



DEK03000

Technical Reference And Service Guide

Pinnacle® Systems, Inc.
280 N. Bernardo Avenue
Mountain View, CA 94043

June 2004

Copyright© 2004 Pinnacle® Systems, Inc.

P/N 373100101
Rev. A

Preface

This manual is a technical reference for the Deko3000 workstation. A technical overview of the workstation is provided, as well as information on troubleshooting the workstation and replacing software and hardware components within the workstation.

This manual is intended for the person who sets up and uses the Deko3000 workstation, and the Pinnacle Systems Customer Support Engineer who provides technical support for the workstation over the phone.

Trademarks

All brand or product names mentioned herein are used for identification purposes only and may be trademarks or registered trademarks of their respective companies.

Deko3000 Technical Reference And Service Guide

Copyright © 2004 Pinnacle Systems, Inc.

All Rights Reserved.

Reproduction, adaptation, or translation of this document without prior written permission is prohibited, except as allowed under copyright laws.

Printed in the United States.

Note: The information in this document is subject to change without notice or obligation.

Pinnacle Systems Part #373100101

Revision A

1 June 2004

JML

Official Notices And Warranties

Software License Agreement

IMPORTANT—READ CAREFULLY: This Software License Agreement is a legal agreement between You and Pinnacle (or its suppliers). This System contains certain Pinnacle computer software (“Software”), associated media, printed materials, and electronic documentation. By using the Software, You agree to be bound by the terms of this Software License Agreement. If You do not agree to the terms of this Software License Agreement, Pinnacle is unwilling to license the Software to You. In such case, You may not use or copy the Software. This system also contains certain third party software, which is provided to You upon the condition that You agree to the terms outlined in the third party software licenses included with the materials shipped with the System.

License: Pinnacle grants to You a nonexclusive, personal, perpetual, nontransferable, limited license to use the installed Software exclusively on hardware on which Pinnacle has loaded the Software, or other hardware on which Pinnacle has authorized it to be loaded, but solely in connection with the operation of Your internal business, and not for the benefit of any third party. Such Software may only be enabled by Pinnacle or its authorized agent. Pinnacle and its licensors retain all right, title and interest in and to all Software, but title to the media on which the Software is delivered is transferred to You.

Restrictions: The Software is copyrighted and may contain material that is protected by patent, trade secret or other laws pertaining to proprietary rights. You may not copy the Software, except that it may make a single copy for archival purposes. You may not modify the Software or permit or assist any third party in doing so. You may not decompile, reverse engineer, disassemble, or otherwise reduce the Software to source code or other human-readable form, or attempt or permit any third party to do so. Any violation of this Software license shall be a material breach and shall immediately entitle Pinnacle to exercise any remedy that may exist at law or in equity.

Copyright: All title and copyrights in the Software (and any copies thereof) and the accompanying printed materials are owned by Pinnacle. All rights not specifically granted under this Software License Agreement are reserved by Pinnacle.

Limited Warranty: Pinnacle warrants that (a) the Software will perform substantially in accordance with the published specifications for a period of one year from the date of receipt and (b) any Pinnacle hardware will be free from defects in materials and workmanship under normal use and service for a period of one year from the date of receipt.

This warranty will not apply to repair or replacement necessitated by accident, disaster, improper or inadequate maintenance, customer or customer-supplied interfacing or machines, unauthorized modifications or repairs, improper electrical current, misuse, abuse or improper installation. This warranty is personal to You and may not be assigned or transferred. Pinnacle does not warrant that the Software will operate error-free.

THE LIMITED WARRANTY SET FORTH HEREIN IS THE ONLY WARRANTY, EXPRESS, IMPLIED OR STATUTORY THAT PINNACLE MAKES WITH RESPECT TO THE PRODUCTS. ALL IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT, ARE DISCLAIMED.

Limitation of Liability

PINNACLE SHALL NOT BE LIABLE FOR INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES; FOR DAMAGES THAT DIRECTLY OR INDIRECTLY ARISE FROM YOUR USE OF, OR INABILITY TO USE, THE SYSTEM; FOR COMMERCIAL LOSS OF ANY KIND; FOR THE PROCUREMENT OF SUBSTITUTE GOODS--WHETHER ARISING IN TORT, CONTRACT OR ANY OTHER LEGAL THEORY, EVEN IF PINNACLE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN ANY EVENT, PINNACLE'S LIABILITY SHALL BE LIMITED TO THE AMOUNT ACTUALLY PAID BY YOU FOR THE SYSTEM GIVING RISE TO ANY SUCH DAMAGE. THIS LIMITATION IS INTENDED TO LIMIT PINNACLE'S LIABILITY AND SHALL APPLY NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY.

Table of Contents

OFFICIAL NOTICES AND WARRANTIES	3
Software License Agreement	3
Limitation of Liability	4
CHAPTER 1: INTRODUCTION TO DEKO3000	7
Contents	7
Introduction	8
Using This Manual	8
CHAPTER 2: DEKO3000 SYSTEM OVERVIEW	9
Contents	9
Hardware Configuration	10
Channel Configurations	10
<i>Single Channel Mode</i>	10
<i>Dual Channel Mode</i>	11
<i>Triple Channel Mode</i>	13
Workstation Front Panel	14
Workstation Back Panel	15
CHAPTER 3: INSTALLATION AND SETUP	9
Contents	9
Unpacking	10
Deko3000 Workstation Initial Setup	11
Deko3000 Hardware Settings Panel	14
Deko3000 Automation Control Connections	16
<i>GPI Input</i>	16
<i>GPI Output</i>	16
Network Configuration	17
CHAPTER 4: TROUBLESHOOTING	17
Contents	17
Inflexion I/O Diagnostic Utility	18
<i>Modes Of Operation</i>	18
<i>Setup Before Testing</i>	18
<i>Automatic Test Procedure</i>	19
<i>Manual Test Procedure</i>	24
Deko Manifest Utility	30
<i>Deko Manifest Test Procedure</i>	30
<i>Interpreting Deko Manifest Test Results</i>	33
CHAPTER 5: SYSTEM MAINTENANCE	35
Contents	35
Replacing Workstation Components	36
<i>Replacing A TARGA Card</i>	37
<i>Replacing The SVGA Card</i>	42

<i>Replacing The Serial ATA Card</i>	44
<i>Replacing A Hard Drive</i>	48
<i>Replacing A Power Supply</i>	51
<i>Replacing The Fan</i>	53
<i>Replacing The DVD/CD Drive And/Or Floppy Drive</i>	56
System Recovery Procedures	61
<i>You Have The Software Disks Supplied By Pinnacle Systems</i>	61
<i>Recreating A Deko3000 Drive Image Restore DVD</i>	69
 APPENDIX A: PINNACLE SYSTEMS CUSTOMER SUPPORT	75
About Deko Support	75
Troubleshooting Questionnaire	75
Contacting Pinnacle Systems	75
Upgrade Information on the Internet	76
 APPENDIX B: DEKO3000 TECHNICAL SPECIFICATIONS	77
Technical Specifications*	77
Deko3000 Base Configuration	77
ClipDeko Option	78
DekoObjex Option	79

Chapter 1: Introduction To Deko3000

Contents

This Chapter provides an introduction to the Deko3000 Workstation Technical Reference and Service Guide. A brief description of all of the Chapters and Appendices that can be found in this document is also described in this section.

This Chapter contains the following sections:

- Introduction
- Using This Manual

Introduction

Deko3000 is an advanced graphics workstation that is capable of displaying complex graphical elements and clips for live on-air broadcast productions. It is based on both the Microsoft® Windows® XP operating system, and on Pinnacle® Systems proprietary Inflexion Engine technology. Windows XP provides the interconnections, serviceability and networking capabilities required to seamlessly integrate into the critical broadcast environment. The Inflexion Engine is an object-based broadcast quality video processing engine that is designed to support a wide range of broadcast functionality which includes clip recording and playback, real-time effects generation, and graphics display.

This document provides detailed technical information about the Deko3000 workstation. It is meant to be used for initial setup and installation as well as a reference guide for system maintenance and troubleshooting.

As with other Deko products, Deko3000 can be configured to be in a single, dual or triple mode channel configuration. Each Deko3000 workstation will be in one of these configurations, depending on how the workstation was ordered. Each one of these configuration types is described in “Chapter 2: Deko3000 System Overview.”

Using This Manual

Here is a quick overview of this manual’s Chapters and Appendices

- **Chapter 1: Introduction To Deko3000** -- Provides an overview of this manual.
- **Chapter 2: Deko3000 System Overview** -- Provides a basic overview of the Deko3000 system. The various hardware and channel configurations a Deko workstation can have are detailed here.
- **Chapter 3: Installation And Set Up** -- Explains how to set up the Deko3000 workstation after it has been initially received. This includes installing the hard drives, attaching peripheral devices, testing the workstation, Deko3000 software setup, and control and network connections.
- **Chapter 4: Troubleshooting** -- This Chapter describes how to use the Inflexion I/O Diagnostic Utility, and the Deko Manifest Utility. These two software utilities are provided within the Deko3000 workstation system software as a means to quickly and easily troubleshoot the workstation.
- **Chapter 5: System Maintenance** -- This Chapter details how to remove and replace various Deko3000 workstation components, and the methods for system recovery.
- **Appendix A: Pinnacle Systems Customer Support** -- Information about additional Deko resources, a troubleshooting questionnaire, and regional worldwide e-mail and internet contact information is included here.
- **Appendix B: Deko3000 Technical Specifications** -- Gives the technical specifications for the Deko3000. Specifications for the Deko3000 base configuration, ClipDeko option, and DekoObjex option can be found here.

Chapter 2: Deko3000 System Overview

Contents

This Chapter provides a basic overview of the Deko3000 system. The hardware configuration and various channel configurations for a typical Deko3000 workstation are discussed and also detailed via illustrations. The inputs and outputs on the front and back panel of the Deko3000 workstation are also described.

This Chapter contains the following sections:

- System Overview
- Hardware Configuration
- Channel Configurations
- Deko3000 Workstation Front Panel
- Deko3000 Workstation Back Panel

Hardware Configuration

The Deko3000 workstation is built with a high performance motherboard configuration that is driven by powerful plug-in cards that manage the video and graphics data that flows through the system.

The main Input/Output (I/O) module in the Deko3000 system is Pinnacle's TARGA 3200 board. The TARGA 3200 board is an advanced real-time video and audio processing engine that manages all of the I/O and graphics functions in the Deko3000. Up to three TARGA 3200 cards are installed on a Deko3000 system as configured from the factory.

In addition to the TARGA 3200 board, each Deko3000 system is equipped with a state of the art OpenGL graphics card that processes all of the real-time graphic effects that are created in a Deko application.

Channel Configurations

As with other Deko products, Deko3000 can be configured to be in a single, dual or triple mode channel configuration. Each Deko3000 workstation will be in one of these configurations, depending on how the workstation was ordered. Each one of these configuration types is described below.

Single Channel Mode

In single channel mode, a single TARGA 3200 board is installed in a Deko3000 workstation. All I/O, clip processing, effects output, and keying performed by the Inflexion software is processed on a single TARGA 3200 board. An illustration that is representative of the signal flow for single channel mode processing is shown in Figure 2-1.

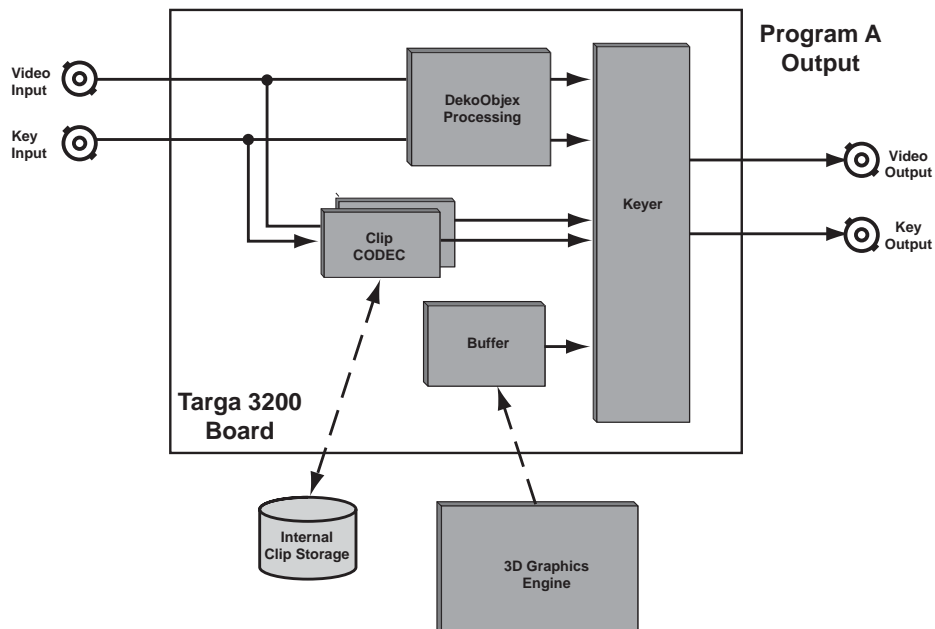


Figure 2-1: Single channel mode processing

Note: Depending on how your system was ordered, it may not have the Clip or DekoObjex options installed.

Dual Channel Mode

In dual-channel mode, two TARGA 3200 boards are installed in a Deko3000 workstation. Dual channel Deko3000 workstations can therefore be software configured to output in either one of the following two program views:

- Program-Preview
- Dual Program

Each type of view is described below.

Program-Preview

The first channel (i.e., TARGA board) operates exactly as in single channel mode. All I/O, clip processing, effects output, and keying performed by the Inflexion software is processed by the first TARGA 3200 board. The frame buffer of the second TARGA 3200 board is used to output the Program-Preview. This output is the static graphic that is displayed on the Preview window within the Deko3000 software program.

Important: No effects or clips can be output from the second TARGA 3200 board as Program-Preview.

An illustration that is representative of the signal flow for dual channel program-preview mode processing is shown in Figure 2-2.

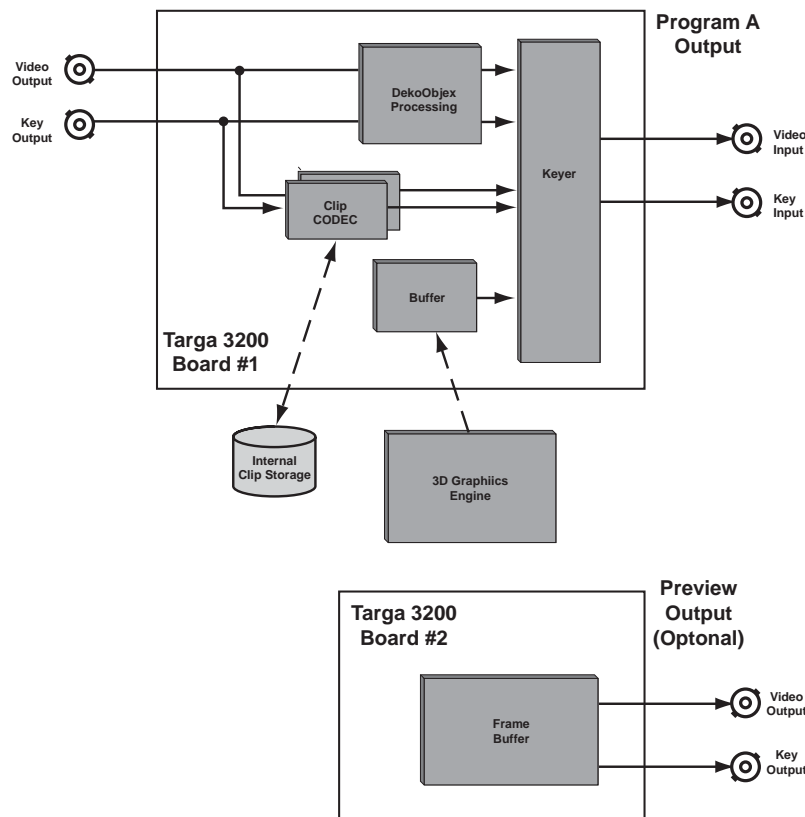


Figure 2-2: Dual channel Program-Preview mode processing

Note: Depending on how your system was ordered, it may not have the Clip or DekoObjex options installed.

Dual Program

In Dual Program mode, both TARGA boards operate as independent channels (with some limitations). All I/O, clip processing, effects output, and keying performed by the Inflexion software can be processed by both TARGA 3200 boards. Once an effect is complete on one channel, a new effect can immediately be played on the other channel.

Important: 3D effects can only be played on a single channel at a time.

An illustration that is representative of the signal flow for dual channel dual-program mode processing is shown in Figure 2-3.

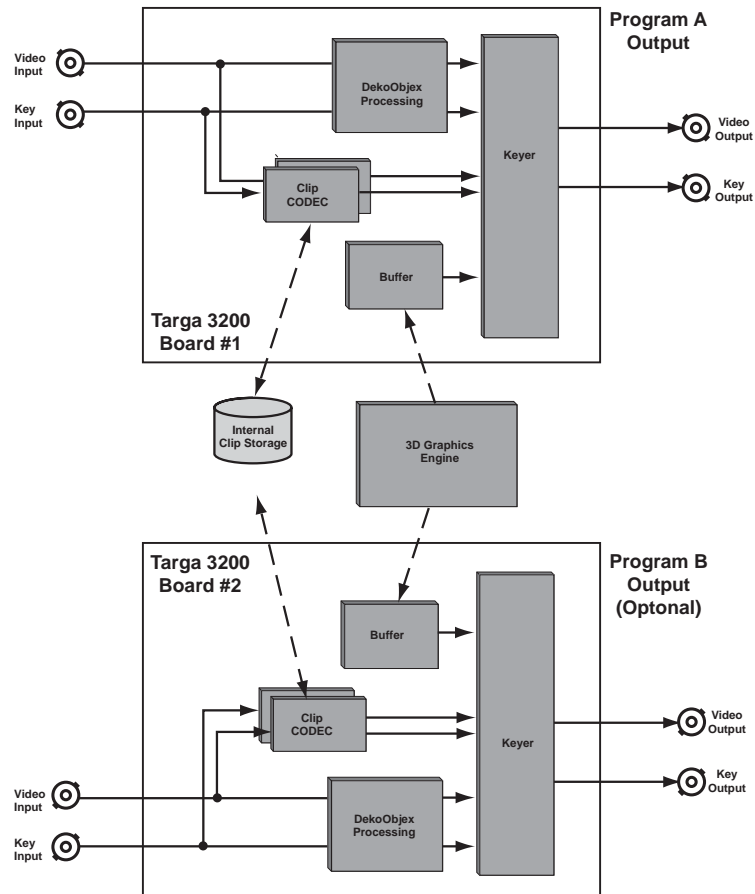


Figure 2-3: Dual channel dual-program mode processing

Note: Depending on how your system was ordered, it may not have the Clip or DekoObjex options installed.

Triple Channel Mode

Triple Channel Mode uses the maximum number of TARGA 3200 boards (which is three) in the Deko3000 system as shown below. The first TARGA board and second TARGA board operate as independent channels (with some limitations). All I/O, clip processing, effects output, and keying performed by the Inflexion software can be processed by the first two TARGA 3200 boards. Once an effect is complete on one channel, a new effect can immediately be played on the other channel.

Important: 3D effects can only be played on a single channel at a time.

The frame buffer of the third TARGA 3200 board is used to output the Program-Preview. This output is the static graphic that is displayed on the Preview window within the Deko3000 software program.

Important: No effects or clips can be output from the third TARGA 3200 board as Program-Preview.

An illustration that is representative of the signal flow for triple channel mode processing is shown in Figure 2-4.

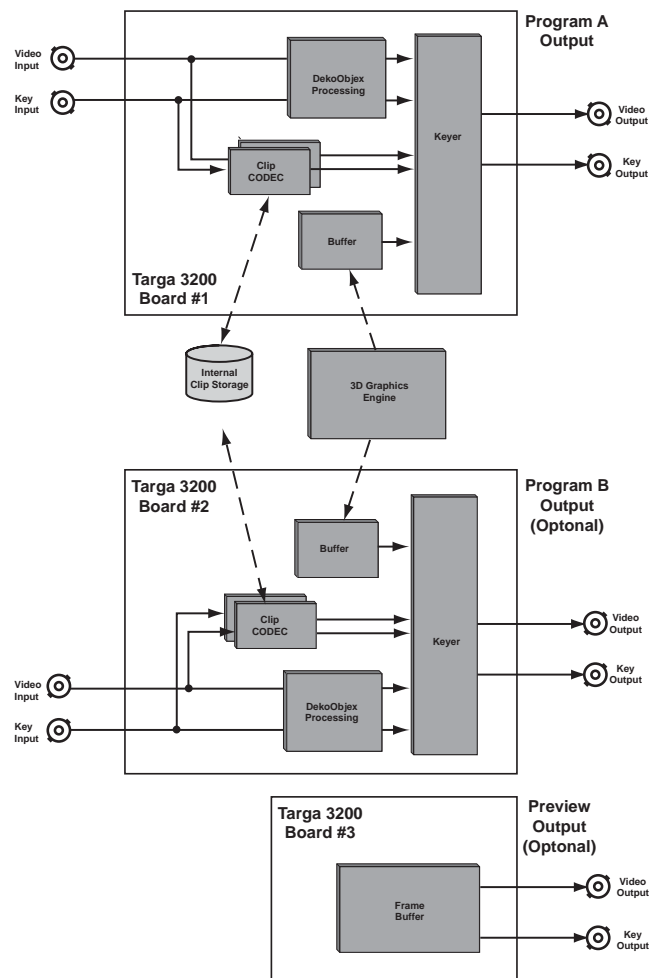


Figure 2-4: Dual channel Program-Preview mode processing

Note: Depending on how your system was ordered, it may not have the Clip or DekoObjex options installed.

Workstation Front Panel

Figure 2-5 shows the front of the Deko3000 workstation with the bezel removed.

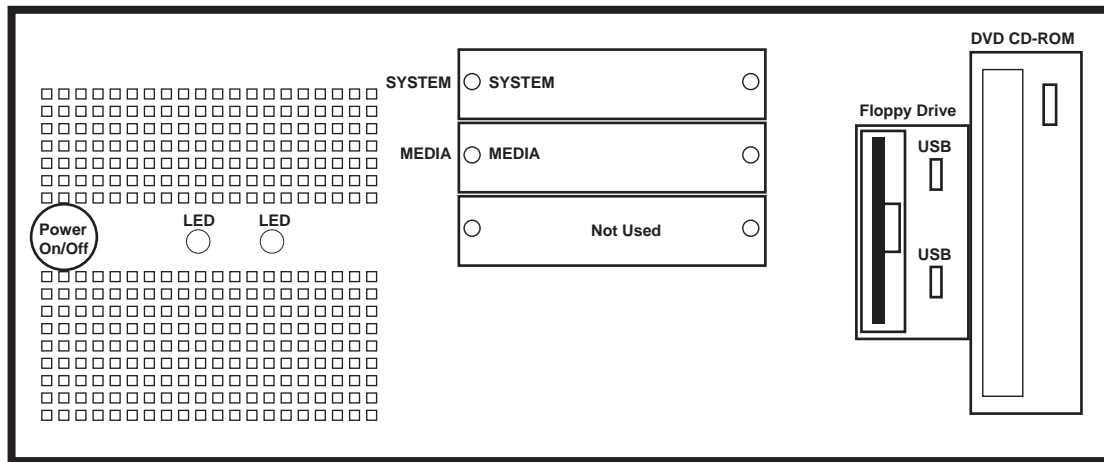


Figure 2-5: Front Panel of Deko3000 workstation (front Bezel removed)

The Deko3000 workstation contains a floppy disk drive and a DVD/CD-ROM drive. The right front panel has openings for inserting floppy disks and DVDs or CDs. To power on the machine, first turn on the Power Supply switches on the back of the unit, then press the Power On/Off button on the left side of the front panel. To power off the machine, first close all applications and shut down the Windows operating system. Press the Power On/Off switch on the front of the unit, and then turn off the Power Supply switches on the back of the unit. When the machine is powered On, the power light stays lit. A green light flashes whenever the hard drive accesses data.

