

NEXTO DI VIDEO STORAGE

Portable Storage for Professional
Video Cameras



- User Guide
- Version 03/11



NextoDI Co., Ltd.
www.nextodi.com

Thank you for purchasing this NEXTO VIDEO STORAGE(NVS1501) product. NVS1501 product allows videographers to save footages from camcorders to a hard drive, without using a computer. The camcorder can then be used to record new data. NextoDI has optimized performance so that data transfers from memory card to NVS1501 more quickly than to other storage devices. Data stored on NVS1501 can later be copied to a computer.

NVS1501 supports professional video cameras from various manufacturers, and memory formats such as Compact Flash (CF), Microdrive (MD), SDHC, SDXC and Memory Stick(MS) Card.

Please read this manual before using the product. Follow operating instructions carefully to avoid any damage to the product, or any personal injury. This guide assumes that your NVS1501 unit contains a properly formatted hard disk and a charged battery. If this is not the case, refer to the User Manual for instructions on formatting a hard disk and charging the battery.

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Important safety notice

- Do not drop, jar, bump, shock, or expose NVS1501 to severe vibration during video preview or while data is being transferred.
- Do not use near open flames (candles, stoves, grills, fires,) or sparks (fireworks, welding torches.).
- Backup your data. Under no conditions is NextoDI Co., Ltd. liable for loss of or damage to a computer; or loss of, or damage to, a program, records, or data; or any consequential or incidental damages.

For more inquiries, contact or consult our technical advisory service:
http://www.nextodi.com/support/en_qna.php

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1. Product Description

The NEXTO VIDEO STORAGE (hereinafter NVS1501) includes a 2.5"Serial ATA (SATA) hard drive and a Li-Poly battery. The NVS1501 provides the following functions:

1. Memory card backup

The NVS1501 contains a 2.5"SATA hard drive and a Li-Poly rechargeable battery. The NVS1501 can copy the contents of a memory card to the internal hard drive without a PC--even in the field where no electric power source is available.

You can copy through the CF/MD card slot and SDHC/SDXC/MS card slot on the top of the device.
For IKEGAMI GFPAK, you can copy through the USB_host port on the bottom of the NVS1501.

For complete backup information, refer to Chapter 11 of this manual.

2. Video/Photo Preview

The NVS1501 can display video footage taken with professional video cameras on a color TFT LCD. The NVS1501 provides a "best effort" preview of the video clip--that is, the resolution and speed may be lower than on a regular device.

For details on Video Preview, see chapter 12.

3. Multi-Copy

NVS1501 can copy the contents of a memory card to the internal hard drive and an USB external hard drive at the same time, allowing you to make two copies in a single operation using this function.

For details of the Multi-Copy feature, see chapter 14.

4. Sync

The NVS1501 can synchronize the contents of a folder with the folder on an USB external hard drive. This allows you to make a secondary copy of the backup folder to an USB external hard drive without using a computer.

For details of the Sync function, see chapter 15.

5. Computer connection

The NVS1501 can be connected via USB2.0, FireWire 800 (IEEE 1394b) to a corresponding port on a computer, in order to copy data.

For details of Computer Connections, see chapter 10.

6. Button operation

All of the functions of the NVS1501 are controlled by two buttons, one for power (On/Off) and the other for function control (control key). The power button can also be used as a function key in some instances.

For details on Power (On/Off) and control key operation, see chapter 8.

7. Bad Sector Recovery

When a video file stored in the NVS1501 cannot be copied or edited on a computer, the problem may be a bad sector on the hard drive. The NVS1501 has a sector recovery function which may recover the video file.

For details on Sector recovery, see chapter 16.

8. Internal/External rechargeable battery

The NVS1501 contains an internal Li-Poly battery that enables the NVS1501 to be used without the power adapter. The power adapter is used to charge the internal battery, supplying power to the main unit. The external battery can be used to charge the internal battery.

For details on Charging the Internal Battery, see chapter 7.

9. Internal hard drive

The NVS1501 offers these functions for the internal hard drive:

[Hard drive format]

[Hard drive capacity check]

[Hard drive self test]

For details see chapter 9 and chapter 17.

10. Firmware upgrade

When NextoDI develops new functionality--or offers support for new video formats--firmware is provided to users through the website's download page.

You can download the new firmware to a memory card or the internal hard drive of the NVS1501. You can then upgrade your NVS1501 using the firmware update function of the NVS1501. For details, see chapter 17.

11. Language selection

The NVS1501 supports various languages. You can select a language from the menu of the NVS1501. For details, see chapter 17.

12. Buzzer on/off

The NVS1501 uses a buzzer to note the results of various operations. A user can turn the buzzer on or off via the menu. For details, see chapter 17.

13. Auto-generation of Index File

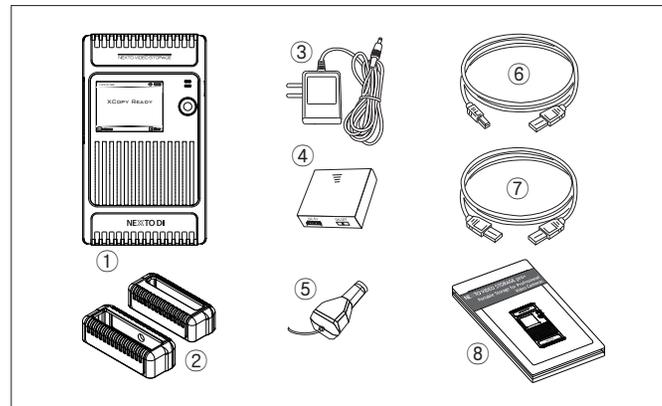
After a memory card has been copied, the NVS1501 generates HTML files containing metadata and thumbnails of the video footage. For details, see chapter 20.

14. Burning Blu-ray Disc

Users can copy video files that are stored in the NVS1501 to a Blu-ray disc using a USB Blu-ray driver. After copying the footage, the NVS1501 will support video preview from the Blu-ray Disc. For details, see chapter 18.

2. Contents of the NEXTO VIDEO STORAGE

1. Main Package



- ① Main storage unit
- ② Shock protective rubber jacket
- ③ AC power adapter (wall plug; 12V/1A)
- ④ AA battery holder for recharging internal Li-Poly battery
- ⑤ Car Charger Cable for recharging internal battery
- ⑥ USB cable for computer connection or connecting external USB hard drive and GFPACK
- ⑦ FireWire 800 (IEEE 1394b) cable for computer connection
- ⑧ User's Guide

3. Symbols Used in This Document



Warning

The flash icon in a triangle is used to alert you to personal injury hazards such as electric shock



Caution

An exclamation mark in a triangle indicates important instructions in this operating manual which must be observed.



Reference

The "hand" icon gives you special tips and notes on the operation.

4. Safety Instructions



Caution

In case of any damage due to failure to observe these operating instructions, the warranty is voided. NextoDI does not assume liability for consequential damages. Nor do we assume liability for damage to property or personal injury caused by improper use or failure to observe the safety instructions. The warranty is void in any such case. The following safety instructions and warnings are not only to protect you, but also to protect the device. Please read the following warnings:



Warning

- Unauthorized conversion and/or modification of the product is forbidden for safety reasons.
- Never open the product. This device is not user serviceable.
- Damaging the Li-Poly rechargeable may result in explosion or fire!
- Maintenance, or repairs may only be carried out by authorized repair center.
- The AC power adapter unit is intended for use in dry conditions to avoid electric shock!



Warning

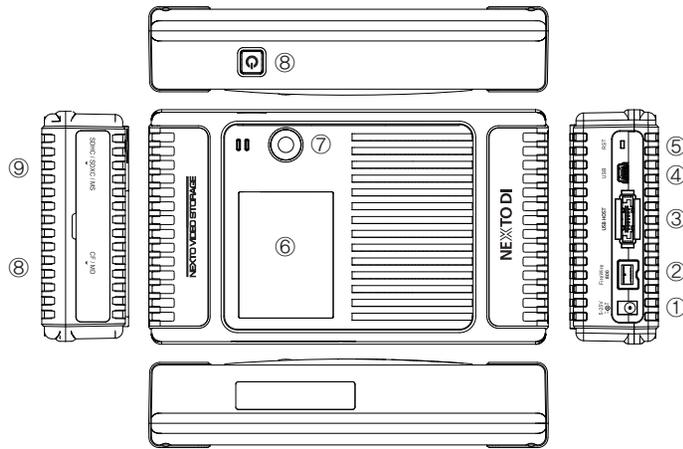
- The case of the hard disk must not get damp or wet. Protect the device from humidity and water, from sun, excessive heat (>113°F) or cold (<32°F), dust and dirt.
- When the product is brought from a cold place into a warm room, condensation may form. This could damage the product. Always let the product get to room temperature before use or before connecting the AC power adapter unit. This can take several hours.
- Do not use in tropical climate conditions
- The AC power adapter unit complies with safety class II. As a voltage source only a proper power socket of the public power supply system may be used. Note the input voltage/frequency imprinted on the AC Adapter. It must correspond to the voltage/frequency of the power outlet. The AC power adapter is equipped with an input voltage range of 100 - 240V, 50/60Hz. Adapters may be necessary for use in countries other than the US.
- The product is not a toy and should be kept out of reach of children!
- Do not place liquid near the product. Liquid could get inside the housing and cause a fire or electric shock. In case of fire damage or short circuit, de-energize the respective socket (e.g. turn off circuit breaker) and only then pull the AC power adapter unit from the socket. Do not attempt to use the product! Take it to your dealer for repair immediately.
- Never touch the AC power adapter unit when your hands are damp or wet.
- In industrial facilities, safety regulations for electrical equipment and facilities must be observed. If the product is used at schools, training facilities, or do-it-yourself/hobby shops, it should not be handled unless supervised by trained, responsible personnel.
- Do not drop NVS1501 device.



