

FUJIFILM

UV/IR
Digital Camera
Technology



IS Pro

IS-1

See Things Differently

 SUPER
CCD SR PRO

RP Processor 

IS Pro DIGITAL CAMERA



Fujifilm is proud to introduce the world's first professional digital cameras that see past the limits of the human eye.

The photographic creative process requires light. Yet the mind's eye is not limited to what we see with our own eyes, but digital cameras have little inherent ability to see past the spectrum of creativity. That is until now!

The IS-1 neo-SLR and IS Pro DSLR are the world's first production professional digital cameras that can see from the ultraviolet (UVB) through the visible and into the near infrared portion of the light spectrum. The advanced ultraviolet and Infrared film technologies and techniques were pioneered by and once limited to scientific and law enforcement professionals. Now these two new cameras open a new era that unleashes the creative potential that embodies FUJIFILM's passion for photography.

IS Pro Real Photo Technology Pro

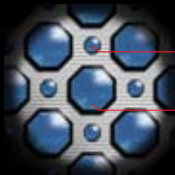
The next stage in the evolution of advanced digital image processing technology

In many scientific applications involving alternative light source (ALS) photography, quite often there are very limited amounts of available UV or IR light reflecting from the subject. Therefore, higher ISO's in combination with low noise CCD signal processing is critical. Fujifilm has introduced "Real Photo Technology Pro" to overcome signal to noise limitations that plague many third party IR camera conversions. It fuses our new wide spectrum sensitive Super CCD SR Pro and RP (Real Photo) Processor Pro to realize ultrahigh resolution with superb S/N ratios. The twin pixel array of Super CCD SR Pro provides a wider dynamic range and rich tonality for performance and image quality beyond imagination.

NEW

Super CCD SR Pro High Sensitivity ISO3200 & High S/N Ratio

Emulating the composition of negative film, the unique double-photodiode matrix of Super CCD SR Pro consists of 6.17 million high-sensitivity S-pixels with large light reception surface area and 6.17 million R-pixels for wide dynamic range with small light receptor area. The large 23.0mm x 15.5mm CCD with its high resolution canvas of 12.3 million effective pixels also achieves a dynamic range of 400%, approaching that of negative film. It's sensitive to a spectrum capture range between 380nm and 1000nm. Also its newly optimized protective glass filter reduces problematic dust cleaning, yet enables maximum UV and IR penetration with limited moiré pattern effects. Achieving both high resolution and high S/N ratio.



"R" pixel for extended dynamic range

"S" pixel for high sensitivity

SUPER CCD SR Pro

NEW

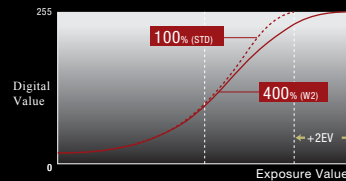
RP (REAL PHOTO) PROCESSOR Pro Exhaustive Noise Reduction & Smoother Tonality

This newly developed processor features the very latest in digital image processing technology. Using "Double Noise Reduction" and a unique advanced algorithm, RP Processor Pro accurately identifies, separates and eliminates virtually only noise from the image data signal. Even at the highest sensitivity of ISO3200, the clarity is amazing.

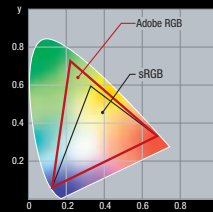


Freedom to customize the extended dynamic range

The extended dynamic range setting can be precisely and optimally set according to subject and scene conditions. In addition to Auto for automatic range selection, there is a Manual mode offering a selection of 6 steps: 100% (STD), 130%, 170%, 230% (W1), 300% and 400% (W2). Select 400% (W2) and get maximum performance of both "S" and "R" pixels for an exposure level equivalent to +2EV and capability to capture outstanding photos in high-contrast scenes.



Extended dynamic range image formation



Adobe RGB Color Gamut (chromaticity diagram)

Adobe RGB Color Space Support

IS Pro fully supports Adobe RGB color space, the choice and standard of graphics professionals and the printing industry. The superior color gamut of Adobe RGB color space fills the photographic expression needs of today's professional.



