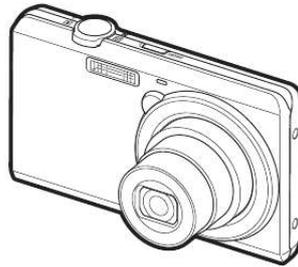You can read the recommendations in the user guide, the technical guide or the installation guide for CASIO EXILIM EX-ZS10. You'll find the answers to all your questions on the CASIO EXILIM EX-ZS10 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual CASIO EXILIM EX-ZS10
User guide CASIO EXILIM EX-ZS10
Operating instructions CASIO EXILIM EX-ZS10
Instructions for use CASIO EXILIM EX-ZS10
Instruction manual CASIO EXILIM EX-ZS10

CASIO.
E
Digital Camera
EX-ZS10
User's Guide

Thank you for purchasing this CASIO product.
• Before using it, be sure to read the precautions contained in this User's Guide.
• Keep the User's Guide in a safe place for future reference.
• For the most up-to-date information about this product, visit the official EXILIM Website at http://www.exilim.com/

EXILIM

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http://yourpdfguides.com/dref/3922690

Manual abstract:

*Digital camera Rechargeable lithium ion battery (NP-120) USB-AC adaptor (AD-C53U) To attach the strap to the camera * The shape of the power cord plug varies according to country or geographic area. 1 2 Strap Attach strap here. Power cord USB cable AV cable CD-ROM Basic Reference 2 Read this first! · The contents of this manual and the bundled Basic Reference are subject to change without notice. · The contents of this manual have been checked at each step of the production process. Feel free to contact us if you notice anything that is questionable, erroneous, etc. · Any copying of the contents of this User's Guide, either in part or its entirety, is forbidden. @@is forbidden under copyright laws. · CASIO COMPUTER CO., LTD. @@· CASIO COMPUTER CO.*

, LTD. @@· CASIO COMPUTER CO., LTD. @@· Note that the example screens and product illustrations shown in this User's Guide may differ somewhat from the screens and configuration of the actual camera. LCD Panel The liquid crystal panel of the monitor screen uses high-precision technology that provides a pixel yield in excess of 99.

99%. This means that some very small number of pixels may not light or may remain lit at all times. This is due to the characteristics of the liquid crystal panel, and does not indicate malfunction. Take a few test shots Before shooting your final image, shoot a test shot to ensure that the camera is recording correctly. 3 Contents Unpacking .

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. . (EyB/AV] port (pages 17, 19, 69, 80, 88, 98) (pages 28, 45, 68, 68) 2 Shutter button (page 28) 3 Flash (page 39) 4 [ON/OFF] (Power) (page 26) 5 Front lamp (pages 41) 6 Lens 7 Microphone (pages 49, 77) bo[SET] button (page 34) bp[ ] (Delete) button (page 31) bq[p] (PLAY) button (pages 26, 30) brControl button ([8] [2] [4] [6]) (pages 12, 31, 34, 39, 55) bsMonitor screen (pages 9, 12) Bottom btBattery/memory card slots (pages 15, 24, 122, 124) ckTripod hole detects the person's face for beautiful portraits every time. See page 42 for more information. Anti Shake The camera corrects automatically to minimize image blur due to camera movement and high speed subject movement.

See page 60 for more information. BEST SHOT Simply select the sample scene you want and the camera sets up automatically. Then all you need to do is press the shutter button for perfect images. See page 52 for more information. 14 Quick Start Basics First, charge the battery prior to use.

Note that the battery of a newly purchased camera is not charged. Perform the steps below to load the battery into the camera and charge it. · Your camera requires a special CASIO rechargeable lithium ion battery (NP-120) for power. Never try to use any other type of battery. To load the battery 1. Open the battery cover. Pressing the battery cover, slide it in the direction indicated by the arrow. 2 1 Stopper 2. Load the battery. With the EXILIM logo on the battery facing downwards (in the direction of the lens), hold the stopper next to the battery in the direction indicated by the arrow as you slide the battery into the camera.

Press the battery in until the stopper secures it in place. Battery contacts EXILIM logo Front Back 3. Close the battery cover. Pressing the battery cover against the camera, slide it closed. · For information about how to replace the battery, see page 122. 1 2 15 Quick Start Basics Charge the Battery You can use either of the two following methods to charge the camera's battery. · USB-AC adaptor · USB connection to a computer . To charge with the USB-AC adaptor 1. Turn off the camera. Check to make sure that the camera's monitor screen is blank.

If it isn't, press [ON/OFF] (Power) to turn off the camera. [ON/OFF] (Power) 2. After connecting the supplied USB cable to the USB-AC adaptor, plug the adaptor into a household power outlet. USB cable (included with camera) USB USB port Power cord USB-AC adaptor 16 Quick Start Basics 3. Connect the USB cable to the camera.

The back lamp should light red, indicating that charging has started. The back lamp will go out when charging is complete. It takes about 110 minutes to achieve a full charge. Charging may take longer depending on charging conditions. USB-AC adaptor [USB/AV] port Small connector USB cable (included with camera) Making sure that the mark on the USB cable connector is towards the lens side, connect the cable to the camera.

Back Lamp Operation Lamp Status Lit Red Flashing Red Off Description Charging Abnormal ambient temperature, USB-AC adaptor problem, or battery problem (page 122) Charging complete Back lamp 4. After charging is complete, disconnect the USB cable from the camera and then unplug the adaptor from the power outlet. 17 Quick Start Basics . To charge using a USB connection to a computer The battery loaded in the camera is charged whenever the camera is connected directly to a computer with the USB cable. · Depending on the setup of your computer, you may not be able to charge the camera's

battery over a USB connection. If this happens, use of the USB-AC adaptor that comes with the camera is recommended. 1. Turn off the camera. Check to make sure that the camera's monitor screen is blank. If it isn't, press [ON/OFF] (Power) to turn off the camera.

