

Canon EF 200-400 f4 L IS USM 1.4x Extender

A field review

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Introduction

Canon photographers have for many a year looked at their Nikon counterparts using their 200-400 f4 professional series zoom lenses, all the time wishing they had something similar (I certainly did); a fast high quality middle to long telephoto range zoom lens. So for years, as a dedicated Canon user, I had to make use of the Sigma EX 120-300 f2.8 HSM lens for most of my motorsport and rugby photography, being a 300mm f2.8 lens that can zoom back to 120mm, sharp, fast and accurate autofocus, and the ideal choice for sporting events where subject distance changes continuously. Canon did not have an offering that could match the Sigma lens, the 100-400 L being too slow and not good in lower light levels, the prime Canon 300mm f2.8 very fast and sharp but losing out on the versatility stakes. And I had no intention of jumping ship for the sake of a lens. However, Canon has now provided us with the perfect alternative, and it's a lens with a huge added bonus; a 200-400mm f4 lens, which with the flick of a switch converts to a 280-560mm f5.6 lens. And this unique feature along with the excellent optical quality and autofocus capabilities makes it one of the most versatile lenses on this planet. After nine years of using the Sigma 120-300 f2.8 lens and always admitting that I will replace it with the same should it become necessary, I am ready to convert to being a full Canon user again. The Canon EF 200-400 f4 L IS USM 1.4 Extender should be the lens of choice for anyone covering motorsport (track racing), rugby, soccer etc on a regular basis. Also does very nicely in nature photography as well, adding versatility where the long telephoto prime lenses sometimes prove to be a bit limited in their application.

Specifications

The technical specifications and features are well known by now, but some of the most important ones are briefly discussed here.

Mass: For most this lens will feel big and heavy, but if you are used to the 400 f2.8, 500 f4 and 600 f4 prime lenses then it will not be all that overwhelming. It is slightly lighter than my personal 500 f4 L IS lens, but not so that you'll really feel the difference; 3,870 kg for the 500 and 3,620 kg for the 200-400.

Size: It is a little shorter than my personal EF 500 f4 L IS lens, and is also less bulky towards the business end, having a 128mm maximum diameter as opposed to the 146mm of my 500 f4 prime lens.

Image Stabiliser: Canon's latest generation IS system allows for three settings:

Mode 1: Normal IS in both horizontal and vertical planes

Mode 2: Panning mode – IS in the vertical plane only

Mode 3: "Exposure mode" IS (my term) – apparently aimed at the sports and action photographer where the IS is only activated on full press of the shutter button. The "image jump" tendency (which can be quite disconcerting when following fast paced action through the viewfinder), is minimised by this setting. During my testing it found it a nice feature, image jump was definitely more evident in mode 2.

Focus mode switch AF/PF/MF: Offers not only the standard auto focus and manual focus modes, but also PF, being power focus, it aids smooth focus transitions when doing video captures. A ring type ultra-sonic focus motor combined with a high speed processor makes for a fast and quiet autofocus function.

A sturdy tripod mounting collar is supplied with click settings at right angles, enabling the lens to rotate easily to the desired orientation. The lens tightens securely in the collar with the familiar twist knob.

The lens has the well-known focus pre-set functionality. I did not find the need to use this feature, but it can be handy in a sports environment such as cricket where one can pre-set the focus points to the two batsmen positions on the pitch. Using the back-button focus technique, (activating autofocus with the button on the back of the body using the thumb and disabling focus from the shutter button) works just as fast for me, but it is a handy feature that adds to the versatility of the lens.

A 52mm drop-in filter slot is provided towards the back of the lens

Internal 1.4x Extender:

This is the only lens from any manufacturer that has this unique feature. A dedicated switch on the



lens body, (which feels solid and can be locked in place to prevent accidental activation), swings the 1.4x Extender into alignment. It slips securely into place, and although I did not feel the need to use the lock, it nice to know it is there should you need it.

In the hand

I use a monopod exclusively when covering sporting events or doing birding photography on foot. All of the photos illustrated here were taken with the lens mounted on a monopod, with the tip either on the ground for cricket, or in a belt pouch for rugby, motorsport and birding. With proper holding techniques and lots of practice this is a very stable way to handle the long lenses even at slower shutter speeds. It also helps to keep the weight of the camera and lens combination off the shoulders, neck and arm muscles, which is very conducive to stability and endurance during extended sessions with the big, heavy telephoto lenses.

