The Acer SpatialLabs Eyes Camera – A Review

By Denis Pellerin on 21st Jun 2025

I have written quite a few books and articles about stereoscopic photography over the past four decades but this is the first time I have reviewed a 3-D camera or even felt the urge to do so. I am still using the words stereoscopic or 3-D as I don't really understand why these cameras and images are now called Spatial. Is it really cooler and trendier and meant to attract the younger generations ? Be that as it may I have had my eyes on the Acer SpatialLabs Eyes camera ever since my colleague Rebecca drew my attention to it, more than a year ago. I was impressed with the photos in the website gallery which, for a change, didn't show fighter jet planes flying over a battleship (the kind of photos one takes daily I presume, provided one has a Mission Impossible kind of budget) but snapshots of a family: the young mother among hydrangeas, the daughter holding flowers or balloons, the father playing with the dog, etc. The pictures and videos looked sharp and bright, the 3-D was pleasant and it made one feel tempted to try the camera for oneself. However, every time I checked on the Acer website I would always come across the same "Out of Stock" message, even though it was certain the camera had never actually been "In Stock". It is all very well to read that the camera won a design award in 2024 but even if it is probably well deserved it doesn't really help potential buyers get their hands on the desired product.

Less than three weeks ago, after going through the website again, only to find the same "Out of Stock" message, I had a look on eBay where, to my surprise I found two Acer cameras for sale, one overpriced in Taiwan, the other one in Spain. I contacted the Spanish seller who assured me the camera he was selling had never been used and, taking the plunge, I bought it at once.

After a wait of about two weeks the camera finally arrived, in the condition described. It comes in a cardboard box (140 x 130 x 80 mm) which, when open, immediately reveals the camera on top.

There is not much in the box: the SpatialLabs camera, a selfie mirror (which fits between the two lenses but was left untouched as I have no need of it), a USB-C cable (to charge the camera and transfer the images to a computer), a soft pouch (meant to protect the camera I guess but too flimsy for the purpose), and some paperwork (a warranty form and a thicker booklet containing no other information than a Declaration of Conformity in dozens of different languages and a page with three diagrams). Whilst there are no instructions for the camera in the box, they can be found online here.

Illustration 1. The box in which the camera comes.

Illustration 2. The box once opened.

Illustration 3. The contents of the box.

My first impression was mixed. The camera design is nice and the device itself is compact (103 x 67 x 37 mm), light (215 grams), and apparently waterproof, but there are no lens covers to protect the most precious parts of the camera, no wrist strap to make sure you won't drop it accidentally when not in use, and no hard case to store it out of harm's way and carry it around. I suggest these should be the first accessories to acquire. I did and I do not regret it. I first found on eBay two "rifle scope flip up lens covers" of the right diameter (30 mm). I thought it would be cool to keep the covers up at all times and to flip them open when I wanted to take photos. The only problem is that the covers are quite high and the lenses being wide angle the covers show in the picture. I consequently bought some smaller lens covers (for telescopes, microscopes and the like) which turned out to be a perfect fit. Since I am sure to lose at least one very quickly I ordered four at once to make sure not to be out of a spare one, at least for a while.

Illustration 4. The Spatiallabs Eyes camera.

Illustration 5. The Spatiallabs Eyes camera with a wrist strap and rifle scope flip up lens covers.

Illustration 6. The Spatiallabs Eyes camera with simpler plastic lens covers.

There is one more thing you need purchasing if you contemplate buying the Acer SpatialLabs Eyes camera: a micro SD card. You cannot take photos if you haven't got one inserted and it is, unfortunately, not provided. By pure chance I had bought one some weeks earlier for a digital microscope (another story I may tell one day), otherwise I would not have been able to test the camera at once, at least not completely. The bottom right diagram below shows you where to insert the card. Not the easiest thing to do as there is not much room for big fingers. When I eventually managed – with a little help – to insert it the correct way I got a message on the back display screen that the card could not be read and had to be formatted. Fair enough. The formatting only took a few seconds and I was then ready to start testing my new acquisition.

