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## Chapter 1. Introduction

Congratulations on purchasing your new REALmagic Hollywood Plus DVD/MPEG-2 Playback Card. Your REALmagic Hollywood Plus transforms your computer into a full-function DVD player, and provides you with uncompromising high performance hardware MPEG-2 digital video playback capability.

The REALmagic Hollywood Plus also has S/PDIF output for Dolby™ Digital (also called AC-3) Surround Sound. This provides full 6-channel surround sound for an amazing home theatre experience when connected to a Dolby Digital Surround Sound amplifier.

Please refer to the README.TXT file for important information not available when this manual was printed. You will find this file on the Driver and Applications diskettes supplied with the board and also in the REALmagic DVD program group after software installation.

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### System Requirements

The DVD/MPEG-2 Playback Card requires the following:

- 2 megabytes (MB) of free hard disk space
- 16MB of RAM
- Pentium-based PC (or compatible), 133 MHz or higher
- PCI 2.1 compliant expansion slot
- VGA card
- DVD-ROM drive
- Plug and Play BIOS support
- Microsoft™ Windows 95
- Amplified stereo speakers (Dolby Digital or Dolby Pro Logic amplifier and speakers required for surround sound)
- Bus mastering IDE controller recommended

Microsoft recommends a bus-mastering IDE controller and driver for proper DVD-Video playback. Windows 95B (OS/R2) includes the bus-mastering IDE drivers for most systems, but Windows 95A does not. If your computer is new, it is very likely that it already has the appropriate hardware and driver for bus-mastering IDE. Otherwise, check to see if your computer is built around Intel motherboard chip sets. If it is, you may obtain bus-mastering IDE drivers on Intel's web site at <http://developer.intel.com/design/pcisets/>. If your computer does not use Intel chip sets, contact your computer's manufacturer to locate bus-mastering IDE drivers for your particular system.

To find out which version of Windows 95 you have, click on the Start button and select Settings/Control Panel. Double-click on the System icon. In the General tab, under the System section, you will see the version of Windows 95 you have. If it is 4.00.950, then you have Windows 95A. If it is 4.00.950 B, then you have Windows 95B.

Without the bus-mastering driver, the DVD-ROM drive may not always be able to send data at the required rate. This can cause dropped frames or jerky video, noise, and audio problems. Because your DVD/MPEG-2 Playback Card does not over-burden the Pentium, these problems typically do not happen when viewing a movie unless you run another program while the movie is playing.

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## Technology Overview

### MPEG-1 and MPEG-2

MPEG stands for Moving Picture Experts Group. It refers to a method of data compression optimized for video and audio data. By analyzing the changes between video "frames," an MPEG "encoder" is able to reduce the file size of the compressed video data significantly. This remarkably efficient compression method allows full-screen and full-motion video, plus CD-quality audio to be stored in a relatively small size file. Once the data has been compressed, however, it must be "de"-compressed before it can be used.

Your DVD/MPEG-2 Playback Card incorporates specialized hardware to decompress MPEG data at a very high speed, which allows MPEG "streams" to play back at a data transfer rate of 500 Kilobytes (KB) to up to 15 Megabytes (MB) per second. MPEG-2 video has a resolution of 720 x 480 in 24-bit (16.8 million) colors at 30 frames per second (fps) for NTSC, and 720 x 576 at 25 fps for PAL. MPEG-1 video has a resolution of 352 x 240 in 24-bit (16.8 million) colors at 30 fps for NTSC, and 352 x 288 at 25 fps for PAL. The MPEG standard is a fully open standard and has been embraced

by the computer and entertainment communities as the current standard of digital video on both television and personal computers.

### **DVD**

DVD is a revolutionary storage medium that is currently capable of storing up to 18 gigabytes (GB) of data on a disc the size of a standard CD. This is enough to store an entire movie encoded in the MPEG-2 format on a single disc.

### **Dolby Digital Surround Sound (AC-3)**

Dolby Digital Surround sound is the audio compression standard for DVD in the U.S. Also known as AC-3, Dolby Digital Surround sound is designed specifically to code multi-channel digital audio. It incorporates six discrete digital audio channels to provide a full immersion surround sound system that is similar to that of a movie theatre. The six channels include left and right front, left and right back, center, and subwoofer. The frequency range of the main channels is 20 Hz to 20 kHz (+/- 0.5 dB). The subwoofer channel range is 20 Hz to 120 Hz (+/- 0.5 dB). The Dolby Digital Surround Sound requires a Dolby Digital receiver/amplifier to decode the signal.

To achieve Dolby Digital sound, connect your DVD/MPEG-2 Playback Card to a Dolby Digital amplifier using the optional S/PDIF connector. Although this connector looks like a standard RCA jack, it carries six channels of digital audio to your digital amplifier.

### **Dolby Pro Logic Surround Sound**

Dolby Pro Logic Surround Sound uses the standard analog stereo signal to multiplex surround sound information, and requires a Dolby Pro Logic receiver/amplifier to decode the signal. Pro Logic Surround Sound differs from Dolby Digital Surround Sound by using the same audio signals for both the front and back speakers on the left and right channels.

### **REALmagic Interactive MPEG**

The REALmagic API (Application Programming Interface) is the most widely used MPEG API in the industry. To ensure compatibility with the interactive games, entertainment, and educational titles based on the REALmagic API, look for the REALmagic Interactive MPEG logo. Your DVD/MPEG-2 Playback Card is compatible with REALmagic Interactive MPEG compatible titles for 32-bit applications.

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## **Supported File Formats**

Your DVD/MPEG-2 Playback Card supports the following MPEG file formats:

### **DVD**

DVD files have various file extensions such as IFO and VOB. MPEG-2 files are at full CCIR601 resolution of 720 x 480 at 30 fps.

### **MPG Files**

MPG is the extension used for files with MPEG-2 or MPEG-1 compressed full-motion video. For MPEG-2, the video resolution is 720 x 480 at 30 frames per second (fps) with 16.8 million colors (full CCIR601). For MPEG-1, the video resolution is 16.8 million colors at 352 x 240, shown at 24, 25, or 30 fps. Both MPEG-2 and MPEG-1 files may include MPEG-compressed audio (16-bit, 48kHz stereo sound).

