating the pistol and its spare ammo. (Some might argue that a speed reload in such a situation is a highly optimistic attitude, but I feel you can never get more ammo into a defensive weapon too quickly.)

Do you need a tactical thigh holster? Unless your job requires it, probably not. Can you use it for competition? Some of them, but not all. Do they look cool? That depends, and you should never discount the "cool guy gear" factor when it comes to selling equipment. Do the holster makers sell lots of them? You bet. Are they comfortable in use? If you don't have any room on your belt, nothing beats them. The tactical thigh holster is a demonstration of the convergence of military and police operations and equipment needs. Both are adopting all kinds of gear

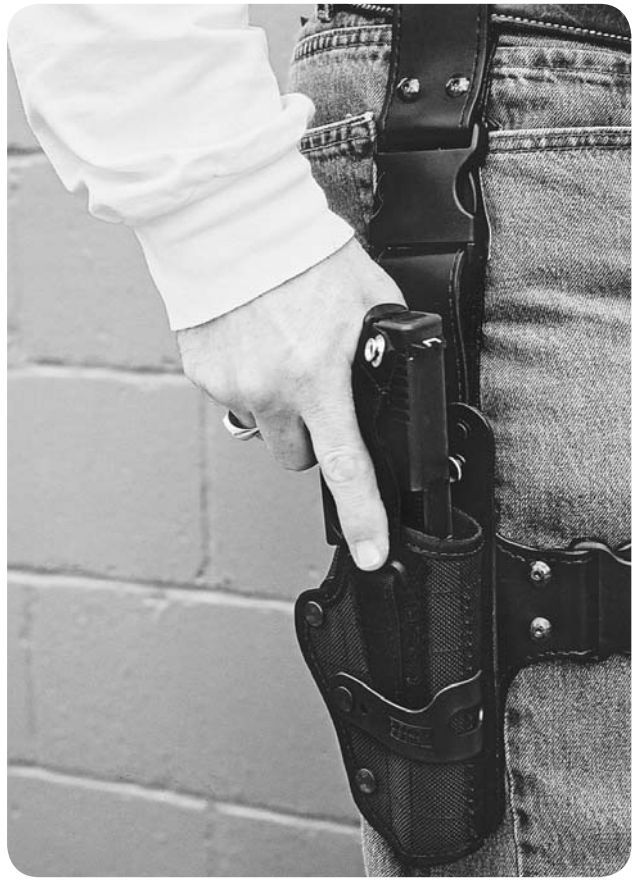
(radios, night vision gear, etc.) and both face the problem of where to wear it.

Two models from London Bridge Trading Company exemplify the tactical thigh rig. Both are made of Cordura nylon with heavy-duty webbing as the backbone. The first of them is the #372A. It has a drop strap with plenty of adjustment. Both the belt loop and the hanger attachment have plenty of velcro and overlap for adjustment. As sent, the holster is set up with seven and a half inches of drop, enough drop to get the holster down on my leg instead of riding up. (I'm tall, and many tactical rigs lack enough adjustment to get the holster down my leg far enough to prevent binding in delicate personal locations.)

The leg straps are one and a half inches wide, and have an elastic construction for a tight fit and comfort. The straps also have retainers to keep the loose ends from flapping around, a nice touch. Many tactical holsters use straps that are sewn to the holster, and you're stuck with the buckles wherever they may fall. This LBT holster has straps that slide through the holster, so you can adjust the buckle position. Also, the backs of the straps have sewn-on rubberized fabric panels, to keep them where you place them. No sliding around, no riding up.

The body of the holster is stiff, so it doesn't collapse when the Glock is out. The shape-retention makes reholstering a breeze. The retention strap is a velcro-adjustable thumb break, with a metal reinforcement on the strap to make sure it stays stiff. The thumb break strap has an additional security strap that can be folded over it. My only complaint about the one I have is that the velcro to secure it out of the way is too short (*vis a vis* the strap length for storage) and the stored strap thus has a

The Shooting Systems' thumb break is adjustable and secure.



On the draw your thumb opens the strap, and the holster keeps your trigger finger straight.

loop to it, a loop that might catch on stuff.

The 372A has an airborne strap, a buckled strap that loops over the frame and keep the pistol (one of our test Glocks) in place even when jumping out of a perfectly good aircraft. It would also serve as a security strap for any other highly active transport, such as small boat or helicopter. The only thing to keep in mind with an airborne strap is that you must drill into yourself the habit of undoing the airborne strap as soon as you reach solid ground. (For you airborne types: land, secure the 'chute, check to see that all your limbs work, unstrap the pistol. Then proceed with the rest of your duties.) If you don't, you will not be able to draw your Glock, no matter how strong you are.

The spare magazine pouch on the front of the holster is velcro-closed, and large enough to hold either a single Glock magazine or two single-stack magazines.

The 372E Naval Special Warfare Model has the same basic construction and dimensions. It differs in having a flap, modified leg straps and a different airborne strap. A flap holster? Yes, for the same reason you have an airborne strap: for extra security and protection. The flap buckles down, so it obviously isn't meant as full-time protection. In the up position, the flap is held up by a velcro strip on the belt loop. When you need the protection, pull the flap down off of its velcro security position and buckle it in place or pull it completely off (it is secured to the holster with a pair of snaps) and stash it in a pocket.

I found the flap quite useful in a recent Law Enforcement AR-15/M-16 class. I went to sitting to deal with the targets on a particular course, and without the flap the grip of my Glock would have been ground up and marred by the concrete slab I happened to be sitting on. The airborne strap on this model is an elastic strap that loops over the butt of the Glock and keeps it in place. (Once you land, fold up the flap, pull the strap off the butt and let it swing free.)

