

Small format, large sensor!

Ricoh has renewed its GR range with a compact camera one centimetre longer than its predecessors, but now sporting an APS-C sensor. The new GR thus retains its line while gaining an image quality that decidedly beats that of many SLRs.



As the technology to create a compact with a large sensor is now available, Ricoh and Nikon (with the Coolpix A) have each designed cameras that make the most of this possibility. But, in contrast to Nikon, Ricoh is a specialist in high-end compacts, and the GR series has always enjoyed an excellent reputation with photographers. A compact with a large sensor (APS-C) is thus a logical approach for Ricoh: the means for maintaining its reputation as a designer of expert-level compacts at its very height.

The GR series appeared some time ago, but this new version marks a major turning point, because increasing the size of the sensor surface by nine involves considerable modifications.

The camera has an f/2.8 wide-angle lens, equivalent to 28 mm, and a fixed 7.5 cm high definition screen. Of course, as always with this type of body, there is no built-in

The GR equipped with viewfinder and 21 mm wide-angle extension. All somewhat cumbersome... even if it is the most compact unit around with this focal length.



viewfinder. This is the biggest criticism than can be levelled at the GR. An accessory viewfinder does exist, but it spoils the compactness of the camera. With an eyepiece like that, nobody would take you for a tourist! If you really want to stand out you can also buy the wide-angle extension (21 mm equivalent) and its dedicated viewfinder.

So, what's the Ricoh GR best for?

Ricoh GRs have always been presented as back-up cameras for expert photographers: the famous "notepad" to keep stashed away in the pocket.

Intelligently, Ricoh has not tried to copy the SLR interface, but has designed the ergonomics of its compact in line with photographers' habits. This is the great advantage of the GRs (and the other Ricoh compacts): using the camera is intuitive, and on top of that, numerous functions can be programmed to each person's particular needs.

Photographers who leave their SLRs at home because they want to be unobtrusive (on an assignment) or don't want to be weighed down (up in the mountains) will find the GR a first-rate fall-back solution. As the image quality is excellent, photos can be used in exactly the same way as those taken with an SLR.

The GR's main assets

The camera's elongated shape means that it slips into a pocket easily...as long as you don't have the accessory viewfinder.

The ergonomics have been carefully studied. As well as a lockable mode button, there is a mode dial for altering shooting modes, and three function buttons (Fn1, Fn2 and Effects), whose action can be modified.

The Tav mode, inherited from Pentax, lets you choose the aperture and shutter speed, while allowing the ISO sensitivity to vary. A new option, which can be useful in certain situations.

Ricoh has lavished attention on the GR's autofocus: as a general rule, focusing is instant. It may lag a little in certain cases (close-ups or lack of contrast in the subject, for example), but these are rare. Compared with the Nikon Coolpix A (see C.I. no. 353), the Ricoh GR does considerably better.

Manual focusing provides several possibilities: the depth of field is indicated (a green line around the distance chosen), infinity can be set.

The "snap" mode makes it possible to immediately obtain a focal distance chosen in advance, and you can set the hyperfocal distance. This mode can be activated by default when you start up the camera, or activated very simply.

The built-in flash is a little powerful, but would be useful for compensating a contre-jour. Its power can be adjusted automatically or even manually.

Some photographers may be interested in the extra 21 mm lens. Personally, I find that that you lose out in terms of compactness. A 35 mm equivalent crop mode is available, which is an interesting solution: cropping after shooting is more flexible, but this crop mode has the advantage of being quick.

Image quality

The 16 Mpix sensor (identical to that of the Coolpix A) produces excellent images, which benefit from a Ricoh-Pentax noise treatment of remarkable quality. The high sensitivities are particularly well-managed. At 1600 ISO, there is not the slightest trace of noise, and

the resolution is very high. At 3200 ISO, the resolution does not seem to decrease, and noise is only faintly visible. Some SLRs do as well, but not many!

