RICOH G900SE

Accessories included
- USB Cable
- USB Power Adapter
- Rechargeable Battery
- Power Plug
- Battery Charger
- Neck Strap
- Macro Stand
- Instruction Manual (Camera User Guide)
  Warranty Card

Optional Accessories for the RICOH G900SE

•RICOH SC-900 Soft Case
A sleeve-style camera case that allows the camera to be readied easily and used quickly.

•RICOH O-CC174 Protector Jacket
A silicone jacket that protects the camera from dirt and scratches.

■ Principal Specifications for the New RICOH G900SE Digital Camera

Product Name		RICOH G900SE
Lens		RICOH lens, 11 elements in 9 groups (5 aspherical elements)
	Focal Length (in 35mm format equivalent)	5 - 25 mm (Approx. 28 - 140mm)
	Maximum Aperture	F3.5(W) - F5.5(T)
Zoom	Optical Zoom	5X
	Digital Zoom	approx. 8.1X
	Intelligent Zoom	approx. 7X at 10M, approx. 40.5X at 640 (including optical zoom)
Motion Blur Reduction	Still	Pixel Track SR, Hi-sensitivity anti-shake mode (Digital SR)
	Movie	Movie shake reduction mode (Movie SR, Movie SR+)
Focus	Type	9-point AF, Spot AF, Auto tracking AF
	Focus Range (From lens face)	Standard:0.5m - infinity / 1.64ft. - infinity (entire zoom range) Macro:0.1 - 0.6m / 0.33 - 1.97ft. (entire zoom range) 1cm Macro:0.01 - 0.3m / 0.03 - 0.98ft. (middle zoom position) Infinity-landscape, Pan Focus, Manual Focus:available, 2.5m / 8.20ft. (Firefighting Mode)
Number of Effective pixels		Approx. 20 megapixels
Image Sensor		1/2.3" CMOS
Number of Recorded pixels	Still	Size:L(20M), M(10M), S(5M), XS(3M), 2M, 1M, VGA •( ) in aspect 4:3. • 2M and 1M are available only in the CALS mode. Aspect: 4:3, 3:2, 1:1 • In the CALS mode, the aspect ratio is fixed to 4:3.
	Movie	4K, 1920, 1280
Sensitivity (Standard Output Sensitivity)		AUTO, Manual (ISO 125 - 25600)
White Balance		Auto, Daylight, Shade, Cloudy, Tungsten light, Fluorescent light(D:Daylight Color, N:Daylight White, W:White Light, L:Warm White), Ring light, Manual
Display	Type	3.0" LCD, approx. 1040K dots, AR Coating (Cover only)
	Adjustments	Brightness, Outdoor View Setting:±2 Steps
Exposure Control	Metering System	Multi-segment metering, Center-weighted metering, Spot metering
	Exposure Compensation	±2EV (1/3EV steps)
Scene modes		Auto Picture, Program, HDR, Movie, High Speed Movie, Digital Microscope, Interval Shot, Interval Movie, Surf & Snow, Digital SR, Report, watermark, Firefighting, Skew Correct, Text, Zoom Macro, Haze removal, Depth of field composition,
Playback modes		Slideshow, Image Rotation, Small Face Filter, Ink Rubbing Filter, Digital Filter (B&W/ Sepia, Toy Camera, Retro, Color, Extract Color, Color Emphasis, High Contrast, Starburst, Soft, Fish-eye, Brightness, Miniature), HDR Filter, Movie Edit, Red-eye Edit, Resize, Cropping, Image Copy, Protect, Start-up Screen, Recover File, Auto Image Rotation, Skew Correct, File Send
Shutter Speed		1/4000 - 1/4 sec. (Mechanical and electronic shutter)
Built-in flash	Modes	Flash-on and Flash-off modes. "Red-eye" compensation function employs a pre-discharge.
	Flash Range	Wide:approx. 0.2 - 5.5m / 0.66 - 18 ft. (ISO Auto) Tele:approx. 0.2 - 3.5m / 0.66 - 11 ft. (ISO Auto)
Drive Modes		One shot, Self-timer, Continuous Shooting, Burst Shooting, M Continuous, S Continuous, Remote Control, Auto Bracketing
Storage Media		Built-in Memory (approx. 6.5GB), SD/SDHC/SDXC Memory Card,FlashAir™ Card
Power Source		Rechargeable Battery DB-110
	Battery life	Still*1:approx. 340 shots (Rechargeable Battery) Playback*2:approx. 260 min. (Rechargeable Battery)
Wireless LAN	Standards	IEEE 802.11a/b/g/n/ac (Wireless LAN standard protocol)
	Frequency (Center Frequency)	2.4GHz (1ch~11ch) /5GHz (36ch~48ch)
	Security	WEP (64/128bit), WPA / WPA 2 mixed PSK, WPA / WPA 2 mixed EAP format enterprise EAP-TLS, PEAP (MS-CHAPv2)
Bluetooth®	Standards	Bluetooth® v3.0 / v4.2 (Bluetooth Low Energy)
	Frequency (Center Frequency)	2.4GHz (CH0~CH39)
NFC	Standards	Felica, Mifare, ISO / IEC 14443 Type A / B
	Frequency (Center Frequency)	13.56MHz
GPS		GPS, GLONASS, QZSS (Michibiki) + SBAS GPS display mode: LAT/LON, UTM, MGRS GPS logging, GPS lock, GPS time adjustment, GPS data imprint, UTC data imprint
Electronic Compass		Compass heading :Cardinal, Degrees, Cardinal/Degrees Declination, Compass data imprint
Interfaces		USB3.0(Type-C), HDMI output terminal (Type D)
Water proof / Dustproof		Equivalent to JIS Class 8 waterproof and JIS Class 6 dustproof capabilities
Dimensions		Approx. 118.2 (W) x 65.5 (H) x 33.1 (D)mm/4.7 (W) x 2.6 (H) x 1.3 (D) inches (including lens depth)
Weight		Approx. 252g / 8.9 oz. (Included dedicated battery and SD memory card), Approx. 225g / 7.9 oz. (Body only)
Included Accessories		Rechargeable Battery DB-110, Battery Charger BJ-11,USB Power Adapter, Power Plug, USB Cable I-USB173, Neck Strap, Macro Stand
Languages		English, French, Germany, Spanish, Portuguese, Italy, Dutch, Japanese, Danish, Swedish, Finnish, Polish, Czech, Hungarian, Turkey, Greek, Russian, Thai, Korean, Simplified Chinese, Traditional Chinese

