

NEW COOLPIX 900

When digital cameras first appeared they were not taken very seriously. Photographers were accustomed to getting very detailed results using film and were rightly suspicious of anything which claimed it could challenge it. I say quite rightly as they really had little to fear. Digital photography was arguably of its time. The principle was great but we did not have the technology to properly implement it.

Things are improving and it is possible to get a digital camera that will replace the handy compact camera and produce decent results. One such camera is the new Nikon Coolpix 900. A few generations of digital camera have gone by and this is the third generation of Nikon. The tiny Coolpix 100 came first and was followed by the successful Coolpix 300.

One of the limitations of digital cameras has been the fixed lens design. Many expect a compact camera to have a zoom lens and the lack of these on digital models has doubtless held back sales. Nikon have decided to equip the



Coolpix 900 with a Nikkor Zoom that covers the equivalent of about 35-115mm. This is a high performance lens with an aspheric element to avoid limiting quality. Minimum focus distance is 0.5 metres reducing to just eight centimetres in macro mode (8-50cm),

The Coolpix 900 is labelled as a high-resolution camera. This is something that is peculiar to digital cameras. With film cameras we have no reason to concern ourselves with the resolution; Nikkor lenses and decent film will produce spectacular results if used properly. Digital cameras are not the same. Resolution varies from model to model.

Resolution is important because it tells us what kind of quality to expect. It ought to be measured by shooting a test target to determine just how well it can record fine detail. When testing a lens it is usual to shoot a standard chart containing tiny lines placed very close together. How far the lines are apart is shown on the chart and successive sets of lines are closer together than

previous ones. By subjecting the results to scrutiny under a high-powered microscope it is possible to see how close together the lines can be before the lens fails to

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reveal that there is space between them. So that is what a resolution test is. Although digital devices could be subjected to a similar test in practice they are not. What is offered is a value that should reflect the resolving power of the kit, all being well. In a digital camera there is an image capturing device. It can assign a value to represent the kind of light that is falling on it. These values can then be stitched together to construct a picture.

Remember the painting by numbers article? The more dots we have to make up a picture the clearer the result. The sensor just mentioned is made up of tiny dots known as pixels. My Concise Oxford says the origin of pixel is an abbreviation of picture element. Whatever you wish to call them, more of these, properly employed, will always improve picture quality.

A common mistake when discussing resolution is to mix this up with the measurement of resolution for a printer. Printers are rated by their ability to place a number of tiny dots, per inch (dpi). This is relevant but is not an appropriate unit to measure the capability of a camera. What we need is to know how much data the camera will capture and then we can consider how big we will print the result. By implication we will have an idea of how the image will look at that size.

If you will indulge me for a minute I will give an analogy. Jam is sold by weight, not rated according to how many slices of bread it can cover. Two things would make the latter an impractical guide. One variable is the thickness we spread it and the other is the size of a slice of bread is not yet an international standard (I think...). How good a digital image looks will mostly depend on how we view it.

Given that a digital image has this finite number of pixels or dots, the quality will depend on how far we spread them out. Here the dpi (dots per inch) comes into play. Print the picture to a certain size and you immediately determine the dpi of the result. If the picture is 1,280 dots wide and you stretch these over four inches of paper you will get 320 dots contained in each inch ($1,280/4 = 320$ dpi). This kind of result is very acceptable.

It is unlikely that the kind of printer one would use at home will offer much above 300 dpi. The figures given for the printer may suggest otherwise but for squeezing out blobs of ink onto paper 300 dpi is good and looks fine. It is important to grasp the difference between these two measurements of resolution to work out what quality is available in the digital world. The capture device will grab just so many dots and how far you spread them out and the viewing distance will affect the quality of the result. No doubt there is some complex mathematics to work out the optimum but rest assured I will not cover that here.

The figure of 1,280 dots I mentioned is straight off the specifications of the Coolpix 900. It can store an image which is 1,280 dots wide and 960 high. This means a total of greater than one million dots. Mega being the prefix for million the Coolpix 900 is known as a mega-pixel camera. So where does it keep all that data? For the Coolpix 900 Nikon are using a special data storage card. The tiny device can hold a number of images. The number of images depends on the capacity of the card, of course, but also on another factor.

The camera can offer three different levels of quality. Because over a million values is a lot of data the camera squashes this down. A company known as the Joint Photographic Experts Group (JPEG) worked out how to throw much of the data away but

keep enough to reconstruct a fair representation of the original picture. A JPEG (as they are known) file with the maximum quality option is hard to distinguish from the original.

