Common information

This text contains important information for the miroVIDEO DC10 user. If you encounter any problems when working with the miroVIDEO DC10, please read the manual and this text.

The current driver for the miroVIDEO DC10 is V. 1.11

Very important:

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 DC10, 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 DC10 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 DC10 all the software mentioned above is available in the miroVIDEO DC10 software group.

On this miroVIDEO DC10 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 miroVIDEO DC10 drivers and registry entries.

The **UNINSTAL.EXE** program is available for download via internet on the miro web page. We recommend to all customers ,who don't have a miroVIDEO DC10 CD ROM V.1.11 or higher, to load this file down. It's a selfextracting file which extract the included files on your local hard disk in the subdirectory **C:\UNINST**.

(see additional driver update for miroVIDEO DC10)

Contrary to the description of fast decompress for playback made in the miroVIDEO DC10 manual, this fast decompress function is not implemented in this software release. This means that in the DC10CTRL program, the "**Window (accelerated)**" option is not yet available.

Contrary to the description in the miroVIDEO DC10 manual page 13. Place the CD ROM you received with your miroVIDEO DC10 (V1.10 or higher) in your CD-ROM drive and switch to the **setup** directory. The installation has changed and the **miroDC10.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 DC10

Recommendation:

Before you try to install an update of the miroVIDEO DC10 drivers, please make sure that the old drivers and registry entries are removed.

Since driver version **V.1.11** there is a complete deinstallation of drivers and registry entries available !!! There is a complete uninstall program in the miroVIDEO DC10 program group.

If you like to update an older miroVIDEO DC10 driver version to version V.1.11, please insert the miroVIDEO DC10 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.

Windows 95 Service Release 2 and miroVIDEO DC10

Recommendation:

Before you install the miroVIDEO DC10 hardware in your system, please first start the setup program out of the setup directory of the delivered miroVIDEO DC10 CD-ROM.

Known bugs:

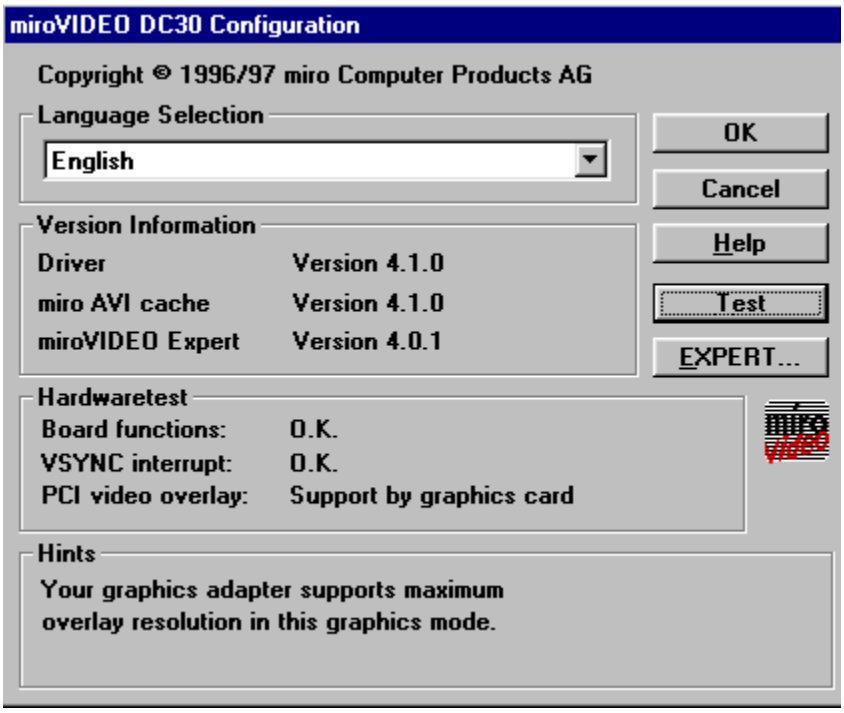
The playback of MJPG compressed AVI files out of the Explorer only appears in a window. A video output to TV is not possible. Please use the MediaPlayer for playback your AVI files to TV.