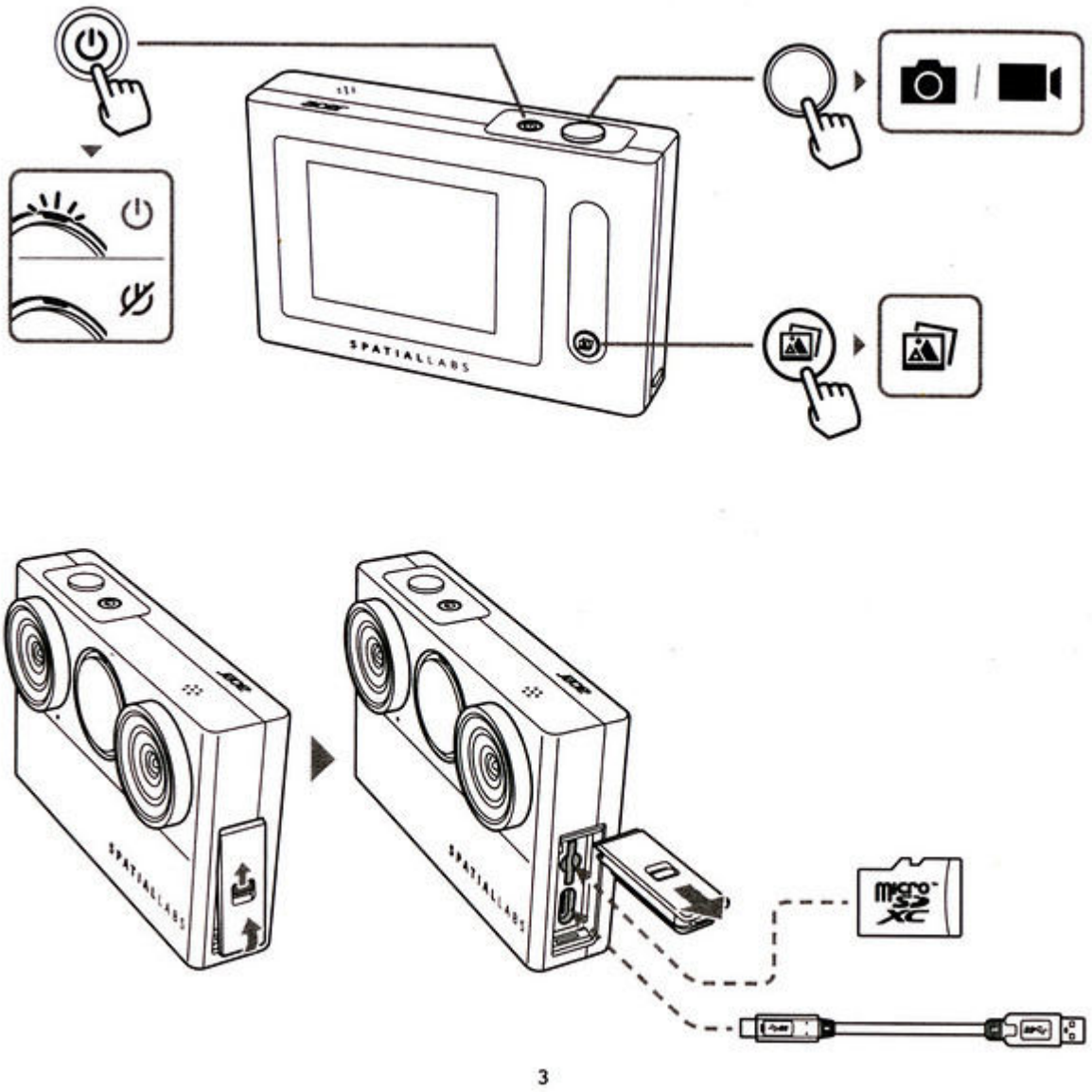
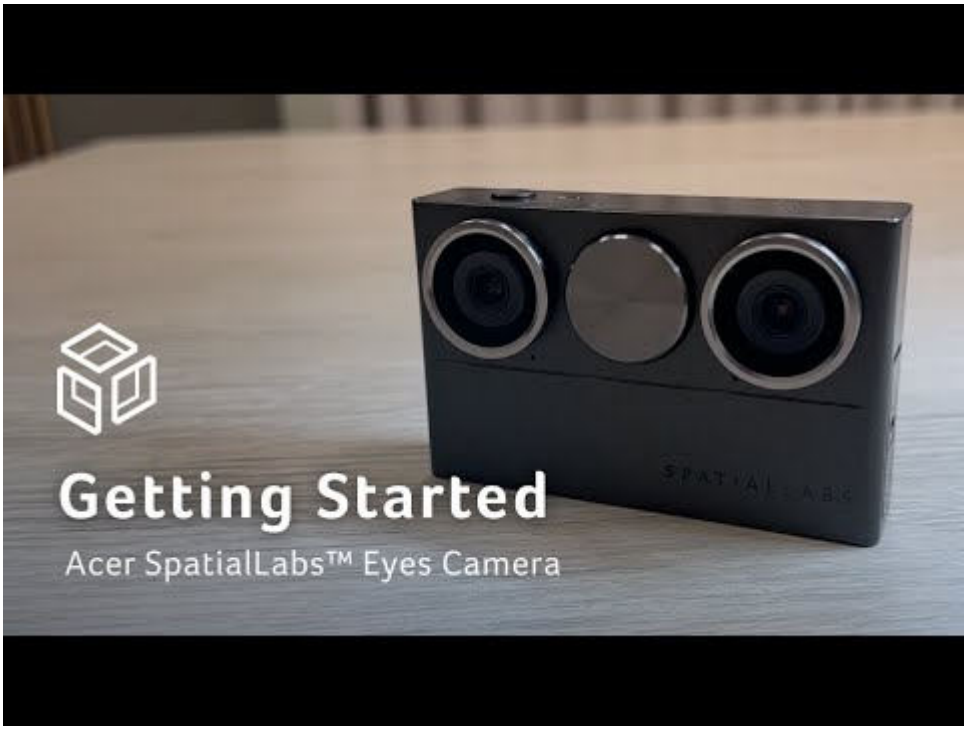


