RICOH

GR DIGITAL Ⅳ

1/7sec, F2.8, ISO400, EV-1.3, WB: Multi-P AUTO, no trimming

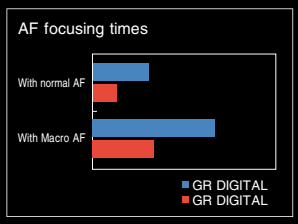
1/64sec, F5.6, ISO200, EV±0, WB: AUTO, no trimming

This camera has the reflexes of a professional photographer.

Quick shooting capabilities combined with precision focus. Hybrid autofocus system

Now equipped with an external autofocus sensor developed in-house that allows for high-speed, high-precision distance calculations for up to 190 points. Thanks to a hybrid autofocus system used in combination with a contrast autofocus, an autofocusing time of as short as 0.2 seconds, as much as half that of the GR DIGITAL III, has been achieved. Furthermore, algorithm refinements have also led to the realization of a maximum of approximately twice the speed with macro autofocusing that uses only contrast AF. The camera can also use the external autofocus sensor when you press the shutter release button all the way down in one motion for Snap or Full Press Snap*. You can capture the moments you want with crystal clarity thanks to the combination of great precision of focus with superb responsiveness.

*Focus distances available for selection includes Auto, 1 m, 1.5 m, 2.5 m, 5 m, and .



Improved performance in dark scenes. Image stabilization feature

The first model in the GR DIGITAL series equipped with an image sensor shift image stabilization feature. Useful for dark scenes and for using Full Press Snap when blur is a concern. The stabilization effect amounts to as much as 3.2 steps calculated in terms of shutter speed. *Measured using RICOH measurement methods.

Visibility improved at high brightness. New 3-inch image monitor with approximately 1.23 million dots*.

Maximum brightness for the image monitor increased approximately 1.7 times that of previous models (compared to the GR DIGITAL III). Brightness can be adjusted automatically in accordance with the brightness of the subject. It helps with taking snapshots even in the bright outdoors owing to its superb visibility.In addition, the distance information calculated by the external autofocus sensor can now be displayed as necessary, helping to improve convenience and comfort level.

*White pixels were added to RGB to attain approximately 1.23 million dots. *Simulated image.

*Focal length indicated are 35mm film camera equivalents.

1/1070sec, F5.6, ISO100, EV-0.7, WB: Multi-P AUTO, no trimming

1/2sec, F6.3, ISO200, EV±0, WB: Outdoors, no trimming

See the essence of the GR DIGITAL series in the high image quality.

With powers to depict a scene that captivate photographers, the GR Lens 28 mm/F1.9.

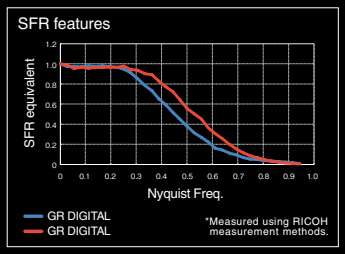
Equipped with the large aperture GR Lens 28 mm/F1.9. This GR Lens demonstrates high resolution and high contrast while suppressing chromatic aberration, thanks to a 6-group, 8-element lens composition and three special low-dispersion lens elements. Furthermore, with the two high-precision, aspherical lens elements, there is hardly any distortion that is noticeable.The optimized coating tamps down on ghosts from backlights and point light sources. The beauties of the Bokeh and light beams that the 7-blade diaphragm produces are also exceptional.

A high-sensitivity 10 megapixel CCD that boasts of rich tones and low noise.

We used low-noise, wide dynamic range 1/1.7-inch CCD with 10 effective megapixels. It renders even low-light settings naturally, keeping roughness in control. Shadowed areas are cleanly firmed up, and it also excels at reproducing delicate shading.

An impressive power to depict what you see produced by an even higher resolution.

With the newly-developed image processing engine, the GR ENGINE IV, color noise reductions when taking high-sensitivity photographs have been achieved. The Auto and Multi-P AUTO algorithms for white balance have also been improved, so that the effects of lighting conditions and subject color are controlled, helping to stabilize and reproduce more favorable colors. Since we also tuned up the color balance, even rather casual subjects like white clouds in a blue sky are rendered more impressively, with rich colors.Furthermore, the image processing algorithm has been optimized and improvements have been made in the optical filter. The quality of resolution has been improved so it vividly renders subjects in great detail.



SFR features: SFR stands for Spatial Frequency Response. SFR is an index for measuring a digital camera's resolution characteristics, including everything from its optics system to image processing.