The lens quality is excellent. The lens renders the tiniest detail, and this is all the more perceptible because the sensor has no optical low pass filter. Here again, comparisons are invidious for Nikon: the Coolpix A is good, but the Ricoh GR is better.

Management of the dynamic range remains relatively basic. Some bodies (as with Fuji or Canon) do better, but not the direct rival (Nikon Coolpix A), which could also be improved in this respect.

The Raw format is in standard DNG, so there is no problem in opening the files with Adobe software, including older versions.

Those who use HDR have a multiple exposure mode, which facilitates repeated framing through an image superimposition system. Photos can be "stacked" or recorded separately: useful for high quality HDR treated subsequently on the computer.

Use of the Raw format is another way of obtaining a broad dynamic range when dealing with very difficult subjects.



An almost standard back, but the clickable "Adj" dial or the +/- cursor make all the difference by giving direct access to the main shooting parameters.

Conclusion

As always with this type of camera, the lack of a built-in viewfinder is regrettable – even Spartan. With an expert compact, it is hard to do without one, and the addition of an accessory spoils the compactness.

Image quality is unfailingly good. Resolution is very high in low sensitivity (the best results we have seen with a 16 megapixel sensor), and when the ISO increases (1600 and 3200), the loss of fine detail is barely perceptible, and the increase in noise almost invisible.

The camera's ergonomics are a model of their kind: the screen is remarkably thin, the shooting parameters are directly accessible, and it

is easy to reprogramme the camera to suit your needs.

A number of small details show that the GR has been designed with photographers in mind, such as the autofocus activated with the touch of a button from the MF mode, the "snap" focusing and the ISO priority mode. The Ricoh displays distinct intelligence, where other cameras are content to line up characteristics in the specifications.

Because it has no viewfinder, the GR gets only four stars, but for all the rest it deserves five. Mr.

Ricoh, if you jettison the built-in flash and replace it with a retractable optical viewfinder, your GR won't get five stars – it'll get six!

P.-M. Salomez & P. Miele



Specifications

Sensor: 16 Megapixel Cmos APS-C (15.6 x 23.6 mm).
Lens: 18.3 mm f/2.8 (28 mm equivalent) - 7 lenses (2 aspherical) in 5 groups. Additional 21 mm lens as an option.
Viewfinder: optical version as an option (fixes onto the flash socket).
Screen: 7.5 cm fixed; 1,230,000 dots.
Autofocus: contrast detection, focus range: 30 cm to infinity (macro: 10 cm to infinity). Spot AF, pinpoint AF, tracking AF, face detection AF (up to 10), continuous AF, MF, Snap.
Metering: multi, central-weighted and spot modes with memorisation; exposure compensation: +/- 4 in 1/3 EV steps.
Exposure modes: Auto, P, Av, Tv, TAv (ISO priority), M, video,

3 pre-programmable modes.
Sensitivity: Auto, Auto Hi, 100 to 25600 ISO.
Shutter speed: 1/4000-300 sec, Bulb, Time
Flash: built-in NG 5.4; auto and manual modes; external flash socket.
Continuous shooting: 4 fps (buffer: 999 shots).
Video: Full HD at 30 - 25 - 24 fps.
Memory Storage: SD card (HC XC) + 54 internal Mb
Recording formats: Jpeg, Raw, Jpeg + Raw.
Autonomy announced: 290 shots (CIPA).
Connections: USB2, HDMI.
Size: 117 x 61 x 35 mm, 245 g (battery pack and SD).
Price: €750.

Chasseur's opinion

What we love...

- Only fractionally larger than a small sensor Ricoh
- Well-built and sober
- Excellent ergonomics: pleasant, efficient and easy to customise,
- Designed for photographers
- Highly responsive
- Excellent image quality in low and high sensitivity (1600 and 3200 ISO)

What we don't like...

- No built-in viewfinder: a fault in an expert camera!