*1 Recording capacity shows approximate number of shots recorded during CIPA-compliant testing.
Actual performance may vary depending on operating conditions.
*2 According to the result of RICOH in-house testing.

■ RICOH G900SE Optional Accessories

Product Name	Model Name
Soft Case	RICOH SC-900
Protector Jacket	RICOH O-CC174
Wide Conversion	DW-5
Remote Control Waterproof	O-RC1
Rechargeable Battery	DB-110
Battery Charger	BJ-11

■ RICOH G900SE Software

DL-20	Copy pictures to a computer
LE2	Create camera memo lists
ME2	View pictures, edit camera memos, and print reports
EX2	Rename files based on camera memo data and export camera memo data
ST-20	Adjust wireless LAN settings
SR-20	Configure your computer as a dedicated server for the camera

■ RICOH G900SE System Requirements

	Windows®
Operating Systems Supported	Windows® 10 (32bit/64bit) Windows® 8.1 (32bit/64bit) Windows® 7 SP 1(32bit/64bit) Windows Server® 2019(64bit) Windows Server® 2016(64bit) Windows Server® 2012 R2(64bit) Windows Server® 2008 R2(64bit)

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

				Internal Memory (approx. 6.5GB)	16GB
Still Image*1	5184×3888	L	★★	1478	3233
	3648×2736	M	★★	2916	6379
	2592×1944	S	★★	5394	11801
	2048×1536	XS	★★	8299	18155
	1600×1200*2	2M	★★	11988	26225
	1280×960*2	1M	★★	14386	31470
	640×480	VGA	★★	53949	118013
Movie	3840(3840×2160)	30fps		00:09:26	00:20:44
	1920(1920×1080)	30fps		00:47:36	01:44:15
	1280(1280×720)	30fps		01:18:41	02:52:14

Note: The maximum recording time is the estimated total recording time.
*1 In aspect 4:3
*2 In the CALS mode

For more information, visit:
https://industry.ricoh.com/en/dc/

RICOH

The information in this catalog is current as of July 2019.

