Common information

This text contains important information for the miroVIDEO DC30 user. If you encounter any problems when working with the miroVIDEO DC30, please read the manual and this text.

The actual driver for the miroVIDEO DC30   is V. 1.10.

Attention, very important changes:

The playback error on Pentium Pro systems with Natoma chipset should be fixed with this driver version. In case you are using a system with the Natoma chipset please insert the following lines in your win.ini :

[miroDC30]

Natoma=1

Since this driver version the video overlay during playback of AVI files, which are captured with miroVIDEO DC30, on the Windows desktop will be supported. Further there is a complete deinstallation of the miroVIDEO DC30 drivers and software incl. the registry entries available.

New are "miroVIDEO DC30 informations", an additional help file and the "miroAVI converter", a tool which converts AVI files captured with the miroVIDEO DC20 into miroVIDEO DC30 format. After the installation of the miroVIDEO DC30 all the software mentioned above is available in the miroVIDEO DC30 software group.

On this miroVIDEO DC30 CD-ROM there is a program called **UNINST.EXE**, located the subdirectory **UNINST**, which should be started before the installation of the new miroVIDEO DC30 drivers.   This program removes all miroVIDEOO DC30 drivers and registry entries.

This **UNINST.EXE** program is available for download   via internet on the miro web page for **Digital Video Products**. We recommend to all customers, who don't have a miroVIDEO DC30 CD ROM V.1.10 or higher, to load load this file down.

(see additional **driver update for miroVIDEO DC30**)

Contrary to the description of fast decompress for playback made in the miroVIDEO DC30 manual, this fast decompress function is not implemented in this software release. This means that in the DC30CTRL program, the "**Window (accelerated)**" option is not yet available.

Contrary to the description in the miroVIDEO DC30 manual page 14. 3.   Place the CD ROM you received with your miroVIDEO DC30 (V1.10 or higher) in your CD-ROM drive and switch to the **setup** directory now. The installation has changed and the **miroDC30.inf** file **is not** located in the root of the CD anymore, but it is only located in the **SETUP subdirectory.**

Driver update for miroVIDEO DC30

Recommendation:

Before you try to install an update of the miroVIDEO DC30 drivers, please make sure that the old drivers and registry entries are removed.

Since   driver version **V.1.10** there is a complete deinstallation of drivers and registry entries available !!! There is a complete uninstall program in the miroVIDEO DC30 program group.

If you like to update an older miroVIDEO DC30 driver version to version V.1.10, please insert the miroVIDEO DC30 CD into your CD-ROM drive and start the program **UNINST.EXE**, which is located in the **UNINST** subdirectory. Then the old drivers and registry entries will be removed. Then you should start the installation of the new drivers.

Hint:

This **UNINST.EXE** program is available for download   via internet on the miro web page for **Digital Video Products**. All customers who don't have a miroVIDEO DC30 CD ROM V.1.10 or higher should load this file down.

Windows 95 Service Release 2 and miroVIDEO DC30

Recommendation:

Before you install the miroVIDEO DC30 hardware in your system, please first start the setup program out of the setup directory of the delivered miroVIDEO DC30 CD-ROM.
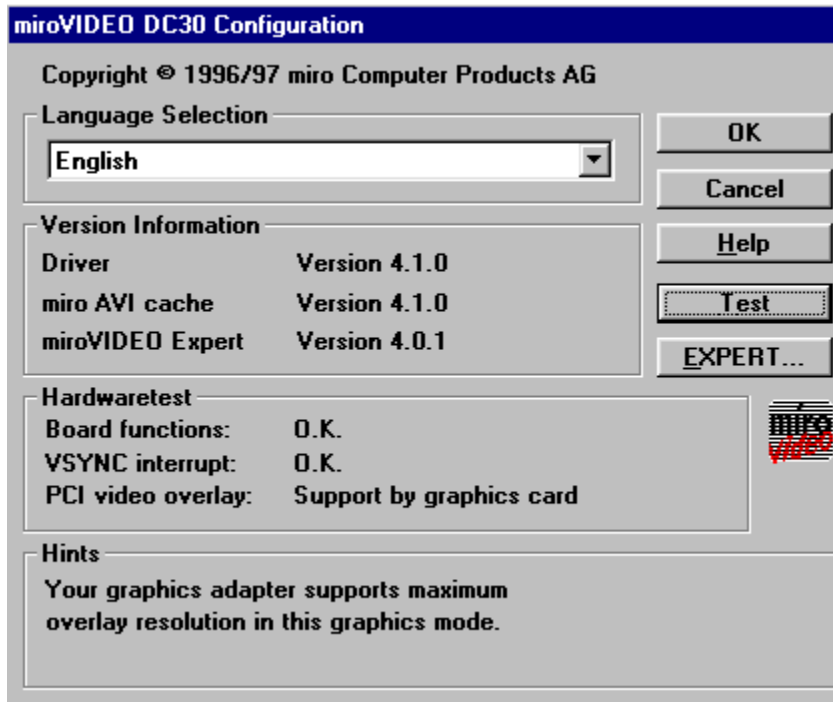
Known bugs:

The playback of MJPG compressed AVI files out of the Explorer only appears in a window. A video output to TV is not possible. Please use the MediaPlayer for playback your AVI files to TV.

Direct Video and miroVIDEO DC30

If you have installed "**Direct Video**" on your computer and you like to playback an AVI movie with the Media Player to TV, you have to start DC30CTRL before starting the Media Player, otherwise you only get a preview and no output to video or TV.

Direct Draw and miroVIDEO DC30

If you combine miroVIDEO DC30 with a miro graphics board, which will be supported with Direct Draw drivers, the miroVIDEO DC30 configuration test will display the following messages shown in the picture below.

miroVIDEO DC30 Configuration

Copyright © 1996/97 miro Computer Products AG

Language Selection

English

Version Information

Driver   Version 4.1.0

miro AVI cache   Version 4.1.0

miroVIDEO Expert   Version 4.0.1

Hardwaretest

Board functions: O.K.

VSYNC interrupt: O.K.

PCI video overlay: Support by graphics card

Hints

Your graphics adapter supports maximum overlay resolution in this graphics mode.

OK

Cancel

Help

Test

EXPERT...

If you combine   miroVIDEO DC30 with a graphics board of another manufacturer it could happen that the messages which are displayed during the configuration test are different from the message in the picture above. The following message may appear:

Direkt Draw Info (384 x 288) (4,4,4,4) (Min=2300; Max=9999)

This means that the Direct Draw driver can use a window with a resolution of   **384 x 288** pixels for the video overlay **(PAL: half horizontal resolution, 1 field)**. Therefore the visible windows (onscreen) and the invisible screen (offscreen) may not exceed certain borders and a certain width. **(4,4,4,4)**

The scaling between onscreen and offscreen happens only in certain steps. These steps are dependant on the used graphics chip, the displayed screen (resolution, color depth, refresh rate) and the used graphics driver. Mostly the graphics driver of your graphics board manufacturer offers more capabilities than the original graphics driver of the chip manufacturer in Windows 95. The minimal value **(Min=2300**) means that the visible window has to be   at least 2.3 times larger than the offscreen window. The maximum value for the maximum   enlargement is **(Max=9999).**

This advantage of the variable scaling uses the miroVIDEO DC30.