18a UVIR Filter Effect

"Face Detection Technology" based on FUJIFILM "Image Intelligence"™

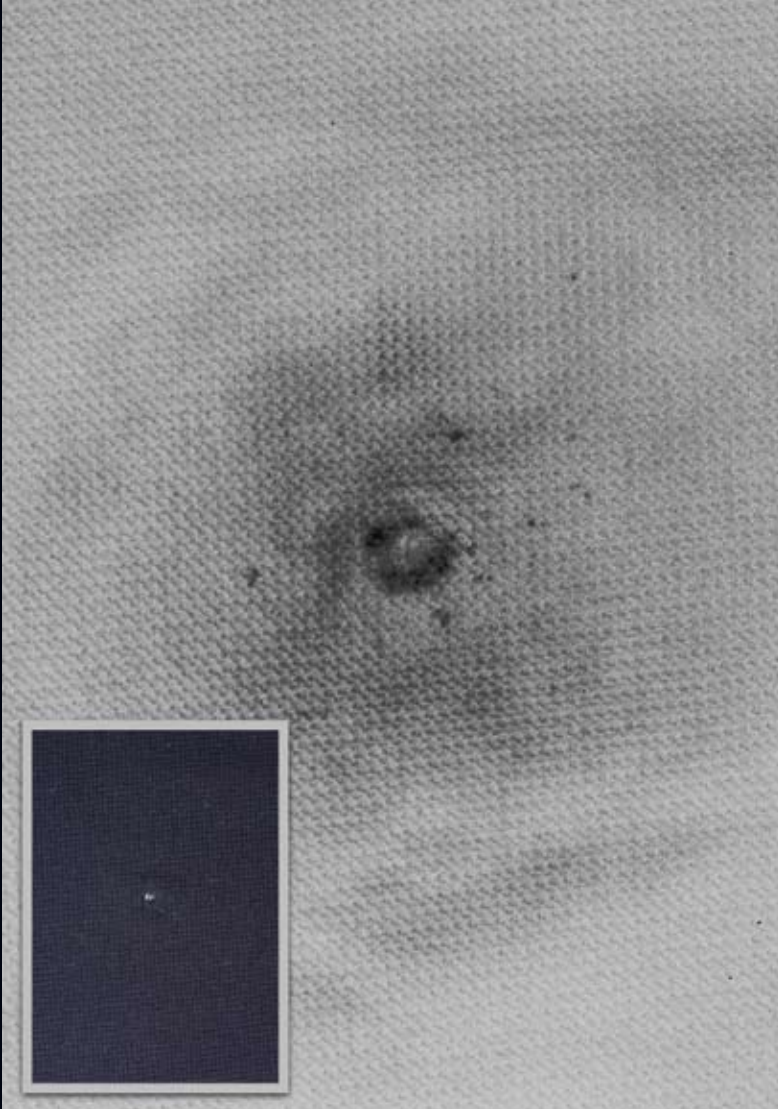
"Image Intelligence"™—the distillation of the vast image processing technology and know-how of FUJIFILM into a database for application in diverse domains from printing industry to the medical field. In the case of the FinePix IS Pro, high-accuracy face analysis and detection technology has been integrated in a custom IC chip that can analyze a captured image in an instant and simultaneously detect up to 10 faces. It is a powerful new solution to meet the high quality demands of photography.





Art meets Forensic Science





Gunshot residue on dark cloth (IS Pro infrared)



Fine art image (IS-1 Infrared)

With UV/IR Cut Filter and Hot Mirror Combination (custom white balance, F1c color mode)



IS Pro FILM SIMULATION MODE — selection of the ideal “film” for the scene

Film Simulation responds to the sophisticated color reproduction and tonality demands of the professional with a choice of five modes. When used in combination with a UVIR cut filter on the lens, these 5 film simulation modes are intended for photographers that want to shoot in the visible spectrum with a more simplified means to achieve natural* color reproduction.

“Professional Portrait” Mode

- F1** Studio Portrait Standard
Suppresses highlight washout with studio flash and produces smooth tonality and natural skin color. Replicates the “feel” of negative film used in conventional studio photography.
- F1a** Warm natural skin tones — Pro-grade negative profile
Slightly higher saturation of skin tones and blue. Exploits the extended dynamic range for fine tonality even under studio lighting. Superb expression of the natural tone and skin color.
- F1b** Vivid blue skies and silky skin tones
Characterized by saturated blues and reproduction of the transparent quality of skin tones. Produces smooth tonality and superb shadow detail under high contrast conditions. Ideal for impressive outdoor portrait results.
- F1c** Highly modulated impression — Pro-grade negative profile
Heightens contrast while expressing just the right shadow detail even under soft light sources. Natural skin tones in flat studio lighting or under cloudy skies.

“FUJICHROME” MODE

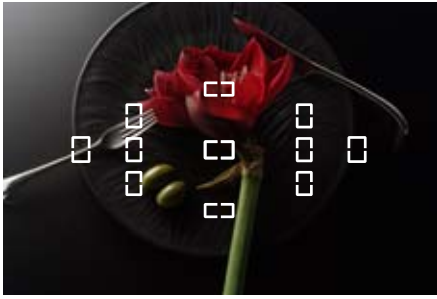
- F2** Color Reversal Film Profile for vivid color
Captures images with high sharpness, highly saturated colors and dynamic tonality. Brings colorful landscapes to life with vibrantly rich color.

* Final color is dependant on the band pass characteristics of the particular UVIR cut filter used. Custom white balancing is helpful in achieving color naturally.

Film Simulation Mode

IS Pro Advanced Features

11-point AF system for high-speed, high-precision focusing



©Above image is a simulated representation.

All eleven focus areas support up to F5.6, and the range finding is effective down to -1EV of brightness. Everything from focus accuracy to subject compensation/tracking and response have been enhanced by a new cutting-edge algorithm.

[4 Focus Modes to Match Scene Requirements]

- Single-area AF
- Dynamic-area AF
- Dynamic-area AF with Closest Subject Priority
- Group Dynamic-AF

The IS Pro is a very unique DSLR as it is equipped with a Manual Focus mode in combination with an industry first Live Image CCD Preview Mode for focusing. Most often alternative light wavelength photography requires manual focusing. This is due in part to the very different light refraction properties of the visible and IR portions of the light spectrum as they pass through the lens. The IS Pro's auto focusing technology is based on Nikon's cutting-edge algorithms for the visible light portion of the spectrum, while the more complex nature of unseen UV and IR light is more suited to manual focusing aided by a FUJIFILM'S unique Live Image Preview technology.

Solid Body

Rugged magnesium-alloy body for extreme shooting conditions

The tough and lightweight magnesium alloy shell of the FinePix IS Pro frees you to focus on getting the photo and not worrying about your equipment under severe shooting conditions. Every seam and joint has been carefully sealed to prevent invasion of moisture and dust.



3D Color Matrix Metering II for Precision Evaluation of Lighting Under Diverse Conditions

With its powerful 1,005 pixel-RGB sensor, 3D Color Matrix Metering II not only uses conventional exposure algorithms but also detects highlight area size and calculates their optimum exposure value with an exposure assessment algorithm. When shooting without lens filters the combined effect of infrared and visible light can exceed the intended visible light metering range of the IS Pro. Slight exposure corrections are common place in alternative light photography but are made easier with the IS Pro's digital LCD display with histogram. The immediacy of this feedback makes corrections and evaluations faster than film based UV and IR photography methods.

