

# SPECIAL LEI



LEICA FOTOGRAFIE INTERNATIONAL



# DIGITAL MODUL R

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SPECIAL: DIGITAL-MODUL-R

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DEAR READERS

In this special edition on the Digital-Modul-R we present to you, in addition to an abundance of information on Leica's professional digital system, the related digital work of several prominent photographers. In asking them what their impression was of the Digital-Modul-R the answers we received were at times quite astonishing. Our thinking was that most would be drawing upon digital photography for sideline projects, never actually believing that it could facilitate expression just as effectively as with the time-honoured medium of film.

It turns out that the majority have become completely engrossed in digital photography. Occasionally, it sounded as though they were beginning to remember film as an old friend to whom they had only little contact. French photographer Bernard Richebé, for instance, whose black and white work is featured starting page 36, experienced digital technology as a liberating kick, providing his creativity with new impulses. German photographer Uwe Dürigen, who at first had to be talked into giving the Digital-Modul-R a try, is now so convinced by its quality that he goes as far as to travel with a battery charging emergency generator.

Now and again a sceptic will express how digital pictures lack soul. But hand to heart: both film and sensor are technical procedures for image making, and technology itself does not have a soul. Should one ascribe this quality to film, then perhaps it refers to the aura that arises due to the fact that our collective memory was largely moulded by film. In the end, however, it's really up to the photographer, whose skill ultimately defines the character of a picture. In this sense, enjoy the read! THE EDITORS



Cover photo: Joerg Schwalfenberg, Hair/Makeup: Martin Schmid/Optics, Model: Flavia Lang/Modelwerk; special thanks to Briese Studios, Hamburg



The Digital-Modul-R turns the R9 into a professional digital camera with brilliant photo quality

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LEICA CAMERA GERMANY

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## THE DIGITAL-MODUL-R

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With the Digital-Modul-R, Leica now enables owners of an R8 or R9 the unique possibility to convert their 35-mm camera into a high-performance digital solution. Here an in-depth appraisal.

BY HOLGER SPARR

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Leica's entry into the market of professional digital cameras may have taken longer than hoped for, but the reason for this was quite simply that the Solms-based company felt that an active involvement in this market segment would only make sense once analogue and digital were capable of generating the same, super-quality results. Leica customers expect the R system to deliver nothing else than supreme photo quality whether with film or chip.

In the area of 35 millimetre, Leica has in fact accomplished a singular solution: the Leica R9, which normally operates with film, and its R8 predecessor, which has an almost identical body, can now be equipped with a digital back, transforming the analogue into a digital

camera by means of a simple manoeuvre. The only difference between this digital camera and its analogue counterpart is that it registers the exposures via a 10-megapixel CCD sensor, storing them on an SD memory card instead of on film. In terms of size and weight, the digital R9 is no different from the analogue version mounted with an optional Motor-Drive-R for automatic film transport.

In order for the Digital-Modul-R to be completed, Leica teamed up with two distinguished partners: Kodak is considered one of the most experienced developers of first-class image sensors, equipping the vast majority of digital backs for medium format cameras. One of the most famous developers of such back units, in turn, is Imacon

## TECHNOLOGY R SYSTEM

from Denmark. They now belong to Hasselblad and were originally in charge of the conceptualisation of the module. Together, the three companies planned and developed the Digital-Modul-R, taking on the by no means trivial task of converting the R9 into a fully-fledged expert digital camera, without depriving the camera of its ability to work with film. It is this choice between film and chip that makes the R9 with the Digital-Modul-R such a unique concept. Depending on application and need, the owner of this double-action system can always choose whether to insert a 35-mm round or a memory chip. That the digital picture quality will

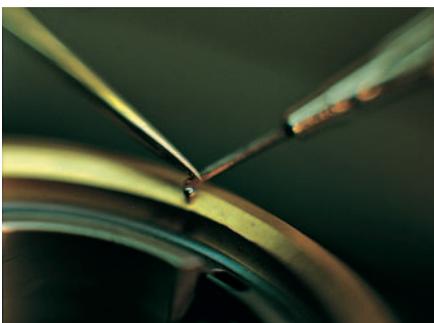
satisfy the demands of the professional world is guaranteed thanks to a 10-megapixel resolution, a high input dynamic range and an accurate colour recognition; and that the concept is beginning to bear fruit becomes evident when we study the respective field reports or what Leica considers the favourable increase in demand.

