

Power VCR II Deluxe User's Guide

CyberLink Power VCR II™

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means electronic, mechanical, photocopying, recording, or otherwise without the prior written permission of CyberLink Corporation.

Neither CyberLink Corporation nor its affiliates shall be liable to the purchaser of this product or third parties for damages, losses, costs, or expenses incurred by the purchaser or third parties as a result of: accident, misuse, or abuse of this product or unauthorized modifications, repairs, or alterations to this product.

CyberLink Corporation shall not be liable for any damages or problems arising from the use of any options or any consumable products other than those designated as original PowerVCR II products or PowerVCR II approved products.

PowerVCR II is a registered trademark along with other company and product names mentioned in this publication and are used for identification purposes and remain the exclusive property of their respective owners.

International Headquarters:

CyberLink Corporation, 15F, No.100, Min-Chiuan Road, Hsin-Tian City, Taipei Hsien, Taiwan, R.O.C.

E-Mail: Service@cyberlink.com.tw or www.gocyberlink.com

Telephone #: 886-2-8667-1298

Fax #: 886-2-8667-1467

Copyright © 1998-2000 CyberLink Corporation, Taipei, Taiwan, ROC.

PowerVCR II User's Guide

<u>POWERVCR II USER'S GUIDE</u>	I
<u>1 POWERVCR II INTRODUCTION</u>	1-1
<u>THE POWERVCR II</u>	1-2
<u>A. Modes</u>	1-2
<u>B. Control Wheel</u>	1-4
<u>C. Display Area</u>	1-4
<u>Secondary Functions</u>	1-4
<u>Preview Window (Editor, Converter, Scheduler)</u>	1-5
<u>Preview Window for i-Power</u>	1-6
<u>MAIN FEATURES</u>	1-7
<u>2 INSTALLING STEPS</u>	2-1
<u>SYSTEM REQUIREMENTS</u>	2-1
<u>BEFORE INSTALLATION</u>	2-2
<u>Video Signal Formats</u>	2-2
<u>Video Capture Devices</u>	2-2
<u>Sound Cards</u>	2-3
<u>Graphics Cards</u>	2-4
<u>Video Overlay Mode</u>	2-4
<u>TV Tuner Cards</u>	2-4
<u>Cables & Connectors</u>	2-4
<u>INSTALLING</u>	2-7
<u>Bringing Video In</u>	2-7
<u>Installing PowerVCR II on Your System</u>	2-8
<u>3 PREPARING TO RECORD</u>	3-1
<u>BEFORE CONFIGURING</u>	3-1
<u>About Television Standards</u>	3-1
<u>NTSC</u>	3-1
<u>PAL</u>	3-1
<u>SECAM</u>	3-1
<u>What is MPEG?</u>	3-2
<u>CONFIGURING THE RECORDING PROFILE</u>	3-3

<u>Selecting your Recording Profile</u>	3-3
<u>Video Compression</u>	3-4
<u>Video Bitrate</u>	3-4
<u>Video Quality</u>	3-4
<u>Frame Size</u>	3-4
<u>Frame Rate</u>	3-4
<u>GOP (Group of Pictures) Pattern</u>	3-4
<u>Audio Compression</u>	3-5
<u>Audio Mode</u>	3-5
<u>Audio Bitrate</u>	3-5
<u>Speed Quality Indicator</u>	3-5
<u>Make your Own Profile</u>	3-6
<u>CHANGING SYSTEM SETTINGS</u>	3-8
<u>Basic</u>	3-8
<u>Video Option</u>	3-9
<u>Frame Rate</u>	3-12
<u>Audio Capture Device</u>	3-13
<u>Audio Option</u>	3-13
<u>Audio Selection</u>	3-13
<u>Timer</u>	3-14
<u>Advanced</u>	3-14
<u>Flip Video</u>	3-14
<u>Deinterlace</u>	3-14
<u>Video Smoothing</u>	3-15
<u>Video Noise Removal</u>	3-15
<u>Enable FF/Rew/Seek during Time-shifting Playback</u>	3-15
<u>CPU Settings</u>	3-15
<u>Overlay Setting</u>	3-15
<u>Force No Overlay</u>	3-16
<u>Force Playback Video Overlay</u>	3-16
<u>Force Live Video Overlay</u>	3-16
<u>4 RECORDING VIDEO FILES</u>	4-1
<u>Recording from a Variety of Sources</u>	4-1
<u>Using the TV Tuner Control</u>	4-2
<u>TIME-SHIFTING PLAYBACK</u>	4-3
<u>5 PLAYING VIDEO FILES</u>	5-1

<u>PLAYING ALL YOUR VIDEO FILES</u>	5-1
<u>USING THE STEP FUNCTIONS</u>	5-2
<u>6 EDITING VIDEO FILES</u>	6-1
<u>TRIMMING CLIPS</u>	6-1
<u>MERGING MULTIPLE VIDEO CLIPS</u>	6-3
<u>7 SCHEDULING RECORDING TIMES</u>	7-1
<u>SCHEDULING WITH THE WIZARD</u>	7-1
<u>CHANGING YOUR SCHEDULING PROFILE</u>	7-3
<u>8 CONVERTING VIDEO FILES</u>	8-1
<u>CONVERTING AVI & MPEG FILES</u>	8-1
<u>CHANGING YOUR CONVERTER PROFILE</u>	8-3
<u>9 WATCHING DVD/VCD WITH POWERDVD</u>	9-1
<u>SWITCHING BETWEEN POWERVCR II & POWERDVD</u>	9-1
<u>THE POWERDVD</u>	9-1
<u>Control Panel Introduction</u>	9-2
<u>DVD/VCD Mode</u>	9-2
<u>PLAYING DVD/VCDs</u>	9-3
<u>PLAYING VIDEO OR AUDIO FILES</u>	9-4
<u>OTHER GREAT FEATURES</u>	9-5
<u>i-Power: a Journey into the Heart of DVD Technology</u>	9-5
<u>Express Menu</u>	9-5
<u>10 I-POWER INTERNET SERVICE</u>	10-1
<u>I-POWER</u>	10-1
<u>Publishing Digital Video</u>	10-2
<u>Video Editing</u>	10-2
<u>Video Capture</u>	10-2
<u>CDRW</u>	10-2
<u>DVD-RAM/ROM</u>	10-2
<u>Video & Audio Resources</u>	10-2
<u>11 TECHNICAL SUPPORT</u>	11-1
<u>Web Support</u>	11-1
<u>E-Mail/Fax Support</u>	11-1

Telephone Support..... 11-1

1 PowerVCR II Introduction

PowerVCR II is opening doors to an entirely different technological dimension for computer users across the globe. The analog-to-digital movement is well underway let PowerVCR II take you to the digital paradise with its incredible recording features that capture raw video data from analog camcorders, VCRs, and TVs (video capture cards are required) with MPEG-2 quality.

It gets even better with PowerVCR II's time-shifting feature which allows you to watch the beginning of a recorded program while it is in progress! Skipping through trivial commercials and watching at a faster speed to catch up to the live broadcast has never come so easy and effortlessly.

Not only does PowerVCR II record, it also plays VCDs, converts video files from AVI to MPEG or vice-versa, and edits your MPEG files by trimming, cutting, splicing and merging your video clips.

You'll never have to miss any more programming with PowerVCR II's CyberEPG, a programming guide situated in Cyberspace (via i-Power), that provides TV program menus, local listings, and CATV's on the Internet, and all the channel information you'll need for scheduling.

To top it off, PowerVCR II features the exclusive CyberLink i-Power service that gives you instant Internet access through PowerVCR II's embedded web browser. No more time-consuming searches and big hassles, PowerVCR II's own portal page provides all the great resources and links that you crave such as creating and publishing your videos and obtaining digital A/V facts.