RICOH
imagine. change.

A Waterproof, Dustproof, Heavy-Duty Digital Camera

G900SE

Data Security & Connect Camera

Bluetooth®

Wireless LAN

NFC

NEW

Proof against water, dust, shock, and chemicals

5×optical zoom (28-140mm)*

GPS and barcode reading

RICOH G900SE

* All focal lengths in this catalog are equivalent to 35mm format.

Data Security & Connect Camera

Connectivity for smooth management of information
×
Camera performance equal to the demands of the harshest worksite

In addition to effective 20 megapixels, 5× optical zoom, and water-, dust-, and impact-resistance for reliability you can count on no matter what the job, the RICOH G900SE has all the latest features, including Bluetooth®, wireless LAN, NFC, GPS, and support for barcodes, and offers password protection and other security options to help secure one of your most vital information assets: your image data. With features for taking pictures securely and reliably and managing them securely and efficiently, this work-site camera is sure to increase productivity.

Networked Connect for seamless data management

Built-in Bluetooth® and wireless LAN

The camera offers built-in Bluetooth® version 3.0/4.2BLE and IEEE 802.11a/b/g/n/ac 2.4/5GHz wireless LAN, features that can be used for high-speed wireless connections not only to computers but also to smartphones* and other devices. The camera even supports WPS (Wi-Fi Protected Setup™) for easy wireless setup. In addition, the camera link to and exchange data with GPS receivers and other devices that support Bluetooth® version 3.0/4.0.

*Requires the ImageSync app.

■Bluetooth® Transceiver

Feature	Specification
Data transfer	Bluetooth® standard version 3.0/4.2 BLE (Bluetooth Low Energy)
Output	Bluetooth® standard Power Class 2
Range *1	Approximately 10m/33ft (line of sight)
Supported Bluetooth® profiles*2	BIP, OPP, SPP
Operating band	2.4 GHz (CH0 ～ CH39)

* 1 Varies with such factors as signal strength, software, operating systems, and the presence or absence of obstacles.
* 2 Specifications set out in the Bluetooth® standard to allow communication between Bluetooth® devices for specific purposes.

■Wireless LAN Transceiver

Feature	
Standards	IEEE 802.11a/b/g/n/ac
Communication protocols	IEEE 802.11g/n: OFDM IEEE 802.11b: DSSS, DQPSK, DBPSK
Range*	Approximately 30 m (98 ft), varies with location and with operating environment and conditions
Security	WEP (64/128-bit), WPA/WPA2 mixed PSK, WPA/WPA2 mixed EAP format enterprise EAP-TLS, PEAP (MS-CHAPv2)
Operating band	2.4GHz (1ch～11ch) / 5GHz (36ch～48ch) restricted to 2.4 GHz in infrastructure mode

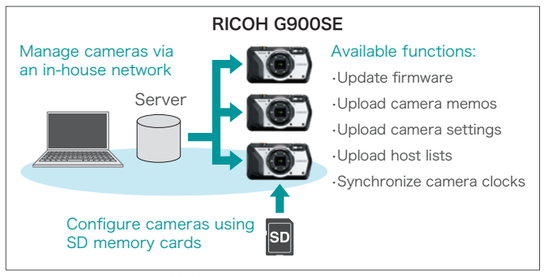
* Varies with such factors as signal strength, software, operating systems, and the presence or absence of obstacles.

Enterprise Wi-Fi support

The RICOH G900SE supports IEEE 802.1x Wi-Fi authentication, a highly secure method that uses credentials supplied by a RADIUS server. It also allows use of computer encryption certificates.