### R-SYSTEM BASE

From a formal point of view, the Digital-Modul-R is an accessory item for Leica's R8 and R9 and thus an element of the wide-ranging R system. Leica's single lens reflex system can look back upon a long tradition, scoring high marks in all areas of photo technology with highest precision and quality, unrivalled longevity and simple and intuitive handling. An excellent example for these virtues is the core piece of the system, the R9. In spite of its comprehensive features and options, the camera prides itself on its minimum number of control elements. The photographer is thus

never faced with mysteries. Behind the unassuming details, however, one will discover great finesse and technology. Take the camera's viewfinder, for instance, which is known to be one of the brightest in 35-mm photography: it enables eyeglass wearers to see effortlessly into its corners, featuring dioptre correction and a curtain shutter against stray light; and the matt screens are also interchangeable.

Countless other details – such as a mirror pre-release against shake, the classic synchronised flash socket for studio light systems, the multiple metering system, which can be influenced in steps of tenths, and much more – are the result of the fact that the R9 was constructed in consideration of people who would be working with the camera on a daily basis. As part of the comprehensive accessory programme we find the Motor-Winder-R and the slightly larger Motor-Drive-R, facilitating up to 4.5 exposures per second. The slightly unusual form of the camera is very ergonomic;



The R9 is built from high-tech material such as magnesium for the body. Most of the assembly process is done by hand, which, through constant control over the working steps, secures higher quality

all control elements are situated in the right place and the camera rests securely in one's hands. The greatest plus of the R system and surely the main reason for its excellent reputation is the vast array of lenses, which like the camera itself are handmade. See the article on page 22 on Leica R lenses, of which more than a few are known to be absolute top of the class.

### BASIC SET-UP

The Digital-Modul-R consists of two basic components. The digital back itself replaces the standard back with film pressure plate; it contains the CCD sensor, the main electronics and the slot for the SD memory card. A power supply unit is connected from below and contains the lithium ion battery as well as the motor, which is also required in digital operation; it clamps the shutter, which, incidentally, can be disengaged temporarily with the quick-release lever. The camera with digital back is practically as heavy and large as the camera with motor drive. The delivery package also contains a viewfinder matt screen, showing the limited picture area of the image sensor within a corresponding frame, and other accessories, such as a charger, a bag for the back unit, a memory card and software.

Apart from the matt screen, the R8 or R9 requires no modification or re-equipping for digital operation. Fortunately, Leica had already included all of the important electronics for the communication with the digital back during the development of the R8 in 1996, and this is what made the whole thing possible in the first place. The only inconvenience that owners of an R8 have to accept is that the R8 cannot tell the digital module when to switch off. Thus it has its own power button.



The R9 gets by with very few, conveniently placed, control elements. The rather unusual form of the camera guarantees smooth operation



With attached Digital-Modul-R, the R9 is practically as large as with the Motor-Drive-R. The protruding monitor of the digital back unit does not obstruct the view through the viewfinder



### TRANSFORMATION

For the initial installation of the Digital-Modul-R the viewfinder matt screen is traded for the supplied version with the additional frame indicating the digital sensor's view angle. Included in the delivery is a matt screen with a split image and micro prism ring, but

Leica now also offer the various matt screens with the respective sensor frame (except the clear glass screen). In 35-mm mode, those who can accept the then superfluous frame can and should leave the matt screen installed in the camera. After all, the changing of screens is the most time consuming aspect of the conversion.