Direct Video and miroVIDEO DC10

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 DC10CTRL before starting the Media Player, otherwise you only get a preview and no output to video or TV.

Direct Draw and miroVIDEO DC10

If you combine miroVIDEO DC10 with a miro graphics board, which will be supported with Direct Draw drivers, the miroVIDEO DC10 configuration test will display the following messages shown in the picture below.



If you combine miroVIDEO DC10 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 DC10.

The miroVIDEO DC10 board makes use of this advantage (variable scaling) by using the system resources in dependance of the settings (see Overlay Settings) and achieves the

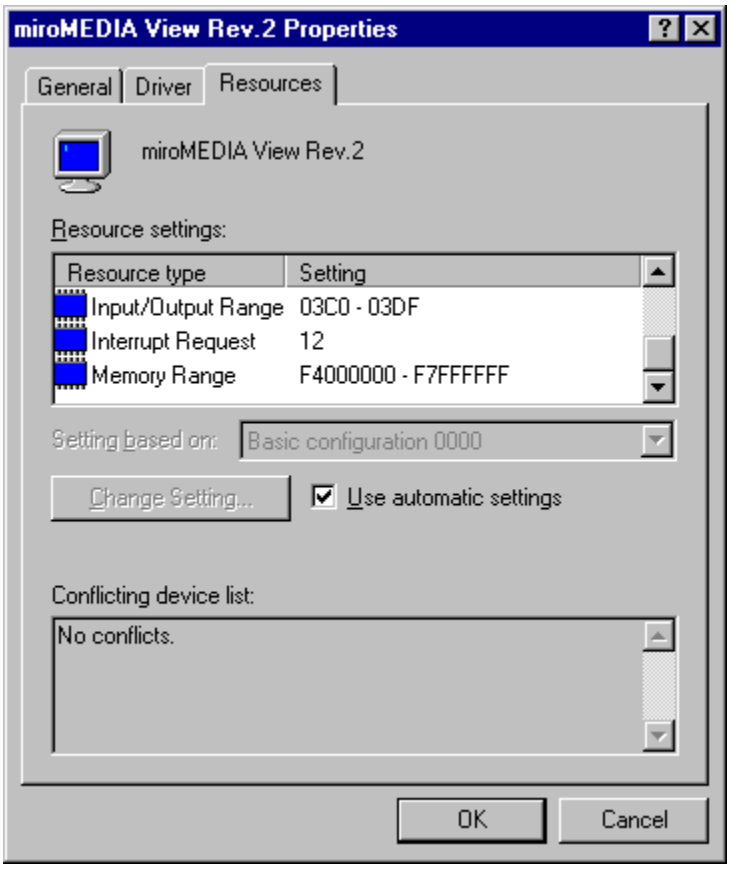
best results for capturing and playback

S3 graphics boards with 868, 968 chip and miroVIDEO DC10

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



Video overlay support for miroMEDIA View and miroMEDIA 3D

-miroMEDIA View

-miroMEDIA 3D

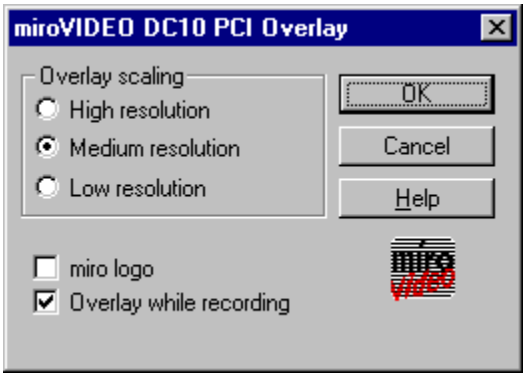
-miroVIDEO 22SD

-miroCRYSTAL 3D

-miroCRYSTAL VR 2000/4000

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 **Overlay Surface** function. With this function a video overlay was possible only during capturing.