Illustrations of the Ricoh GR

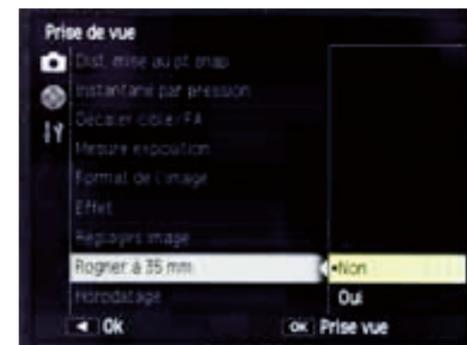


The mode button with lock, and the front dial for adjusting shutter speed and aperture.



Battery pack and memory stick in the same compartment... as with all compact cameras. The GR remains faithful to its origins!

Noise reduction action can be fine-tuned differently, according to the sensitivity. A refinement not found even with expert SLRs.



A 35 mm crop mode makes it possible to change the framing when shooting. The cropping is comprehensive, and the screen then only displays the 35 mm field. It would be handy to be able to choose between this "full 35" and a 28 mm display with a 35 mm frame, like a Leica. Being able to assess a little more than the photo framed when aiming is extremely useful when out on an assignment.



The snap mode means that you can work with a fixed focus. The next line in the menu enables you to choose the distance of this focus. The snap mode is activated permanently from the menu, but it can also be activated temporarily with a programmable button.



Bilan du test

- Possibilities 🐱🐱🐱
- Action photos 🐱🐱
- Landscapes 🐱🐱🐱🐱
- Studio 🐱🐱
- Low lighting 🐱🐱🐱



To sum up – The large sensor compact is the dream of many a photographer, who constantly cite the Minox 35 as the ideal body. I would recommend these nostalgists to bring out pictures taken with a Minox and compare them with those produced by a modern-day compact: many entry level models do much better!

With the Coolpix A (tested last month), Nikon showed that it is possible to design a truly compact camera equipped with an APS-C sensor. Given its long history of expert compacts, Ricoh in turn had a duty to present its own large sensor compact. Soberly dubbed the GR, the camera has a 28 mm, placed in

front of a 16 Mpix sensor (like Nikon!) in a body one centimetre longer than the previous, small sensor model. The image quality is excellent: at 100 ISO, the resolution achieves a level rarely attained by the 16 Mpix sensor. The absence of a low pass filter, the very high quality of the lens and the somewhat forceful accentuation account for these excellent results.

At 1600 ISO, the image quality remains very high: no noise, and an imperceptible loss of fine detail. With discreet reporting, the GR will work miracles. Those hesitating between the GR and Coolpix A can see that the less expensive of the two is also the better camera.

If the graphics put you off...

What the images say

We were expecting a good level of image quality, and were pleasantly surprised: the quality is not merely good, it is remarkable. The 16 Mpix sensor (probably the Sony model) is an excellently-made Cmos, which here gains from the Ricoh-Pentax know-how (the two brands have now joined forces) in terms of image processing. This results in high-level performances that rival those of the best SLRs.

Smoothing and sharpness

The sharpness is considerable: the 16 Mpix sensor with no low pass filter produces very high resolution images.

Up to 1600 ISO, the smoothing action is difficult to see, because the fine details are so meticulously rendered. You have to go up to 3200 ISO to notice a slight loss in reproduction: in an A4 print, it is hard to spot. At 6400 ISO and above, the anti-noise action becomes considerably stronger, but never to the point of producing disastrous images: Ricoh has done some fine work, here.

noise

The 16 Mpix Cmos must "naturally" produce little noise, as it is one of the sensors that achieves the best results (this observation holds good for all brands using this Sony Cmos).

The GR provides noise-free images up to 1600 ISO. And the slight, colourless granulation that appears at 3200 ISO looks more like minuscule Jpeg artifacts than noise or grain.

The low frequency noise (slightly coloured "cloudy" zones) is totally invisible, even at 25600 ISO (at this sensitivity, you no longer see noise in the classic sense of the term, only the smoothing).