Caution

The product must not get damp or wet. This product is not a toy. It contains fragile and swallowable glass parts, small parts, and a rechargeable battery. Any use other than that described above may damage the product. Read these operating instructions thoroughly and carefully. The instructions contain important information for installation, operation, and handling. Take note of all safety instructions.

5. Device Diagram



- ① "DC IN" slot for AC power adapter unit (wall plug; 5-25V).
- ② Connector " Firewire 800 (IEEE 1394b)" to connect to the computer with max 800Mbps speed.
- ③ USB Host slot to connect USB external hard drive or IKEYAMI GFPACK or USB Blu-ray driver.
- ④ "USB" slot for USB2.0 device connection to a computer
- ⑤ Recessed Reset key, to be pressed with a tooth pick or similar tool; switches off NVS1501 in the event of a hardware or software malfunction.
- ⑥ LCD Display
- ⑦ Control key. Controls up/down/left/right/select of cursor when power is on.
- ⑧ Power key. Controls power on/off and selecting command when power is on.
- ⑨ Compact Flash slot
- ⑩ 3-in-1 connector for SDHC/SDXC/MS

6. About the Rechargeable Battery

A "Li-Poly" (lithium-polymer) rechargeable battery is integrated into the NVS1501. This rechargeable battery does not have the so-called "memory effect"--the rechargeable battery can be charged whenever you want. Furthermore, it has a higher energy content than conventional NiCd and NiMH rechargeable batteries. Note these important instructions when handling the Li-Poly rechargeable battery.

The rechargeable battery can be recharged 400 times.
If the battery operation time gets shorter, it may be time to replace the battery. Consult your authorized NEXTODI dealer to replace the internal battery.



Caution

- Never damage the rechargeable battery--do not remove it from the NVS1501. Consult the chapter on "Battery Disposal". Damaging the wrapping of the rechargeable battery might cause an explosion or fire.
- Never short circuit the contacts of the rechargeable battery. Never touch the connections or electrical components inside the NVS1501 with metal objects.
- Charge the rechargeable battery regularly, even if you do not use the product. The NVS1501 needs some "current" (a small quantity) at all times. Due to the Li-Poly rechargeable battery technology, it is not necessary to discharge the battery before recharging. Recharge the battery completely, about once a month. The device will be ready for use at any time.

7. Charging the Rechargeable Battery

1. Internal battery

The battery can be charged using the AC power adapter unit delivered with this product.

- ① Turn off NVS1501.
- ② Connect the charger's wall plug to the NVS's "DC IN" slot.
- ③ Plug the AC power adapter unit into a wall socket.
- ④ The LED above the Control key shows red during the charging.
- ⑤ When the battery is charged, the red LED turns off.
- ⑥ If there is an error when charging, the LED blinks. If this happens, unplug the AC adapter unit and plug it in again.

Users can charge the NVS1501 via the USB/FireWire 800 (IEEE 1394b) cable, or the AA battery holder.

With a completely empty rechargeable battery, the charging procedure lasts approximately 4 hours using the AC power adapter, or the FireWire 800 (IEEE 1394b) cable. With the USB cable, charging takes about 7 hours.

With the AA battery holder, charging takes about 10 hours. An AA battery pack charges about 40% of the internal battery capacity.

Reference

- You must turn off the NVS1501 in order to charge the unit.
- The NVS1501 can be charged via USB without using the AC power adapter included in the box. A high powered USB connection is needed, i.e. a USB connection with its own power supply, such as the USB port of a computer or a USB hub with a power unit.
- If the NVS1501 is operated with a notebook, you must always use the AC power adapter unit to charge the NVS1501. Notebooks may not deliver the necessary amount of current via USB.
- The NVS1501 will operate for about two hours with a fully charged internal battery.
- When connected to a computer using FireWire 800 (IEEE 1394b) or USB, the NVS1501 draws power from the computer, not the internal battery.
- If the NVS1501's battery is completely discharged, the performance of the battery may be degraded. It is recommended that the NVS1501's battery be recharged before the battery gauge reaches the empty level.
- See Chapter 8 for more information on the battery gauge.



Caution

- Car charger cable should be used only for charging the internal (or external) battery.

8. NVS1501 Interface

1. Turning NVS1501 on/off

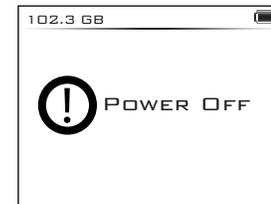


Press the power key on the right side of device for more than 2sec in order to switch NVS1501 on. The power up logo and firmware version is shown on the LCD.

When you see the logo on the LCD screen, release the button. Otherwise, the NVS1501 will automatically power down.



After checking the system, the NVS1501 goes into [XCOPY ready] mode. You can copy a memory card in this mode.



The NVS1501 turns off automatically after about 50 seconds if you do not use it. When the (L) Off control option appears on the LCD, the NVS1501 can be powered off by pressing down on the control key or power key for more than 2 seconds.



Reference

- The NVS1501 can be reset via the recessed RESET key (see chapter 5 and chapter 22). This will also turn the power off.

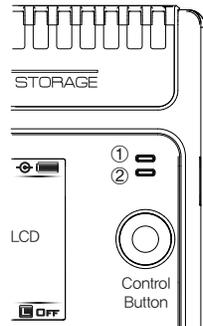
2. Key operation

The NVS1501 is operated by a single control key which can be used in five different ways. The display shows you the “S” (Short) or “L” (Long) symbol as a means to invoke the desired function.

Symbols	Operation
S	Press once and release immediately.
L	Press and hold the key for more than two seconds.
▲▼◀▶	Push the key in the appropriate direction. Up/down/left/right movements are supported. Pushing and Holding the key in the up or down direction, results in repeated executions of the operation.

 If the control key is not working: If the control key is malfunctioning, the menu sub-functions cannot be used. However, functions such as copy and verify can be controlled through the power key. The user could thus rely on the power key—instead of the control key—to select the desired function from the menu.

3. The LED indicator



- ① Red indicates battery is being charged. Green indicates “power on”.
- ② Blinking red indicates that a data transfer is occurring.

4. The LCD Display



- ① Remaining capacity of the internal hard disk.
If the capacity of the internal hard disk is uncertain, the display will be grayed out. A capacity check will be performed automatically during power on or power off. The capacity check can also be activated from the menu. If an external hard drive is connected to the NVS1501, the capacity of external hard drive will be displayed next to the capacity of the internal hard drive.
- ② Remaining capacity of the rechargeable battery
The battery capacity is displayed four ways: (3→2→1→empty) by the battery gauge.
 -  (Full): 80% - 100%
 -  (2nd Gauge): 30% - 80%
 -  (1st Gauge): 5% - 30%
 -  (Empty): Under 5%
- ③ Current status of the device.
- ④ Available functions for the current screen. The display varies depending on the function in use.



Reference

- Once the capacity counter has decreased, it will not increase until fully charged

9. Formatting the Hard Drive

The hard disk in the NVS1501 should already be formatted with the "FAT32" or "exFAT" file system. Only one (or the first) partition can be used. Do not attempt to format the NVS1501 disk with a computer. Use only the format function on the NVS1501. This will allow the hard disk to be read by either the Windows or Mac operating systems.

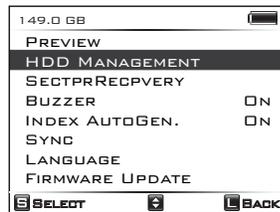


Caution

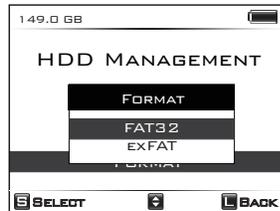
The NVS1501 can work only with one partition in the file format "FAT32" or "exFAT". Therefore, NVS1501 offers users the function for formatting the hard disk in the "FAT32 file system" or "exFAT file system". If you using SDXC card then NVS1501 should be formatted with the "exFAT" file system.

