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Welcome to Screen Saver Studio!

Screen Saver Studio is an exciting utility for Windows that enables computer users—no matter what their level of computing expertise—to create professional-looking screen savers for home or office. If you can click your mouse you can create a screen saver that your friends, associates or clients will love. Anything you can imagine can be created using the simple interface of Screen Saver Studio! With Screen Saver Studio, you can:

- Easily create screen savers that use the power of DirectX to be faster and smoother that will still work on systems without DirectX installed!
- Give screen savers you make to family members, friends or business associates. *No* additional software is needed to run Screen Saver Studio screen savers!
- Use many different graphic formats—including animated GIFs!
- Use any WAV or MIDI file to add sound to your screen saver.
- With the aid of a recent version of Windows Media Player, you can also use MPG, MP3, MOV (version 2 and earlier) and many more multimedia file formats.
- Add text and pick from over 100 transition effects for your text and graphics.
- Use the 3D Wizard to wrap graphics of your choice around three-dimensional objects.
- Use the Slide Show wizard to turn all the pictures in a chosen subdirectory into a slide show screen saver just by making a few selections!
- Use the Template wizard to make cards in a few simple steps!
- Use the SWF wizard to make a screen saver that plays a Flash file!

Children and adults will quickly create screen savers with the easy to use interface of Screen Saver Studio. Just a few clicks of the mouse and you are on your way to making a screen saver! Advanced users will enjoy the flexibility and many powerful features of Screen Saver Studio.

System Requirements

Screen Saver Studio was designed for any system running Windows 95, Windows 98, Windows Me, Windows 2000, Windows NT or Windows XP. Recommended System Requirements are:

- 20 Megabytes of free hard drive space on your Windows drive for temporary files
- SVGA graphics
- 100 MHz processor or better if you will be working with large photos
- 300 MHz processor or better if you want to play MP3 files
- DirectX version 7.0 or higher if you want to be able to view DirectX savers.

For technical support information please call 318-221-8718. Please have information regarding your computer configuration available. You may also email support@softdisk.com.

Installation

Before You Install:

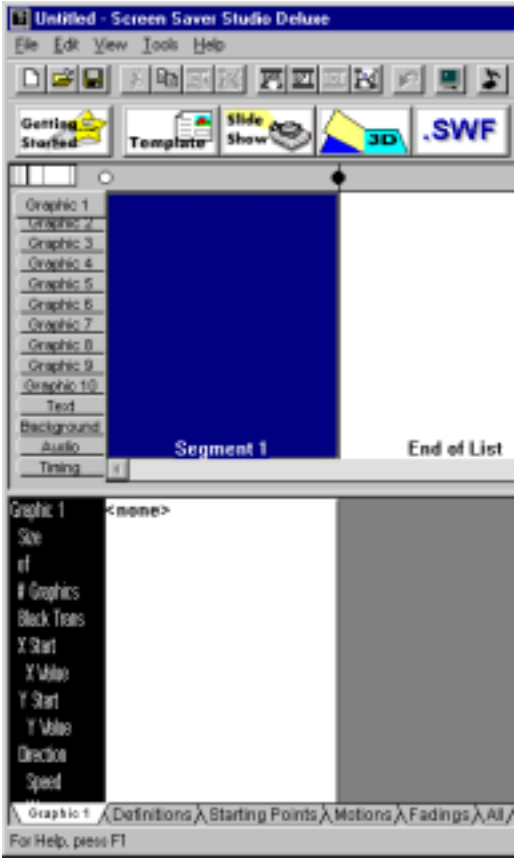
- Close all applications, including all programs that may be running in the background.
- If you are logged onto a network, log off.

To Install:

- Click the taskbar Start button.
- Select the RUN option.
- Type D:\SETUP in the command line field. (Where “D” is the letter of your CD-ROM.)
- Click “OK” and follow the on-screen prompts. Screen Saver Studio will be installed in the directory \program files or where you chose during the installation process.

Starting Screen Saver Studio

- From the desktop, click on the START button. The START menu displays.
- Move the cursor to the PROGRAMS option. The Program Menu displays.
- Move the cursor to the Screen Saver Studio icon. The Screen Saver Studio interface will load and you are ready to make your own screen savers.



Your First Screen Saver

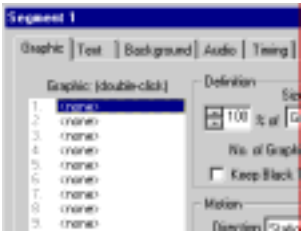
Let's jump right in and make a screen saver! This tutorial will acquaint you with the main features of Screen Saver Studio. You will make an actual screen saver that has a star bouncing around the screen, accompanied by the tune "Twinkle, Twinkle, Little Star." Make sure you actually do all the instructions! The instructions you should follow are *italic*.

Launch Screen Saver Studio.

You should be looking at a blank session. As you can see, Segment 1, (the dark blue box) is highlighted. The words "Segment 1" at the bottom of it are highlighted in your system colors and there is also a dotted line around the dark blue box. (But sometimes the dotted line is hard to see.)

Double-click on the Segment 1 box or just *press <Enter>* to edit the contents of Segment 1.

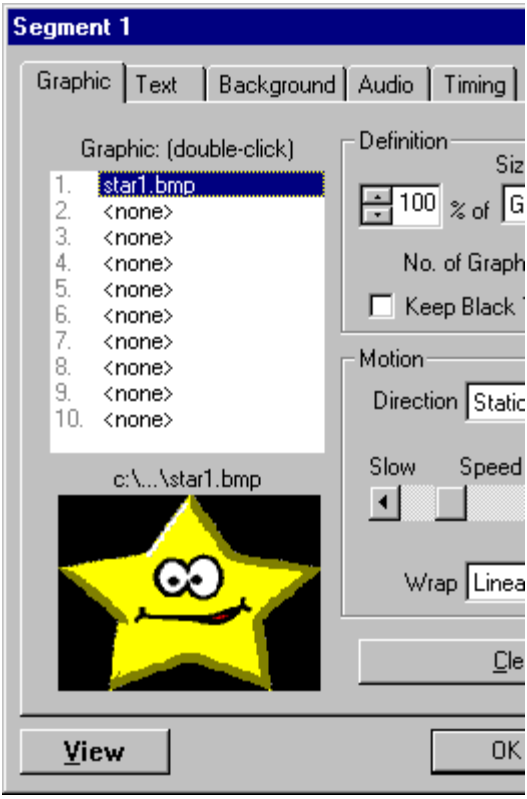
We want to look at the Graphic tab page of the segment editor. If you are not on the Graphic tab page, then *click on the Graphic Tab in the upper left corner.*



The upper left corner of the graphic tab page has 10 slots (or layers) for graphics. The first slot is highlighted and says <none>, meaning there is no graphic in that slot. We want to add a star graphic. Above the slots section it says "Graphic: [double-click]", so *double-click on slot 1* or *press <Space>* to change the slot 1 graphic.

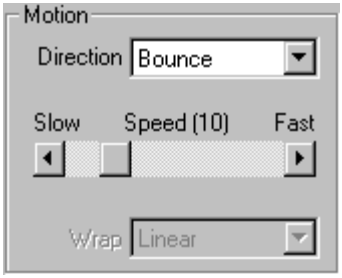
To the left is a standard file selection dialog. *Browse to the \SSSTUDIO\SOURCES\TWINKLE directory.* There are three graphics in this directory—**star1.bmp, star2.bmp** and **stars.bmp**. *Click on **Star1.bmp*** to highlight it. If the Enable Preview box is checked you'll see a thumbnail preview of it in the right hand corner. (It defaults to not checked for speed purposes; it can be take a while to open a large graphic and shrink it for the preview.)

Since this is the graphic we want, *click Open* to return to the graphic page.



Now the graphic page shows you the name of the graphic in slot 1. Below the slot list is a preview of the graphic in the highlighted slot.

The middle of the screen has an area that allows you to set the motion. The Speed slide bar defaults to 5. *Change the speed to 10* so the star will move faster. Do this by clicking on the right arrow of the slide bar, or by dragging the



thumb over and then clicking just outside of the thumb to get it exact. There is also a Direction pull down menu in this area. *Click on the direction menu and select Bounce* so the star will move around the screen and bounce off the edges. (Selecting this dims the wrap item, since bouncing items do not wrap.)

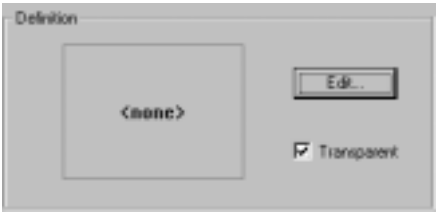
The Starting Point area is at the top of the right-hand corner of the graphic page. It has controls for both the X and Y-axis. *Click on the pull down for each axis and change them to the Keep Old* setting. (This becomes important later on when we want our star to move fluidly by beginning a segment where it ends the last one.)

The lower right section—Fading—controls how the star gets on and off the screen. You want the star to enter the screen by zooming in. *Click on the arrow in the Fade-In button* and you'll see a dialog like that at left. These images represent the fade-in types. *Select the fade type that has a centered square image surrounded by black.*

Below the types is a pull-down menu. It contains fade-in effects that alter the way the fade types work. *Choose Stretch from these effects*. The star will be compressed in the center of the screen, then stretch to its full size. Now the star will zoom in. *Set the speed bar for the fading to 140*. We want the fade-out for the star to be instantaneous. *Click on the Fade-Out button and choose the type that contains an image of a black square.*

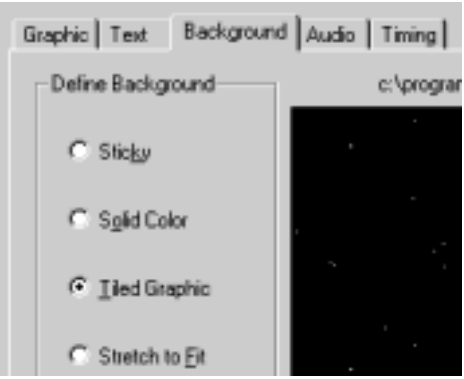
Let's take a look at what our effort looks like so far. *Click on the View button* to see what this segment looks like up to now. If this is the first time you've previewed this project, the dialog to the right will pop-up. This dialog defines the display settings you want to use in your screen saver. DirectX is a newer display system which uses the graphic card to do a lot of computing so it is faster and smoother—but it may not be on present on older systems. It is the default because it is so much better than the regular Windows graphics device interface (GDI) and because you or the end-user of your screen saver can switch into GDI if you need to!

For now, press *OK* to accept the defaults. Screen Saver Studio will try to put your system into 16 color, 800x600 DirectX mode for both the previews **and** the built saver. You should see the Star fade in and start bouncing around the screen. *Click on the close box of the View Segment 1 bar, or press ESC or ALT+F4* to get back to the segment dialog. (If you have a video problem, press Esc to exit the preview and then consult the Troubleshooting DirectX section.)



Click on the Text tab to add some text. The Definition text box in the upper left hand corner is activated by the Edit button, which brings up a mini-text editor where you enter your message. *We typed "Hello World!"*

This text will come up in the middle of the screen, but since the star will be moving around in a random place the text will not usually obscure the star. Note that you can make the text move, make it fade in, determine where it starts on the screen etc., just like you can do with a graphic. If you want, you can click the Font button to bring up the standard Windows font dialog to change the size, color and style of different parts of your message.



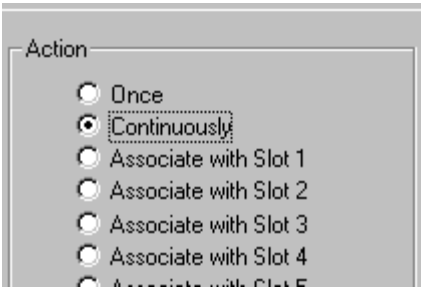
Our star would be lonely all by itself, so let's add some stars in the background! *Click on the background tab*.

When a graphic is repeated across the screen both left-to-right and up-and-down—"tiled" as it is called—it will look like a whole bunch of stars. There is a graphic that looks like a few distant stars; when we made it we had to be careful that there were no stars right at the edges or they would have looked funny when the edges of the graphic met itself. (i.e. it "tiles" nicely.)

Click on the "Tiled Graphic" radio button, then *click on the Select button*. You will see a standard open dialog; *browse to the TWINKLE directory and select the STARS.BMP.*

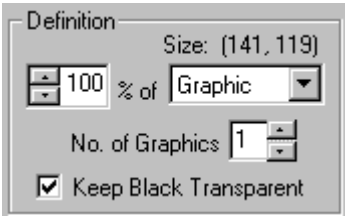
Now we'll add the song! A song is sound, and sound is Audio, so *click on the Audio tab.* Click on the Select button and you'll see the standard file selection dialog box. *Browse over to the TWINKLE directory* and there is only one audio file to pick. *Select* ***twinkle2.wav*** *and click OK.*

In the Action radio button section, *select the Continuously radio button.* This will make the sound automatically play again (or loop) when it finishes playing all the way through.



One tab left! *Click on the Timing tab* to change how long Segment 1 lasts. *Select the* ***Stop after x seconds*** *radio button and change the value to 6.* This means that after the star fully zooms-in onto the screen it will bounce around for 6 seconds and then the fade-out effect will begin. (Since we chose an instantaneous fade-out it means the segment will be over 6 seconds after the zoom-in is complete.)

Click View to see how everything looks...Did you notice it? When the big yellow star moves around it blocks the background stars in an area around the star. In fact, the area is the rectangle that contains the star. This is because the star graphic actually has black around the yellow and it's being drawn over the background stars. But don't worry, there is a way to fix it!

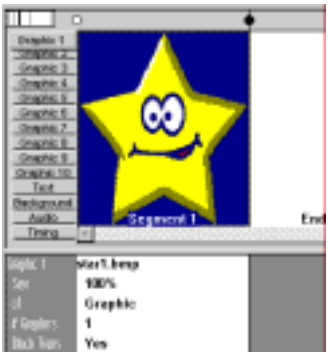


Click on the Graphic tab and look in the Definition area. There is a check box labeled "Keep Black Transparent." If we turn it on, all the black parts of the graphic will become "invisible" and everything underneath will be seen! In the Fading area there is a "Transparent Fade" check box that does a similar thing with the graphic as it is fading in. *Check the Keep Black Transparent and Transparent Fade check boxes.*

- *You don't want these checked unless you have graphics moving over other graphics or over backgrounds—it uses up time and memory.*

If you *View* your progress so far, the sound plays, the text is in the middle of the screen and the bouncing star zooms-in without covering the background…Excellent! *Exit the segment view* and then *click OK* to return to the main screen.

- *Clicking OK "sets" all of the changes you've made and returns you to the main screen. The Apply button sets all the changes you've made but keeps you on the segment property page. The Cancel button erases ALL the changes on ALL the pages since the last time you clicked Apply.*



On the left hand side of the screen are tabs labeled Graphic 1 through Graphic 10 as well as ones labeled Text, Background, Audio and Timing. Graphic 1 is highlighted, so you are seeing what we put in slot 1—our big star! You could click on the Text tab and see our text. If you look at one of the empty slots, Graphic 2, for example, you'll see a blank field.

To add a new segment, *click on the box labeled End of List*. This highlights it. Now *press the <Insert> key* on the keyboard or *click on the Insert new segment button* on the tool bar. This causes *all* of segment 1 to be copied into segment 2 for you. This is convenient since segments are usually very similar with only small changes between them.

Double-click on segment 2 and the segment controller dialog again comes up. It knows what Tab you have set on the main page, so you should be on the Graphic tab with Slot 1 highlighted.

We do not want the star to zoom-in in this segment—we want to keep it the same size throughout. *Click on the Graphic Tab* if it's not already selected and *change the fade type to the teal square*. (It's all the way at the bottom of the fade type list.) This will make the fade-in instantaneous. Also, *change the motion from bounce to stationary*.

Click on the Text tab and *click on the Clear button*—this will erase the text.

The Clear button only works on the "main" section of each page and leaves all other sections alone. *Set the text motion to Bounce* and then *click Clear*—the motion is still Bounce. The Use Prior button, however, affects **all** settings by copying the current page values from the prior segment's page. *Click on Use Prior Segment Values*; the motion goes back to stationary and the text comes back, too! *Click Clear* to erase the text again.

If you start to play a sound in a segment, it always stops any sound that was still playing from a previous segment. Right now, the **twinkle.wav** is selected to play in segment 2 just like it was in segment 1—which will stop the song right in the middle and start playing it again. This is **not** what we want! *Click on the Audio tab* and then *click on the Clear button* to change the **twinkle.wav** to **<none>**. Now the song from segment 1 will play continuously like we want it to.

C*lick on the Timing tab and change the duration to 1 second.*

Get back to the main screen by *clicking OK*, then *click on the End of List segment* and *insert* another new segment.

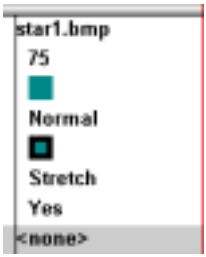
You can edit segments directly in the work sheet, the spreadsheet area below the segment area. There are some very powerful features associated with the work sheet that can make working with your projects faster and easier. Sometimes it makes more sense to use the segment editor and other times it makes more sense to use the work sheet.

Right now we want to change the graphic in segment 2. We could double-click on segment 2 and click on the Graphics tab, then double-click on star1.bmp in graphic slot 1 and open **star2.bmp** and then Click OK to get back to the main screen.

However, it's so much easier to just *left-click on the star1.bmp attribute in segment 2* of the worksheet. It opens up the file dialog and you can simply *double-click on star2.bmp* to select it.

The star is winking!

We want to change the timing in segment 3 slightly. To do this on the worksheet, *click on the Timing tab on the left hand side of the segment view*. The segment view now displays the timing info for each segment and the first tab at the bottom of the worksheet changes to Timing. *Click on the Timing Tab at the bottom of the work sheet.* To increase the length of segment 3, *click on the 1 under the Seconds label of Segment 3*. An input box pops up that lets you change the value either by typing it in or by using the up and down arrows. *Change the value to 3 and press enter or click on the OK button.*



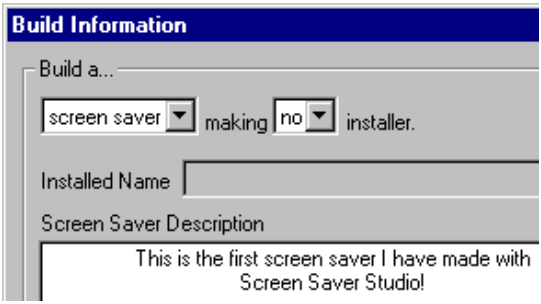
Click on the Fadings tab at the bottom of the work sheet. Click on the blank square that represents the out type for segment 3. The fade dialog pops-up; *select the fade-out type that has a centered square image surrounded by black,* then *choose the Stretch effect from the pull-down menu that appears when you click on the word "Normal" below the fade out type*. This will make the star appear to zoom out. We want things to mesh nicely when we go from segment 3 back to segment 1 where we had zoomed-in.

Now let's preview the entire screen saver to be sure it's doing what we want. *Click on the big preview button or the little preview icon* and you'll see a bar that says Segment 1. The star should be bouncing around while zooming-in over the background and the song should be playing. After a bit, the bar should change to segment 2 and the star should stop moving and wink while the text goes away. Then in segment 3 the star zooms out. After that it goes back to segment 1.This "big picture" preview shows you each segment one after the other instead of just the segment you are working on, but you end it in the same way—by *pressing ESC, ALT+F4 or clicking on the close box of the dialog.* If something looks wrong, go back to the proper segment and edit it.

When your file is okay, save it by *clicking File|Save or click on the save icon*. You will see a standard save dialog—browse to the desired directory and save your project like any other file. It will be given an SSP file type. NOTE! The Screen Saver Project file (SSP) that you are saving contains only a list of the various elements (graphics and sounds) you chose for your screen saver. It does **not** contain the elements themselves! If you delete a source graphic, for example, when you open up the SSP again it will tell you it can't find the graphic!

Now let's turn your work into a screen saver! Create the screen saver by *clicking the big build button or File|Build SCR/EXE or click the build SCR/EXE icon* in the tool bar to bring up the build dialog. You may only enter an Installed Name if you are making an installer.

You may enter description text in the description box—this is only visible when looking at the screen saver settings dialog.



At the top of the build dialog are two (or three) pull down menus that describe exactly what you are building. The first choice is Screen Saver or Presentation. A presentation differs from a screen saver in that it is a program that must be launched "by-hand" and it cannot be exited by a mouse click or mouse movement. *Select to build a screen saver.*

The second choice is whether to make an installer or to make no installer. A finished screen saver or presentation always has at least two files though it may have more. An installer packs all of the

needed files together into a single EXE file. When this EXE file is run it unpacks all the parts into the proper place, and if it's a screen saver, actually makes it the default screen saver on your system! From the an/no menu, *select making an installer.*

When you are making an installer another option becomes available—whether or not to use compression. You should almost always use compression—it can make the installer about half the size it would be without compression. However, it may also take a significant amount of time on slow systems, so you should build screen savers and test them first, building an installer using compression only on the absolutely finished product. Since our screen saver has not been tested, go back and *select making no installer.*

You can leave the items in the graphics section alone for now. C*lick OK* to continue the build.