The miroVIDEO DC30 board makes use of this advantage (variabe scaling) by using the system resources in dependance of the settings (see Overlay Settings) and achieves the
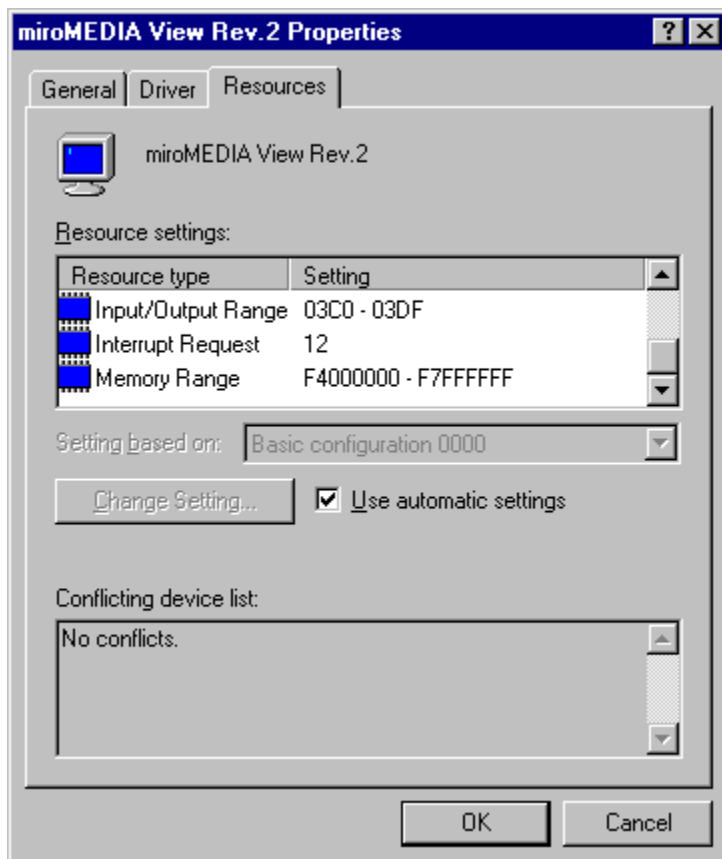
best results for capturing and playback

S3 graphics boards with 868, 968 chip and miroVIDEO DC30

If you have installed a graphics board with S3 chip 868, or 968, please make sure that this graphics board really uses a 64MB memory area. You can check this in the Device Manager of Windows 95. Computers with older AWARD BIOS report only a 32MB memory area back to the Device Manager. As soon as you like to install another device which memory area is located directly behind the memory area of the graphics board the system can hang up, because the memory areas overlap.

Solutions:

- Update of the AWARD BIOS
- Change the memory area of your graphics board in the Device Manager

miroMEDIA View Rev.2 Properties

General | Driver | Resources

miroMEDIA View Rev.2

Resource settings:

Resource type	Setting
Input/Output Range	03C0 - 03DF
Interrupt Request	12
Memory Range	F4000000 - F7FFFFFF

Setting based on: Basic configuration 0000

Change Setting... ☑ Use automatic settings

Conflicting device list:

No conflicts.

OK   Cancel

Video overlay support for miroMEDIA View and miroMEDIA 3D

The video overlay functionality for the graphics boards mentioned above will be implemented in the latest Windows 95 driver versions for this boards. These Windows 95 drivers support the Video Overlay Surface function. With this function a video overlay is possible during capturing.

Since driver version V.1.10 it is possible to get a video overlay window during playback AVI files on the Windows desktop on condition that the graphics board will be supported with a Direct Draw driver, which supports the special "**overlaysurface**" function. This means if you already get a video overlay during the capture, you will get a video overlay during playback too. Ensure that in the miroVIDEO DC30 control the output option S-Video or Composite Video is enabled. If you have enabled the ouput option window you won't get a video overlay in a window.
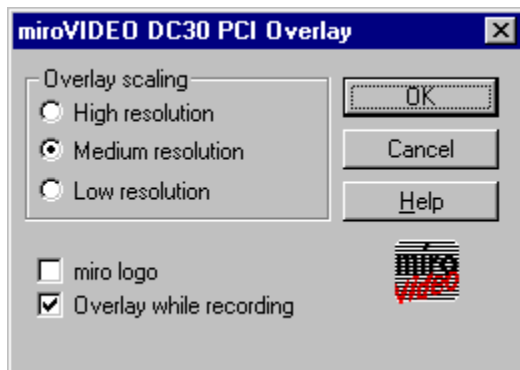
Video Overlay support in general

In general, state-of-the-art PCI graphics adapters with S3 Trio 64V+ or S3 Virge graphic processors are able to support a PCI overlay. Some manufacturers don't support this function in their Windows 95 drivers. You can easily check if your graphics board supports this function by opening the "**miroVIDEO DC30 Configuration**" program and click the "**Test**" button. If you notice any disturbances in the overlay windows during capturing, change the overlay scaling in VidCap32 in the "**Options**" menu and switch Video Display into the next smaller level. In doubt, select the "**Low resolution**" option for the overlay scaling. This should fix the disturbances in the video overlay windows.

Since driver version V.1.10 it is possible to get a video overlay window during playback AVI files on the Windows desktop on condition that the graphics board will be supported with a Direct Draw driver, which supports the special "**overlaysurface**" function. This means if you already get a video overlay during the capture, you will get a video overlay during playback too. Ensure that in the miroVIDEO DC30 control the output option S-Video or Composite Video is enabled. If you have enabled the ouput option window you won't get a video overlay in a window.
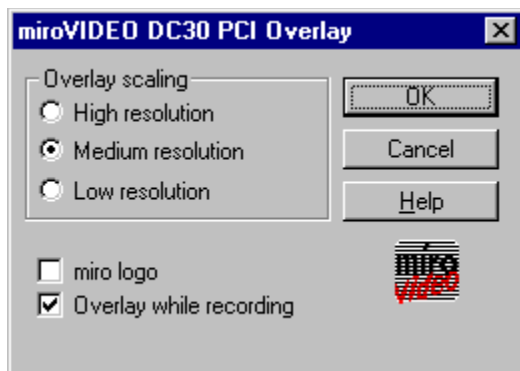
Changing the resolution during capturing with active video overlay

Avoid changing the resolution during capturing AVI files with activated video overlay. The video overlay can be enabled in VidCap32 or in the Premiere capture program.

Video overlay and playback

Video overlay during playback with miro graphics boards With the miroVIDEO 20TD live, the miroMEDIA TV and the miroMEDIA 3D boards, a video overlay during playback AVI files can be realized on the computer monitor. Therefore you have to connect the composite input of miroVIDEO 20TD live, or the composite input (S-VHS -> composite adapter) of the miroMEDIA TV with the composite output of the miroVIDEO DC30. After this please start the miroTV application. You can connect the miroMEDIA 3D board via an S-VHS cable to the S-VHS output of the miroVIDEO DC30. Then start the miroTELEVISION application.

Since driver version V.1.10 it is possible to get a video overlay window during playback AVI files on the Windows desktop on condition that the graphics board will be supported with a Direct Draw driver, which supports the special "overlaysurface" function. This means if you already get a video overlay during the capture, you will get a video overlay during playback too. Ensure that in the miroVIDEO DC30 control the output option S-Video or Composite Video is enabled. If you have enabled the ouput option window you won't get a video overlay in a window.

Video overlay during playback in general

If you installed a graphics board in your computer, which can also display a video overlay, connect the video input of the graphics board(Composite or S-VHS) to the miroVIDEO DC30 composite output and start the Video Overlay application of the manufacturer of your graphics board.

Since driver version V.1.10 it is possible to get a video overlay   window via PCI bus during playback AVI files on the Windows desktop on condition that the graphics board will be supported with a Direct Draw driver, which supports the special "overlaysurface" function. This means if you already get a video overlay during the capture, you will get a video overlay during playback too. Ensure that in the miroVIDEO DC30 control the output option S-Video or Composite Video is enabled. If you have enabled the ouput option window you won't get a video overlay in a window.

Interrupt Sharing

This miroVIDEO DC30 version supports PCI interrupt sharing. This function is necessary if the motherboard allocates a single interrupt to all PCI slots. In this case, all PCI devices have to share one interrupt which means that every driver has to check if the current interrupt comes from its device. If this is not the case, the driver must not handle this interrupt and has to pass it to the next PCI device. If only one of the devices involved (or its driver) fails to do so, the system will not function properly. Because the devices which are mostly used for recording and playing back video are SCSI hard disks and SCSI controllers, we test the behavior of SCSI controllers.   Under Windows95, we tested miroVIDEO DC30 together with Adaptec SCSI controllers and the Adaptec driver software EZ-SCSI 4.0. This combination works without any problems.