To Format a New Hard Disk

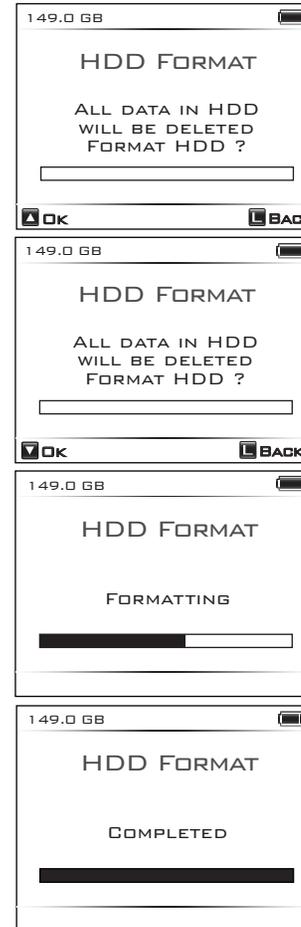
The NVS1501 must not be connected with a computer via USB or FireWire 800 (IEEE 1394b). Remove any memory card or USB device.



To re-partition/format the hard disk, press the control key once at the [XCopy Ready] mode to get to the menu ("S-Menu"). Move the highlighted cursor to the [HDD Management] menu by pushing the control key downward. Press the control key once to select [HDD Management].



Move the highlighted cursor to the [Format] menu option with the control key. Press the control key once to select [Format]. Select [FAT32] or [exFAT] and briefly press the control key [S] to move to the next step.



Confirm the selection by pushing the control key upward. You can cancel the operation by pressing and holding the control key or power key.

Note: With Windows XP, hard disks and partitions are formatted (with a size of more than 32GB) only with the file system "NTFS"; the "FAT32" option is no longer available. For MAC OS, hard drives are formatted with the file system HFS+ (MAC OS Extended). These formats are incompatible with the NVS1501.

Then you can repartition and reformat the hard disk; to confirm, push the control key downward. All data on the hard disk will be lost!

You can cancel the operation by pressing and holding the control key or power key.

The NVS1501 indicates the progress of the formatting operation.

When the formatting is completed you are ready to copy data to the hard disk.

10. Using the NVS1501 as a Hard Drive

The NVS1501 can be connected to your computer for use as an external hard disk. Two connection methods are supported.

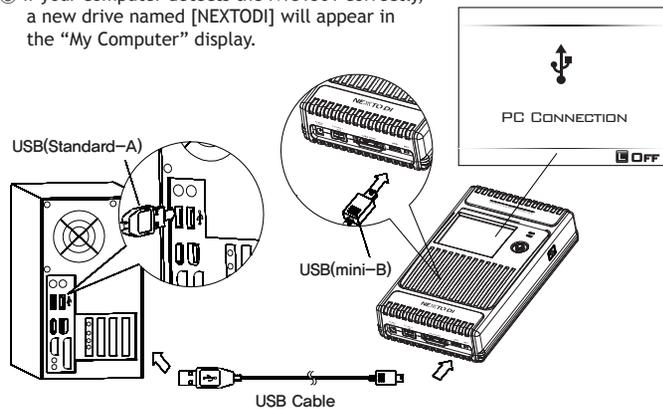
1. Connect to the computer's USB2.0 slot via the NVS1501 "USB slot" and the USB cable.
2. Connect to the computer's Firewire 800 (IEEE 1394b) slot via the NVS1501 "Firewire 800 (IEEE 1394b) slot" and the Firewire 800 (IEEE 1394b) cable.

Device drivers for the NVS1501 are included in the Microsoft Windows 7, Vista, ME, XP and 2000 operating systems. Drivers for Windows 98 systems can be downloaded from the NextoDI website. To download drivers, go to <http://www.nextodi.com/support>
<http://www.nextodi.com/support.htm>

When you have successfully connected the NVS1501 to your computer, the contents of the NVS1501 hard disk will appear in Windows File Explorer.

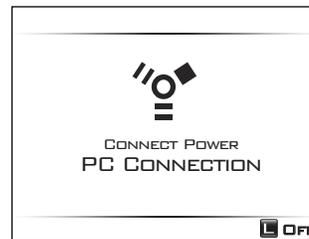
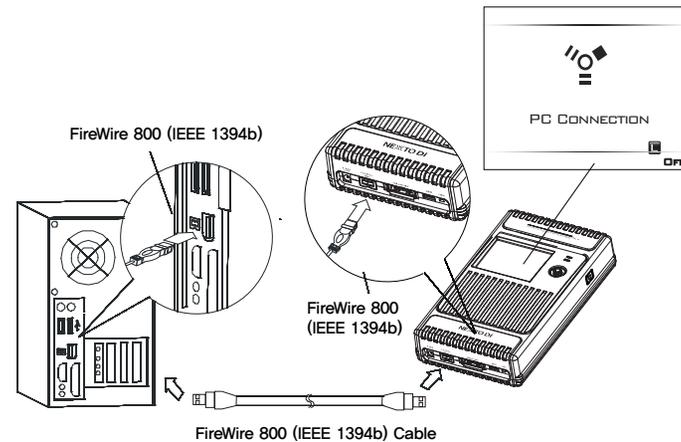
1. Connect via USB

- ① Turn your computer on. Wait until the operating system is completely booted.
- ② Turn your NVS1501 on.
- ③ Connect the NVS1501 "USB" slot via the USB cable with a free USB2.0 port on your computer. A USB1.1 port can also be used.
- ④ Check the "PC Connection" on the NVS1501's LCD display.
- ⑤ If your computer detects the NVS1501 correctly, a new drive named [NEXTODI] will appear in the "My Computer" display.



2. Connect via Firewire 800 (IEEE 1394b)

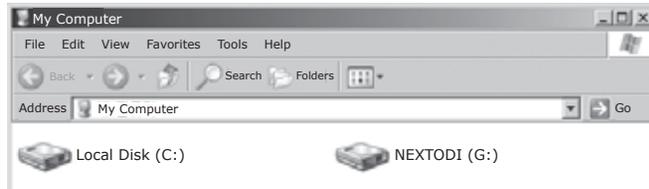
- ① Turn your computer on. Wait until the operating system is completely booted.
- ② Turn your NVS1501 on.
- ③ Connect the NVS1501 "Firewire 800 (IEEE 1394b)" slot via the Firewire 800 (IEEE 1394b) cable with a free Firewire 800 (IEEE 1394b) port on your computer.
- ④ Check the "PC Connection" on the NVS1501's LCD display.
- ⑤ If your computer detects the NVS1501 correctly, a new drive named [NEXTODI] will appear in the "My Computer" display.



The 4pin-9pin Firewire 800 (IEEE 1394b) cable does not provide power. Use the AC power adapter unit or USB cable to provide power. If no power is provided, the NVS1501 shows the "Connect power" message and waits for external power to be applied.

3. Browsing the contents of your hard drive

If your computer detects the NVS1501 correctly, a new drive named [NEXTODI] will appear on 'My Computer'.



Back up data is stored in the "NVSPRO" folder. This folder is created automatically. The NVS1501 generates a new folder for each memory card copy. The name of the folder is determined by the shooting date.

For example, 20081112.000 means the last footage recorded on November 12, 2008. (If you copy multiple items on a single day, the last three digits will be changed to indicate the download sequence - "000, 001, 002, 003, etc.>) The date code comes from the video cameras. If the date setting on the video camera is incorrect, the folder name of NVS1501 will also be incorrect.

If a copying failure occurs, the copy is stored on your computer as a TMP folder. The TMP folder contains the same file names, but the data may be abnormal. You may delete the TMP folder.

4. Disconnecting the NVS1501 from Your Computer

For Windows

Right click the Storage device icon in the System Tray (lower right corner of your screen) and select "Safely Remove Hardware" or "Unplug" or "Eject Hardware". Then disconnect the cable from your NVS1501 and your computer.

For MAC

Drag and drop the NEXTODI icon to the trash. Then disconnect the cable from your NVS1501 and your computer.

11. Data Backup(Copy) and Verify

This chapter represents the 'Copy' and 'Verify' functions.

Insert a memory card into the corresponding memory slot. The slot for CF/MD/SDHC/SDXC/MS is located on the top side of the NVS1501. The Ikegami GfPAK flash memory device can be connected via the "USB-Host" slot using the USB cable.

When copying from a memory card, the NVS1501 must not be connected to a computer. The NVS1501 can copy a memory card onto the internal hard disk via the built-in memory slot or via the "USB-Host" slot connector with a USB cable. After the backup, the copy procedure can be verified. The data on the memory card and the data on the hard disk are compared with one another. This ensures that the data has been copied properly ("Verify"). You can choose the "New Copy" or the "Verify" function according to whether the contents of the memory card have been copied before.



Do not connect more than one memory card or USB external HDD to the NVS1501. Only the first one connected will be detected.

- Insert the memory card carefully. The pin may get bent if you insert incorrectly.

1. Parsing the memory



The data on the memory card is compared with the data stored on the NVS1501 hard disk to determine whether it is new data or if the data or a portion of the data has already been stored on the NVS1501. According to the comparison result, the NVS1501 operates as follows:

2. Copy

(1) If the memory card contains new data.



The NVS1501 will make a new folder on the hard disk and copy all the files and folders in the memory card onto the internal hard disk. The contents of the memory card will not be deleted.

S: To Copy, press the control key briefly.