Illustration 7. The only “instructions” which come in the camera box.

Illustration 8. The door hiding the slots for the SD card and the USB-C cable. In the background you can see the back of the camera.

Going back a little, make sure the camera is at least partly charged before you turn it on. There is a small door on the left of the camera which, when open, shows the slot in which to insert the SD card and the socket for the USB-C cable (included). Here's an unboxing video from Acer which may help with getting started:



Pressing the power button at the top switches the device on. The first nice surprise it that, unlike the aforementioned QooCam EGO, which takes forever to come to life, the SpatialLabs Eyes is operational in seconds. The display itself is 70 x 48 mm but these dimensions are misleading as the proper image seen by the user is much smaller (50 mm wide x 30 mm high), just big enough to compose the picture before pressing the button. The latter is not as stiff as the one on the QooCam EGO, but it takes a little practice to press it without moving the camera downwards. I suggest using a hand grip that screws in at the bottom of the camera. It will make life much easier when you take photos or shoot videos.

Illustration 9. The camera with a hand grip ending with a wrist strap.

There is no other way to capture photos or videos than by pressing the top button. There is a touch screen option available but it is only used to focus on a particular part of the composition. When doing so, be careful not to swipe your finger either up, down, left or right as you will immediately leave the current shooting mode and either go to the gallery (if you swiped up or down) or to the alternative shooting mode (if you swiped left or right).

At the top of the image you can see, from left to right, the number of pictures still available (it obviously depends on the storage capacity of the card you have inserted and the resolution – 4K or 8K – you have chosen), the mode in which you are operating (Photo or Video) and the battery charge. To switch from Photo to Video mode, or vice versa, simply swipe the screen left to right or right to left.

Illustration 10. What you see on the display screen when you are about to take a photo.

As with the QooCam EGO or the XREAL Beam Pro, it is impossible to Zoom in or out with the SpatialLabs Eyes camera. If you want to get closer to the subject you have to take a few steps forward. It is the only way. The good thing with the SpatialLabs Eyes, however, is that when you switch it on it is automatically in 3-D mode. The lenses are 63 mm apart, which is roughly the average interpupillar distance of the human eyes, and you compose your picture through the right one. The separation between the lenses is about the same as that of the QooCam EGO (65 mm) but 13 mm more than the one used for the XREAL Beam Pro. The focal length of the lenses is 21 mm equivalent as opposed to 35 mm for the QooCam EGO and 18 mm for the XREAL Beam Pro.