## TECHNOLOGY R SYSTEM



Once the film back unit and battery box of the R9 have been removed, the conversion into a digital camera is a matter of seconds: first, the digital back is hinged onto the camera, then the protective cap of the sensor is removed, the back is shut closed and finally the power supply unit with the battery and motor is inserted from below

Using the supplied tool, one then loosens the latch of the film back and installs the digital back in its place. The sensor comes with a protective cap. It should only be removed just before closing the back to prevent dust from getting onto the sensor. Just like the motor drive, the next step would be to remove the battery component and connect the power supply unit. Once the memory card and the battery have been inserted, the digital Leica R is ready to shoot. Re-equipping the camera for film would then simply happen the other way around. With practice, the

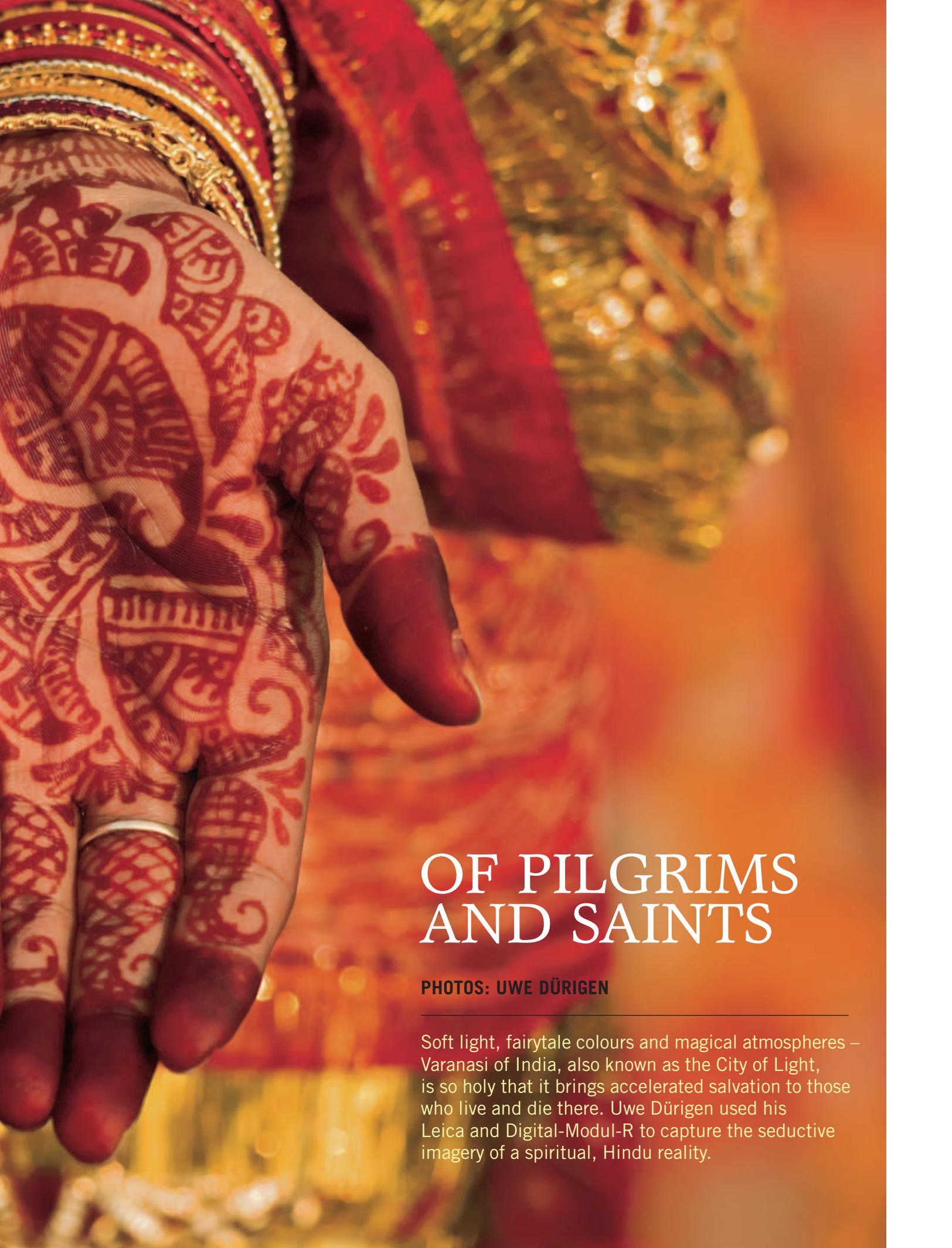
whole manoeuvre takes no more than 30 seconds, quick enough to make a second camera body for a switch-over to film unnecessary.

