

READYNAS™ SOLUTIONS SERIES

# Editing Digital Video using ReadyNAS 600

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## Introduction

Making a movie at home is easier today than in the past. With total equipment costing less than \$2,500, anyone can make an independent movie worthy of many film festivals around the world. Everyday, new filmmakers are discovered by their home-made videos. How about just making home video of recent family vacation? The tools available today makes it very possible to achieve a professional looking product using just a home computer.

There are many ways to do Digital Video Editing (DVE) on home computer. This paper will describe how to make home video using a camcorder with built in digital output, such as IEEE-1394 or USB-2 connection. All of the Digital Video (DV) based camcorders have IEEE-1394 connection, also known as Firewire. Some of the new camcorders feature a USB-2 connection in addition to the Firewire. Most of the new computers have USB-2 as a standard and many also have Firewire built in as well. Even if you have a computer that does not have it built in, you can buy a card for as low as \$10 and it's a true plug and play with most modern OS.

There are a few differences between Firewire and USB-2. However, the major difference is a protocol called isochronous transfer. Firewire has it and USB-2 does not. Isochronous transfer provides a guaranteed periodic time window for each frame of digital video data. This has one advantage in that the transfer between the camera and the computer will have less chance of dropping a frame. However, if the bandwidth of the stream is fairly low or it's not a real time data transfer, then the advantage disappears since all of the data can be transferred in less bandwidth.

This paper will provide a step-by-step instruction on how to make a home video using a Firewire or USB-2 equipped camcorder and a computer, finally outputting the movie on a DVD.

## Requirement

First of all, you will need a PC, ReadyNAS600, and Digital Video Camcorder.

Following system configuration and network router is minimum requirement to install ReadyNAS 600 and Personal Digital Video Recorder.

### **System Requirement:**

- PC with PIII 500MHz or Faster Processor
- 128 MB RAM Memory
- DVD-R/DVD+R Drive
- PCI 2.1 Compliant Expansion Slot
- Windows Compatible Sound Card
- Video Card with 24bit Resolution capability
- DirectX 9.0 or higher
- Windows 98SE/ME/2000/XP
- Windows Media Player 7 or higher
- Windows Media Center (Recommended)
- IEEE 1394 Firewire or USB Ports
- PCI 2.1 Compliant Expansion Slot
- IEEE 1394 Firewire or USB Cable



**Network Router:** wired (minimum 100 based Ethernet) or wireless (minimum 802.11g Wi-Fi)

**Storage:** ReadyNAS 600 (can also be used for general uses like backup)

**Personal Video Recorder:** Any PCI based IEEE-1394 (aka Firewire) or USB-2 Card for Analog to Digital Conversion if it's not built in to the system.

**Digital Video Recorder:** Any Digital Video Recorder or Video Camcorder.

**Digital Video Editing Software:** InterVideo WinDVD Creator

We will make an assumption that you have the PC, Digital Video Camcorder and the ReadyNAS 600 system already and do not need to purchase them. The Digital Video Recorder can be any consumer electronic video camcorder or recorder that can attach to your computer with USB cable or IEEE1394 / Firewire cable. If you do not have those connections on your Camcorder, you will need the Analog Audio/Video Output to attach with your PCI Digital Personal Video Recorder. We have chosen Digital Video Editing Software as InterVideo WinDVD Creator in our example to show you how to import your existing Video from Digital Video Recorder and Editing

You will need a gateway/DHCP server on the network. Make sure you "Enable" the DHCP setup under your router and all the systems on the network. Otherwise, your network will not recognize the ReadyNAS. Typically, most routers and PCs come with DHCP as a default.