Hint: It could be, that your miroVIDEO DC30 has no INT of its own, that it   has e.g. the same as your Adaptec 2940 SCSI controller. You can check that in the control panel by opening the Device Manager. Click once on the selected device and open the resource folder. Then you should reboot your system and deactivate **auto-PNP-PCI-configuration** in your system's BIOS and assign the interrupts by yourself. If this is the case, your performance should increase considerably.

System.ini entries after   the installation of miroVIDEO DC30

After successful installation of the miroVIDEO DC30 you should find the following entries in the system.ini in the section **[drivers]:**

VIDC.MJPG=DC30CDC.DRV

wave_m=DC30AUD.DRV

mixer_m=DC30AUD.DRV

In the section **[mci]** there should be the following line:
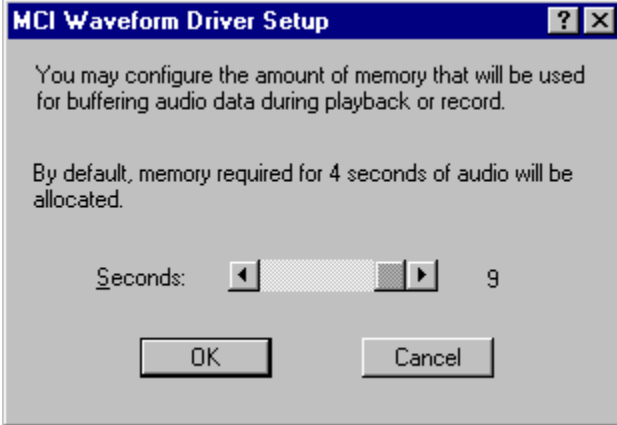
AVIVideo1=miroAVI.drv

miroVIDEO DC30 audio properties

In System control you can set the audio properties of the miroVIDEO DC30 by double-clicking the Multimedia icon. If you have already installed, or integrated a sound board in your system, you can choose between your soundboard or the miroVIDEO DC30 in "**Properties for Multimedia Audio**". By default, the miroVIDEO DC30 is set as sound device. In case you didn't install a sound device before, you can use the miroVIDEO DC30 for capturing and playing back files in *.wav format
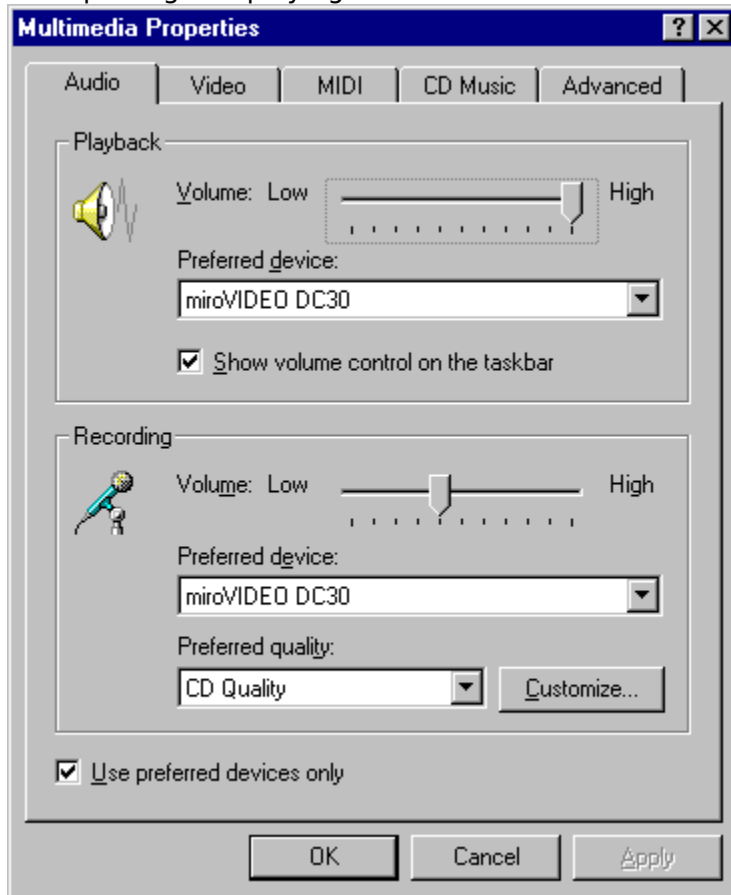
Important hint:

If you get an error message during capturing an AVI like "**Not enough Audio Buffers**", or "**Cannot open Audio Device**", please open in the control panel the mulimedia icon and select the "Advanced" folder. Then open in the list of "**Media Control Devices**" the "**Wave Audio Device**" and click the "**Settings**" button. A further windows opens where you can select the reserved seconds for audio capturing. Increase this value to the maximum of 9 seconds.

MCI Waveform Driver Setup

You may configure the amount of memory that will be used for buffering audio data during playback or record.

By default, memory required for 4 seconds of audio will be allocated.

Seconds: ◄ ▢ ►   9

[OK]   [Cancel]

Capturing and playback of AVI sequences

For capturing and playback AVI movies with the miroVIDEO DC30 we recommend absolutely to set the miroVIDEO DC30 as well as an active video capture device and as an active audio device too. Only this setting can ensure that audio and video can be captured and playback lip-synchronous. If you have installed another sound device in your system and you like to use this board any further, please make sure that the miroVIDEO DC30 is set as an active primary sound device before capturing and playback AVI files.

Jerks during playback

To make sure that you get synchronous video and audio during playback, we redesigned our miroVIDEO DC30 driver for video playback. Now every frame will be marked with an internal time code. Because the captured frames will be buffered, there are no problems to digitize more frames than your hard disk can write but during playback problems may occur. As yet, frames will be dropped if the hard disk cannot achieve the selected data rate.

Result:

No runtime difference between video and audio after long playback, using the miroVIDEO DC30 for video and audio capture and playback.

Now with the internal time code, every frame has to be played back up to a defined point in time. In case the hard disk cannot achieve the selected data rate, you get jerks because some frames will be dropped for keeping the selected datarate. Playback without loss of frames there is no runtime difference between audio and video data.

Solutions:

1. If you have plenty of RAM memory in your system, you can disable the virtual memory of your Windows 95.

2. Insert the following two lines in your system.ini below the section **[vcache]**:

> **MinFileCache=4096**
>
> **MaxFileCache=4096**

Both values should be equal and about 25% of the main memory. i.e.   for a system with 16MB you should use a value of 4MB (4096KB).

3. Otherwise you should reduce your selected data rate during capturing.

Hints:

1. During playing back AVI movies using the Media Player or Adobe Premiere at a high resolution, with two fields and a high data rate, few frames are jerky and jittering during the startup of the playback. First, the frames will be loaded into an internal cache memory, before they can be played back with the Media Player. For playing back an AVI movie to a VCR we recommend to insert a short trailer of about a few seconds before the movie starts, or to use the miroAVI cache with the "synchronized start" option enabled.

2. AVI files, captured with Vidcap32 or another capture program mostly have a worse interleave factor between the video and audio blocks, this means that first a number of video blocks and then the audio blocks are located in the file. This could cause jerks during playback. This worse interleave factor you can change with Adobe Premiere by calculating the AVI file once again with the "**Make MOVIE**" function. The resolution and datarate should be kept, but in the output options make sure that the setting for "Audio Blocks" is set to "**1Frame**". In the miroVIDEO DC30 presets for Adobe Premiere 4.2 this is already the default setting.