1/20sec, F6.3, ISO200, EV-0.3, WB: AUTO, Bleach Bypass, no trimming

Diverse powers of expression that will stir your desire to try something new.

Now even bulb shooting is available with Exposure control modes

The exposure control modes are Auto, P (program shift), A (aperture priority), M (manual exposure), and S (shutter priority). In M mode, you can now also set B (bulb) and T (time).* This expands your breadth of expression, for free exposures.

*Up to 180 seconds maximum. Can also be operated using cable switch CA-2 (optional).

Beautiful shaded portrayals, dynamic range correction feature

Equipped with a new feature, Dynamic Range compensation. It controls overexposure and underexposure by automatically dividing the image up and properly correcting each area. You can also use the dynamic range double shot option to take two photos in a row with different exposures and combine the parts of each that are properly exposed. Even scenes where the contrast is great are richly shaded going from the highlighted areas to the shadowed ones.

Enhanced auto-bracket functions

In addition to the existing exposure and white balance options, this model is equipped with the new Contrast Bracket and Dynamic Range Compensation Bracket options as well as the Image Setting Bracket option for recording a sequence of three shots with different image settings. This eliminates the bother of having to change settings for each snap. You can continue to take photographs with comfort, just concentrating on the subject.

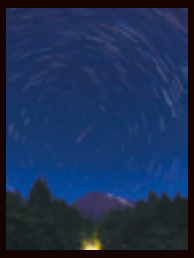
Featuring two new modes. Enhanced image setting modes

Positive Film and Bleach Bypass have been added to Image Settings. Together with existing settings of Vivid, Standard, Setting1/Setting2, B & W, B & W (TE), High Contrast B&W and Cross Process, varied types of expression have become possible.

The range for making adjustments for settings such as Vividness and Contrast has also been expanded (to 9 steps). You can be more free than ever creating works using high contrast, soft tones, or whatever you choose. These settings can be used in each of the exposure control modes and the shooting modes (Auto/P/A/S/M).

A new scene mode for capturing star trails against a landscape

We have added Interval Composite mode to the list of scene modes. Take a series of photos of the night sky at a fixed interval. The camera selects and combines only the high-intensity pixel data from each of those images. This is very effective for when you want to combine the trails of the stars and the moon with a landscape.



Multiple Exposure Shooting, making composite photographs easy and fun

Have fun getting creative with your photos by creating drama through combining shots of different scenes into a single image.In addition to the ability to combine up to 5 photos, automatic adjustment of the amount of exposure is also possible. We have also added the Retake shot option that allows you to retake a shot after each snap. With these new features, you can easily get the photo you imaged.

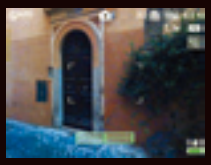
High-quality macro mode, for minimizing field curvature

Minimum shooting distance of approximately 1 cm. When using Macro Mode, some of the lens groups that do not move during normal focusing move to a specific position for near-distance photography. This is an original, image quality priority feature that corrects field curvature during near-distance photography.

The uncompromising operability and expandability will make taking photos that much more fun.

New electronic level to inform you of the horizon and of roll and pitch direction.

In addition to its ability to detect horizon lines, the camera can now detect roll and pitch direction as well. Knowing roll and pitch direction is effective in helping to achieve quick leveling and to take faithfully proportioned photos.



*Simulated image.

Fn Button Pair Setting, to enable quick changes to the save feature

The camera has two function (Fn) buttons to which you can assign the functions you choose and access with a single button push. You can combine the functions you have assigned to each button to create up to four pairs using the Fn Button Pair Setting, and you can switch between them quickly using the shortcuts.

My Setting data can be saved to an SD memory card.

With My Setting, you can save your favorite camera settings. You can now save 12 different types of settings in the camera itself, and another 6 on an SD memory card. The convenience and pleasures of the GR DIGITAL IV increase when you share your My Setting data with other users of the same model.

*The My Setting data is assigned to the mode dial (MY 1 through MY 3).

For better portability and durability. The perfected GR design

The model retains the GR design, which has earned rave reviews for how well it fits in pockets and because cameras using it can be held steady with just one hand. Both the GR shape, which fits comfortably in the hand and the superbly balanced GR grip remain unchanged in the new model. The exterior is of a light and durable magnesium alloy manufacture. It has the durability to withstand shocks, and will earn your devotion and trust.

The Eye-Fi card synching feature, for automatically forwarding photographs

The camera can use an Eye-Fi card (X2 series), a type of SD memory card that is Wi-Fi ready. When the Eye-Fi card is in use, an icon indicating the transmission status will be displayed.

