

## Mag tuning the easy way - for STI (in 9mm)

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My personal theory on STI magazine strategy is this: STI has acknowledged that no two IPSC shooters have the same preferences on mag details, hence STI produces a good mag-body, and fills it with the cheapest follower, spring and bottom available on earth.

My brand new and very expensive STI pistol had serious "premature slide lock" problems from day one. I suspect this was not a coincidence, as my second brand new and very expensive STI pistol had the same serious "premature slide lock" problems from day one.

So what's my preference?

I'll get back to that later...

### Making STI mags work

The original STI follower is rather bad, loose it, don't lose any sleep over it.

I bought some Grams follower/spring kits from Shooters Connection, USA. They're good! For a 9mm pistol you still need to use the plastic spacer at the back of the magbody, but the follower is not as deep as the STI follower, so my capacity increased from 17 rounds to 18 rounds, and reliability improved significantly too. No more premature slide locks.

That was easy, put in a Grams Spring/follower, and get 18 rounds reloadable with excellent reliability!

I experimented with cutting coils off the Grams spring in an attempt to get 19 rounds, but reliability suffered and I never really got 19 rounds.

Photo 1 shows the STI magbody and Grams kit on the right. On the left you see my "other alternative", an STI magbody with an STI spring and an SPS follower, which works just as well, but is a bit cheaper.

Buying stuff from the states is quite expensive for a danish guy like me, keeping my business inside of the European Union has some economic advantages (leaves more money for beer).

I'm not sure the STI spring is crap, but the follower sure is! The spanish company SPS has a very user-friendly net-shop, delivery is fast and easy, and prices are low. So, I bought a standard SPS spring/follower kit to see if that was a better solution, and ... well ... I think it is. The standard SPS follower fits the STI spring (same locking system), and with minor (easy) tuning you get 18 rounds reloadable and good reliability.

It's tempting to go for the SPS High Capacity follower/spring, but this follower does NOT fit the STI spring! And the SPS high capacity follower/spring kit doesn't work reliably in an STI magbody, so this is not an option either! The SPS standard follower needs minor detailing to function properly in the STI magbody. The SPS follower is slightly wider than the Grams follower and STI follower at the front, and this screws up reliability as the follower nose-dives near the top of the magbody. This is cured by filing the sides at the front of the follower (as can be seen on photo 2) - making the follower slimmer - until the front of the follower stops sticking at the top of the magbody.

Now that you're at it, file the height of the follower down to the same level as the "taps" for the spring, this is necessary to get 18 rounds mag capacity. Don't file the "skirts" of the follower shorter than the taps, as this again will affect reliability.

What's good about this setup? It's cheap, provided you already own the STI magbodies. And you don't need the 9mm spacer. It's reliable. What's bad? Nothing, really. Unless you want more than 18 rounds, that is. Reloadable / non-reloadable

A "reloadable" magazine is a mag you can use for reloading your gun during an IPSC course of fire. It may need a firm push to seat properly in the gun, but it doesn't take brute force to make it stay in the gun.

A "non-reloadable" magazine is a mag you can't reliably use for reloading your gun during an IPSC course of fire. It has been tuned for mag capacity and needs to be slammed so hard into the gun, that it is no longer to be trusted for reloading during competition. You can use it for a starter-mag, because when your under RO command (Load and make ready), you have all the time in the world for slamming your "fat" mag into place and checking that it's seated properly.

I don't use "starters". All my mags are reloadable. I don't want the risk of accidentally swapping mags, and finding myself trying to reload during a course of fire, with a "starter" mag. More than 18 Rounds

Is 18 rounds enough? No, of course not. You compete against guys and girls with 20 rounds, and while 18 rounds will not seriously handicap you anywhere, 20 rounds WILL enable you to get through the occasional course without having to reload. Why is this good? Because a reload may not take much time, but it will take up some of your focus, and it will introduce a "source of error" - a potential malfunction of fuckup. Why invite it, when you can avoid it?

I tried out different mag bottoms (extension pads, expanded bottoms), but they all had downsides, and they all added to the cost. There's a cheap and efficient solution to this problem: SPS High Capacity Mags.

If you already own STI magbodies, improvement of these can be the way to go. If you're looking for an all new magazine, STI is far too expensive compared to SPS. From the SPS net-shop I picked up four High Capacity magazines for the sum of 1500kr - that's 375kr pr magazine! These mags take 20 rounds with no modification at all. And they're legal for Standard Division in IPSC in an STI 2011. Buying an STI mag and modifying it for 20 rounds will cost me 3 times that price.

However, 2 small and easy modifications are necessary to make the mags function reliably in an STI. It's necessary to trim the width of the magbottom and the length of the magazine retention slot as described below.

In order for the mag to seat properly in the gun, it's necessary to file the slot for the magazine retention (mag release axle) a little longer.

Photo 3 shows an STI mag retention slot (left/low) and the SPS retention slot after I filed it long enough for the mag to lock properly into position in the gun (right/top). The STI and SPS magbodies have different profiles, so the only reliable way to find out how much extension of the SPS slot is necessary, is by taking the top end off the gun (remove slide/barrel), dismantle the magazine (remove bottom, spring and follower). Push the magbody into the gun slowly, and watch (by looking down from the top of the frame) how the mag retention seats. The mag release axle has to easily click all the way into the mag catch slot of the magbody. Keep filing the slot longer until the magbody seats easily - you are now really, really close to having a very reliable 20 round magazine.

For the next step you need to file the sides of the magbottom. The thing is, the SPS magwell is a slightly different shape than the STI magwell. If you're using an STI without the large magwell this will not be a problem, but using a standard STI Edge the mags are unlikely to seat properly unless you take action.

Photo 4 is a standard STI magbottom (black) next to a High Capacity SPS magbottom (blue). The SPS bottom is actually not quite sufficiently recessed to fit into the STI magwell, so you need to file the top of the sides of the magbottom slightly, in order for the mag to seat high enough in the pistol. It's fairly easy to check when you have removed enough material, just assemble the magazine and push it lightly into the gun. Look at the sides of the magbottom - is it touching the sides of the magwell? Remove material until the mag locks easily into the gun - you may check this by looking at the mag release, does it seat properly in the magbody? It should easily click into place for the magazine to function reliably during a course of fire.

After using SPS mags for a couple of years I have discovered that some of my High Capacity mags have transformed themselves into 21-round mags! I suppose this added bonus comes with wear and tear, but even the 21 rounders are still reliable and reloadable, so I'll just accept this discovery as one of life's little unexpected surprises :-)

If anything is unclear or if my english isn't up to par, feel free to drop me a line at: Claus at Uckfup dot Dk