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You can read the recommendations in the user guide, the technical guide or the installation guide for SONY NEX-FS100PK. You'll find the answers to all your questions on the SONY NEX-FS100PK in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

> **User manual SONY NEX-FS100PK**
> **User guide SONY NEX-FS100PK**
> **Operating instructions SONY NEX-FS100PK**
> **Instructions for use SONY NEX-FS100PK**
> **Instruction manual SONY NEX-FS100PK**

SONY

4-279-232-**12**(1)

Interchangeable Lens Digital HD
Video Camera Recorder

Operating Guide

E-mount

Table of Contents

Getting Started

Recording/Playback

Editing

Using the Menu

Connecting with another device

Troubleshooting

Additional Information

Quick Reference

AVCHD InfoLITHIUM L PROGRESSIVE

NXCAM MEMORY STICK SD XC HDMI

NEX-FS100E/FS100P/FS100EK/FS100PK

Manual abstract:

107). @@Pushing the plug forcibly into the terminal will damage the terminal and may result in a malfunction of the camcorder. · Use GPS in accordance with the regulations of the situation, the countries/regions of use. · Do not record the sun or leave the camcorder under the sun for a long time. The inside of the camcorder may be damaged. If sunlight is focused on a nearby object, it may cause a fire. When you must place the camcorder under direct sunlight, attach the front lens cap. · Do not expose your camcorder's viewfinder, lens, or LCD screen to the sun or strong light source for extended periods. Doing so may cause a malfunction of the camcorder. · Do not attempt to record the sun directly.

Doing so may cause a malfunction of the camcorder. @@In this case, a message appears on the LCD screen (p. @@@@@@All data recorded on the memory card will be erased by formatting, and cannot be recovered. Save important data on the memory card on other media such as a computer, before formatting the memory card. · Before starting to record, test the recording function to make sure the picture and sound are recorded without any problems. · Compensation for the loss of the content of recordings or the loss of recording opportunities cannot be provided, even if recording or playback is not possible due to a malfunction of the camcorder, storage media, etc., or even if images or sounds are distorted due to the limits of the capabilities of the camcorder. · TV color systems differ depending on the countries/regions. To view your recordings on a TV, you need a PAL system TV. · Television programs, films, video tapes, and other materials may be copyrighted.

Unauthorized recording of such materials may be contrary to the copyright laws. · Because of the way that the image device (CMOS sensor) reads out image signals, the following phenomena may occur. The subjects passing by the frame rapidly might appear crooked depending on the recording conditions. (This phenomenon may be notable in displays having high motion resolution.) Horizontal lines appear on the screen during recording under fluorescent lights. The phenomena can be reduced by adjusting the shutter speed (p. 32). Images on the screen look horizontally divided when a subject is continuously lit with a flash. The effect of this phenomenon may be reduced by using a slower shutter speed. Also, you may try using the "Content Management Utility" software on the supplied CD-ROM to repair the image.

On playing back movies · Movies recorded using this camcorder may not play back normally on devices other than this camcorder. Also, movies recorded on other devices may not play back properly on this camcorder. · Standard (SD) image quality movies recorded on SD memory cards cannot be played on AV devices of other manufacturers. DVD media recorded with high definition image quality (HD) DVD media recorded with high definition image quality (HD) can be played back with devices that are compatible with the AVCHD standard. You cannot play discs recorded with high definition image quality (HD) with DVD players/recorders as they are not compatible with the AVCHD format. If you insert a disc recorded with the AVCHD format (high definition image quality (HD)) into a DVD player/recorder, you may not be able to eject the disc. Save all your recorded image data · To prevent your image data from being lost, save all your recorded images on external media periodically. To save images on a computer, see page 87. To save images on an external device, see page 83. · Movies recorded with [1080/50p PS] or [1080/50i FX] of [REC FORMAT] can be saved on an external media device only (p. 83). To handle the recorded images on your computer Refer to "Help" on the supplied CD-ROM "Content Management Utility." Continued , 3 Read this first (Continued) Format the recording media using [MEDIA FORMAT] if images are not recorded or played back properly If you continue recording and deleting images on recording media for a long time, the files on that recording media may be fragmented. As a result, you may not be able to record and save images properly. If this happens, save images on a separate recordable media, such as a disc or computer, then format the recording media (p. 63). Note on disposal/transfer Even if you format the recording media on your camcorder or computer, you may not delete data from the recording media completely. When you transfer the recording media or your camcorder, it is recommended that you delete the data completely using commercially available data deletion software to prevent the recovery of your data. Also, when you dispose of the recording media, it is recommended that you destroy the actual body of the recording media. captured using a digital still camera, and therefore may appear different.

· The on-screen displays in each local language are used for illustrating the operating procedures. Change the screen language before using your camcorder if necessary (p. 22). · Design and specifications of recording media and other accessories are subject to change without notice. · Illustrations of camcorders in this manual show the NEX-FS100EK/FS100PK unless otherwise specified. About the location of the nameplate The nameplate is located on left side of the unit (circled below). About the operation of the camcorder You can operate the camcorder using the SEL/PUSH EXEC dial (p. 21, 66), V/v/B/ b/EXEC buttons (p. 66), and the touch panel. However, you cannot use the touch panel to make some settings such as the MENU items.

About this manual · Operations in the manual are described using the E 18-200 mm F3.5-6.3 OSS lens supplied with the NEX-FS100EK/ FS100PK. When the operation differs depending on the lens used, you will find the relevant information in "Notes" or "Tips." · Memory cards and a flash memory unit are both referred to as recording media in this manual. · The images of the LCD screen used in this manual for illustration purposes are 4 Table of Contents Read this first .....
.....
.....
....
....
.....
.....
....
....
.....
.....
....
......2 Getting Started Step 1: Checking supplied items ....
.....
.....
....
....

.ing Started Lens hood (1) (p. 20) Body cap (attached to the camcorder) (1) (p. 18) Front lens cap (1), rear lens cap (1) (attached to the lens) (p. 18) Accessory shoe plate (1) (p. 15) Connecting cord (DK-415) (1) (p. 17) CD-ROM "Content Management Utility" (1) CD-ROM "Manuals for Interchangeable Lens Digital HD Video Camera Recorder" (1) Operating Guide (2) 9 Step 2: Attaching the supplied accessories Attaching the lens See page 18 for information on attaching the lens. The NEX-FS100E/FS100P does not come with the E 18-200 mm F3.5-6.3 OSS lens.

