

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

IN RE PAPST LICENSING GMBH & CO.
KG LITIGATION

This Document Relates To:

ALL CASES

Misc. Action No. 07-493 (RMC)
MDL Docket No. 1880

CAMERA MANUFACTURERS' STATEMENT ON THE ABSENCE OF NEED FOR
EXTENSIVE DISCOVERY PRIOR TO A MARKMAN HEARING

There is no need for extensive, costly and time-consuming discovery before the Court conducts a *Markman* hearing in this case and that hearing should be held early in this litigation. Papst contends that it needs to conduct wide-ranging discovery solely for the purpose of determining which of the 33 claims of the patents-in-suit it will choose to assert in this matter. Indeed, Papst also contends that its need for this discovery should delay the *Markman* hearing almost two years.¹ As set forth below, there are several reasons why such extensive discovery is not needed before a *Markman* hearing in this action.

First, there are six independent claims in the two patents-in-suit and each of these claims contains almost identical terms. For many of these claim terms, the Camera Manufacturers and Papst have already staked out their claim construction positions in pre-litigation discussions. If the Court were to agree with the Camera Manufacturers on *any* of them, then this case may be

¹ As the Camera Manufacturers noted in our Case Management Report filed on March 12, 2008, the courts that hear the most patent infringement cases, the Eastern District of Texas, and the Northern District of California both enforce local rules for patent cases that require patentees to identify the claims to be asserted very early in the matter, before any discovery has been conducted. They then follow with a series of disclosures requiring the parties to set forth their positions on claim construction, followed by a relatively early claim construction proceeding.

over. There is no reason to delay the resolution of these potentially case-determinative issues, solely to allow Papst to pursue extensive and costly discovery from the Camera Manufacturers that will have little relevance to claim construction. Indeed, at its core, Papst's strategy is to prevent an early resolution of claim construction to force the Camera Manufacturers to face the prospect of protracted and costly discovery before interpretation of patent claims is ever addressed.

Second, the dependent claims of the patents-in-suit add few additional terms to be construed. The burden of construing those few additional claim terms is inconsequential compared to the millions of dollars the Camera Manufacturers would incur in potentially needless discovery if Papst's proposed schedule is adopted.

Third, Papst already has access to extensive information on the digital cameras of each Camera Manufacturer that it can use to determine which the claims of the patents-in-suit it wishes to assert. There is a wealth of publicly available information about the Camera Manufacturers' cameras in particular and about digital camera technology in general that has been available to Papst for years and would inform Papst about which claims it may want to assert. Accordingly, Papst's contention that it cannot determine which claims to assert without discovery does not justify delaying the *Markman* hearing, and forcing the Camera Manufacturers to engage in burdensome and costly discovery.

A. Construction of Any of the Independent Claims In The Patents-In-Suit Will Complete Most of the Claim Construction Analysis Required.

This action presents a paradigmatic example of a case that would benefit from an early *Markman* hearing. There are only two patents-in-suit, only six independent claims in those patents, and those independent claims are remarkably similar to each other. Independent patent

claims stand on their own, while the dependent claims explicitly refer to another claim and incorporate that claim's terms by reference. The patents-in-suit in this case are related, and have the same specification. Each has three independent claims—claims 1, 11 and 14 of U.S. Patent No. 6,470,399 (the “’399 patent”) and claims 1, 17, and 18 of U.S. Patent No. 6,895,449 (the “’449 patent”)—and 12 and 15 dependent claims, respectively. Regardless of how many claims ultimately are asserted by Papst, in order to be found to infringe the patents-in-suit, the Camera Manufacturers must meet every limitation of at least one of the independent claims of each patent. If the Camera Manufacturers do not satisfy even one limitation of an independent claim, then they cannot be found to infringe that claim, or any of the dependent claims that refer to the non-infringed claim. For example, if the Camera Manufacturers do not meet even one limitation of claim 1 of the ‘449 patent, then the Camera Manufacturers cannot be found to infringe claims 1 through 16 of that patent.² Accordingly, if the Camera Manufacturers prevail on their proposed construction of one or more terms from claim 1 of the ‘449 patent, then there is a strong likelihood that such a determination would be case dispositive of that patent, and quite possibly both patents. Given that this threshold determination could resolve the question of infringement, it is of no consequence which dependent claims Papst chooses to assert.

Moreover, the six independent claims of the patents-in-suit have very few differences in terms that would be of any significance for claim construction. The burden of claim construction has less to do with the number of claims to be construed, than with the number of terms to be construed. Because the six independent claims contain most of the terms likely to require

² Given the almost identical nature of the independent claims, if the Camera Manufacturers do not meet a limitation of claim 1, that same limitation is most likely also missing in the other two independent claims, 17 and 18. Thus, a finding that the accused products do not have this one limitation will most likely end the case entirely for the ‘449 patent.

construction from all of the claims of the patents-in-suit, adding any number of the dependent claims will add little burden to the claim construction exercise. For example, the following chart compares claims 1 and 11 of the `399 patent and highlights those sections in which the claim language differs:

Independent Claim 1 of `399 Patent: 1. An interface device for communication between a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and a data transmit/receive device, the data transmit/receive device being arranged for providing analog data, comprising: - a processor; - a memory; - a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and - a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including a sampling circuit for sampling the analog data provided by the data transmit/receive device and an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, wherein the interface device is configured by the processor and the memory to include a first command interpreter and a second command interpreter, wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device, sends a signal, regardless of the type of the data transmit/receive device attached	Independent claim 11 of `399 Patent: 11. An interface device for communication between a host device, which comprises a multi-purpose interface and a specific driver for this interface, and a data transmit/receive device, the data transmit/receive device being arranged for providing analog data, comprising: - a processor; - a memory; - a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and - a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including a sampling circuit for sampling the analog data provided by the data transmit/receive device and an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, where the interface device is configured using the processor and the memory to include a first command interpreter and a second command interpreter, wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, sends a signal, regardless of the type of the data transmit/receive device attached to the
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to the second connecting device of the interface device, to the host device which signals to the host device that it is an input/output device customary in a host device, whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	second connecting device of the interface device, to the host device which signals to the host device that it is an input/output device customary in a host device, whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.
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As demonstrated by this chart, the only significant difference between these two claims is the use of the term “driver for the input/output device customary in a host device” (claim 1) versus “specific driver for the multi-purpose interface” (claim 11). Thus, construing these two claims will require precisely the same exercise—every identical term that the Court construes will be given the same construction for both claims—with the possible addition of one more term. *See Omega Eng'g, Inc. v. Raytek Corp.*, 334F.3d 1314, 1334 (Fed. Cir. 2003) (“[W]e presume, unless otherwise compelled, that the same claim term in the same patent or related patents carries the same construed meaning.”). Exhibit 1 to this Statement includes tables further demonstrating the same level of similarity found in the other independent claims.

The Court will have to construe at least one independent claim from each of the patents-in-suit, regardless of whether Papst asserts a single dependent claim of either patent, and regardless of the number of dependent claims Papst asserts. Once one independent claim is construed, the burden of construing all six of the independent claims can be completed with little additional work.

B. The Dependent Claims of The Patents-In-Suit Add Very Few Additional Terms That May Be In Dispute And Require Construction.

Papst contends, however, that it simply cannot prepare for the *Markman* hearing until it knows which of the dependent claims it will choose to assert, and seeks to delay *Markman* until it obtains some vague and undisclosed additional discovery somehow needed to make that determination. But once the independent claims are construed, as they must be in any instance, then there are very few additional terms that are likely candidates for construction found in the remaining dependent claims. Consider, for example, claim 2 of the '399 patent:

An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.

This claim is composed primarily of terms already found in independent claim 1 (underlined above), plus the additional limitation of a “hard disk.” The term “hard disk” should be readily understood by one of ordinary skill in the art for these patents and should be given its ordinary meaning. It will not need to be construed by the Court.. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (“We have frequently stated that the words of a claim are generally given their ordinary and customary meaning....We have made clear, moreover, that the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention”(internal citations omitted)). Thus, whether or not Papst chooses to assert this claim makes no difference whatsoever to the *Markman* proceeding. The same is true of many other dependent claims. Admittedly, there may be some dependent claims that contain terms that may be disputed and require construction, but these terms are few in number -- far fewer than the terms that will need to be construed for the independent claims.

At a minimum, the Court will have to construe the independent claims of the patents-in-suit. But, even if Papst is truly unable to omit a single dependent claim, and as a result, the Court is required construe every disputed term in every claim, the additional burden will be relatively inconsequential. Accordingly, the benefits of an early *Markman* hearing, specifically, avoiding a lengthy and costly discovery period, far outweigh its burdens.

C. The Extensive Information Publicly Available Regarding The Allegedly Accused Products Is Sufficient For Papst To Determine Whether Or Not To Assert The Claims At Issue.

Even if Papst were correct that it needs to understand the Camera Manufacturers' products to decide which claims of its patents to pursue in this litigation prior to the *Markman* hearing, that would not provide a basis to allow Papst to conduct the extensive discovery it contemplates prior to the *Markman* hearing. As a general matter, technical information regarding digital cameras is widely available to the public through technical articles, industry standards and other sources. *See, e.g.*, Exh. 2 at 2 (technical article containing block diagram for certain type of digital camera). Moreover, as the Camera Manufacturers' counsel have stated, extensive public information is already available about the Camera Manufacturers' digital cameras. For example, Papst had enough information prior to this litigation to prepare a claim chart comparing one of each of the Camera Manufacturers' cameras to claim one of each of the patents-in-suit. Papst also has access to a substantial amount of information that the Camera Manufacturers make publicly available on their respective websites regarding the digital cameras that they manufacture and sell, such as specifications, detailed user manuals (often more than 100-pages long), camera firmware and drivers for each of the Camera Manufacturers' digital

camera models.³ *See, e.g.*, Exh. 3 (Brochure with specifications for Finepix F50fd, which indicates memory, file format and methods of external connection) & Exh. 4 (User Manual for Finepix A203/A303 including Chapter 7 regarding “Camera Connection”). This publicly available information provides details regarding the camera’s internal memory, how to connect the camera to a computer or other devices, the method(s) for doing so, and the file formats used by the camera, which is the type of information Papst contends it needs to know in order to decide which claims of the patents-in-suit to assert.

Accordingly, Papst already has sufficient information to make any necessary strategic judgments regarding which of the claims of its patents it actually wants to assert against each Camera Manufacturer. Moreover, Papst has never identified any specific claims about which it is uninformed or any specific information that it believes it needs and to which it does not already have access. To the extent Papst identifies specific information that it believes that it needs from a Camera Manufacturer in order to assess the applicability of particular claims, it can get that information through limited and targeted discovery in the next few months before the *Markman* hearing takes place.⁴

³ Casio also has already produced a substantial amount of material in discovery.

⁴ As both plaintiffs’ counsel and the Court noted at the March 25 status conference, plaintiffs also may use the defendants’ prior art and invalidity contentions to select among claims to be asserted, based on strategic judgments about which claims may be most likely to survive validity challenges. Indeed, such strategic judgments on validity are most often paramount in deciding what claims should be asserted.

D. Conclusion

Most of the claim terms requiring construction are recited in the independent claims of the patent-in-suit and require no discovery to be identified. To the extent that Papst is unsure about whether to assert particular dependent claims, construing the few additional claim terms in those claims will impose a relatively inconsequential additional burden on the Court and the parties – far less than if the Court subjects the parties to an extensive and costly discovery period before addressing any claim construction issues. In this case, the benefits of early claim construction, such as “facilitat[ing] settlement and . . . permit[ting] resolution, either in whole or in part through dispositive motions, thereby reducing litigation costs,” far outweigh the burdens. *See Manual of Complex Litigation (Fourth)* § 33.223. For all of the foregoing reasons, the Camera Manufacturers request that the Court schedule an early *Markman* hearing in this matter.

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Respectfully submitted,

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**Camera Manufacturers' Exhibit 1 to
Statement On Absence Of Need For Extensive Discovery Prior To A
Markman Hearing**

Comparison of '399 Patent Independent Claims

Independent Claim 1 of the '399 Patent: 1. An interface device for communication between a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and a data transmit/receive device, the data transmit/receive device being arranged for providing analog data, comprising: - a processor; - a memory; - a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and - a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including a sampling circuit for sampling the analog data provided by the data transmit/receive device and an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, wherein the interface device is configured by the processor and the memory to include a first command interpreter and a second command interpreter, wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device, sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device which signals to the host device that it is an input/output device customary in a host device, whereupon the host device communicates with the interface device by	Independent claim 11 of the '399 Patent: 11. An interface device for communication between a host device, which comprises a multi-purpose interface and a specific driver for this interface, and a data transmit/receive device, the data transmit/receive device being arranged for providing analog data, comprising: - a processor; - a memory; - a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and - a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including a sampling circuit for sampling the analog data provided by the data transmit/receive device and an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, where the interface device is configured using the processor and the memory to include a first command interpreter and a second command interpreter, wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device which signals to the host device that it is an input/output device customary in a host device, whereupon the host device communicates with the interface device by means of the specific driver for the
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means of the driver for the input/output device customary in a host device, and wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	multi-purpose interface, and wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.
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Independent Claim 1 of the '399 Patent: 1. An interface device for communication between a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and a data transmit/receive device, the data transmit/receive device being arranged for providing analog data, comprising: a processor; a memory; a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including a sampling circuit for sampling the analog data provided by the data transmit/receive device and an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, wherein the interface device is configured by the processor and the memory to include a first command interpreter and a second command interpreter, wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device, sends a signal, regardless of the type of the	Independent Claim 14 of the '399 Patent: 14. A method of communication between a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and a data transmit/receive device, the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including a sampling circuit for sampling the analog data provided by the data/transmit/receive device and an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; regardless of the type of the data
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data transmit/receive device attached to the second connecting device of the interface device, to the host device which signals to the host device that it is an input/output device customary in a host device, whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device in such a way that it is an input/output device customary in a host device, whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.
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Comparison of '449 Patent Independent Claims

Independent Claim 1 of the '449 Patent: 1. An interface device for communication between a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and a data transmit/receive device comprising the following features: - a processor; - a memory; - a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and - a second connecting device for interfacing the interface device with the data transmit/receive device, wherein the interface device is configured by the processor and the memory in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device which signals to the host device that it is a storage device customary in a host device, whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	Independent claim 17 of the '449 Patent: 17. An interface device for communication between a host device, which comprises a multi-purpose interface and a specific driver for this interface, and a data transmit/receive device comprising the following features: - a processor; - a memory; - a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and - a second connecting device for interfacing the interface device with the data transmit/receive device, where the interface device is configured using the processor and the memory in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device which signals to the host device that it is a storage device customary in a host device, whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.
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Independent Claim 1 of the '449 Patent:

1. An interface device for communication between a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and a data transmit/receive device comprising the following features:

a processor;

a memory;

a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and

a second connecting device for interfacing the interface device with the data transmit/receive device,

wherein the interface device is configured by the processor and the memory in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device which signals to the host device that it is a storage device customary in a host device, whereupon the host device communicates with the interface device by means of the **driver for the storage device customary in a host device**, and

wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.

Independent Claim 18 of the '449 Patent:

18. A method of communication between a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and a data transmit/receive device via an interface device comprising the following steps:

interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;

interfacing of the data transmit/receive device with a second connecting device of the interface device;

inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;

regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device in such a way that it is a storage device customary in a host device, whereupon the host device communicates with the interface device by means of the **usual driver for the storage device**, and wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a **file allocation table** and a directory structure.

Comparison of the '399 and '449 Patent Method Claims

'399 Independent Claim 14:

14. A method of communication between a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and a data transmit/receive device, **the data transmit/receive device being arranged for providing analog data**, via an interface device, comprising:

interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;

interfacing of the data transmit/receive device with a second connecting device of the interface device, **the second connecting device including a sampling circuit for sampling the analog data provided by the data/transmit/receive device and an analog-to-digital converter for converting data sampled by the sampling circuit into digital data**;

inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;

regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device in such a way that it is an **input/output device** customary in a host device, whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and **interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.**

'449 Independent Claim 18:

18. A method of communication between a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and a data transmit/receive device via an interface device comprising the following steps:

interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;

interfacing of the data transmit/receive device with a second connecting device of the interface device;

inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;

regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device in such a way that it is a **storage device** customary in a host device, whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and **wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.**

Comparison of '399 and '449 Device Claims

'399 Independent Claim 1: 1. An interface device for communication between a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and a data transmit/receive device, the data transmit/receive device being arranged for providing analog data, comprising: - a processor; - a memory; - a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and - a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including a sampling circuit for sampling the analog data provided by the data transmit/receive device and an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, wherein the interface device is configured by the processor and the memory to include a first command interpreter and a second command interpreter, wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device, sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device which signals to the host device that it is an input/output device customary in a host device, whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and wherein the second command	Independent Claim 1: 1. An interface device for communication between a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and a data transmit/receive device comprising the following features: - a processor; - a memory; - a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and - a second connecting device for interfacing the interface device with the data transmit/receive device, wherein the interface device is configured by the processor and the memory in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device which signals to the host device that it is a storage device customary in a host device, whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a
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<i>interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.</i>	<i>directory structure.</i>
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第4世代スーパー CCD ハニカムを用いた 広ダイナミックレンジ撮像システム

久保 直基*, 竹村 和彦*, 足立 薫*, 西村 亨*,
玉山 宏*, 岩部 和記*, 山田 哲生**

Super Dynamic Range Image Processing System Using a New Structure CCD

Naoki KUBO*, Kazuhiko TAKEMURA*, Kaoru ADACHI*, Toru NISHIMURA*,
Hiroshi TAMAYAMA*, Kazuki IWABE*, and Tetsuo YAMADA**.

Abstract

Recently the digital still camera (DSC) has achieved a remarkable progress especially in terms of pixel number. This owes to the progress of semi-conductor process technology and DSC market request. A Super Dynamic Range Image Processing System has been developed using a new structure CCD, in which a pair of different photodiodes are arranged under a micro lens that is located on the top surface. This make it possible to capture a high contrast scene which dynamic range is about 400%, and we have achieved robustness in case of capturing the difficult scene for DSC such as backlight scene, short range speed light photography, etc. In this paper, we explain the new CCD and LSIs which realize the super dynamic image processing system, and its algorithm.

1. はじめに

デジタルスチルカメラ（以下、DSCと略）は広く普及し、今や銀塩カメラの生産数量をしのぐまでに成長した。それにともない、クオリティも向上し、高倍率光学ズーム、小型化などの CCD 以外の特徴出しにも目が向けられるようになった。

特に画素数においては、一般向け DSC では 300 ～ 500 万画素 CCD が搭載されるようになり、プロ用途では 1000 万画素を超える CCD が搭載されるようになった (Fig. 1)。こうして多画素化が進んだ背景には、画素数アップに対する市場要求と半導体の微細加工技術の進展が上げられ、解像度の飛躍的向上、電子ズーム倍率拡大などの画質的なメリットをもたらした。逆に、画素数の増加により画素サイズは小さくなり、捕獲電子数減少による感度低下 (S/N 劣化)、読み出し時間の増大による撮影間隔の増大、動画スピードの低下、さらには記録容量の増大によるカード記録枚数の低下といったデメリットも新たな解決すべき課題となっている。

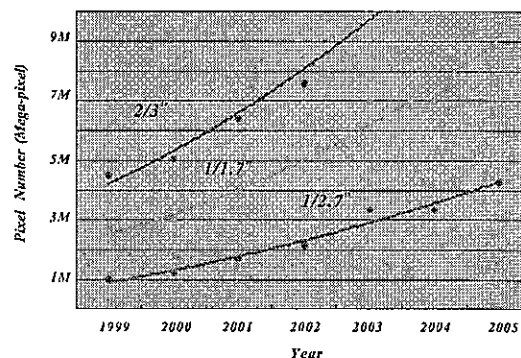


Fig. 1 Trends of pixel number increase of digital cameras in the market.

2000年に初めて当社独自のハニカム CCD を搭載した製品を発売したが、それ以来、ダイナミックレンジ（以下、Dレンジと略）、解像度、感度・S/N、階調再現、色再現の方向に高画質化を追求し、進化させてきた。

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今日のように多画素化が進む中で、300万画素程度であれば、2Lサイズプリント (Frontier 350 Digital Minilab (300DPI) 使用の場合) でも十分であるとの見方も一方にあり、今回、われわれは上述の微細加工技術を“広Dレンジ化”に特徴的に割り振り、さらに進化させた広Dレンジ撮像素子 (『第4世代スーパー CCD ハニカム』) を実用化し、本 CCD を用いた広Dレンジ撮像システムを開発した。合わせて、それを実現するチップセットを開発し、カメラセットに搭載した。

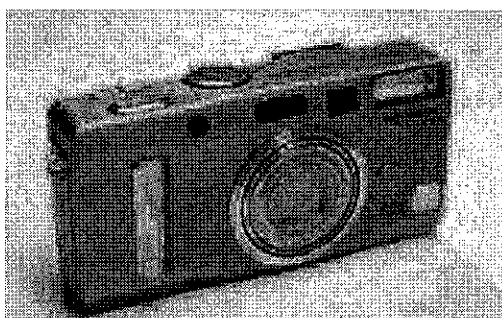


Photo 1 DSC with super dynamic range image processing system.

本報告では、広Dレンジ撮像を実現したチップセットとその信号処理、および広Dレンジ信号処理アルゴリズムを中心に説明する。

2. 広ダイナミックレンジ撮像を実現するチップセット

広Dレンジ撮像システムの概略ブロック図を Fig. 2 に示す。本機能を実現するために、CCD、アナログフロン

トエンド (AFE)、CCD ドライバー、デジタル信号処理 LSI の4種類のチップセットを開発した。前者3つのチップセットは撮像処理を受け持ち、後段のデジタル信号処理 LSI は広ダイナミック信号処理のほか、ほとんどすべてのカメラ制御機能を受け持っている。以下にこれらチップセットの機能と動作を説明する。

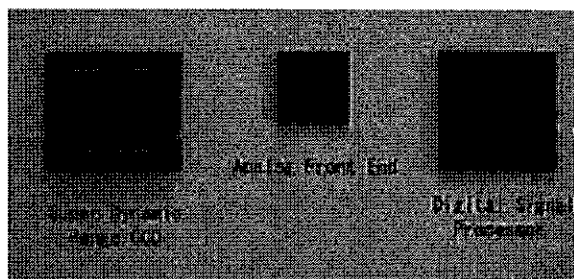


Photo 2 Signal processing LSIs.

2.1 広ダイナミックレンジ撮像素子 (CCD)

D レンジを拡大するには、CCD の標準感度に対して十分な飽和出力が確保される必要がある。実際に必要とされる一般画像の D レンジは、従来 CCD の4倍程度 (後述) であれば十分であるという結果が得られており、飽和出力を変えないで CCD 感度を低下させれば可能であるが、主要被写体が暗くなり、S/N の観点から実用的とは言えない。そこで、われわれは低輝度/高輝度領域をおのおの受け持つ2種類の感度をもったセルを同一チップ上に配置した新しい構造の CCD を開発した。現状のセルを2種類の感度で振り分ければ簡単に実現可能であるが、補間等の信号処理の負荷大、偽色、解像度劣化などの副作用が大きい。今回、最も効率的にシステム構築でき、画質劣化のない、現状の1つのフォトダ

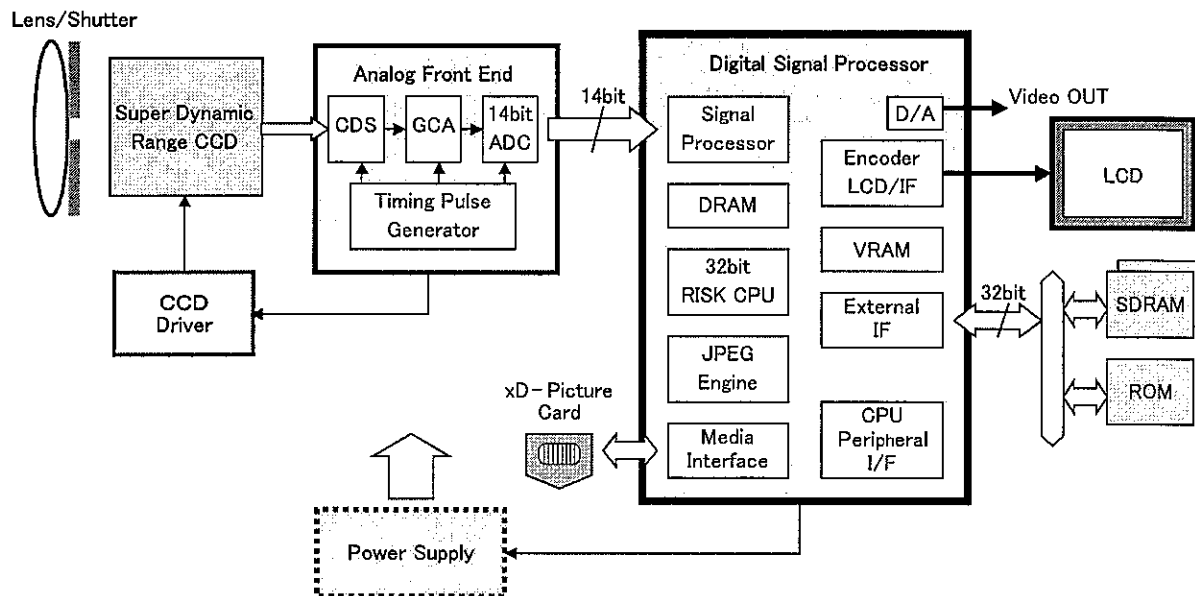


Fig. 2 Block diagram for super dynamic range image processing system.

イオード（以下、PDと略）を高感度/低感度の大小2種類のPDに分割する新しい構造（第4世代CCDハニカム）を採用することで、広Dレンジ（400% Dレンジ）を実現した（Fig. 3）。

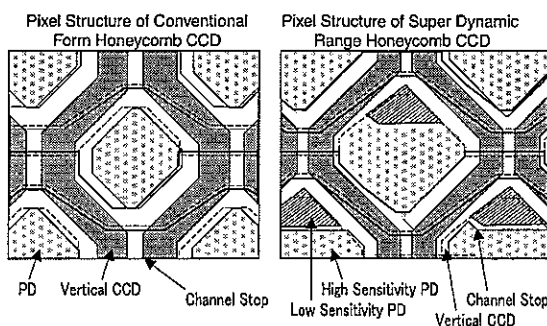


Fig. 3 CCD device layout.

今回、開発したCCDは、1/1.7型総画素数666万画素（高感度画素333万画素＋低感度画素333万画素）で、ハニカム状に画素配列²¹されている。微細加工技術により、PD、VCCD、およびチャンネル分離幅などを再設計し、PD領域を従来比35%拡大することで、高感度画素の性能を従来型CCD²¹と同等以上とすることができた。その結果、低感度PDの飽和レベルを高感度PDに対して約1/3、感度を約1/16に設定することができ、Dレンジ400%以上を確保することができた（Fig. 4）。

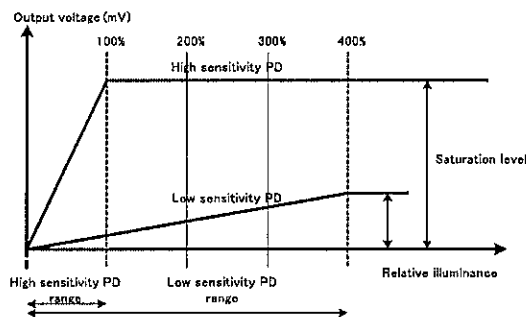


Fig. 4 Opto-electronic conversion function for each of the photodiodes.