Workstation Back Panel

Figure 2-6 shows the back of the Deko3000 workstation.

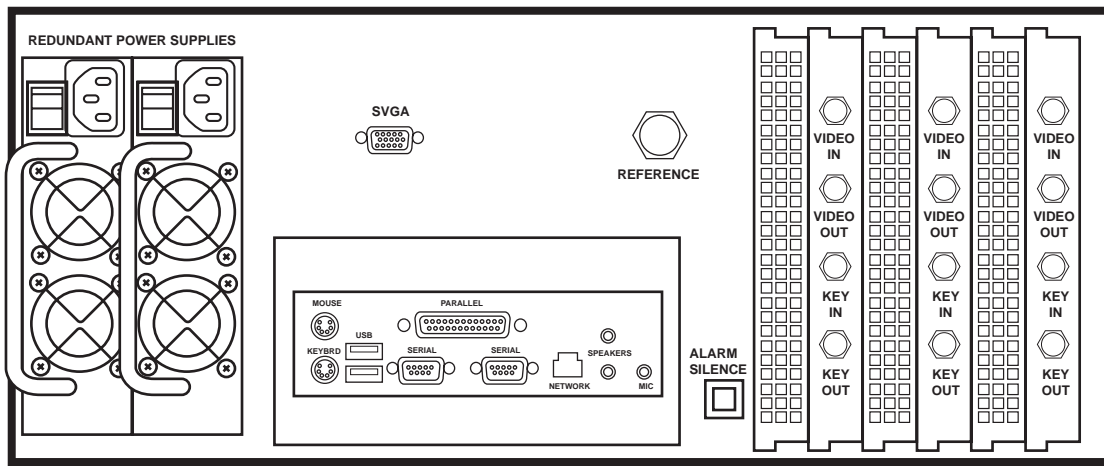


Figure 2-6: Back Panel of Deko3000 workstation

The Deko3000 workstation back panel (Figure 1-2) has a power supply on the left, and AGP and PCI card ventilation covers on the right. BNC connector plates for each TARGA 3200 board in the workstation also double as ventilation covers. The cables from the TARGA 3200 cards are fastened to the inside BNCs of the connector plates, which is labeled on the corresponding BNCs on the outside the connection plates for each connection.

The Deko3000 workstation includes a pair of redundant hot-swappable Power Supplies. In the event that one of the Power Supplies fails, the other will automatically take over to assure continued operation of the workstation. A replacement Power Supply can be installed without disrupting operation.

Important: Pinnacle Systems highly recommends that you purchase at least one spare Power Supply to use in the event of a Power Supply failure. Contact Pinnacle Systems Customer Support (refer to Appendix A) for ordering information.

Turn on the Power Supply switches before pressing the Power On/Off switch on the front panel. When the power supplies are running, the Power LED on each power supply is green. When a power supply is turned off or is not operational, the LED for that power supply is not lit. If a power supply is not operational and the Power On/Off switch on the front panel is turned On, an alarm will sound for the workstation. The workstation alarm can be turned off by pressing the Alarm Silence button. Instructions for replacing a power supply can be found in Chapter 5: System Maintenance.

The upper-middle part of the back panel contains the SVGA interface and the Genlock Reference Input, which is internally connected to the TARGA 3200 board(s).

The recessed lower-middle panel has connectors for a keyboard and mouse, one available USB port, one parallel port, two serial ports, and one LAN connector.

Important: A dongle which is necessary for the Deko3000 software program to run is installed on the parallel port. *Do not remove the dongle.*

Chapter 3: Installation And Setup

Contents

This Chapter describes how to set up the Deko3000 workstation after it has been initially received. Information on installing the hard drives, attaching peripheral devices, testing the workstation, Deko3000 hardware settings software setup, and GPI control and network connections.

This Chapter contains the following sections:

- Unpacking
- Deko3000 Workstation Initial Setup
- Deko3000 Hardware Settings Software panel
- Deko3000 GPI Input and GPI Output Connections
- Network Configuration

Unpacking

Please check to make sure that the following items have been included in the Deko3000 packages that were shipped:

-- Software CDs and DVDs

- Deko3000 Software CD
- Deko3000 Drive Image DVD
- Deko Fonts CD
- Instant CD/DVD Software CD
- Windows XP Pro CD

These CD's are critical for the proper support of the Deko3000 system. Please put them in a safe location to insure timely support in the event that system maintenance is necessary. Misplacing any of these CD's may result in a delay in servicing your Deko3000 system.

-- Documents

- Deko User's Guide
- Deko3000 Release Notes
- Deko3000 Quick Install Guide
- Product Registration Card

Please read the Release Notes for important information about your new Deko3000 System. Also, take the time to fill out the Product Registration Card and return it to Pinnacle Systems. Your filling out and sending the registration card enables Pinnacle Systems to inform you of any important updates for your Deko3000 system.

-- Hardware Components

- Main Deko3000 Chassis
- System Drive (packed in separate box)
- Media Drive (packed in separate box)
- Deko3000 Front Bezel
- Standard Mouse
- Standard Keyboard
- Two AC Power Cords (USA)
- Two AC Power Cords (International)

Note: Only two of the supplied power cords will be necessary for the Deko3000 workstation. The type used is dependent on the type of power outlet used in the facility where the Deko3000 workstation will be located.

Deko3000 Workstation Initial Setup

Before installing the Deko3000 in your rack, the system should be put together, powered up, and tested via a diagnostic test that comes pre-installed on the system. The steps for initially setting up the workstation, powering it up, and testing it are as follows:

1. **Visually inspect the hardware components listed in the “Unpacking” section on the previous page to make sure that none of them were damaged during shipment**

If you received a hardware component that was damaged, contact Pinnacle Systems Customer Support. Contact information can be found in Appendix A of this document.

2. **Insert the System hard drive and Media hard drive into their respective drive bays on the front panel of the Deko3000 workstation. Refer to Figure 3-1.**

When placing a hard drive into its respective bay, align the drive so that it will properly slide into the drive bay. Then push the drive so that it completely slides into the bay. This will connect the drive to its connectors at the back of the bay. Use a screwdriver to completely tighten the two thumbscrews. To insure that the connection stays intact, tighten the thumbscrews as much as possible with the screwdriver.

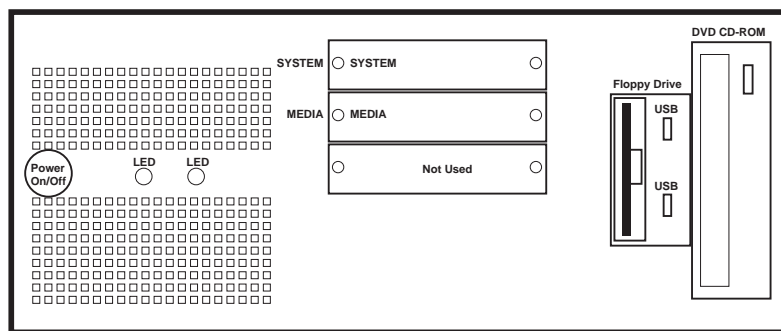


Figure 3-1: Front Panel of Deko3000 Workstation (front Bezel removed)

3. **Attach the mouse and keyboard to the back panel of the workstation.**

The mouse and keyboard connections on the workstation are shown in Figure 3-2.

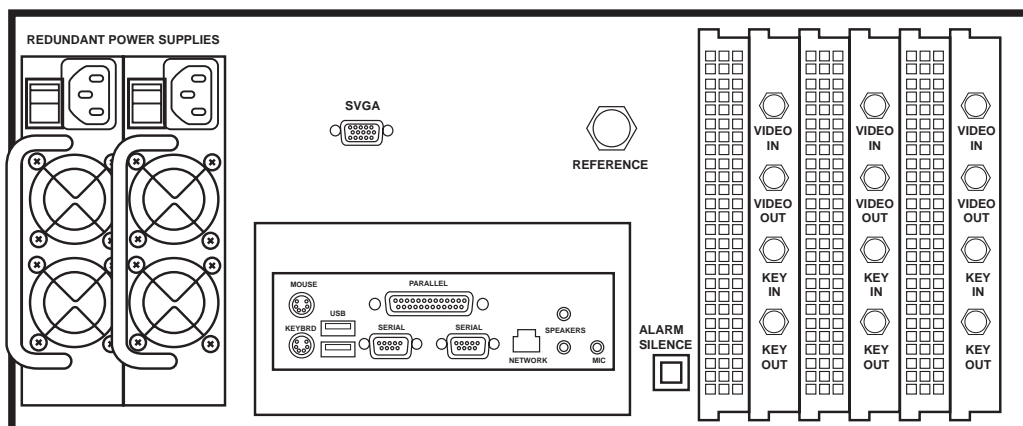


Figure 3-2: Back Panel of the Deko3000 Workstation

4. Attach the Bezel (supplied) to the front of the Deko3000 workstation.

The Bezel is the large plastic front panel cover that has the word Deko in red lettering.

5. Connect a monitor (not supplied) to the Deko3000 workstation.

The monitor attaches to the SVGA connector on the back of the Deko3000 Workstation. Refer to Figure 3-2.

6. Connect both AC Power Cords (supplied) to the Deko3000 workstation.

The AC power cords connect to both Power Supplies located at the back of the workstation. Refer to Figure 3-2. Use the power cords appropriate for the electrical voltage range used by the electrical outlet.

7. Turn on the monitor, and then power up the Deko3000 workstation.

The workstation is power up by first pushing the Power Supply switches where the AC Power Cords are connected to “On.” Then push the On/Off button located on the front panel of the workstation to power up the workstation. When the operating system boots up, the Deko3000 background is displayed on the monitor.

8. Run the automatic mode of the Inflexion I/O Diagnostic Utility to insure that the TARGA card(s) are functioning on the workstation.

For each TARGA card to be tested, the SDI channels for that card must be set to loop back. This is done by taking two BNC cables (75 ohm) and connecting the Input/Output of each channel as shown in Figure 3-3. The TARGA card BNC connectors are located on the back panel of the workstation. The cable connection on the card for the test should be: Video Out to Video In, and Key Out to Key In. Refer to Figure 3-3.



Figure 3-3: Loop Back Connections on each channel

Use the following path to the Inflexion Diagnostic software program within Windows:
Start menu >> Programs >> Deko3000 >> Diagnostic Tools
Then click the program “Inflexion I-O Diagnostic” to open it. Refer to Figure 3-4.

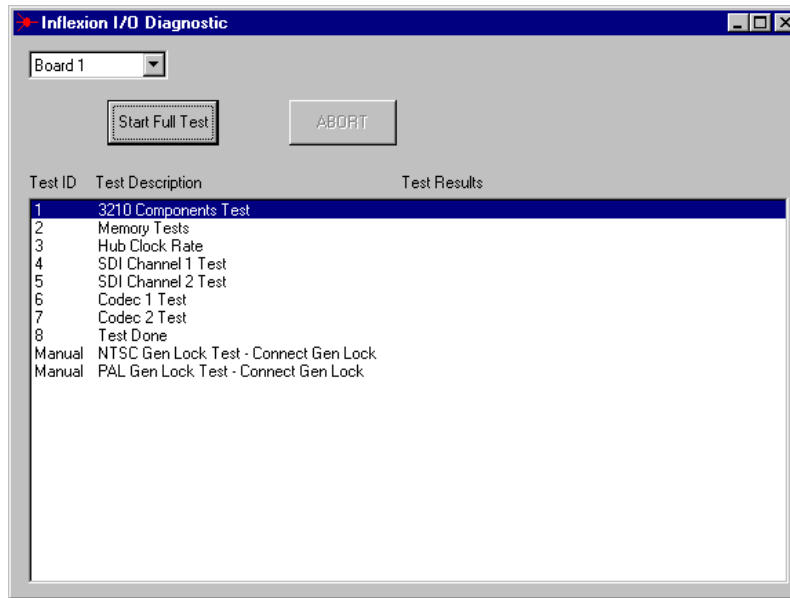


Figure 3-4: Inflexion Diagnostic Utility

Use the pull-down selection box on the upper right-hand side of the Inflexion I/O Diagnostic window to select the channel to be tested. If you are facing the back panel of the workstation and looking at the BNCs, then TARGA Board 1 would be the row of BNC's on the far left. Then click the "Start Full Test" button on the Inflexion I/O Diagnostic window to run the automatic mode of the test. If nothing fails on the test, the channel tested is fine.

A more detailed explanation of the Inflexion Diagnostic Utility program can be found in "Chapter 4: Troubleshooting" of this manual.

9. If the workstation is to be rack mounted or moved to another location, disconnect all of the components and rack mount the workstation chassis.

The Deko3000 workstation chassis is designed so that industry standard rails can be connected to it for rack mounting purposes. The workstation will fit on 19-inch standard instrument racks.

10. Make any other connections to the workstation that are necessary for the working environment.

Other connections would include Genlock Reference, Video Input/Output BNCs, network cable, printer cable, etc.

Note: The Audio connections (Speakers, Mic) on the back of the Deko3000 chassis (refer to Figure 3-2) are disabled at the factory and should not be used.

Deko3000 Hardware Settings Panel

The Hardware Settings panel in Deko3000 provides a list of parameters that can be configured to customize the integration into your facility. To access the Hardware Settings dialog box, run the Deko3000 software application and select Options >> Hardware Settings within the Deko application. The window shown in Figure 3-5 will be displayed.

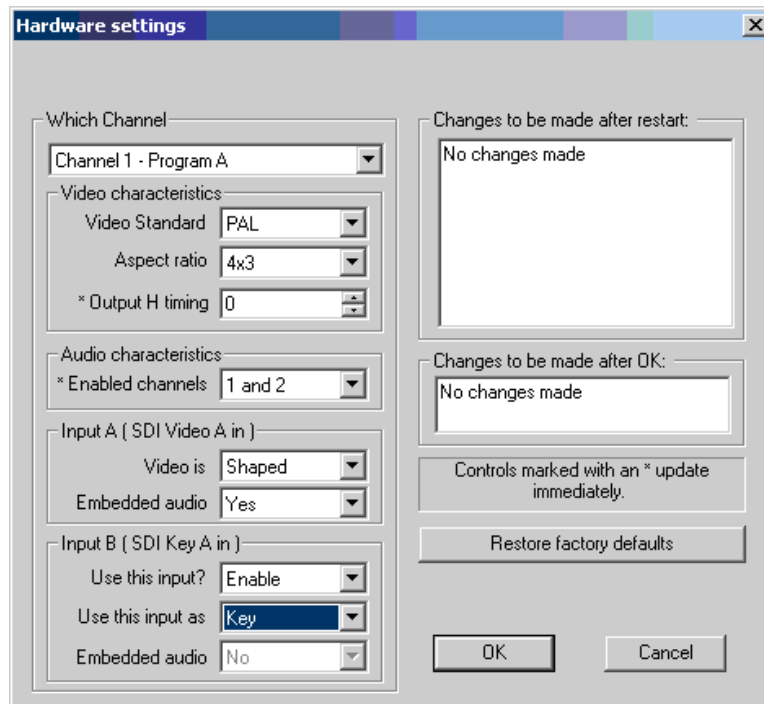


Figure 3-5: Deko3000 Hardware Settings Panel

Channel Selection -- The Deko3000 can be configured in either a single, dual or triple channel configuration. Depending on how your system is configured, you will have the option of configuring each of these channels through the “Which Channel” drop down menu.

Video Standard -- Deko3000 can be configured to run in either NTSC or PAL video standards. Select the format from the “Video Standard” drop down menu.

Aspect Ratio -- Deko3000 can be configured to run in either 4x3 or 16:9 aspect ratios. This will control how the Deko application is laid out and how graphics are created. Select the format from the “Aspect Ratio” drop down menu.

Output H Timing -- The horizontal output timing of each Deko3000 channel can be adjusted in half pixel increments relative to the analog reference input (House Reference). The range of available adjustment is between -300 usec and 300 usec.

Audio Channel Selection -- Deko3000 supports up to 8 channels of embedded audio for each Video and Key. These audio channels can be used for live pass-through, clip record, clip playback or sound effects insertion (refer to the Deko User’s Guide for details on these features). The “Audio Characteristics” drop down menu allows you to control which embedded audio channels are used.

Input A (SDI Video A in) -- The parameters in this section provide configuration controls for the Video input on each channel.

- “Shaped” Parameter: When used with a corresponding live key input, this parameter sets whether the Video signal is shaped or unshaped. Note: if this parameter is not set properly, improper keying through the Deko system may result.
- “Embedded Audio” Parameter. This parameter will control whether embedded audio is to be used on the Video input channel. If “Yes” is selected, the audio channels selected in the “Audio Characteristics” menu will be used.

Input B (SDI Key A in) -- The parameters in this section provide configuration controls for the Key input on each channel.

- “Use this Input”: The Key input on each channel must be disabled if it is not used or if there is no valid signal attached to the physical connector. Note: improper operation will result if this parameter is enabled without a valid input attached.
- “Use this Input as Key”: When used with the DekoObjex feature, the Key input can be used as a second Video input for each channel.
- “Embedded Audio” Parameter. This parameter will control whether embedded audio is to be used on the Key (or second) input channel. If “Yes” is selected, the audio channels selected in the “Audio Characteristics” menu will be used.

The Deko application must be closed and reopened for most of the parameters changes to take effect. Controls marked with a * will take affect automatically without requiring a restart. The status windows on the right hand side of the window will provide an overview of any changes that were made.

Deko3000 Automation Control Connections

GPI's (General Purpose Interface) can be used to interface Deko3000 with peripheral devices that are capable of sending and receiving GPI pulses. A GPI Input can be selected from the Deko Sequencer to trigger through a graphics sequence manually. A GPI Output can be set from a Deko macro command to trigger an external device. For details on how to use GPIs within the Deko application, refer to the "Deko User's Guide" provided with your system.

The RS-232 port on the back of your Deko3000 system can be repurposed to provide a single GPI input and output. The diagram below shows the pin connections on the RS-232 port that are used as GPI's.

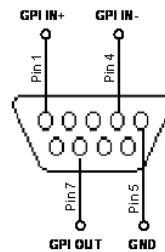


Figure 3-6: Deko3000 RS-232 Port Pinout

GPI Input

Pins 1 and 4 of the RS-232 connector can be used to detect a GPI from a standard contact closure (such as a GPI output from a switcher). Alternatively, a short pulse (minimum 10 milliseconds) on pin 1 will also trigger the GPI input on the Deko application.

GPI Output

Pin 7 on the RS-232 connector will pulse high (for approximately 100 milliseconds) when a GPI output command is issued from the Deko application. This can be used to trigger an external device that is expecting a pulse to trigger an event from the Deko.

For an external device that will not trigger from a short pulse, but requires a contact closure, the custom circuit illustrated in Figure 3- can be used. This circuit will convert the pulse on Pin 7 into a contact closure to properly trigger devices that expect a more traditional GPI (e.g., Pinnacle's Thunder Clip Server).

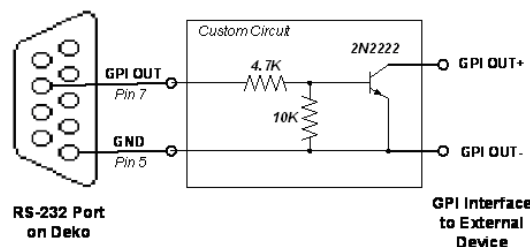


Figure 3-7: Custom Circuit for GPI Output

Note: If you require more RS-232 ports than are available on your Deko chassis, an external USB to RS-232 converter can be used. Refer to the "Using External Peripheral Devices with Pinnacle's Deko Products" Application Note for details on specific models. This and other Application Notes and White Papers can be found on Pinnacle's website at www.pinnaclesys.com

Network Configuration

Contact the IT System Administrator at the facility where the Deko3000 workstation is to be installed to obtain detailed information about how to configure your system for the Network.

The following guidelines are outlined for the IT department to use to protect your Deko3000 system from virus infection. While it is understood that all of these guidelines may not be practical, following them will provide the best level of protection against system infection.

1. NEVER share a folder or drive to “Everyone” with full-access.
2. ALWAYS assign a local Administrator password on every machine. Not assigning a local Administrator password can introduce a serious security risk.
3. Do not store files with a .exe extension in directories with write permissions.
4. If possible, keep all Pinnacle Live Production equipment on a separate network that is isolated from other machines in the facility.
5. Disallow Internet access on any Pinnacle Live Production machines that do not require it.
6. Do not install anti-virus software on any of the Pinnacle supplied hardware components that are used on-air.
7. Install and run anti-virus software on all PC components that are not used for on-air play out. This includes Pinnacle products such as DekoCast Authoring Station, PostDeko, DekoMOS Clients, Lightning Browse, and Thunder Browse.

Note: Please refer to the “Virus Protection Recommendations for Pinnacle Systems Live Production Products” white paper for additional guidelines on how to protect your Deko system from virus infection. This and other White Paper and Application Notes can be found on Pinnacle’s website at www.pinnaclesys.com

Chapter 4: Troubleshooting

Contents

This Chapter describes how to use software utilities provided with each Deko3000 Workstation system software as a means to quickly and easily troubleshoot the workstation. Troubleshooting tips are also provided. Performing these procedures will help streamline the process of getting your Deko3000 Workstation up and running again.

This Chapter contains the following sections:

- Inflexion I/O Diagnostic Utility
- Deko Manifest Utility

Inflexion I/O Diagnostic Utility

The Inflexion Input/Output (I/O) Diagnostic software test utility provides a range of tests if you, or Pinnacle Systems Customer Support, suspect that there is a problem with the TARGA 3200 card(s) in a Deko3000 Workstation. The procedures described for performing the Inflexion I/O Diagnostic should be performed before contacting Customer Support. If a TARGA card is the problem, downtime is kept to a minimum since the problem is quickly identified.

