

Owner's Manual

4.1-megapixel digital camera (2272x1704 pixels)
3x zoom lens 8-24mm (38-114mm in 35mm terms),
Macro down to 0.08 m
Automatic flash unit with five modes
Automatic exposure control, single frames, continuous shooting and multishot
images
Various autofocus and exposure modes
Shutter speeds 2 – 1/500 s, apertures f/3.4-3.6 to f/15
1.8-inch TFT screen (220 x 280 pixels)
Type I CompactFlash™ cards as storage medium
Professional image management with camera folders
Video Out for TV/beamer
Power supplied by four size AA alkaline or rechargeable NiCd or NiMH batteries
Optional external 6V DC power supply
USB image transfer to PC or Macintosh

Warnings

Caution !

Be sure to read all hints and warnings carefully. Improper use may cause batteries to heat up or explode.

- Exclusively use the types of battery mentioned in this manual.
- Be sure to load the batteries with proper orientation of negative and positive poles.
- Do not expose batteries to fire or high temperatures.
- Never try to recharge, short-circuit or open ordinary batteries.
- Do not mix batteries of different make or age.
- Follow the usual rules for the use of batteries.
- Be particularly careful when using the camera near small children to avoid accidents.
- Always keep batteries and other small objects that might be swallowed out of reach of small children. Immediately call a doctor if such an object has been swallowed.
- If you have dropped the camera or if it has received a severe blow that might have damaged its interior components, immediately remove the batteries and do not use the camera any more.
- Do not use the camera if it emits smoke, smell or heat.
- Do not walk or run while looking at the TFT screen.

NEVER try to dismantle your camera! Contact with its electrical circuits may result in electric shock! Please consult your dealer should the camera need repairs.

The temperature of the camera will rise during prolonged use.
Take suitable care when using the camera or changing batteries or memory cards.

Everything complete?

Check the packing to see whether everything is complete. Should something be missing, please contact your dealer or an authorized service center.

- Camera (1x)
- Size AA alkaline batteries (4x)
- Video cable (1x)
- Wrist strap (1x)
- Camera case (1x)
- USB cable (1x)

- Software on CD-ROM:
 - USB drivers for Windows®98/Windows®98 Second Edition, Windows®2000 Prof/Me/ Windows®XP
 - USB drivers for Mac OS 8.6/9/9.0.2/9.0.4
 - Owner's Manual (PDF) Windows® / Macintosh
 - Adobe Photoshop LE 5.0, Family Edition, CD-ROM for Windows®
 - Adobe Photoshop LE 5.0, CD-ROM for Macintosh

- Printed documentation
 - Warranty card (1x)

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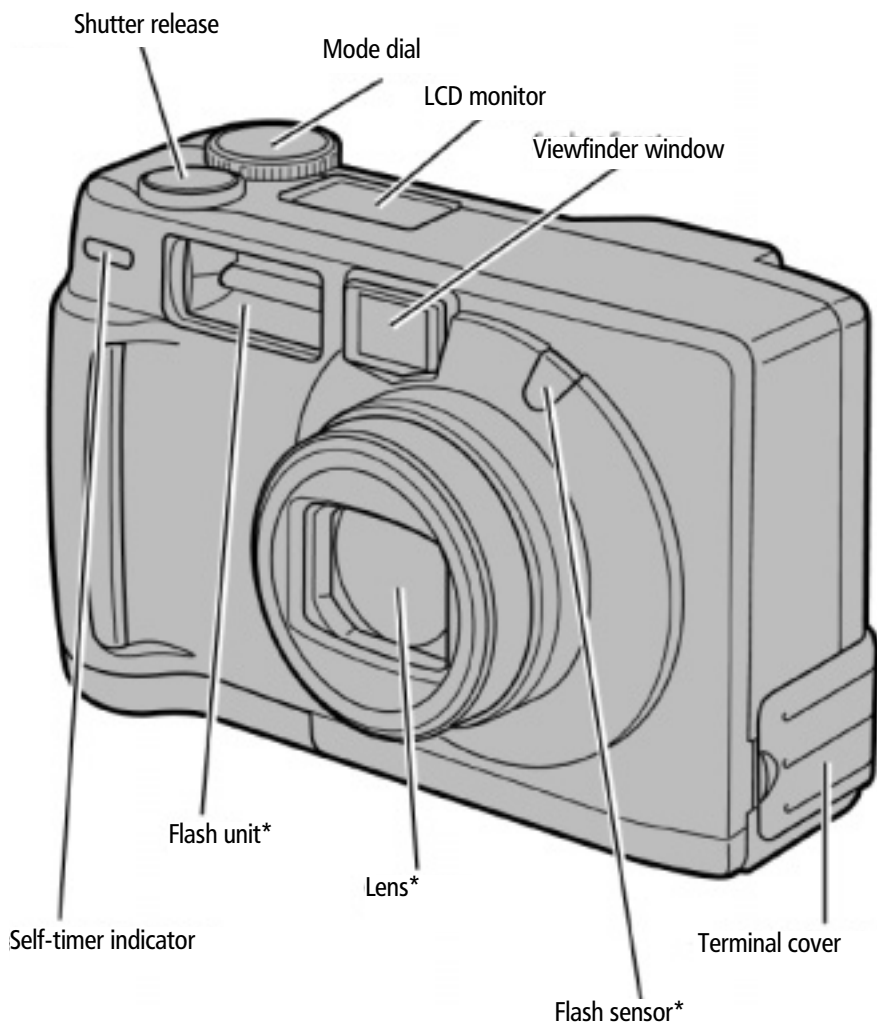
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Names of parts and controls

Camera front

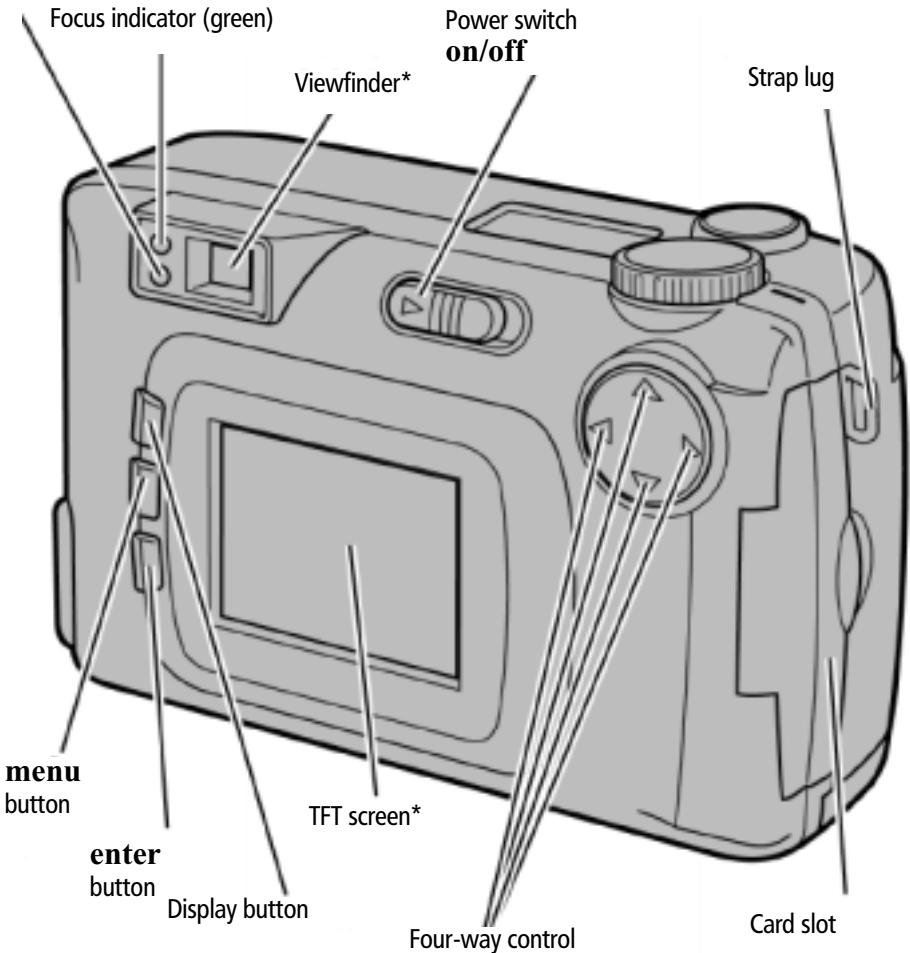


* Do not touch!

Names of parts and controls

Camera back

Flash-ready indicator

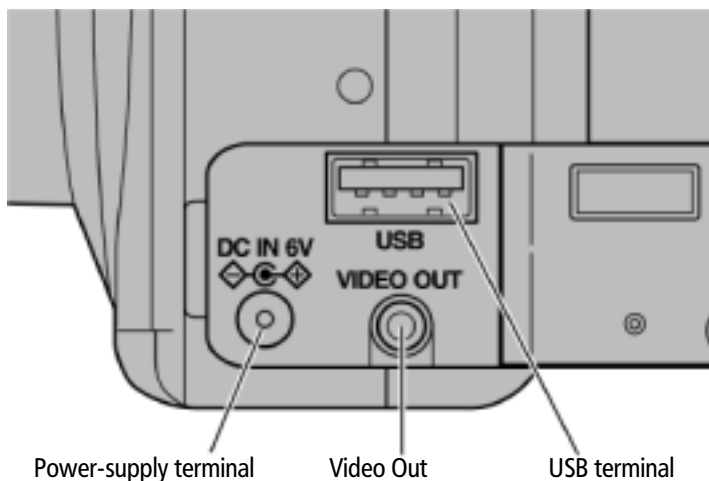


Note: The four-way control has a number of different functions: In the camera mode it controls zooming, helps you navigate through the display of stored images and select camera functions. As a rule, the selection made in the different setting menu is confirmed by depression of the Right arrow ►.