THE POWERVCR II



A. Modes



Recorder



System Settings



Recording Profile



Save and name recorded files



Time-shifting Playback



Player



Opens files



Time-shifting Playback



Editor



Opens files for editing/trimming



Edits selected files



Edits all selected items (merge)



Start trimming position



End trimming position



Step left trim



Step right trim



Adds additional tasks of the same file



Scheduler



Scheduling Wizard that guides you through the scheduling process



Converter



Opens files for converting



Converts selected files



Converts all files

B. Control Wheel



Records video content



Rewinds video files



Plays video files



Pauses video files



Fast forwards video files



Stops video files

C. Display Area



Current time



Hard disk space available



Current file size



Elapsed time for current file



Time remaining until next
scheduled task



Total time for current file

Secondary Functions



Simply drag the slider bar to advance or reverse.



Step left function during playback



Step right function during playback



Volume



Recording Volume



TV Tuner control (TV tuner device required with WDM interface)



Minimize



Exit



Power Off



Accesses Online Help



Link to the i-Power service



About PowerVCR II



TV tuner (refer to Chapter 4 for more details)



Switches between PowerVCR II & PowerDVD software



Closes the Switcher

Preview Window (Editor, Converter, Scheduler)



Selects files up or down



Deletes tasks



Shows PowerVCR II's User Controls

Preview Window for i-Power



Goes back or forward when viewing web pages in i-Power



Stops loading web pages (i-Power)



Refreshes files or web pages



Updates automatically from Internet



Shows PowerVCR II's User Controls

MAIN FEATURES

Records video content from:

- VCRs & Camcorders (Hi8 and V8)
- TVs (cable)
- Digital camcorders

Other Recording and Playback Functions:

- Time-shifting function allows users to simultaneously watch and record video content
- Personal recording profiles for video professionals
- Supports real-time and high-resolution digital video MPEG-1 compression and MPEG-2 quality video recording
- Plays all MPEG-2, MPEG-1, AVI files
- DVD/VCD player

Professional Editing Studio Features:

- Converts AVI files into MPEG and vice-versa
- Edits and merges MPEG-1 video files

More Sophisticated Extras:

- i-Power links users to numerous Internet resources
- Provides Internet Electric Programming Guide from the Internet

2 Installing Steps

SYSTEM REQUIREMENTS

Please make sure your system meets the following minimal requirements before installing and running PowerVCR II:

- Windows 2000 or 98 operating system
- For **MPEG-1 recording**: Pentium II 350 MHz or the AMD K6 family at 450 MHz
- For **MPEG-2 quality recording**: Pentium III 650 MHz or Athlon 650 MHz
- 32 MB RAM (64 MB and above recommended)
- 15 MB free hard drive space
- PCI (Peripheral Components Interface), USB, or IEEE 1394 video capture devices
- Sound card
- Internet Explorer 4.0 version or higher

Before you begin recording MPEG video files, be sure to:

- Properly connect your assorted hardware to your PC through the video ports.
- Then, install PowerVCR.

There still might be some standard hardware peripherals and audio/video terminology that you might want to familiarize yourself with first so please go on to the next section for more information.

BEFORE INSTALLATION

Video Signal Formats

Today, the predominant signal formats are television, S-Video, and Composite which are connected through video ports by televisions, camcorders and most VCRs and other consumer electronics.

Television signal format

This format is the average NTSC or PAL signals your TV receives through a normal cable or TV antenna.

Composite video signal format

This is used for less expensive types of video devices that produce a single individual video signal, like for instance, VHS camcorders or VCRs.

S-Video signal format

This format produces separate video signals resulting in better quality and is used with video devices such as S-VHS, Hi-8 camcorders or Hi-8 VCR.

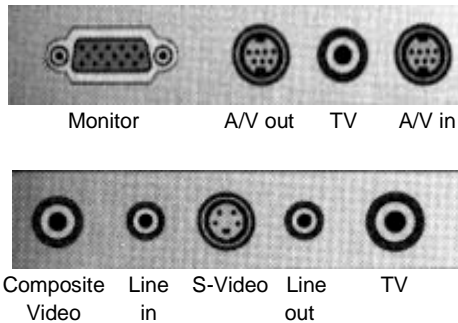
Video Capture Devices

This hardware peripheral transfers video content from analog camcorders or VCRs into your computer. There are many styles of video capture devices including the Peripheral Component Interface (PCI), Universal Serial Bus (USB) video capture device pictured below, or general capture cards.

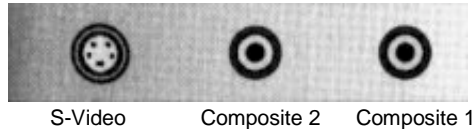


Video Capture Device with USB Interface

Depending on the video card, some will have special Audio/Video (A/V) In and Out ports (pictured below).



Other cards will come with S-Video and Composite ports (designed for receiving video content and pictured above) which will require you to plug the audio cable directly into your sound card.



Pictured above is a basic capture card for video content incorporating the S-Video and Composite ports.

Sound Cards

Sound cards are responsible for the audio aspect of your computer and controls the quality of sound during computer playback when editing or transferring output to other devices.

Like video cards, they come in all shapes and sizes. Some computers may have built-in audio ports while some have multiple ports for:

- a microphone input jack
- speakers

- headphones
- output jacks
- line-in cables

PowerVCR supports both 16-bit ISA bus sound cards and 32-bit PCI bus sound cards. Refer to your sound card's user's guide for more details.

Graphics Cards

In order to guarantee minimal graphic quality, your graphic card must be capable of displaying at least High Color (16 bit). Almost all current PCI and AGP video cards support this basic requirement.

Video Overlay Mode

Video Overlay is the ability to superimpose computer graphics over a live or recorded video signal and store the resulting video image on hard disk. Whether you'll be able to view the video in this manner depends on the type of PC graphic card on your computer.

TV Tuner Cards

With these cards, you feed the television radio frequency (RF) signal directly into the TV tuner card, which can then demodulate NTSC, PAL, or SECAM signals. Use a similar video capture card to convert the demodulated composite analog video to AVI video format.

Cables & Connectors

Listed below are various cables that you will need to establish connections:

- S-Video cable (format discussed earlier)



- Composite (RCA) video cable (format discussed earlier)



- Audio Y-adapter cable
 - Sometimes referred to as a mini jack to RCA stereo cable, it carries audio signals to your computer from an array of audio equipment



- RCA-to-RCA stereo cable
 - It carries audio signals to your computer from an array of audio equipment



Below are diagrams for the composite and S-Video ports:



Composite port



S-Video port

A new, and semi-evolutionary digital video format supported by a consortium of over 50 companies, *FireWire* is a serial data transfer protocol and interconnection system used (amongst other things) to transmit digital video (DV).



FireWire was originally developed by Apple Computer, Inc. and was standardized in 1995 by the Institute of Electrical and Electronic Engineers as IEEE-1394-1995. It offers a higher transfer rate incorporating the use of hot-plugging technology (i.e. connecting and disconnecting without shutting down the host computer).

INSTALLING



Bringing Video In

As pictured above, the video source will have to be connected properly to your capture devices, sound cards, or FireWire interface before beginning. Refer to your hardware peripheral's manual for more information on installation.

Note: Capture and sound cards come in various sizes and shapes. Some capture cards have built-in TV tuners and/or audio in capability.