By default the camera is in Auto mode but if you press Auto at the bottom of the display you get access to a few self-explanatory options, namely Auto, Sport, Night, Manual, Portrait, Landscape, some of which you may already have on your smartphones.

Illustration 11. The different shooting modes available.

Illustration 12. First result. A still life in Auto mode (the weather was terrible so indoor photography was the only option).

When in Auto mode you can access EV compensation and tell the camera you want more or less light to fall on the sensor than its automatic settings are indicating as the best value. It is a very useful option when some parts of the picture are over-exposed. Just slide the bar at the bottom of the display left or right and you will see the changes in real time.

The Sport mode is to be used for action shots (I guess the shutter speed increases to “freeze” fast movements). I wanted to try it at once by photographing a game of cricket which was supposed to be happening nearby but it was cancelled on account of the pouring rain. I consequently had to wait for another opportunity, which, fortunately, occurred a week later during the annual fete of the village in which I live. Now, when one takes “sport” or action pictures one expects to be able to freeze movement at the precise moment when one presses the shutter. Good luck with that ! There is always a delay between the time you do and the moment when the photo is actually taken. It is actually worse, from what I have experienced so far, in Sports mode than in Auto. I don’t know if this can be changed by software but if it can it needs to be fixed at once.

I was actually quite impressed with the Night mode. I tried taking a photograph inside a room with the curtains drawn. Light was coming only from the small gap between the bottom of the curtains and the carpet and I still managed to get a photograph, with the SpatialLabs Eyes camera on a tripod. The colours are very different from what they are with more light but the photograph is still pretty good, I think. Again, this needs more testing but sounds very promising, as long as you can make sure the camera doesn’t move (use a tripod, a table, anything).

Illustration 13. The same still life in Night mode.

I have tried taking portraits in Auto and Portrait Modes in rapid succession so as to keep the same lighting conditions but I must say I can’t see much difference between the resulting images. It seems that the picture gets darker in Portrait mode, especially around the edges. The focal length of 21 mm does not make the SpatialLabs Eyes ideal for portraits. It is better for medium shots than for close ups (you have to get very close to the person to get one of the latter and there might be distortions) and you will notice there are no close ups in the gallery on the Acer website, only medium and wide shots. You cannot really get too close to a subject either. on account of the lens separation. If you do you will see the message “Move farther away” appear on the back display. The minimum distance to the subject is about 50 cm.

Again, I could not notice much difference between the Auto and Landscape modes. I would say the

picture looks lighter in Landscape mode but I don't necessarily find it an improvement. However, I did my test on a very wet and grey day so maybe things might be better on a sunny one. I will try again as soon as possible.

Illustration 15. Two photographs taken in Landscape mode.

I have kept the Manual mode for last as it can prove the most useful but also the trickiest of all. When you press M for Manual you see an icon with cursors appear at the bottom of the display (to the right of the letter M). By pressing this cursor icon you access a new screen and are given a choice of three settings you can change: Shutter Time, White Balance (WB) and ISO. This sounds great but there is a major snag. Unlike with the EV setting you can't see how the changes you make will affect the final picture unless you actually take it. It is rather annoying as it means you have to keep taking pictures and playing with the settings until you are satisfied with the result. I know you can bin the photos you are not pleased with but it would have been much better if the changes could have been observed in real time. I guess with a little practice it becomes easier to juggle with all three settings and get to the effect you desire without wasting too much time but it is odd they could not find a way to remedy this issue.

As a conclusion to the use of these modes I would say it is usually easier and safer to keep the settings to Auto since it does a very good job – actually a better one than the more specialised modes – and you still have easy access to EV Compensation. I would say this is the part that needs the more improvements in the software or otherwise.