Remember, in combat it isn't always possible to save your magazines.

The magazine pouch is both velcro-secured and has a two-position snap. The cover is not just a strap, but a pouched cover that offers additional protection. And the leg straps have velcro-secured cargo straps that let you attach extra gear or a clipboard to the leg straps. The extra gear pouch would be useful to an infantryman, and the clipboard to a chopper pilot. In all, both are versatile and useful pieces of gear that will give you many years of service. Both also offer you the option of removing the drop strap, pulling the leg straps out and using the holsters as regular belt holsters. The 372E in particular would make a very useful hunting holster, with its full flap offering plenty of protection for your Glock.

Spare magazine pouches become a real issue: how many do you need, and is that number greater than the holster itself can provide? Remember, in combat it isn't always possible to save your magazines. Getting extra ammo doesn't help much if your magazines are scattered all over the Area of Operation, and you'll need spares besides the ones in the Glock and on the holster.

One option is to mount the spare mags on the drop strap, above the holster. I'm not too keen on that, as it could interfere with the draw. Another option is the other thigh. While convenient, that location is often taken over by a spare magazine carrier for the rifle or submachinegun or flashbangs or grenades or by the gas mask bag or dump bag. If you have your left thigh free, then a pouch there would work great. Otherwise, a belt mount will be the only place. One possibility is to mount the spare pistol mags on the thigh straps, forward of the holster on the right, or forward of the other spare main weapon mag pouch or gas mask bag,

on the left. While the mag pouch might slide around, and isn't much of an option for pilots, the thigh top can be a convenient location.

Shooting Systems offers their Advanced Tactical Holster, a thigh rig with some differences. The drop strap uses a fastex buckle to attach. If you want to take the holster off you don't have to go ripping apart your carefully-adjusted velcro straps, you just unbuckle it. The leg strap is a single, wide strap that has a single elastic thigh strap. But it is wide enough, and the drop strap is stiff enough, to keep the holster from moving around.

The holster itself is a standard Shooting Systems holster secured to the tactical webbing. Instead of a unitized and organic structure, the Shooting Systems approach uses their regular holster and the extra webbing. As a manufacturing approach, it has benefits.

The cost is that for some shooters, the holster doesn't quite fit. I had no problems, but some of my testers found they couldn't get the holster just where they wanted it and make it stay. By the time they got it secured it was tight enough to chafe. The Shooting Systems holster isn't quite as "sexy" as the others, but it is a durable and useful holster – and good enough that one of my testers insisted on taking it home.

Advantages and Disadvantages

The big advantage of the tactical rig is that it gets your Glock off your belt and out of the way of other gear, which is also its disadvantage. Especially in a vehicle, a thigh rig can be a real hassle to draw from. Your arm doesn't have much room, with the seatback in the way.

When I'm geared up, with a tactical thigh holster on, spare magazines or other pouches on the other thigh, I can't fit into the seat of many automobiles or trucks. You wonder why your local PD uses honkin' big SUVs to get around in? Because they can't fit into anything smaller with their gear on. Once you've crammed two officers fully geared up into the front seat of a Chevy S-10 or a Ford Ranger, you can't get the doors closed. Also, with a tactical thigh rig if you go prone and your holster isn't adjusted tightly enough (or lacks the rubberized non-slip strap backs), it will roll around your leg until it is lying on the ground.

But the thigh rig is here to stay, and if you want to look cool, you simply have to have one.

Lanyards

A lanyard used to be something we saw in our grandfathers photos of the Great War. A lanyard is simple: it keeps the gear attached to the owner. For a mounted soldier, it made a great deal of sense. It's a long way down to the ground, and the horse may not be all that enthusiastic about going back to get dropped gear. But after cavalry turned in their horses for internal combustion engines, the lanyard fell out of use. Oh, some units still had them, but for the most part they were old hat.

Not any more. What with all the gear, the high tempo of operations, and the exhaustion of soldiers, a lanyard can be a smart thing to have. When I first noticed that suddenly everyone had one, I asked some friends in the know what the deal was. It turns out that not only had lanyards made a comeback, but in one fashion or another they had never left. One friend remarked to me, "Pat, I've been so exhausted on a

The Wilderness Safepacker looks like a map case.

The Blackhawk Industries lanyard tied to the Glock frame with 550 cord. The next step is sealing the ends with a match or lighter.

Ranger Op that I would have forgotten anything not tied to me." Not only had this soldier gone out on patrol with a lanyard on his sidearm, he had the belt-fed machinegun attached to his web gear with 550 cord. Called, unflatteringly, a "dummy cord" it kept him from having to explain the loss of, and reimburse the government the cost, of, that M-60.

The Glock pistols have a lanyard hole. The earliest G-17s didn't, or so I've been told. And the compacts and subcompacts don't, either. (A portable drill can take care of that, should you greatly desire a lanyard hole on your compact Glock.)

The Blackhawk lanyard I have on my desk is pretty simple: a webbing loop with velcro attachments goes around your belt right behind your holster. The coiled cord ends in a nylon cord loop. At first I couldn't figure out how this was supposed to work, so I asked the folks at Blackhawk. "Tie it together with gutted 550 cord." was the reply.

Ah. You see, in military units (and a lot of police and Sheriffs departments) 550 cord is common. More common than duct tape. Originally parachute cord, it has the multiple virues of being easy to cut, soft on the hands and gear, and quite strong. Yes, the name gives it away, it has a breaking strength of 550 pounds. To attach the lanyard, take a six-inch section of cord and pull the white core out of it. The outside you're left with won't be as strong as the full 550 pounds, but it will be strong enough. Loop the 550 skin around the nylon lanyard and through the Glock frame hole. Loop twice if you can fit it through the hole. Then tie a square knot. Trim the ends, and use a match or lighter to melt and seal it. The melted ends won't unravel, and the square knot, done right, won't loosen.

