Using the Matrox VFW Capture Driver

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matrox
Digital Video Solutions

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Your notes

About the Matrox VFW capture driver

The Matrox VFW capture driver allows you to use your Matrox RT hardware with your Video for Windows program to capture analog video. The Matrox realtime plug-in for Adobe Premiere lets you capture analog and DV clips with your Matrox RT system. By using the Matrox VFW capture driver, however, you can capture analog clips using capture programs other than Adobe Premiere, such as Sonic Foundry's Vegas Video. You can also use the Matrox VFW capture driver with many messenger and video conferencing programs (such as Microsoft NetMeeting) to send streaming video over the internet or your corporate intranet.

Because of the system resources needed to capture with Video for Windows programs, you'll get best results capturing clips at less than full-screen resolution (such as in video streaming programs). For more information, see "Monitoring your CPU usage" on page 3.

Although Matrox has tested many Video for Windows programs, there may be certain operational limitations when using the Matrox VFW capture driver with some of these programs (as well as with untested programs).

Note Instead of using your Video for Windows program to capture analog clips on your Matrox RT system, you'll get much better results using a Matrox capture format in Adobe Premiere to capture your analog clips.

System requirements

The Matrox VFW capture driver requires the following minimum system configuration:

- Microsoft Windows XP Home or Professional, or Windows 2000 (Service Pack 2 or later is recommended).
- A Matrox RT2000 or RT2500 system with Matrox Video Tools 3.1b or later installed.
- A CPU of at least 1 GHz. If you choose to install the Matrox VFW capture driver on a computer with a CPU of less that 1 GHz, you may experience dropped frames when capturing or streaming video.

Before you start capturing

To properly capture and play back audio, make sure you've set appropriate recording and playback volume levels for your sound card, as explained in the manual for your Matrox RT system.

Note The Matrox VFW capture driver does not support running more than one Video for Windows program at a time.

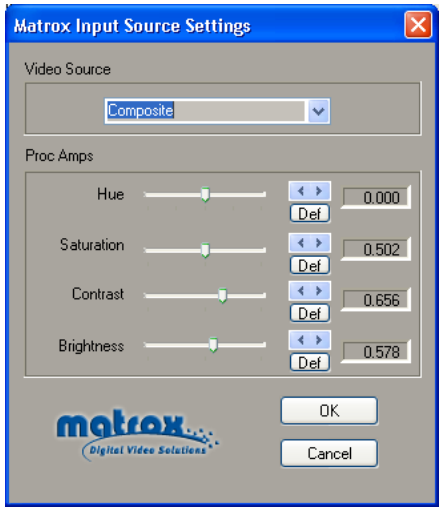
Capturing material for your production

The following sections explain how to select the device from which you want to capture material, change the proc amp settings of your incoming video, and select your video capture format and resolution.

Important Depending on which Video for Windows program you use with the Matrox VFW capture driver, you may not have access to all of the following settings. Some Video for Windows programs may also override your settings with defaults needed for proper use of the program. For instructions on a program's use, such as how to capture material, refer to your program's documentation.

Selecting your capture source and adjusting proc amp settings

1. Start your Video for Windows program.
2. Choose the program's **Video Source** command (refer to your program's documentation).
3. From the list of available devices, select **Matrox Video Capture Device**. The **Matrox Input Source Settings** dialog box appears:



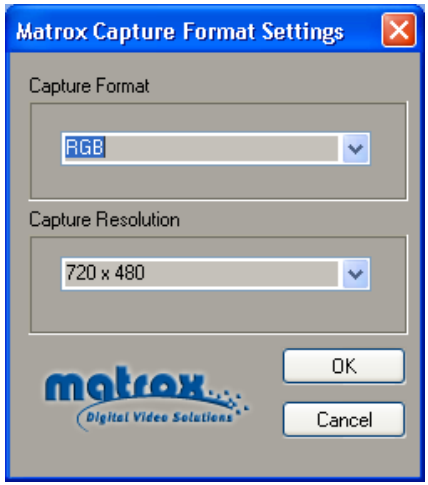
4. From the **Video Source** list, select **Composite** or **S-Video (Y/C)**. Make sure this setting matches your input device.
5. Use the proc amp controls as needed to adjust the incoming analog video signal before starting the capture. To return a control to its factory default setting, click the **Def** button.
   - **Hue** Adjusts the tint of the colors in the image.
   - **Saturation** Adjusts the saturation (vividness) of the image's colors.

– **Contrast** Adjusts the difference in luminance between the lightest and darkest areas of the image.

– **Brightness** Adjusts the level of black in the image.

Selecting your capture format and resolution

1 Choose your program's **Video Format** command. The **Matrox Capture Format Settings** dialog box appears:



2 From the **Capture Format** list, select the format you want for your captured clips.

Note In some Video for Windows programs, if you select **RGB** or **YUV** as your capture format, you'll have to choose a compressor from the list supplied by your program. For details, see your program's documentation.

3 If you select **RGB** as your capture format, you can select a different resolution from the **Capture Resolution** list.

Note The only **Capture Resolution** available for the YUV capture format is full-screen (that is, 720×480 for NTSC and 720×576 for PAL). Some Video for Windows programs, however, may only allow certain resolutions for proper usage, or may set a default resolution that overrides the selected capture resolution.

Monitoring your CPU usage

Even on a system that meets the recommended system requirements, there are many factors that can cause dropped frames while using the Matrox VFW capture driver. These include the speed of your CPU, the amount of hard drive space available on your computer, the capture format and resolution of your clips, and the compression format (codec) used in your Video for Windows program.

You can monitor your CPU usage by right-clicking on the Windows toolbar, and choosing **Task Manager**. On the **Performance** tab, choose **Options** and make sure that **Always On Top** is selected. While capturing clips, if your CPU usage reaches and maintains 100% for too long, you will drop frames.

Tip If you're experiencing dropped frames during your captures, you can disable the program's live video window on your computer monitor (if allowed by the program) to try to solve this problem. If you have an NTSC or PAL video monitor connected to your system, you'll still be able to monitor your captures. Refer to your program's documentation for information on disabling the live video window.

A note about capturing video with audio

Because of the way Video for Windows captures material, when you capture video and audio to the same *.avi* file, the duration of the video and audio portions of the clip may not be exactly the same. For example, the clip's audio may end a few frames before its associated video. To play back the clip, Video for Windows adjusts the frame rate of the video so that it's synchronized to start and stop at the same time as the audio. This means the video may not play back smoothly, and the clip's frame rate won't match the standard frame rate for your system (29.97 fps for NTSC video, or 25 fps for PAL video). The problem is most apparent with very short clips.

If you use Adobe Premiere to capture your material, the duration of the video and audio portions of your clips will match, and the audio will be stored in separate *.wav* files.

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