The following illustrates how the video capture device's ports (left side) connects to the sound card ports (right side) when bringing audio in with video:

Line Out⇒Line In

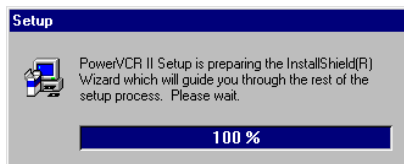
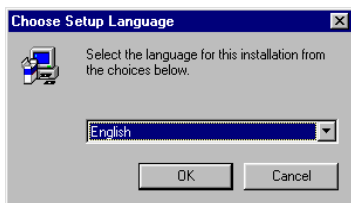
Audio Out⇒Mic In/Audio In/Speakers

Another method for connecting speakers is to use a cable wire for connecting them to the sound card through the Line Out portal.

Installing PowerVCR II on Your System

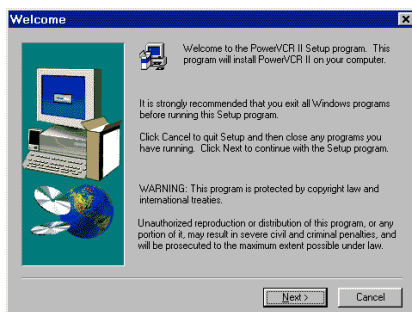
Click on **Setup.exe** after you have accessed your CD-ROM directory.

1. First pick your preferred language.

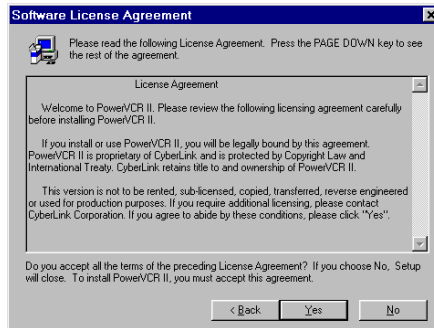


Note: If you have a previous version of PowerVCR II, simply click on *Yes* to Uninstall, and then press *Yes* to remove all components. After you're done, go to step 2.

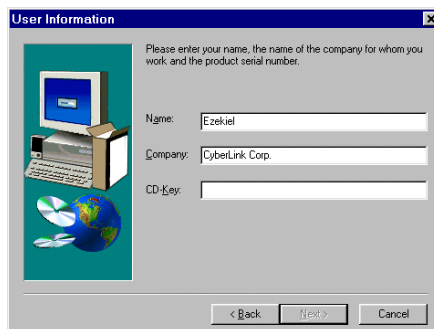
2. Press *Next* after you finish reading Welcome.



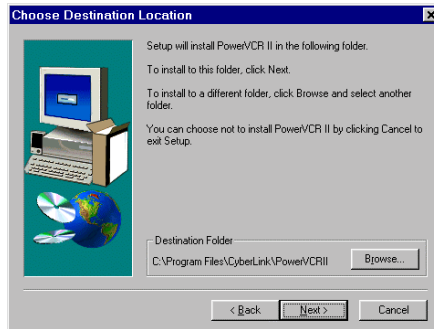
3. After you read the licensing agreement, click *Yes*.



4. Fill in your name, company and the serial number located on the CD jewel case. Press *Next*.



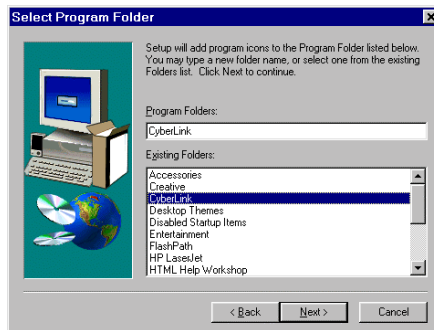
5. Choose an appropriate destination by pressing *Browse* if the default destination is inappropriate. Press *Next*.



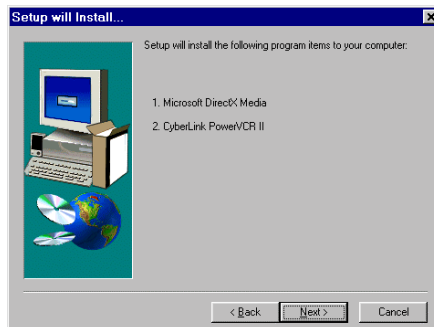
6. Select where you would like your video files to be saved (be sure the drive is large enough). Press *Next*.



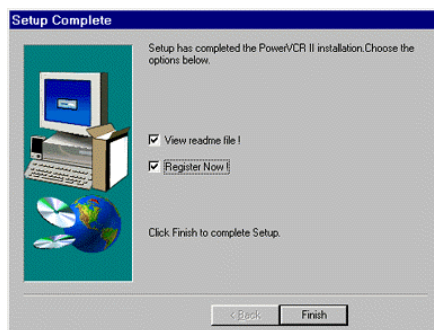
7. Select where you want the folder to be located in your Start Menu, or create a new folder. After you're done, press *Next*.



8. Press *Next*.



9. After the installations, view the Readme file and register now or uncheck to do it at a later time. You may also register via the Reply Mail card.



3 Preparing to Record

BEFORE CONFIGURING

About Television Standards

NTSC

The NTSC (National Television Systems Committee) is a standard format adopted by the FCC for television broadcasts in the United States, Japan, Canada, and Mexico. This is commonly referred to as composite video because of the convergence of luminance and color into a single analog signal:

- 525 lines of resolution per frame at 30 frames per second
- 60 Hz field frequency
- Requires a 6 MHz analog channel for transmission

PAL

Based on a 50 Hz power system, PAL (Phase Alteration Line) is the standard format for television broadcasts in West Germany, Great Britain and most of the Western European nations. By reversing the relative phase of the color signal components on alternate scanning lines, it avoids the color distortion that occasionally appears in NTSC broadcasts. Otherwise, PAL closely resembles NTSC.

- 625 lines of resolution per frame at 25 frames per second
- 50 Hz field frequency
- Requires a 8 MHz analog channel for transmission

SECAM

SECAM (Sequential Couleur a Memoire or Sequential Color with Memory) is the video format used in France, Eastern Europe, F.S.U and some Middle Eastern countries. Like PAL, SECAM is based on a 50 Hz power system.

- 625 lines of resolution per frame at 25 frames per second
- Color signals are transmitted sequentially (R-Y followed by B-Y and etc.)

What is MPEG?

MPEG, simply, is an acronym short for the Moving Picture Experts Group which belongs to the family of ISO/IEC standards (International Organization for Standardization and International Electrotechnical Commission). It is a compression technology for digital video and audio signals intended for consumer distribution. Included in the MPEG family are:

- MPEG-1 (Audio/Video)
- MP3 or MPEG-1 Audio Layer 3 (Audio)
- MPEG-2 (Audio/Video)
- MPEG-4 (Interactive Multimedia System)
- MPEG-7 (Multimedia Database & Retrieval)

MPEG technology is defined as a bit-stream representation for synchronized digital audio and digital non-interlaced or interlaced (MPEG-2 includes both) video compressed to fit into a certain bandwidth:

- MPEG-1 -- 1.5-4.0 Mbps (megabits per second)
- MPEG-2 -- 4.0-10.0 Mbps

MPEG is responsible for multiplexing and synchronizing one video stream with a single or multiple audio streams. MPEG-1 was designed to reproduce VHS/VCR quality in a digital format, while the MPEG-2 concept, similar to MPEG-1, is intended to cover a wider range of applications including DVD quality and its primary goal of an all-digital transmission of broadcast TV at coded bitrates between 4 and 9 Mbps.