Typical cost to be expected for this project is as follows:

Routers*	\$50 to \$85
Digital Camcorder*	\$250 to \$500
Digital Video Editing Software	\$50 to \$250
Firewire or USB-2 PCI card ^	\$10 to \$50
Total	\$360 to \$885

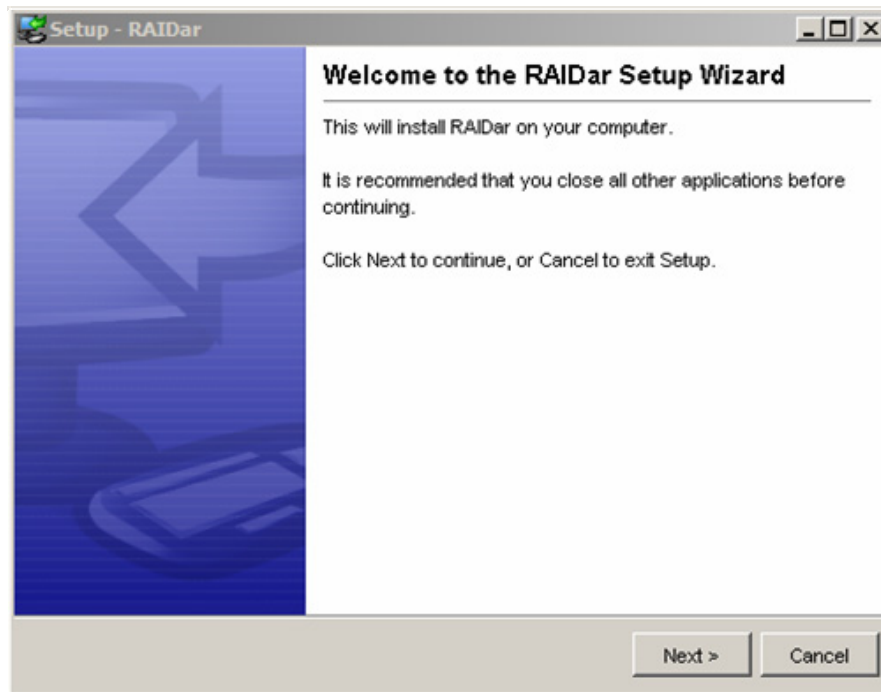
\* Not needed if you already have a home network set up and have your own Digital Camcorder

^ Not needed if you already have a system with it built in

This is a typical price you can expect to find on the web and is not a guaranteed price.

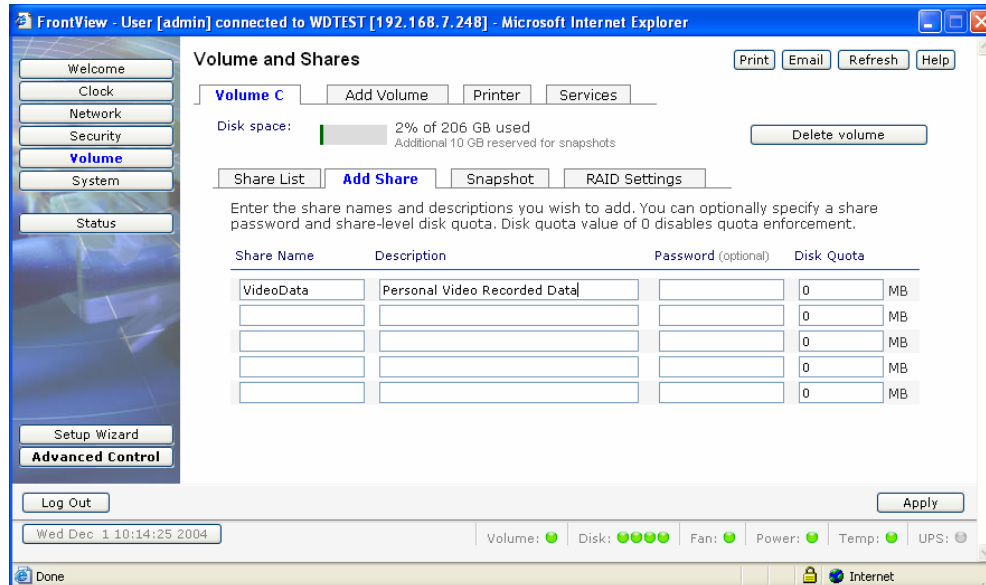
## Step-by-step ReadyNAS Setup

1. Make sure your PC is connected to your local network router and router is setup for DHCP.
2. Insert the Setup CD Provided by ReadyNAS 600 in your PC CD-ROM Drive. Run the RAIDar installation program, and the Welcome screen should appear.