[ON/OFF] (Power) Monitor screen IMPORTANT! · If you connect the camera to a computer for the first time after you purchase it while the camera is turned on, the computer will enter a camera recognition operation. If this happens, perform the procedure on page 87 or 97. After the computer recognizes the camera, turn off the camera. 18 Quick Start Basics 2. With your computer turned on, connect the camera to it. The back lamp should light red, indicating that charging has started. The back lamp will go out when charging is complete. It takes about 130 minutes to achieve a full charge. Charging may take longer depending on charging conditions. USB port USB cable (included with camera) Large connector [USB/AV] port Small connector Making sure that the mark on the USB cable connector is towards the lens side, connect the cable to the camera.

Back Lamp Operation Lamp Status Lit Red Flashing Red Off Description Charging Abnormal ambient temperature, charging taking abnormally long, or battery problem (page 122) Charging complete Back lamp 3. After charging is complete, disconnect the USB cable from the camera and then from the computer. 19 Quick Start Basics NOTE · Even if you turn on the camera, the battery will continue to charge if there is a USB connection with a computer. In this case, however, back lamp operation will change as described below. Back Lamp Operation Lamp Status Lit/Flashing Amber Flashing Red Lit Green Description Charging Abnormal ambient temperature, charging taking abnormally long, or battery problem (page 122) Charging complete IMPORTANT! · Charging is not performed while the connected computer is in the hibernate mode.

·A charging error can occur immediately after charging begins or some time after charging begins. A charging error is indicated by the back lamp flashing red. Other Charging Precautions · With the two charging methods described above, you can charge the camera's battery (NP-120) without removing it from the camera. You also can charge the battery using an optionally available charger unit (BC-120L). Never use any other type of charger device. Attempting to use a different charger can result in unexpected accident. · A battery that is still warm due to normal use may not charge fully. Give the battery time to cool before charging it. · A battery discharges slightly even when it is not loaded in the camera. Because of this, it is recommended that you charge the battery immediately before you need to use it. · Charging the camera's battery may cause interference with TV and radio reception. If this happens, plug the charger into an outlet that is further away from the TV or radio. · Actual charging time depends on current battery capacity and charging conditions. · Do not use the USB-AC adaptor with any other device. 20 Quick Start Basics Checking Remaining Battery Power As battery power is consumed, a battery indicator on the monitor screen indicates remaining power as shown below.

Remaining Power Battery Indicator Indicator Color Cyan High * * Amber * * Red Low * * Red indicates battery power is low. Charge the battery as soon as possible. Recording is not possible when is indicated. Charge the battery immediately. · The level shown by the battery indicator may change when you switch between the REC mode and PLAY mode. · Leaving the camera for about 30 days with no power supplied while the battery is dead will cause its date and time settings to be cleared. A message telling you to configure time and date settings will appear the next time you turn on the camera after restoring power. When this happens, configure date and time settings (page 109). · See page 140 for information about battery life and number of shots. Battery Power Conservation Tips · When you do not need to use the flash, select ? (Flash Off) for the flash setting (page 39).
· Enable the Auto Power Off and the Sleep features to protect against wasting battery power when you forget to turn off the camera (pages 111, 111). 21 Quick Start Basics Configuring Basic Settings the First Time You Turn On the Camera The first time you load a battery into the camera, a screen appears for configuring the display language, date, and time settings. Failure to set the date and time correctly will cause the wrong date and time data to be recorded with images. IMPORTANT! · A screen for language selection will not appear in step 2 of the procedure below if you purchased a camera intended for the Japanese market. To change the display language from Japanese in this case, use the procedure under "Specifying the Display Language (Language)" (page 110).
Note that a version of this manual in the language you select may not be included with a camera intended for the Japanese market. · Camera models sold in certain geographic areas may not support display language selection. 1. 2. 3.
Press [ON/OFF] (Power) to turn on the camera. Use [8], [2], [4], and [6] to select the language you want and then press [SET]. [ON/OFF] (Power) SET [0] (Movie) Use [8] and [2] to select a date style and then press [SET]. Example: July, 10, 2012 YY/MM/DD * 12/7/10 DD/MM/YY * 10/7/12 MM/DD/YY * 7/10/12 4. Set the date and the time. Use [4] and [6] to select the setting you want to change and then use [8] and [2] to change it. To switch between 12-hour and 24-hour format, press [0] (Movie). 5. After setting the date and time, use [4] and [6] to select "Apply" and then press [SET]. 22 Quick Start Basics If you make a mistake configuring display language, date, or time settings with the above procedure, refer to the following pages for information about how to correct the settings.

Display language: Page 110 Date and time: Page 109 NOTE · Each country controls its local time offset and the use of summer time, and so they are subject to change. · Removing the battery from the camera too soon after configuring time and date settings for the first time can cause the settings to be reset to their factory defaults. Do not remove the battery for at least 24 hours after configuring settings. Preparing a Memory Card Though the camera has built-in memory that can be used to store images and movies, you probably will want to purchase a commercially available memory card for greater capacity. The camera does not come with a memory card. Images recorded while a memory card is loaded are saved to the memory card. When no memory card is loaded, images are saved to built-in memory. · For information about memory card capacities, see page 136. Supported Memory Cards SD Memory Card SDHC Memory Card SDXC Memory Card Use one of the above types of memory card. B 23 Quick Start Basics To load a memory card 1.
Press [ON/OFF] (Power) to turn off the camera and then open the battery cover. Pressing the battery cover, slide it in the direction indicated by the arrow. 2 1 2. Load a memory card. Positioning the memory card so its front is facing upwards (towards the monitor screen side of the camera), slide it into the card slot all the way in until you hear it click securely into place.
Front Front Back 3. Close the battery cover. Pressing the battery cover against the camera, slide it closed. · For information about how to replace the memory card, see page 124. IMPORTANT! 1 2 · Never insert anything besides a supported memory card (page 23) into the memory card slot.
· Should water or any foreign object ever get into the card slot, immediately turn off the camera, remove the battery, and contact your retailer or nearest CASIO authorized service center. 24 Quick Start Basics To format (initialize) a new memory card You need to format a new memory card before using it for the first time. 1. 2. 3. 4. 5. Press [ON/OFF] (Power) to turn on the camera and then press [SET]. Use [8] and [2] to select the second Control Panel option from the bottom (MENU) and then press [SET] (page 34). Use [4] and [6] to select the "Set Up" tab.