The 1.4x Extender does add some bulk to the rear section of the lens, but it is not really noticeable when the lens is mounted on a body. One never really touches that part of the body except to activate the various switches mounted there, so the added bulge which houses the extender goes unnoticed.

The true aim of this review is to report on the performance of the lens in the field, photographing different sporting events and also using it in a birding environment. Lined up was a test to visually determine the influence of the 1.4x Extender and at the same time check calibration of the lens to my EOS 1D MkIV body. The field evaluation would encompass a cricket match, some motorsport, then off to a Currie Cup rugby match played under floodlights, and some birding as a final test.

1.4x Extender effect

I started my testing with a few photos to illustrate the versatility of the lens with its internal 1.4x extender, where you can literally within a second switch from a 400 f4 maximum focal length to a 560 f5.6 lens. This makes a huge difference to in-frame size of a subject. I took the photos of a Cape Sparrow at a distance of about 4.5 m, at full zoom, with and without the extender. The difference is obvious. What is impressive is the virtually unnoticeable drop in image quality. The feather detail remained excellent, even with the lens used as a 560mm f5.6. I did not feel the need to stop down the lens for increased sharpness (for the so called sweet spot). The photos were taken on an overcast morning in my garden, hence the slow shutter speed, but the combination of the IS in mode 2, the monopod and a subject which cooperated by not moving ensured sharp and crisp photos.



Cricket

I had to cover the One Day Cup match between the Northern Titans and the Dolphins, played as a day-night match at Supersport Park in Centurion. Usually cricket matches are prime telephoto lens territory, and I knew from the start that the lens will be used as a 560mm f5.6 lens all the time. I usually cover cricket matches with my 500 f4 lens and then mostly with my 1.4x Extender fitted to achieve a 700mm f5.6 effective focal length (lets ignore the 1.3x crop factor from the body for now) so the 560mm f5.6 that I could achieve with the test lens will be marginal on reach when taking photos from higher up in the stands. But working down low, closer to the field of play it could easily frame batsmen more than tight enough, and bowlers from a side-on view for that matter. However trying to get bowlers from across the batting pitch, moving head-on towards the camera, was just a little too much to ask from a 560mm lens. One could still use those photos, requiring some cropping in post processing but in this scenario a 700 mm focal length works perfectly. More important was the ability of the lens to focus and track the running batsmen, which it did with ease as expected.



With time on my hands, I decided to do a little test, and fitted my 1.4x Extender to the lens with the intention to compare the extenders with one another, and also to see how the lens would perform with two 1.4x Extenders in place. This will push the effective focal length to 784mm f8. I was honestly amazed at the image quality I could achieve, whilst retaining autofocus (1D MkIV body) in good quality light. When an approaching thunderstorm clouded over, the exposure dropped by about three stop and the AF stopped working. By then I was on ISO 1600, f8 and 1/250, so light was really bad, almost flood light quality lighting. Removing my own extender caused the AF to function properly and effectively once again. Refer to the photo of Heino Kuhn in batting action, for a typical sample of the lens with the two 1.4x Extenders in place. Shortly after that photo was taken, the light levels dropped substantially and AF became impossible. Happy with the performance of the lens during a cricket match, and accepting the slight limitation on reach, I was ready for the next sporting event.

Motorsport.

The Historic Racing Register had one of their championship events at Zwartkops International Raceway. Although these cars are classics, they are still very fast and post seriously quick lap times around the circuit. I decided to do my testing on the fastest of the all the classes, the International Sports Prototypes, the cars which raced at the Le Mans 24 Hour races in the 60's and 70's.

The Porsche 917's and Ford GT40's are still fast on the track even by today's standards, and provided an excellent opportunity to test the focus tracking capabilities of the lens on racing cars approaching head-on at more than 140 kph, then braking and reducing speed to only about 60 kph.

Panning side-on with the cars going through a fast sweep doing 120 kph also tested the panning mode IS and focus tracking to the limit.