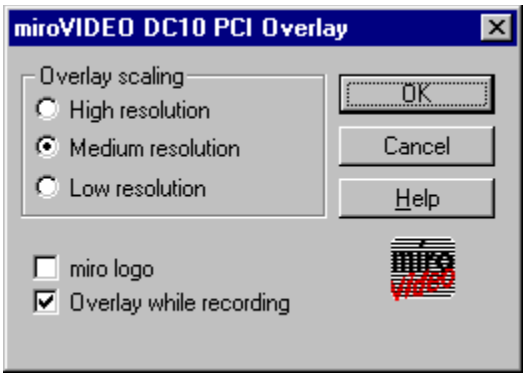
Since driver version V.1.11 it is possible to get a video overlay window during playback AVI files on the Windows desktop on condition that the graphics board will be supported with a Direct Draw driver, which supports the special **Overlay Surface** function. This means if you already get a video overlay during the capture, you will get a video overlay during playback too. Ensure that in the miroVIDEO DC10 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 DC10 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.1.11 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 **Overlay Surface** 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 DC10 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.



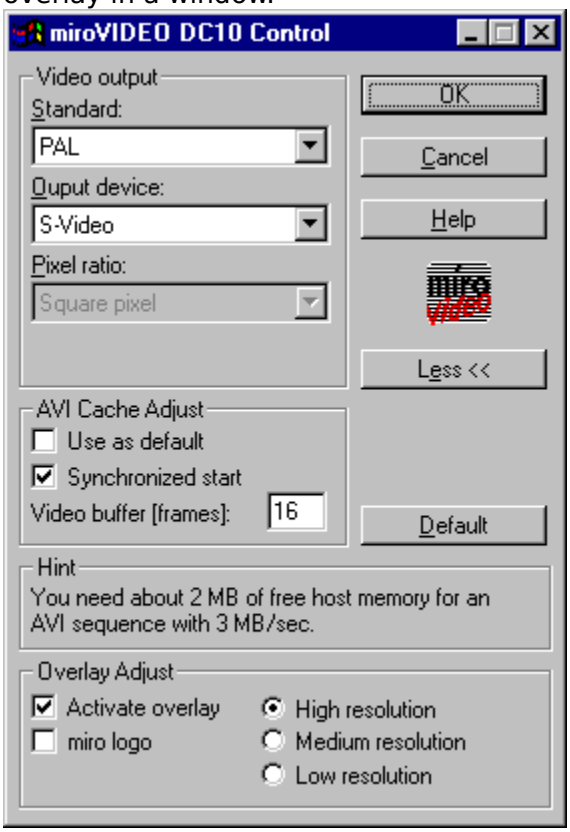
Changing the resolution during capturing with active video overlay

Avoid changing the resolution during capturing AVI files with activated video overlay. The video overlay can be enabled in VidCap32 or in the Media Studio 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 DC10. 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 DC10. Then start the miroTELEVISION application.

Since driver version V.1.11 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 **Overlay Surface** 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 DC10 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.



If you are using a miro graphics board with the latest **Direct Draw** drivers, the **Overlay Adjust** functions in miroVIDEO DC10 control are available.

In case you don't use the latest driver version for the used graphics miro board which doesn't support the special **overlay surface** function. The **Overlay Adjust** functions in miroVIDEO DC10 control are disabled.

(see additional Video overlay support for miroMEDIA View and miroMEDIA 3D)

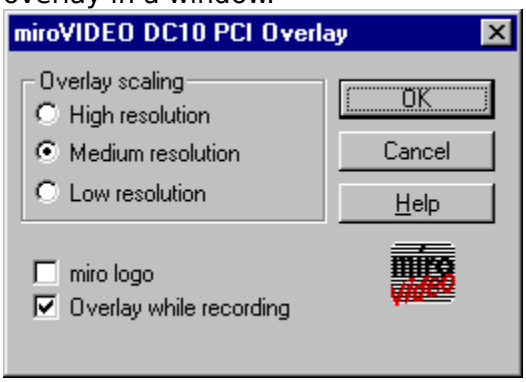
Hint:

If you loop through the a video signal to the miroVIDEO DC10, please watch that the S-VHS output of the miroVIDEO DC10 only has a S-VHS signal if a S-VHS Source is connected to the input of the miroVIDEO DC10 !!! You can't convert a composite signal into a S-VHS signal with the miroVIDEO DC10.

