



ActionMedia^â II Driver for Indeo[®] Video Installation Guide

For ISA Compatible Computers

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Contents

Preface

| | |
|--------------------------|-----------|
| Audience | Preface-1 |
| Manual Organization..... | Preface-1 |

Chapter 1 Introduction

| | |
|---------------------------------------|-----|
| Introduction | 1-1 |
| Installation Procedures Summary | 1-1 |

Chapter 2 Installing The ActionMedia II Driver

Chapter 3 Configuring the Capture Settings

Chapter 4 Play A Sample Video File

Chapter 5 Additional Configuration Information

Appendix A Software Installation Problems and Error Messages

| | |
|--|------|
| Installation Problems | A-1 |
| Video File Playback Problems | A-2 |
| Video Problems During Capture | A-5 |
| Video Problems When Editing A File | A-7 |
| Audio Problems | A-8 |
| VIDRATE and ALIGNVID Problems | A-9 |
| Miscellaneous Problems | A-10 |

PREFACE

This document provides software installation procedures and troubleshooting tips for the ActionMedia® II Driver for Indeo™ Video.

Audience

This guide is intended for those persons responsible for the software installation of the ActionMedia II Driver for Indeo Video into a personal computer.

Manual Organization

Organization of this document is as follows:

| | |
|---|---|
| Chapter 1 Introduction | Describes the ActionMedia II Driver for Indeo Video and provides a summary of the procedures for installing the driver. |
| Chapter 2 Installing the ActionMedia II Driver | Provides the step-by-step process for installing the ActionMedia II Driver software. |
| Chapter 3 Configuring the Capture Settings | Explains the configuration of the capture settings. |
| Chapter 4 Play A Sample Video File | Describes the two sample video files provided with the ActionMedia II Driver and provides step-by-step instructions for activating each file. |
| Chapter 5 Additional Configuration Information | Contains additional information concerning the VIDRATE application and the ActionMedia II video alignment tool, ALIGNVID. |

PREFACE

| | |
|--------------|--|
| Appendix A | Lists general problems, video file problems, |
| Software | video capture problems, video editing |
| Installation | problems, audio problems, VIDRATE and |
| Problems and | ALIGNVID problems, etc. The tables |
| Error | document a specific problem, lists the |
| Messages | possible cause for the problem, and |
| | provides a possible solution or corrective |
| | action. |

Introduction

The ActionMedia® II driver allows you to use hardware-accelerated Indeo video technology to capture, playback, and edit a video file in Microsoft's Video for Windows™ application.

This chapter describes the procedures for installing and testing the ActionMedia II driver for Indeo™ Video.

The driver installation procedures are summarized in Table 1-1.

Table 1-1 Summary of ActionMedia II Driver Installation Procedures

| Step | Procedure |
|------|--|
| 1 | Install the ActionMedia II driver. |
| 2 | Configure the capture settings, if needed. |
| 3 | Play a sample video file. |

Chapter 2

INSTALLING THE ActionMedia II DRIVER

This chapter walks you through the software installation of the ActionMedia II Driver.

NOTE

Be sure the AMSETUP program has been run. For details, please refer to the ActionMedia II Hardware Installation Guide.

Before installing the ActionMedia II Driver, you must have Windows 3.1 or later and Microsoft's Video for Windows™ already installed.

The ActionMedia II Driver setup and video sample files require 3.0 Megabytes of hard disk space. The installation of the driver files without the video sample requires only 1.8 Megabytes of hard disk space. The video sample files allow testing of the driver installation and ActionMedia II board.

PROBLEM

If you encounter a problem or receive an error message during this procedure, refer to Appendix A, "Software Installation Problems and Error Messages."

Perform the following steps to install the ActionMedia II driver:

1. Insert the ActionMedia® II Drivers for Indeo™, Disk 1 in drive A. From the Windows Program Manager, select File .
2. Select Run from the File menu.

INSTALLING THE ActionMedia II DRIVER

In the 'Command Line' edit field, enter:

A:\setup

The "Initializing Setup" message displays. When initialization is complete, a Welcome window opens. This window prompts you to select one of three buttons: 'Continue' to continue setup, 'Exit' to quit the setup program, or 'Help' to receive information on completing a screen. Select Continue or press the Enter key.