The next thing you see is a standard Save As dialog. You should save your screen saver in the Windows directory so it can be used immediately.

Since we didn't build an installer, the file name you give it will be the name that shows up in the screen saver selection list. *Type in FIRST as the file name* and *press <Enter> or click Save.*

After some progress thermometers go by, you'll see the following dialog that alerts you to the fact that there are more files than just an SCR file in a screen saver. If you want to give this screen saver away to a friend you have to give him the extra file or files. (Better still, remake the screen saver as an installer using compression after you check it out.)

Click OK to get past the dialog to finish building the screen saver. The built screen saver is **not** dependent on the source files that made it. If you wanted, you could delete the source files and the screen saver would still run. (Of course, you could no longer open the project and rebuild it!)

To test your screen saver: *Right-click on the desktop and drag down to the Properties item. Click on the Screen Saver tab. Select First as the screen saver and click on Preview.*

Congratulations! You've made a screen saver! Screen Saver Studio can do much more, however…You should try out the 3D, Slide Show and Template Wizards, load up some of the sample screen saver projects and just experiment with things on your own. Have fun!

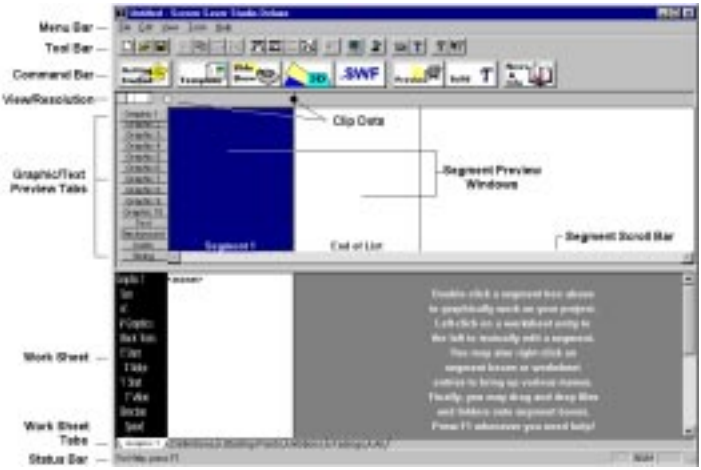
Screen Saver Studio Concept

Screen Saver Studio is a segment based screen saver creator program. Think of a segment as a page. It contains the various elements that you add. Graphics, text, sounds, background elements and the like are placed in a segment. An initial transition effect (like zoom in, random blocks, or appear instantly) is applied along with motion (up, down, right, left, bounce, stationary). An exiting transition effect can then be applied as well. To complete the segment, the duration is set. This tells how long a segment will last—how long the objects will move or appear. Screen Saver Studio supports up to 1000 segments. The screen saver you create will automatically run through the segments you defined. The combinations of graphics, sounds, text, backgrounds, duration, movements and transition effects offers unlimited possibilities for screen saver creations!

Some of the best screen savers are simply one or two segments that repeat—a bouncing logo with a background image can be quite effective. Another typical example would be a screen saver featuring photos of the family pet. Each picture displayed would fill a segment. You would add various transition effects between each segment to give a slide show appearance, but basically you would have as many segments as you have pictures.

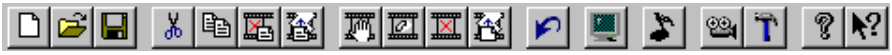
In fact, the Template Wizard and the Slide Show Wizard can make these two types of screen savers even quicker and with even less fuss than doing them “by hand!” All you need to do is fill in a few fields and click a couple of buttons and Screen Saver Studio does the rest! The 3D Wizard is the third Screen Saver Studio wizard. This wizard allows you to easily create impressive three-dimensional photo cubes with your own graphics! Finally, the SWF Wizard takes a single Flash (swf) file and turns it into a screen saver for you!

The main screen gives you an overview of your screen saver. It lets you preview your screen saver, add new segments and get to the segments you wish to edit. The basic elements are:



Menu Bar

The menu bar contains all the usual sorts of menus and items; the most frequently used items have been made into icons on the Tool Bar. You can go to the View menu and independently turn the Tool Bar, the Command Bar, the Work Sheet and the Status Bar on or off as you prefer.



Tool bar

The tool bar is displayed across the top of the application window below the menu bar. The tool bar provides quick mouse access to many tools used in Screen Saver Studio. To hide or display the Tool bar, choose Tool bar from the View menu (ALT+V, T).

Click	To
	Open a new project.
	Open an existing project.
	Save the active project with its current name. (Save As if currently untitled.)
	Remove selected data from the project and store it on the clipboard.
	Copy the selection to the clipboard.
	Place the contents of the clipboard **segment** over the current segment.
	Insert the contents of the clipboard **segment** before the current segment.
	Edit the current **segment**.
	Clear the current **segment**.

Remove the current **segment**.

Insert a new **segment** before the current one.

Undo the last Edit action.

Call up the Display Settings Dialog.

Open the Jukebox

Preview the current screen saver.

Build a screen saver file and possibly an installer program.

About your version of Screen Saver Studio.

Point-and-click help.

Command Bar

The command bar is displayed across the top of the application window, below the tool bar. The command bar provides quick mouse access to many tools used in Screen Saver Studio.
To hide or display the Command bar, choose Command bar from the View menu (ALT+V, C)

Launches a tutorial to guide you through making your first screen saver. If you haven't tried out the program yet, you should take this tutorial.

Starts the Template Wizard that allows you to make quick cards by maing a few selections.

Runs the Slide Show Wizard that allows you to turn all the graphics in a single directory into a slide show screen saver.

Calls up the 3D Wizard that allows you to wrap selected graphics around a 3D shape and rotate it around on the screen.

Starts the 'swiff' Wizard which allows you to build a screen saver that plays a single Flash (.swf) file.

Starts a preview of the entire screen saver. Use it to insure that things work properly from segment to segment.

This actually builds the screen saver.

Connects you to www.screensaverstudio.com where you can read about the latest updates, patches, and add-ons, as well as news about contests, etc. (If you have a properly configured web-browser and internet connection!)

Main Screen View Resolution

When you run the program the main screen enables you to view four segments. You can set this to 1, 2, 4, 8, 16, or 32 segments. If your screen savers are usually only one segment you will be able to see it better by using the one segment view. Conversely, if you are working with large, multi-segment screen saver projects you may want to view more segments to minimize scrolling.

You can change the number of segments being viewed in one of two ways. Click on the View menu, choose Resolution, then choose how many segments you want to see on the main screen. Alternatively, in the upper left hand corner of the main screen is a little ruler. It graphically shows you how many segments are being displayed, indicates how large the segments will be on the screen, and lets you click on a vertical line to change the number of segments you are viewing.

Drag and Drop

If you are looking at the main window, you may select a file from your Windows desktop and drag and drop it onto a segment. The file will be placed in the slot that is currently 'active' as seen by the raised slot tab on the left side of the window. For example, if Slot 2 is popped-up, when you drag and drop a graphic onto a segment it will be placed in slot 2 of that segment—replacing whatever was currently there—but retaining all the other properties which were already set, such as motion, transparency, etc.

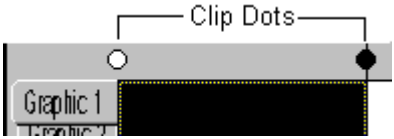
This becomes more powerful when you set up the segment exactly like you want and then drag and drop a *folder* or group of files onto the window—the first graphic overwrites whatever happens to be in the segment you drop it on, but then copies of that segment are inserted after it, one for each dropped file. Thus you can make a template segment and quickly fill it with desired graphics.

You can't drop audio files onto graphic slots (or vice versa) and currently you can't drop anything onto the text tab. If you drop more than one audio file then they will be placed into the Jukebox and you will be given a warning if you were not in Jukebox mode already. If you drop a folder that contains mixed file types you will get warnings for those that can't be dropped in that particular slot, like audio files on graphic slots or videos on anything other than slot 1, etc. When you drop a graphic onto the background it will become 'stretched' unless it was already defined as 'tiled.'

Clips

A clip is a run of segments that are always played in order. Thus, a simple screen saver that begins at segment 1, goes to segment 2, then segment 3, etc. until it reaches the last segment is actually a single clip.

After the last segment of a clip is played, the first segment of a *different* random clip is then started. The simple screen saver mentioned above has no other clips to choose from, so it plays the same one again from the beginning. In addition, no clip will be repeated until every clip has been played once. So if you have 20 clips, each one will be played in a random order without repeating any one. Then all 20 will play in a random order again without repeating, etc.



To make a clip, darken the clip dot on the left side of the desired *starting* segment and the clip dot to the right side of the *ending* segment—not the ones in between. If the dots on both sides of a segment are dark then you've made a single segment clip. You have to make sure that all the settings in the starting and ending segments of all clips make sense when they follow or precede any other clip since you don't know what order they will be played in.

The very last clip dot in your screen saver will always be dark. The very first clip dot can be dark or light and controls the final clip feature—the Intro clip. The Intro clip is a clip that is played only when the screen saver starts. If the first clip dot is white, then everything from segment 1 up to the first black clip dot is an intro clip. (In the simple screen saver, the single clip is actually an intro clip—it is played repeatedly since there is nothing else to play!) If the first clip dot is dark, then the first clip will be treated like any other clip and played randomly.

Viewing the Graphics in a Segment

A group of tabs can be found on the left side of the main screen. The first tab is named Graphic 1, the second is named Graphic 2, and so on, all the way to Graphic 10. The next four are named

Text, Background, Audio and Timing, respectively. One of these will be active and appear to be popped out over the others, such as Graphic 1 in the graphic at right. When you look at the segment list in the main screen you are seeing the different objects (in each segment) as determined by which of these tabs is currently active. This is a quick way to find a segment where something changes.

There are two ways to change the objects that are shown in the segment list. The easiest is to just click on the tab you want to view. You can also select Element in the View Menu and then choose the desired object.

Adding Segments to a Screen Saver Project

Screen Saver Studio can make screen savers with up to 1,000 different segments. A new segment can be added in one of three different ways. You can add a new blank segment at the end of the project, insert a duplicate of a highlighted segment or you can insert a copy of any existing segment or segments anywhere into the project.

To add a new blank segment at the end of the project, highlight the End of List box and press <Enter>. <Enter> calls up the editing box for a highlighted segment—since the End of List is empty it calls up a blank segment for you to edit as you wish.

To add a duplicate segment, highlight the segment just after the one you want duplicated and press <Insert> on your keyboard or click on the Insert New Segment Icon in the Tool bar. When you insert a segment this way it contains the contents of the prior segment.

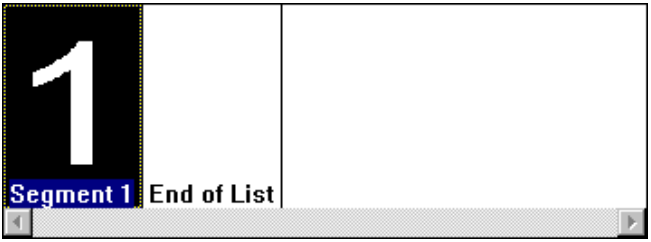
If you want to insert a new segment that is a copy of some other segment in your project, simply select that segment and copy it to the clipbord by pressing <CTRL+C> or clicking the copy icon in the Tool bar...

...then highlight a segment and click the Paste Insert Icon in the Tool bar or select Paste Insert from the Edit Menu <CTRL+A>. The copied segment will be pasted *before* the highlighted segment.

...or highlight a segment and click the Paste icon in the Tool bar or select Paste from the Edit Menu <CTRL+V>. The copied segment will *replace* the highlighted segment.

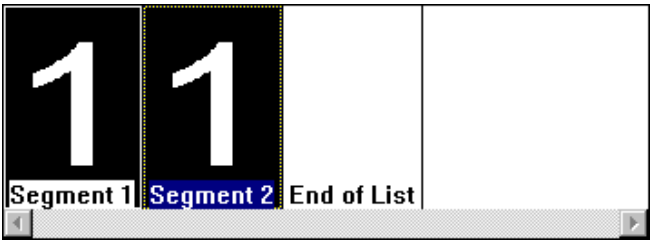
Copying a sequence of segments is similar, except that there is no tool bar icon to click on. You highlight a segment, then choose Copy Sequence from the Edit menu or press <ALT+C> to begin the copy. You then specify what segments to copy, up to the last one. Then you select the segment you want to start pasting the sequence to and press <ALT+A> or go to the Edit menu and choose Paste Insert Sequence. Note that you are doing an *insert*, not an *overwrite*!

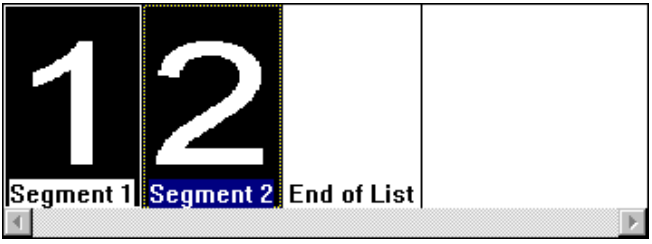
Here's a screen saver with one segment. The Text tab is showing the contents of the text field in all segments. As you see, the text for segment 1 is "1".



The End of List segment has been highlighted. The highlighted segment has its name inverted, and there is a dashed box around it.

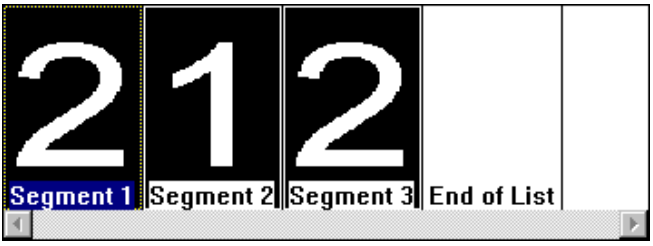
The results of hitting <Insert>—the contents of Segment 1 are copied automatically into segment 2. The new segment is also highlighted.

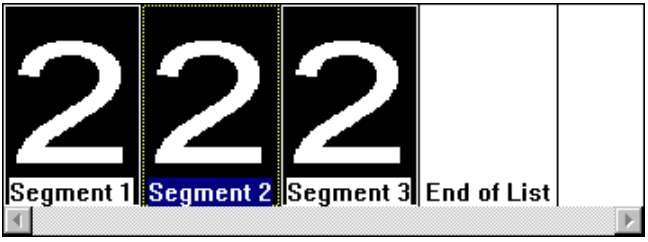




The result of editing the text in segment 2 to “2”. Then we copied this segment to the clipboard by pressing <CTRL+C>.

After highlighting segment 1, Paste Insert puts the segment from the clipboard *before* the highlighted segment. Thus, segment 1 moves over into segment 2 and segment 2 becomes segment 3.





If you then highlight segment 2 and use the Paste command, you will replace the contents of the highlighted segment with what was on the clipboard.

❖ *You may add segments until your project has 1,000 segments. Using the Slide Show wizard it is possible to generate a project file that has more than 1,000 segments. You can work with and edit such a project, but you cannot add any more segments.*

Deleting Segments

To delete a segment simply click on that segment from the main menu and press Delete or click the Delete Segment Icon in the Tool bar.

Clearing a Segment

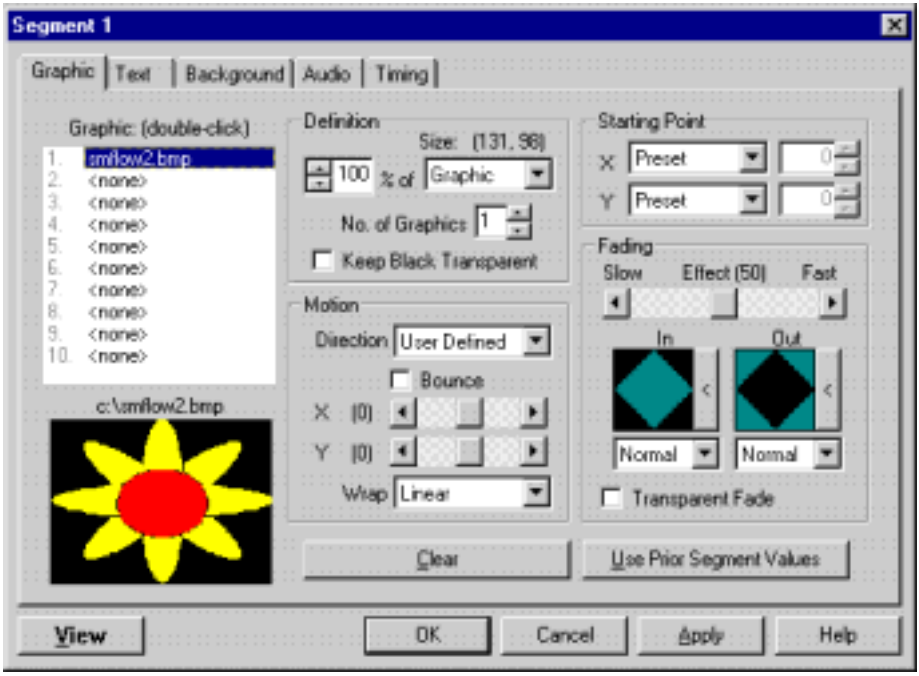
To clear *everything* in a segment, click on that segment then press SHIFT+ENTER. (Or go to Edit|Clear Segment menu item or in the tool bar, click on. This clears **all** of the segment's contents—the graphics, background, audio, text and timing—to their default values. If you want to delete the graphics and *only* the graphics in a segment, you have to edit the proper segment, go to the graphics tab, and then "by-hand" select each graphic slot and Clear it.

Editing Segments

To edit a previously created segment just double-click on that segment from the main menu (or select it and press Enter). You'll see the segment properties sheet. A tab other than Graphic may be highlighted when you get there—it opens to the tab selected on the main screen.

Adding Graphics to a Segment

Graphics are the "actors" in your screen saver. There can be up to 10 different graphics per segment and up to 50 copies of each graphic. Graphics can be static or they can be special "animations" contained in a single file. You can choose from many fade types that alter how they enter and exit the screen. You can also command the graphics to move in several different ways once they are on the screen.



There are 10 **graphic slots** (or "layers") for graphics in each segment. The slot a graphic is in affects how it acts on the screen. Graphics in slot 10 will always be at the lowest depth (just above the background) whereas those in slot 1 will always be on top (just under text.) When two graphics pass over each other, the one in the lower numbered slot (towards the top of the list) will be 'above' or 'in front' of the higher numbered one.

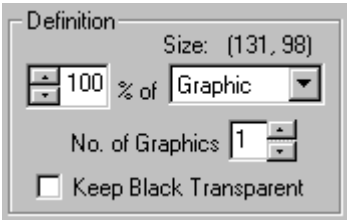
Double-click on a graphic slot to call up the dialog box to select a graphic or animation. The selection dialog has a small thumbnail of the file currently highlighted if the Enable Preview box is checked on.

You can drag a graphic from one slot to another by clicking on a slot and holding the mouse down while moving. This swaps adjacent slots. All the information associated with the slot is moved with the graphic! If you hold down the SHIFT key first, you will drop a copy of the graphic you were dragging when you release the button.

You can use a movie file as a graphic—*but only in slot 1*. When you select a movie for a segment, you may set the size it plays at in the same manner as you do any graphic. **Movies are always the topmost object—they even appear *OVER* text!** If you are playing a movie full screen (or a movie that takes up the whole screen) then you will see nothing but the movie.

You may experience some palette conflicts on computers running in 256 color mode if you have other graphics or a background in effect while a movie is playing. (This can be stopped if the other graphics and background are in the Windows 16 color palette.) While it is possible to move a movie around the screen while it is playing, it is not recommended since the video card can leave trails of the movie behind as it moves. Movies can cause a palette flash in segments before and after the movie in 256 color mode.

The graphic **preview window** shows a resized version of the graphic in the highlighted slot. The path name (or as much as can fit) appears above it. Please note that video files will only display their path name and will not show up in the preview window.



Size value allows you to set the image or video to a percentage of a given graphic size unit. The default is 100% so that you will see the graphic normal size. If you pick too small a percentage you may not see anything!

Graphic Size Unit allows you to pick what the graphic size value is based on:

If you pick **Graphic,** the percentage size is applied to the original dimensions of the graphic. Thus, you can make it be anywhere from 1% (very small) to 100% (original size). This is useful in that you only need to draw one large sized graphic for your project. You display it at different sizes in different slots to give depth to things like bees or snowflakes.

Screen—full determines the size of the screen when the screen saver is run and then stretches the graphic to completely fill the given percentage of that size. Thus, 100% always fills the entire screen, 50% takes up 1/4 of the screen, 33% uses 1/9 of the screen, etc. Be aware that even though your percentages may add up to 100%, rounding occurs and you may have some gaps between images.

Screen—fit also bases itself on the determined screen resolution, but it resizes the graphic proportionally to fit to an edge. This means that tall and thin graphics will stay tall and thin instead of getting widened all out of proportion. This is useful for covering a large area with a single graphic, like laying a floor graphic across the bottom of the screen.