### INNER VALUES

At the heart of the digital camera system we have the image sensor, which was developed by Kodak following Leica's specifications. The key condition, to force the sensor into the unaltered, 24-by-26-mm film window of the R8 or R9, required the development of a new sensor concept. Since the chip had to

contain the connecting wires and a few circuits, the light-sensitive area measures only 26.4 by 17.6 millimetres; in other words, the sensor is forced to produce a crop enlargement of the 35 mm picture. In digital operation, the lens focal length is consequently multiplied by a 1.37 factor (rule of thumb: one third more) to attain the same view angle as one would attain with film.

What is rarely seen is that the enlarged crop section does change the perspective, but not the lens's depth-of-field range. If, in digital operation, one wants to reach the same depth of field as



# OF PILGRIMS AND SAINTS

**PHOTOS: UWE DÜRIGEN**

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Soft light, fairytale colours and magical atmospheres – Varanasi of India, also known as the City of Light, is so holy that it brings accelerated salvation to those who live and die there. Uwe Dürigen used his Leica and Digital-Modul-R to capture the seductive imagery of a spiritual, Hindu reality.



**Holy cow amid the traffic.** Elmarit-R 19 mm  
f/2.8, f/16, 1/15 sec, ISO 100

Varanasi, one of the oldest cities in India, is situated in the north of the country at the bank of the River Ganges in Uttar Pradesh. It is home to over a million and is known as the holiest city in Hinduism. Spiritual seekers have been attracted to Varanasi for more than 2500 years: bathing in the Ganges is said to purify from sin, and those who die there will find salvation by being cremated and having their ashes cast into the river.

In December 2005, Uwe Dürigen travelled to India to document religious life in Varanasi. With a mindfulness and sensitivity for unexpected details and insights, the photographer from Ettlingen, Germany, was able to produce a series of mystical exposures. A

transcendental light gently caresses his well composed photographs, taking us deep into the ritualistic lifestyle of Varanasi.

Predominantly active in Asia, 38-year-old photographer Dürigen focuses on social, cultural and political issues. His intention is to deliver authentic insight: "I use my camera to accompany a situation, not to stage one. I also feel that reportage photography is not an exact reflection of reality. The photographer is already interpreting a situation with the mere choice of perspective and lens." The German photojournalist produced his reportage on Varanasi using Leica's Digital-Modul-R. LFI sat with him as he talked about his experiences. **FAY**



**Right: Plunging into the river. Pilgrims use the sacred water for prayer and leisure.** Elmarit-R 19 mm f/2.8, f/4, 1/750 sec, ISO 200



**Above: Sideshwa explains the ritual of smoking hashish. For the Sadhus, this drug brings direct contact with the gods. According to legend the Hindu God Shiva smoked a whole mountain of hashish.** Apo-Summicron-R 90 mm f/2 Asph; **left:** f/5.6, 1/125 sec, ISO 100; **middle:** f/4.8, 1/125 sec, ISO 100; **right:** f/2.8, 1/2000 sec, ISO 200

**Left: Sadhu 'Kailash Muni' has vowed to years of silence.** Summilux-R 80 mm f/1.4, f/2, 1/180 sec, ISO 200



**LFI:** Mr Dürigen, at what point and for what reason did you start working with the Digital-Modul-R?

**Uwe Dürigen:** I bought my DMR in the summer of 2005. Before then, I'd already been borrowing a digital camera system for specific assignments. What I soon took for granted was the speed and the immediate control over the results; but what the competing products seemed to lack was the brilliance and sharpness of Leica cameras and lenses. Here, the Digital-Modul-R offered superior quality. My first project already took me to what was probably the most remote area of Mongolia, the Altai Mountains, where I used the Digital-Modul-R to document the Kazakh Nomads and their ancient tradition of hunting with golden eagles for magazines 'Terra' and 'LFI'.