3. The next window opens prompting you for the directory where the software will be installed. (The program displays the default directory (C:\AM2.) To accept the default directory, select Continue or press the Enter key.
4. The next screen shows the sample video files installation selection box already selected as the default. The sample video files provide you with a means of testing to make sure the driver was installed correctly and a means of testing the communication between the driver and the board. If you do not want the sample files installed, click on the X in the box to deselect the files. Select Continue or press the Enter key.
5. The 'Setup' program performs the file copying process. After all files are copied from the ActionMedia® II Drivers for Indeo™ Video, Disk 1, the 'Setup' program prompts you to insert the other disk(s). Press 'OK' to continue the copying.
6. The 'Setup' program prompts you for permission to modify and backup the AUTOEXEC.BAT file. Select the 'Yes' button; or the 'No' button to copy a sample AUTOEXEC.BAT file to the DOC directory.

- The next screen displays a 'Setup Successful!' message. If you receive a 'Setup Failed!' message on your system, check Appendix A for a solution. If one cannot be found, contact your board reseller. The 'Setup' program generates the ActionMedia II Tools Windows group that consists of four icons for Windows:

| | |
|------------------|---|
| • ConfPLV2 - | represents the PLV video sample file. |
| • Dance - | represents the Indeo video sample file. |
| • Configurator - | is a configuration program that allows you to adjust display, audio, and capture settings for the ActionMedia II board. |
| • VIDRATE | represents a program that tests your VGA display type and, if necessary, makes the appropriate corrections. |

- If you elected to have the program modify the AUTOEXEC.BAT file, exit Windows and reboot your system to activate the setup changes.

If you pressed the 'No' button for the automatic modification option, you must modify the AUTOEXEC.BAT file manually to include the ActionMedia II files in the path. Refer to the sample AUTOEXEC.BAT file in the C:\AM2\DOC directory. Reboot your system to activate the changes. Allow the setup program to update your AUTOEXEC.BAT file.

- If necessary, proceed to Chapter 3, "Configuring the Capture Settings", to configure your capture parameters.

INSTALLING THE ActionMedia II DRIVER

10. Proceed to Chapter 4, "Play A Sample Video File", to verify that the driver was properly installed and that the driver and the ActionMedia II board are communicating.

Chapter 3

CONFIGURING THE CAPTURE SETTINGS

'Composite' video is the default. If you wish to use S-Video input, or make any other changes to your capture settings, you will be required to change these settings in the configuration program.

This chapter provides you with the information you need to make sure the capture settings are configured for NTSC composite input.

Use the following steps to change your capture settings:

1. Click on the 'Configurator' icon in the ActionMedia II Tools Windows group.
2. Select 'Configuration' and then 'Capture Settings'.
3. Select the correct capture source (i.e., S-Video).
4. Select the correct capture device type. If the capture device type is a VCR, select 'VCR'. If the capture device type is anything other than a VCR, such as a laser disk, a camcorder, or directly from broadcast, select 'Not a VCR'. Click on 'OK'.
5. If changes were made to the configuration settings, select 'File' and 'Save Changes' to save the changes.
6. Select 'Exit configuration program' to exit the Configuration program.
7. Proceed to Chapter 4, "Play a Sample Video File."

Chapter 4

PLAY A SAMPLE VIDEO FILE

If you installed the sample video file during the driver installation procedure, you can play it to check that the driver software was properly installed.

NOTE

If you encounter a problem or receive an error message during this procedure, refer to Appendix A, "Software Installation Problems and Error Messages."

The following steps will lead you through the process of playing either or both video files. The PLV video file, ConfPLV2, will only play if the ActionMedia II board was installed properly. The Indeo video file, DANCE, will play in Indeo Video software-only mode and/or accelerated mode on the ActionMedia II board.

1. Open the ActionMedia II Tools Windows group from the Windows Program Manager.
2. Double click on the ConfPLV2 icon in the ActionMedia II Tools window to activate the PLV video file.
3. Double click on the DANCE icon in the ActionMedia II Tools window to activate the Indeo video file. The file should play smoothly and in full color.
4. If either video file is non responsive or if the Indeo video file displays in software mode only, check the troubleshooting information provided in Appendix A of this document.

Chapter 5

ADDITIONAL CONFIGURATION INFORMATION

This chapter contains information concerning the VIDRATE application and the ActionMedia II video alignment tool, ALIGNVID.