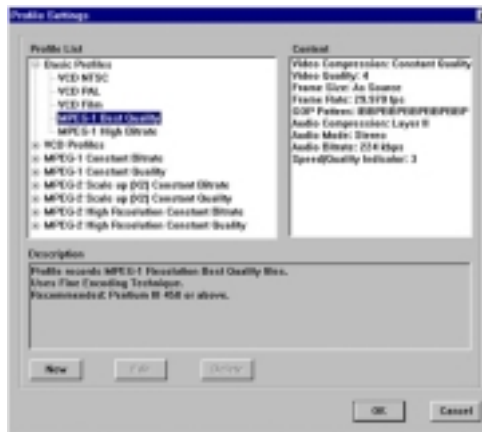
CONFIGURING THE RECORDING PROFILE

Selecting your Recording Profile

When you first start PowerVCR II, the default position will be the Recorder (or simply click on the Recorder). Press the **Recording Profiles**, and then select from the Profile List a suitable description for your recording needs.

The first selection, Basic Profiles, are for novice or even intermediate users. The remaining Profiles located below are for advanced users.

Generally, use MPEG-1 for low resolution (normal usage) and MPEG-2 quality recording for high resolution. Keep in mind the recommended system requirements for recording high resolution at screen sizes such as 640x480, 720x480, or 720x576 (Pentium III 650 MHz). Finally, if you will be writing to a CD (making your own CDs), choose the VCD Profiles.



When a profile is highlighted, the Content box (upper right) will display its settings. Click on the + signs for more selections in the Profiles' List. General recommendations and suggestions are located in the bottom half of the dialog box. Below are brief descriptions for each profile's content:

Video Compression

Only two choices are available: **Constant Bitrate** or **Constant Quality**. The difference is that for Constant Quality, PowerVCR II will guarantee the quality of the video content while Constant Bitrate guarantees the bitrate, which in turn gives you more control over the amount of hard disk used.

If you wish to edit and often utilize the random access (FF/Rew) capabilities, Constant Bitrate is recommended. If primarily for viewing and normal playback, select Constant Quality.

Video Bitrate

Measured in kilobytes per second, the higher the bitrate the more memory consumed but with better quality. Refer to the above *Video Compression* section for differences between quality and bitrate settings.

Video Quality

The range for Video Quality is 2-4. Refer to the above *Video Compression* section for differences between quality and bitrate settings.

Frame Size

This determines the frame size when recording. The available sizes are 352x240, 352x288, 720x480, 720x576 or As Source, which is dependent on the driver's automatic settings.

Frame Rate

The frame rate setting allows you to set the frames per second (FPS) for recording. The more frames the better for capturing video content with motion.

GOP (Group of Pictures) Pattern

A MPEG compression technology, GOP concept reduces the temporal redundancy across frames (from frame to frame) for video content. There are three types of frames involved in the GOP concept:

- **I-Frame (Intra pictures):** I-frame is typically the first frame of each GOP, is moderately compressed, and serves as the reference points for random access and can be likened to images.
- **P-Frame (Predicted pictures):** P-frames are coded with reference to past pictures, predict in a forward direction, and moderately compressed.
- **B-Frame (Bi-directional pictures):** B-frames' predictions are forward, backward and bi-directional which is relative to the other I-frames and P-frames. Compression is at a high level.

Audio Compression

Layer 2 contains more efficient codes for representing bit allocation and performs better than Layer 1. Possible applications for this layer are the storage of audio sequences and content on CD-ROM or VCD audio tracks.

Audio Mode

Stereo ensures the best audio quality. The MPEG-1 audio standard definitions:

- **Stereo** (default) includes two independent channels but bitrate remains constant while the channels' split may vary. The encoder uses this flexibility to improve quality by allocating more bits to the channel with the higher dynamic signal. Use Stereo for best audio quality at higher bitrates.

Audio Bitrate

Like its video counterpart, this too is measured in kilobytes per second (kbps). The higher the bitrate, the more hard disk it will use but with better quality.

Speed Quality Indicator

When encoding, the trade-off parameter consists of speed versus quality. '0' is for the fastest speed with the lowest quality, and '3' is for best quality and the lowest speed but consumes more CPU resources.

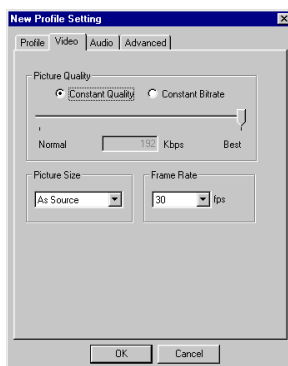
Now, if you would like to make your own profile, press *New* and go directly to step 3 below. Otherwise, press *OK* after you have made your selection.

Make your Own Profile

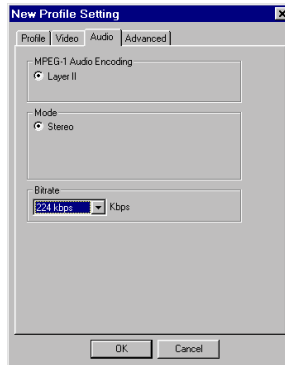
1. Press **Recording Profiles** while in Recorder.
2. Press *New*.
3. Select a similar profile that will serve as the basis for your own profile.
4. The **Profile** tab will be the default. Name your profile.



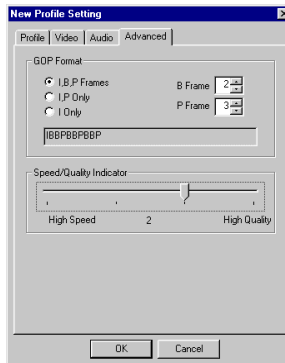
5. Press the **Video** tab. Refer to the previous section for more information on individual settings.



6. Press the **Audio** tab. Refer to the previous section for more information on individual settings.



7. Press the **Advanced** tab. For the GOP format, refer to the previous section.



8. When you're done, press *OK*.

CHANGING SYSTEM SETTINGS

Settings are configured automatically before recording. If you would like to alter them, there are three sections to choose from:

- Basic
- Advanced
- CPU Setting
- Overlay Setting

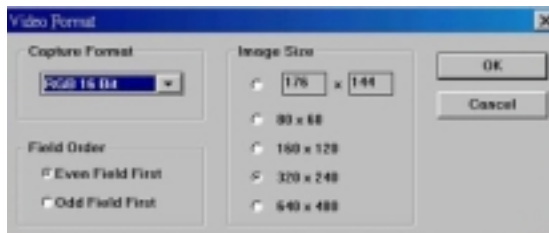
Basic



This is the default tab where you may set another video capture device, audio capture device and modify video formats, video sources, audio formats and audio selections.

Video Option

Under **Video Option**, there are different options and dialog boxes depending on your video capture device driver— Video for Windows or WDM (Windows Driver Model) as pictured below:

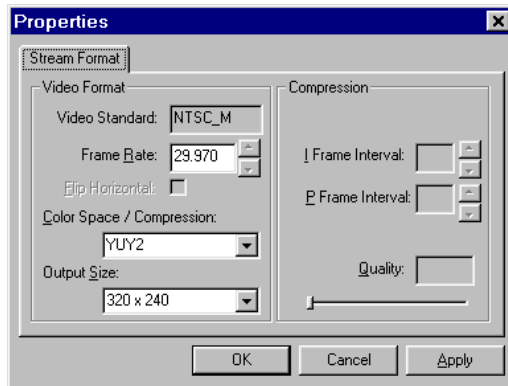


Video Format for Video for Windows

In the **Video Format** section under **Capture Format**, RGB is an additive color model (color system) consisting of the three primary colors red, green, and blue. YUV is a color encoding-scheme for natural pictures in which the luminance and chrominance are separate. The human eye is less sensitive to color variations than to intensity variations, so YUV allows the encoding of luminance (Y) information at full bandwidth and chrominance (UV) information at half bandwidth.