Problems that may lead one to run the Inflexion I/O Diagnostic Utility are as follows:

- No picture being output from the workstation
- Video looks bad or rolls continuously (no genlock)
- Effects of clips stutter
- Video capture and playback not working
- Audio is scrambled

Modes Of Operation

The Inflexion I/O Diagnostic test can be used in two different modes: automatic or manual. The automatic testing runs a list of tests until either an error is detected, or until all the tests are successfully completed. In most instances, the automatic test mode is used. Manual testing allows you to select a test individually from the list of tests and run it. You can run each test individually by manual selection if directed to do so by Pinnacle Systems Customer Support.

Setup Before Testing

The setup procedures given below for automatic and manual test modes should be performed before running the Inflexion I/O Diagnostic test.

Setup for automatic test mode:

For each TARGA card to be tested, the SDI channels must be set for loop back. This is done by taking two BNC cables (75 ohm) and connecting a TARGA card that is to be tested to itself. The cable connection on the card should be: Video Out to Video In, and Key Out to Key In. Refer to Figure 4-1.



Figure 4-1: Loop Back Connections on a TARGA Card

Setup for manual test mode:

If the NTSC Genlock or PAL Genlock test is to be done, then an input black burst signal must be connected to the REF input connector on the back of the Deko3000 chassis. An input NTSC signal source must be used for the NTSC Genlock test. An input PAL signal source must be used for the PAL Genlock test.

If manual testing of the SDI channels is to be done, the SDI channel to be tested must be set for loop back. Refer to “Setup for automatic test mode” above and Figure 4-1. Channel 1 is Video Out (Out A) to Video In (In A). Channel 2 is Key Out (Out B) to Key In (In B).

Automatic Test Procedure

The following steps should be performed for automatic testing of TARGA card(s) within a Deko3000 Workstation by way of the Inflexion I/O Diagnostic Utility test:

1. Turn on the Deko3000 Workstation.

Only the Windows OS should be running. If any other programs are running on the workstation, then you should exit out of those programs.

Important: If your workstation is corrupted to the point where it will not boot up when turned on, contact Pinnacle Systems Technical Support. Contact information can be found in Appendix A.

2. Start the Inflexion I/O Diagnostic software program.

Use the following path to the Inflexion Diagnostic software program:

Start >> Programs >> Deko3000 >> Diagnostic Tools

Then click the program “Inflexion I-O Diagnostic” to open it. A Window similar to that shown in Figure 4-2 should be displayed.

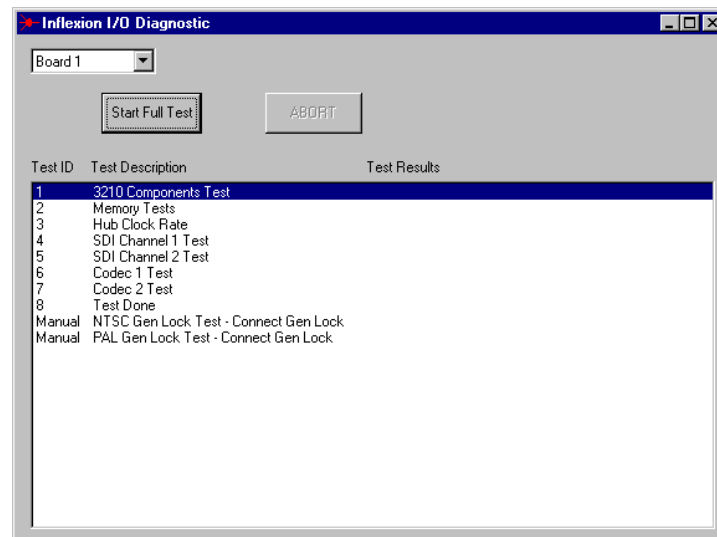


Figure 4-2: Initial start up screen of Inflexion I/O Diagnostic Test

Important: If the dialog shown in Figure 4-3 is displayed, then either the Deko3000 program is also running, or some other program is running that interferes with the Inflexion I/O Diagnostic.

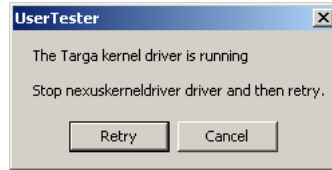


Figure 4-3: TARGA kernel driver interference dialog

Quit all other programs and restart the workstation. Repeat Step 2 so that only the Inflexion I/O Diagnostic program is running.

3. Select the channel that is to be tested.

Some workstations have more than one channel. There is a pull-down selection box on the upper right-hand side of the Inflexion I/O Diagnostic window. The default selection in the pull down is Board 1 (i.e., first channel). Refer to Figure 4-2. If more than one channel is in the workstation, click and hold the pull down and then select the board (i.e., channel) that is to be tested. The selection and identification of board is as follows:

For workstations configured with 1 or 2 channels

- Board 1 -- This would be the first (or only) TARGA. This TARGA card is essentially the first channel. If you are facing the back panel of the workstation and looking into the TARGA card bay area, then Board 1 would be the TARGA card on the far left. If the workstation top is lifted off, a TARGA card would be seated right next to the Serial ATA card. (Refer to Figure 5-1 within the “Replacing Workstation Components” section of Chapter 5 for TARGA card locations.)
- Board 2 -- This would be the second TARGA card in workstations with more than one TARGA card installed. This TARGA card is essentially the second channel. If you are facing the back panel of the workstation and looking into the TARGA card bay area, then Board 2 would be the second TARGA card from the left. (Refer to Figure 5-1 within the “Replacing Workstation Components” section of Chapter 5 for TARGA card locations.)
- Board 3 -- This would be the third TARGA card in workstations with more than one TARGA card installed. This TARGA card is essentially the third channel. If you are facing the back panel of the workstation and looking into the TARGA card bay area, then Board 3 would be the third TARGA card from the left. (Refer to Figure 5-1 within the “Replacing Workstation Components” section of Chapter 5 for TARGA card locations.)
- Board 4 -- The board 4 pull down selection is not used with the Deko3000 Workstation.

Important: Loop back must be set up on the TARGA card channel to be tested. Refer to the “Setup Before Testing” section above for automatic testing procedures.

For workstations configured with 3 channels

- Board 1 -- This would be the first (or only) TARGA. This TARGA card is essentially the first channel. If you are facing the back panel of the workstation and looking into the TARGA card bay area, then Board 1 would be the TARGA card on the far left. If the workstation top is lifted off, a TARGA card would be seated right next to the Serial ATA card. (Refer to Figure 5-1 within the “Replacing Workstation Components” section of Chapter 5 for TARGA card locations.)

- Board 2 -- This would be the third TARGA card in workstations with more than one TARGA card installed. This TARGA card is essentially the second channel. If you are facing the back panel of the workstation and looking into the TARGA card bay area, then Board 2 would be the third TARGA card from the left. (Refer to Figure 5-1 within the “Replacing Workstation Components” section of Chapter 5 for TARGA card locations.)
- Board 3 -- This would be the second TARGA card in workstations with more than one TARGA card installed. This TARGA card is essentially the third channel. If you are facing the back panel of the workstation and looking into the TARGA card bay area, then Board 3 would be the second TARGA card from the left. (Refer to Figure 5-1 within the “Replacing Workstation Components” section of Chapter 5 for TARGA card locations.)
- Board 4 -- The board 4 pull down selection is not used with the Deko3000 Workstation.

Important: Loop back must be set up on the TARGA card channel to be tested. Refer to the “Setup Before Testing” section above for automatic testing procedures.

4. Click the “Start Full Test” button on the Inflexion I/O Diagnostic window.

Brief descriptions of the tests are as follows:

- 3210 Components Test -- This test checks that the various components on the TARGA card are functioning in a normal manner.
- Memory Tests -- This test performs extensive memory testing on the TARGA card.
- Hub Clock Rate -- This is a test to check that the TARGA’s “clock” locks to the oscillator.
- SDI Channel Tests -- This test loops a signal out of the SDI portion of a channel and checks that the signal comes back into the card exactly the same.

Important: Loop back must be set up on the TARGA card to be tested. Refer to the “Setup Before Testing” section above.

- Codec Tests -- This test checks the encoding and decoding ability of a Codec by putting a fixed image through the Codec.

When the “Start Full Test” button is clicked, the automatic testing sequence for the channel (i.e., board) selected in the pull down will begin. The automatic test takes about 3 minutes to complete. An example of automatic testing in progress is shown in Figure 4-4.

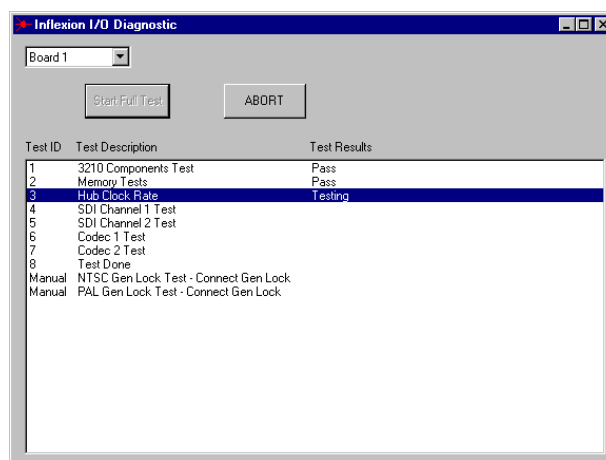


Figure 4-4: Inflexion I/O Diagnostic automatic test in progress

If all automatic tests pass:

If automatic testing completes successfully, a dialog stating that the tests are done and all test passed will be displayed. Click the “OK” button within the dialog. Refer to Figure 5-5.

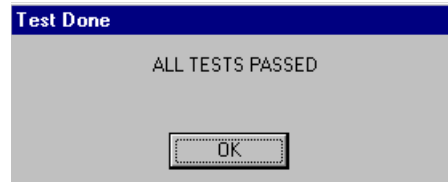


Figure 4-5: Dialog shown when all automatic tests pass

If there is more than one TARGA card in your workstation, repeat Steps 1-4 above for each TARGA card.

If an automatic test fails:

The automatic testing sequence will stop at the point that a test fails, and the dialog shown in Figure 4-6 will be displayed.

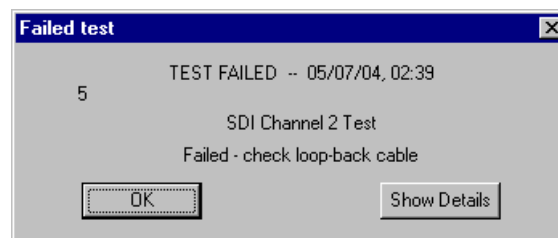


Figure 4-6: Dialog shown when an automatic test fails

Details about a test that fails can be viewed by clicking the “Show Details” button on the Failed Test dialog. If it was one of the SDI Channel tests that failed, check that the loop through cables are connected properly to the TARGA card being tested. (Refer to the “Setup Before Testing” section above for automatic testing setup procedures.)

Perform the following steps if a test fails:

- 1. After viewing the details, click “OK” on the dialog and repeat the automatic test.**

Make sure that the TARGA card is properly seated, and loop through cables are secure and properly connected before repeating the automatic test sequence.

Important: Power down the workstation before removing the cover to make sure that the TARGA card is properly seated in its PCI slot.

- 2. If the test fails again, click “OK” on the Failed Test dialog and save results.**

Results can be saved by right clicking on the blue title bar or red icon (upper left-hand corner) of the Inflexion I/O Diagnostic window and selecting “Save Results.” Refer to Figure 4-7.

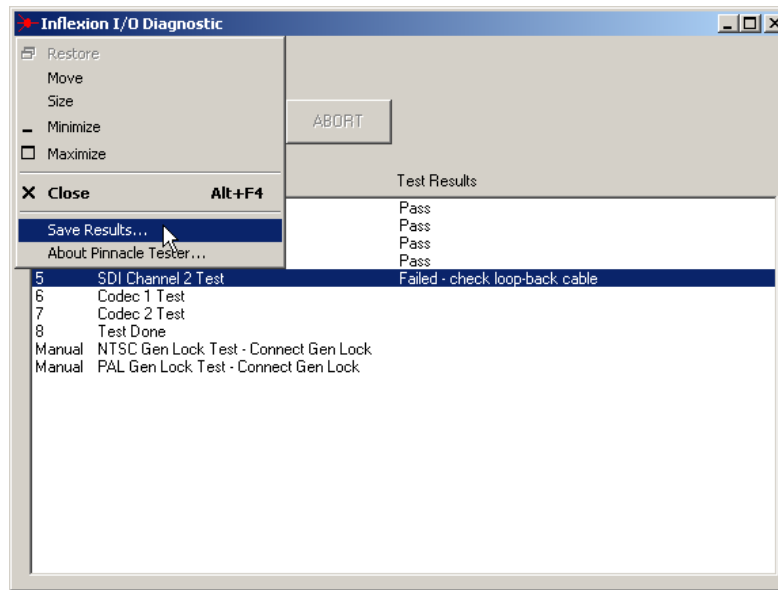


Figure 4-7: Selecting “Save Results” for Inflexion I/O Diagnostic window

When saved results is selected, the window shown in Figure 4-8 will be displayed.

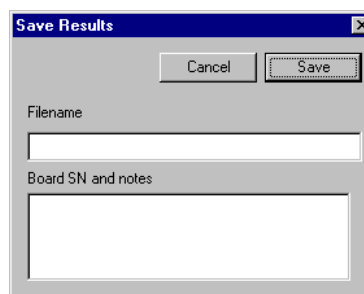


Figure 4-8: Save Results Window

3. Type a Filename in the Filename area and a brief description of the problem.

When typing a filename for the Save Results file, make sure to use an extension such as .txt (an example would be: testfailed.txt as a filename). If you know the TARGA card's serial number, include when typing a brief description of the problem.

Important: When typing a brief description of the problem do not use the <Enter> key on your keyboard. The <Enter> key will cause the Save Results window to unexpectedly close.

4. Click the “Save” button.

The Save Results file will be saved in the same folder where the Inflexion I-O Diagnostic test is located on the TARGA 3000 Workstation. Pinnacle Systems Technical Support may request that you send this file to them. An example of a saved Test Results file is shown in Figure 4-9.

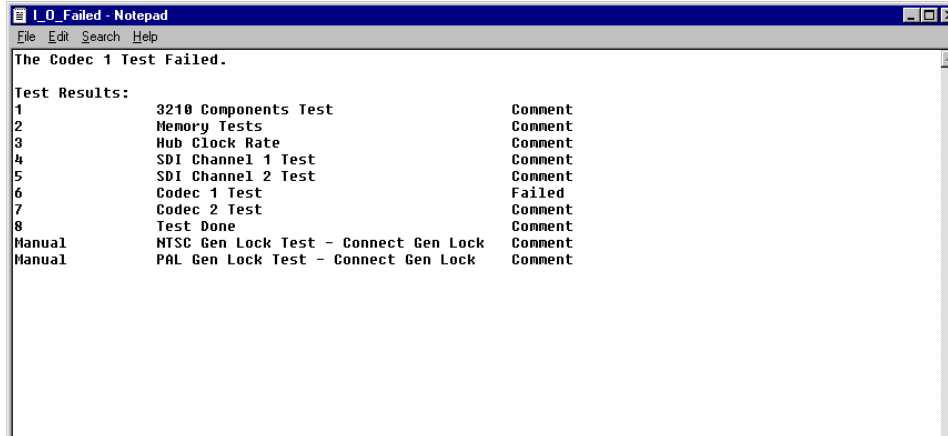


Figure 4-9: Example of a saved Test Results file

5. Contact Pinnacle Systems Technical Support.

Pinnacle Systems Technical Support will provide you instructions on the procedure to obtain a replacement TARGA card. Contact information can be found in “Appendix A: Pinnacle Systems Technical Support.”

Manual Test Procedure

The following steps should be performed for manual testing of TARGA card(s) within a Deko3000 Workstation by way of the Inflexion I/O Diagnostic Utility test:

1. Turn on the Deko3000 Workstation.

Only the Windows OS should be running. If any other programs are running on the workstation, then you should exit out of those programs.

Important: If your workstation is corrupted to the point where it will not boot up when turned on, contact Pinnacle Systems Technical Support. Contact information can be found in Appendix A.

2. Start the Inflexion I/O Diagnostic software program.

Use the following path to the Inflexion Diagnostic software program:

Start >> Programs >> Deko3000 >> Diagnostic Tools

Then click the program “Inflexion I-O Diagnostic” to open it. A window similar to that shown in Figure 4-10 should be displayed.

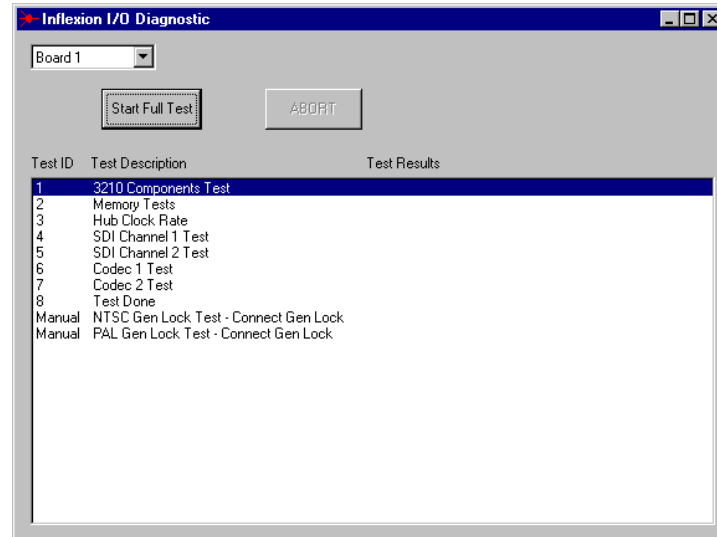


Figure 4-10: Initial start up screen of Inflexion I/O Diagnostic Test

Important: If the dialog shown in Figure 4-11 is displayed, then either the Deko3000 program is also running, or some other program is running that interferes with the Inflexion I/O Diagnostic.

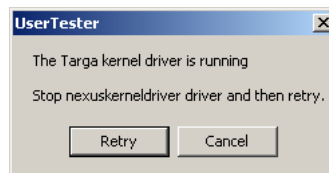


Figure 4-11: TARGA kernel driver interference dialog

Quit all other programs and restart the workstation. Repeat Step 2 so that only the Inflexion I/O Diagnostic program is running.

3. Select the channel that is to be tested.

Some workstations have more than one channel. There is a pull-down selection box on the upper right-hand side of the Inflexion I/O Diagnostic window. The default selection in the pull down is Board 1 (i.e., first channel). Refer to Figure 4-10. If more than one channel is in the workstation, click and hold the pull down and then select the board (i.e., channel) that is to be tested. The selection and identification of board is as follows:

For workstations configured with 1 or 2 channels

- Board 1 -- This would be the first (or only) TARGA. This TARGA card is essentially the first channel. If you are facing the back panel of the workstation and looking into the TARGA card bay area, then Board 1 would be the TARGA card on the far left. If the workstation top is lifted off, a TARGA card would be seated right next to the Serial ATA card. (Refer to Figure 5-1 within the “Replacing Workstation Components” section of Chapter 5 for TARGA card locations.)
- Board 2 -- This would be the second TARGA card in workstations with more than one TARGA card installed. This TARGA card is essentially the second channel. If you are facing the back

panel of the workstation and looking into the TARGA card bay area, then Board 2 would be the second TARGA card from the left. (Refer to Figure 5-1 within the “Replacing Workstation Components” section of Chapter 5 for TARGA card locations.)

- Board 3 -- This would be the third TARGA card in workstations with more than one TARGA card installed. This TARGA card is essentially the third channel. If you are facing the back panel of the workstation and looking into the TARGA card bay area, then Board 3 would be the third TARGA card from the left. (Refer to Figure 5-1 within the “Replacing Workstation Components” section of Chapter 5 for TARGA card locations.)
- Board 4 -- The board 4 pull down selection is not used with the Deko3000 Workstation.

For workstations configured with 3 channels

- Board 1 -- This would be the first (or only) TARGA. This TARGA card is essentially the first channel. If you are facing the back panel of the workstation and looking into the TARGA card bay area, then Board 1 would be the TARGA card on the far left. If the workstation top is lifted off, a TARGA card would be seated right next to the Serial ATA card. (Refer to Figure 5-1 within the “Replacing Workstation Components” section of Chapter 5 for TARGA card locations.)
- Board 2 -- This would be the third TARGA card in workstations with more than one TARGA card installed. This TARGA card is essentially the second channel. If you are facing the back panel of the workstation and looking into the TARGA card bay area, then Board 2 would be the third TARGA card from the left. (Refer to Figure 5-1 within the “Replacing Workstation Components” section of Chapter 5 for TARGA card locations.)
- Board 3 -- This would be the second TARGA card in workstations with more than one TARGA card installed. This TARGA card is essentially the third channel. If you are facing the back panel of the workstation and looking into the TARGA card bay area, then Board 3 would be the second TARGA card from the left. (Refer to Figure 5-1 within the “Replacing Workstation Components” section of Chapter 5 for TARGA card locations.)
- Board 4 -- The board 4 pull down selection is not used with the Deko3000 Workstation.

4. Double click the test name that is to be run.

A single test can be performed by left-double clicking the name of the test. An example of the manual testing window is shown in Figure 4-12.

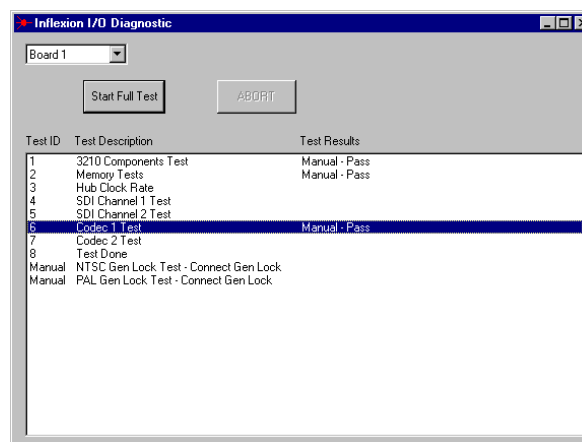


Figure 4-12: Inflexion I/O Diagnostic manual testing window

Brief descriptions of the tests are as follows:

- 3210 Components Test -- This test checks that the various components on the TARGA card are functioning in a normal manner.
- Memory Tests -- This test performs extensive memory testing on the TARGA card.
- Hub Clock Rate -- This is a test to check that the TARGA's "clock" locks to the oscillator.
- SDI Channel Tests -- This test loops a signal out of the SDI portion of a channel and checks that the signal comes back into the card exactly the same.

Important: Loop back must be set up on the TARGA card to be tested. Refer to the "Setup Before Testing" section above.

- Codec Tests -- This test checks the encoding and decoding ability of a Codec by putting a fixed image through the Codec.
- Genlock Tests -- The NTSC and the PAL genlock tests both use a black burst or composite signal as input source to Reference (REF) on the TARGA card. Either test locks the TARGA's output to the reference, and then tests to check if it is really locked to the reference output. The test then checks that unlocking can occur.

Important: An input black burst or composite input signal must be connected to the REF 1 connector on the back panel of the workstation if a genlock test is to be done. The input signal format (i.e., NTSC or PAL) must match the format listed in the test name description.