Nikon offer the option of fine, normal and basic quality. Moving one step in quality is a doubling or halving of the amount of data kept. This means that normal quality gives the camera the ability to store twice as many images. Basic quality stores four times the number of shots as fine quality and twice that of normal. The cards themselves have a capacity rating. The standard card is four megabytes (4mb) and this will hold 12 normal images. A much higher capacity card is offered as part of a so-called premium bundle.

Back to the camera itself now. It can be used point and shoot style but has the usual flash control and red-eye reduction system. The AF system works on a continuous basis when the built-in screen is active and goes over to single shot mode when the screen is switched off. The screen is clear and bright and I found myself using it in preference to the viewfinder.

Matrix metering is the order of the day but the option of centre-weighted or spot metering when in the advanced mode is an interesting one. Switching from auto mode to this manual mode leaves auto-exposure in place but adds metering options, exposure compensation and black & white shooting, for example. The shutter mechanism offers speeds from 1/750th to 1/4 second.

Immediately after a shot has been taken it can be viewed on the built-in screen. If necessary one can discard the shot and re-shoot. Whilst the screen is on, the image constantly updates and then freezes for a short while so you can check the pictures that has just been taken. The four AA cells that power the unit will last longer with the screen off but I

think loading up with lithium AA cells and bearing the consequences of leaving it on would be my recommendation. The screen will go off after a short wait in order to avoid wastage.

The camera is supplied with lithium AA cells, case and

sufficient cabling to connect to a PC, Mac or TV/video. Some photo software and slide show software is also provided. More technical data is weight 360 grams without batteries and the dimensions are 157mm by 75mm by 35mm. Pricing is £700.00 for the basic kit and £820.00 for the

premium bundle with 12mb card, mains unit and PC card adapter. We have sold out of our first shipment and are taking further orders.

by Tony Munday

ADVENTURE IN THE STOCK ROOM II - THE FINAL CONFRONTATION

No sooner had I written about a variety of items other than cameras and lenses, hoods and filters, cases and straps than a whole lot more came to light. The millennium clear-out may be a suitable description!

The magic towels captured the imagination and are now sold out. The sew-on patches were popular and sold out. However we have located a good supply of the patches in Canada of all places and these will be with us soon - sorry for the delay! Incidentally there will be no more magic towels as far as I can see, not unless a resourceful reader has a giant multi ton press.....

You will never guess what the nice yellow Nikon coffee mugs at £6 do when heated up! The F5 silhouettes (4 in number) change from plain black to depict a variety of awards that the camera has won around the world. Before you enquire I didn't find any F5 cameras lying forgotten in the stockroom!

Waiting secure in their cardboard tubes are 2 posters of very differing character. The older of the two is a beautifully drawn rendering of a 1959 64XXXXX series Nikon F (the first F). It is 23" high x 17" wide. The camera is a plain prism version shown beside a first type waist level finder, an



F-36 motor drive and the nice classic lenses, the 5.8 cm f/1.4 Nikkor S and the 5.5cm f/3.5 pre-set Micro-Nikkor (the 1 to 1 version). This latter was recently featured in the Nikon Legend series. The first type clip-on exposure meter is there too. The camera itself is in exploded diagram form in black on a lovely silver grey



background. This poster was drawn by Donal Begley, designed by Tony Hurst and the researched information came from Robert Rotoloni and Gray Levett. All this for £9.95 + postage. A lovely item for sure.

The other poster is an illustrated History of Nikon specially put together by Nikon UK with assistance from Gray Levett. It is in full colour and covers a wealth of interesting topics about the marque. We are seriously considering moving our one from just by our entrance door as visitors get engrossed and block the way in or out! It costs £10.95 including cardboard tube and UK postage.

Updating your information on badges, leads me to say that F5 and F90X ones are sold out, yellow square Nikon ones which were thought to be finished are not (sorry for false alarm to some people), F4 badges celebrating the model winning the 1989 camera Grand Prix are available at £3 and F-601 badges exist at £2. There are 22 F5 watches left at £35.

As well as the transfer sheets featuring the F90X and F5, another one is available. It features the Nikon logo in the familiar blue, yellow and black in about 6 rectangular transfers adding up in size to A4.

In ascending order of

3

scarcity my 3 final finds to mention are a dozen or so keyrings at £3 which are 2" or so square in blue on white stating the very obvious truth "Nikon - we take the world's greatest

pictures". Then a trio of neat table tripods about 6" leg length in black with a gold Nikon logo at £8.