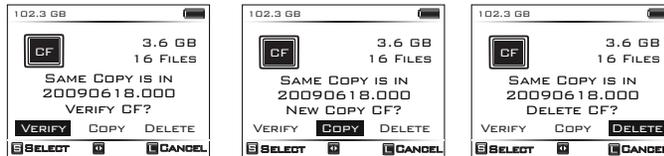
L: To Cancel the copy, press the control key for more than 2 seconds.

Three options are available for copy using up/down key selection.

Fast Copy	Make new folder and copy all the memory card data into the folder.
Verify&Copy	Same as [Fast Copy] but after copying, the data on the memory card is compared with the copied data in the NVS1501 hard drive. Each bit is verified.
Safe Copy	Before copying data, the NVS1501 verifies that its hard drive area is safe. If a bad sector is detected, a new, safe area is found - then copying [Fast Copy] will begin.

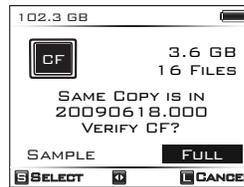
(2) Memory card with copied data

If the memory card was copied before and not modified since, then you can choose to [Verify] or [Copy] or [Delete].



Verify	Compare data stored in the hard drive to the data stored in the memory card.
Copy	Copy again. Make a new folder and copy all of the data in the memory card to the hard drive.
Delete	Delete the data on the memory card so that it can be reused.

3. Verify



When you choose the verify function, the NVS1501 compares the data stored on the hard drive to that on the memory card. The verification logic entails a full bit-by-bit verification, and detects any differences.

- [S]: For verification, press the control key briefly
- [L]: Another option: press the control key for more than 2 seconds. Select to make one more copy of this memory card.

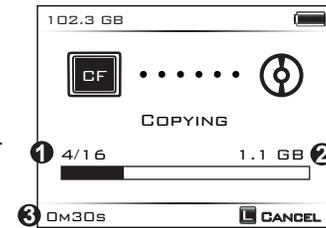
Two options are available for verification using left/right key selection.

Sample verify	Compare first 1MByte of each file.
Full verify	All the data is compared

4. Status

Current operation status is shown on the LCD display.

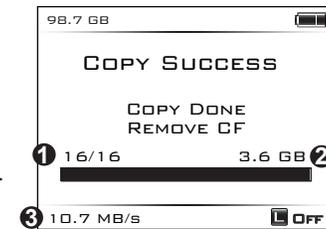
- (1) Total number of files in the memory card versus the number of copied files.
- (2) Amount of data copied.
- (3) Elapsed time



5. Indication of Results

If the operation completes successfully, the user is notified with a beep sound and the elapsed time is displayed.

- (1) Total number of files in the memory card versus the number of copied files.
- (2) Amount of data copied.
- (3) Copy speed in (MB/s)

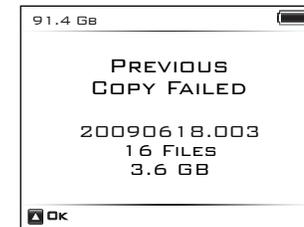
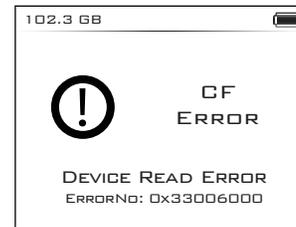


Reference

- Remove the memory card to return to the initial display.
- If you don't remove the memory card, the NVS1501 will automatically turn off within 50 seconds to preserve battery life.

6. Error Display

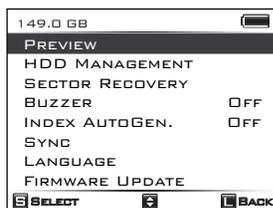
The NVS1501 displays the previous operational status at the next power up. The user will then know whether the last backup was successful.



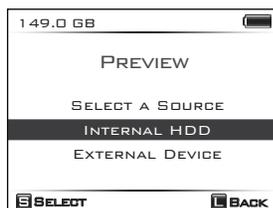
12. Video/Photo Preview

The NVS1501 shows stored video or photo files after backup depending on the file format. A preview of both the internal and external device (CF/MD/SDHC/SDXC/MS/USB) is supported. Users can also choose to delete the backup folders.

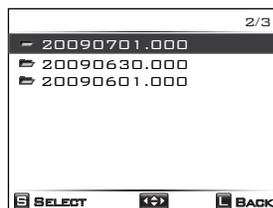
1. Preview from the internal hard drive



Press the control key once at the “XCOPY Ready” mode to activate the menu. Press the control key and select “Preview”.



Select “INTERNAL HDD” to preview the video file stored in the internal hard drive.



The NVS1501 will display the contents of the backup folder in date order. The most recent folder is shown first. After you select a folder, the NVS1501 will display a brief list of the contents as shown in the figure below.



The user can select [Show Video] for video preview, [Show Image] for photo preview, [Delete] for deleting this backup, or [Copy] for copying to an external hard drive.



If “SHOW VIDEO” is selected, the NVS1501 will display the video files contained in that folder as thumbnails.

Unsupported video files are shown with an [X] mark. Video clips are selected for preview by using an up/down/left/right push of the control key. Press the control key briefly to select a clip.



The NVS1501 will show a preview of the video file at reduced resolution. The user can select play/pause by pressing the control key. The user can also adjust the preview speed by pushing the control key to the left/right.

- (1) Preview speed
- (2) Elapsed time
- (3) Progress of preview in %
- (4) Preview video
- (5) Selectable command

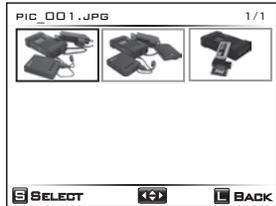
Reference

- See <http://www.nextodi.com/manual> for supporting preview format.
- The preview of the NVS1501 is a “best effort” preview. The preview speed differs depending on the video format.

2. Image Preview



Select [Show Image] at the preview menu. The number on the right is the number of image files.



The NVS1501 shows a list of image files contained in that folder as thumbnails--just like [Show Video].



If you select an image, the NVS1501 shows the larger one. A user can control the “left/right” button to preview the next image or can short press the key([S]) to preview in slide show mode.

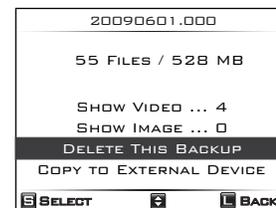
- (1) File extension
- (2) Size of Images
- (3) Preview Images
- (4) Selectable command



Reference

- See <http://www.nextodi.com/manual> for supporting preview format.

3. Delete the backup data



Select “Delete This Backup” from the Preview menu.



The NVS1501 will ask you twice to confirm the delete operation. (If you do not want to delete, press the button for more than 2 seconds to go back to the main menu.) Push the control key up and down to confirm the deletion.



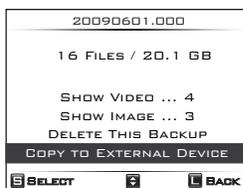
The specific folder is deleted. Return to the main menu by pressing the control key once.



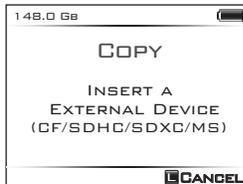
The specific folder is deleted. Return to the main menu by pressing the control key once.

4. Copy to External Device

A user can upload the backup folder inside the NVS1501 to a memory card using the “Copy to external device” function provided by the NVS1501.



Select a backup folder in the preview menu. Choose “Copy to External Device” to copy that backup folder to an external memory card.



Connect memory card (CF/SDHC/SDXC/MS) to the 3-in-1 connector or CompactFlash slot.



The NVS1501 checks for the memory card.

4.1. If the memory card is empty

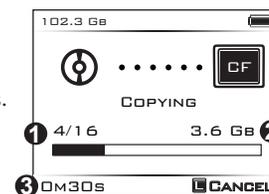
Copying all of the files inside the selected folder onto a memory card.

- : To Copy, press the control key briefly
- : To cancel the Copy, press the control key for more than 2 seconds.



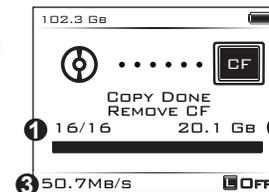
Current operation status is shown on the LCD display.

- (1) Total number of files in the memory card versus the number of copied files.
- (2) Size of files to be copied
- (3) Elapsed time



If the operation completes successfully, the NVs2501 will make a beeping sound and the display will show:

- (1) Total number of files in the memory card versus number of copied files.
- (2) Copied capacity
- (3) Copy speed in (MB/s)



4.2. If the memory card is NOT empty



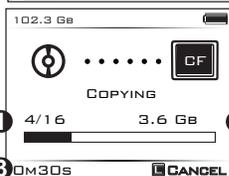
The NVS1501 will ask you twice to confirm the memory card deletion operation. If you do not wish to proceed with deleting the data from the memory card, press the control key for more than 2 seconds to go back to the main menu.



Use the Control key (up or down motion) to confirm that you wish to delete the contents of the memory card.

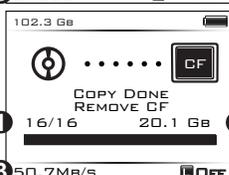


The contents of the memory card have been deleted. The copy operation is initiated automatically.