If manual tests pass:

When a manual test is done, a Pass/Fail message will be displayed in a column to the right of the test name. Refer to Figure 4-12. If the manual test(s) you needed to run passes, and there is more than one TARGA card in the workstation, repeat Steps 1-4 above for each TARGA card.

If a manual tests fails:

When a manual test is done, a Pass/Fail message will be displayed in a column to the right of the test name. Details about a test that fails can be viewed by clicking on the test name with a single left mouse click which will highlight the test name and test result. Once highlighted, right double click on the highlighted name for a dialog detailing the failure. If it was one of the SDI Channel tests that failed, check that the loop through cables are connected properly to the TARGA card being tested. If a genlock tests failed, check the signal input on the Reference. (Refer to the "Setup Before Testing" section above for manual testing setup procedures.)

Perform the following steps if a test fails

1. Repeat the manual test.

Make sure that the TARGA card is properly seated, and loop through cables are secure and properly connected before repeating the manual test.

Important: Power down the workstation before removing the cover to make sure that the TARGA card is properly seated in its PCI slot.

2. If the test fails again, save the results.

Results can be saved by right clicking on the blue title bar or red icon (upper left-hand corner) of the Inflexion I/O Diagnostic window and selecting “Save Results.” Refer to Figure 4-13.

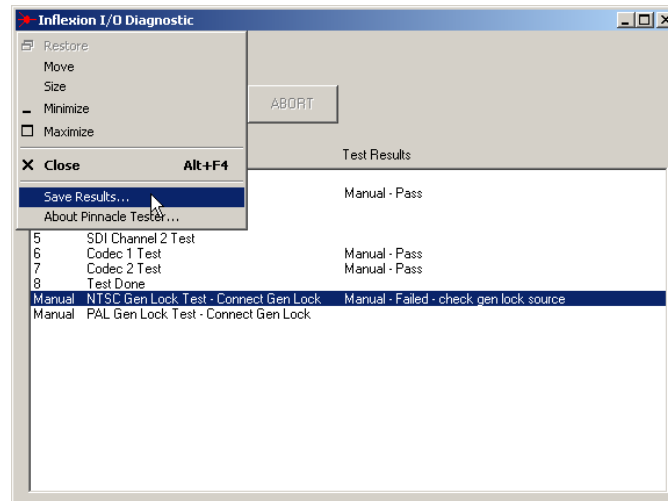


Figure 4-13: Selecting “Save Results” for a manual test failure

When saved results is selected, the window shown in Figure 4-14 will be displayed.

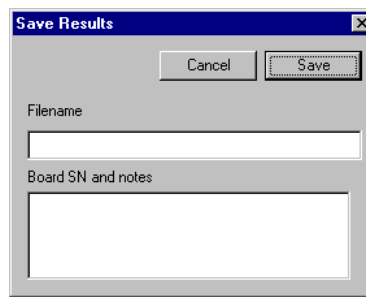


Figure 4-14: Save Results Window

3. Type a Filename in the Filename area and a brief description of the problem.

When typing a filename for the Save Results file, make sure to use an extension such as .txt (an example would be: testfailed.txt as a filename). If you know the TARGA card's serial number, include when typing a brief description of the problem.

Important: When typing a brief description of the problem do not use the <Enter> key on your keyboard. The <Enter> key will cause the Save Results window to unexpectedly close.

4. Click the “Save” button.

The Save Results file will be saved in the same folder where the Inflexion I-O Diagnostic test is located on the TARGA 3000 Workstation. Pinnacle Systems Technical Support may request that you send this file to them. An example of a saved Test Results file is shown in Figure 4-15.

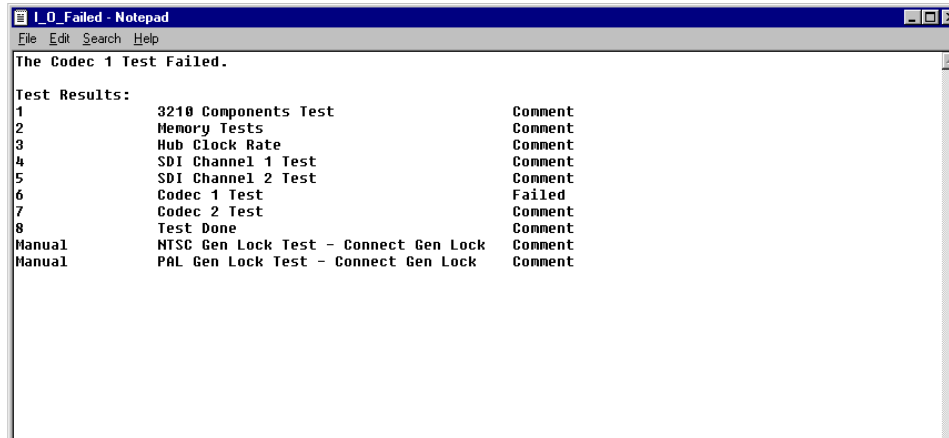


Figure 4-15: Example of a saved Test Results file

5. Contact Pinnacle Systems Technical Support.

Pinnacle Systems Technical Support will provide you instructions on the procedure to obtain a replacement TARGA card. Contact information can be found in “Appendix A: Pinnacle Systems Technical Support.”

Deko Manifest Utility

The Deko Manifest test provides a view of the of software components within the Deko workstation. This test compares the registered software components with the official record of a software release and looks for mismatches. This is useful in identifying workstation software components that may have become corrupt, or software that may be incompatible with Deko3000 software. This test is also useful in identifying configuration problems that may have occurred in a Deko workstation.

Important: *This is a test that should only be used with Pinnacle Systems Customer Support supervision.* Customer Support personnel will be able to properly analyze the results of this test, and then determine the steps necessary to solve the problem being experienced with the workstation.

Deko Manifest Test Procedure

The following steps should be followed to performed the Deko Manifest Utility test:

1. Turn on the Deko3000 Workstation.

Only the Windows OS should be running. If any other programs are running on the workstation, then you should exit out of those programs.

Important: If your workstation is corrupted to the point where it will not boot up when turned on, contact Pinnacle Systems Technical Support. Contact information can be found in Appendix A.

2. Start the Deko Manifest Utility software program.

Use the following path to the Deko Manifest software program:

Start >> Programs >> Deko3000 >> Diagnostic Tools

Then click the program “DekoManifestUtility” to open it. A Window similar to that shown in Figure 4-16 should be displayed.

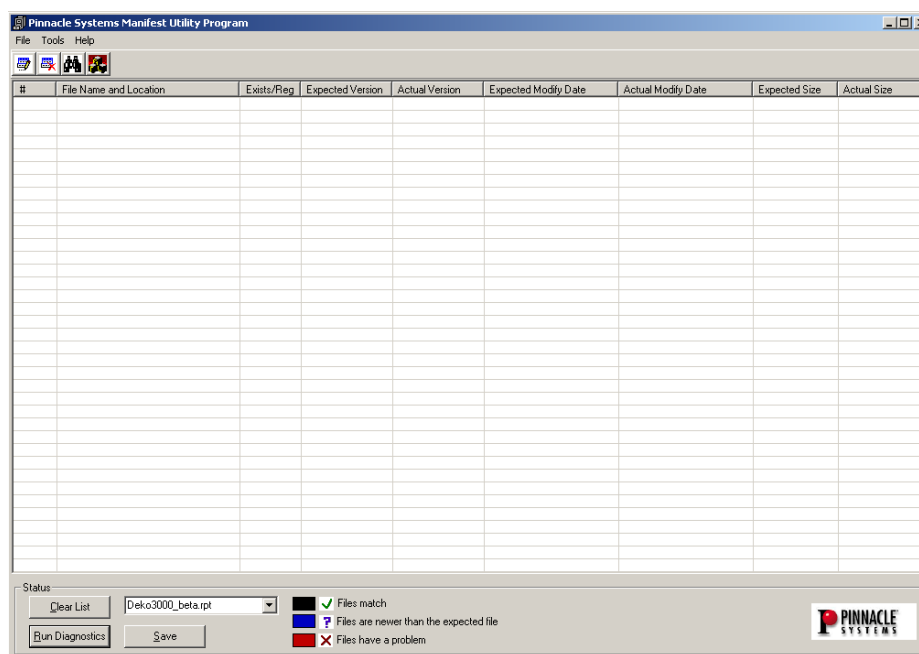


Figure 4-16: Initial start-up screen of Manifest Utility Test

3. Select the set of software components that are to be tested.

From the pull down on the bottom part of the Manifest Utility start-up screen, select the set of software components that are to be selected. Refer to Figure 4-17. The choices are “Deko3000” and “Inflexion_Manifest.”

- Deko3000 -- This choice will compare the Deko3000 software programs on the workstation being tested to the official record of the Pinnacle Systems release for the Deko3000 software.
- Inflexion_Manifest -- This choice will compare the Inflexion software programs on the workstation being tested to the official record of the Pinnacle Systems release for the Inflexion software.

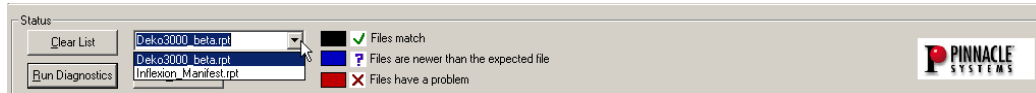


Figure 4-17: Software components selection for Manifest Utility test

4. Click the “Run Diagnostics” button on the Manifest Utility program window.

Clicking the “Run Diagnostics” button will cause the comparison test for the selected workstation components to be made. For the Deko3000 components, a window similar to that shown in Figure 4-18 will be displayed.

#	File Name and Location	Exists/Reg	Expected Version	Actual Version	Expected Modify Date	Actual Modify Date	Expected Size	Actual Size
ClipDLLs								
1	C:\WINDOWS\system32\bwv75com...	Yes/Yes	1.0.0.1	1.0.0.1	11/12/01 05:44:24 PM	11/12/2001 5:44:24 PM	90112	90112
2	C:\WINDOWS\system32\vdomicom.dll	Yes/Yes	1.0.0.1	1.0.0.1	02/16/99 09:53:02 PM	2/16/1999 9:53:02 PM	104960	104960
3	C:\WINDOWS\system32\vdouthcom.dll	Yes/Yes	2.4.0.1	2.4.0.1	03/04/03 03:41:36 PM	3/4/2003 3:41:36 PM	98304	98304
4	C:\WINDOWS\system32\vdodecom.dll	Yes/Yes	1.0.0.1	1.0.0.1	11/12/01 05:44:28 PM	11/12/2001 5:44:28 PM	106496	106496
5	C:\WINDOWS\system32\vdieracom.dll	Yes/Yes	1.0.0.1	1.0.0.1	02/16/99 09:53:02 PM	2/16/1999 9:53:02 PM	104448	104448
6	C:\WINDOWS\system32\vdhundnet.dll	Yes/Yes	5.4.0.6	5.4.0.6	09/10/03 01:14:44 PM	9/10/2003 1:14:44 PM	118784	118784
7	C:\WINDOWS\system32\vdpcrom.dll	Yes/Yes	1.0.0.1	1.0.0.1	02/16/99 09:53:02 PM	2/16/1999 9:53:02 PM	129024	129024
LeadTools								
8	C:\Deko3000\awdc32.dll	Yes/NA	4.0.0.950	4.0.0.950	06/26/02 01:17:36 PM	6/26/2002 1:17:36 PM	24576	24576
9	C:\Deko3000\awdxc32.dll	Yes/NA	4.0.0.950	4.0.0.950	06/26/02 01:17:36 PM	6/26/2002 1:17:36 PM	6144	6144
10	C:\Deko3000\awdenc32.dll	Yes/NA	4.0.0.951	4.0.0.951	06/26/02 01:17:36 PM	6/26/2002 1:17:36 PM	11776	11776
11	C:\Deko3000\awress32.dll	Yes/NA	4.0.0.950	4.0.0.950	06/26/02 01:17:36 PM	6/26/2002 1:17:36 PM	26624	26624
12	C:\Deko3000\awview32.dll	Yes/NA	4.0.0.951	4.0.0.951	06/26/02 01:17:36 PM	6/26/2002 1:17:36 PM	10240	10240
13	C:\Deko3000\lacs13n.dll	Yes/NA	13.0.0.35	13.0.0.35	06/27/03 01:42:38 PM	6/27/2003 1:42:38 PM	91136	91136
14	C:\Deko3000\lalp13n.dll	Yes/NA	13.0.0.84	13.0.0.84	10/17/03 05:50:00 PM	10/17/2003 5:50:00 PM	294912	294912
15	C:\Deko3000\lari13n.dll	Yes/NA	13.0.0.84	13.0.0.84	10/17/03 05:13:46 PM	10/17/2003 5:13:46 PM	25600	25600
16	C:\Deko3000\lari13n.dll	Yes/NA	13.0.0.84	13.0.0.84	10/17/03 05:13:48 PM	10/17/2003 5:13:48 PM	19968	19968
17	C:\Deko3000\lari13n.dll	Yes/NA	13.0.0.84	13.0.0.84	10/17/03 05:13:50 PM	10/17/2003 5:13:50 PM	23040	23040
18	C:\Deko3000\lari13n.dll	Yes/NA	13.0.0.84	13.0.0.84	10/17/03 05:13:54 PM	10/17/2003 5:13:54 PM	30208	30208
19	C:\Deko3000\lari13n.dll	Yes/NA	13.0.0.84	13.0.0.84	10/17/03 05:13:58 PM	10/17/2003 5:13:58 PM	56320	56320
20	C:\Deko3000\lari13n.dll	Yes/NA	13.0.0.84	13.0.0.84	10/17/03 05:45:00 PM	10/17/2003 5:45:00 PM	89600	89600
21	C:\Deko3000\lari13n.dll	Yes/NA	13.0.0.84	13.0.0.84	10/17/03 05:14:02 PM	10/17/2003 5:14:02 PM	31744	31744
22	C:\Deko3000\lari13n.dll	Yes/NA	13.0.0.84	13.0.0.84	10/17/03 05:48:16 PM	10/17/2003 5:48:16 PM	420352	420352
23	C:\Deko3000\lari13n.dll	Yes/NA	13.0.0.84	13.0.0.84	10/17/03 05:49:44 PM	10/17/2003 5:49:44 PM	508928	508928
24	C:\Deko3000\lari13n.dll	Yes/NA	13.0.0.62	13.0.0.62	06/27/03 01:42:48 PM	6/27/2003 1:42:48 PM	90112	90112
25	C:\Deko3000\lari13n.dll	Yes/NA	13.0.0.84	13.0.0.84	10/17/03 05:14:06 PM	10/17/2003 5:14:06 PM	20480	20480
26	C:\Deko3000\lari13n.dll	Yes/NA	13.0.0.84	13.0.0.84	10/17/03 05:19:46 PM	10/17/2003 5:19:46 PM	79872	79872
27	C:\Deko3000\lari13n.dll	Yes/NA	13.0.0.84	13.0.0.84	10/17/03 05:19:50 PM	10/17/2003 5:19:50 PM	94208	94208
28	C:\Deko3000\lari13n.dll	Yes/NA	13.0.0.84	13.0.0.84	10/17/03 05:45:50 PM	10/17/2003 5:45:50 PM	484352	484352
29	C:\Deko3000\lari13n.dll	Yes/NA	13.0.0.84	13.0.0.84	10/17/03 05:20:00 PM	10/17/2003 5:20:00 PM	130048	130048

Figure 4-18: Example results from Manifest Utility program

A window similar to that shown in Figure 4-18 will be displayed if the test is run for the Inflexion software components.

5. Save the results of the test.

Pinnacle Systems Customer Support will either ask to be sent a copy of the file, or go over the results of the test with you over the phone. Therefore save the results of the test by clicking the “Save” button on the Manifest Utility program window to capture the window and save the results. When the “Save” button is clicked, a “Save File As...” window similar to that shown in Figure 4-19 will be displayed.

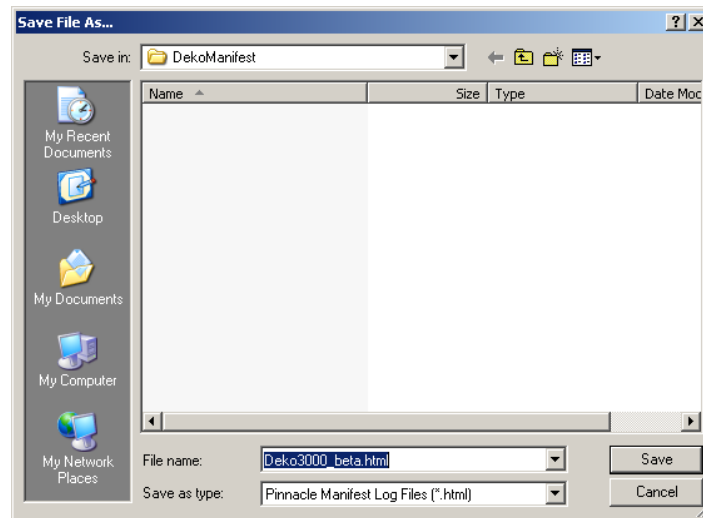


Figure 4-19: Example File Save As Window

From the “Save in” pull down at the top upper left of the File Save As window, select the location that the result of the Deko Manifest test will be saved. Refer to Figure 4-20.

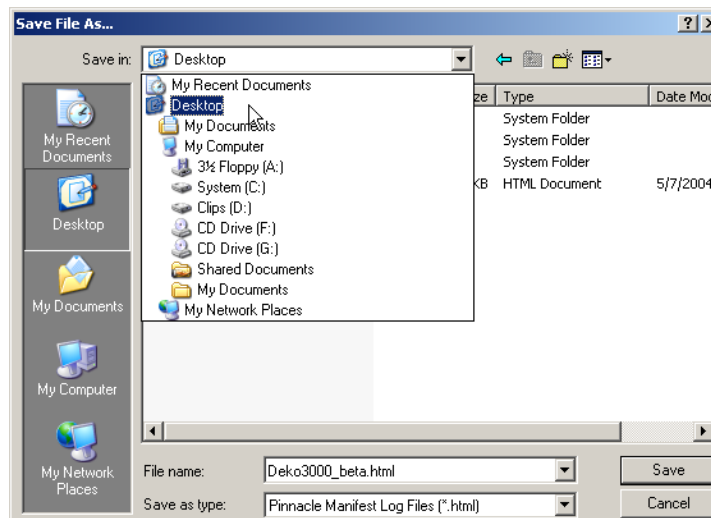


Figure 4-20: Selecting saved location for test results

The file will be saved as an Internet Explorer.html file in the location that you indicated.

6. Click the “Clear List” button to test the other set of software components listed in the Deko Manifest screen pull-down list.

Click on the “Clear List” button to refresh the Manifest Utility window so that it looks similar to what is shown in Figure 4-21.

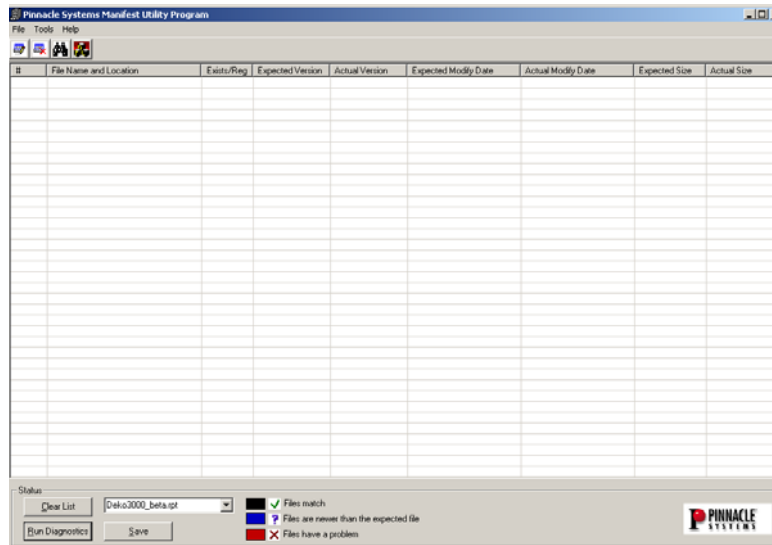


Figure 4-21: Manifest Utility window refreshed with “Clear List” button

7. Select the other set of software components listed in the Deko Manifest screen pull-down list.

From the pull down on the bottom part of the Manifest Utility start-up screen, select the other set of software components (i.e., the one not previously tested). Refer to Figure 4-17. Your choice will either be “Deko3000” and Inflexion_Manifest.

8. Perform Steps 4 and 5 listed above to complete testing.

Once the second set of file components file has been tested and saved, Deko Manifest Utility testing is completed. Follow the instructions given to you by Pinnacle Systems Customer Support in order to get the saved files to them.

Interpreting Deko Manifest Test Results

The Deko Manifest Utility test compares the registered software components on the workstation being tested with the official record of a software release. Files that match are indicated with a green check mark and normal black text. Files that are newer on the workstation than what the official release record shows are indicated with a blue “?” and blue text. Files that have a problem are indicated with a red “x” and red text. Refer to Figure 4-22.