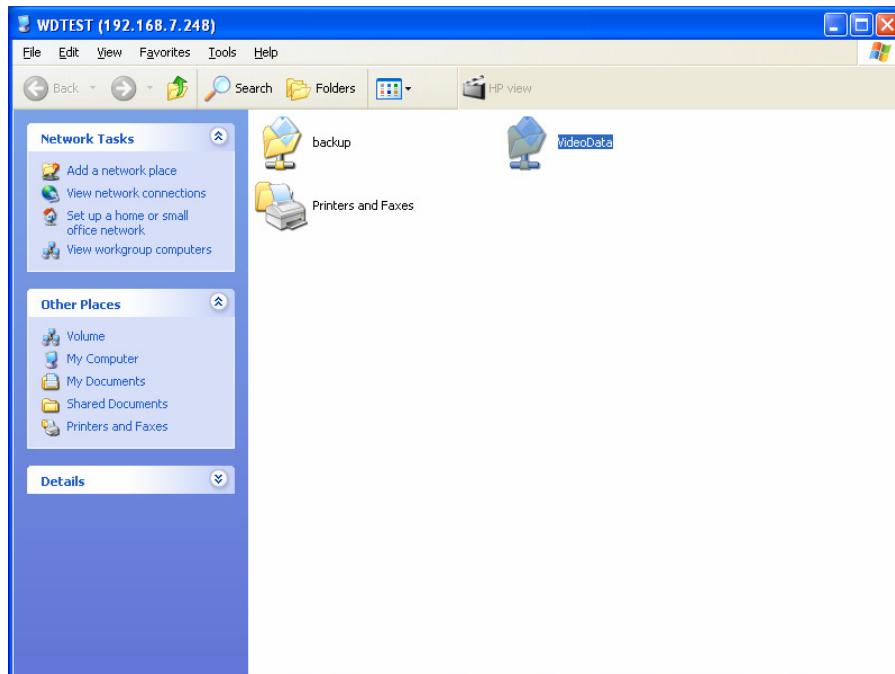


3. Follow the RAIDar setup wizard.
4. After completing the RAIDar setup wizard, you will see NAS Device setup screen. This is where you locate your NAS System by MAC ID Address of your system.
5. Select your NAS Device and click *Setup* to setup your Device.
6. Follow the Setup Wizard.

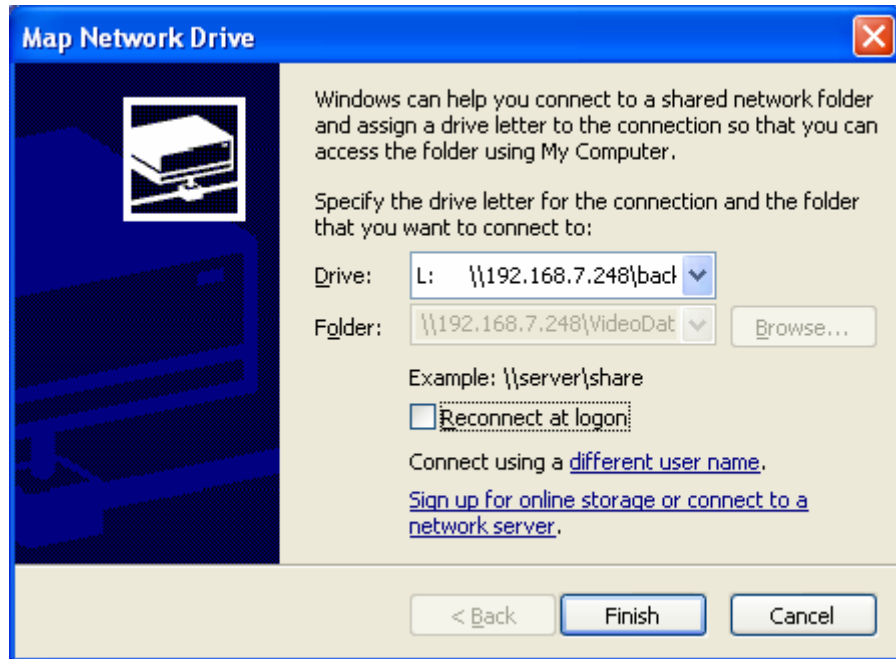
7. Create the Share folder under VOLUME section on your NAS System. For example we have created a shared called VideoData.