Use [8] and [2] to select "Format" and then press [6]. Use [8] and [2] to select "Format" and then press [SET]. IMPORTANT! · Formatting a memory card that already has snapshots or other files on it, will delete its contents. Normally you do not need to format a memory card again. However, if storing to a card has slowed down or if you notice any other abnormality, re-format the card. · Be sure to use the camera to format a memory card. Formatting a memory card on a computer and then using it in the camera can slow down data processing by the camera.

In the case of an SD, SDHC, or SDXC memory card, formatting on a computer can result in non-conformity with the SD format, causing problems with compatibility, operation, etc. · Before formatting a new Eye-Fi card to use it for the first time, copy the Eye-Fi Manager install files to your computer. Do this before formatting the card.

B 25 Quick Start Basics Turning the Camera On and Off To turn power on To turn on power and enter the REC mode Press [ON/OFF] (Power) or [r] (REC). · The back lamp will light green momentarily and the lens will extend out of the camera (page 28). Press [p] (PLAY). · The back lamp will light green momentarily and an image currently stored in camera memory will appear on the monitor screen (page 30). [ON/OFF] (Power) To turn on power and enter the PLAY mode Back lamp · Take care to ensure that nothing is restricting or coming into contact with the lens as it extends.

Holding the lens with your hand so it cannot extend creates the [p] (PLAY) [r] (REC) risk of malfunction. · Pressing [p] (PLAY) while in the REC mode switches to the PLAY mode. The lens retracts about 10 seconds after switching modes. · The Sleep function or Auto Power Off (pages 111, 111) will turn off power automatically if you do not perform any operation for a preset amount of time. To turn off the camera Press [ON/OFF] (Power).

· You can configure the camera so power does not turn on when you press [r] (REC) or [p] (PLAY). You also can configure the camera to turn off when you press [r] (REC) or [p] (PLAY) (page 112). 26 Quick Start Basics Holding the Camera Correctly Your images will not come out clearly if you move the camera when you press the shutter button. When pressing the shutter button, be sure to hold the camera as shown in the illustration below, and keep it still by pressing your arms firmly against your sides as you shoot. Holding the camera still, carefully press the shutter button and take care to avoid all movement as the shutter releases and for a few moments after it releases. This is especially important when available lighting is low, which slows down the shutter speed. Horizontal Vertical Hold the camera so the flash is above the lens. NOTE · Take care that your fingers and the strap do not cover any of the areas indicated in the illustration. · To protect against accidentally dropping the camera, attach the wrist strap and make sure it is around your fingers or wrist while you are operating the camera. · Never swing the camera around by its strap.

· The supplied strap is intended for use with this camera only. Never use it for any other purpose. IMPORTANT! · Take care to ensure that your fingers are not blocking or are not too close to the flash. Fingers can cause unwanted shadows when using the flash. Flash Front lamp Lens Microphone 27 Quick Start Basics To shoot a snapshot 1. Press [r] (REC) to turn on the camera. The camera will enter the REC mode. Make sure R is on the display. If it isn't, see page 52. Snapshot mode icon Monitor screen Shutter button [r] (REC) Remaining Snapshot Memory Capacity (page 136) 2.

Point the camera at the subject. You can zoom the image, if you want. Zoom controller w Wide Angle z Telephoto 28 Quick Start Basics 3. Half-press the shutter button to focus the image. When focus is complete, the camera will beep, the back lamp will light green, and the focus frame will turn green.

Back lamp Focus frame Half-press Press lightly until the button stops. Beep, beep (Image is in focus.) When you half-press the shutter button, the camera automatically adjusts exposure and focuses on the subject it is currently pointed at. Mastering how much pressure is required for a half-press and a full-press of the shutter button is an important technique for goodlooking images. · The focus frame in the screen shots included in this manual is shown at ß.

Note that you can change the form of the focus frame, if you want (page 59). 4. Continuing to keep the camera still, press the shutter button the rest of the way down. This records the snapshot. Full-press Recording a Movie Press [0] (Movie) to start movie recording. Press [0] (Movie) again to stop movie recording. See page 48 for details. [0] (Movie) Snap (Image is recorded.) . If the image does not focus.

.. If the focus frame stays red and the back lamp is flashing green, it means that the image is not in focus (because the subject is too close, etc.). Re-point the camera at the subject and try to focus again. . If the subject is not in the center of the frame... "Focus lock" (page 58) is the name of a technique you can use when you want to shoot an image in which the subject to be focused on is not within the focus frame in the center of the screen.

29 Quick Start Basics . To track the movement of a moving subject Half-press the shutter button to follow and focus automatically on a moving subject. See "Ë Tracking" (page 61) for more information. Viewing Snapshots Use the following procedure to view snapshots on the camera's monitor screen. · For information about how to play back movies, see page 67.

1. Press [p] (PLAY) to enter the PLAY mode. · This will display one of the snapshots currently stored in memory. · Information about the displayed snapshot also is included (page 136). · You also can clear the information to [p] (PLAY) view only the snapshot (page 12).

· You can zoom in on the image by sliding the zoom controller towards z (page 68). If you are recording a snapshot that is very important to you, it is recommended that you zoom the image and check its details after recording it. 2. Use [4] and [6] to scroll between images. · Holding down either button scrolls at high speed. [6] [6] [4] [4] NOTE · Half-pressing the shutter button while in the PLAY mode or while a menu screen is displayed will switch directly to the REC mode. 30 Quick Start Basics Deleting Snapshots and Movies If memory becomes full, you can delete snapshots and movies you no longer need in order to free up storage and record more images. · In either the REC mode or PLAY mode, you can delete files simply by pressing [ ] (Delete). IMPORTANT! · Remember that a file (image) delete operation cannot be undone. [ ] (Delete) · Deleting an audio snapshot (page 77) deletes both the snapshot and the audio file.