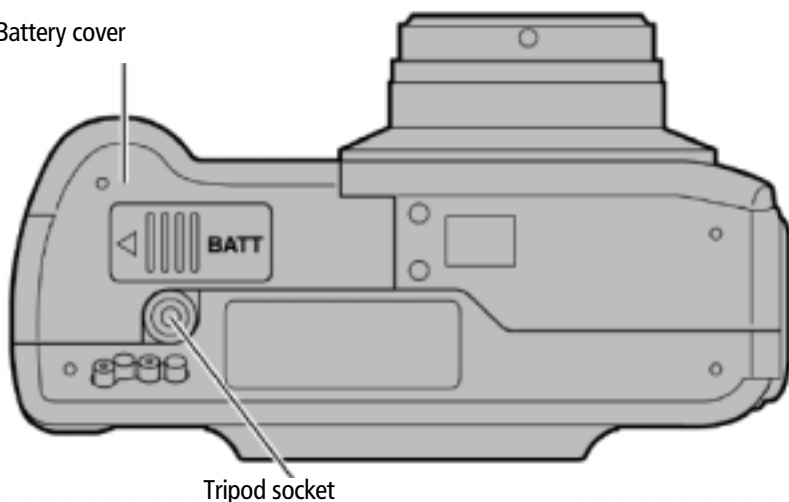
The **enter** button at the back of the camera is enabled only when the four-way control is needed, for example, for selection in index displays.

Names of parts and controls

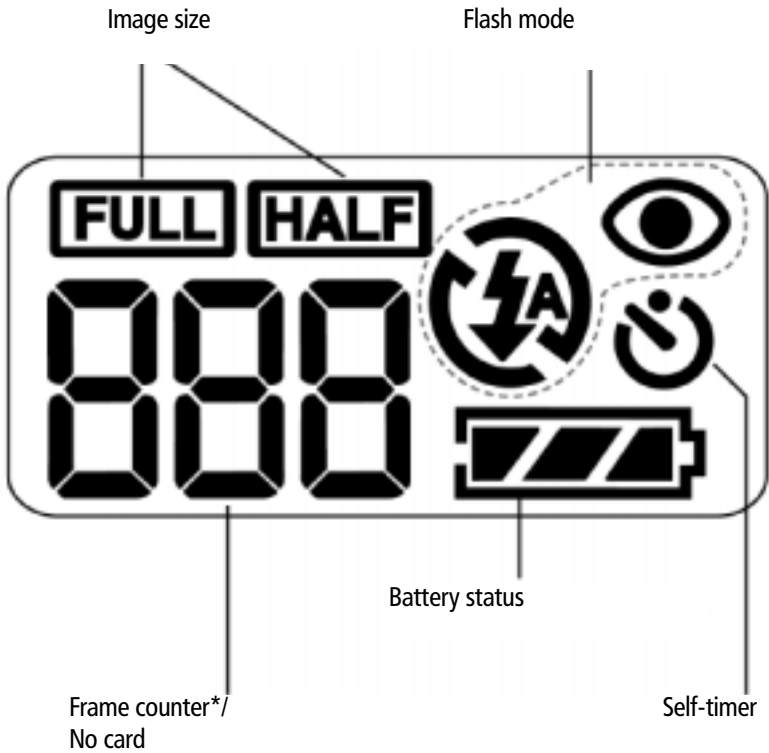
Camera terminals / bottom plate



Battery cover



LCD monitor



The number of remaining images is approximate as the number will vary according to the compression selected.

Names of parts and controls

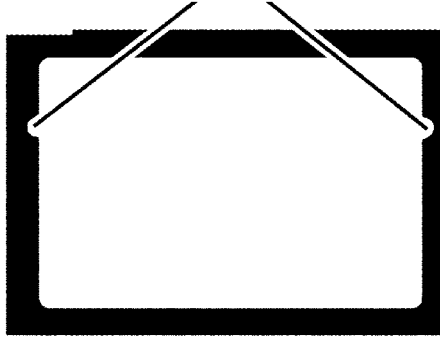
Viewfinder

Focus indicator (green)



Flash indicator (orange)

Parallax marks



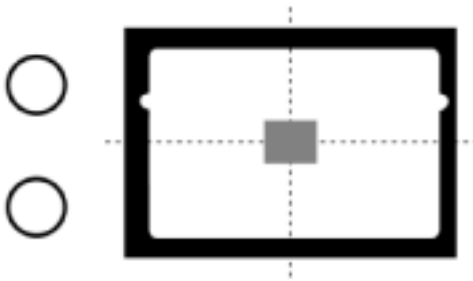
Parallax marks

At distances of less than 1 m, only the subject detail below these marks will be recorded. It is therefore advisable to use the TFT screen for framing at short range.

Focus/Flash-ready indicators

Focus indicator (green) Lights	Subject in focus.
Blinks rapidly (approx. 8x per second)	Focusing impossible. (Insufficient contrast, subject too dark or too close. In macro mode: subject too far away.)
Blinks slowly (approx. 2x per second)	Image being written to CompactFlash™ card or loaded from card.

Focus area



In autofocus mode, the camera will focus on the area marked gray.

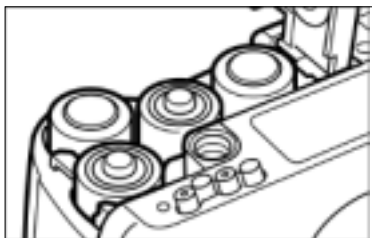
Flash indicator (orange) Lights	Flash fully charged and ready to fire.
Blinks rapidly (approx. 8x per second)	Flash being recycled, shutter cannot be released.
Blinks slowly (approx. 2x per second)	With flash switched off, camera uses slow shutter speed – risk of camera shake.

Brief instructions

This is how it works:

This is how it looks:


Load batteries



Insert memory card

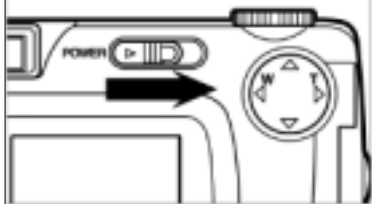


Shoot

Turn mode dial to camera icon 



Press power switch **on/off**.



Brief instructions

This is how it works:

Frame your subject in the viewfinder or on the TFT screen

If necessary, zoom in or out pressing the four-way control:

Right ► telephoto

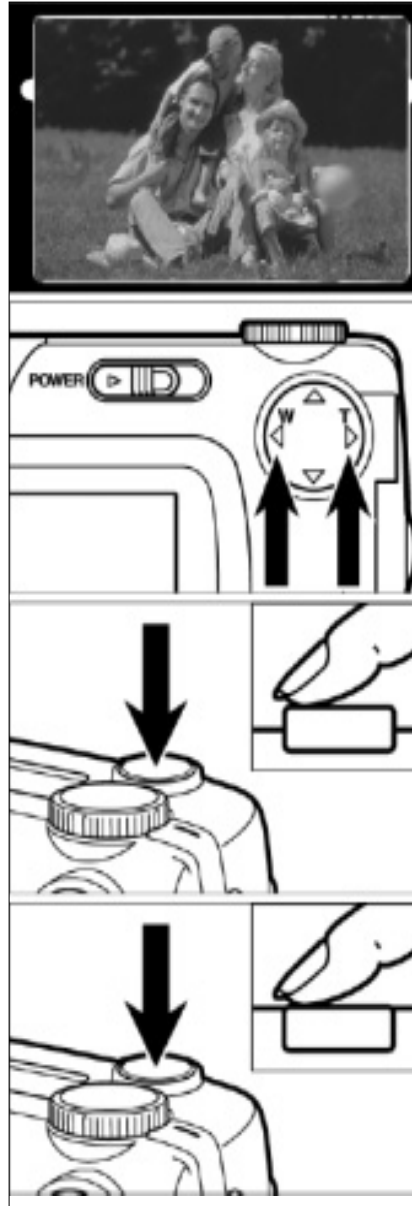
Left ◄ wide-angle

Press shutter release **halfway** until the green lamp beside the viewfinder eyepiece lights green

Press shutter release **fully** to take your picture

Please note: The shutter release works in two stages; pressed halfway, it activates the autofocus system that needs a few fractions of a second for focusing..

This is how it looks:




Brief instructions

This is how it works:

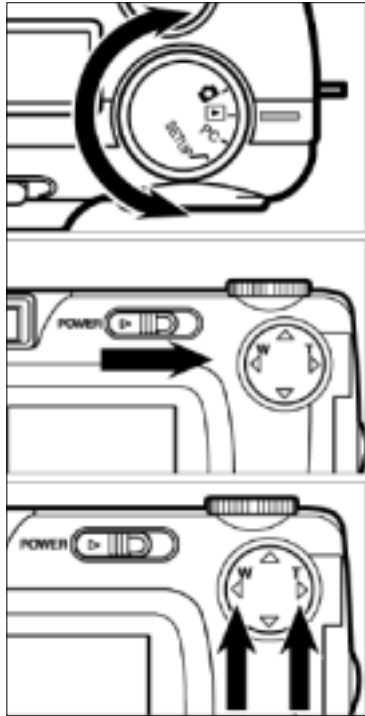
This is how it looks:

Playing back images

Turn the mode dial to the Playback icon 

If the camera is still off, press the power switch

Your last shot will be displayed; using the four-way control, you can navigate between all the pictures stored on your memory card



This is how it works:

Deleting images

Turn mode dial to Playback icon ►

Press

1) **menu** button on camera back;

2) Right-hand arrow of four-way control on Delete item of menu

3) Right-hand arrow of four-way control once more on Select Image item of submenu

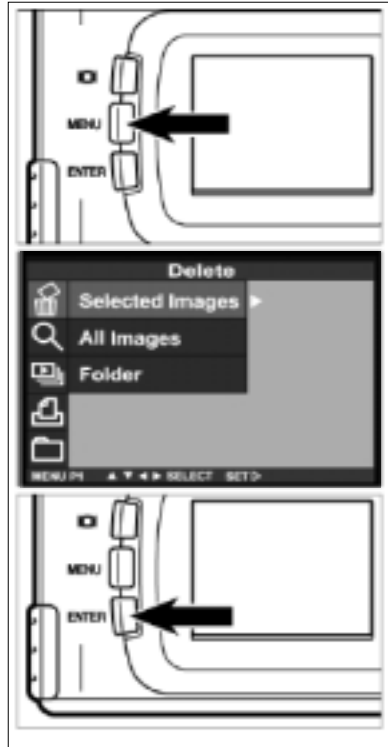
An overview of six images will be displayed, the image to be deleted being highlighted

4) Once more select this image by pressing the DISP **on/off** button until delete icon (recycle bin) appears in image

5) Finally, press **enter** button and answer the following dialog by

6) pressing the Down arrow of the four-way control ▼ = Yes

This is how it looks:



7) Then press right-hand arrow of four-way control ► to delete the image.

Power supply

This is how it works:

Loading alkaline or rechargeable batteries

Your camera uses four size AA alkaline batteries or four NiMH batteries or four rechargeable batteries, type NiCd.