### **DAT Files (Video CD 1.0 and 2.0)**

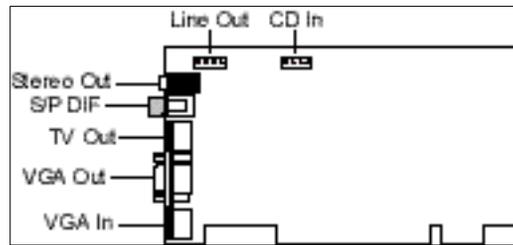
DAT is the extension for Video CD or Karaoke CD files. The DVD/MPEG-2 Playback Card can play both Video CD and Karaoke CD DAT files.

### **VBS and ABS Files**

VBS and ABS are file extensions used for some MPEG encoded video-only bit stream and audio-only bit stream files.

## Chapter 2. Hardware Installation

This chapter describes the steps required to install the REALmagic Hollywood Plus DVD/MPEG-2 Playback Card (Figure 1).



**Figure 1. REALmagic Hollywood Plus DVD/MPEG-2 Playback Card**

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### Handling the Board

**Warning:** Static electricity can damage your equipment. Do not take the board out of its static protective bag until you are ready to work with it.

Follow these precautions when handling the board:

- Before you open the static protective bag, touch it to a metal expansion slot cover on the back of your computer. This drains static electricity from the package and from your body.
- Do not touch any exposed printed circuitry after opening the package.
- Keep other people from touching the board. They might have a static-electricity buildup.
- Limit your movement. Movement causes a buildup of static electricity.

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## Installing the Hardware

Follow the steps below to install the REALmagic Hollywood Plus DVD/MPEG-2 Playback Card into your computer.

1. Turn off the power to the computer and to the VGA monitor. Unplug (disconnect) the power cord from the computer.
2. Disconnect the VGA monitor cable from your PC.
3. Remove the cover from the computer. (Refer to your PC user's manual for specific instructions.)
4. Locate an available PCI expansion slot.
5. Remove the slot cover screw and slot cover, if applicable.
6. Open the protective sleeve containing the REALmagic Hollywood Plus DVD/MPEG-2 Playback Card, grasp the circuit board by the edge of its mounting bracket, and remove it from the protective sleeve.
7. Insert the REALmagic Hollywood Plus card into the PCI expansion slot. Press down gently on the top edges of the board to ensure that all connecting points are seated securely. Anchor the board's mounting bracket using the screw removed earlier.
8. Replace the cover of your PC and reconnect the power cord.

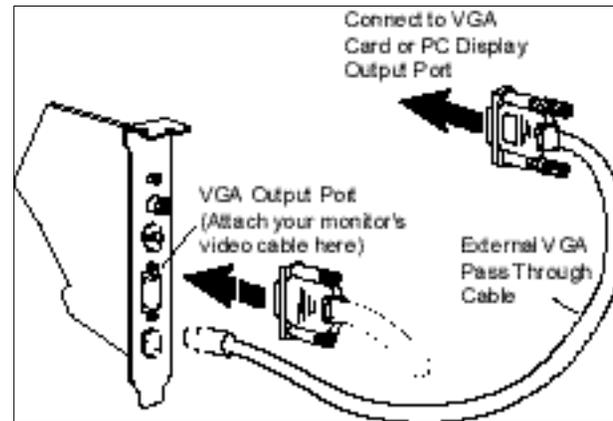
**Note:** If you install a DVD-ROM drive at the same time as the REALmagic Hollywood Plus DVD/MPEG-2 Playback Card, remember to attach the CD-Audio cable from the DVD-ROM drive to your sound card. Otherwise, you will not be able to play CD-Audio titles with the DVD-ROM drive. This will not affect the audio of DVD-Video or DVD-ROM titles.

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## Video Connection

Your REALmagic Hollywood Plus DVD/MPEG-2 Playback Card must be connected to your VGA card or your PC's VGA output port in order to display MPEG video on your VGA monitor. (Refer to Figure 1 earlier in this Chapter for reference.) Follow the steps to connect the DVD/MPEG-2 Playback Card to your VGA output (see Figure 2).

1. Attach the round 9-pin DIN connector of the provided *External VGA Pass-Through Cable* to the VGA IN connector at the back of the REALmagic Hollywood Plus DVD/MPEG-2 Playback Card (refer to Figure 1).
2. Attach the other end (15-pin "D" shape) of the cable to the output port on your VGA card or your PC's VGA output port.
3. Connect the VGA cable from your VGA monitor to the VGA OUT of the DVD/MPEG-2 Playback Card.



**Figure 2. Video Connection**

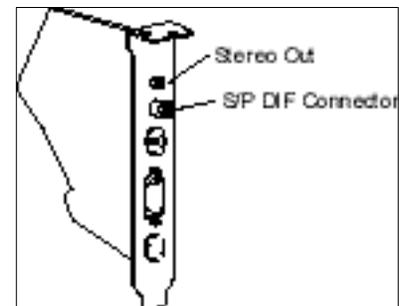
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## Audio Connections

There are two audio outputs on the REALmagic Hollywood Plus DVD/MPEG-2 Playback Card: the **Stereo Out** and the **S/PDIF** connector. The **Stereo Out** outputs a standard analog stereo signal that can be used by virtually any stereo receivers or amplified speakers. It also contains the Pro Logic Surround Sound encoding that allows you to achieve surround sound by attaching this signal to a Pro Logic receiver.

If your system has a sound card, we recommend attaching the **Stereo Output** signal to the **LINE-IN** port on your sound card, and then attach your Pro Logic receiver or speakers to the **LINE-OUT** or **SPEAKER** port on your sound card. This will allow you to use one set of speakers to listen to both DVD/MPEG-2 audio as well as other types of audio from your sound card. It will also allow you to control the volume by using the mixer program provided with your sound card. A standard mini jack audio cable can be used for this audio connection of the DVD/MPEG-2 Playback Card and the sound card. Otherwise, attach this signal directly to a Pro Logic receiver or speakers.

Connect your Dolby Digital Surround Sound receiver to the **S/PDIF** connector. This signal contains all six Dolby Digital Surround Sound channels.