- Center-Weighted Metering
- Spot Metering

Shutter release durability - tested to exceed approx.100,000 cycles

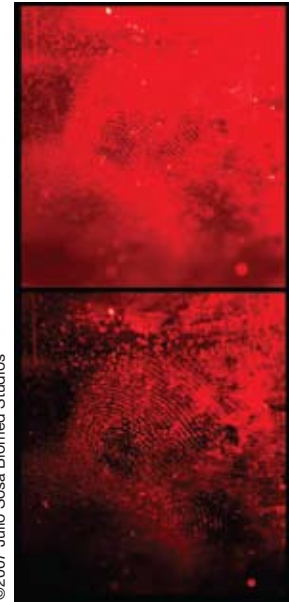
Shutter release boasts not only high precision but also superb durability. A shock-absorbing mirror balancer minimizes mirror bounce after shutter release, bringing it instantly to a standstill while vibration suppression has enhanced silent operation. Also improved mirror motion speed significantly reduces image blackout.

From ISO100 to ISO3200, select the optimum sensitivity for any scene

Low light photography is critical to forensic and scientific photography, that's why the Fujifilm IS Pro offers selectable 1/3 EV steps, with an impressive ISO range from ISO100 to ISO3200. When the brightness of the subject exceeds the exposure control range in the [P], [S] or [A] modes, or an appropriate level of exposure cannot be achieved for the Manual [M] mode shutter speed and aperture, it automatically adjusts sensitivity within the range of ISO100 to 3200 for optimum exposure.

Camera TIFF Processing and RAW+JPEG Mode

Most digital SLR cameras no longer have in-camera TIFF Processing, and instead have replaced it with RAW. However TIFF is a highly useful option for forensic finger print and document investigators, so the IS Pro offers an optional in-camera TIFF processing mode. This firmware update temporarily disables the RAW capture mode and enables TIFF capture in a choice of three resolutions. Simultaneously record both RAW and JPEG files of the same image for immediate viewing and distribution. JPEG data can be saved in either L (4256x2848 pixels), M (3024x2016 pixels) and S (2304x1536pixels) sizes.

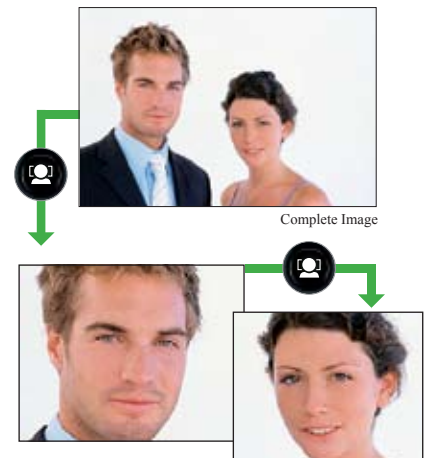


©2007 Julio Sosa Biomed Studios

Face Zoom In

Face Zoom In function puts high-accuracy face detection to work

With a press of the Face Zoom In button on the rear panel, this function instantly and simultaneously detects up to 10 faces in an image and zooms in for an enlarged and sequential display of each for easy checking of facial details, and focus on the LCD monitor. This smart function fills the gap in law enforcement surveillance and portrait photography workflow.



©Sample photo is a simulated image

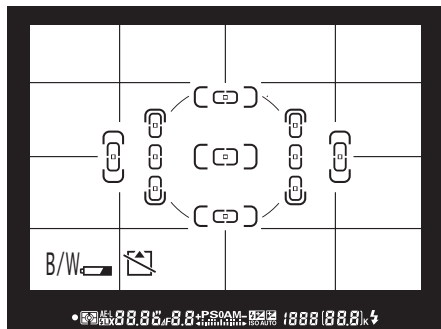
* Depending on the scene conditions, Face Detection performance may vary.

Pro-grade Performance

Other Functions

High-performance Viewfinder boasts magnification of 0.94x and approximately 95% coverage

The high-magnification viewfinder supports comfortable viewing and composition. Photographic data and settings status are clearly displayed in digital readout of the viewfinder. The Vari-Brite Focus Area display aids smooth confirmation of the selected focus area, while a Multi-Display Screen provides a convenient grid display.



Spacious 2.5-inch LCD with 100% coverage

With approx.230,000 pixels of resolution, the 2.5-inch low-temperature polysilicon TFT LCD provides comfortable viewing of not only image data but also the large characters and optimized color scheme of the menu screens. Multi-image playback of 9 thumbnails is just one example of its functional versatility.



“Live View” Function for more precise focusing and view angle setting

What sets the IS Pro apart from all infrared digital SLR cameras is FUJIFILM's industry first Live image preview function. A live 30 second color or B&W image is displayed on the LCD direct from the Super CCD SR Pro. This unique feature enables fine tuning the focus and composing the picture when dark opaque UV and IR lens filters render the optical viewfinder useless. The image can be magnified in for to confirm sharp focus and the lightness can be adjusted to compensate for extremely low light forensic photography. Live Image Preview is available on the IS Pro's LCD, and via a USB connected PC or an NTSC/PAL video monitor.



Multi-Data Display Function for a precise grasp of captured image data

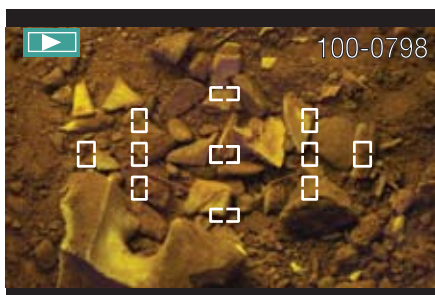
In addition to a standard histogram display, you can check color and brightness for each RGB channel with the RGB histogram or receive “washout” warnings. You can also confirm the “active” AF focus area and other shooting details for each captured image.