Now so long as your belt is on your Glock is with you. If you have to remove the pistol from the lanyard, just cut the 550 part of it (not the lanyard itself) and it's free. You can always reattach with a new section of 550. One small detail on lanyards: if you use an airborne strap, you must use the buckle style with a lanyard, not the rubber loop slip-over type.

The Joker in the Deck

It doesn't matter how carefully you describe your categories, someone will come up with something that defies description, or covers more than one. The Wilderness, out of Phoenix, makes the Safepacker holster. It is not just a holster, it is a pistol case and a packing case. Used as a holster, it looks like a map case or oddly-shaped fanny pack. Rectangular and flat, the large flap is big enough to hold a wallet, map, or other goodies. And that compartment can be accessed without exposing the pistol. Unbuckle the flap, and the Glock and spare ammo are right there.

If you don't want to wear it on your belt, you can clip a shoulder strap onto it and use it a a shoulder bag or purse-like carrier. It has a built-in hand strap for when your shoulder gets tired, or you want a different carry. The hand-carry is sort of like a

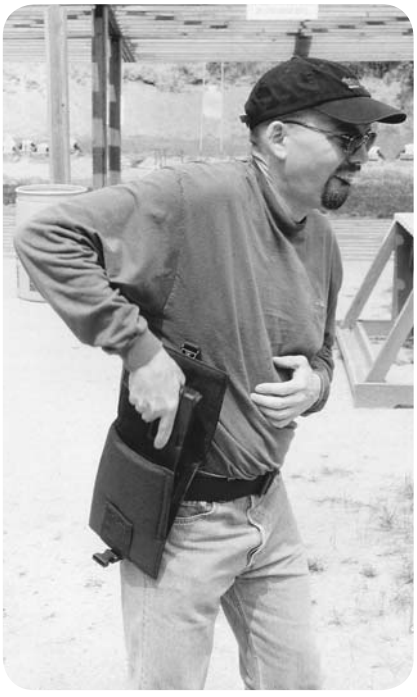
clutch purse with a retention strap and takes a little getting used to.

And it is also a gun case, capable of protecting your Glock while it rides in the trunk of your car to the range.

The really trick option is to strap it to a rucksack or backpack. On the outside of a ruck, the larger ones look like a map case and the smaller ones look like a cell phone or first aid kit pouch. As long as someone doesn't make it for a gun case, your handgun is secure but available. If you think it might be "made" then you can tuck it into an outside pocket of the backpack. Yes, it would take an extra step to get your sidearm, but it would be secure and safe from impact as well as ready to go. You can't just dump your Glock (or any other handgun for that matter) into a pouch or pocket on a rucksack, as you can't then control the direction of the muzzle nor access to the trigger. In the Safepacker, you can control both.

Unsnap.

Hand in.



Glock up.

Support hand under.

Just to prove that I can't think of everything, the first wheelchair-bound shooter I showed it to immediately started wondering about locations on his chair where he could strap it. Chair, car, boat, truck, let your imagination run wild. (Limited, of course by local law, or regulations the chief, sheriff or commanding officer might insist on.)

Spare Gear

In most applications, you needn't further burden yourself with extra stuff. For daily concealed carry, you can leave the cleaning tools and repair parts at home. At a match, they reside in your gear bag. For a police officer on duty, or in a SWAT callout, cleaning equipment and spare parts can stay in the car. In the event your handgun goes

down on duty, you transition to your backup, go to cover, depend on your partner, or all three. Especially in a SWAT response, your Glock is your backup to your rifle, smg or shotgun, and if you are in the position of having to transition to your Glock and find it also fails you, I'd say you were having a really bad day.

But three situations would call for extra gear: camping/hiking, working outdoors in the wilderness, and military. For a hiker depending in his or her handgun, going back to the cabin or truck isn't an option. Ditto for a working cowboy riding the fence, several miles from the bunkhouse. And a soldier or Marine on the perimeter or out on patrol isn't going anywhere except where he's needed, regardless of what happens to his Glock.

What could happen? Something as simple as having to ford a silty river, or taking a tumble into a mudhole. Or even more miserable, out in the rain for days on end. Or riding in the back of a truck for a day, getting covered in dust. Yes, a good holster will help, but there is only so much you can expect even from properly-designed and made tactical nylon. Thus, the cleaning kit and spare parts roll.

You'll need a cleaning rod or cable, patches, oil (even though Glock says "no oil" you'll need some) patches in a sealed plastic bag, and a few spare parts. The rod that comes with your Glock will serve nicely. Get a bronze bristle brush and keep it in a plastic tube to keep it from getting crushed. And seal your spare parts in a plastic bag, to keep dust off them and to keep them all in one spot.

What parts? Since nothing is likely to break, carrying spares to replace broken parts is not smart. The only spare I'd carry against breakage would be an extractor. The rest of the parts in my kit are there against loss in cleaning, and to clean. In addition to the cleaning equipment I carry a disassembly punch, a spare set of striker cups, disassembly pins, firing pin spring and a firing pin sleeve. In all, not a lot of stuff, and a compact enough package that I can simply lash it to the holster and have it handy when I need it. The pouch can be switched from the holster for military classes, to a rucksack for backpacking. One of these days I'm going to assemble another package and simply leave one with the rucksack and one with the holster, and not have to switch.