8. Complete the Setup Wizard and Click *Logout*.
9. By now your ReadyNAS 600 device is configured and setup for sharing.
10. Select your NAS from RAIDar and Click on "Browse".



11. Select the folder you created “VideoData”, Click on Right Mouse and Choose “Create a Network drive”
12. Drive Letter can be anything you like, but we use “L” in our example.
13. Check on “Reconnect at Logon”.



14. Click Finish.
15. By now your Share Folder is configured as Network Drive “L” and you can access into the folder as your Hard Drive from Windows Explore or My Computer.
16. Create a folder call “VideoEditingData” on your Network Drive “L”.

## Step-by-step Digital Video Editing Software Installation

We will make an assumption that you have purchased Digital Video Editing Software and Installed in your PC. If not, you can follow our simple setup. We use InterVideo WinDVD Creator in our example.

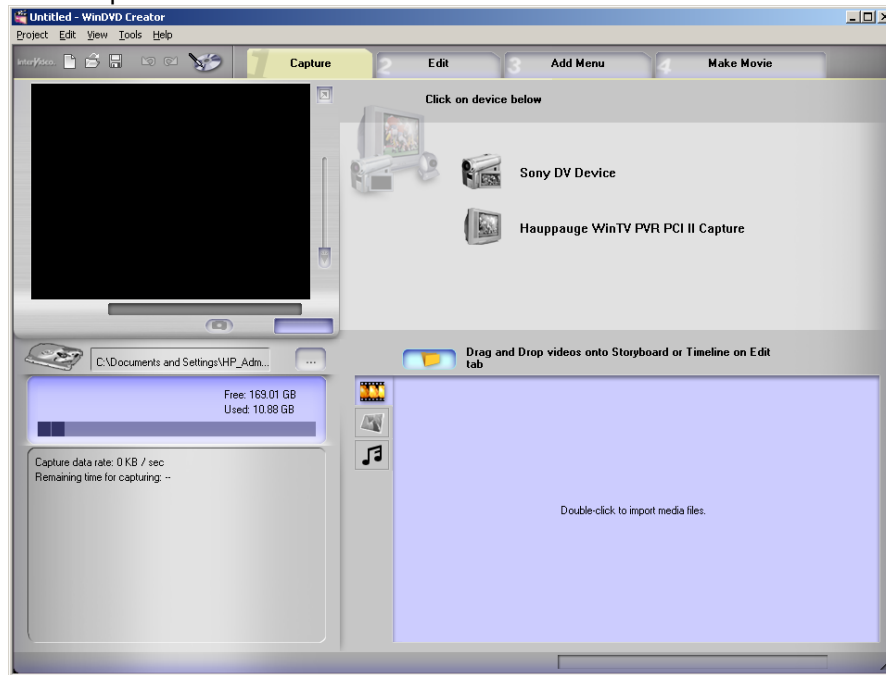
1. Insert the Digital Video Editing Software CD-ROM. Double-click on SETUP.EXE from your CD-ROM to launch the software installation wizard.
2. Following the on-screen prompts until installation is completed.