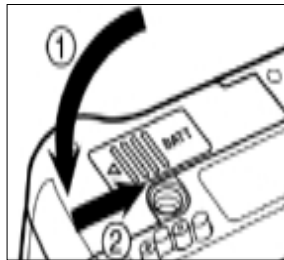
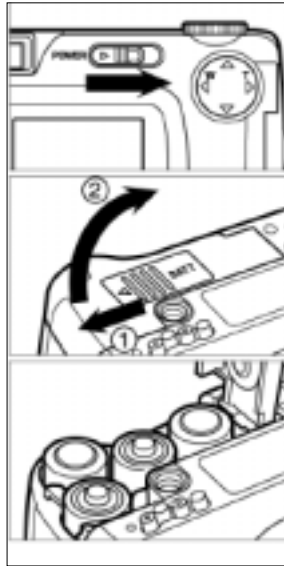
Should you use rechargeable batteries, make sure that these have been fully charged in a suitable charger.

Always turn the camera off before loading or exchanging batteries.

Open the battery compartment by pushing its cover in the direction shown (1), then open the flap (2).

Load the batteries in accordance with the +/- marks.

This is how it looks:



This is what it's for:

The camera should preferably be used with high-capacity NiMH batteries.

After changing batteries, check whether the built-in clock is set to the correct date and time.

If the camera is without power supply for over five minutes, the clock may be slow or it may reset. In this case, set date and time.

Left without power supply for a prolonged period, the camera will "forget" individual settings and reset to default values. However, the pictures stored on your memory card will not be lost.

Do not put the camera down with the battery compartment open to prevent damage to its cover.

Be careful when changing the batteries as they may be hot.


This is how it works:


This is how it looks:

This is what it's for:

Checking battery power

With batteries loaded, the camera will automatically check their status and display it on the LCD monitor.

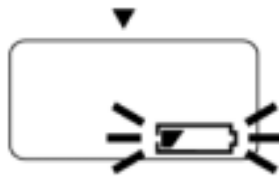
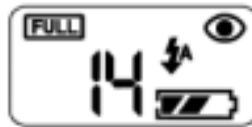
 lit
Full power.

 lit
Declining battery power, but the camera is fully operational.

If the display disappears, followed by the battery icon blinking for five seconds and disappearing once more,

battery power is insufficient for camera operation.

Replace all batteries by fresh ones, or use the optional power-supply unit.



If the LCD monitor is blank, replace all batteries and make sure they are inserted with their +/- poles properly oriented.

If left unused for three minutes, the camera will automatically switch off to save power. To resume operation, press the power switch.

If you wish, you may select intervals of 1, 5, 10 or 30 minutes for automatic cutoff.

When the optional power-supply unit is used or when the camera is connected to a PC, the cutoff interval is always 30 minutes and cannot be varied.

Power supply

This is how it works:

Using the optional power-supply unit

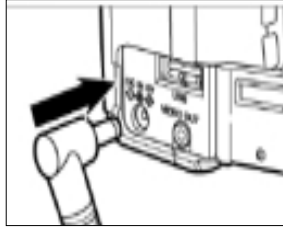
The camera can be operated on external power with the aid of the optional power-supply unit. This is advisable for prolonged shooting sessions to save battery power. The power-supply unit is particularly helpful when the camera is linked up with a PC.

Before changing over from battery power to AC or vice versa, make sure that your camera is turned off. Never change the power supply with the camera switched on!

Connect the plug to the power-supply terminal of the camera.

Plug the power-supply unit into a wall outlet.

This is how it looks:



This is what it's for:

Note that the power-supply unit will not recharge any batteries in the camera. To charge these, use a commercial charger.

Even with the power-supply unit, the camera will automatically cut off (for safety reasons) after 30 minutes of non-use.

To reactivate the camera, simply press the power switch.

This is how it works:

Using the CompactFlash™ memory card

Always switch off your camera before inserting or changing a CompactFlash™ card! Otherwise, the data on the card may be lost or the card itself damaged.

Open the card slot as shown.

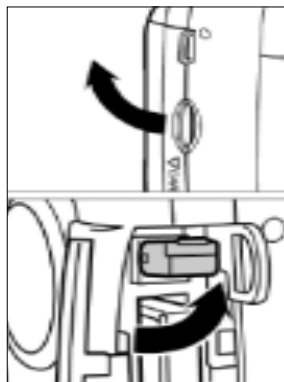
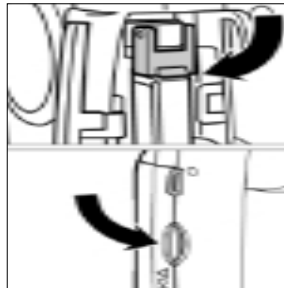
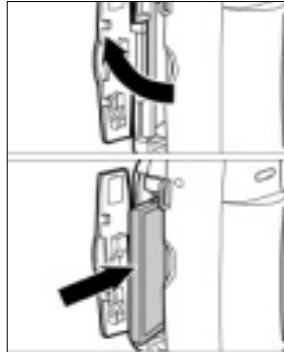
Insert the CF card with its contacts forward into the camera.

Be sure not to tilt or jam the card.

To avoid jamming, make sure the card is inserted with the proper end facing the camera.

Never use force to avoid damage to card and camera.

This is how it looks:



This is what it's for:

Note:

CF cards (type I) can be inserted into the camera **only in one direction** and with the **proper side up**. Before important events, it is advisable to practice the exchange of memory cards at home.

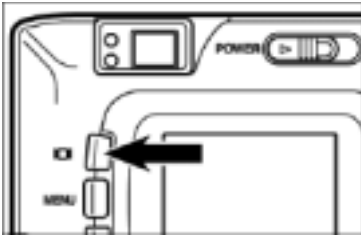
The card slot of the camera has a small hinged safety and ejector lever. This holds the card in place and – when folded – serves to eject it.


After properly inserting the card, push it as far as it will go. The safety lever will move out and can be folded.

To remove the card, fold the lever out and push to eject the card slightly.

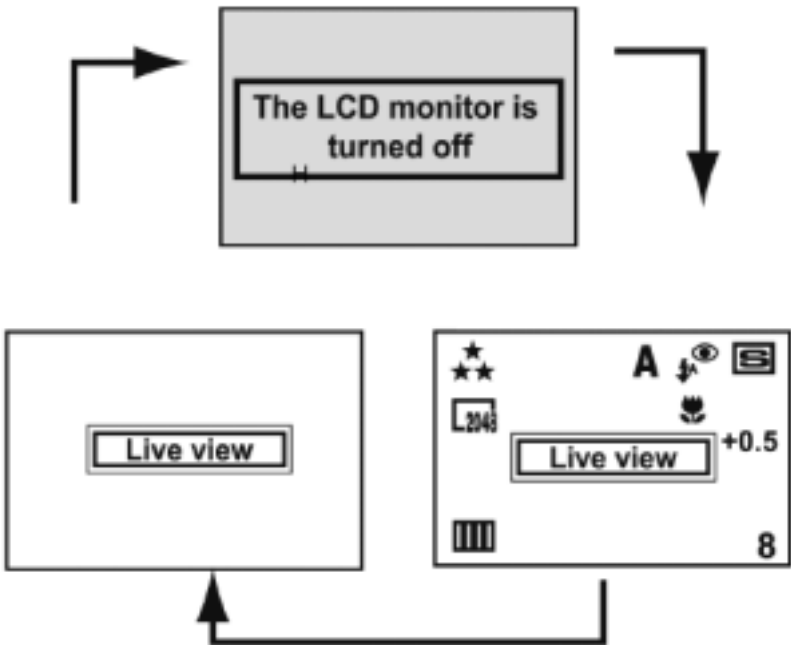
Basic functions

The TFT screen in Camera mode



Each depression of the Display button  will change the screen display as follows.

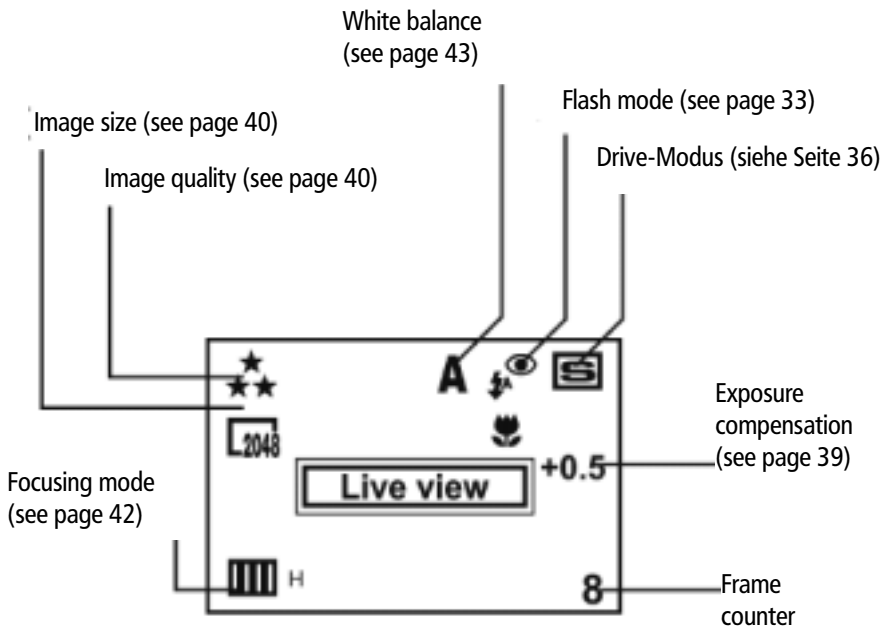
TFT screen turned off



Live image
(Camera settings not shown)

Live image
(Camera settings displayed)

Screen settings



This is how it works:

This is how it looks:

This is what it's for:

Focusing

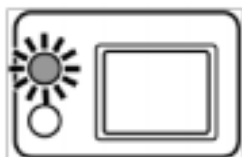
As the shutter release is pressed halfway, the camera automatically focuses on your subject. The green lamp near the viewfinder eyepiece signals the focus status.

If the lamp lights green (after a few fractions of a second), focus is set and you may press the shutter release to take your picture.

Should the green lamp blink, check the following points:

Did you try to focus on a detail that is difficult to focus on? (See page opposite.)

Is your subject less than the minimum focusing distance away (or over 40 cm in Macro mode)?



Focus lock



The autofocus system is center-weighted. If your subject is off center, the camera will focus on the background. In this case, use focus lock:

Place your main subject in the center of the TFT screen and press the shutter release **halfway**. Then recompose without letting go of the shutter release and finally press the release fully to take your picture.