Hard disks in general

Windows 95 supports the 32-bit access to hard disks. Please check in Control panel | System|Device Manager, if your hard disk drive or your SCSI controller has been detected by Windows95 correctly. If not, the data transfer rate of your hard disk will not suffice for a satisfying quality when recording and playing back video.

We recommend to install a second hard disk to save the complete video clips for recording and playback. You can save temporary files to your system hard disk. During recording and playing back, Windows 95 accesses system files. If these files are located on the same hard disk as the video clips, the head has to be repositioned which leads to one or more dropped frames (unsmooth playback). Even the internal miroVIDEO DC30 cache (which is part of the driver) cannot avoid this if the hard disk is used at the peak performance.

Enhanced-IDE hard disks

With some E-IDE hard disks, high data rates result in an unsmooth playback when playing back AVI files because the hard disk is recalibrated while a file is read. This is no problem of miroVIDEO DC30 but is due to the functionality of your hard disk and the other system components. This miroVIDEO DC30 driver version will eliminate these unsmooth "jerks". If you got a disk with special busmaster drivers with your hard disk, please install these drivers in your system, because the disk performance will raise considerable.

SCSI hard disks

Up to now SCSI hard disks are more expensive than E-DIE hard disks, but for digital video editing they have advantages. During capturing and playback tests with the miroVIDEO DC30   Wide SCSI hard disks with wide SCSI busmaster PCI controllers (or ultra wide SCSI) have been the efficient combination, cause these combination load less the processor and the system has more performance

We can recommend to use   for digital video editing special AV hard disks, which do not calibrate, so you get a continuos datastream for reading and writing .

Computer Science Megabyte vs. Hard disk megabyte

To begin the discussion regarding hard disk space requirements and data transfer rates, one must understand the difference between a **computer science** Megabyte and a **hard disk** Megabyte.   A **computer science** Megabyte is 1,048,576 bytes.   Each byte represents one typed letter, character or unit of information. In contrast, a **hard disk** Megabyte is 1,000,000 bytes. What this means is that a **hard disk** Megabyte is less than the correct **computer science** Megabyte.

Image Size Information

The moving image displayed on a television or video monitor consists of various parts. Within each second of video display, 25 individual frames for PAL/SECAM or 30 individual frames for NTSC are displayed.   Each frame consists of two fields (one odd and one even) that are interlaced together to display the final image.

For PAL the odd field is 768 pixels wide and 288 pixels high.   The even field is also 768 x 288 pixels. Combining the two fields yields the result that one full frame is 768 x 576 active pixels.   The width does not change only the height changes because the two fields are interlaced together.   For NTSC, the principle is the same only the physical size is different, one field is 640 x 240 active pixels and one full frame is 640 x 480 active pixels.

Each pixel contains luminance (brightness) and color information that is represented by 2 computer bytes (16 bits).   The following table shows the amount of information contained in an uncompressed video signal in accurate   **computer science** terms.

Square Pixel	NTSC	PAL	SECAM
Single Pixel	2 bytes (16 bits)	2 bytes (16 bits)	2 bytes (16 bits)
Single Field	640 x 240 pixels 153,600 total pixels 307,200 bytes	768 x 288 pixels 221,184 total pixels 442,368 bytes	768 x 288 pixels 221,184 total pixels 442,368 bytes
Full Frame **(both fields together)**	640 x 480 pixels 307,200 total pixels 614,400 bytes	768 x 576 pixels 422,368 total pixels 884,736 bytes	768 x 576 pixels 422,368 total pixels 884,736 bytes
Frames per second	30	25	25
Bytes per second	18,432,000	22,118,400	22,118,400
MB per second **(computer science MB rounded off)**	17.6	21.1	21.1

Compression & Hard Disk Space

Much confusion exists regarding video capture, compression, video data rates and the image quality that is actually captured to the hard disk.   By the time the video is fed into the computer and finally stored on the hard disk, the video signal has gone through a number of processes.   The capture process is a multi-step process whereby the more information (video data) that is captured to the hard disk, the better the video image**.**

Why Compression?

One second of uncompressed video requires 17.6 Megabytes (NTSC) or 21.1 Megabytes (PAL) of hard disk storage.   To store one minute of uncompressed video to the hard disk requires 1.03 Gigabytes or 1.27 Gigabytes of space.   It also means that the computer must be capable of capturing and storing the video to the hard disk very quickly.   The data transfer rate from capturing the video and storing it to the hard disk must be sustained at 17.6 Megabytes each second for NTSC and 21.1 Megabytes each second for PAL. This is beyond the performance of today's standard PC and therefore the video is compressed

before it is stored to the hard disk.

The following table shows the amount of video that can be captured to a computer's hard disk at a given compression rate.   Please note that the hard disk values are used for the space calculations. The   information in the table is applicable to miroVIDEO DC20, miroVIDEO DC30 and other products that capture both video fields in the full video frame and at full resolution.

Compression Rate	1 (hard disk) GB Drive		4 (hard disk) GB Drive		8 (hard disk) GB Drive	
	1,000,000,000 Bytes		4,000,000,000 Bytes		8,000,000,000 Bytes	
	PAL	NTSC	PAL	NTSC	PAL	NTSC
1:1	00h 00m45s	00h 00m54s	00h 03m01s	00h 03m37s	00h 06m02s	00h 07m14s
2:1	00h 01m30s	00h 01m49s	00h 06m02s	00h 07m14s	00h 12m03s	00h 14m28s
3:1	00h 02m16s	00h 02m43s	00h 09m03s	00h 10m51s	00h 18m05s	00h 21m42s
4:1	00h 03m01s	00h 03m37s	00h 12m03s	00h 14m28s	00h 24m07s	00h 28m56s
5:1	00h 03m46s	00h 04m31s	00h 15m04s	00h 18m05s	00h 30m08s	00h 36m10s
8:1	00h 06m02s	00h 07m14s	00h 24m07s	00h 28m56s	00h 48m14s	00h 57m52s
10:1	00h 07m32s	00h 09m03s	00h 30m08s	00h 36m10s	01h 00m17s	01h 12m20s
15:1	00h 11m18s	00h 13m34s	00h 45m13s	00h 54m15s	01h 30m25s	01h 48m30s
20:1	00h 15m04s	00h 18m05s	01h 00m17s	01h 12m20s	02h 00m34s	02h 24m41s
50:1	00h 37m41s	00h 45m13s	02h 30m42s	03h 00m51s	05h 01m24s	06h 01m41s
100:1	01h 15m21s	01h 30m25s	05h 01m24s	06h 01m41s	10h 02m49s	12h 03m23s

Compression and Data Rates

The following table shows the compression rates for miroVIDEO DC30 and miroVIDEO for a given data rate.   Both products are able to capture and compress both video fields in full frame video and at full resolution directly to the computer's hard disk. Compression rates less than 5:1 are considered **broadcast quality** and some professionals insist on rates less than 4:1.

Data Rate (kilobytes)*	miroVIDEO DC30		miroVIDEO DC20	
	PAL	NTSC	PAL	NTSC
6,000	3.6:1	3.0:1	-	-
5,000	4.3:1	3.6:1	-	-
4,000	5.4:1	4.5:1	-	-

3,500	6.2:1	5.1:1	-	5.1:1
3,000	7.2:1	6.0:1	7.2:1	6.0:1
2,000	10.8:1	9.0:1	10.8:1	9.0:1
1,000	21.6:1	18.0:1	21.6:1	18.0:1
500	43.2:1	36.0:1	43.2:1	36.0:1

The data rate is given in thousands of kilobytes not megabytes. A kilobyte is equal to 1024 bytes.   To calculate the compression rate as given divide the video data by the total kilobytes per second. For example to calculate the compression ratio for NTSC at 6,000 kilobytes per second, multiply 6,000 times 1,024 (6,144,000) and then divide 18,432,000 by the result.   This yields 3 and gives a video compression ratio of 3:1.

