

# A Site For Sore Eyes

*There's plenty of confusion out there about shooting glasses and what they can do for the budding pistol shooter. Do you really need to spend big bucks to get the most elaborate and space age specialist frames with every clip-on attachment conceived by man? Let's look at some of the particular problems suffered by shooters and see if we can work out what, if anything, can help keep a crystal clear sight picture all match long.*

## The Far Sighted

Despite the widespread belief that a good shooter has to have a keen eye (or at least good distance vision), this can be something of a handicap.

Typically the first twenty or even thirty shots are not too bad. It will depend on the age of the shooter; younger eyes are able to focus on the sights a little easier so will last a little longer than this. But the inevitable will happen, the sights take on a distinctly hairy aspect and the groups will open up.

## Magoos

People like myself who are naturally near sighted obviously will have corrective lenses (spectacles or contacts) and if these are worn while shooting we experience the same problems as our hawk-eyed friends. Obviously this is because our corrective lenses are made to optimize our sight to make us as far sighted as possible.

Depending on our level of near sightedness, trying to shoot without our glasses is possibly even more difficult. Personally I have a natural focal range of maybe twelve inches in my shooting eye, but I'm sure there are people out there who are only slightly near sighted who could do very well with no correction.

## Other Sufferers

Some people are particularly light sensitive, and a well lit target against a dark background, or even shooting outdoors on a bright day, can draw the eye away from the sights.

We don't all perceive colors the same either. This can mean contrast is markedly different for some shooters.

Cross dominance can also be a problem. This is where a right handed shooter's left eye is stronger than his right, and it naturally wants to take control. The biggest problem is not physical, there are two equally successful solutions. Unfortunately it's one of shooting's biggest old wives' tales that you can never succeed if you're cross dominant and you have to swap hands to shoot with your strong arm and strong eye. It's a cross that a lot of us have had to bear. I wasn't willing to admit to several of my coaches over the years that I'm cross dominant for fear of the drastic solutions that would be suggested for a non-existent problem. You'd get fewer negative responses from admitting to being a cross dresser!

And the two options for the cross dominant shooter? One is to simply cover the strong eye and make the most of your "weak" eye with a corrective lens. Since shooting does not rely on better distance vision this is the best option in my opinion. The other option is to shoot with the strong eye, that is a right handed shooter would use the left eye. Some modification of stance is needed to make this work, normally the shooter stands a lot squarer to the target. Olympic gold medalist Roberto di Donna and bronze medalist Annemarie Forder both shoot this way with no apparent handicap.

## What Can Corrective Lenses Offer?

With a plus correction a far sighted shooter can reduce his natural focal range to a point that is far closer to his sights than the target. This will mean he can focus on the front sight with minimal effort to the eye. The trick is to discover what power this should be. If too strong, the sights will be clear but the target will wash out completely. If not strong enough the eye will still be doing too much work and fatigue will set in.

This is how it works. A +1.0 diopter correction will make the focal range 1 meter away from the eye (assuming the shooter has good distance vision). This is too strong. I can tell you this with perfect confidence because one of my early shooting lenses was made with my normal prescription plus 1.0 diopter after I took my pistol in during my eye exam and we used the combination that gave me the best sight picture. Unfortunately we never took into consideration what would happen to the target. Area aiming is one thing. Guessing which whitish smudge might be your target and hoping you might be able to get a lucky hit on the paper is another. I truly know what shooting blind is like.

The next step down is +.75 diopter. This is still too strong for many people, but can work well in conjunction with an adjustable iris (we'll discuss this little animal later). It can also work quite well when the target is not too distant, such as in 10m Air Pistol.

Most popular is the +.50 diopter. It's the mid range lens that seems to give enough help to stay focused on the sights without making the shooter too insecure about losing too much target definition.

The least correction available is +.25 diopter. I think this works best with younger eyes. Some work is needed to stay focused on the sights. Your eye doctor will tell you that after you hit 40 or 45 the focusing apparatus in your eye loses its elasticity and will refuse to give you the clear sight picture that used to come so easily. Of course he might use proper medical terms, and that's why he earns far more money than I ever will...

### **What Do Shooting Glasses Offer?**

It's quite important to position any corrective lens as square on to the eye as possible. It will depend on your shooting position as to whether purpose-built shooting frames are necessary. If a conventional spectacle frame allows you to be looking through the center of the lens at the correct angle you could use this to set whatever lens works best for you. Most optometrists can frost the lens in front of the non-shooting eye, and this makes a great low-cost option, especially for people who have old glasses frames lying around.

A lot of shooting stances are not so friendly to such an easy option however. Frames such as Varga, Knobloch and Champion allow a great deal of adjustability in height, angle and rotation to position the lens correctly. They can also make it possible to quickly and easily change lenses if need be. Why should you want to do that after everything you've been through so far to find the optimum lens? I never said this would be easy...

Unfortunately ranges just don't have the same conditions. Lighting on the shooter, target and everything in between can change the whole shooting match – literally. Some shooters can comfortably use a +.75 diopter lens for an event with a target that's not so distant, such as 10m Air Pistol. For 50m Free Pistol he may change to a +.50 diopter. The brightness of the target face might draw the eye away from the sights, so under these unusual conditions a shooter may find himself using a stronger lens than usual. Changes in shooting conditions then bring into play other options...

### **Colored Lenses and Filters**

This is the toughest of any part of shooting optics to predict. Every one of us is color blind to some extent. That is to say, we all perceive colors in slightly different ways. A color filter that works well for one shooter in accentuating contrast might make no difference, or even worsen the sight picture, for another shooter. I use a red lens on outdoor ranges because it darkens my sights and makes everything else a pinkish hue, which cuts down on any color distractions (and heaven knows I don't need to be encouraged to be distracted). Other shooters find that vermilion or gold works best for them. Yellow can enhance the available light when it's gloomy, and a dark lens can help cut down on glare on extra bright days.

### **The Adjustable Iris**

The iris certainly has its uses but can create some bad habits.

By adjusting the size of the aperture it's possible to fine tune your sight picture if lens power or color filters haven't done the trick.

On the down side, if you close the aperture to the stage where everything is in focus, sights and target, there is a very human and irresistible compulsion to look at the target. Keep your attention on the sights and you'll call shots like you'd never have believed possible. But as soon as that group size starts to spread you just KNOW your mental focus has gone "out there". Fight it if you can, it's a losing battle. Been there, done that. These days I still use an iris but it's wound wide open and I use it mostly to keep my head in a constant position (by looking through the center of the aperture).

### **A Few Final Thoughts**

Color choice of the occluder (cover for the non-shooting eye) is fairly important. It's a good idea to have a similar amount of light coming to both eyes, and for this reason a black cover might be a mistake. Mileage does vary from shooter to shooter, it's just something to keep in mind.

Side blinders are another one of those good/bad attachments. On the good side they block visible movement in your peripheral vision that might cause a distraction. On the down side they might cause you to sway. Peripheral vision is necessary to maintain

your balance, and some people find they become unstable when they don the horse blinkers.