**LFI:** In what way has your photographic approach changed since you've started working with the Digital-Modul-R?

## FACTOR 1.37

One of the key arguments in favour of the Digital-Modul-R is that you can benefit from the potential of R lenses – ranging from 15 to 800 millimetre focal lengths – both in analogue and digital use. 35-mm photographers will simply have to befriend themselves with a slightly altered perspective.



Super-Elmarit-R 15 mm f/2.8 Asph: expensive luxury for friends of extreme perspectives



Vario-Elmar-R 21–35 mm f/3.5–4 Asph: compact and better than the fixed focal lengths

Maximum system compatibility has always been a founding virtue of Leica – to this day, owners of an R3 can still use Leica’s most recent R lenses, and an R8 or R9 remains companionable with almost all lenses throughout the past 40 years of Leica’s SLR history. Even the ones featuring the Leicaflex metering cams can be reinforced with a ROM module. Since photokina 1998, this is what has been enabling today’s R lenses to electronically transfer parameters, such as aperture, focal length and vignetting, to the camera.

Even during the inception of the Digital-Modul-R concept, this general idea played a central role. For Leica R photographers who already own an R8 or R9 and an array of lenses, the Digital-

Modul-R would appear to be a logical next move, if an entry into high-end digital photography is on the cards. Those to whom the Digital-Modul-R marks the occasion to enter into the Leica R system not only have the prospect of an unrivalled camera concept with outstanding ergonomics, technology and handling, but also – and above all – one of the best optical systems in the world for 35-mm photography.

### KEYWORD: 35-MM FORMAT

Leica, of all brands, as the pioneer of 35-mm photography, is now, with the digitalisation of the R system, being unfaithful toward this format. At least this is what critics never cease to slate. For reasons mentioned on page 6, the

sensor is slightly smaller than 35 mm film – while the latter has a diagonal of 43.3 millimetres, the sensor of the Digital-Modul-R has a 31.7-mm diagonal; and when one alters the format of the exposure medium, the behaviour of the lenses changes accordingly. Those who as 35-mm photographers occasionally stray into medium format will know how confusing the whole thing can be. A lens that was built for the image circle of a 6-by-7 system has, with a 100-mm focal length, a view angle of approximately 48 degrees, which more or less equals a 50 mm lens in 35-mm lingo. Yet the reorientation with the Digital-Modul-R is not so severe. One can even claim that the related crop factor is fairly moderate, resulting from the division of the



**PHOTOS:** JOERG SCHWALFENBERG  
**HAIR/MAKEUP:** MARTIN SCHMID/OPTICS  
**MODEL:** FLAVIA LANG/MODELWERK  
**THANKS TO** BRIESE STUDIOS, HAMBURG

Photographer Joerg Schwalfenberg from Hamburg, Germany, not only specialises in the field of portrait and people but has also been working with the Digital-Modul-R since its market inception – this was ideal for our objective, as we wanted a cover photo that would demonstrate the potential of the Digital-Modul-R in a professional studio environment. The urgency with which the photographs were required did little to faze the photographer. This is simply what Schwalfenberg does, day in and day out. The photo model, Flavia Lang, was hired at once and the studio and lighting equipment rented from Briese, a Hamburg-based company. Joerg Schwalfenberg first opted for a set-up consisting of one main light and several bright-ening panels. Later, he drew on a ring flash to help brighten up the shadowy areas.