Optimizing your Windows 95 system

miroVIDEO DC30 is a high-end video capture board. This is why you should set your optimum system configuration in order to achieve maximum quality. Here are some of the most important settings for enhancing your hard disk's data rate:

1. Under **My Computer, Control Panel, System, Performance, File System..., Hard Disk**, set **Read-ahead optimization** to **None**.

2. Under **My Computer, Control Panel, System, Performance, File System..., Troubleshooting**, activate the **Disable write-behind caching for all drives** option.

3. If you have more than 32 MB memory, deactivate **virtual memory** under **My Computer, Control Panel, System, Performance, Virtual Memory**.

4. Deactivate the Auto **insert notification option** under **My Computer, Control Panel, System, Device Manager, CDROM, Settings.**

5. If you use a SCSI controller, always use the manufacturer's most up-to-date driver. The drivers incorporated in Windows 95 generally offer poorer performance.

miroVIDEO Expert

The miroVIDEO Expert is a program which calculates a recommended data transfer rate out of the read and write speed for the selected hard drive. During the standard test a 20 MB file will be written to the hard disk first and then read. The file size can be changed manually.

The miroVIDEO Expert only offers a "rough value" of the actual hard disk's performance!!!

The value depends on the used system and on whether the data will be written and read on the outer sectors of the hard disk or on the inner sectors. On the outer sectors the real transfer rate is higher than on the inner sectors. The calculated value of the "reachable video data rate" can be used on most systems without any problems, but there might be systems where this value cannot be achieved for whatever reasons. This may occur with E-IDE disks which offer a very high data transfer rate on the outer sectors, but a considerable performance loss on the inner sectors.
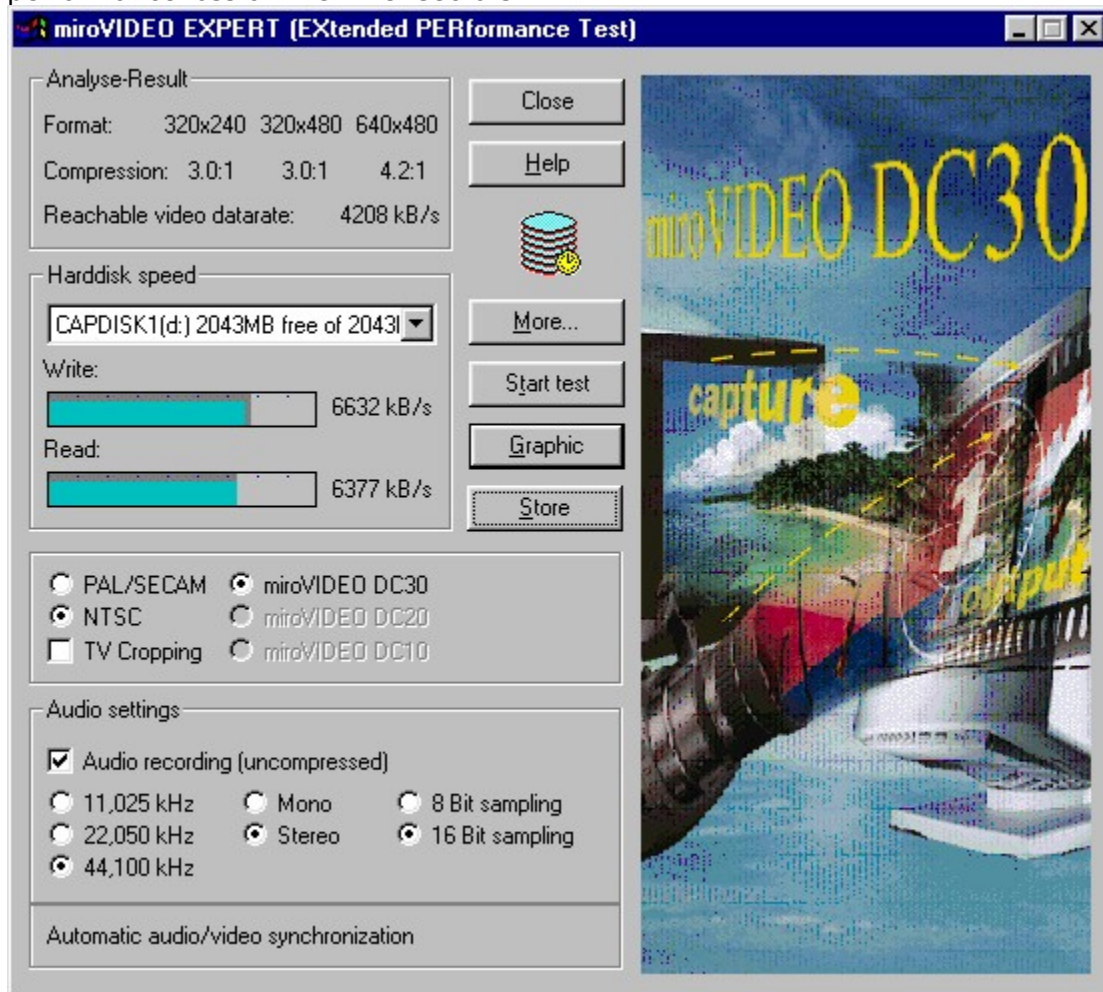
By clicking the "**Graphic**" button   the data rates for reading and writing will be shown in a graphic too.
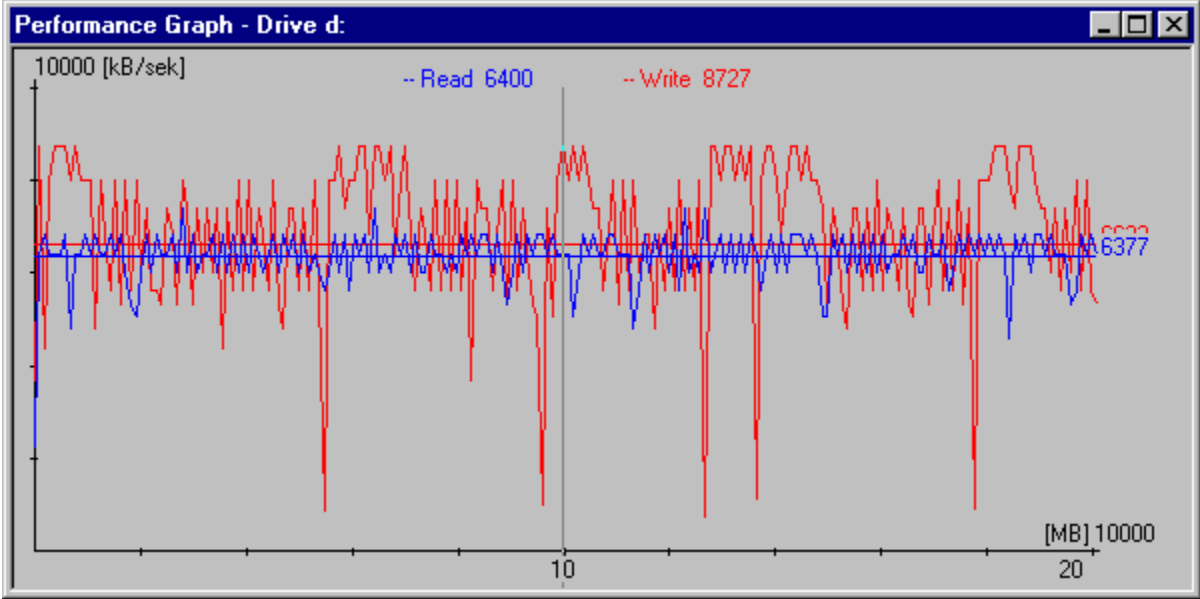
miroAVI converter

If you want to play back AVI files you recorded with the miroVIDEO DC20 board via the miroVIDEO DC30 board or a board by another manufacturer, we recommend to convert these files.