Histogram display



Data display



AF display

Nikon F mount compatibility including D/G types and AF Nikkor lenses

The IS Pro is compatible with all D/G-type AF Nikkor lenses with built-in CPU including the AF-S series, and is also ready for manual focus Ai Nikkor lenses and the AF-VR lenses with camera shake correction. For superior UV photography, a quartz lens is highly recommended. The IS Pro's system has firmware settings that can accommodate older style non-CPU based lenses, many of which retain useful markings for IR focusing shifts.

* Certain lens models may not be compatible or may have restrictions on their functionality.



Built-in Pop-up Flash with i-TTL flash control

The built-in pop-up flash features high-precision flash output using i-TTL flash control. Ready for advanced wireless lighting, the built-in Commander function serves as the master for remote wireless control of up to 2 “slaved” groups. With a guide number of approximately 12 (ISO100 •m, 20°C), it provides view angle coverage for an 18mm lens. Convenient functions such as repeating flash for multiple-exposure photography and modeling flash for assessing overall lighting prior to shooting are also available.

i-TTL Flash with monitor pre-flash for precision control of flash output

When working with i-TTL-compatible outboard flash equipment, the i-TTL flash system with monitor pre-flash metering technology can determine the appropriate flash output by emitting a flash immediately prior to the shot and metering both ambient light and the reflected light from the primary subject with the 1,005-pixel RGB sensor. Compared with conventional D-TTL, i-TTL enhances the frequency and output of monitor flash for more precise lighting. Moreover with the attachment of a G- or D-type AF Nikkor lens and the acquisition of subject ranging data from the lens, it can determine the ideal flash volume.

White Balance Mode with 9 presets

White balance is less critical in UV and IR Photography, however when shooting in visible light with a UVIR cut filter, it's nice to now the IS Pro offers an “Auto” mode for automatic assessment of light sources or select one of the white balance presets: Incandescent Light, Fluorescent Lamp (1-5), Fine, Flash, Shade and Color Temperature. For more accurate white balances the IS Pro provides up to 5 Custom white balance settings, and fine tuning for each white balance setting.

“Function Lock” with password protection prevents costly mishaps

Lock the command dial and button functions with password protection to pre-empt workplace errors.

Bar-code Management Function for easy management and “commenting” of image files

Connect an RS-232C compatible bar-code reader* and append various photographic remarks to image files for more efficient image file management and workflow. Bar coded data from evidence, forensic ALS and filter setups, automotive VIN tags, property tags, mug shots, and much more can be cataloged along with every picture.



* Special required cable sold separately.

IS-1 Superb 9.0 MegaPixels image quality

Superb 9.0 MegaPixels image quality

Featuring the 1/1.6-inch Super CCD HR sensor sensitive between 400nm visible into the near infrared up to 900nm, the IS-1 boasts a remarkable 9.0 effective megapixels. The benefits are visible at a glance: high-resolution images characterized by stunning detail and rich texture, even at greatly enlarged print sizes. But Real Photo image quality goes beyond resolution. The Super CCD HR offers high sensitivity with unprecedented image quality. Thanks to effective noise suppression performed by the Fujifilm's innovative RP Processor, the IS-1 produces beautiful photos without tripod or flash, retaining the natural light and atmosphere of the scene even outdoors at dusk, in low light indoors, or at long telephoto settings tripod or flash. It also benefits from a higher light sensitivity effect gained by the additional presence of invisible infrared light present in the scene that can further increase detail in shadows during dusk.

Integrated lens contributes to exceptional image quality

The IS-1 is an all-in-one SLR-style digital camera equipped with a powerful integrated Fujinon zoom lens. This high-precision 10.7x optical zoom lens employs one hybrid aspherical element and two glass-molded aspherical elements. This array yields unparalleled optical quality with minimal chromatic aberrations throughout the entire zoom range.

Easy manual zoom control

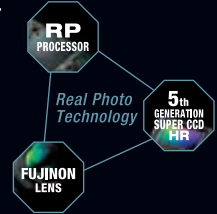
Unlike most all-in-one digital cameras, the IS-1 lets you zoom manually from wide-angle to telephoto by simply rotating a zoom ring around the lens barrel, just as you would with a 35mm SLR. Macro and Super Macro modes get you to within 1cm of the subject.



Real Photo Technology

Dramatically higher sensitivity and lower noise

Real Photo Technology is our name for the advanced three-way interaction between lens, CCD, and processor. The superb optics of the Fujinon lens form an exceptionally accurate image on the Super CCD HR, which then works in tandem with the Real Photo (RP) Processor to perform sophisticated processing of image data at ultra-high speed. The result is a breakthrough in high sensitivity with very low noise. Even at maximum pixel resolution and highest ISO sensitivity, photos are vividly natural and beautiful. Fujifilm's Real Photo Technology is literally the next generation in digital imaging technology.



Innovative Real Photo (RP) Processor

- The compact processor chip effectively incorporates all the advanced signal processing required for unparalleled image quality.
- Two cycles of sophisticated noise reduction processing ensure high-quality images even at the highest ISO settings.
- Energy-efficient signal processing allows longer battery life and more shots per charge.
- New contour correction processing optimizes contrast and resolution for more natural image quality.



Dust-free sealed construction



Because there's no need to change lenses, the sensor is protected from dust accumulation, a common problem that affects the quality of images captured with digital SLR cameras. With the dust-free, integrated lens construction of the IS-1, you can always count on maximum image quality – and never worry about cleaning the CCD.