本CCDは上記特徴のほかに、当社独自の水平混合機能も標準搭載しており、30fpsVGA動画であって、高感度化を実現している³¹。

2.2 アナログフロントエンド (AFE)、および CCD ドライバー

Fig. 2に示されるように、AFEにはCDS (Correlated Double Sampling) 回路、GCA (Gain Control Amplifier) 回路、ADコンバータ（以下、ADCと略）、およびTG (Timing Generator) が内蔵されている。ADCは14ビット化し、高S/N化、CCD出力信号の階調特性向上を図っている。TGはCCD、AFEを駆動するパルスを発生する

が、AFEとの1チップ化により、高速パルスによる電源系のノイズを抑え、クロック位相変動の少ないパルスをAFEに供給することができ、CCDアナログ信号処理の高S/N化に寄与している。

Fig. 5は本CCDの電極構成図と電荷読み出しの概念図を示している。高感度PDはVCCD奇数電極に接続されており、従来と同じ3値パルスで読み出されるが、低感度PDはVCCD偶数電極に接続されており、従来2値出力パルス端子が接続されているため、ドライバーを3値化する必要があった。本開発のCCDドライバーはVCCDを駆動するすべての端子が3値化されており、AFEに内蔵のTGによりコントロールされる。

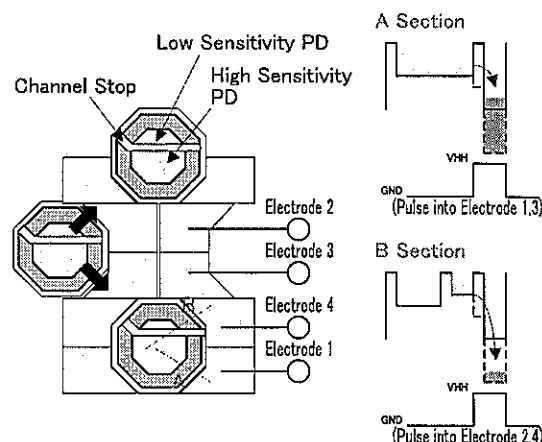


Fig. 5 CCD pixel structure and drive pulses of the vertical driver.

2.3 デジタル信号処理 LSI

Fig. 2にデジタル信号処理LSIの主要ブロック図が示されており、広Dレンジ信号処理、32ビットRISC-CPU、JPEGエンジン、外部メディア・I/Oインターフェース、CPU周辺機器インターフェース、ビデオ/LCDインターフェースといったカメラ制御のほとんどすべての機能が搭載されている。

記録画では、CCD信号は高感度画素、低感度画素の順に2フィールドで読み出される（Fig. 6）。読み出された両画素のデータは、まず、外部SDRAMの所定の位置に格納され、内部バスを介してデジタル信号処理部 (Signal Processor) との間でDMAによるデータのやり取りでYC画像データ (Y:輝度信号, C:色差信号) が生成され、外部SDRAMの所定の場所に格納される。このYC画像データは、JPEGにより圧縮され、外部メディアに記録される。

高/低感度合わせて600万画素余りのデータを効率よく処理するために、低感度画素を読み出している最中に、高感度画素の前処理 (OB処理→キズ補正→リニアマトリックス→ホワイトバランス) をバックグラウンドで行っており、処理時間の短縮化を図っている。続いて低感度画素が読み出され、高感度画素と同じように前処理が施される。その後、高/低感度の両画素情報が

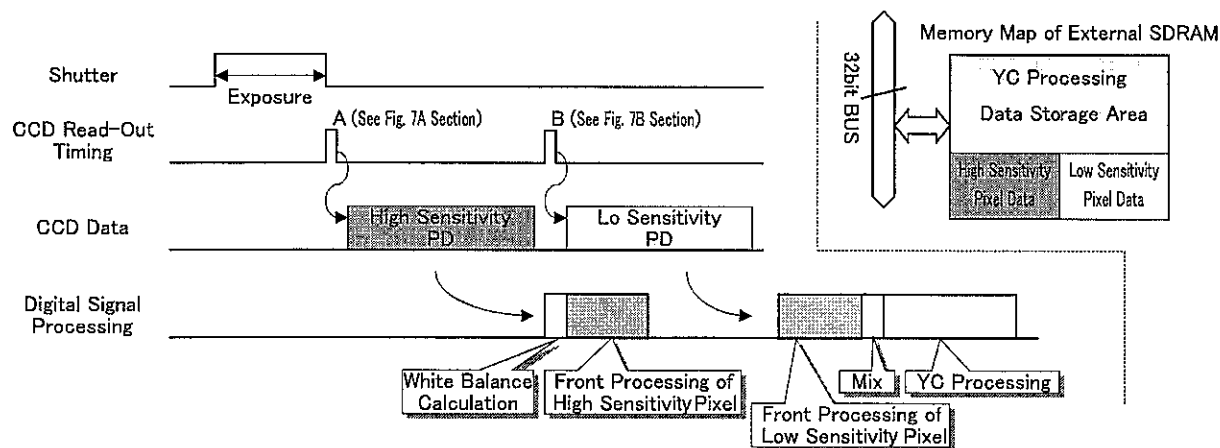


Fig. 6 Time table of CCD read and digital signal processing and operation of super dynamic signal processing.

ら最適な混合比率が決定され（後述），合成される（Fig. 6中，“Mix”で表示）。

動画では，取り込まれたCCD信号は，まず，内蔵VRAM（DRAM）にフレームごとに格納される。デジタル信号処理部との間でDMA転送を行い，YC画像データを生成し，再度VRAM内に格納している。動画は水平混合により，すでにVGA相当の高解像度が得られているが，信号処理速度をさらにアップさせたことで，静止画同等の補間処理が可能となり，真にVGA画質に迫る高解像度化を達成している。このYCデータは，エンコーダを通してLCD表示，またはビデオ信号に変換されて出力される。また，動画記録時は，順次JPEGを通して圧縮され，外部メディアに記録される。動画処理時に頻繁にアクセスされるVRAMをLSIに内蔵することで，低消費電力化を図っている。

3. 広ダイナミックレンジ信号処理アルゴリズム

一般的なCCDを用いたDSCでは，逆光やハイコントラストシーンのようなDレンジの広いシーンの撮影は不得意であり，ハイライト部分が“白とび”することがある。また，近年，撮影領域拡大をねらった高感度化も進められているが，ストロボ使用時に，その到達距離は長くなるが，逆に近接精度が厳しくなり，露光オーバーとなって顔などが白くとびやすくなる。広Dレンジ撮像ができれば，広Dレンジシーンでの露出制御，ストロボ撮影時のロバスト性を向上させることができる。

実際に，ハイコントラストシーンではどの程度Dレンジが必要であるかを，CCDを搭載したDSCで評価した結果をFig. 7に示す。主要被写体が適正露光された輝度ヒストグラムは，①（高感度信号）で示されているが，明らかに飽和して失われる高輝度情報が存在していることがわかる。このシーンを露出アンダーで撮影すると，②（低感度信号）のようになり，適正露光時に高輝度情報がカットされた明るさに対して輝度差（ Δ

$\log Y$ ）が約0.6，すなわち約4倍まで輝度情報が存在することがわかる。同様に，逆光シーンでも4倍程度の輝度情報が存在し，従来CCDの4倍程度までDレンジが確保できればさまざまなシーンに対して十分に対応できると考えられる。

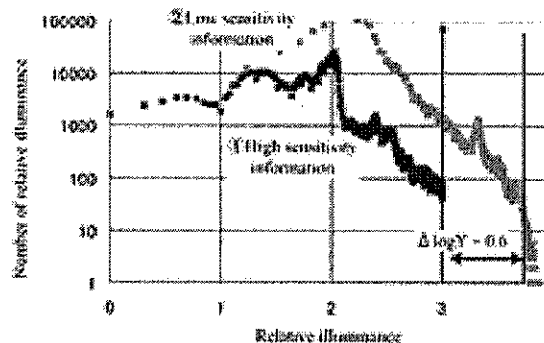


Fig. 7 Relative illuminance histograms of a high contrast scene.

実際には，被写体のDレンジはシーンに応じて変化する。たとえば，曇天シーンはDレンジが狭いので，広Dレンジ信号処理を適応すると，階調再現が軟調になり“ねむい”画像になるという逆効果があり，シーンに応じて自動的にDレンジをコントロールすることが重要となる。

この課題に対して，広Dレンジ撮像素子の出力信号から被写体のDレンジを測定し，その結果から高感度画素出力信号と低感度画素出力信号との合成比率を適応的にコントロールし，出力画像が所望のDレンジになるように最適な階調再現を得る信号処理アルゴリズムを開発した。Fig. 8にその信号処理アルゴリズムを示し，得られるトータル階調をFig. 9に示す。

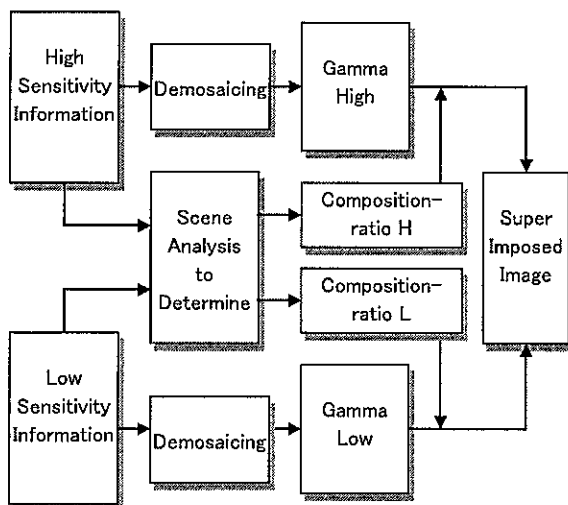


Fig. 8 Flow of the algorithm to build up a final image.

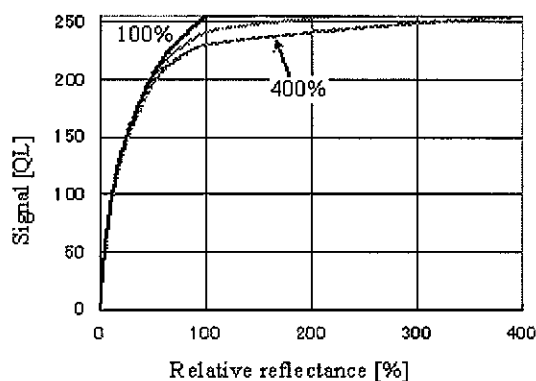


Fig. 9 Opto-electronic conversion functions for a combined image.

4. まとめ

われわれは第4世代スーパーCCDハニカムを用いた広ダイナミック撮像技術を開発し、DSCに搭載した。その結果、逆行シーン、近接ストロボなどの今までデジタルスチルカメラが不得意としていたシーンのロバスト性が向上し、撮影領域を拡大した。

本報告では、チップセットと高Dレンジ信号処理を中心に説明をしたが、これらが搭載されたDSCは、カメラとしてTable 1のような多彩な機能を備えている。

Table 1 Specification of a DSC with Super Dynamic Range Image Processing System.

項目	仕様
撮像素子	1/1.7型スーパーCCD ハニカム SR、原色カラーフィルタ
有効画素数	620万画素(S画素:310万画素,R画素:310万画素)
記録画素数	max.2832×2128ピクセル(603万画素)
記録メディア	xDピクチャーカード(16MB~512MB)
レンズ	スーパーEBC フジノン光学式3倍ズーム (7.7mm~23.1mm/F2.8~F7.1)
撮影感度	ISO AUTO/200/400/800/1600
露出制御	プログラム AE[オート/シーンポジション/プログラム] シャッター優先 AE/絞り優先 AE/マニュアル露出
シャッタースピード	3秒~1/2000秒
連写	連写/サイクル連写/MEGA連写
液晶モニター	1.8型CGシリコンTFTカラー液晶モニター(約13.4万画素)
動画	640×480、30fps(メディア容量まで連続記録可能)
ビデオ出力	NTSC/PAL方式

参考文献

- 1) T.Yamada, et al. A Progressive Scan CCD Image Sensor for DCS Applications. IEEE Journal of SOLID-STATE CIRCUIT 135 (12), DEC 2000.
- 2) K.Ikeda, et al. 1/1.7 format 3.3M Pixel Honeycom CCD Sensor. ITE Tech. Rep. 25 (28).
- 3) 三沢 他. 30fpsVGA 相当動画読み出し対応330万画素 CCD イメージセンサとその応用. 映像学報. 26 (26), 65-70 (2002).

(本報告中にある“スーパーCCDハニカム”, “xDピクチャーカード”, “フジノン”は富士写真フイルム(株)の商標です。)



Face Detection 2.0 - Full of New Features

Latest Face Detection Technology Finds Faces at Almost Any Angle.

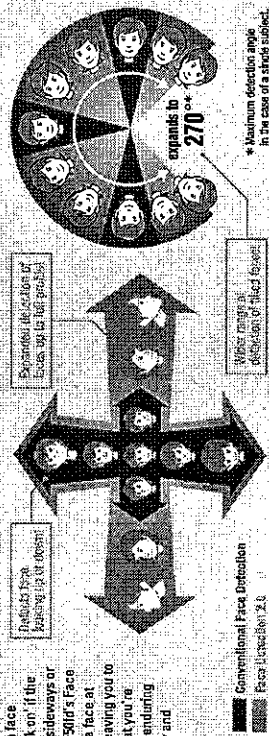


With the expanded range of Face Detection 2.0, every face is clear and bright! It finds faces even if tilted or in full profile, and optimizes focus and brightness. You just frame the shot, press the shutter and enjoy the beautiful results.

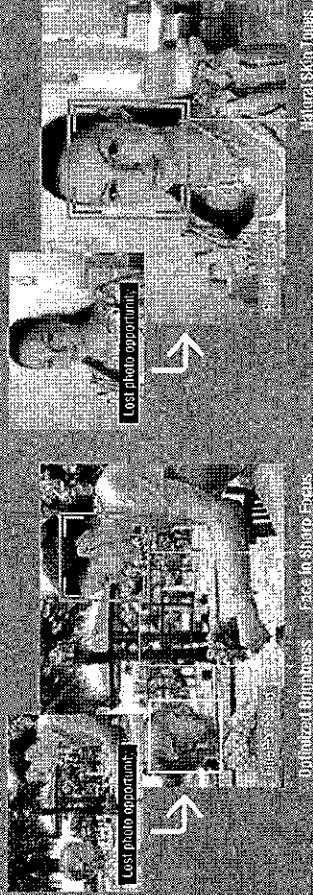


The F50fd Gives a New Extended Range of Face Detection.

Other cameras with face detection can't "lock on" if the subject has turned sideways or is lying down. The F50fd's Face Detection 2.0 finds a face at almost any angle, leaving you to concentrate on what you're good at - capturing enduring memories of beauty and expression.



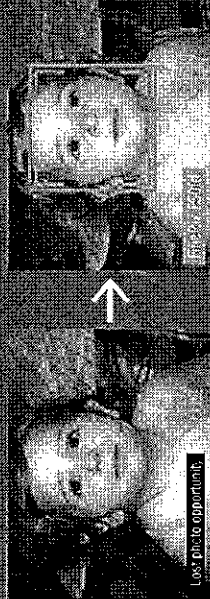
Get Stunning Results with auto optimization.



Optimized Brightness Faces in Sharp Focus

New Face Detection 2.0 does all the work in an instant, leaving you free to frame and snap those fleeting family moments. The next generation technology not only finds and optimizes the faces with precision, but also optimizes exposure to brighten up faces and even enhances facial quality by setting the area with hair and skin.

Ban Red Eye from your pictures forever.

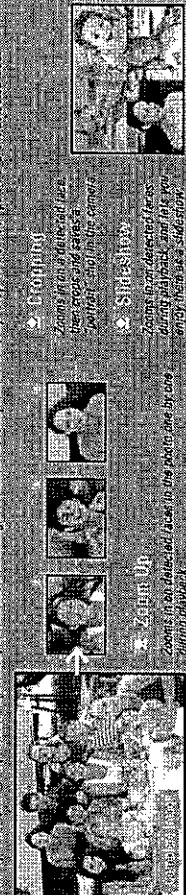


Lost photo opportunity

For decades, one of the biggest reasons why you missed precious moments was the red-eye problem. The F50fd's new Eye Correction technology instantly corrects the red-eye problem. Now, you can enjoy every moment without the red-eye problem. Your precious memories will be saved and ready to share with you.

Up to 10 Faces detected almost instantly.

With Face Detection 2.0, it's so easy to shoot those more fun when they're together. You just frame the shot, and Face Detection does the work simultaneously and accurately finding up to 10 faces in bright, clear results. During playback of your pictures, you can zoom in on detected faces and select them one by one. You just find a red-eye correction, Face Detection with high resolution to easily zoom in on individual faces and zoom in on the detected face.



Zooming in on detected faces

Zooming in on detected faces

Zooming in on detected faces

Zooming in on detected faces

Zooming in on detected faces

Zooming in on detected faces

Zooming in on detected faces

Zooming in on detected faces

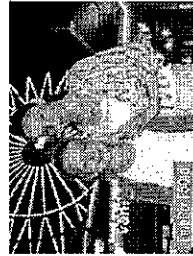
Zooming in on detected faces



*Take home a beautiful family memory
with Real Photo Technology.*

ISO 6400 means so many more great pictures in difficult conditions.

In serious low-light situations, ISO 6400 gives you the ability to capture sharp, clear images even in the darkest of conditions. It's the difference between a blurry, underexposed shot and a sharp, clear one.



Without flash (Natural light)

With Intelligent Flash

Intelligent Flash plus Higher Sensitivity

Say goodbye to flash washout and dark backgrounds! With automatic setting of the ideal balance of flash output and sensitivity, you capture both foreground subjects and background in beautiful bright detail.

Natural Light & with Flash

Can't decide whether it's best to use flash? Choose this mode, press the shutter and automatically capture the same scene twice: once with high sensitivity and natural light, and the second time with Intelligent Flash. Later choose one or keep both!



The F500 allows you to shoot up to 12 frames in a burst* (at 5 frames per second) in continuous mode, even if the subject is moving. Then, later, find that one perfect shot to treasure for ever.

5fps "Burst" Continuous mode

*at 3MP or lower



12 Megapixels Canvas Captures Every Curl and Dimple.

Full-time responsive Super CCD technology makes a sharp 12 megapixel resolution, enabling you to crop or enlarge part of your picture without loss of quality.



12 Megapixels

Higher Sensitivity without the Noise

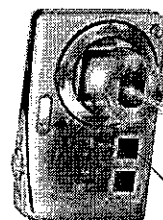
The results of high sensitivity without the noise are perfect for capturing every detail. Double noise reduction separates and removes noise from the picture so your shots show details even in dark scenes.



Double Noise Reduction

Dual IS (Image Stabilization)

Low-light pictures are so often spilt in conventional cameras by image blur. The F500 employs a dual image stabilization system to give crisp results every time. High sensitivity allows you to use a fast shutter speed to freeze the action, while CCD shift image stabilization automatically compensates for camera shake. But blur from your camera.

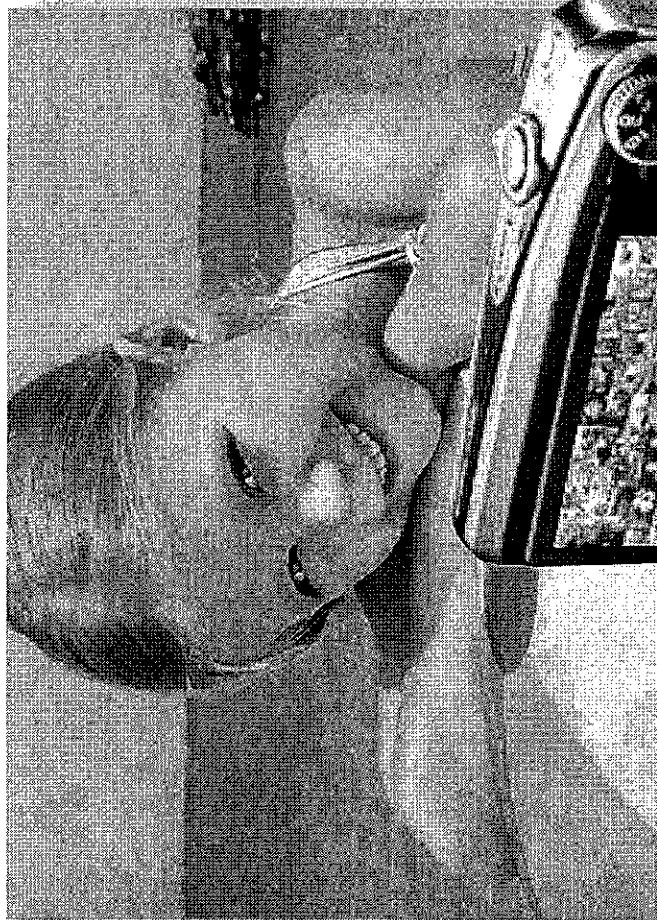


Super CCD

Gyro-Sensor

Image Stabilization Chip

The Gyro-Sensor detects the amount of blur and the Image Stabilization Chip calculates how much correction is needed. Based on the result, the CCD is shifted to compensate for camera shake.

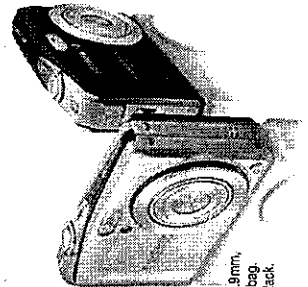


Micro Thumbnail View

View and select from up to 100 photos at a time displayed in a 10x10 array. With the high resolution LCD, it is so easy to scan the micro images and find the photos you want to share with friends and family.

2.7-inch 230,000 Pixels LCD

Even high resolution displays aren't easy to compare the picture quality of most other cameras. The 2.7-inch LCD is also perfect to display the picture quality of most other cameras.



Beautiful "Aero" Form

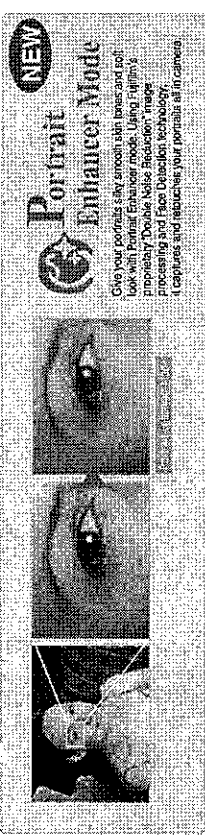
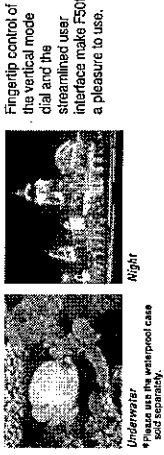
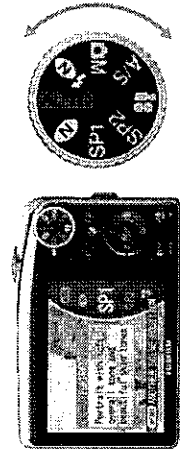
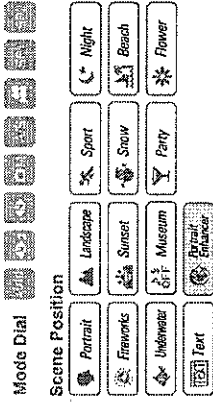
The graceful curves and sleek design of the complex electronics within the F50fd's tough metal exterior. At a depth of only 22.9mm, it's a perfect fit for a pocket or handbag. Available in two colors, silver and black.

Wide View Film

Most LCDs have to be viewed from directly behind the camera to get a clear image. With Fujifilm's proprietary Wide View Film, the LCD can be viewed from oblique angles, which really helps with image playback to friends or composing picture above your head or at waist level.

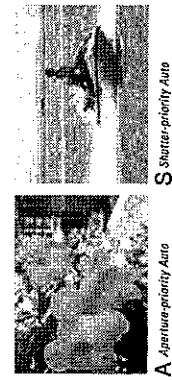
Easy-Select Shooting Modes

Choose a shooting mode that matches the situation and you are ready with the ideal settings for everything from shutter speed and exposure to white balance.



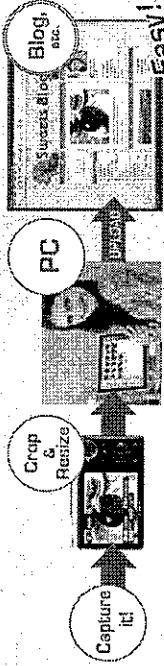
"A" and "S" Modes for the Creative at Heart

"A" Aperture-priority and "S" Shutter-priority auto exposure modes let you explore your creativity. Choose "A" mode and add drama to your photos by increasing or decreasing depth of field. "S" mode gives action shots a new dimension by freezing motion or creating a motion blur.



Blog mode

Just choose "Blog mode" and images are resized in your camera and ready for posting to your blog or attachment to e-mail to share with friends and family.



IrSimple™ for Wireless Communication

The F50fd is fitted with the latest high-speed infrared connectivity, meaning you can copy pictures to another IrSimple™ camera in a couple of seconds, without the need for a cable or PC.



xD/SD Compatible Slot

The versatile card slot is compatible with ultracompact xD-Picture Cards and both standard and high-capacity Secure Digital (SD) memory cards.



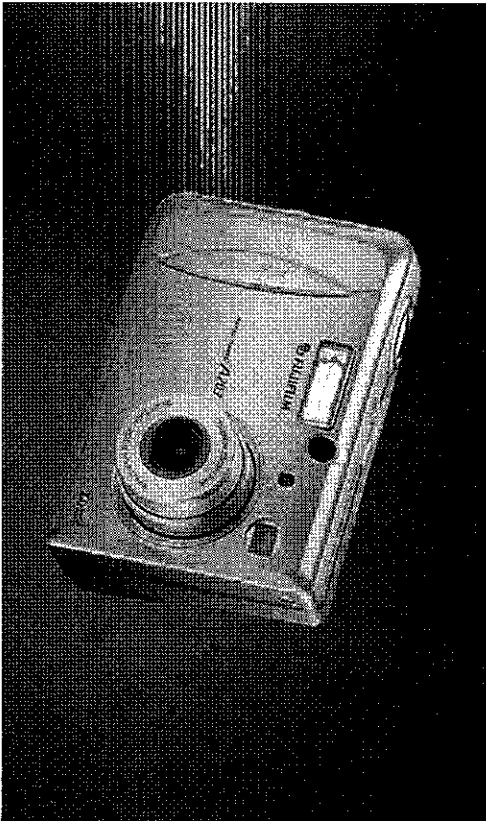


DIGITAL CAMERA

FinePix A203 / FinePix A303



digital
look for the imagination.



Getting Ready **1**

Basic Photography **2**

Advanced Features Photography **3**

Advanced Features Playback **4**

Settings **5**

Software Installation **6**

Camera Connection **7**

Using FinePixViewer **8**

OWNER'S MANUAL

This manual will show you how to use your FUJIFILM DIGITAL CAMERA FinePix A203/FinePix A303 correctly. Please follow the instructions carefully.

BL00147-200 (1) **E**

Warning

To prevent fire or shock hazard, do not expose the unit to rain or moisture.



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The graphical symbols are located on the bottom of the case.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

For customers in the U.S.A.

FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

— Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void the user's authority to operate the equipment.

Notes on the Grant:

To comply with Part 15 of the FCC rules, this product must be used with a Fujifilm-specified ferrite-core USB cable and DC supply cord.

For customers in Canada

CAUTION

This Class B digital apparatus complies with Canadian ICES-003.

Please read the Safety Notes (P.125) and make sure you understand them before using the camera.