As for the need, I was reminded at the last World Shoot just how bad things can get. The range was 50 or 60 acres (ranges alone, then there was the rest of the range property) of freshly bulldozed earth. In that part of South Africa the dust was so fine as to make talcum powder look like beach sand. Everyone who intended to keep their pistols going cleaned them every night. And some cleaned them at lunch, too. Those who neglected cleaning found themselves subject to the random and puzzling malfunction, even when using a Glock.

My cleaning gear went into the rucksack I was packing, rather than on my belt or holster. At a match I can always count on being able to walk the few feet to my "ruck" and get what I need.

In a military setting, however, the rucksack may be the next hole over or a couple of miles off. If you need stuff cleaned, you need it done now, and you can't wait. ♦

CHAPTER 24

Sights for Glocks

Sights are this radical new innovation. Well, you'd think so, when you see some people shoot. As my wife once remarked when watching shooter after shooter working over a plate rack to no avail "What do they think aim is? A four-letter word?"

Glock sights are radical, in that they are composed mostly of polymer. The front sight is a parallel-sided pyramid, while the rear is a flattened pyramid. The front is entirely plastic and is held on in a manner that first-timers view as inadequate. The front sight has a split post underneath, and the post goes through the hole in the slide provided for it. Once through, the sight is held in place by a tiny polymer wedge that gets pressed into the split in the sight post. Trust me, it will stay if you press the wedge in properly.

The sights are a reflection of the era in which they were designed. In the late 1970s and early 1980s, white outline sights and dot front sights were all the rage. Compared to the traditional European military sights (small, rounded, negligible bumps of steel on the top of the slide) the Glock sights were a marvel of design. And if you don't like the dots or bar, it is easy enough to make them go away with the judicious application of a felt-tip pen. Me, while I love a McGivern gold bead and white outline rear on a revolver, on a pistol I want black on black. Silly, but I shoot better with plain sights.

Neat, simple and easy to make and replace, Glock sights are plenty durable enough for their intended users: police and military. The low weight and tough composition of the polymer allows the sights to shrug off many of the impacts that sights get in use. In the Glock system, all sight changes are made by working on the rear sight. Windage adjustments are made by moving the rear sight from side to side. To adjust bullet

Despite the advances in optical sights, here is why you want iron (or polymer) sights on your defensive handgun. I'm not blaming the maker of this sight (a very good one, by the way) but if you drop a pistol out of your holster, you've got to expect this kind of thing to happen.

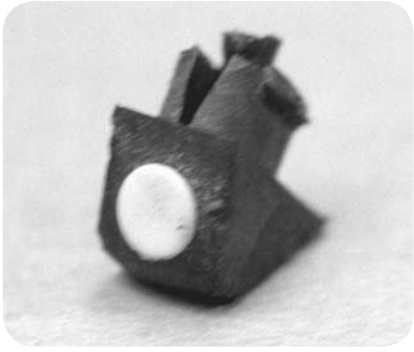
White dot and rear outline: its's soooo '80s! But unlike the music back then, these sights still work.

impact up or down, Glock makes rear sights in different heights, noted by markings on the side of the pyramid.

But still plastic. OK, polymer. They'll stand up to police or military use, but the kind of wear that American competition shooters subject them to is something else again. (I can imagine Gaston Glock sitting in his office, mulling over the problem of the American competition shooter. No matter how carefully he designs things, they want something different. No matter how durable he makes it, they insist on greatly exceeding the design parameters or expected service life. But then, they do buy a lot of Glocks.) Chuck Taylor, in his long-term testing of a Glock G-17, did thousands and thousands of draw and dry-fire repetitions, and gradually wore his front sight down due to friction with the holster. If that is a problem for you as it was for him, go with a replacement front sight made of steel.

Armando Valdes, who must do as many presentations as Chuck Taylor does, has not worn his sight down. He prefers the factory sights. He likes the dot front sight. "My draw is so grooved that the sights come up aligned and I just use the dot on the front sight as if it were a red dot sight." (A grooved draw is one of the big secrets of the Grand Master shooters, by the way.) "If I need a finer sight alignment, for a far shot or a tight one between no-shoots, then I go with a classic sight picture. Otherwise I go with the front sight dot."

The rear sight is polymer, with a steel plate cast into it to grab the dovetail on the rear of the slide. The sight is moveable by pressing it back and forth in its slot. You cannot move it by traditional methods, however. Usually, if you need to move a rear sight (or a new front sight dovetail design) you use a brass or plastic drift and a hammer. Tap the drift against the sight and thus move it. Won't work on a Glock sight. Whack it, and it spreads under the impact, wedging tighter in the slot. If you want to move a Glock sight, you must use



The Glock front sight, with the split post and wedge.

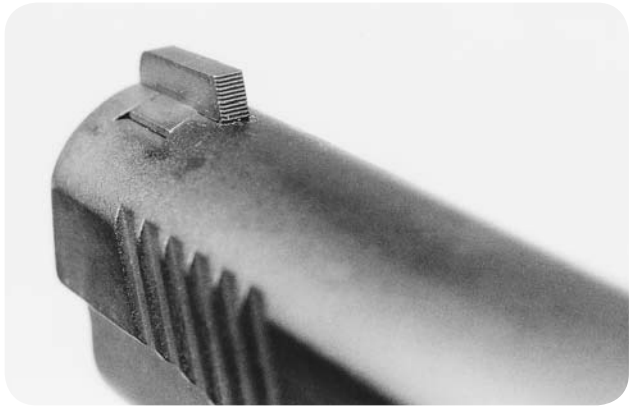
The Glock front sight installed.

either a Glock sight pusher or the MGW sight pusher. Both use a large screw press to move the sight.

