



HyperCam *Contents*

[Overview & Features](#)

[Quick Start Example](#)

[Before You Begin...](#)

[Screen Area Options](#)

[Hot Key Options](#)

[AVI File Options](#)

[Sound Options](#)

[Recording and Playing AVI Files](#)

[Performance Hints & Tips](#)

[Command Line Options](#)

[Purchasing HyperCam](#)

[Entering License Information](#)

[Technical Support](#)

[Contact Hyperionics](#)



HyperCam Overview

HyperCam captures the action from your Windows 95 or NT screen and saves it as a standard, easily edited, AVI (Audio-Video Interleaved) movie file. This format can be played under Windows 3.1, 95, and NT, as well as the Internet, unlike other programs that use proprietary formats that may need special viewers and be difficult, if not impossible, to edit. HyperCam lets you define the precise area of the screen you want to capture, unlike MS Camcorder and others that record the entire screen.

These files can be useful as teaching tools, to demonstrate software, as a start for animation, and for many other uses. This easy to learn, flexible system will have you making your first screen movie in no time at all.

Features include:

- n easy precision visual screen area or window selection
- n system-wide hot keys to start, pause, stop recording, and to snap single frames
- n unique panning mode lets your area follow your cursor
- n multiple video compression choices
- n optional sound, with choices for recording quality
- n capture in any screen color depth
- n automatically incrementing file names for captures
- n frame rate, compression, and key frame choices
- n convenient, user-definable hot keys, including 'record pause'
- n integrated playback buttons
- n command line options

A [Quick Start](#) topic is included so you make your first screen movie in a matter of minutes. However, we suggest that it will be worth your time to take the few minutes it will take to browse this brief help file, using the browse sequence buttons above, beginning with [Before You Begin](#). Each of the tabbed options is generally self-explanatory, but the short explanations and performance tips in this document will undoubtedly make your experience with HyperCam a far more rewarding one.

 **HyperCam Quick Start**

For the purposes of this introduction, we will be using [HyperCam's](#) default values, and basic settings. Later, you will discover the flexibility and ease of use that [HyperCam's](#) options offer you.

For best performance, set your color depth to 256 color mode. For further information on the implications of the color mode you choose, see [Before You Begin](#).

- Start [HyperCam](#), and from the Screen Area tab, click on Select Region, and use your cursor to outline a small capture area (approximately 150x150). Notice the sharply defined box you can size, as its size is interactively displayed. Click to confirm the size and position of your capture, and place your mouse cursor in the area.
- Click on F2 (the default start/stop hot key) to begin recording. The [HyperCam](#) window will temporarily disappear to allow the capture. Move your cursor within the capture area, and then, after a few seconds, click on F2 again to end the capture.
- Congratulations, you have just made your first movie! It's that simple.
- Now, click on Play in the [HyperCam](#) dialog, to view your creation.

Next, take the a few minutes to browse this brief help file, using the browse sequence buttons above. The knowledge and tips you will gain will make it worth your small investment in time, enabling you to get the best results in the shortest time.



HyperCam *Before You Begin*

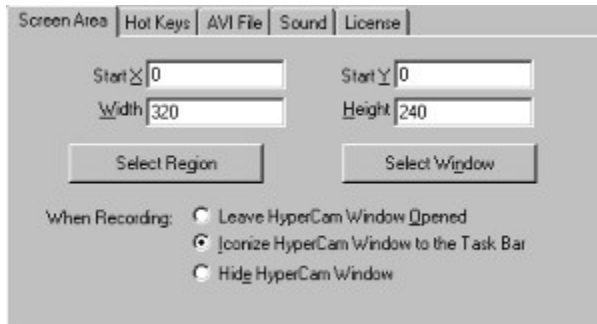
HyperCam captures the action from your Windows 95 or NT screen and saves it to AVI (Audio-Video Interleaved) movie file. Your machine can be in any color mode, and sound from your system microphone can also be simultaneously recorded. We personally suggest that you consider the following to contribute to your first successful experience with HyperCam.