The YUV color model luminosity and color values are processed separately. The YUV values are calculated by addition or subtraction of specifically formed RGB values. RGB is the default setting with 16 bit (the higher the bit, the better the quality but with more memory consumed).

Field Order (interlaced) does not have to be altered and doesn't impact codecs. Choosing a larger **image size** will consume more CPU resources.



Video Capture Pin for WDM

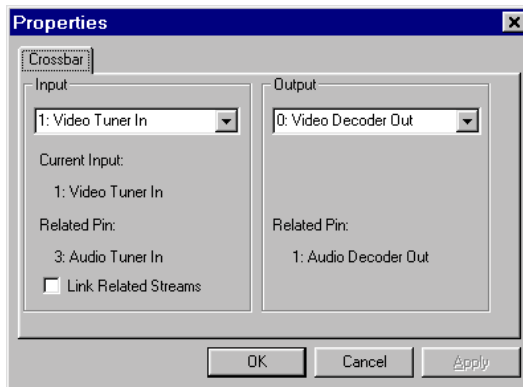
Refer to the previous section in selecting **Frame Rate**, **Color Space**, and **Output Size**.



Video Source for Video for Windows

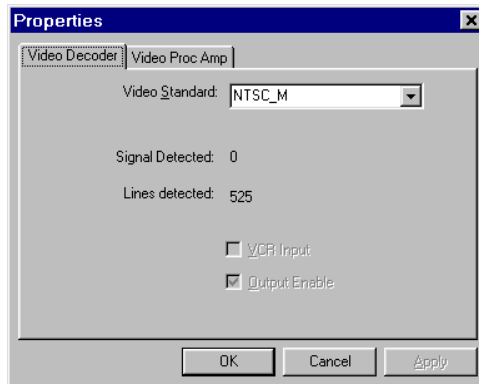
The Video Source regulates all the input and its attributes. For video input, select the appropriate input method. Press **TV Setting** if you have a TV Tuner card installed properly along with its corresponding driver.

To adjust the brightness, hue, color, and saturation, click on the slider and drag. For the video standards, refer to the above *About Television Standards'* section in selecting the appropriate option.

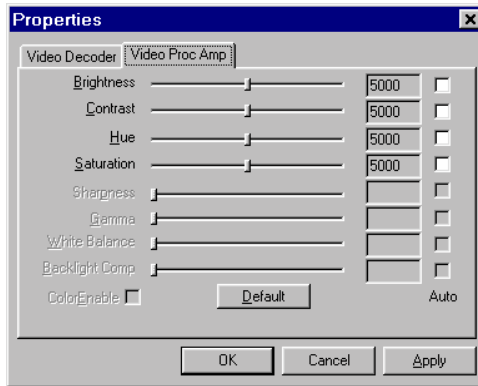


Video Crossbar for WDM

Like its counterpart, input selection is located here along with the output selection. Alter the method of input if it is S-Video, Composite, or Video Tuner.

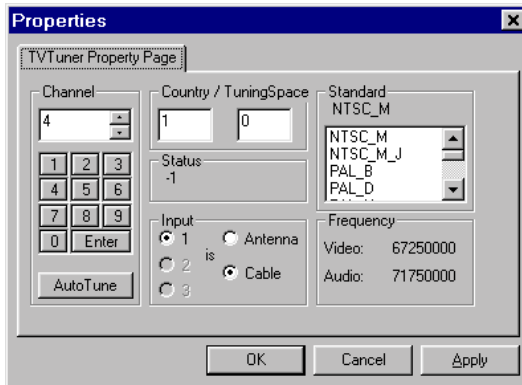


Video Capture Filter (Video Decoder) for WDM



Video Capture Filter (Video Proc Amp) for WDM

For the capture filter, there are two tabs. Here, they allow you to choose the proper TV standard along with adjusting the image displayed on your screen.



TV Tuner for WDM

You may choose channels through here and adjust the input (this is only applicable if you have a TV Tuner card).

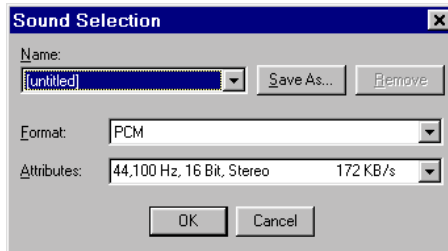
Frame Rate

Refer to the above section, *Configuring Your Recording Profile* for more information on setting this option.

Audio Capture Device

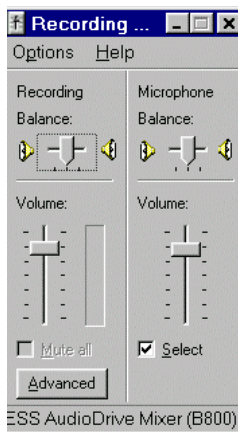
Essentially, the default should be automatically set as your sound card.

Audio Option



You may create your own format along with an attribute and save it. Otherwise, select the attribute. The higher the MHz, bits, and KB/s, the better the quality but at the expense of more memory consumption.

Audio Selection

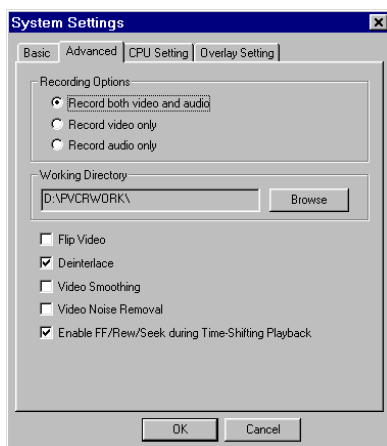


This adjusts playback and recording (microphone) volumes. Be sure *Select* is checked when recording.

Timer

The Timer located at the bottom enables you to set the maximum recording time. Simply check *Enable* and use the arrows to select the time or directly key it in.

Advanced



The Recording Option lets you choose the type of content you would like to record (only audio or video) while the Working Directory let's you determine the folder you want to save it in.

Flip Video

This option is for certain video formats (such as YUY2) provided by some hardware capture devices which will might be displayed as upside-down during recording.

Deinterlace

Check here to use the deinterlacing mode for interlaced content from high resolution sources or input. This selection also is best for interlaced video content from TV, for it will help exorcise your "ghosts." Be sure to know if your capture card is high or low resolution. This is the default for MPEG-2 quality recording.

Video Smoothing

Check here if video content is too fine and on the grainy side.

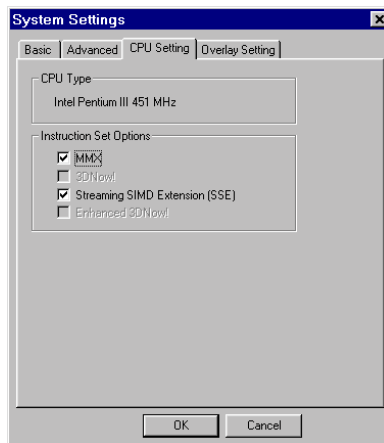
Video Noise Removal

Checked as default, it is employed during video content with motion by removing video artifacts.

Enable FF/Rew/Seek during Time-shifting Playback

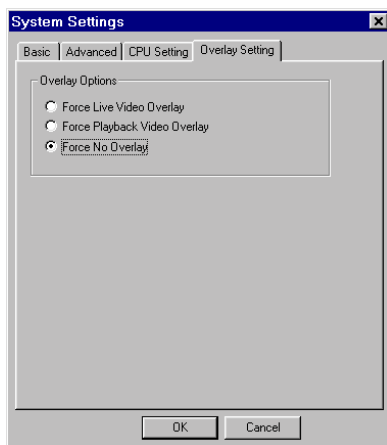
This will be set as default and enables users to fast forward and rewind while utilizing the time-shifting playback feature during recording. Be sure that your CPU can support this load.