This is how it works:

This is how it looks:

This is what it's for:

Special focusing situations

The autofocus system is center-weighted and uses image contrast (the difference between dark and bright details) to detect focus. This is why there are some subjects that make autofocusing impossible.

In this case either use focus lock, focusing on a subject at the same distance, or switch to manual focusing.



Your subject is too dark.

Your subject has insufficient contrast, such as blue sky or a white wall.

Subjects located at different distances overlap in the focus area.

Your subject is too bright, such as highly glossy car paint or a shiny water surface.

This is how it works:

This is how it looks:

This is what it's for:

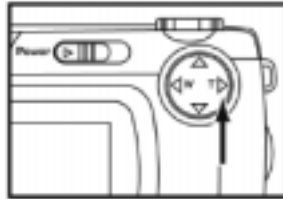
Digital zoom

The camera has a digital zoom which allows zooming in on your subject beyond the longest focal length of the camera's zoom lens.

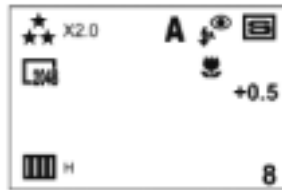
The digital zoom is operative only with the TFT screen switched on.

To turn on the digital zoom, press the Right arrow ► of the four-way control beyond the maximum value for two seconds.

Note: Use this feature only in exceptional cases and for pictures that require only lesser resolution because the camera will automatically change over to 480x640-pixel resolution.



2 sec




The digital zoom should not be confounded with the optical zoom, that is, a variation of lens focal length. Digital zooming may be compared to selective enlargement, which is why digital-zoom pictures cannot be enlarged or sharpened.

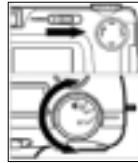
This is how it works:

This is how it looks:

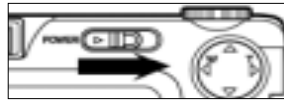
This is what it's for:

Shooting digital images

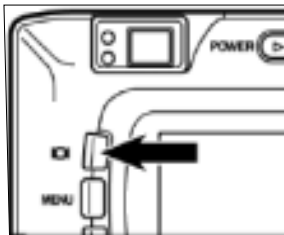
Turn the mode dial to the red camera icon .



Switch the camera on.



Look through the viewfinder or switch the TFT screen on by pressing the screen icon on the camera back.



Press the shutter release fully down.

The camera will save your picture to the memory card.

Always reset the camera from other settings in the Playback, transfer and set menus to the camera icon, so you'll always be ready to shoot at a moment's notice.

The optical viewfinder is ideal for candid shots and for use in bright light.

Because of autofocusing, the shutter release operates in two stages. To take your picture, always press it fully.

The camera takes a few seconds to complete saving. Only then is it ready for the next shot.

This is how it works:

Autofocus photography

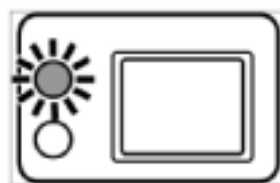
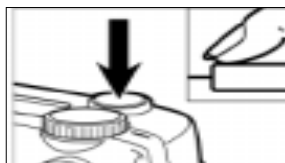
The shutter release operates in two stages: Half depressed, the camera will start automatic focusing.

This always takes a second or so (approx. 1.5 second for a subject 3 m away).

Once the camera has focused on your subject, a green lamp will light beside the viewfinder eyepiece (focus indicator), and a short beep will be heard.

Only now should you press the shutter release fully for exposure.

This is how it looks:



This is what it's for:

Always wait for the green light beside the viewfinder to come on before pressing the shutter release fully.

The beep may be disabled via the Set menu (accessible with the mode dial).

If your main subject is off-center, lock focus on the most important detail by keeping the shutter release pressed halfway. Then recompose with the release held in this position.

It is advisable to practice the two-stage release of the shutter.

For critical subjects you have the additional option of manual focusing as well as the Macro mode.

This is how it works:

Switching to spot autofocus

While autofocus is normally center-weighted, it may also be switched to spot focusing.

Press the MENU button on the camera back and use the four-way control to select Focusing. Then select Area, followed by Spot.

This is what it's for:

Choose spot autofocusing if you wish to focus precisely on a specific part of your subject.

As the camera is turned off, it will reset to normal (center-weighted) auto-focusing.

This is how it works:

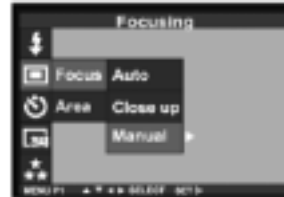
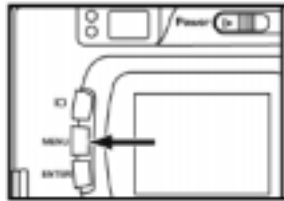
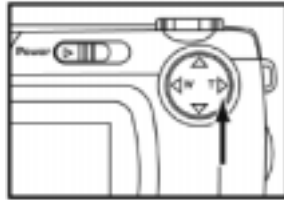
Switching from autofocus to manual focusing

As an alternative to autofocusing, you may also focus manually.

Press the MENU button on the camera back and use the four-way control to select Focusing. Then select Focus and from there Manual. Confirm your selection by pressing the Right arrow ► of the four-way control.

To focus, press the four-way control. Depression of the Up arrow ▲ will shift focus towards infinity, of the Down arrow ▼ towards close-up (down to 8 cm).

This is how it looks:



This is what it's for:

Use the TFT screen of the camera for manual focusing. This cannot be turned off in the manual focusing mode.


Manual focusing is possible from infinity right down to close-up.

During manual focusing, the green lamp beside the viewfinder eyepiece – which during autofocusing signals that focus has been achieved and the camera is ready to shoot – is disabled.

This is how it works:

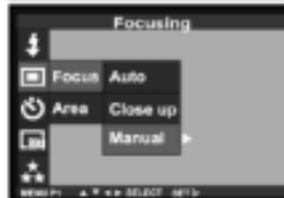
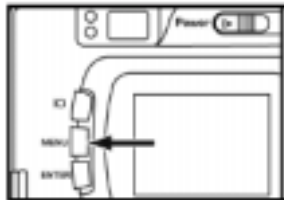
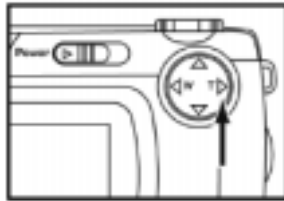
Switching to macro autofocus

For close-up shots, switch to macro autofocus.

Press the MENU button on the camera back and use the four-way control to select Focusing. Then select Focus and from there Close-up. Confirm your selection by pressing the Right arrow  of the four-way control.

Macro autofocusing is possible over a range of 0.08 to 0.4 m.

This is how it looks:



This is what it's for:

If at all possible, mount your camera on a tripod for close-up shots.

Close-up photography makes sense only if you use the TFT screen for framing. This is why the TFT screen cannot be switched off in this mode.

The built-in flash is unsuitable for close-range photography. It is therefore automatically disabled in the close-up mode.

Manual focusing is helpful in close-range photography because the macro mode lets you focus all the way down to 8 cm (object field approx. 4x6 cm).

This is how it works:

Using the built-in flash unit

Press the MENU button and use the four-way control to select Flash. Then select the Mode subfunction.

When the light is low, the flash will then fire automatically.


Flash on.

Flash off.

Flash on with red-eye reduction.

Slow sync – Flash is synchronized with a slow shutter speed.

This is how it looks:

The built-in flash unit has five different modes that can be selected with the four-way control. To select the desired mode, press the Right arrow  of the control.



This is what it's for:

Use this standard mode for candid photography.

Shooting against the light, this mode will help you fill in deep foreground shadows (if necessary, with reduced output).

This is ideal for atmospheric available-light shots in situations where flash would disturb the evocative mood of the scene.

The flash emits preflashes to reduce the risk of red eye caused by reflection from the retina.

Flash illuminates the foreground, while a slow shutter speed coaxes out weak illumination in the background.

This is how it works:

More details about flash photography

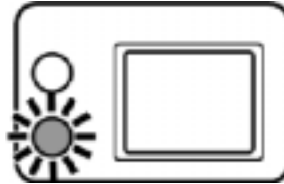
The ready lamp beside the viewfinder eyepiece lights red as soon as the flash is fully charged and ready to fire.

While the flash is recycling – for example when you take several flash pictures in short order – the red ready lamp will blink. Releasing the shutter is then impossible.

The built-in flash unit has a range of approx. 0.4 to 3 m, regardless of the focal length set.

Flash is disabled in the Continuous and Macro modes.

This is how it looks:



This is what it's for:

For prolonged shooting sessions with flash (important events, etc.) always use fresh or fully charged batteries.

Turn off the TFT screen and use the optical viewfinder if you have to use flash while the camera is warning of low battery power (only two bars remaining).

Experiment with the different flash modes. More often than not, available-light shots of stationary subjects are more evocative than flash pictures. However, the camera should be placed on a sturdy support (tripod or similar). (Stativ etc).

If subject contrast is high, for example with sunlight incident at an angle, use the flash to fill in shadows (Flash On mode).

This is how it works:

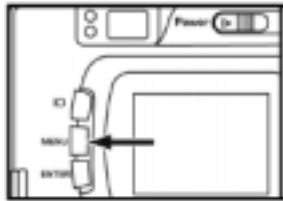
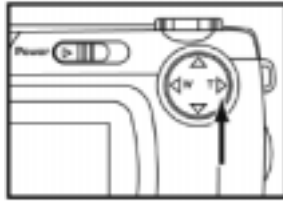
More details about flash photography

Flash output is controlled automatically, but flash exposure compensation is possible.

Press the MENU button on the camera back and use the four-way control to select the Flash mode. Then select the Power subfunction where you can choose between the following settings: +2.0, +1.5, +1.0, +0.5, 0.0 (default), -0.5, -1.0, -1.5 and -2.0. Confirm your selection by pressing the Right arrow ► of the four-way control.

Switching the camera off will reset it to "Autoflash with red-eye reduction" and default output.

This is how it looks:



This is what it's for:

In digital photography, the high sensitivity of the CCD sensor may result in relatively bright flash pictures.

This is why you should experiment with flash exposure compensation – described at left – as well as with slow sync that brings out weaker background illumination in addition to your flash-illuminated foreground subject.

Be sure to experiment with all available flash modes – it's worth your while! Digital photography is instantaneous: You will see your picture right after you take it. So you can repeat it at will, if necessary. And your pictures will surely benefit from mastery of the different flash modes.