· You cannot delete files while movie or audio recording is in progress. · The delete menu will not appear if you press [ ] (Delete) while "On" is selected for the camera's "Ü Disabled" setting (page 112). You can delete files only while "Off" is selected for "Ü Disabled". To delete a single file 1. 2. 3. Press [ ] (Delete). Use [4] and [6] to scroll through the files until the one you want to delete is displayed.

Use [8] and [2] to select "Delete" and then press [SET]. · To delete other files, repeat steps 2 and 3. · To exit the delete operation, press [ ] (Delete). 31 Quick Start Basics To delete specific files 1. 2. 3. Press [ ] (Delete). Use [8] and [2] to select "Delete Files" and then press [SET]. · This displays a file selection screen. Use [8], [2], [4], and [6] to move the selection boundary to the file you want to delete, and then press [SET]. · This will select the check box of the currently selected file. 4. 5. Repeat step 3 to select other files, if you want. After you are finished selecting files, press [ ] (Delete). Use [8] and [2] to select "Yes" and then press [SET]. · This deletes the files you selected. · To exit the delete operation, press [ ] (Delete). To delete all files 1. 2. 3. Press [ ] (Delete).

Use [8] and [2] to select "Delete All Files" and then press [SET]. Use [8] and [2] to select "Yes" and then press [SET] to delete all files. This will cause the message "There are no files" to appear. 32 Quick Start Basics Snapshot Shooting Precautions Operation · Never open the battery cover while the back lamp is flashing green. Doing so can result in the image you just shot being saved incorrectly, damage to other images stored in memory, malfunction of the camera, etc. · If unwanted light is shining directly onto the lens, shade the lens with your hand when shooting an image. Monitor Screen when Shooting Snapshots · Subject brightness conditions can cause monitor screen response to slow and can cause digital noise in the monitor screen image. · The image that appears on the monitor screen is for image composition. The actual image will be recorded at the quality set for the image quality setting (page 64). Shooting Indoors under Fluorescent Lighting · Minute flickering of fluorescent lighting can affect the brightness or color of an image.

Auto Focus Restrictions · Any of the following can make proper focus impossible. Solid color wall or other very low contrast subject Strongly back lit subject Very shiny subject Blinds or other subject with a repeating horizontal pattern Multiple subjects at varying distances from the camera Subject in a dark location Camera movement while shooting Fast-moving subject Subjects outside the focus range of the camera · If you cannot focus properly, try using focus lock (page 58) or Manual Focus (page 57). 33 Quick Start Basics Snapshot Tutorial Using the Control Panel The Control Panel can be used to configure camera settings. 1. In the REC mode, press [SET].

This will select one of the Control Panel icons and display its settings. [8] [2] [4] [6] Available settings Control Panel [SET] 1 2 3 4 5 6 7 8 9 2. Use [8] and [2] to select the setting you want to change. 1Snapshot image size/quality* (pages 35, 64) 2Movie image quality (page 38) 3Flash (page 39) 4Self-timer (page 41) 5Face Detection (page 42) 6Lighting (page 43) 7easy Mode (page 43) 8REC menu display (page 55) 9BEST SHOT scene selection (page 52) * Snapshot image quality cannot be changed using the Control Panel. 3.

4. 5. Use [4] and [6] to change the setting. If you want to configure another setting, repeat steps 2 and 3. After all of the settings are the way you want, press [SET]. This will apply the settings and return to the REC mode. If you selected "MENU", the REC menu will appear. If you selected "BS", the BEST SHOT scene menu will appear. · You can close the Control Panel by pressing [ ] (Delete). 34 Snapshot Tutorial NOTE · No icon is displayed for any Control Panel option (page 9) that is set to its initial default (reset) setting.

An icon will appear only if you change the setting of the corresponding Control Panel option. The following are the initial defaults for Control Panel options. · Flash: Auto Flash Self-timer: Off Face Detection: Off Lighting: Off · You also can configure settings other than those listed above (page 55). Changing the Image Size (Size) . Pixels A digital camera image is a collection of small dots called "pixels". The more pixels there are in an image, the more detail there will be. However, you generally can do with fewer pixels when printing an image (L size) through a print service, attaching an image to e-mail, when viewing the image on a computer, etc. Pixel . About image sizes The size of an image indicates how many pixels it contains, and is expressed as horizontal pixelsxvertical pixels. 10M (3648x2736) size image = Approximately 10 million pixels 3648* 2736* VGA (640x480) size image = Approximately 300,000 pixels 640* 480* * Unit: pixels 35 Snapshot Tutorial Image Size Selection Tips Note that larger images have more pixels, so they take up more memory space.

More detail, but takes up more memory. Best when you plan to print large-size prints (such as A3 size). Large Number of Pixels Small Number of Pixels Less detail, but takes up less memory. Best when you want to send images by e-mail, etc. · For information about image size, image quality, and number of images that can be stored, see page 136.

· For information about movie image size, see page 38. · For information about resizing existing snapshots, see page 76. 36 Snapshot Tutorial . To select the snapshot image size 1. 2.

3. In the REC mode, press [SET]. Use [8] and [2] to select the top Control Panel option (Snapshot Image Size). Use [4] and [6] to select an image size and then press [SET]. Suggested Print Size and Application Poster Print Poster Print HDTV Poster Print Good detail A3 Print 3.5"x5" Print E Mail Best when preserving memory capacity is relatively more important than image quality. Image files are smaller, which is better when attaching images to e-mail. However, images are relatively coarser. Good detail for better clarity even for images cropped (page 76) from the original Description Image Size (Pixels) 14M (4320x3240) 3:2 (4320x2880) 16:9 (4320x2432) 10M (3648x2736) 6M (2816x2112) 3M (2048x1536) VGA (640x480) · The initial factory default image size setting is "14M". · Selecting "3:2" records images with an aspect ratio of 3:2, which matches the standard aspect ratio of print paper.