Contents

Warning	2
Preface	6
Accessories	7
Nomenclature/Attaching the strap	8
1 Getting Ready	
LOADING THE BATTERIES AND xD-Picture Card ..	11
SWITCHING ON AND OFF	14
SETTING THE DATE AND TIME	15
Changing the date and time	16
To change the date display format	16
SELECTING THE LANGUAGE	18
2 Basic Photography	
BASIC OPERATION GUIDE (PHOTOGRAPHY)	19
BASIC OPERATION GUIDE (PLAYBACK)	20
BASIC OPERATION GUIDE (MENU)	21
3 STILL IMAGE	
TAKING PICTURES (CA AUTO MODE)	22
Viewfinder Lamp Display	27
Number of Available Frames	28
USING AF/AE LOCK	30
FRAMING GUIDELINE FUNCTION	32
USING THE ZOOM	33
FLASH	34
Auto Flash Mode (Blank)	34
Red-Eye Reduction	35
Forced Flash	35
Suppressed Flash	36
Slow Syncro	36
4 PLAYBACK MODE	
VIEWING YOUR IMAGES (PLAYBACK)	37
MULTI-FRAME PLAYBACK	38
PLAYBACK ZOOM	39
ERASING SINGLE FRAME	40
3 Advanced Features Photography	
MACRO (CLOSE-UP) PHOTOGRAPHY	42
SELF-TIMER PHOTOGRAPHY	43
5 MOVIE PHOTOGRAPHY	
MOVIE (VIDEO)	45
BASIC PHOTOGRAPHY MENU OPERATIONS	48
SELECTING CA AUTO OR CM MANUAL	49
PHOTOGRAPHY MENU OPTIONS	50
6 PHOTOGRAPHY MENU	
SETTING THE QUALITY	52
EV (EXPOSURE COMPENSATION)	54
WHITE BALANCE (SELECTING THE LIGHT SOURCE)	55
4 Advanced Features Playback	
5 PLAYBACK MODE	
PLAYING BACK MOVIES (VIDEO)	56
Playing back movies	57
6 PLAYBACK MENU	
ERASING SINGLE	58
ALL FRAMES/FORMATTING	59
PROTECTING IMAGES FRAME/ALL	62
HOW TO SPECIFY PRINT OPTIONS (DPOF) ..	66
DPOF SET FRAME	67
5 Settings	
ADJUSTING THE MONITOR BRIGHTNESS	71
USING SET-UP	72
SET-UP Menu Options (Date/time setting, etc.) ..	73
6 SET-UP	
POWER SAVE	74
6 Software Installation	
6.1 The Software Components	75
6.2 Installation on a Windows PC	76
6.2.1 Load the CD-ROM into your PC	76
6.2.2 From FinePixViewer installation to restart ..	77
6.3 Installation on a Mac OS 8.6 to 9.2	81
6.3.1 Check the system software settings	81
6.3.2 From FinePixViewer installation to restart ..	81
6.4 Installation on a Mac OS X	84
6.4.1 From FinePixViewer installation to restart ..	84
7 Camera Connection	
7.1 Using the optional AC Power adapter	87
7.2 Use at DSC mode	88
7.3 Use at PC-CAM mode	91
7.4 Disconnecting the Camera	94
8 Using FinePixViewer	
8.1 Saving Images on Your Computer and Viewing Images ..	96
8.2 Making a FinePix CD Album	97
8.3 Using the FinePix Internet Service	98
8.3.1 Using FAQ	98
8.3.2 User Registration	98
8.4 Mastering FinePixViewer	102
8.5 Uninstalling the Software	103
System Expansion Options	105
Accessories Guide	106
Notes on Using Your Camera Correctly	108
Notes on the Power Supply	109
Applicable Batteries	109
Notes on the Batteries	109
AC Power Adapter	111
Notes on the xD-Picture Card	112
Warning Displays	114
Troubleshooting	117
Specifications	120
Explanation of Terms	124
Safety Notes	125
EC Declaration of Conformity	129

Preface

■ Test Shots Prior to Photography

For particularly important photographs (such as weddings and overseas trips), always take a test photograph and view the image to make sure that the camera is functioning normally.

● Fuji Photo Film Co., Ltd. cannot accept liability for any incidental losses (such as the cost of photography or the loss of income from photography) incurred as a result of faults with this product.

■ Notes on Copyright

Images recorded using your digital camera system cannot be used in ways that infringe copyright laws without the consent of the owner, unless intended only for personal use. Note that some restrictions apply to the photographing of stage performances, entertainments and exhibits, even when intended purely for personal use. Users are also asked to note that the transfer of memory cards containing images or data protected under copyright laws is only permissible within the restrictions imposed by those copyright laws.

■ Liquid Crystal

If the LCD monitor is damaged, take particular care with the liquid crystal in the monitor. If any of the following situations arise, take the urgent action indicated.

- If liquid crystal comes in contact with your skin
Wipe the area with a cloth and then wash thoroughly with running water and soap.
- If liquid crystal gets into your eye
Flush the affected eye with clean water for at least 15 minutes and then seek medical assistance.
- If liquid crystal is swallowed
Flush your mouth thoroughly with water. Drink large quantities of water and induce vomiting. Then seek medical assistance.

■ Notes on Electrical Interference

If the camera is to be used in hospitals or aircraft, please note that this camera may cause interference to other equipment in the hospital or aircraft. For details, please check with the applicable regulations.

■ Handling Your Digital Camera

This camera contains precision electronic components. To ensure that images are recorded correctly, do not subject the camera to impact or shock while an image is being recorded.

■ Trademark Information

- IBM PC/AT is a registered trademark of International Business Machines Corp. of the U.S.
- iMac and Macintosh are registered trademarks of Apple Computer, Inc.
- QuickTime and the QuickTime logo are trademarks used under license. The QuickTime logo is registered in the U.S. and other countries.
- Adobe Acrobat Reader is a trademark of Adobe Systems Incorporated of the U.S.
- Microsoft, Windows, the Windows logo and DirectX are either trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries. Windows is an abbreviated term referring to the Microsoft Windows Operating System.
- * The "Designed for Microsoft Windows XP" logo refers to the camera and the driver only.
- xD-Picture Card and other company or product names are trademarks or registered trademarks of the respective companies.
- **Exit Print (Exit ver. 2.2)**
Exit Print Format is a newly revised digital camera file format that contains a variety of shooting information for optimal printing.

Accessories

● 16 MB, xD-Picture Card (1)

- Supplied with:
 - Anti-static case (1)



● LR6 AA-size alkaline Batteries (2)



● Hand strap (1)



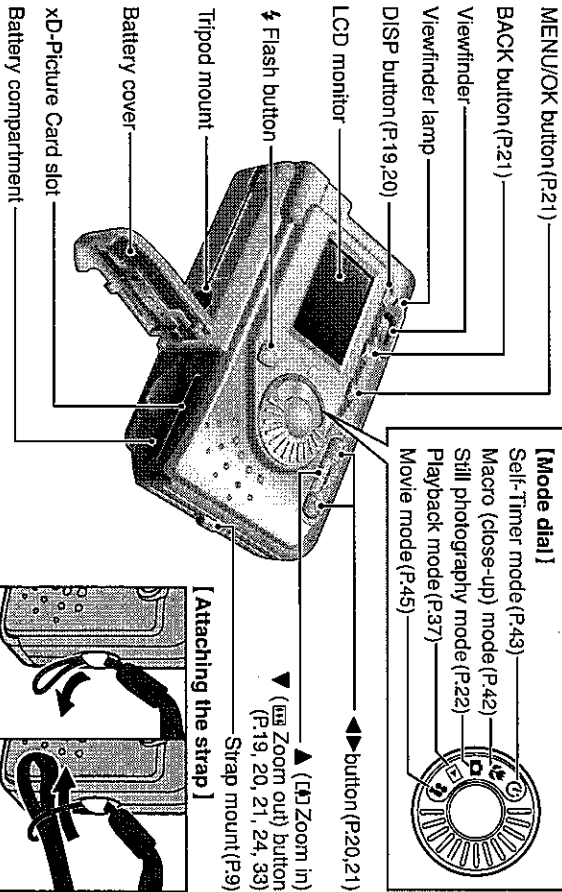
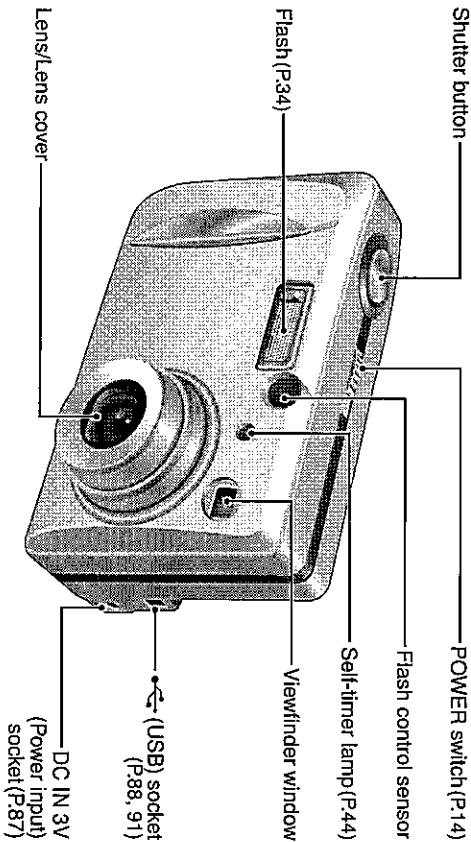
● Interface Set (1)

- CD-ROM: Software for FinePix SX (1)
- Special USB cable with Noise Suppression core (1)

● Owner's Manual (this manual) (1)

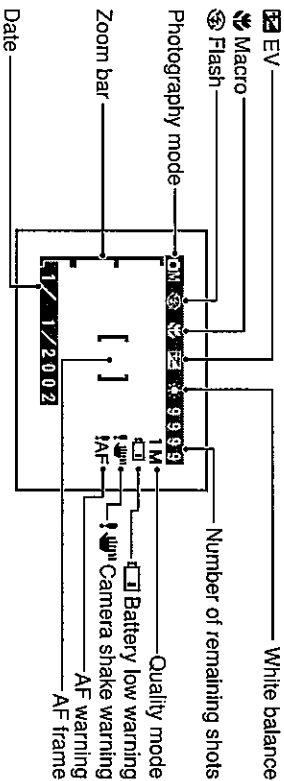
Nomenclature

* Refer to the pages in parentheses for information on using the camera features.

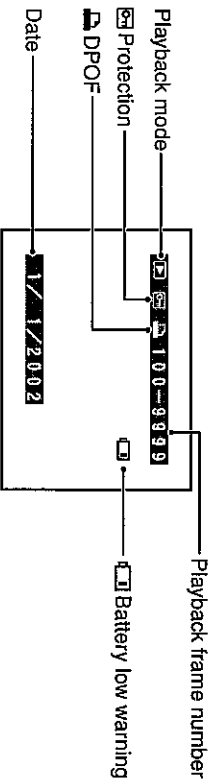


Nomenclature (Sample display)

Example of LCD Monitor Text Display: Still Image



Example of LCD Monitor Text Display: Playback



1 Getting Ready

LOADING THE BATTERIES AND XD-Picture Card

Compatible batteries

Use two AA-size alkaline batteries or two AA-size nickel-metal hydride (Ni-MH) batteries.

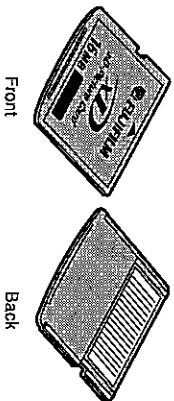
Notes on Handling Batteries

- It is recommended that you use the same brand of alkaline batteries as those supplied with the camera.
- Never use a battery when the outer casing is split or peeling as this could result in a short-circuit and cause major problems due to battery fluid leakage or overheating.
- You cannot use lithium, manganese or nickel-cadmium (Ni-Cd) batteries.
- Do not use different types of batteries or old and new batteries together.
- The operating lives of alkaline batteries vary between brands and the life of batteries you purchase may be shorter than the alkaline batteries provided with the camera. Note also that due to the nature of alkaline batteries, the time for which they can be used is shorter in cold locations (at temperatures of +10°C (+50°F) or below). Consequently, Ni-MH batteries are recommended.
- Soil (fingerprints, etc) on the terminals of batteries can greatly reduce the time for which the batteries provide power.
- You will need the optional charger (P. 106) to recharge Ni-MH batteries.
- See P. 109 for notes on using batteries.



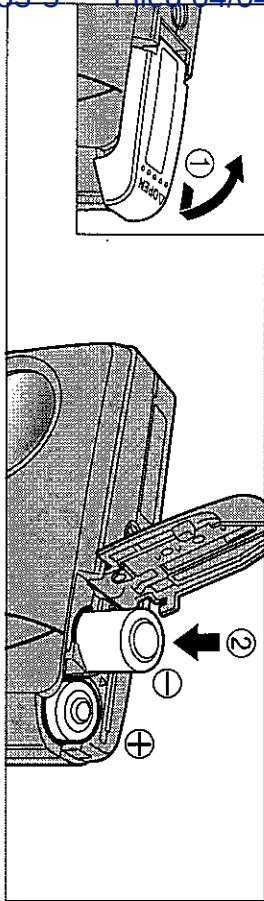
XD-Picture Card (sold separately)

DPC-16 (16MB)
DPC-32 (32MB)
DPC-64 (64MB)
DPC-128 (128MB)



Operation of this camera is only guaranteed when it is used with FUJIFILM XD-Picture Card.
See P. 112-113 for more information on XD-Picture Card.

LOADING THE BATTERIES AND xD-Picture Card

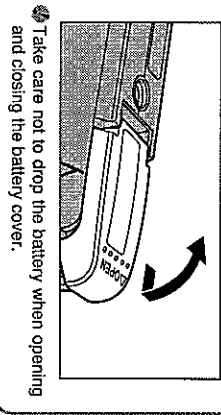


① Slide the battery cover out to open it.

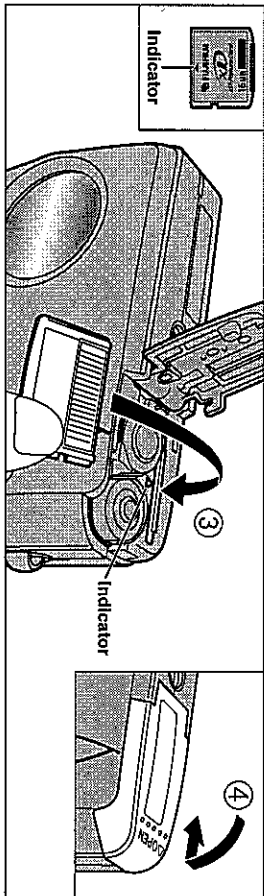
② Load the batteries correctly as shown.

Do not apply excessive force to the battery cover.
Do not open the battery cover while the camera is still switched on. This could damage the xD-Picture Card or corrupt the image files on the xD-Picture Card.

◆ When you want to replace the battery ◆
Check that the camera is switched off, open the battery cover and then remove the batteries.



Take care not to drop the battery when opening and closing the battery cover.



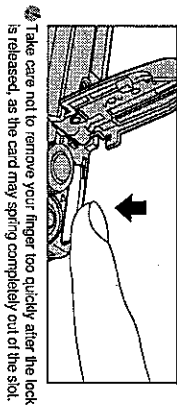
③ Align the arrows on the camera and the xD-Picture Card, and firmly push the card fully into the xD-Picture Card slot.

④ Close the battery cover.

◆ If you open the battery cover while the camera is switched on, the camera automatically switches off to protect the data on the xD-Picture Card.
◆ The xD-Picture Card will not slide fully into the slot if it is inserted facing the wrong way. Be careful not to apply undue force to the xD-Picture Card.
◆ To protect the xD-Picture Card, always store it in the special anti-static case.

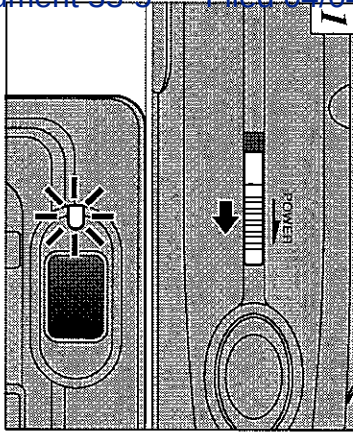
◆ When you want to replace the xD-Picture Card ◆

When you push the xD-Picture Card into the slot and then slowly remove your finger, the lock is released and the xD-Picture Card is pushed out. You can then pull the xD-Picture Card the rest of the way out.



Take care not to remove your finger too quickly after the lock is released, as the card may spring completely out of the slot.

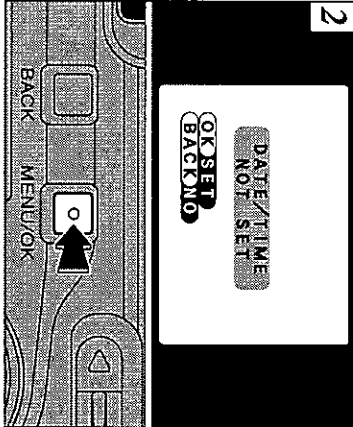
SWITCHING ON AND OFF



Slide the "POWER" switch sideways to turn the camera on and off. When you switch the camera on, the viewfinder lamp lights (green).

In "mode", the lens cover opens and the lens extends. Take care not to press on these precision components as this could result in a fault or a "LENS COVER" message being displayed on the LCD monitor. Take care also not to leave fingerprints on the lens as this will degrade the picture quality.

2



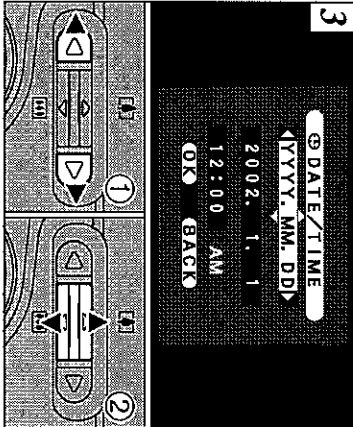
When you first switch the camera on, the date is cleared. Press the "MENU/OK" button to set the date and time.

To set the date and time later, press the "BACK" button.

If you do not set the date and time, this confirmation screen will appear each time you switch the camera on.

SETTING THE DATE AND TIME

3



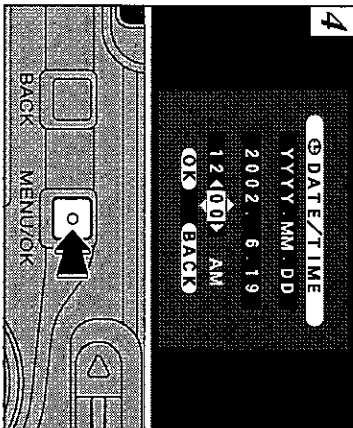
Use "▲" or "▼" to select Year, Month, Day, Hour or Minute.

Press "▲" or "▼" to set the number.

If you hold down "▲" or "▼", the numbers change continuously.

When the time displayed passes "12:00", the AM/PM setting automatically switches.

4



Once you have set the date and time, press the "MENU/OK" button. Pressing the "MENU/OK" button switches the camera to Photography or Playback mode.

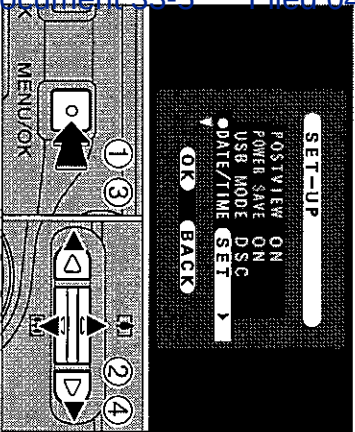
To set the time more precisely, press the "MENU/OK" button when the time on your reference clock reaches zero seconds.

At the time of purchase and after you leave the camera for a long period with the batteries removed, settings such as the date and time are cleared.

Unless the battery has been left in the camera for at least 20 minutes, the camera settings may not be retained when you replace the xD-Picture Card or battery.

SETTING THE DATE AND TIME

Changing the date and time



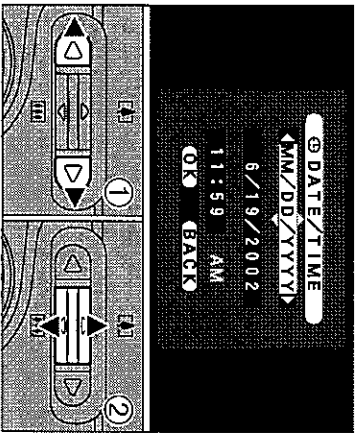
To change the date and time:

- 1 Press the "MENU/OK" button.
- 2 Use "▲" or "▶" to select "SET" OPTION and then use "▲" or "▼" to select "SET-UP".
- 3 Press the "MENU/OK" button.
- 4 Select "DATE/TIME" and press "▶".

See P.14, 15 for information on setting the date and time.

To change the date display format

You can select your preferred date format.



- 1 Press "▲" or "▶" to select the date format.
- 2 Press "▲" or "▼" to set the format. Refer to the table below for details of the settings.

Setting	Explanation
YYYY.MM.DD	Displays the date in the "year.month.day" format.
MM/DD/YYYY	Displays the date in the "month/day/year" format.
DD.MM.YYYY	Displays the date in the "day.month.year" format.

Checking the remaining battery charge

Switch the camera on and check that no battery level warning (or) is displayed on the LCD monitor. If no icon is displayed, there is ample charge left in the battery.

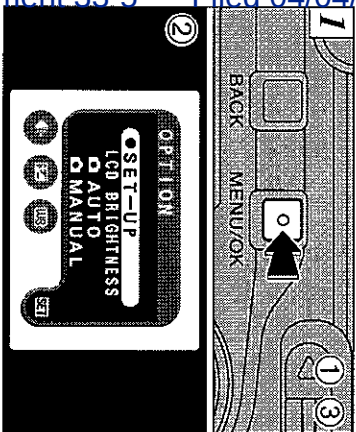
- **Lit red:** The battery is low on charge. Have a new battery ready.
- **Blinking red:** The battery is exhausted. The display will shortly go blank and the camera will stop working. Replace or recharge the battery.

The above estimates are for the Still photography modes. In Playback mode, the transition from " " to " " may take less time.

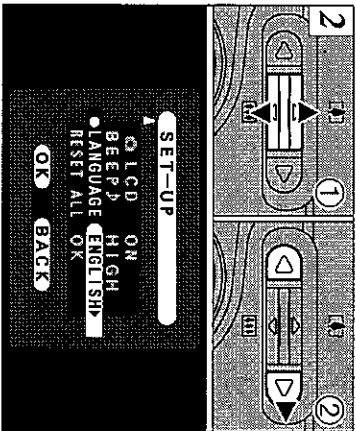
Power Save Function

If the camera is not used for 2 minutes, this function automatically switches the camera off. When this function is active, it also switches off the LCD monitor to reduce power consumption if the camera is not used for 30 seconds (See P.74 for details).

SELECTING THE LANGUAGE



- 1 Press the "MENU/OK" button to display the menu screen.
- 2 Use "▲▼▶◀" to select "SET-UP" from the "OPTION" menu.
- 3 Press the "MENU/OK" button.

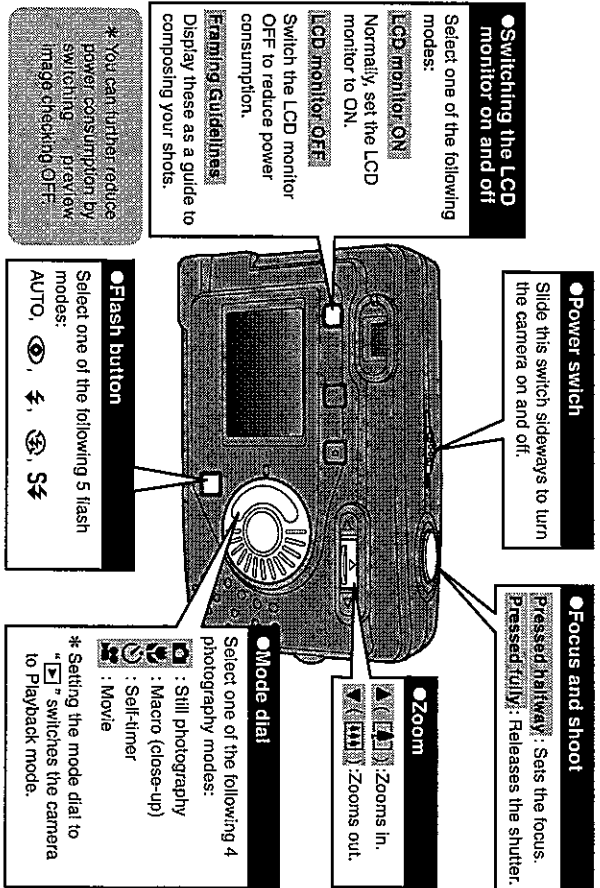


- 1 The "SET-UP" screen appears. Use "▲" or "▼" to select "LANGUAGE".
- 2 Use "▶◀" to select "ENGLISH", "FRANCAIS" or "DEUTSCH". You can cycle through the language settings by pressing "▶◀".

⚠ The screens in this manual are shown in English.
⚠ See P. 72, 73 for more information on the "SET-UP" OPTION menu.

2 Basic Photography

BASIC OPERATION GUIDE (PHOTOGRAPHY)



BASIC OPERATION GUIDE (PLAYBACK)

● **DISP button**

Select one of the following 3 modes:
Text displayed:
Normally, use this setting.
Text not displayed:
No text is displayed.
Multi-frame playback:
Displays 9 image frames.

● **Power ON/OFF**

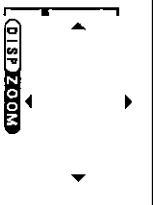
Slide this switch sideways to turn the camera on and off.

● **Playback frame selector**

 : Selects the next frame.
 : Selects the previous frame.

◆ **Displaying help** ◆

This feature displays help on moving to the next step at the bottom of the screen. Press the corresponding button.



● **Mode dial**

Set the mode dial to "P".

● **Playback zoom**

 : Increases the display scale (zooms in).
 : Decreases the display scale (zooms out).

BASIC OPERATION GUIDE (MENU)

● **Using the Menus**

● **To cancel a procedure mid-way**
Press the "BACK" button.

① **Display the menu.**
Press the "MENU/OK" button.

② **Select a menu option.**
Press "▲" or "▼".

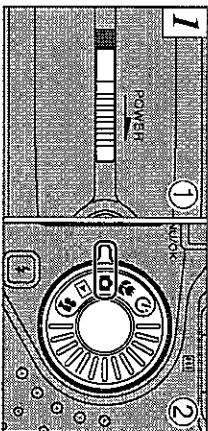
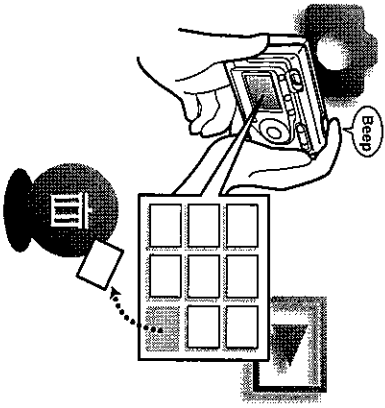
③ **Select a setting.**
Press "▲" or "▼".

④ **Confirm the setting.**
Press the "MENU/OK" button.

Up, down, left and right are indicated by black triangles in the Owner's Manual. Up or down is shown as "▲▼", and left or right is shown as "◀▶".

STILL IMAGE TAKING PICTURES (CA AUTO MODE)

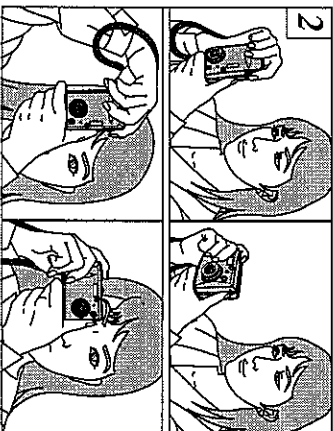
You have read the section called "Getting Ready" and now your camera is ready to take pictures.
The "Basic Photography" section takes you through the basic procedures of "Shooting", "Viewing" and "Erasing" pictures.
Master these basic operations by trying them out as you read through the manual.



- ① Slide the "POWER" switch sideways to switch the camera on.
- ② Set the Mode dial to "CA".
- **Photography range:** Approx. 60 cm (2 ft.) to infinity
- For subjects closer than 60 cm (2 ft.), use Macro photography (P.42).

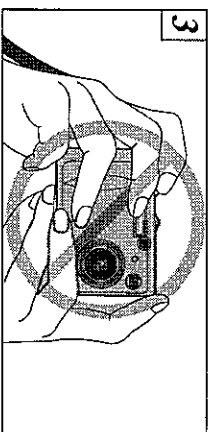
◆ **To increase your shooting time** ◆

- Press the "DISP" button to switch the LCD monitor off and use the viewfinder to take pictures (Note that you cannot switch the LCD monitor off in Macro mode).
- Set "POSTVIEW" in the "SET-UP" menu to "OFF" (P.73).
- Set "POWER SAVE" in the "SET-UP" menu to "ON" (P.73, 74).



Brace your elbows against your sides and hold the camera with both hands.
Hold the camera so that your right thumb is conveniently positioned for operating the zoom.

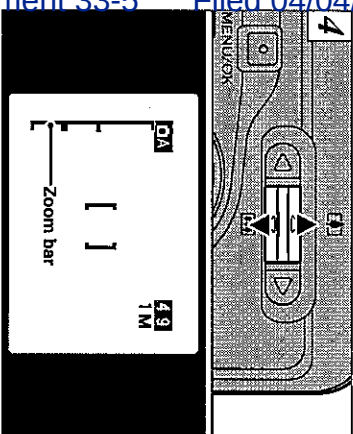
- If the "CARD ERROR", "WRITE ERROR", "READ ERROR" or "CARD NOT INITIALIZED" message appears, see P.114 and P.115.
- If you use the flash in very dusty environments or when it is snowing, the flash may reflect off the dust particles or snowflakes and appear as white dots in your images.



Be careful to ensure that the lens, flash and flash control sensor are not obscured by your hands or the camera strap.
The camera may not be able to take successful pictures if your fingers or the strap are in the way.