If you need a higher or lower rear sight (to change the bullet impact vertically) you need to swap your current Glock rear for a different Glock rear.

Look on the side of the sight. You'll see a bar or set of bars. The standard 9mm and .40 sight will have a single bar on it: "—" is what it looks like. The standard 10mm and .45 sight will have that bar with a shorter one above it. A still taller one will have the regular bar and two shorter ones above it. If you want to raise bullet impact, go with a sight that has more bars (provided they are shorter bars above the long bar).

For a G-17, each change in sight creates a 2" difference in the point of impact at 25 yards. If you find your bullets are hitting too high, then the sight with a short bar under the long bar lowers point of impact by two inches. The click adjustable sight spans the gap from the shortest to the tallest of the fixed sights. The new click adjustable sight from Glock is far superior to the old adjustable sight that was made solely to comply with the silly US importation regulations. It actually works as a sight, and it isn't so fragile you can break it just getting the Glock out of your gun bag and into your holster. (I've seen the old ones get snapped off, just getting hooked on a belt.)



The trend in 1911s is to use a dovetail front sight for ease of changing and durability.

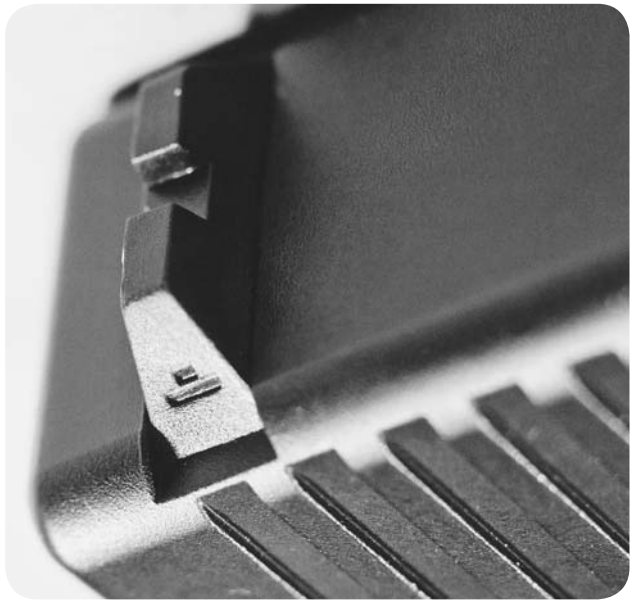
A longer pistol, such as the G-34 or G-35, will have less change in the point of impact with each change of sight, due to the longer distance between the front and rear sights.

Some people don't favor a plastic sight, and I can't say that I blame them. Not just the wear of plastic but also the banging around a handgun gets in service use. For taking a beating, nothing works like steel. And if you're going to go to steel, you might as well get some night-capable sights too. The Heinie Straight Eight is one example.

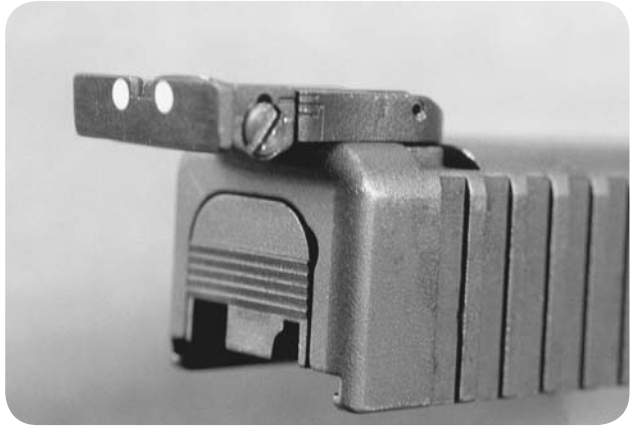
The problem with standard three-dot sights in the dark is that when you're faced with three dots, how do you know that what you're seeing isn't the front sight outside of the rear sight, instead of nestled between the rear dots? You don't. The Straight Eight is simple. There is a tritium capsule inside the front sight blade and another one underneath the rear sight slot. To aim, you place one dot on top of the other. If you dip the front sight too much, you lose the dot and see only one. Ditto if you point to one side enough for the rear blade to hide the front sight. If you raise the muzzle too much, you can see the gap between the dots.

The rear sight in its dovetail.

The rear sight in its dovetail.



The rear sight markings. A short bar over the long bar means one step taller.



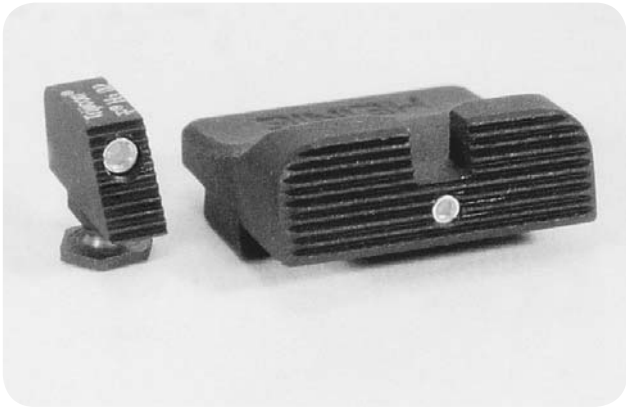
Some adjustable sights offer adjustments at a risk. In a match, this sight risks getting snagged on the draw.

Scott Warren also offers steel sights, and Dave Sevigny uses them to great effect. While we can't lay all of Dave's competition success to the sights he uses, he would not select them over others if he did not feel they offered him an advantage. That's the secret to all success: you select the gear that gives you the greatest advantage, and the practice, practice, practice.