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 DC10 composite output and start the Video Overlay application of the manufacturer of your graphics board.

Since driver version V.1.11 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 **Overlay Surface** 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 DC10 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.



If you are using a graphics board with **Direct Draw** drivers which support the overlay surface function, the **Overlay Adjust** functions in miroVIDEO DC10 control are available.

In case you use a Direct Draw driver version for your graphics board which doesn't support the special **overlay surface** function. The **Overlay Adjust** functions in miroVIDEO DC10 control are disabled.

Interrupt Sharing

This miroVIDEO DC10 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 DC10 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 DC10 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 DC10

After successful installation of the miroVIDEO DC10 you should find the following entry in the system.ini in the section **[drivers]:**

VIDC.MJPG=DC30CDC.DRV

Capturing and playback of AVI sequences

If you like to capture and playback AVI files with audio, you need a sound device in your system. In case you already have installed a sound device in your system you can capture and playback audio data too. The miroVIDEO DC10 is only a video device because it has no audio chip.

Jerks during playback

We redesigned our miroVIDEO DC10 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. 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.

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 Media Studio 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 Ulead Media Studio by calculating the AVI file once again with the "**Create Video File**" 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**".

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 DC10 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 DC10 but is due to the functionality of your hard disk and the other system components. This miroVIDEO DC10 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 DC10 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 1,000,000,000 Bytes		4 (hard disk) GB Drive 4,000,000,000 Bytes		8 (hard disk) GB Drive 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

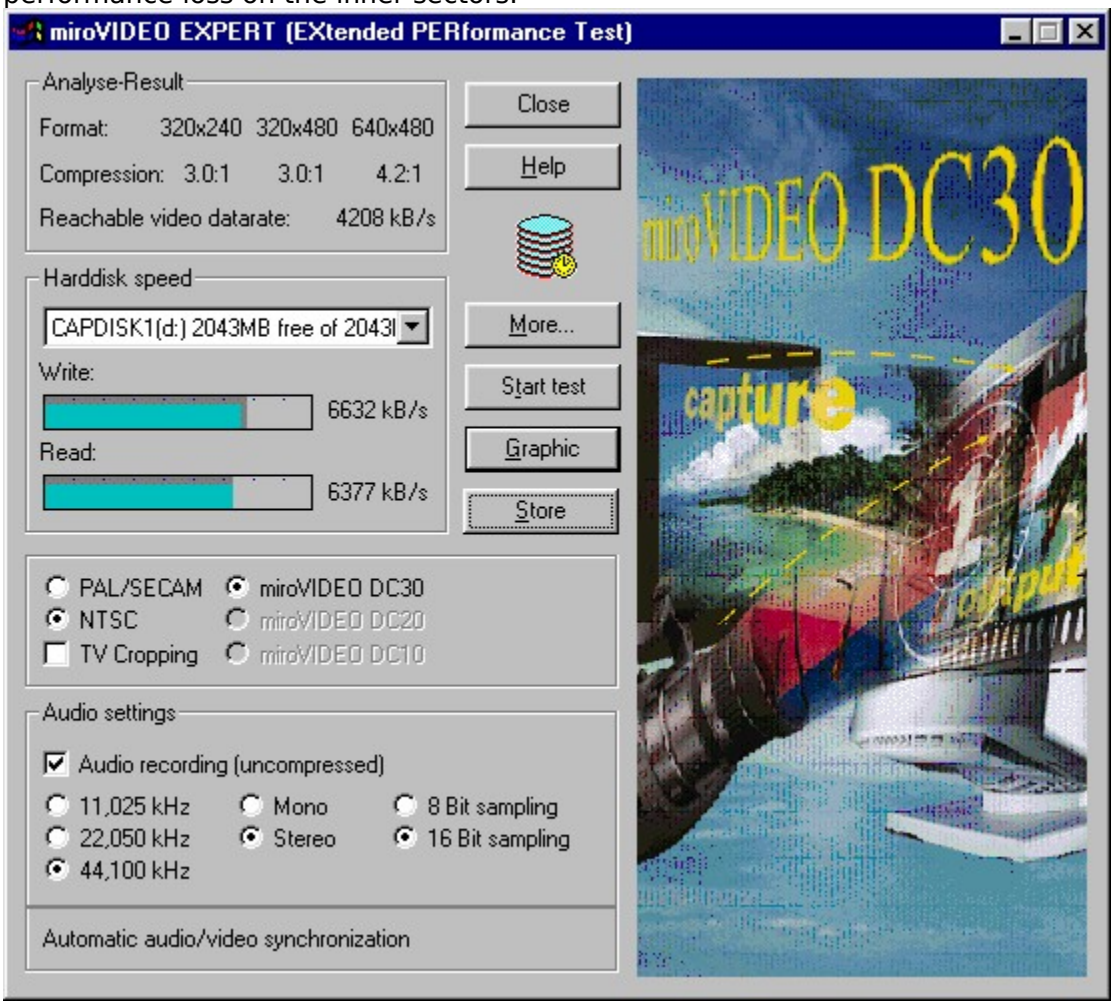
The data rate is given in thousands of kilobytes not megabytes. A kilobyte is equal to 1024 bytes. To calculate the compression rate as given divide the video data by the total kilobytes per second. For example to calculate the compression ratio for NTSC at 6,000 kilobytes per second, multiply 6,000 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.