- Check that the lens is clean. If it is dirty, clean the lens as described on P.108.

STILL IMAGE TAKING PICTURES (QA AUTO MODE)

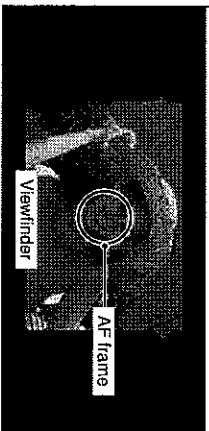
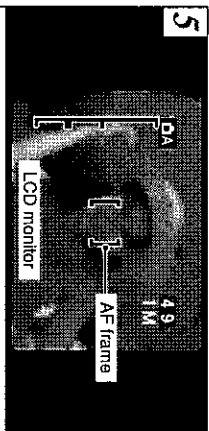


To zoom in on the subject, press "▲" (TELE). To zoom out, press "▼" (WIDE). A "zoom bar" appears on the LCD monitor when you zoom in or out.

● **Optical zoom focal length (35mm camera equivalent)**

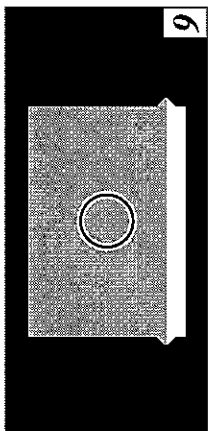
Approx. 38 mm-114 mm Maximum zoom scale: 3x

Zooming stops briefly when the camera switches between optical zoom and digital zoom (P.33).



Using the viewfinder or LCD monitor, frame your shot so that the subject fills the entire AF (Auto Focus) frame.

● If your subject is not in the center of the picture, use AF/AE lock to take the picture (P.30).

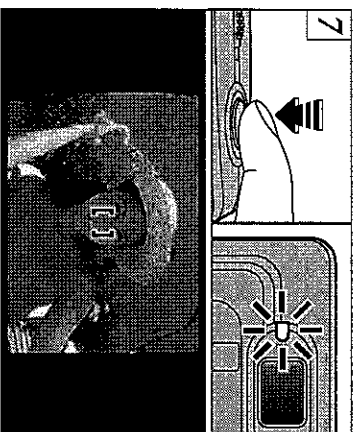


When you are using the viewfinder to take a picture at a distance of 80 cm to 1.5 m (2.6 ft. to 4.9 ft.), only the shaded area in the figure is photographed.

● To frame your shot precisely, you should take the picture using the LCD monitor.

● In some conditions it may be difficult to see your subject clearly on the LCD monitor (such as in sunny weather outdoors or when you are shooting dirty lit scenes). In such situations, use the viewfinder to take the shot.

● The image shown on the LCD monitor before you take the shot may differ in its brightness, color, etc. from the image actually recorded. If necessary, play back the recorded image to check it (P.37).



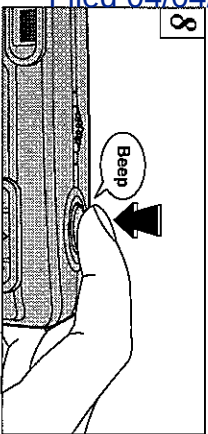
Press the shutter button down halfway. Focusing is complete when the AF frame on the LCD monitor shrinks and the viewfinder lamp (green) stops flashing and remains lit.

● If "1AF" appears on the screen, the camera cannot focus.

● When you press the shutter button down halfway, the image on the screen freezes temporarily.

● If "1AF" is displayed on the screen (e.g. the shot is too dark for the camera to focus), try standing about 2 m (6.6 ft.) from your subject to take the picture.

STILL IMAGE TAKING PICTURES (CA AUTO MODE)



To take the picture, press the shutter button down fully without lifting your finger off it. The camera beeps and takes the picture, and the data is then recorded.

If you press the shutter button down fully in one motion, the shot is taken without the AF frame changing.

When you take a picture, the viewfinder lamp lights orange (camera not ready) before switching back to green to indicate that the camera is again ready for shooting.

The viewfinder lamp flashes orange while the flash is charging. If the LCD monitor is switched on, the screen may go dark for a moment. This is normal and does not indicate a fault.

See P. 114-116 for information on the warning displays.

Warnings Displayed When the Shutter is Pressed Halfway

!AF The camera cannot focus.

Solution:

- Ensure that you are at least 2 m (6.6 ft.) from the subject when you take the shot.
- Use AF/AE lock to take the shot (P.30).



There is a high risk of camera shake due to the slow shutter speed.

Solution:

- Use the flash.
- Use a tripod.



You can take the shot, but it will not be correctly exposed.

Viewfinder Lamp Display

* When the LCD monitor is switched on, more detailed warning messages are displayed (P.114-116).

Display	Status
Lt green	Ready to shoot.
Blinking green	AF/AE in progress, camera shake warning or AF warning (Ready to shoot).
Blinking green and orange alternately	Recording to xD-Picture Card (Ready to shoot).
Lt orange	Recording to xD-Picture Card (Not ready).
Blinking orange	Flash charging (Flash will not fire).
Blinking red	• xD-Picture Card Warnings No card loaded, card not formatted, incorrect format, card full, xD-Picture Card error. • Lens operation error.

Subjects Not Suitable for Autofocus

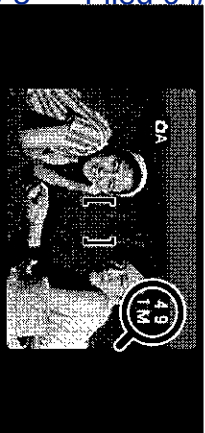
Though the FinePix A203/FinePix A303 uses an accurate autofocus mechanism, it may have difficulty focusing or not be able to focus at all for the types of subject and situation listed below. In such cases, the image may be out of focus.

- Very shiny subjects such as a mirror or car body.
- Subjects photographed through glass.
- Subjects that do not reflect well, such as hair or fur.
- Subjects with no substance, such as smoke or flames.
- When the subject is dark.
- When there is very little contrast between the subject and the background (such as white walls or subjects dressed in the same color as the background).
- Subjects moving at high speed.
- When something other than your subject is close to the AF frame, has contrasting areas of light and dark, and is either closer or further away than your subject (as when you photograph someone against a background with strongly contrasting elements).

For subjects of this type, use AF/AE lock (P.30).

STILL IMAGE TAKING PICTURES (CA AUTO MODE)

Number of Available Frames



The number of available shots is displayed on the LCD monitor.

Standard number of shots per xD-Picture Card

The number of available shots when the xD-Picture Card is formatted in the camera.

■ FinePix A203					
Quality/Mode	2M • F	2M • N	1M	0.3M	
Number of recorded pixels	1600 × 1200		1280 × 960	640 × 480	
Image Data Size	Approx. 620 KB	Approx. 390 KB	Approx. 320 KB	Approx. 130 KB	
DPC-16 (16 MB)	25	39	49	122	
DPC-32 (32 MB)	50	79	99	247	
DPC-64 (64 MB)	101	159	198	497	
DPC-128 (128 MB)	204	319	398	997	

■ FinePix A303					
Quality/Mode	3M • F	3M • N	2M	1M	0.3M
Number of recorded pixels	2048 × 1536		1600 × 1200	1280 × 960	640 × 480
Image Data Size	Approx. 1300 KB	Approx. 590 KB	Approx. 390 KB	Approx. 320 KB	Approx. 130 KB
DPC-16 (16 MB)	12	26	39	49	122
DPC-32 (32 MB)	25	53	79	99	247
DPC-64 (64 MB)	50	107	159	198	497
DPC-128 (128 MB)	102	215	319	398	997

See P.52 for information on changing the Quality (number of recorded pixels).
At shipment, the default setting is "1M".

Because the amount of data recorded varies depending on the subject, the number of available shots may not decrease when recording ends, or in some cases may decrease by 2 frames.
Also, the discrepancy between the actual number of available shots and the standard number of shots tends to be larger when the capacity of the xD-Picture Card is larger.

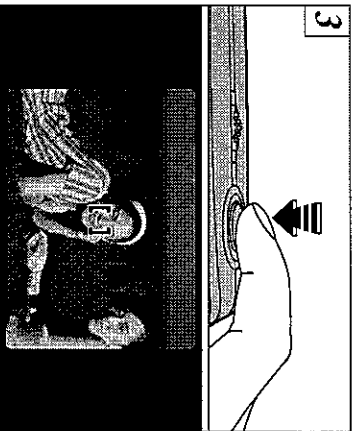
USING AF/AE LOCK



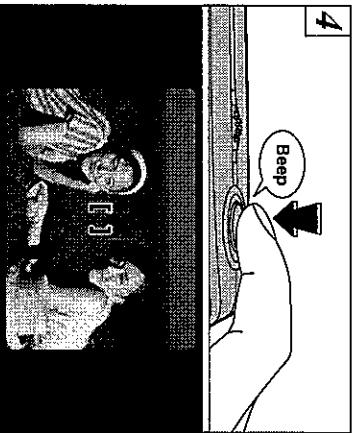
In a shot with this type of composition, the subjects (two people in this case) are not in the AF frame. If the shot is taken at this point, the subjects will not be in focus.



Move the camera slightly so that one of the subjects in the AF frame.



Hold the shutter button down halfway (AF/AE Lock) and check that the AF frame on the LCD monitor shrinks.

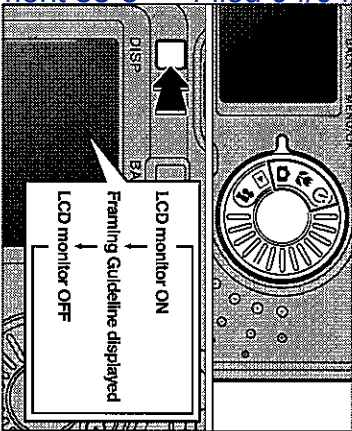


Continue to hold the shutter button down halfway (AF/AE lock). Move the camera back to the original image and then fully press down on the shutter button.

◆ **AF (Autofocus)/AE Lock (Auto-exposure)** ◆
On the FinePix A203/FinePix A303, when you press the shutter button down half way, the focus and exposure settings are fixed (AF/AE lock). If you want to focus on a subject that is off to one side of the image or if you want to set the exposure before you compose the final shot, lock the AF and AE settings and then compose and shoot your picture to get the best results.

● You can reapply the AF/AE lock as many times as you like before releasing the shutter.
● The AF/AE lock operates in all Photography modes and can be used to ensure excellent results.

FRAMING GUIDELINE FUNCTION

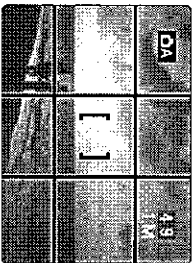


This function can be specified in the "Q" "V" and "S" modes. The mode shown on the LCD monitor switches each time you press the "DISP" button. Press the "DISP" button to display the framing guideline.

The framing guideline is not recorded on the image. The lines in the scene frame roughly divide the recorded pixels into three equal parts horizontally and vertically. When the image is printed, the resulting print may be shifted slightly from the scene frame.

Scene

Use this frame when you want to position your main subject in the center of the frame or when you want to align your shot with the horizon. This feature provides a clear guide to the subject size and the overall balance of the shot so that you get exactly the shot you want.



Important

Always use the AF/AE lock to compose your picture. Failing to use the AF/AE lock may result in the image being out of focus.

USING THE ZOOM

Press "▲" to zoom in and make your subject larger. Press "▼" when you want to zoom out and shoot a wider area. If you use the LCD monitor to take pictures, you can continue zooming with the digital zoom after the optical zoom finishes.

FinePix A203

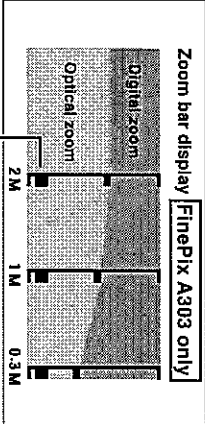
	Digital zoom (focal distance: 35 mm camera equivalent)	Maximum zoom scale
2M	Cannot be used	1.3x
1M	Equivalent to approx. 114 mm-146 mm	2.5x
0.3M	Equivalent to approx. 114 mm-285 mm	2.5x

FinePix A303

	Digital zoom (focal distance: 35 mm camera equivalent)	Maximum zoom scale
3M	Cannot be used	1.3x
2M	Equivalent to approx. 114 mm-146 mm	1.6x
1M	Equivalent to approx. 114 mm-182 mm	1.6x
0.3M	Equivalent to approx. 114 mm-365 mm	3.2x

See P.52 for information on changing the quality setting.

Zoom bar display FinePix A303 only

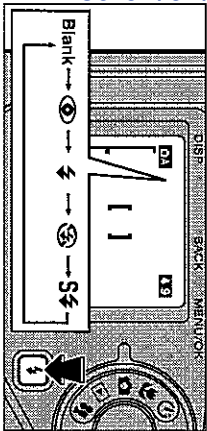


The position of the "■" on the zoom bar indicates the current zoom setting.

- If the "■" is above the dividing line, the digital zoom is being used. If it is below the line, the optical zoom is being used.
- Press "▲" or "▼" to move the "■" up or down.
- When you switch between digital zoom and optical zoom, the "■" stops moving briefly. Press the button for the same direction again to start the "■" moving and switch the zoom setting.

If the image goes out of focus when you use the zoom, press the shutter button halfway to refocus.

The optical zoom is equivalent to approximately 35 mm-114 mm on a 35 mm camera.



Press the "4" button to select the flash setting. Use the flash mode that best suits your shot.

- 5 flash modes: "AUTO" (no icon), "☉", "☉", "☉", "☉".

● Effective flash range (CA in AUTO mode):

Wide-angle: Approx. 30 cm to 3.5 m (1.0 ft.-11.5 ft.)

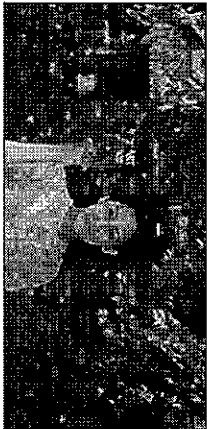
Telephoto: Approx. 60 cm to 3 m (2.0 ft.-9.8 ft.)

☉ if you use the flash in very dusty environments or when it is snowing, the flash may reflect off the dust particles or snowflakes and appear as white dots in your images.

☉ The flash charging time may increase if the charge remaining in the batteries is low.

☉ When you take a shot using the flash, you may see the video image disappear and the screen go dark as the flash charges. The viewfinder lamp flashes orange while the flash is charging.

Auto Flash Mode (Blank)



Use this mode for ordinary photography. The flash fires automatically as required by the shooting conditions.

☉ Red-Eye Reduction



Use this mode to ensure that the subject's eyes appear natural when photographing people in low-light conditions. The flash fires automatically as required by the photography conditions. The flash fires a pre-flash just before the picture is taken and then fires again to take the actual picture.

☉ Forced Flash

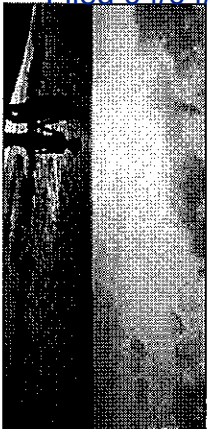


Use this mode to photograph backlit scenes, such as a subject against a window or in the shade of a tree, or to obtain the correct colors when you are shooting under lighting such as fluorescent tubes. In this mode, the flash fires in bright as well as dark conditions.

◆ Red-Eye Effect ◆

When you use the flash to photograph people in low-light conditions, their eyes sometimes appear red in the picture. This is caused by the light of the flash reflecting off the inside of the eye. Use Red-Eye Reduction flash to effectively minimize the likelihood of the red-eye effect. Take the following measures also to make Red-Eye Reduction more effective:

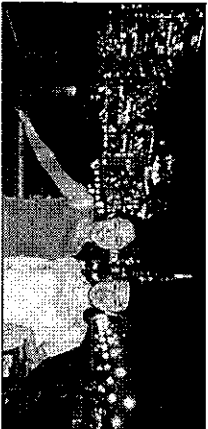
- Get the subjects to look at the camera.
- Get as close as possible to the subjects.



3 Suppressed Flash

Use this mode for photography using indoor lighting, for shots taken through glass, and for photography in venues such as theaters or at indoor sporting events where the distance is too great for the flash to be effective. When you use Suppressed Flash, the Automatic White Balance function (P.124) operates so that natural colors are captured along with the ambience of the available light.

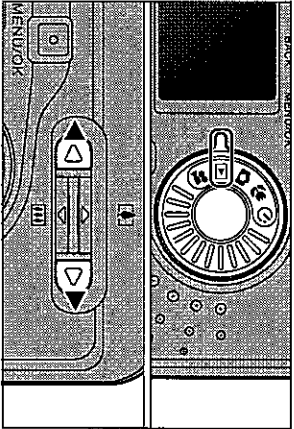
⚠ If you are shooting in Suppressed Flash mode in dark conditions, use a tripod to prevent camera shake.
⚠ See P.26, 115 for information on the camera shake warning.



S4 Slow Synchro

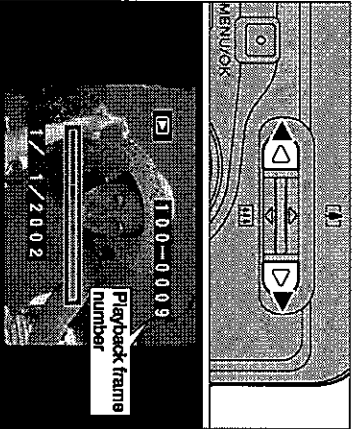
This is a flash mode that uses a slow shutter speed. This allows you to take pictures of people at night that clearly show both your subjects and the night time backdrop.

⚠ The image may be overexposed when you shoot bright scenes.
⚠ Because a slow shutter speed is used, a tripod should be used to prevent camera shake.



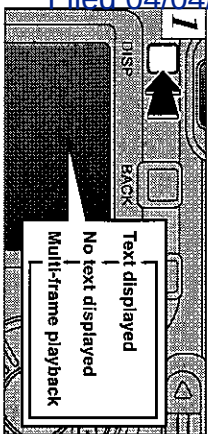
Set the Mode dial to "P". Press "▶" and "▶" to move forward and backward respectively through your images.

⚠ When you set the Mode dial to "P", the last image shot is displayed.

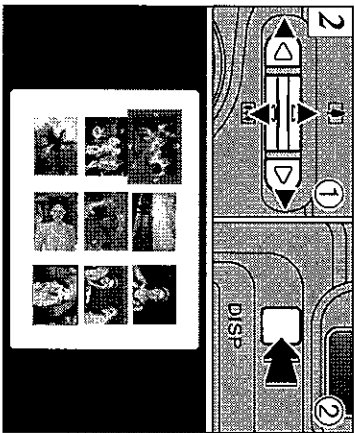


During playback, you can skip backwards or forwards through the images (the frame number increases or decreases) by holding down "▶" or "▶" for approximately 1 second. The displayed image does not change, but a progress bar indicates the approximate playback location on the XD-Picture Card.

PLAYBACK MODE MULTI-FRAME PLAYBACK



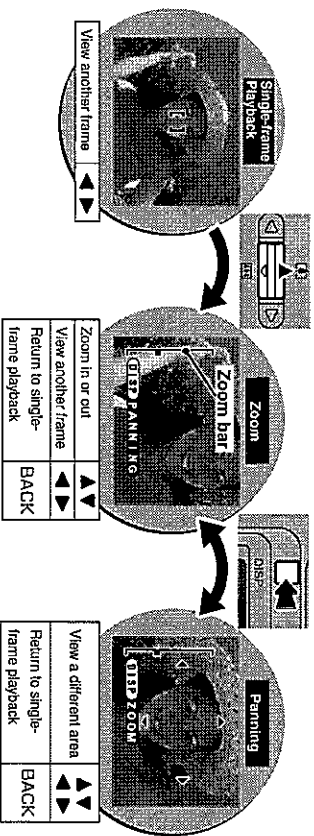
In playback mode, the display shown on the LCD monitor switches each time you press the "DISP" button. Press the "DISP" button until the multi-frame playback screen (9 frames) appears.



① Select a frame by using "<Left>", "<Right>", "<Up>" and "<Down>" to move the cursor (the orange box) to the desired frame. Press "<Left>" or "<Right>" several times to switch to the previous page or the next page.
② You can enlarge the selected image by pressing the "DISP" button again.

PLAYBACK MODE PLAYBACK ZOOM

This function is useful for things such as checking the focus of shots you have taken. To switch to the zoom screen, press "<Left>" during single-frame playback.



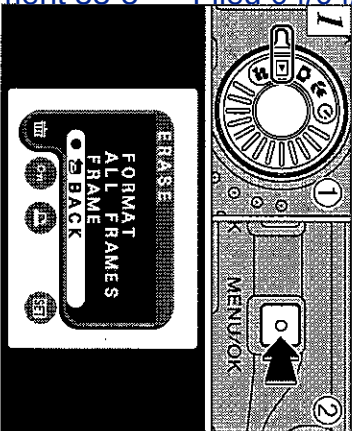
2

Maximum zoom scale

Model	Quantity	3M (2048 × 1536)	2M (1600 × 1200)	1M (1280 × 960)	0.3M (640 × 480)
FinPix A203	—	—	10x	8x	4x
FinPix A303	13x	—	—	—	—

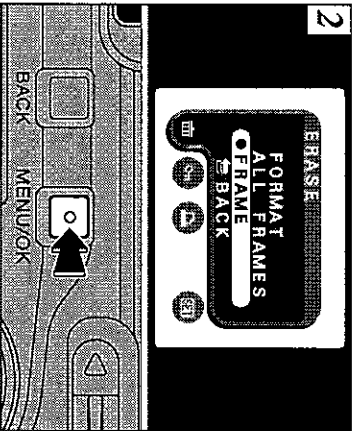
④ It may not be possible to play back images shot on other camera models.
⑤ Playback zoom cannot be used during multi-frame playback.

PLAYBACK MODE **ERASING SINGLE FRAME**

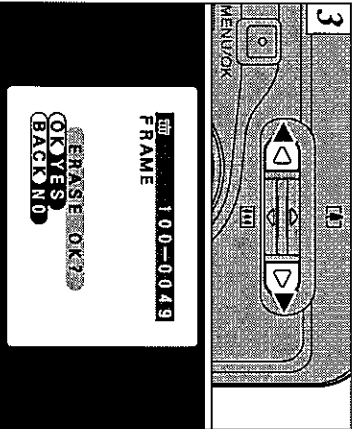
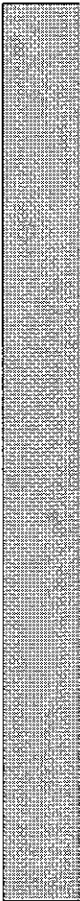


① Set the Mode dial to "E".
② Press the "MENU/OK" button to display the menu screen on the LCD monitor.

To revert to image playback without erasing the frame, select "BACK" and press the "MENU/OK" button.



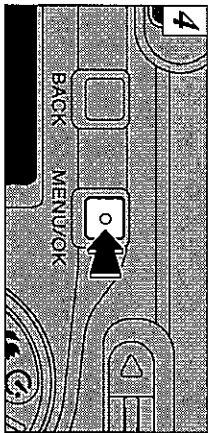
Select "FRAME" in the "E" ERASE menu and press the "MENU/OK" button. See P.59 for more information on "ALL FRAMES" and "FORMAT".



Press "▲" or "▼" to view the frame (individual file) you want to erase.

Press the "BACK" button to cancel frame erasing.

Note: that mistakenly erased images cannot be recovered. You should copy important files that you want to keep to your computer.

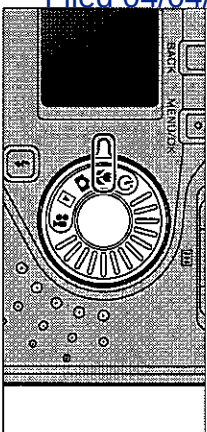


Pressing the "MENU/OK" button erases the frame (individual file) displayed. When the frame as been erased, the next frame is played back and "ERASE OK?" is displayed.

To erase another frame, repeat steps 3 and 4.

3 Advanced Features Photography

MACRO (CLOSE-UP) PHOTOGRAPHY



Setting the Mode dial to "M" allows you to take close-up shots.

Effective Photography Range

Approx. 10 cm to 80 cm (3.9 in.-2.6 ft.).
(Approx. 30 cm to 80 cm (1.0 ft.-2.6 ft.) when the flash is used)

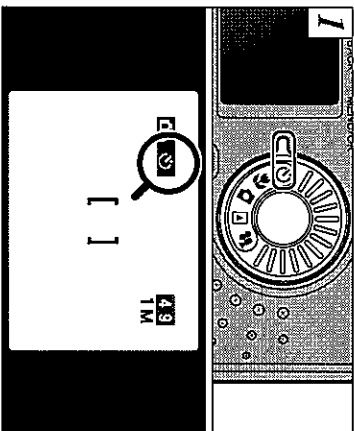
When shooting in dark conditions, use a tripod to prevent camera shake.

If you use the viewfinder to take a picture in Macro mode, the field visible through the viewfinder does not match the field actually photographed because the viewfinder and lens are in different positions. Accordingly, you should use the LCD monitor to take pictures in Macro mode.

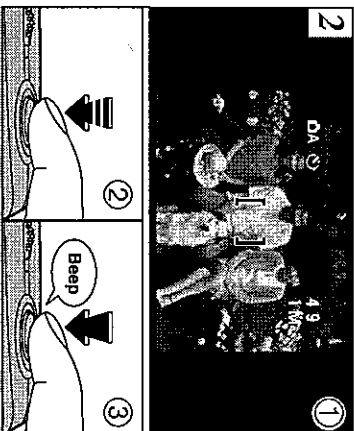
During macro photography, the following camera settings are applied:

- The lens is fixed at the wide-angle zoom setting and only the digital zoom can be used.
- The LCD monitor is automatically switched ON and cannot be switched OFF.

SELF-TIMER PHOTOGRAPHY



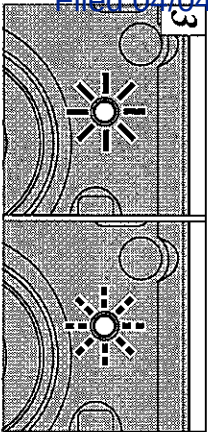
When you set the mode dial to "TM", "TM" appears on the LCD monitor. In this mode, a timer runs for roughly 10 seconds before the shutter is released. Use this mode for shots such as photographs of yourself.



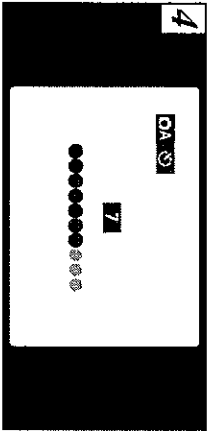
① Position the AF frame over your subject.
② Press the shutter button down half way to set the focus.
③ Without releasing the shutter button, press it down fully. The self-timer then starts running.

You can also use the AF/AE lock (P.30). Be careful not to stand in front of the camera when you press the shutter button as this can cause focusing or exposure metering errors.

SELF-TIMER PHOTOGRAPHY



3 The self-timer lamp lights steadily for roughly 5 seconds and then blinks for another 5 seconds, after which the shot is taken.



4 A counter on the LCD monitor counts down the time until the shot is taken.

MOVIE PHOTOGRAPHY MOVIE (VIDEO)



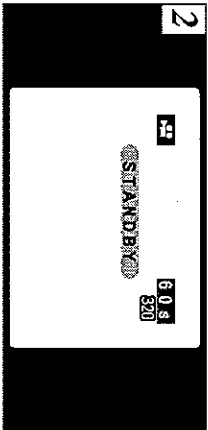
Set the Mode dial to "Movie".
●Movie format: Motion JPEG (P.124)

- F20 (320 × 240 pixels)
- F60 (160 × 120 pixels)
- selectable
- 10 frames per second
- Without sound

Number of seconds of recording per movie

Model	Quality	F20	F60
FinePix A203		20 sec.	80 sec.
FinePix A303		60 sec.	240 sec.

- Depending on the available space on the xD-Picture Card, the available shooting time per movie may be shorter.
- You cannot switch the LCD monitor off in this mode.
- It may not be possible to play back your movie on other cameras.
- See P.52 for information on changing the quality setting.