**Figure 3. Audio Connections**

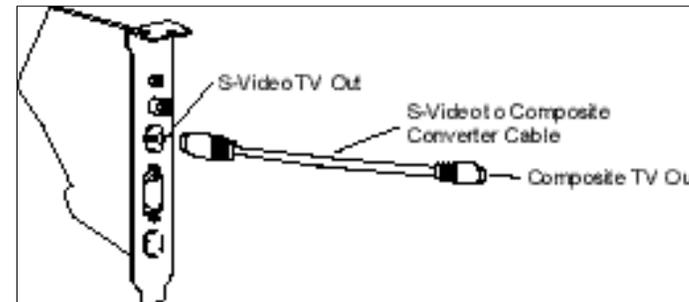
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## TV Connections

There are two options for connecting your REALmagic Hollywood Plus DVD/MPEG-2 Playback Card to a television: S-Video by using a standard S-Video cable, or composite video by using an S-Video to Composite converter cable.

The REALmagic Hollywood Plus DVD/MPEG-2 Playback card can be connected directly to a TV using an S-Video cable. The S-Video TV Out connector on the REALmagic Hollywood Plus is a 7-pin S-Video connector, which can be connected directly to a TV using a standard S-Video cable. If your television set does not have an S-Video input port, you may connect it to the REALmagic Hollywood Plus by using an S-Video to Composite converter cable.

Composite Video is more common and works with most televisions. The S-Video Out connector provides better picture quality.



**Figure 4. TV Connections**

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## Advanced Connections

The DVD/MPEG-2 Playback Card also includes an internal CD Audio In connector that allows you to pass CD audio through to the internal CD Audio In connector on your sound card. To do this, attach the CD Audio cable from the DVD-ROM drive to the REALmagic Hollywood Plus DVD/MPEG-2 Playback Card, then attach another cable from the internal Line Out port from the REALmagic Hollywood Plus to the CD Audio In connector on your sound card. Please refer to Figure 1 for the locations of these internal connectors.

The signal from the Line Out port combines the CD Audio In signal from the DVD-ROM drive with the same signal that is output through the Stereo Output Port on the REALmagic Hollywood Plus. This solution eliminates the external audio cable that normally goes from the DVD/MPEG-2 Playback Card to your sound card.

If you are using this solution, attach the Pro Logic receiver to the Line Out port of your sound card to obtain the surround sound signal.

**Note:** With this solution, the volume for both CD audio and MPEG audio will be controlled by the CD Audio portion of your mixer.

**Note:** Due to the copyright protection circuit in use by this product, please do not connect any recording device, such as a VCR, to the Composite Video Out or the S-Video Out connectors of the DVD/MPEG-2 Playback Card. For best playback, make sure the DVD title is played directly from the DVD/MPEG-2 Playback Card onto a TV, not through a VCR.

### Macrovision Copyright Notice

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only, unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

## Chapter 3. Software Installation

This chapter describes the software installation procedure for the REALmagic Hollywood Plus DVD/MPEG-2 Playback Card. Follow the directions carefully. Skipping steps may result in improper operation.

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### Software Installation For Windows 95

Follow the steps below to install the REALmagic Hollywood Plus DVD/MPEG-2 Playback Card software:

#### Driver Installation

1. Put the cover back on your computer and turn on the power.
2. After the Windows 95 logo screen, the **New Hardware Found** dialog box will appear to inform you that the system has found a **PCI Multimedia Video Device**.
3. Windows95 will start a driver information database, and the device driver wizard will show a device with the signature **PCI Multimedia Video Device**.

4. Insert the floppy disk labeled **Driver Disk** into the floppy disk drive A and click **Finish**. REALmagic Hollywood Plus will appear in the window.
5. Windows 95 will then prompt you for the path to the drivers with the message **Please insert the disk labeled REALmagic Hollywood Plus Installation Disk 1 in your floppy disk drive A and click OK**.
6. Click **OK**. This process will copy drivers and software for the REALmagic Hollywood Plus DVD/MPEG-2 Playback Card onto your hard disk.
7. After the driver installation is done, restart Windows 95.

#### DVD-Station Installation

1. When the copying is done, the Windows 95 desktop will appear. Remove Disk 1 from the floppy disk drive and insert the REALmagic Hollywood Plus Applications Disk into the floppy disk drive.
2. From the Windows 95 taskbar, click the **Start** button, and then select **Run...**
3. Type **A:\SETUP** and click **OK**. (Assuming A: is the disk drive containing the REALmagic Hollywood Plus Applications disk.)

4. Setup will now ask you to select one of the following options:
  - Install the REALmagic applications
  - Change the DVD Region Code
5. If you are installing the REALmagic Hollywood Plus card and applications for the first time, check Install the REALmagic applications and click **OK**. (Refer to the section on Setting and Changing DVD Region Code for details about changing and setting a region code.)
6. By default, Setup will install the DVD Station into a directory called **REALmagc**. Click the **Next** button to accept this directory. You may choose another directory by selecting **Browse** and entering the path information.
7. After copying the files the setup program will prompt you to select a DVD region code. Select a region code from 1 to 6 depending on the country you are in. Click **OK** and the setup program will prompt you about the successful completion of the region code setup.

**Note:** The Setup program will not ask you to set the Region Code if you are reinstalling the card in the same region code at a later time.

8. At the end of the installation procedure, the setup program will show a Setup Complete window with the following message:  
**Setup has finished installing the REALmagic software. In order to have the border ready for operation, it is required to execute the “Border Adjust” option from the “REALmagic Configuration” window. To skip this setting for now, check the “Don’t launch configuration Window” option below.**
9. Click **Finish** to complete the installation of the REALmagic application software. At this stage the setup program will automatically launch REALmagic Configuration.
10. Click **Auto calibration**. This will adjust the border and color calibration simultaneously. The monitor screen will flicker for about 5 to 10 seconds during this process and will then become normal. Auto calibration usually does a fine job with the border, however, if the border is not adjusted properly, use the **Adjust border** function described below to make further adjustments.

The Border Adjustment and Color Calibration section also describes how to make border adjustments if you do not launch the REALmagic configuration during installation of the software for REALmagic Hollywood Plus.

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## Border Adjustment and Color Calibration

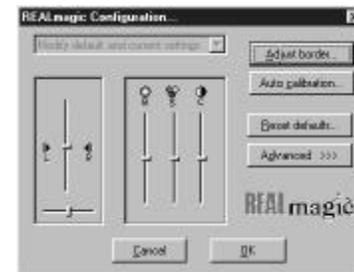
REALmagic Hollywood Plus uses overlay technology to display MPEG video on top of the normal VGA graphics. This technology uses a “key color” to determine where to overlay video. If the video window does not match the designated area exactly, a “border” around the video window will appear. Due to the wide range of video modes available in today’s VGA cards, you must adjust the position and size of the video window for each display mode you use. Border Adjustment is required to finalize the installation and to adjust the MPEG video window on the Windows 95 desktop.