No. of Graphics sets the number of this graphic that will be placed on-screen. The range is 1 to 50. All of these graphics will initially be positioned randomly, except the first one which strictly obeys the Starting Graphic Location rules. For moving graphics the first one will move at the speed set by the speed bar, all others will move randomly at the same speed or slower. However, for User Defined Direction, *all* graphics move at the user defined speed.

The **Keep Black Transparent** check box is normally unchecked. It causes all black pixels with an RGB value of 12, 12, 12 or less to be invisible. Turn it on to move objects over each other or across a non-black background. GIFs with a transparent color are internally changed to make that color black—for them to appear transparent you still must check the Keep Black Transparent box.

❖ *Some video cards have problems with "near black" colors acting transparent when you want them to be solid. RGB values of 12, 12, 12 or greater seem to prevent this from happening on most, if not all, systems.*

The **Motion** settings are in effect for graphics, animations and videos. Most of the time it will look like this...

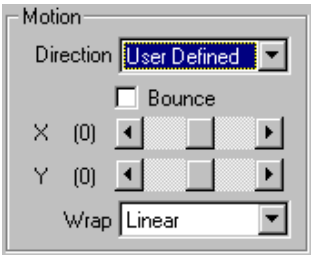
The **Direction** pull down menu sets how a graphic moves:

bounce- the graphic moves around the screen and when it reaches an edge, it bounds off in the opposite direction.
left, right, up or down- the graphic moves across the screen in the indicated direction. After it exits the screen, the Wrap pull down menu determines how (or if) it reappears on the opposite edge.
stationary- the graphic stays where it is placed. Animations, however, could still appear to move around in a limited area if they were designed that way.

The **Speed bar** determines how fast the graphic moves across or around on your screen. The speed number is actually how many pixels the graphic moves every update. Thus, at the default Update Rate of 100ms, 10 updates occur every second. A graphic with a speed of 10 will therefore move 100 pixels every second.

The **Wrap** menu controls how a graphic reenters the screen after moving *completely* off an edge:

seamless- the graphic continues to *on* the opposite edge in a straight line from where it exited.
linear- the graphic continues to *off* the opposite edge in a straight line from where it exited.
random- after moving off the screen, the graphic appears at a random location *off* the other side.
none- the graphic is removed permanently (at least for the current segment) once it leaves the screen. If you have 50 graphics wrapping with 'none' and the segment duration set to 30 cycles of that graphic, you probably want the next segment to be set to 20 graphics instead of 50 so the ones that didn't wrap don't come back!



When the **motion** selected is User Defined, the choices you have look like this...

The heart of the user defined direction is an understanding of the X-Y coordinate system. The center of the screen is 0, 0. X is the horizontal axis; it increases to the right (+) and decreases to the left (-). The Y-axis is the vertical axis; it increases to the top (+) and decreases to the bottom (-). By setting the sliders to the proper numbers, you can make an object move in any desired direction.

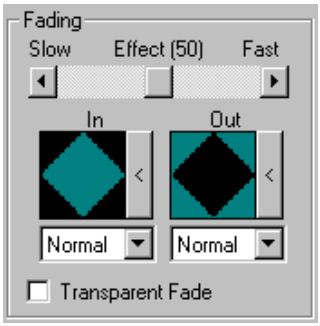
The **X** and **Y Speed** numbers represent how many pixels the graphic moves every update. Thus, at the default Update Rate of 100ms, 10 updates occur every second. A graphic with an X-speed of 10 and a Y speed of 3 will therefore move 100 pixels to the right and 30 pixels up every second.

The **Bounce** check box allows graphics using user defined motion to bounce off the edge of the screen. Be aware that when a new segment is begun a user defined bouncing graphic will start the segment by moving in the user defined direction. It may therefore seem to reverse direction in the middle of the screen; but this is what is supposed to happen.

The wrap menu has the same effect on user defined motions as it does on other motions.

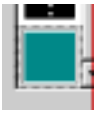
The **Effect slide bar** changes the rate at which the fading effect occurs—at the slow end it will take a long time for the graphic to fade; at the high end it is almost instantaneous. It affects both the In and Out effects.

To choose how the graphic enters or leaves the screen click either the Fade-In or Fade-Out button or double-click on the picture of the fade itself. When it opens you will see several small graphics. These graphics represent the different fade-in types. To choose how you want the graphic to fade in or out, click the picture of your choice. When you click the picture it animates to give you a preview of how the graphic is going to enter or leave the screen. This preview gives a good idea of what the type looks like.



The last two pictures in the types list do not animate when clicked. The question mark symbolizes a random fade-in type. When you choose the random type Screen Saver Studio randomly picks a fade-in or fade-out type from the available choices.

In the fade-in types the picture at the very bottom of the list symbolizes instantaneous fade-in. When you choose this type the graphic enters the screen instantly with no fading. When you choose this as the fade-out type it acts differently if it is in DirectX or GDI—in DirectX it fades out instantly; in GDI the graphic does not fade out, it remains on the screen until another graphic hides it. (You are given a warning about this when loading old SSPs.)

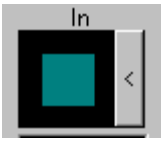


Finally, there is a black square in the fade-out types. It fades the image out instantly.

There are several fade-in effects to accompany the fade-in types. They are in the pull-down menu under the fade-in types. The effects are: Normal, Bleed, 2 Pass, 2 & Fro, Move, Stretch, and Random. Not all the fade types can use all these effects. If a fade type cannot use the Move effect, for example, Move will not show up in the pull-down menu. The effects are:

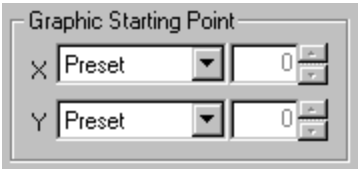
Normal— the image enters/leaves the screen exactly as the preview shows. If you pick the left to right fade-in type, for example, the left side of the image remains stationary as the image fades in.
Bleed— the image enters/leaves the screen a few pixels at a time.
2 Pass— the image enters/leaves the screen in 2 separate stages. The second stage fills in what the first left behind.
2 & Fro— the image enters/leaves the screen in 2 separate stages. The second stage takes a reverse direction from the first and fills in what was left behind.
Move— the entire image moves as it enters/leaves the screen.
Stretch— when fading in, the entire image appears on the screen at once, compressed into a small area. The image then expands (stretches) to its correct size. When fading out, the image shrinks to the size of a thin line as it leaves the screen.
Random— chooses randomly from the above effects which are allowed for the chosen fade type.

You can combine these fade types and effects in many different ways. One of these is zooming in and out. To make an object appear as if it is zooming in, select this picture from the types for fading in. Then choose Stretch in the fade effects. To make the object appear as if it is zooming out repeat the above steps for fading out.



The **Transparent Fade check box** here is similar to the Keep Black Transparent box. You normally want it on unless you are working with only one graphic on a black background. If this is off you will see the box the graphic occupies get filled in by the fade.

The **Graphic Starting Point** is broken into X and Y coordinates for maximum flexibility. The options are:



Keep Old- begin at the same location the graphic ended at in the previous segment. This is needed to maintain smooth motion of graphics from segment to segment. If there was no graphic in the previous segment, a Random location is used instead.
Preset- uses standard starting locations based on the selected direction of the graphic. Bounce generates a Random location that keeps the graphic completely on the screen. Stationary is centered on the axis. Left, Right, Up or Down direction puts the starting location just off the edge of the screen. User defined directions use a random starting location that is completely on the screen.
Random- places the *center* of the graphic somewhere on the screen. Thus, the graphic *can* start partially off the screen.
At Left or **At Right** on X-axis; on the Y-axis **At Top** or **At Bottom-** puts the graphic just completely on the indicated edge of the screen.
Off Left or **Off Right** on X-axis; on the Y-axis **Off Top** or **Off Bottom-** puts the graphic just completely off the indicated edge of the screen.
Pixel Offset- starts the center of the graphic that number of pixels from the center of the screen.
% Offset- starts the center of the graphic the specified percentage of the screen resolution from the center of the screen.

The **Graphics Starting Values** are dimmed and can't be accessed unless Pixel Offset or % Offset is chosen for the particular axis. Values can run from -9999 to 9999.

The Graphic **Clear Button** changes the graphic in the selected slot to <none>. It does not change any other settings.

Use Prior Segment Values makes every setting in the currently selected property sheet exactly the same as the settings in the previous segment's dialog. This is a very useful way to recover from changes that didn't quite work the way you wanted.

The **View** button allows you to see a sample of what the segment looks like. There will be a little bar that you can close to exit the view, or you can just press ESC.

- *Sometimes this view will **not** reflect what you will see in the final screen saver since the starting positions of graphics, background elements, etc. may have been set in previous segments.*

OK accepts all the changes you've made and returns you back to the main screen.

Cancel "forgets" *every* change on *all property sheets* that you have made since the last time you hit Apply. It also reverts things back to the way they were before you made any changes (or since you came into the properties sheet if you never clicked Apply.)

The **Apply** button "sets" the changes on *all* the property sheets since you last clicked Apply.

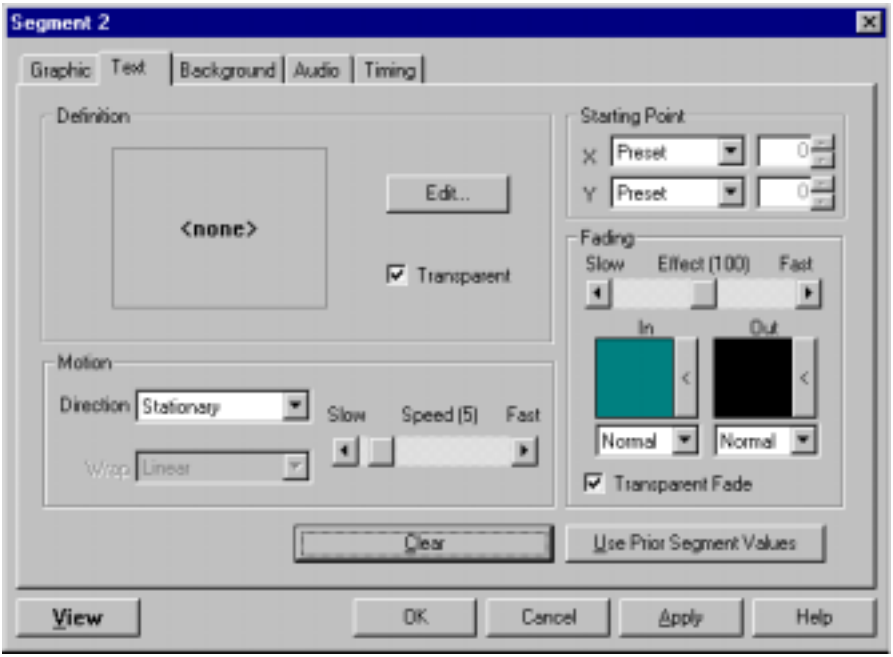
The **Help** button brings up context-sensitive help dialogs.

- *The only way to keep smooth movement from segment to segment is by using the Keep Old settings as starting coordinates. If your graphics are jumping around this is the way to fix them!*

- *If your screen saver runs very slowly your graphics may be too large or you may have too many copies of them. Crop the source graphics to a smaller pixel size and don't set them to screen-full. See performance considerations for more help.*

Adding Text to a Segment

Each segment can have one text message associated with it. Text always appears over all graphics—except movies—it is the topmost layer. Just like a graphic you can make the text move and control how it enters and exits the screen.



Clicking on the Edit button or double-clicking on the text box on the Text tab brings you to the dialog below, where you can enter your text and change whatever words you want to be different fonts, colors, styles etc. You can also set different paragraphs to different justifications.

The major thing to understand is how the dialog size and WYSIWYG check box affect the text in the screen saver. (WYSIWYG is an acronym for 'What You See Is What You Get' pronounced wizzy-wig.) While you are typing text in the input area it will always be wrapped to fit in the dialog. So if you type one long paragraph it could be spread out over three screen lines in the dialog box. When you click OK and then Preview the result, if WYSIWYG is unchecked the paragraph will become one long horizontal line—NOT three lines—so that you could use it to scroll like a marquee. If WYSIWYG is checked, then the Preview should show you exactly what you saw in the text entry dialog—three lines wrapping in the same way.

You may resize the dialog to help WYSIWYG text fall where you want. The only thing to note is that if you make the window wider than the 600x400 it starts out as, if you save your project and open it up later in a smaller screen size the dialog will be shrunk to fit on screen—losing your original WYSIWYG proportions. If you make the window wider than 640 and use WYSIWYG, people who run your screen saver on a smaller resolution screen might see cropped text!

You may type as much text as you want and it will ALL go into the dialog box. However, a 'thumb' never appears when you've filled the height of the dialog box—you just have to arrow up and down or use Page Up and Page Down and CTRL+Home and CTRL+End to move around.

The paragraph is the basic unit of text. When you click anywhere within some text and click on one of the justification buttons (left, center or right) the entire paragraph containing the cursor will reformat regardless of how WYSIWYG is set. You will have to insert carriage returns to make new paragraphs if you want some lines to be justified differently.

You can make the background for the text be any of the Windows 16 colors. Usually you would change this if you wanted to use black text and needed to be able to see what you were typing, but it could also be used just to make a colored block around your text. If you have WYSIWYG on, the background will only show enough to enclose the height of the text rather than being the entire size of the dialog window.

- *You won't see any text that is the same color as the background though it still 'counts' for WYSIWYG. You can use it as a place holder to set up some text and then change it to a different color later.*

Finally, any text you enter will be seen by ALL users as what you see. i.e. the text is always turned into a graphic in the screen saver rather than depending on the user having the appropriate font. (That's why the 'Use Exact Font' checkbox from previous versions no longer exists.)

The text **Keep Black Transparent** check box means that you will see just the text over everything else. You normally want this on. If it is off your text appears inside a box of the color you picked as the text background.

The **Motion** settings allow you to control your text. When the chosen direction is anything but User Defined you'll see this:

The **Direction** pull down menu determines how the text acts on-screen:

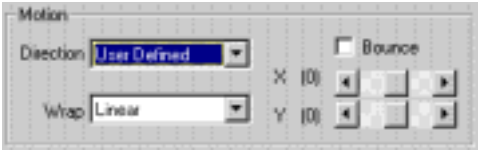
user defined- the user gets custom control over the movement.
bounce- the text moves around the screen and when it reaches an edge, it bounds off in the opposite direction.
left, right, up or down- the text moves across the screen in the indicated direction. After it exits the screen, the Wrap pull down menu determines how (or if) it reappears on the opposite edge.
stationary- the text stays where it is placed.
stationary left- the text is placed to the left of the graphic in slot 1. This is a good way to put a label by a graphic. If there is no graphic in slot 1, the text will be placed on the very left side of the screen. If the graphic in slot 1 is wholly or partially off the screen, the text will always be completely on the screen as close to the left side of the graphic as possible.
stationary right, stationary up and stationary down work just like stationary left, but on the indicated side.

The **Wrap** menu controls how the text reenters the screen after moving *completely* off an edge:

seamless- the text continues to *on* the opposite edge in a straight line from where it exited.
linear- the text moves in a straight line off one edge of the screen to *off* the opposite side.
random- after moving off the screen, the text appears at a random location *off* the other side.
none- the text is removed permanently (at least for the current segment) once it exits the screen.

The **Speed bar** determines how fast the text moves across or around on your screen. The speed number is actually how many pixels the text moves every update. Thus, at the default Update Rate

of 100ms, 10 updates occur every second. A block of text with a speed of 10 will therefore move 100 pixels every second.



When text motion is User Defined:

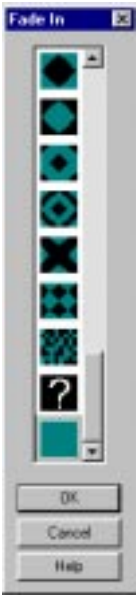
The text **Bounce check box** allows text using a user defined direction to bounce off the edge of the screen. Be aware that when a new segment is begun, user defined bouncing text will start the segment by moving in the user defined direction!

The heart of user defined direction is an understanding of the X-Y coordinate system. The center of the screen is 0, 0. X is the horizontal axis; it increases to the right (+) and decreases to the left (-). The Y axis is the vertical axis; it increases to the top (+) and decreases to the bottom (-). By setting the sliders to the proper numbers, you can make an object move in any desired direction.

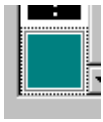
The text **X** and **Y Speed** numbers represent how many pixels the text moves every update. Thus, at the default Update Rate of 100ms, 10 updates occur every second. Text with an X-speed of 10 and a Y speed of 3 will therefore move 100 pixels to the right and 30 pixels up every second.

The **Effect slide bar** changes the rate at which the fading effect occurs—at the slow end it will take a long time for the text to fade; at the high end it is almost instantaneous. It affects both the In and Out effects.

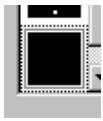
To choose how the text enters or leaves the screen click either the Fade-In or Fade-Out button or double-click on the picture of the fade itself. When it opens you will see several small graphics. These graphics represent the different fade-in types. To choose how you want the text to fade in or out, click the picture of your choice; it animates to give you a preview of how the text is going to enter or leave the screen. This preview is an excellent representation of what the type looks like.



The last two pictures in the types list do not animate when you click them. The question mark symbolizes a random fade-in type. When you choose the random type Screen Saver Studio randomly picks a fade-in or fade-out type from the available choices.



In the fade-in types the picture at the very bottom of the list symbolizes instantaneous fade-in. When you choose this type the text enters the screen instantly with no fading. When you choose this as the fade-out type it acts differently if it is in DirectX or GDI—in DirectX it fades out instantly; in GDI the text does not fade out, it remains on the screen until something hides it. (You are given a warning about this when loading old SSPs.)



You will also see a black square in the fade-out types. When you choose this type the text fades out instantly.

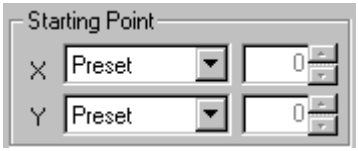
There are several fade-in effects to accompany the fade-in types. They are in the pull-down menu under the fade-in types. The effects are: Normal, Bleed, 2 Pass, 2 & Fro, Move, Stretch, and Random. Not all the fade types can use all these effects. If a fade type cannot use the Move effect, for example, Move will not show up in the pull-down menu. These effects are:

Normal— the text enters/leaves the screen exactly how the preview shows. For example, if you pick the left to right fade-in type, the left side of the picture

remains stationary as the text fades in.
Bleed— the text enter/leaves the screen a few pixels at a time.
2 Pass— the text enters/leaves the screen in 2 separate stages. The second stage fills in what the first left behind.
2 & Fro— the text enters/leaves the screen in 2 separate stages. The second stage takes a reverse direction from the first and fills in what was left behind.
Move— the text moves as it enters/leaves the screen.
Stretch— when fading in, the text appears on the screen at once, compressed into a small area. The text then expands (stretches) to its correct size. When fading out, the text shrinks to the size of a thin line as it leaves the screen.
Random— chooses randomly from the above effects that are allowed for the chosen fade type.

The text **Transparent Fade check box** here is similar to the Keep Black Transparent box. You normally want this on unless you want a black box around the text until the effect is finished.

The **Text Starting Values** are dimmed and can't be accessed unless Pixel Offset or % Offset is chosen for the particular axis. Values can run from -9999 to 9999.



The **Text Starting Point** is broken into X and Y coordinates for maximum flexibility. The options are:

Keep Old- begin at the same location the text ended at in the previous segment. This is needed to maintain smooth motion of text from segment to segment. If there was no text in the previous segment, a Random location is used instead.
Preset- uses standard starting locations based on the selected direction of the text. Bounce generates a Random location that tries to keep the text block completely on the screen. Stationary is centered on the axis. Left, Right, Up or Down direction puts the starting location just off the edge of the screen. User defined direction text uses a random starting location that tries to place the text completely on the screen.
Random- places the *center* of the text block somewhere on the screen. Thus, the text *can* start partially off the screen.
At Left or **At Right** on X-axis; on the Y-axis **At Top** or **At Bottom-** puts the text just on the indicated edge of the screen.
Off Left or **Off Right** on X-axis; on the Y-axis **Off Top** or **Off Bottom-** puts the text just off the indicated edge of the screen.
Pixel Offset- puts the center of the text that number of pixels from the center of the screen.
% Offset- starts the center of the text block the specified percentage of the screen resolution from the center of the screen.