CPU Settings



This will be automatically determined by PowerVCR II according to your CPU. The instruction sets depend on your microprocessor, either produced by Intel or Advanced Micro Devices (AMD) and optimizes and regulates multimedia tasks and configuration. All possible selections should be checked.

Overlay Setting



Force No Overlay

This is the default setting and allows PowerVCR II, as opposed to your hardware, to regulate the overlay mode for your video content (refer to the *Video Overlay Mode* section earlier in this chapter for more details).

Depending on your VGA graphics card and capture card, you may not be able to override the hardware default setting for video overlay. When hardware regulates overlay, less CPU resources are consumed, possesses better video quality, but is less stable than software.

Force Playback Video Overlay

Choose this selection if you prefer to and generally play video content instead of recording. The video quality in playback mode will be better than during recording live video. If you commonly use time-shifting playback, this is the appropriate selection.

Force Live Video Overlay

Choose this selection if you generally record video content from your TV tuner card or capture card and would prefer the live content you are recording to be good quality.

4 Recording Video Files

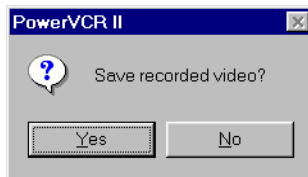
After having decided on a recording profile, you are ready to begin recording. Be sure to choose the correct input. If you have a WDM driver, select **Video Crossbar** and choose the right input. For Video for Windows' drivers, select **Video Source** and choose the correct input from there (refer to the previous Chapter for more information on *System Settings*). Now you are ready to record from a variety of video sources that include: PC camera, camcorder, digital camcorder, VCR, or TV.

Recording from a Variety of Sources

1. Be sure that your capture card is installed correctly.
2. After turning PowerVCR II on, you will see a live shot of the current video source you have connected.

Note: If the display window is completely blue, be sure your video source is on. Other possibilities may be the connections aren't set up properly, or you selected the wrong input settings.

3. Press *Record*.
4. Press *Stop* when you are finished.
5. A dialog box will appear for you to save the file:



6. Press *Yes* and then the *Save As* dialog box will appear.
7. Name your file and then press *Save*.

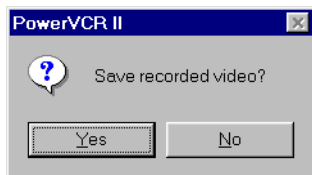
Tip: To enlarge your display window into full screen, click anywhere on the screen. To restore to original size, click again.

Using the TV Tuner Control

1. Be sure that your TV Tuner card (or capture card) is installed correctly.
2. After turning PowerVCR II on, you will see a live shot of one of the TV channels while the TV Tuner Control (as shown below) will automatically be activated (press **TV** for the TV Tuner Control located in the bottom right of the PowerVCR II User Interface if it isn't).



3. Select a desired channel by using the number pad or left and right arrows.
4. Press *Record*.
5. Press *Stop* when you are finished.
6. A dialog box will appear for you to save the file:



7. Press *Yes* and then the *Save As* dialog box will appear.
8. Name your file and then press *Save*.

Located in the middle section of the Tuner Control is your favorite channels. To add favorites, press the **Favorites'** button located below the '9' and left of the '0' after you have selected the desired channel. Press the X to exit.

Note: Remember that the TV Tuner Control only works with capture devices with WDM and a few Video for Windows drivers. For the other Video for Windows' users, use the TV tuner section under *System Settings* or refer to your manual for more instructions.

TIME-SHIFTING PLAYBACK

You are overworked and underpaid; but tonight is the season finale to your favorite teenage soap opera "The Fateless One." You are dying to find out if Kyle really did die and murder his entire family in the process! And just as a precaution, you have scheduled the recording time with PowerVCR thinking you might have to work overtime again this week, but you'd rather much watch it live and join in the play-by-play with all your male & female friends on the phone!

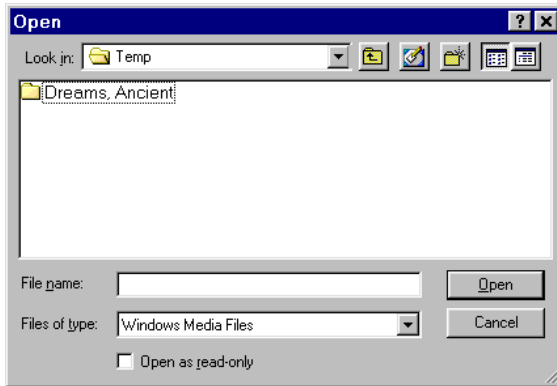
It begins at 9:00 PM and you luckily get off at 8:50. But you forget your house keys, spend time screaming, hollering and chasing someone down who almost ran you over, and then finally found out that your watch is 10 minutes slow! You wind up home at 9:20 and is extremely unpleasant. But, you then remember PowerVCR's wonderful time-shifting playback feature where you can watch recorded content while not disturbing the recording process! So you watch it from the beginning, skip over the commercials and voila, you catch up to the live feed at approximately 9:45 and find out that Kyle.....

1. After you have pressed record (or it has already started recording), press the **Time-shifting Playback** button (available in the Recorder or Player).
2. Press *Play*.

You can also watch your own personal instant replay (great for sports) of any TV program or video content you are currently recording! Simply press Recorder to return to your live recording.

5 Playing Video Files

PLAYING ALL YOUR VIDEO FILES



1. Press the *Open* video files. Type in or click on the file you would like to play. You may list MPEG files, AVI files, VCD, Windows' Media files, or All Files by clicking on the arrow in the *Files of type* row.
2. After opening the file, press *Play* on the Control Wheel.

USING THE STEP FUNCTIONS



While playing, you may press the **Step Left** or **Step Right** functions anytime for moving one frame at a time to the left or right. It is best to use this function in *Pause* or *Stop* mode.

6 Editing Video Files

If you would like to combine or merge video clips, or simply cut or trim out various footage, look no further than the Editor. However, if you would like to edit AVI video files, convert them into MPEG-1 files first (refer to the *Converting Files* chapter). MPEG-2 editing is currently not supported.

TRIMMING CLIPS

1. Press *open* for loading a video file for editing. The first frame of the video file should be displayed as pictured above while the file will be added to the cut list below.



2. Now, adjust the **Start Trim** and **End Trim** slider bars in the Editing Area (located at the top of the user interface) by dragging and releasing at the specific points where you would like to begin recording and stop recording respectively.



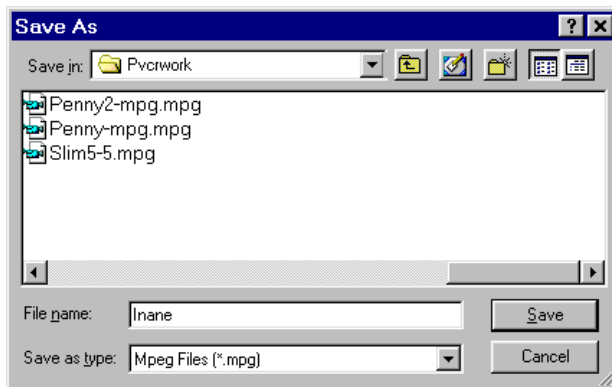
The **Trim Functions** are highlighted in red when the cursor is over it or it's being adjusted.

3. To use the editing **Step Left/Right** functions located to the left and right of Start/End Trim, first click on either the **Start/End Trim**, and then press either **Step Left** or **Right**.
4. To preview files before trimming, select the files by keeping <CTRL> depressed as you click with the mouse and then press *Play* to preview (as shown below).