For the best initial performance, we suggest you begin with the 8 bit color mode (256 colors). We have determined that, in this configuration, HyperCam can capture up to ten frames per second of 640x480 images on a Pentium 133 machine. You may capture more if your capture area is smaller, or you have a faster machine. In 16 bit (64K colors) color mode it can do about five fps (frames per second) of 320x240 frames on the same machine. For 4 bit graphics MS Video does not provide a suitable compressor for 4 bit (16 colors) color mode, so the frames are written uncompressed. This is also slow and produces large AVI files, which is why we feel that 256 colors is a good compromise.

HyperCam **Screen Area - Options**

There are three methods for selecting the initial screen area for recording.

- You can select your capture area graphically, from the screen. Clicking on the **Select Region** button provides a convenient, movable and resizable rectangle to appear on screen. Use your cursor or the keyboard arrows to position and anchor one point of the area, and then size the window to your liking. Note that the image size is interactively shown, and the coordinates recorded in the screen area dialog.
- When you click the **Select Window** button, you can move your cursor around the screen to select various screen objects, such as windows, window areas, buttons, etc. These specific areas will be highlighted as you pass over them. Click the left mouse button to accept the highlighted area, or the right button to abort the selection.



Screen Area | Hot Keys | AVI File | Sound | License


Start X: 0 Start Y: 0
Width: 320 Height: 240

Select Region Select Window

When Recording: Leave HyperCam Window Opened
 Iconize HyperCam Window to the Task Bar
 Hide HyperCam Window

- You can also directly enter your choice of the **x and y screen coordinates**, along with the width and height in pixels, to precisely define your capture area, or fine tune a previous capture.

The **When Recording** radio buttons determine what happens to the [HyperCam](#) window when you start recording. It may be left in place, iconized to the task bar, or completely hidden.

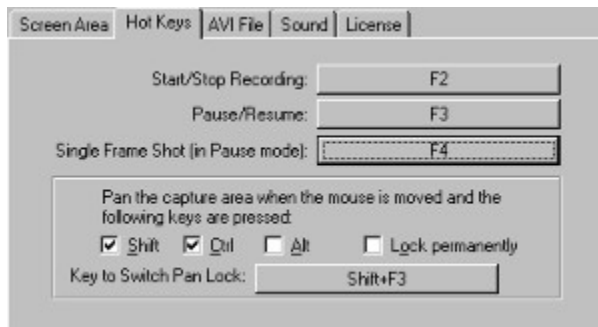
 Please note that you should know the hot key to stop AVI recording if you use *iconize* or *hide*, or you may have difficulty terminating a recording. Click on the [Hot Keys](#) tab in [HyperCam](#) to find out (and change if necessary) the hot key definitions.

HyperCam **Hot Keys - Options**

HyperCam uses four system-wide hot keys:

- to **start and stop** AVI file recording (default is F2)
- to **pause** the recording temporarily and resume it again after a while (default is F3)
- to **snap single frames** and save them to AVI file while HyperCam is in Pause mode (default is F4)
- to switch between **Pan Lock** mode ([see the explanation below](#)).

Simply click on the corresponding buttons to redefine the hot keys. When you do, make certain that the blinking I-beam cursor is inside the white space of the edit field, then press the key combination you want to start selected function. If, for example, you want this key combination to be Shift+F9, please hold down the Shift key, then press the function key F9.



With the **Single Frame Shot** hot key (F4 by default) you can make HyperCam capture and save to AVI file single frames at the exact moments you need. Either start the recorder in Paused mode (Start Paused button), or press F3 hot key while recording. Your recorded area mark on the screen will have a big X across it - this means that nothing is recorded. Move the recorded area where you need it, arrange the display you want it, position cursor etc. Now press this hot key and exactly one frame will be snapped and saved to your AVI file. You may repeat this process as many times as you need. If you turned sound recording on, nothing (silence) is recorded in single frame mode. You may terminate this mode at any time by pressing Stop or Resume hot keys/buttons.