VIDRATE

VIDRATE is an application that can be used to determine the proper operating frequency for the ActionMedia II board in a Windows environment. VIDRATE should be run immediately after installation of the ActionMedia II driver kit and every time the graphics board or graphics board drivers are changed. To run VIDRATE:

1. Click on the VIDRATE icon in the ActionMedia II Tools Windows group.
2. Select the menu item 'Check VBI frequency' from the VIDRATE screen. An hourglass will appear and the application will pause for about eight seconds to check the VGA dot clock rate. If the application fails in any way, please refer to the VIDRATE section in Appendix A.
3. The program will complete with a message box verifying the system's video VBI frequency. Video for Windows supports the playback and capture of video at either 60Hz or 72Hz VBI frequency. Any other video rates will produce undesirable results.

ALIGNVID

ALIGNVID is an application within the ActionMedia II configuration program that allows you to properly align the video and graphics planes for display. ALIGNVID should be

ADDITIONAL CONFIGURATION INFORMATION

executed if the video appears shifted or stretched in the playback or capture window. To execute ALIGNVID:

1. Select the 'Configuration' icon from the ActionMedia II Tools Windows group.
2. From the configuration program, select 'Configuration' and then the 'displays' menu item. Verify that the video display frequency and installed cabling are correct for the system. Select the button labelled 'Run Adjustment Tool.'
3. The system will display a dashed box and a solid rectangle. Using the display adjustment guides, move and/or size the rectangle until it aligns with the dashed box drawn by the graphics card. Use the adjustment tuning if necessary.
4. As a last step, calculate the exact video frequency of the VGA card by clicking the 'Calculate frequency' box. This will take approximately two minutes.
5. Save the alignments and exit the program.

Appendix A

SOFTWARE INSTALLATION PROBLEMS/ERROR MESSAGES

Installation Problems

This section lists installation problems and error messages you may encounter during, or due to, installation.

Try the corrective action. If the problem is not resolved, contact your board reseller.

| Problem | Possible Cause | Corrective Action |
|---|-------------------------------------|---|
| The INSTALL program does not complete successfully. | Possible bad install disks. | Contact your retailer for technical support. |
| INSTALL program completed but cannot run applications. | INSTALL program modified your path. | <ol style="list-style-type: none">1. Update your autoexec.bat file.2. Exit Windows3. Reboot your system |

Video File Playback Problems

This section lists error messages and general problems you may encounter while playing video files in Video for Windows.

Try the corrective action. If you receive the same error message after following the procedure, contact your board reseller.

| Problem | Possible Cause | Corrective Action |
|---|---|--|
| DANCE.AVI file plays software only or CONFPLV2.AVI does not play at all. | Improper EMS address or EMS address conflict. This is the most common cause of hardware problems. | <ol style="list-style-type: none">1. If any changes are to be made to any file, be sure to save a backup copy.2. Verify that the EMS address in the AVK.INI file in the Windows directory does not conflict with any other system resource.3. Make sure the EMS exclusion ranges of memory are correct in both the SYSTEM.INI and, if necessary, the CONFIG.SYS. |
| | Improper VGA resolution. The ActionMedia II board only supports 640x480 VGA mode 18. | Check that your system is configured for 640x480 VGA mode 18. If in doubt, use the standard VGA.DRV that comes with Windows as a test. |
| | Library and microcode files are not in the path. The system must be rebooted to update your path. | <ol style="list-style-type: none">1. Check your path for the presence of the AM2\BIN directory. At the DOS prompt, type 'PATH'.2. If this directory is not in your path, add it to your path statement in your AUTOEXEC.BAT file.3. Exit Windows if necessary, and reboot the system for changes to take effect. |
| (Other possible reasons for error messages continued on next page | | |

