

USSR LENS BUYER'S GUIDE



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1. INTRODUCTION

The goal of this guide is to help all photographers and cinematographers in their quest for vintage USSR - or Russian, or Former Soviet Union (FSU) - lenses. Our journey starts with “why are these lenses so popular in today’s super-high resolution sensors and ultra high definition videos?”. We will look at what are the reasons for when asking “which vintage lens should I buy?” at least one of the answers is “Helios 44!” and probably other Soviet lenses pop up among the suggestions.



The famous Helios 44. You will have at least one of these.

My selection of lenses for this guide is based on the most adaptable mounts (M39/M42) so you can fit them to any cameras, DSLR or mirrorless, from small sensors all the way up to full frame.



Helios 44-2 adapted to Sony full frame camera.

Then we move to some of USSR’s lenses’ technical aspects and what are some of their distinctive features. The fact they intercut so well among each other makes it easy to put a set together. I will teach you how to quickly identify focal length, aperture, brand, model, version and mount just from reading a lens name. The next subject is the controversial red **II** and a little bit about the early versions of USSR lenses - including a quick note on how to identify some more desirable models based on serial numbers.



The controversial red M.

The **\$200 Starter Set** chapter shows you how cheap it can be to assemble a standard set with three focal lengths. If you are in a rush to grab some glass and get filming before reading the whole guide, this is where you should start.



A collection of early silver models, by [Vintage Lenses for Video](#).

After this general information on how the Soviets worked their optics, we get to an extensive list of the most popular and respected twenty lenses from their ranks. These are lenses you can get on eBay right now for cheap. I am talking tech specs,

rumors, different versions, coatings... You will find valuable information to help you make a choice when buying USSR glass, be your mission a one-time thing or a full-blown project of building the very best set anyone can think of (you will have to fight with me for that title).

After the lens list, you will find a chapter on rare and exotic lenses that are nearly impossible to find so you can stay up for months trying to collect them. Then we move onto a series of short chapters with useful bits and pieces of information such as recommended and knowledgeable sellers; disassembly guides and modification instructions; or where to go to service USSR optics. At the very end I briefly explore Zenit's new-ish fast primes which promised a revival of Soviet's classics. Yet, did they deliver it?



Zenit's new-ish super fast 50mm f/0.95.

Besides all the hard knowledge, this guide aims to provide you with some entertainment. During my research I came across unbelievable myths about these optics and how they were treated in the USSR. So, if something sounds absurd, there is a chance it is just an internet rumor! Take those bits with a grain of salt!

Shall we start our journey, comrade?

2. REASONS AND RULES

When I first started in photography, it was all about getting the best lenses. Faster apertures, lightning-fast autofocus, zoom lenses to cover all focal lengths, constant aperture, the whole nine yards... In fact, the less artifacts the better: less flares, less distortion, better light transmission, sharper results. **L** was the way to go. It filled all my dreams and for a while I had quite the collection.



Canon EF 24-70mm f/2.8L, 135mm f/2L, 85mm f/1.2L, 35mm f/1.4L. I had these four and many, many more.

I started to change my mind when I got into film school in 2010. Autofocus was rendered useless as I learned there was a person whose job is to getting images in focus (1st AC).



Left: First year of film school. "What is camera?". Right: Third year of film school. "Ooh!".

As projects became more elaborate, exposure adjustments during a shot were required and things get jumpy when aperture is controlled electronically. The camera snaps the lens aperture to the default values in a heartbeat and just as quickly ruins a smooth, fluid shot with a jarring exposure click. It is a two-step problem, first, the camera controls the aperture, and second, aperture follows the standard values (1.4, 2, 2.8, 4, 5.6, 8...) with sharp clicks even when the lens has an aperture ring.



Markings on a clicked aperture ring.

By the end of my film program I had fallen out of love with modern lenses - not that I was able to say this so clearly back then. No matter how much post-processing I threw at the footage, everything came out looking blandly similar. It looked just like anything else. It lacked personality.

My [graduation work was about anamorphic adapters](#) and one of the first things you read about anamorphics is that they favor lenses with simpler optical designs. It did not take long before I started to look into Soviet lenses and other vintage optics.



Helios 44-2 and Kowa for Bell & Howell Anamorphic Adapter.

For specific reasons (I admit: lens flares) I jumped head on into Soviet lenses instead of German or Japanese optics, putting together a set that would get the best out of my anamorphics. Since 2012 I have had countless Soviet lenses - I would risk saying over a hundred - and I currently own a set of primes that range from 20mm to 500mm. What still holds my interest about them is their almost endless variety when compared to other brands and the organic and imperfect look they deliver.



Lens whacking with a Helios 44 for extra organic bits. *The Emotional Octopus*, 2018.