Once again, the lens delivered as one expects from any lens in its range. Focus tracking was spot-on, the lens easily kept up with the changes in speed of the cars, (admittedly bolstered by the capabilities of the 1D4 body). Compared to the results I was used to getting with my Sigma 120-300 f2.8, the 200-400 produced crisp photos at a keeper rate of around 95% which is exceptional, This is better than my 500 f4 L lens which usually achieves about 90% on the very fast cars, and my 120-300 at a 85 % rate. For the 200-400, which had to tackle fast moving subjects closer to the camera, (where I would normally use a 500 f4 lens at a greater distance), and still come up trumps with a better keeper rate, says a lot to me.





Rugby

Packing up at Zwartkops Raceway I immediately headed to Loftus Versveld in Pretoria where the Blue Bulls were taking on the Griquas in a Currie Cup rugby match. This match started at 19:10, so the whole match was played under stadium lighting. This would really test the autofocus capabilities of the lens in lower light levels on fast and erratic moving subjects, closer to the camera.

Again the lens was mounted on my monopod, and the tip of the monopod positioned in a belt pouch on my waistband. I used both IS mode 2 and mode 3 during the match. Both modes were effective, but in the end I switch the IS off, in order to compare sharpness keeper rate with my regular lens. My EOS 1D MkIV was set to manual mode, 1/800, f4, ISO 2000 which is comparable to my standard Manual setting at the stadium, except I would get 1/1000 and ISO 1600 with my f2.8 lens. I enjoyed the extra 100mm of reach offered by the 200-400 f4 lens, and wasn't really bothered by the extra 80mm in reach when zoomed out to its fullest. I do feel that in extreme cases where a player would cross the goal line right in front of me, this would prove to be too much lens, but I never got to test it. I had to zoom back to 220mm at one point during the match, but was still comfortable using the lens. I never felt the need for less than 200mm zoom.



As it turned out, the lower light levels didn't affect the lens which was used without the 1.4x Extender activated all through the match. From the typical forwards play charging forward into a tackle to the backline running at speed, the 200-400 lens handled it all. When Bjorn Basson (photos) broke through and dived over for his 50th Currie Cup try, the full series of 15 shots stayed sharply focussed. Overall I believe I got about 20% more sharp, keeper photos than I am used to from Sigma 120-300 f2.8. Again I was impressed by the excellent overall performance of the lens.

325mm, 1/800 f4 ISO2000, no IS



Birding

For the final evaluation I had planned for this lens, I moved out to a birding reserve to test the focus tracking of the lens on moving subjects, specifically birds in flight and birds doing some form of activity which I felt would provide a better testing environment than just photographing stationary birds. Using my trusty 1D MkIV, set to 10fps and AI Servo focus mode, I took a variety of shots with birds in flight, launching from water on take-off, coming in to land, just plain swimming or foraging around, and came to the conclusion that the 200-400 f4 lens is more than capable enough, (when linked to a good body), to accurately lock on, track and follow slow and faster moving birds. A sequence of 7 shots on a Red-knobbed Coot doing his "running on water" act, chasing any wannabe intruder from his area, kept 5 of them super sharp and crisp with the lens set to 560mm f5.6, and a Yellow-billed Duck coming in to land, skidding on the water until he settled down, head-on towards the camera, delivered 5 of 5 sharply focussed shots. A fast flying Rock Dove (aka Feral Pigeon) was caught in-flight and kept sharp. The bird's somewhat erratic flight path made it difficult to keep the focus on him continuously, and yet, re-establishing focus on the bird was quick and accurate. The results in keeper rate were a little better than what I was used to with my 500 f4 lens on these faster moving birds, which any birding enthusiast would find gratifying.





Conclusion

The Canon EF 200-400 f4 L IS USM Extender 1.4x is a serious piece of kit. Well made, fast auto focus, crisp and clear optical quality, fast maximum aperture, up to four stops IS capability and a very handy zoom range complimented superbly by the internal 1.4x Extender. It is a lens which is ideally suited for the sports and the wildlife photographer, professional and amateur/serious hobbyist alike. Canon produced a winner here, filling a long-standing gap in their lens line-up and I for one, am very excited about this new addition to my Canon must-haves wish list.

Many thanks to Canon SA for arranging and making available the test lens.