Software Installation Problems/Error Messages

| Problem | Possible Cause | Corrective Action |
|--|--|--|
| DANCE.AVI file plays software only or CONFLV2.AVI does not play at all. (Continued) | Missing or invalid AVK.INI file in the Windows directory. | <ol style="list-style-type: none"> 1. Check for the presence of the AVK.INI file in the Windows directory. If it is not there, reinstall your driver kit. 2. Proper file size will vary but will be between 800 and 1000 bytes. |
| | Invalid I/O port. | Check the jumper settings on the ActionMedia II board match the jumper configuration shown in the 'Setup' program. Refer to Figure B-1 of the ActionMedia II Hardware Installation Guide for an example of the default jumper configuration. |
| | SCSI or other devices are using the same interrupts as the ActionMedia II board. | <ol style="list-style-type: none"> 1. If any files are to be modified, be sure to save a backup copy. 2. Verify the I/O and interrupt requirements of other system resources. 3. Ensure that video, audio, and SCSI interrupts listed in the AVK.INI are valid and do not conflict with other system resources. Valid interrupts are 9, 10, or 11 for video and 10 or 11 for audio and SCSI. Interrupts on the AMII may be shared (i.e., video audio, and SCSI may all use 10). 4. Save changes and reboot the system. |
| First frame did not open. | Bad or missing file. | Make sure the AVI file contains an Indeo video or a PLV2 bitstream. |

Software Installation Problems/Error Messages

| Problem | Possible Cause | Corrective Action |
|--|---|--|
| Video plays, but it is stretched out of the range of the window. | Unmatched ActionMedia II and VGA video frequencies. | Run VIDRATE. |
| Video plays back jerky and keeps halting. | Data delivery problem. | Check configuration for proper setup of SMARTDRV or other disk cache software. |
| Hear sound, but no video. | When using digital feature connector, plugged into wrong monitor. | Make sure the monitor is connected to the output of the ActionMedia II Board. |
| No video, or software-only video, when monitor and connections are correct. | VGA board may be incompatible. | Check the list of compatible VGA boards. |
| | VGA board is running at a VBI frequency that is not acceptable for the version of the installed device drivers kit. | Version 1.3 supports only VGA 640x480 at 60 or 72 Hz. |
| An Indeo file is not playing in hardware-accelerated playback. | File may not be an Indeo video file. | Use VidEdit to verify that this is an Indeo video file. |

Video Problems During Capture

This section lists video problems you may encounter when capturing an Indeo video file. Some errors may occur even if playback runs successfully.

Try the corrective action. If the problem is not resolved, contact your board reseller.

| Problem | Possible Cause | Corrective Action |
|--|---|--|
| Error message or, Screen becomes completely green and Windows locks up or, System hangs or crashes. | Corrupted or incomplete software/driver installation. | <ol style="list-style-type: none"> 1. Reboot the system and try playing the video again. If video still does not play, try the next steps. 2. Run VIDRATE to check for presence of acceptable VGA card. 3. Reinstall Video for Windows. 4. Reinstall the ActionMedia II driver kit. |
| Video is stretched or compressed in the playback window. | Incorrect driver settings. | Run the Configuration utility and set the drivers according to: <ul style="list-style-type: none"> - The type of VGA board and its refresh rate. - The video input source (PAL/NTSC, Composite/S-Video/RGB). or, Use VIDRATE and ALIGNVID to verify the board is running at selected VBI frequency. |
| No video in the capture window. | Bad connection from the video source. | Ensure that the video source is connected to the proper connector on the capture cable. Refer to Figure 4-16, in the ActionMedia® II Hardware Installation Guide for capture cable pinouts. |
| | Overlay or Preview not active. | Check VidCapt Options menu and verify that either the Overlay or Preview video selection is checked. |

Software Installation Problems/Error Messages

| Problem | Possible Cause | Corrective Action |
|---|---|--|
| Vertical green or pink bars in the picture. | The Delivery Board and Capture Module are not properly connected. This occasionally occurs when the computer has been moved around. | <ol style="list-style-type: none"> 1. Exit Windows. 2. Shut the system down. 3. Open the computer and check that the ActionMedia II boards are securely connected to each other. There is a connector at each end of the Capture board. Press the two boards firmly together at these two points. 4. Close the computer and restart. |
| A lot of frames are dropped during capture. | Data delivery or SMARTDRV issues. | Check to ensure that disk caching software is properly configured in your system. |
| All files play smoothly except file that was captured in VidCapt. | Frame rate capture setting is too high. | Try the following: Reduce the frame rate, or, optimize the hard disk by adding the use of a third party disk cache utility, or, use a faster system (upgrade). |
| Video frame curves to the right near the top (flagging), image is very dark. | Weak video source. | Insert a time base corrector before your video input. |
| Video is shifted in relation to the VGA window. | Alignment. | Use ALIGNVID. |
| | Running 800x600 VGA resolution. | Ensure your computer is running 640x480. |