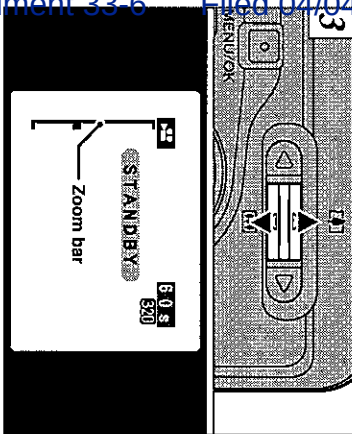


2 The available shooting time and the "STANDBY" message are shown on the LCD monitor.

xD-Picture Card standard shooting time

xD-Picture Card Capacity	F20	F60
DPC-16 (16 MB)	Approx. 94 sec.	Approx. 5 min.
DPC-32 (32 MB)	Approx. 191 sec.	Approx. 10.1 min.
DPC-64 (64 MB)	Approx. 6.4 min.	Approx. 20.2 min.
DPC-128 (128 MB)	Approx. 12.9 min.	Approx. 40.6 min.

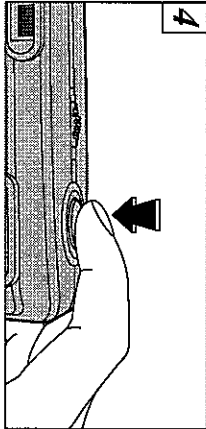
4 To stop the self-timer once it has started running, press the "BACK" button.



During movie shooting, the lens is fixed at the wide-angle zoom setting and only the digital zoom can be used.

Use "▲" or "▼" to zoom in and out. A zooming bar is displayed on the LCD monitor. The focal distances and maximum zoom ratios for the digital zoom are shown below.

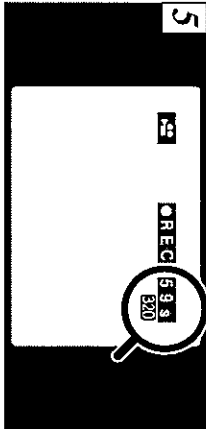
Model	Digital zoom focal distance (35 mm camera equivalent) zoom scale	Maximum zoom scale
FinePix A203	Approx. 38 mm-95 mm	2.5x
FinePix A303	Approx. 38 mm-122 mm	3.2x



Shooting starts when you press the shutter button down fully.

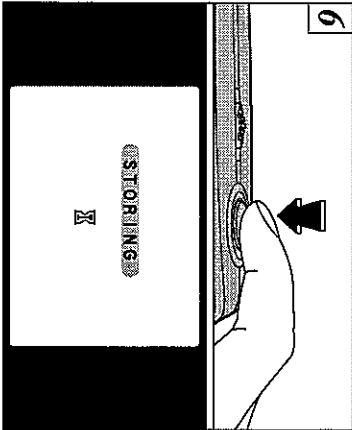
- ④ You do not need to hold down the shutter button. The focus is fixed at approximately 80 cm (2.6 ft.) to infinity.
- ④ The white balance is fixed during shooting, but the exposure varies automatically to suit the scene being shot.
- ④ The image shown on the LCD monitor before you take the shot may differ in its brightness, color, etc. from the image shown on the monitor during movie recording.

The white balance is set automatically when you press the shutter button.



During shooting, "REC" appears on the LCD monitor with a counter showing the remaining time displayed in the top-right corner.

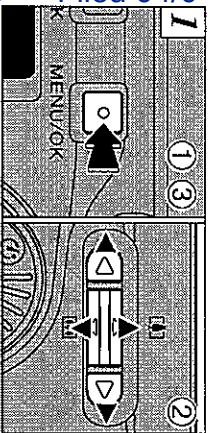
- ④ Once the remaining time runs out, movie recording automatically stops and the movie is stored on the xD-Picture Card.



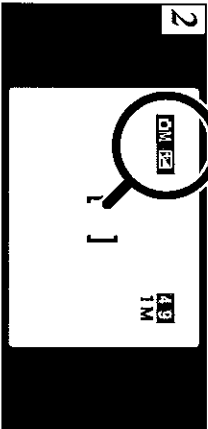
If you press the shutter button during shooting, shooting ends and the movie is stored on the xD-Picture Card.

- ④ If you end shooting immediately after you start shooting, only 1 second of movie is shot.

BASIC PHOTOGRAPHY MENU OPERATIONS



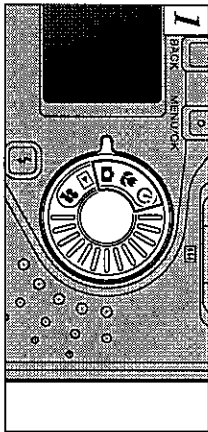
- Set the Mode dial to "1", "2", "3", "4", "5", "6", "7", "8", "9", "10", "11", "12", "13", "14", "15", "16", "17", "18", "19", "20", "21", "22", "23", "24", "25", "26", "27", "28", "29", "30", "31", "32", "33", "34", "35", "36", "37", "38", "39", "40", "41", "42", "43", "44", "45", "46", "47", "48", "49", "50", "51", "52", "53", "54", "55", "56", "57", "58", "59", "60", "61", "62", "63", "64", "65", "66", "67", "68", "69", "70", "71", "72", "73", "74", "75", "76", "77", "78", "79", "80", "81", "82", "83", "84", "85", "86", "87", "88", "89", "90", "91", "92", "93", "94", "95", "96", "97", "98", "99", "100".
- ① Press the "MENU/OK" button to display the menu.
 - ② Use "▲" or "▼" to select the menu item and "▲" or "▼" to change the setting.
 - ③ Press the "MENU/OK" button to confirm the selection.



When you validate the settings, the respective icons appear at the top of the screen.
(Example: When the EV (exposure compensation) is set in Manual mode.)

⚠ The settings available in the menu screen differ depending on the still photography mode.

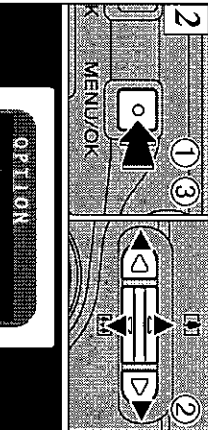
SELECTING AUTO OR MANUAL



Set the Mode dial to "1", "2", "3", "4", "5", "6", "7", "8", "9", "10", "11", "12", "13", "14", "15", "16", "17", "18", "19", "20", "21", "22", "23", "24", "25", "26", "27", "28", "29", "30", "31", "32", "33", "34", "35", "36", "37", "38", "39", "40", "41", "42", "43", "44", "45", "46", "47", "48", "49", "50", "51", "52", "53", "54", "55", "56", "57", "58", "59", "60", "61", "62", "63", "64", "65", "66", "67", "68", "69", "70", "71", "72", "73", "74", "75", "76", "77", "78", "79", "80", "81", "82", "83", "84", "85", "86", "87", "88", "89", "90", "91", "92", "93", "94", "95", "96", "97", "98", "99", "100".

AUTO
This is the easiest mode for taking pictures and can be used in a wide range of conditions.

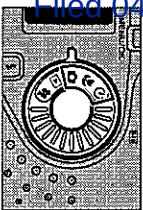
MANUAL
This mode allows you to specify your own "EV" (exposure compensation) and White Balance" settings.



- ① Press the "MENU/OK" button to display the menu.
- ② Use "▲" or "▼" to select "OPTION" and then use "▲" or "▼" to select "AUTO" or "MANUAL".
- ③ Press the "MENU/OK" button to confirm the selection.

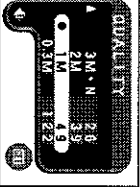
PHOTOGRAPHY MENU OPTIONS

Still/Macro/Self-Timer Mode



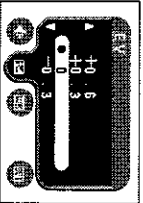
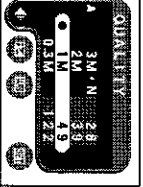
When you press the "MENU/OK" button in the "M", "S", or "ST" mode, one of the menu screens shown below appears, allowing you to specify the respective settings. Selecting the "MANUAL" setting allows you to specify the "EV (exposure compensation)" and "WHITE BALANCE" settings.

AUTO

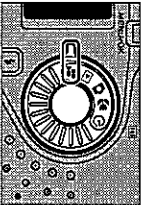


MANUAL

You can switch between AUTO and MANUAL in "OPTION".

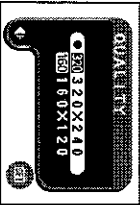


Movie Mode



If you press the "MENU/OK" button in the "M" mode, the menu screens shown below appear, allowing you to specify the respective settings.

QUALITY



OPTION



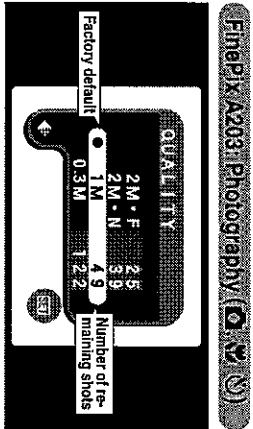
PHOTOGRAPHY MENU **SETTING THE QUALITY** *Displaying the menus (P.50)

Use the "QUALITY" setting to specify the number of recorded pixels.

FinePix A203: Photography (Q, W, S)	
Quality	Usage
2M · F (1600×1200)	For printing
2M · N (1600×1200)	
1M (1280×960)	For the Internet
0.3M (640×480)	

FinePix A303: Photography (Q, W, S)	
Quality	Usage
3M · F (2048×1536)	For printing
3M · N (2048×1536)	
2M (1600×1200)	For the Internet
1M (1280×960)	
0.3M (640×480)	

FinePix A203/FinePix A303: Movie (M)	
Quality	Usage
F20 (320×240)	—
F60 (160×120)	



Any of 4 settings can be selected. Select the setting that best suits your needs.

<Examples>

- To print at A6 (postcard) to A5 size

→ 2M · F or 2M · N

* Select 2M · F for better quality and 2M · N for more shots.

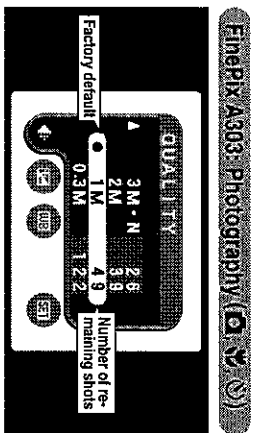
Normally the 2M · N setting provides sufficiently high quality for printing.

- To print at A7 (half postcard) to A6 (postcard) size

→ 1M

- For an image attached to E-mail or used on a website

→ 0.3M



Any of 5 settings can be selected. Select the setting that best suits your needs.

<Examples>

- To print at A4 size

→ 3M · F or 3M · N

* Select 3M · F for better quality and 3M · N for more shots.

Normally the 3M · N setting provides sufficiently high quality for printing.

- To print at A6 (postcard) to A5 size

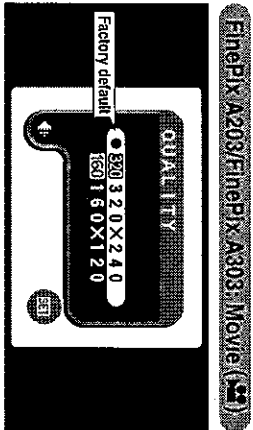
→ 2M

- To print at A7 (half postcard) to A6 (postcard) size

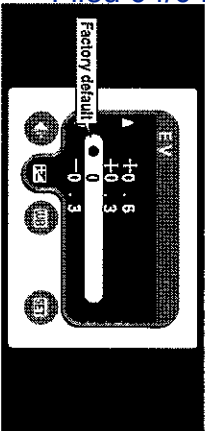
→ 1M

- For an image attached to E-mail or used on a website

→ 0.3M



You can choose from 2 image sizes for movies. Select "F20" for better quality or "F60" for longer shooting times.



This mode can be selected in the "CM" photography mode.
Use the Brightness setting to obtain the optimum image brightness (exposure) when the subject is much brighter or darker than the background.

- **Correction range:** 13 steps
(-2.1 EV to +2.1 EV in 0.3 EV increments)
See P.124 for more information on EV.

- The Brightness setting is disabled in the following situations:
 - When the flash is used in Auto or Red-Eye Reduction mode.
 - When dark scenes are shot in Forced Flash mode.

◆ **Subjects for Which Exposure Adjustment is Particularly Effective** ◆

◆ **Guide to using (+positive) compensation** ◆

- Copying of printed text (black characters on white paper) (+1.5 EV)
- Backlit portraits (+0.6 EV to +1.5 EV)
- Locations with very bright backgrounds or strong reflections, such as ski resorts: +0.9 EV
- Shots made up predominantly of sky (+0.9 EV)

◆ **Guide to using (-negative) compensation** ◆

- For spoilt subjects, particularly against a dark background: -0.6 EV
- Copying of printed text (white characters on black paper) (-0.6 EV)
- Scenes with low reflectivity, such as shots of pine trees or dark foliage (-0.6 EV)



This mode can be selected in the "CM" photography mode.
Change the white balance setting when you want to take a picture with the white balance fixed for the surroundings and lighting when the picture is taken.

In Auto mode, the correct white balance may not be obtained for subjects such as close-ups of people's faces and shots taken under a special light source. In such situations, select the correct white balance for the light source. See P.124 for information on the white balance.

AUTO: Automatic adjustment

(Shooting to show the ambience of the light source)

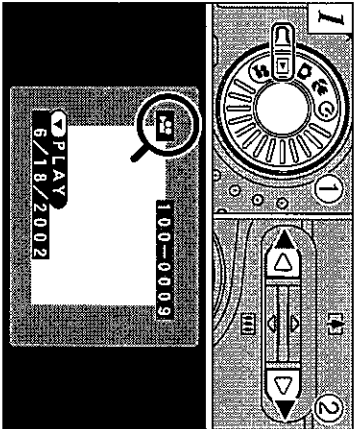
- ☀ : Shooting outdoors in fine weather
- ☁ : Shooting in shade
- ☀₁ : Shooting under "Daylight" fluorescent lamps
- ☀₂ : Shooting under "Warm White" fluorescent lamps
- ☀₃ : Shooting under "Cool White" fluorescent lamps
- ☀₄ : Shooting in incandescent light

* The white balance setting (unless it is a Custom White Balance setting) is ignored when you use the flash. To achieve the desired effect in your shot, press the flash back down to suppress flash operation (P.36).

4 Advanced Features Playback

PLAYBACK MODE

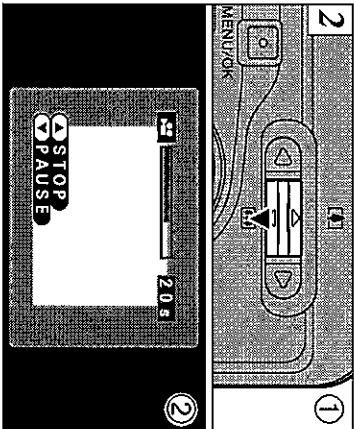
PLAYING BACK MOVIES (VIDEO)



- ① Set the Mode dial to "PLAY".
- ② Use "◀" or "▶" to select the movie file.

Movies cannot be played back using multi-frame playback. Use the "DISP" button to revert to normal playback.

Indicated by the "M" icon.



- ① Press "V" to play the movie.
- ② The LCD monitor shows the playback time and a playback progress bar.

If the subject of the movie is very bright, white streaks may appear on the image during playback. This is normal and is not a fault.

Movies are displayed somewhat smaller than still images.

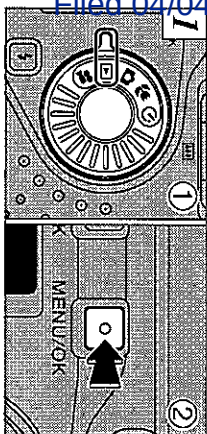
Playing back movies

	Control	Description
Playback		The movie automatically stops when playback ends.
Paused/Resume		Pauses the movie during playback. Press this button again to resume playback.
Stop		Stops playback. * Press "◀" or "▶" while movie playback is stopped to go back to the previous file or advance to the next file respectively.
Fast forward/Rewind		Press these during playback to skip forwards or backwards through the movie.
Skip playback		• Each time you press "◀" or "▶" when the movie is paused, the movie advances or goes back one frame. • Hold down the button to move through the frames quickly.

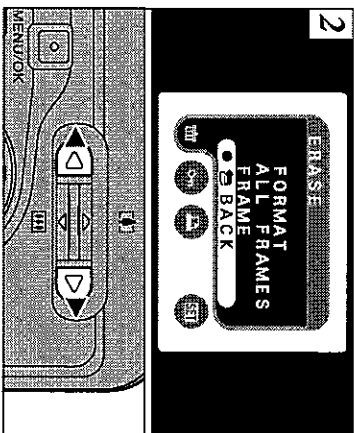
Playing back movie files

- It may not be possible to play back movies shot on other camera models.
- To play back movie files on a computer, save the movie file on the xD-Picture Card to the computer's hard disk and then play back the saved file.
- Video files contain large amounts of data. Depending on the performance of the computer, movies may not run smoothly if the computer cannot process the images quickly enough.
- If you play back your movies on a computer or a different camera model, they may run slightly faster than normal.

PLAYBACK MENU **ERASING SINGLE • ALL FRAMES/FORMATTING**



1 Set the Mode dial to "E".
2 Press the "MENU/OK" button to view the menu screen.



Use "▲" or "▼" to select "ERASE".

FORMAT

Erases all the images. Because formatting also erases protected files, check carefully before formatting a card and copy any files that you want to keep onto other media, such as your hard disk.

ALL FRAMES

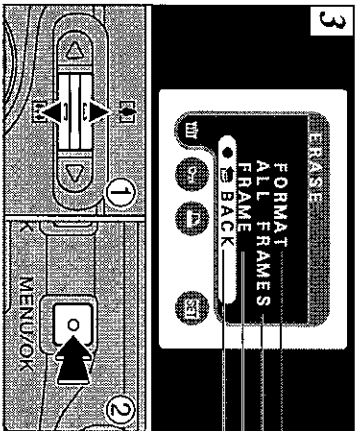
Erases all unprotected images. You should copy important files that you do not want to be erased to your computer or other media.

FRAME

Erases only the selected image.

BACK

Returns to playback without erasing any files.

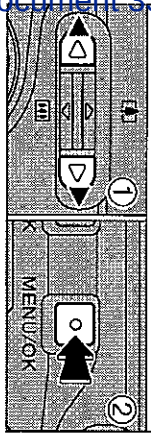
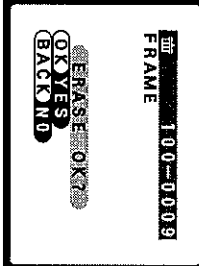


1 Use "▲" or "▼" to select "FRAME", "ALL FRAMES" or "FORMAT".
2 Press "MENU/OK" button to confirm your selection.

Note that mistakenly erased images cannot be recovered.
You should copy important files that you want to keep to your computer.

PLAYBACK MENU ERASING SINGLE - ALL FRAMES/FORMATTING

FRAME



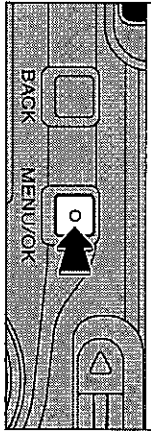
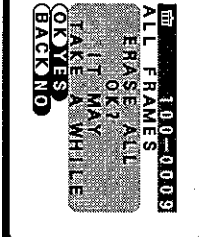
Press "▲" or "▼" to select the image to be erased.

Press the "MENU/OK" button to erase the displayed image.

to erase another image, repeat steps ① and ②. When you have finished erasing images, press the "BACK" button.

Images with "PROTECTED FRAME" displayed cannot be erased. Unprotect the image before erasing it.

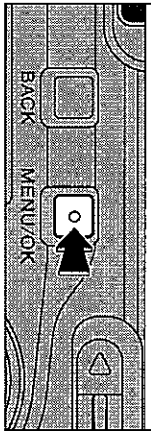
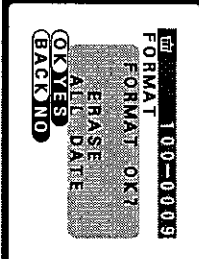
ALL FRAMES



Press the "MENU/OK" button to erase all the unprotected images.

If "COPY-SPECIFIED ERASE OK?" appears, press the "MENU/OK" button again to erase the image.

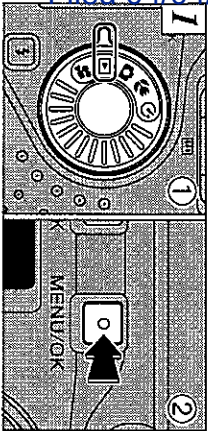
FORMAT



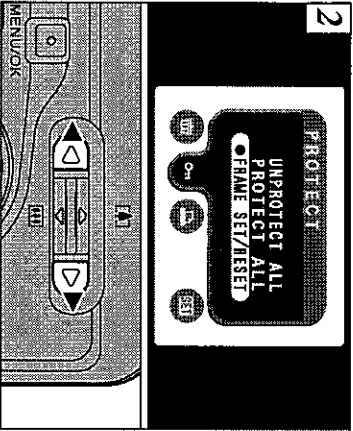
Press the "MENU/OK" button to erase all the images and initialize the xD-Picture Card. Protected images are also erased.

If the "CARD ERROR", "WRITE ERROR", "READ ERROR" or "CARD NOT INITIALIZED" message appears, refer to P.114, 115 before formatting the xD-Picture Card and take the appropriate measures.

PLAYBACK MENU **On** **PROTECTING IMAGES FRAME/ALL**



① Set the Mode dial to "1".
② Press the "MENU/OK" button to view the menu screen.



Use "▲" or "▼" to select "On" PROTECT.

UNPROTECT ALL

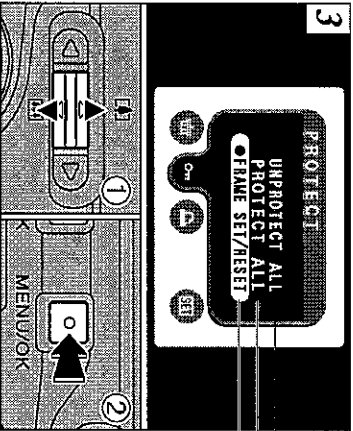
Unprotects all the images.

PROTECT ALL

Protects all the images.

FRAME SET/RESET

Protects or unprotects only the selected image.

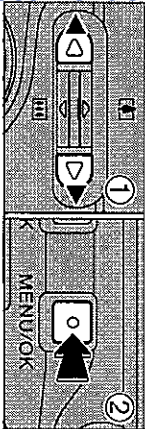
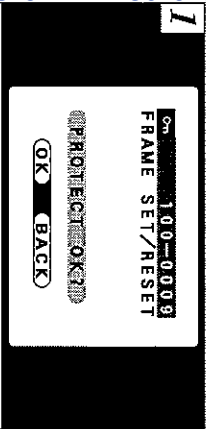


① Use "▲" or "▼" to select "FRAME SET/RESET", "PROTECT ALL" or "UNPROTECT ALL".
② Press "MENU/OK" button to confirm your selection.

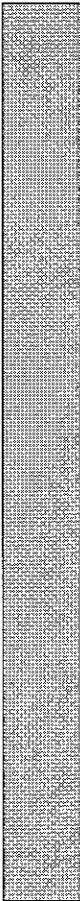
Protection is a setting that prevents images from being accidentally erased. However, "FORMAT" erases all images, regardless of protected or not (p.61).



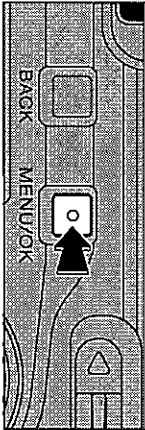
FRAME/SET/RESET



- ① Press “▲” or “▶” to select the image to be protected.
 - ② Press the “MENU/OK” button to protect the displayed image.
- To protect another file, repeat steps ① and ②. To finish protecting files, press the “BACK” button.

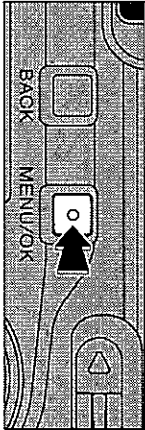
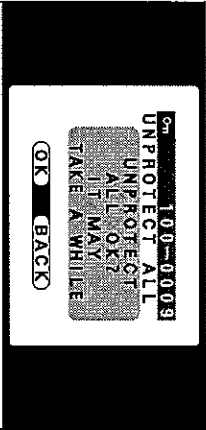


PROTECT ALL



Pressing the “MENU/OK” button protects all the images.

UNPROTECT ALL



Pressing the “MENU/OK” button unprotects all the images.



PLAYBACK MENU HOW TO SPECIFY PRINT OPTIONS (DPOF)

DPOF stands for Digital Print Order Format and refers to a format that is used for recording printing specifications for images shot using a digital camera on media such as xD-Picture Card. The recorded specifications include information on which frames are to be printed.

This section gives a detailed description of how to order your prints with the FinePix A203/ FinePix A303. On the FinePix A203/FinePix A303, you can specify only one print per image in the DPOF settings.

* Note that some printers do not support date and time imprinting or specification of the number of prints.

* Note that the warnings shown below may be displayed while you are specifying the prints.

DPOF SPECIFIED. ERASE OK? (P.60)

DPOF SPECIFIED. ERASE ALL OK? (P.60)

When you erase the image, the DPOF setting for that image is deleted at the same time.

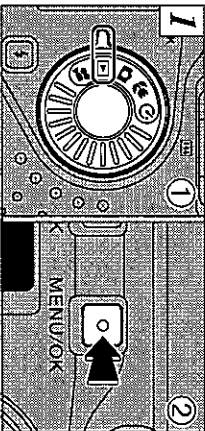
RESET DPOF OK? (P.70)

If you load a xD-Picture Card that contains frames specified for printing on another camera, those print specifications are all reset and replaced by the new print specifications.

DPOF FILE ERROR (P.116)

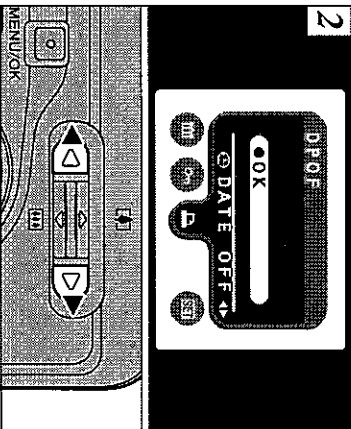
Up to 999 frames can be specified on the same xD-Picture Card.

PLAYBACK MENU DPOF SET FRAME

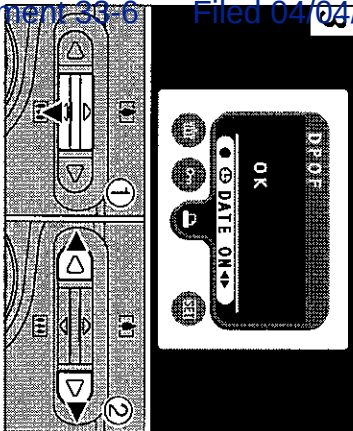


1 Set the Mode dial to "D".

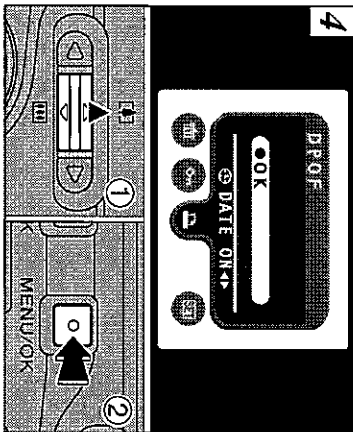
2 Press the "MENU/OK" button to display the menu screen.



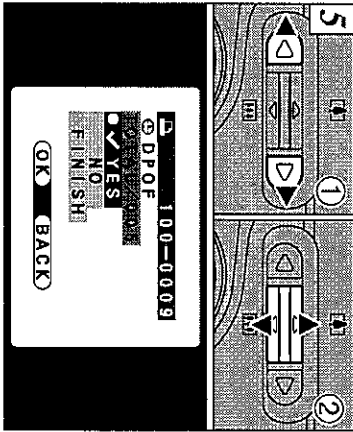
Use "◀" or "▶" to select "DPOF".



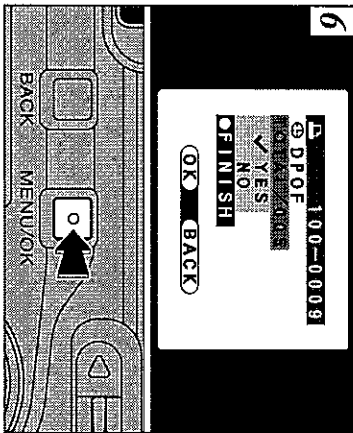
3 Use "▲" to select "DATE".
4 Use "▲" and "▼" to select "DATE ON" or "DATE OFF".
The selected setting is then valid for all frames with DPOF settings.