Please use appropriate lenses (sold separately). 2 While pressing the screw down, turn it clockwise to fasten the handle. If the light to the lens is blocked Certain types of microphone may block the light to the lens. If this happens, attach the handle facing the other way round. Attaching the handle 1 Remove the screws and cap of the handle slide bar, and pull the handle slide bar out. 1 Slide the handle into the accessory shoe in the direction of the arrow. Handle slide ins lead) to the wall outlet (wall socket). 4 Place the battery pack in the slot of the AC Adaptor/Charger, press it down, and slide it in the direction of the arrow as illustrated. The charge lamp turns on and charging starts. Continued , 15 Step 3: Charging the battery pack (Continued) After charging the battery The charge lamp turns off (normal charge).
If you continue charging more 1 hour after the charge lamp turns off, you can use the battery a little longer (full charge). Remove the battery pack from the AC Adaptor/Charger when the charge is completed. To store the battery pack If the battery pack is not in use for a while, run down the battery and store it. See page 106 for details on storage of the battery pack. Charging time Approximate time (minute) required when you charge a fully discharged battery pack. Battery pack Normal charge time Fully charge time To attach the battery pack Press the battery pack against the back of your camcorder and slide it right as shown below. NP-F770 NP-F970 b Notes 250 365 310 425 · The supplied battery pack is NP-F770. · You cannot use the NP-F570 battery pack with your camcorder. On the battery pack · Before changing the battery pack, slide the POWER switch to OFF. · The Battery Info (p.

55) will not be correctly displayed under the following conditions. The battery pack is not attached correctly. The battery pack is damaged. The battery pack is worn-out. z Tips · You can check the remaining battery life with the status check function (p. 55). To remove the battery pack Slide the POWER switch to OFF. Push the BATT RELEASE (battery release) button and slide the battery pack as shown below. BATT RELEASE button 16 Using an outside power source By using the AC Adaptor/Charger and the connecting cord DK-415 (supplied), you can use the camcorder on AC power, without worrying about running out of power. To the wall outlet (wall socket) Power cord AC Adaptor/ Charger Charge lamp On the AC Adaptor/Charger · Use the nearby wall outlet when using the AC Adaptor/Charger.

Disconnect the AC Adaptor/ Charger from the wall outlet (wall socket) immediately if any malfunction occurs while using your camcorder. · Do not use the AC Adaptor/Charger placed in a narrow space, such as between a wall and furniture. · Do not short-circuit the DC plug of the AC Adaptor/Charger or battery terminal with any metallic objects. This may cause a malfunction. · Even if your camcorder is turned off, AC power (house current) is still supplied to it while connected to the wall outlet (wall socket) via the AC Adaptor/Charger. Getting Started Mode switch Connecting cord DK-415 1 Connect the power cord (mains lead) to the AC Adaptor/Charger. 2 Connect the power cord (mains lead) to the wall outlet (wall socket). 3 Connect the connecting cord (DK-415) to the AC Adaptor/Charger. 4 Set the mode switch of the AC Adaptor/ Charger to VCR/CAMERA. 5 Press the connecting part of the connecting cord (DK-415) against the back of your camcorder in the battery slot and slide it in the direction of the arrow.

17 Step 4: Attaching the lens This manual explains how to attach a lens using the E18-200 mm F3.5-6.3 OSS lens that comes with NEX-FS100EK/FS100PK. Front lens cap Attaching the lens Hold the camcorder body with the front end downward, and quickly change the lens somewhere away from dusty locations so as to keep dust or debris from getting inside the camcorder body. 1 Remove the body cap from the Zoom lock switch Rear lens cap Hood index Zooming ring Focal-length scale Focal-length index camcorder body and the packaging lid from the rear of the lens.

Focusing ring Mounting index Lens contacts* * Do not touch or dirty the lens contacts. 2 Mount the lens by aligning the mounting indexes (white) on the lens and the camcorder body. While pushing the lens lightly toward the camcorder body, turn the lens clockwise until it clicks into the locked position. Be sure to put the lens on straight. 18 Lens release button Mounting indexes (white) Getting Started 2 Replace the packaging lid on the b Notes · When attaching a lens, do not press the lens release button.

· Do not use force when attaching a lens. Mounting the lens forcibly may result in a malfunction or damage of the lens mount. · There may be a gap between the lens and the lens mount, depending on the lens attached. This is normal. lens and attach the body cap to the camcorder body. · Align the mark on the body cap to the mounting indexes, and turn the cap clockwise. z Tips · When you have changed the lens, it is recommended to adjust the black balance (p.

34) before recording. When you adjust the black balance, make sure that the front lens cap is attached. Align the marks.

· Before you attach caps, remove dust from them. Removing the lens 1 While pressing the lens release button all the way in, turn the lens counterclockwise until it stops. · When you remove the lens, make sure that you hold both of the lens and the camcorder body. b Notes · When changing the lens, if dust or debris gets inside the camcorder body and adheres to the surface of the image sensor (the part that acts as the film), it may appear on the image, depending on the shooting conditions. The image sensor is applied with the anti-dust coating, to prevent dust from adhering to the image sensor. However, attach or remove the lens quickly somewhere away from dusty locations. · Do not leave the camcorder body with the lens and body cap removed. Continued , 19 Step 4: Attaching the lens (Continued) If dust or debris adheres on the image sensor Turn off the camcorder and detach the lens. Clean the image sensor and the surrounding area using a blower (sold separately), and then reattach the lens. To attach the lens hood Align the red line of the lens hood to that of the lens and mount the lens hood on the lens.

Turn the lens hood clockwise until the red dot of the lens hood and the red line of the lens align with a click. When storing the lens, fit the lens hood onto the lens backwards. b Notes · Do not use a spray blower because it may scatter water droplets inside the camcorder body. · Do not put the tip of a blower into the cavity beyond the mount, so that the tip of the blower does not touch the image sensor. · Hold the camcorder's face downward to prevent the dust from resettling in the camcorder.

· Do not apply a mechanical shock to the camcorder during cleaning. · If you cannot clean the image sensor by the above procedure, consult your Sony dealer or local authorized Sony service facility. A-mount lenses · You need a Mount Adaptor (sold separately) to use A-mount lenses. For details, refer to the operating manuals that come with the Mount Adaptor. · When an A-mount lens is attached, you cannot use the auto focus and auto iris functions.

You may not be able to use certain A-mount lenses. For the compatibility of a particular A-mount lens, visit the Sony website in your area, or consult your Sony dealer or local authorized Sony service facility. 20 Step 5: Turning on the camcorder and setting the date and time Turning on the camcorder Slide the POWER switch to ON while you press the green button. When you use your camcorder for the first time, the [CLOCK SET] screen appears. Getting Started SEL/PUSH EXEC dial Press and hold the green button. MENU button Skip to step 4 when you set the clock for the first time. 1 Press the MENU button. 2 Select To turn off the power Slide the POWER switch to OFF. b Notes · If warning messages appear on the screen, follow the instructions. (OTHERS) by turning the SEL/PUSH EXEC dial, then press the dial.

Setting the date and time Set the date and time when you use your camcorder for the first time. z Tips · If you do not use your camcorder for about 3 months, the built-in rechargeable battery gets discharged and the date and time settings may be cleared from the memory. In that case, charge the rechargeable battery and then set the date and time again (p. 108). 3 Select [CLOCK SET] by turning the SEL/PUSH EXEC dial, then press the dial. Continued , 21 Step 5: Turning on the camcorder and setting the date and time (Continued) the correct time automatically, depending on the country/region selected for your camcorder. In this case, set [AUTO CLOCK ADJ] and [AUTO AREA ADJ] to [OFF]. Changing the language setting 4 Select your area by turning the SEL/PUSH EXEC dial, then press the dial. You can change the on-screen displays to show messages in a specified language. Press the MENU button and select (OTHERS) with the SEL/PUSH EXEC dial.