You should also convert AVI files you recorded with the miroVIDEO DC10, miroVIDEO DC30 or any other capture board before playing back the files via the miroVIDEO DC20 board. To do so, you can use the miroAVI converter tool.

When double-clicking the miroAVI converter icon, at first a dialog box appears where you can select the file you want to convert. Then the miroAVI converter tool is started.
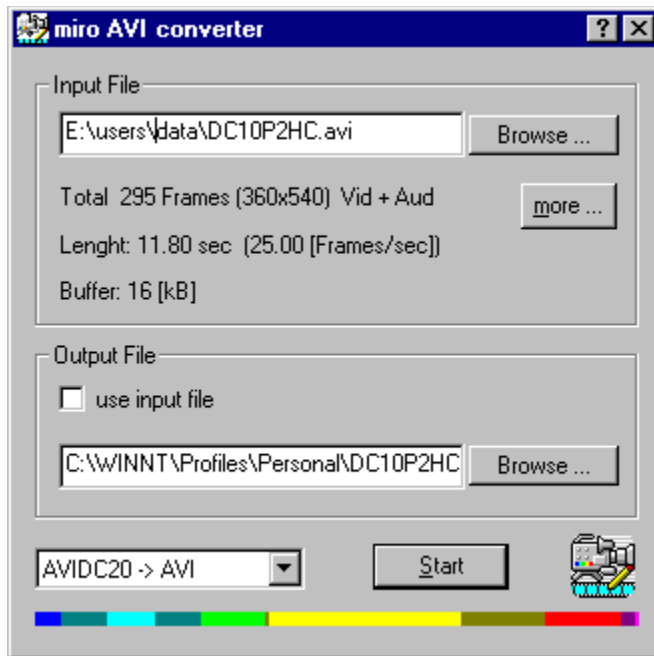
Under **Input File** the file you will find the file you want to convert. You also find information on this file. If you need more details, click **more ...** .

Under **Output File** you can specify a name for the target file.

If you want to overwrite the source file while converting, click **use input file**. If the conversion cannot run properly, however, also the source file may be corrupted. Therefore this setting is not recommended.

The list box lets you select the desired type of conversion.   If you want to convert an AVI file recorded using the miroVIDEO DC20 board into another AVI file, either click **AviDC20 -> AVI** or, if the file mainly consist of still images, **AviDC20 -> Avi (Still)**. If you want to convert the file back, either select **Avi -> AviDC20** or **Avi -> AviDC20 (Still).**

To start the conversion, click **Start.**

Important hint:

The **miroAVI converter** will be delivered with the miroVIDEO DC30 and miroVIDEO DC10. Please consider that miroVIDEO DC10 is able display only the half horizontal resolution, but

the miroVIDEO DC20 and miroVIDEO DC30 can capture AVI files in full PAL/NTSC format, this means that miroVIDEO DC20 supports the full horizontal resolution. If you decide to convert a DC20 AVI with full horizontal resolution this AVI file can't be displayed with miroVIDEO DC10.

VidCap32 for Windows 95

For using the miroVIDEO DC30 under Windows 95 we recommend Microsoft VidCap32 for capturing AVI files. VidCap32 will be copied during the installation of the miroVIDEO DC30. VidCap32 fully supports the 32Bit Capture-Class, so that you can reach higher data rates during capturing. Check in the VidCap32 menu "**Edit| Preferences| Video and Audio synchronization**" if the option "**No master**"is enabled.
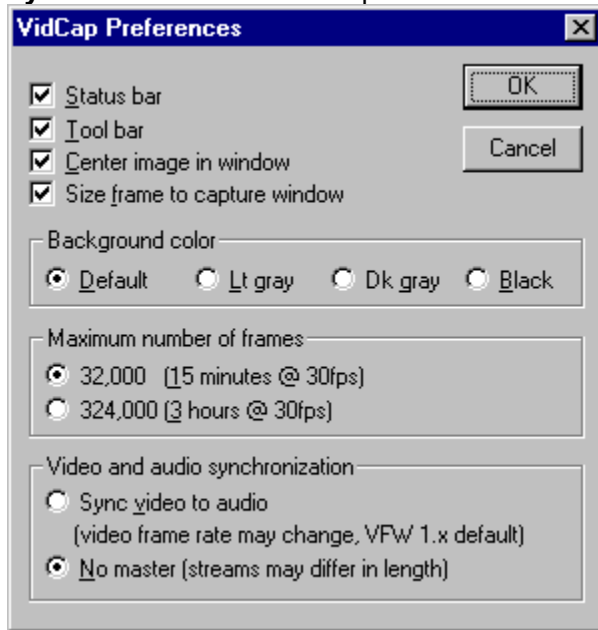
VidCap32 and NTSC Standard

Before capturing NTSC movies with VidCap32 you should set the "**Frame rate**" in the Capture |Video menu exactly to 29.970 frames/s and not 30 frames/s !!! Only with this exact setting it is possible to capture NTSC movies lip-synchronous for a long period of time.
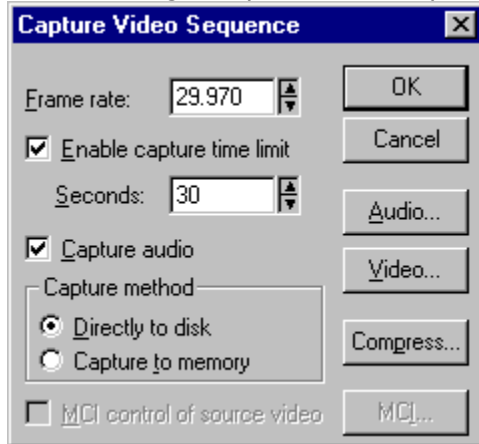
VidCap32 and MediaPlayer

We don't recommend to start VidCap32 or any other video capture program during the playback of AVI files with the miroVIDEO DC30 and the Media Player. miroVIDEO DC30 does not allow to capture and play back AVI files simultaneously.

Known bugs in VidCap32

By default, VidCap32 sets the capture file to C:\CAPTURE.AVI. If you like to select another drive for capturing, it could happen that VidCap32 stops with a General Protection Fault (GPF). Start VidCap32 once again, ignore the error message that the device is already active and set the desired drive for capturing. Close VidCap32 now and restart Windows 95.

VidCap32 supports the overlay functionality of miroMEDIA View and miroMEDIA 3D under Windows 95, this means that you can switch between the preview and the overlay modes and you don't have to connect a TV set miroVIDEO DC30 output.   Avoid minimizing VidCap32 to an icon if you are in the overlay mode because this could cause a GPF. If you want to minimize VidCap32 so that this application will appear in the status line, please switch into the preview mode first.

Always check the audio setting of VidCap32 before you start capturing, because older versions of VidCap32 doesn't save this settings.

In case you start capturing with VidCap32 and you get an error message "**not enough memory for audio buffer available**", first close all applications working in the background and start capturing again. In case this does not solve the problem change the audio settings in VidCap32 to increase the audio data rate.   If these changes are not successful, please restart your system. (see additional miroVIDEO DC30 audio properties)

A German Help file for the VidCap32.exe doesn't exist. If you try to open the "**Help**" option in the VidCap32 you only get the English Help.

miroVIDEO DC30 and Pentium Pro

The playback error during the playback of AVI files on Pentium Pro systems with Natoma chipset should be fixed with since driver version V.1.06beta. I case you are using a Pentium Pro system with the Natoma chipset, please insert the following two lines in your win.ini file:

[miroDC30]

Natoma=1

## Starting Adobe Premiere

If your system crashes during the startup of Adobe Premiere LE or another video editing software or you get General Protection Faults, we recommend you to start DC30CTRL.EXE before you start your video capture or video editing software   (Premiere, Media Studio). You can realize this by putting this program in the Windows startup folder.