The MPEG video that appears within the overlay window is also independent of your normal VGA graphics. Color Calibration allows you to make adjustments to the color attributes of the video.

You need to perform the Border Adjustment and Color Calibration only once for each of the display mode you use. A single display mode consists of a particular display resolution and vertical refresh rate.

Follow the steps below to complete the Border Adjustment and Color Calibration. Skip Step 1 if you are adjusting the border during installation of the software for REALmagic Hollywood Plus.

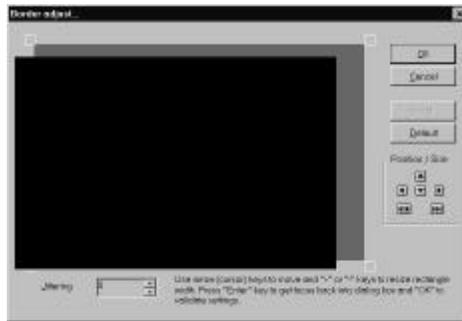
1. Start DVD Station as follows: click the **Start** button and select **Programs**, and then select **REALmagic Hollywood Plus**. You will see the **REALmagic Configuration...** dialog (Figure 5).



**Figure 5. REALmagic Configuration**

2. At the REALmagic Configuration... dialog (Figure 5), click **Auto calibration...** Your display will flicker for about 30 seconds. If auto calibration fails to adjust the border properly, proceed to the next step.

3. From the REALmagic Configuration dialog box, click **A**adjust border (figure 5). You will see the **Border adjust** dialog (Figure 6). Use the arrow keys in the dialog or on the keyboard to align the placement of the colored window within the outlined pink window. Click  or press the plus (+) key on the keyboard to widen the colored window. Click  or press the minus (-) key on the keyboard to make the colored window narrower. The colored window must cover the pink window exactly. When aligned, click **OK**.
4. The **Default** button will reset the color calibration and the border adjustment values to the factory default settings.
5. If the auto calibration function fails, please reboot your system and try the auto calibration function again. If the auto calibration function still fails, you will need to perform a manual color calibration. See Appendix A: Advanced Configuration Options.



**Figure 6. Border Adjust**

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### Setting and Changing DVD Region Code:

The setup program allows you to change the DVD region code up to five times. This feature allows you to change region in case you relocate to somewhere with a different region code. You will not be able to change the region code after the fifth time.

Follow the instructions below to set and change the DVD region code.

1. From the Windows 95 taskbar, click the **Start** button, and then click **R**un...
2. Insert REALmagic Application Disk into drive A and Type **A:\SETUP** and click **OK**.
3. Hollywood Plus Setup will now ask you to select one of the following options:
  - Install the REALmagic applications
  - Change the DVD Region Code

Check **Change the DVD Region Code** and press **OK**. Select the appropriate DVD region code according to the country you are in. Proceed with the instructions and complete the region code set-up.

**If you want to reset the Region Code after setting it five times please contact Sigma Designs or Sigma's authorized distributor or service center. Nominal handling charges will be required for this service.**

**Note:** Regionalization and Copy Protection (DVD Region Code) uses the Content Scramble System (CSS) standard to prevent unauthorized duplication of the intellectual property distributed on DVDs. It was originally requested by the Motion Picture Association of America (MPAA) to address video piracy, but is applicable to any content. CSS works by inhibiting the transmission of unencrypted data of the PCI bus. Playback systems must license CSS in order to decode the encrypted data.

The CSS specification divides the world into six unique regions. Content designated for one region cannot be read by playback systems in another region.

While CSS is used to prevent digital copies of the DVD content, another technology devised Macrovision is used to prevent analog copies of the DVD content. The Macrovision standard is a scrambling system that has been widely used by the movie industry to prevent unauthorized duplication of video content using commercial VCRs.

DVD playback systems must support both CSS and Macrovision copy protection standards.

**Notes:**

## Chapter 4. Using the DVD Station

The DVD Station is a versatile Windows utility that allows you to play a variety of DVD, Video CD, and CD formats. This section describes how to use the DVD Station to play full-length feature films recorded in the DVD and Video CD formats, and data CDs containing MPEG files and also Audio CDs. The DVD Station will automatically detect the format of the disc in your DVD drive and identify the file type in the Display Panel. The DVD Station can also detect MPEG files in your CD-ROM and hard drives.

Your DVD drive must be DVD compliant to be able to play DVD-Video and DVD-ROM. Check the owner's manual for your DVD drive to make sure your DVD drive meets these requirements before attempting to play DVD discs.

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### Starting the DVD Station

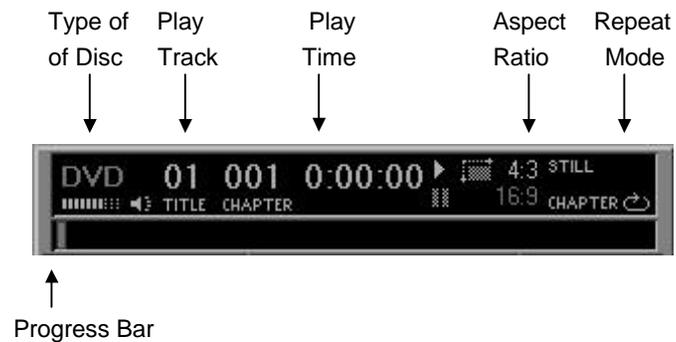
Follow the steps below to start the DVD Station:

1. Start Windows, if you have not already done so.
2. Insert a DVD disc, a Video CD, or a CD-ROM containing MPEG files into your DVD drive.
3. From the taskbar, click **Start**, and then click **Programs**. Click **REALmagic Hollywood Plus** and then click **DVD Station**.
4. The DVD Station (Figure 7) is displayed on the screen. (DVD Station looks best if Windows has 256 or more colors.)
5. If the Auto-Play feature in DVD Station is enabled, DVD Station will begin playing the disc in the DVD-ROM drive as soon as one is inserted.



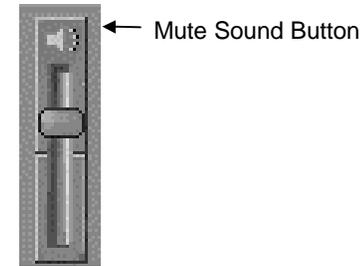
Figure 7. DVD Station

The Display Panel (Figure 8) provides specific information about the current video or audio track, such as its track number, play time, and aspect ratio. A progress bar at the bottom indicates the progression of the clip as it plays. You can click on the Progress Bar to jump to a particular part of the track being played. Depending on the type of disc you are playing, additional information may appear.



