

# Canon RF 100-400mm f5.6-8 IS USM

## A field review

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### Introduction

The Canon RF 100-400mm IS USM (hereafter referred to as the RF100-400) is a welcome addition to the RF lenses range, filling in for the affordable mid-range tele-zooms, very popular amongst enthusiast photographers. It is an autofocus f5.6-8 variable aperture, zoom lens of quite compact dimensions compared to similar products from other manufacturers.

### Basic Specifications

Focal length range: 100-400mm

F-stop range: f5.6 to f8 (variable aperture)

Filter diameter: 67mm

Minimum focussing distance: 0.88m (1.2m at 100mm / 0.88m at 200mm / 0.95m at 300mm / 1.05m at 400mm)

Image Stabilization: Optical IS, 5-.5stops

Focus motor and method: Nano USM, internal (front element does not rotate during focus)

Weight: 635g

Accessories: front and rear lens caps.

Lens hood sold separately.

Note: No weather/environmental sealing

For the full set of detailed specifications, visit the Canon website: <https://www.canon.co.za/lenses/rf-100-400-f5-6-8-is-usm/>

### In the hand

As far as 100-400mm lenses go, the RF100-400 must certainly count as one of the most compact models around. Since I have a Sigma 100-400mm Contemporary (EF mount), comparing the two lenses was inevitable. Canon has managed to make this lens so compact by clever design, as well as opting for f8 as maximum f-stop opposed to the f6.3 of the Sigma. Smaller maximum f-stop means smaller diameter glass and smaller diameter barrel, all of which also saves weight; this is why this lens comes in at 635g only, compared to the Sigma 100-400 at an almost double the weight of 1160g.



**Size comparison Left: RF 100-400 top, Sigma 100-400 Contemporary bottom**

**Size comparison Right: Sigma 100-400 Contemporary left, RF 100-400 right**

The lens is manufactured from rather sturdy polycarbonate type material with a metal mount. The zoom ring, Manual Focus ring and the RF Control ring all feel secure and not too tight, or too loose. The Control ring has click stops to help judge the number of adjustments made to whatever setting you set it to in the menu system. The lens is not supplied with a hood, which is an optional extra, nor does it have any weather sealing.

The lens comes with the usual switches. On the left side of the body, you'll find sliding switches for the AF/MF and below that the single setting Stabilizer On/Off switch. On the right hand side is a lock switch which will effectively lock the lens at 100mm for easy transport preventing any accidental zoom creep. During the time I had with the lens, the zoom action remained firm, and I never experienced any zoom creep. The lock is however a handy feature.

On the lens barrel nearest the front element one will find the narrow, knurled RF Control Ring which can be set in-camera to provide a function / setting to your liking. The middle of the three rotating

rings is the fine-ribbed MF ring, which is easy to grip and operate, and the course ribbed zoom ring closest to the lens mount.

There is no rotating collar or any way to mount a tripod or sling.



**Controls and switches - Left photo: Switches for AF/MF selector, Stabilizer On-Off**

**Controls and switches - Right photo: Zoom lock switch**

## Performance

I tested the lens on a Canon EOS R7, the camera also a test unit from Canon SA. It proved to be a good combo in a variety of photographic activities.

Note: Especially when using Fv mode be sure to set the Auto ISO within useable digital noise range for the camera in use. On the R7, I was shooting at ISO 10000 at one stage, and visible digital noise was present, but rather handled quite effectively with Lightroom's Noise Reduction settings. That review also published, for more detail as it is more camera related rather than lens.

Taking into consideration the price range of this lens, it is clear to see that it is aimed at the consumer market, affordable to those on a tighter budget or not having the requirements offered by the professional L series lenses. The beginner, the enthusiastic photographer, the serious amateur will all be well set by using this lens. Typically I see the RF100-400 used as a wildlife lens, sports,



aviation photography and even some general close-up photography with its short minimum focus distance. Can also double as a casual portrait lens, basically a nice all-rounder lens on a budget.

### **Nature and wildlife**

This is probably the genre where the RF100-400 will be used most. Being very compact in size, and very light. It is easily to handhold without external support (no tripod mounting socket remember) and I found it easy and comfortable to handle in my car from the front seat whilst also driving between sightings. Definitely a lot easier than handling my much bulkier 500mm f4.5 under the same conditions. The very handy zoom range, well known from the L-series sibling in EF mount, works perfectly for wildlife photography. I found the image quality to be very good indeed, way better than expected from a budget orientated lens and a proper surprise to me. Colour and contrast straight out is very good, with very good sharpness. A California Wood Duck seen hanging out at a local nature reserve proves the point.