miroVIDEO Expert

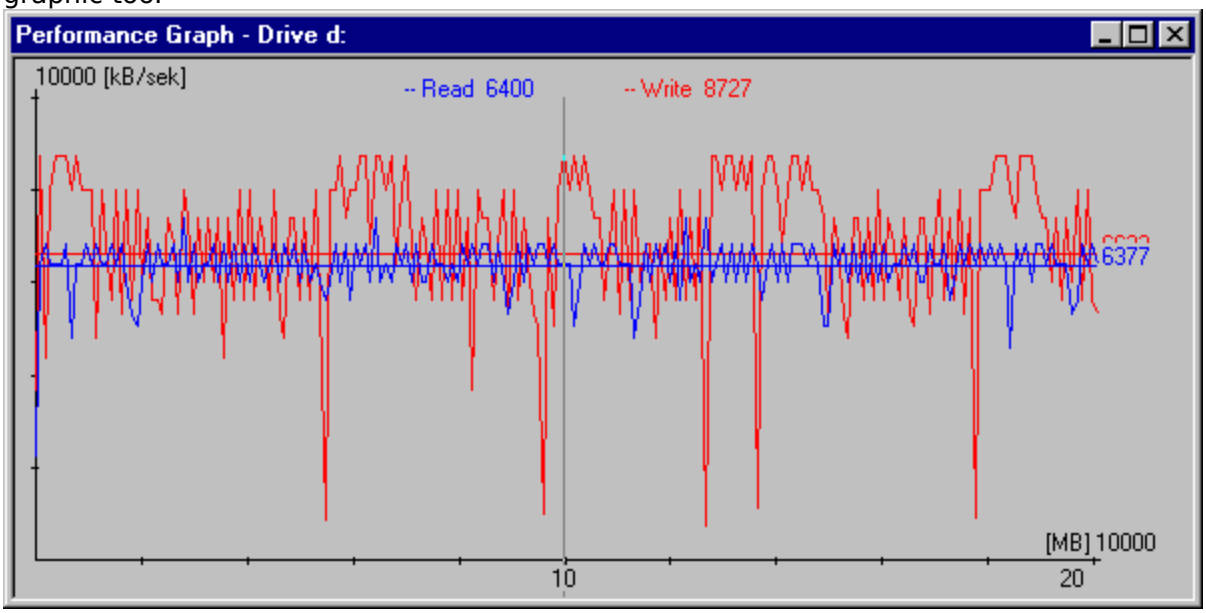
The miroVIDEO Expert is a program which calculates a recommended data transfer rate out of the read and write speed for the selected hard drive. During the standard test a 20 MB file will be written to the hard disk first and then read. The file size can be changed manually.

