Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for SANYO VPC-CA100. You'll find the answers to all your questions on the SANYO VPC-CA100 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual SANYO VPC-CA100
User guide SANYO VPC-CA100
Operating instructions SANYO VPC-CA100
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Instruction manual SANYO VPC-CA100

SANYO

GUIDE FOR BASIC OPERATION

Dual Camera

Xacti HD HIGH DEFINITION

VPC-CA100EX
VPC-CA100GX
VPC-CA100PX
VPC-CA100TA
VPC-CA102

Important note
This manual explains how to safely operate the VPC-CA100EX, VPC-CA100GX, VPC-CA100PX, VPC-CA100TA and VPC-CA102. Any information regarding only one of these products will be labeled as such.

Please read these instructions carefully before using the camera.
Make sure to read and understand the separate booklet "SAFETY MANUAL".
Keep this manual in a safe place for later reference.

You're reading an excerpt. Click here to read official SANYO VPC-CA100 user guide
http://yourpdfguides.com/dref/3242043

Manual abstract:

@@@@Wash hands after handling. i This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: h Reorient or relocate the receiving antenna. h Increase the separation between the equipment and receiver. h Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. h Consult the dealer or an experienced radio/TV technician for help. i Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Declaration of Conformity Model number: VPC-CA102 Trade Name: SANYO Responsible party: SANYO North America Corporation Address: 21605 Plummer Street, Chatsworth, California 91311 Telephone No.: (818) 998-7322 This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. i English kFOR CANADIAN USERS i This Class B digital apparatus complies with Canadian ICES-003. kFOR EU USERS The symbol mark and recycling systems described below apply to EU countries and do not apply to countries in other areas of the world. Your SANYO product is designed and manufactured with high quality materials and components which can be recycled and/or reused. The symbol mark means that electrical and electronic equipment, batteries and accumulators, at their end-of-life, should be disposed of separately from your household waste. Note: If a chemical symbol is printed beneath the symbol mark, this chemical symbol means that the battery or accumulator contains a heavy metal at a certain concentration. This will be indicated as follows: Hg: mercury, Cd: cadmium, Pb: lead In the European Union there are separate collection systems for used electrical and electronic equipment, batteries and accumulators. Please, dispose of them correctly at your local community waste collection/ recycling centre.

Please, help us to conserve the environment we live in! SANYO Sales & Marketing Europe GmbH Stahlgruberring 4, D-81829 München, Germany SANYO Electric Co., Ltd. 1-1, Sanyo-cho, Daito City, Osaka 574-8534, Japan kFOR RUSSIAN USERS This product is certified by an official certification company which is authorized by the Russian Federation. English ii HOW TO READ THIS MANUAL For first-time users Please read this manual to familiarize yourself with your camera's operation. To use the various camera features The Instruction Manual that explains the features in detail can be obtained from our website (page 42). To use additional features Visit the Sanyo website to learn how to adjust the camera settings for various shooting scenes. There you'll also find information about the software for playing back data recorded with your camera and for burning (recording) DVDs. You may find the answers to questions or problems concerning camera operation in the sections "COMMONLY ASKED QUESTIONS" (page 48). Symbols used in this manual HINT CAUTION (page xx) Points giving some extended instructions or special points to pay attention to. Points that require special attention.

Refer to the page indicated for detailed information. iii English SHOOT, PLAY BACK AND SAVE Preparing the camera 1 Insert the battery pack. Battery cover lock Battery pack Connector markings 2 Open Battery cover 1 Push the battery cover lock to the right to release it. 5 Push the battery cover lock to the left to lock it. The colored label is visible when the battery cover lock is not completely closed. Be sure to close the lock completely so that the colored label is not visible. 3 Insert the battery pack while matching the connector markings. 4 Close Colored label About saving your recorded data h If you wish to use an SD Memory Card, refer to page 9 to install the card in the camera. h An SD Memory Card is not included with your camera. Please purchase a commercially sold card.

h This camera has an internal memory, so you can shoot and record without an SD Memory Card installed. English iv Shooting 1 Press the ON/OFF button for at least 1 second to turn the camera on. h If the screen to set the date and time appears, press the MENU button 2 times to cancel it. For how to set the date and time, see page 20. Record.

To record a video clip: h Press the [ ] button to begin recording a video clip. h Press the [ ] button again to end the recording. To take a photo: h Press the [ ] button. h A still image is captured. [ ] button [ ] button 2 ON/OFF button MENU button v English Before capturing those important shots, be sure to first take a test shot to confirm that your camera is set up and ready to go i Sanyo declines any claim for compensation for recorded contents etc.

in case of photographing or recording failure due to a chance camera or card flaw. Playback 1 2 Press the REC/PLAY button. h The display changes to the Playback Screen. Select the image to play back. h Use the arrow keys to move the orange frame to the image you wish to play back. h The image information for the framed image is shown in the bottom part of the monitor. Press the SET button. <To return to the recording mode> h Press the REC/PLAY button. <For slideshow playback (continuous playback)> 1 While the screen in step 2 (Playback Screen) is displayed, press the MENU button. 2 Select the slideshow setting [ ], and press the SET button.

3 Select the type of file to play back, and press the SET button. REC/PLAY button Arrow keys SET button 3 Full-HD Orange frame 6.5MB SET OK 100-0006 00:00:05 Remaining battery power indication English vi Deleting files 1 2 3 4 5 On the screen in step 2, move the orange frame to the file you wish to delete, and press the MENU button. Select "DELETE", and press the SET button. Select "DELETE SINGLE", and press the SET button. Select "DELETE", and press the SET button. h If you press [G] or [H] , the screen to delete a different file will appear. When you are finished deleting files, press the MENU button. h Pressing the MENU button 3 times will return you to the screen in step 2.

When you are finished using the camera.

.. Press the ON/OFF button for at least 1 second to turn the camera off. To continue to the next operation..

. Please confirm that your computer is connected to the Internet. vii English Burn your recorded video clips onto a DVD Using the supplied CD-ROM (Xacti Software CD), you can store your captured images on a DVD. Install application program 1 2 Set the supplied CD-ROM in your computer's DVD drive. h The installation window opens.