Pinnacle Systems Manifest Utility Program								
File Tools Help								
#	File Name and Location	Exists/Reg	Expected Version	Actual Version	Expected Modify Date	Actual Modify Date	Expected Size	Actual Size
**** Program ****								
90	C:\Deko3000\deko3000.exe	Yes/NA	1.0.1766.0	1.0.1766.0	05/14/04 04:45:36 PM	5/14/2004 4:45:36 PM	5765120	5765120
91	C:\Deko3000\poly.dll	Yes/NA			05/18/99 02:34:34 PM	5/18/1999 2:34:34 PM	73728	73728
92	C:\Deko3000\poly4.dll	Yes/NA			06/13/03 06:43:48 PM	6/13/2003 6:43:48 PM	77824	77824
93	C:\Deko3000\poly5.dll	Yes/NA			12/01/03 05:07:52 PM	12/1/2003 5:07:52 PM	110592	110592
94	C:\Deko3000\psapi.dll	Yes/NA	5.1.2600.1106	5.1.2600.1106	08/29/02 08:00:00 AM	8/29/2002 8:00:00 AM	17408	17408
**** Program_reg ****								
95	C:\Deko3000\allplugin.dll	Yes/Yes	1.0.0.1	1.0.0.1	03/25/99 12:56:58 PM	3/25/1999 12:56:58 PM	323584	323584
96	C:\Deko3000\allplugin2.dll	Yes/Yes	1.0.0.1	1.0.0.1	03/07/00 08:59:00 PM	3/7/2000 8:59:00 PM	262144	262144
97	C:\Deko3000\dekobjexauth.ocx	Yes/Yes	1.0.0.9	1.0.0.10	05/14/04 11:36:52 AM	5/14/2004 6:24:22 PM	57344	57344
98	C:\Deko3000\dekobjexcontroller.ocx	Yes/Yes	2.0.0.1	2.0.0.1	05/13/04 02:47:24 PM	5/13/2004 2:47:24 PM	278528	278528
**** Winysdr ****								
99	C:\WINDOWS\system32\gdplus.dll	Yes/NA	5.1.3097.0	5.1.3097.0	08/23/01 05:25:28 PM	9/5/2001 9:00:58 PM	1706800	1700352
100	C:\WINDOWS\system32\mnv71.dll	Yes/NA	7.10.3052.4	7.10.3052.4	02/21/03 06:42:00 AM	4/6/2004 2:54:06 AM	348160	348160
101	C:\WINDOWS\system32\vhunderpic...	Yes/NA	1.1.0.2	1.1.0.2	04/12/02 12:44:10 PM	4/12/2002 12:44:10 PM	40960	40960
**** Winysdr_reg ****								
102	C:\WINDOWS\system32\corocket.dll	Yes/Yes	1.1.2.38	1.1.2.38	05/10/04 10:40:52 AM	5/10/2004 10:40:52 AM	491520	491520
103	C:\WINDOWS\system32\mucometl.o...	Yes/Yes	6.0.88.77	6.0.88.77	12/03/00 07:02:00 PM	11/25/2002 1:53:28 PM	1122816	1122816
104	C:\WINDOWS\system32\rocketoom.dll	Yes/Yes	1.0.0.75	1.0.0.75	05/13/04 10:16:54 AM	5/13/2004 10:16:54 AM	417792	417792
105	C:\WINDOWS\system32\sizeone.ocx	Yes/Yes	7.0.0.24	7.0.0.24	06/25/02 06:56:58 PM	6/25/2002 6:56:58 PM	251608	251608
106	C:\WINDOWS\system32\label32.ocx	Yes/Yes	6.0.90.43	6.0.90.43	12/06/00 01:00:00 PM	12/6/2000 1:00:00 PM	209608	209608
107	C:\WINDOWS\system32\unibox10.ocx	Yes/Yes	1.0.3.7	1.0.3.7	10/16/03 04:44:08 PM	10/16/2003 4:44:08 PM	421888	421888
108	C:\WINDOWS\system32\uniboxv10...	Yes/Yes	1.1.0.31	1.1.0.31	02/13/04 05:47:42 PM	2/13/2004 5:47:42 PM	241664	241664
**** SpellCheck_DLL ****								
109	C:\WINDOWS\system32\lsce4332.dll	Yes/NA	4.22.0.0	4.22.0.0	05/01/97 12:00:00 AM	5/1/1997	113664	113664
**** SpellCheck_lex ****								
110	C:\Deko3000\Lex\autocont.tlx	Yes/NA			05/01/97 12:00:00 AM	5/1/1997	9255	9255
111	C:\Deko3000\Lex\condcont.tlx	Yes/NA			05/01/97 12:00:00 AM	5/1/1997	561	561
112	C:\Deko3000\Lex\html.tlx	Yes/NA			05/01/97 12:00:00 AM	5/1/1997	1047	1047
113	C:\Deko3000\Lex\lsce.hlp	Yes/NA			05/01/97 12:00:00 AM	5/1/1997	16486	16486
114	C:\Deko3000\Lex\lscebr.tlx	Yes/NA			05/01/97 12:00:00 AM	5/1/1997	7691	7691

Figure 4-22: Example Deko Manifest results with possible problems

Important: It does not necessarily mean that the Deko3000 workstation being tested is malfunctioning just because the results of a Deko Manifest test may have blue or red files indicated. In fact, some workstations are supposed to have files indicated this way. This is why it is absolutely imperative that a Pinnacle Systems Customer Support representative interprets the test results and recommends to you how to proceed. This is also why the Internet Explorer .html file of the Deko Manifest results saved in the procedures above must be sent to Customer Support. Contact information can be found in “Appendix A: Pinnacle Systems Technical Support.”

Chapter 5: System Maintenance

Contents

This Chapter describes how to remove and replace components diagnosed to have failed in the Deko3000 Workstation. System recovery procedures are also given for cases when the entire Deko3000 operating system must be replaced or restored onto a Deko3000 workstation. Please note that Deko 300 Workstation components should only be replaced if you are directed to do so by a Pinnacle Customer Support representative.

This Chapter contains the following sections:

- Replacing Workstation Components
- System Recovery Procedures

Replacing Workstation Components

Only the components inside of a Deko3000 Workstation that are listed below are considered user replaceable by non-Pinnacle Systems personnel:

- TARGA Cards
- SVGA Card
- Serial ATA Card
- Hard Drives
- Power Supply
- Fan
- DVD/CD Drive And Floppy Drive

The physical location of each component listed above for the Deko3000 Workstation is shown in Figure 5-1.

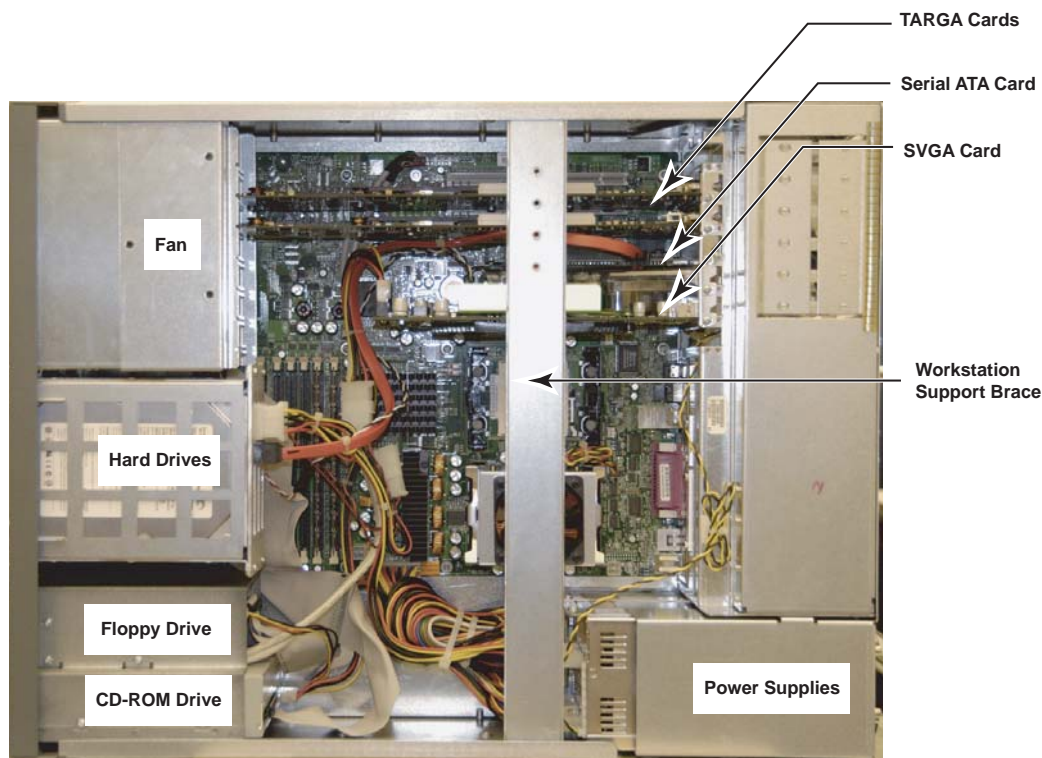


Figure 5-1: Replaceable components within a Deko3000 Workstation

Any components not listed above that needs to be replaced within the Deko3000 Workstation should only be replaced by a qualified Pinnacle Systems service engineer.

Replacing A TARGA Card

Important: Remove a TARGA card only if directed to do so by a Pinnacle Systems Customer Support representative.

There may be up to three TARGA cards within the Deko3000 Workstation. If a TARGA card needs to be replaced, the Inflexion I/O Diagnostic application (refer to Chapter 4: Troubleshooting) would have identified the one that needs to be replaced. For systems with more than one TARGA card, the first TARGA card will be seated in the slot besides the Serial ATA card. Refer to Figure 5-1 for TARGA card locations, and Figure 5-2 for TARGA card identification.

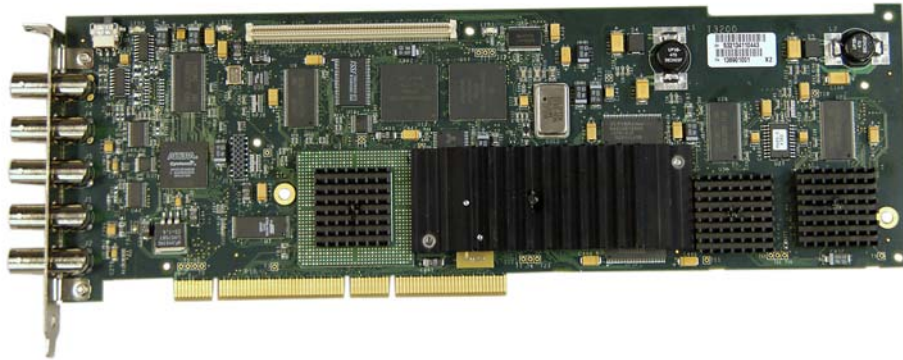


Figure 5-2: TARGA Card

1. Shut down the computer and turn off the monitor.

Shut down the computer by going to the Start menu and selecting Shut Down (Start menu >> Shut Down). Turn off the monitor after you are sure the computer has powered down.

Important: Do not attempt to open the computer while the computer is turned on. If you think the computer is in sleep mode press the power button in front of the computer to wake it, and then shut down the computer.

2. Remove all cables from the back of the computer, and let the computer cool down.

Unplugging the power cord and cables helps to ensure that no power is running on the motherboard, which reduces the risk of damage to your equipment. Wait 5 minutes to allow the computer's internal components to cool.

3. Discharge static electricity that you may have on your clothes or body.

Use the Anti-Static Wrist Strap that is provided with your new TARGA card. Also, touch the metal part of the power supply to discharge any static electric charge that you might be carrying.

4. Remove the top cover from the computer.

Use a Phillips-head (+) screwdriver to remove the screws attaching the top cover to the computer. Then remove the cover from the computer.

5. Remove the BNC I/O Connection Plate for the TARGA card at the rear of the computer.

Disconnect all of the BNC cables connected to the front of the BNC I/O Connection Plate. Then unscrew the two spring screws that hold the plate in place. Pry the plate from the back of the computer. Note that internal BNC cables run from the back of the plate to the TARGA card. Refer to Figure 5-3.

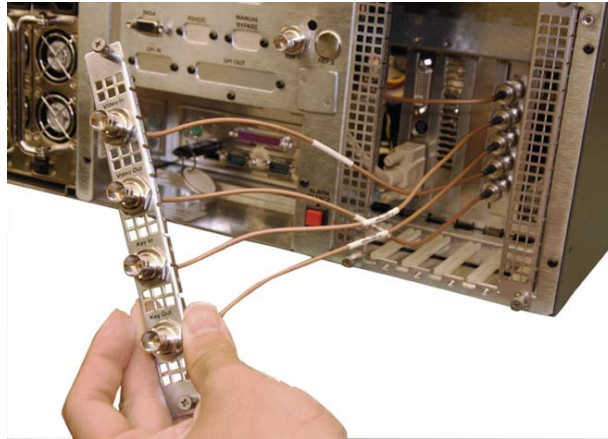


Figure 5-3: BNC I/O Connection Plate with internal BNC cables to TARGA Card

6. Remove all of the internal BNC cables from the BNC connectors on the TARGA card.

Each BNC cable “grip” must be turned counter-clockwise to loosen. Once loosened, a BNC can be pulled from the TARGA’s BNC connector. Remove all of the BNC cables from the TARGA card (including the REF BNC cable if it is used), and set aside the BNC I/O Connection Plate.

7. Remove the Fan Cover.

Refer to Figure 5-4. Unscrew the 3 retaining screws on top of the fan housing that holds the fan’s cover in place. Then remove the fan cover and put it aside.

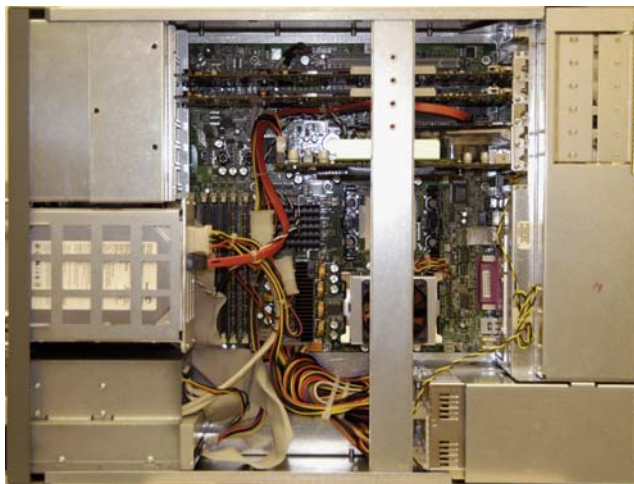


Figure 5-4: Fan Cover and Workstation Support Brace

8. Remove the Workstation Support Brace.

The Workstation Support Brace lies across the workstation just above the TARGA card(s) and other workstation cards. Refer to Figure 5-4. There are two screws on each end of the brace that must be unscrewed so that the support brace can be removed from the workstation.

9. Remove retaining screw and pull the TARGA card from the PCI slot.

Unscrew the retaining screw that secures the TARGA card's bracket in place. Save the screw because it will be used with the new card. Firmly lift the TARGA card from its slot by pulling upwards while using a gentle lengthwise rocking motion, and set the card aside.

10. Remove the new TARGA card from its antistatic bag.

Make sure you are grounded via the antistatic wrist strap. Handle the card by its edges and by its metal bracket, and avoid touching the connector pins on the bottom of the card. If a black handle is connected to the TARGA card remove it so that looks similar to that shown in Figure 5-2.

11. Insert the new TARGA card into the expansion slot.

Note: The same expansion slot that the damaged card was pulled from should be used.

With the bracket toward the open access port, align the connector on the bottom of the card directly over the slot. Then push down and gently rock the card lengthwise until the card is firmly seated. When pushed into the slot the TARGA card may catch as if it were in place, so gently continue to exert pressure until it "seats" again. The gold slot connectors on the card are barely visible when the card is completely installed.

Important: Don't force the card. If there is resistance, remove the card and try again.

12. Secure the TARGA card's bracket with retaining screw.

Use the card retaining screw that was removed earlier to secure the TARGA card's bracket in place.

13. Attach the REF 1 internal BNC cable to the REF BNC connector on the TARGA card.

Refer to Figure 5-5. Push the BNC cable grip onto the card's BNC connector. The BNC cable grip should then be turned clockwise to lock it onto the card's BNC connector.

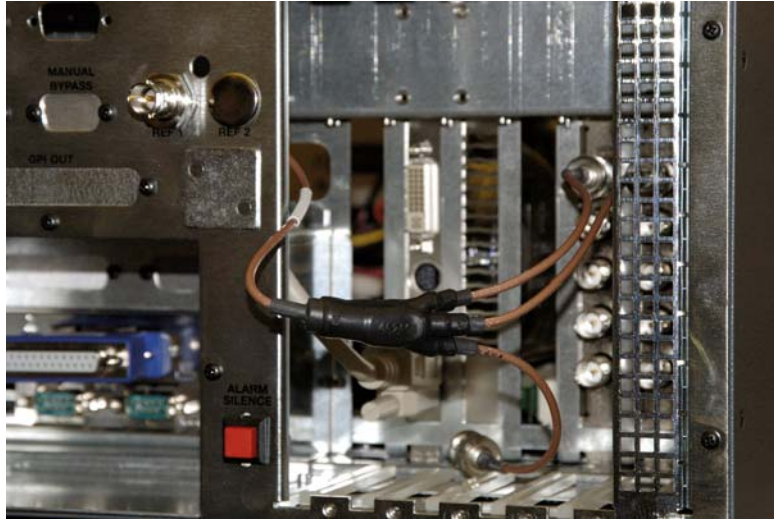


Figure 5-5: REF 1 internal cable connected to TARGA card

14. Attach the internal BNC I/O Connection Plate cables to the TARGA card.

When attaching the internal BNC cables from the I/O Connection Plate to the TARGA card, make sure to match the cable labels on the I/O Connection plate to the labels on the TARGA card's bracket for each internal BNC cable. Refer to Figure 5-3. The connections should be made as follows:

- REF 1 to TARGA REF)
- VIDEO IN to TARGA IN A
- VIDEO OUT to TARGA OUT A
- KEY IN to TARGA IN B
- KEY OUT to TARGA OUT B

Note: All REF BNC's are the same.

15. Attach the BNC I/O Connection Plate and connect the external BNC cables to it.

Push the I/O Connection Plate back into place on the computer's frame, and tighten the two spring screws on the plate to fasten it into place. Then connect all of the external BNC cables to the front of the BNC I/O Connection Plate.

16. Attach the Fan Cover and Workstation Support Brace.

Place the Fan Cover on top of the fan housing and screw the cover back into place with the three cover screws previously removed. Put the Workstation Support Brace back in place just above the TARGA card(s) and other cards. Refer to Figure 5-4. Screw the brace into place at both ends with its previously removed screws.

17. Attach all other cables and power up the computer.

Connect power cord, monitor cable, and any other communication cables that you removed previously, and then power up the computer.

18. If necessary, set the termination switch on the TARGA Card.

The termination switch on the TARGA card is located near the top edge of the card close to the card's retainer bracket. Refer to Figure 5-6.

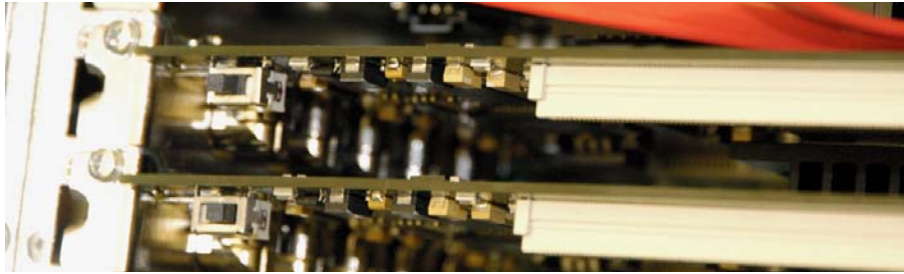


Figure 5-6: Termination switch on two TARGA cards

Some systems require the termination switch on the TARGA card to be on, others off. Termination is activated On if the switch is set away from the retainer bracket so that the switch's green LED light is lit (i.e., on).

Note: If you're not sure if your systems requires termination on or off, check the switch position of the damaged card you removed. Set the switch on the newly installed replacement card to be the same.

19. Run the Inflexion I/O Diagnostic Test to ensure the new card is functional.

The Inflexion I/O Diagnostic Test application should be used to check the functionality of the newly installed TARGA card. For systems with more than one TARGA card, the first TARGA card (TARGA Board 1) is seated in PCI Slot 3 which is beside the Serial ATA card. If there is a second TARGA card it will be in Slot 4, and if a third then Slot 5. Refer to Figure 5-1 for TARGA card locations. Refer to "Chapter 4: Troubleshooting" for instructions on locating and using the Inflexion Diagnostic Test software program.

Important: If the newly installed TARGA card fails when tested, check all of the connections and retest. If the card fails again, contact Pinnacle Customer Support. Refer to Appendix A for contact information.

20. Place the computer's cover back on the computer.

Use a Phillips-head (+) screwdriver to reattach the screws securing the top cover to the computer.

21. Return the damaged TARGA Card to Pinnacle Systems.

Place the damaged TARGA card into the antistatic bag that the replacement card was pulled from, and send the damaged card to Pinnacle Systems per the instructions given by Pinnacle Support.

Replacing The SVGA Card

Important: Remove a SVGA card only if directed to do so by a Pinnacle Systems Customer Support representative.

The SVGA card is located next to the Serial ATA card, and is installed in the AGP slot on the motherboard. The AGP slot is brown in color; the PCI slots are ivory in color. The SVGA card used by the Deko3000 Workstation is double wide, and thus completely covers PCI slot one. Therefore, PCI slot one is not used within a Deko3000 Workstation. Refer to Figure 5-1 for the SVGA card location, and Figure 5-7 for SVGA card identification.



Figure 5-7: SVGA Card

Note: The workstation SVGA card may differ slightly from what is shown in Figure 5-7.

1. Shut down the computer and turn off the monitor.

Shut down the computer by going to the Start menu and selecting Shut Down (Start menu >> Shut Down). Turn off the monitor after you are sure the computer has powered down.

Important: Do not attempt to open the computer while the computer is turned on. If you think the computer is in sleep mode press the power button in front of the computer to wake it, and then shut down the computer.

2. Remove all cables from the back of the computer, and let the computer cool down.

Unplugging the power cord and cables helps to ensure that no power is running on the motherboard, which reduces the risk of damage to your equipment. Be sure to disconnect the monitor's VGA cable (Figure 5-8).



Figure 5-8: Monitor cable connected to SVGA card.

3. Discharge static electricity that you may have on your clothes or body.

Use the Anti-Static Wrist Strap that is provided with your Deko3000 Workstation. Also, touch the metal part of the power supply to discharge any static electric charge that you might be carrying.

4. Remove the top cover from the computer.

Use a Phillips-head (+) screwdriver to remove the screws attaching the top cover to the computer. Then remove the cover from the computer.

5. Remove the Workstation Support Brace.

The Workstation Support Brace lies across the workstation just above the TARGA card(s) and other workstation cards. Refer to Figure 5-4. There are two screws on each end of the brace that must be unscrewed so that the brace can be removed from the workstation.

6. Remove SVGA card's retaining screws and pull the card from the AGP slot.

Unscrew the retaining screws that secures the SVGA card's bracket in place. Save the screws because they will be used with the new card. Firmly lift the SVGA card from its slot by pulling upwards while using a gentle lengthwise rocking motion.

Note: If there is a tie wrap binding the wiring, you may have to remove (i.e., cut) the tie wrap.

7. While holding the SVGA card, disconnect its 4-pin power cable.

The 4-pin power cable (Figure 5-9) is easier to remove from the SVGA card after the card has been lifted from its AGP slot. Once the power cable is removed, set the card aside.

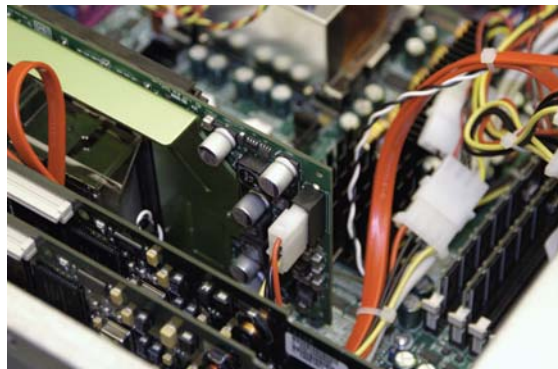


Figure 5-9: Power cable connection on SVGA card

8. Remove the new SVGA card from its antistatic bag.

Make sure you are grounded via the antistatic wrist strap. Handle the card by its edges and by its metal bracket, and avoid touching the connector pins on the bottom of the card.

9. Insert the new SVGA card into the AGP slot.

With the bracket toward the open access port, align the connector on the bottom of the card directly over the slot. Then push down and gently rock the card lengthwise until the card is firmly seated.

Important: Don't force the card. If there is resistance, remove the card and try again.