Capturing in Adobe Premiere

Acceleration in the construction window

The full versions of Adobe Premiere 4.0a and the new 32bit Premiere 4.2 and Premiere 4.2 LE support the miroVIDEO DC30 accelerator functions. The display of thumbnails in the construction view is up to 10 times faster, the preview during "scrubbing" as well as in the transition preview is much faster. Older versions of Premiere do not support these acceleration types.
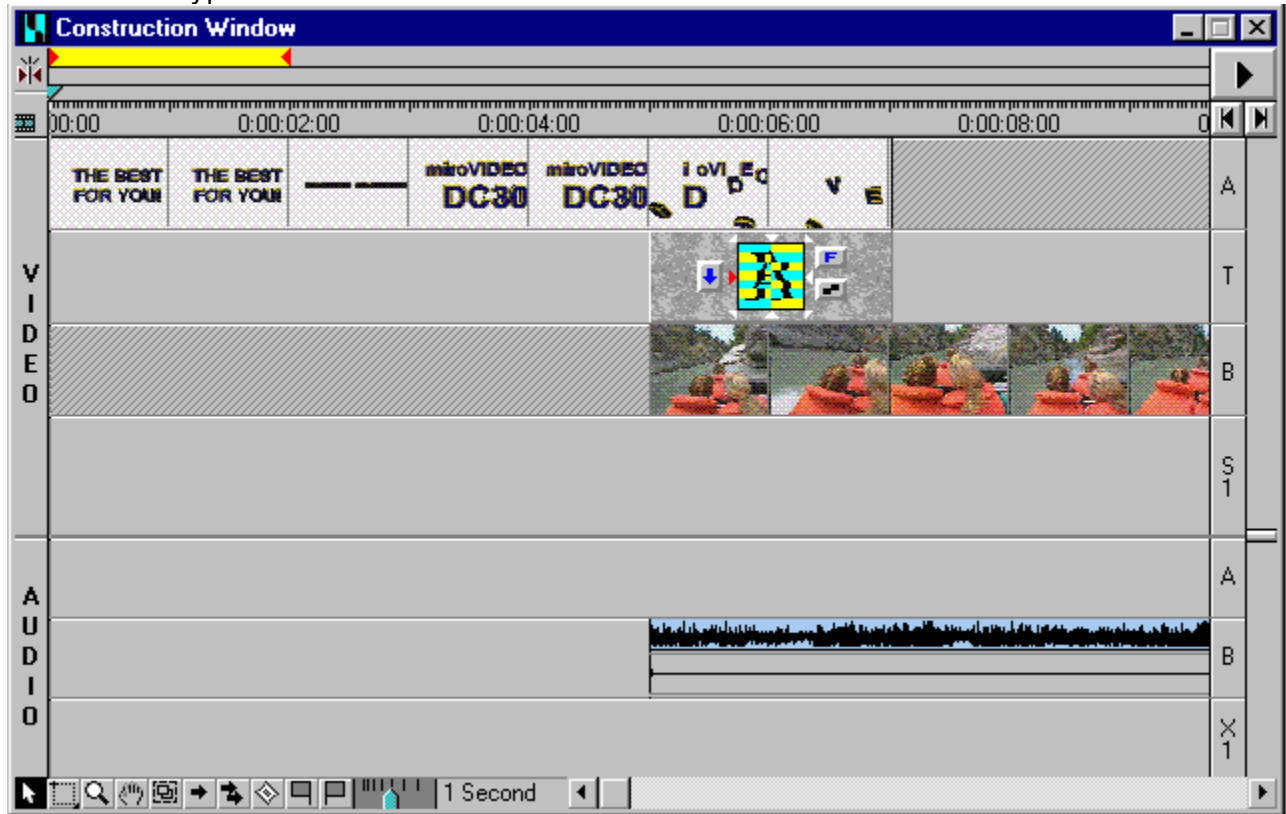
Presets for Adobe Premiere

In the miroVIDEO DC30 installation program, you can select DC30 presets for the Premiere 4.2   and 4.2 LE version. We recommend you to install these presets depending on the Premiere 4.2 version you have installed on your system.
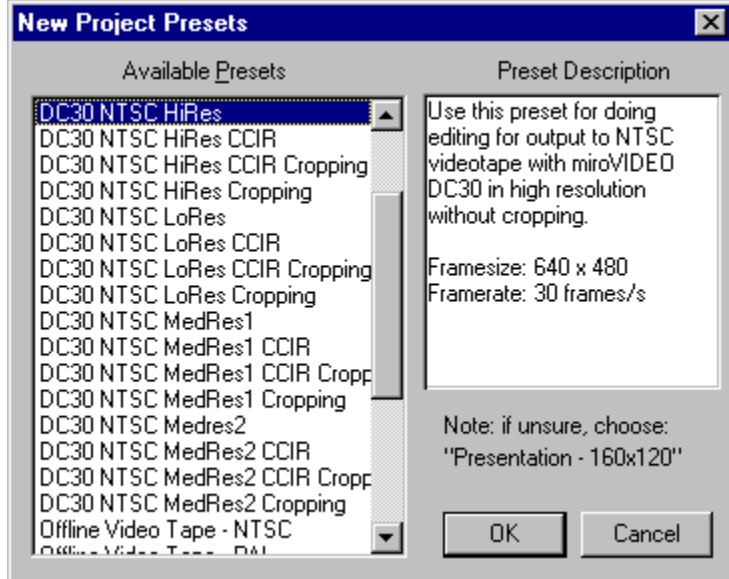
Known bugs in Adobe Premiere

1. If you like to resample an AVI movie, please check that the horizontal image size has an even number of pixels, otherwise you get a color mismatch on the TV out, or in the video overlay. This bug is not visible in the preview!

2. If you change the mixer settings during capturing an AVI movie with active video overlay in Premiere, the video overlay switches off. To activate the video overlay again, open the "**Movie Capture**" menu in Premiere and switch to "**Preview**" first and immediately afterwards back to "**Overlay**". Then, the video overlay should be displayed in the capture window.

3. If you are working in the trimming window of Premiere, there is no audio available!!!

4. First switch the video output option to **Window** in the miroVIDEO DC30 control. Then start Adobe Premiere and load two long AVI files in lane A and B and insert some transitions between them. If you are scrubbing with the mouse over this project it could happen that at the beginning of a transition the video in the preview window shrinks into about two lines. The whole preview window is black except this two lines.

Solution:

Wait a short moment for about 5 to 10 seconds. Then Premiere will close already opened instances. After this you can scrubb though your project and the whole video will be displayed in the preview window.

5. Please try to create Premiere projects with video files of only one resolution. Avoid to combine different resolutions and files with one and two fields.

Solution:

If you create a Premiere project try to use video files with the **same resolution and field order**. Check this before you start **Make MOVIE** and you will be impressed by the result.

6. Adobe 4.0LE

Using Adobe Premiere 4.0 LE avoid changing the preview rate in the "**MOVIE Capture**" menue to "**off**". This setting causes a "**division by zero**" and is not a default setting.

3D/FX and   miroVIDEO DC30

Settings in 3D/FX

To get the best results when using 3D f/X animations in a Premiere project we recommend the following settings:

Select the "**Scene->Generate Animation**" menu item. Under "**Compression**" click "**Change**" and select the miroVIDEO DC30 Codec. Set "Quality" to 100%. The animation will now be rendered using the fast miroVIDEO DC30 hardware, it has a smaller size since it is compressed and Premiere does not need to recompress it. Click on "**Animation Settings**" and "**Colors**". Set "**Palette**" to "**16 million (24 bits**)". Set "**Quality**" and "**Size**" to the same value as the remaining video clips in the project.

Hints for 3D/FX

In general: The animations which are created using 3D F/X should have the same size (frame size) as the videos in your Premiere project, so that Premiere does not need to resize and recompress.