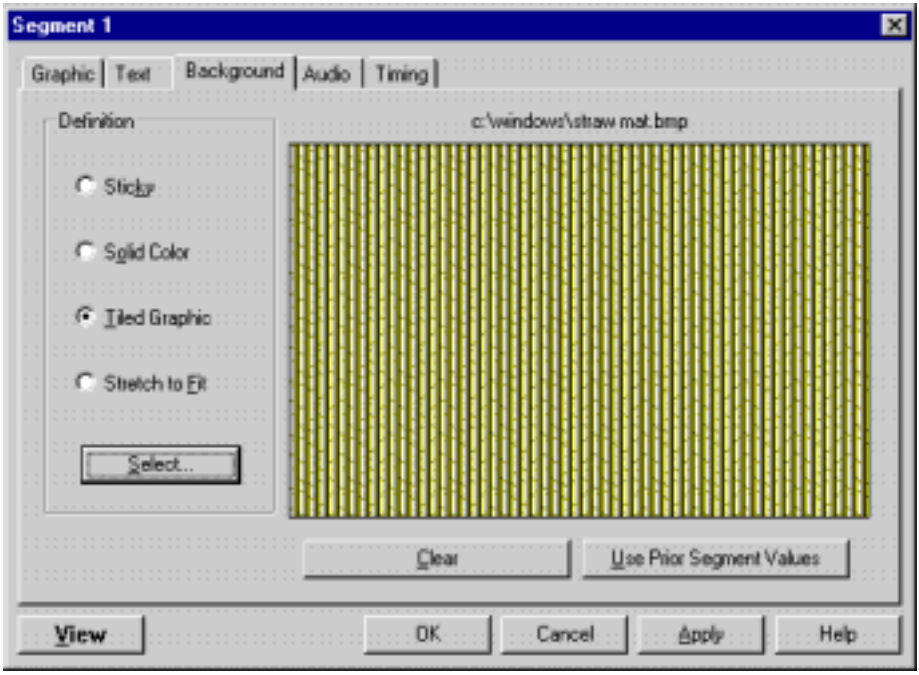
The Text **Clear Button** deletes the text in the text entry box. It doesn't change any other settings.

- *If the text is not where you expect it to be when using the "Stationary (up, down, left or right)" placement, remember it is based on the graphic in slot #1. Be sure that that graphic is the one you want to associate the text with!*

Adding a Background Graphic or Color to a Segment

The background is the mat on top of which all other actions take place. It can be as simple as a solid color or as pretty as a full-screen, scanned-in photo. Backgrounds always appear instantaneously at the beginning of the segment and remain for the entire segment. All other graphics and text appear over the background—it is the lowest layer.

The background **Select** button is dimmed out when sticky is selected, otherwise you must click it to bring up the color selection dialog for a solid color background or a standard file selection dialog to select a tiled graphic or stretch-to-fit background. The file selection dialog defaults to showing all supported graphic file formats.



A **sticky** background retains everything that is drawn on it—it never erases. Objects that move across the screen leave a trail as they go. This can be a very interesting effect. You need to have sticky selected in a run of segments to retain the effect—as soon as a non-sticky (i.e. solid color, tiled graphic or stretch-to-fit) background segment is encountered, the screen will be cleared to whatever background was selected in that segment.

A **solid color** background is just that—a solid color. It is the fastest way to draw the background. You need to click on the Select button to bring up the color palette. Click on the color you want for your background then click OK. The color selection dialog shows the 48 colors that may be chosen; the lower 16 “custom” colors are the Windows 16 color palette colors. They are repeated here in case you want a background that will work with a multimedia movie, for instance.

A **tiled graphic** background will take the selected graphic and tile it—that is, repeatedly draw it over and over again until the entire screen is covered.

It is important to remember when working with tiled graphics that you do not know what resolution the end user of your screen saver will be running under. If you have a “full screen” 640x480 background graphic and they are in 800x600 resolution, your background will be tiled—which may be undesirable. Similarly, if you have an 800x600 graphic and the end user is in 640x480 resolution, they will only see the upper left hand corner of the background.

A **stretch to fit** background takes the selected graphic and enlarges it to fill the entire screen. The closer your graphic is to the size of the screen the better it will look after it is stretched. If you have a very small graphic and you stretch it to fit the screen it will probably be very blocky and diagonal lines will become jagged. If your image is larger than the screen it will shrink to fit the screen, perhaps distorting the image. In general, a large image looks better reduced than a small image looks enlarged, and those that begin close to a 4:3 width:height ratio won’t be as distorted.

- *When using a photograph as a background it is best to use stretch-to-fit. A tiled photo starts with the upper left hand corner matching the screen's upper left hand corner and would look unattractive if run on a screen larger than the photo. In other cases it is better to center the photo as a graphic in slot 10 instead of making it a background. In a graphic slot it doesn't tile, you see the center of the photo, other objects still pass in front of it and on larger screens there is a black matte around it.*

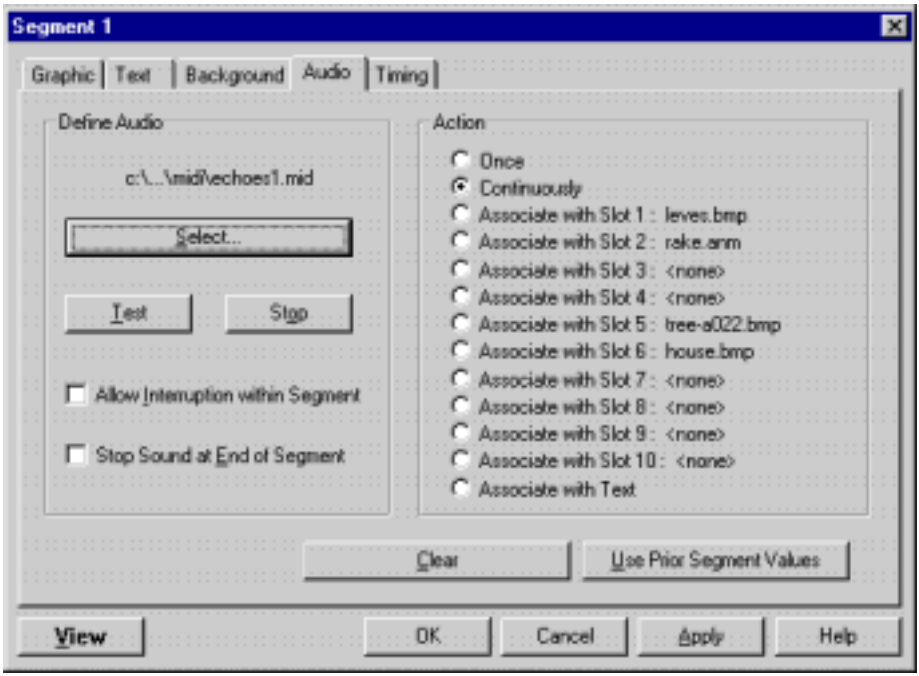
The background is redrawn every update and it takes longer to draw many tiles than fewer. Thus, a single pixel can be tiled to make a blue background, but this is **much** slower than tiling a large blue graphic, which is slower than just using a blue Solid Color background.

The background **preview window** shows a sample of the background. A tiled graphic will tile the graphic in the display window (if the graphic is exceptionally large, you may not see any evidence of tiling); a solid color will show the selected color; sticky will just be completely gray with no evidence of a window outline, and stretch to fit will show the stretched image compressed in the display window. The **Background Clear Button** resets the background to Solid Color, black.

Adding Audio to a Segment

Sounds can make your screen saver come alive! You can easily add them to your screen saver.

- *If you already have sounds in the Jukebox, you must remove all of them before you can assign a sound to a specific segment.*



The **Audio Select** button calls up a standard file selection dialog to allow you to find audio files. As much of the path as can be displayed shows over the select button after a selection is made.

The **Audio Test** button plays the sound or song you have chosen. You can go select another while the current one is playing, or click OK to exit the dialog and stop the song.

The **Audio Stop** button stops any sound that was started by pressing the Test button.

When the **Allow Interruption within Segment** box is checked, if a sound is playing when a new one is supposed to begin, the current sound will be stopped and the new one played. Otherwise, the current sound continues until it is finished. *This only affects sounds in a single segment!* If a sound plays into another segment, any new sound always stops the current sound and begins the new one. The **Stop Sound at End of Segment** check box, if checked, will make sure that any sound will be ended when the current segment ends, even if the duration of the sound is longer than the segment. These two boxes may be checked in any combination.

The **Audio action** list lets you pick how or when to play a sound:

Once- the sound is played once at the beginning of the segment. It may or may not be finished when the segment ends, so it could continue into the next segment.
Continuously- the sound starts at the beginning of the segment and plays in a loop, so be sure it sounds okay when repeated. If a sound is played in a later segment it will stop the continuously looping sound. To restart the loop set it up again in another segment. In such a case, to make it seamlessly loop from the end of the screen saver to the beginning, make sure to have a continuously playing sound in Segment 1—even if it's part of an Intro Clip—or else the sound will "jump."
Associate with Slot 1-10- plays the sound whenever *any* graphic in the chosen slot exits or bounces off the edge of the screen. Multiple copies of graphics bouncing around can cause many sounds to be generated. If the graphic in the slot is stationary, the sound will begin when the graphic finishes fading in. You get to see the name of the graphic (if any) currently in the slot to help you associate properly.
Associate with Text- plays the sound when the text exits or bounces off the edge of the screen.

The **Audio Clear** button clears the audio selection to <none>. It leaves the check boxes and action unchanged since these can affect sounds that began in a previous segment.

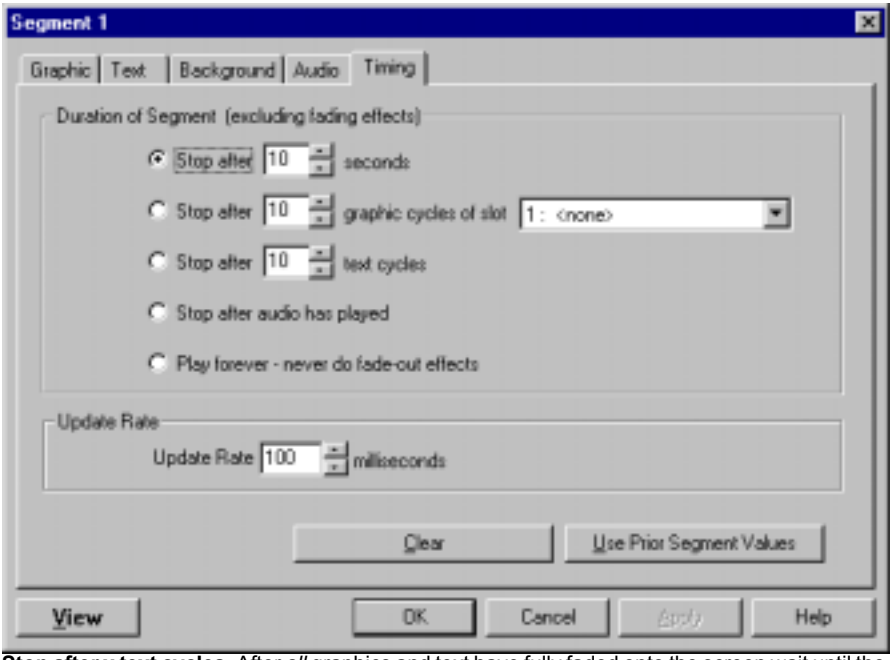
- *An interesting random affect can be achieved by associating sounds with a bouncing, invisible dot. Make a single pixel graphic in true black. Set it to bouncing around the screen in slot 10. Slots 1 and 2 have clouds moving to the left and slot 3 has a stationary full moon. In segment 1, associate a cat screech with the graphic in slot 10. In segment 2 associate a wolf howl with it. In segment 3 make it play a witch's cackle. Set the timing of each of the three segments to zero seconds. As the clouds move across the screen in front of the moon, eventually the dot will bounce and play the sound of the segment that it's in! (Remember to set Keep Old as the coordinates of the dot in all three segments!)*

Adjusting the Timing of a Segment

As you make a segment you must pay attention to how long it lasts. This is not precise because of the vagaries of different systems. After all the graphics and text fade in, the segment lasts for the specified duration, then everything fades out. You can set the timing in one of 5 ways.

Stop after x seconds. After *all* graphics and text have fully faded onto the screen wait this many seconds then begin fading out all graphics and text. When the last one disappears the segment ends. The maximum is 60 seconds. If you need longer than this (to delay as long as a MIDI song, for example), duplicate the segment as many times as necessary, setting the Fade In of all graphics only on the first segment and setting the graphics to Fade out only on the last segment.

Stop after *x* graphic cycles in slot *y*. After *all* graphics and text have fully faded onto the screen, count each time the graphic (or *any* copy of it) in slot **y** exits or bounces off the screen edge. When the count reaches **x** begin fading out all the graphics and text. When the last one disappears the segment ends. You get to see the name of the graphic (if any) currently in the slot so that you know if it's the one you want to associate with.



Stop after x text cycles. After *all* graphics and text have fully faded onto the screen wait until the text block has exited or bounced off the screen this many times, then begin fading out all the graphics and text. When the last objects completely fades-out the segment ends.

Stop after audio has played. After the current sound has finished playing begin fading out all graphics and text. When the last one disappears the segment ends. *The Audio Action must be set to 'Once' for this to work.*

- *When you are in Jukebox mode, when the sound ends and the objects begin to fade out, the Jukebox* will *begin playing another sound as soon as the first one is finished but before the next segment begins. You may have to set Instantaneous Fade-outs if that is a problem.*

Play forever—never do fade out effects. After *all* graphics and text have fully faded onto the screen they just keep doing what they're doing. They never fade out (even if set to do so) and the segment never ends.

The **Update Rate** determines how often Screen Saver Studio redraws every object on the screen. It is measured in milliseconds, so the default of 100ms means that everything is redrawn every 100/1000ths of a second—that is, every 1/10 of a second or every 0.1 seconds.

Note that this is the optimum case. It is entirely possible to have so many large graphics that they cannot all be drawn in the allotted time. To preserve the look of the screen saver on all systems—no matter how slow—Screen Saver Studio figures out how many iterations need to be done and then executes them no matter how long it actually takes.

So, under the default update rate, if a segment is supposed to last 3 seconds, 30 iterations will be done. (10 updates /second * 3 seconds.) These 30 iterations could take 3 seconds as planned or it might take 5 seconds if the system is very slow.

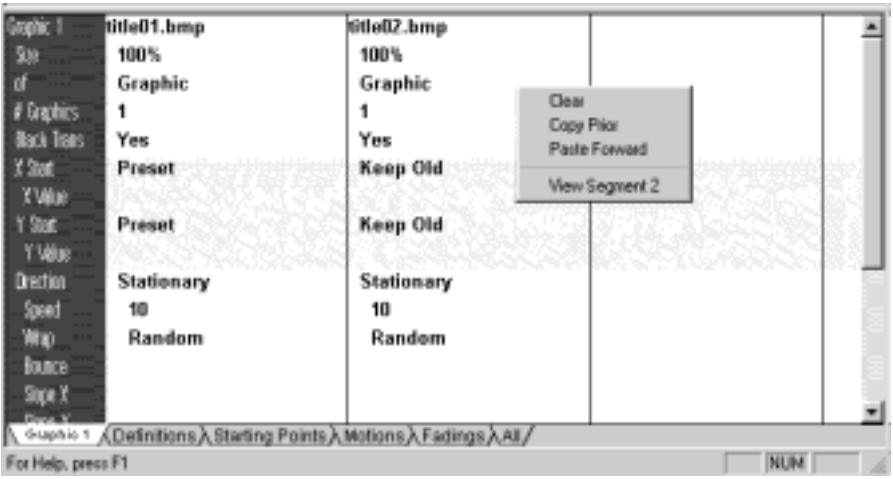
The **Timing Clear** button sets the segment to end after 10 seconds. It affects no other settings.

- Only by setting fade-in and fade-out to instantaneous can you attempt to time anything exactly!

- *When playing movies you usually want to set the duration to 1 cycle of it. It defaults to 10 seconds and that may be too short or too long to play the whole thing.*

Work Sheet

The work sheet gives you an alternative way from the segment sheets to manage your projects. Think of the work sheet as a spreadsheet where columns represent individual segments and rows represent unique attributes in each segment. Unlike the segment sheets, cells in the work sheet are disabled (cleared) when not relevant. View tabs located at the bottom of the window control what information is shown in the rows. You may turn the work sheet on or off in the View menu.



You will see the cursor change when it moves over the line separating the worksheet from the horizontal scroll bar of the segment view. If you click and hold the left mouse button down when over the line you can change the vertical size of the two sections of the display!

On the left size of the work sheet are the labels for each of the rows. These rows change according to which view tab at the bottom of the work sheet is selected. If there are too many rows to fit on the screen a vertical scroll bar appears to the right enabling you to move all the rows up or down. To move the columns left or right use the horizontal scroll bar directly above the work sheet. You must look up at the segment view to see which segment each work sheet column relates to.

Working with the work sheet is simply a matter of clicking an attribute in the segment you wish to change. If the attribute represents a file name (like a graphic or audio file) a standard open file dialog is presented. Just like a segment sheet's fade settings, fades are represented graphically in the work sheet. If an attribute describing a fade type is clicked it will open a fade dialog. Clicking on the attribute that represents a segment's text brings up an editable text control. Clicking on an attribute that represents a background color opens a standard color selection dialog. All the other attributes will either open a drop down list or an editable field that can also be changed by a spin control.

The five horizontal work sheet view tabs at the bottom control what is displayed in the work sheet. The first tab changes to match the vertical segment tab currently selected on the left hand side of the Segment display. For example, if Graphic 2 is currently selected in the segment display the first work sheet tab will be called Graphic 2 and when it is highlighted the work sheet only shows what is relevant for the second graphic. If the Background view tab is selected the first work sheet

tab is called Background and only information dealing with the background for each segment will be displayed when it is highlighted.

The **Definition** view tab shows only the attributes that define an object, like its file name, size, color, transparency state, etc. You can change the definitions of all the graphics, the text, the background, the audio and timing no matter what is selected in the segment tab.

The **Starting Points** view tabs let you change both the X an Y the starting point locations and values for all graphics and text regardless of the segment tab selection.

The **Motions** view tabs let you change the direction, wrap value and speed attributes for all graphics and text regardless of the segment tab selection. If the User Defined direction is chosen the X & Y components may be set as well as if it should bounce.

The **Fadings** view tabs let you change the fade speed, the fade-in type and effect, the fade-out type and effect and whether the fade is to be transparent for all graphics and text regardless of the segment tab selection. When selecting the fade types you pick from a graphical list just like in the segment view.

The **All** view tab shows every single attribute for all objects in a segment! If you are unsure what any of these attributes do, read about them in the Editing Segments section.

If you right click on an attribute in the work sheet a pop-up menu appears that allows you to perform certain editing tasks with that attribute. (Depending on where you clicked, some of the these menu options may be dimmed.) You can clear the attribute to its default value, copy the corresponding value of the prior segment to the current segment, paste the current attribute value forward into however many following segments you want, or view the segment.

These features, especially paste forward, give you great power to edit your projects. For example, if you have a black background in all 238 segments of your project and you just realized you want them all to be blue, simply change the background of the first segment to blue, right-click that attribute in the work sheet and select Paste Forward, then type in 238 and you're done!

Sort of...

...When you paste forward something like this, it ***does*** change every segment up to the end you specify. However, sometimes you may not be able to see the changes immediately. If any of the segments in the example above had a graphic background, the paste forward action would not noticeably change those segments—you would still be seeing the graphic and not a blue background. However, if you then went to one of those segments and switched it to a solid background it would come up as blue. In our example, you should go to segment 1, set the background to solid and then paste that forward to insure every segment is displaying a blue background.

Please note that sometimes a paste forward **can** affect more than just the attribute you are working with. Continuing our example, if you go back to segment 1 and select a background of 'stretch' you are immediately asked to choose the graphic you want stretched. After you pick a graphic, the work sheet background view will show a graphic of 'stretch', the color will be a gray bar and there will be a file name in the graphic. If you now right-click on 'stretch' and paste forward to 238, all the segments will be set to stretch *and the filename in the graphic attribute will be copied as well.* This is because it is illegal to have a stretch background without a file associated with it.

Note, however, that if you had right-clicked on the graphic name and pasted it forward the background type would **not** be changed in the following segments—it would stay what it was. (Though that filename *would* be associated with each segment's background as the default.)

Basically, those attributes higher in the list can change lower, indented ones whereas indented ones will not change higher ones.

The combinations like these that you may want to be aware of are:

Background may affect filename, but not vice versa.

Fading type may affect the fading effect, but not vice versa. In fact if you select an effect of stretch, for example, and paste it forward, it will not be applied to those segments where stretch is not a valid choice of the given fade type in a given segment.

Pasting forward the timing attribute will affect that line and the value or values needed to fully define it, but pasting forward a single one of those defining values will not change the timing attribute in segments not already set to the proper timing type.

Clearing a graphic slot or the text field and pasting it forward may generate warnings about a segment not ending due to it being based on the graphic or text which is being cleared.

Remember that if you paste forward something and the results are not quite what you wanted, you can go to the Edit menu and select Undo! But DON'T do anything else in between the paste forward and the undo!

Viewing a Preview of the Current Screen Saver

To preview the screen saver scripted by your current screen saver project, select Preview in the View Menu (ALT+V, P), click the Preview button in the command bar or click the Preview Icon in the Tool bar. The segment at which the preview begins is controlled by the Begin Preview... item in the View menu. Press ALT+F4, Esc or click Close in the title bar's close box to end the Preview and return to the screen saver project.

The first time you Preview a project you will be shown the Display Settings dialog box. The Preview will obey the settings currently in effect. (See Display Settings below.)

The **Begin Preview..**. menu item allows you to set where the preview begins. When you access this item you get a dialog that has two radio button items: Begin Preview Normally and Begin Preview at Segment x. When this is set to Begin Preview Normally, previewing acts exactly like the final screen saver will when it runs. i.e. starting at Segment 1 unless that is part of a random clip, in which case it will start at the beginning of a randomly chosen clip.