Current operation status is shown on the LCD display.

- (1) Total number of files in the memory card versus the number of copied files.
- (2) Size of files to be copied
- (3) Elapsed time



If the operation completes successfully, the NVS1501 will make a beeping sound and the display will show:

- (1) Total number of files in the memory card versus the number of copied files.
- (2) Size of files to be copied
- (3) Copy speed (in MB/s)

4.3. If the capacity of the memory card is smaller than the backup folder

The NVS1501 does not support “Copy to External Device” if the capacity of an inserted memory card is less than the size of a selected backup folder.

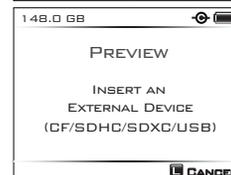


5. Preview from an external device



The NVS1501 supports the preview of video files stored on an USB external hard drive—as well as video files stored on memory cards such as: SDHC, SDXC, MS, MD and CF.

Select “External device” from the preview menu.



Then connect the external device to the NVS1501.



(1) If a memory card contains video or image files—and is inserted into the NVS1501-- information about the video or image files will be displayed.



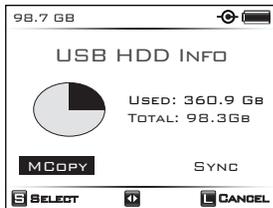
(2) If an USB hard drive is connected, the NVS1501 will detect and analyze the backup folders. The NVS1501 will then display the backup folders as in the figure. The rest of operations are the same as previewing from the internal hard drive



If you select “Back” by pressing and holding the control key, then a “remove (device type)” message will appear on the LCD display. Once the cable or memory card has been removed, you will automatically be returned to the main menu.

14. Making Two Copies In A Single Backup(Multi-Copy)

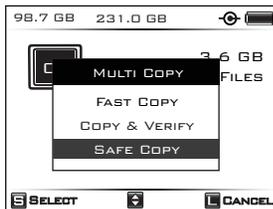
Copying a memory card to both the internal hard drive and an external USB hard drive at the same time makes two copies of data in a single operation. The “Multi-copy” function of the NVS1501 makes backup more reliable.



If the proper external hard drive is connected, the NVS1501 shows information about the drive. Quickly [S] press the key or wait 10 seconds--the NVS1501 will automatically go into the “Multi-Copy” mode. (If the external USB hard drive connects before the power is on, the NVS1501 will go directly into “Multi-Copy” mode)



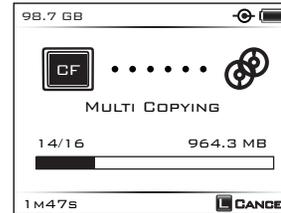
The remaining operation is the same as the “XCopy ready” mode. This mode can be exited by holding and pressing the key or by removing the USB cable from the NVS1501.



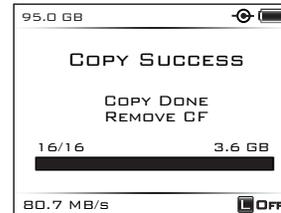
Insert the memory card when you are in the “MCopy ready” mode. The NVS1501 detects/ parses the contents of the memory card and asks you to confirm the mode of copy. Three options are available as in the normal XCopy mode. For details, see chapter 11.

[S] : Copy: briefly press the key.

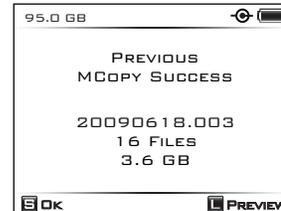
[L] : Cancel the copy: press and hold the key for more than 2 seconds.



When Multi-Copy is in progress, do not remove the memory card or disconnect the USB external hard drive.



Multi-Copy completed. Remove the memory card to return to the initial display. If you do not remove the memory card within 50 seconds, the NVS1501 will automatically turn off in order to preserve battery life. See chapter 10 for the location and name of the backup folders.

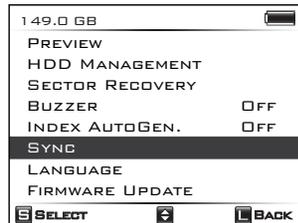


The NVS1501 displays the previous backup status during the next power on.

15. Making A Secondary Copy (Sync)

The “Sync” function synchronizes data between the [NVSPRO] folder of the NVS1501 and the [NEXTO] folder of an external USB hard drive connected on the “USB Host” connector via USB cable. This function compares the folders stored in the [NVSPRO] folder of the NVS1501 and the [NEXTO] folder of an external hard drive. A new folder will be copied to the external hard drive only if a folder is in the [NVSPRO] folder of the NVS1501—but not in [NEXTO] folder of an external hard drive.

(1) Selecting “SYNC” from the menu

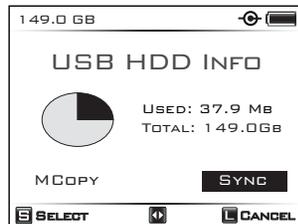


Move to “SYNC” on the main menu and select it.



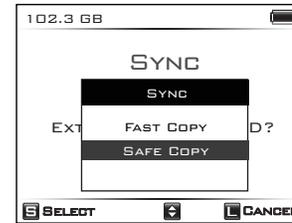
Connect the USB external hard drive to the [USB-Host] combo port of the NVS1501 as shown in chapter 13.

(2) Connecting the USB hard drive during “XCOPY ready” mode



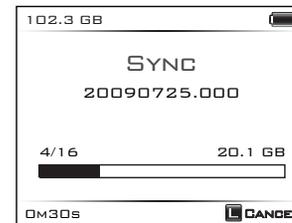
If a proper external hard drive is connected, the NVS1501 will display the status of that drive. Press the control key button to the left to highlight “Sync” and briefly press the key to select “Sync”.

(3) Sync function

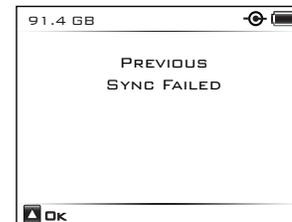


A user can select two modes of duplication, fast copy or safe copy. Highlight the desired mode using the up/down key, then briefly press to select the mode. Press and hold the key [L] to cancel the operation and go back to the main menu.

Fast Copy	Duplicates new folder to external hard drive
Safe Copy	Before duplication, the NVS1501 verifies that the copy area of the external hard drive is safe. If the copy area is not safe, the NVS1501 will automatically search for a new safe area and copy to that area.



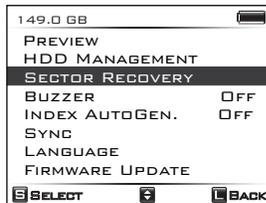
The NVS1501 compares the [NVSPRO] folder of the internal hard drive and the [NEXTO] folder of the external hard drive. If there is data in the [NVSPRO] but not in the [NEXTO] folder, then the NVS1501 copies those folders from the internal hard drive to the [NEXTO] folder of the external hard drive. The end result is that the two folders—on both the NVS1501 and the external hard drive—contain the same information



If an error occurs during the “Sync” function, the NVS1501 will automatically shut down and display an error message at the next power up-- as shown in the figure. Press the control key upwards to go back to the main menu.

16. Bad Sector Recovery

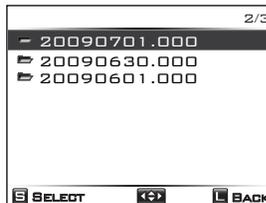
The NVS1501 features a bad sector recovery function. If an offloaded video file contains bad sector(s), those areas are filled with dummy files, so that the front/back frames are usable for editing/playing on an NLE system.



Briefly press [S] SECTOR RECOVERY under the Main MENU.



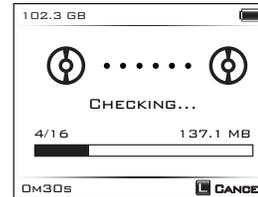
A description of the recovery function appears on the screen. Briefly press the control key [S] to move to the next screen



The next screen displays all data as folders in ascending order from the most recent date or from a large extension number if folder dates are the same. Select a folder and briefly press the control key [S] to move to the next screen



The next screen displays information about the selected folder. You can delete a folder—or preview the folder if it contains a video file. Select SECTOR RECOVERY and briefly press the control key [S] to move to the next step.



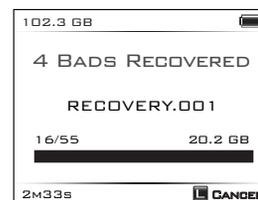
The NVS1501 will begin scanning to see if there are any bad sectors inside of the folder.



If a bad sector is found, a popup window will appear. Briefly press the control key to begin the recovery.



The data will be copied to a safe area on the internal hard drive—while the faulty sectors are being filled with dummy files.



This final screen displays the total number of bad sectors found and a folder name that has been created during the recovery process. You should now connect your NVS1501 to a computer and check the recovered folder.

Reference

- The "Bad Sector Recovery" feature is supported with previewable video codec only.
- See <http://www.nextodi.com/manual> for a list of supported preview formats.

17. Advanced Functions

NVS1501 has several advanced function menus, accessible from the Main Menu.