## Step-by-step Digital Video Camcorder Installation & Capturing File:

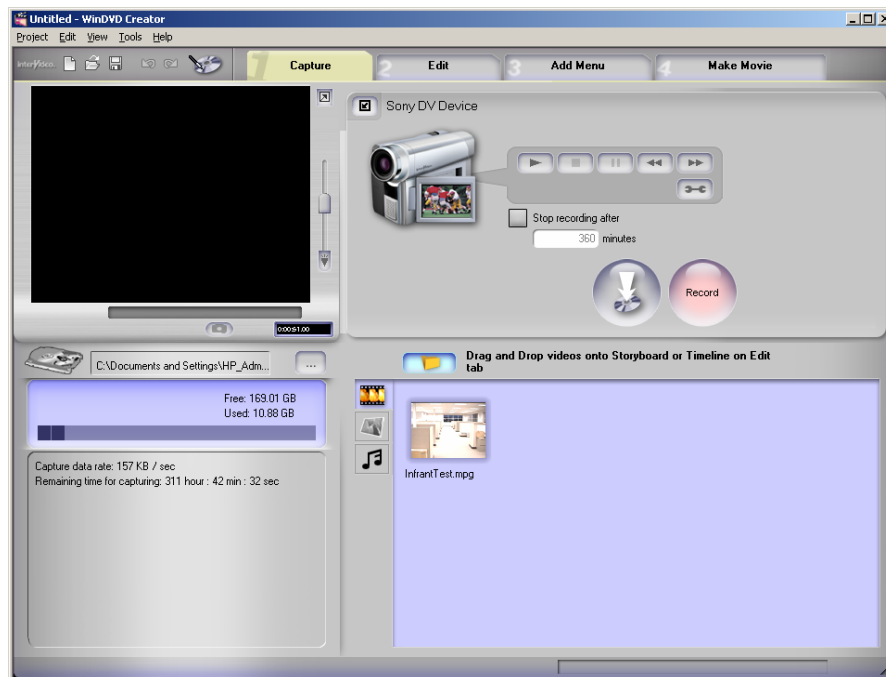
1. Connect your PC and Digital Camcorder with a Firewire or USB Connection.
2. Double Click and Open the Digital Video Editing Application. In this case we use InterVideo WinDVD as example. So double click on "InterVideo WinDVD Creator" Icons from Start -> All Programs -> InterVideo WinDVD -> InterVideo WinDVD Creator -> InterVideo WinDVD Creator.



3. Click on “Capture Video into hard disk”.

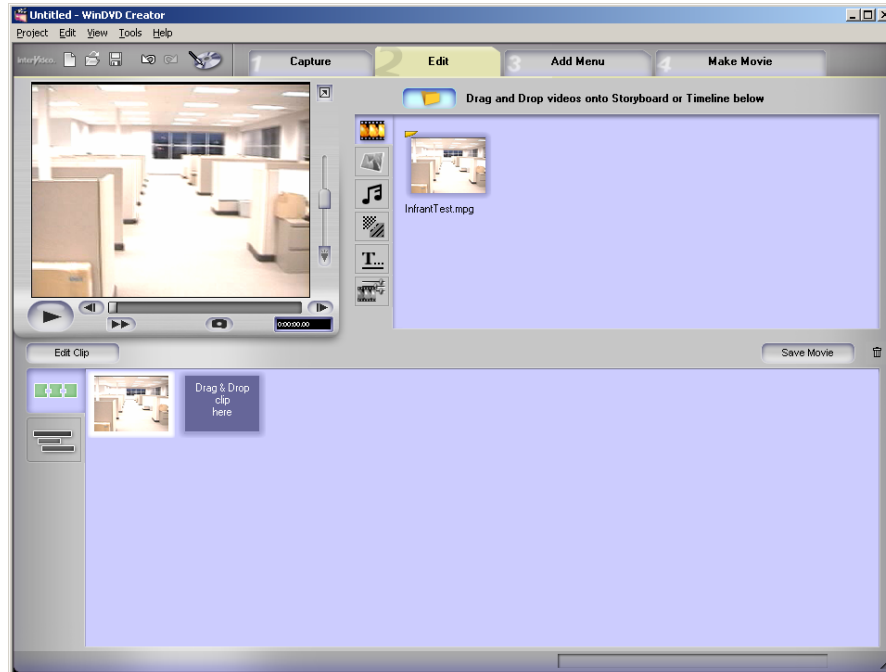


4. Choose the Device on your right hand side. In this case, we choose “Sony DV Device” as example.





5. You can preview your movie on your Camera by Play, Stop, Forward, Rewind and etc.
6. Click on “Record” Button to Capture the Video from your Digital Camcorder or “Record Directly to CD” Button to Record directly from your Digital Camcorder.
7. Save the Recorded Video in “L:\VideoEditingData” Folder.
8. Click on “Edit” Tab.