Video Problems When Editing A File

This section lists video problems you may encounter when editing an Indeo video file. Try the corrective action. If the problem is not resolved, contact your board reseller.

| Problem | Possible Cause | Corrective Action |
|---|-----------------------------|---|
| Colors shift, quality decreases. | Recompression of artifacts. | When possible, edit to key frames in the video bitstream and save with the 'No Change' Option in VidEdit. |

Audio Problems

This section lists audio problems you may encounter when capturing or playing back an Indeo file. Try the corrective action. If the problem is not resolved, contact your board reseller.

| Problem | Possible Cause | Corrective Action |
|---|---|---|
| No audio when trying to capture or play back video. | A third-party audio board was not installed. Video for Windows requires a separate audio board. | <ol style="list-style-type: none">1. Exit Windows and turn off power to your computer.2. Remove the ActionMedia II boards.3. Install a third-party audio board (check manufacturer's instructions for installation procedures). Make sure that the I/O port and interrupt settings for the audio board will not conflict with settings required by the ActionMedia II board.4. Run AMSETUP and install the ActionMedia II boards and software according to installation procedures.5. Plug speakers and microphone into the sound card, and not into the ActionMedia II Delivery Board. |
| | Audio source may not be turned on or plugged into the wrong inputs/outputs. | <ol style="list-style-type: none">1. Check that your audio source is turned on and volume properly adjusted.2. Make sure speakers and microphone are plugged into the sound board, and not into the ActionMedia II Delivery Board.3. Check that all audio input and output lines are connected properly. |
| Hear audio when capturing, but no sound during playback. | Plugged into ActionMedia II board. | Plug into WAVE-compatible sound card. |

VIDRATE and ALIGNVID Problems

This section lists problems specific to the VIDRATE program and ALIGNVID. Try the corrective action. If the problem is not resolved, contact your board reseller.

| Problem | Possible Cause | Corrective Action |
|--|---|--|
| VIDRATE or ALIGNVID produces the following: "Cannot start the ActionMedia II software subsystems, error code = 75." | Failed to access the hardware. Hardware configuration is invalid. | Check the following: 1. Check your path for the presence of the AM2\BIN directory. At the DOS prompt, type 'PATH'. 2. Verify that the graphics resolution of the Windows session is 640x480. 3. Verify that the EMS address in the AVK.INI file is valid and poses no conflicts with other system resources. 4. Check to ensure that the EMS address is excluded in the SYSTEM.INI file and the CONFIG.SYS file, if required. 5. Verify that the I/O port is valid and that the ActionMedia II jumpers match the AM.CFG file. |
| In ALIGNVID, the ActionMedia II rectangle is too big for the graphics box. | Graphics frequencies are incorrect. | Run VIDRATE or Check that the graphics settings in the displays section of the configuration program are correct. |

Miscellaneous Problems

This section lists general problems. Try the corrective action. If the problem is not resolved, contact your board reseller.

| Problem | Possible Cause | Corrective Action |
|---|--|---|
| Nothing happens when double-clicking on Video for Windows icons. | MMTOOLS.INI file is corrupted. | <ol style="list-style-type: none">1. Delete MMTOOLS.INI file from the main Windows directory.2. Try selecting a Video for Windows icon. You will have to specify all capture and compression values again. |
| When running at more than 256 colors, the ActionMedia II board does not pass the correct colors. | Digital keying only supports 256 colors. | Run video to 256 colors or switch to the analog RGB Overlay Cable. |

'Setup' program, 2-3, 2-4

A

ActionMedia II Driver, 2-1

ActionMedia II Tools Windows group, 2-4

audio, 2-4

AUTOEXEC.BAT, 2-3, 2-4

AVK.INI, 2-5

B

backup, 2-1

C

capture settings, 2-4, 2-5

Configurator, 2-4

CONFPLV2, 2-3, 2-4

D

Dance, 2-4

DANCE.AVI, 2-3

default, 2-3

default directory, 2-3, 2-4

DISKCOPY, 2-1, 2-2

display, 2-4

I

Indeo video, 2-4

P

PLV, 2-3

video, 2-4

R

reboot, 2-4

S

sample video files, 2-3

setup, 1

SYSTEM.INI, 2-5

T

testing, 2-3

V

VGA, 2-4

Video for Windows, 2-1

video sample files, 2-1

VidRate, 2-4

W

Windows 3.1, 2-1