Select the screen language in [LANGUAGE] (p. 80). 5 Set [SUMMERTIME], [Y] (year), [M] (month), [D] (day), hour and minute, by turning the SEL/PUSH EXEC dial, then press the dial. The clock starts. · Set [SUMMERTIME] to [ON] to move the time forward 1 hour.

· You can set any year up to the year 2037. z Tips · The date and time are automatically recorded on the selected recording media, and can be displayed during playback (DATA CODE button, p. 54). · Once the clock is set, the clock time is automatically adjusted with [AUTO CLOCK ADJ] (p. 81) and [AUTO AREA ADJ] (p. 81) set to [ON]. The clock may not be adjusted to 22 Step 6: Inserting a memory card/Attaching a flash memory unit Memory card Types of memory cards you can use in your camcorder SD Speed Class Described in this manual "Memory Stick PRO Duo" media (Mark2) "Memory Stick PROHG Duo" media SD memory card SDHC memory card SDXC memory card* - "Memory Stick PRO Duo" media Getting Started Class 4 or faster SD card Types of memory cards you can use with Slow & Quick Motion recording SD Speed Class Described in this manual "Memory Stick PROHG Duo" media - "Memory Stick PRO Duo" media SD memory card SDHC memory card SDXC memory card* Class 10 or faster SD card * Movies recorded on SDXC memory cards cannot be imported to or played back on computers or A/V devices not supporting the exFAT file system, that is used for SDXC memory cards, by connecting the camcorder to these devices with the USB cable. Confirm in advance that the connecting equipment is supporting the exFAT system. If you connect equipment not supporting the exFAT system and the format screen appears, do not perform the format. All the data recorded will be lost. b Notes · Operation with all memory cards is not assured. · "Memory Stick PRO Duo" media, half the size of "Memory Stick" media, or standard size SD cards can be used for this camcorder. · Do not attach a label or the like on memory card or memory card adaptor. Doing so may cause a malfunction. · "Memory Stick PRO Duo" media of up to 32 GB and SD cards of up to 64 GB have been verified to operate with your camcorder.

· See page 99 for the recordable time of memory cards. · A MultiMedia Card cannot be used with this camcorder. Continued , 23 Step 6: Inserting a memory card/Attaching a flash memory unit (Continued) 1 Open the cover in the direction of the arrow. off, eject the memory card, or remove the battery pack. Otherwise, image data may be damaged. · If [The image database file is corrupted. The media must be restored to use again.] appears in step 2, format the memory card (p. 63). · When inserting or ejecting the memory card, be careful to prevent the memory card from popping out and dropping.

Flash memory unit You can attach a flash memory unit HXRFMU128 (sold separately) to your camcorder for recording movies. 2 Insert the memory card with the notched edge in the direction as illustrated until it clicks. Access lamp While sliding the RELEASE lever, align the mark on the camcorder with the one on the flash memory unit, and slide the flash memory unit in the direction of the arrow. Memory card slot Note the direction of notched corner. b Notes · If you insert a memory card into the slot in the wrong direction, the memory card, the memory card slot, or image data may be damaged.

Align the marks. To remove the flash memory unit Turn off your camcorder, and while sliding the RELEASE lever in the direction of arrow, remove the flash memory unit. To eject the memory card Lightly push the memory card once. b Notes · When the access lamp is lit or flashing in red, your camcorder is reading/writing data. Do not shake or knock your camcorder, turn the power 24 Getting Started When you do not use a flash memory unit Leave the flash memory unit jack cover attached.

While sliding the RELEASE lever in the direction of the arrow, attach the flash memory unit jack cover. z Tips · Your camcorder does not have the relay recording function. If the memory card is fully recorded during recording, the camcorder stops recording automatically. · You can record movies on both of the memory card and the flash memory unit simultaneously (p. 27). 25 Recording/Playback Recording START/STOP button START/STOP button Recording lamps POWER switch Your camcorder records movies on a memory card and/or a flash memory unit. Do the following steps to record movies. · This camcorder can record movies in either high definition image quality (HD) or standard definition image quality (SD). The factory setting is high definition image quality (HD) ([/ SET], p. 28).

b Notes · When the access lamp is lit or flashing in red, your camcorder is writing data on recording media. Do not shake or knock your camcorder, or remove the battery pack or the AC Adaptor/Charger. · See page 99 on the recording time of movies. · Your camcorder can record a movie for about 13 hours continuously. · If a movie file exceeds 2 GB during recording, the camcorder divides the file and create a new file automatically. · The menu settings, the PICTURE PROFILE settings, and the settings made by the AUTO/MANUAL switch are stored in your camcorder when you slide the POWER switch to OFF. The access lamp lights up while the settings are being stored. If you remove the battery pack or the AC Adaptor/Charger before turning off the power, the settings may return to the default settings. 1 Slide the POWER switch to ON while pressing the green button. Press and hold the green button.

26 2 Press the START/STOP button. [STBY] t [REC] The recording lamp lights up during recording. To stop the movie recording, press the START/STOP button again. Recording/Playback z Tips · When recording in high definition image quality (HD), the aspect ratio is fixed to 16:9. When recording in standard definition image quality (SD), you can switch the aspect ratio to 4:3 ([WIDE REC], p.

73). · You can change the screen display during recording (p. 54). · Indicators displayed on the screen during recording are shown on page 120. · The recording lamp can be set to stay off ([REC LAMP[F]], [REC LAMP[R]], p.

82). · You can capture still images from the movies you recorded (p. 59). To record movies using both the memory card and the flash memory unit (Simultaneous recording) You can record movies on both of these recording media simultaneously. Press MENU t select (REC/OUT SET) t [REC SET] t [SIMULTANEOUS REC] t [ON] (default setting) with the SEL/PUSH EXEC dial. z Tips · Set [/ SET] to [ ] (p. 28) for the simultaneous recording. · If one of the recording media used becomes unable to continue recording during simultaneous recording, the other recording media continues recording without pause. · When [SIMULTANEOUS REC] is [ON], movies are recorded on both media, irrespective of the [REC MEDIA SETTING] setting. To record movies only on the memory card or the flash memory unit 1 Press MENU t select (REC/OUT SET) t [REC SET] t [SIMULTANEOUS REC] t [OFF].