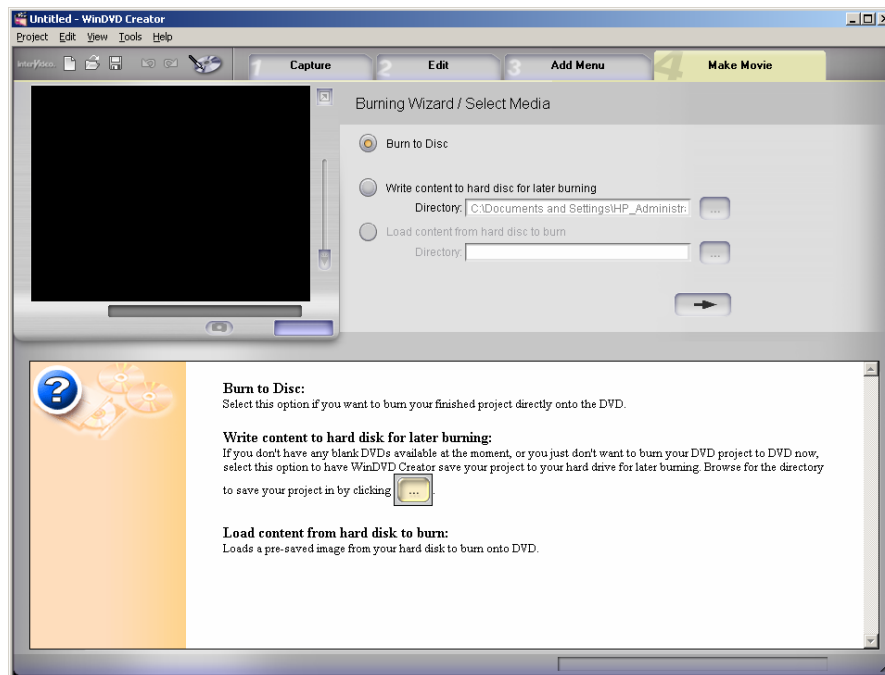


9. This is where you want to edit or re-arrange all your Video Files.

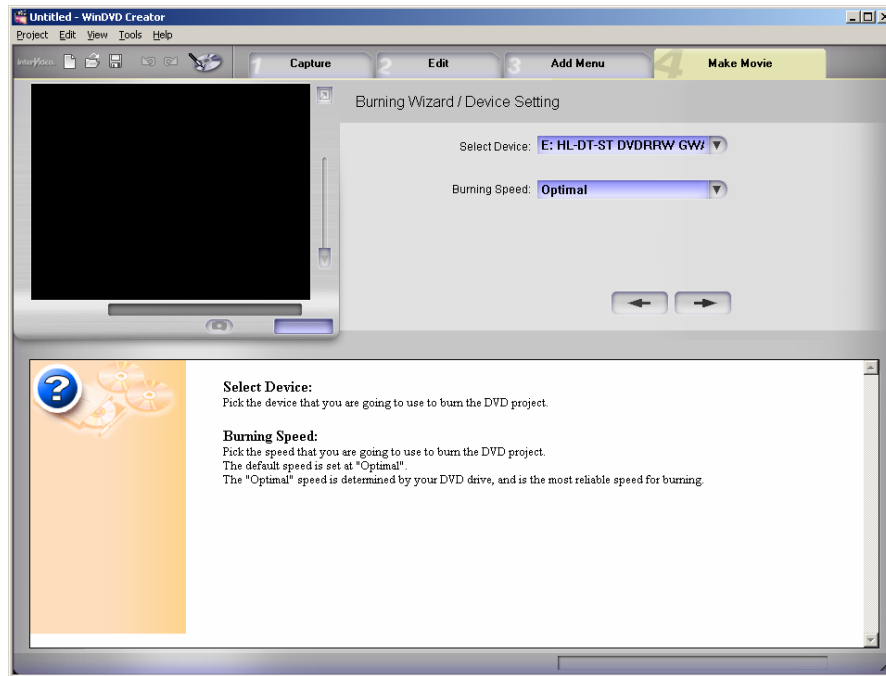
10. If you like you can add your own DVD Menu by clicking “Add Menu” Tab.