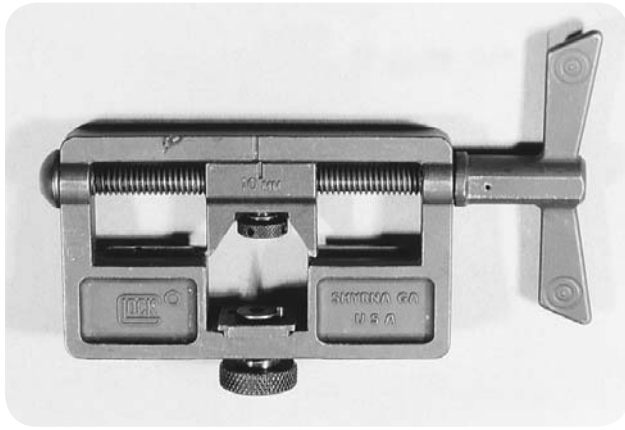
Installation is easy. To take the Glock front out, use a dental pick or sharp and narrow awl to pry the wedge out of the sight post. Glock says to toss and use a new one, but I've had 100 percent success re-using the old ones. What can I say? I'm cheap. Press the Glock sight out.

A steel front sight blade for a Glock is unlike any other sight out there. Obviously, what with the mass of a steel front sight, we can't go with the wedge-and-slot method used on the polymer sights. We can't machine a Glock slide, so the cross dovetail method is out, too. Press the Heinie or other steel sight through the slide.

You'll notice the post is drilled and the hole threaded. The bottom of all steel sights for the Glock are machined to be a tight fit in the oval milled through the slide. The sight is secured in place by means of a hex-headed bolt. To attach the sight properly you need the correct thin-sided wrench to tighten the bolt, or a delicate touch and narrow needlenose pliers.



The Heinie Straight Eight sights.



The Glock sight adjustment tool.

Once you have the Glock sight out, check the fit of the steel sight. If it binds in the oval, use a small safe-edge (no teeth on the side) file to clean up the oval boss of the sight until it fits snugly. Don't remove too much or your sight will be loose.

Once the sight fits correctly, try the fit of the hex bolt. When you screw the bolt in (don't tighten it yet) does the sight fit tightly in the slide? In the rare event that it is loose, you'll have to shorten the bolt a small amount, enough to let the bolt pull the sight tight to the slide.

For the rear, you must use the Glock or MGW sight pusher or destroy the old sight removing it. Check the fit of the Heinie or Warren rear sight pyramid to the Glock dovetail, and if needed file with a safe edged three sided file to adjust. (You aren't going to get the file to bite on the Glock slide, so you have to file the sight.) Once the sight starts, use the sight pusher to move the sight to the center of the slide. Range test to see if you need to make any minor corrections.

Now, all you have to do is pay attention to the sights when you shoot, and you won't miss. ♦

The Heinie rear sight fits right into the dovetail with a little judicious filing.

The MGW sight tool.

More Custom Glocks and Competitors

The old adage "imitation is the sincerest form of flattery" gives a nod to the profit imperative. If you see your competition beating you, taking your market share, you can either come in with something that leapfrogs their product or sit back and watch your customer base erode.

It took a while, but Glock found themselves faced with competition. The first was the S&W Sigma. Later came the Springfield XD, the S&W M&P, and now the Ruger SR9.

While a G-21 is bigger than a G-22, the Bar-Sto longslide is longer yet.

Of course it has a Bar-Sto barrel in it, and it's tightly fitted and not binding.

On the back, an adjustable LPA rear sight.

Despite the extra length, the slide uses a standard Glock recoil spring assembly.

The Bar-Sto match barrel is a full six inches long.

Compared to a G-22, you can see how the scaled-up G-21 slide is larger.

The cartridge pickup rail. On the Glocks in .45, the rail should look like this, with an angle in it. If yours doesn't, have Glock upgrade it.

Glock recoil spring assemblies are marked. The 5600 on the right is for a G-21. The 5579 on the left is for a G-22.

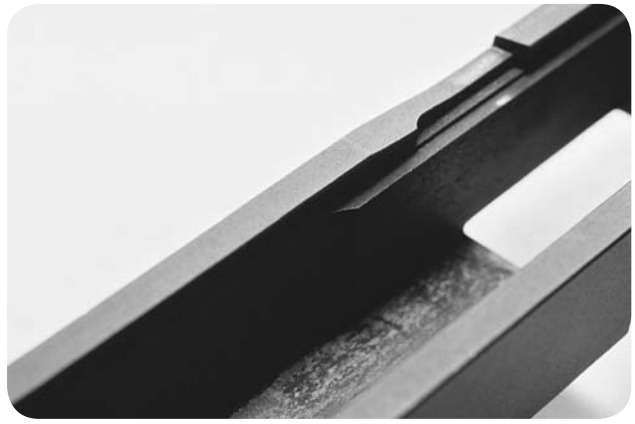
The Bar-Sto gun fed everything from my reloads to my stash of Black Talon (*left*), Super Vel (*center*) and WinClean (*right*).

Bar-Sto makes barrels for all the Glocks, in all the calibers, and they're all fully supported and tightly chambered.

The longslide is a big gun, and you need a big hand for it. I wear a #10 government glove, and as you can see I have to stretch to grab it.