Pan Lock

This special HyperCam feature causes the defined screen area to move along with the movement of your cursor. It can be very useful in some cases, to keep the size of your AVI file down, and yet cover more screen area..

The area that is recorded to AVI may be also moved without using the Pan Lock hot key. You may select any combination of the modifier keys (Shift, Ctrl and Alt) which, when held, will cause the record frame to follow your cursor movements. If you check the *Lock permanently* box, the area will be moved without holding any modifier keys. This state may be also toggled on and off using the *Switch Pan Lock* hot key during recording.

💡 Results can be a bit disorienting if not used with proper techniques, so we suggest you experiment with this often useful mode

HyperCam **AVI File - Options**

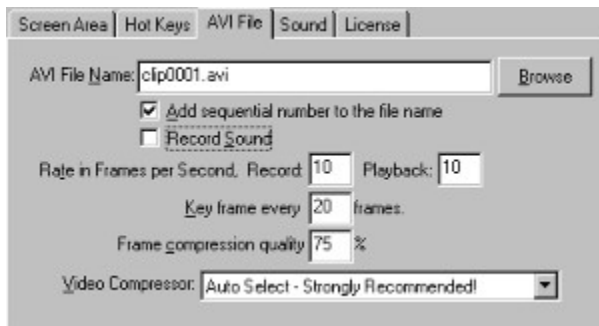
This option tab lets you choose the several parameters of the AVI file that you record with [HyperCam](#):

- The **AVI File Name** may be changed by entering the name of the file you prefer. The file name may be preceded by a drive and directory (folder) name, i.e., c:\MyVideos\clip.avi. You may also click on the *Browse* button to select the folder and file name.



If one of your hard disks is faster than the others, we suggest you use that disk as your AVI file destination. Also be certain you have sufficient free disk space on that drive.

- When the **Add sequential number to the file name** box is checked, a number will automatically be appended to the file name each time you press the Start Record button or hot key, so a sequence of files will be recorded, i.e., clip0001.avi, clip0002.avi, clip0003.avi, etc.
- 💡 Using this option can be a good idea in order to preserve prior, possibly useful, captures. If a file already exists, it will be overwritten with the new capture, and the old capture lost.
- The **Record Sound** box will enable or disable recordings from your system microphone or other sound input. Please note: on many systems, with sound recording on, you will not hear the sounds normally produced by your computer and the running programs. This is due to the fact that most sound cards and their drivers are working in "half duplex" mode, meaning that they can either record or play sounds, but not both at the same time.



The **Rate in Frames per Second** choices let you specify how many movie frames per second will be recorded. If you enter too high a number, and your computer is not fast enough to capture and compress them, [HyperCam](#) will drop some frames, or stop completely and tell you about the error. Please see [Performance Tips](#) for some advice on what to do in such situations. You may also specify a different playback rate. For example, you could record at 5 frames per second, but have the movie play at 10 fps. If you do this, the Record Sound check box is turned off and disabled, because any sound that you would record would be played at twice the normal speed.

The **Key frame every [] frames** value determines how often full frames are written to the AVI file. The frames between them may have only the differences between the current and preceding frame. Higher values may let you help to achieve slightly better frame rates, but also can make it difficult to edit your AVI file in a video editor at a later time.

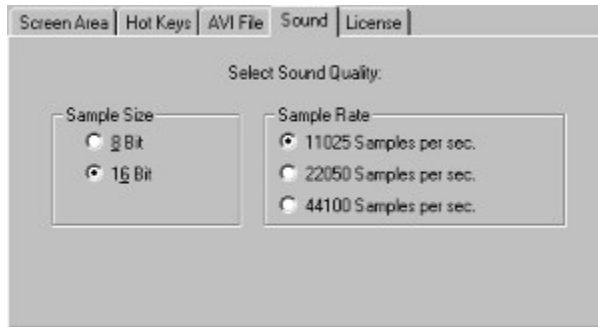
The **Frame compression quality [] %** value is used by some video compressors to make a compromise between the speed of compression and size of the picture of the file versus the quality of the picture. You may try to lower this value to achieve faster frame rates, particularly in 16, 24 and 32 bit color modes, but do review what you recorded frequently to verify that you are still satisfied with the

picture quality.