2 Select (REC/OUT SET) t [REC SET] t [REC MEDIA SETTING] t [MEMORY CARD] or [FMU] (flash memory unit). z Tips · A message appears if an access error occurred while the camcorder was accessing the recording media. During simultaneous recording, the [STBY]indicator and the icon of the recordable medium appears on the screen. Continued , 27 Recording (Continued) Selecting high definition image quality (HD) or standard definition image quality (SD) You can select the desired image quality from the high definition image quality (HD) that enables you to record fine images, or the standard definition image quality (SD) that has more compatibility with various playback devices ([HD] is the default setting). Change the image quality according to the recording situation or the playback device. To change the setting Press MENU t select (REC/OUT SET) t [REC SET] t [or [ ] with the SEL/PUSH EXEC dial. / SET] t [ ] Selecting the recording format You can select the recording format (bit-rate, image size, frame rate, scanning system). In the default setting, [ ] is selected. To change the setting Press MENU t select (REC/OUT SET) t [REC SET] t [desired format with the SEL/PUSH EXEC dial. Setting value Description · Bit-rate PS: max.

28 Mbps FX: max. 24 Mbps FH: approx. 17 Mbps (average) HQ: approx. 9 Mbps (average) LP: approx. 5 Mbps (average) · Image size PS: 1920×1080 FX: 1920×1080/1280×720 FH: 1920×1080/1280×720 HQ: 1440×1080 LP: 1440×1080 · Frame rate either 25 or 50 · Scanning system i: interlace p: progressive REC FORMAT] t a 28 Setting value If you select [ ], for example, movies are recorded with following format.

· 1080: Effective scanning lines · 25: Frame rate · p: Scanning system · FX: Recording mode b Notes · The recording mode is fixed to FX or FH with the progressive scanning system. · You can save movies that have been recorded with [1080/50p PS] or [1080/50i FX] of [REC FORMAT] on an external media device only (p. 83). Zooming Turn the zooming ring right or left to decide on the size of the subject in your image. Zooming must be done before focusing. b Notes · The operations and operating methods available depend on the lens attached. Refer to the operating manuals that comes with your lens. · Do not grab or apply a strong force to the lens cylinder that rolls out when zooming. The lens may be damaged. Recording/Playback Adjusting the focus You can adjust the focus manually for different recording conditions.

Use this function in the following cases. To record a subject behind a window covered with raindrops. To record horizontal stripes. To record a subject with little contrast between the subject and its background. When you want to focus on a subject in the background.

z Tips · The recording format of [576/50i HQ] is automatically selected for the standard image quality (SD) recording. To record a stationary subject using a tripod. Continued , 29 Recording (Continued) · When you want to record a close-up image of a subject, fully zoom out towards W (wide angle), then adjust the focus. To restore automatic adjustment Set the FOCUS switch C to AUTO. 9 disappears and the automatic focus adjustment is restored. Using automatic focus temporarily (Push auto focus) Record the subject while pressing and holding the PUSH AUTO button D. If you release the button, the setting returns to manual focusing. Use this function to shift the focus on one subject to another. The scenes will shift smoothly. z Tips · The focal distance information (for when it is dark and hard to adjust the focus) appears for about 3 seconds in the following cases.

b Notes · When you use A-mount lenses (sold separately), you cannot use following functions and buttons. Auto focus Button D FOCUS switch C at the AUTO position 1 During recording or standby, set the FOCUS switch C to MAN. 9 appears. When you set the FOCUS switch C to MAN and 9 appears on the screen. When you rotate the focusing ring while 9 is displayed on the screen.

2 Rotate the focusing ring B and adjust the focus. when the focus cannot be adjusted any farther. 9 changes to when the focus cannot be adjusted any closer. z Tips 9 changes to Using the expanded focus (Expanded focus) Press the EXPANDED FOCUS button A. [EXPANDED FOCUS] appears and the center of the screen is magnified by about 2.

0 times. It will be easier to confirm the focus setting during manual focusing. The screen returns to the original size when you press the button again. b Notes · Even though the image appears expanded on the screen, the recorded image is not expanded. · You cannot use the expanded focus with the SMOOTH SLOW REC function (p. 45). For focusing manually · It is easier to focus on the subject when you use the zoom function. Zoom towards T (telephoto) to adjust the focus, and then, towards W (wide angle) to adjust the zoom for recording. 30 Adjusting manually Set the AUTO/MANUAL switch to MANUAL when you adjust the iris, gain, shutter speed, and white balance manually. light decreases the more that you close the aperture (increasing F value).

To temporarily adjust the iris automatically Hold the IRIS PUSH AUTO button C down. The iris is adjusted automatically for as long as you hold the button down To adjust the iris automatically Press the IRIS button A. appears next to the iris value. b Notes · You can make this adjustment only with an E-mount lens. · When you use A-mount lenses (sold separately), you must adjust the iris manually, using the iris ring B. · When you set the AUTO/MANUAL switch H to AUTO, iris, gain, shutter speed, and white balance are adjusted automatically. You cannot adjust any of them manually. Recording/Playback Adjusting the iris This is handy for making the background blurred or sharp. z Tips · The range of focus, an important effect of the aperture, is called the depth of field. The depth of field gets shallower as the aperture is opened, and deeper as the aperture is closed.

Use the aperture creatively to obtain the desired effect in your photography. 1 Set the AUTO/MANUAL switch H to MANUAL. Adjusting the gain 2 Press the IRIS button A. next to the iris value disappears. You can adjust the gain manually when you do not want to use the AGC (automatic gain control).

3 Adjust the iris with the iris ring B. The volume of the light increases the more that you open the aperture (decreasing F value). The volume of the 1 Set the AUTO/MANUAL switch H to MANUAL. Continued , 31 Adjusting manually (Continued) 2 Press the GAIN button D. next to the gain value disappears, or the gain value appears on the screen.

3 Change the shutter speed displayed on the screen by turning the SEL/PUSH EXEC dial G. You can adjust the shutter speed in a range of 1/3 second through 1/10000 second. The denominator of the set shutter speed appears on the screen. For example, [100] appears on the screen when you set the shutter speed to 1/100 second. The larger the value on the screen is, the faster the shutter speed is. 3 Set the gain switch E to H, M or L. The gain value set for the selected gain switch position appears on the screen. You can set the gain value for each gain switch position from [GAIN SET] of the (CAMERA SET) menu (p. 71). To adjust the gain automatically Press the GAIN button D.

The gain value disappears, or next to the gain value. b Notes · When you set the AUTO/MANUAL switch H to AUTO, iris, gain, shutter speed, and white balance are adjusted automatically. You cannot adjust any of them manually. 4 Press the SEL/PUSH EXEC dial G to lock the shutter speed. To readjust the shutter speed, repeat steps from 2. appears z Tips · It is difficult to focus automatically at a lower shutter speed. Manual focusing with your camcorder attached to a tripod is recommended. · When recording under fluorescent lamps, sodium lamps, or mercury lamps, the picture may flicker or change colors, or may have horizontal bands of noise. You may be able to improve the situation by adjusting the shutter speed. Adjusting the shutter speed You can manually adjust and fix the shutter speed.

You can make a moving subject look still or emphasize the movement of a moving subject by adjusting the shutter speed. 1 Set the AUTO/MANUAL switch H to MANUAL. To adjust the shutter speed automatically Press the SHUTTER SPEED button F twice. The shutter speed value disappears, or appears next to the shutter speed value. b Notes · When you set the AUTO/MANUAL switch H to AUTO, iris, gain, shutter speed, and white balance are adjusted automatically.