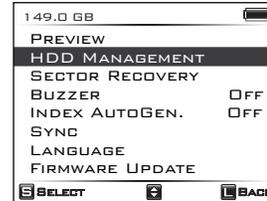
Menu	Operation
Capacity Check	Checks the used capacity and the remaining recordable capacity on the NVS1501 hard drive.
Self Test	Built-in test utility for detecting physical errors on the internal hard drive. This function does not fix errors. If an error is detected during the self-test, consult your authorized NEXTODI dealer.
Delete TMP folder	If the copy function fails, a TMP folder will be generated. A user can delete the TMP folder using this menu.
Buzzer	On/Off setting for buzzer sound. Factory setting is On.
Language Selection	Change the language setting.
Firmware Upgrade	Upgrade to new firmware with the firmware file stored in the internal hard drive or on a memory card.

Enter Main Menu



Press the control key briefly [S] in order to get to the main menu.

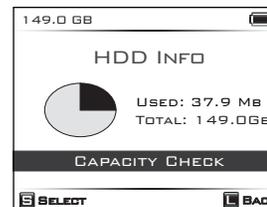
1. Capacity Check



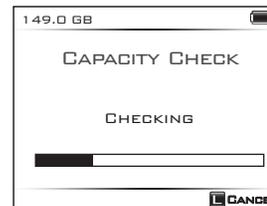
Select "HDD Management" from the main menu.



Select "HDD Info" submenu from the "HDD Management" menu.



The NVS1501 will show the capacity status of the internal hard drive using a pie diagram.



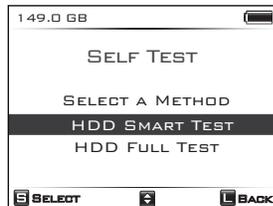
Select OK by pressing the control key briefly [S]. The capacity check will then begin.

2. Self Test

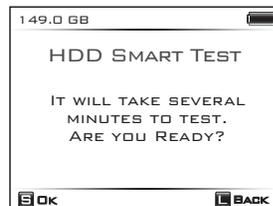
(1) Quick test



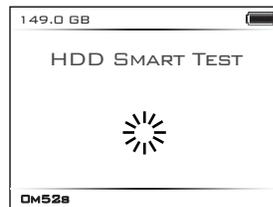
Select "Self test" submenu from the "HDD Management" menu



The User can choose between a quick test or a full test. Choose the quick test. The quick test uses a S.M.A.R.T test provided by the hard drive.



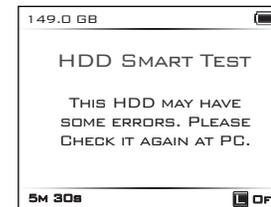
The quick test takes several minutes to test the internal hard drive. Pressing the control key initiates the quick test.



The display tells the user that the S.M.A.R.T test is in progress. This process takes several minutes



No problems found during the quick test.



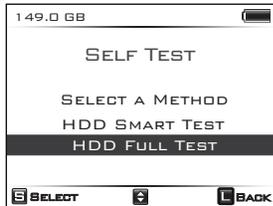
Error found during quick test. Further use of NVS1501 may result in loss of backup data. Consult your authorized NEXTODI dealer for service.



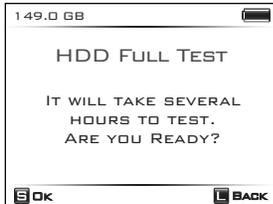
Caution

- The NVS1501 buzzer indicates the completion of the test. The power does not turn off automatically at completion of the test.
- The NVS1501 returns to the initial mode only after the user presses the control key for more than 2 seconds.
- It is strongly recommended that the AC adapter be used during this test in order to prevent battery failure during the process.

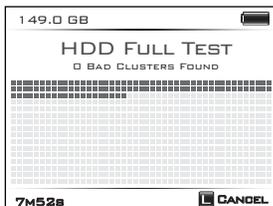
(2) Full test



Select "FULL TEST" from the self test menu.



The full test will take several hours. It will read all the sectors in the internal hard drive to discover if any bad sectors exist.



Full test in progress. This process will take about 2-3 hours. The user can cancel the full test by pressing the control key for more than 2 seconds.



No errors found.



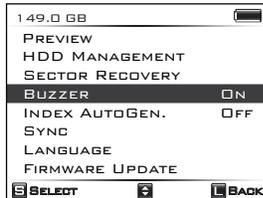
Error found during full test. Further use of NVS1501 may result in the loss of backup data. Consult your authorized NEXTODI dealer for service.



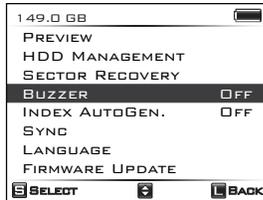
Caution

- The NVS1501 indicates the completion of the test using the buzzer sound. The power does not turn off automatically at the completion of the test.
- The NVS1501 returns to the initial mode only after the user pushes the control key for more than 2 seconds.
- It is strongly recommended that the AC adapter be connected for this test in order to prevent battery failure during the process.

3. Buzzer

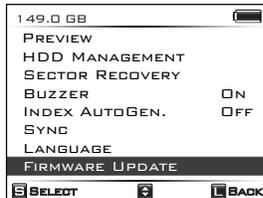


The Buzzer is on. Select “BUZZER” from the main menu to turn the buzzer sound on/off with by briefly pressing the control key. The factory default setting is buzzer on.

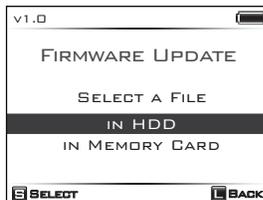


The Buzzer is now off. If the control key is briefly pressed, the buzzer setting will go to “buzzer on.”

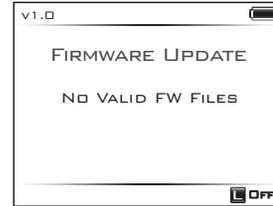
4. Firmware Update



Select “FIRMWARE UPDATE” from the main menu.



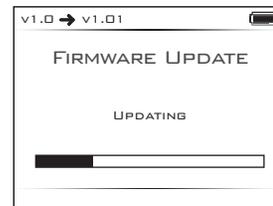
The firmware file (NVSPRO.BIN) should be placed in the root directory of a memory card or the internal hard drive. Select [In HDD] (hard disk drive) if the firmware file is to be placed in the root directory of the internal hard drive. Select [In Memory Card] if the firmware is in the root directory of the memory card. If you selected the memory card, insert the memory card into the NVS1501.



If a valid firmware file is not contained in the specified device, the NVS1501 indicates an error. Check whether the device contains valid firmware in the root directory and repeat the previous process.



If valid firmware is found at the specified location, the NVS1501 indicates a “FW File Found” message on the LCD. Confirm the firmware upgrade by pressing the control key briefly [S].

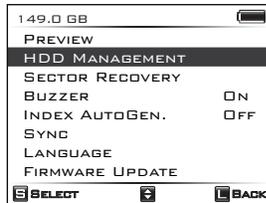


The LCD screen indicates that the NVS1501 firmware is being updated. Do not turn the power off during the firmware upgrade. Use of the AC power adapter is recommended.

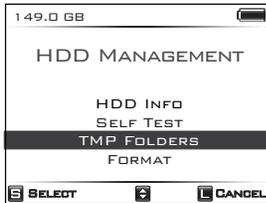


Firmware upgrade completed. The NVS1501 turns off automatically.

5. Delete TMP folder



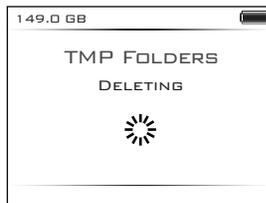
Select “HDD Management” from the main menu.



Select the “TMP folders” submenu from the “HDD Management” menu.

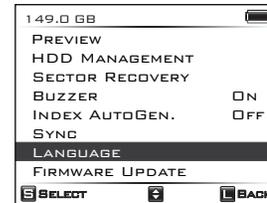


If the TMP folder exists inside the [NVSPRO] folder, then the number of TMP folders will appear on the LCD. Press the control key briefly [S] to delete the TMP folders.



The LCD screen displays the message “Deleting the TMP Folders.”

6. Language setting



The user can select the preferred language using this function.

Select “Language” submenu from the main menu.



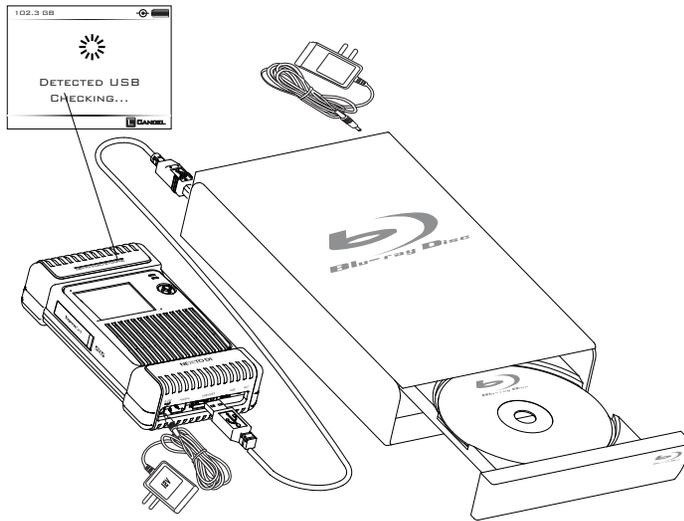
Select the desired Language using the up/down/left/right key function. Press the key briefly to set the language as the default.