10.7x optical zoom + 2x digital zoom

In addition to the high-performance 10.7x optical zoom covering a remarkable 28–300mm, a 2x digital zoom boosts total magnification up to 21.4x, or a focal length equivalent of approximately 600mm. (Infrared)



▲ Wide angle (28mm)



▲ 3.6x optical zoom (100mm)



▲ 10.7x optical zoom (300mm)



▲ 10.7x optical plus 2x digital zoom (600mm)



PS (Picture Stabilization) mode eliminates blur

With a sensitivity range of up to ISO 1600, the IS-1 lets you take pictures at a higher shutter speeds, effectively eliminating the blur caused by camera shake or subject movement. The resulting images are sharp, focused and realistically beautiful even in low light or at long telephoto settings.

Images shown with UVIR Cut Filter



▲ Conventional digital camera



▲ FinePix S9100

Other functions

Versatile shooting modes



With 11 different shooting modes, the IS-1 lets you explore all the artistic parameters of photography. Just turn the mode dial to "A" mode (Aperture Priority Auto) or "S" mode (Shutter Priority Auto) and explore the creation of professional photographic effects. Through the use of a UVIR cut filter on the lens and the IS-1's custom white balance, traditional visible light photography is also possible.



S Shutter Priority Auto



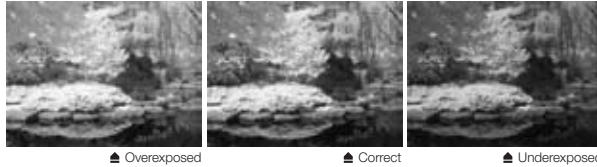
A Aperture Priority Auto

- AUTO** Auto Mode **P** Program Auto **S** Shutter Priority Auto **A** Aperture Priority Auto
- M** Manual **MOVIE** Movie **NIGHT** Night **LANDSCAPE** Landscape
- PORTRAIT** Portrait **NATURAL LIGHT** Natural light **PICTURE STABILIZATION** Picture Stabilization

Take the guess work out of IR Exposure

Auto-exposure bracketing

Automatically captures three consecutive shots in 1/3, 2/3 or 1 EV increments over and under the set exposure.



▲ Overexposed

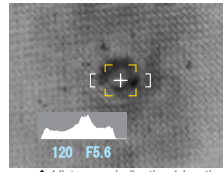
▲ Correct

▲ Underexposed



Extensive shooting and image data displays

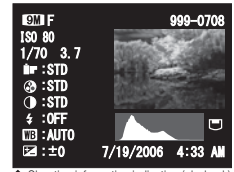
The bright, easy-to-view interface displays a range of image data during shooting and playback on the LCD monitor. In addition to shooting mode information, the monitor also offers a real-time histogram display for confirmation of exposure values. During playback, a convenient overexposure warning causes overexposed highlight areas to blink, helping to ensure you've captured the picture you were shooting for.



▲ Histogram indication (shooting)



▲ Mode dial indication (shooting)



▲ Shooting information indication (playback)

The expanded shooting freedom of a multi-angle LCD

Multi-angle LCD monitor

The Fujifilm IS-1 is the first IR capable digital camera to utilize a full time live image viewing 2.0-inch LCD monitor that swivels vertically to let you shoot from high and at low angles with ease. The full time live preview is available even when dark IR filters obscure the lens and is an excellent aid for when manual focusing is necessary. Useful for forensic photographers is the focus magnifier feature that zooms in close to confirm sharp focus before taking the picture. Video from the LCD can be projected onto an NTSC or PAL external monitor.



Full Time Live Image Preview

Easy-to-see LCD monitor and EVF

The refresh rate of the LCD monitor and TFT electronic viewfinder (EVF) can be selected for optimum visibility, with a choice of standard 30fps or an enhanced 60fps for smoother viewing. The crisp, clear EVF also features approx. 100% coverage, and provides you true TTL framing and full on-screen shooting information.

Super Macro shooting

The Super Macro mode lets you move right in – as close as 1cm from your subject. Close-ups are richly detailed and razor sharp, turning everyday objects into exciting visual images.



Movie recording with sound

The IS-1 offers full movie plus sound recording and combines visible and IR mode or visible only with the use of a UVIR cut filter or IR only when used with an IR filter. Its 30fps movie mode produces beautifully smooth videos. Autofocus, auto-exposure, and zoom functions all operate during video recording, assuring that your subject stays in focus and properly exposed, even under changing light conditions. And movie quality approaches that of dedicated camcorders.



▲ Movie recording



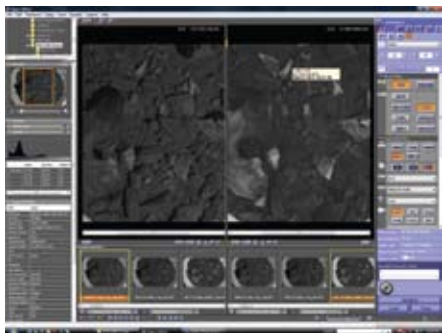
Courtesy of BioMed Studios (Infrared)

New Hyper-Utility Software "HS-V3"

Hyper-Utility Software

Easily replicate even the high color saturation of reversal film

HS-V3 Hyper-Utility Software uses 3D-LUT image processing technology to convert CCD-RAW 14bit data into image data files with high precision. FUJIFILM technology lets you replicate color quality that approaches that of film. Use "Velvia" Mode to reproduce blue skies with amazing clarity and enhance photos with luxuriously saturated color. Choose the "Studio Portrait EX" Mode for tonal touch and broad color reproduction rivaling professional negative film.



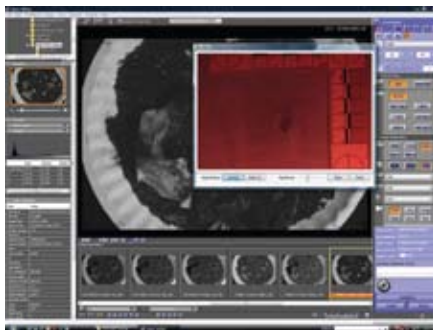
RAW FILE CONVERTER

Masking Function

Display the image with the masking size selected on the camera. Confirm cropping to precisely meet the various print sizes.