This is how it works:

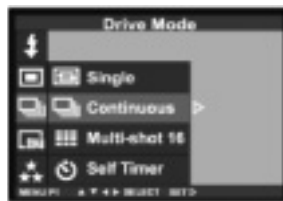
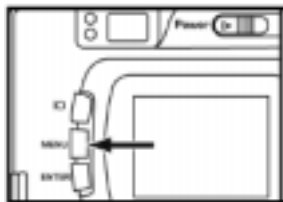
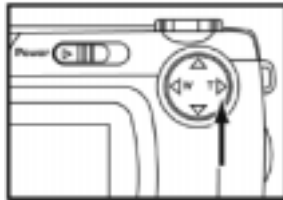
Using the different shooting modes

Switching the camera on sets it to single frames (SingleShot). In addition, there are the Continuous, Multishot 16 and Self-timer modes.

To select one of these modes, press the MENU button on the camera back and use the four-way control to select Drive Mode. Then use the four-way control to select either Single, Continuous, Multishot 16 or Self-timer by pressing the Right arrow ►.

Flash is disabled in the Continuous and Multishot 16 modes.

This is how it looks:



This is what it's for:

The Continuous mode is ideal for shooting motion sequences (sports / dance / action), since it allows photos to be taken continuously at intervals of just a few seconds.

These picture series are limited exclusively by the capacity of the memory card used.

This is why there should be sufficient storage space available for your picture series. Alternatively, you may reduce the image size (number of pixels) and/or image quality (compression).

Focusing is another point in continuous photography that deserves your attention. The camera will focus the first image of a series. Should your subject leave the area of sharp focus, you might have to interrupt the series to resume focusing.

This is how it works:

This is how it looks:

This is what it's for:

Using the different shooting modes

In the Multishot 16 mode, 16 pictures will be taken at intervals of approx. two seconds. However, these will all be combined in one frame (multishot). Flash is not available in this mode.

In the Self-timer mode, the shutter will be released 10 seconds after depression of the shutter release. The red lamp on the camera front will blink ever more rapidly, reflecting the countdown. In addition, a beep will be heard. This can be disabled via the Set menu and the mode dial under Beep.



Be sure to experiment with this attractive feature. If your subject moves during the series or if you vary the framing slightly, the result will be particularly fascinating.

When pressing the shutter release, be sure not to stand in front of the camera. Instead, look through the viewfinder. Otherwise, the camera might focus on your chest or some distance in front of the actual subject.

If your main subject is off-center, use focus lock with the shutter release pressed halfway. See Autofocus / Focusing.

This is how it works:

Automatic exposure control

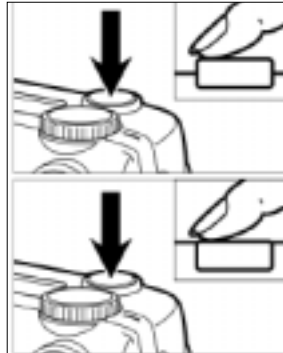
The camera automatically controls the exposure of your digital photos with an equivalent sensitivity of ISO 100/21°.

Programmed AE will automatically select shutter speeds from 2 s to 1/500 s and apertures of f/3.4, f/4.8, f/7.7 and f/15 (wide-angle) as well as f/3.6, f/4.8, f/7.7 and f/15 (telephoto).

Press the MENU button on the camera back and use the four-way control to select Exposure. In the Area submenu you may select Full, Central or Spot using the four-way control (pressing the Right arrow ►).

A blinking red lamp beside the viewfinder eyepiece warns against camera shake (when the flash is off) and recommends use of a tripod.

This is how it looks:



This is what it's for:

To lock in exposure settings, press and hold the shutter release in its halfway position. This allows pinpoint exposure control in the case of high subject contrast.

In its default setting, the camera averages exposure over the entire field. However, for certain subjects, such as portraits against a bright background, you may also switch to center-weighted metering.


Spot metering in turn is ideal for precise metering of important subject details.

For pinpoint metering, use AE lock with the shutter release depressed halfway.

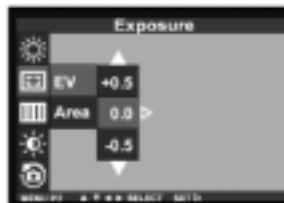
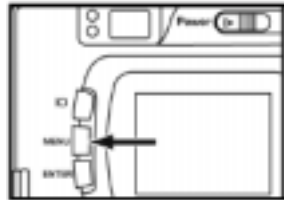
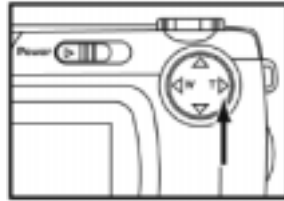
This is how it works:

Exposure compensation

Automatic exposure can be compensated over a range of +2.0 to -2.0.

Press the MENU button on the camera back and use the four-way control to select the Exposure mode. In the EV subprogram you then can choose between the following compensation values: +2.0, +1.5, +1.0, +0.5, -0.5, -1.0, -1.5 and -2.0. Press the Right arrow  of the four-way control to make your selection.

This is how it looks:



This is what it's for:

Experiment with exposure compensation to optimize your digital images. Slight compensation (for example by +/- 0.5) may be useful, above all if you wish to print out your pictures directly, i.e. without subsequent manipulation by PC image-processing software, be it on your own printer or through an Internet printing service, since different printers and printer software interpret digital images differently (and might print your pictures too bright or too dark).

Note: If you wish to avoid flash in low light, a certain amount of underexposure may give you shake-free images because the camera will then use a faster shutter speed. PC image-processing software is capable of correcting such underexposure.

This is how it works:

Selecting resolution / file size

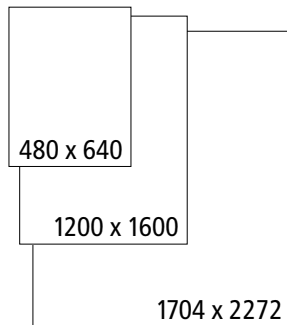
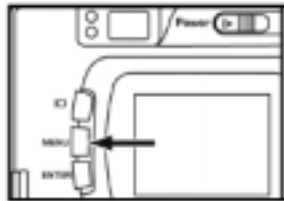
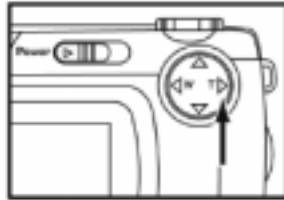
The camera has a 1/1.8-inch CCD sensor with 3.87 megapixels (1704 x 2272) and an aspect ratio of 4:3.

The maximum resolution / file size of 1704 x 2272 pixels can be reduced to 1200 x 1600 or 480 x 640 pixels.

Press the MENU button on the camera back and use the four-way control to select the desired resolution under Image Size of 1704 x 2272, 1200x1600 or 480x640 by pressing the Right arrow ► of the control.

The resolution selected will remain in effect, regardless of whether or not the camera is switched off.

This is how it looks:



Resolutions / file sizes available

This is what it's for:

If you have sufficient storage space (that is, a sufficient number of or sufficiently powerful memory cards), always use the highest possible resolution (1704 x 2272 pixels).

Reduce the resolution setting only if you are sure you need only a smaller file size (for example, for images intended exclusively for the Web).

On the go, a reduction of file size may help you out if you are running out of storage space. This will get you a few additional pictures on your card (at reduced quality). Try to buy additional high-capacity memory cards or use other storage media (mobile hard disk/laptop) and make full use of maximum resolution (1704 x 2272) and minimum compression (Fine).

This is how it works:

Selecting the compression level

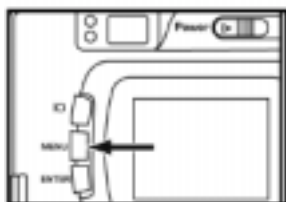
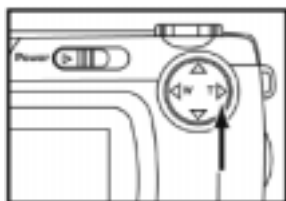
The data provided by the camera's CCD sensor can be saved at three different compression levels: Fine = 1:6, Standard = 1:12 and Economy = 1:25.

These compression levels are available for each of the three different resolutions (1704 x 2272, 1200 x 1600 and 480x640 pixels).

Press the MENU button on the camera back and use the four-way control to select the desired compression level under Quality: The resulting file sizes are approx. 1.26 MB* (Fine), approx. 630 kB* (Standard) and approx. 310 kB* (Economy).
(* File sizes for 1704 x 2272 pixel resolution).

The compression level selected will remain in effect even if the camera is switched off.

This is how it looks:



This is what it's for:

In conjunction with the different resolution settings, variation of the compression level allows very precise tailoring of the desired picture quality to your specific requirements.

Optimum quality is obtained by using the highest resolution/largest file size (1704 x 2272 pixels) with lowest compression (Fine).

Depending on the capacity of your memory card, you may have to make some compromises – for example away from home – in order to capture a sufficient number of pictures. It is therefore advisable to add a mobile, battery-powered hard disk to your equipment so that you can easily load down your pictures.

This is how it works:

This is how it looks:

This is what it's for:

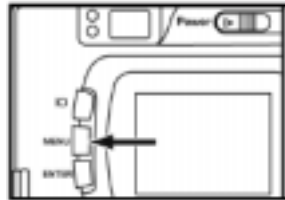
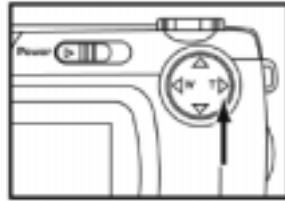
Selecting pixel sharpness

A special mode of the camera allows the pixels provided by the CCD sensor to be saved with different sharpness characteristics (digital sharpening).

This feature should, however, not be confounded with focusing of the lens.

Press the MENU button on the camera back and use the four-way control to select either Hard, Normal or Soft under Image Sharpness.

When the camera is switched off, it will automatically reset to Normal = unchanged saving of image data.



In most cases it is advisable to save the image data unchanged, that is, neither digitally sharpened nor softened.

Digital sharpening enhances the visual impression of sharpness by contour sharpening through numerical manipulation of pixel characteristics (for example, at the borders of bright and dark details).

Digital softening is analogous

However, since this overall technique will often enhance unwanted detail as well, such as skin blemishes in portraits, it is usually more convenient to sharpen or soften (very carefully) only later, using suitable PC image-processing software.

This is how it works:

Selecting white balance

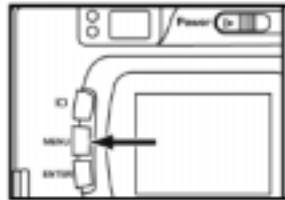
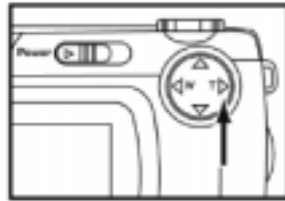
With its automatic white balance, the camera automatically adjusts to the color temperature of available light sources.