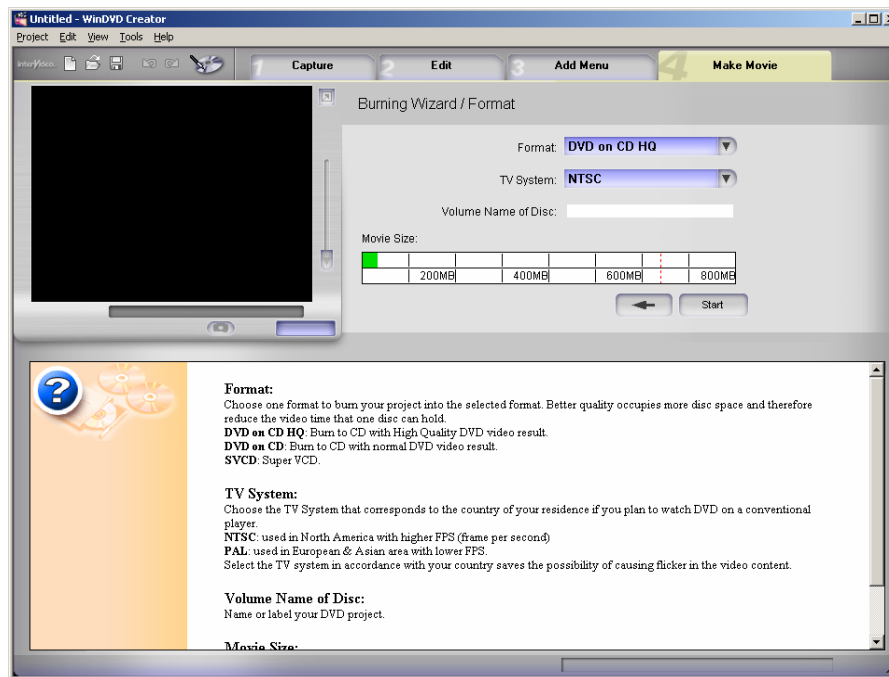
11. Click on “Make Movie” Tab to Create Video CD/ DVD. In our example, we create DVD Disc.



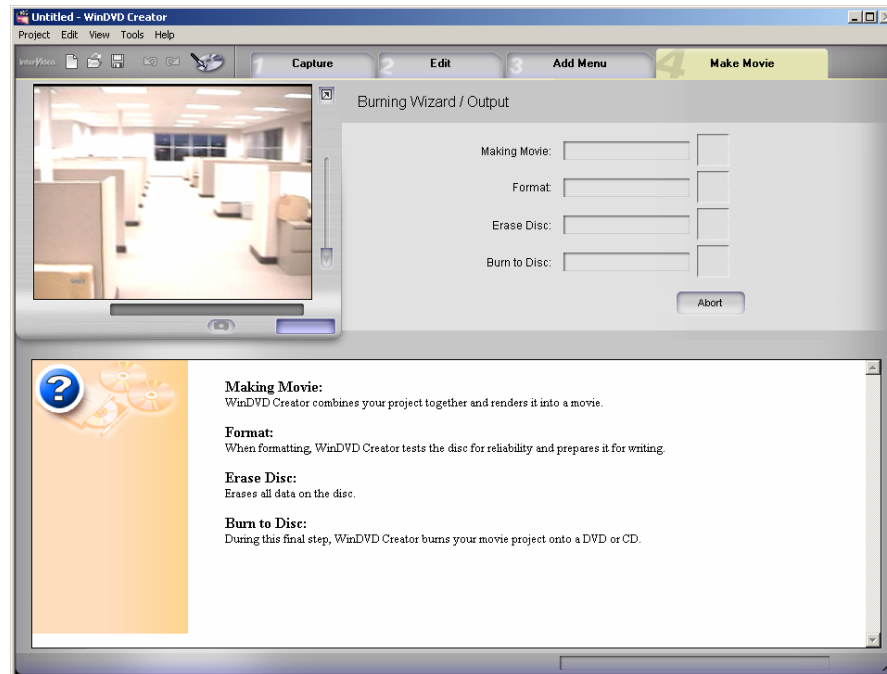
12. Click on right “Arrow” in “Burning Wizard / Device Setting” Section.