Click on [TotalMedia Extreme for SANYO]. h After clicking on the application program, follow the instructions shown on the monitor to install the program. h When the window appears requesting to restart your computer, click the [Finish] button to reboot. Remove the CD-ROM from the computer's DVD drive. <About the Kodak online service> h When the installation window closes, a dialog box to connect to the website introducing Kodak's online service appears. Check the [No thanks !] option button, and then click on the [OK] button. 3 English viii Copy data from your camera to the computer Connect your camera to a computer, and copy the desired data to the computer. 1 Turn on the computer, and use the supplied dedicated USB interface cable to connect your camera to the computer. h Connect the cable between the camera's USB AV terminal and the computer's USB connector. Turn on the camera (page 17).

h The USB Connection Screen appears on the camera's monitor. USB CONNECTION COMPUTER PRINTER CANCEL CANCEL OK 2 Terminal cover To USB AV terminal Supplied dedicated USB interface cable To USB connector ix English How to open the terminal cover 1 Push the battery cover lock. Terminal cover 2 Open 3 Select "COMPUTER", and press the SET button. h The screen to select the USB CONNECTION computer connection mode CARD READER appears. MTP SCREEN CAPTURE PC CAMERA CANCEL OK 4 5 Select "CARD READER", and press the SET button. Double-click the [TotalMedia Extreme for SANYO] icon on the desktop. English x h TotalMedia Extreme for SANYO is launched, and the initial screen appears. [Management] icon 6 Click the [Management] icon. h The ArcSoft MediaImpression for SANYO screen appears. [Import] icon xi English 7 Click the [Import] icon.

h The screen to select files to copy (import) to your computer appears. [mToday's Date] [Import] button 8 Click the [mToday's Date] of the [Subfolder Name], and click the[Import] button. h Copying begins. h When copying is completed, a window showing the result appears. [Delete Original Files] button [Done] button 9 Click the [Done] button.

h If desired, you can click the [Delete Original Files] button to delete the file in the camera from which the copy was made. 10 Click the [×] close button in the upper right corner of the ArcSoft MediaImpression for SANYO window. h You are returned to the top page of TotalMedia Extreme for SANYO. English xii 11 Click the [×] button in the upper right corner of the TotalMedia Extreme for SANYO window. h TotalMedia Extreme for SANYO is exited.

Burn video clips onto a DVD Here's how to write your recorded data onto a DVD in the MPEG2 format. For information on other operations, please see the Help file for TotalMedia Extreme. 1 2 Insert a blank DVD in your computer's DVD drive. Double-click the desktop [TotalMedia Extreme for SANYO] icon. h TotalMedia Extreme for SANYO is launched, and the startup page appears. [Create video] icon xiii English 3 Click the [Create video] icon. h The TotalMedia Studio screen appears. [New DVD project] English xiv 4 Click [New DVD project]. h The screen to create a video clip to burn to DVD appears. [Insert video] xv English 5 Click [Insert video].

h The screen to select the video clip file to burn to DVD appears. h Click on the file you wish to burn to DVD. h To select multiple files, keep the [Ctrl] key pressed while selecting files. Click the [Open] button. h The files you selected in step 5 and the total size of the files to burn to DVD are shown in the lower part of the window. Selected files 6 Size of selected files English xvi 7 Click the [Design] tab. h The screen to design the title menu that is shown when the DVD is played appears. h Select one of the designs. [Produce] tab xvii English 8 Click the [Produce] tab. h The screen to burn files to the DVD appears. [Burn] button 9 Click the [Burn] button. h A window appears asking if you wish to save the project. h Saving the project will save your settings from steps 5 through 7. h It is recommended that you save the project if you intend to again edit the same video clips that you burned to DVD. English xviii 10 Click the [Yes] button.

h The screen to save the project appears. h Assign a suitable file name for the pver are completely and securely closed to prevent water from getting inside the camera and damaging it. i Please note that the camera accessories are not waterproof. k Cautions concerning use in water i The waterproof properties of the camera apply to fresh water and saltwater only; they do not apply to cleaning substances, chemicals or water from spas, etc. In case of a splash, immediately wipe off any moisture.

i Do not immerse in water at a depth greater than 3.0 m (9.84 ft.). i Do not subject the camera to high-pressure water. i Do not immerse in water for longer than 60 minutes. After 60 minutes of use in water, allow it to dry for at least 10 minutes. i Do not immerse in water that is warmer than 40 °C (104°F). i Do not open and close the battery cover or terminal cover when the camera is wet or while it is immersed in water. i Do not open and close the battery cover or terminal cover with wet hands.

i Do not open the battery cover or terminal cover on the beach or at the poolside. i Do not jolt the camera while it is immersed in water. Doing so may cause the battery cover or terminal cover to open. English xxii NOTE k Storing and maintaining your camera i Do not leave the camera unwashed after it has been immersed in salt water or if salt water is adhering to it. Doing so may cause corrosion and discoloration of the plating, as well as deterioration of the camera's waterproof capability. i After the camera has been used in water, use fresh water to wash it. Never use soap or detergent to clean the camera, as doing so will cause deterioration of the camera's waterproof capability. i After washing the camera, take care to completely drain it, and use a dry cloth to wipe off any drops of water adhering to it (page 35). i Do not leave the camera in an environment colder than 0 °C (32°F) or warmer than 40 °C (104°F), as doing so may cause deterioration of the camera's waterproof capability. i Waterproof seals are used in this camera. It is recommended that the waterproof seals be replaced every year with new ones.

*For replacing the seals, please consult your dealer. * Please note that there is a fee for replacing the waterproof seal. k Beware of condensation i Avoid opening and closing the battery cover and terminal cover in a high humidity environment, as doing so may cause condensation inside the camera. i If condensation has formed inside the camera, as indicated for example by a cloudy lens, open the covers in a dry environment and leave the camera to dry. k Other cautions i Do not subject the camera to severe jolts, as doing so may deform the battery cover, terminal cover or the camera body, thus compromising its waterproof capability. If the camera has been subjected to a strong jolt, please consult with your dealer. HINT What is "JIS IPX8" (formerly "JIS protection grade 8")? i "JIS IPX8" specifies that a device is protected against the effects of continuous immersion in water. xxiiiEnglish BEFORE RECORDING IN WATER Make sure that the battery cover and the terminal cover are closed. If a cover is open, water will get inside the camera and damage it.*

When closing the battery cover and terminal cover, make sure that no foreign object such as sand, hair, dust, etc. is caught in the rubber seal. Battery cover Terminal cover English xxiv CONTENTS HOW TO READ THIS MANUAL ....

Before capturing those important shots, be sure to first take a test shot to confirm that your camera is set up and ready to go ....

English 2

CHECKING THE INCLUDED ACCESSORIES

i Xacti Software CD (CD-ROM) (page viii): 1
i Li-ion battery pack: 1
i AC adaptor: 1
i Plugs: 6
i Dedicated USB interface cable (page ix): 1
i Dedicated AV interface cable (page 40): 1
i Handstrap (page 5): 1
* To prevent from dropping the camera, be sure to attach the handstrap.

i GUIDE FOR BASIC OPERATION

3 English

i SAFETY MANUAL (safety precautions booklet)
Please read this booklet carefully before using the camera.

i QUICK GUIDE

i Obtaining the PDF instruction manual and cautions

English 4

How to use the accessories

k Handstrap

About the power plug
A power plug suitable for the destination country is provided for the AC adaptor.