To optimize your results and make allowance for special lighting conditions, you may set the camera to special light sources by pressing the MENU button on the camera back and selecting White Balance.

In addition to the default Auto setting, the presets Daylight, Light Bulb and Fluorescent may be selected with the four-way control.

When the camera is switched off, it will automatically reset to automatic white balance.

This is how it looks:



AUTO Automatic white balance



Daylight setting



Tungsten setting



Fluorescent-light setting

This is what it's for:

Similar to a video camera, a digital still camera also has to adjust to the color temperature of the prevailing light to render color as naturally as possible.

Automatic white balance will be entirely sufficient for a large number of subjects.

Only in extreme lighting situations – which you can recognize from a pronounced color cast in your pictures – should you make test shots using the presets for tungsten or fluorescent light.

Try your hand and experiment!

Selectively used, these modes can result in very attractive special effects, for example at parties, that clearly distinguish them from "ordinary" photos by their special color mood.

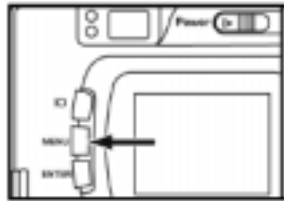
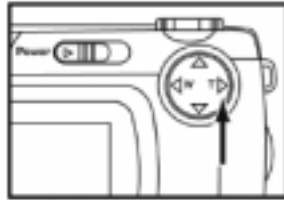
This is how it works:

Resetting camera functions to default settings

All shooting modes of the camera can be reset to their default values.

Press the MENU button on the camera back and use the four-way control to select Default and then Yes or No. If you wish to reset the camera to its defaults, select Yes and press the Right arrow ► of the control.

This is how it looks:



This is what it's for:

The camera offers a multitude of settings for shooting. However, since only some of these are reset when the camera is switched off, the Reset mode is a convenient means of defaulting all of them.

This reset within the Camera menu (mode dial on top plate set to red camera icon) affects only the shooting modes and is different from the reset to default values of the general camera modes (Playback, Set and Transfer) that can be selected via the Set menu and the mode dial.

This is how it works:

Default camera settings

Upon reset, the shooting modes default to the following settings:

Flash

Autoflash with red-eye reduction

Focus Mode

Autofocus

Focus Area

Center-weighted

Drive Mode

Single frames

Image size

Full format (1 704 x 2272 pixels)

Quality

Medium compression

White Balance

Automatic

Exposure EV

Zero exposure compensation

Exposure Area

Center-weighted metering

Sharpness

No sharpening

Camera TFT screen (LCD)

Screen brightness set to a medium 5

This is how it works:

This is how it looks:

This is what it's for:

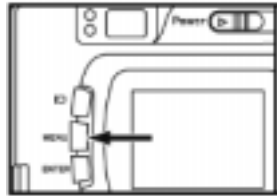
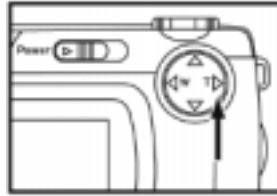
Selecting screen brightness

The brightness of the TFT screen on the camera back can be varied.

Press the MENU button on the camera back and use the four-way control to select LCD and Brightness, where values from 0 to 9 can be set on a scale. Confirm by pressing the Right arrow ► of the control.

Your setting will remain effective even when the camera is switched off.

Screen brightness can also be set in the Playback menu.



Screen dark – Camera defective? Not necessarily. Before turning the camera in for repairs, check (preferably in a dark room) whether screen brightness might be set to 1 or even 0. These settings are equivalent to extremely low screen brightness, which in daylight may give the impression that the screen is dead.


This is how it works:

Displaying individual images

Turn the mode dial to the Playback icon. ►

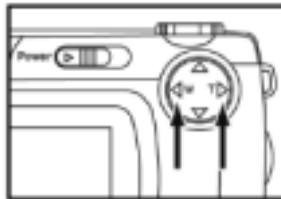
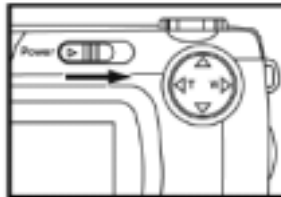
Switch the camera on.

The TFT screen will automatically display your last shot, including the frame number, the shooting date and time.

Pressing the screen display button  again will display the entire image without these data.

To navigate through the pictures saved on your memory card, press the Left arrow ◀ of the four-way control to go back, the Right arrow ▶ to go forward.

This is how it looks:



This is what it's for:



The possibility of checking all your pictures right after the shot is one of the main advantages of digital photography.

Immediately after pressing the shutter release you can see your picture, check framing, exposure and focus – and repeat the shot, if necessary.

By the way: Your picture is displayed on the screen during saving, though very briefly.

This is how it works:

Displaying several images (Index Mode)

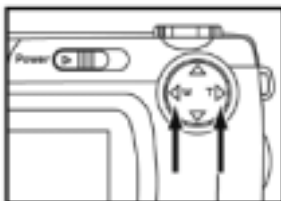
If you press the screen display button  twice with the mode dial set to Playback , nine images will be displayed in the Index mode.

The display will start with the first image on your card, which will be highlighted in color.

Using the four-way control, you can shift this frame to select separate images. After the first nine, another nine images will be opened.

To open up the selected image to full size, press the ENTER button on the camera back. Go back to Index view pressing the screen display button twice.

This is how it looks:



This is what it's for:

The Index mode is very convenient, above all, with high-capacity memory cards, for a quick overview of the images saved on the card.

With the DPOF mode of the camera (see Image Printout), a similar index can be prepared, saved to memory card and printed out on printers compatible with this mode.

This is how it works:

This is how it looks:

This is what it's for:

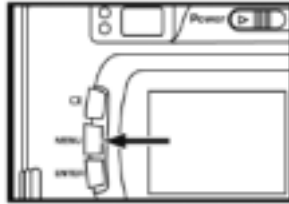
Zoom-magnifier playback

Recorded images can also be displayed at 2x magnification.

In Playback mode (with the mode dial set to the Playback icon), press the MENU button, then select Zoom using the four-way control. If you now press the Right arrow ► of the control, the details of the image will be displayed at 2x magnification. A magnifier icon and 2.0x will also appear on the screen.

The image section displayed can now be shifted in all four directions with the aid of the four-way control. (◀ ▶ ▼ ▲)

To go back to standard display, press the MENU button.



The magnifier mode is ideal for checking image detail and focus.

In portraits or group shots, it lets you check whether all of the people in the picture have their eyes open so that you may repeat the shot, if necessary.

Other subjects may be checked for optimum focus. If necessary, you can then switch to manual focusing and repeat the shot.

This is how it works:

Slide show

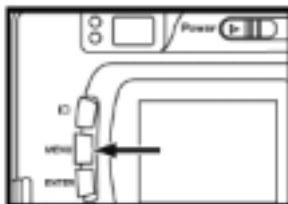
The camera can display all the pictures on your memory card in the form of an automatic slide show.

In Playback mode (with the mode dial set to the Playback icon) press the MENU button and use the four-way control to select Slide Show. Pressing the Right arrow ► of the control takes you to a submenu in which you can start the slide show selecting Start.

The screen time of the pictures can be set via the Time submenu to either 2, 3, 5 or 10 seconds.

The order of the pictures shown can be selected via the Direct submenu with the options Forward, Backward and Random.

This is how it looks:



This is what it's for:

Your slide show will be particularly impressive if you show your pictures on a TV screen (see Playback via TV set).

To do this, connect the video cable supplied to the Video Out terminal of your camera (under the lateral rubber cover) on the one hand and the Video In terminal of your TV set on the other. As soon as the cable is in place, the camera screen will be switched off.

To interrupt your show, press the ENTER button, to exit press the MENU button. The picture last selected will be displayed in full size.

You may view the pictures captured with your camera on a TV screen. The camera has a video output terminal via which it can be connected to a TV set using the video cable. This terminal can be switched to either NTSC or PAL.

This is how it works:

Playback via TV set or video beamer

The pictures saved on your memory card can be viewed on a TV set or projected via a video beamer.

To do this, connect the cable supplied to the Video Out terminal under the lateral rubber cover of your camera to the Video In terminal of your TV set or beamer.

Caution: Be sure to make the connection with both the camera and the TV set or beamer switched off!

Then switch on the TV/beamer and the camera set to Playback. The camera screen is disabled in this mode.

You may use any of the playback modes of the camera: single frames, zoom magnifier and, above all, slide show.

This is what it's for:

Dark TV screen? Check whether the right video input of your TV set is activated. Many TV sets have several video inputs.

Connecting your digital camera to a TV set is a neat way of viewing your pictures quickly and hassle-free on a large screen or showing them to your friends.

You may have to turn up the color of your TV set and reduce brightness somewhat, since digital images are optimized for viewing on PC monitors. However, your pictures are saved in true color on your memory card.

If you have more than one CF card, you may assemble your own selection of images on one card (via your PC).

This is how it works:

Deleting images one by one

The images stored on your memory card can be selected via the camera screen and deleted either separately or all at once.

In Playback mode, press the MENU button and use the four-way control to select Delete. Press the Right arrow ► of the control to access a submenu where depression of the same arrow under Select Image lets you delete one of six pictures displayed. The image selected is highlighted in color and has to be confirmed by pressing the screen display button. Then select Yes in the dialog that follows and confirm by pressing the Right arrow ► of the control.

This is how it looks:



This is what it's for:

Please note that deleted pictures are irreversibly lost.

The different steps required for deleting images are summarized on page XX. If you use your camera only occasionally, it is advisable to copy this page and keep it in your camera case.

This is how it works:

Deleting all the images on your memory card

All the images stored on your memory card can be deleted at once with a single menu command.

In Playback mode (with the mode dial set to Playback icon), press the MENU button, then select Delete using the four-way control.

Press the Right arrow ► of the four-way control to access a submenu where another depression of ► under All Images will delete all the pictures on your card.

In the submenu that follows, confirm Yes by pressing ► again.

This is how it looks:



This is what it's for:

Please note that deleted images are irreversibly lost.

Frequently used memory cards should occasionally be reformatted (Format mode accessible with the mode dial set to Set).

This applies above all to cards that have already been used in digital cameras of other make.