**Figure 8. Display Panel**

The Volume Control (Figure 9) increases or decreases the audio level. With the mouse, move the lever up and down to adjust the volume. Click the Mute Sound Button to mute the audio. To unmute the audio, click the Mute Sound Button again.



**Figure 9. Volume Control**

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## Standard Buttons

DVD Station has controls similar to those of a VCR. See Figure 10.



Figure 10. Standard Buttons

- ❶ is the **Pause** and **Play** button. Click this button to pause play, to start playing the first track on the DVD or CD, or to resume play after pausing.
- ❷ is the **Stop** button. Click this button to stop play.
- ❸ is the **Eject** button. Click this button to operate the ejection mechanism (if supported by your DVD or CD-ROM drive).
- ❹ is the **Rewind** button. Click this button to play the current track backwards at 2x speed, click again for 8x speed, and click again to resume normal playback.
- ❺ is the **Fast Forward** button. Click this button to fast forward the current playing track at 2x speed, click again for 8x speed, and click again to resume normal playback.
- ❻ is the **Previous Track** button. Click this button to skip to the previous track on the CD.
- ❼ is the **Next Track** button. Click this button to skip to the next track on the CD.
- ❽ is the **Play Mode** button. Click this button to select from three play modes: **All**, **Random**, and **Play List**. The Display Panel will show which play mode is currently active. The default play mode is **All**. To select **Play List**, you must first create a play list. (See “Creating a Play List” later in this chapter.) Selecting **Random** will cause DVD Station to play the tracks in random order. The **Random** setting does not work with DVD movies.
- ❾ is the **Repeat Mode** button. Click this button to toggle between **Play Once** and **Continuous Play** modes. Click once to repeat the current chapter, and twice to repeat the title.

### Custom Buttons

Custom Buttons (Figure 11) perform additional functions within DVD Station.



**Figure 11. Custom Buttons**



Clicking the **Display** button displays the playtime of the current clip, the spoken language, and the name of the file in the upper left-hand corner of the VGA viewing window. Clicking the **Counter** button again disables this feature.

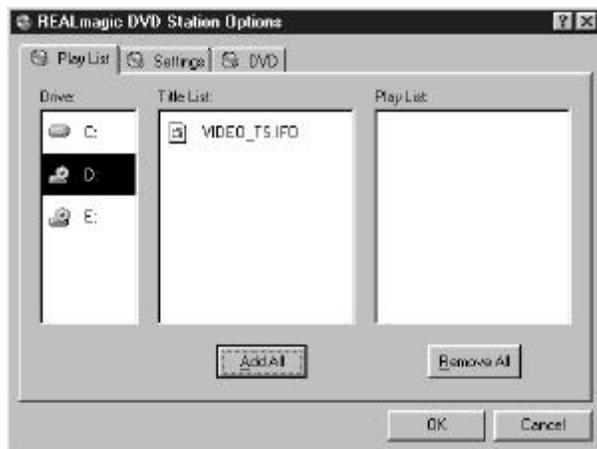


Clicking the **TV Mode** button will switch the video out to a TV. The MPEG window will vanish from the computer monitor and the DVD/MPEG-2 Playback Card will output the video only on the TV screen. If the video out is on TV, clicking this button will switch the video to the computer monitor. In this case, the REALmagic Hollywood Plus DVD/MPEG-2 Card will display the MPEG video only on the computer monitor. For details, please see section for TV Out.



Clicking the **Open File** button allows you to open and play MPEG files from your hard disk, DVD-ROM, or CD-ROM drive. You will see a standard Open Video File dialog window.

 Clicking the **Options Dialog** button brings up the DVD Station Options window (Figure 12).



**Figure 12. Options Dialog**

### **Play List**

The **Play List** feature allows you to create a list of your favorite MPEG clips for the DVD Station's Play List mode. In Figure 12, drive D: is the DVD-ROM and drive E: is the CD-ROM. Since the DVD/MPEG-2 Playback Card is capable of playing both MPEG-1 and MPEG-2 files, you may choose to play MPEG-1 and MPEG-2 files from the CD-ROM drive or from your hard disk drive. DVD files will only play from the DVD-ROM or the hard disk drive.

The Title List window displays the filenames of MPEG clips DVD Station was able to locate on the hard disk, DVD-ROM, or CD-ROM drive. The Play List window displays the clips that are currently on the Play List.

Perform the following steps to create a Play List:

1. Select the clip's icon that you wish to add to the Play List from the Title List window and drag it to the Play List window. To move all of the clips in the Title List to the Play List, click the **Add All** button. To clear the Play List, click the **Remove All** button.
2. To remove a clip from the Play List, click on the clip's icon and drag it to the Title List box. To change a clip's playing order, drag and re-position its icon in the Play List box.
3. Click **OK** when you have finished adding, removing, and/or changing the order of the clips to the Play List.
4. Click the **Play Mode** button  in the main window (refer to Figure 10) until the word **Play List** is highlighted in the Display Panel. All clips included in the Play List will play in order.

## Settings

Click on the **Settings** tab to display the DVD Station Settings (Figure 13). This section allows you to choose the various DVD Station settings to enable and disable.

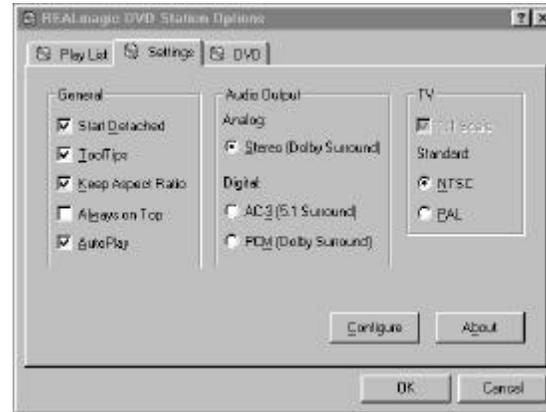


Figure 13. DVD Station Settings

## **General**

### **Feature**

### **Explanation**

Start Detached:	Displays the DVD Station Control detached from the movie window on startup. Press F2 to toggle this feature.
ToolTips:	Enables pop-up ToolTips that display the function of each DVD Station button.
Keep Aspect Ratio:	Maintains the movie's correct aspect ratio (either 4:3 or 16:9) when re-sizing a movie window. Prevents distortion of the movie. Press F4 to resize the movie window to the movie's standard (non-scaled) resolution.
Always on Top:	Displays the movie window on top of all other windows. With this feature enabled, other programs will not appear on top of the movie window.
AutoPlay:	Allows you to enable and disable the Windows 95 AutoPlay feature on the DVD-ROM drive.