Seamlessly manage cameras on in-house networks

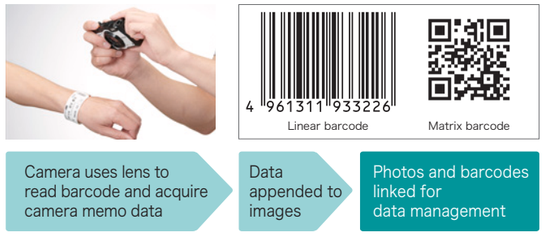
Cameras can be managed in-house or on in-house networks. Update firmware simultaneously on multiple cameras and otherwise reduce administrator workload and improve system integration. Cameras can also be configured using SD memory cards.



Note: Requires the supplied SR-20 software.
Note: Memory cards cannot be used for clock synchronization.

Barcodes help with memo and password entry

The RICOH G900SE reads linear and matrix barcodes. Barcodes can be stored as camera memos that can help with such tasks as managing goods for distribution and preventing patient mix-ups at medical institutions.



Export camera memos in XML format

Use the supplied EX2 software to export camera memos in the highly portable XML format. You can also choose templates for export in your choice of formats, making it a snap to manage memos via in-house networks.

Secure Create images that can be trusted; prevent leaks

Password protection restricts access to a variety of camera functions

Password-protect the entire camera or internal memory or require a password only for USB access or to modify camera settings. Access can be granted by scanning a password barcode or entering the password using the camera's onscreen keyboard.

- Password-protect the entire camera
- Password-protect internal memory
- Restrict USB access
- Password-protect camera settings

Create up to two passwords

Create separate user and administrator passwords. The administrator can restrict access to functions used on-site, for example to prevent unintended changes to camera settings when the camera is used in the workplace.

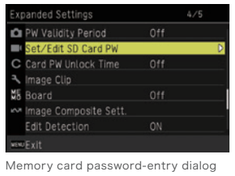
	Administrator	User
Camera access	●	●
Menu access	●	●
Viewing the contents of internal memory	●	●
USB connection	●	●
SDWO	●	●
Internet access*	●	●


Password entry dialog

* When connected to an Internet-enabled device via Bluetooth® or wireless LAN.
Note: When both administrator and user passwords are supplied, the administrator password takes priority.

Password protection for memory cards

Two types of SD memory cards can be password protected: SDHC and SDXC. Password-protecting memory cards prevents images falling into the wrong hands should the card be lost or stolen.



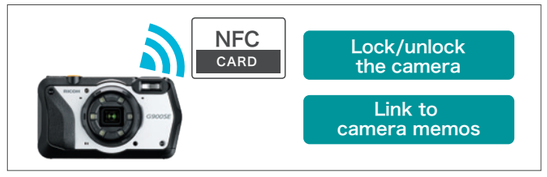
Memory card password-entry dialog

Note: Do not forget your password. Password-protection cannot be removed by support personnel.
Note: Password protection has been tested and approved for use with Panasonic, Toshiba, and SanDisk SDHC and SDXC memory cards of up to 256 GB capacity.
Note: Passwords for SD memory cards can only be entered via the on-screen keyboard or by scanning barcodes.

NEW Support for NFC (Near Field Communication) Cards

The RICOH G900SE supports MIFARE®, FeliCa, and ISO1443 TypeA/B NFC cards, letting users unlock the camera simply by tapping it with a card. Card data can be linked to camera memos so that the camera can, for example, retrieve the user's name from a previously-prepared list and record it when tapped with a company ID card*.

* Requires the supplied SR-20 software.



Control the camera from a computer

If the camera is connected to a computer running Image Transmitter 2 software (available separately)*, you can adjust settings (including zoom, exposure, and ISO sensitivity) and take pictures, all while the view through the camera lens is displayed in the computer monitor. The pictures can be saved to any folder on your computer.

* For more information, visit the RICOH website.

Supports control from remote devices

Smartphones and tablets running the soon-to-be-released G900SE-compatible version of Image Sync* will be able to perform a variety of tasks, including controlling the camera and taking and viewing pictures remotely and downloading images from the camera and uploading them to social media.

* For more information, visit the RICOH website.