Lastly a single solitary Nikon stapler in black about 3" long at

£10 will have to be snapped up quick before I nab it for myself...

by Nick Wynne

THE LONG AND SHORT OF IT

by Simon Stafford

You may well have heard the old adage that "less is more", and I am a firm believer that it applies to photography, especially photographic equipment. In the past I would habitually carry six or seven prime lenses to cover my most frequently used focal length range of 20mm to 200mm, and by the end of a day my back was telling me it had had enough.

Now I can travel light thanks to the quality of modern zoom lenses, with my "basic kit" comprising three Nikkor optics; 20-35mm f/2.8, 60mm f/2.8 Micro, and 80-200mm f/2.8. Yet despite the wide variety of subjects that I photograph eighty percent of my pictures are taken with just these three lenses. I find the zooms allow me to work quickly, significantly reducing the amount of time I spend changing lenses and filters. Thus the thought processes of "seeing" a picture, and the flow of developing initial ideas occurs far more easily with fewer interruptions.

However, every so often there are occasions when the reach of a 200mm is just not long enough. I find I am unable to sufficiently isolate an element in a landscape, or the detail of a building to the degree that I want, and I regret having left my 300mm f/4 IF-ED behind. So when Nikon announced the launch of their new 70-300mm f/4-5.6 'D' specification lens with ED glass I thought my prayers had been answered, particularly with the price

set at a very reasonable £269.00.

My first impression on opening the familiar 'gold' Nikon box was that it, and the packaging within, weighed almost as much as the lens! At 515 grams (18oz) this optic is definitely in the lightweight division, a significant reduction compared to its predecessor the 75-300mm f/4.5-5.6 AF, which weighed in at 850g (30oz). In part this reduction has



been achieved by constructing the lens barrel from plastic, but the new lens differs in other respects. Physically much shorter, only 127mm (5") long compared to 172mm (6.8"), it has lost both the focus range limit switch, and tripod collar incorporated in the earlier version.

There are some similarities between old and new. The new version is a two ring design with a

very wide zoom ring positioned nearest the camera, and a narrower front ring for focusing. It has a convenient and popular 62mm filter thread allowing the user to fit a wide range of affordable filters. Best of all it keeps its older cousin's minimum focus distance (MFD) of just 1.5m (5 feet), but now with Nikon's renowned Extra Low Dispersion (ED) glass, and 'D' (Distance) specification to assist in Matrix metering functions.

Doubtless my mention of a plastic lens barrel and no tripod collar will have some potential users of this lens feeling rather sceptical about its quality, especially if you are already familiar with the earlier lens. Let me dispel your fears here and now.

The focusing ring has a very light action, with a throw of about 120 degrees from infinity to MFD at 1.5m giving a good 'snap' to the image on the focus screen. Used with a Nikon F90X body the auto focus (AF) was very quick and positive: a benefit of such a light design. The front of the lens extends with both the focusing and zooming actions, but the filter ring only rotates when the focus ring is turned. This allows you to position say a polarising filter and then adjust the focal length without changing the orientation of the filter, a very useful feature when fine tuning a composition.

So what of the optical quality? Personally I cannot abide all these graphs and charts published in lens reviews, for me they have no practical application outside of a laboratory. Most high

quality lenses these days will out resolve all but the finest grained, sharpest film emulsions, therefore, the film and not the lens becomes the limiting factor, and if you handhold a majority of your shots you become the limiting factor!

I prefer a practical field test. So with my FM2, used for its mirror lock-up feature, secured to very heavy Gitzo tripod weighed down with a sand bag, and cable release, I shot some Kodachrome 25 and Fuji Velvia.

I am pleased to report optical quality is superb. At 300mm and maximum aperture (f/5.6), there is a hint of softness in the extreme corners, which is gone by f/8. Similarly at minimum aperture (f/45). At the short end (70mm) under a good quality 8x lupe I can see no such loss of quality in the transparencies. The lens delivers sharp high contrast images, and with its commendably deep lens hood, appears able to cope well with difficult flare inducing backlit situations.

Where this lens really shines for me is it's ability to close focus down to 1.5m at all focal lengths giving a magnification at 300mm of 1:3. Shooting pictures of wildfowl on my local ponds proved the worth of this lens. I could work from a range that filled the viewfinder with my subjects, but kept me at a distance that did not disturb

them. Working distance is extremely important if the subject cannot be approached too closely. It also allows plenty of room for reflectors or fill lights to be positioned without encroaching on the subject or lens. Since the new lens is



equipped with the 'Distance' or 'D' technology using the Nikon SB24/25/26/28 speedlights for fill-flash is as simple as simple can be.