This is how it works:

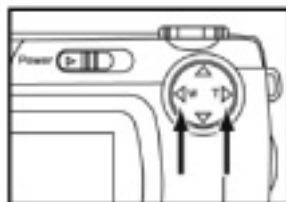
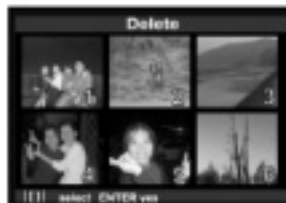
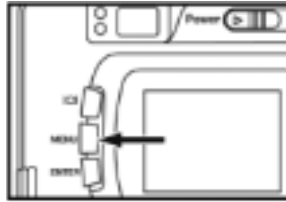
Preparing images for direct printout in DPOF' format

Your camera is capable of preparing images for direct printout in DPOF' format (Digital Print Order Format).

In Playback mode (mode dial set to Playback icon), press the MENU button and select Print using the four-way control. Then press the Right arrow ► of the control to access a submenu with the items STD, Index and Cancel. If you select STD, a set of thumbnails is displayed for selection with the four-way control.

Preset the number of prints desired for the image selected by pressing the Up arrow ▲ of the control. A compatible printer will then print the desired number of copies from the card.

This is how it looks:



This is what it's for:

The DPOF' function lets you select – right in the camera and thus without connection to a PC – individual images for subsequent printout on DPOF-compatible printers.

In addition, it is possible to select the desired number of prints. And finally, these printers allow automatic generation of an Index Print showing all the images on the card. (Select Index subfunction in the Print menu.)

With the Cancel subitem, all orders for the DPOF' system, including the Index Print, can be canceled and deleted.

The camera supports Version 1.0 of the DPOF' system that is being upgraded continually.

This is how it works:

Saving and managing images in folders

The camera saves your pictures on the memory card in folders. In addition to the folders generated automatically by the camera, further folders can be created and named to facilitate image management.

In the Playback mode (mode dial set to Playback icon), press the MENU button and use the four-way control to select Folder. Press the Right arrow ► of the control to access a submenu with the options New and Select. New lets you generate and name new folders. (Select letters or numbers with the Up ▲ or Down ▼ arrow of the control.)

Select lets you select the folders available on your card.

This is how it looks:



This is what it's for:

You don't normally need to pay attention to folder management, since the required folders are automatically generated for each card.

However, for special projects or in the case of cards of very high capacity, the use of differently named folders does make sense for image management – similar to conditions in a personal computer.

As new folders are created, the camera will save your pictures to the folder last generated, which is thus active.

If you have other (possibly even empty) folders on your card and have changed between these via Folder – Select, you will first have to go back to display of the images in the correct folder or search all the folders.

This is how it works:

Deleting folders from the memory card

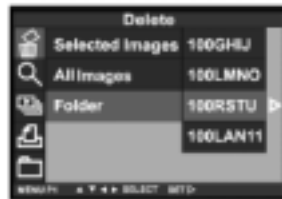
With the exception of the write-protected Default folder, all folders on your card can be deleted.

In the Playback mode (mode dial set to Playback icon), press the MENU button and select Delete using the four-way control. Press the Right arrow ► of the control to access a submenu which, among other things, lets you choose Folder.

Again press the Right arrow ► of the control to display all the folders on your card that can be deleted (with the exception of the write-protected Default folder)..

Caution: You will also delete all the images contained in these folders!

This is how it looks:



This is what it's for:

This delete function only serves to delete folders created either by the camera or by you (in the camera). Folders created on your card in a PC will not be displayed.

Note regarding the use of memory cards in different digital camera systems:

Since nearly all digital camera systems and manufacturers create their own folders and folder designations on the memory cards, it is advisable to use a PC CompactFlash™ card reader for safe and precise erasure of these foreign folders.

Once you are sure that these memory cards do not contain any useful pictures any more, you should reformat these cards using the Set mode and Format before using them in your digital camera..

This is how it works:

DCF standard for digital image storage

The DCF standard (Design rule for Camera File System) has been adopted for storing images in digital cameras.


This worldwide standard guarantees that:

- The pictures taken with this camera cannot only be displayed on the camera screen, but also on other digital cameras as well as other multimedia equipment, such as video beamers.
- The images can be printed out on different printers.
- The memory cards can be used interchangeably in different cameras and camera systems of different makers.
- The digital images taken with the camera can be processed in a PC/Mac..

This is how it works:

Setting camera-screen brightness

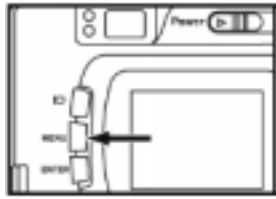
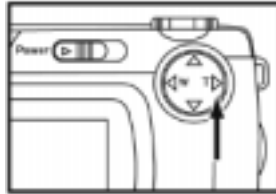
The brightness of the TFT screen on the camera back can be varied.

Press the MENU button on the camera back and use the four-way control to select LCD and Brightness, where values from 0 to 9 can be set on a scale. Confirm by pressing the Right arrow  of the control.

Your setting will remain effective even when the camera is switched off.

Screen brightness can also be set in the Camera mode in the Camera menu.

This is how it looks:



This is what it's for:

Screen dark – Camera defective? Not necessarily. Before turning the camera in for repairs, check (preferably in a dark room) whether screen brightness might be set to 1 or even 0. These settings are equivalent to extremely low screen brightness, which in daylight may give the impression that the screen is dead.

This is how it works:

This is how it looks:

This is what it's for:

Basic camera settings and functions

The basic camera settings and functions are combined in the Set menu (mode dial set to Set icon).

To select the different menus, turn the mode dial and activate/confirm by pressing the Right arrow ► of the four-way control.

Formatting

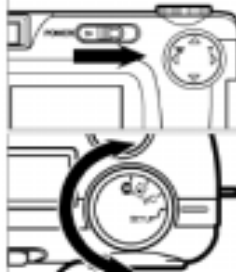
This menu serves to format memory cards. Caution: Formatting will automatically delete all images (even those in new folders)!

Power Save

Here you can set the interval after which the camera will automatically cut off to save power.

The following settings are available: 1 min, 3 min, 5 min, 10 min and 30 min.

When the camera is connected to a PC or used with the power-supply unit, the interval is fixed at 30 min (default).



Formatting will irreversibly delete all your images on the card! If you have more than one card, check whether you really have inserted the card you wish to format.

The shorter the interval, the more power you will save. Also, use the camera screen only when you really need it. It consumes more power than anything else.

This is how it works:

Basic camera settings and functions

Date/Time

This is where you can set the date and time. These will be saved together with each image.

Beep

This menu lets you switch the beeps on or off.

Video Out

In the Video Out menu, PAL is the default mode which is the standard for many parts of the world including Europe.

Language

This menu allows the selection of either German or English for the camera menus.

Default

The Default/Reset menu lets you reset all Playback, Set and Transfer functions to default. (Note: The Camera menu has its own reset function.)

This is what it's for:

Always set date and time, since these data are very useful in filing and managing your pictures.

Here you can cancel the beeps which in certain situations might be found disturbing.

This is useful when you have set several special functions in the different submenus and would like to cancel them with a single command. The images saved on the card will not be deleted by resetting to default values.

This is how it works:

Default settings for Playback, Set and Transfer modes

In the Set menu, the following defaults are reset in the Playback, Set and Transfer modes:

In Playback menu:

Delete

Selected image: single frame

Slide Show Time

Screen time 5 seconds

Slide Show Direction

Forward playback

Print

STD (standard)

Folders

Numbering of folders 100SK410

LCD (camera screen)

5 – medium brightness

In Camera Set menu:

Power Save

Automatic cutoff after 3 minutes

Beep

On

In Transfer menu:

Storage: Transfer to PC On

Mode dial set to **transfer** icon

This is how it works:

Connecting the camera to PC/Macintosh

Install driver software.

For Windows® 98/Windows® 98 SE/Windows® 2000 Prof./Windows® proceed in the following way:

Insert software CD in your computer drive.

Double-click on Setup icon to start installation.

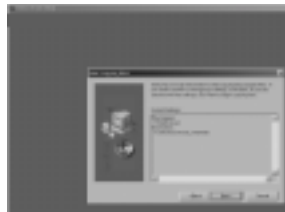
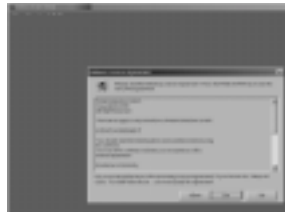
The Setup dialog box is displayed. Please wait.

When the Welcome dialog box appears, click [Next].

When the Software License Agreement appears, please read it carefully and take your decision.

[Back]: Back to preceding dialog box.

This is how it looks:



[Yes]: Agrees and takes you to next screen.

[No]: Exit

When the Start Copying Files box is displayed, select:

[Next]: Start installation.

[Back]: Back to preceding dialog box.

[Cancel]: Exit

When the Setup Complete box appears, click [Finish] to finish installation.

PC linkup

Mode dial set to **transfer** icon

This is how it works:

The following steps apply to both OS 8.6 and OS 9.

Select the driver for your system.

Start installation with a double click.

When the Welcome box appears, click [Continue].

Start installation by clicking on Install.

Read warning, then click on [Continue].

If necessary, exit by clicking on [Cancel].

Installation has been successfully completed.

This is how it looks:



To initial the program installed, restart your computer (suggested), or click on [Continue] if the Twain driver is to be activated right away.

This is how it works:

Connecting the camera to PC/Macintosh

For as long as the camera is connected to your computer or data are being exchanged between camera and computer, observe the following warnings:

- Do not switch the camera off!
- Do not pull the USB cable!
- Do not move the mode dial!
- Do not insert or remove your memory card!

Leaving these warnings unheeded may damage your camera or computer and damage or destroy the data on your memory card.

As long as the camera is connected to your PC, it will automatically switch off after 30 minutes.

When linking up your camera with a computer and transferring data, the batteries should have full power. If the batteries have only limited power, there is a risk that the camera will cut off during data transmission. An error message will be displayed, and the camera and computer may malfunction. Also, the image data on your memory card might be damaged or destroyed.

It is recommended always to use fresh batteries or the optional power-supply unit when connecting the camera to your computer.

A very safe and comfortable means of transferring data is the use of CompactFlash™ card readers that are connected to the USB terminal or a PC or Macintosh.