10. Connect the 4-pin power cable to the newly installed SVGA card.

Refer to Figure 5-9.

11. Attach the Workstation Support Brace.

Put the Workstation Support Brace back in place just above the TARGA card(s) and other cards. Refer to Figure 5-4. Screw the brace into place at both ends with its previously removed screws.

12. Attach all other cables to the computer.

Connect power cord, SVGA monitor cable, and any other communication cables that you previously removed.

13. Turn on the monitor and power up the computer

You should see video displayed on the VGA monitor. If you get an insufficient power message for SVGA, check the SVGA power connection (Step 10).

Important: If video is not displayed on the VGA monitor, check all of the connections. If is still not displayed, contact Pinnacle Customer Support. Refer to Appendix ?? for contact information.

14. Place the computer's cover back on the computer.

Use a Phillips-head (+) screwdriver to reattach the screws securing the top cover to the computer.

15. Return the damaged SVGA Card to Pinnacle Systems.

Place the damaged SVGA card into the antistatic bag that the replacement card was pulled from, and send the damaged card to Pinnacle Systems per the instructions given by Pinnacle Support.

Replacing The Serial ATA Card

Important: Remove a Serial ATA card only if directed to do so by a Pinnacle Systems Customer Support representative.

The Serial ATA card is located between the SVGA card and a TARGA card. The Serial ATA card is installed in PCI Slot 2 on the motherboard. Refer to Figure 5-1 for the Serial ATA card location, and Figure 5-10 for Serial ATA card identification.

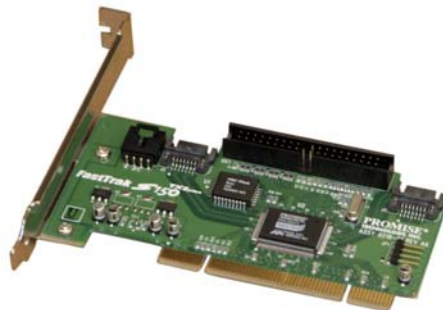


Figure 5-10: Serial ATA Card

1. Shut down the computer and turn off the monitor.

Shut down the computer by going to the Start menu and selecting Shut Down (Start menu >> Shut Down). Turn off the monitor after you are sure the computer has powered down.

Important: Do not attempt to open the computer while the computer is turned on. If you think the computer is in sleep mode press the power button in front of the computer to wake it, and then shut down the computer.

2. Remove all cables from the back of the computer, and let the computer cool down.

Unplugging the power cord and cables helps to ensure that no power is running on the motherboard, which reduces the risk of damage to your equipment.

3. Discharge static electricity that you may have on your clothes or body.

Use the Anti-Static Wrist Strap that is provided with your Deko3000 Workstation. Also, touch the metal part of the power supply to discharge any static electric charge that you might be carrying.

4. Remove the top cover from the computer.

Use a Phillips-head (+) screwdriver to remove the screws attaching the top cover to the computer. Then remove the cover from the computer.

5. Remove the Workstation Support Brace.

The Workstation Support Brace lies across the workstation just above the TARGA card(s) and other workstation cards. Refer to Figure 5-4. There are two screws on each end of the brace that must be unscrewed so that the brace can be removed from the workstation.

6. If necessary, remove the SVGA from the motherboard.

Because the SVGA card is double wide, you may have to remove from its AGP slot in order to easily get to the Serial ATA card. If this is the case, refer to “Replacing The SVGA Card” section previously discussed in this Chapter to remove the SVGA card.

7. Remove retaining screw and pull the Serial ATA card from its PCI slot.

Unscrew the retaining screw that secures the Serial ATA card’s bracket in place. Save the screw because it will be used with the new card. Firmly lift the Serial card from its slot by pulling upwards while using a gentle lengthwise rocking motion.

8. While holding the Serial ATA card, disconnect the two serial ATA cables and the 4-pin cable.

Examine how the two serial ATA cables, and the 4-pin Hard Drive LED Activation cable, are connected to the Serial ATA card. Refer to Figure 5-11. Remove the three cables and set the card aside.

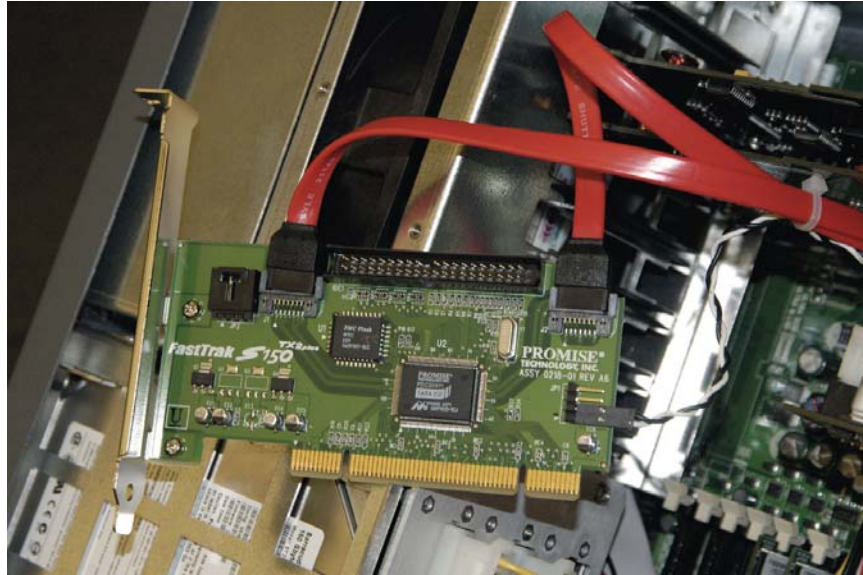


Figure 5-11: ATA cables and 4-pin cable on Serial ATA card

9. Remove the new Serial ATA card from its antistatic bag.

Make sure you are grounded via the antistatic wrist strap. Handle the card by its edges and by its metal bracket, and avoid touching the connector pins on the bottom of the card.

10. Connect the two serial cables to the new Serial ATA card.

Attach each Serial ATA cable to the card. Note that the cable with a label of 0 goes to the Port 1 connector on the ATA card. The cable with a label of 1 goes to Port 2 on the ATA card. Refer to Figure 5-12.

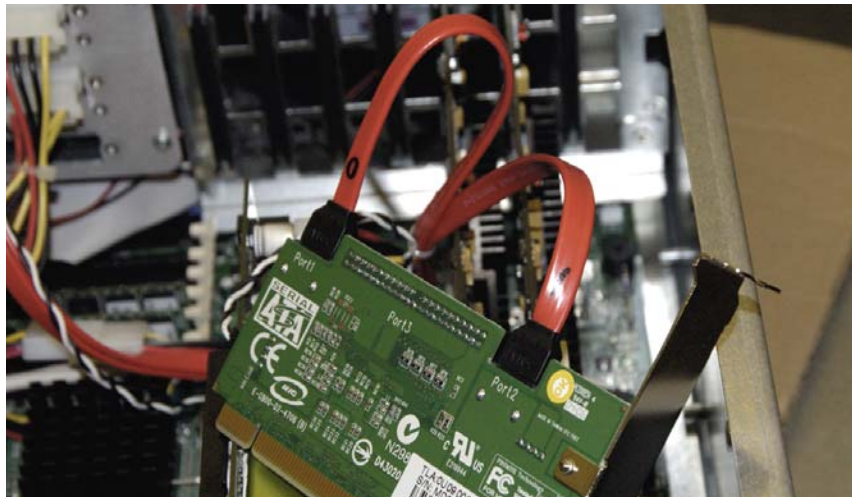


Figure 5-12: Attaching Serial ATA cables to Serial ATA card

11. Connect the 4-pin Hard Drive LED Activation cable to the new Serial ATA card.

The Hard Drive LED Activation cable connects to the 4 JP1 connector pins on the Serial ATA card. The white wire of the LED Hard Drive Activation cable must be connected to the bottom connector pin of the connector. Refer to Figure 5-13.

Important: A small white arrow marker below the JP1 label on the ATA card points to the bottom pin where the white wire lead of the activation cable must connect.



Figure 5-13: Orientation for connecting Drive LED Activation Cable

12. Insert the new Serial ATA card into PCI Slot 2.

With the bracket toward the open access port, align the connector on the bottom of the card directly over the slot. Then push down and gently rock the card lengthwise until the card is firmly seated.

Important: Don't force the card. If there is resistance, remove the card and try again.

13. Reinsert the SVGA card into its AGP slot, and reconnect its power and its monitor cable.

Refer to Figures 5-8 and 5-9.

14. Attach the Workstation Support Brace.

Put the Workstation Support Brace back in place just above the TARGA card(s) and other cards. Refer to Figure 5-4. Screw the brace into place at both ends with its previously removed screws.

15. Attach all other cables to the computer.

Connect power cord and any other communication cables that you previously removed.

16. Turn on the monitor and power up the computer

You should see video displayed on the VGA monitor.

Important: If video is not displayed on the VGA monitor, check all of the connections. If is still not displayed, contact Pinnacle Customer Support. Refer to Appendix ?? for contact information.

17. Place the computer's cover back on the computer.

Use a Phillips-head (+) screwdriver to reattach the screws securing the top cover to the computer.

18. Return the damaged Serial ATA Card to Pinnacle Systems.

Place the damaged Serial ATA card into the antistatic bag that the replacement card was pulled from, and send the damaged card to Pinnacle Systems per the instructions given by Pinnacle Support.

Replacing A Hard Drive

Important: Remove a Hard Drive only if directed to do so by a Pinnacle Systems Customer Support representative.

The Hard Drives are accessed from the front panel of the Deko3000 Workstation if it becomes necessary to install a replacement. Refer to Figure 5-14.



Figure 5-14: Workstation Front Panel (with Bezel removed)

Refer to Figure 5-15 for Hard Drive identification.



Figure 5-15: Deko3000 Workstation Hard Drive

1. Shut down the computer and turn off the monitor.

Shut down the computer by going to the Start menu and selecting Shut Down (Start menu >> Shut Down). Turn off the monitor after you are sure the computer has powered down.

Important: Do not attempt to open the computer while the computer is turned on. If you think the computer is in sleep mode press the power button in front of the computer to wake it, and then shut down the computer.

2. Discharge static electricity that you may have on your clothes or body.

Use the Anti-Static Wrist Strap that is provided with your Deko3000 Workstation. Also, touch the metal part of the power supply to discharge any static electric charge that you might be carrying.

3. Loosen the captive thumbscrews of the damaged drive.

Use a screwdriver if necessary to completely loosen the two thumbscrews. The screws are “captive” meaning that they can be loosened but not removed from the front bay panel.

4. Pull the Hard Drive out from its drive bay.

Grab the two thumbscrews and pull to slide the Hard Drive out from the drive bay. Refer to Figure 5-16.



Figure 5-16: Hard drive out from drive bay.

Continue to pull on the Hard Drive until it is completely removed from its drive bay. Refer to Figure 5-17. Set the damaged Hard Drive aside.



Figure 5-17: View of empty hard drive bay

5. Remove the new Hard Drive from its antistatic bag.

Make sure you are grounded via the antistatic wrist strap. Handle the new Hard Drive as much as possible by its front bay panel.

6. Push the new Hard Drive all the way into the drive bay.

Align the Hard Drive so that it will properly slide into the drive bay, and then push the Hard Drive so that it completely slides into the drive bay. This will connect the Hard Drive to its connectors at the back of the bay. Refer to Figure 5-17. The Hard Drive's front bay panel should be flush with the front panel of the Deko3000 Workstation.

7. Tighten the captive thumbscrews of the new drive.

Use a screwdriver if necessary to completely tighten the two thumbscrews.

8. Turn on the monitor and power up the computer

You should see video displayed on the VGA monitor.

Important: If an "Operating system not found" message is displayed on the monitor, the captive thumbscrews for the new drive may not be tightened enough. Use a screwdriver to tighten the screws as much as possible, and then power down and power up the workstation.

Important: If video is not displayed on the VGA monitor, check all of the connections. If it is still not displayed, contact Pinnacle Customer Support. Refer to Appendix ?? for contact information.

9. Place backup files from damaged hard drive onto the new hard drive.

Refer to "System Recovery Procedures" in this Chapter for information on placing the files backed up from the damaged Hard Drive onto the new Hard Drive just installed.

Important: If there is no backup of the damaged Hard Drive, contact Pinnacle Customer Support. Refer to Appendix A for contact information.

10. Return the damaged Hard Drive to Pinnacle Systems.

Place the damaged Hard Drive into the antistatic bag that the replacement drive was pulled from, and send the damaged drive to Pinnacle Systems per the instructions given by Pinnacle Support.

Replacing A Power Supply

Important: Remove a Power Supply only if directed to do so by a Pinnacle Systems Customer Support representative.

The Deko3000 Workstation uses a dual Power Supply configuration. The redundancy with the power supplies is so that if one Power Supply should fail the other will keep the workstation from abruptly powering down. When a Deko3000 Workstation Power Supply unit starts to malfunction, the LED on the unit will dim and eventually turn off. A Deko3000 Workstation Power Supply unit is shown in Figure 5-18.



Figure 5-18: Power Supply

The Power Supplies are accessed from the back of the Deko3000 Workstation if it becomes necessary to install a replacement. A Power Supply can be replaced “hot.” That is, a Power Supply can be replaced while the Deko3000 workstation is powered up (i.e., turned on and running).

1. Switch damaged Power Supply to off position and unplug it.

Make sure the switch of the Power Supply to be removed is in the off (i.e., “O”) position, and its power cord is removed. Refer to Figure 5-19.



Figure 5-19: Power Supply ready to be removed.

2. Release locking latch and pull the Power Supply from the Deko3000 Workstation.

Slide the locking latch (see Figure 5-19) switch up to release the lock. Then grab the Power Supply unit's handle and pull the unit straight out from the Deko3000 Workstation. Refer to Figure 5-20. Set the damaged unit aside.



Figure 5-20: Hard drive out from drive bay.

3. Remove the new Power Supply from its antistatic bag.

Handle the new Power Supply with care.

4. Push the new Power Supply all the way into the drive bay.

Align the Power Supply so that it will properly slide into its bay, slide the locking latch up, and then push the Power Supply so that it completely slides into the bay. This will connect the Power Supply to its connectors at the back of the bay. Make sure the locking latch slides down to lock the Power Supply into place.

5. Plug in power cord and switch Power Supply to On.

When the Power Supply is switched to the On (i.e., "I") position, its LED should light.

Important: If the LED on the unit does not light, check both ends of the unit's power cord and also make sure the workstation is turned on as well. If the LED still does not light and you are sure the unit is receiving power and the workstation is on, contact Pinnacle Customer Support. Refer to Appendix ?? for contact information.

6. Return the damaged Power Supply to Pinnacle Systems.

Place the damaged Power Supply into the antistatic bag that the replacement unit was pulled from, and send the damaged unit to Pinnacle Systems per the instructions given by Pinnacle Support.

Replacing The Fan

Important: Remove the Fan in a Deko3000 Workstation only if directed to do so by a Pinnacle Systems Customer Support representative.

The Fan assembly is located at the front of the Deko3000 Workstation next to the Hard Drives (opposite side from DVD/CD and Floppy drive). Specifically, the Fan assembly is located directly in front of the TARGA card(s). The primary function of the Fan is to help regulate the temperature of the TARGA card(s). Refer to Figure 5-1 for the Fan assembly location, and Figure 5-21 for Fan identification.



Figure 5-21: Deko3000 Workstation Fan

1. Shut down the computer and turn off the monitor.

Shut down the computer by going to the Start menu and selecting Shut Down (Start menu >> Shut Down). Turn off the monitor after you are sure the computer has powered down.

Important: Do not attempt to open the computer while the computer is turned on. If you think the computer is in sleep mode press the power button in front of the computer to wake it, and then shut down the computer.

2. Remove all cables from the back of the computer, and let the computer cool down.

Unplugging the power cord and cables helps to ensure that no power is running on the motherboard, which reduces the risk of damage to your equipment. Wait 5 minutes to allow the computer's internal components to cool.

3. Discharge static electricity that you may have on your clothes or body.

Use the Anti-Static Wrist Strap that is provided with your Deko3000 Workstation. Also, touch the metal part of the power supply to discharge any static electric charge that you might be carrying.

4. Remove the top cover from the computer.

Use a Phillips-head (+) screwdriver to remove the screws attaching the top cover to the computer. Then remove the cover from the computer.

5. Remove the Workstation Support Brace, Fan Cover, and TARGA card(s).

Because the TARGA card(s) block the Fan Box screw access holes for the Fan, the TARGA card(s) must be removed from their slot(s). The Workstation Support Brace and Fan Cover must be removed as well. Refer to the "Replacing A TARGA Card" section previously discussed in this Chapter for instructions on removing the Workstation Support Brace, Fan Cover, and TARGA card(s).

6. Disconnect the Fan's power connector.

Disconnect the Fan's power connector. Refer to Figure 5-22. If there is a tie binding the Fan's power connector wiring to other wiring in the workstation, cut the tie and remove it. The wiring and connector for the Fan will come out of the workstation with the Fan when the Fan is lifted from the Fan Box.



Figure 5-22: Deko3000 Workstation Fan Connector

7. Remove the 4 screws that secure the Fan within the Fan Box.

There are access holes in the Fan Box that provide access to the fan retaining screws. Refer to Figure 5-23. Use a screw driver to loosen or remove each screw so that the Fan can be lifted out the top of the Fan Box.

Note: A magnetic screwdriver may be needed to more easily remove the fan screws.

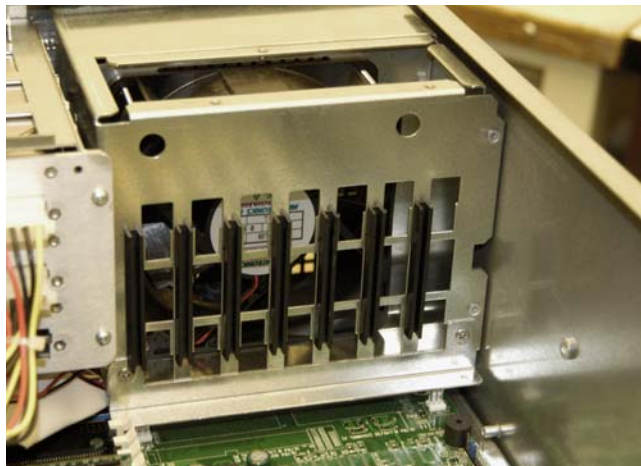


Figure 5-23: Deko3000 Workstation Fan Connector

8. Lift the Fan out of the workstation Fan Box.

Once the 4 screws are no longer securing the fan in place, the fan can be lifted straight out from the top of the Fan Box. There is an opening inside the Fan Box from which the Fan's wiring and power connector can be pulled through in order to completely remove the Fan from the workstation.

9. Insert the new Fan's power connector and wiring into the workstation.

Place the new Fan's wiring and power connector into the Fan Box and snake it through the opening at the bottom of the box so that both are inside of the workstation chassis.

10. Insert new Fan into the workstation Fan Box and secure in place.

Place the new Fan into the Fan Box and secure it in place with the 4 screws that were previously removed. Refer to Figure 5-23. A magnetic screwdriver or turning the workstation up on its end may be necessary in order to align the screws to the screw holes.

11. Connect the Fan's power connector.

Connect the Fan's power connector so that power will be supplied to the Fan when the workstation is powered up

12. Reinsert the TARGA cards into their slots, and reconnect their BNC cables.

Refer to "Replacing A TARGA Card" section previously discussed in this Chapter.

13. Attach the Fan Cover and Workstation Support Brace.

Place the Fan Cover on top of the fan housing and screw the cover back into place with the three cover screws previously removed. Put the Workstation Support Brace back in place just above the TARGA card(s) and other cards. Refer to Figure 5-4. Screw the brace into place at both ends with its previously removed screws.

14. Attach all other cables to the computer.

Connect power cord and any other communication cables that you previously removed from the Deko3000 Workstation.

15. Turn on the monitor and power up the computer

You should see video displayed on the VGA monitor, and the new Fan should be working.

Important: If video is not displayed on the VGA monitor or if the new Fan is not working, then check all of the connections. If video is still not displayed or if the Fan still is not working, then contact Pinnacle Customer Support. Refer to Appendix ?? for contact information.

16. Place the computer's cover back on the computer.

Use a Phillips-head (+) screwdriver to reattach the screws securing the top cover to the computer.

17. Return the damaged Fan to Pinnacle Systems.

Send the damaged Fan to Pinnacle Systems per the instructions given by Pinnacle Support.

Replacing The DVD/CD Drive And/Or Floppy Drive

Important: Remove the DVD/CD Drive or Floppy Drive only if directed to do so by a Pinnacle Systems Customer Support representative.

The DVD/CD and Floppy Drive assembly is located at the front of the Deko3000 Workstation next to the Hard Drives (opposite side from Fan). Refer to Figure 5-1 for the DVD/CD and Floppy Drive assembly location, and Figure 5-24 for DVD/CD and Floppy Drive assembly identification.



Figure 5-24: DVD/CD and Floppy Drive Assembly

1. Shut down the computer and turn off the monitor.

Shut down the computer by going to the Start menu and selecting Shut Down (Start menu >> Shut Down). Turn off the monitor after you are sure the computer has powered down.

Important: Do not attempt to open the computer while the computer is turned on. If you think the computer is in sleep mode press the power button in front of the computer to wake it, and then shut down the computer.

2. Remove all cables from the back of the computer, and let the computer cool down.

Unplugging the power cord and cables helps to ensure that no power is running on the motherboard, which reduces the risk of damage to your equipment. Wait 5 minutes to allow the computer's internal components to cool.

3. Discharge static electricity that you may have on your clothes or body.

Use the Anti-Static Wrist Strap that is provided with your Deko3000 Workstation. Also, touch the metal part of the power supply to discharge any static electric charge that you might be carrying.

4. Remove the top cover from the computer.

Use a Phillips-head (+) screwdriver to remove the screws attaching the top cover to the computer. Then remove the cover from the computer.

5. Disconnect the 2 thick-wired USB connectors on motherboard that come from the DVD/CD and Floppy Drive assembly.

Grasp each connector for the two USB wires and pull each from the motherboard. Refer to Figure 5-25.

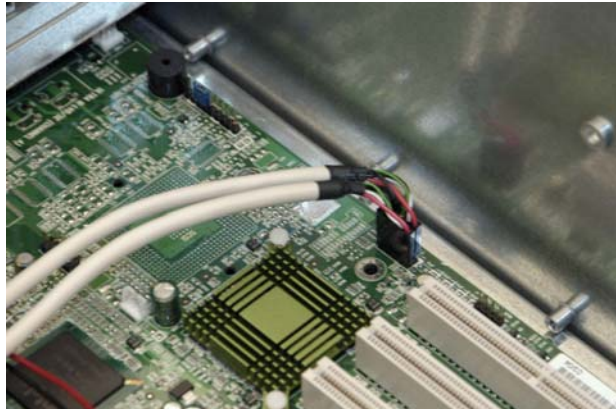


Figure 5-25: Dual-wired USB connector on motherboard

6. Disconnect the power connector and ribbon cable from back of the DVD/CD Drive.

Pull the longer motherboard ribbon connector and then the power connector from the back of the DVD/CD Drive. Refer to Figure 5-26.