Note: During editing and previewing clips, you may experience time lags when playing videos. If you record with constant bitrate profiles, these lags will be minimized.

5. Press **Trim Selected Item(s)** after you are finished and you will be asked to save/name your file.



6. Press *Save*.

MERGING MULTIPLE VIDEO CLIPS

1. Press *open*.
2. Trim and add the files to the cut list. (refer to steps 2-4 above).
3. You may also adjust the order of the files by pressing the *up* and *down* arrows or the *X* to delete files.
4. To select multiple files quickly, use your mouse in the Tasks' List to click, drag (enlarging selection area), and release (as shown below). Other options are to keep *shift* (selects files in a row) or *control* (selects files individually) depressed when selecting files with the mouse. All selected files will be highlighted.



5. To preview, refer to #4 in the section above.
6. Press **Merge All Items** and you will be asked to save/name your file.
7. Press *Save*.

Note: In order to preserve original video quality, be sure to heed the following precautions:

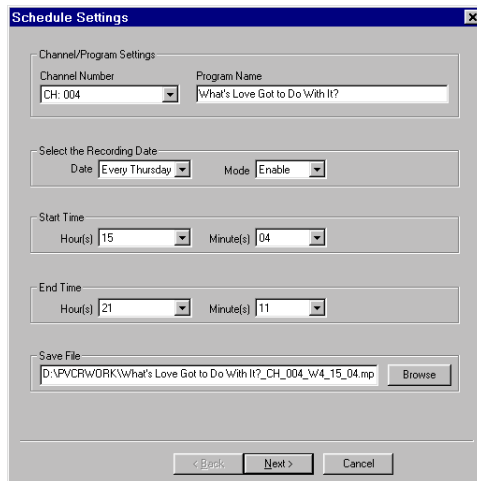
- Do not merge different formatted video files (e.g. VCD with MPEG format or MPEG-1 with MPEG-2 formats)
- We do not advise merging different recording profiles (e.g. Constant Bitrate with Constant Quality profiles)
- We do not advise merging video files that have different frame sizes (e.g. 320x240 with 640x480)

7 Scheduling Recording Times

SCHEDULING WITH THE WIZARD

Scheduling recording times will require a TV tuner card and cable access in order for it to be operational. Also remember to keep your computer on!

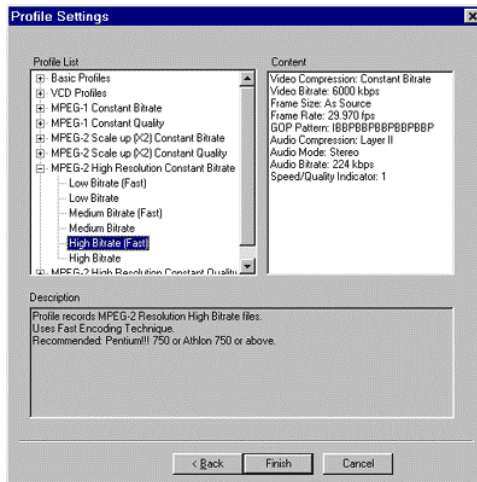
1. Press the **Scheduling Wizard**.
2. Choose the correct channel, date, starting time, ending time, and the directory to save it under. After you're done, press *Next*.



The screenshot shows a 'Schedule Settings' dialog box with the following fields and options:

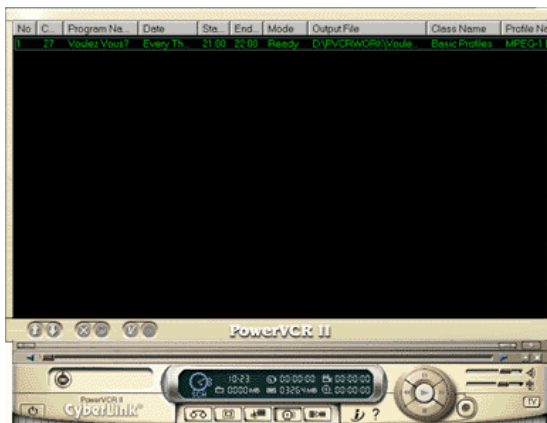
- Channel/Program Settings:**
 - Channel Number: CH: 004 (dropdown menu)
 - Program Name: What's Love Got to Do With It? (text field)
- Select the Recording Date:**
 - Date: Every Thursday (dropdown menu)
 - Mode: Enable (dropdown menu)
- Start Time:**
 - Hour(s): 15 (dropdown menu)
 - Minute(s): 04 (dropdown menu)
- End Time:**
 - Hour(s): 21 (dropdown menu)
 - Minute(s): 11 (dropdown menu)
- Save File:**
 - File path: D:\PVCWORK\What's Love Got to Do With It?_CH_004_W4_15_04.mp (text field)
 - Browse button
- Navigation buttons:** < Back, Next >, Cancel

3. Now, pick a profile. Press *Finish* after you are done.



- The scheduled task will now appear in the preview window while using the Scheduler (as shown below).

Note: Move your cursor over certain tasks and a hint will appear for added convenience.



- To edit scheduling tasks, just double-click on the specific task and the Scheduling Wizard will automatically appear.
- To add more scheduling tasks, repeat the above steps.

CHANGING YOUR SCHEDULING PROFILE

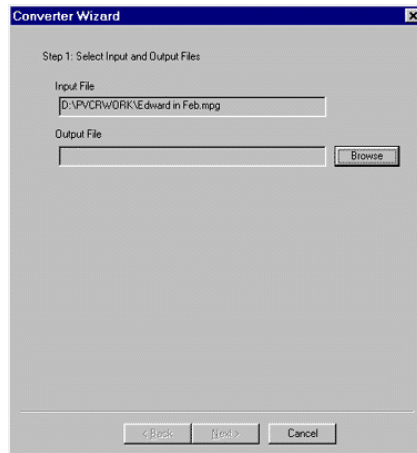
Refer to Chapter 3 for more information on selecting your profile.

8 Converting Video Files

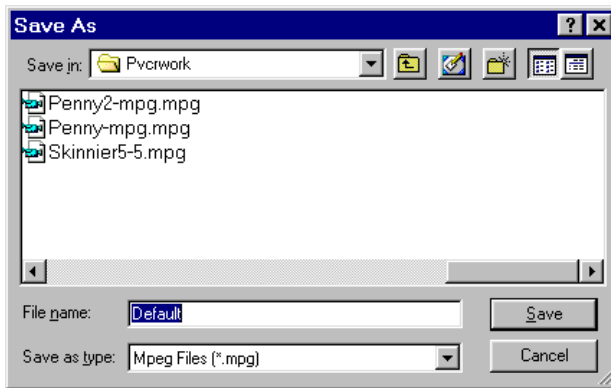
CONVERTING AVI & MPEG FILES

When converting, usually uncompressed .AVI video files will take up more memory and are optimal to be converted into compressed .MPG files. The default for PowerVCR II will be .AVI files. Be aware that some .AVI files are already compressed and don't need further conversion.

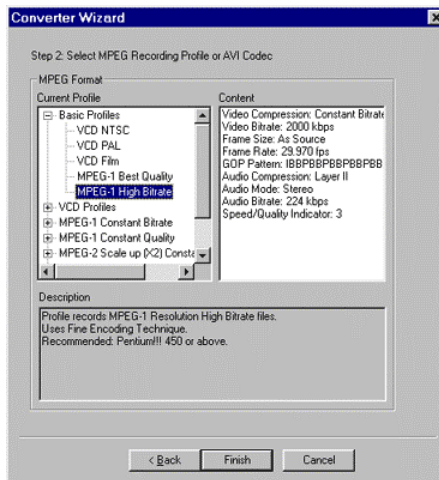
1. Press the Converter button.
2. Open your video file(s).
3. After opening your file, a dialog box will be displayed. Press *Browse*.