PC "Live View" function for accurate confirmation of focus and view angle on the computer display

With the mirror in the up position, PC "Live View" lets you use the HS-V3 window to directly view the image seen through the lens of the camera. It is ideal for focus and view angle settings for high-angle shots that are difficult to check in the viewfinder.



PC Control Mode for remote shutter release from the computer

With the IS Pro tethered to your computer, you can release the shutter with a mouse click. Right after the shot, the image can be displayed and checked for focus, color quality and other details.

Face Zoom In function for accurate detection of faces

In the PC control mode immediately after shooting or when reviewing the image data stored in the personal computer, Face Zoom In detects the faces and zooms in for smooth and detailed assessment of facial detail and focus.

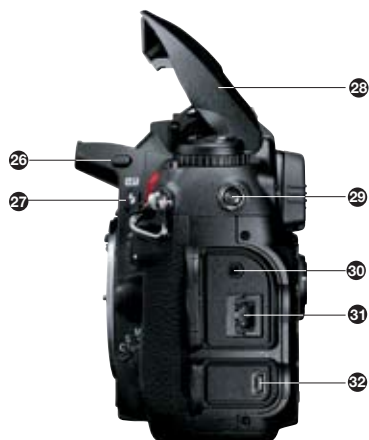


System Requirements

	Windows®	Macintosh
CPU	PC/AT compatible model equipped with an Intel Pentium 4-class processor or higher.	Macintosh models equipped with a PowerPC G4 (excluding PCI Graphic models), PowerPC G5 or an Intel processor.
Connection Terminal (Only in the case of using the "shooting control application")	IS Pro FinePix S3 Pro/ S2 Pro/ S20 Pro	Built-in USB Port (USB 2.0 is recommended) FinePix S3 Pro/ S2 Pro/ S20 Pro
OS	Windows®2000 Professional SP4 Windows®XP Professional SP2 Windows®XP Home SP2	MacOS X 10.3.9 ~10.4.8
Memory	Minimum of 512MB (1GB or higher is recommended.)	
Hard Disk Free Space for Installation	Minimum of 1 GB of free space on the OS system hard disk drive is required for installation.	
Monitor	1024×768 ~3840×2400 dot, High color (16bit or higher), (1600×1200 dot/32bit or higher is recommended)	1024×768 ~3840×400 dot, approx. 32,000 colors or higher (1600×1200dot/Full Color or higher is recommended)
Drive for Installation	Optical drive with CD-ROM reading capability.	

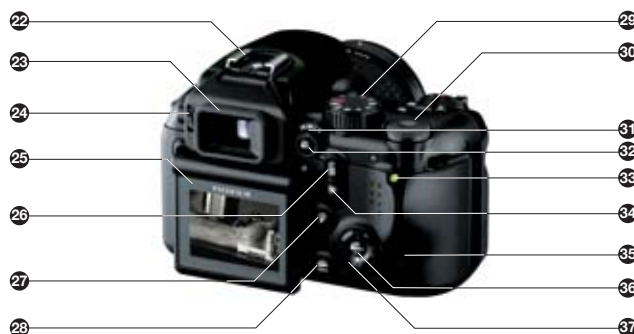
*Tether shooting not available with IS-1

FUNCTIONS *IS Pro*



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| 1 AF-assist illuminator/
Self-timer lamp/
Red-eye reduction lamp | 2 Sub-command dial | 3 Preview button | 4 Function button | 5 10-pin terminal | 6 Lens release button | 7 Focus mode selector switch | 8 Viewfinder | 9 BKT (auto-bracketing) button | 10 Delete button/Format button | 11 PLAY button | 12 MENU/OK button | 13 DISP/BACK and instant live
preview button | 14 Setup button | 15 Face Zoom In button/
Help button | 16 LCD monitor | 17 Diopter adjustment control | 18 Metering mode dial | 19 AE-L/AF-L button | 20 AF-ON button | 21 Main-command dial | 22 Multi selector | 23 Focus area lock switch | 24 AF-area mode selector | 25 Card slot cover latch | 26 Flash pop-up button | 27 Flash Synchro mode button/
Flash compensation button | 28 Flash | 29 Synchronizing terminal | 30 VIDEO OUT (video signal output) port | 31 DC IN (power input) port | 32 USB port | 33 Release mode dial
cancel button | 34 QUAL (Quality) button/
Setting reset button | 35 WB (White Balance) button | 36 ISO (sensitivity) button | 37 Release mode dial | 38 Accessory shoe | 39 MODE (exposure mode) button/
Format button | 40 Power switch/
Illuminator switch | 41 Shutter button | 42 Exposure compensation button/
Setting reset button | 43 Display panel |
|--|--------------------|------------------|-------------------|-------------------|-----------------------|------------------------------|--------------|--------------------------------|--------------------------------|----------------|-------------------|---|-----------------|--|----------------|-------------------------------|-----------------------|---------------------|-----------------|----------------------|-------------------|---------------------------|--------------------------|--------------------------|------------------------|--|----------|---------------------------|---|-----------------------------|-------------|---------------------------------------|---|------------------------------|-----------------------------|----------------------|-------------------|--|--|-------------------|--|------------------|