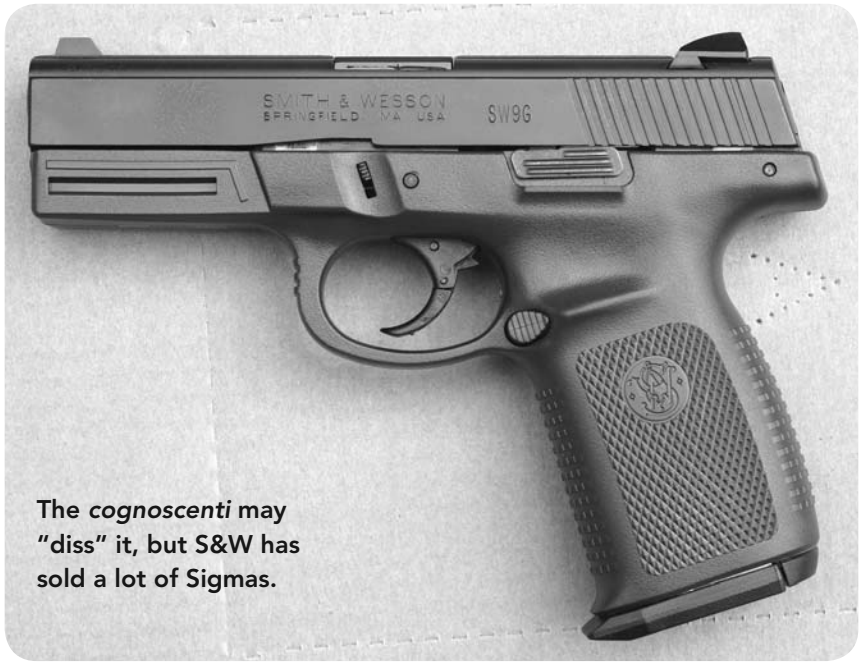
The front sight is a bit tall, but combineed with the adjustable rear it makes aiming easy.

If you use a CMPi aluminum mag extension you'll add a couple of rounds to the .45.



The Caspian slide is machined for lighter weight, just as the factory .45 slides are.

As a total custom gun, the CCF Raceframe is not just a Glock, but a Glock in metal. And you can have your own Glock worked over by master gunsmiths, as the Glock is now seen as more than just an industrial tool, but a work and life necessity that is worthy of their attention.



The *cognoscenti* may "diss" it, but S&W has sold a lot of Sigmas.

Sigma

The S&W Sigma appeared in the mid 1990s, and if you took the slide off you would be led to believe that you could interchange parts between the Sigma and a G-17 or G-22. Not

The Springfield XD is another contender for the crown of "King of Polymer" but it has yet to threaten Glock's dominance.

quite, but close – so close that Glock took S&W to court, but they finally settled.

Unloved, the Sigma has a singular reputation at the S&W factory: it has, by far, the lowest return rate of any product they have ever made. Were it possible to obtain the information, I'd be curious to see if the S&W Sigma return rate mirrors that of the Glock return rate. As the information is proprietary, and closely-held, I suspect we'll never know. Offered in 9mm and 40, the Sigma is a low-cost line of S&W, and they have not only sold truckloads of them here, but have sold many on contract to overseas police and military organizations.

The S&W M&P offers options Glock does not and may well make inroads in Glock's market share. But they have a long way to go.

XD

Made in Croatia, and imported by Springfield (with some design improvements Springfield insisted on) the XD is a hot competitor of the Glock in practical shooting circles. One aspect of the XD that makes it less comfortable as a carry gun is the rail location. The slide of the XD has a pair of support/cover rails that run its length, and make it feel not quite so flat as the Glock. However, it too has an enviable reputation for reliable function, and offers something that the Glock does not: a grip safety. The XD seems to be a mainly USA-market pistol, as I have not read of any large military or police contracts overseas.

S&W M&P

Coming out 20 years after the first Glocks, the M&P offers a few things that Glock does not and cannot without a radical change. First, you need not dry-fire the M&P to disassemble it. Also, you can change the size and shape of the grip by swapping out one of the backstraps for another. From small to medium to large, you can change your M&P grip size. Also, the M&P uses through-hardened slide, barrel and cam block, so you need not worry over

much about a catastrophic failure (i.e., breaking your frame). Last, the design of the frame includes an internal skeleton that the trigger and cam block are pinned to on assembly, so the trigger pull has less of the "spongy" feel that the more flexible Glock frame delivers.

Ruger SR9

Ruger has not been known for sleek, good-looking pistols, at least not until now. The SR9 offers a two-sided backstrap (no inserts to lose), a magazine disconnector and a thumb safety, all in a striker-fired pistol. And, as with the M&P, you need not dry-fire it to disassemble it. For now it is available in one size and caliber: full-size, 9mm, but it offers 17 rounds in each magazine. Considering the market segment, and the price point, they'll be flying off the shelves and Glock will have to work harder. But then competition is good for us, the customer.

CCF Raceframes

Ever find yourselves thinking "My Glock is great, but I'd rather have metal than plastic." Well, daydream no more. CCF Raceframes makes a Glock clone frame of steel or aluminum. The original plans also included a titanium frame, but the cost of titanium on the world metals market has gotten absurdly high. So much so that it is economically unwise to even try and offer Ti frames (regardless of the design or company) simply because you have no way of knowing what you'll have to charge for the frames you make. The CCF Glock frame is available in the standard G-17/G-22 size, in stainless steel or aluminum. It also has an exchangeable backstrap so you can alter the contour from Glock to 1911 grip angle.

An aluminum frame is about four ounces heavier than a standard Glock, while the stainless steel is a portly 17 ounces heavier. However, if you want a competition

Ruger's SR9 offers perhaps the biggest challenge to Glock. The Ruger has features Glocks don't, including a thumb safety, and will hit the stores at a lower retail price.

gun and not a carry gun, the steel frame makes the 9mm cartridge feel like a .22LR in a standard Glock frame.