The photographic stereoscopic pairs are stored as JPEG files and the 3-D videos as mp4. You can see the photos on the back display of the device in three different ways: by pressing the button on the bottom right of the display, by touching the icon with the four tiny squares or by swiping the screen up or down while in shooting mode. Only the first option takes you straight to the Gallery. The other two open a new screen on which is an icon showing two square photos the top one showing a mountains. That's the icon of the Gallery (the same one that can be seen on the back button and, strangely enough the same icon as the Landscape mode). The side-by-side images displayed are really tiny (50 mm x 15 mm) so let's hope you can freeview.

The resolution of the stereoscopic pairs is the one announced by the manufacturer of the camera, namely 7680x2160 pixels at 8K (3840x2160 pixels for each half). It is slightly smaller than the sizes of the images from the XREAL Beam Pro Camera (7680x2880) or the Kandao QooCam EGO (8000x3000) but it is still fairly good.

Illustration 16. Full image, 7680 x 2160 pixels, straight from the camera.

As it is not really practical to constantly remove the micro SD from the camera and put it back again (even with removing the cover and using it like in the Acer unboxing video), the safer option is to transfer the pictures from the camera to a computer through the USB-C cable provided. Once the SpatialLabs Eyes is connected to the laptop or desktop, switch the camera on and wait for a few seconds until you see a folder called ASEC-1 appear on your computer's desk and the following message on the display of the camera:

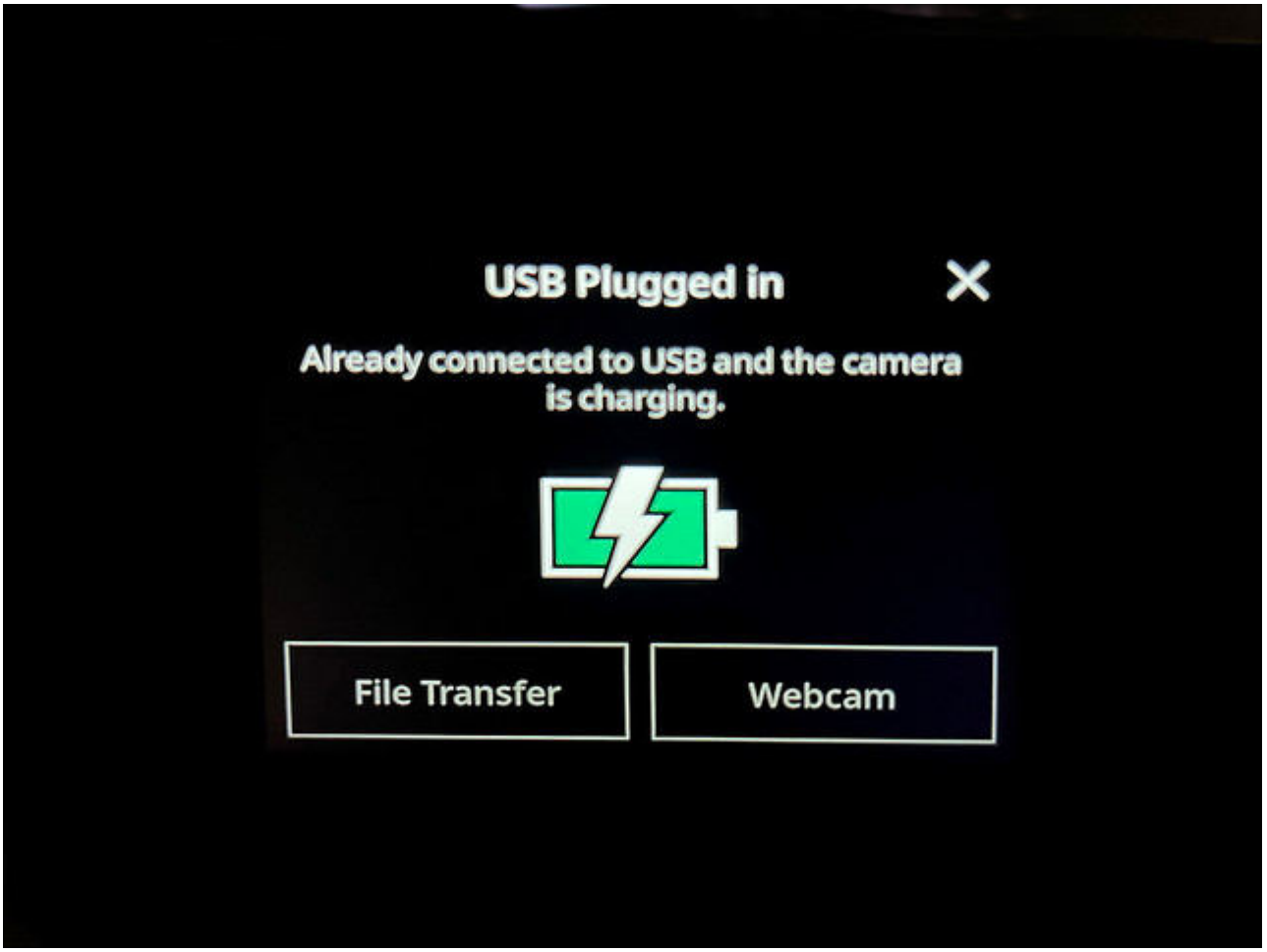


Illustration 17. Transfer message once the camera is connected to a computer.

Press the File Transfer box which will open a folder with the pictures you have taken. Grab and drop into a new folder the pictures you want to keep before deleting everything from the card if you wish to. Be careful however as the numbering will start from zero every time you delete the photos which means you will end up with images having the same file name. I have solved the issue by creating a folder with the current date each time I transfer the pictures.

The manufacturer says you can take up to 187 photographs and 37 minutes of video with a battery charge. This needs confirming but one thing is certain, the camera gets back to full charge fairly quickly, at least with a new battery. I don't know yet if it is possible to have the battery changed once it starts losing its charge quickly. It may be worth asking the manufacturer directly. One thing which I found rather annoying is that the camera switches off after a few seconds. If you want to take your time to compose your picture carefully, well, you can't. It is particularly frustrating when you are trying to get action shots and waiting for the right moment. When it comes the camera is already off. I guess this is to make the batteries last longer but it is really frustrating.

It is still early days to pass judgment on this camera after such a short time using it and more testing is definitely needed. But even though the jury is still out I can say that on the whole it is a good camera, easy to carry around, not too difficult to use (especially if you stick to Auto mode) and which gives pretty good 3-D pictures. It is obvious the stereoscopic pairs are meant to be seen with headsets or the like of the Apple glasses. I was able to view some of the pictures through a Meta Quest 2 headset (thanks to Rebecca) and there is no denying they do look impressive and

that you get a real sense of immersion which is greatly helped by the fairly wide angle given by the lenses. However, I do not care much for headsets (too heavy, too uncomfortable) and as long as you have to sell a kidney to buy the lighter kind of glasses I will stick to what I am used to doing and turn the images I obtain into stereoscopic cards of the standard format. It means losing about half of the surface of each picture but I quite like the result, and since I have been doing the same with the Fuji W3, the QooCam EGO, the XREAL Beam Pro and the iPhone, it is better for the purpose of comparison. As an alternative, what I call the Phone Format (1920 x 1080 side by side pictures which can easily be shared on a smartphone with a lorgnette type viewer) also works nicely. Keeping the original format for display on a smartphone results in rather small and very narrow pictures which do not do justice at all to the magic of stereoscopy.

Illustration 18. Image from the SpatialLabs Eyes in “Phone format” (1920x1080).

Illustration 19. Full image as it would appear on a smartphone (1920x1080).

Since I started writing this article I have had a couple of occasions to try the Acer SpatialLabs Eyes camera again, in various conditions. I took it to an antique shop (stereoscopy loves clutter so it sounded a perfect opportunity) and to a village fete (lots of people in movement). As you can see for yourself, the shots taken in the Antique shop work really well. There was some light inside, although not too much, and the pictures turned out fine enough. There is depth in the images and you really get the feeling you can grab some of the objects for sale. Full points on this one.

Illustration 20. The outside of the Antique Shop in bright sunlight.

Illustration 21. Inside the Antique shop. There is nothing like clutter to show how great stereoscopy can be.

Illustration 22. Another picture inside the Antique shop.