· The letters "HDTV" stand for "High Definition Television". An HDTV screen has an aspect ratio of 16:9, which makes them wider than the usual 4:3 aspect ratio of television screens of the past. Your camera can record images that are compatible with the aspect ratio an HDTV screen. · You should regard the print paper sizes suggested here as guidelines only (200 dpi print resolution). 37 Snapshot Tutorial .

Specifying Movie Image Quality Movie image quality is a standard that determines the detail, smoothness, and clarity of a movie during playback. Shooting with the high-quality (HD) setting will result in better image quality, but it also shortens the amount of time you can shoot. 1. 2. 3.

In the REC mode, press [SET]. Use [8] and [2] to select the second Control Panel option from the top (Movie Image Quality). Use [4] and [6] to select the setting you want and then press [SET]. Frame Rate 30 frames/second 30 frames/second Image Quality (Pixels) Approximate Data Rate HD STD 1280x720 30.2 Megabits/second 640x480 10.

6 Megabits/second · The 16:9 aspect ratio is available when "HD" is selected as the image quality. · Memory capacity (Movie recording time you can shoot) will be affected by the quality settings you configure (page 137). B 38 Snapshot Tutorial Using Flash (Flash) 1. 2. In the REC mode, press [2] ( ) once. Flash Use [4] and [6] to select the flash setting you want and then press [SET]. · If there are no indicators on the monitor screen, you can cycle through the flash modes by pressing [2] ( ). You can turn display information on or off by pressing [8] (DISP) (page 12). > Auto Flash ? Flash Off < Flash On ¥ Red Eye Reduction [2] ( ) Flash fires automatically in accordance with exposure (amount of light and brightness) conditions. Flash does not fire. Flash always fires. This setting can be used to brighten a subject that normally comes out dark due to daylight or backlight (daylight synchro flash). Flash fires automatically. This type of flash can be used to reduce the chance of redness in the subject's eyes. 3.

Press the shutter button to shoot. Back lamp Flashes orange while the flash is charging to indicate that image recording is disabled. · You will not be able to take another flash snapshot until the lamp stops flashing orange, which indicates that charging is complete. < indicates the flash will fire. · For information about Flash Range, see page 139. 39 Snapshot Tutorial NOTE · Take care so your fingers and the strap do not block the flash. · The desired effect may not be obtained when the subject is too far away or too close. · Flash charging time (page 139) depends on operating conditions (battery condition, ambient temperature, etc.). · Shooting with flash turned off when lighting is dim results in a slow shutter speed, which can cause image blur due to camera movement. Under such conditions, secure the camera with a tripod, etc. · With red eye reduction, the flash is fired automatically in accordance with exposure. It does not fire in areas where lighting is bright. · The presence of outdoor sunlight, fluorescent lighting, or some other light source can cause abnormal image colors. · Select ? (Flash Off) for the flash setting when shooting in areas where flash photograph is prohibited.

Red-eye Reduction Using the flash to shoot at night or in a dimly lit room can cause red spots inside the eyes of people who are in the image. This is caused when the light from the flash reflects off of the retina of the eye. When red-eye reduction is selected as the flash mode, the camera fires a pre-flash to cause the irises in the eyes of any people in the image to close, which reduces the chance of red eye. Note the following important points when using red-eye reduction. · Red-eye reduction does not work unless the people in the image are looking directly at the camera (flash).

· Red-eye reduction may not work very well if the subjects are located far away from the camera. 40 Snapshot Tutorial Using the Self-timer (Self-timer) With the Self-timer, pressing the shutter button starts a timer. The shutter is released and the image is shot after a fixed amount of time. 1. 2. 3. In the REC mode, press [SET]. Use [8] and [2] to select the fourth Control Panel option from the top (Self-timer). Use [4] and [6] to select the setting you want and then press [SET]. ,, 10sec Self-timer , 2sec Self-timer 10-second Self-timer 2-second Self-timer · When shooting under conditions that slow down the shutter speed, you can use this setting to prevent image blur due to camera movement.

Shoots three images: one image 10 seconds after the shutter button is pressed, and the next two images as soon as the camera is ready after shooting the previous image. How long it takes for the camera to get ready to shoot depends on the image size and quality settings, whether or not a memory card is loaded in the camera, and the flash charge condition. " X3 Self-timer (Triple Self-timer) Self-timer Off Turns off the Self-timer. · The front lamp flashes while the Self-timer countdown is in progress. · You can interrupt an ongoing Self-timer countdown by pressing [SET]. Front lamp NOTE · The Self-timer cannot be used together with the following features. CS, some BEST SHOT scenes · The Triple Self-timer cannot be used together with the following features. Movie, easy Mode, some BEST SHOT scenes 41 Snapshot Tutorial Using Face Detection (Face Detection) When shooting people, the face detection feature detects the faces of up to ten individuals and adjusts focus and brightness accordingly. 1. 2.

3. 4. 5. 6. In the REC mode, press [SET].

Use [8] and [2] to select the fifth Control Panel option from the top (Face Detection). Use [4] and [6] to select "G Face Detection: On" and then press [SET]. Point the camera at the subject(s). The camera will detect human faces and display a frame around each one. Half-press the shutter button. The camera will focus and the frames around the faces it focuses on will turn green. Face Detection icon Press the shutter button the rest of the way down. IMPORTANT! · · · · The camera performs center focus if it cannot detect a face. The only focus mode available while face detection is enabled is Auto Focus (AF). Face detection may take a bit longer when you hold the camera sideways. Detection of the following types of faces is not supported. Face that is obstructed by hair, sunglasses, a hat, etc., or a face in dark shade A profile or a face that is at an angle A face that is very far away and small, or very close and large A face in an area that is very dark The face of a pet or some other non-human subject · Face detection cannot be used in combination with any of the following features. Some BEST SHOT scenes Movie Recording · The AF area setting (page 61) is ignored while face detection is enabled. 42 Snapshot Tutorial Optimizing Image Brightness (Lighting) You can use this setting to optimize the balance between bright areas and dark areas when shooting images.