Ray Harms, the guy behind the CCF frames, is a long-time custom gunsmith, and he put extra touches into the CCF frames. The area behind the trigger guard is "lifted" a common and expensive custom touch on 1911 competition pistols. The trigger guard is rounded, the mag well opened, the mag button area scalloped, and there is a picatinny rail out front for your lights, lasers, etc.

Don't bother showing up at a GSSF match with a CCF frame, as it is not Glock. But all your Glock parts will fit onto the CCF frame. If you are a Glock-certified armorer, it is an easy thing to simply order up enough parts to finish assembly. However, if you want more, you can get a custom slide from Caspian. You can have any caliber (within the limits of the G-17/G-22 frame) cocking serration options, sight cuts, etc. A match barrel from someone else will complete the ensemble, and only a small number of parts in it will have come from Glock itself. I can even see guys at a gun club competing with Glock clones, not only on the range, but also in assembly, seeing who has the fewest actual Glock parts in their pistols.

One of the really cool parts of being a gun writer is the opportunity to test a custom gun. Or a bunch. The custom Glock I had a chance to test is the personal gun of Irv Stone III of Bar-Sto. As you can imagine, it has some really cool features, but surprisingly it has some box-stock ones, too. Why? Because some things on the Glock don't need changing, even from the point of view of the picky American competition shooter.

First, it is a long-slide. The slide is nine inches long, machined from bar stock by Caspian Arms. The

Available in stainless steel or aluminum, the CCF frame makes an attractive option for those who simply must have a metal Glock.

slide has vertical cocking serrations on the rear, with forward serrations that are tilted, in the style of so many 1911 slides. It takes all the standard parts of a Glock G-21 slide, except for the barrel. Thus, you can fit the regular extractor, recoil spring and the rest from a G-21. The barrel is a Bar-Sto, of course, and measures six inches. It is what Glock would have made, had they made a G-21L.

The rear sight is an LPA adjustable, basically a Bo-Mar clone. It has been slightly machined into the slide, thus the front sight is taller than normal, coming in at .315" tall. Irv has a lightened firing pin and a 3.5-lb. connector installed, so the trigger pull is a crisp (for a Glock) and light pull.

The curious thing is, it is a third generation frame with light rail. It has the upgraded trigger parts, but the trigger bar is coated with a dull black finish. If I had not known what the correct shape of the firing pin safety cam was, I'd have thought old parts got into a upgraded Glock.

The Bar-Sto barrel fits the slide just as you would expect, tightly but without binding. And for those who love the "push test" (pressing the chamber down when the action is locked, to see if there is any flex) the barrel sits rock solid when the slide is forward. The chamber is tight enough to prevent excess brass expansion on firing, but loose enough to work a hundred percent.

Bar-Sto is in the high desert of California, and every place Irv has to shoot is dusty, so he is keenly aware of proper chamber dimensions for reliable function. And, a lot of his customers are Marines from the 29 Palms Marine base in town, so he would get feedback if he were getting it wrong. The bore is cut-rifled, and handles lead bullets without a care.

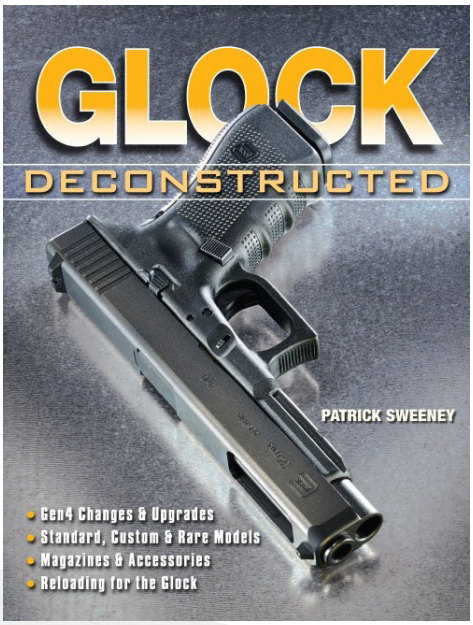
The frame is standard, without any modifications in size, shape or surface texture. Why? Irv has hands large enough to not need a frame reduction. And, he still has the standard parts, so he can return this G-21 to is original configuration in less than a minute.

What can you use something like this for? Hunting would be one application. The longer barrel would give a bit more velocity, and with a heavier recoil spring installed you could use .45 ACP+P ammo or even .45 Super ammo and go slay your buck. Or better yet, go running through the woods of Tennessee chasing big wild pigs. In competition, it would make a soft-shooting Limited Ten gun for USPSA/IPSC, and if you had a supply of hi-cap mags you could shoot it in Limited. I'm afraid it wouldn't pass in IDPA or GSSF matches, but loaded down in power it would be a really trick falling plate gun.

And how does it shoot? As you'd expect. It is soft in recoil, and as far as accuracy is concerned you can hardly fault it. Our club has a set of gongs on the hundred yard range, and it was no problem to ring them with every hit shooting offhand. In all, I put several hundred rounds through Irv's Glock, and it never failed once.

Sending it back was a sad day, but if I really feel the need, I know where to get one made. Caspian makes the slide, Irv makes the barrels, all the internals are standard factory parts. If you find the barrel doesn't quite fit, Irv can fit it for a small charge. And if it does, then anyone who can take their Glock apart for cleaning can assemble an upper just like this. Or like this and in 10mm, which would be a real hunting powerhouse.

What if the 10mm/.45 framed Glock is just too big? You can duplicate this gun in 9mm, .357 or .40. It's just that Glock has already done it for 9mm and .40, so you wouldn't need to go the full custom parts route. That is, provided you can lay hands on a Glock longslide and barrel. They don't grow on trees. ♦



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