The **Video Compressor** select box allows you to select the *CODEC*, which is the program that will compress your pictures to make AVI files smaller and enable them to play faster. We recommend the *Auto Select* setting, which will select MS RLE compression for 8 bit color mode, MS Video 1 compression for all higher color modes, and no compression for 4 bit color. Please note that if you want to record AVI files in True Color mode (24 or 32 bit), the default MS Video 1 compressor will still write them as 16 color bitmaps, losing some of the color resolution. You may try the "Full Frames (Uncompressed)" selection to actually record 24 bit bitmaps, or experiment with some other video compressors that are installed on your system.

HyperCam **Sound - Options**

The Sound tab of [HyperCam](#) allows you to specify the quality of the sound recorded with AVI movies. For best performance when you are using a high frames per second rate, select 8 bit samples and a low sample rate. For better sound quality, you may select higher values. A reasonable compromise between performance and quality seems to be 16 bit sound at 11025 sampling rate.





HyperCam *Recording and Playing AVI Files*

After setting all the parameters for your AVI file, defining the screen area that you want to record, and noting all the hot key assignments, you are ready to start recording. You may start recording immediately by clicking on the **Start Rec.** button or pressing the start hot key (by default F2). You may also start in "paused" mode, where you will see the blinking frame marking the area to be recorded, and be able to pan this area, without beginning to record. To start in "paused" mode, click on **Start Paused** button or press the appropriate hot key (F3 by default). Then, "unpause" when ready by pressing the "pause" hot key (F3 if you did not change it) again.

Once you start recording, you will see a blinking rectangle on your monitor. Everything within this rectangle, including your mouse cursor movements, will be recorded. You may also speak into your microphone and record the sound. The blinking rectangle in which the recording is taking place can be moved (see [Pan Lock](#)). You may temporarily pause the recording, and then prepare the recorded program or move the rectangle, by pressing the "Pause" hot key (F3 by default). When ready to resume the recording, press the same "Pause" key again. Finally you may stop the recording by pressing on the start/stop hot key (F2 by default) again. If you did not iconize or hide [HyperCam](#) dialog for recording, you may also use [HyperCam](#) buttons to start/stop and pause/unpause the recording.



After you record a movie, you may play it by pressing on the **Play** button. However, [HyperCam](#) does not perform the playback, but instead is asking your Windows 95 or NT to play it for you, using the default AVI player installed on your system.

The **Defaults** button may be use to reset all the options (record area, hot keys, AVI File parameters etc.) to the "factory" default values. [HyperCam](#) remembers all the custom parameters that you set, even if you exit it and restart later.



HyperCam *Performance Tips*

If your machine is not fast enough to record as many frames per second, as you requested, [HyperCam](#) will try to drop some frames and keep up with as many as possible. However, if it finds out that more than 50% of the frames must be dropped, it will stop with an error message. What can you do to increase the fps rate?

- Try to record your AVI file capture to the fastest hard disk that you have available.
- Consider the color depth of your video mode. Today, many computers work in High Color, which uses 16 bits per every pixel and can represent accurately up to 65536 colors, or True Color, which use 24 or 32 bits per every pixel and can represent millions of colors. Pictures in High and True colors modes contain a lot of information to capture from the screen memory, compress and write to AVI file, and this takes a lot of time, processor power, and disk space.

In many cases, the programs that you want to capture will probably look as good in 8 bit color mode, which can display 256 colors. The programs optimize the color map to make the best use of them, so you really do not lose that much quality unless your subject demands higher color depth. In 8 bit color mode the amount of information to capture and compress is 2, 3, or even 4 times smaller than in the other modes. These pictures can be also compressed fastest, and produce the smallest AVI files. Please consider switching your monitor into 8 bit color mode (256 colors) for AVI recording.