18. Burning a Blu-ray Disc

A user can connect a USB Blu-ray drive to the NVS1501 through an USB HOST port. The NVS1501 supports the burning of Blu-Ray Discs-- or the preview of Blu-ray Discs-- without the use of a computer. Only the BD-R or BD-RE is supported. There is no support for burning a CD or DVD.

1. Connecting the USB Blu-ray Drive

Connect the USB Blu-ray drive to the [USB-Host] port of the NVS1501 as shown below. The NVS1501 detects the drive and displays information.



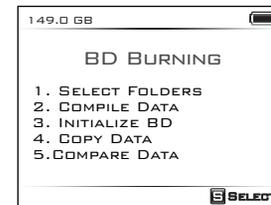
If a Blu-ray drive is properly connected, the NVS1501 will detect it and display the information as shown in the figure. Press the control key briefly [S] to go to the next step.

2. Burning the Blu-ray Disc

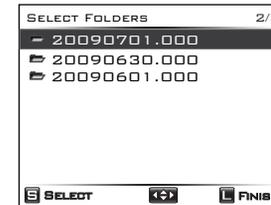


- ① Capacity of the Blu-ray Disc
- ② Type of discs
 - BD-R (record once)
 - BD-RE (rewritable)
- ③ Disc status

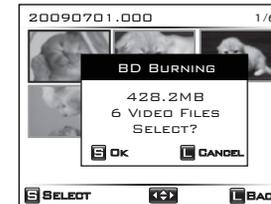
	BD-R	BD-RE
BLANK DISC	Recordable	Recordable
NON-BLANK DISC	Non-recordable	Recordable



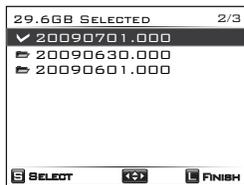
If you select "Burning BD," the NVS1501 will show you the burning process. Press the control key briefly [S] to begin the procedure.



First, select backup folders that you wish to transfer. By using the up/down function on the control key, highlight the folder that you want to archive. Press briefly to select the folder.



The NVS1501 shows you the video clip stored in the backup folder, then asks if you wish to select it. Press the control key briefly to select the folder for burning --or press the key more than two seconds to unselect the folder.

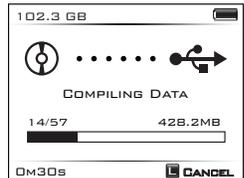


The selected folder will be highlighted and a check mark will be shown at the head of folder name. A user can select multiple folders at this stage, but the total capacity of selected folder(s) should not exceed the capacity of the Blu-ray Disc.

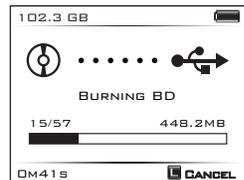
Press the key more than two seconds to initiate burning.



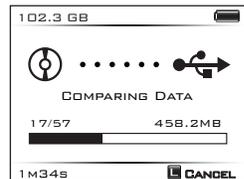
Confirm selection.



It will take the Blu-ray Disc about 20 minutes to prepare for burning.



The progress of the Blu-ray disc burning is shown.

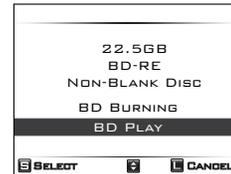


After burning the Blu-ray Disc, the NVS1501 will verify the data in both the Disc and the hard drive.

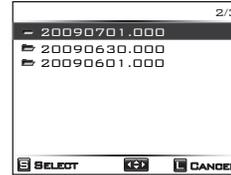


The LCD screen on the NVS1501 shows the completion of the Disc burning. The USB cable can now be removed

3. Play the Blu-ray Disc



Connect the external USB Blu-ray drive, then select “BD Play” to preview the video in the Blu-ray Disc.

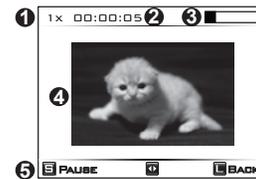


The NVS1501 shows the list of backup folders.



The NVS1501 shows a list of video files contained in the selected folder as thumbnails. Unsupported video files are shown with an [X] mark. Select a video clip for preview using the up/down/left/right function of the control key.

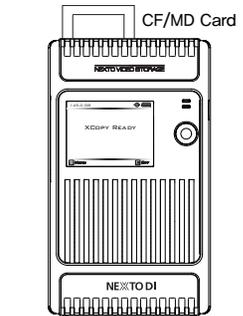
Press the control key once to select a clip. The NVS1501 shows a preview of that video file with reduced resolution. The user can select play/pause with a press of the control key. The user can also control the preview speed using a left/right push of the control key.



- (1) Preview speed
- (2) Elapsed time
- (3) Progress of preview in %
- (4) Preview video
- (5) Selectable command

19. Examples of Basic Functions

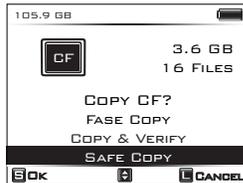
1. Copying from an CF card



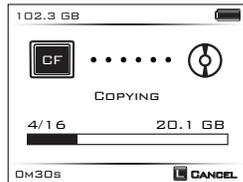
- (1) Turn on the NVS1501 by pressing the power button for more than 2 seconds. Wait for the "XCOPY ready" mode, then insert an CF card into the CF/MD slot located on the top of the device.



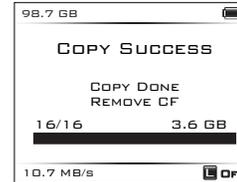
- (2) The NVS1501 detects the memory card and analyzes it.



- (3) The result of the backup analysis is shown on the LCD. The total number of files-- in addition to the data capacity of the CF card -- is shown on the LCD. The NVS1501 will wait for the completion of the backup analysis before starting to copy.

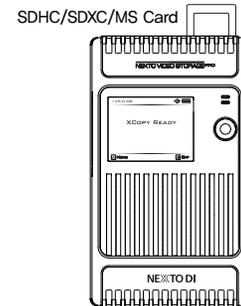


- (4) The copy status is shown on the LCD.



- (5) If the copy is successfully completed, the result will be shown on the LCD. Remove the CF card to return to the initial "XCOPY ready" mode.

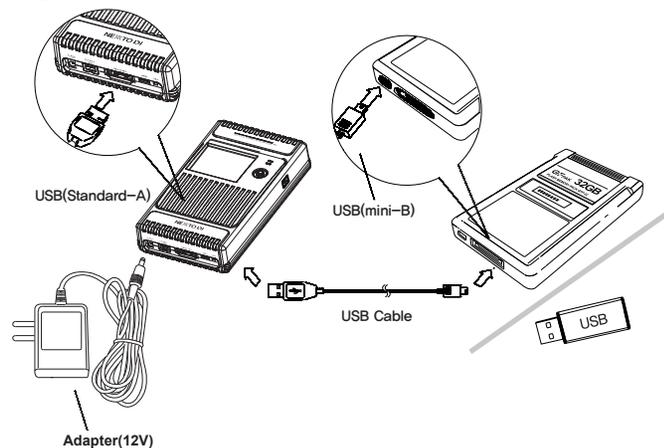
3. Copying a SDHC/SDXC/MS card



- The Memory card slot for a SDHC/SDXC/MS card is located on the top of the NVS1501. Insert the SDHC/SDXC/MS card into the slot. The remaining procedure is the same as for CF memory cards.

4. Copying from an IKEGAMI GFPAK or a USB memory card reader

The NVS1501 supports copying from the IKEGAMI GFPAK or a USB memory card reader. Simply attach the GFPAK or memory card reader to the “USB-Host” slot using the supplied USB cable.



When copying from a USB device, the NVS1501 should be powered by the AC power adapter. The detailed connection is shown above.

If the USB device is connected correctly, the NVS1501 will automatically detect the device and prepare for Copying.

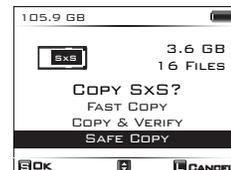
Copying from a USB device: After copying, remove the USB cable connected to the USB device.

20. Auto-Generation of Index Files

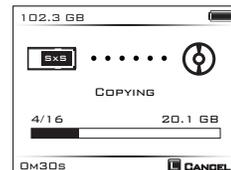
The NVS1501 automatically generates HTML index files which contain metadata and thumbnails of each video file.



This function can be turned on or off from the main menu.



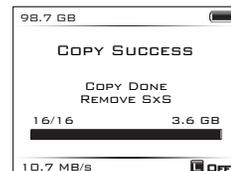
If a memory card with new data is inserted, the NVS1501 asks you to begin copying.



This screen indicates that the NVS1501 is copying the memory card data to the internal hard drive.