If Preview from Segment x is chosen, any time you preview—either by choosing the Preview menu item or by clicking the preview icon in the tool bar or the preview button in the command bar—the preview will begin at the specified segment. This is very convenient when you need to check how things are working in segments near the end of the screen saver.

You set the segment number to begin previewing at with the scroll arrows or you can enter a segment number directly. You cannot exceed the current highest segment number! If segments are added the number specified remains the same, so it may not be the segment you want to preview anymore. If enough segments are deleted to make the specified number exceed the highest numbered segment, it is reset to Begin Preview Normally.

If you right-click on a segment display segment there is a **Begin Preview At Segment** menu item. This allows you to see a sample of what the screen saver looks like starting from that segment. This is a quick way to check on action in a specific clip or farther along in the screen saver project. It does *not* set the Begin Preview at Segment value that is accessed from the view menu—clicking on the preview button will always work as defined the menu setting.

- *Starting a Preview at anything other than the first segment may not reflect what you will see in the final screen saver since the starting positions of graphics, background elements, etc. may have been set by segments you skipped over.*

Saving Screen Saver Projects

As you are building your project, every now and then you should choose Save (CTRL+S) in the File Menu to save the project. Though it is possible to build a screen saver module or program without saving the current project, we recommend saving every project in case you want to change it or duplicate the effects you have achieved with different graphics. Use the Save As command in the File Menu when you want to create a copy of an open screen saver project.

Opening Previously Saved Projects

Choose Open in the File Menu, locate the previously saved screen saver project you wish to open and press OK. Alternatively, select one of the four most recently used files near the bottom of the menu. Or double-click on an SSP file to launch Screen Saver Studio and load that project!

If you are working on a screen saver and wish to get rid of the changes you've made in a session, you *can not* just reload the file you want—you have to do a File|New and then a File|Open or equivalently, a File|Revert.

Display Settings

The Display Settings dialog controls how your screen saver is Previewed and built. The default is to Support DirectX because it is faster than the old Windows graphics device interface (GDI) drawing method and it allows you, the builder, to control the final output exactly. However, this means the viewer of the screen saver *must* have installed DirectX version 7 or higher to view it. (If the user has a new system or has played any new games then DirectX is probably installed.) If DirectX is *not* installed then the user is alerted to this fact and even asked if he wants to download and install it. But if DirectX is not present the screen saver automatically runs in GDI mode! For these reasons you should almost always have Support DirectX checked.

When DirectX support is enabled you first choose a color depth you want to run in. The default of 16 bit high color is fine if you have animations and graphics moving around. If you are dealing with a slide show of photos, however, you probably want true 24 or 32 bit color so they look the best they can. 24 bit color uses less system resources, but a lot of newer video cards are actually *faster* when using 32 bit color mode. When DirectX is not used the user sees whatever color depth his monitor is currently set to.

When DirectX is on it changes the monitor resolution on-the-fly to whatever size you specify in the Display Size section. So if you pick 800x600, for example, you know that the user will be seeing an 800x600 screen saver that fills the entire screen. In GDI mode, however, the monitor stays in whatever resolution it is set to and the screen saver then runs in an 800x600 rectangle. If their monitor is at 1024x768 they will see a centered 800x600 screen saver area with black around it; if they are at 640x480 then they will see only the center section of the 800x600 screen saver and the edges will be cropped.

To avoid this you can use the Full Screen when DirectX is Not used check box. In this case, your screen saver is automatically run at the current resolution. This is a good thing *if* you build your screen saver properly. For example, if you are in 800x600 mode and you have a man walking across the screen at a speed of 10, you might notice that it takes 8 seconds for him to get off the screen, so you set the timing of that segment to 8 seconds. You would need to make sure to have

the Full Screen box *unchecked* since if this runs at any other resolution the segment will not end when the man walks off the screen! At 1024x768 he would disappear well away from the edge of the screen. If you had set the timing of the segment to the recommended “1 cycle of graphic x”, however, then your segment would end properly on *any* resolution and so you could have the Full Screen box checked.

- *Always remember that even though you choose Support DirectX, the screen saver may be displayed in GDI if the user does not have DirectX! So make sure you have the Full Screen box set in an appropriate manner.*

- *Display size has no effect on 3D creations! The Slide Show Wizard defaults to full screen; if you cancel out of the build during the wizard you can then set the display size manually before building it. (The Template Wizard is set according to its underlying project.)*

Of the two items in the Graphics section, Compress All Graphics is by far the most important one. Having this on internally converts *all* of your source graphics into jpgs—which can make them much smaller in size. However, it also affects their quality and can cause ‘speckling’ of black areas in graphics which need to be displayed transparently. Only use it if you are not using transparency *anywhere* in your project and use lots of non-jpg graphics.

The Reduce to 256 Colors checkbox internally reduces all your graphics to a 256 color palette. There is not much need to do this anymore—it’s a holdover from days gone by.

Troubleshooting DirectX

The best laid plans sometimes go awry, and it can happen that you plan to use DirectX, but when you do, you find that you get video garbage! When that happens you can click on the Troubleshooting button to change the display mode.

- *A built screen saver has a troubleshooting button that calls up this exact same dialog and it works in the same manner.*

When you first enter the Troubleshooting dialog, the usage arrow is on Full and the Display Mode is what the screen saver builder has decided to make the default.

Moving the usage arrow to the middle setting could resolve some minor graphical glitches like spurious lines around fading graphics or sudden jumps in zooming graphics.

If you don’t see anything recognizable at all, you can see if it’s because your system does not support the requested Display mode. Your computer may say that it supports 1024x768 whereas it may only be able to show 800x600. The easiest way to find out is to go to the very top of the list and pick the smallest, lowest color depth—usually 640x480x16—and see if you can display that. If you can, then you can try a larger size or higher color depth until you get something you like that still works.

If changing it to the smallest display mode doesn’t work, move the usage arrow all the way to the left and not use DirectX at all. This forces the screen saver into GDI mode and should be used as a last resort.

When you are *building* the screen saver the main page of the display settings are used—not the troubleshooting values! This way, you can build a DirectX screen saver on a system without having DirectX installed, or say you want it to be 800x600 when your own system can only support 640x480. The troubleshooting values are *not* saved in Screen Saver Studio, but they *are* saved when running a finished screen saver. If an end-user has to go into troubleshooting and later upgrades his DirectX, the screen saver will not recognize it automatically; he will have to go into troubleshooting and Clear it to see if DirectX now works for him.

Jukebox

The **Jukebox** feature allows you to add audio files to your project that will be played in a "one after another" fashion. These audio files play independently of what is happening in the project's segments. In fact, if you are using the Jukebox (by having audio files selected in its list) you will be unable to change—or even view—any of the audio pages in any segment. If you have a project loaded with sounds already in it, turning on the Jukebox will erase all the sound info from the project. You will be warned before this occurs so you can save a copy of the project before you turn the Jukebox on. Finally, the Jukebox is designed for songs—MIDIs, MP3s and the like. It will play WAV files, but if you have just a single WAV file it will have a pause between playings while it loops. If you want a smoothly continuous loop of a single WAV file, put it in the regular audio tab set to "continuous" instead of in the Jukebox.

Add- allows you to select an audio file to add to the list.
Remove- removes the currently selected file from the list.
Remove All- clears the list allowing you to assign sounds to individual project segments.
Test- begins playing the currently highlighted audio file so you can hear what it sounds like.
Stop- stops playing any audio file you are testing.
Play Songs Randomly- songs are played at random, but every song will be played once before any song is repeated.

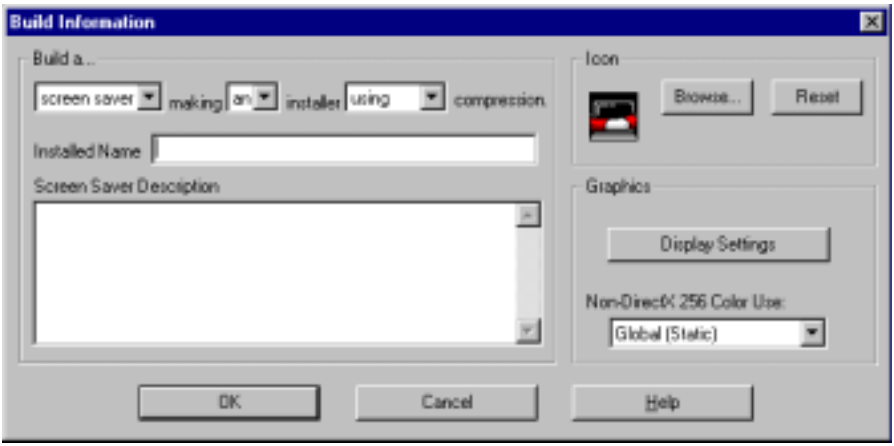
Building Your Screen Savers

After you have completed and saved your screen saver project to disk, you can build a Windows-ready screen saver module (.SCR file) or a runnable program (.EXE file). Select Build SCR/EXE File in the File Menu (CTRL+B) and you will see the dialog on the next page.

Choose what type of file to build by selecting the appropriate **build type** options from the drop-down lists. You may create a screen saver (SCR file) or a presentation (EXE file). The presentation option creates a program that runs only when you launch it and is exited only by a key press—the mouse is ignored and mouse movement or clicks will not exit it like a normal screen saver. While viewing a presentation the cursor (arrow) keys give the user the special ability to bypass the current segments fade and duration settings. If an arrow key is pressed while objects are fading in they will instantly be shown in full. If no objects are fading and some are set to fade out they will instantly start fading out, otherwise, the next segment will begin. If objects are already fading out when a cursor key is pressed the current segment will end and the next will begin.

After you know what you are making you must decide whether or not to make an installer for it. An installer takes all the files that make up the SCR or Presentation EXE and bundles them into one file. It is highly recommended that you make installers for any screen savers or presentations you wish to give away—you can't forget to give away any needed files! If you are using the Jukebox or

if your project has certain multimedia files anywhere in it you will be forced to make an installer. Running a finished installer will put the screen saver on a system and make it the default screen saver, or it will put the presentation EXE on a system and then run it.



If you choose to make an installer you have the option of using compression. It can take a long time to compress on slower systems, but it should always be used for your final build since it can make the overall installer size significantly smaller. After building a compressed installer you are given a chance to span it across multiple floppies or to break it up into multiple parts of the size you specify. *You only get the span option after building compressed installers.*

The **Installed Name** field is dimmed and can't be accessed when you are building a simple screen saver. When you are building an installer the installed name is what will be seen when you are selecting the screen saver from the control panel. This name cannot be the same as the name you will give to the actual installer if you are building a presentation. (The screen saver control panel will only show one screen saver with identical names—the first one installed.)

In the **build description box** enter any information you want to appear when the user selects the Settings button for the screen saver. The text is automatically word-wrapped so don't press <Enter> unless you want to start a new line. Each line of the description text will be centered. This text will also be seen when a screen saver installer is run, so you can use it as a read me. The description text will *not* be seen if you build a presentation EXE.

The **icon** currently selected for the screen saver is shown. It is the icon for the SCR file and it shows up in the settings dialog. You *must* have an icon—if you really don't want one, use the CLEAR.ICO we've provided—it's completely transparent.

The **reset button** set the icon to the default icon—a monitor being saved by a lifesaver. (Get it?)

Use the icon **browse** button to select the icon for your screen saver screen. It calls up a standard file selection box so you can find and use *any* graphic file on your hard drive as the icon.

The **Non-DirectX 256 Color Use** has meaning only when the computer is in 256 color mode *and* DirectX is not being used; otherwise this option is ignored. You will probably never change it from the default General Rainbow. The options are:

General Rainbow (Static) - This is exactly the palette you see while building and previewing your screen saver in 256 color video mode. It makes a fairly good approximation for most graphics, but is bad for photographs. Builds quickly since no palette calculations are made; use this if you have tried a different palette and it 'died' during the build of a screen saver with a lot of graphics.

Global (Static) - this takes all the graphics from the entire screen saver and determines the single best palette. The results are usually very good. There is never a palette flash between segments but it can take a while for the palette calculation during the build.
per Segment (Dynamic) - this takes all the graphics in each segment and determines the best single palette for that segment. This is excellent for slide shows, **but,** if you don't fade each graphic to black before a new segment you will see a palette flash.
per Clip (Dynamic) - this takes all the graphics in each clip and determines the best single palette for each clip. This avoids palette flashing between segments within clips but not between the clips themselves.

After you've made all your choices and click OK you are presented with a standard Save As… dialog to name the resulting SCR or EXE file and to choose the directory where you want to save it. (Usually Windows for an SCR.)

- *It is important that you compile your screen savers onto your hard drive and then transfer them to a floppy disk. If your screen saver is larger than the amount of free space on your diskette, Screen Saver Studio may, in some cases, fail to notify you and continue to build your screen saver incorrectly.*

When you start actually building you will see some progress thermometers go by apprising you of the status of the build. When the build is complete, if you built a screen saver you will see a dialog telling you where some files were saved. (If you built a screen saver and saved it in your Windows directory, you can see it right away. Right-click anywhere on the desktop and drag down to Properties. Click on the Screen saver tab. Scroll through the list until you find your screen saver then click on Preview.)

If you built an installer you will be asked if you want to run it. If you say yes, the screen saver will be installed and made your default screen saver!

If you built an installer using compression you are given a chance to span it to multiple disks or files. This allows you to break the installer up into smaller files so you can distribute it on floppy disks or over the internet in easy to download chunks.

If you are spanning to floppies you need to make sure that you have enough pre-formatted disks around. These disks don't necessarily need to be empty or of the same capacity, but you need enough total free space on all of them to contain your installer.

If you want to make certain sized parts to use as email attachments, for example, all you need to provide is the maximum spanned file size and a folder on your hard-drive, network drive or other device that can hold the entire unspanned installer to save them in. If you want to span and pick to span across floppies, if the entire output file fits on the floppy without spanning, you will see the dialog asking how big to make each part. Files of that size will then be placed on the floppy.

Distributing

Now that your screen saver is finished you may want to give it to friends and family to enjoy! If you did not do so, you should go back and build it as an installer using compression. This is so:

- All the files will be together,
- It will be as small as possible,
- The recipient just has to run the EXE to make it his default screen saver!

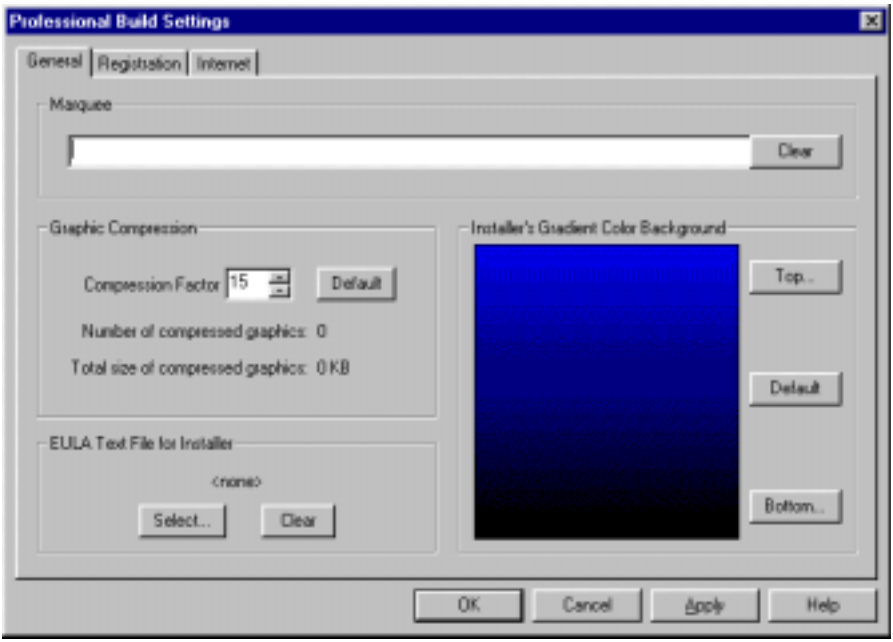
Your purchase of Screen Saver Studio Deluxe grants you the right to freely distribute the files you create to friends and family members. If you wish to *sell* your screen savers or use them to promote your business, you must obtain a licensed version of Screen Saver Studio Professional. Visit www.screensaverstudio.com or call 1-318-221-8718 for more information. You may sell your Pro creations royalty free!

Professional

Purchase of the Professional version allows you to do more than just sell your creations—you also get a few added features and there are some other subtle differences…When your screen saver installers are run they do *not* display the Screen Saver Studio splash page. The settings dialog of every screen saver you make will have at the top the lines:

This screen saver by
Licensee Name

You pick a Licensee Name when you buy the Pro and this *cannot* be changed! You may copy and paste sequences of segments from one project to another. Plus, there are some extra settings:



Marquee text is an optional scrolling banner of up to 2000 characters of text at the bottom of the screen. It scrolls from right to left. All of the text exits the left side of the screen before any shows on the right side. You may not change the appearance of the text; it is always white, written in the system font, and scrolls at a predetermined speed. The actual screen height is reduced by the size of the font so that the text can scroll across the bottom. Stretch to fit backgrounds will stretch to this adjusted screen height. You will not see the marquee text in the 3D Wizard preview.

The Graphic Compression Factor is a value between 1 to 254 that controls the amount certain files are compressed in the final screen saver. Only JPGs will be affected by this value. If you have Compress All Graphics checked, **all** graphics will be affected. The smaller this value the less they are compressed. This leads to better looking images but larger screen savers. Of course, the larger this value the smaller your screen saver will be, but the quality of the images will suffer. Images with broad swaths of similar colors, like photos of the sky, will be more affected by a high compression factor. Since all images are compressed equally you will just have to play around a bit to see what yields the best quality to size results for each particular screen saver. This feature is mostly used when you want to fit a final installer on a single floppy and it's just a little too big—tweaking the compression factor up a point or two can make it fit!

The Apply button on the General page immediately recompresses all of the compressed graphics in your project with whatever current value is in the Compression Factor box. You can then see their total size. Note that this is the size of the compressed images—if you have uncompressed BMPs, WAVs or movies their sizes are not reflected in this total.

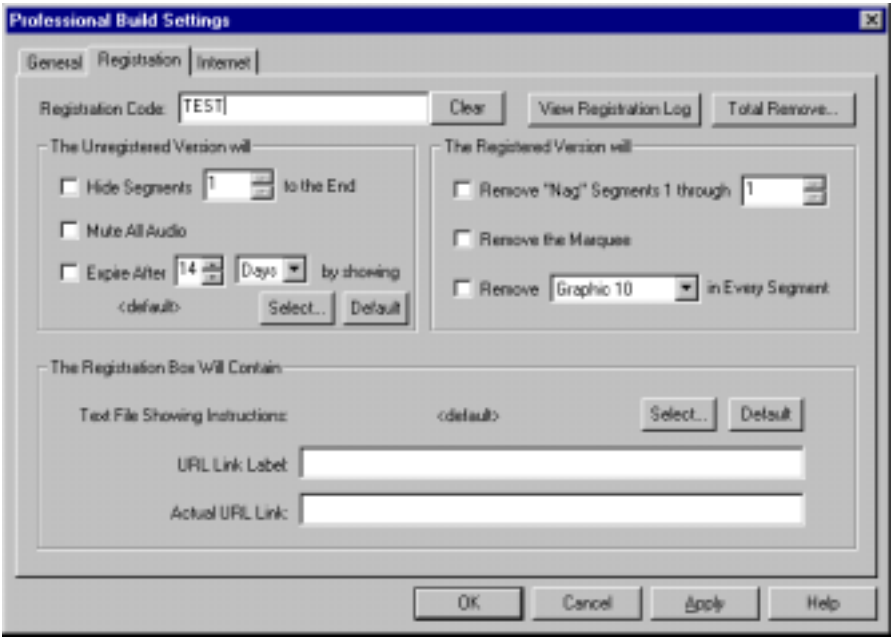
The Graphic Compression Default button restores the Compression Factor box to 15. This value is best for most images. You must hit Apply or OK for the graphics to be recompressed.

The EULA Select button allows you to select a strictly ASCII text file to be used by the screen saver installer as an End User License Agreement. A EULA is a contract that is shown by the installer that must be agreed to *before* the screen saver will be installed. The user must agree to the terms outlined in the EULA or else exit the installation of the screen saver. To insure that the file contains nothing but ASCII text, load it up in Notepad (Start\Run\NOTEPAD.EXE) and save it out before selecting it in Screen Saver Studio.

The EULA Clear button insures that no EULA is displayed when the screen saver installer is run.

You can customize each screen savers installer by changing the color gradient of its Setup screen. Simply pick a pleasing combo of top color and bottom color.

The Registration tab is the big one! Here's what it looks like:



First, to even be able to see this tab, you MUST have built an installer. You can't just build a simple .scr file since the knowledge of whether or not it has been registered has to be set up by an installer. So you will NOT be able to access this unless you go back and change your build method if you had chosen a simple .scr.

When you first come to this tab everything will be dimmed out and unavailable until you enter a Registration Code. Doing so means that you wish to build a screen saver that has to be registered to be fully seen. You build only one screen saver with all the features in it and then you get to pick the ways that the screen saver is 'crippled' when unregistered or 'enhanced' when it is registered. You can hide segments until it's registered, have a scrolling marquee in the unregistered version, expire the unregistered version after so many days or viewings, etc.