This is how it works:

How to handle batteries

- Battery power drops at low temperatures. When shooting in a cold environment, keep fresh batteries ready, preferably in a warm pocket inside your clothing.
 - The power of rechargeable NiMH batteries drops more slowly, so that these are therefore preferable. Even after use at low temperatures, they will regain their normal power as soon as they have been restored to normal temperature.
 - Remove the batteries if you are planning not to use your camera for a certain length of time. Leaking batteries may damage the battery compartment.
 - With alkaline batteries, the battery-status indicator may signal less power than is actually available. When you use the camera, the icon disappears.
- Caution! Batteries may get hot during use and should therefore be handled with care when removing or replacing them. Switch the camera off and wait long enough for the batteries to cool down..

Ambient temperature and operating conditions

- Your camera has been designed for operation at temperatures from 0°C to 40°C.
- Never keep your camera in a place where it might be exposed to very high temperatures, for example in the glove compartment of a car.
- Do not expose your camera to extreme humidity.
- To avoid condensation, keep your camera in a light-tight plastic bag before taking it from a cold environment to a warm room. Leave it to adopt room temperature before taking it out of the bag.

Tips and Tricks

Notes on the use of CompactFlash™ cards

In the following cases, data may be lost or your memory card may be damaged:

- If the card is used improperly.
- If the card is near electrostatic discharges or electrical fields.
- If the card is removed or the power supply interrupted while the camera is accessing the card (reading, deleting).
- If the card is left unused over a prolonged period. With time, the data stored on a CompactFlash™ card gets weaker. After prolonged nonuse, the data on the card may therefore be impossible to recover.
- Formatting your card will irreversibly delete all the data stored on it.
- The storage capacity of CompactFlash™ cards diminishes with heavy use. Should this be noticed, buy a new card.
- Keep your memory card away from electrical fields and static charges.
- Do not bend the card, nor expose it to heavy impact
- Do not touch the electrical contacts with your fingers or a metallic object.
- Protect the card from humidity, heat and direct sunlight.
- Keep the card away from powerful magnets, such as in loudspeakers.
- Keep the card in its case when not using it.

Care of TFT screen

- The TFT screen of the camera is a highly precise component with a pixel failure rate of less than 0.02%.
- Do not subject the surface of the screen to any pressure whatsoever, since this might result in permanent damage.
- At low temperatures, the screen may temporarily darken. However, it will go back to normal as soon as normal temperature is restored.
- Should the screen surface be dirty, first blow away dust and sand, then use a soft, dry and clean cloth.
- Should the screen flicker permanently or fail to work, it will have to be replaced.

Taking care of your digital camera

- Your camera is sensitive to shock and should therefore be handled with care.
- Switch the camera off for carrying, and remove the batteries.
- Your camera is neither splashwater-proof, nor watertight.
- Inserting or removing batteries or memory cards with wet hands may result in damage.
- Careless use of the camera at the beach or near water may damage the camera.
- Do not expose the camera to direct sunlight for prolonged periods. Never point the lens directly at the sun, or the CCD sensor might be damaged.

Cleaning your digital camera


- To clean your camera and lens, use a soft, clean and dry cloth. First blow off sand or dust. Do not try to wipe it off right away, since this might cause scratches.
- To clean the lens surface, first use a blower brush to remove dust or sand, then apply some lens cleaning fluid to a clean cloth.
- Never use organic solvents to clean your camera.
- Avoid touching the lens as much as possible.

Questions and service


- Before important events, carefully check all functions of the camera or make test shots.
- We will not be responsible for any damage caused by malfunctioning of the camera.
- If you have any questions regarding your camera and before sending it for repairs, please ask your dealer.

Troubleshooting

If you have any trouble with your camera, try to solve the problem with the aid of the following table. Should this be unsuccessful, please consult your dealer.

Problem	Cause	Remedy	Page
Automatic focusing impossible (green focus lamp blinking rapidly – approx. 8x per second) when shutter release is depressed halfway.	Are you trying to focus on a subject that is unsuitable for AF?	Use focus lock or focus manually.	24
	Are you trying to shoot a subject that is less than 40 cm away – in macro mode –	Step back to maintain a distance of, at least, 40 cm. Use macro mode for subjects that are between 8 cm and 40 cm away.	24
Shutter does not release.	Is camera switched off?	Turn control dial to  and switch camera on.	31
	Is camera set to Record?		
	Does green focus lamp blink slowly (approx. twice per second) and does “Recording” blink on LCD screen?	Your image is being saved on CF card. Wait until saving is completed and neither the focus lamp nor “Recording” blink.	32



Troubleshooting

Problem	Cause	Remedy	Page
Shutter does not release.	CF card is full.	Delete images you do not wish to keep or load pictures down to PC. Alternatively, insert another CF card with sufficient free memory.	51
No live image on screen.	Is camera switched on?	Turn control dial to  and switch camera on.	32
	Are batteries spent?	Replace all four batteries or use the AC adapter (sold separately).	18
	Have batteries been inserted with wrong polarity?	Reload them with proper polarity.	18
	Is LCD screen switched off?	Press DISPLAY button to switch it on.	22
	Camera has turned off automatically to save power.	Turn it on again.	19

Troubleshooting

Problem	Cause	Remedy	Page
Shutter does not release.	Is there a CF card in the camera?	If NO CARD appears on the LCD screen and CF on the data monitor, there is no CF card loaded. Insert a card.	21
	Green focus lamp blinks slowly (about twice per second), and PLAYBACK blinks on screen.	Camera is reading data from CF card. Wait until it has finished and the focus lamp as well as PLAYBACK stop blinking.	24
Flash picture comes out underexposed.	Was your subject within flash range?	Make sure your subject is within range of the built-in flash unit: 0.4 – 3 m.	33

Troubleshooting

Problem	Cause	Remedy	Page
Zoom playback does not work.	Was the picture taken with digital zoom?	Pictures taken with digital zoom cannot be played back in zoom mode.	26
All images are over or underexposed.	Did you use exposure compensation?	Reset exposure compensation to zero.	38
Lens moves out, but data monitor remains blank, and camera does not work.	Does the battery icon  blink?	(Display goes dead after five seconds.) If the battery icon  blinks, the display will go dead after five seconds, while the lens moves out. Replace the batteries.	18
Image file damaged.	Did you remove your CF card while it was accessed by the camera?	Never remove your CF card while the green focus lamp is blinking slowly after exposure (about twice per second).	21
Camera does not work properly.	Remove the batteries and replace them. If the camera malfunctioned while it was powered by AC, pull the plug from the camera and reinsert it. Then switch the camera on again. If the camera cannot be switched off, a defective CF card is the likely cause. In this case, format your CF card externally in a PC after loading down its data onto the computer.		

Camera

CCD:	1/1.8-inch CCD (4:3) with 3.87 megapixels (1704 x 2272), ISO 100/21°
Lens:	3x zoom lens 8-24mm f/3.4-3.6 (38-114mm in 35mm terms); 9 elements in 6 components, max. resolution 160 lp/mm, focusing from 0.4 m – infinity, macro mode from 0.08 m (object field 4x6 cm)
Shutter:	2 – 1/500 s; min. shooting interval 6 s, release lag 1.5 s
Exposure control:	Programmed AE with center-weighted or spot metering
Camera TFT screen:	1.8-inch TFT color LCD with 220x220 pixels
Storage medium:	Type I CompactFlash™ card
Image files:	24-bit RGB, Exif 2.1 (DCF), DPOF-compatible

Shooting modes

Mode:	Single frame, continuous shooting, 16-image multishot, self-timer
Self-timer:	Delay approx. 10 s

Built-in flash unit

Recycling time:	approx. 8 s for fill flash
Flash modes:	Autoflash, fill flash, flash off, autoflash with red-eye reduction (default setting), slow sync; flash disabled in macro mode

Interfaces

Video Out:	Composite signal, PAL, H-resolution 220 lines
PC interface:	USB terminal (Universal Serial Bus) for PC and Macintosh

Power sources

Batteries:	Four size AA alkaline batteries or rechargeable NiCd or NiMH batteries
External power source:	AC power-supply unit (DC terminal in camera)
Operating temperature:	0°C to 40°C, max. 85% rel. humidity (non-condensing)

Dimensions and weight

Dimensions (wxhxd):	116 x 73 x 62 mm (4.57 x 2.87 x 2.44 „) – without protruding parts
Weight:	approx. 280 g (without batteries and CF card)

All data at time of going to print, subject to change without notice.

System requirements for Windows®

- For Windows® 98/98SE/2000Prof./Me /XP
- 16MB RAM, preferably 32 MB
- 110 MB free disk space
- VGA color monitor
- CD-ROM drive
- 3.5" diskette drive
- USB and Video Out terminals

System requirements for iMac, iBook, G3 blue & white series, G4 series

- Mac OS 8.6 / 9 / 9.0.2 – preferably 9.0.4
- 32MB RAM or higher
- 110 MB free disk space
- VGA color monitor
- CD-ROM drive
- USB and Video Out terminals

All data at time of going to print, subject to change without notice.

Transferring Pictures to your Computer

- 1) Install the drivers on your computer by following the instructions contained in the User's Guide. Be sure that your camera is NOT connected to the computer while the installation is in process.
- 2) After the driver installation has been completed, connect the camera to the computer using the USB cable provided in the camera box.
- 3) Turn the rotary dial to PC.
- 4) Turn the camera on by sliding and holding the Power button for a few seconds. "USB" in the LCD indicates that the camera is properly connected. If "USB" does not appear in the LCD, check that the USB cable is securely connected and the rotary dial is aligned between PC and the line guide on the camera.
- 5) The first time you connect the camera to the computer, the Install Hardware Device screen will appear. Click on Next throughout the installation. At the prompt click on Finish to complete the installation.
- 6) An icon will automatically be created on your desktop.
- 7) Click on the "4330Z" Icon to view your images.
- 8) Select the pictures you would like to save to your computer by clicking on the pictures while holding down the Shift key. A red border indicates the picture has been selected. Click on the Computer Icon (Save to HD) to download your pictures. You can select the location to which you would like to save your pictures.

Note: You may also use the Adobe Photo Editing software that comes with your camera. Install the software on your computer insuring that your camera is NOT connected to the computer while the installation is in process. An icon will automatically be created on your desktop. After connecting the camera to the computer, click on the Adobe icon and follow the on screen directions.

WINDOWS XP USERS:



When this window appears, click [Continue Anyway] to continue installation.

Technical Support Hot Line:

Toll Free In the USA & Canada

1-866-522-6372

Toll Free In Europe

UK: 0800-169-6482

BELGIUM: 0800-787-57

FRANCE: 0800-917-599

GERMANY: 0800-1800-563

SPAIN: 900-973-195

ITALY: 800-781-883

All Other Countries - Toll

31-53-482-9779