## **Audio Output**

The Audio Output allows you to select between analog or digital audio output. It also allows you to choose either AC-3 (Dolby Digital 5.1 channel) or PCM (Pro Logic) surround sound.

## **TV**

The REALmagic Hollywood Plus can output MPEG video to the computer monitor or to a TV. If you select TV for video output, check the appropriate box for PAL or NTSC.

## DVD

Click on the DVD tab to display the DVD Station's DVD settings.

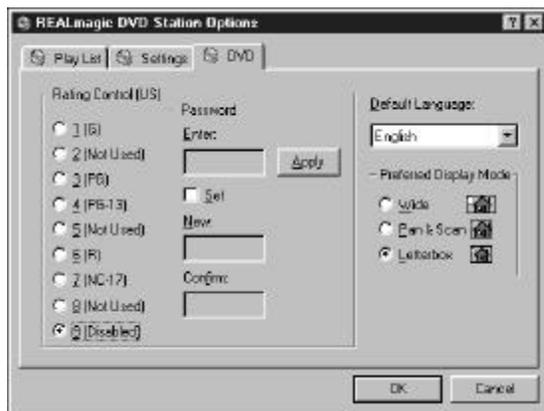


Figure 14. DVD Settings

## Rating Control

Some DVD movie titles support a voluntary movie rating system. With a rated title, this feature allows you to play an edited version of the movie, with violent and other objectionable scenes removed. For instance, a title may come with R, PG-13, and PG-rated versions of the same movie.

When DVD Station is first installed, the password box is grayed out. To enable this feature, check the **Set** box and enter a password. Enter a password of your choice into the **New** box and again in the **Confirm** box. Click on **Apply** to enable the password.

**Note:** Make sure the password is something you can remember or record it at a secret place. If you forget the password, you must reinstall the DVD Station software to enter a new password.

When you want to change the rating level, enter the password into the **Enter** box and then make your selection.

**Important Note:** This feature has no effect on titles that do not support the Parental Lockout feature. Most DVD movie titles do not use this voluntary rating system. You cannot rely upon this feature to prevent your children from viewing objectionable titles. The only way to prevent children from playing such movies is to physically keep those movies out of reach of children.

### Default Language

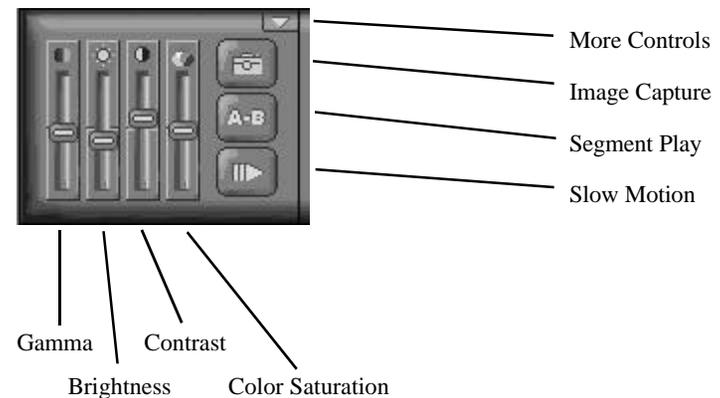
Most DVD movies support multi-lingual audio. You may select the default language of your choice under the **Default Language** selection. If the chosen default language is not available on that DVD movie title, DVD Station will use the default language on that particular DVD movie disc, which may differ depending on the origin of the disc.

**Note:** You must restart the movie after changing the Default Language in order for it to take effect.

---

### Picture Controls

Click the **More Controls** button (see Figure 15) to toggle the display of more features.



**Figure 15. Additional Custom Buttons**

- **Picture Control sliders**

Move the sliders to adjust the Gamma, Brightness, Contrast, and Color Saturation of the movie window. These adjustments affect the movie window only; they are designed so that they will not affect other VGA graphics on your computer monitor. Audio may be muted when using the sliders.

- **Image Capture**

Click the **Image Capture** button to save a BMP image of a movie frame to disk. Note that, because of copyright restrictions, this feature does not work with DVD Video titles.

- **Segment Play (A-B)**

This feature lets you loop playback between any two points in a movie. Click this button on the progress bar once during movie playback to set the start point. Click the button a second time to set the end point. The movie will now loop between the two points until you press another button (for example: Rewind or Stop).

- **Slow Motion Play**

Click this button to play back the movie at half speed. Click the button again to return to normal playback speed. Audio is muted when Slow Motion is selected.

---

### DVD Navigation Buttons

There are five DVD Navigation buttons and a joystick controller on the right-hand side of the DVD Station (Figure 16). Use the mouse to click on the button to activate the desired function.



**Figure 16. Navigation Buttons**



### Audio Soundtrack Language Selector

This operation only functions with a DVD movie disc that contains multiple language soundtracks. Press the Audio Soundtrack Language Selector during play. Click and select the language you want. Figure 17 shows an example where **English** is the selected language. The language selected is momentarily displayed in the upper-right corner of your movie window.



Figure 17. Language Selector



### Camera Angle Selector

This operation only functions with a DVD movie disc that contains multiple camera angles. Press the Camera Angle Selector during play. Move the mouse UP or DOWN to highlight the camera angle you wish to view (Figure 18). Click on the angle you wish to view. The camera angle number is momentarily displayed in the upper-right corner of your movie window.



Figure 18. Camera Angle Selector



### Subtitle Selector

This operation only functions with a DVD disc that contains multiple language subtitles or closed captions. Refer to Figure 19.

Press the Subtitle Selector during play. The language selected is momentarily displayed in the upper-right corner of your movie window. If the selector is divided (the languages appear more than once, as shown in Figure 19), the first selection provides normal subtitles for the selected language. The second language selection identifies subtitles with extra functions.



**Figure 19. Subtitle Selector**



### Menu Selector

Some DVD discs have a unique menu structure called DVD menu. For example, some discs allow you to access the multiple language soundtrack, multiple camera angles, and subtitle options in the DVD menu.