Eye-Fi connected

*For details regarding the Eye-Fi card, please refer to the Eye-Fi website at <http://www.eye.fi/>.
*Eye-Fi cards are approved for use in the country of purchase only

Full range of system accessories, allowing for varied uses of the camera

You can use the existing 21-mm wide convergence lens (GW-2), external TTL flash (GF-1), and other accessories. We also now offer a metal lens cap (GL-1). The cap is useful not only for protecting the lens, but it also prevents the problem of the lens unexpectedly extending while in motion thanks to the power button lock feature. Furthermore, we have filled out our options with the addition of a genuine leather hand strap.

System Configuration

● Optional accessory ▲ Standard product

*Hood and adapter (GH-2) are required for use of a filter (43-mm radius). Contact the manufacturer directly for more information on the filter used. *Viewfinder vignetting may increase if a conversion lens or the hood is used in conjunction with an external viewfinder. *The built-in flash cannot be used while a conversion lens or the hood is used. * Hood and adapter is required when using wide conversion lens. When the wide-angle conversion lens is mounted, only the CCD contrast AF method will be used.* When the metal lens cap is mounted, the GC-3/GC-4 cannot be used. ※Included with the camera body.

●The hood and adapter (GH-1), 21-mm wide conversion lens (GW-1), 40-mm teleconversion lens (GT-1), cable switch (CA-1) and soft cases (GC-1, GC-2) cannot be used.

The improvements continue even after the camera is in your hands. Function-expansion firmware

We supply firmware that expands the product's features.
Download firmware updates so you can always use the latest features.

GR DIGITAL

< Accessories included >

- •Rechargeable battery
- •Battery charger
- •AV cable
- •USB cable
- •Hand strap
- •Instruction manuals