FUNCTIONS *IS-1*



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| 1 Continuous Shooting Button | 2 Exposure Compensation Button | 3 Flash Button | 4 Shutter Button | 5 Power Switch | 6 External AF Sensor | 7 AF-assist Illuminator/Self-timer
Lamp | 8 Battery Cover | 9 Lens | 10 Flash | 11 Flash Pop-up button | 12 Microphone | 13 Speaker | 14 Strap Mount | 15 INFO (Information check
button) | 16 Terminal Cover | 17 One-Touch AF Button | 18 Focus Mode Selector Switch | 19 Macro Button | 20 Focus Ring | 21 Zoom Ring | 22 Hot Shoe | 23 Viewfinder (EVF) | 24 Diopter Adjustment Dial | 25 LCD Monitor | 26 EVF/LCD (Monitor Selector) | 27 Photo Mode (P) Button | 28 DISP/BACK Button | 29 Mode Dial | 30 Command Dial | 31 Photometry Selector Dial | 32 AE-L (AE lock) Button | 33 Indicator Lamp | 34 Focus Check Button | 35 Slot Cover | 36 MENU/OK Button | 37 4-direction Button |
|------------------------------|--------------------------------|----------------|------------------|----------------|----------------------|--|-----------------|--------|----------|------------------------|---------------|------------|----------------|---------------------------------------|-------------------|------------------------|-------------------------------|-----------------|---------------|--------------|-------------|---------------------|----------------------------|----------------|-------------------------------|--------------------------|---------------------|--------------|-----------------|-----------------------------|--------------------------|-------------------|-----------------------|---------------|-------------------|-----------------------|

Fujifilm IS Pro Digital Camera Specifications*

Type of camera	UV / IR / Visible Light Sensitive Modified Interchangeable-lens SLR-type digital camera
Number of Effective Pixels(*1)	12.34 million (S-pixel: 6.17million, R-pixel: 6.17million) pixels
CCD sensor	23.0mmx 15.5mm Super CCD SR Pro (~ 380nm - 1000nm Sensitivity)
Number of recorded pixels	L: 4,256x2,848 / M:3,024x2,016 / S:2,304x1,536 pixels
Storage media	Compact Flash™ (CF) Card (Type I/II) and Microdrive™
File format* Image quality mode	Exif-JPEG (Exif2.2.1(*2) compatible) FINE / NORMAL [Design rule for Camera File System 2.0 compliant / DPOF-compatible] / CCD-RAW (14bit) / CCD-RAW + Exif-JPEG In camera TIFF processing will become available as an optional free downloadable firmware update (RAW is disabled in TIFF Mode) No Movie Function
Lens mount	Nikon F mount (with AF coupling and AF contacts)
Usable lenses	Type DX AF Nikkor: All functions supported Type G or D AF Nikkor (IX Nikkor lenses can not be used): All functions supported Micro Nikkor 85 mm f/2.8D: All functions supported except auto-focus and some exposure modes Other AF Nikkor(excluding lenses for F3AF): All functions supported except 3D color matrix metering II and 3D multi-sensor balanced fill-flash for digital SLR AI-P Nikkor: All functions supported except 3D color matrix metering II, 3D multi-sensor balanced fill-flash for digital SLR, and auto-focus Non-CPU: Can be used in exposure modes A and M; electronic range finder can be used if maximum aperture is f/5.6 or faster; color matrix metering, multi-sensor balanced fill-flash for digital SLR, and aperture value display supported if user provides lens data
Picture angle	Approx. 1.5x focal length in 35mm format equivalent
Sensitivity	AUTO, ISO 100/125/160/200/250/320/400/500/640/800/1000/1250/1600/2000/2500/3200 (Standard Output Sensitivity) It's recommended to stay above ISO 200 when photographing in IR or UV wavelenths
Auto focus	TTL phase detection, AF assist illuminator. (Proper AF function require a UVIR cut filter on the lens. AF focusing may not be possible with some IR or UV filters covering the lens)
Focus areas	Normal: 11 areas; single area or group can be selected; Wide: focus area can be selected from 7 areas
AF Area mode	1) Single Area AF 2) Dynamic AF 3) Group Dynamic AF 4) Dynamic AF with closest subject priority
Shutter speed	30 sec. to 1/8000 sec. Bulb.
Continuous Shooting	C H: Up to max. 3 frames/sec. ([D-RANGE] set to [100%(STD)]) / Up to 1.5 frames/sec. ([D-RANGE] set to WIDE (other than [100%(STD)])) C L: Up to max. 2 frames/sec. ([D-RANGE] set to [100%(STD)]) / Up to 1.5 frames/sec. ([D-RANGE] set to WIDE (other than [100%(STD)])), and 1 frames/sec.
Auto bracketing	Number of shots 2-9 compensated EV value 1/3 1/2 2/3 1 EV step.
Exposure metering system	Three-mode through-the-lens (TTL) exposure metering, 3D Color Matrix Metering II (metering performed by 1,005-segment RGB sensor) / Center-weighted / Spot (UV / IR Auto exposure may not be accurate due to the high presence of IR light beyond the meters sensitivity)
Exposure modes	Programmed Auto with flexible program [P], Shutter-Priority Auto [S], Aperture-Priority Auto [A], and Manual [M]
White balance	Automatic / Incandescent light / Fluorescent lamp (1-5) / Fine / Flash / Shade / Color temperature / Preset Custom(1-5) Fine tuning can be set. (Hue varies depending on the cutoff point of the UVIR cut filter used - proper white balance may not be possible without a UVIR cut filter on the lens)
Film Simulation / Color Modes	(STANDARD) / F1 / F1a / F1b / F1c / F2 (color is dependent on the cutoff point of the UVIR cut filter used)
Dynamic Range	AUTO / 100%(STD) / 130% / 170% / 230%(W1) / 300% / 400%(W2) (In some scenes, depending on the light wavelengths being photographed, the DR settings may not contribute significantly to image quality)
Viewfinder	Fixed-eyelevel pentaprism, built-in diopter adjustment, Frame coverage: Approx. 95%, Magnification: Approx. x 0.94
LCD back monitor	2.5-inch approx. 230,000 pixels low temperature polysilicon TFT color LCD (approx. 100% frame coverage for playback)
Live Image Preview	30 second live image CCD preview to the cameras LCD monitor or external NTSC/PAL compatible monitor directly from the imaging sensor in color or black and white Live image preview can be digitally magnified and brightness adjusted to improve focusing accuracy or to compensate for light intensity. The video image can also be viewed on an NTSC / PAL monitor or on the PC over the cameras USB 2.0 connection directly form Fujifilm's optional HyperUtility HS-V3 software. Color or B&W mode can be selected by holding down the Face Detection button on the back of the camera. Instant Live Image Preview B&W mode can be activated by holding down the Preview/Back button on the back of the camera
Video output	NTSC / PAL selectable(*3)
Digital interface	USB 2.0 (High-Speed)
Important Notice on lenses	The Zeiss Makro-Planar T 2/50 ZF non-CPU with IR focus adjust markings, and Tamron Macro SP AF90mm F/2.8 Di Macro Lens 1:1 are considered excellent IR investigative lenses, however Fujifilm recommends using quartz based lens systems for UV photography. In all cases manual focusing may be necessary to achieve an acceptable focus Some lens and filter combinations can cause undesired hot spot "halo" effects. This is often caused by reflections in internal lens elements requiring larger lens hoods or changing position vs. the subject