### Title Selector

Some DVD discs, such as movies or Music Videos, have more than one title and contain a Title menu. If the disc has a Title menu, press the Title Selector during play to activate the menu. Operate the joystick to highlight the desired title. Click on the Select button or the Play button to play the title.



### Joystick Controller

The joystick controller is a group of five buttons nested together. The joystick is used to navigate around the possible choices offered in the DVD menus. Click on the UP, DOWN, LEFT, or RIGHT arrows to highlight the option you wish to select, and click on the Select button in the center of the joystick to select the highlighted item.

---

## DVD Playback

### Basic DVD Playback

1. Turn on the PC and press OPEN/CLOSE button on the DVD-ROM drive to open the disc tray.
2. Insert a DVD disc onto the tray and press the OPEN/CLOSE button on the DVD-ROM drive to close the disc tray.
3. Start DVD Station by selecting the following from the taskbar: **START - PROGRAMS - DVD – DVD Station**. A DVD control panel and a Video Screen should appear (Figure 20).
4. If the Auto-Play feature of DVD Station is enabled, the DVD-Video will begin to play.
5. Initially, the DVD Station Control panel is detached from the MPEG Video screen. You can attach the DVD Station to the MPEG Video screen by pressing the F2 key on the keyboard. Pressing F2 again will detach the DVD Station Control panel.
6. If the DVD Station Control Panel is behind the MPEG Video screen and is not visible, click the right mouse button will bring the Control Panel to the foreground.



**Figure 20. DVD Control Panel and Video Screen**

7. If a DVD movie disc is in the DVD-ROM drive, and the DVD-ROM is the first logical drive after the hard disk (for example, the hard disk is drive C: and the DVD-ROM is drive D: ), click **PLAY** on the DVD station. The DVD movie should start.
8. If the DVD-ROM is **NOT** the first logical drive after the hard disk, click the **Options Button** on the DVD Station. In the Options dialog (Figure 21), select the drive that represents your

DVD-ROM drive. DVD Station will automatically search for all available DVD files on the selected drive. A DVD information file “Vts\_01\_0.ifo” (for a DVD-Video disc) should appear on the Title List. Click **OK** to close the dialog.



**Figure 21. Options dialog**

9. Click the **PLAY** button on the DVD station.



## 10-Key Keypad

If DVD Station detects that a DVD movie disc is in the DVD-ROM drive, it will display the 10-Key Key Pad button in place of the Mode button. Clicking on this button will bring up a floating 10-key keypad that will allow you to interact with some DVD movie titles that have menu selections and other options. Figure 22 shows the two 10-key keypads available.



Figure 22. 10-key Keypads



Click on this button to toggle between the two 10-key keypads.



Use this button to make corrections.



This button returns to the previous menu.



Click on this button will execute whatever option you have chosen.

If the 10-key keypad is hidden by another window, clicking on the



button again will bring it back to the foreground.

During full-screen video playback, use the right mouse button to hide and unhide the 10-key keypad.

---

## Video CD Playback

1. Press the OPEN/CLOSE button on the DVD-ROM drive or the CD-ROM drive to open the disc tray.
2. Insert a Video CD 2.0 disc onto the tray and press the OPEN/CLOSE button on the DVD-ROM drive to close the disc tray.
3. Initialize DVD Station by selecting the following from the taskbar: **START - PROGRAM - DVD – DVD Station**.
4. DVD Station will detect the Video CD in the DVD-ROM drive or the CD-ROM drive and display the Video CD 2.0 Control Panel (Figure 23). If the disc is a Video CD 1.0 disc, the 10-key pad will not appear and the display will show **VCD** instead of **VCD2**.



Figure 23. Video CD 2.0 Control Panel

## Select Buttons (Video CD 2.0 Only)

Video CD 2.0 discs feature embedded playback controls. When you play a Video CD 2.0 disc, you can experience a whole new level of interactivity. You may play a disc that prompts you with questions. For example, you may be asked if you want to play the disc in (1) English or (2) Japanese. If you are playing a Video CD 2.0 disc, DVD Station will show a series of number buttons (Figure 24) on the screen next to the Standard Buttons. Use these buttons to make your selection.



Figure 24. Menu Key Pad

Click on the number that you want to select. The number will be displayed in the display panel.

### Playing a Video CD 2.0

DVD Station will display a 10-key pad for Video 2.0 CD. To play the CD, select the **Play** button on the DVD Station application. For most Video 2.0 CDs, you will see a menu of songs appear on the viewing screen. The viewing screen will show only the first half of the songs on the CD. To select a song from the second half of the viewing screen, you must click the **Next Track** button to view the next set of titles on the screen. Once you have decided on a song, use the keypad on DVD Station's control panel to select the song number and click the **Menu Select** key on the control panel using your mouse.

**Note:** Some Video CDs have different formats and do not require the **Menu Select** key. Some formats will work by using the **Next Track** button to select the song, followed by clicking the **Play** button.

---

### Audio CD Playback

1. Press the OPEN/ CLOSE button on the DVD-ROM drive or the CD-ROM drive to open the disc tray.
2. Insert an Audio CD disc onto the tray.
3. Start DVD Station by selecting the following from the taskbar: **START - PROGRAM - DVD - DVD Station.**
4. DVD Station will detect the Audio CD in the DVD-ROM drive or the CD-ROM drive and display the Audio CD Control panel (Figure 25).



Figure 25. Audio CD Control Panel

5. Click the **Play** button to start playing the Audio CD, or use the Play List function to choose your own selection. The **Open File** feature is not supported for Audio CD.

**Note:** If you do not hear any music during playback, check to see if you can hear music with a headphone connected to the headphone jack in front of the CD-ROM or DVD-ROM drive. If you can hear music from the headphones, check to see if you have connected the stereo cable from the DVD-ROM drive to your sound card.