If your Project works with smooth motion and you have captured the videos with "**both fields**" (which is 50fps PAL or 60fps NTSC) then you should set the value of "**frames per second**" to **50** for PAL or **60** for NTSC.

miroVIDEO DC30 and Video Mouse

The miroVIDEO DC30 won't be supported by the WinEdit software of the Video Mouse. It is not planned to implement this as yet.

miroAVI Cache

Common:

miroAVI Cache is a MCI based driver which can be used by the Media Player of Windows 95. miroAVI Cache makes it possible to playback AVI-movies in MJPG-Format. These files could be created i.e. with a miroVIDEO DC10, miroVIDEO DC20 and the miroVIDEO DC30. To ensure a non-jerky playback even at high data rates, the video and audio data are buffered in the memory (cached). When the hard disk interrupts its operation (i.e. during swapping), the video clip will be temporarily taken from the memory.   If necessary, you can adjust the cache size using miroVIDEO DC30 Control.

Installation:

During the installation of the miroVIDEO DC30 the miroAVI Cache will be copied automatically into the Windows\System subdirectory. To use the miroAVI Cache, select "**miroAVI Cache (MJPG)**" in the device menu of the Media Player instead of "**Video for Windows**". Then a file selection window appears. Please make sure that you set the video output options either to composite video or to S-Video in the miroVIDEO DC30 control. At the time, miroAVI Cache does not support the video output in a window.

Settings:

With the miroVIDEO DC30 Control the size of the cache for video and audio data can be changed. Therefore please start miroVIDEO DC30 Control and click the "**AVI Cache**" button. Now you can set the desired cache size in the field "**Video Buffer**" in frames between 6 and 128. The changes of the buffer number take effect the next time the AVI is loaded. If the driver has to increase the buffer number, the number will be reset as soon as a new AVI file will be loaded or the Media Player will be closed. This is only the case, if the user has not changed the buffer number in the meantime. By clicking the default button the value can be set to default, which will be sufficient for most of the applications.   Please remember that a large cache size needs a high amount of memory and especially on systems with low memory the system performance will go down. A hint at the bottom of miroVIDEO DC30 Control specifies the approximate required cache size for a data rate of 3MB per second. If you activate the option "**Use as default**" the **miroAVI cache** will be used as primary driver in the Media Player instead of the Video f. Windows driver.

miroVIDEO DC30 Control

Video output

Standard:

PAL

Ouput device:

S-Video

Pixel ratio:

Automatic adaption

AVI Cache Adjust

☑ Use as default

☑ Synchronized start

Video buffer [frames]: 16

Hint

You need about 2 MB of free host memory for an AVI sequence with 3 MB/sec.

Overlay Adjust

☑ Activate overlay
☐ miro logo

◉ High resolution
○ Medium resolution
○ Low resolution

OK

Cancel

Help

Less <<

Default

Changes to the last driver versions

Version 1.01

- supporting French language (Dialogs and all online helps)
- supporting SECAM,PAL-N and PAL-M output
- supporting an alpha version of the miroAVI.drv
- GPF fixed, if no miroVIDEO DC30 is installed and DC30CTRL will be started
- The application VIDEO CRAFT works with the miroVIDEO DC30 now
- During the calculation of video clips in Premiere a higher data rate than 3MB/s can be used now
- general changes to make sure the playback of AVI files
- miroEXPERT: limitation of the max. compression to 3:1

Version 1.04

- miroAVI Cache implemented
- miroVIDEO DC10 adaptations
- Premiere: Playback backwards with Adobe Premiere possible now
- Premiere: Clip Player can be controlled via keyboard
- Premiere: Capturing of audio data without video data possible now
- Premiere: sporadic system hang-up in preview fixed
- fixed: 20ms difference between audio and video during capturing with only one single field
- Correction of the automatic pixelratio adaptation to get an video output of most of the formats which are not in an 4:3 or 16:9 format.
- fixed: flickering video output, using graphics boards which are not PCI conform
- fixed: jerks during playback of AVI files which contain audio data of a lower quality than 22kHz, 16bt stereo
- fixed: mixer settings will be saved now
- new VidCap32 which saves the audio settings will be delivered now
- new PAL/SECAM presets for Adobe Premiere

Version 1.10

-Video overlay during playback of AVI files only with graphics boards, which supports the "Overlay Surface" function in Direct Draw.
-Automatic scaling of the video overlay if overlay window will be drawn to one border of the Windows 95 desktop
-miroAVI Cache expanded to 32 bit and playback behavior essential improved
-miroAVI Cache can be selected as primary driver in the miroVIDEO DC30 Control

-miroAVI Cache can be used for playback in Premiere now

-miroVIDEO DC30 Installation program video standards PAL/NTSC/SECAM selectable

-miro logo can be displayed during capture and playback. Default is off

-complete deinstallation of all drivers and registry entries

-miroAVI converter will be added during installation

-Help database "miroVIDEO DC30 informations" will be added during installation

-fixed: playback problems on Pentium Pro systems with Natoma chipset

-fixed: hangups on machines with VIA chipset

-fixed: GPF during Installation of Games (Hellbender)

-fixed: during a new installation the external mixer for recording will be added

miro Support

For further information about the miro Support centers please click on the corresponding national colors or the underlined text.

miro Support Austria

miro Support France

miro Support Germany

miro Support Great Britain

miro Support Netherlands

miro Support Spain

miro Support Switzerland

miro Support USA

Germany

Company   (Headquarter) miro Computer Products AG
Address   Carl-Miele-Strasse 4
          38112 Braunschweig
Country   Germany

Phone	05 31/21 13-0
Fax	05 31/21 13-99
Helpdesk phone	05 31/21 13-100
Helpdesk fax	05 31/21 13-199
Service phone	05 31/21 13-141
Service fax	05 31/21 13-274
Support phone	05 31/21 13-666
- only f. ISDN Products	05 31/21 13-222
Support fax	05 31/21 13-110
Support access	
Mailbox, analog	05 31/21 13-11 2
	Protocol 2.400 - 28.800 Baud
	8 data. bit, no parity, 1 stop bit
Maibox, ISDN	05 31/21 13-11 55
	Protocol X.75, transparent
ISDN Support Server	05 31/21 05 33 3
	Protocol X.75, transparent, Access only with
	miro ISDN Access for Novell Netware Driver
Internet	http://www.miro.de

Hinweise:

Der miro Support kann in der Woche von Montag bis Freitag, in den Sprechzeiten von 10 bis 12 Uhr und 14 bis 16 Uhr, telefonisch unter der folgenden Hotline Rufnummer erreicht werden:

miro Telefon Hotline: +49 531 2113- 666

Ausnahmen sind die gesetzlichen Feiertage und die Wochenenden !!!

Weiterhin besteht aber die Möglichkeit den miro Support für Anfragen auch per Fax zu erreichen. Das miro Support Fax hat die folgende Rufnummer und ist 24 Stunden am Tag , sowie auch an Feiertagen und Wochenenden erreichbar.

miro Support Fax: +49 531 2113 -110

Aktuelle Treiber und Updates für die miroVIDEO DC30 erhalten Sie über die oben genannten miro Online Dienste.

France

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Phone	++33/5/57 92 20 44
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Support phone	++33/5/57 92 20 44
Support fax	++33/1/46 12 03 13
Times of support	8 h -20 h
Support access	
Mailbox	BBS 1/46 12 03 10
	Protocol 1.200 - 19.200 Baud
	8 data bit, no parity, 1 stop bit
Internet	http://www.miro.com
Minitel	3615 miroINFO

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                         Support access
                         Internet   http://www.miro.com

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Support access	
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Support phone	++41/01/74 10 51 5
Support fax	++41/01/74 15 85 3
Times of support	10 h - 12 h and 14 h - 16 h
Support access	
Mailbox analog	06 2/889 79 89
	Protocol 1.200 - 19.200 Baud
	8 data bit, no parity, 1 stop bit
ISDN	ISDN 062/889 79 89
	Protocol 64.000 Baud, X.75
	8 data bit, no parity, 1 stop bit
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