You cannot adjust any of them manually. 2 Press the SHUTTER SPEED button F until the shutter speed value is highlighted. 32 Adjusting the white balance 2 Press the WHT BAL button A. 3 Set the white balance memory switch B to any one of PRESET/A/B. Select A or B for recording with the white balance setting stored in memory A or B.

x To use the white balance you adjusted in advance 1 Preset the white balance offset value as described in "To save the adjusted white balance value in memory A or B" (p. 34). 2 Set the white balance memory switch B to A or B. z Tips Recording/Playback You can adjust and fix the white balance according to the lighting conditions of recording environment. You can store white balance values in memory A (A) and memory B (B), respectively.

Unless a white balance is readjusted, values will remain even after the power has been turned off. When you select PRESET, [OUTDOOR], [INDOOR] or [MANU WB TEMP] is selected, according to which one you previously set with [WB PRESET] in the (CAMERA SET) menu. z Tips · You can assign [WB PRESET] to an ASSIGN button (p. 48). · This adjustment is recommended when you use a commercially available ND filter.

x To use the preset white balance offset value Outdoor recording 1 Select [CAMERA SET] menu t [WB PRESET] t [(OUTDOOR)] (p. 71). 2 Set the white balance memory switch B to PRESET. Indoor recording 1 Select [CAMERA SET] menu t [WB PRESET] t [n (INDOOR)]. 2 Set the white balance memory switch B to PRESET. 1 Set the AUTO/MANUAL switch E to MANUAL. x To set the color temperature 1 Select [CAMERA SET] menu t [WB TEMP SET] t a desired color temperature (p. 71). 2 Select [CAMERA SET] menu t [WB PRESET] t [MANU WB TEMP] (p. 71).

Continued , 33 Adjusting manually (Continued) 3 Set the white balance memory switch B to PRESET. before completing the adjustment, set the white balance memory switch B to another position to temporarily suspend white balance adjustment. z Tips · You can change the outdoor white balance setting by setting an offset value. Press (one push) button C while (outdoor) is selected and turn the SEL/PUSH EXEC dial D to select an offset value from -7 (bluish) to 0 (normal, the default setting) to +7 (reddish). You can also set the white balance offset value from the menu ([WB OUTDOOR LEVEL], p. 71). · You can change the color temperature. Set [WB PRESET] to [MANU WB TEMP], and the white balance memory switch B to PRESET, then press the (one push) button C. Turn the SEL/PUSH EXEC dial D until the desired temperature appears on the screen, then press the dial to set the temperature. To adjust the white balance automatically Press the WHT BAL button A.

b Notes · When you set the AUTO/MANUAL switch E to AUTO, other manual adjusted items (iris, gain, and shutter speed) also become automatic. Xxx Adjusting the black balance Normally, you do not need to adjust the black balance. The black balance may be inappropriately adjusted for some recording situations. If that happens, adjust the black balance. It is recommended that you adjust the black balance also when you change the lens. The adjusted settings are stored only temporarily. The settings return to the default settings when you turn the power off. To save the adjusted white balance value in memory A or B 1 Set the AUTO/MANUAL switch E to MANUAL. 2 Press the WHT BAL button A. 3 Set the white balance memory switch to A(A) or B (B).

4 Capture a white subject, such as white paper, full-screen in the same lighting condition as the one in which the subject is. 5 Press the (one push) button C. The adjusted value is stored in A or B. The stored color temperature appears for about 3 seconds. b Notes · When a white balance adjustment value has not been obtained successfully, A or B turns to slow flashing. Adjust the subject appropriately and set the shutter speed to auto or around 1/50, then try adjusting the white balance again. · It may take a long time to adjust the white balance, depending on the recording conditions. If you want to perform a different operation 1 Press the MENU button during standby. 2 Select (CAMERA SET) t [BLACK BALANCE] with the SEL/ PUSH EXEC dial. 3 Following the message on the screen, attach the front lens cap, and select [YES].

The black balance adjustment starts. 34 Audio setup 4 When [Completed.] appears, press the MENU button to complete the adjustment. The following jacks and switches allow you to set the sound to be recorded. See page 11 on connecting the microphones.

If [Could not adjust.] appears Try the adjustment again. Recording/Playback External audio jacks and switches INPUT 1 jack F INPUT 2 jack E INPUT 1 switch A INPUT 2 switch G Audio source switches CH1 (INPUT 1/INPUT 2) switch B CH2 (INPUT 1/INPUT 2) switch H Audio level controls CH1 (AUTO/MAN) switch C CH2 (AUTO/MAN) switch I AUDIO LEVEL (CH1) dial D AUDIO LEVEL (CH2) dial J Continued , 35 Audio setup (Continued) Recording sound via the supplied microphone The sound will be recorded in monaural. Recording sound from an external audio device To use an external audio device, or a microphone other than the supplied microphone, change the following settings. 1 Attach the supplied microphone (p. 11) and connect it to the INPUT 1 jack F. 1 Select the input source. Set the INPUT 1/INPUT 2 switches according to the devices connected to the INPUT 1/INPUT 2 jacks. Audio devices Switch position 2 Set the CH1 (INPUT 1/INPUT 2) B and CH2 (INPUT 1/INPUT 2) H switches to INPUT 1. The same sound will be recorded on both CH1 and CH2. External audio device (mixer, etc.) Dynamic microphones or microphones with a builtin battery LINE MIC 3 Set the INPUT 1 switch A to MIC+48V. +48V powering (Phantom powering) microphone b Notes MIC+48V · If you connect a device that does not support +48V phantom power, malfunction may result from setting this switch to MIC+48V. Check before connecting the device. · When there is no audio device connected to an INPUT jack, set the INPUT switch of that jack to LINE to prevent noise.

2 Set the input level of the microphone. · Set the input level to the sensitivity of an XLR microphone you are using with [INPUT1 TRIM]/[INPUT2 TRIM] in the menu (p. 75). [0dB] will be appropriate for the supplied microphone (ECM-XM1). · You can set an input level between -60 dBu (+12 dB) and -30 dBu (-18 dB) by 6 dB. The default setting is -48 dBu (0 dB). 36 3 Select the channel you want to record. Using the CH1/CH2 switches, select the source to be recorded on each channel. INPUT jack and recorded channel Switch position 2 Turn the AUDIO LEVEL dial (D or J) of the channel to be adjusted during recording or standby. To restore automatic adjustment CH1 CH2 CH1 CH2 CH1 CH2 CH1 CH2 INPUT 1 INPUT 1 INPUT 2 INPUT 1 INPUT 2 INPUT 2 Set the AUTO/MAN witch (G or I) of the manually adjusted channel to AUTO.