Tough — Tough enough for the roughest worksite

Impact resistant — Tough body with heightened impact resistance passes the 2.1m drop test

Although it is light and compact, the RICOH G900SE features a tempered front lens element and protection at key points, tough enough to withstand the Pentagon MIL-Standard 810F 2.1m (6.9ft) drop test on all 26 sides (6 faces, 8 corners, and 12 edges) even when the power is on.

Waterproof — IPX 8 water resistance, good to depths of 20m for up to 2 hours

With Class 8 JIS/IEC water resistance, the RICOH G900SE can take photographs for 2 hours at depths of 20m (66ft). Use it on wet worksites or in the rain or the dirt can be rinsed off.

Dust- and freeze-proof — Toughness that shines on harsh jobs

Class 6 JIS/IEC dust resistance keeps out dust and sand. Able to withstand temperatures as cold as –10°C (14°F), the RICOH G900SE can be used in cold environments.

Chemical resistant — Worry-free usage with sodium hypochlorite, ethanol, or liquid chlorine dioxide disinfectants

The RICOH G900SE can be used with ethanol, sodium hypochlorite, and liquid chlorine dioxide disinfectants, allowing it to be used worry-free in medical facilities or on production lines.

Support for filters

Third-party 37mm filters can be attached to the lens to protect it from condensation and scratches.

Wide, long neck strap

Long enough to be worn across the chest, the strap is broad and rugged. Camera can also be hanged vertically as it can also be worn around the neck so that the camera can easily be placed in a breast pocket.

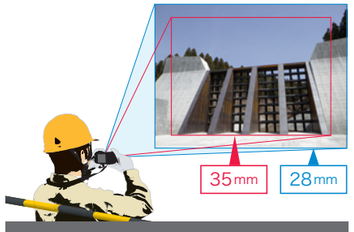
Easy to hold, easy to use

The large grip guides your fingers into a position where you can support the camera naturally. Additionally the mode dial and other controls are designed for ease of use with gloves.

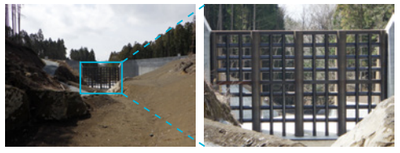
Wide&Macro — With 5× optical zoom, a lens that handles a range of subjects

Compose shots freely with 5× optical zoom

Featuring a 28–140mm lens with 5× optical zoom and a field of view wider than that of a typical 35 mm lens, the RICOH G900SE is perfect for shooting indoors and in other locations where there is little room to step back , yet also takes telephoto shots in its stride.



Get wide shots without stepping back



Wide conversion lenses

Use a conversion lens for wider shots at a focal length equivalent to 22mm. When attached, conversion lenses provide JIS Class 7 water resistance and are so slim that the extra length is almost unnoticeable.

22 mm

Note: When used with a wide conversion lens, the flash will not illuminate objects at the edges of the frame and parts of any shots taken with the flash will be dark.

Smart — A high-performance camera for your worksite

NEW — New image processing engine and back-illuminated CMOS sensor

Take clear shots of dimly-lit worksites. 20 effective megapixels ensures that details show clearly even after pictures are cropped. The latest image sensor and image processing engine can handle a wide variety of scenes, from long shots to close-ups, even under at night or under low light.

Actual brightness
(simulation)

Flash: AUTO
ISO: AUTO (125-1600)
shutter speed:1/20 sec;
aperture: F3.5

Flash: OFF
ISO: 6400
shutter speed:1/20 sec;
aperture: F3.5

NEW — Wide-angle 3.0-inch, 1,040k-dot monitor is easy to read, indoors and out

The large, high-resolution (3.0″ , aspect ratio of 3:2, approximately 1,040k-dot) monitor features a cover with an anti-reflective (AR) coating that makes it easy to view even outdoors in bright sunlight. The new outdoor view feature lets you quickly adjust brightness in response to ambient lighting conditions for an even better viewing experience.

Note: Composite image; actual display not shown.