If I have a gripe then it must be the missing tripod collar. The 75-300 f/4.5-5.6 AF was provided with a collar for reasons of mechanics to ensure no excessive force was applied to the camera body tripod socket. It is not, however, the firmest of devices. It certainly does not guarantee sharp results, especially if the camera is being operated remotely, and shutter speeds are in that critical range of 1/30 to 1/2 of a second.

The weight of the camera body shifts the centre of gravity to a point behind the tripod collar, and so any vibration caused by

the operation of the shutter can result in movement of the lens, even on a solid tripod. Beware!

The new lens is so much lighter that it does not require a collar for reasons of stability, but in terms of ease of operation I think it's omission is a pity. Why? Well first, I use a heavy Gitzo tripod for virtually all of my photography, secondly I like to give editors a choice by shooting both horizontal and vertical compositions of most of the photographs I take. If I had my way every lens would be fitted with a tripod collar, then I could flip the camera from horizontal to vertical, and back again, around the central axis of the lens with the minimum of re-composition. Having to turn the camera/lens combination over on its side shifts the lens axis off the subject and the whole shot requires recomposing.

Gripe over - and I am the first to concede that the provision of a collar on this lens would not only increase weight and bulk, but no doubt cost as well. All factors which would negate the attributes of this highly capable and very useful optic. I will definitely be adding one to my kit. The long and the short of it is that on those occasions when I know that I will not require the wide aperture of my 80-200mm f/2.8, this lens will give me far more options. Well done Nikon!

by Simon Stafford

"Thank you for the 55mm f/1.2 Nikkor-SC, scalloped barrel lens that you gave an excellent category. I wish everyone used your way of grading second hand equipment.

In my mind I was expecting a well used slightly tatty 20 odd year old lens but as always you gave me a very pleasant surprise, in the box that arrived within 16 hours of the order was a clean and very well looked after example. Many thanks."

R. Jones, Wiltshire

HEATHER ANGEL JULY WORKSHOP

LAST ORDERS PLEASE!

Regular readers of this publication will have noticed that we have been promoting our workshop with world renowned wildlife and natural history photographer Heather Angel. You have a choice of days Saturday 25th or Sunday 26th July 1998. Beginners and experts alike are welcome. There is no need for anyone to be intimidated and there is no-one whose photographic capabilities cannot be built up! This is a very friendly and enjoyable affair.

The venue is elegant Saint Hill Manor, East Grinstead, West Sussex. This gracious manor is surrounded by 55 acres of landscaped gardens and grounds.

If you are travelling by car you will notice that Saint Hill Manor is sign-posted on all the major roads as you approach the outskirts of East Grinstead.

If you travel by rail the nearest station is East Grinstead (London Victoria, 55 mins). There are usually taxis outside the main entrance. The journey to Saint Hill Manor takes about 5 minutes.

The day begins with coffee and tea served between 9.00 and 10.00am. This is followed by Heather's illustrated lecture "A Seeing Eye" with a wide range of subjects - landscapes, plants,

animals and close-ups. Heather will give many tips and explains why particular lenses were chosen for specific shots.

Immediately following the talk you will have the opportunity to handle a wide range of Nikon equipment. Mark Fury from Nikon UK as well as the staff of Grays of Westminster will be available to discuss any equipment related subjects. Following lunch

we have outdoor photography where Heather will demonstrate lighting techniques and answer your queries.

The latter part of our day begins with afternoon tea and coffee, after which there is the opportunity to have your own work evaluated if you so wish. Slides will be projected.

The fee is £120.00 for either day. Please telephone 0171-828 4925 to book your place.

We look forward to spending a very enjoyable day with you.



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ADVENTURE IN THE BOOK ROOM - THE FINAL CHAPTER



Following the success of Nick Wynne's adventure in the stockroom I am happy to say that we have unearthed copies of some out of print titles. The first of these is the excellent F90 book by Michael Huber. If you have one of these cameras and would like to know how to get the best out of it I can certainly recommend this book. Huber has a style that is thorough and orderly so you should find what you need quite quickly.

The F90 book covers the basics needed to operate the camera, and as such can replace the makers handbook quite readily, but also goes into detail such as how the matrix metering works in practise. Huber did a good deal of study and practical testing and the results are given in this book.

When the F90X arrived there was an urgent need to produce a book and the result was a title quite strongly based on Huber's original F90 guide. This is a testament to the validity of Huber's approach.