•GR DIGITAL IV – Major Specifications

Item		Specifications
No. of Effective Pixels (Camera), Image Sensor		Approximately 10.00 million pixels, 1/1.7-inch CCD (total pixels: approx. 10.40 million pixels)
Lens	Focal length	f=6.0 mm (equivalent to 28 mm for 35 mm film cameras)
	F-aperture	F1.9 – F9 (exposure control with both aperture and ND filter when F8.0-F11 displays in auto shooting mode)
	Shooting Distance	(from the front of the lens): Approx. 30 cm - infinity Macro (from the front of the lens): Approx. 1 cm – infinity
	Lens Construction	8 elements in 6 groups (aspheric lens: 2 elements and 2 surfaces)
Digital Zoom Magnification		Digital Zoom: Approx. 4.0x; Auto Resize Zoom: Approx. 5.7x (VGA images)
Focus Mode		Multi AF (Hybrid AF) / Spot AF (Hybrid AF) /Subj. Tracking/ Manual Focus / Snap / Infinity (Focus lock and AF auxiliary light available.)
Blur reduction		Image sensor shift-type image stabilization function
Shutter Speed	Still image	Bulb, Time ,180, 120, 60, 30, 15, 13, 10, 8, 6, 5, 4, 3.2, 2.5, 2, 1.6, 1.3, 1 - 1/2000 sec.
	Movie	1/30 - 1/2000 sec.
Continuous shooting	Continuous shooting speed*11	Approximately 1.54 frames/second
	Maximum continuous shots	999
Exposure Control	Exposure Metering Mode	Multi (256 segments), Centre Weighted Light Metering, Spot Metering (TTL-CCD metering method, AE lock possible)
	Exposure Modes	Program shift AE/Aperture priority AE/ Manual Exposure /Shutter priority AE
	Exposure Compensation	Manual Exposure Compensation +/-2.0EV (1/3EV Steps), Auto Bracket Function (-0.5EV, ±0, +0.5EV / -0.3EV, ±0, +0.3EV)
ISO Sensitivity (Standard Output Sensitivity)		AUTO, AUTO-HI, ISO80 – 3200 (1EV, 1/3EV, selectable steps)
White Balance Mode		AUTO / Multi-P AUTO / Outdoors / Cloudy / Incandescent1 / Incandescent2 / Fluorescent / Manual / Detail, White Balance Bracket Function
Flash	Built-in flash mode	Flash On, Auto, Red-eye-Reduction, Slow Synchro, Manual Flash, Flash Off
	Built-in flash range	Approx. 20 cm - 3.0 m (ISO Auto)
	Flash compensation	+/-2.0EV (1/3EV Steps)
	Charging time*12	Approximately 5 seconds
Monitor		3.0-inch Transparent LCD (approx. 1,230,000 dots)
Shooting Mode		Auto Shooting Mode / Program Shift Mode / Aperture Priority Mode / Shutter Speed Priority Mode / Manual Exposure Mode / Scene Modes (Dynamic Range / Movie / Skew Correction / Interval Composite) / My Settings Mode
Image settings		Vivid, Standard, Setting1 / Setting2, B&W, B&W(TE), High Contrast B&W, Cross Process, Positive Film, Bleach Bypass
Picture Quality Mode *2		F (Fine) / N (Normal) / RAW (DNG file format) *3
No. of Pixels Recorded	Still image	3648×2736, 3648×2432, 2736×2736, 3648×2048, 3264×2448, 2592×1944, 2048×1536, 1280×960, 640×480
	Movie	640x480, 320x240
Recording Media		SD memory card, SDHC memory card, Internal memory (approx. 40MB) Eye-Fi cards (X2 series) can be used
Storage Capacity (Pictures/Time)*4 (internal memory approx. 40MB)	Still image	3648×2736 (RAW: 2, F: 10, N: 17) / 3648×2432 (RAW: 2, F: 11, N: 19) / 2736×2736 (RAW: 2, F: 13, N: 23) / 3648×2048 (RAW: 2, F: 13, N: 23) /3264×2448 (F: 12) / 2592×1944 (F: 15) / 2048×1536 (F: 24) / 1280×960 (F:43) / 640×480 (F: 158)
	Movie*5	640×480: 30 frames/sec. (22 sec.), 320×240: 30 frames/sec. (54 sec.)
Recording File Format	Still Image	JPEG (Exif ver.2.3) *6 , RAW (DNG)
	Movie	AVI (Open DML Motion JPEG Format compliant)
	Compression method	JPEG Baseline method compliant (still images, movies)
Other Major Shooting Functions		Continuous / AF-Cont / S-Cont / M-Cont / Self-Timer (operation time: approx. 2 sec. / custom) / Interval Shooting (shooting interval: 5 sec. to 1 hour, in 5-second increments)*7 / Image Setting Bracket / Dynamic Range Compensation Bracketing / Contrast Bracketing / Color Space Setting / AE/AF Target Movement / Camera Shake Correction / Dynamic Range Compensation / Multiple Exposure Shooting / Noise Reduction / Histogram / Grid Guide / Depth of Field / Electronic Level / Hot Shoe
Other Major Playback Functions		Auto Rotate / Grid View / Enlarged Display (maximum 16x) / Slideshow / Resize / Trim / DPOF settings
Interface		USB and AV output terminal: USB 2.0 compliant, mass storage compliant*8 HDMI micro output terminal (Type D)
Video Signal Format		NTSC, PAL switchable
Power Supply		Rechargeable Battery: DB-65 (3.6V) x1, AAA Dry Alkaline Battery x2, AAA Nickel-Metal Hydride Battery x 2, AC adapter (AC-4c option) 3.8V
Battery Consumption*9		Based on CIPA Standard: Using the DB-65, approx. 390 pictures / Using AAA Dry Alkaline Battery x2, approx. 30 pictures*10
External Dimensions		108.6 mm (W) x 59.8 mm (H) x 32.5 mm (D) (CIPA-conformant)
Weight		Approx. 190 g (excluding battery, SD memory card, strap), Accessories approx. 30 g (battery, strap)
Operating Temperature Range		0ºC-40ºC

*1. Shutter speed upper and lower limits vary depending on Shooting Mode and Flash Mode. *2. The picture quality modes which can be set vary depending on the image size. *3. The DNG file format is a RAW image file format and is the standard format of Adobe Systems. *4. Estimated number of still images it is possible to record and estimated amount of movie recording time. *5. The maximum length for one instance of movie recording is 29 minutes or the file size upper limit of 4GB. *6. Compatible with DCF and DPOF. DCF is the abbreviation of the JEITA standard "Design rule for Camera File system." (Full compatibility with other devices is not guaranteed.) *7. With flash off. *8. Mass storage driver is compatible with Windows® XP, Windows Vista®, Windows® 7; Mac OS X 10.4 -10.6.7. *9. Shooting capacity was measured using CIPA-standard parameters. This is only an estimate, and performance may vary according to usage conditions. *10. Using Panasonic AAA alkaline batteries. *11. Measurement values obtained under Ricoh measurement conditions using Panasonic Pro High Speed 2G Class 6 cards. Results may differ depending on the speed and/or number of continuous shots, shooting conditions, and recording media, or on the condition of the recording media. *12. When using rechargeable batteries