- Try making the "Key frame" value on the AVI tab higher, or the "Frame compression quality" factor lower can help a little in improving the fps rate.
- Consider recording a smaller picture to achieve higher frame rate for your movies. You could make a good use of [HyperCam's](#) panning capability to make up for the lower size of your picture.
- Finally, if you really need high fps rate and picture size, you may need to consider using to a machine with a faster processor. Dual (and even more) processor machines running under Windows NT will be to your advantage, too, as [HyperCam](#) is using three program threads when recording. Windows NT will schedule the threads among all available processors to give you better performance.



HyperCam *Command Line Options*

HyperCam may be started from a batch file, command prompt window or another application with a number of command line options (switches) that override default settings saved in the system registry, and also may cause it to start recording immediately. A summary of command line switches follows:

- nox Special option to avoid displaying the big X mark when recording is paused. This may be used in some special situations when the X mark is not completely removed when resuming capture from pause mode, and is recorded on the movie.

- rec HyperCam starts recording immediately on startup. HyperCam dialog window is iconized to the task-bar.

- recx Same as -rec, but also on stop recording (e.g. the user presses the hot key to stop recording) HyperCam will terminate.

- hwNN Selects the recording area to be the same as the area of a window (including frames and title-bar) with handle NN, where NN is a number in decimal notation. This option is useful mainly when calling HyperCam from other applications.

- xNN -yNN -wNN -hNN Select the recording area (x - left, y - top, w - width, h - height) in pixel coordinates. Upper left corner of the screen is (0, 0). If any value is omitted from the command line, the default value saved in the registry is used.

- fNN Select the frame rate (in frames per second). NN is a number, decimal fractions are accepted.

- a This option is for specifying the output AVI file name. The next argument should be the file name itself, for example, HyperCam -a test.avi. Use double quotes to surround the file name, if it contains any spaces.

- i+ or -i- Turn on (+) or off (-) the adding of incremental number to the file name.

- s+ or -s- Turns on (+) or off (-) the sound recording.

- kNN Sets the key frame value for compressed AVI files. NN is an integer number.

Example:

```
HyperCam -rec -x100 -y100 -w300 -h200 -i- -a test.avi
```

will start HyperCam in recording mode. The recorded area will start at (100,100), the width will be 300 pixels, and the height 200. The AVI file name is "test.avi", and no numbers will be appended to the file name.

 **HyperCam** *Purchase and Registration*

Note: This topic does not apply to you, if you own the Commercial version of [HyperCam](#).

HyperCam is a 'try before you buy' program that relies on your support for continued development, and single user registration is only \$30.00. When you register [HyperCam](#) you will receive a code that will prevent HyperCam from placing the "Unregistered HyperCam" mark on the new AVI movies that you make. You will also become eligible for priority support and be able to obtain free updates of the program through our Web page (address below) until the next major release.

License cost:

	Version for Intel processors (Windows 95 and NT)	Version for DEC Alpha processors (NT only)
Single licenses	\$30 each	\$40 each
Site license covers a single organization for an area of up to 100 miles (160 km) in radius	\$950	\$1050
World-wide license	\$2900	\$3100

[HyperCam](#) may be purchased using one of the following convenient methods:

You may purchase [HyperCam](#) licenses at the **Hyperionics WEB Store** at <http://www.hyperionics.com> where you enter your credit card number on a secure (SSL) WEB page. With this method, a temporary license will be emailed from the store to you immediately, allowing you to use the software at once. A permanent license will be sent to you within the next few days.

For off-line registrations, you may run the small [Register program](#) usually provided with HyperCam. With the help of this program you will prepare a registration form, with your credit card number encoded for security, that can be emailed to sales@hyperionics.com, faxed or sent by regular mail.

You may also **mail your check or money order** written in US currency and drawn on a US bank, directly to the address below, payable to Greg Kochaniak. Please do remember to include a short letter with your check, that tells us where and to whom we should send the license. Thank you!