Value rendering

Here, Ricoh has a little way to go: the extended dynamic range has the chief effect of modifying the shadow/light contrast distribution. Nothing disgraceful, but there could be an improvement. NB: making play with the dynamic range can alter the sensitivity when working below 400 ISO. This is generally not important, but it's best to be aware of it.

Responsiveness - Autofocus

The Ricoh GR autofocus is relatively fast. It's certainly not a firebrand, but it lies within the high average of results delivered by contrast AFs. In situations where a rapid response is vital, the snap mode (a pre-set manual focus) gives you an immediately operational camera. As the lens (28 mm equivalent) has considerable depth of field, this mode can be fully exploited.

Screen

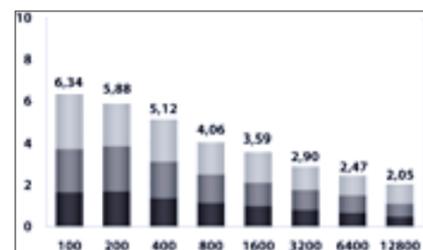
The back screen is fixed, and provides a 7.5 cm diagonal and high resolution (1,230,000 dots). It can be turned off (using the "Disp." button), making it more comfortable if you are using the accessory optical viewfinder.

Video

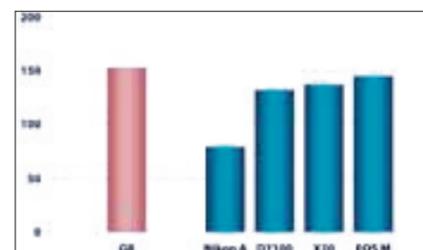
The video is in Full HD format at 24-25 and 30 fps. The GR also provides 50 and 60 fps in HD 720. The sound is in stereo, but the camera has no external microphone jack. Video should be considered as a stopgap solution, as apart from a few special cases, filming in 28 mm is rarely very comfortable



Viewfinding – There is a great deal of information shown on the back screen of the camera (there is even a green index for the depth of field with manual focusing), but it is also possible to display none at all, or even switch to a black screen if you are using the accessory optical viewfinder.

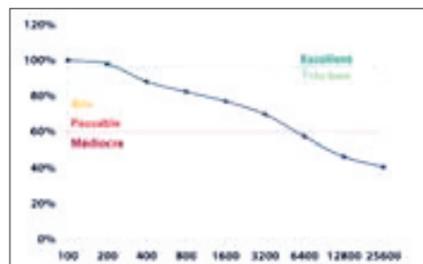


Noise – Noise is well-controlled. It is totally invisible from 100 to 400 ISO, even in very large format prints. From 800 to 3200 ISO, it becomes perceptible but remains discreet. Very high sensitivities display well-contained noise.



Granulation in A3 prints (1600 ISO)

Compared with cameras of a similar type, or even a recent high quality SLR, the GR provides extremely good results. Noise is perfectly controlled at 1600 ISO (our point of comparison)



Texture – Smoothing is controlled intelligently: maximum quality at 100-200 ISO; slight smoothing between 400 and 1600 ISO to keep noise as low as possible, and as from 3200 ISO, increased smoothing to obtain an acceptable compromise between the detail rendered and the noise level.

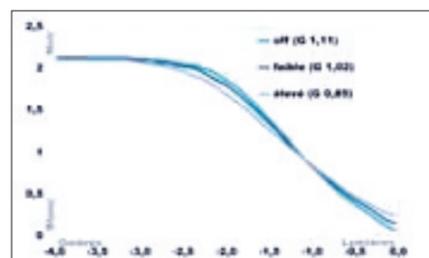
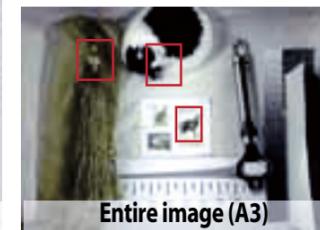
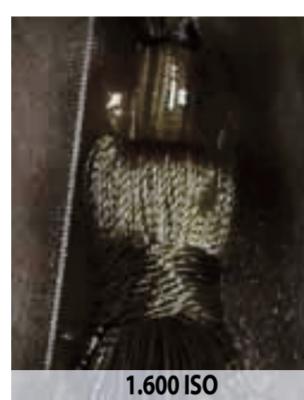
Figures and curves chiffres for the experts!