Internal memory approx.6.5GB of image storage

The camera features internal memory with space enough for 856* images. You can keep shooting without worrying even when the memory card is full. ＊At settings of 5184 × 3888 (L) ★★★

ADJ button

The ADJ button provides quick access to camera settings, including exposure compensation and ISO sensitivity.

Note: The ADJ button functions as a camera memo button when camera memo settings are enabled.

Select modes quickly and easily using the mode dial

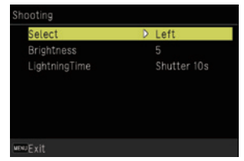
For example, selecting Digital Microscope mode, which illuminates the ring lights for photos at distances as close as 1cm, is as simple as rotating the mode dial. Frequently-used settings can be assigned to the U1 and U2 positions on the mode dial for quick recall.

Recall saved settings at the twist of a dial

Saved settings for different scenes can be recalled instantly imply by rotating the mode dial to U1 or U2.

NEW — Adjustable ring light

The lens is surrounded by a six-LED ring light. You can choose which LEDs light and adjust their brightness to get clear shots showing fine details such as the model numbers on small parts or scratches in walls or floors.



Ring light settings

Left ring lights used for a photo taken in macro mode at a distance of 1cm (0.4in)

NEW — 4K resolution for sharper movies

Shoot movies in 4K (frame size 3840 × 2160 pixels, 30 fps) for high-resolution footage that gives you an overall view of a big construction site, for example, or helps you grasp the relative positions of various objects.

Note: The camera can record up to approximately 25 minutes or 4GB of footage per shot.

NEW — Outline fonts

The camera uses clear-rendering outline fonts for composite images created using electronic survey slates.

Tweaks for on-site photography and photo management

■Button hold options prevent unintended operation

To avoid unintended operation such as accidental menu display or the camera turning on during transport, use the menus to reduce the response speed of the power and menu buttons.

■Folder-creation options

Users have a choice of three options for naming the folders used to store images: standard, user-selected, or by date.

■Display folder at startup

While starting up, the camera displays the current folder together with the images it contains.

■Display date at startup

The RICOH G900SE displays the date from startup until the shutter release button is pressed, helping you catch errors in the camera clock before they are recorded with your pictures.

■Pitch and roll indicators help keep the camera level

The camera' s built-in electronic level with pitch and roll indicators can be used to keep the camera level.

■Rename files

Users can select the four-letter prefix used to name files. Files can be named accoxo the photographer or departmental rules to help simplify image management.

Versatile — Varied functions for a variety of situations

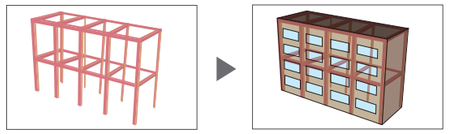
Varied functions for a variety of situations

NEW ■Equipped with GPS and an electronic compass

The onboard GPS and electronic compass record the current location and heading with each picture taken for highly accurate positioning no matter what the time or place. The RICOH G900SE supports GPS, the Japanese Quasi-Zenith Satellite System (QZSS, also known as Michibiki), and GLONASS, can use signals from Satellite-Based Augmentation Systems (SBAS), and can record track log entries once a second for both photos and movies. Set the camera clock using GPS or use the “GPS memory” button to record the locations of selected targets.

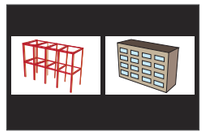
■Compare images with “Watermark Options

Use existing pictures as a template when composing new photos. Template transparency can be selected from 20, 40, 60, and 80 percent, or photos with the same composition as the template can be compared side-by-side. One way in which this feature can be used is for before and after shots on construction sites.



Display photo as template

Refer to template when taking new photos



NEW Compare images side-by-side

■Skew correction

Select “Skew Correct Mode” to reduce the effects of perspective when photographing signs, business cards, and other rectangular subjects from an angle. The camera also records the uncorrected photos. Users have the option of displaying guides to help correct skew.

Before correction

NEW After correction (with guides)

After correction (without guides)

NEW ■Haze penetration

Image processing is used to reduce the effects of mist or haze for sharper images in ports or among the mountains.

NEW ■Depth-of-field composites (focus stacking)

Use focus stacking to create images where every part of the subject, from front to back, is in focus.