Greg Kochaniak
Hyperionics
3146 Chestnut Street
Murrysville, PA 15668, USA

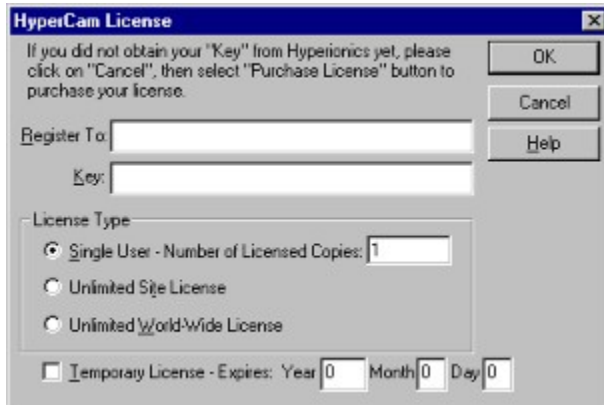
e-mail: gregko@hyperionics.com
<http://www.hyperionics.com>

[HyperCam](#) may be also registered using **CompuServe** SWREG forum (GO SWREG), search for HYPERCAM name there and select the appropriate processor version. The price for single user license over CompuServe is a little higher due to the 15% charge they impose.

HyperCam *License - Options*

Note: This topic does not apply to the Commercial version of [HyperCam](#).

You should enter this dialog only after you have received an email or letter from Hyperionics, listing your license. If you do not have it yet, please click on **Cancel** button.



Your license letter will list your or your company name, the "Key" value, the type of the license and the number of licensed copies. Please enter all the data to the appropriate fields on the "HyperCam License" dialog. Please note also that your "key" string contains only capital letters from the English alphabet - there are no digits or other characters in it, except maybe for dashes or spaces to make the key entry easier. Whenever in doubt, if the O shape is "zero" digit, or the capital "O" letter, always enter a letter.

Please enter all strings (Register To: name and the key) exactly as spelled in your license letter from Hyperionics. Then click below in the "License Type" frame on the radio-button that marks the type of the license you have purchased. Most often it will be one or more "Single User" licenses. If this is the case, you must also enter the correct "Number of Licensed Copies", that will be stated in your license letter.

After entering the above, in most cases, you may just click on OK button at the top right corner. If all was entered correctly, the "HyperCam License" dialog will just disappear and you'll be back in [HyperCam](#) "License" tab. Your name and the license type should be listed there. If you see a message saying "The license key you entered is invalid...", please click on OK button and verify once again if all the data was entered correctly. Make the appropriate correction and try again. If it still does not work, please contact Hyperionics for the correct license key.

Occasionally you may receive a temporary license from Hyperionics, for evaluation purposes or to let you work on an urgent project while your payment is in the mail or being processed. If you have a temporary license, you must click on the "Temporary License" check-box at the bottom of "HyperCam License" dialog, and then enter the exact expiration date in the Year, Month and Day fields. If you neglect to do so, or enter a date that differs from the expiration date stated in your license message from Hyperionics, the license will not work.



HyperCam **Contact Information**

For the latest version of [HyperCam](#), and details on our other software, please visit the Hyperionics web site at:

<http://www.hyperionics.com>

Other products by Hyperionics (as of September 1997), available also from the above web site:

HyperSnap-DX still screen capture utility for Windows 95 and NT. Can capture regular Windows programs, as well as screens games/multimedia programs that use DirectX technology.

EasyAVI DLL a Dynamically Loaded Library for C/C++, Visual Basic and other programmers to easily create AVI files from within their programs.

Thank you for using [HyperCam](#)! Please do contact us for technical support, questions, comments, and suggestions for improvement you may have!

e-mail: gregko@hyperionics.com

Greg Kochaniak
Hyperionics
3146 Chestnut Street
Murrysville, PA 15668, USA
Fax: (415) 617-3721

Hyperionics

Software by Greg Kochaniak

