

05) An Introduction into Choosing Optics (A)

BINOCULARS:

As soon as you start to take a serious interest in birds, you need a pair of binoculars (or 'bins', as you will inevitably hear them called).

Even if you are only watching in your garden, they will add a whole new dimension to your bird watching, revealing the finer points of plumage details that you probably had never noticed before, and allowing you to separate similar species with ease.

The good news is that, these days, it is possible to get good quality optics without breaking the bank, or getting a mortgage, provided you do a bit of homework first.

Your first step should be to try as many different models as you can – ask as many birding friends if you can try theirs, then go to a reputable dealer and ask to see the models that interest you.

At the most basic level, you are looking for the best combination of a number of important factors; ease and comfort of use, build quality and of course price. So you should consider all the following:

SIZE – You will notice that all models come with two numbers such as 10x42. The first figure (i.e. 10) is the magnification. The higher this is the greater the amount of magnification, while the second (i.e. 42) is the size of the objective or front lens. The larger this is the more light can get in, and the brighter the image will appear.

But, and this is a big but, that does not mean that you should rush out and purchase a pair of binoculars with the highest possible values for both (i.e. 15x50). These will provide a lot of magnification and a bright image, but they will also be very heavy and hard to hold 'still', as well as being difficult to carry around for a full day in the field. Additionally, the higher the magnification the narrower the 'field of view'. For these reasons the most popular sizes tend to be: 8x32, 10x32, 8x42, 10x42 and 8x36 are also becoming popular.

FIELD of VIEW – In simple terms, this is the width of the image you can see. Test different pairs by looking from the same spot at something that allows you to easily judge comparative distances (i.e. a fence posts). Remember to that a field of view might start to get blurry or 'milky' towards the edges on budget, lower price models, while on the best, most expensive binoculars sharpness is maintained right up to the edges of the image.

BRIGHTNESS – Optical advances these days means that most binoculars produce a good bright image in fairly normal and bright light, but the real test is how they perform on a grey, dull, murky day, or at dawn or dusk, when light conditions are reduced. Try to test binoculars under these poor conditions.

SHAPRNESS and CONTRAST – Some dealers may have a chart on which you can test this, but in essence we are talking about how well defined an image is. Look at the same object, from the same distance, with a number of different pairs of binoculars to get a good impression.

COLOUR – This is something of a personal preference. While some binoculars go for as natural an image colour as possible, others have a slightly ice-blue tint (this may appear as a sharper image) or a yellowy tint (producing a warmer image). Try looking at something pure white through the binoculars to get a good comparison and your preference.

DIOPTRE – This is a device that helps the binoculars to compensate for the differences between your two eyes. Some are calibrated, but what is really important is that they are easy to set and they remain in position while in extended use.



CHROMATIC ABERRATION – Also known as colour fringing, this is an effect that becomes particularly apparent when viewing something against bright light, appearing as a ‘halo’ of colour around the edges of the object. Most binoculars will display at least some, but on the best it should all but disappear once you get your eye position right. If there is so much that it is a distraction, then look at another pair of binoculars.

FOCUS – You need to consider how easy it is to find focus quickly and how fine an adjustment you can make. This is vital if a bird is moving around a lot. Personal preference again comes into play. Some birders like a focus wheel that travels relatively stiffly, to avoid accidentally moving it out of position. Try focusing with a pair of gloves on and check that this can be undertaken without difficulty for cold conditions and winter use.

EYEPIECES – many binoculars these days come with twist-up eyepieces that can be set in two or more positions. These allow you to adjust the binoculars to suit your eyes. For example, wearers of glasses will use them with eyepieces pushed right in, while other people will pull them out to create a certain distance between the eye and the lens. Remember you may be wearing sun glasses in bright sunshine during the summer. Make sure that the binoculars you are considering have settings that suit you for all possibilities.

ROOF or PORRO PRISM? – Most birding binoculars these days are roof prisms, which keep things as slim-line and lightweight as possible. Porro prisms (traditional style binoculars) are larger and heavier, but if you decide that you can put up with this, they actually offer a slightly brighter image than the equivalent size roof prisms.

DO I NEED / SHOULD I CONSIDER ‘ED’/‘HD’ GLASS? – Many binoculars these days come with the designation ‘ED’ (extra-low dispersal) or ‘HD’ (high definition) after the Size. Without going too deep into the technicalities, these two designations mean that they use specially treated glass that maximises the quality of the image, so ‘ED’/‘HD’ binoculars will provide more optical clarity than the equivalent non-‘ED’/‘HD’ model, especially in poor light conditions, but they will also be more expensive.

ACCESSORIES – Most binoculars do come with a case of some sort, a strap, a rain-guard for the eyepieces and possibly objective lens covers. None of these are likely to be a deal-breaker, but they are worth taking into account when buying. However, you can easily purchase a good wide, elasticised strap to fit any pair of binoculars to spread the load on your neck or a harness, which are becoming more popular and takes the load from your neck to your shoulders. These are excellent in hot climates and during the summer, especially if you are out for long periods/all day.

PRICE – These days you can purchase a very useable pair of binoculars for £100.00 or less, while even good ‘ED’/‘HD’ binoculars are available for approximately £350.00. Something in these price ranges might be your first acquisition, while you decide exactly how much bird watching you are going to do, where and when.

However, you can pay anything up to ca.£2,200.00 or even more for a pair of top of the range binoculars, but the pricier end of the market does come with some distinct advantages. For a start the best binoculars are nitrogen filled making them totally water-proof and will really come into their own in poor conditions and/or wet weather. They can still produce a bright image even in the murk and they can stand up better to rough handling. Secondly you will get the back-up for years to come from the manufacturer should you have a problem. If you do decide to splash out at this end they will retain a lot of their value and you will be confident in the knowledge that you will never need to do so again. Unless you wish to have the current up-to-date model each time one is unveiled?