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.

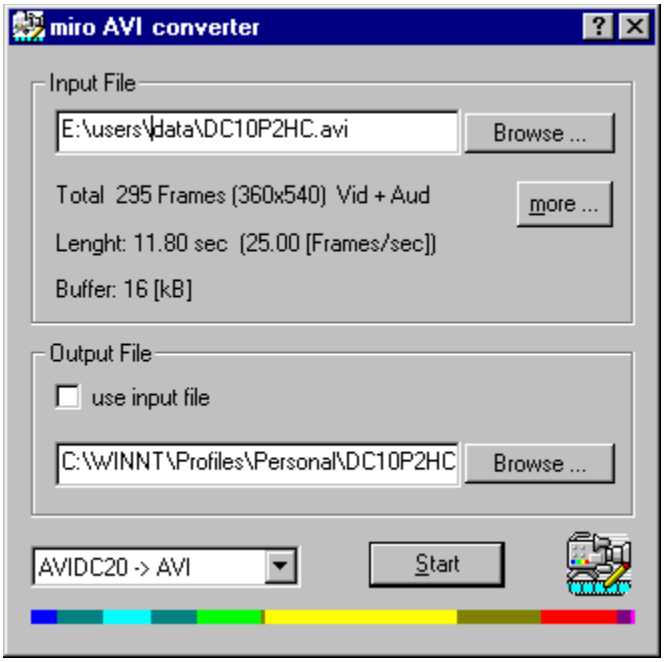


miroAVI converter

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.

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.

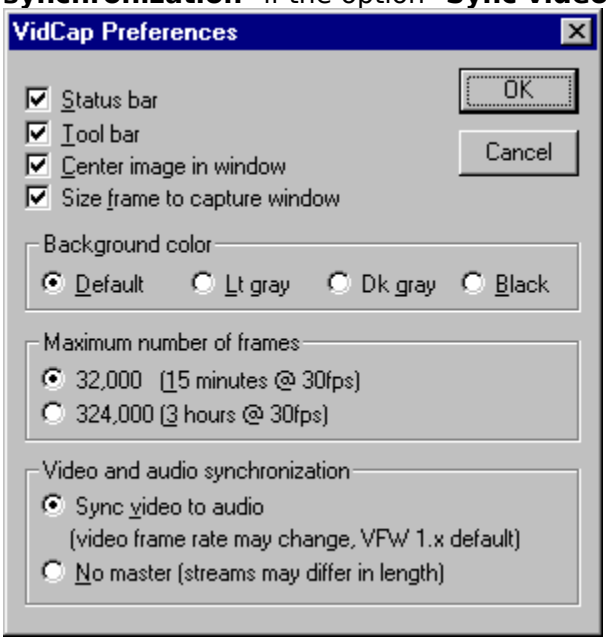
3. If you have more than 32 MB memory, deactivate **virtual memory** under **My Computer, Control Panel, System, Performance, Virtual Memory**.

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.

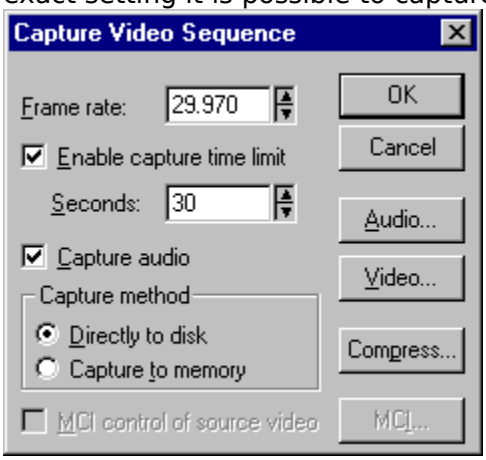
VidCap32 for Windows 95

For using the miroVIDEO DC10 under Windows 95 we recommend Microsoft VidCap32 for capturing AVI files. VidCap32 will be copied during the installation of the miroVIDEO DC10. 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 "**Sync video to audio**"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 lipsync 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 DC10 and the Media Player. miroVIDEO DC10 does not allow to capture and play back AVI files simultaneously.