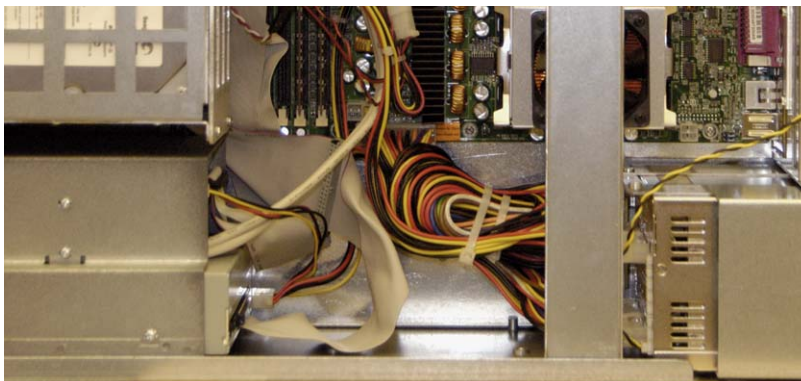


Figure 5-26: Motherboard ribbon and power cables connected to DVD/CD and Floppy Drive

7. Disconnect the power connector and ribbon cable from back of the Floppy Drive.

Pull the other (i.e., shorter) motherboard ribbon connector and then the power connector from the back of the Floppy Drive. Refer to Figure 5-26.

8. Remove the 4 screws from front panel that secures the DVD/CD Floppy Assembly.

There is one front panel screw at each edge DVD /D Floppy assembly (for a total of 4 screws) that holds the assembly to the front panel of the workstation. Remove these 4 screws and set them aside.

9. Push the DVD/CD Floppy Assembly from the back to slide it out of the workstation.

Push the assembly from its back, and then grab its front to slide it out of the workstation. Take care that the dual-wire USB cable does not snag or pull other connected wires loose when the assembly is being removed. Refer to Figure 5-27.



Figure 5-27: Removal of DVD/CD and Floppy Drive

10. If the DVD/CD Drive is to be replaced, remove the screws securing the DVD/CD Drive in the DVD/CD Floppy housing assembly.

There are 2 screws on the top side of the housing and 2 screws on the bottom side of the housing that keeps the DVD/CD Drive in place. Refer to Figure 5-28. Remove the screws.



Figure 5-28: Bottom of DVD/CD Floppy housing assembly

11. If the Floppy Drive is to be replaced, remove the screws securing the Floppy Drive in the DVD/CD Floppy housing assembly.

There are 4 screws on the top of the housing and 4 screws on the bottom of the housing that keeps the Floppy Drive in place. Refer to Figure 5-28. Remove the screws.

12. Remove the malfunctioning drive from the housing assembly, and replace with the new DVD/CD or Floppy drive.

Once the malfunctioning DVD/CD or Floppy drive's securing screws have been removed from the housing assembly, the drive can simply be pushed out of the front of the housing

assembly. The new replacement drive can then be pushed into the front of the assembly until it is in place. Refer to Figure 5-29.



Figure 5-29: Inserting DVD/CD Floppy housing assembly back into workstation

13. Put the screws that were removed back into the housing assembly.

Align the screw holes, and secure the new drive to the housing assembly with the screws that were previously removed.

14. Connect the power connector and ribbon cable into the back of the Floppy Drive.

Connect the shorter motherboard ribbon connector and then the power connector to the back of the Floppy Drive. Refer to Figure 5-26.

15. Connect the power connector and ribbon cable to the back of the DVD/CD Drive.

Connect the longer motherboard ribbon connector and then the power connector to the back of the DVD/CD Drive. Refer to Figure 5-26.

16. Connect the 2 thick-wired USB connectors to the motherboard that come from the DVD/CD and Floppy Drive assembly.

Dress the two USB wires under the TARGA board(s). Then connect each connector to the pins shown in Figure 30.

Important: The red wires go toward the TARGA PCI slots and the rear panel. The black wires are toward the fan. Refer to Figure 5-30.

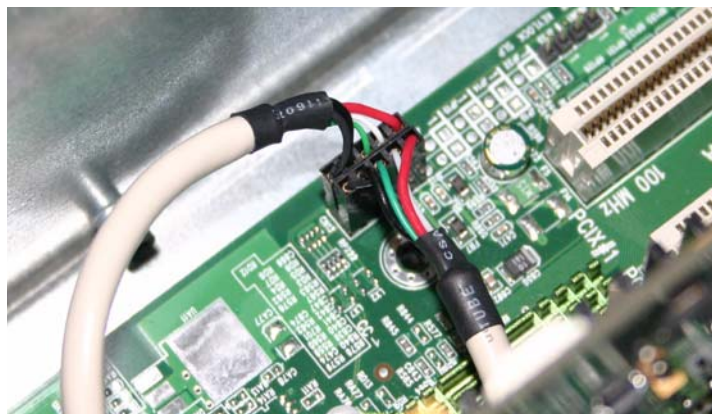


Figure 5-30: Dual-wired USB connector on motherboard

17. Attach all other cables to the computer.

Connect power cord and any other communication cables that you previously removed from the Deko3000 Workstation.

18. Power up the computer

You should see video displayed on the VGA monitor.

Important: If the DVD/CD or Floppy Drive LED light comes on and stays on, then the drive's ribbon cable has been connected upside down. If such is the case, shut down the workstation and reattach the offending ribbon cable. If video is not displayed on the VGA monitor, then check all of the connections. If video is still not displayed, then contact Pinnacle Customer Support. Refer to Appendix ?? for contact information.

19. Place the computer's cover back on the computer.

Use a Phillips-head (+) screwdriver to reattach the screws securing the top cover to the computer.

20. Return the damaged DVD/CD Drive or Floppy Drive to Pinnacle Systems.

Send the damaged DVD/CD Drive or Floppy Drive to Pinnacle Systems per the instructions given by Pinnacle Support.

System Recovery Procedures

There may be instances when something happens and the Deko3000 operating system (OS) software (or Deko3000 program software) gets so corrupted that the quickest and easiest fix is to wipe out the OS and then restore it onto the workstation. There may be other instances where a Pinnacle Systems Customer Support representative instructs you to replace the Deko3000 OS and Deko3000 program software. In instances such as these, replacing the Deko3000 system and program software restores the workstation to the state it was in when it was initially shipped.

Note: The Deko3000 program software must always be re-installed on the workstation after the OS has been restored.

Important: Because of instances such as the ones pointed out above, Pinnacle Systems always recommends that you periodically back up your system and media (clip) drives.

Follow one of the criteria below that describes your situation:

- If you have a Deko3000 “Drive Image Restore DVD” and a “Deko3000 Software CD” (both ship with Deko3000 workstations) stored in a place where you can find them per the instructions given in “Chapter 2: Installation And Setup,” then proceed to the section “You Have The Software Disks supplied By Pinnacle Systems” below. You will be able to completely restore your workstation in about 20 minutes.
- If you don’t have the Deko3000 “Drive Image Restore DVD,” but you do have the Deko3000 Software CD, then proceed to the section called “Recreating A Deko3000 Drive Image Restore DVD” below. Pinnacle Systems has provided a way for you to create the “Drive Image Restore DVD” that is needed from the Deko3000 Workstation.
- If you can’t find the “Deko3000 Software CD,” then contact Pinnacle Systems Customer Support to obtain the software. Contact information for Pinnacle Systems Customer Support can be found in “Appendix A: Pinnacle Systems Customer Support.”

Important: If your system can’t boot back up or if you have misplaced your Drive Image Restore DVD, then contact Pinnacle Systems Customer Support.

You Have The Software Disks Supplied By Pinnacle Systems

Perform the following steps to restore the Deko3000 OS:

Important: This process will permanently delete all of the material on your C: Drive. Be sure to back up all important material on your C: Drive before proceeding with this process.

1. Enter the BIOS setup of the workstation.

If the workstation has been turned off, power it up. Enter the BIOS program by rebooting the workstation, and then at the beginning of the start-up procedure press and momentarily hold down the <Delete> key on the keyboard. This is done when you see the words “Press for Setup” on the monitor, or when you see the three keyboard “Lock” LEDs (top right-hand corner of the keyboard) flash on the keyboard.

2. Insert the “Drive Image Restore DVD” into the DVD/CD-ROM drive.**3. From within the BIOS display, check that the boot order for the drives is as follows:**

+Removable Devices

CD-ROM Drive

+Hard Drive

Use the arrow keys to get to the Boot menu. If it is necessary to correct the order of the drives, change the order of the drives per the instructions given on the screen. Then Save and Exit the BIOS program.

4. Reboot the workstation (it may automatically reboot coming out of the BIOS).

You will see a prompt “Restoring will overwrite your system partition. Are you sure?”

Important: This process will permanently delete all of the material on your C: Drive. Be sure to back up all important material on your C: Drive before proceeding with this process.

The Drive Image Restore program will take approximately 7 minutes to complete. After the program has finished, the root directory for Drive A (shown as A:\>) will be displayed.

5. Remove the “Drive Image Restore DVD” from the DVD drive and reboot the workstation.

A welcome screen will appear after the reboot.

6. Click “Next” on the welcome screen.

The Next arrow box is located at the lower right-hand corner of the Welcome screen. When clicked, the license agreement screen will appear.

7. Accept the license agreement.

Click to check the “Yes, I accept” radio button and then click “Next.” The product key confirmation screen will appear.

8. Enter the 25 characters that make up the product key number for the workstation.

The alpha-numeric characters that make the product key can be found on the front panel of the workstation. If the Deko3000 Bezel is on the front of the workstation, remove the Bezel. The product key sticker is glued onto the front panel of the workstation. Type the product key onto the boxes displayed on the screen, then click “Next.” A screen prompting for the name of the computer should appear.

9. Enter a name for the computer and click “Next.”

Only the characters A-Z, the numbers 0-9, and hyphens can be used. If the workstation is connected to a network, then name given to the machine (and the description if one is given) will appear on the network. When “Next” is clicked, the Administrator password screen will appear.

10. Do not enter an Administrator password. Click “Next.”

A screen asking for the name of the workstation users will appear.

11. Type in the word Deko for the “Your Name” field and click “Next.”

A thank you screen will appear.

12. Click “Finished” on the Thank You screen.

The workstation will reboot and a “Log On To Windows” dialog will appear.

13. Change the log on user name to Deko.

When the “Log On To Windows” dialog appears, change the user name from the word Administrator to the word Deko. Do not type in a password. Click “Ok.”

The Deko3000 background screen will appear. The operating system has been restored on the workstation, but will need to be configured. Refer to “Configuring A Restored OS” below.

Configuring A Restored Deko3000 OS

The steps for configuring a restored Deko3000 OS are as follows:

1. For now, click “Cancel” to each “Found New Hardware Wizards” pop-up window.

The pop ups will occur three times for each channel installed on the workstation.

2. Delete the desktop shortcut icon for Windows Media Player.

Click to highlight and then press the <Delete> key for each.

3. If necessary, change the desktop to a resolution of 1024x768 with 32-bit color.

This is done by using the following path: Right click on desktop >> Properties >>Settings tab
Clicking the Settings tab will then show a window similar to that shown in Figure 5-31.

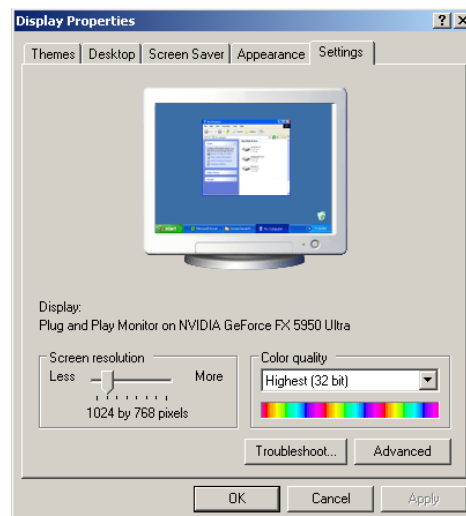


Figure 5-31: Display Properties window

Use the slider to adjust the screen resolution and bit depth to 1024x768 with 32-bit color. Then click “Ok” and then “Yes” to keep the new resolution and color depth.

4. Change the DVD/CD-ROM Drive and Hard Drives' letter designations.

The designations for the drives should be changed as follows:

- Drive Disk 0 System partition should have a designation of (C:)
- Drive Disk 0 Graphics partition should have a designation of (D:)
- Drive Disk 1 Clips partition should have a designation of (E:)
- Drive DVD/CD-ROM 0 should have a designation of (F:)

To change the designations, right click on “My Computer” and select “Manage.” A window similar to that in Figure 5-32 will be displayed.

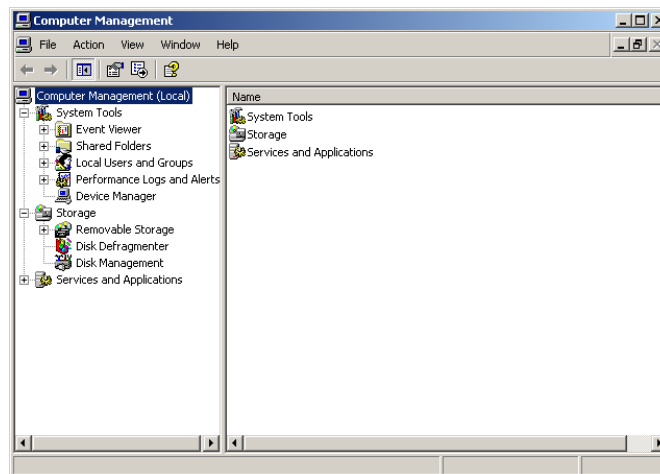


Figure 5-32: Initial Computer Management Window

In the left pane (see Figure 5-32) click the “Disk Management.” A screen similar to that shown in Figure 5-33 will be displayed. If necessary, expand the window’s size.

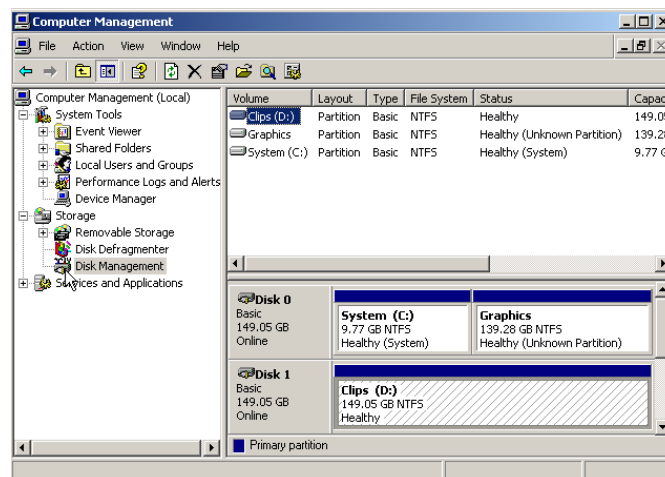


Figure 5-33: Computer Management window with Disk Management selected.

Right click on the drive word Clips (D:) and select “Change Drive Letters and Paths...” from the pop-up window. Refer to Figure 5-34.

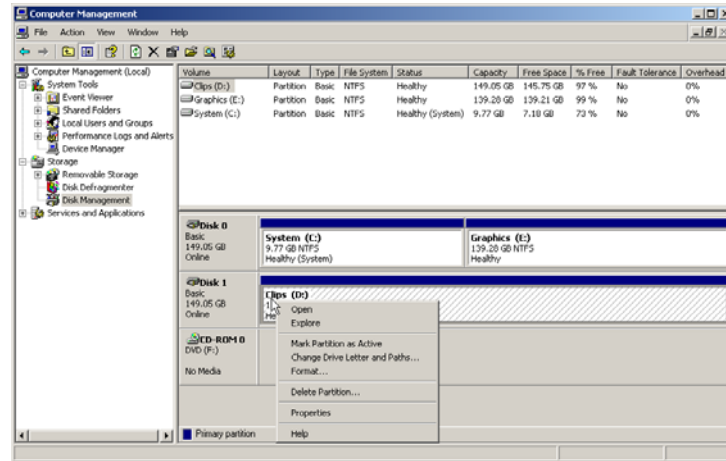


Figure 5-34: Change Drive Letters and Paths being selected

Select “Change...” from the “Change Drive Letters and Paths...” window.” Refer to Figure 5-35.

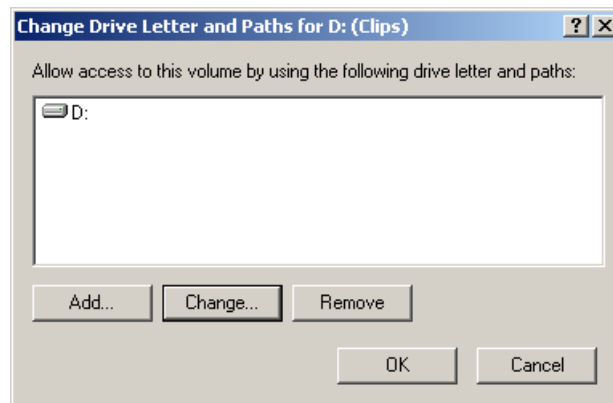


Figure 5-35: Change Drive Letters and Paths window

From the pull down select “H” as the new drive designation to be assigned to Clips and then click “Ok.” Refer to Figure 5-36.

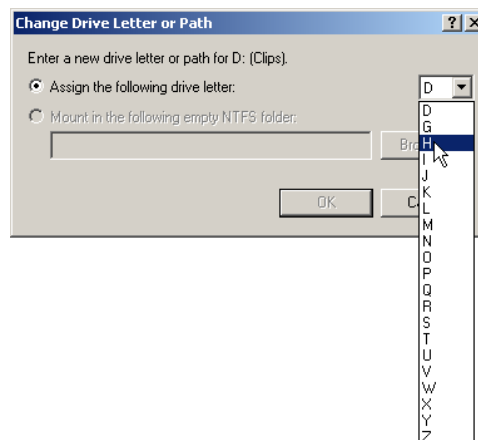


Figure 5-36: H designation selected for Clips Drive

Select “Yes” to confirm that the drive designation is to be assigned. Refer to Figure 5-37.

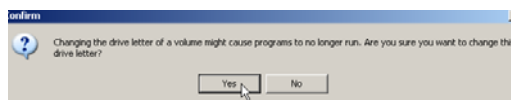


Figure 5-37: Confirmation of drive designation

Right click on the partition word Graphics (E:) and select “Change Drive Letters and Paths...” from the pop-up window. Refer to Figure 5-38.

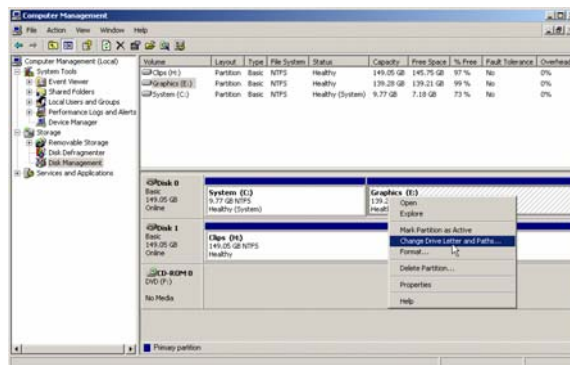


Figure 5-38: Change Drive Letters and Paths being selected

Select “Change...” from the “Change Drive Letters and Paths... window.” Refer to Figure 5-39.

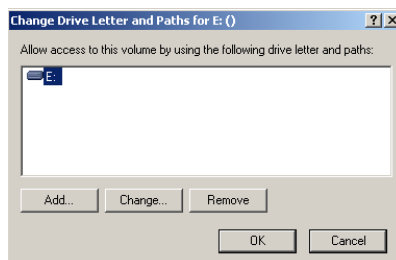


Figure 5-39: Change Drive Letters and Paths window

From the pull down select “D” as the new drive designation to be assigned to Graphics and then click “Ok.” Refer to Figure 5-40.

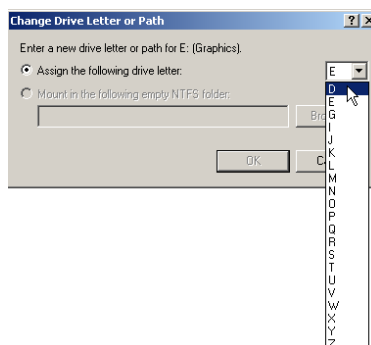


Figure 5-40: D designation selected for Graphics

Select “Yes” to confirm that the drive designation is to be assigned. Refer to Figure 5-41.

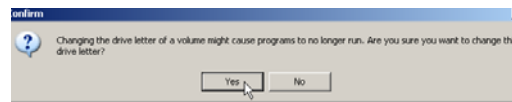


Figure 5-41: Confirmation of drive designation

Right click on the partition word Clips (H:) and select “Change Drive Letters and Paths...” from the pop-up window. Refer to Figure 5-42.

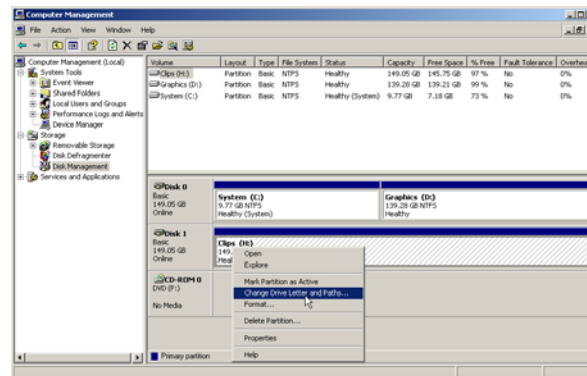


Figure 5-42: Change Drive Letters and Paths being selected

Select “Change...” from the “Change Drive Letters and Paths... window.” Refer to Figure 5-43.

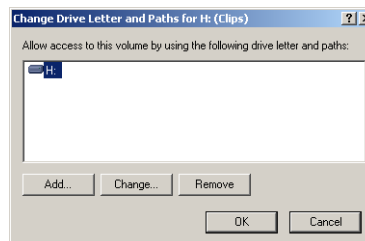


Figure 5-43: Change Drive Letters and Paths window

From the pull down select “E” as the new drive designation to be assigned to Clips and then click “Ok.” Refer to Figure 5-44.

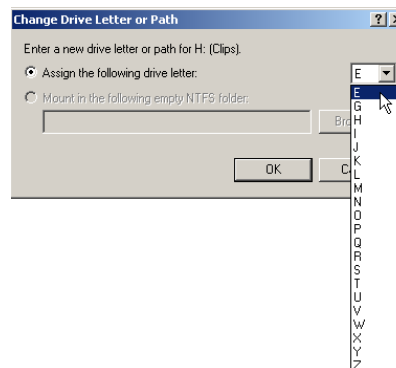


Figure 5-44: H designation selected for Clips Drive

Select “Yes” to confirm that the drive designation is to be assigned. Refer to Figure 5-45.