**California Wood Duck, Canon EOS R7, RF 100-400 f5.6-8 IS USM**

**400mm, 1/100, f9, ISO 400, handheld with IS**

One of the big advantages of this lens is the zoom range. So often will one come up on a nice sighting in a game reserve where other patrons are already on site, parking cars and blocking traffic flow. The scene below was taken from the same spot, first image at 100mm, then zoomed in to 400mm which allows the user to still manage a nice photo of the animals. Very handy indeed and a graphic illustration of the pulling power of the zoom range. Images are uncropped, taken with the Canon EOS R7.



Zoom range advantage: Top at 100mm, bottom at 400mm, same position.





Boeing 737, Canon EOS R7, RF100-400 f5.6-8 IS USM, 200mm, 1/15000, f8, ISO 800



Airbus A350, Canon EOS R7, RF100-400 f5.6-8 IS USM, 400mm, 1/1600, f8, ISO 400

## Sport and Action

The compact size and light weight of the lens for me also makes it ideal for plane-spotting and airshows. Again the zoom range means easily framing aircraft of different sizes at different distances.

Just remember that for those long range captures on big subjects, atmospheric conditions such as heat-haze, dust, mist etc will all play a role in the perceived sharpness of the images. Choose the time of day carefully before attempting those type of images.

The aviation images above were captured at OR Tambo International Airport. The Lift Airways Boeing 737 on final approach was taken at about 300m distance, whilst the Ethiopian Airways Airbus A350 was taken at about 600m. In the last image one can already see the effects of heat haze, which is more pronounced closer to ground level; compare the parked aircraft with the one taking off.

Being a contracted media photographer I also used the lens to cover a rugby match, the semi-final of the SA Rugby Woman's Premier League, with the Bulls Daisies taking on the Boland Dames. Using the EOS R7 with the RF100-400, I was again pleasantly surprised by the results from this more budget orientated combination. The match was played in the afternoon, in good sunny conditions. The AF tracking of the lens proved to be more than capable to keep up with the charging players and believe me these ladies are professionals and play the game hard and proper. The quality of the images actually led to images being selected for publishing as the editorial content reporting on the match.

This event also shows that covering school sports will be no problem for those parents wanting to create the memory moments for their children. Also refer to my EOS R7 Review for more information on the performance of this camera / lens combination, here:

[http://actionimage.co.za/Equip\\_Reviews/Canon%20EOS\\_R7\\_review\\_SimonDP-Actionimage.pdf](http://actionimage.co.za/Equip_Reviews/Canon%20EOS_R7_review_SimonDP-Actionimage.pdf)



**Canon EOS R7, RF100-400 f5.6-8 IS USM, 400mm, 1/640, f8, ISO 400**



For the motorsport loving dad's (and mom's) out there, do not fear. The RF100-400 again showed its capabilities when I took it along to a local Championship event. Fitted to the EOS R7 it easily kept up with the head-on approaching race cars, parallel panning at slower shutter speeds, coming through turns where change in direction can lead to some soft frames until the AF accurately tracked again. Now this sounds worse than it really is in practice, with the frame rate of 15 fps it is a mere split second before AF is accurate again. The banging V8 Mustang below was the first frame after AF drift, three shots sharply focussed entering the corner, lost two frames mid turn, then the next three frames counter-steering through the final section of the corner all nicely focussed. Impressive performance from a lens in this price range. Handholding the lens made it easy to follow and track the race cars with AI Servo in Fv mode.



**Ford Mustang, Canon EOS R7, RF 100-400 f5.6-8, IS USM, 236mm, 1/250, f13, ISO 200**

In-between the racing I had some time to check out the close-focus ability of the lens, and found the yellow wild flower / weed which proved to be a suitable subject. The blossom is about the same size as a beer bottle cap and at the minimum focus distance the results are quite eye-opening. Sharpness was again more than acceptable and should be sufficient for most photographers out there.

### **Conclusion**

I really like the time I spent with the RF100-400. It is a nice compact and light-weight lens, with surprisingly good image quality, fast AF for most conditions and affordable.

### **Pro's:**

Compact





**Wildflower. Canon EOS R7, RF 100-400 f5.6-8 IS USM, 325mm, 1/320, f8, ISO 200 (uncropped)**

Light

Very handy zoom range

Very good optics and fast AF

Effective IS

Zoom lock at 100mm for transport

#### **Con's**

No weather sealing

Lens hood needs to be purchased separately

If you need to mount on a tripod, the socket on the camera body is the only option.

I don't have one yet; ideal for my aviation and motorsport photography

**Many thanks to Roger Machin at Canon SA for arranging the test lens.**

Feel free to ask questions, request more specific information etc on this review or any of the other items I have reviewed so far.

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or

See link : [http://actionimage.co.za/equipment\\_reviews.htm](http://actionimage.co.za/equipment_reviews.htm)