1. 2. 3. In the REC mode, press [SET]. Use [8] and [2] to select the sixth Control Panel option from the top (Lighting).

Use [4] and [6] to select the setting you want and then press [SET]. Ï On Ì Off Performs brightness correction. When this option is selected, it takes longer for the image to be stored after the shutter button is pressed. Does not perform brightness correction. Using the easy Mode (easy Mode) The easy mode eliminates troublesome setups and simplifies snapshot recording.

This mode is recommended for those who are new to digital imaging. 1. 2. 3. 4.

In the REC mode, press [SET]. Use [8] and [2] to select the third option from the bottom in the Control Panel (easy Mode). Use [4] and [6] to select "| ON" and then press [SET]. This enters the easy mode. Point the camera at the subject.

If the camera detects a human face, it continually focuses on the face (page 42). If the camera does not detect a face, it continually focuses on the center of the screen. · The camera will focus and focus frame will turn green. 5. When you are ready to shoot, press the shutter button. This records the snapshot. IMPORTANT! · Vibration and noise will occur due to lens operation. This does not indicate malfunction. 43 Snapshot Tutorial . easy Mode Control Panel In the easy mode, the Control Panel provides you with access to four setting items: image size, flash, self-timer, and easy Mode.

There is also a "MENU" option, which you can select to display a menu screen for configuring image quality (page 64) and Setup tab (page 106) settings. · In the easy mode, the Quality tab can be used to configure the "Movie Quality" and "Lighting" settings only. · The settings of menu options that appear on the normal REC menu but not on the easy mode REC menu are automatically fixed at their optimum settings. These fixed settings do not affect normal REC menu settings. 1. In the easy mode, press [SET]. In the easy mode, the characters that appear on the setting screen are larger than they are in other modes. 2. Use [8] and [2] to select the setting you want to change. 1 2 3 4 5 1Image size (page 35) 2Flash (page 39) 3Self-timer (page 41) 4easy Mode (page 43) 5REC menu display(page 55) 3.

Use [4] and [6] to change the setting. Setting: Available Options: Image Size Flash Self-timer easy Mode MENU ã* / & / ! > (Auto)* / < (On) / ? (Off) · (10-second self-timer) / l* k / l* Quality tab/Set Up tab · An asterisk (*) indicates reset default settings. · The following are explanations of the easy Mode. k: Stays in easy Mode. l: Exits easy Mode to the normal REC mode.

44 Snapshot Tutorial 4. Press [SET]. This will apply your setting(s) and display the easy Mode viewfinder screen, indicating the camera is ready to shoot. If you selected "MENU" in step 2, pressing [SET] will display the REC menu. See "Advanced Settings" (page 55) for details about configuring its settings. · Pressing [ ] (Delete) will exit the Control Panel. Shooting with Zoom Your camera provides you with 5X optical zoom (that changes the lens focal distance), which can be used in combination with digital zoom (that digitally processes the center portion of the image to enlarge it) for total zoom capabilities of 5X to 79.7X. The image deterioration point depends on the image size (page 47). 1. In the REC mode, slide the zoom controller to zoom. w Wide Angle z Telephoto Zoom controller w (Wide Angle) : Reduces the size of the subject and broadens the range. z (Telephoto) : Enlarges the subject and narrows the range. 2. Press the shutter button to shoot the image.

IMPORTANT! · Digital zoom is disabled while time stamping (page 109) is turned on. 45 Snapshot Tutorial NOTE · The higher the digital zoom factor, the coarser the recorded image. Note that the camera also has a function that lets you record using digital zoom without image deterioration (page 47). · Use of a tripod is recommended to protect against image blur due to camera movement when shooting with telephoto. · Performing a zoom operation changes the lens aperture. · Digital zoom only is available during movie recording. You can adjust the optical zoom setting before you press the shutter button to start movie recording. Optical Zoom and Digital Zoom Switch Point If you hold the zoom controller towards z (Telephoto), the zoom operation will stop when the optical zoom factor reaches its maximum. Momentarily releasing the zoom controller and then holding it again towards z (Telephoto) will switch to digital zoom, which you can use to set an even higher zoom factor. · During zoom, a zoom bar on the monitor screen shows the current zoom setting.

Image deterioration indicator Focusing range (Displayed for Auto Focus, Macro Focus, and Manual Focus.) Zoom bar Undeteriorated image quality range Deteriorated image quality range 1X Optical/digital zoom switch point * 5X optical zoom point 5X to 33.8X 20X to 79.7X Zoom pointer (Indicates current zoom.) Image deterioration 46 Snapshot Tutorial · The image deterioration point depends on the image size (page 35).

The smaller the image size, the higher the zoom factor you can use before reaching the image deterioration point. · Though digital zoom generally causes a deterioration of image quality, some digital zoom without image deterioration is possible with image sizes of "10M" and smaller. The range in which you can use digital zoom without image deterioration is indicated on the display. The deterioration point depends on the image size. Image Size 14M 3:2 16:9 10M 6M 3M VGA Maximum Zoom Factor 20.

0X 20.0X 20.0X 23.7X 30.7X 42.2X 79.7X Undeteriorated zoom limit 5.0X 5.0X 5.0X 5.

9X 7.7X 10.6X 33.8X 47 Snapshot Tutorial Recording Movie Images and Audio To record a movie 1. 2. Configure the quality setting for the movie (page 38). The length of the movie you can record will depend on the quality setting you select. In the REC mode, point the camera at the subject and then press [0] (Movie). This will start recording and display Y on the monitor screen. Movie recording includes monaural audio.

· Immediately after you press [0] (Movie), the camera will focus automatically on the subject in the center of the monitor screen. After this, focus is fixed while movie recording is in progress. Remaining recording time (page 137) [0] (Movie) Recording time 3. Press [0] (Movie) again to stop recording. · Each movie can be up to 29 minutes long.