VPCCA100EX VPCCA100TA VPCCA100GX VPCCA100PX

* No power plug is provided for the VPC-CA102.

k How to attach

5 English

ABOUT THE CARD

Media cards that can be used with this camera
The type of card that can be inserted into and used with this camera is:
i SD Memory Card
i SDHC Memory Card
i SDXC Memory Card

What "card" means in this manual
i In this manual, SD Memory Cards, SDHC Memory Cards and SDXC Memory Cards that can be used in this dual camera are referred to as "card".

English 6

SETUP

SETUP PARTS NAMES

Front
Speaker
Lens
Monitor unit
Stereo microphone
Flash
[I] key
SET button
ON/OFF button
REC/PLAY button
MENU button
[G] key
[H] key
[J] key

There are places in the camera where water might accumulate, but this will not affect its waterproof properties. To care for your camera after using in water, see page 35.

7 English

Rear
[ ] button
[ ] button
ZOOM RANGE button
Zoom switch
SETUP Monitor
Multi-indicator
Terminal cover
Terminal cover lock
* The tripod mounting hole is on the bottom.
Strap holder

English 8

INSTALLING THE CARD

Be sure to format a newly purchased card or one that was used in another device before using it in your camera (page 10). If an unformatted card is used, the card itself may become unusable.

Battery cover lock
4 Close
2 Open
Battery cover
1 Push the battery cover lock to the right to release it.
3 Insert the card with the label side facing up.

<When removing the card...>
h To remove the card, press it in, and then release. The card will protrude slightly, and you can then pull it out.
1 Push the card in
5 Push the battery cover lock to the left to lock it.
The colored label is visible when the battery cover lock is not completely closed. Be sure to close the lock completely so that the colored label is not visible.
Colored label
2 Pull it out

9 English

CAUTION

Close the battery cover securely
i If the battery cover is not closed or is not closed completely, the camera will no longer be waterproof.

When closing the battery cover, make sure that no foreign object such as sand, hair, dust, etc. is caught in the rubber seal.

Do not attempt to forcibly remove the card
i Doing so may damage the card or the stored files.

If the multi-indicator is flashing red...
i Never remove the card when the multi-indicator is flashing red, as doing so may result in loss of files stored in the card.

HINT

To format a card
1 Insert the card in the camera, and press the ON/OFF button

*(pages 9 and 17). 2 Set the camera to the NORMAL mode (page 23). 3 Press the MENU button.
4 Select the [E] tab, and press the SET button. 5 Select "FORMAT" and press the SET button. i The Format Screen appears. Follow the instructions on the
screen to format the card. Shooting without a card installed i When a card is installed, images are recorded to and played back from the card.
When no card is installed, images are recorded to and played back from the camera's internal memory. When the camera is turned on with no card installed,
the internal memory icon is shown on the monitor to let you know that the images you capture will be saved to the camera's internal memory.*

SETUP English 10 CHARGING THE BATTERY PACK Please charge the supplied battery pack before using it. Install the battery pack in the camera, and connect the AC adaptor to charge the battery. Power to the camera can also be supplied from a power outlet when the AC adaptor is connected.

1 Open the battery cover. Battery cover lock 2 Open Battery cover 1 Push the battery cover lock to the right to release it. 11 English 2 Insert the battery pack, then replace the battery cover. Battery pack 4 Close Connector markings SETUP 3 Insert the battery pack while matching the connector markings. 5 Push the battery cover lock to the left to lock it. The colored label is visible when the battery cover lock is not completely closed. Be sure to close the lock completely so that the colored label is not visible. Colored label 3 Affix the appropriate plug (supplied) to the AC adaptor. h Use the plug that is appropriate for your region. English 12 4 Use the dedicated USB interface cable (supplied) to connect the camera and the AC adaptor, and then connect the AC adaptor to a power outlet.

h Recharging takes place only when the camera is turned off, or when the power save function or the sleep function has been activated. Recharging does not take place when the camera is in the recording mode or playback mode. to AC <During charging...> h During charging, the multiindicator is lit red. When charging is completed, the indicator turns off. h The multi-indicator flashes red if the battery pack is defective or is not installed correctly. Make sure that the battery pack is correctly installed. h The charging time is approx.

120 minutes. Multi-indicator 13 English CAUTION Use only the supplied accessories i Please use only the supplied AC adaptor and dedicated USB interface cable. Using an AC adaptor or USB cable other than those supplied may cause a fire. Close the battery cover and terminal cover securely i If any cover is not closed or is not closed completely, the camera will no longer be waterproof. When closing a cover, make sure that no foreign object such as sand, hair, dust, etc.

is caught in the rubber seal. Do not charge the battery pack immediately after the camera has been in continuous use for a long time i The battery pack becomes hot when the camera is used continuously for a long time. If you attempt to charge the battery pack in this state, the multiindicator may flash red and it may not be possible to charge the battery pack. Wait until the battery pack has cooled down before attempting to charge it. Does the battery pack appear swollen? i The lithium-ion battery used in this camera may expand slightly when stored in a hot environment or repeatedly used, but this is not a safety hazard.

However, a battery that is difficult to insert because it has become swollen may then be impossible to extract from the battery compartment. In this case, please discontinue its use and replace it with a new battery. Do not use the battery with the outer covering or label removed i Doing so may result in malfunction. SETUP English 14 HINT About the internal backup battery i This camera's internal battery serves to maintain the date and time settings, as well as the shooting settings. The backup battery will be fully charged when the battery pack is kept in the camera continuously for about 2 days. In the fully charged state, the backup battery will maintain the camera settings for about 7 days. When not using the camera for a long time, remove the battery pack i A small amount of power is still used even if the camera is turned off, and it is therefore recommended that the battery pack be removed from the camera if it is not going to be used for a long time. Note that when the battery pack is removed for a long period, the time and date settings may be cleared. Before using your camera again, be sure to confirm that the camera settings are correct. Recharging when connected to the USB terminal i The battery can be recharged while the camera is connected to a computer.

During recharging, the camera is recognized by the computer as a separate drive; however, data cannot be exchanged. i The time it takes to recharge will differ depending on the operating condition of the camera and the computer. i Connect the dedicated USB interface cable to the USB connector on your computer. Do not connect it to the USB connector on the monitor or the keyboard, or to the USB hub. Correct operation of the USB interface cable cannot be guaranteed if it is connected to a connector other than the computer's USB connector. i If the camera is not going to be used for an extended period of time, please disconnect the dedicated USB interface cable from the camera. 15 English About recharging Recharging takes place only when the camera is turned off, or when the power save function or the sleep function has been activated. Recharging does not take place when the camera is in the recording mode or playback mode. About the temperature alert icon \ During camera use, if the temperature of the battery or inside the camera (excluding the battery) rises, a temperature alert icon \ will appear as described below. k When the battery or internal camera (excluding battery) temperature rises during use h During camera use, if the temperature of the battery or inside the camera (excluding the battery) rises, a \ icon lights on the monitor.