It was a bright and very sunny day for the Village Fête, with clouds coming and going fast. I tried different subjects: the classic cars show, one of the stalls, the youth orchestra playing, the crowd watching young girls doing gymnastics, the queue in front of the ice-cream van, the horse-drawn dray, etc. In full sunshine the pictures look very contrasty but this can be fixed in Photoshop or StereoPhotoMaker. The 63 mm separation between the lenses gives good depth even in a crowd and things obviously get even better if you can have something or someone in the foreground.

Illustration 23. The Village fete. The Classic Cars Show.

Illustration 24. The Village fete. One of the stalls.

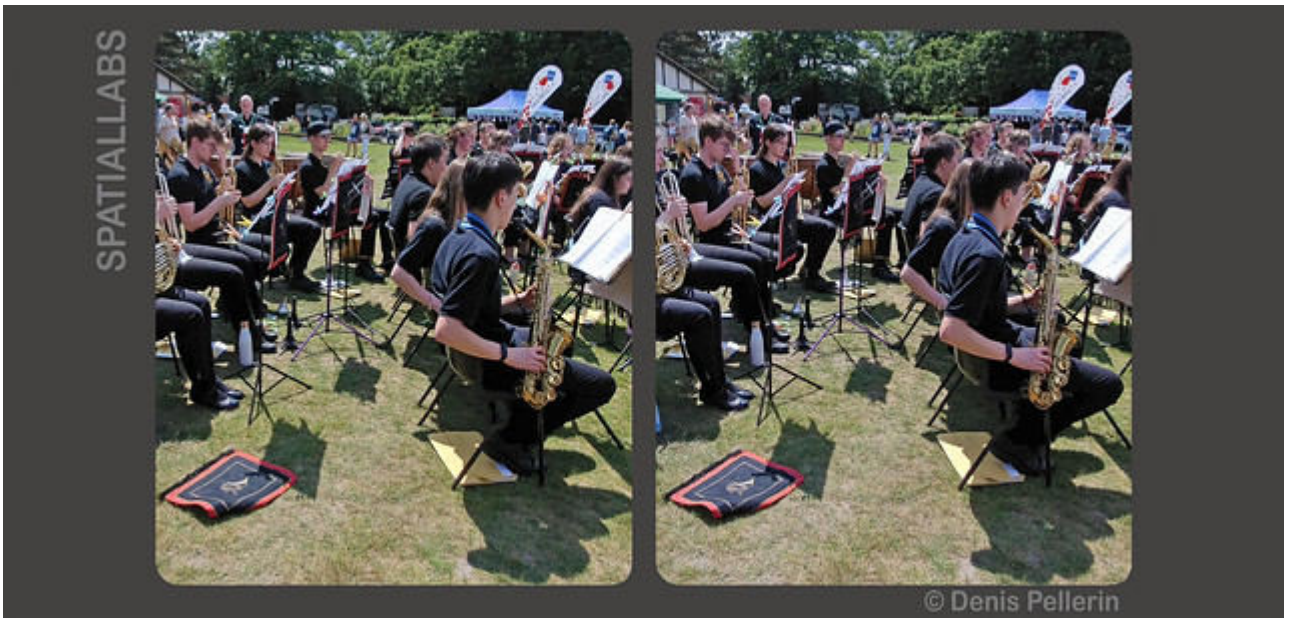


Illustration 25. The Village fete. The Youth Orchestra.

Illustration 25. The Village fete. The crowd watching girls doing gymnastics.

Illustration 27. The Village fete. The queue in front of the ice-cream van.

Illustration 28. The Village fete. The horse-drawn dray which was used in the past to deliver beer kegs.

I do hope some of the issues I have raised here can be fixed in later versions of the software or hardware of the camera. The online instruction manual contains a link to a firmware upgrade, which I haven't had chance to try yet.

The Acer SpatialLabs Eyes could really be a great camera with a few modifications but it is a pity manufacturers of 3-D – sorry, Spatial – cameras do not talk to people who actually take stereoscopic pictures before they start designing them. The technology is there and great things could be achieved if, instead of courting so-called “influencers”, more time was spent discussing with the 3-D community. The most important thing at the moment, though, would be for this nice little camera to become more widely available so that its potential can be fully appreciated and feedback from different sources can be given to the manufacturers who may or may not choose to act upon it.

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