Setting the headphone sound Recording/Playback You can select the channel by setting the switch to CH1 or CH2, to output from the headphone. See [HEADPHONE OUT] on the sound at STEREO MIX (p. 74). z Tips · When you use a stereo microphone (2 XLR plugs), connect the L (left) channel plug to the INPUT 1 jack, and the R (right) channel plug to the INPUT 2 jack. Set the CH1 switch to INPUT 1, and the CH2 switch to INPUT 2.

Adjusting the volume You can adjust the volume of the microphones connected to the INPUT 1/ INPUT 2 jacks. 1 Set the AUTO/MAN switch (C or I) of the channel to be adjusted to MAN. appears on the screen. 37 Useful functions Customizing the picture quality (Picture profile) Picture profile number Recording condition PP1 Default settings the same as when Picture Profile is [OFF] Default settings the same as when Picture Profile is [OFF] Example settings of natural color tone with ITU-709 gamma Example settings of a color tone that is faithful to ITU-709 Example settings of pictures recorded on cinema color negative film Example settings of pictures screened with cinema color print film PP2 PP3 PP4 PP5 PP6 You can customize the picture quality by adjusting picture profile items such as [GAMMA] and [DETAIL].

Connect your camcorder to a TV or monitor, and adjust the picture quality while observing the picture on the TV or monitor screen. Picture quality settings for different recording conditions have been stored in [PP1] through [PP6] as default settings. 1 During standby, press the PICTURE PROFILE button B. 2 Select a picture profile number with the SEL/PUSH EXEC dial A. You can record with the settings of the selected picture profile. 3 Select [OK] with the SEL/PUSH EXEC dial A. 38 To cancel the picture profile recording Select [OFF] in step 2 with the SEL/PUSH EXEC dial A. To change the picture profile You can change the settings stored in [PP1] through [PP6]. 1 Press the PICTURE PROFILE button B. 2 Select the PICTURE PROFILE number with the SEL/PUSH EXEC dial A. 3 Select [SETTING] with the SEL/PUSH EXEC dial A.

4 Select an item to be adjusted with the SEL/PUSH EXEC dial A. 5 Adjust the picture quality with the SEL/ PUSH EXEC dial A. 6 Repeat steps 4 and 5 to adjust other items. 7 Select [RETURN] with the SEL/ PUSH EXEC dial A. 8 Select [OK] with the SEL/PUSH EXEC dial A. A picture profile indicator appears. Recording/Playback Continued , 39 Useful functions (Continued) BLACK LEVEL To set the black level. Item Description and settings Sets the black level. -15 to +15 GAMMA To select a gamma curve. Item Description and settings [STANDARD] [CINEMATONE1] [CINEMATONE2] [ITU709] Standard gamma curve Gamma curve 1 for producing tone of film camera images Gamma curve 2 for producing tone of film camera images Gamma curve that corresponds to ITU-709.

Gain in low intensity area: 4.5 BLACK GAMMA To correct gamma in low intensity area. Item Description and settings [RANGE] [LEVEL] Selects a correcting range. HIGH / MIDDLE / LOW Sets the correcting level. -7 (maximum black compression) to +7 (maximum black stretch) KNEE To set knee point and slope for video signal compression to prevent over-exposure by limiting signals in high intensity areas of the subject to the dynamic range of your camcorder.

Item Description and settings [MODE] Selects a mode either automatic or manual. [AUTO] : to set the knee point and slope automatically. [MANUAL] : to set the knee point and slope manually. Sets the maximum point and sensitivity in the automatic mode. [MAX POINT] : Sets the maximum point. 90% to 100% [SENSITIVITY] : Sets the sensitivity. HIGH / MIDDLE / LOW Sets the knee point and slope manually. [POINT] : Sets the knee point. 75% to 105% [SLOPE] : Sets the knee slope. -5 (gentle) to +5 (steep) [AUTO SET] [MANUAL SET] 40 COLOR MODE To set type and level of colors. Item Description and settings [TYPE] Selects a type of colors. [STANDARD] : Standard colors [CINEMATONE1] : Film camera image-like colors good with [GAMMA] set to [CINEMATONE1] [CINEMATONE2] : Film camera image-like colors good with [GAMMA] set to [CINEMATONE2] [PRO] : Similar color tones to those of Sony professional cameras (when combined with ITU-709) [ITU709 MATRIX]: Colors corresponding to ITU-709 Recording/Playback [LEVEL] Sets a color level when you set [TYPE] to the settings other than [STANDARD]. 1 (close to color settings of [STANDARD]) to 8 (color settings of the selected type) COLOR LEVEL To set the color level. Item Description and settings -7 (light) to +7 (dark), -8: black and white COLOR PHASE To set the color phase. Item Description and settings -7 (greenish) to +7 (reddish) COLOR DEPTH To set the color depth for each color phase.

This function is more effective for chromatic colors and less effective for achromatic colors. The color looks deeper as you increase the setting value to more positive side, and lighter as you decrease the value to more negative side. This function is effective even if you set [COLOR LEVEL] to [-8] (black and white). Item Description and settings [R] [G] [B] [C] [M] [Y] -7 (light red) to +7 (deep red) -7 (light green) to +7 (deep green) -7 (light blue) to +7 (deep blue) -7 (light cyan) to +7 (deep cyan) -7 (light magenta) to +7 (deep magenta) -7 (light yellow) to +7 (deep yellow) Continued , 41 Useful functions (Continued) WB SHIFT To set items for the white balance shift. Item Description and settings [FILTER TYPE] Selects a color filter type for the white balance shift. [LB-CC] : Film type (color conversion and correction) [R-B] : Video type (correction of R and B levels) Sets a color temperature offset value. -9 (bluish) to +9 (reddish) Sets a color correct offset value. -9 (greenish) to +9 (magentish) Sets an R level. -9 (low R level) to +9 (high R level) Sets a B level. -9 (low B level) to +9 (high B level) [LB[COLOR TEMP]] [CC[MG/GR]] [R GAIN] [B GAIN] DETAIL To set items for the detail.

Item Description and settings [LEVEL] [MANUAL SET] Sets the detail level. -7 to +7 [ON/OFF] [ON] : Turns on and off the manual detail adjustment. : Enables the manual detail adjustment (automatic optimization will not be performed). [OFF] : Disables the manual detail adjustment. [V/H BALANCE] : Sets the vertical (V) and horizontal (H) balance of DETAIL.

-2 (off to the vertical (V) side) to +2 (off to the horizontal (H) side) [B/W BALANCE]: Selects the balance of the lower DETAIL (B) and the upper DETAIL (W). TYPE1 (off to the lower DETAIL (B) side) to TYPE5 (off to the upper DETAIL (W) side) [LIMIT] : Sets the limit level of DETAIL. 0 (Low limit level: likely to be limited) to 7 (High limit level: not likely to be limited) [CRISPENING] : Sets the crispening level. 0 (shallow crispening level) to 7 (deep crispening level) [HI-LIGHT DETAIL]: Sets the DETAIL level in the high intensity areas. 0 to 4 42 COPY To copy the settings of the picture profile to another picture profile number.