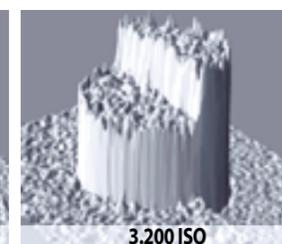
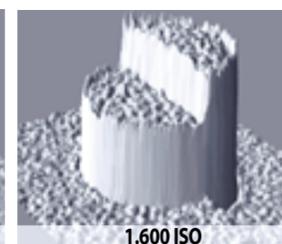
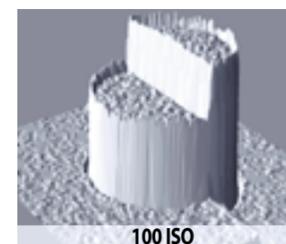
Image sharpness – At 100 ISO, the sharpness of the image is remarkable. The fine details of the image are rendered in astonishingly well: the well judged accentuation and the 16 Mpix sensor with no low pass filter make for top-notch photos. This is probably the best we have ever seen with this sensor.

At 1600 ISO, the results are almost as good as at 100 ISO. In a 40 x 60 cm print, it is hard to see the increase in noise, including in the dark areas. As for the rendering of fine details, you need a magnifying glass to observe a loss: the smoothing is hardly destructive at all.

Overall, the Ricoh GR produces images that hold their own against those of an SLR. It is better than many models, even.

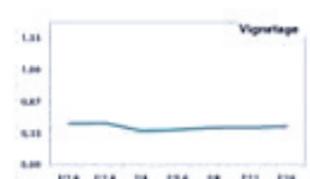


Value rendering – the dynamic variation does not have an extraordinary effect, as Ricoh mainly plays on the contrast of shadow and light. NB: below 400 ISO, the dynamic variation also alters the sensitivity.



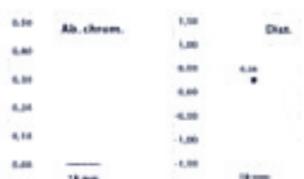
Grain - Accentuation – At 100 ISO, the noise is imperceptible and the accentuation well-marked but not exaggerated. In photos, this takes the form of considerable sharpness without any unsightly edging. The noise at 1600 ISO is totally controlled: granulation is present, but remains very fine (hard to see in the images) and is evenly spaced out. At 3200 ISO, the noise is a little more visible, but retains the same even distribution

Ricoh 18,3 mm f/2,8 (28 mm equivalent)



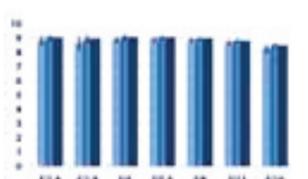
Vignetting is well corrected, and never exceeds 0.4 EV... there was probably computer correction behind the results obtained at f/2.8.

There is no chromatic aberration, but it is



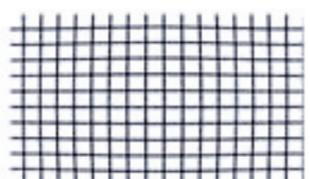
hard to know whether this excellent result is due to the lens or the computer equipment.

There is very little distortion: 0.26 % – a good result that makes this defect practically invisible in pictures.



Sharpness, at its best level from when the aperture is wide-open, presents perfectly consistent results: from the centre right to the corners, everything is impeccable.

Logically, a 28 mm opened to f/2.8



should provide good results, but when the lens is so compact you can sometimes get a nasty surprise... Here, the surprise was quite the reverse: this 28 mm equivalent is remarkable in every way.