Known bugs in VidCap32

1. 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.

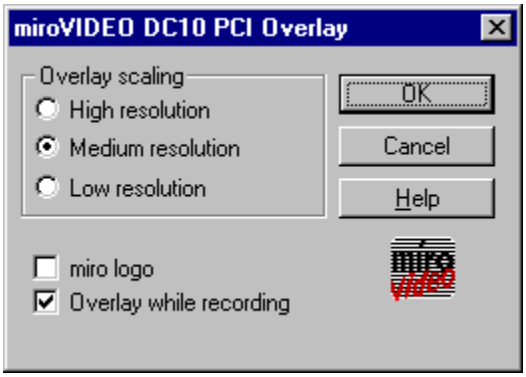
2. VidCap32 supports the overlay functionality of miroMEDIA View and miroMEDIA 3D under Windows 95, this means that you can switch between the preview and the overlay modes and you don't have to connect a TV set miroVIDEO DC10 output. Avoid minimizing VidCap32 to an icon if you are in the overlay mode 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.

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

4. 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.

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.



5. 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 DC10 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.1.11. In 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

miroVIDEO DC10 and Video Mouse

The miroVIDEO DC10 won't be supported by the WinEdit software of the Video Mouse. It is not planned to implement this as yet.

miroAVI Cache

Common:

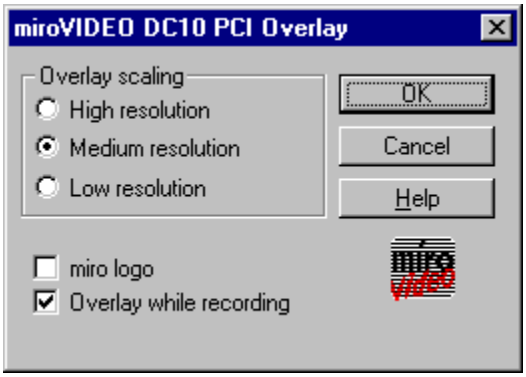
miroAVI Cache is a MCI based driver which can be used by the Media Player of Windows 95. miroAVI Cache makes it possible to playback AVI-movies in MJPG-Format. These files could be created i.e. with a miroVIDEO DC10, miroVIDEO DC20 and the miroVIDEO DC10. To ensure a non-jerky playback even at high data 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 DC10 Control.

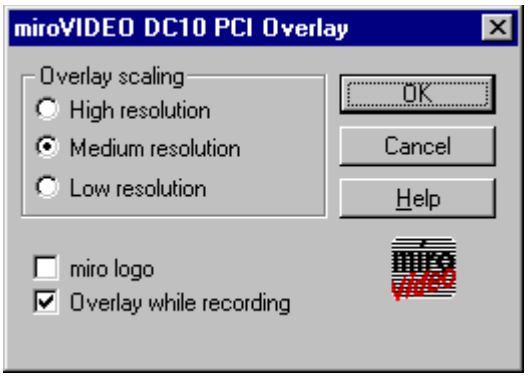
Installation:

During the installation of the miroVIDEO DC10 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 DC10 control. At the time, miroAVI Cache does not support the video output in a window.

Settings:

With the miroVIDEO DC10 Control the size of the cache for video and audio data can be changed. Therefore please start miroVIDEO DC10 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 DC10 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 DC10 PCI Overlay
Overlay scaling
High resolution
Medium resolution
Low resolution
OK
Cancel
Help
miro logo
Overlay while recording

3D/FX and miroVIDEO DC10

Settings in 3D/FX

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

Select the "**Scene->Generate Animation**" menu item. Under "**Compression**" click "**Change**" and select the miroVIDEO DC10 Codec. Set "Quality" to 100%. The animation will now be rendered using the fast miroVIDEO DC10 hardware, it has a smaller size since it is compressed and Media Studio 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.

Hint:

For using the miroVIDEO DC10 codec you have to do the following settings in the menue **szene / create animation :**

- settings../ Size: maximum 384 x 288

- colors: 16 Million (24 Bit)

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 Media Studio project, so that Media Studio 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.