■Interval-timer photography

The camera takes photos at preset intervals. Choose from intervals of 10 seconds to 99 minutes (interval-timer photography) or 1, 5, 10, 30, or 60 minutes (time-lapse movies).

■Firefighting mode

Fires are a challenge for autofocus. Firefighting mode fixes focus at 2.5m and heightens ISO sensitivity and sharpness.

Support for FlashAir™ memory cards

Using a FlashAir card* (a SD memory card with built-in wireless LAN), you can upload pictures from the worksite to a distant office or the like. The card’ s wireless LAN can now be enabled or disabled from the camera, helping reduce the drain on the battery.

＊An SD-UWA-series W-04 Toshiba FlashAir™ SDHC/SDXC memory card.

◀ Actual size

Smooth — Automatize post-shooting sorting

Camera memos to simplify image management

Camera memos: You can select pre-generated camera memos listing job information or other data to be added to pictures as they are taken.

Hard-to-identify images can be clearly labeled with written descriptions in the form of camera memos saved simultaneously with the picture and consisting of up to 100 items of 999 lines each, with descriptions of up to 128 characters. Choose from multiple camera memo lists, which can be stored in the camera’s internal memory.

Note: Camera memo lists can be created using the supplied LE2 software.

Camera memo selection dialog

Electronic work slate playback dialog

Note: Composite image; actual display not shown.

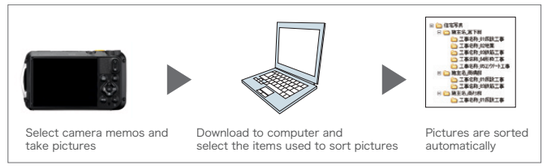
Versatile functions help you manage and sort images after shooting

Here are some features that will greatly reduce your post-shooting workload when it comes to such tasks as data management and manually sorting images by viewing them one at a time.

■Categorize images automatically

Import memo data and use it to categorize images automatically, reducing the work involved in sorting files after shooting.

Note: Requires the supplied DL-20 and EX2 software.



Select camera memos and take pictures

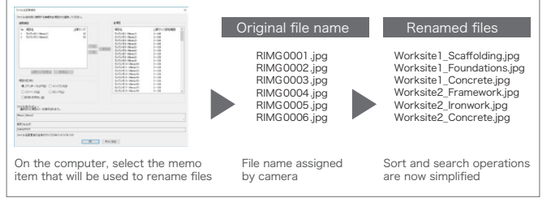
Download to computer and select the items used to sort pictures

Pictures are sorted automatically

■Sorting and searching are a snap

Rename files automatically based on memo contents to streamline sort and search operations. Files can also be renamed based on information read from barcodes.

Note: Requires the supplied EX2 software.



On the computer, select the memo item that will be used to rename files

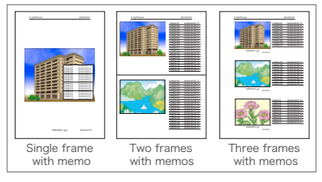
File name assigned by camera

Sort and search operations are now simplified

■Camera memos make generating reports a snap

It’s easy to generate handy reports with memos. No need to write them out by hand—simply print them and use them in statements or reports.

Note: Requires the supplied ME1 software.



Single frame with memo

Two frames with memos

Three frames with memos

■Stamp memo data on pictures

Camera memo data can be stamped on images so that their content can be verified as text.

Data stamps in three locations

Note: Composite image; actual display not shown.

■Link related images with image clips

For example, you can clip shots of survey data onto worksite photos so that the relationship between the photos and the survey data is clear when the photos are viewed. Users can choose a clip size that suits their needs; options range from 3M to VGA.

Note: Requires the supplied ME2 software.

■Add camera memos to movies

Simplify movie file management with camera memos that can be viewed using the supplied ME2 software. The technique for adding memos to movies is as same as for photos.

■Add temporary voice memos to pictures

Up to 30 seconds of voice data can be recorded when a photo is taken. Use this feature to add temporary memos giving onsite survey data and other up-to-the-minute information.

Creation options for temporary memos