Movie recording stops automatically after 29 minutes of recording. Movie recording also will stop automatically if memory becomes full before you stop movie recording by pressing [0] (Movie). Shooting with BEST SHOT With BEST SHOT (page 52), you can select the sample scene that matches the type of movie you are trying to shoot and the camera will change its setup accordingly, for beautiful movies every time. Selecting the BEST SHOT scene named Night Scene, for example, will configure the camera so night scenes appear clearer and brighter.

48 Recording Movie Images and Audio NOTE · Spending a long time using movie recording will cause the camera to become slightly warm to the touch. This is normal and does not indicate malfunction. · The camera also records audio. Note the following points when shooting a movie. Take care that the microphone is not blocked by your fingers, etc. Good recording results are not possible when the camera is too far away from what you are trying to record. Microphone Operating camera buttons while shooting can cause button noise to be picked up in the audio. · Shooting a very bright subject can cause a vertical band or a pink cast on the monitor screen image. This does not indicate malfunction. · When using the camera's built-in memory or certain types of memory cards, it can take too much time to record data, which can result in breaks in the image and/or audio. This condition is indicated by » and Y flashing on the monitor screen.

To avoid loss of movie frames, use of a memory card with a maximum transfer speed of at least 10MB per second is recommended (page 125). · Only digital zoom can be used for zooming during movie recording. Since optical zoom is not possible while recording a movie, zoom as required before pressing [0] (Movie) to start recording. · The effects of camera movement in an image become more pronounced when you shoot close up or with a large zoom factor. Because of this, use of a tripod is recommended under these conditions. · Focus is fixed while movie recording is in progress. Shooting a Snapshot while Shooting a Movie 1. While a movie is being recorded, press the shutter button. Movie recording continues after the snapshot is recorded. NOTE · You can use [2] ( ) while shooting a movie to change the flash mode setting.

· Movie recording is interrupted for a few seconds at the point where a snapshot is recorded. · Shooting a snapshot during movie recording is not possible when shooting with any of the following. Some BEST SHOT scenes easy Mode 49 Recording Movie Images and Audio Recording Audio Only (Voice Recording) Voice Recording lets you record audio only, without a snapshot or movie. · For information about Voice Recording capacities, see page 137. 1. 2. 3. In the REC mode, press [SET]. Use [8] and [2] to select the bottom Control Panel option (BS) and then press [SET] (page 34). Use [8], [2], [4], and [6] to select the "Voice Recording" scene and then press [SET].

This causes `to appear on the monitor screen. 4. Press the shutter button to start recording. · The back lamp flashes green while recording is in progress. · Pressing [SET] during recording will insert a marker into the recording. During playback, you will be able to jump to the markers in the recording. Recording time 5. Press the shutter button again to stop audio recording. time · To create another audio recording file, repeat steps 4 and 5. · To turn off Voice Recording, press [SET], use [8] and [2] to select the bottom Control Panel option (BS), and then select R (Auto).

Remaining recording NOTE · You can use [8] (DISP) during audio recording to toggle the monitor screen on and off. · When monitor screen contents are turned off, selecting the "Voice Recording" scene will cause the monitor screen to turn off immediately (page 12). About audio data · Audio files can be played back on a computer with Windows Media Player or QuickTime. Audio Data: WAVE/IMA-ADPCM (WAV extension) 50 Recording Movie Images and Audio To play back an audio recording 1. In the PLAY mode, use [4] and [6] to display the Voice Recording file you want to play. `is displayed in place of an image for a Voice Recording file. 2. Press [0] (Movie) to start playback. · You can also start playback by selecting the second PLAY Panel item from the top (Playback Start) and pressing [SET] (page 71). Voice Recording Playback Controls Fast forward/fast reverse Play/pause Jump to marker Volume adjustment Monitor screen on/off Playback end [4] [6] [SET] While playback is paused, press [4] or [6] to jump to the next marker and then press [SET] to resume playback.

Press [2] and then press [8] [2] [8] (DISP) [0] (Movie) NOTE · See page 31 for information about deleting a voice recording file. 51 Recording Movie Images and Audio Using BEST SHOT What is BEST SHOT? BEST SHOT provides you with a collection of sample "scenes" that show a variety of different types of shooting conditions. When you need to change the setup of the camera, simply find the scene that matches what you are trying to achieve, and the camera sets up for it automatically. This helps to minimize the chance of ruined images due to poor exposure and shutter speed settings. Some Sample Scenes Portrait Scenery Night Scene Night Scene Portrait To shoot an image with BEST SHOT 1. 2. In the REC mode, press [SET]. Use [8] and [2] to select the bottom Control Panel option (BS) and then press [SET] (page 34). This will display a menu of BEST SHOT scenes. · The initial default selection is R (Auto).

Currently selected scene (with boundary) [8] [2] [4] [6] 3. Use [8], [2], [4], and [6] to move the boundary to the scene you want to select. [SET] Scene name Scene number · The scene menu has multiple pages. Use [8] and [2] to scroll between menu pages. · You can access information about the currently selected scene. See page 53 for details. · To return to normal snapshot recording, select Scene 1 R (Auto). 52 Using BEST SHOT 4. Press [SET] to configure the camera with the settings for the currently selected scene. This returns to the REC mode.

· The settings of the scene you selected remain in effect until you select a different scene. · To select a different BEST SHOT scene, repeat the above procedure from step 1. 5. Press the shutter button (if you are shooting a snapshot) or [0] (Movie) (if you are shooting a movie). NOTE · The BEST SHOT YouTube scene sets up the camera for recording movies that are optimized for uploading to YouTube. Movies recorded with the YouTube scene are stored in a special folder to make them easy to locate for uploading (page 104). . Using Scene Information Screen To find out more about a scene, select it with the boundary on the scene selection screen, and then slide the zoom controller in either direction. · To return to the scene menu, slide the zoom controller again. · To scroll between scenes, use [4] and [6].