---

## Shortcut Keys

<u>Key:</u>	<u>Description:</u>
Double-click on movie window	Toggle movie playback between full-screen and window mode.
Press any key	Return from full-screen to window playback mode
Right-click on movie window	Display playback controls (window playback mode only)
Move mouse to bottom of screen	Display mini-controls (full-screen mode only)
F1	Help
F2	Toggle to detach/attach playback controls to movie window
F3	Display DVD movie information (window playback mode only)
F4	Size window to the movie's standard resolution (without scaling or stretching)
F5	Switch between VGA and TV mode

Alt-F4	Quit
ctrl+a	Activate angle menu
ctrl+c	Activate frame capture
ctrl+d	Toggle display timer
ctrl+e	Eject disk
ctrl+f	Fast-forward (cycles from 2x, 8x, then normal)
ctrl+g	Segment (A-B) play
ctrl+l	Cycle playback mode (All, Random, Play List)
ctrl+m	Display DVD menu
ctrl+n	Next track or chapter
ctrl+o	Open options dialog
ctrl+p	Play/pause toggle
ctrl+q	Activate closed caption/sub-title menu
ctrl+r	Rewind
ctrl+s	Stop
ctrl+t	Display DVD title menu
ctrl+v	Previous track or chapter

ctrl+w	Slow motion playback
ctrl+z	Zoom to Full Screen

**Video CD 2.0 Shortcut Keys:**

ctrl+0-9	Select numbers on Video CD 2.0 keypad
ctrl+←	Backspace on Video CD 2.0 keypad
ctrl+<Enter>	Apply or enter selection on Video CD 2.0 keypad
ctrl+→	Play default Video CD 2.0 track

**DVD Menu Shortcut Keys:**

	Select menu option (active when DVD menu is on-screen)
<Enter>	Activate selection (active when DVD menu is on-screen)

**Notes:**

## Appendix A. Advanced Configuration Options

### Manual Color Calibration

If the Auto calibration feature displays an error message, follow the steps below to manually calibrate the color:

1. From the **REALmagic Configuration...** dialog (refer to Figure 3), click **Advanced >>>** and then **Manual calibration**.
2. From the **Dialog** (Figure 26), use your mouse to move the bar (marked R) slowly up or down to a point where the image of the big box on the right-hand side of the Dialog window appears similar to the image of the “GOOD” box. You can use the UP or DOWN arrow keys on the keyboard to make fine adjustments. Click **Next**. You must perform this procedure three more times for the colors red, green, and blue. After the last adjustment, click **OK**.

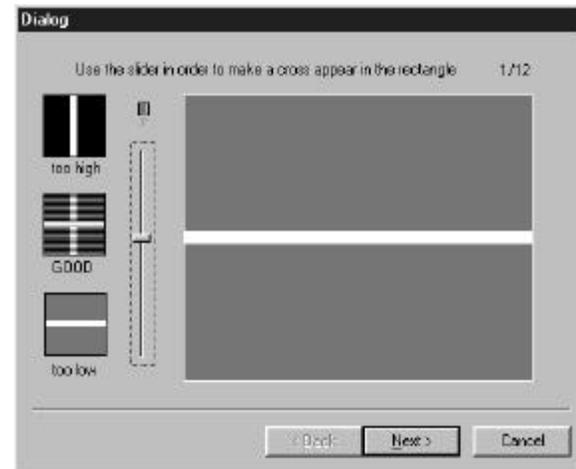


Figure 26. Dialog

---

## Advanced Color Adjustments

When you move the mouse or a window on top of the DVD or MPEG video, the VGA graphics need to appear on top of the video window. To do this, the DVD/MPEG-2 Playback Card uses a well-established method called chroma key. This method is similar to the “blue-screen” effect often used in television. A special color is chosen as the “chroma key” color, and video will only display where the chroma key color appears. For practical reasons, the chroma key color is usually a rarely used color that is very unlikely to be used by other Windows programs.

The DVD/MPEG-2 Playback Card software defaults to a dark green color as the chroma key color. You might prefer to use a different color if the default color conflicts with one of your application programs. When there is a conflict, you will see MPEG video displayed “through” an area of your application. There may also be instances where the default color is not compatible with your VGA display.

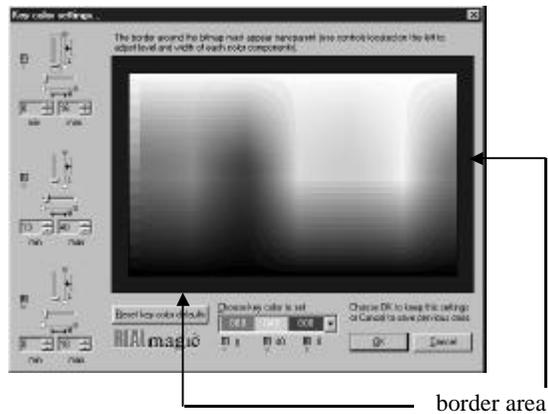
Follow the steps below to set your own chroma key color if:

- You want to use a different chroma key color, or
- You are not able to view any MPEG video on your VGA screen, or
- If the VGA graphics seems to “bleed through” the MPEG video

**Note:** If you are not able to view MPEG video at all, there are several things you should try before changing the chroma key color: make sure that the monitor is connected to the DVD/MPEG-2 Playback Card, powering off the computer and try again after restarting, or double check the Border Adjust and Color Calibration procedures.

1. Start DVD Station and play an MPEG video. Even if the video is not visible, you should be able to hear the audio.
2. Click on the **Options** button, click on the **Settings** tab, and then click the Configure button. Next, click the **Advance>>>** button and select **Color Adjustment**.
3. Select a key color from the **Choose key color to set** menu.

4. If you would like to select a key color that is not in the menu, select **Add Custom Color**, which is the last item on the menu. This will bring up a dialog box that allows you to enter the red (R), green (G), and blue (B) values of the color you want. There are 256 levels for each color. Enter a value between 0 and 255. (Figure 27).



**Figure 27. Key Color Settings**

5. MPEG video should appear in the border surrounding the color chart. There should also be a “hole” in the color chart where MPEG video will show through.
6. If MPEG video does not appear in BOTH the border and the “hole,” then you must adjust the R, G, and B values with the sliders until you can see the video in both regions. Do this by adjusting the width (W) and length (L) slider bars of each color to make the video appear both inside and outside of the color chart.  
Normally, adjusting these sliders can easily make a very large hole in the color chart that displays MPEG video. Once you can see video in both the inside and the outside area, you should adjust the sliders to reduce the size of the hole so that it is about 40 x 40 pixels, which is roughly the size of a Windows icon. Making the hole too small will cause video “jittering” and “bleeding.” Making the hole too large will cause MPEG video to play “through” areas within a larger range around the chroma key color.
7. If necessary, click the **Reset Key Color Defaults** button to reset the key color back to the factory default value.
8. Click **OK** to exit the **Key Color Settings** window.

**Notes:**

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