It is still possible to record and play back even when the \ icon is lit; however it is advised that you discontinue use as soon as possible and turn the camera off. h If the temperature rises further, the \ icon will start to flash, and the camera will turn off automatically. The camera cannot be turned on until the temperature has dropped (or as long as the \ icon remains flashing). Please wait until the temperature has dropped before resuming use. h During video recording, a countdown indicator will show the time starting about 15 seconds before shutdown.

When the indicator shows 0 seconds, recording stops. h If the camera is turned off while the temperature is high (that is, while the \ icon is flashing), it cannot be turned on again until the temperature has dropped (or as long as the \ icon remains flashing). SETUP English 16 TURNING THE CAMERA ON AND OFF Turning on the camera 1 Open the monitor unit, and press the ON/OFF button for at least 1 second. h If you briefly press the ON/OFF button, once, the camera will switch to the power save mode. h If you press the REC/PLAY button for at least 1 second, the camera turns on in the playback mode. ON/OFF button REC/PLAY button Turning off the camera 1 Press the ON/OFF button for at least 1 second. h The camera turns off. 17 English Turning on the camera when the power save (sleep) mode is active In order to preserve battery pack power, the power save (sleep) function will automatically turn off the camera after about 1 minute of no use during shooting, or about 5 minutes of no use during playback (factory-preset setting).

i When the power save mode is active, you can restore the power by any of the following methods: h Press the ON/OFF button. h Press the [ ] button. h Open the monitor unit. i After the power save mode has been active for about 1 hour, the camera will switch to the standby mode. In this case, you can restore the power by pressing the ON/OFF button, or by closing and then opening the monitor unit. i When the AC adaptor is connected, the power save mode will become active about 5 minutes after the camera is turned on (factory-preset setting). i When the camera is connected to a computer or printer, the camera turns off after about 12 hours.

SETUP English 18 HINT To immediately activate the power save mode i Press the ON/OFF button briefly to activate the power save function. About the standby mode i To turn off the camera only briefly, you can close the monitor unit to put the camera in the standby mode. The standby mode uses almost no power. When the monitor unit is opened again, the camera turns on immediately and you are ready to shoot or view images without any delay. CAUTION If the K icon appears... @@@@@@@@@@@@@@@@@Example: To set the clock to 7:30 p.m. @@h The Clock Set Screen appears. @@@@Set the date. 1 Select "DATE". 2 Press the SET button. h The Set Date Screen appears. 3 Set the date to "2010/12/24". @@h Press [G] or [H] to select year, month or day. Press [I] or [J] to increase or decrease the number. @@1 Select "TIME". 2 Press the SET button. h The Set Time Screen appears.
3 Set the time to "19:30". @@h A 24-hour clock is used for the time display. 4 Press the SET button. Set the order in which the date is displayed during playback. 1 Select "DISP". 2 Press the SET button. h The Set Date Format Screen appears. 3 Press [I] or [J]. h The date display order changes. @@h The date and time setting is completed.

@@@@@@To correct the date and time settings 1 Turn on the camera. 2 Display the Option Setting Menu 1 (page 26). 3 Select "CLOCK SET" and press the SET button. h The screen to set the date and time appears. h The current date and time settings are shown. @@h The mode changes. @@@@h The previous mode is active. Press the MENU button. h The Menu Screen for the active mode appears. Select the operating mode icon, and press the SET button. h Switch from the SIMPLE mode to the NORMAL mode, or from the NORMAL mode to the SIMPLE mode. h Press the MENU button to cancel the Menu Screen. SN Switch to detailed normal menu OK Operating mode icon <SIMPLE Mode Menu Screen> 1 2 3 1 2 3 Press SET button to switch to simple Menu SN OK Operating mode icon <NORMAL Mode Menu Screen> 23 English Accessing/exiting the SIMPLE/NORMAL Mode Menu Screen 1 2 3 Set the camera to the recording or playback mode (page 22). Select the desired operating mode (page 23). SETUP If the Menu Screen is not displayed, press the MENU button.
h The Menu Screen appears. h To cancel the Menu Screen, press the MENU button. SN Switch to detailed normal menu SET OK <Example: SIMPLE Mode Recording Menu> 1 2 3 1 2 3 Press SET button to switch to simple Menu MENU button SET SN OK <Example: NORMAL Mode Recording Menu> English 24 Using the SIMPLE Mode Menu 4 Press [I] or [J] to select the item you wish to change, and press the SET button. h The Setting Screen for the selected item appears. Select an item to change Description of selected item Press [I] Select video and photo size SN SET OK Press [J] To keep in HDTV size 14M 2M HDTV size 14M [4:3] Press the SET button SET SET OK <Setting Screen> 25 English Using the NORMAL Mode Menu 4 Press [I] or [J] to select a tab. h The Menu Screen for the selected tab appears. Press [I] Tab SETUP RECORDING MENU 1 1 2 VIDEO 3 PHOTO SCENE SELECT 1 FILTER 2 FLASH 3 SELF-TIMER SET OK SN Full-HD 14M-S Press [J] Option tab 5 Press [H]. Press [H] RECORDING MENU 1 1 VIDEO 2 PHOTO 3 SCENE SELECT 1 FILTER 2 FLASH 3 SELF-TIMER SET OK Full-HD 14M-S English 26 6 Press [I] or [J] to select the item you wish to change, and press the SET button. h The Setting Screen for the selected item appears. h To return to the Menu Screen, press the MENU button. Select an item to change Press [I] RECORDING MENU 1 1 VIDEO 2 PHOTO 3 SCENE SELECT 1 FILTER 2 FLASH 3 SELF-TIMER SET OK Full-HD 14M-S Applicable mode Press [J] PHOTO 16M 12M 14M-H 14M-S 10M 2M Press the SET button 4640x3480 4608x2592[16:9] 4352x3264 4352x3264 4352x2448[16:9] 1920x1080[16:9] SET OK <Setting Screen> HINT About the applicable mode indicator i This indicator shows the shooting mode(s) for which the selected setting is effective. : This setting is effective during still image shooting. : This setting is effective during video clip recording. : This setting is effective during still image shooting and video clip recording. 27 English SHOOTING SHOOTING VIDEO CLIP RECORDING 1 2 Turn on the camera (page 17), and set it to the recording mode (page 22).