After copying, the NVS1501 generates an index file that displays thumbnails of the video footage.



Backup and index generation has successfully completed.

This index file is in HTML format and can be accessed via a computer using the web browser. The HTML file (NEXTOIDX.HTM) is stored in the root directory of the NVS1501. To access a video file, simply connect the NVS1501 to a computer and double-click on the NEXTOIDX.HTM file in the root directory.

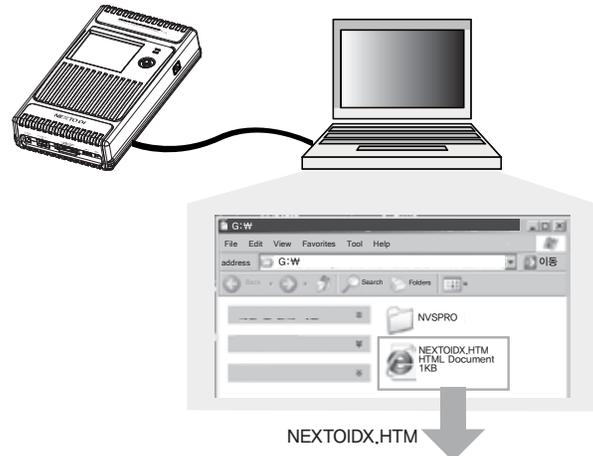


Table of Contents

20100614.000	20100614.000	Total File: 235 Total Video: 27 Total Size: 2.4GB
20100604.002		File name: 0001V001.MXF Manufacturer: Ikegami Model: HDS-V10 Duration: 00:00:15 File Size: 92.5MB Modification Time: Tue Oct 1 11:26:32 2002 Codec Info: MPEG2
20100604.001		File name: 0002V001.MXF Manufacturer: Ikegami Model: HDS-V10 Duration: 00:00:13 File Size: 85.5MB Modification Time: Tue Oct 1 11:26:50 2002 Codec Info: MPEG2
20100604.000		File name: 0003V001.MXF Manufacturer: Ikegami Model: HDS-V10 Duration: 00:00:25 File Size: 152.5MB Modification Time: Tue Oct 1 11:27:24 2002 Codec Info: MPEG2
20100426.016		
20100426.014		
20100426.005		

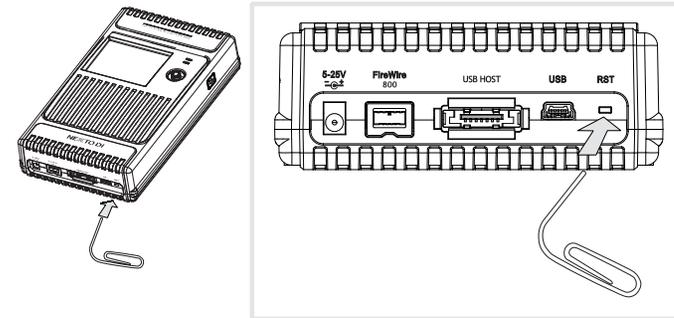
NEXT VIDEO STORAGE pro
 NEXT VIDEO STORAGE pro
 WEB MANUAL
 NEXT VIDEO STORAGE pro

21. Troubleshooting Tips

IF THE POWER ON THE NVS1501 CANNOT BE TURNED OFF VIA THE ON/OFF BUTTON:

Press the RESET button using a toothpick or paper clip.

The RESET button will turn the power off safely so that the data stored in the hard drive will not be lost or altered.

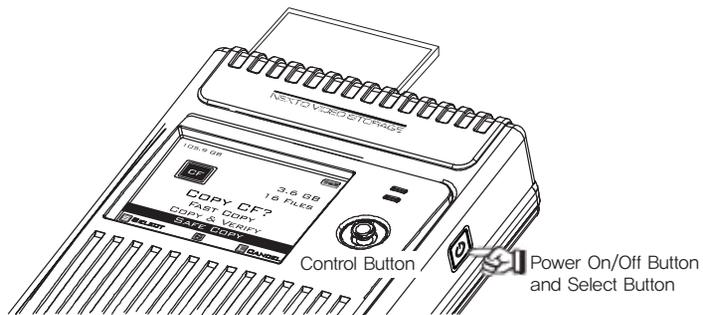


IF THE CONTROL KEY IS NOT RESPONDING:

If you are unable to select an operation that involves the pressing of the control key in an up/down/left/right direction, you can still perform the [COPY] or [VERIFY] functions of the NVS1501 by using the power (on/off) button.

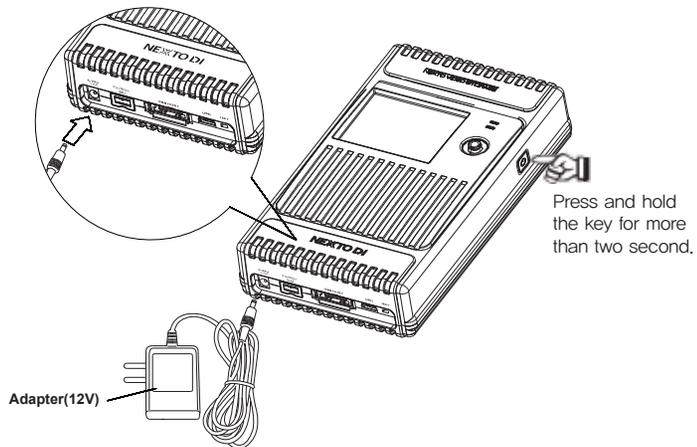
First, turn on your NVS1501 by pressing the power button for over two seconds. Next, place your memory card into the appropriate slot. When the LCD screen shows [SAFE COPY], briefly press the power button to begin copying. Please note that you will be initiating the "Safe Copy" function— which is slower, but is the most reliable method of backup.

When the copying is done, remove your memory card. Now re-insert the memory card and wait until your NVS1501 asks [VERIFY?]. A brief press of the power button will begin the "Verify" process.



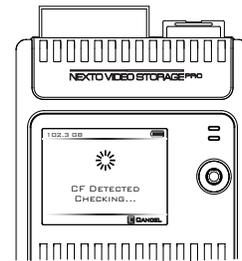
IF THE POWER CANNOT BE TURNED ON:

The NVS1501 has an internal rechargeable battery. If you cannot turn on the NVS1501 with the On/Off button, it may be that the internal battery has been discharged. Connect the power adapter to the NVS1501 and push the power button for more than 2 seconds to turn the NVS1501 on.



IF MULTIPLE MEMORY CARDS INTERETD TO THE NVS1501 AT THE SAME TIME:

Do not connect more than one memory card or USB external HDD to the NVS1501 at the same time. Only the first connected one will be detected.



IF THE FILES IN NVS1501 CANNOT BE COPIED OR EDITED AT THE COMPUTER :

When a video file stored in the NVS1501 cannot be copied or edited on a computer, the problem may be a bad sector on the hard drive. The NVS1501 has a sector recovery function which may recover the video file. For details on Sector recovery, see chapter 16.

22. Battery Disposal

Batteries/rechargeable batteries containing harmful substances are marked with the following symbols: Cd=cadmium, Hg=mercury, Pb=lead. You can return batteries/rechargeable batteries free of charge to any authorized disposal station in your area, in our stores or in any other store where batteries/rechargeable batteries are sold. Do not dispose of used batteries in the household trash.

The Li-Poly rechargeable battery integrated into the NVS1501 must be removed from the housing prior to disposal. Please see your authorized NVS1501 dealer for this service.

FCC Rules and Regulations - Part 15

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment under FCC rules.

Technical Specifications

Device	NEXTO VIDEO STORAGE	
Model Number	NVS1501	
LCD	2.4" Color TFT LCD: 320*240, 64K colors	
Card Slots	CF	CF Type 1/2, Micro Drive
	3in1	SDHC/SDXC/MS
External Harddrive Support	USB 2.0: 480Mbit/sec	
Battery	Internal: 3.7V 4400mAH rechargeable Li-Poly battery (120 min) * Rechargeable by AC adapter, USB cable, FireWire 800 (IEEE 1394b) cable (9-9pin), and Car charger cable External : Battery holder for recharging Internal battery with four standard AA cell batteries (40 min)	
AC Power Adapter	Input: 100-240V AC Output: 12V/1A DC	
Bus Power Operation	Operate with USB bus power or FireWire 800 (IEEE 1394b) cable power	
Computer Interface	USB 2.0 : 480Mbit/sec FireWire 800 (IEEE 1394b) : 800 Mbit/sec	
File System Format	Internal hard drive : FAT32 / exFAT Memory card (including SxS) : FAT12/16/32/exFAT	
OS Compatibility	Windows VISTA/XP/2000/ME MAC OS 10.6 or above Linux2.4.18 or above	
Dimensions	154mm * 91mm * 33mm (6.1 inches * 3.6 inches * 1.3 inches)	
Weight	430g/15.1oz (with Hard drive)	
Contents	NVS1501 Main unit / Manual / AC power adapter / USB cable / IEEE 1394b (FireWire 800) cable (9-9pin) / AA battery holder / Rubber jacket for shock protection	