Acquiring location information (GPS) RESET To reset the picture profile to the default setting. 1 Press the MENU button during standby. To copy the picture profile setting to another picture profile number See page 38 for the location of the buttons. 1 Press the PICTURE PROFILE button B. 2 Select the picture profile number that you want to copy from with the SEL/ PUSH EXEC dial A. 3 Select [SETTING] t [COPY] with SEL/PUSH EXEC dial A. 4 Select the number of the picture profile that you want to copy to with the SEL/ PUSH EXEC dial A. 5 Select [YES] with the SEL/PUSH EXEC dial A. 6 Select [RETURN] t [OK] with the SEL/PUSH EXEC dial A. 2 Select (OTHERS) t [GPS SETTING] t [ON] (default setting) with the SEL/PUSH EXEC dial.

appears, and your camcorder starts trying to triangulate. When your camcorder triangulates successfully, it will record the location information at the time movies were recorded. Recording/Playback b Notes ·The indicator changes according to the strength of GPS signal reception. Triangulating status GPS GPS reception status indicators To reset the picture profile settings You can reset the picture profile settings by each picture profile number. You cannot reset all picture profile settings at once.

See page 38 for the location of the buttons. 1 Press the PICTURE PROFILE button B. 2 Select the number of the picture profile that you want to reset with the SEL/ PUSH EXEC dial A. 3 Select [SETTING] t [RESET] t [YES] t [RETURN] t [OK] with the SEL/PUSH EXEC dial A. Function off No [GPS SETTING] is indicator set to [OFF], or the GPS receiver is not functioning normally.

The camcorder cannot find a GPS signal, therefore, it cannot triangulate. Use the camcorder in an open area. The camcorder is searching the GPS signal. It may take several minutes until the camcorder triangulates. The camcorder is receiving a weak GPS signal.

Continued , Difficult Searching Triangulating 43 Useful functions (Continued) Triangulating status GPS GPS reception status indicators Triangulating The camcorder is receiving a GPS signal, and can acquire location information. The camcorder is receiving a strong GPS signal, and can acquire location information. 3 Select the first 2 digits with the SEL/ PUSH EXEC dial. You can set the time code between 00:00:00:00 and 23:59:59:24. 4 Set other digits by repeating step 3.

5 Select [OK] with the SEL/PUSH EXEC dial. Triangulating To reset the time code You can reset the time code (00:00:00:00). Select [RESET] in step 2 of "Presetting the time code." · [GPS SETTING] is set to [ON] in the default setting. Movies recorded during triangulation by GPS will be recorded with location information. If you do not want to record location information, set [GPS SETTING] to [OFF]. · If the GPS indicator does not become a triangulating status indicator even after several minutes, the camcorder is having trouble with receiving GPS signals. You may start recording if you do not need to record location information, or go to a location with access to the open sky. · The camcorder can hardly receive GPS signals indoors or near tall buildings. Go to a location with access to the open sky.

· Even if a triangulating status indicator is displayed, the camcorder may not record the GPS information continuously, depending on the condition of GPS signal reception. To reset the time code using the Wireless Remote Commander You can reset the time code (00:00:00:00) also by pressing the TC RESET button on the Wireless Remote Commander. Presetting the user bit 1 Select [UB PRESET] with the SEL/ PUSH EXEC dial. 2 Select [PRESET] with the SEL/PUSH EXEC dial. 3 Select the first 2 digits with the SEL/ PUSH EXEC dial. 4 Set other digits by repeating step 3. 5 Select [OK] with the SEL/PUSH EXEC dial. Setting time data The camcorder records movies accompanied by time data, such as time code and user bit. Display the setting screen by pressing the MENU button t select (TC/UB SET) with the SEL/PUSH EXEC dial. To reset the user bit You can reset the user bit (00 00 00 00).

Select [RESET] in step 2 of "Presetting the user bit." Presetting the time code 1 Select [TC PRESET] with the SEL/ PUSH EXEC dial. 2 Select [PRESET] with the SEL/PUSH EXEC dial. 44 Recording with the SMOOTH SLOW REC function Fast moving subjects and actions, which cannot be captured under the general recording conditions, can be recorded in smooth moving slow-motion (25% slow). This is useful for recording fast actions such as a golf or tennis swing.

[START TRIGGER]* [END TRIGGER] * The default setting is [START TRIGGER]. Recording/Playback b Notes · Sounds cannot be recorded. · The image quality is lower than with the regular recording. · You cannot set a slower shutter speed than 1/ 215 second. · The simultaneous recording on the memory card and the flash memory unit is not available.

· The time of the movie recorded using SMOOTH SLOW REC is recorded after being converted to slow-motion, not the time when the movie is actually shot. · SMOOTH SLOW REC is not available with standard definition image quality (SD). · With SMOOTH SLOW REC, the angle of view will be narrower by 25 %. Press the SMOOTH SLOW REC button, then the START/STOP button. A recording of about 3 seconds is stretched to about 12 seconds and recorded as a slowmotion movie. Recording ends when [Recording...] disappears from the screen. z Tips · During SMOOTH SLOW REC, the high definition image quality (HD) recording format changes to [1080/50i FH].

When you finish SMOOTH SLOW REC, the normal recording setting is restored. · Movies are recorded on the medium selected with [REC MEDIA SETTING]. To cancel SMOOTH SLOW REC Press the SMOOTH SLOW REC button or the MENU button. To change the timing You can select when recording starts in relation to when the SMOOTH SLOW REC button is pressed. Press MENU t select (CAMERA SET) menu t [SMOOTH SLOW REC] t [REC TIMING] t a desired setting with the SEL/PUSH EXEC dial. Continued , 45 Useful functions (Continued) Recording with the Slow & Quick Motion function By recording with a frame rate that is different from the playback frame rate, you can record images to be played back as slow motion or quick motion images. The images recorded with the Slow & Quick Motion function will appear smoother than slow or fast-forward playback of images recorded at normal speed. You can use the Slow & Quick Motion function with high definition image quality (HD) only. START/STOP button Playback speed The playback speeds based on the recording format and frame rate setting are as follows. FRAME RATE REC FORMAT 1080/25p 1080/50p b Notes · You must use "Memory Stick PRO-HG Duo" media or SD card Class 10 or faster for Slow & Quick Motion recording.

· When recording with the Quick Motion recording function, your camcorder may continue recording for some time (approximately 30 seconds at most) after you press the button to stop recording. Do not operate your camcorder while the [REC] indicator is flashing on the screen, but wait till it turns to [STBY]. · After you press the button to stop recording, your camcorder continues recording till it completes writing of the minimum unit of data (0.5 seconds of replay time). 50 25 12 6 3 2 1 50% slow 208% quick 417% quick 833% quick 1250% quick 2500% quick 100% (standard) 417% quick 833% quick 1667% quick 2500% quick 5000% quick 100% (standard) 200% quick 46 Preparation You must set the recording format and frame rate.