Press the [ ] button. h Recording begins. h It is not necessary to keep the [ ] button pressed while recording. h When the remaining recording time available for the currently recording clip becomes little, a countdown of the remaining recording time appears on the display. End the recording. h Press the [ ] button again to stop recording. Recording time [ ] button SHOOTING 3 Full-HD REC000:00:09 5 Available recording time remaining English 28 SHOOTING SINGLE SHOTS Capture a still image (single-shot). 1 2 Turn on the camera (page 17), and set it to the recording mode (page 22). Press the [ ] button. 1 Press the [ ] button halfway.
h The autofocus operates, and the image is focused (focus lock). 2 Continue to gently press the [ ] button all the way. h The shutter releases and the image is captured. h You can view the captured image on the monitor by keeping the [ ] button depressed when you capture the image. 1 2 [ ] button 14M-S Target mark 29 English HINT Adjusting the monitor brightness i While the Recording Screen is active, you can quickly access the screen for adjusting the brightness of the monitor by pressing the MENU button for at least 1 second.
What is the camera focusing on? Target mark i A target mark & on the monitor shows the area the camera is 14M-S focusing on. i The camera automatically determines the correct focus by measuring from 9 different focus points within the shooting area. If the target mark is at a position that is F3.6 1/2 different from the point you wish to focus on, you can refocus, for Camera shake icon example, by changing the shooting Shutter speed angle. Aperture i The large target mark appears when the camera focuses on a wide area in the center of the screen.
Does it seem to take a long time to save images? i When shooting in dimly lit conditions, it may take some time to save the data to the card.

SHOOTING English 30 SHOOT A STILL IMAGE WHILE RECORDING A VIDEO CLIP You can capture a still image (a single-shot) while recording a video clip. 1 2 3 Turn on the camera (page 17), and set it to the recording mode (page 22). Press the [ ] button. [[ ] button] button When you see a scene you'd like to capture as a still image, press the [ ] button. Press the [ ] button to end the video clip recording. 4 2M Full-HD REC000:00:09 31 English HINT i When shooting a still image while recording a video clip, the flash does not operate. i When the remaining video recording time becomes approximately 50 seconds, it will no longer be possible to capture a still image while recording a video clip. If you intend to capture a still image while recording a video clip, it is suggested that you take note of the remaining video recording time. About the recording size of still images i The size of a still image captured during video clip recording depends on the video clip recording size.

Video clip recording size setting !Y "&) h It is not possible to capture sequential shots. Still image recording size + , [SHOOTING English 32 MACRO-PHOTOGRAPHY (ZOOM) Your camera has two zoom functions: optical zoom and digital zoom. 1 2 Point the camera lens at the subject. Push the zoom switch toward [T/]] or [W/P] to compose the desired image. [T/]]: Zoom in on the subject. [W/P]: Zoom out. h When the zoom switch is pushed, the zoom bar appears on the monitor. h When the optical zoom factor is at maximum, zooming stops temporarily. When the zoom switch is pushed toward the [T/]] side again, the mode changes to the digital zoom mode and zooming continues. Take the picture.

For video clip recording, see page 28. For shooting single shots, see page 29. Zoom switch 3 Zoom bar When both optical and digital zoom are enabled Optical zoom Digital zoom (yellow) When optical zoom only is enabled Pointer 33 English HINT When recording video clips at a high magnification i When recording video clips at a high magnification, a moving subject or moving camera can cause camera shake, resulting in a distorted playback image. This phenomenon is due to the characteristics of the CMOS sensor and is not a malfunction. i It is recommended that you use a tripod to stabilize the camera when recording video clips at a high magnification.

About the "Advanced Zoom" i During video clip recording, the "Advanced Zoom" function makes it possible to electronically magnify the image with no image degradation, and increase the magnification to a maximum 6x. When the ZOOM RANGE button is pressed... i The magnification is approximately doubled (double-range zoom).

Press the button again to return to normal magnification. i The [W] icon is shown on the Recording Screen during normal magnification, and a [T] icon on the double-range zoom Recording Screen (Normal mode). SHOOTING English 34 AFTER USING THE CAMERA IN WATER After using the camera in water, wash it with fresh water and dry it completely. 1 2 3 Turn off the camera, and close the battery cover and terminal cover securely. Wash the camera with fresh water. h Fill a shallow basin with fresh water, and immerse the closed camera for about 5 minutes. Rotate the monitor unit several times to clean it completely. Dry the camera. h Use a dry cloth to wipe off any drops adhering to the camera, and leave it to dry completely in a well-ventilated place away from direct sunlight. h Do not use a hair dryer or the like to dry the camera.

Exposing the camera to high temperatures may cause the camera and/or waterproof seal to become deformed. HINT About the handstrap i Wash the handstrap in fresh water after detaching it from the camera. i After washing, leave it to dry in a place away from direct sunlight. 35 English PLAYBACK PLAYBACK PLAYING BACK VIDEO CLIPS AND STILL IMAGES 1 2 Set the camera to the playback mode (page 22). Orange frame Select the image to play back. h Use the arrow keys to move the orange frame to the file you wish to play back. h The image information for the framed image is shown at the bottom of the screen. Press the SET button. h The image you selected in step 2 is displayed fullscreen. h If a video clip was selected, playback begins. <To return to the screen to select playback files> Press [J]. <For slideshow playback (continuous playback)> 1 While the screen in step 2 (Playback Screen) is displayed, press the MENU button. 2 Select the slideshow setting [ ], and press the SET button. 3 Select the type of file to play back, and press the SET button. SD 2010.

12.24 Full-HD 6.5MB SET 18:41 100-0006 00:00:05 3 OK PLAYBACK Arrow keys SET button English 36 Video clip playback operation To do this... Normal forward playback Stop playback Pause Do this Press the SET button. During playback, press [J]. During playback, press the SET button or press [I]. During accelerated playback, press [I]. To play back During forward After pausing playback, press [H]. one image playback at a time During reverse (singleAfter pausing playback, press [G]. playback frame step) During forward After pausing playback, press and hold [H]. playback Slow playback During reverse After pausing playback, press and hold [G]. playback During forward playback, press [H]. h The playback speed changes each time [H] Forward is pressed, as follows: playback Normal playback 2× 5× 10× 15× To Press [G] to resume normal playback speed.

accelerate During forward playback, press [G]. playback h The playback speed changes each time [G] Reverse is pressed, as follows: playback 15× 10× 5× Press [H] to resume normal playback speed. Return to normal playback Press the SET button. speed Louder: During playback, push the zoom switch toward the [T] side. Adjusting the volume Softer: During playback, push the zoom switch toward the [W] side. 37 English How to save one frame from a video clip as a still image 1 2 Play back the video clip. Pause the playback at the point you wish to "snap" a photo. Press the [ ] button. h The screen to select the aspect ratio of the still image appears. Select the desired aspect ratio, and press the [ ] button.