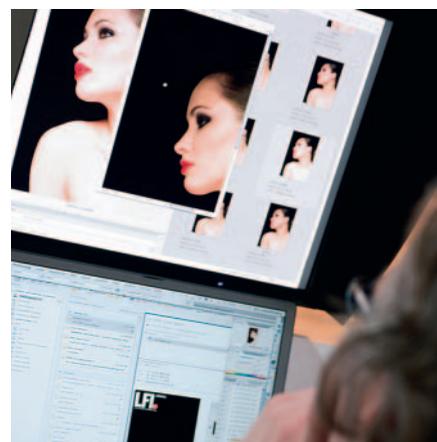
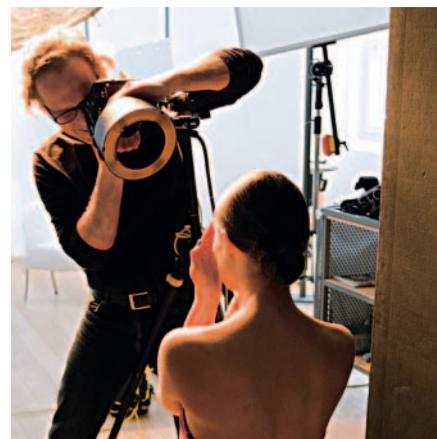
The advantages of digital photo technology were of course implemented from the start. This demanded a PowerBook and a calibrated monitor in the studio set-up. The LFI art direction had provided the photographer with a wealth of ideas and draft layouts, enabling the team to assess the exposures in an eventual publishing context. Thanks to a mobile phone and the PowerBook's network port, the art director even took the liberty to

be in Berlin on the day of the shoot. This was no problem: samples were sent back and forth, there was room for spontaneous ideas to be developed and old ones to be discarded. In an analogue photo session, in which interim results can only be seen in Polaroid, this degree of flexibility would have been out of the question. The continuous and immediate verification of the material – on location – was immensely helpful when it came to optimising lighting, styling and make-up.

### THE PROJECT

A glamour shot, such as our cover photograph, not only demands extra care on behalf of the make-up artist and great accuracy on behalf of the lighting, it also requires extensive digital manipulation: every strand of the model's hair, every vein and pore have to be retouched.

Here one cannot help but feel a little sorry for the model, who herself was already very beautiful. We wanted therefore to keep the amount of retouching to a minimum and avoid robbing the model of her individuality. In spite of the many preparatory efforts – where the stylists paid extra attention to every single hair – there was plenty of opportunity for digital post production.



**A single main light illuminated the face perfectly with the help of a few brightening panels and a ring flash. The exposures were frequently evaluated on the computer screen**



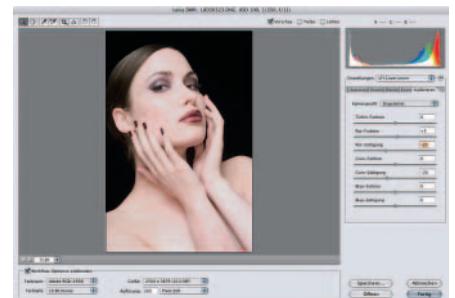
Several hours of retouching were necessary before the picture looked spotless. Eyes and hairs received extra attention. Leica R8, Digital-Modul-R, Macro-Elmarit-R 60 mm f/2.8, 1/125 sec., aperture 11, ISO 100



Before manipulation

## FIRST IMPRESSION

Joerg Schwalfenberg likes to view and evaluate his material in Adobe Bridge. He uses Adobe Camera Raw to calibrate the gradation, colour and contrast of his pictures and to transform them from Raw into Tif format. Then the pictures are imported into and retouched in Photoshop with 16 bits per colour channel. For optimum results, the pictures must only be sharpened at the very end of the imaging process. In our case it was performed by the Alphabeta repro service, where the pictures



Perfecting colour: in addition to exposure and gradation, the colour saturation is best adjusted in Adobe Camera Raw. Here, red and green were reduced with their respective sliders to generate a cooler mood