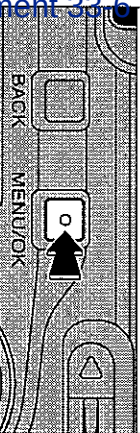
1 Press "▲" to select "OK".
2 Press the "MENU/OK" button.



1 Use "▲" or "▼" to display the frame for which you want to specify DPOF settings.
2 Press "▲" or "▼" to set "YES" for the frame to be printed and then press the "MENU/OK" button or "▼".
To specify more DPOF settings, repeat steps 1 and 2.
DPOF settings cannot be specified for movies.
"TOTAL" shows the total number of frames for which prints have been ordered.

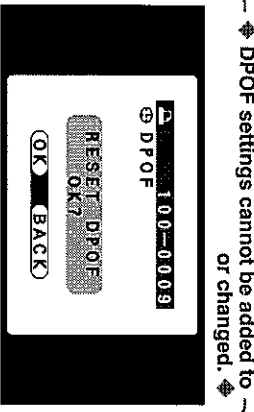


When you have finished the settings, always select "FINISH" and press the "MENU/OK" button.
If you press the "BACK" button, no DPOF settings are specified.
You can only specify one print per frame in the DPOF settings. Note also that you can specify prints for up to 999 frames on the same XD-Picture Card.



Pressing the "MENU/OK" button confirms the DPOF settings.
Pressing the "BACK" button returns you to the settings screen [5].

Pressing the "MENU/OK" button confirms all the settings.
70

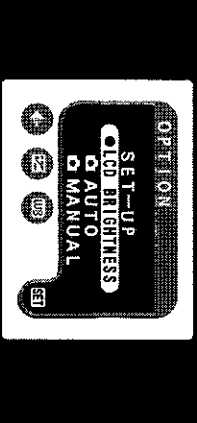
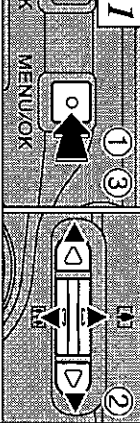


If you select a frame for which DPOF settings have already been specified, the "RESET DPOF OK?" message appears.
Pressing the "MENU/OK" button erases all the DPOF settings already specified. You must then specify the DPOF settings again.

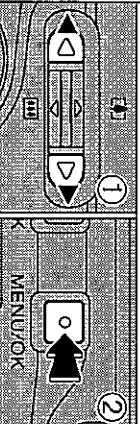
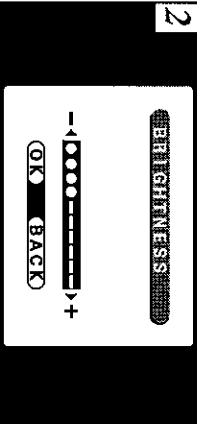
Press the "BACK" button to leave the previous settings unchanged.
During playback, check that the "DPOF" icon is displayed for the previous settings.

5 Settings

SET ADJUSTING THE MONITOR BRIGHTNESS



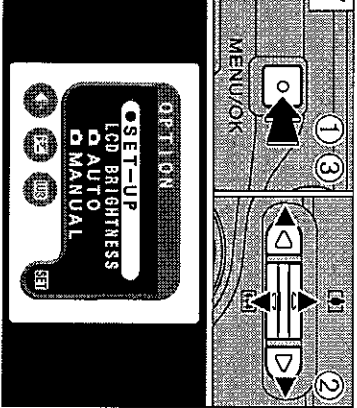
- ① Press the "MENU/OK" button to display the menu screen.
- ② Press "▲" or "▶" to select "SET" OPTION and then press "▲" or "▼" to select "LCD BRIGHTNESS".
- ③ Press the "MENU/OK" button.



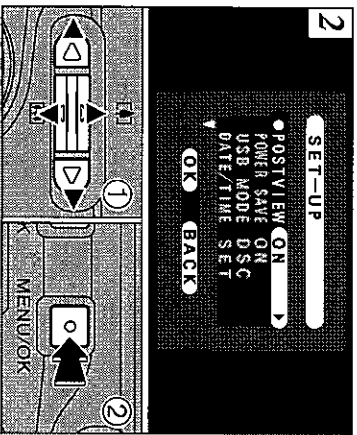
- ① Use "▲" or "▶" to adjust the LCD monitor brightness.
- ② Press the "MENU/OK" button.

To exit this procedure without changing the settings, press the "BACK" button.

SET USING SET-UP



1 Press the "MENU/OK" button to display the menu screen.
2 Press "▲" or "▶" to select "SET" OPTION and then press "▲" or "▶" to select "SET-UP".
3 Press the "MENU/OK" button.



1 Press "▲" or "▶" to select a menu option and then press "▲" or "▶" to change the setting.
2 Press the "MENU/OK" button.

3 Press "▶" for "DATE/TIME" or "RESET ALL".

List of Settings

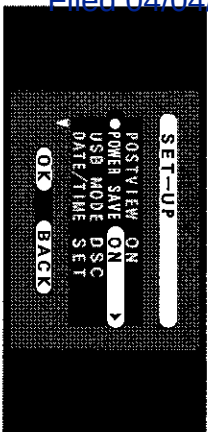
The options available in the settings menus vary depending on the mode, as shown in the table below.

Still Photography mode	Movie mode	Playback mode
DA AUTO DM MANUAL LCD BRIGHTNESS (P.71) SET-UP	— — LCD BRIGHTNESS (P.71) SET-UP	— — LCD BRIGHTNESS (P.71) SET-UP

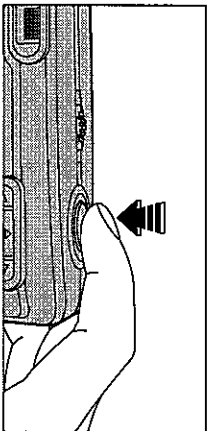
SET-UP Menu Options (Date/time setting, etc.)

Settings	Display	Factory default	Explanation
POSTVIEW	ON/OFF	ON	This option specifies whether or not an image checking screen (photography result) is displayed after you take a shot. The photographed image is displayed for a few moments and then automatically recorded.
POWER SAVE	ON/OFF	ON	If the camera is not used for approximately 30 seconds, this function temporarily switches off the LCD monitor. See P.74 for details.
USB MODE	DSC/PC CAM	DSC	See P.75 for details.
DATE/TIME	SET	---	Use this option to correct the date or time. See P.15 for details.
LCD	ON/OFF	ON	Use this option to specify whether the LCD monitor is automatically switched ON or OFF when the Mode dial is set to Q .
BEEP ♪	LOW/HIGH/OFF	LOW	Allows you to set the camera's operating sound.
LANGUAGE	ENGLISH/FRANCAIS/DEUTSCH	ENGLISH	Select English, French or German as the language used for screen display.
RESET ALL	OK	—	This resets all the camera settings (including the photography and playback menu settings) other than DATE/TIME and LANGUAGE to the factory default values set at shipment.

SET-UP SET POWER SAVE



- **Power saving "ON"** (default setting)
Power consumption is kept to a minimum to prevent battery depletion. You should select the "ON" setting when you are using alkaline batteries.
 - If the camera is not used for approximately 30 seconds, the LCD monitor switches off temporarily to reduce power consumption (Sleep mode).
 - Once the camera is in Sleep mode, if it is left unused for a further 90 seconds, it is automatically switched off.
 - The charging time for the flash increases slightly because the flash charging power is reduced.
- **Power saving "OFF"**
Batteries are more likely to run flat since no power reduction measures (sleep mode, etc.) are used. However, this function automatically switches the camera off if the camera is not used for approximately 2 minutes.



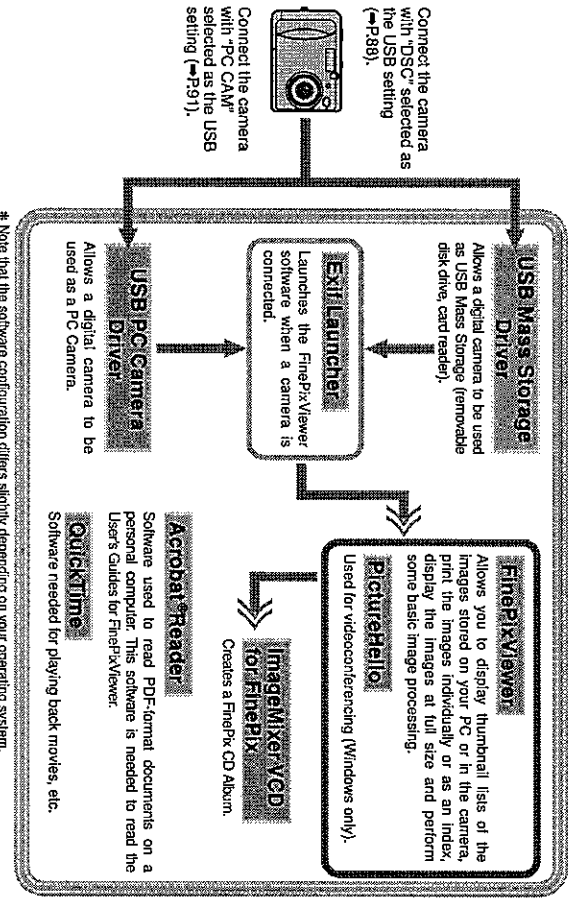
When the camera is in Sleep mode, pressing any button on the camera will switch the LCD monitor back on. You can take a picture even while the LCD monitor is switched off simply by pressing the shutter button.

- If you press the shutter button down halfway and then release it, the screen may go dark briefly because the flash is charging.
- The Power Save and Auto Power Off functions are disabled during USB connection.

The Sleep function does not operate when the LCD monitor is switched off, during setup, or in Playback mode, but the camera still switches off automatically if it is not used for 2 minutes.

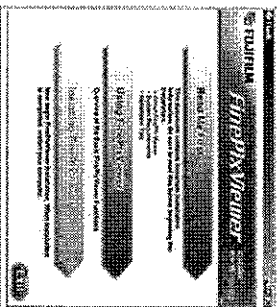
6 Software Installation

6.1 The Software Components



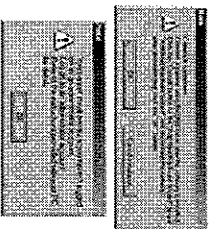
4. The Setup screen appears. Click the [Installing FinePixViewer] button.

* For more information on what is installed, click the [Read Me First] button and [Using FinePixViewer] button.

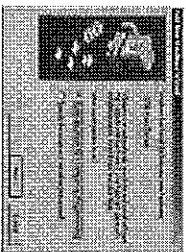


6.2.2 From FinePixViewer installation to restart

1. Pre-Installation checking begins. If any warning messages appear, follow the instructions given on the screen.



* The "Add New Hardware Wizard" may be hidden behind the "Note" message. Check the taskbar, move the message window and then click the [Cancel] button.



3. Load the enclosed CD-ROM into the CD-ROM drive. The installer starts up automatically.

2. Quit all other active applications until no applications are shown in the taskbar.

NOTE
Users of Windows 2000 or Windows XP should log in using a system administrator account (e.g., Administrator).

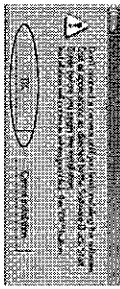
1. Switch on your PC and start up Windows.
* If you have already switched on your PC, restart your PC at this point.

NOTE
Do not connect the camera to your PC until the software installation is completed.

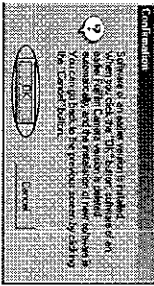
6.2.1 Load the CD-ROM into your PC

6.2.2 Installation on a Windows PC

2. A confirmation message appears asking whether you want to continue with the installation. Click the [OK] button.



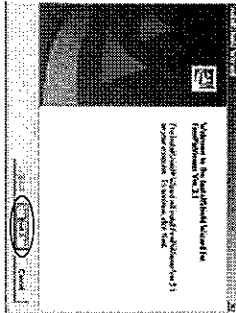
3. The software version is checked. If the window shown below appears, click the [OK] button to uninstall the software.



4. The USB drivers are installed.

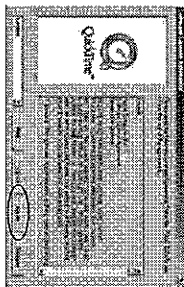
5. Install FinePixViewer.

① FinePixViewer installation begins and notes and warnings are displayed. When you have confirmed these, click the [Next >] button.
 ② The User License Agreement for this software is displayed. Read the agreement carefully and then, if you agree to the terms of the Agreement, click the [Yes] button. If you click the [No] button, the software is not installed.

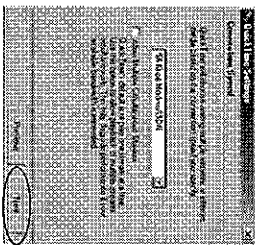


③ Check the installation destination folder and then click the [Next >] button.
 ④ "Confirmation" screen shown may appear. To continue with the settings, click the [Yes] button.

6. Install QuickTime as directed by the on-screen instructions.
 * If you have already installed QuickTime version 5.0.2 or later, this installation is not performed.



Click [Agree] button in the "Software License Agreement" window.



If the "Connection speed" window appears, set the correct speed for your environment of connection and then click the [Next >] button.
 * If you do not know your connection speed, simply click the [Next] button.

7. Install NetMeeting as directed by the on-screen instructions.
 * If NetMeeting 3.01 or later is already installed on your PC, this installation is not performed.

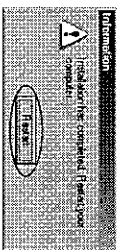
8. Install ImageMixer VCD for FinePix as directed by the on-screen instructions.

9. Close the "Readme" window.

10. Install WINASPI as directed by the on-screen instructions.

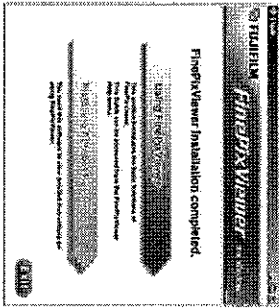
11. Install Windows Media Player as directed by the on-screen instructions and then restart your PC.

* If the latest version of the software is already installed on your PC, this installation is not performed. When next screen appears, click the [Restart] button.



In Windows Media Component Setup window, tick the "I have read the Privacy Statement" checkbox and then click the [Next >] button.
 When you click the [Finish] button, your PC is restarted.

13. After you restart your PC, the "FinePixViewer installation completed" message appears. Click "Using FinePixViewer" to view the basic FinePixViewer functions.



14. To install Acrobat Reader, click "Install Acrobat Reader."*

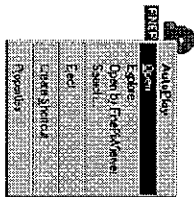
*You should install Adobe Systems' Acrobat Reader software to read the FinePixViewer User's Guide (PDF).

If you already have the latest version installed, this step is not required.

15. Proceed with the installation as directed by the on-screen instructions.

■ To install Acrobat Reader later...

1. Open the "My Computer" window, right-click the CD-ROM icon and select "Open" to view the contents of the CD-ROM.



2. Double-click "ACROREAD" → "ENGLISH" folder.
3. Double-click "ar505enu.exe".
4. Proceed with the installation as directed by the on-screen instructions.

6.3 Installation on a Mac OS 8.6 to 9.2

6.3.3.1 Check the system software settings

■ Enable File Exchange

Check whether File Exchange is active.
To use an xD-Picture Card that is supported by the camera, the File Exchange utility supplied with Mac OS must be running.

- 1. Switch on your Macintosh and start up Mac OS 8.6 to 9.2.**

NOTE

Do not connect the camera to your Macintosh until the software installation is completed.

2. Select the Extension Manager in the Control Panel and check that the File Exchange check box is ticked. If not, click in the box so that an ☒ appears and then restart your Macintosh.

6.3.3.2 From FinePixViewer installation to restart

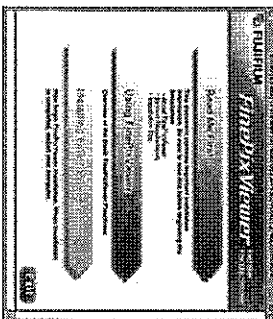
1. When you load the enclosed CD-ROM into the CD-ROM drive, the "FinePix" window automatically opens.

NOTE

If the "FinePix" window does not open automatically, double-click the CD-ROM icon.

- 2. Double-click "Installer for MacOS8.6-9.x" to launch the installer.**

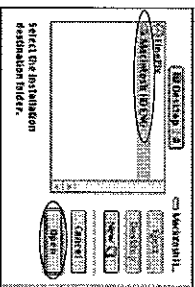
3. The installer setup screen appears. Click the **[Installing FinePixViewer]** button.
- * For more information on what is installed, click the **[Read Me First]** button or **[Using FinePixViewer]** button.



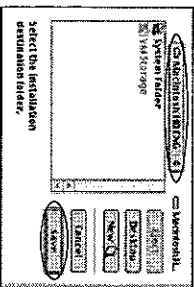
4. A confirmation message appears asking whether you want to continue with the installation. Click the [OK] button.

5. The User License Agreement for this software is displayed. Read the agreement carefully and then, if you agree to the terms of the Agreement, click the [Yes] button. If you click the [No] button, the software is not installed.

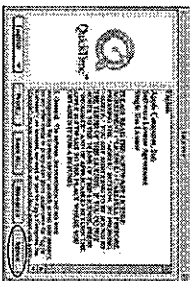
8. Select the installation destination for FinePixViewer and ImageMixer VCD for FinePix.
① Click the [Open] button to open the installation destination folder.



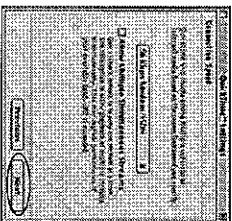
② Click the [Save] button.



7. Install QuickTime as directed by the on-screen instructions and then restart your Macintosh.
* If you have already installed QuickTime version 5.0.2 or later, this installation is not performed.

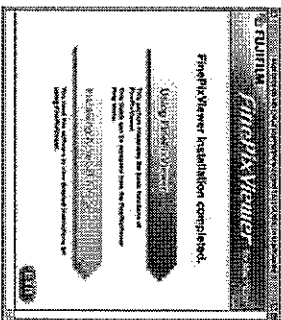


Click [Agree] button in the "License" window.



If the "Correction Speed" window appears after you restart your Macintosh, set the correct speed for your environment of * If you do not know your connection speed, simply click the [Next] button.

8. After you restart your Macintosh, the "FinePixViewer installation completed" message appears. Click "Using FinePixViewer" to view the basic FinePixViewer functions.



9. To install Acrobat Reader, click "Install Acrobat Reader".
* You should install Adobe Systems' Acrobat Reader software to read the FinePixViewer User's Guide (PDF).
If you already have the latest version installed, this step is not required.

10. Proceed with the installation as directed by the on-screen instructions.

- To install Acrobat Reader later...
- 1. Double-click the "FinePix" CD-ROM to open the CD-ROM window.
- 2. Double-click "FinePixViewer for Mac OS 8.6-9.X" → "Acrobat Reader" → "English" folder.
- 3. Double-click "English Reader Installer".
- 4. Proceed with the installation as directed by the on-screen instructions.

6.4 Installation on a Mac OS X

6.4.1 From FinePixViewer installation to restart

Only FinePixViewer is installed on Mac OS X.

NOTE

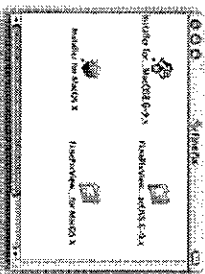
AVI movies cannot be played back on version 10.0.4.

Switch your Macintosh on and start up Mac OS X. Do not launch any other applications.

Load the enclosed CD-ROM into the CD-ROM drive. The "FinePix" window opens.

NOTE

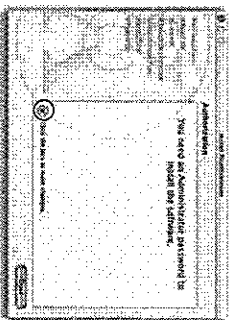
If the "FinePix" window does not open automatically, double-click the CD-ROM icon.



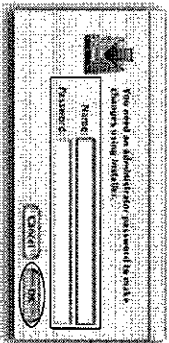
Double-click "Installer for MacOS X".



4. Click the "Ⓢ" icon.



5. Enter the administrator name and password. Then click the [OK] button.

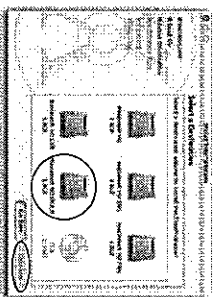


6. Click the [Continue] button.

7. Quit any other programs that are running and then click the [Continue] button.

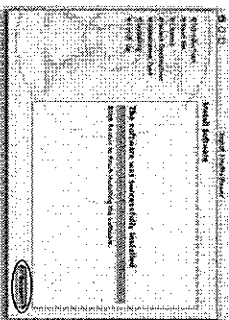
8. Click [Continue] button in the "Software License Agreement" window.

9. Select the Mac OS X startup disk as the installation destination and click the [Continue] button.



10. Click the [Install (upgrade)] button.

11. When you have completed the installation, click the [Restart] button.



7 Camera Connection

The "Camera Connection" section explains how to connect the camera to your computer using the special USB cable and describes the functions you can use once the camera and computer are connected.

If the power cuts out during data transmission, the data will not be transmitted correctly. Always use the AC power adapter when connecting the camera to a computer.

The first time you connect the camera to your computer by referring Section 6
You must install all of the software before connecting the camera to your computer.



CD-ROM
(Software for FinePix SX)

■ DSC (Mass storage device) Mode

This mode provides a simple way to read images from an xD-Picture Card and store images on to an xD-Picture Card (P. 88).

■ PC CAM (PC Camera) Mode

This function allows you to conduct videoconferencing sessions between PCs connected to the Internet (P. 91).

*Videoconferencing ("PictureHello") is not supported on Macintosh computers.
*Connection is only possible with a FUJIFILM camera equipped with a "PC Camera" function.

For more information on using the software, refer to "How to use FinePixViewer" in the HELP menu which was installed from the CD-ROM.



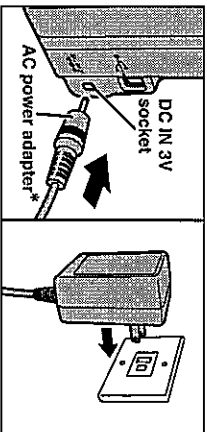
7-1 Using the optional AC power adapter

Always use a FUJIFILM AC Power Adapter AC-3V (P. 106).

Use the AC power adapter to avoid losing power at inconvenient times, such as when you are downloading photographed images to your computer. Using the AC power adapter also allows you to take pictures and play back images without worrying about depleting the batteries.

*See P. 111 for notes on using the AC power adapter.
*Only connect or disconnect the AC power adapter when the camera is switched off.

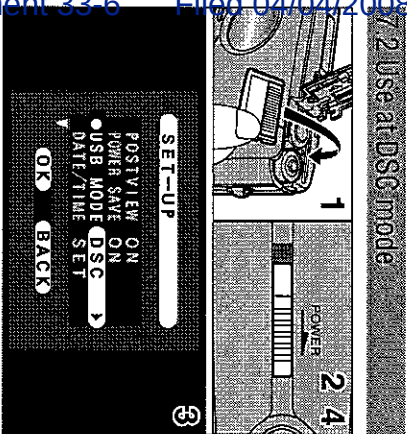
Connecting or disconnecting the AC power adapter while the camera is switched on temporarily interrupts the power supply to the camera, so that images or movies being shot at the time are not recorded. Failing to switch the camera off first can also result in damage to the xD-Picture Card or malfunctions during PC connection.



Check that the camera is switched off. Plug the AC power adapter connector into the "DC IN 3V" socket and then plug the AC power adapter into the power outlet.

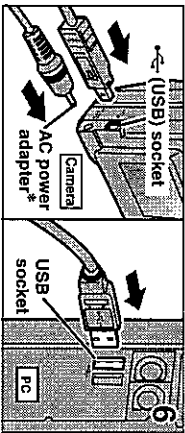
*The socket-outlet shall be installed near the equipment and shall be easily accessible.
*The shape of the plug and socket-outlet depends on the country of use.

Connecting the AC power adapter does not allow you to charge the Ni-MH batteries. Use the optional charger (P. 106) to charge the Ni-MH batteries.



1. Load an xD-Picture Card containing photographed images into your camera. Plug the AC power adapter connector into the DC IN 3V socket on the camera and then plug the adapter itself into the main power outlet.
2. Slide the power switch to the side to turn the camera on.
3. Set the "USB MODE" setting in the "SET-UP" menu to "DSC" (P.72, 73).
4. Slide the Power switch to the side to turn the camera off.

*It is recommended that you connect the AC Power Adapter AC-3V (sold separately) (P.87). Constant power supply will prevent successful data transfer from trouble caused by power supply.



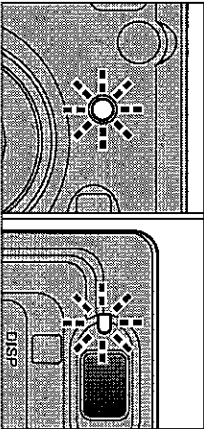
5. Switch your PC on.
6. Use the special USB cable to connect the camera to your computer.
7. Switch the camera on.

If you are using a Windows PC, the driver settings are specified automatically when installation is completed. No further action is required.

Always use the prescribed procedure when disconnecting or switching off the camera (P.94)

*On Windows XP and Mac OS X, you must specify the automatic launch settings the first time you connect the camera to your computer.
*Take care to ensure that the special USB cable is connected the correct way around and that the plugs are pushed fully into the connection sockets.

■ Camera Operation



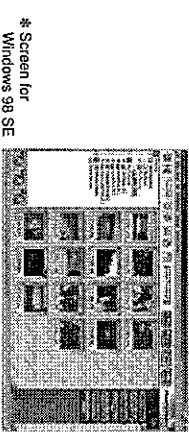
- When the camera and computer are exchanging data, the self timer lamp flashes and the viewfinder lamp flashes alternately green and orange.
- "DSC" appears on the screen.
- Power Save and Auto Power Off are disabled during USB connection.
- Before replacing the xD-Picture Card, always disconnect the camera from the PC using the procedure on P.94.
- Do not disconnect the USB cable when the camera is communicating with the PC. See P.94 for information on the disconnection procedure.

■ PC Operation

Windows 98/98 SE/Mac/2000 Professional

* The Windows CD-ROM may also be required during installation. In this event, switch CD-ROMs as directed by the on-screen instructions.

• FinePixViewer automatically starts up.



* A removable disk icon appears and you can use your PC to transfer files to and from the camera.



If the above operations do not occur, you do not have the required software programs or drivers installed on your PC. Complete the required PC setup procedures. Then reconnect the camera to your PC.

Windows XP

1. The "Found New Hardware" help message appears in the bottom-right corner of your screen. This message will close when the settings are completed. No action is required. * This step is not required for subsequent connections.



2. Specify the settings in the "AutoPlay" dialog box.

3. When FinePixViewer is included in the list of actions to perform

Select "Viewing Images using FinePixViewer" and then select the "Always do the selected action" checkbox. (This checkbox may not be shown in some cases.)

Click the [OK] button to launch FinePixViewer.

4. When FinePixViewer is not included in the list of actions to perform

Select "Take no action" and then select the "Always do the selected action" checkbox. (This checkbox may not be shown in some cases.) Click the [OK] button and launch FinePixViewer manually.

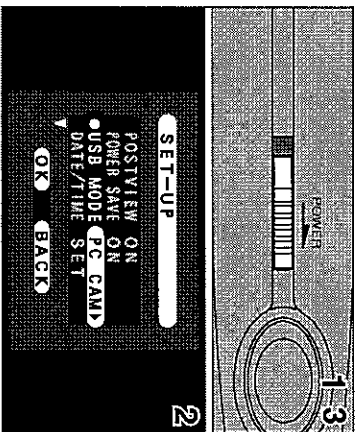
5. A new removable disk icon appears in the "My Computer" window.

TIP The next time you connect the camera, the removable disk drive icon and name change to the "FinePix" icon and name.



Proceed to "Using FinePixViewer" on page 96.