4. Type in a new file name or just use "Default."



5. Press *Save*. Then, press *Next*.
6. Choose a converter profile. Press *Finish*.



7. This will be added to the cut list. Now you may select this file for conversion by clicking it or continue adding more conversion files.
8. You may also trim your files to be converted by following steps 2-3 in the *Editing Files* chapter in the Trimming Clips section.
9. Now select the file to be converted. Press **Convert Selected Item(s)** or **Convert All Items** to convert all the files at once.

CHANGING YOUR CONVERTER PROFILE

Refer to the Recorder Profile section in Chapter 3.

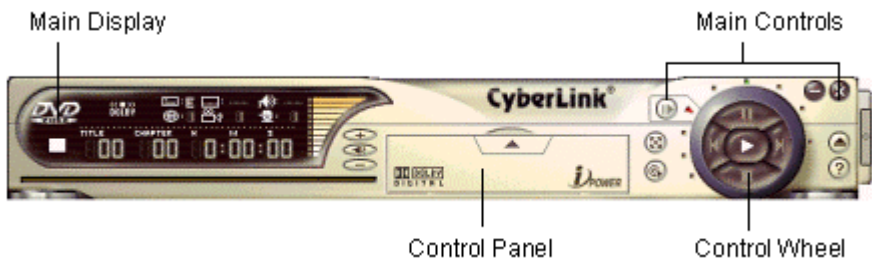
9 Watching DVD/VCD with PowerDVD

A hearty welcome awaits you from the world's best in DVD software—PowerDVD. This following section will only serve as a general guideline for PowerVCR II users. For more in-depth information, refer to the PowerDVD online help bundled with this version of PowerVCR. So let's get started with the world's most user-friendly DVD software!

SWITCHING BETWEEN POWERVCR II & POWERDVD

When PowerVCR II is activated, you will notice the *VCR/DVD Switch* on the left side. Simply press DVD to activate PowerDVD and PowerVCR II will shut off automatically.

THE POWERDVD



Control Panel Introduction



DVD/VCD Mode

DVD/VCD Mode

Remember that tool tips are available when you leave your cursor on an object for a short period of time.



Accesses Configuration dialog boxes to modify settings. (Ctrl-C)



i-Power instantly takes you directly to the Internet. (F3)

Note: The Toggle function will be disabled after the i-Power launch. Access the UI through the taskbar.



Bookmarks specific scene. (Ctrl-F2)

Tip: Position cursor here and right click for a menu to delete Bookmarks.



Direct link to bookmark. (F2)

Tip: Position cursor here and right click for Bookmark menu that includes a Viewer and Browser.



Displays the various menus for swift navigation. (L)



Repeats current chapter or MPEG file playback. An additional click will repeat all the files in the playlist. (Ctrl-R)

Note: Some DVD titles may not have the built-in function to repeat chapters.



Switches among available subtitles. (U)

Tip: Position cursor here and right click for the menu.



Switches among available audio streams. (H)

Tip: Position cursor here and right click for the menu.



Switches among available angles. (A)



Goes up to previous section. (R)



Switches between Karaoke function selections. (K)

Tip: Position cursor here and right click for the menu.



Directional arrows for menu selections. (/)



Captures video frames that is saved as a bitmap file. Right click here for capture menu. (C)

Tip: Position cursor here and right click for the menu.

When using the **Capture to File** function, the path destination may be modified in the Capture Configuration box.

PLAYING DVD/VCDs

Now, simply press play after you insert the disc! To fast forward, just press the outside perimeter of the control wheel (right side) at the different points, which all represent a speed. Reverse mode is on the left side of the control wheel. You may also click on the slider for advancing to specific parts of the video.

PLAYING VIDEO OR AUDIO FILES

If you would like to create a playlist of your favorite video or audio files, you first have to switch into **File Mode** by pressing the *Modes* button located by the eject button (tool tips will be available when you leave your cursor on an object for a short period of time).

After that, access the menu button in the control panel and begin adding new files. You may also *save lists* or *load lists*. **Shuffle**, **Repeat**, and **Repeat All** are also options you may choose in both modes.

OTHER GREAT FEATURES

i-Power: a Journey into the Heart of DVD Technology

DVD aficionados, fans, and beginners will truly appreciate the convenience of **i-Power** and its direct link feature to Cyberspace. Buying, researching, and searching for DVDs online has never been more fun or accessible, especially after watching a powerful and provoking DVD title that leaves you breathless and wanting for more. Simply click on i-Power to access the embedded browser and visit any of the links.

Express Menu

The most convenient and versatile menu available anywhere...simply right click anywhere on the video window and you are presented with 99% of PowerDVD functions. No more tool tips or long searches, simply click and presto!



10 i-Power Internet Service

I-POWER

The i-Power function is the wave of the future with its precocious characteristics and functionality. Powered by an embedded browser and exceptional links to publishing digital video, video editing resources, CDRW, DVD-RAM/ROM, video capture devices and video & audio sources, i-Power hopes to serve your creative nature unconditionally (as shown below).



Under the Internet Electronic Programming Guide, pick the link that is specific to your area and you'll instantly be transported to vast amounts of information for all your scheduling needs such as TV scheduling and times for your area, cable information, program content, and local programming information.

Publishing Digital Video

Come here to obtain professional assistance on all facets of publication; or do it yourself by accessing the great informational links available here and acquire tools you might need to finish your project.

Video Editing

Fantastic links are at your disposal for a collection of video editing software leaders, professional editors, and editing facilities.

Video Capture

Anything digital you may think of that can cease and assist in your creativity will be located here for capturing video content. Come here for the "down low."

CDRW

Get your facts, hardware and software all here! A great list to choose from when you're looking for anything remotely associated with CD-writable or CD-rewritable items.

DVD-RAM/ROM

Get your wallets and purses ready. Like the last link, CDRW, come here to find out all there is to know about this great new technology and if interested, get ready to spend!

Video & Audio Resources

Come here for many links to private home pages for riot-filled and humorous video content or links to audio resources such as short clips of your favorite top 40 songs. Audio links will be in .WAV format.

11 Technical Support

Before asking CyberLink Corp. for technical support, please refer to this user's guide or online help for more information. You may also contact your local distributor/dealer. If your problem is still not resolved, the following section provides ways to obtain technical support:

Web Support

Solutions to your problem are available 24 hours a day at our Web sites in Taiwan, USA, or Japan:

www.gocyberlink.com

www.cli.co.jp

You may also find solutions in the FAQ section or at our Web sites. In addition to frequently asked questions, we also provide troubleshooting techniques, the latest in product news, and other relevant information.

E-Mail/Fax Support

In order to answer your technical questions as quickly as possible, please send e-mail to: powervcr@cyberlink.com.tw.

Or fax us at: (886) 2-8667-1467

Note: Technical support is only offered to registered users, so please make sure to jot down your CD-Key number located on your CD case when e-mailing or faxing.

Telephone Support

Users are welcome to call the CyberLink's Technical Support Hotline at (886) 2-8667-1298. Phone support hours are Monday to Friday, 9:00 AM-5:00 PM (GMT +8:00) Taiwan local time excluding holidays. When calling for support, please have your computer ready and provide us with the following information:

- your registered CD-Key number
- the product version
- Windows' OS version
- hardware types (capture card and VGA card) and their specifications
- warning messages displayed
- detailed problem description and when it occurred

Note: Technical support is only offered to registered users, so please make sure your CD-Key number is ready when calling.