Fujifilm IS-1 Digital Camera Specifications*

Type of camera	IR Plus Visible Light Sensitive Modified Fixed Lens Neo-SLR-type digital camera
Number of Effective Pixels(*1)	9.0 Million Pixels
CCD sensor	1/1.6-inch Super CCD HR (Visible - IR 400nm 900 nm)
Number of recorded pixels	Still image: 3,488 x 2,616 / 3,696 x 2,464 (3:2 format) / 2,592 x 1,944 / 2,048 x 1,536 / 1,600 x 1,200 / 640 x 480 pixels Movie: 640 x 480 pixels (30 frames/sec.), 320 x 240 pixels (30 frames/sec.), with monaural sound
Storage media	Slot No. 1: xD-Picture Card (16MB to 2GB)
File format* Image quality mode	Still image: JPEG (Exif Ver. 2.2), CCD-RAW Movie: AVI (Motion JPEG), (Design rule for Camera File system compliant / DPOF-compatible)
	640x480 320x240
Lens mount	Integrated Fujinon 10.7x zoom lens, (F 2.8 - 4.9) (58mm lens threads)
Lens	f=6.2 - 66.7mm/Equivalent to 28 - 300 mm on a 35 mm camera (IR and IR Cut Filters are Optional - 58mm) F 2.8 - F11, 13 steps in 1/3 EV increments Manual/Auto selectable Approx. 2.0x (10.7x optical zoom lens is used together: Max. zoom scale: 21.4x)
Lens servo	Single Servo AF(S) / Continuous Servo AF(C) / Manual focus(M)
Sensitivity	AUTO/ Equivalent to ISO 80/100/200/400/800/1600(Standard Output Sensitivity) It's recommended to stay above ISO 200 when photographing in IR wavelenths
Auto focus	Auto focus (Area, Multi, Center) / Manual focus / Continuous AF Normal :Approx. 1.3 ft. to infinity (wide), 6.6 ft. to infinity (telephoto) Macro: Approx. 3.9 in. to 9.8 ft. (wide), 3.0 ft. to 9.8 ft. (telephoto) Super Macro: Approx. 0.4 in. to 3.3 ft. (wide angle only)
Shutter speed	1/4 sec. to 1/4000 sec. (Auto/Picture Stabilization/Natural Light/Portrait/Landscape) Night: 4 sec. to 1/500 sec. P/S/A: 4 sec. to 1/4000 sec., M: 30 sec. to 1/4000 sec. Bulb (Up to 30 sec.)
Continuous Shooting	1. Top-4: Max. 1.5 frames / sec. up to 4 frames 2. Final-4: Max. 1.5 frames / sec. up to 4 frames 3. Long-period: Max 1.1 frames / sec up to 40 frames.
Exposure metering system	256-zone TTL metering-Multi/Spot/Average
Exposure modes	Programmed AE **, Aperture Priority AE **, Shutter Priority AE **, Manual
White balance	Automatic / Incandescent light / Fluorescent lamp (1-5) / Fine / Flash / Shade / Custom Fine tuning can be set. (Hue varies depending on the cutoff point of the UVIR cut filter used - proper white balance may not be possible without a UVIR cut filter on the lens)
Film Simulation / Color Modes	Standard / Chrome / B&W
Color Space	sRGB
Dynamic Range	NA
Viewfinder	ELV; 0.44-inch Low temperature poly-silicon TFT (approx. 235,000 pixels), Approx. 100% coverage
LCD back monitor	2.0-inch Low temperature poly-silicon TFT (approx. 235,000 pixels), Approx. 100% coverage
Live Image Preview	Full-time
Built-in flash	Manual pop-up with button release.
Accessory shoe	Standard non TTL based hot-shoe contact
Flash control	Auto, Red-eye Reduction, Forced Flash, Suppressed Flash, Slow Synchro, Red-eye Reduction + Slow Synchro
Video output	NTSC/PAL selectable
Digital interface	USB 2.0 high-speed
Sync contact	X-contact only
Synchronization terminal	NA
DC input	AC Power Adapter AC-5Vx (Optional - Suggested when photographing long exposures)
Power source	4xAA type alkaline batteries (included), 4xAA type Ni-MH rechargeable batteries (optional) or AC power adapter AC-5VX (optional)
Notice	Some lens and filter combinations can cause undesired hot spot "halo" effects. This is often caused by reflections in internal lens elements requiring larger lens hoods or changing position vs. the subject

* Number of effective pixels: The number of pixels on the image sensor which receive input light through the optical lens, and which are effectively reflected in the final output data of the still image.

** Exif 2.2 is a newly revised digital camera file format that contains a variety of shooting information for optimal printing.

Specifications are subject to change without notice.