7.3 Use at PC CAM mode

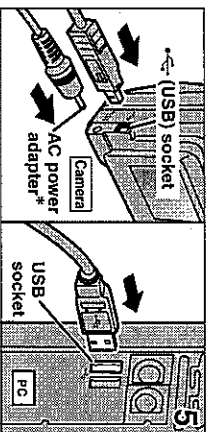


Plug the AC power adapter connector into the DC IN 3V socket on the camera and then plug the adapter itself into the main power outlet.

1. Slide the power switch to the side to turn the camera on.
2. Set the "USB MODE" setting in the "SET-UP" menu to "PC CAM" (P.72, 73).
3. Slide the power switch to the side to turn the camera off.

*It is recommended that you connect the AC Power Adapter AC-3VH (sold separately) (P.87). Constant

power supply will prevent successful data transfer from trouble caused by power supply.



* Sold separately

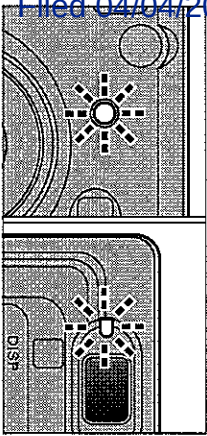
4. Switch your PC on.
5. Use the special USB cable to connect the camera to your computer.
6. Switch the camera on.

If you are using a Windows PC, the driver settings are automatically specified when installation ends. Just wait a few moments.

Always use the prescribed procedure when disconnecting or switching off the camera (P.94)

*Take care to ensure that the special USB cable is connected the correct way around and that the plugs are pushed fully into the connection sockets.

■ Camera Operation



- When the camera and computer are exchanging data, the self timer lamp flashes green and orange.
- The lens is fixed at the wide-angle zoom setting.

"PC CAM" appears on the screen. Power Save and Auto Power Off are disabled during USB connection.

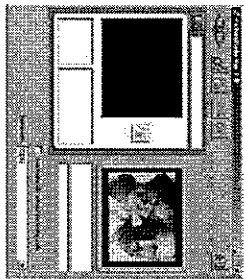
- * Do not disconnect the USB cable when the camera is communicating with the PC. See P.94 for information on the disconnection procedure.

* If the camera is used as a PC camera, a light source such as fluorescent tube stand can be used to illuminate the subject and get a brighter image.

- * When the camera is connected to a computer as a PC camera, the color tones on the LCD monitor may change briefly.

■ PC Operation

1. FinePixViewer automatically starts up and the PictureHello window opens (Windows only).



* Screen for Windows 98 SE

If the above operations do not occur, you do not have the required software programs or drivers installed on your PC. Complete the required PC setup procedures. Then reconnect the camera to your PC.

2. Check PC operation. The installation procedure differs depending on the operating system running on your PC.

* This step is not required for subsequent connections.

Windows 98/98 SE/Me

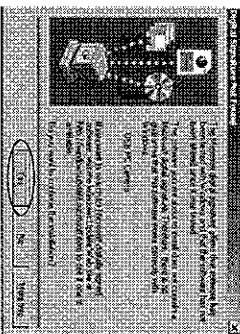
The "New Hardware Found" wizard appears. The wizard will close when the settings are completed. No action is required.



* The Windows CD-ROM may also be required during installation. In this event, switch CD-ROMs as directed by the on-screen instructions.

Windows 2000 Professional

If the "Digital Signature Not Found" dialog box appears, click the [Yes] button.



Windows XP

The USB PC Camera Driver is installed automatically. When the following screen appears, click the [Continue] button.

3. FinePixViewer starts up automatically and the live image is displayed.

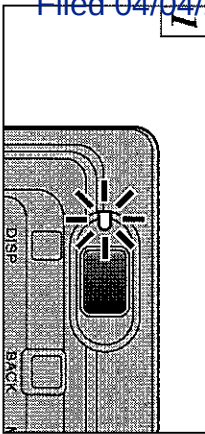
NOTE

If the live image does not appear, refer to "Troubleshooting" in FinePixViewer User's Guide (PDF).

ATTENTION

The Exit Launcher installed with the FinePixViewer automatically launches FinePixViewer when you connect the camera to your PC.

7.4 Disconnecting the Camera



1. Quit all applications (FinePixViewer etc.) that are using the camera.
2. Check that the viewfinder lamp is lit green or that the self timer lamp is off (no data is being exchanged with the computer).

For a DSC connection, proceed to step 2.
For a PC CAMERA connection, proceed to step 3.

* Even when "Copying" is no longer displayed on the computer, the camera and the computer may still be exchanging data. Always check that the viewfinder lamp is lit green or that the self timer lamp is off.

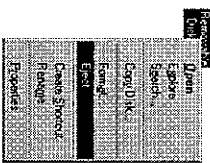
2. Perform the steps shown below before you switch the camera off. This procedure differs depending on the operating system software (or PC) you are using.

Windows 98/98 SE

No PC operation is needed.

Windows Me/2000 Professional/XP

1. Right-click the removable disk icon in the "My Computer" window and select Eject. This step is only required in Windows Me.



2. Left-click the Eject icon in the taskbar and select "USB Disk".



3. The menu option shown below appears. Click on this option.



* Screen for Windows Me

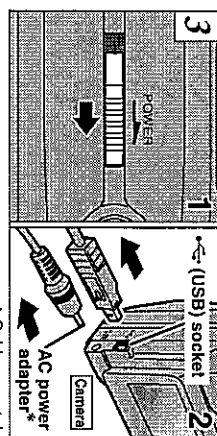
4. The "Eject hardware" dialog box appears. Click the [OK] button or the close button.

Macintosh

Drag the "Removable drive" icon on the desktop to the Trash.



*When you drag the icon to the Trash, "REMOVE OK" appears on the camera's LCD monitor.



1. Switch the camera off.
2. Unplug the special USB cable from the camera.

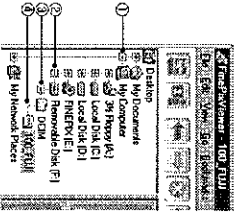
8 Using FinePixViewer

8.1 Saving Images on Your Computer and Viewing Images

This section gives a brief overview of how to use FinePixViewer. Refer to these instructions while you are using FinePixViewer.

1. Connect the camera to your computer in DSC mode (→P.88).
2. When you open the folders shown below in order, the images in the camera are displayed in the thumbnail display area.

Windows

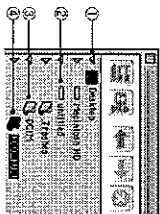


NOTE

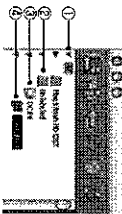
On Windows XP, the removable disk appears as "FinePix" (for the second and subsequent connections).



Mac OS 8/6/9/2



Mac OS X



3. Click the [Automatic Taking] button.

Medium Thumbnail



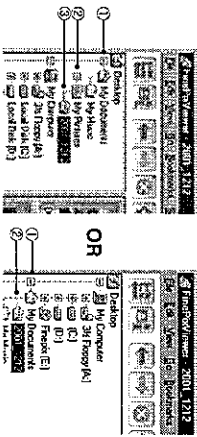
Copies multiple images at once.

4. Check that the files are downloaded from the camera to your computer and that a folder with the photography date is created. Open the folder as shown below.

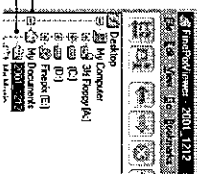
NOTE

To open a folder, click on the plus "+" symbol (Windows) or arrow "▶" (Macintosh) to the left of the folder.

Windows



OR



Mac OS



Indicates the folder in which FinePixViewer is installed.

5. Double-click a still-image thumbnail to open an image window.

For more information on using the software, refer to: How to use FinePixViewer in the HELP menu which was installed from the CD-ROM.

Always use the prescribed procedure when disconnecting or switching off the camera (→P.94).

8.2 Making a FinePix CD Album

For using "ImageMixer VCD for FinePix" to create CD albums and video CDs.

- To create CD-Rs or video CDs, you will need a CD-R drive.
- Refer to the "ImageMixer VCD for FinePix" help file for more detailed information.
- For inquiries regarding "ImageMixer VCD for FinePix"

PIXELA User Support Center

PIXELA Home Page: <http://www.ImageMixer.com/>
 North America (Los Angeles) Telephone: +1-213-341-0163
 Europe (U.K.) Telephone: +44-1489-564-764
 Asia (Philippines) Telephone: +63-2-438-0090
 Japan (Osaka) Telephone: +81-72-224-0181

8.3 Using the FinePix Internet Service

NOTE

Mac OS X users should refer to P.100.
Using FinePixViewer also allows you to access the FinePix Internet Service via the Internet.
* A working Internet connection is required not only for FinePix Internet Service, but also online FAQ (FinePixViewer frequently asked and responses) and latest updates.
* A FinePix Internet Service fees do not include your Internet service provider (ISP) connection fees or any phone charges incurred in dialing your ISP's access point.

8.3.1 Using FAQ

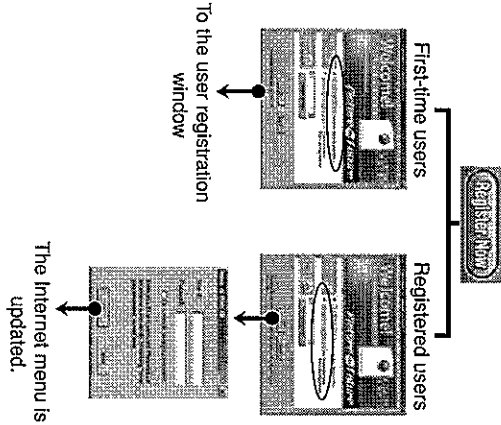
On FinePixViewer, select "QuickStart Guide/Online FAQ" from "Help" menu, then click "FinePixViewer 3.2A". You may obtain an answer to your question via internet.

8.3.2 User Registration

■ For Windows and Mac OS 8.6 to 9.2

NOTE

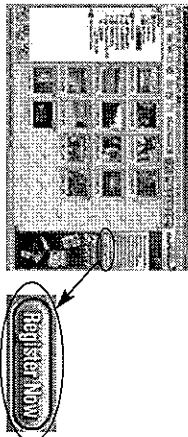
Your user ID and password are very important. Make sure you do not forget them.



To use the FinePix Internet services, users must first register.

* Follow the steps below to register. Users can be registered for free.

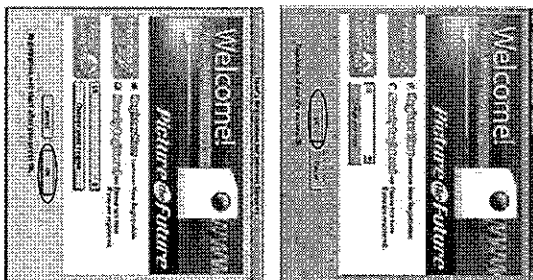
1. Launch FinePixViewer.
2. Click the [Register Now] button.



3. The "User's Registration for Internet Services" dialog box opens. As shown at right, select [Register Here], then select the country or region where you are living and click the [OK] button.

* If you are not already connected to the Internet, connect now (A dial-up dialog box may be displayed).
* If you have completed the user registration, select "Already Registered" (E.g. When you want to re-install FinePixViewer after completing user registration).

* If the country or area where you are living does not appear in the pull-down list, select "OTHERS".



4. When the browser starts up, proceed as directed by the on-screen instructions.

9. Enter the required information in the user registration page.

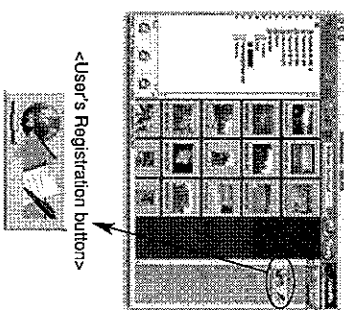
- ① Enter the name of your choice (nickname, etc.).
- ② Enter a password of your choice using letters and/or numbers. Then enter the password again for confirmation.
- ③ Enter your name.
- ④ Enter your E-mail address.
- ⑤ Enter the remaining required information.
* After you register, a confirmation E-mail message is sent to you. Be sure to enter a valid E-mail address at which you can receive the message.
* The actual user registration page may differ slightly in appearance from the sample shown here.
6. When you have entered all the required information, click the [Registration] button at the bottom of the page.

Once you complete the registration, a confirmation E-mail is sent. Wait a few moments until the message is sent.

■ For Mac OS X

To use the FinePix Internet services, users must first register.
* Follow the steps below to register. Users can be registered for free.

1. Double-click the "FinePixViewer" icon in the installed folder.
2. Click the [User's Registration] button. The "Operation Selection" dialog box appears.

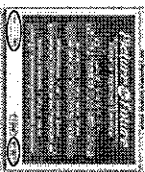


3. Select "User's registration" and click the [OK] button.

* If you are not already connected to the Internet, connect now. (A dial-up dialog box may be displayed.)
* Only select menu acquisition if you have already completed the user registration process and you have re-installed "FinePixViewer", etc.



4. The User's Registration dialog box opens. Select the country or area where you are living and click the [OK] button.



- * The actual user registration page may differ slightly in appearance from the sample shown here.
- * If the country or area where you are living does not appear in the pull-down list, select "OTHERS".
5. When the browser starts up, proceed as directed by the on-screen instructions.
6. Enter the required information in the user registration page.

- ① Enter the name of your choice (nickname, etc.).
- ② Enter a password of your choice using letters and/or numbers. Then enter the password again for confirmation.
- ③ Enter your name.
- ④ Enter your E-mail address.
- ⑤ Enter the remaining required information.
* After you register, a confirmation E-mail message is sent to you. Be sure to enter a valid E-mail address at which you can receive the message.
* The actual user registration page may differ slightly in appearance from the sample shown here.
7. When you have entered all the required information, click the [Register] button at the bottom of the page.

Once you complete the registration, a confirmation E-mail is sent. Wait a few moments until the message is sent.

8.4 Mastering FinePixViewer

For more information on FinePixViewer functions not fully explained in this manual, refer to "How to Use FinePixViewer" in the Help menu for details.

■ To read "How to Use FinePixViewer" ... You must install Adobe Systems' Acrobat Reader. See P.83 for information on installing Acrobat Reader.

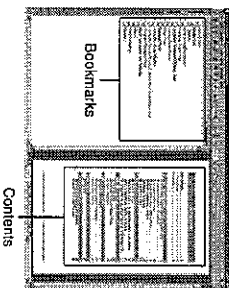
■ What is explained in "How to Use FinePixViewer" ...

"How to Use FinePixViewer" covers a range of topics, including batch processing and ordering prints.

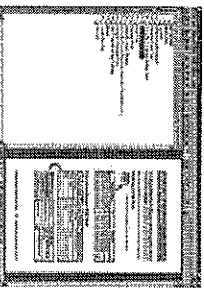
■ Example: Looking up slide shows

Click "How to Use FinePixViewer" in the FinePixViewer Help menu.

Search for relevant articles by clicking the corresponding items in the Help "Bookmarks" or "Contents". Here, click "Viewing Slide Shows".



3. The "Viewing Slide Shows" information is displayed. Press the "←" key to view the previous page or the "→" key to view the next page.



* For more information on using Acrobat Reader, refer to the Acrobat Reader "Help" menu.

8.5 Uninstalling the Software

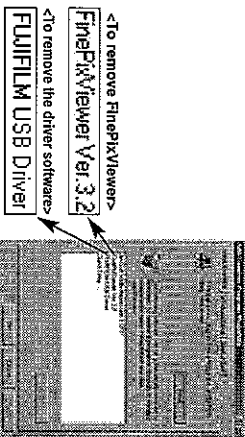
Only perform this operation when you no longer require the installed software or when the software was not installed correctly.

Windows

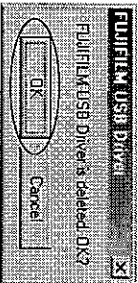
1. Switch on your PC.
2. Disconnect the camera (⇒ P.94, 95).
3. Quit all currently running applications.
4. Close all files.
5. Open the "My Computer" window, open the "Control Panel", and double-click "Add/Remove Programs".



6. The "Add/Remove Programs Properties" window appears. Select the software to be uninstalled (FinePixViewer or the driver) and then click the [Add/Remove] button.



7. When the confirmation message appears, click the [OK] button. Check your selection carefully since the process cannot be cancelled once you click [OK].



8. Automatic uninstallation begins. When uninstallation ends, click the [OK] button.

Macintosh

NOTE

Only perform this operation when you no longer require the installed software or when the software was not installed correctly.

Mac OS 8.6/9.2

■ Uninstalling Mass Storage Driver and PC Camera Driver

1. Check that the camera is not connected to your Macintosh.
2. Drag all the files that begin with "USB04CB..." to the Trash.
3. Restart your Macintosh.
4. Select "Empty Trash" in the "Special" menu.

■ Uninstalling Exif Launcher, FinePixViewer and DP Editor

1. After you have quit Exif Launcher in "Exif Launcher Settings" in the FinePixViewer "Settings" menu, move the Exif Launcher file from the "Startup Items" folder in the System folder to the Trash. Then select "Empty Trash" in the "Special" menu.

2. After you have exited FinePixViewer and DP Editor and then drag the installed

Mac OS X

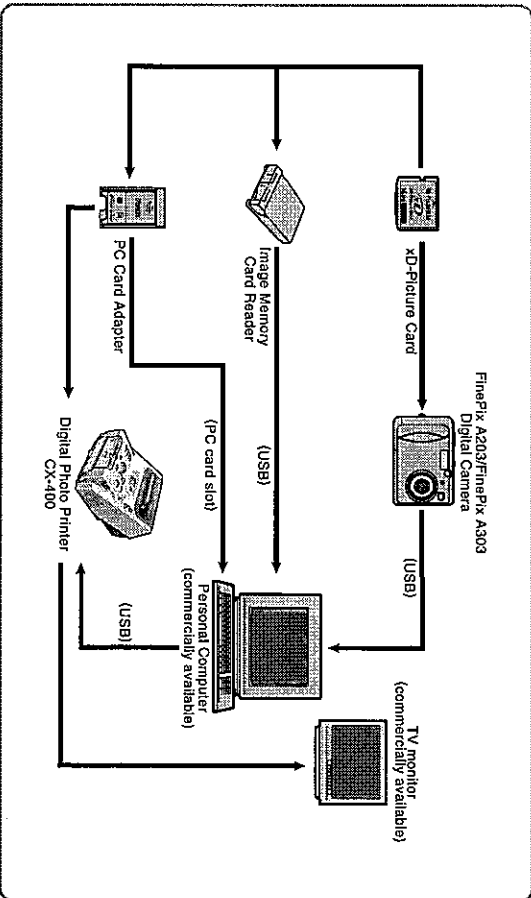
FinePixViewer folder to the Trash. Then click "Empty Trash" in the "Special" menu.

■ Uninstalling FinePixViewer

Quit FinePixViewer and DP Editor. Then drag the installed FinePixViewer folder to the Trash and select "Empty Trash" in the "Special" menu.

System Expansion Options

► By using the FinePix A203/FinePix A303 together with other optional FUJIFILM products, your system can be expanded to fill a wide range of uses.



Accessories Guide

The optional accessories (sold separately) can make taking pictures with the FinePix A203/FinePix A303 even easier. For information on how to attach and use the accessories, refer to the instructions provided with the accessory used.
Visit the FUJIFILM web site for the latest information on camera accessories:
<http://home.fujifilm.com/products/digital/index.html>

• XD-Picture Card

These are separately available XD-Picture Card cards.
Use the following XD-Picture Card:
DPC-16 (16MB)/DPC-32 (32MB)/DPC-64 (64MB)/DPC-128 (128MB)



• AC Power Adapter AC-3V

Use the AC power adapter when you want to take pictures or play back images for long periods or when the camera is connected to a computer.
* The shape of the AC power adapter, the plug and socket outlet depend on the country.



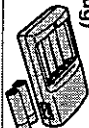
• Fujifilm Rechargeable Battery 2HR-3UF

The 2HR-3UF includes 2 pieces of high-capacity AA-size Nickel-Metal Hydride (Ni-MH) batteries.



• Fujifilm Battery charger with Battery BK-NH (With Euro type or UK type plug)

The BK-NH includes the quick battery charger BCH-NH and 2 Ni-MH batteries.
The BCH-NH can charge 2 Ni-MH batteries in approximately 120 minutes.
Up to 4 Ni-MH batteries can be charged simultaneously.



• SC-FXA01

This is a special case made of polyester that protects the camera against soil, dust and minor impacts when it is being carried.

• DPC-R1 Image Memory Card Reader

The DPC-R1 provides a quick and easy way to transfer images back and forth between your PC and an image memory card (XD-Picture Card and SmartMedia).
The DPC-R1 uses the USB interface for high-speed file transfer.

• Compatible with Windows 98/98 SE, Windows Me, Windows 2000 Professional, Windows XP or iMac, Mac OS 8.6 to 9.2, Mac OS X (10.1.2 to 10.1.5) and models that support USB as standard.

• Compatible with SmartMedia of 3.3V, 4MB to 128MB.



• DPC-AD PC Card Adapter

The PC Card Adapter allows the XD-Picture Card and SmartMedia to be used as a PC Card Standard ATA-compliant (PCMCIA 2.1) PC card (Type II).
• Compatible with SmartMedia of 3.3V, 2MB to 128MB.



Notes on Using Your Camera Correctly

Be sure to read this information in conjunction with "Safety Notes" (P.125), to ensure that you use your camera correctly.

Places to Avoid

- Do not store or use the camera in the following types of locations:
 - In the rain or in very humid, dirty or dusty places.
 - In direct sunlight or in places subject to extreme temperature rises, such as in a closed car in summer.

Extremely cold places.

- Places subject to strong vibration.
- Places affected by smoke or steam.
- Places subject to strong magnetic fields (such as near motors, transformers or magnets).

- In contact with chemicals such as pesticides or next to rubber or vinyl products for long periods of time.

Notes on Immersion in Water or Sand

The FinePix A203/FinePix A303 is particularly adversely affected by water and sand. When you are at the beach or close to water, ensure that the camera is not exposed to water or sand. Take care not to place the camera on a wet surface. Water or sand inside the camera can cause faults that may be irreparable.

Notes on Condensation

If the camera is carried suddenly from a cold location into a warm place, water droplets (condensation) may form on the inside of the camera or on the lens. When this occurs, switch the camera off and wait an hour before using the camera. Condensation may also form on the xD-Picture

card. In this event, remove the xD-Picture Card and wait a short time before using it again.

When the Camera is Unused for Long Periods

If you do not intend to use the camera for a long period of time, remove the battery and the xD-Picture Card card before storing the camera.

Cleaning Your Camera

- Use a blower brush to remove dust from the lens, LCD monitor screen or viewfinder, and then wipe lightly with a soft, dry cloth. If any soil remains, apply a small amount of lens cleaning liquid to a piece of FLUORFILM lens cleaning paper and wipe gently.

- Do not scratch hard objects against the lens, LCD monitor screen or viewfinder as these surfaces are easily damaged.

- Clean the body of the camera with a soft, dry cloth. Do not use volatile substances such as thinners, benzine or insecticide, as these may react with camera body and cause deformation or remove the coating.

Using the Camera Overseas

When travelling overseas, do not place your camera in the check-in baggage. Baggage handling at airports may subject baggage to violent shocks, and the camera may be damaged internally even when no external damage is visible.

Notes on the Power Supply

Applicable Batteries

- AA-size alkaline, Ni-MH (nickel-metal hydride) can be used with this camera.
- Do not use AA-size manganese, lithium or nickel-cadmium (Ni-Cd) batteries in your FinePix A203/ FinePix A303 because the heat generated by the batteries could damage the camera or cause malfunctions.
- The operating lives of alkaline batteries vary between brands and the life of batteries you purchase may be shorter than the alkaline batteries provided with the camera.

Notes on the Batteries

- Incorrect use of the batteries could cause them to leak, become hot, ignite or burst. Always observe the precautions given below.
- Do not heat the batteries or throw them into a fire.
- Do not carry or store a battery with metal objects such as necklaces or hairpins that could come into contact with the metal positive (+) and negative (-) poles of the battery.
- Do not expose the batteries to fresh or sea water, and take particular care to keep the terminals dry.
- Do not attempt to deform, disassemble or modify the batteries.
- Do not attempt to peel off or cut the battery casing.
- Do not drop, strike or otherwise subject the batteries to strong impacts.

- Do not use batteries that are leaking, deformed, discolored or exhibit any other obvious abnormality.
- Do not store batteries in very warm or moist locations.
- Keep the batteries out of reach of babies and small children.
- When loading the batteries into the camera, ensure that the battery polarity (+ and -) is as indicated on the camera.
- Do not use new batteries together with used batteries. In the case of rechargeable batteries, do not use charged and discharged batteries together. Do not use batteries of different types or brands together.
- If you do not intend to use the camera for a long period of time, remove the batteries from the camera. (Note that if the camera is left with the batteries removed, the time and date settings are cleared.)
- The batteries may feel warm immediately after being used. Before removing the batteries, switch the camera off and wait until the batteries cool down.
- When replacing the batteries, always fit 2 new batteries. Here, new batteries refers to either recently purchased unused alkaline batteries, or Ni-MH (nickel metal hydride) batteries that have recently been fully recharged together.
- In cold locations (at temperatures of +10°C/+50°F or below), battery performance deteriorates and the time for which they can be used shortens markedly. This is particularly true of alkaline batteries. In cold conditions,

Notes on the Power Supply

put the batteries in your pocket or a similar place to warm them before loading them into the camera. If you use a body warmer to warm the batteries, ensure that they are not in direct contact with the warmer.

● Soil (such as fingerprints) on the battery terminals can markedly reduce the number of available shots. Carefully wipe the battery terminals clean with a soft dry cloth before loading the batteries.

▲ If any liquid at all leaks from the batteries, wipe the battery compartment thoroughly and then load new batteries.
▲ If any battery fluid comes into contact with your hands or clothing, flush the area thoroughly with water. Note that battery fluid can cause loss of eyesight if it gets into your eyes. If this occurs, do not rub your eyes. Flush the fluid out with clean water and contact your physician for treatment.

Disposing of Batteries

When disposing of batteries, do so in accordance with your local waste disposal regulations.

Notes on Small Rechargeable Batteries (Ni-MH batteries)

● Always use the special battery charger to charge AA-size Ni-MH batteries. Charge the batteries as described in the instructions provided with the battery charger.

- Do not use the battery charger to charge batteries other than those specified for use with the charger.
- Note that the batteries may feel warm immediately after being charged.
- Ni-MH batteries are not charged at shipment. Be sure to charge the batteries before using them.
- The camera mechanism is such that it draws a minute amount of current even when the camera is switched off. Take particular care not to leave Ni-MH batteries in the camera for a long period of time as they can become excessively discharged and may no longer be usable even when charged.
- Ni-MH batteries self-discharge even when not used. Always charge Ni-MH batteries before using them. If the time for which a battery provides power shortens markedly when it has been correctly charged, this indicates that the battery has reached the end of its effective life and should be replaced.
- Soil (fingerprints, etc) on the terminals of Ni-MH batteries can greatly reduce the number of available shots. When this occurs, clean the terminals carefully with a soft dry cloth. Then use up the remaining charge in the batteries and recharge them.
- Newly purchased batteries or batteries that have been left unused for an extended period may not be fully charged (This is indicated by the immediate display of the battery low warning or a low number of available shots). This is a normal characteristic of the batteries and does not indicate a fault. Repeatedly charging and using the batteries 3 times or 4 times

will restore them to a normal condition.

- If you repeatedly charge a Ni-MH battery before it is fully discharged, it will suffer from the "memory effect", causing the battery low warning to appear while there is still ample charge remaining in the battery. To restore the batteries to their normal condition, use up all the charge in the batteries before recharging them.

*Memory effect: A phenomenon affecting the battery characteristics such that the apparent battery capacity decreases.

AC Power Adapter

Use only the AC-3V AC Power Adapter with your FinePix A203/FinePix A303 Digital Camera. The use of other AC power adapters may result in damage to your camera.

- This AC power adapter is designed exclusively for indoor use.
- Plug the connection cord plug securely into the DC input terminal of the FUJIFILM Digital camera.
- Turn off the power switch of the FUJIFILM Digital camera before disconnecting the connection cord from the FUJIFILM Digital camera's DC input terminal. To disconnect, take hold of the plug and pull it out (do not disconnect it by pulling on the cord).
- Do not use this AC power adapter with any device except the specified device.
- During use, this AC power adapter will become hot to the

touch, but this is normal.