· To configure the camera with the settings for the currently selected scene, press [SET]. 53 Using BEST SHOT . BEST SHOT Precautions · Some BEST SHOT scenes cannot be used while recording a movie. · For YouTube scene cannot be used while shooting a snapshot.

·The Voice Recording scene cannot be used while shooting a snapshot or recording a movie.
·Some scenes like Night Scene and Fireworks results in a slow shutter speed setting. Since a slow shutter speed increases the chance of digital noise in the image, the camera automatically performs a digital noise reduction process when either of these scenes is selected. This means that it will take a bit longer for the image to be saved which is indicated by the back lamp flashing green. Do not perform any key operation during that time. Also, it is a good idea to use a tripod to avoid image blur due to camera movement when shooting at slow shutter speeds.
·Your camera includes a sample scene that optimizes settings for auction site images. Depending on your camera model, the sample scene is named either "For eBay" or "Auction". Images you record using the auction site sample scene are stored in a special folder so you can easily find them on your computer (page 104). ·High Sensitivity The high sensitivity setting is disabled whenever the camera's flash fires. High sensitivity may not produce the desired results in very dark conditions. When shooting with slow shutter speeds, use a tripod to protect against blurring due to camera movement. Under certain lighting conditions, the camera will perform an automatic noise filtering operation to reduce digital noise in the image. This operation causes the camera to take longer than normal to save the image and be ready for the next shot. ·BEST SHOT scene images were not shot using this camera. ·Images shot using a BEST SHOT scene may not produce the results you expected due to shooting conditions and other factors.

·You can modify the camera settings that are made after you select a BEST SHOT scene. Note, however, that the BEST SHOT settings revert to their defaults when you select another BEST SHOT scene or turn off the camera. 54 Using BEST SHOT Advanced Settings The following are menu operations you can use to configure various camera settings. ·REC mode menu contents and operations are different from those in the PLAY mode. This section explains operations using the REC menu screen. See page 71 for information about PLAY menu screen operations. Using On-screen Menus . Example REC Menu Screen Operation [8] [2] [4] [6] 1. 2. In the REC mode, press [SET].
Use [8] and [2] to select the second Control Panel option from the bottom (MENU) and then press [SET] (page 34). This will display the REC menu screen. 3. 4. 5.
6. Use [4] and [6] to select the tab where the menu item you want to configure is located. Use [8] and [2] to select the menu item you want, and then press [6]. Use [8] and [2] to change the setting of the selected menu item. After the setting is the way you want, press [SET] to apply the setting and return to the viewfinder screen.
·Pressing [4] instead of [SET] applies the selected setting and returns to the menu item selection. ·To configure settings on another tab after pressing [4] to return to the menu item selection, use [8] or [ ] (Delete) to move the highlighting up to the tabs, and then use [4] and [6] to select the tab you want. [SET] Example: When "T Quality" is selected on the "Quality" tab Tabs Settings Selected menu item 55 Advanced Settings NOTE ·[ ] (Delete) provides a helpful way to navigate around tabs and menus. Pressing [ ] (Delete) while a tab is selected will display the viewfinder screen. Pressing [ ] (Delete) while menu item or setting is selected will "back step" in the following sequence: Settings * Menu items * Tab. . REC Menu Operations in This Manual REC menu operations are represented in this manual as shown below. The following operation is the same one described under "Example REC Menu Screen Operation" on page 55. Use [8] and [2] to select the second Control Panel option from the bottom (MENU) and then press [SET]. Use [4] and [6] to select the "Quality" tab.

Procedure [r] (REC) * [SET] * MENU * Quality Tab * T Quality Press [r] (REC). Press [SET]. Use [8] and [2] to select "T Quality" and then press [6]. 56 Advanced Settings REC Mode Settings (REC) Selecting a Focus Mode (Focus) Procedure [r] (REC) * [SET] * MENU * REC Tab * Focus Settings Type of Shot Focus Mode Snapshot Movies Automatic Fixed focal point Automatic Approximate Focus Range*1 Snapshot Approximately 10 cm to 9 (infinity) (3.9" to 9) (Wide Angle) Approximately 10 cm to 50 cm (3.9" to 19.7") (Wide Angle) Infinity Approximately 10 cm to 9 (infinity)*2 (3.9" to 9) (Wide Angle) Movies Q Auto Focus General recording Fixed distance ´Macro *2 Close ups Scenery and other distant subjects When you want to focus manually) Infinity W Manual Focus Fixed Manual *1 The focus range is the distance from the lens surface. *2 The minimum changes along with the optical zoom setting. 57 Advanced Settings To focus with manual focus 1.
2. On the monitor screen, compose the image so the subject you want to focus on is within the yellow boundary. Watching the image on the monitor screen use [4] and [6] to adjust focus. ·At this time the image that is within the boundary will enlarge and fill the monitor screen, which aids in focusing. If you do not perform any operation for two seconds while the enlarged image is displayed, the screen in step 1 will re-appear.
Yellow boundary NOTE ·An Auto Macro feature detects how far the subject is from the lens and automatically selects either Macro Focus or Auto Focus accordingly. ·Auto Macro can be used when recording snapshots only. ·Auto Focus is the only focus mode available while face detection is enabled. To select another focus mode, first turn off face detection (page 42). ·Use of the flash together with Macro Focus can cause the light of the flash to become blocked, which may result in unwanted lens shadows in your image.
·Whenever you perform an optical zoom operation while shooting with Auto Focus, Macro Focus, or Manual Focus, a value will appear on the monitor screen to tell you the focus range, as shown below. Example: oo cm to 9 * oo is the actual focusing range value. ·The operations assigned to the [4] and [6] keys with the "L/R Key" setting (page 62) are disabled while Manual Focus is selected as the focus mode. Using Focus Lock "Focus lock" is a technique you can use when you want to compose an image in which the subject you want to focus on is not within the focus frame in the center of the screen. ·To use focus lock, select "Û Spot" for the Auto Focus area (page 61). Subject to be focused on 1. Align the monitor screen's focus frame with the subject you want to focus on and then half-press the shutter button.