13. Click “Start” from “Burning Wizard/Format” Section.

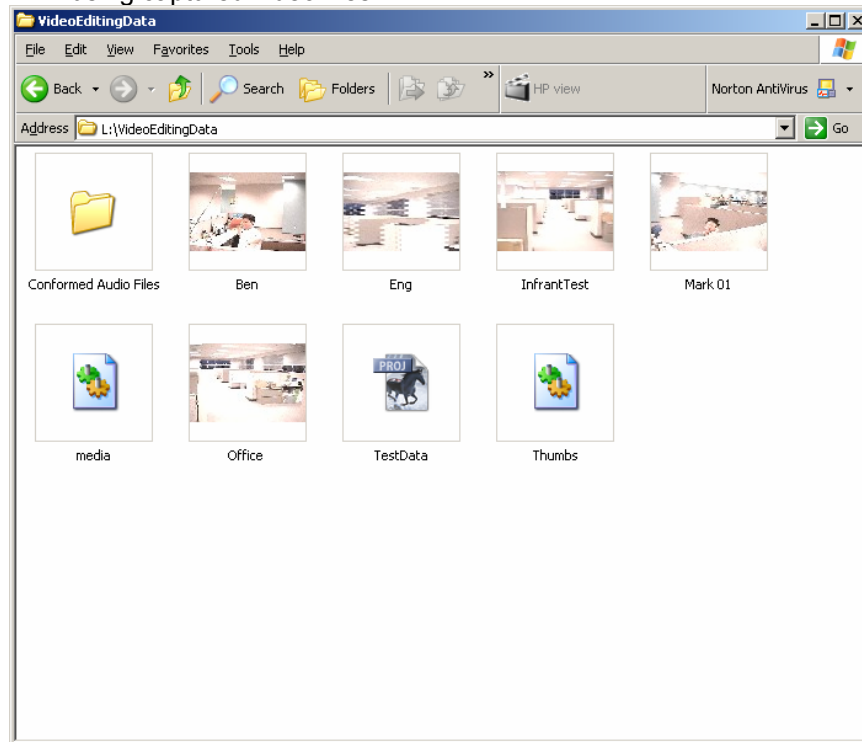


14. Click “OK” When the Burning Process Complete.



15. Congratulation!! You just created a home video on DVD or VCD.

16. All of your video captures files will be save on ReadyNAS. You can always go back and edit or create more DVD using captured video files.



17. For play back, Insert your DVD or VCD into Any DVD players OR DVD-ROM on your computer.

18. Enjoy!

## Conclusion

Now that you have created a masterpiece movie on DVD, it's time to share. You can send a copy of the DVD to your family and friends. If you would like to go further with your creativity, you can try the following products to enhance your movies. These programs are geared towards higher end production but they do provide some creative ways to enhance your movie.

Adobe Premiere: High end DVE software application. Adobe Premiere is one of the original DVE software and it has many features that are not found on lower end software.

Adobe Photoshop: Still the granddaddy of them all on image creation software. It can be used to create titles and background images for your movies.

Adobe After Effects: One of the best digital effects creation software for movies. If you wanted to film your own Darth Vader versus Obiwan Kenobi's lightsaber duel, you can create the effects using this software.

Roxio Easy MediaCreator: One of the better CD/DVD creation software around.

Smartsound Sonicfire Pro: If you want to create a perfect background music, in exact length and matched to the movie, this software is it. Using this software's easy to use interface, you can create any kind of music for home made movies.