- Do not disassemble the AC power adapter. Doing so could be dangerous.
- Do not use this device in a place with high temperature and high humidity.
- Do not drop or subject this device to strong shocks.
- This device may emit a humming noise, but this is normal.
- If used near a radio, this device may cause static, so play the radio in a distant place.

Notes on the xD-Picture Card

Image Memory Card

This Image Memory Card is a new image recording media (xD-Picture Card) developed for digital cameras. The Image Memory Card consists of a semiconductor memory (NAND-type flash memory) to record digital image data.

The recording process is electrically performed and enables erasure of existing image data as well as re-recording of new image data.

- When using a new Memory Card, or a Memory Card that has been initialized by a PC, be sure to initialize (format/initialize) the card with your digital camera before using it.

Protecting Your Data

Data may be lost or destroyed in the following situations. Please note that FUJIFILM assumes no responsibility for data that is lost or destroyed.

1. Removal of the memory card or turning the power off while the memory card is being accessed (i.e., during record, erase, initialization, and playback operations).
2. Improper handling and use of the memory card by the user or third party.

- We recommend saving your important data to another media (i.e., MO disk, CD-R, hard disk, etc.).

Notes on Handling xD-Picture Card

1. Keep xD-Picture Cards out of the reach of small

children. When storing xD-Picture Cards, ensure that they are kept in a location out of the reach of small children to prevent a card being accidentally swallowed. An xD-Picture Card could cause suffocation if accidentally swallowed. If a child swallows an xD-Picture Card, seek medical advice immediately.

- Make sure that the memory card is straight when you insert into the camera etc.
- The memory card is a precision electronic instrument. Do not apply pressure or shock, and avoid bending.
- Do not use the memory card in a hot, humid, or corrosive environment.
- If the contact area on the card is soiled (dust, fingerprints, etc.), wipe it clean with a soft, dry cloth.
- Clean the memory card with a soft dry piece of cloth when dirty.
- When you carry or store it, always keep the card in the anti-static case provided. Use a storage case if available.
- The memory card can be used reliably for a long period of time, but will eventually lose its ability to store and playback image data. At this point, replace with a new memory card.
- Never remove the xD-Picture Card or switch the camera off during data recording, during data erasing (xD-Picture Card formatting) or during frame advance when images are being played back. These actions

could result in damage to the xD-Picture Card.

- The use of xD-Picture Cards is recommended with the FinePix A203/FinePix A303.
The camera quality cannot be guaranteed when cards other than those manufactured by FUJIFILM are used.
- The xD-Picture Card may feel warm when it is removed from the camera after extended periods of picture taking or image viewing. This is normal and does not indicate a fault.
- Do not affix labels to the xD-Picture Card.
This could result in the label peeling off and causing a fault when the card is inserted or removed.

Notes on Using xD-Picture Cards with a PC

- If you intend to take photos using an xD-Picture Card that has been used on a PC, format the xD-Picture Card on your camera.
- When you format an xD-Picture Card in the camera and then shoot and record images, a directory (folder) is automatically created. Image data is then recorded in this directory.
- Do not change or delete the directory (folder) names or file names on the xD-Picture Card from your PC as this will make it impossible to use the xD-Picture Card in your camera.
- Always use the camera to erase image data on an xD-Picture Card.
- To edit image data, copy the image data to the PC's

hard disk and then edit the copied data.

- Do not copy files other than those that will be used by the camera.

Specifications

Type	Image memory card for digital cameras (xD-Picture Card)
Memory type	NAND-type flash memory
Conditions for use	Temperature: 0°C to +40°C (+32°F to +104°F) Humidity: 80% max. (no condensation) 25 mm × 2.2 mm × 20 mm (0.98 in. × 0.09 in. × 0.79 in.) (W × H × D)
Dimensions	

Warning Displays

► The table below lists the warnings that are displayed on the LCD monitor.

Warning Displayed	Explanation	Remedy
 (lit, red)  (blinking red)	The batteries in the camera are fully depleted or very low on charge.	Replace the batteries or have new batteries ready.
NO CARD	No xD-Picture Card is loaded.	Load a xD-Picture Card.
CARD NOT INITIALIZED	- The xD-Picture Card is not formatted. - The xD-Picture Card contact area is soiled.	- Wipe the contact area on the xD-Picture Card with a soft dry cloth. It may be necessary to format the xD-Picture Card. If the error message is still displayed, replace the xD-Picture Card. - Contact your FUJIFILM dealer.
CARD ERROR	- The xD-Picture Card contact area is soiled. - The xD-Picture Card is damaged. - The xD-Picture Card format is incorrect. - Camera fault.	- Wipe the contact area on the xD-Picture Card with a soft dry cloth. It may be necessary to format the xD-Picture Card. If the error message is still displayed, replace the xD-Picture Card. - Contact your FUJIFILM dealer.
CARD FULL	The xD-Picture Card is fully recorded.	Erase some images or use a xD-Picture Card that has ample free space.

Warning Displayed	Explanation	Remedy
READ ERROR	- An attempt was made to playback a frame not recorded on this camera. - The xD-Picture Card contact area is soiled.	Images cannot be played back.
WRITE ERROR	You attempted to play back a movie file that was not recorded on this camera.	- Wipe the contact surface on the xD-Picture Card thoroughly with a soft, dry cloth. In some cases, you may have to format the xD-Picture Card. - Play back the movie on a computer or on the camera on which it was recorded.
FILE NO. FULL	The playback frame number has reached 999–9999.	Take the shots using a formatted xD-Picture Card.
WRITE ERROR	- The data could not be recorded due to a xD-Picture Card error or a connection error between the xD-Picture Card and camera. - The photographed image cannot be recorded because the xD-Picture Card is full.	- Reload the xD-Picture Card or switch the camera off and then on again. - Use a new xD-Picture Card.
	There is a strong likelihood of camera shake because the shutter speed is slow.	Use flash photography. However, a tripod should be used for some scenes and modes.

Warning Displays

Warning Displayed	Explanation	Remedy
! PROTECTED FRAME	A protected frame was encountered.	Protected files cannot be erased. Unprotect the image.
! AE	Outside the AE (Auto-exposure) continuous range.	The shot can be taken, but the exposure will not be correct.
! AF	The AF (Autofocus) cannot work effectively.	- If the image is too dark, take the picture at a distance of around 2 m (6.6 ft.) from the subject. - Use AF lock to take the picture.
! DPOF FILE ERROR	Prints were specified for more than 1000 frames in the DPOF frame settings.	The maximum number of frames for which prints can be specified on the same xD-Picture Card is 999.
! FOCUS ERROR	Camera malfunction or fault.	- Switch the camera on again, taking care not to touch the lens. - Turn the camera off and on again a few times.
! ZOOM ERROR		
! LENS COVER		

Troubleshooting

► If you think the camera is faulty, check the following once more

Problem	Cause	Remedy
No power.	- The battery is exhausted. - The AC power adapter plug has come out of the power outlet.	- Replace the batteries. - Plug the adapter back in.
Power cuts out during operation.	The battery is exhausted.	Replace the batteries.
Battery runs out quickly.	- You are using the camera in extremely cold conditions. - The terminals are soiled. - The battery is flat.	- Put the battery in your pocket or another warm place to heat it and then load it into the camera just before you take a picture. - Wipe the battery terminals with a clean, dry cloth. - Purchase new batteries.
No photograph is taken when the shutter button is pressed.	- No xD-Picture Card is loaded. - The xD-Picture Card is fully recorded. - The xD-Picture Card is not formatted. - The xD-Picture Card contact area is soiled. - The xD-Picture Card is damaged. - The camera has been switched off because 2 minutes have elapsed since it was last used. - The battery is exhausted.	- Load a xD-Picture Card. - Insert a new xD-Picture Card or erase some unwanted frames. - Format the xD-Picture Card. - Wipe the xD-Picture Card contact area with a clean, dry cloth. - Load a new xD-Picture Card. - Switch the camera on. - Purchase new batteries.

Troubleshooting

► If you think the camera is faulty, check the following once more

Problem	Cause	Remedy
Can't use the flash to take pictures.	• The flash is set to Suppressed Flash mode. • You pressed the shutter button while the flash was charging. • The battery is exhausted.	• Set the flash to Auto, Red-Eye Reduction or Forced Flash mode. • Wait until charging is completed before pressing the shutter button. • Replace with new batteries.
The playback image is too dark even though the flash was used.	• The subject is too far away. • Your fingers are obscuring the flash or flash control sensor.	• Move closer to the subject. • Hold the camera correctly.
The image is blurred.	• The lens is dirty. • The photographed subject was too dark.	• Clean the lens. • Try standing approx. 2 m (6.6 ft.) from your subject to take the picture.
There is speckling on the image.	• The shot was taken with a slow shutter speed (long exposure) in a high-temperature environment.	• This is a characteristic of CCDs and does not indicate a camera fault.
Can't format the xD-Picture Card.	• The xD-Picture Card contact area is soiled.	• Wipe the xD-Picture Card contact area with a clean dry cloth.

Problem	Cause	Remedy
The ERASE ALL function does not erase all the frames.	• Some frames may be protected.	• Unprotect frames using the camera on which the protection was first applied.
Frame erase does not erase the frame.		
Nothing happens when I use the Mode dial.	• Camera malfunction.	• Briefly remove the batteries, or disconnect the AC power adapter. Then reload the batteries or reconnect the AC power adapter and try again. • Replace with new batteries.
	• The batteries exhausted.	
When the camera is connected to a personal computer (PC), the shot image appears on the camera's LCD monitor.	• The special USB cable is not connected correctly to the PC or camera. • The PC is not switched on.	• Set up the camera and USB cable correctly. • Switch the PC on.
The camera no longer works correctly.	• The camera has suffered an unforeseen problem.	• Remove the batteries briefly and then reload the batteries and try again.

Specifications (FinePix A203)

System

- Model: Digital Camera FinePix A203
- Number of effective pixels: 2.0 million pixels
- CCD sensor
 - 1/2.7-inch square pixel CCD with RGB Filter
 - Number of total pixels: 2.1 million pixels
 - Number of recorded pixels
 - 1600 x 1200 pixels (1.92 million pixels)
 - 1280 x 960 pixels/640 x 480 pixels
- Storage media
 - xD-Picture Card (16MB to 128MB)
- File format
 - Still image: JPEG (Exif Ver. 2.2), DPOF-compatible
 - Movie: AVI format, Motion JPEG
- *Design rule for Camera File system Compliant
- Viewfinder
 - Real image optical: Frame coverage: 80%
- Lens
 - Fujinon 3x optical zoom lens
 - f=38-114 mm on a 35 mm camera

Standard number of available shots/recording time per xD-Picture Card

Quality Mode	2M * F	2M * N	1M	0.3M	620 (Movie)	620 (Movie)
Number of recorded pixels	1600 x 1200	1280 x 960	640 x 480	320 x 240	160 x 120	—
Image Data Size	Approx. 620 KB	Approx. 390 KB	Approx. 320 KB	Approx. 130 KB	—	—
DPOF-16 (16 MB)	25	39	49	122	Approx. 94 sec.	Approx. 5 min.
DPOF-32 (32 MB)	50	79	99	247	Approx. 191 sec.	Approx. 10.1 min.
DPOF-64 (64 MB)	101	159	198	497	Approx. 6.4 min.	Approx. 20.2 min.
DPOF-128 (128 MB)	204	319	398	997	Approx. 12.9 min.	Approx. 40.6 min.

- Aperture
 - F2.8-F4.9/F7.0-F11.6 (automatically selected)
- Focus distance
 - 1.5-7.1 m (equivalent to 38-114 mm on a 35mm camera)
- Exposure control
 - 64 zones TTL metering, Program AE (exposure compensation available in Manual mode)
- Sensitivity
 - Equivalent to ISO 100
- White balance
 - Auto (7 positions selectable in Manual mode)
- Focal range
 - Normal: Approx. 60 cm/2.0 ft. to infinity
 - Macro: Approx. 10 cm-60 cm/3.9 in.-2.6 ft.
- Shutter speeds
 - Variable-speed, 1/2 sec. to 1/2000 sec. (combined with mechanical shutter)
- Flash (Auto flash using flash control sensor)
 - Effective range:
 - Wide-angle: Approx. 30 cm-3.5 m (1.0 ft.-11.5 ft.)
 - Telephoto-angle: Approx. 60 cm-3.0 m (2.0 ft.-9.8 ft.)
 - Flash modes: Auto, Red-Eye Reduction, Forced Flash, Suppressed Flash, Slow Synchro

- LCD monitor
 - 1.5-Timer, 60,000-pixels TFT
- Self-Timer
 - 10 sec. timer clock

Input/Output Terminals

- *USB (USB) socket
 - USB (1) for image data output with a personal computer
- DC IN 3V (Power Input) socket
 - Socket for specified AC power adapter (optional)

Power Supply and Others

- Power supply
 - Use one of the following:
 - 2AA-size alkaline batteries
 - 2AA-size Ni-MH (nickel-metal hydride) batteries (optional)
 - AC Power Adapter AC-3V (optional)
- No. of available shots using battery (battery life)

Battery type	With LCD monitor ON	With LCD monitor OFF
Alkaline batteries	Approx. 200 frames	Approx. 300 frames
NiMH batteries	Approx. 300 frames*	Approx. 400 frames*

Condition: Power saving mode ON, with fully charged battery (Ni-MH)

This indicates the number of available frames shot consecutively at room temperature with a flash use rate of 50%. Note that these figures may vary depending on the ambient temperature and the amount of charge in the battery. The number of available shots or available shooting time will be lower in cold conditions.

- Conditions for use
 - Temperature: 0°C to +40°C (+32°F to +104°F); 80% humidity or less (no condensation)
- Camera dimensions (W/H/D)
 - 97.0 mm x 63.9 mm x 34.3 mm/3.8 in. x 2.5 in. x 1.4 in. (not including accessories and attachments)
- Camera mass (weight)
 - Approx. 145 g/5.1 oz. (not including accessories, batteries or xD-Picture Card)
- Weight for photography
 - Approx. 200 g/7.1 oz. (including batteries and xD-Picture Card)
- Accessories
 - See P. 7
 - Optional Accessories
 - See P. 106, 107

* These specifications are subject to change without notice. FUJIFILM shall not be held liable for damages resulting from errors in this Owner's Manual.

* The LCD monitor on your digital camera is manufactured using advanced high-precision technology. Even so, small bright points and anomalous colors (particularly around text) may appear on the monitor. These are normal display characteristics and do not indicate a fault with the monitor. This phenomenon will not appear on the recorded image.

* The operation error may be caused in a digital camera by the strong radio interference (i. e., electric fields, static electricity, line noise, etc.).

* Due to the nature of the lens, the edges of photographed images may appear distorted. This is normal and does not indicate a fault.

Specifications (FinePix A303)

System

- Model: Digital Camera FinePix A303
- Number of effective pixels: 3.24 million pixels
- CCD sensor
- 1/2.7-inch square pixel CCD with RGB Filter
- Number of total pixels: 3.34 million pixels
- Number of recorded pixels
- 2048 x 1536 pixels (3.15 million pixels)/
- 1600 x 1200 pixels/1280 x 960 pixels/640 x 480 pixels
- Storage media
- xD-Picture Card (16MB to 128MB)
- File format
- Still image: JPEG (Exif Ver.2.2), DPOF-compatible
- Movie: AVI format, Motion JPEG
- *Design rule for Camera File system Compliant
- Viewfinder
- Real image optical: Frame coverage: 80%
- Lens
- Fujinon 3x optical zoom lens
- f=38-114 mm on a 35 mm camera

- Aperture
- F2.8-F4.8/F7.0-F11.6 (automatically selected)
- Focus distance
- f=5.7-17.1 mm (equivalent to 38-114 mm on a 35 mm camera)
- Exposure control
- 64 zones TTL metering, Program AE (exposure compensation available in Manual mode)
- Sensitivity
- Equivalent to ISO 100
- White balance
- Auto (7 positions selectable in Manual mode)
- Focal range
- Normal: Approx. 60 cm/2.0 ft. to infinity
- Macro: Approx. 10 cm/3.9 in.-2.6 ft.
- Shutter speeds
- Variable-speed, 1/2 sec. to 1/2000 sec. (combined with mechanical shutter)
- Flash (Auto flash using flash control sensor)
- Effective range:
- Wide-angle: Approx. 30 cm-3.5 m (1.0 ft.-11.5 ft.)
- Telephoto-angle: Approx. 60 cm-3.0 m (2.0 ft.-9.8 ft.)
- Flash modes: Auto, Red-Eye Reduction, Forced Flash, Suppressed Flash, Slow Synchro

Standard number of available shots/recording time per xD-Picture Card

Quality Mode	3M - F	3M - N	2M	1M	0.3M	620 (Movie)	1280 (Movie)
Number of recorded pixels	2048 x 1536	1600 x 1200	1280 x 960	640 x 480	320 x 240	160 x 120	
Image Data Size	Approx. 1300 KB	Approx. 599 KB	Approx. 390 KB	Approx. 320 KB	Approx. 130 KB	—	—
xD-PIC-16 (16 MB)	12	26	39	49	122	Approx. 94 sec.	Approx. 5 min.
xD-PIC-32 (32 MB)	25	53	79	99	247	Approx. 191 sec.	Approx. 10.1 min.
xD-PIC-64 (64 MB)	50	107	159	198	497	Approx. 6.4 min.	Approx. 20.2 min.
xD-PIC-128 (128 MB)	102	215	319	398	997	Approx. 12.5 min.	Approx. 40.5 min.

- LCD monitor
- 1.5-inches, 60,000-pixels TFT
- Self-Timer
- 10 sec. timer clock

Input/Output Terminals

- USB (USB) socket
- USB (1) for image data output with a personal computer
- DC IN 3V (Power Input) socket
- Socket for specified AC power adapter (optional)

Power Supply and Others

- Power supply
- Use one of the following:
- 2AA-size alkaline batteries
- 2AA-size Ni-MH (nickel-metal hydride) batteries (optional)
- AC Power Adapter AC-3V (optional)
- No. of available shots using battery (battery life)

Battery type	With LCD monitor ON	With LCD monitor OFF
Alkaline batteries	Approx. 150 frames	Approx. 200 frames
Ni-MH batteries	Approx. 200 frames*	Approx. 300 frames*

(Condition: Power saving mode ON, with fully charged battery (Ni-MH))

This indicates the number of available frames shot consecutively at room temperature with a flash use rate of 50%. Note that these figures may vary depending on the ambient temperature and the amount of charge in the battery. The number of available shots or available shooting time will be lower in cold conditions.

- Conditions for use
- Temperature: 0°C to +40°C (+32°F to +104°F); 80% humidity or less (no condensation)
- Camera dimensions (W/H/D)
- 97.0 mm x 63.9 mm x 34.3 mm/3.8 in. x 2.5 in. x 1.4 in. (not including accessories and attachments)
- Camera mass (weight)
- Approx. 145 g/5.1 oz. (not including accessories, batteries or xD-Picture Card)
- Weight for photography
- Approx. 200 g/7.1 oz. (including batteries and xD-Picture Card)
- Accessories
- See P. 7
- Optional Accessories
- See P. 106, 107

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* The operation error may be caused in a digital camera by the strong radio interference (i. e. electric fields, static electricity, the noise, etc.).

* Due to the nature of the lens, the edges of photographed images may appear distorted. This is normal and does not indicate a fault.

Explanation of Terms

PROF: Digital Print Order Format

PROF is a format used for recording information on a storage media (image memory card, etc.) that allows you to specify which of the frames shot using a digital camera are printed and how many prints are made of each image.

EV:

EV number that denotes exposure. The EV is determined by the brightness of the subject and sensitivity (speed) of the film or CCD. The number is larger for bright subjects and smaller for dark subjects. As the brightness of the subject changes, a digital camera maintains the amount of light hitting the CCD at a constant level by adjusting the aperture and shutter speed. When the amount of light sinking the CCD doubles, the EV increases by 1. Likewise, when the light is halved, the EV decreases by 1.

JPEG: Joint Photographics Experts Group

A file format used for compressing and saving color images. The compression ratio can be selected, but the higher the compression ratio, the poorer the quality of the expanded image.

Motion JPEG:

A type of AVI (Audio Video Interleave) file format that handles images and sound as a single file. Images in the file are recorded in JPEG format. Motion JPEGs can be played back by QuickTime 3.0 or later.

MC Card:

A generic term for cards that meet the PC Card Standard.

PC Card Standard

A standard for PC cards determined by the PCMCIA.

PCMCIA:

Personal Computer Memory Card International Association (US).

White Balance:

Whatever the kind of the light, the human eye adapts to it so that a white object still looks white. On the other hand, devices such as digital cameras see a white subject as white by first adjusting the color balance to suit the color of the ambient light around the subject. This adjustment is called matching the white balance. A function that automatically matches the white balance is called an **Automatic White Balance function**.

Safety Notes

- To ensure that you use your FinePix A203/FinePix A303 camera correctly, read these Safety Notes and your Owner's Manual carefully beforehand.
- After reading these Safety Notes, store them in a safe place.

About the Icons

The icons shown below are used in this document to indicate the severity of the injury or damage that can result if the information indicated by the icon is ignored and the product is used incorrectly as a result.

 **WARNING**

This icon indicates that death or serious injury can result if the information is ignored.

 **CAUTION**

This icon indicates that personal injury or material damage can result if the information is ignored.

The icons shown below are used to indicate the nature of the information which is to be observed.



Triangular icons notify the user of information requiring attention ("Important").



Circular icons with a diagonal bar notify the user that the action indicated is prohibited ("Prohibited").



Filled circles with an exclamation mark notify the user of an action that must be performed ("Required").

 **WARNING**

When a fault arises, switch the camera off and then remove the batteries and disconnect the AC power adapter.



Continued use of the camera when it is emitting smoke, is emitting any unusual odor, or is in any other abnormal state can cause a fire or electric shock.

- Contact your FUJIFILM dealer.

Do not allow water or foreign objects to enter the camera.

If water or foreign objects get inside the camera, switch the camera off, remove the battery and disconnect and unplug the AC power adapter.



Continued use of the camera can cause a fire or electric shock.

- Contact your FUJIFILM dealer.

Do not place the camera on an unstable surface.

This can cause the camera to fall or tip over and cause injury.



Do not use the camera in the bathroom or shower.

This can cause a fire or electric shock.



Do not use in the bathroom or shower.

Safety Notes

 WARNING	Never attempt to modify or disassemble the camera. (Never open the casing.) Do not use the camera when it has been dropped or the casing is damaged. This can cause a fire or electric shock. • Contact your FUJIFILM dealer. Do not disassemble.
	Never attempt to take pictures while in motion. Do not use the camera while you are walking or operating a moving car or other vehicle. This can result in you falling down or being involved in a traffic accident.
	Do not heat, modify or attempt to disassemble the batteries. Do not drop or subject the batteries to impacts. Do not attempt to recharge lithium or alkaline batteries. Do not store the batteries with metallic products. Any of these actions can cause the batteries to burst or leak and cause fire or injury as a result.

 WARNING	Do not touch any metal parts of the camera during a thunderstorm. This can cause an electric shock due to induced current from the lightning discharge.
	Do not use the batteries except as specified. Load the batteries with the poles positioned as indicated by the ⊕ and ⊖ marks.
	Use only the batteries or AC power adapter specified for use with this camera. The use of other power sources can cause a fire.
	If the battery leaks and fluid gets into your eyes or comes into contact with your skin or clothing, this can cause injury or loss of eyesight. Immediately flush the affected area thoroughly with clean water and seek medical treatment.
	When discarding or storing batteries, cover the battery terminals with insulation tape. • Contact with other metallic objects or batteries could cause the batteries to ignite or burst.

 WARNING	Keep xD-Picture Cards out of the reach of small children. Because xD-Picture Cards are small, they can be accidentally swallowed by small children. Be sure to store xD-Picture Cards out of the reach of small children. If a child accidentally swallows an xD-Picture Card, seek medical advice immediately.
	

 CAUTION	Keep out of the reach of small children. This product could cause injury in the hands of a child.
	Do not use this camera in locations severely affected by oil fumes, steam, humidity or dust. This can cause a fire or electric shock.
	Do not leave this camera in places subject to extremely high temperatures. Do not leave the camera in locations such as a sealed vehicle or in direct sunlight. This can cause a fire.
	Do not place heavy objects on the camera. This can cause the heavy object to tip over or fall and cause injury.
	Do not move the camera while the AC power adapter is still connected. This can damage the power cord or cables and cause a fire or electric shock.

Safety Notes

 CAUTION	Do not cover or wrap the camera or the AC power adapter in a cloth or quilt. This can cause heat to build up and distort the casing or cause a fire. Remove the batteries and disconnect the AC power adapter when you are cleaning the camera or if you intend to leave the camera unused for a long period. Failure to do so can cause a fire or electric shock. Using a flash too close to a person's eyes may temporarily affect the eyesight. Take particular care when photographing infants and young children. When an XD-Picture Card is removed, the card may fly completely out of the slot. Use your finger to stop the card from flying out before removing the card. If an XD-Picture Card is allowed to fly out, it could hit someone and cause injury.
	
	
	
	

 CAUTION	Request regular internal testing and cleaning for your camera. Build-up of dust in your camera can cause a fire or electric shock. ● Contact your FUJIFILM dealer to request internal cleaning every 2 years.
	

EC Declaration of Conformity

We

Name :
Address :

Fuji Photo Film (Europe) G.m.b.H.
Heesensstrasse 31
40349 Düsseldorf, Germany

declare that the product:

Product Name : FUJIFILM DIGITAL CAMERA FinePix A203/FinePix A303
Manufacturer's Name : Fuji Photo Film Co., Ltd.
Manufacturer's Address : 26-30, Nishiazabu 2-chome, Minato-ku, Tokyo 106-8620, Japan

is in conformity with the following Standards

Safety : EN60950
EMC : EN55022 : 1998 Classe B
EN55024 : 1998
EN61000-3-2 : 1995 + A1:1998 + A2:1998

following the provision of the EMC Directive (89/336/EEC, 92/31/EEC and 93/68/EEC) and Low Voltage Directive (73/23/EEC).



Düsseldorf, Germany	September 1, 2002	
Place	Date	Signature/Managing Director



Bij dit produkt zijn batterijen geleverd. Wanneer deze leeg zijn, moet u ze niet weggooien maar inleveren als KCA

IMPORTANT

Be sure to read this page before using the Software.

NOTICE

BEFORE OPENING THE PACKAGE OF CD-ROM PROVIDED BY FUJIFILM PHOTO FILM CO., LTD., PLEASE READ THIS END USER LICENSE AGREEMENT CAREFULLY. ONLY IF YOU DO AGREE TO THIS AGREEMENT, YOU WILL BE ABLE TO USE THE SOFTWARE RECORDED ON THE CD-ROM. BY OPENING THE PACKAGE, YOU ACCEPT AND AGREE TO BE BOUND BY THIS AGREEMENT.

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This End User License Agreement ("Agreement") is an agreement between Fuji Photo Film Co., Ltd. ("FUJIFILM") and you, which sets forth the terms and conditions of the license granted by FUJIFILM to you to use the Software. The CD-ROM contains third party software. In case a separate agreement is provided by the third party supplier for its software, the provisions of such separate agreement shall apply to the use of such third party software, prevailing over those of this Agreement.

Definitions.

- (a) "Media" means the CD-ROM record Software by FujiFilm, Sx, which is provided by FUJIFILM.
- (b) "Software" means the program which is recorded on Media.
- (c) "Documentation" means the operation manuals of Software and other related written materials which are provided to you together with Media.
- (d) "Product" means Media (including Software) and Documentation collectively.

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- (c) to use Software on the computer onto which Software is installed; and
- (d) to make one backup copy of Software.

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No export.

You acknowledge that neither Software nor any part thereof, will be transferred, or exported or re-exported, in violation of any export control laws and regulations to which Software is subject.

Termination.

In case you breach any of the terms and conditions herein, FUJIFILM may immediately terminate this Agreement without any notice.

Term.

This Agreement is effective until the date when you cease to use Software, unless earlier terminated in accordance with Section 9 hereof.

Obligation upon termination.

Upon termination or expiration of this Agreement, you shall, at your own expense, destroy or delete all copies of Software, Media and Documentation (including its copies), Media and Documentation.

Governing Law.

This Agreement shall be governed by and construed in accordance with laws of Japan.



FUJI PHOTO FILM CO., LTD.
26-30, Nishiazabu 2-chome, Minato-ku, Tokyo 106-8620, Japan

Printed in Japan



Printed on recycled paper.

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