1 Press the MENU button C. 2 Select (CAMERA SET) t [S&Q MOTION] t [REC FORMAT] with the SEL/PUSH EXEC dial B. 3 Select a recording format. You can select one from 1080/50p PS, 1080/25p FX, or 1080/25p FH. 4 Select [FRAME RATE]with the SEL/ PUSH EXEC dial B, and set a desired frame rate.

You can select one from 50 fps, 25 fps, 12 fps, 6 fps, 3 fps, 2 fps, or 1 fps. 5 Select [RETURN] t . To record with the Slow & Quick Motion function Press the S&Q button A, then the START/ STOP button. Recording starts. To stop Slow & Quick Motion recording Press the START/STOP button again.

To change the frame rate setting Recording/Playback Hold the S&Q button A down for about 1 second, than change the value with the SEL/PUSH EXEC dial. Holding the S&Q button A down again for about 1 second restores the previous setting. To cancel Slow & Quick Motion recording Press the S&Q button A or the MENU button C during standby. z Notes · When you are recording with a slow frame rate, the camcorder may continue recording for a few more seconds after you press the START/STOP button to stop recording. · You cannot change the frame rate during Slow & Quick Motion recording.

To change the frame rate, stop current Slow & Quick Motion recording. · The time code is recorded in the [REC RUN] mode during Slow & Quick Motion recording (p. 79). · The Slow & Quick Motion mode is canceled automatically when the POWER switch is set to OFF, but the frame rate setting is retained. · You can record sound only at 100% (standard). · You cannot use the Slow & Quick Motion function for the simultaneous recording. · You cannot use the Slow & Quick Motion function with the standard image quality (SD). 47 Reviewing the most recently recorded scene (Last Scene Review) You can review the most recently recorded scene on the screen. Assigning the functions to the ASSIGN buttons Some functions can be assigned to the ASSIGN buttons for use. You can assign a single function to any one of the ASSIGN 1 to 6 buttons.

See "Menu items" (p. 68) on the function of each item. Default function of each ASSIGN button · ASSIGN 1: ZEBRA (p. 76) · ASSIGN 2: HISTOGRAM (p. 76) · ASSIGN 3: SMOOTH SLOW REC (p.

45) · ASSIGN 4: PEAKING (p. 76) · ASSIGN 5: MARKER (p. 77) · ASSIGN 6: LAST SCENE (p. 48) Right after you stop recording, press the LAST SCENE button. The camcorder plays from the top to the end of the most recently recorded scene, then returns to standby mode.

Functions you can assign to the ASSIGN buttons · · · · · · · · · · · · · · · · - (no function) LAST SCENE REVIEW (p. 48) WB PRESET (p. 33) AE SHIFT (p. 71) STEADYSHOT (p. 72) SMOOTH SLOW REC (p. 45) COLOR BAR (p. 72) HISTOGRAM (p. 76) ZEBRA (p. 76) PEAKING (p. 76) MARKER (p.

77) CAMERA DATA DISPLAY (p. 77) AUDIO LEVEL DISPLAY (p. 78) REC LAMP[F] (p. 82) REC LAMP[R] (p. 82) VISUAL INDEX (p. 50) To stop reviewing the last scene Press the LAST SCENE button during playback. The camcorder returns to standby mode. z Notes · If you edit the movie or remove the recording media after you stop recording, the Last Scene Review function may not work correctly. · You cannot use the Last Scene Review function with SMOOTH SLOW REC. 48 4 Select the function that you want to assign with the SEL/PUSH EXEC dial A.

5 Select [OK] with the SEL/PUSH EXEC dial A. ASSIGN buttons 6 Select [RETURN] with the SEL/ PUSH EXEC dial A. Recording/Playback 7 Press the MENU button B to hide the menu screen. 1 Press the MENU button B. 2 Select (OTHERS) t [ASSIGN BUTTON] with the SEL/PUSH EXEC dial A.

3 Select the ASSIGN button to which you want to assign a function with the SEL/PUSH EXEC dial A. · [--------] appears if no function is assigned to the ASSIGN button. 49 Playback VISUAL INDEX button POWER switch VOLUME buttons You can play back movies as follows: 1 Slide the POWER switch to ON. Press and hold the green button. 2 Press the VISUAL INDEX button.

The VISUAL INDEX screen appears after a few seconds. Recording media Previous Thumbnail (movie) Playback mode Next Current movie data (p. 51) · You can turn on or off the time and date display on the thumbnails by pressing the DISPLAY button. 50 3 Play back movies. 1 Touch the recording media you want to play back. : Memory card : Flash memory unit 2 Touch the playback mode, and select the desired image quality of movies. Playback mode Recording/Playback : High definition image quality (HD) : Standard definition image quality (SD) 3 Touch twice the thumbnail of the movie you want to play back. You can also select the movie to be played back by pressing B/b/V/v buttons followed by pressing the EXEC button. The first touch will show the information on the movie at the lower part of the screen. A Date and time of recording started B Resolution C Frame rate D Record mode E Duration F Time code of recording started Time code will not be displayed correctly when you play back recording media with no time code, or recording media with time code that your camcorder does not support.

G GPS data Appears on the movie that was recorded with [GPS SETTING] set to [ON] (default setting) on the [OTHERS] menu. H LPCM recording Appears when audio is recorded in Linear PCM. This does not appear for movies in the standard definition image quality (SD). · i appears with the movie that has been most recently played back or recorded. If you touch the movie with i, you can continue playback from the previous time. Continued , 51 Playback (Continued) Your camcorder starts playing the selected movie. Stop Previous Slow/Fast reverse Next Slow/Fast forward Play/Pause b Notes · You may not be able to play back movies recorded on other camcorders. · If you touch the thumbnail and press the PLAY button, the most recently recorded or played scene is played back. z Tips · When playback from the selected movie reaches the last movie, the screen returns to the VISUAL INDEX screen. · Touch / during pause to play back movies slowly.

· As you repeat touching / during playback, movies are played back as fast as about 5 times t about 10 times t about 30 times t about 60 times. · Reduced-size images which enable you to view many movies at the same time on the VISUAL INDEX screen are called "thumbnails." · You can operate playback using the PREV/PLAY/NEXT/STOP/PAUSE/SCAN/SLOW buttons on the camcorder. To adjust the volume Adjust the volume with the VOLUME buttons. To return to the recording mode Press the VISUAL INDEX button.

Viewing still images You can create still images by capturing scenes from movies that you recorded on your camcorder (p. 59). View still images. 1 Touch the recording media you want to view. : Memory card : Flash memory unit 52 2 Touch the playback mode, then select Playback mode (still image). Recording/Playback 3 Touch twice the thumbnail of the still image you want to view. The first touch will show the information on the still image at the lower part of the screen. A Date and time of recording B Resolution C Image size D GPS data Appears on a still image that was created from a movie recorded with [GPS SETTING] set to [ON] (default setting) on the [OTHERS] menu. Your camcorder displays the selected still image. Next Previous 53 Changing/checking the settings in your camcorder Displaying recording data (Data code) You can display information, including date, time, camera data and GPS triangulation data automatically stored during recording on the screen during playback.