Note, however, that if the video clip aspect ratio is 4:3, you cannot select 16:9. HINT The file size for a video clip is very large i Therefore, be aware that if the video clip is uploaded to a computer to be played back, the computer may not be able to play back the video fast enough, making it appear jerky. (The video will always be displayed properly on the camera monitor or a television.) i Depending on the card, recording may end even before the possible recording time indicated. Display the video clip playback point i During video clip playback, press the MENU button for at least 1 second to display a bar showing the current playback point in the video clip.
i Press the MENU button for about 1 second to cancel the bar.

CAUTION During video clip playback, the sound of a motor is audible... i During recording, the sound of the optical zoom movement or autofocus movement was recorded.

This is not a malfunction. If no audio is heard... i The audio is not played back when the video clip is played back in the frame-by-frame, slow-motion, fast playback or reverse playback mode. PLAYBACK English 38 CONNECTING TO A TV CONNECTING TO A TV CONNECTING TO A TV By connecting the camera to a TV, you can play back the recorded files on the TV. CAUTION Insert and pull out the cable carefully i When connecting the cables, make sure that the cable plugs are correctly oriented and that they match the shapes of the terminal sockets on the devices. Push the plugs in straight when connecting them. If undue force is used to connect a cable, it may permanently damage the connector pins in the terminal socket. i Do not use excessive force when connecting and disconnecting cables.

About image output: The image output destination differs depending on the camera status. Connection cable Dedicated AV interface cable Image output destination Camera monitor TV Camera monitor TV Recording mode Standby NTSC: n PAL: m NTSC: m PAL: n n m n: Images are not output Recording m n m n Playback mode n m n m HDMI cable m: Images are output HINT i HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing, LLC. 39 English Connecting to a video input terminal Use the supplied dedicated AV interface cable to connect to a TV. Yellow plug:To Video Input terminal To USB AV terminal Supplied dedicated AV interface cable White plug: To Audio Input terminal CONNECTING TO A TV Set the input to "VIDEO". Connecting to the HDMI terminal Use a separately sold mini-HDMI cable to connect to a TV. Set the input to "HDMI". Mini HDMI cable (optional) To HDMI terminal To HDMI terminal on the TV English 40 PLAYING BACK ON A TV i After connecting the camera to the television, switch the TV input to the terminal to which the camera is connected. i The playback method is the same as when viewing images on the camera's monitor. (Use the TV controls to adjust the volume.) i The same playback procedure as when playing back with the camera is used to play back audio recordings as well.

i The audio playback is monaural. CAUTION Insert and pull out the cable carefully i When connecting the cables, make sure that the cable plugs are correctly oriented and that they match the shapes of the terminal sockets on the devices. Push the plugs in straight when connecting them. If undue force is used to connect a cable, it may permanently damage the connector pins in the terminal socket. i Do not use excessive force when connecting and disconnecting cables.

Copying (dubbing) images to a DVD recorder i Please refer to the section on "Dubbing" in the instruction manual for your DVD recorder. 41 English OBTAINING THE INSTRUCTION MANUAL OBTAINING THE INSTRUCTION MANUAL OBTAINING THE INSTRUCTION MANUAL The Instruction Manual that explains the features in detail can be downloaded from our website. i "Adobe Reader" is required to view the Instruction Manual. If Adobe Reader is not already installed on your computer, a link to the website from which you can download it can be found on our website. Contents of the Instruction Manual Explanations for the functions indicated below can be found in the downloadable Instruction Manual.

Please be sure to obtain and use the Instruction Manual. HOW TO READ THIS MANUAL QUICK SEARCH BY OPERATION CHECKING THE INCLUDED ACCESSORIES How to use the accessories About the power plug ABOUT THE CARD Media cards that can be used with this camera What "card" means in this manual GETTING THE MOST OUT OF YOUR CAMERA Waterproof capability High-quality images with "Full High Definition*" Includes SIMPLE mode for quick-and-easy operation Image stabilizer for sharp pictures Capture clear images of the targeted subject Eye-Fi smart SYSTEM MAP SETUP PARTS NAMES INSTALLING THE CARD CHARGING THE BATTERY PACK About recharging About the temperature alert icon \ TURNING THE CAMERA ON AND OFF Turning on the camera Turning off the camera Turning on the camera when the power save (sleep) mode is active DATE AND TIME SETTING OBTAINING THE INSTRUCTION MANUAL English 42 SWITCHING BETWEEN THE RECORDING MODE AND PLAYBACK MODE SWITCHING THE OPERATING MODE Switching between the SIMPLE and NORMAL modes Accessing/exiting the SIMPLE/NORMAL Mode Menu Screen Overview of the SIMPLE Mode Setting Screen Overview of the NORMAL Mode Setting Screen SIMPLE SHOOTING BEFORE TAKING PICTURES For best results Using the autofocus Select the recording size Select the focus setting Hints for taking pictures VIDEO CLIP RECORDING SHOOTING SINGLE SHOTS Using the flash SHOOT A STILL IMAGE WHILE RECORDING A VIDEO CLIP MACRO-PHOTOGRAPHY (ZOOM) AFTER USING THE CAMERA IN WATER PLAYBACK PLAYING BACK VIDEO CLIPS AND STILL IMAGES How to save one frame from a video clip as a still image SLIDESHOW PLAYBACK PLAYBACK VOLUME DELETING FILES Delete single/delete all/delete folder Delete selected PLAYBACK MODES 21-image display playback Selecting the playback folder Magnifying (zooming in) the image NORMAL SHOOTING RECORDING MENU 1 Video setting Still image setting Scene select setting Filter setting Self-timer setting RECORDING MENU 2 Motion compensation (image stabilizer) setting 43 English Focus range setting Focus mode setting Light-measuring mode setting ISO sensitivity setting RECORDING MENU 3 White balance setting Exposure setting Subject chaser settings High sensitivity mode setting Digital zoom setting Exposure compensation Storage folder setting PLAYBACK PLAYBACK MENU 1 Slideshow settings File protect setting Resize Rotate PLAYBACK MENU 2 Correcting the image Editing video clips Printing instructions FILE INFO DISPLAY OPTION SETTINGS DISPLAY THE OPTION SETTING MENU INTRODUCTION TO THE OPTION SETTING MENU Shortcut setting TV output setting File No. continued setting Formatting (initializing) CHECKING THE REMAINING CARD MEMORY Checking the remaining number of images and video recording time For audio recordings CHECKING THE REMAINING BATTERY PACK CHARGE OTHER DEVICES AND CONNECTIONS CONNECTING TO A TV CONNECTING TO A TV Connecting to a video input terminal Connecting to the HDMI terminal OBTAINING THE INSTRUCTION MANUAL English 44 PLAYING BACK ON A TV CONNECTING TO A PRINTER PRINTING APPENDICES COMMONLY ASKED QUESTIONS TROUBLESHOOTING Camera Notes regarding the Scene Select feature and filters SPECIFICATIONS Camera Camera connectors Battery life Possible No. of Images/Possible Shooting Time/Possible Recording Time Concerning the multi-indicator Supplied AC adaptor Supplied Li-ion battery pack Others Before capturing those important shots, be sure to first take a test shot to confirm that your camera is set up and ready to go HINTS FOR TAKING PICTURES 45 English How to obtain the Instruction Manual The Instruction Manual that explains the camera functions in detail can be obtained from the SANYO website.