Huber recognised the need to go beyond the operation of the camera itself and covered how the flash system works with the F90 plus how the camera fits into the famous Nikon system. Any F90 owner will find something of benefit in this book. We have reasonable stocks and hope to cope with demand. As the F90 is still a strong seller secondhand we do not plan to completely clear

the stock and have therefore priced the book at £8.00. We will post the book within the UK or Europe for just £1.00 or to the rest of the world for £2.00.

The second book we have to offer is also a Huber title. Rather like the F90 the SB-25 is an excellent piece of equipment but has been replaced by a model with some improvements. We had little opportunity to gather stock of the SB-25 book when it went out of print so were glad to be offered some. The comments relating to Huber's approach to the F90 book are equally valid for the SB-25 book.

Sadly we have quite limited stock of the SB-25 book so would suggest responding quickly. Even at full price we expect to sell out so in the spirit of things we will accept £8.00 a copy with postage as per the F90 book offer. But do act quickly!



by Tony Munday

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The Nikon Legend - Part L

by Gray Levett

One of the most fascinating attachments made for the Nikon F was the Speed Magny which allowed one to produce "instant" large format Polaroid or conventional photographs.

Two Speed Magny attachments were manufactured. The Model 100 accepts Polaroid type 107 and type 108 3 1/4 x 4 1/4 film packs. Model 45 accepts standard 4 x 5 holders for Polaroid as well as sheet film. Speed Magny attachments were intended for use with 200mm and longer lenses to avoid vignetting. However, excellent results could be obtained with

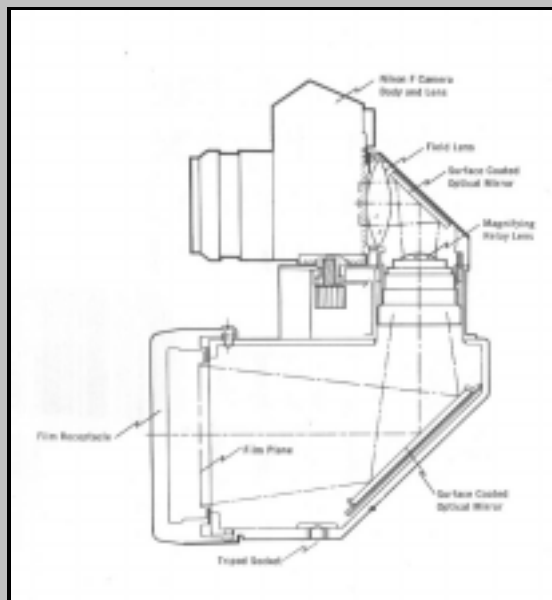
shorter focal length lenses too.

These units were made ready for the 1964 Olympic Games in Tokyo by the Speed Magny Company. Seeing the possibilities that this product could offer, the Nikon Corporation purchased the Speed Magny Company and by 1966 this item could be seen in Nikon price lists.

The Speed Magny has an optical system which increases the effective focal length of the camera lens 3.2 times with the Model 100, and 4.1 times with the Model 45. In 1969 Nikon introduced the Speed Magny RF which stands for "roll film" and accepted Polaroid type 3 film.

The Speed Magny optical system comprises a magnifying relay lens (a 50mm f/2.8 El-Nikkor) in combination with a coated field lens and 2 optically flat mirrors. Due to the difference in proportions between the 35mm and 3 1/4 x 4 1/4/4x5 formats, slightly less picture length is recorded onto the film than is shown in the F finder.

How does it work? If you look at the diagram you should get a good idea of the process.



Light travels through the Nikkor lens in use and passes on through the field lens before striking the surface coated optical mirror which sits at a 45 angle to it. From there it travels through the El-Nikkor enlarging lens (described as a magnifying relay lens) onto a further optical mirror which in turn reflects it onto the surface of the film within the large format film holder. Quite a journey for light to travel and as one would no doubt expect a loss of light to the tune of 4 stops occurs.

The Speed Magnys are cumbersome and awkward to use but their benefits far outweighed any of these annoyances. They were put to good use by the medical profession as well as news and commercial photographers.

*Grays of Westminster
Exclusively...Nikon
40 Churton Street
Pimlico
London SW1V 2LP
England*

*Tel: 0171-828 4925
Fax: 0171-976 5783*

*International:
Tel: +44 171 828 4925
Fax: +44 976 5783*

*email:
info@graysofwestminster.co.uk
website:
www.graysofwestminster.co.uk*

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Editor: Gray Levett

Contributors: Tony Munday, Gray Levett, Simon Stafford, Nick Wynne

Photography: Tony Hurst, Nikon Corp, Simon Stafford

Typography: Jacqueline Munday

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