Ulead Media Studio and miroVIDEO DC10

Known bugs in Media Studio

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

2. If you have installed DirectX V.3.0 or Active Movie on your system an error message occurs in Media Studio opening the option "**Playback media file**" . The message shows that there was "**no device found**". For playing back AVI files we recommend to use the Windows 95 Media Player in combination with the miroAVI cache.

Changes to the last driver versions

Version 1.03

- supporting SECAM,PAL-N and PAL-M output
- supporting an alpha version of the miroAVI.drv
- GPF fixed, if no miroVIDEO DC10 is installed and DC30CTRL will be started
- The application VIDEO CRAFT works with the miroVIDEO DC10 now
- general changes to make sure the playback of AVI files

Version 1.05

- miroAVI Cache implemented
- miroVIDEO Expert will be delivered too
- miroVIDEO DC10 adaptations
- 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 format.
- fixed: flickering video output, using graphics boards which are not PCI conform
- new VidCap32 which saves the audio settings will be delivered now

Version 1.11

-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 DC10 Control
-miroAVI Cache can be used for playback in Premiere now
-miroVIDEO DC10 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
-Help database "miroVIDEO DC10 informations" will be added during installation
-miroAVI converter will be added during installation
-fixed: playback error 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 Center

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

GERMANY
DEUTSCHLAND
ALLEMAGNE

Company	(Headquarter) miro Computer Products AG	
Address	Carl-Miele-Strasse 4	
	38112 Braunschweig	
Country	Germany	
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	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 DC10 erhalten Sie über die oben genannten miro Online Dienste.

France

FRANCE
FRANKREICH
FRANCE

Company miro France
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92324 Chatillon Cedex
Country France

Phone	++33/5/57 92 20 44
Fax	++33/1/46 12 03 13
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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GRANDE-BRETAGNE

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		Fax	++44/01 494/51 02 50
		Support phone	++44/01 494/51 09 85
		Support fax	++44/01 494/47 44 12
		Times of support	9:00 a.m. - 5:30 p.m.
		Support access	
		Internet	http://www.miro.com

Austria

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ÖSTERREICH
AUTRICHE

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	Fax	++43/1/803 40 75 - 20
	E-Mail:	verkauf@miro.co.at
	Support phone	04 59 8/99 09 5 (Mehrwertdienst 21g/s)
	Support fax	++43/1/803 40 75 - 20
	Times of support	9 h - 12 h and 14 h - 16 h
	Support access	
	Internet	http://www.miro.com
	E-Mail	support@miro.co.at
	Technical Service	++43/1/865 87 15
	Internet	http://www.miro. com

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BELGIUM,
LUXEMBOURG

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	Fax	++31/(0)40 - 267 04 87
	Support phone	++31/(0)402/67 04 88
	Support fax	++31/(0)402/67 04 87
	Times of support	9 h - 12:30 h
	Support access	
	Mailbox	06/91 68 16 75
		Protocol 1.200 - 19.200 Baud
		8 data bit, no parity, 1 stop bit
	Internet	http://www.miro.com

Switzerland

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SCHWEIZ
SUISSE

Company	miro Computer Products AG		
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Country	Switzerland		
		Phone	++41/747 30 40
		Fax	++41/747 30 49
		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
		Internet	http://www.miro.de

Spain

SPAIN,
PORTUGAL
SPANIEN,
PORTUGAL
ESPAGNE,
PORTUGAL

Company	Binal Multimedia SL		
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	20011 San Sebastian		
Country	Spain		
		Phone	++34/043/46 60 47
		Fax	++34/043/46 19 23
		Support access	
		Internet	http://www.miro.com

USA

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		Fax	001/415/855-9004
		Support phone	001/415/855-0950
		Support fax	001/415/855-9004
		BBS	001/415/855-9944
		Times of support	7 a.m. - 5 p.m. Pacific Time
		Support access	
		Fax back	001/415/855-9494
		Internet	support@miro.mirousa.com
		URL	http://www.miro.com