When the user has the unregistered screen saver and wishes to register it, you give them the registration code that you used when you built the screen saver. It will be the same for **all** the screen savers built with that code, so if you have two completely different screen savers you should change the code for them!

For now, we'll skip over the View Registration Log and Total Remove buttons to get to the heart of the idea...There are two sections, things that happen in the unregistered version and things that happen if the screen saver is registered. You can mix and match any of the six features in any combinations that you want—except that you must choose at least one of them or you can't build one that can be registered.

When the screen saver is unregistered:

You may choose to 'hide' a run of segments from view. They must be continuous and go to the end of the project, starting from the one you specify. You use this to give the user 'more' when he registers. So if you had a screen saver that showed various landscapes, you could show four of them in the unregistered version by hiding segments 5 to the end. This option can't be chosen with 3D or SWF screen savers since there is only one segment!

You may mute **all** audio in the screen saver when it's unregistered. This selection is dimmed out and can't be selected on SWF screen savers.

You may set the screen saver to Expire after so many days or plays. The number of days is based on when it is installed; plays add-up both by when the screen saver kicks-in 'naturally' **and** *when the user clicks on the Windows Display Properties|Screen Saver Preview button.*

When the screen saver expires, the graphic of your choice will be shown instead of any other part of the unregistered screen saver. You can create and Select your own graphic, or use the default which is a graphic that says 'This screen saver has expired!! Please see it's settings box for more information on how to Register it.'

Please note that the user can always reset his system clock to 'unexpire' a screen saver that expires by Days, so we do not recommend this as the only protection. You should include the Marquee or 'watermark' the scenes or something else if this is used.

When the screen saver is registered:

You may remove opening 'nag' screens. They must start at segment 1 and end at the segment you specify in a continuous run. We use it as a way to include an intro clip that says that the screen saver was made with Screen Saver Studio, which is then removed after it's registered. It is dimmed out and can't be selected on 3D and SWF screen savers.

You may remove the Marquee text you have set.

You may remove a graphic from every segment. This feature can be used to 'watermark' the unregistered screen saver. We fequently display a graphic in slot 1 that covers all the other scenes and when the screen saver is registered, it is removed. It is dimmed out and can't be selected on SWF screen savers.

Note, however, that you cannot choose NOT to remove it in a given segment! So if you need all 10 slots in a given segment to make it look the way you want, you won't be able to use this feature since you don't want any of the graphics in that segment removed. (But if this is the case only in the intro 'nag' clip which will also be removed then you can do it!)

To put it all into action... We built our sample screen savers with a short intro clip and some Marquee text and a graphic in the upper left hand corner of the screen. When the user registers,

the intro, marquee and 'watermark' graphic go away, and sometimes a new final segment that says 'This was brought to you by Screen Saver Studio' becomes visible! (Just a little reminder since you register our screen savers for free.)

Another way to use this would be to make a slide show with the pictures at 25% size in segments 1-10. Duplicate those segments to 11-20 and then set the size of the pictures in those segments to 100% You can then 'Hide' segments 11-20 in the unregistered version and 'Remove' segments 1-10 in the registered version. This has the effect of showing the user small scenes when it's unregistered and full size ones when it's registered! (And the screen saver is not too much bigger since each picture is only saved internally once!)

We also did a very neat thing here! When looking at the screen saver in the Windows Display Properties|Screen Saver tab, the user will **always** see the full, registered version! This way they can get a preview of what they would get if they registered but it's not very usable or satisfying.

The bottom section of the screen contains information you can include for the user to register his screen saver. You may select an ASCII TXT file that will be displayed when the user clicks on the button to register your screen saver. The default says 'Enter the registration code below to register this screen saver.'

The URL Link Label is text that shows up on the user's registration box that will normally lead them back to your site so they can register the screen saver. This is the 'plain text' that they can read; the URL is entered in the Actual URL Link box where you enter the **full** URL to go to—which means you need to include the opening 'http://' and the ending '.com' or other extension. These are entirely optional—but if you want a link they are *both* necessary!

When the user gets the unregistered screen saver and clicks on the Register button he sees your text, maybe a clickable link, and a box to enter the Registration code. How you get the registration code to the users is something you need to do on your own end. (Including a way to collect a payment before sending the code.)

But remember that if you build a screen saver, ALL copies of it are unlocked with the same registration code. If you rebuilt it again with a different code there would be no way to know which code to use for which saver unless you also change the ASCII text file instructions or the URL link to go somewhere else. (Or you could change the actual name of the screen saver.)

View Registration Log (CTRL+L)

This is a simple ASCII text file that shows you what you've built, it's name, registration code and date built. It gets added to when you actually build a screen saver to completion. The first column will be '3D' if you built a 3D Wizard screen saver, 'SWF' if it was made with the SWF Wizard and blank otherwise. The name of the screen saver comes next. In the middle is the all-caps registration code for this screen saver, followed by the date when it was built.

The program checks the last line of the file and if you've built the same name screen saver with the same registration code—which you will be doing a lot of as you test it!—then it keeps only the one line and changes the build date. However, if you change the name or the registration code then a new entry is made.

You may enter text of your own to comment or separate various sections and can delete old lines at will—but since we **can not** tell you what registration code is in any particular screen saver you'd better be careful with this record of your codes! (So you should probably make a back-up of it periodically by doing a Save As when you're viewing it.)

- *The log file is opened by whatever a TXT file is associated with on your system—probably Notepad. Word Pad or Word or any other text editor could be used as long as you save any changes as plain ASCII text. (It may also be called MS-DOS text.)*

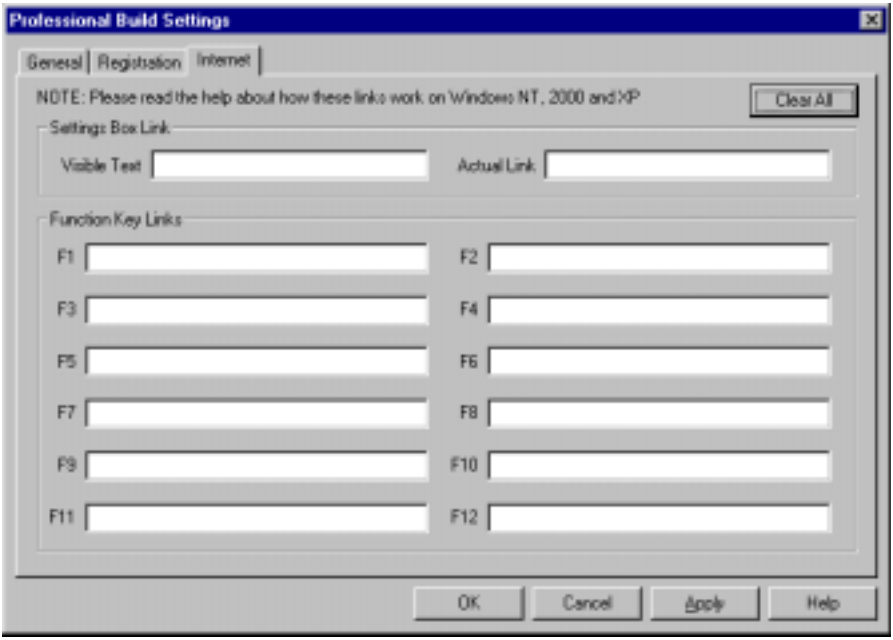
Total Remove (CTRL+T)

This feature is very necessary when building and testing registrable screen savers! When a regular user installs your screen saver and then uninstalls it, if he then reinstalls it, it will still be in the state he last had it—registered, expired or unregistered.

As the Pro who is building these screen savers, however, you need to be able to get around this to make sure everything is working like you want. When you click Total Remove you will be presented with a list of **all** Screen Saver Studio screen savers on your system. Then just like with the Windows Add/Remove program function, you select a screen saver and can *completely* remove it from your system by clicking the Remove button. This means that not only does the screen saver get uninstalled, but the registration files that were written are removed as well. (Click OK when you're done removing screen savers.)

You need to do this if a screen saver you're working with has expired or you registered it and want to see it in its unregistered state. So you might want to get in the habit of Totally Removing screen savers as you build them as a matter of course.

- *If you happen to have a screen saver made by another Pro user on your system, when you run Total Remove it will show up in the list—and if you remove it, it'll be gone! (Which is bad if you've registered it...)*

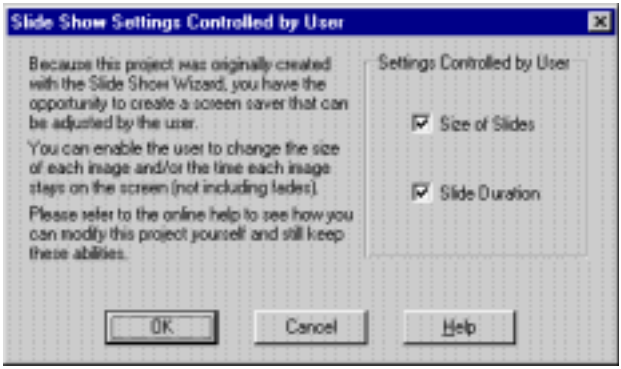


The Settings Box Link generates a colored web link that appears in the settings dialog of all your screen savers. This can be any text—it does not have to mention the "www." or ".com" if you don't want it to. The About Box URL, however is the actual, unseen URL that is linked to the About box Text. This *must* be the **full** URL including the "http://www." and final extension.

The F1 to F12 boxes are for **full** URLs that can be mentioned in your screen saver or the description text. If the user exits the screen saver by pressing a function key the screen saver will end and try to link to that address. Note that you must alert the user to the functionality of the defined keys via the scrolling marquee or text placed in a certain segment, etc. so the viewer will know what to press and where he'll go.

URL assignments do not work as expected on systems running Windows XP, Windows 2000 or Windows NT. The user will get a message box telling them to visit the URL that was assigned to the function key they pressed. For security reasons these operating systems create a completely new desktop when a screen saver launches and you are not allowed to switch to another application (your browser) while in the screen saver desktop since that could thwart password protection! (However, if you build a *presentation*, the URLs *will* link since you are not on the screen saver desktop.)

The Pro version allows screen savers originally created by the Slide Show Wizard to be adjusted by the end user. The settings dialog of a slide show screen saver can show controls that allow the end user to change the size of the images and to set the number of seconds they should stay on the screen—excluding fades. When building the screen saver you get to determine which of these controls (if any) the end user will see.



You should know that you can cancel out of the Save As dialog in the Slide Show Wizard to see the actual project that was just created. You can change any of the segments however you would like and then build your screen saver. If you do decide to edit your slide show project in this way *and* plan on including either of the user controls you should be aware of a few things…

The end user will be able to control the size of any graphic that is set to Stationary with a speed of 1, or which has a User Defined direction of 0 for both the X and Y values. No other graphics can be affected by the end user. Segments that are set to last for 0 seconds with an Update Rate of 1,000 or more will have their durations controlled by the end user. All other segments will last for however long you set them—including segments that are based on object cycles or playing forever. (If the method of setting a segment duration to 0 seconds confuses you, remember that all segments go through at least one update before ending. So what is really happening is that it is being displayed for the Update rate divided by 1000 milliseconds/second.)

This gives you the ability to decide which parts of the screen saver you want the end user to be able to control. You could, for example, put in an opening clip pushing your services that the end user could not shorten. Note, however, that you **must** run the Slide Show Wizard and work on the project it produces to gain access to these features. When you save one of these projects Screen Saver Studio Pro remembers that it was originally created by the Slide Show Wizard and still grants you access to these features.

Finally, remember that once you buy your copy of Screen Saver Studio Professional you may sell your creations without paying any more fees or royalties!

3D Wizard

The 3D Wizard allows you to easily make screen savers consisting of graphics wrapped around three-dimensional objects. These images can be any graphics of your choice. The wizard will actually make a new project. If you have an unsaved project in memory, you will be alerted when you start a wizard. If you want to save the current project, say “No” to exit the wizard, then save the current file. The 4 wizard pages are:

Type Page (1 of 4)
You can choose to make either a Screen Saver or Presentation.

You MUST enter a Name. This is the name that shows up in Window’s list of screen savers.

Description text is optional. It is seen when viewing the settings dialog of a screen saver.

Image Page (2 of 4)
You may change the icon to *any* graphic file on your system by clicking the browse button. (Reset puts it back to the lifesaver around a monitor.)

Next choose the shape of the object that you want to place in the screen saver. You have four choices: Album, Sheet, Pyramid, and Cube. For the last three, each side of the shape can contain a graphic of your choice. To place a graphic on a side of a shape, just click the tab with the ellipsis (three dots) in it to the right of the slot then choose the graphic you want from your files. The Sheet shape only has two sides, whereas the Cube shape has six sides and the Pyramid shape has five sides.

You must select a graphic for at least one side but you do not have to one for every side. If you want every side to have the same graphic, just insert a graphic in any slot and leave the rest of the slots empty. Sides without defined graphics use the graphic from the side above them.

When you pick Album you may choose a single graphic that will be the ‘cover’ to the album. It will be shown at the start and never repeated. If you choose a cover and then decide you don’t want it, click on the Clear button. You MUST choose a directory that contains the images you want in your album—all of the valid graphics in it will be used. (There must be at least two valid graphics in the directory or else you’ll get an error dialog.) If you check the ‘Order Alphabetically’ box the graphics will be ordered by their file name, otherwise they will appear in a random order each time the album is played. You can set the look of the pages of the photo album by selecting to have a colored matte (border) or by picking a graphic to tile or stretch as a matte and then placing the photo on it so that it retains its proportions or if it will be stretched to fill the entire photo area.

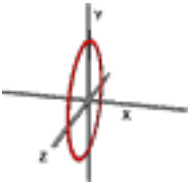
If you chose to make a photo album the View Angle ‘tilts’ the album so that it looks more like you are holding it in your lap—a view angle of zero is a top down view. You can change the amount of time the album should wait between the turning of the pages as well as how long it takes to turn the pages. (For the page flips, the lower the number the longer it takes the page to turn.)

Movement Page (3 of 4)
Now you need to choose the size of the objects that you want in your screen saver. To choose the size you want (small, medium, large, or jumbo), simply click the arrow in the Size of Objects box and select the one that you want from the pull-down menu. If you choose “jumbo” you will get a warning since this size can be slow on all but the fastest computers. You can also choose how many of the objects you want to appear in the screen saver—you can have from one to three. Just click the Number of Objects pull-down menu and choose.

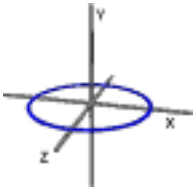
The objects in 3D screen savers can move in two ways. First, you have the option to make the objects revolve in a circular motion around the screen. To do this, make sure the Revolve Object box is checked. (When you have more than one object they revolve automatically). You can adjust the speed of the revolution of the object. This speed ranges from -10 to 10.

Second, the objects can be made to rotate. You can adjust the speed of these rotations. Like the revolution speed, the rotation speed ranges from -10 to 10. You have the option to change the rotation around three axes: the X, Y, and Z axes.

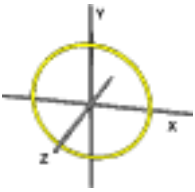
❖ *In the pictures that follow the axes are tilted slightly so that you can see all three axes at once. The axes actually run parallel and perpendicular to the monitor's surface.*



The **X**-axis runs from the left to the right of the screen. The picture at left shows the path an object takes when it revolves around the **X**-axis.



The **Y**-axis runs from top to bottom. Look at the picture to the right to see the path an object takes when it rotates around the **Y**-axis.



The **Z**-axis runs front to back. The picture at left shows the path an object takes when it rotates around the **Z**-axis.

❖ *You do not have to make the objects rotate around all three of the axes. For example, if you just wanted an object to spin around the Y-axis, you would change the rotation speeds of the X and Z axes to 0.*

If you will be adding highly compressed sound files (like MP3s) on the Sound page, you will probably want to check the 'Use Less System Time' box. This slows down the animation which can keep sound files from breaking up on slower systems.

Sound Page (4 of 4)
If you would like some sounds in your screen saver, click the Select button to open up the Jukebox. The Clear button means no sound will play. The sounds you pick will loop constantly throughout your screen saver.

To Finish
When you click the Finish button the wizard processes all your images. After you are given a chance to save the 3D project file, you then see a standard Save As dialog. Name the file whatever valid name you want and specify the directory where the installer will be saved. After the installer is created you may span it. You will then be asked if you want to run it to set it up.

Slide Show Wizard

The Slide Show wizard allows you to quickly make a screen saver out of *all* the valid graphics in a specified directory. You should therefore set up a directory with just the pictures you want before you run the Slide Show wizard. The wizard will actually make a new project. As such, if you have an unsaved project in memory you will be alerted when you start a wizard. If you want to save the current project, say "No" to exit the wizard, then save the current file. The 4 wizard pages are:

Type Page (1 of 4)
Click the radio button to build a Screen Saver or a Presentation.

You MUST enter a Name. This is the name that appears in Windows' list of screen savers.

Description text is optional. It is seen when viewing the settings dialog of a screen saver. (It can't be seen in a presentation.)

Images Page (2 of 4)
You may change the icon to *any* graphic file on your system by clicking the browse button. (Reset puts it back to the lifesaver around a monitor.)

You MUST select a directory containing the graphics you want to use for your slide show. ALL valid graphics in this directory will be used! If there is a problem opening a graphic you will be notified and the graphic will not be used. When the images have been processed you will be told how many were found. (Note: If the number is 0, you will have to pick a different directory.)

You may build one of five kinds of slide shows:

Centered— each image is centered on the screen. If it's too big you will not see the edges.

Fit to Screen, Proportionally Resized— each image is resized to where it is just wide or tall enough to fit on the screen. For example, a tall, skinny graphic will have its top and bottom touching the sides of the screen, but its proportionally resized width probably will not make it to either side.

Fill entire Screen, Resized— each image is stretched or shrunk so that it fills the entire screen. Graphics that do not have the same proportions as the screen may look strangely distorted.

Random, Fully Visible (if small enough)— each image will be placed (in full view, if possible) randomly on the screen.

Random, Maybe Partially Off Screen— each image will be placed randomly, with some partially hidden even if they could fit on the screen.

You can also alphabetically arrange your graphics according to filenames. To do this, simply check the Order Alphabetically box. If you do not check this box the slides will appear randomly.

You have the option to display the filenames with your graphics. You can place them at any of the eight locations around the screen edges or in the center of the screen—but all slides will be labeled in the same location. You can adjust the font of your labels by clicking on the Font button.

Appearance Page (3 of 4)
Choose how you want your slides to fade in and out by selecting the effect from the pull-down menu. When you choose random, a random effect is chosen from the other fading effects.

The effect speed affects how fast each slide fades in and out. All slides use the same speed for both fading-in and fading-out. Move the thumb around or click on the arrows to change the speed.

You can choose to have each slide fade out before the next one appears on the screen. To do this, check the Fade Each Slide Out box. If this box is not checked, slides will remain on the screen until hidden by other slides.

If you will be adding highly compressed sound files (like MP3s) on the Sound page, you will probably want to check the 'Use Less System Time' box. This slows down the fading which can keep sound files from breaking up on slower systems.

The duration sets how long each slide will be on the screen after fading-in and before fading-out. You can set it to be from 0 to 60 seconds.

Sound Page (4 of 4)
If you want sound in your screen saver, click the Select button to open up the Jukebox. The Clear button means no sound will play. The sounds picked loop constantly throughout the screen saver.

Finishing
When you click the Finish button the wizard will process all your images. You then see a standard Save As dialog. Name the file whatever valid name you want and specify the directory where the installer will be saved. After the installer is created you will be given a chance to span it. You will then be asked if you want to run it to set it up.

You then go back to the main screen—and all of your slides are in the segments! You can save the SSP if you'd like, or add or delete some segments, turn off the Compress All Images check box and then rebuild it, etc.

Template Wizard

The Template Wizard allows you to quickly customize a screen saver from a template. For example, a Christmas card template might allow you to pick a photo of your family and enter your own greeting—without using the segment editor at all! The wizard will make an SSP file. As such, if you have an unsaved project in memory you will be alerted when you start a wizard. If you want to save the current SSP, say "No" to exit the wizard, then save the current file. The general flow is:

Selection Page
The first page shows a list of all the templates you have. (Check www.screensaverstdio.com for new templates!) You should be able to get a good idea of what it is by its name, but you can always highlight one and then click on Preview to see what it looks like uncustomized.

Type Page
Click the radio button to build a Screen Saver or a Presentation.

You MUST enter a Name. This is the name that appears in Windows' list of screen savers.

Description text is optional. It is seen when viewing the settings dialog of a screen saver. (It can't be seen in a presentation.)

Customization Pages
Each template then gives you the ability to choose some graphics or sounds or enter some text. You will see a series of screens asking for your input. You may use the default selection, choose your own or clear it entirely. At any step you can Preview what the result will look like and you may always arrow forward and back through the different pages.

Finishing
When you click the Finish button the wizard will process your choices. You then see a standard Save As dialog. Name the file whatever valid name you want and specify the directory where the installer will be saved. After the installer is created you will be given a chance to span it. You will then be asked if you want to run it to set it up.