•GR DIGITAL Optional Accessories

Accessory Name			
Hood and adapter	GH-2	Neck strap (GR DIGITAL logo)	GS-1
Wide conversion lens	GW-2*2	Neck strap (Ricoh logo)	ST-2
External TTL flash	GF-1	AC adapter	AC-4c
External viewfinder	GV-1	Rechargeable battery	DB-65
External mini viewfinder	GV-2	Battery charger	BJ-6
Cable switch	CA-2*1	Metal lens cap(with function for locking the power button)	GL-1*1*3
Soft case	GC-3	Hand strap (genuine leather, with GR logo)	GS-2*1
Soft case (GV-2 compatible)	GC-4	HDMI cable	HC-1

GR DIGITAL/GR DIGITAL II options GH-1, GW-1, GT-1, GC-1, and GC-2 cannot be used.
*1. Newly introduced option. *2. Hood and adapter is required when using wide conversion lens.When the wide-angle conversion lens is mounted, only the CCD contrast AF method will be used. *3. When the metal lens cap is mounted, the GC-3/GC-4 cannot be used.

•GR DIGITAL Software (Stored in the internal memory of the camera.)

	Windows® 7	Windows Vista®	Windows® XP
1. DL-10	○	○	○
2. MediaBrowser™	○	○	○

•GR DIGITAL System Requirements

	Windows
Operating system	Windows® XP Home Edition Service Pack 3 Professional Service Pack 3 Windows Vista® Service Pack 2 Windows® 7 32bit /64bit
CPU	Pentium® IV: 1.6GHz or higher, Pentium® M: 1.4GHz or higher, Intel® IntelR Core™2Duo: 1.5GHz or higher
Memory	Windows® XP : 512MB or higher, Windows Vista® / Windows® 7 : 1GB or higher
Hard Drive Space	300MB or higher (when installed)
Display Resolution	Resolution: 1024 × 768 dots or higher
Display Colors	65000 or higher
USB Port	Open USB port available on above PC

*The GR DIGITAL IV can only be connected to a PC by USB and cannot be connected via a serial port.
*The PC needs to come with one of the above operating systems preinstalled and a USB port as standard equipment.
*Not compatible with 64bit versions of Windows® XP or Windows Vista®.
*For MAC OS X 10.4 to 10.6.7, the GR DIGITAL connects using mass storage mode.

•SD Memory Card Storage Capacity (Number of Images and Time)

Mode	Quality	No. of Pixels Recorded	Internal Memory	1GB	2GB	4GB	8GB	16GB	32GB
Still	RAW	3648×2736	2 images	50 images	103 images	203 images	415 images	831 images	1668 images
	F	3648×2736	10 images	240 images	487 images	957 images	1957 images	3922 images	7867 images
	N	3648×2736	17 images	411 images	830 images	1631 images	3333 images	6678 images	13396 images
	RAW	3648×2432	2 images	57 images	116 images	228 images	467 images	935 images	1877 images
	F	3648×2432	11 images	271 images	548 images	1077 images	2202 images	4412 images	8851 images
	N	3648×2432	19 images	461 images	931 images	1828 images	3737 images	7487images	15020 images
	RAW	2736×2736	2 images	67 images	137 images	270 images	551 images	1105 images	2217 images
	F	2736×2736	13 images	319 images	647 images	1270 images	2596 images	5202 images	10435 images
	F	3648×2048	13 images	321 images	653 images	1284 images	2624 images	5257 images	10546 images
	F	3264×2448	12 images	297 images	602 images	1183 images	2418 images	4845 images	9718 images
	F	2592×1944	15 images	370 images	749 images	1471 images	3008 images	6026 images	12089 images
	F	2048×1536	24 images	570 images	1159 images	2277 images	4654 images	9324 images	18704 images
	F	1280×960	43 images	1041 images	2118 images	4160 images	8505 images	17039 images	34181 images
	F	640×480	158 images	3776 images	7681 images	15082 images	30828 images	61759 images	123888 images
Movie	640×480(15 frames / sec.)		43"	17'4"	34'9"	67'3"	137'3"	274'33"	550'45"
	640×480(30 frames / sec.)		22"	8'54"	17'58"	35'17"	72'8"	144'30"	289'52"
	320×240(15 frames / sec.)		1'38"	38'45"	78'48"	154'44"	316'16"	633'35"	1270'57"
	320×240(30 frames / sec.)		54"	21'26"	42'41"	83'49"	171'19"	343'11"	688'26"

*Storage Capacity (Pictures/Time) is only an estimate.

For more information, visit:

http://www.ricoh.com/r_dc

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