1 2 3 Insert the supplied Xacti Software CD in your computer's CD drive. On the installation screen, click [Go to Xacti CA100/CA102 Web Support Page]. Follow the instructions on the screen to download the Instruction Manual. h "Adobe Reader" is required to view the Instruction Manual. Adobe Reader can be found in the Xacti Software CD. OBTAINING THE INSTRUCTION MANUAL English 46 ABOUT THE EYE-FI TRANSFER FEATURE ABOUT THE EYE-FI TRANSFER FEATURE ABOUT THE EYE-FI TRANSFER FEATURE By inserting a commercially sold Eye-Fi card (SD card with wireless LAN) in your camera, you can easily upload photos to your computer, a sharing site, etc.

automatically via a Wi-Fi network. Also, you can transfer video files if your Eye-Fi card has a video upload function. The Eye-Fi card settings can be performed using the Eye-Fi Manager, but in addition, the settings below can be performed with this camera. i Eye-Fi automatic transfer ON/OFF i Automatic halt of Eye-Fi operation when battery is low i AC adaptor connection restrictions (may or may not be supported, depending on the camera) i SSID setup/delete HINT i The Instruction Manual for the Eye-Fi transfer feature can be obtained from the Sanyo website (page 46). * "Adobe Reader" is required to view the Instruction Manual. Adobe Reader can be found in the Xacti Software CD. 47 English APPENDICES APPENDICES COMMONLY ASKED QUESTIONS If you have a question about the camera operation, you might find the answer in this compilation of commonly asked questions. Question Why doesn't the power turn on? Answer Due to cold temperatures, the battery pack temporarily lost its power. The ambient temperature is very low. The battery pack life has expired.

Action Place the camera in your pocket to warm it up before using it. Why is the battery pack consumed so quickly even after it was fully recharged? Power Why doesn't recharging end? The battery pack life has expired. Why does the icon appear? Why does the multi-indicator flash red? Shooting Why doesn't the flash operate? The remaining battery pack power is low. A recorded file is being saved on the card or internal memory. The camera has determined that the image is bright enough and the flash is not necessary.

Keep the battery pack in an environment of 10 to 40 °C (50 to 104 °F). If a battery becomes depleted quickly even after it was sufficiently charged, it should be assumed that the battery has reached the end of its service life. Please replace it with a new battery. Replace with a new battery pack. If this is not effective, consult your dealer.

Use the AC adaptor, or replace the battery pack with a fully charged one. Not a malfunction. Wait until the multiindicator turns off. Not a malfunction. Capture the image; the camera will determine when the flash is necessary. APPENDICES English 48 Question Are the settings retained even after the camera is turned off? Answer -- Which resolution setting should I use? -- Shooting Action All settings except the self-timer and the exposure compensation are retained even after the camera is turned off. Select the resolution setting according to the intended use. 4, 5, 6, 7, 8, :: Appropriate for printing letter-size or larger, and for printing a close-up of part of a photo (trimming). +, G, t: For printing standard photo (photo service) sizes. ,, [: For photos displayed on a web page, or sent as e-mail attachments.

49 English Question What is the difference between the digital zoom and the optical zoom? Answer -- How can I get the distant view into focus? Shooting -- The video clip appears to freeze for an instant. The ZOOM RANGE button was pressed during video clip recording. The ZOOM RANGE button was pressed while the digital zoom was engaged. The zoom range does not change when the ZOOM RANGE button is pressed. Action Because shooting with the optical zoom uses the optics of a physical lens, you can shoot without losing minute details in the image. The digital zoom, on the other hand, works by magnifying a portion of the image that hits the image sensor and may produce a coarser image. Set the scene select function to the landscape + mode when photographing. Or, set the focus range setting to manual focus -, and set the distance to . Not a malfunction. During the very brief span that the zoom lens is changing, the recording appears as a still image.

Not a malfunction. Use the optical zoom. The zoom range cannot be changed while the digital zoom is engaged. APPENDICES English 50 Monitor Question When used in cold weather, why does the image seem to leave traces as it moves? Why does the displayed image contain some red, blue and green dots, or why are black spots visible? Why is the image too bright? Answer Condition due to the monitor characteristics. Action Not a malfunction.

Spots that appear in the monitor only appear in the monitor and will not be recorded with the images. The subject was too bright. Viewing images Why is the image out of focus? The focus is not locked properly. When capturing an image, devise a way to compensate for a bright subject, for example, by changing the shooting angle. Hold the camera correctly and slowly press the [ ] button halfway to lock the focus.

Then press the [ ] button all the way to capture the image. 51 English Question Why is there no image (z is shown)? Viewing images Why is the playback image distorted? Answer This may happen when trying to play back images stored on a card from a different digital camera. If the subject moves or the camera is moved during recording, a distorted image may sometimes occur. Action Play back images that were recorded on a card using this camera. Not a malfunction. This is a characteristic of the CMOS sensor. APPENDICES English 52 Question Why isn't the magnified image clear? Viewing images Why isn't the captured image clear? Can I play back image and sound files that I edited using my computer? Why is there a motor-like sound during video clip playback? Why is there no sound? Why does a message appear during PictBridge printing? Answer Due to the characteristics of the camera, magnified images appear less clear. The image was captured using the digital zoom. -- Action Not a malfunction. Not a malfunction.

Connecting to a TV Printing The sound of the camera's mechanical action was recorded. The volume on the TV is set to the minimum. There is a problem with the printer. We cannot guarantee the accurate playback of files that have been edited using a computer. Not a malfunction. Adjust the volume on the TV. Please refer to the instruction manual for your printer. 53 English Question The "Cannot edit video clips with unlike settings" message appears. Why is a noise heard from a nearby TV or radio during battery recharging? Why does the "Insufficient card memory" or "Insufficient internal memory" message appear? Why does the "Card is protected" message appear? Why can't the camera be operated? Answer You have attempted to join video clips having different resolutions or frame rates.

Electromagnetic waves are emitted from the charger.

Action Select video clips that have the same resolution or frame rate. Move the AC adaptor further away from the TV or radio when recharging the battery pack. Delete unnecessary files, or use a card that has more memory available. Misc. There is no more available memory on the card or in the camera's internal memory.