You then go back to the main screen—and your custom choices are in the segments! You can save the SSP if you'd like, or edit the segment, etc.

- *Don't save over the original SSP that the template runs from! If you do, weird things could happen when you try to run the template again!*

SWF Wizard

The .SWF wizard allows you to quickly make a screen saver out of a Flash (SWF) file. The wizard will clear any existing project. As such, if you have an unsaved project in memory, you will be alerted when you start the wizard. If you want to save the current project, say "No" to exit the wizard, then save the current file. The 4 wizard pages are:

Type Page (1 of 4)
Click the radio button to build a Screen Saver or a Presentation.

You MUST enter a Name. This will be the name that shows up in Window's list of screen savers.

Description text is optional. It is seen when viewing the settings dialog of a screen saver. (It can't be seen in a presentation.)

Click on the Next button to move to page 2.

Definition Page (2 of 4)
You may change the icon to *any* graphic file on your system by clicking the browse button. (Reset puts it back to the lifesaver around a monitor.)

You MUST select a valid Flash (SWF) file by clicking on the ellipsis and browsing to it or by typing its path manually. You decide if the user of the screen saver will have a checkbox to turn sound off; if your SWF file has sound in it, you usually want this checked on.

Now set how large you want it to display. You may set it to be 1-100% of the size of the original size of the *Animation*, of the screen (*screen—full*) or of the screen while retaining its original proportions (*screen—fit*). The default is 99% so in the cases where its set to a screen size this guarantees that moving the mouse to an edge of the screen could cause it to exit. (See below.)

Finally, you may have the file play in a loop or stop after one playing. You almost always want it to be in a loop; we left the ability to turn it off in there for completeness. The way some Flash files are built there is a introductory loop after which the main part plays. If you experience that the screen saver never makes it past the intro loop whether the Loop control is on or all, all you can do is rebuild your Flash file without the intro loop.

Events Page (3 of 4)
While your Flash file is playing it may need to respond to mouse movement and clicks and/or specific key-presses. To keep the screen saver from exiting when it is doing that, you need to specify what they are so it won't exit prematurely.

The 'SWF needs mouse control' must be checked if your Flash file accepts mouse clicks or even just mouse movement to affect the display. When this is checked, you see the mouse cursor and only mouse movement outside of the actual Flash file boundary will cause the screen saver to exit. (Thus, the default size is 99% so that you can always manage to move the mouse off the Flash file.) When this box is unchecked, the mouse cursor is hidden and any mouse movement will exit just like a normal screen saver. (If you built a Presentation, of course, mouse movement will *not* exit it!)

Newer Flash files can accept keystrokes as well as mouse clicks. You can exit on any key press if your Flash file doesn't support keyboard at all. The next most common thing would be that your Flash file needs to accept the cursor keys, the space and/or carriage return. If so, the 'Do NOT exit on Control Keys' is what you need. Note however, that ESC **always** exits. Finally, if you need to support pressing 'M' for menu, for example, then select 'Do NOT exit on Control Keys and the keys:' and type 'm' into the key list box. Upper and lowercase letters are equivalent. Type the letters your Flash file uses without any spaces or commas between them.

Distribution Information Page (4 of 4)
If you are going to distribute your screen saver with a Flash file you will need to abide by the Macromedia licensing agreements.

Finishing
When you click the Finish button the wizard will create the installer. You then see a standard Save As dialog. Name the file whatever valid name you want and specify the directory where the installer will be saved. After the installer is created, you will be given a chance to span it. You will then be asked if you want to run it to set it up.

- *Users of a screen saver built with the SWF Wizard must have the proper version of Flash Player installed on their system. If it is not found they will be prompted with a link to download the newest version.*

Icon Editor
Icon Editor is a bonus add-on program that allows you to create icons for the screen savers you make. By selecting the Icon Editor icon from the tool bar (or selecting Tools|Icon Editor from the Menu Bar), you activate this program.

Files Supported
Screen Saver Studio can work with a variety of bitmap and vector graphics. Formats ranging from BMP, JPG, PCX, WMF and more can be used to make your screen savers. Screen Saver Studio takes these graphics and converts them into a standard format inside the screen saver. Unless Compress All Graphics is on, every format except BMPs will be converted into temporary files on your hard drive. In order to save on working hard drive space and speed up loading time you should try to work with BMPs as much as possible. When Compress All Graphics is on, the graphics will be converted and stored as JPGs.

The complete list of graphic files (plus most of the subtypes of these files) supported is:

AVI, BMP, DIB, GIF, ANM, CMP, CAL, IMG, PNG, DIC, TIF, GIF, JPG, ICA, JFF, JTF, MAC, MSP, PCD, PCX, PIC, PSD, EPS, RAS, TGA, WMF, FXS, WPG, ICO, CUR

Other files can be opened with the aid of a recent version of Windows Media Player. These include MPG, WMV, ASF, AVI, QT, MPEG, M1V, MPV2 and MOV (version 2 and earlier) files. To download the most recent version of the Windows Media Player, go to www.microsoft.com/windows/windowsmedia

The audio files that can be played are: AU, WMA, M3U, MPA, MIDI, ASF, MP2, MP3, SND, AIFF, AIFC, MID, RMI and WAV.

AVI files are a common file format for video animations. Screen Saver Studio can import most AVI files, but they can only be placed in graphic slot 1. You may experience some palette conflicts on computers running in 256 color mode if you have other graphics or a background in effect while an AVI is playing. (If the background or other graphics are in the Windows 16 color palette, they should work with no conflict.) While it is possible to move an AVI around the screen while it is playing, it is not recommended. AVI files are packaged with the finished screen saver so be careful—it is easy for the file sizes to become large with AVI files!

BMP is a standard format with two common subtypes—RGB encoded and RLE encoded. (Do not use O/S 2 encoding!!!) RLE encoding usually makes the installed screen saver a bit smaller.

The **ANM** file is an animation file created with ANIMCOMP, the beta program included with Screen Saver Studio. Animations created by other programs with an ANM extension *will not work*. We recommend you keep your animations in a single directory so you don't get confused.

Graphics in a lossy format (JPG for example) have a compression feature that often gives incorrect results when working with the transparent black portion of a graphic. This is because the file compression algorithm *loses* information from the original to obtain greater compression,

and it frequently does this by saying that all near blacks become the same black since the human eye can't distinguish the difference anyway. Unfortunately, Screen Saver Studio can and does need a specific range of black to work with to make masks correctly. We recommend that you load these format graphics in a paint program and make sure that the masked areas are the correct black then save them out to another format—BMP for example. The Compress All Graphics setting ruins transparent blacks; use it only when doing so can't have adverse affects!

GIFs are supported and can be opened. However, Screen Saver Studio only works with RGB values of 12, 12, 12 or less as (possibly) being transparent. If the GIF has a color defined as transparent it will internally be changed to have that color become true black. Any other blacks in the GIF will be changed to near black so as not to become transparent. If the Compress All Graphics option is off, GIFs will be saved as BMPs in the final screen saver, so each becomes much larger. If the Compress All Graphics option is on it will become a JPG—which means that if it has a transparent background it will become speckled around the edges. *You need to turn on the Keep Black Transparent check box for a transparent GIF to be transparent!*

Animated **GIFs**
Screen Saver Studio for the most part supports animated GIFs. Just select them like any other graphic or ANM file. They will be opened and played one frame after another and are even transparent where they should be if Keep Black Transparent is turned on. Animated GIFs that take advantage of the timing delays on each frame may look jerky or slow because of the way timing is handled in Screen Saver Studio. For the best results the update rate of the segment will need to be set to the smallest delay in the animated GIF. The default update rate of 200 ms works well, but you may need to decrease it to handle some animated GIFs. Remember that the update rate affects the entire segment and not just the animated GIFs!

The **MP3** format is a highly compressed audio format. It takes a **lot** of processing power to play one correctly since it is uncompressed on the fly. You need at *least* a 166 MHz processor to play one through the Windows Media Player if nothing else at all is running on the computer. If the hard-drive is caching or other programs are running, the MP3 can "skip" when it can't keep up with its decompression.

MP3s also come in different sampling levels and "bit rates." For playback in Screen Saver Studio the bit rate is the more important of the two. It's a good measure of how much processing power your system will need to play it properly. If you have an association to play MP3s on your system you may try double-clicking on the file and then reading the properties of the file from within the default program. Or you can launch Windows Media Player (Start menu, up to Programs, over to Accessories, over to Multimedia then to Windows Media Player) and then open the MP3 file that you are interested in. Go to the View menu, down to Settings and out to MPEG Layer 3 Decoder, then click on the statistics tab.

Windows Media Player will at least enable you to find out the bit rate of the file. 128 kBit/s is CD quality and you'll need about a 300 MHz system to play it consistently with no "skipping." If your source has a lower bit rate, like 96 (near CD) or 64 (FM radio) you need correspondingly less horsepower to play it properly. If, however, the bit rate is OVER 128 kBit/s you may need a very fast machine indeed to keep up with everything that goes on in a screen saver while playing that MP3. Complicating this is the fact that stereo files take more power to play than mono ones, though not double that of a mono one. Unfortunately, the current Windows Media Player does not give you information on whether or not the file is in stereo. (Other players do, though, so you want to check the MP3 properties with the utility that gives you the most information.)

Please note that the finished screen saver cannot change the playback rate or audio quality of the MP3. If you are just interested in making a screen saver for your own system and have no intention of giving it away then you'll know right away if the MP3s are playing properly or not. If you are making a simple, blank-screen, MP3 jukebox screen saver, then if the target system can play the MP3, the screen saver will be able to play the MP3. However, if your screen saver has large or

numerous graphics in it the MP3 may “skip” while in the screen saver if the MP3 has too high a bit rate or if the update rate in the screen saver is set too fast. The best remedy is to make or obtain a lower bit rate or mono version of the MP3 before building it into your screen saver. Using only BMPs in your project (with Compress All Images turned OFF) and increasing the update rate could free up enough processing power to play the MP3 properly. If you make no compromises just realize that not all systems will be able to play your creation correctly.

Media Files Supported

Screen Saver Studio passes control to the Windows program mplayer.exe, NOT Windows Media Player. However, by installing the newest Windows Media Player you will get more codecs and therefore mplayer will be able to play more files. To get the newest version, go to:

http://www.microsoft.com/windows/mediaplayer/en/default.asp

If you want to know for sure whether or not Screen Saver Studio will be able to play a file, DON’T simply double-click on it to see if anything runs it—go to the start menu, Run command, and type “mplayer” and then press “Enter”. Then try to open and play the file you’re interested in. If mplayer can’t play it, then Screen Saver Studio can’t, either. Please note that the Windows Media Player program does not support the playback of every type of media file available currently, but it does provide support for the most common types of media files. The files it supports are:

Windows Media formats File name extensions: .asf, .asx, .avi, .wav, .wax, .wma, .wm
Moving Pictures Experts Group (MPEG) File name extensions: m3u, mp2v, .mpg, .mpeg, .m1v, .mp2, .mp3, .mpa, .mpe, mpv2
Musical Instrument Digital Interface (MIDI) File name extensions: .mid, midi, .rmi
Apple QuickTime, Macintosh AIFF Resource File name extensions: .qt, .aif, .aifc, .aiff, .mov
Unix File name extensions: .au, .snd

NOTE: Windows Media Player supports files created with Apple QuickTime version 1 and 2. Windows Media Player no longer supports the .ra, .rm, and .ram file formats.

If you need help troubleshooting the playing of a supported file, please check the Screen Saver Studio help file topic “Media Files Supported” for possible fixes.

Creating New Graphics and Animations

If you have an art program or a scanner or digital camera, you can create new graphics for Screen Saver Studio. You just need to know and keep in mind a couple of details...

The first thing to consider when making graphics is that smaller is better. Make them just large enough to get the desired effect across. This is both for memory usage as well as the fact that moving full screen images around is inherently slow. See the TWAIN section below for caveats when scanning-in photos to keep them from getting way too large!

The second thing to remember is to be careful when using true black—RGB color 0, 0, 0. True black can be made transparent, so a white disk surrounded by black can be made to look like a disk moving across the background. If you put another black disk inside the white disk it will look like a doughnut because the background will show through the hole. If you want a white disk with a black center that stays black, you need to make the center disk “not quite black”. i.e. RGB values of 12, 12, 12 or a very deep purple, etc.

- *If you plan on using the transparent black feature you cannot make the graphic a JPG nor can your screen saver use the Compress All Graphics setting. If you do, the transparent parts will be speckled. If you have a source JPG with a black section you want to be transparent, you must use a paint program to edit the black areas to insure they are solid black and then save it out as a BMP to get rid of the original speckles.*

Screen Saver Studio for the most part supports animated GIFs. Use them like any other ANM or graphic file. Animated GIFs that take advantage of the timing delays on each frame may look jerky or slow because of the way timing is handled in Screen Saver Studio. For the best results the update rate of the segment will need to be set to the smallest delay in the animated GIF. The default update rate of 100 ms works well, but you may need to decrease it to handle some animated GIFs. Remember that the update rate affects the *entire* segment!

Animation files (ANM) are single files that contain many images. These images are displayed one after the other in the same segment—thus giving the impression of movement. You can download animations from www.screensaverstudio.com or you can use ANIMCOMP to create your own. The instructions for Animcomp are given when you run the program, but the basic rules are:

- You have to have BMPs.
- The BMPs must be the same number of colors.
- The BMPs must be exactly the same width and height.
- The BMPs must be in the same encoding scheme—either RGB or RLE.
- The BMPs must be named in sequence with a root name and digits that increase. Something like STAR01.BMP, STAR02.BMP... STAR11.BMP.
- The BMPs must all be in the same directory.

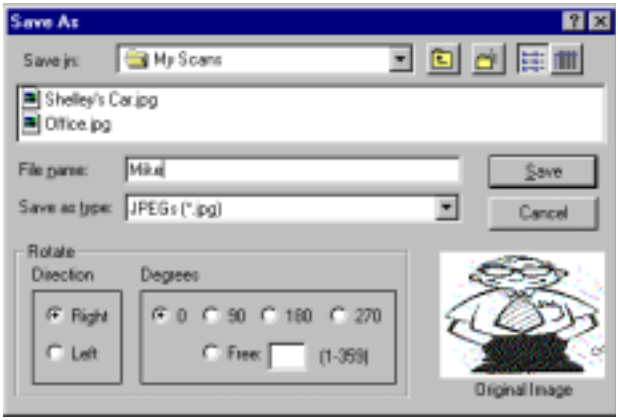
When you run Animcomp, you will be asked for a file to load. Select any frame of the series and it will find the lowest numbered one and turn it and the rest in sequence into an ANM file!

Using a TWAIN device to make a new image is a two-step process. First, use the TWAIN select source command from the File menu to specify what TWAIN device you wish to use. You must set the device every time you launch Screen Saver Studio.

The TWAIN Acquire command gets an image from the source you have selected. When you select this command the dialog box from the device you have chosen comes up. You should be able to follow the instructions for that device. However, here are some things to remember:

When you scan in an image you must choose the dpi, which stands for dots per inch. (A dot is basically a pixel). To figure out what dpi to choose, multiply the size of the image you are scanning by the dpi values. In general, when using a scanner 72 dpi usually produces acceptable results, though it's a function of your desired screen size and the area being scanned. For example, if you have a 5 inch wide photo, it will be 360 pixels wide when scanned at 72 dpi. (5 inches x 72 dpi = 360 pixels.) This is just over half of a 640x480 screen. If you scan the same photo at 300 dpi it will be 1500 pixels wide—much wider than the screen! However, if you just scan a 1 inch section of the same photo, scanning it at 300 dpi gives a scanned image that is 300 pixels wide.

After your image is scanned, a Save As Dialog with some extra features comes up. You can choose how many degrees you want to rotate your image. If you don't want to rotate your image make sure that 0 degrees is selected. 90 degrees turns the image on its side, 180 degrees turns it upside down and 270 degrees turns it three quarters of the way around. Which way it is



turned is set by the right/left radio button pair. If you pick the Free radio button you can enter an exact degree of rotation from 1-359. A rotated image increases in size to a rectangle that encloses the tilted image. The areas around the corners of it will be filled with true black. (The preview picture always shows the original, unrotated image.)

After your scan is saved, if you go into a segment and double-click an empty graphic slot, the graphic you just scanned-in will be the default graphic! If you double-click a slot with a graphic already in it, however, *that* graphic will come up and the default of the scanned image will be lost.

Screen Stuff

Screen Saver Studio always treats the dead center of the screen as 0,0. The X-axis is the horizontal axis—you can move left and right along it. The Y-axis is the vertical axis—you can move up and down on it. When you move up you are moving in a +Y direction, down is the -Y direction. Moving right is +X and left is -X.

You can use the pixel offset when starting your graphics to put them in a specific location. The pixel range in any direction is 9,999. That is, you can place a graphic anywhere from -9,999 to +9,999 pixels in the X or Y direction. Initially, the center of a graphic is its reference point, so for a graphic to be placed off the edge of the screen the *center* of the graphic must be placed far enough off the screen so that none of the graphic is visible on-screen. Placing a graphic at a pixel offset of 0,0 centers the graphic on the screen.

- *Once on the screen , however, the upper left hand corner is the key point. Put a large graphic in slot 1 of segment 1. In segment 2 put a small graphic in slot 1, but use the Keep Old Coordinates starting point. This graphic will be placed so its upper left hand corner is where the upper left hand corner of the large graphic in segment 1 was.*

When you create your screen saver you may have no idea what the screen resolution will be when the screen saver runs. It could be 640x480, 800x600, 1024x768 or even higher. The right edge is +320 X on a 640x480 screen, the bottom edge is -300 Y on an 800x600 screen, the left edge is -512 X on a 1024x768 screen, etc. If you place something at +400 on the X-axis, it may be completely off the screen on a 640x480 screen but completely visible on a 1024x768 screen!

The % Offset feature gets around the screen resolution question since it moves the center of the graphic the designated percentage distance from the center of the screen. The edges of the screen are always one-half of the distance of the screen resolution away from the center. Thus, +50% X will put the graphic half-off the right edge of the screen no matter what screen resolution you are running under! (It's only half-off the screen because the *center* of the graphic is placed there.) The % offset runs from -9999 to 9999. You generally won't want to go beyond 100% in any direction since it would take a long time for such a graphic to get on the screen!

- *DirectX lets you set the screen to a known size, like 800x600, but remember that the user may not have DirectX! Make sure 'Full Screen' is off to ensure that it works on any system if you're not using relative offsets!*

Performance Considerations

Many things can affect the performance of your screen saver; here are the main things to know:

MP3s

The MP3 format is a highly compressed audio format. It takes a **lot** of processing power to play one correctly since it is uncompressed on the fly. You need at *least* a 166 MHz processor to play one through the Windows Media Player if nothing else at all is running on the computer. If the hard-drive is caching or other programs are running, the MP3 can "skip" when it can't keep up with it's decompression.

MP3s come in different sampling levels and “bit rates.” For playback in Screen Saver Studio the bit rate is the more important of the two. It’s a good measure of how much processing power your system will need to play it properly. If you have an association to play MP3s on your system you may try double-clicking on the file and then reading the properties of the file from within the default program. Or you can launch Windows Media Player (Start menu, up to Programs, over to Accessories, over to Multimedia then to Windows Media Player) and then open the MP3 file that you are interested in. Go to the View menu, down to Settings and out to MPEG Layer 3 Decoder. Then click on the statistics tab.

Windows Media Player will at least enable you to find out the bit rate of the file. 128 kBit/s is CD quality and you’ll need about a 300 MHz system to play it consistently with no “skipping.” If your MP3 has a lower bit rate, like 96 (near CD) or 64 (FM radio), you need correspondingly less horsepower to play it. If, however, the bit rate is OVER 128 kBit/s you may need a very fast machine indeed to keep up with everything that goes on in a screen saver while playing it. Complicating this is the fact that stereo files take more power to play than mono ones, though not double. The current Windows Media Player does not give you stereo information—other players do, though, so check the MP3 properties with the utility that gives you the most information.

Please note that the finished screen saver cannot change the playback rate or audio quality of the MP3. If you are just interested in making a screen saver for your own system and have no intention of giving it away, then you’ll know right away if the MP3s are playing properly or not. If you are making a simple blank-screen, MP3 jukebox screen saver, then if the target system can play the MP3, the screen saver will be able to play the MP3. However, if your screen saver has large or numerous graphics in it the MP3 may “skip” while in the screen saver if the MP3 has too high a bit rate or if the update rate in the screen saver is set too fast. The best remedy is to make or obtain a lower bit rate or mono version of the MP3 before building it into your screen saver. Using only BMPs in your project (with Use Image Compression turned OFF) and increasing the update rate could free up enough processing power to play the MP3 properly. If you make no compromises, just realize that not all systems will be able to play your creation correctly.

Update Rate
When you put an MP3 in a screen saver—unless you just have a black screen—there is a lot of stuff going on! The background is being refreshed and all the copies of all the objects are being moved and redrawn at the default rate of five times a second. If you’ve set the update rate to its lowest value of 25ms it tries to update the screen 40 times a second! At such a speed there is a fight between the MP3 player and the screen saver for processor time and the screen saver wins and the MP3 “skips.” (Unless you have a *really* fast system!)