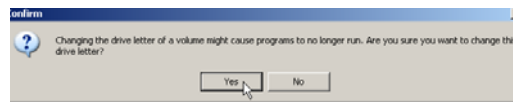


Figure 5-45: Confirmation of drive designation

Repeat the process for any remaining partitions that need to be changed. Make sure the partition designations are the same as those shown in Figure 5-46 below.

Important: When completed, your designations should match those shown in Figure 5-46.

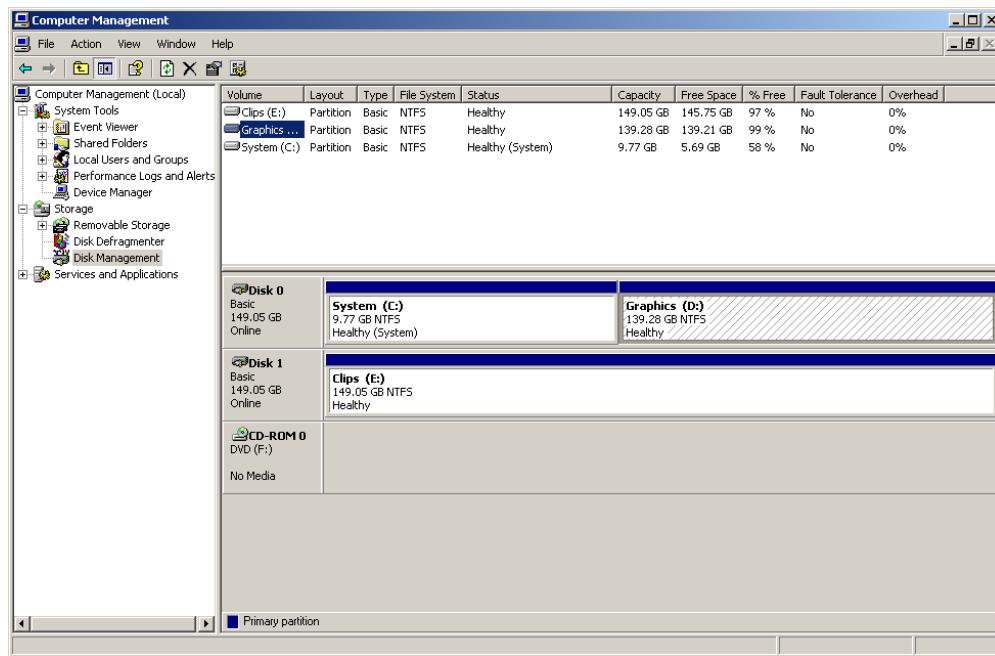


Figure 5-46: The correct drive designations for a Deko3000 workstation

Important: Disk 0 and Disk 1 should show as “Basic” and not “Dynamic.” Refer to Figure 5-46. If one or the other shows as “Dynamic,” then right click the disk icon and choose “Convert To Basic.”

5. Configuration for Deko3000 OS is Complete.

Close the Computer Management window. The last part of the process is to install the Deko3000 program software. Refer to “Installing The Deko3000 Software” below.

Installing The Deko3000 Software

The steps for installing the Deko3000 program software are as follows:

1. Insert the Deko3000 Software CD into DVD/CD-ROM drive.

The software program should auto start. If it does not auto start, browse the CD and click on the “Setup.exe” file.

2. Choose the “Custom Installation.”

The installation screens that are displayed are for the most part self-explanatory. The following selections though bare some thought:

- If a FAK (Fast Action Keyboard) is connected to the workstation, check the FAK box.
- If you know that DV25 is being used with the workstation, click “Yes” to the “Install the Pinnacle Systems DV25 Software Only Codec” question.
- Reboot the machine when the choice is given to do so.

3. After rebooting, the “Log On To Windows” dialog may be displayed.

If the word Deko is not shown as the user name, type in the word Deko and click “ok.”

4. Click “Next” to each “Found New Hardware Wizards” pop-up window and then click “Finish.”

The pop ups will occur three times for each channel installed on the workstation. Installation is complete after know new hardware is found.

Recreating A Deko3000 Drive Image Restore DVD

Pinnacle Systems has provided a way that you can create a Deko3000 “Drive Image Restore DVD” in case the one originally sent with the Deko3000 workstation can’t be found. To do this, you will need a blank DVD of one of the following formats:

- DVD +R
- DVD +RW
- DVD -R
- DVD -RW

Important: The Drive Image Restore DVD created in this process will only restore the operating system and supporting utilities for the Deko3000. The actual Deko3000 program is installed from the Deko3000 Software CD.

Perform the following steps to recreate a Deko 300 Drive Image Restore DVD:

1. Power up the workstation and insert a blank DVD into the DVD/CD-ROM drive.

If necessary, close the Drive F window if it is displayed since nothing is on the DVD at this time.

2. Start the software program named “Instant CD+DVD” on the workstation.

Use the following path to the Instant CD+DVD software program:

Start >> Programs >> Instant CD+DVD

Then click the program file “Instant CD+DVD” to open it. A window similar to that shown in Figure 5-47 should be displayed.



Figure 5-47: Initial start up window of Instant CD+DVD

3. Click “Data Disk.” Refer to Figure 5-47.

Once Data Disk is clicked a New project window will be displayed similar to that shown in Figure 5-48 with a New Project window displayed.

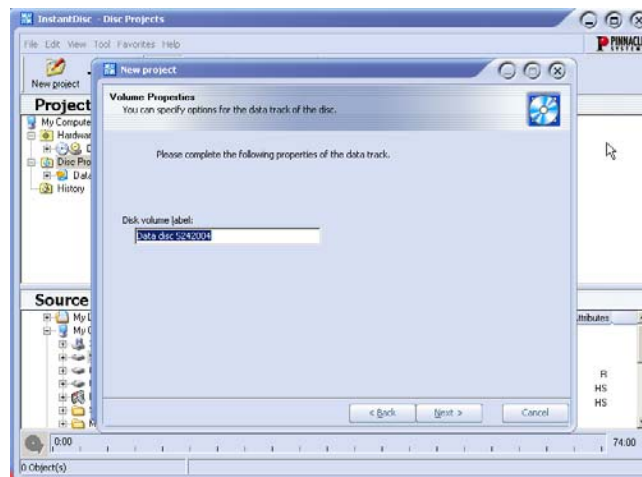


Figure 5-48: New Project Dialog

4. Click “Cancel” for the New Project dialog.

Click the “Cancel” button. Refer to Figure 5-48.

5. Click the “New Project” menu icon.

A “New Disc Project” window similar to that shown in Figure 5-49 will be displayed.

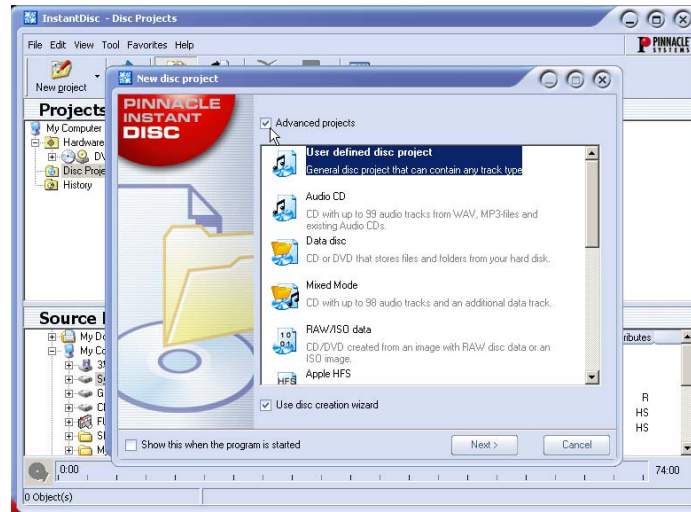


Figure 5-49: New Disc Project window

6. Click the “Advanced Projects” box.

Click to check mark the “Advanced Projects” box. Refer to Figure 5-49.

7. Select “Raw / ISO Data.”

Click to highlight “Raw/ISO data” and then click “Next.” Refer to Figure 5-50.

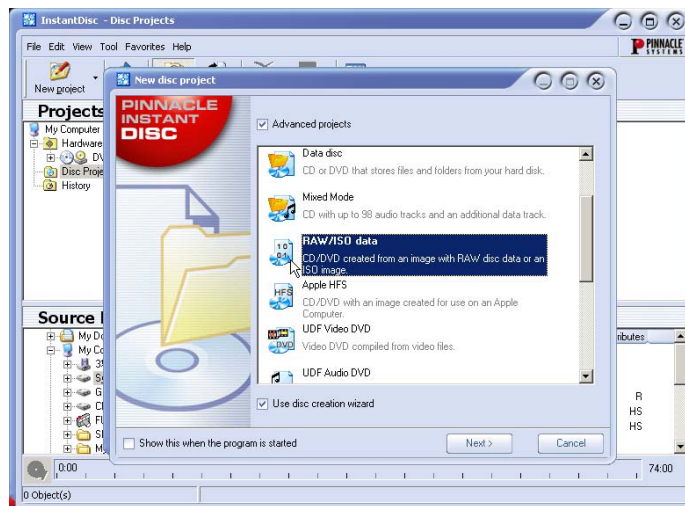


Figure 5-50: Raw/ISO Data selected

8. Browse to the Track1.iso file on Drive E (Clips drive) within the System Restore folder.

Once you have browsed to the Track1.iso file click “Next.” Refer to Figure 5-51.

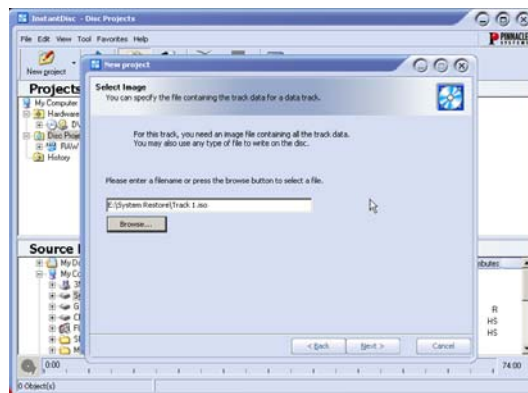


Figure 5-51: Browsing to Track1.iso file

9. Select “Close This Wizard” and click “Finished.”

Refer to Figure 5-52.

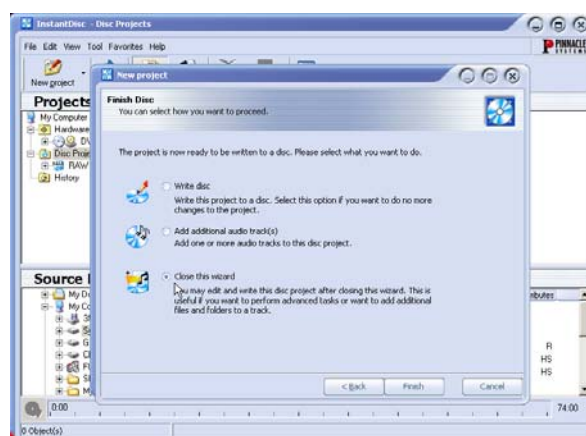


Figure 5-52: Close This Wizard selected

10. Click to highlight the word “Raw,” and then click “Properties” in the icon menu.

Raw is a file name under “Disc Projects” in the Projects Pane. Refer to Figure 5-53.

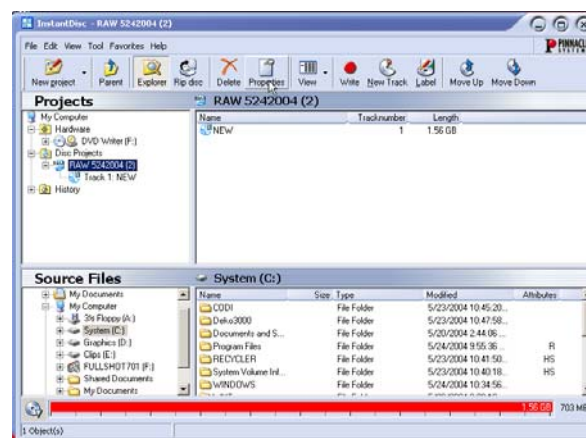


Figure 5-53: Clicking Raw file within Disc Projects subdirectory

Once the “Properties” menu icon is clicked, a window showing of the “Properties Of Raw” will be displayed. Refer to Figure 5-54.

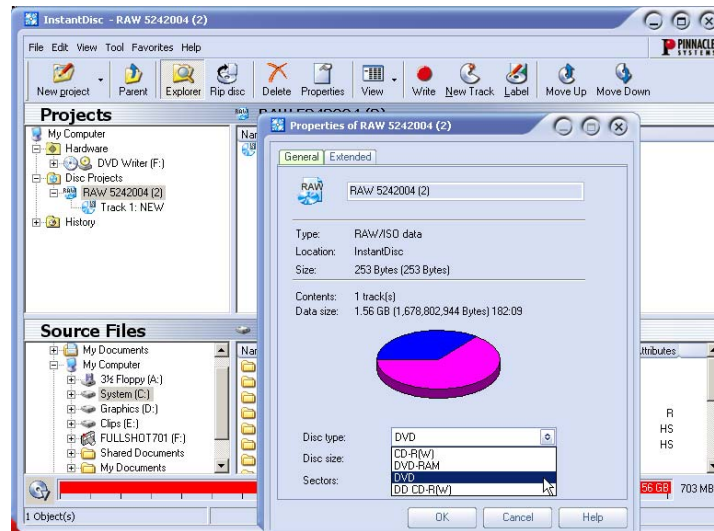


Figure 5-54: Properties Of Raw window displayed

11. From the pull down for “Disk Type” select “DVD.”

Select DVD as the Disc Type that is in the DVD/CD-ROM drive, and then click “Ok.” Refer to Figure 5-54.

12. Click “Write” in the icon menu.

Refer to Figure 5-55. “Write” in the icon menu is represented by a red ball.

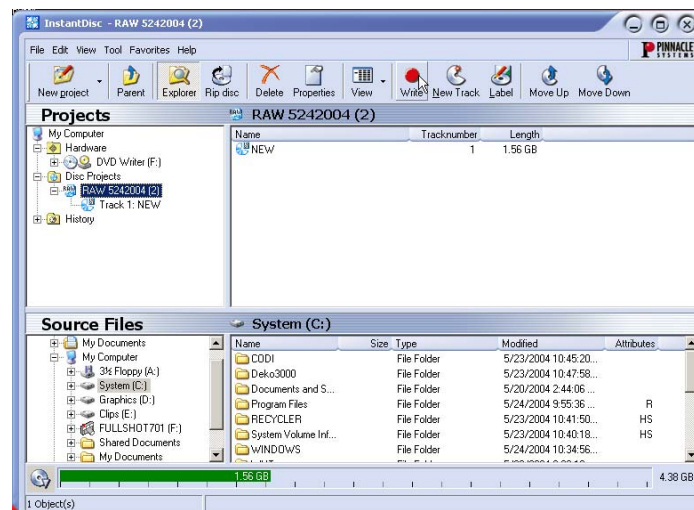


Figure 5-55: Clicking Write in the icon menus

When “Write” in the icon menu is clicked a “write Disc Project” window will be displayed. Refer to Figure 5-56. The drive image of the Deko3000 operating system is now ready to be copied to the DVD.



Figure 5-56: Write Disc Project window displayed

13. Click the “Write” button in the “Write Disk Project” dialog.

Click the “Write” button to begin writing the Deko3000 operating system to the DVD. Refer to Figure 5-56.

Once the “Write” button is click, a window indicating the progress of the data being written onto the DVD will be displayed. Refer to Figure 5-57.

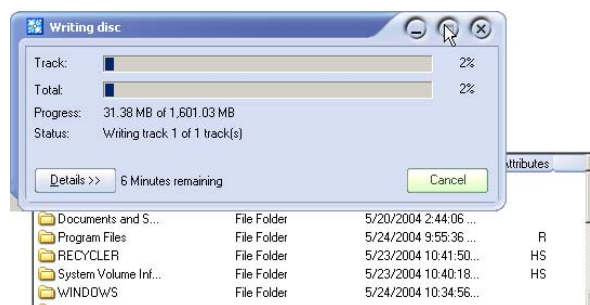


Figure 5-57: Progress indication of data being written to DVD

14. When “Writing Successfully Finished” (Figure 5-58) is displayed, the DVD can be removed.

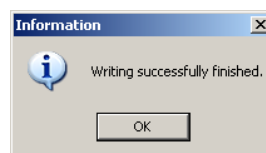


Figure 5-58: Successful creation of Deko3000 Drive Image Restore DVD

15. Quit the Instant CD+DVD software program.

The Deko3000 “Drive Image Restore DVD” you just created can now be used to restore the Deko3000 operating system. Refer to the section “You Have The Software DVDs Supplied By Pinnacle Systems” above for instructions on restoring the Deko3000 operating system and restoring the Deko3000 software program.

Appendix A: Pinnacle Systems Customer Support

About Deko Support

Additional resources are available online. FAQs, public web boards, and late-breaking documentation are posted at the Pinnacle Systems web site for Deko products. Use the following link address:

<http://www.pinnaclesys.com/support>

Answers to all of the problems you encounter may not be found here, but what is there can help stimulate new thoughts and ideas about the source of the problem.

Troubleshooting Questionnaire

Before contacting Pinnacle Systems Customer Support, please complete the Troubleshooting Questionnaire below and have the answers ready before you contact us.

1. What is the product model and software version number?
2. Can you reproduce the problem consistently or is the problem intermittent?
3. What version of the operating system are you using?
4. When did the problem start? Has the product ever worked? What was the last thing changed or added to the system?
5. What is the exact wording of any error messages you have received?
6. Are you using the product as it was intended or recommended to be used?
7. Does the issue disappear if you boot the system with all third-party devices removed?
8. What have you done to try to resolve the issue yourself?

Once you know the answers to the questions listed above, you should contact Pinnacle Systems Customer Support for additional help.

Contacting Pinnacle Systems

Request support from Pinnacle Systems via E-mail or the web. Please be sure to include your name, phone number, and the serial number of the Deko3000 workstation with your request. The appropriate member of the Pinnacle Systems support team will respond to your request. Support by region is as follows:

Important: Please keep this manual at a place where it can readily be found. When you are contacted by Pinnacle Systems Customer Support, you may need this document for troubleshooting and maintenance of your system while on the phone with the Support Engineer.

Broadcast Support Americas and Canada

E-mail: broadcast-support@pinnaclesys.com

Web Support: <http://www.pinnaclesys.com/support/contact>

Broadcast Support Europe

E-mail: broadcast-support-uk@pinnaclesys.com

Web Support: <http://www.pinnaclesys.com/support/contact>

Broadcast Support South Asia

E-mail: pacrim-support@pinnaclesys.com

Web Support: <http://www.pinnaclesys.com/support/contact>

Supports Regions: Taiwan, India, Pakistan, Bangladesh, Sri Lanka, Australia, New Zealand, Thailand, Viet Nam, Philippines, Brunei, Singapore, Malaysia, Indonesia

Broadcast Support Beijing

E-mail: broadcast-support-cn@pinnaclesys.com

Web Support: <http://www.pinnaclesys.com/support/contact>

Supports Regions: China, Hong Kong, Korea

Broadcast Support Japan

E-mail broadcast@pinnaclesys.co.jp

Web Support: www.pinnaclesys.co.jp

Upgrade Information on the Internet

For the latest information on Pinnacle Systems products, visit the Pinnacle Systems web site at:
<http://www.pinnaclesys.com/support>

Appendix B: Deko3000 Technical Specifications

Technical Specifications*

The specifications for the Deko3000 Workstation are divided into three sections within this Appendix:

- Deko3000 Base Configuration
- ClipDeko Option
- DekoObjex Option

Deko3000 Base Configuration

Supported Video Standards	-- NTSC and PAL Video Standards -- 4:3 Aspect Ratio -- 16:9 Aspect Ratio
Video I/O	-- SDI and Key Input per Channel (SMPTE 259M Compliant) -- Automatic Retiming of Synchronous Inputs -- SDI and Key Output per Channel (SMPTE 259M Compliant) -- Horizontal Output Timing Adjustment (-300 µsec to 300 µsec, half pixel increments) -- Standard 8 Bit, 4:2:2:4 Sampling -- Preserves VBI Data in Lines 10-21
Audio I/O	-- Eight Channels Audio Input (Embedded in SDI Video Inputs) -- Eight Channels Audio Output (Embedded in SDI Video Inputs) -- Standard 16 Bit, 48 KHz Sampling
Reference	-- Analog Color Black (75 ohm terminated)
Downstream Keyer	-- 8 Bit Video Resolution -- 4 Frame Processing Delay through Box
Automation Protocols (Optional)	-- III (i.e., I nfini t I ntelli g ent I nter f ace) -- PEGS (P rogrammed options, E -MEM recall, G PI events, D ubner S trings) -- E-MEM (E vent M emory) -- Single GPI Input (Configurable through RS-232 port)

* All specifications subject to change without notice

Platform	<ul style="list-style-type: none">-- 3.0 GHz Intel Xeon (or faster)-- Windows XP Professional Operating System-- 1 GByte System RAM-- 100 BaseT Ethernet Interface-- Single RS-232 Serial Port-- Dual USB 2.0 Port (Front Mounted)-- Dual USB 2.0 Ports (Rear Mounted)-- 3.5 Inch Floppy Drive-- CD/DVD+R/+RW Writer/Reader
Chassis Dimensions	<ul style="list-style-type: none">-- 4RU Rack Mount Chassis-- 19-inch x 22-inch x 7-inch (48.26 cm x 55.88 cm x 17.78 cm)
Power Supply	<ul style="list-style-type: none">-- Dual Redundant Hot-Swappable Power Supplies-- 110/220 Volt 60/50 Hz (Auto-sensing)-- AC Line Current = 6 A-- 350 Watt Maximum Output
ClipDeko Option	
Audio I/O	<ul style="list-style-type: none">-- Eight Channels of Audio for Clip Capture (Embedded in SDI Video Inputs)-- Eight Channels of Audio for Clip Playback (Embedded in SDI Video Outputs)-- Standard 16 Bit, 48 KHz Sampling
Clip Capture Support	<ul style="list-style-type: none">-- MPEG2 I-Frame 4:2:2 Sampling Variable Bit Rate (15-50 MBit), .MXF File Format-- DV25 Standard Compression Format (.DV File Format)
Clip Playback Support	<ul style="list-style-type: none">-- MPEG2 I-Frame 4:2:2 Sampling Variable Bit Rate (15-50 MBit), .MXF File Format-- DV25 Standard Compression Format (.DV File Format)-- DV25 Standard Compression Format (.AVI File Format)
Clip Processing	<ul style="list-style-type: none">-- Independent Control of Clips on Each Program Channel-- Up to 100 MBit Total Clip Bandwidth-- 2D Size and Position of Clip Layer-- 3 point Looping Clip Playback Capability

DekoObjex Option

DekoObjex Processing

- 32 Bit 4:4:4:4 RGBA Processing
- Up to 5 Screen Pixel Coverage Processing Power

Live Video Processing

- Independent 2D DVE for Two Video Inputs
- 4 Frame Processing Delay through Box

Audio Processing

- 24 Track Audio Mixer with Router