The lock switch on the card is in the locked (protect) position. A temporary internal circuitry problem may be the cause. Move the lock switch to the unlocked position. Remove the AC adaptor and the battery pack from the camera, wait a few minutes, then reinstall the battery pack and try again. After saving your files to a different medium, format the card.

A problem such as inability to record or play back occurs. The card contains files that were saved using a device other than this camera. APPENDICES English 54 Question Can I use my camera abroad? Answer -- Misc. Why does the "System error" message appear? A problem has occurred within the camera or card. Action When the camera is connected to a TV, you can switch the camera's video output to NTSC or PAL. If you have questions about accessories etc., please consult with a dealer near you for advice. Check the following items: 1 Remove the card and then install it again. 2 Remove the battery pack and then install it again. 3 Install a different card.

If "System error" still appears after performing the above steps, then take the camera to the dealer for service. 55 English SPECIFICATIONS Camera Still images: JPEG format (DCF, DPOF, Exif 2.2 compliant) Note: Designed mainly by the Japan Electronics and Information Technology Industries Association (JEITA), DCF (Design rule for Camera File system) is standard for digital still camera image files to provide interoperability between digital photography devices for the images stored on removable memory cards. However, it is not guaranteed that all devices will support the DCF standard. Video clips: Conforms to ISO-standard MPEG-4 AVC/H.264* Audio: MPEG-4 audio (AAC compression) 48 kHz sampling rate, 16-bit stereo format Data storage Internal memory: Approx. 50 MB media SD Memory Card SDHC Memory Card (up to 32 GB) SDXC Memory Card (up to 64 GB) Image sensor/ 1/2.33-inch (1.1 cm) CMOS sensor camera effective Still images: Approx. 14.

3 million pixels number of pixels Videos (HD mode): Approx. 11.9 million pixels Videos (SD mode): Approx. 14.3 million pixels * Video clip files recorded with models VPC-CA65 and VPC-CG65 are in the same H.

264 format as this model. However, such files cannot be played back, since they are not compatible due to differences such as the data compression method. Recorded image file format APPENDICES English 56 Still image shooting mode (recording resolution) Video clip recording mode (recording resolution) White balance Lens 4: 4640 × 3480 pixels (approx. 16 million pixels) 5: 4608 × 2592 pixels (approx. 12 million pixels, 16:9 aspect ratio) 6: 4352 × 3264 pixels (approx.

14 million pixels, low compression) 7: 4352 × 3264 pixels (approx. 14 million pixels, normal compression) 8: 4352 × 2448 pixels (approx. 10 million pixels, 16:9 aspect ratio) +: 1920 × 1080 pixels (approx. 2 million pixels, 16:9 aspect ratio) G: 1600 × 1200 pixels (approx. 2 million pixels) ,: 1280 × 720 pixels (approx. 900,000 pixels, 16:9 aspect ratio) [: 640 × 480 pixels (approx. 300,000 pixels) :: 4352 × 3264 pixels (approx. 14 million pixels, sequential shots) t: 1600 × 1200 pixels (approx. 2 million pixels, sequential shots) !: 1920 × 1080 pixels, 60 fields/s (60i) Y: 1920 × 1080 pixels, 30 fps (30p) ": 1280 × 720 pixels, 60 fps (60p) &: 1280 × 720 pixels, 30 fps (30p)): 640 × 480 pixels, 30 fps (30p) h The 60 fps frame rate of this camera is 59.94 fps, and the 30 fps frame rate is 29.

97 fps. Full-auto TTL; manual setting available Focal length: f = 6.8 mm to 34.0 mm, Optical 5× zoom Open: F = 3.5 (wide) to 3.7(tele) 8 groups, 10 elements (including three with four aspheric surfaces) Galvanometer iris Internal ND filter 35 mm film camera conversion Still image shooting: 38 mm to 190 mm (Optical zoom 5×) Video clip recording: Double-range zoom W mode: f = 40 mm to 240 mm (Advanced Zoom 6×) Double-range zoom T mode: f = 80 mm to 480 mm (Advanced Zoom 6×) 57 English Exposure control type Light-measuring mode Range Digital zoom Shutter speed Sensitivity Minimum subject illumination Image stabilizer Monitor Programmable AE/Shutter speed priority AE/ Aperture priority AE/Manual exposure control Exposure compensation available (0 ±1.8 EV in 0.3 EV steps) Multi-section measuring, center-weighted measuring, spot measuring Normal mode: 50 cm (19.69 in.) to infinity Super macro mode: 1 cm (0.

39 in.) to 80 cm (31.50 in.) (wide end only) For shooting: 1× to approx. 10× For playback: 1× to approx.

72.5× (varies with resolution) Still image shooting mode: 1/2 to 1/1,500 sec. (Approx. 1 sec. max.

when scene select function is set to lamp Q) (During flash: 1/30 to 1/1,500 sec.) Sequential shots mode: 1/30 to 1/1,500 sec. (no flash) Video clip recording mode: 1/30 to 1/10,000 sec. (1/15 sec. max. when scene select function is set to lamp Q or the high sensitivity mode) Still image shooting (standard output sensitivity*)/ video clip recording mode: Auto (video clip recording: ISO 50 to 800; still image shooting: ISO 50 to 400)/ISO 50, ISO 100, ISO 200, ISO 400, ISO 800, and ISO 1600 (switchable from the Recording Menu) h Sensitivity measured in compliance with the ISO standard (ISO 12232:2006). h Maximum ISO sensitivity up to 1600 equivalent when Scene Select function is set to Q. 17 lux (1/30 sec. in the scene select AUTO mode) 5 lux (1/15 sec. in the HIGH SENSITIVITY or lamp mode) Video: Electronic Still image: Multi-calculation electronic 2.

7" (6.9 cm) low-temperature polysilicon TFT color wide liquid crystal (transmissive), approx. 230,000 dots APPENDICES English 58 GN = 4.0 Approx. 50 cm (19.69 in.) to 2.3 m (7.55 ft.) (wide) Approx.

80 cm (31.50 in.) to 2.2 m (7.22 ft.

) (tele) Flash modes Auto-flash, forced flash, flash off Focus TTL-type AF (still image shooting mode: 9-point range finder/spot focus; video clip recording mode: Continuous focus), manual focus Self-timer Approx. 2-second delay, 10-second delay Ambient Temperature 0 to 40 °C (32 to 104°F) (operation) environment 20 to 60 °C (4 to 140°F) (storage) Humidity 30 to 90% (operating, no condensation) 10 to 90% (storage, no condensation) Water-resistant Compliant with JIS protection grade 8 standards (according to tests conducted in-house by Sanyo) Can be submerged at a maximum depth of 3.0 m (9.84 ft.), for up to 60 minutes.

Power supply Battery pack Li-ion battery pack (DB-L80) ×1 AC adaptor VAR-G12 (supplied) Power consumption 3.