Objects
For most screen savers the slowest thing is to have a large “area” of objects on the screen in a single segment. Get the size of each graphic and add a border in pixels equal to the speed of that object to all four sides. i.e., the calculated width becomes the actual width plus twice the speed and the calculated height is the actual height plus twice the speed. Multiply the calculated width by the calculated height to get its area. Multiply it by 2 if you have the keep black transparent box checked. Multiply it by 2 if you have the transparent fade box checked. Multiply it by the number of graphics set in that slot. Do this for each graphic in every other slot and add them all together. This is the amount of object data you are manipulating every update. You can see that this gets large quickly, especially if you have transparent check boxes on when they don’t need to be!

You also need to be aware of how many graphics you have set to be 100% screen size in the same segment. The tricky thing is that you must count every *frame* of every animated GIF or ANM that you have set to play at 100% in that segment. Add one if the background is set stretch-to-fit. Although it may work fine on your system, on someone else’s system with a 1280x1024, 32 bit color screen, each of these is taking up 5.25 megabytes of RAM! The screen saver may be verrrrry slow. Try not to have more than a background and one or two more graphics be full screen in a segment.

Also, remember that text is actually displayed as a graphic! Turning “use exact font” on makes a graphic that is stored in the final screen saver; if it’s turned off then the graphic is generated when the screen saver runs. Either way the text still becomes a graphic. The graphic is the size of the rectangle that contains ALL of the text, so a huge, scrolling, Star Wars text script can be quite large—especially since you usually want it to be transparent!

Graphic Size
WIndows 95, Windows 98 and Windows Me have a 16 MB size limit on certain operations dealing with graphics. If you load a very large graphic it is possible to hit this limit and the graphic will not be shown in the screen saver. Assuming that the end system will be 32 bit true color—4 bytes per pixel—your graphic can cover an area of 4 MB; up to 2000x2000. However, even though Windows may handle such a graphic, it could still be very slow on any given system!

Graphic Type
There is a trade-off when dealing with graphics. You can have JPGs that load slow but have a small file size or BMPs that load fast but have a large file size. This is because JPGs have to be decompressed before they can be displayed. When loading a JPG across a segment, objects that are moving can be seen to pause while the JPG is decompressed. Study the postcard.ssp (available at www.screensaverstudio.com) for a way to load up all the JPGs at once so that they do not need to be decompressed again. Basically, you need to keep the same JPG in the same slot across all the segments—just place it off the screen when you don’t want it to be seen.

Background
Another common “slow” element is a tiled background when the graphic that is tiled is small—less than 64x64 pixels, say. To speed it up you can take your small graphic and manually tile it 2x2 or 3x3 in a paint program and save out the larger version. A stretch-to-fit background, especially when the screen resolution is greater than 800x600, can slow things down a bit, too.

Screen Resolution
The screen settings can slow things down in two ways: first, the larger the screen the more data that may have to be updated. A 640x480 screen has 307,200 pixels whereas an 800x600 has 480,000 pixels (56.25% larger) and a 1024x768 is 786,432 pixels—156% larger! Second, and perhaps more importantly, the color depth influences how many bytes each pixel uses—256 colors (1 byte), 65K color (2 bytes), 24-bit true color (3 bytes) or 32-bit true color (4 byes). So a 640x480, 256 color screen is manipulating 480,000 bytes of data, whereas a 1024x768 32-bit true color screen has to manipulate 3,145,728 bytes—more than 6.5 times the data!

Video Card
Things are not quite as straightforward as picking a screen resolution with the lowest total bytes, however. The video card can be optimized to run better at a certain resolution or color depth than others. If your video card offers 32-bit color it may be *faster* than running at 24-bit color! You can change the troubleshooting properties of a screen saver to test them out on your system.

“Choppiness”
If your video card can’t quite handle the number of objects at a given color depth and screen resolution then the resulting screen saver may look “choppy.” However, there are a couple of things that you can do to reduce this. You could make smaller objects. Or insure that they have transparency turned off if it’s not needed. Or you may decrease the speed of the moving objects while at the same time decreasing the update rate to keep the same apparent motion across the screen. Say that an object is moving at 20 pixels per update and you think it looks “choppy.” You could reduce that to 10 pixels if you cut the update rate in half. Or even cut it down to 5 pixels and cut the update rate to a 1/4 of what it was originally. Similarly, a slower fade effect rate (smaller number) smooths out the fade effects, so if a fade is too “jaggy” at speed 150, cut the fade effect rate in half and it will be smoother—but it will take twice as long to finish—unless you also cut the update rate in half.

However, if MP3s in your screen saver are “skipping” then after you insure you have a reasonable bit rate in your MP3 (see above) you need to work with the graphics to insure that they are as small as possible. After that then you may need to *increase* the update rate to give more time to the audio player! It’s a tough choice—if you insist on having many large objects in a screen saver playing an MP3 jukebox one of them is likely to suffer. (Unless you’re on a really good system.)

3D
3D screen savers take a lot of processing power to wrap the photos on the objects. If you play an MP3 at the same time...things could get choppy! If the audio is skipping you may need to check the box that gives more time to the audio player and then hope for the best on the motion. To make the motion look best you want to avoid jumbo sized objects. You can cut down on the speed of revolution to keep the object from “jumping” quickly across the screen when it is right inside the plane of the monitor’s glass. And remember that the more objects you have, the slower it will be.

What does all this mean?
Well, as the builder of a screen saver you should know what could make it run poorly on other systems. If you keep these things in mind your creations should be able to run on any system with little or no problem. However, if you give it away and someone complains about it, you should have an idea of what the problem may be on their end. The single biggest trick in your arsenal may be...

Display Size
For non-3D screen savers this setting is a real boon! Since it allows you to pin the action area to a given size, not only can you make actions occur correctly regardless of the user’s screen size but you also keep the video card from dealing with a huge amount of data! The biggest drawback is the black border that mattes the action on much higher resolution screens. However, this can be a small price to pay for increased and/or correct performance on other systems.

Putting Screen Savers on CDs

If you have a screen saver or presentation of many photos or a large number of MP3s in a jukebox slideshow, for example, you may want to run it from a CD instead of having a full install onto a hard-drive. The advantage is that the user saves a lot of hard-drive space; the disadvantage is that the CD must be in the drive when the screen saver kicks-in if you’ve built a screen saver.

If you’ve built a simple screen saver or presentation, that is, one that doesn’t require an installer, simply build it in it’s own folder and then burn all the files in that folder onto a CD. (There will only be an .SCR file and a .DAT file.) If you are forced to build an installer because of the file types you’ve used in your project, run the installer. For a presentation, install it where you want it and delete UNINSTAL.EXE and INSTALL.LOG before burning the folder to the CD. A screen saver installer always puts the *name*.SCR file in the \WINDOWS or \WINNT folder. Copy it to a new folder. Do a Find Files search of your Windows drive for *name*. (Make sure that you include hidden folders in your search in XP.) Double-click on the *name* folder to see all the other files that were installed. Copy them to your burn folder, except UNINSTAL.EXE and INSTALL.LOG.

The burn folder should have an .SCR file, a .DAT file and maybe other files named FILExxxx.yyyy where xxxx is a 4 digit number and yyyy is an extension like MID or MPEG, etc. Test to make sure you have gathered everything together by going to the Start Menu, Settings, Control Panel and run Add/Remove Programs and then remove the installed presentation or screen saver. Then go to your new folder and either run the presentation or double-click on the .SCR file. Let it run all the way through. If everything runs and you don’t get any error messages then you’ve done everything okay! If you get a “missing file” message then reinstall it and see what files you missed.

- *Don’t forget to remove the installed screen saver before testing—otherwise it will always run properly on your system when you test it and you could therefore be giving away something that will break on other people’s systems.*

To run a presentation the recipient just runs the EXE on the CD. Setting up a screen saver to run from a CD is almost as easy...just right-click on the *name*.SCR file and go to the Install line of the menu that pops-up. This installs the name of the SCR into the screen saver list and makes it the default screen saver. As long as the CD is in the drive it will run correctly. However, if you Install a screen saver from a different CD or even a different folder, you will “lose” the previous one since Windows only shows screen savers from one external directory.

Finally, it would be a good idea to put the actual installer on the CD if it will fit since this will always give the recipient all the files needed!

File menu commands

New Project	Creates a new project.
Open Project	Opens an existing project.
Save Project	Saves an opened project using the same file name.
Save Project As	Saves an opened project to a specified file name.
Revert	Revert to previous saved version.
Display Settings	Lets you set the display size and mode for your project.
Professional Features	Accesses build settings available only in the Professional version.
Build SCR/EXE	Build and save the current project as a .SCR or .EXE file.
TWAIN Select Source	Allows you to select your TWAIN device.
TWAIN Acquire	Acquire a graphic from a TWAIN device.
File 1,2,3,4	Most Recently Used file list.
Exit	Exits Screen Saver Studio.

Edit menu commands

Undo	Undoes the last Edit action.
Cut	Deletes data from the project and moves it to the clipboard.
Copy	Copies data from the project to the clipboard.
Paste	Pastes data from the clipboard into the project
Paste Insert	Inserts data from the clipboard into the project
Edit Segment	Edit the contents of the selected segment.
Clear Segment	Clear the contents of the selected segment.
Delete Segment	Removes the currently selected segment.
Insert Segment	Inserts a new segment in front of the selected segment, duplicating the contents of the previous segment).
Copy Sequence	Copies a series of segments to the clipboard.
Paste Insert Sequence	Pastes the series of segments from the clipboard into the project.
Toggle Clip Marker	Allows you to define clips.

View menu commands

Tool bar	Shows or hides the tool bar.
Command Bar	Shows or hides the command bar.
Work Sheet	Shows or hides the work sheet.
Status Bar	Shows or hides the status bar.
Preview	Preview the current screen saver project from the segment defined by the Begin Preview dialog.
Begin Preview Normally...	Set the Segment to begin previewing at.
Element	Determines which segment element tab is selected.
Resolution	View 1, 2, 4, 8, 16, or 32 segments at once.

Tools menu commands

Jukebox	Allows you to add audio files to your project that will be played in a “one after another” fashion.
Icon Editor	Opens the Icon editor.
3D Wizard	Runs the 3D Wizard.

Slide Show Wizard	Runs the Slide Show Wizard.
Template Wizard	Runs the Template Wizard.
SWF Wizard	Runs the 'swiff' or Flash file Wizard.

Help menu commands

Getting Started Tutorial	Runs a presentation that guides you through building a screen saver. (Or loads the appropriate help section.)
Index	Offers you an index to topics on which you can get help.
Using Help	Provides general instructions on using help.
News and Info	Connects to the www.screensaverstudio.com page so you can find out about updates, patches, new version, etc.
Distributing	Tells you how to give away your screen savers.
About	Displays information about Screen Saver Studio.

Glossary

Animcomp: A separate beta-program included with Screen Saver Studio that allows you to take identically sized and formatted BMP graphics and turn them into an ANM file.

ANM: An animation file made by Animcomp. It plays a sequence of images in order within a single segment. ANM files created with other programs *will not* work in Screen Saver Studio!

Audio: Sound of any supported format.

AVI: A common form of graphic movie. AVI's can only be played in Graphic Slot 1.

Background: The mat on which all objects are placed. All other objects are in front of it.

BMP: A standard Windows graphic format. If your paint program supports it, when you create new graphics you should save them as RLE encoded since this usually makes your final screen saver smaller.

Bounce: A special object motion where the object bounces off the edge of the screen instead of moving off of the screen.

Build: To take your raw data files and turn them into an SCR or EXE.

Clip: A clip is a run of segments that plays from the first segment of the clip to the last segment of the clip. When the last segment is played, a different clip is chosen at random to be played.

Clip Marker (or Clip Dot): The indication of where a clip begins and ends. A dark dot indicates both the beginning and end of a clip; a light dot shows a segment is an internal part of a clip.

Compress All Graphics: A setting that forces all graphics to be internally stored as JPGs. This can result in great size savings but sometimes with a loss of image quality. It will also ruin graphics that use the "Keep Black Transparent" setting.

Compression: Making your screen saver smaller so it is easier to distribute.

Compression Factor: A Pro feature that allows you to set the compression factor of all the JPGs in you screen saver. This can greatly reduce the final size of the screen saver letting you avoid spanning to fit it on a single floppy.

DirectX: An alternative way for Windows to draw graphics, it utilizes the processor on the video card to greatly speed up drawing graphics, making it much faster than GDI. Most versions of Windows come with DirectX, but you or the user of the screen saver may need to install a newer version (7.0 or above) to see its benefits.

Display Size: A setting to pin the screen saver to a certain size “action box” regardless of the users screen resolution.

Distribution: Giving your screen saver away for free! To *sell* your creations, call 1-318-221-8718 and ask about the Professional version. Or visit www.screensaverstudio.com for info.

dpi: dots per inch. A dot is basically the same thing as a pixel.

Duration: How long the movement portion of a segment lasts. It can be set to last a certain number of seconds or by how a certain object moves.

Effects: Accompany the fading types by changing how they work.

EULA: End User License Agreement. A EULA is a contract shown by the installer that must be agreed to *before* the screen saver is installed. The user must agree to the terms outlined in the EULA or else exit the installation of the screen saver.

EXE: An executable program. Screen Saver Studio can build a Presentation EXE, or a self-installing screen saver EXE.

Fade In: The portion of a segment where objects enter the screen. There are a variety of types and effects to choose from.

Fade Out: The portion of a segment where objects leave the screen. There are a variety of types and effects to choose from.

GDI: Graphics Device Interface. The native way that Windows draws graphics. See also DirectX.

General Rainbow (Static) Palette: A general palette used while building and previewing your screen savers. It makes a fairly good approximation for most graphics, but is bad for photographs.

GIF: A compressed graphic format. You need Keep Black Transparent on if you want a GIF to use its transparent color—regardless of what color is actually transparent in the GIF.

Global (Static) Palette: A setting that takes all the graphics from the entire screen saver and makes the single best palette. The results are usually very good. There is never a palette flash between segments, but it can take a while for the palette calculation during the build.

Graphic: The main object in Screen Saver Studio. Many graphic formats are supported, but they are all turned into one of two standard formats in the final screen saver.

Graphic Slot: Graphics in a segment are assigned to one of ten slots to keep track of them. The major function of a slot is determining how objects pass over each other on screen.

High Color: Also known as 16-bit or 65 thousand color, this is a video mode that displays 65,536 colors. (Also used to describe 15 bit color, a mode that displays 32,767 colors.)

Icon: A tiny picture associated with the file you create. It is also displayed in the setup box of a screen saver. Screen Saver Studio supports only 32 pixel by 32 pixel, Windows 16 color icons.

Icon Editor: Accessed from the Tool menu, this is a program that allows you to create icons.

JPG: A popular, lossy graphic format. Because of the compression method used, these may not work properly with transparent black settings.

Jukebox: A sound setting that allows you to select multiple sounds which can be played randomly or in order throughout a screen saver.

Layer: A graphic slot functions a little like a layer in other programs; but in Screen Saver Studio the top most layer is always slot 1 and the bottom layer is slot 10.

Lossy: A compression scheme that sacrifices information for size reduction. Usually used on graphics (like JPG) under the theory that the human eye can't detect the difference between the original and the compressed graphic. Unfortunately, Screen Saver Studio runs into trouble with transparent black settings when using lossy graphic formats.

Marquee text: (a PRO only feature) is an optional scrolling banner of up to 2000 characters of text at the bottom of the screen. It scrolls from right to left.

Mask: A way of letting the background show though a graphic. All pixels of a certain color are defined to be transparent. In Screen Saver Studio, the mask color is always any black with RGB values of 12, 12, 12 or less. Thus, in the graphic of a doughnut, you'd make the hole the mask color so you could see it was a hole.

MIDI: A music format where instruments and notes are defined as numbers. Much smaller in size than WAVs, MIDIs will play on most properly installed sound cards. However, songs may not sound the same on different systems.

Movement: The main portion of each segment, this is where objects move around the screen. You can set the speed and direction of movement.

MP3: A highly compressed audio format. Requires a fairly good system (166 MHz) to play properly with nothing else running. In a screen saver with "masked" objects moving across nice backgrounds can require a 300 Mhz to keep the sound from "skipping."

Object: Either a graphic or a block of text. Objects are the "actors" in your screen saver "movie".

OPENGL: A graphics library required to run the 3D Wizard screen savers.

Palette: The specific 256 colors a segment uses out of all the millions of available RGB colors. Only a concern on 256 color systems since true color and high color systems always have all the colors and 16 color systems all use the same 16 color palette.

Palette Flash: An annoying, often psychedelic distortion of colors that briefly occurs on 256 color systems when displaying a new segment that uses a different palette of colors.

Password: An access feature of many screen savers. When the screen saver is exited you are asked for a password. If you do not enter the right one you cannot get onto the system. It prevents unauthorized users from using your system while you are away. If you use one, don't forget it or you won't be able to get on your system either!

per Clip (Dynamic): A setting that calculates a palette for every individual clip.

per Segment (Dynamic): A setting designed for slide shows that calculates a palette for every segment. You should fade each slide to black before going to the next image or you will get a palette flash between segments.

Pixel: The basic unit of the screen, each "dot" on the screen is one pixel. A 640x480 screen resolution means you can see 640 pixels across and 480 pixels up and down.

Presentation EXE: A stand-alone program. It must be run like any other program—it does not run automatically like a screen saver. It is exited by a key press. Arrow keys, however, act to step forward through the segments.

Preview: A way to look at your screen saver before building it. You can watch the segment number to see where things go wrong. The preview uses the rainbow palette.

Random Segments: See Clip Dots.

RGB: An acronym of Red, Green, Blue. It's a way of specifying a color by each of the three color values which run from 0 (dark) to 255 (bright). Black is 0, 0, 0; white is 255, 255, 255, bright blue is 0, 0, 255 etc.

Scanning: Transforming a hard copy of an image (such as a photograph) into a digital format.

SCR: The file extension of screen saver files.

Screen Resolution: The width and height of your screen as measured in pixels. Common resolutions are 640x480, 800x600, 1024x768, and 1280x1024, but more exist. In fact, some settings can be larger than your screen can show—"virtual" screen sizes—but Screen Saver Studio will still work! But remember that when on a virtual screen you can't scroll around to see the action which may be happening off the screen!

Screen Saver: A special program that is run automatically after a predefined length of time has passed with no input to your computer. Any key press or mouse movement exits the program. Originally designed to keep your monitor's screen from getting burned by constantly displaying the same thing for long periods of time, screen savers have become fanciful, fun, whimsical programs that amuse or break up the workday monotony.

Segment: The basic unit of a Screen Saver Studio screen saver. Each segment has three parts: A beginning where objects Fade In, a middle where objects Move, and an end where objects Fade Out. Objects can be moving while fading in and out, and they can be stationary in the middle.

Slot: Graphics in a segment are assigned to one of ten slots to keep track of them. The major function of a slot is determining how objects pass over each other on screen.

Sound: Either a sound or song. Only one sound can be played per segment, though it can be played multiple times

Spanning: The process of writing a compressed installer file over multiple disks—usually floppies. When the installer is run the user is automatically asked to insert the appropriate disks.

Speed: The number of pixels that an object moves every update. Speed can range from 0-50.

SSP: Screen Saver Project. The file that tells Screen Saver Studio where to find and how to use all the objects in your screen saver.

Sticky: A special background where objects leave a trail behind when they move.

Text: An object that displays a block of text. You can set the font, style, color and size of the text. You can have only one text object per segment. Text in all other respects acts like a graphic.

Tiling: Drawing the same graphic side by side and above and below itself to fill a large area. If care is taken, the edges where the graphics abut can be seamless. Vertical or horizontal lines are the result of improperly designed tiles.

Transparent Black: A check box that allows graphics or text to be masked on to the screen.

True Color: Also known as 24-bit or 16 million color, this is a video mode that displays 16,777,216 colors. Many systems now also support 32-bit true color.

TWAIN: TWAIN is a standard for image input devices such as scanners and digital scanners. TWAIN is not an acronym. For more information about TWAIN go to www.twain.org.

Types: The different ways objects can Fade In or Fade Out during a segment.

Update Rate: How often Screen Saver Studio redraws every object on the screen. Measured in milliseconds (thousandths of a second). The default of 200ms means that every 0.2 seconds objects will be moved and redrawn.

Use Exact Font: A text setting that turns the text in a segment into a graphic—insuring that all users will see the font and style used no matter what fonts they have on their system.

WAV: A sound format which digitizes an actual sound as a long string of numbers. All systems with sound cards should be able to play WAVs.

Work Sheet: An alternative method of editing the segments of a screen saver. It functions like a spreadsheet and has advantages and disadvantages over the segment display.

Wrap: A setting that determines how objects reappear after they move off the screen.

X Coordinate: In the Cartesian coordinate system the X-axis is the horizontal axis. It is positive (+) to the right of center and negative (-) to the left of center. In Screen Saver Studio, the center is defined to be the very center of the visible screen.

Y Coordinate: In the Cartesian coordinate system the Y-axis is the vertical axis. It is positive (+) above center and negative (-) below center. In Screen Saver Studio, the center is defined to be the very center of the visible screen.