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## Hints & tips (authors rambling)

I hope that you've already gotten a chance to play with this program and been as dazzled by the images it makes as we are. What you've got is our first crack at an interface for setting up a fractal [template](#) to go in any variety of directions. For those of you familiar with Fractal Vision type templates, I think you'll quickly catch on to how the controls effect the output you'll see on your screen. For the rest of you, check out the rest of this help file. For those of you wondering what to do with all the controls in the [Options](#) dialog box, I thought I'd share with you some of the discoveries I made in writing and testing the program.

First try the defaults (if you haven't) and work from there.

I've found that for me the most fascinating animations happen within a range of speeds. An important thing to realize is that [drawing](#) fractals is a whole lot more processor intensive (slower) than [painting](#) them. And for every additional part and/or level that it's drawn to, it'll take significantly longer. My rule of thumb, when drawing animations is: the total parts plus the current level should be less than 6. If you want to speed up drawing animations for settings that exceed this, check "Color by Level" in the [Colors](#) dialog. Make some of the colors (now levels) in the "Template Colors" section the same color as the current [background](#) color (under the "B"). If you've got the paint fractal mode checked, try lowering the number pixels to speed up animations. Perhaps you'll have different preferences, and likely different hardware, so adjust accordingly.

One thing that we and our beta testers discovered was that some of the most exciting animations came from [FRTs](#) that were the *least interesting* to look at in FractalVision. Simple FRTs make great animations. The more complex FRTs take a lot longer to render. Plus they just don't seem as juicy (at least not to me). If you really want to take control of your animations there's no substitute for a copy of an FRT editing program. (You guessed it, get ready for another shameless plug.) Run out and buy ([or order](#)) a copy of Fractal Vision for Windows which will allow you to edit and create your own templates. With this you can create perfectly symmetrical templates, add or delete points or parts, even change where on the screen the fractal starts from.

Try unchecking the "Point Mode" control. Now click on Test. The thing to understand is that there are literally thousands of possible combinations available, even without [loading](#) a template, because this program has an internal template that it will use. If you include all the possible templates that can be loaded into the program, the combinations are limitless. Some of those combinations really aren't all that interesting. Some just sit there. Some go flying off the screen into the void of fractal computations, *and don't come back!* Unless you tell them to by checking the reset option and setting the number of frames low.

How to simulate the bounce back effect: If you raised the movement increment, while on active part #0 and with some [random movements](#) checked or either the "move & spin" or "all" animations selected, you find that the image quickly zooms off the screen.

To fix this, scroll the "Reset Frame" value down or lower the movement increment until the image stays on the screen.

Which approach you pick will probably depend on the particular aesthetics of the fractal your working with. In any case, with very little effort, you should be able to create a combination of settings that makes animation sequences that closely mimic

"bounce back" off the edges of your display.

With "Reset Frame" at 1, you can see what the first single frame looks like (over and over and over again). Now put the frames reset at something more interesting, about 40, and make the active part something other than "0". This probably seems more interesting, but still it repeats itself. In order to get something different in each animation, check some of the random movements, or "All" for [animations](#). The animations listed represent a small subset of what's available to our "fractal engine". We've included a few of our favorite for this version. In coming versions we'll certainly add controls to allow you to pick and choose your own animation movement combinations, like "stretch and spin" or "squish, skew and spin", or whatever. Furthermore I think that it'd be nice to be able to setup various animation patterns and cycle between them. There are obviously quite a few possibilities here, if you come up with anything you'd particularly like to see, please get in touch with us. We LOVE feedback!

I think that you'll find, once you start playing around, that your choice of colors makes a big difference on the output. In general, I've found that gradients give the most pleasing results. I also try to find nice contrasts between adjacent levels or parts. For future versions of this program we're going to add compatibility with Fractint type .MAP files. This will allow users to load in their favorite 256 color palettes, instead of being stuck with the solid colors that Windows includes.

If you have run the program and played with it, you may have overwritten the default settings. This happens to the current setting each time you push the Test button. That's OK, you can get them back anytime by simply deleting or renaming the [FSS.INI](#) file inside your Windows directory.

In fact there is a handy trick to allow multiple configurations. Just create a directory named FSSINIS (or whatever) then when you get a combination that you like, rename FSS.INI to something unique, maybe mnemonic. Flipping between your various favorite combinations becomes no harder than simply copying over the existing FSS.INI. I know this is a bit of a hassle, and it's something we intend to address in coming versions, but, *this is version 1.0 of [FREEWARE](#)*. It is probably also worth noting that manually editing the INI file is presently the only way of removing any files from the contents of the dialog's drop down fractal template list.

More about "[point mode](#)". This control effects the shape of a fractal template's seed. If you have FVW (or Fractal Graphics for DOS) pushing the 'm' key enters this mode. Changing the shape of a template's seed *will* effect how a fractal is drawn, **not how it's painted**. It has to do with the dynamics of fractals and the mathematics of chaos. In a nutshell, when you paint a fractal in our program, your seeing the *fractal attractor* of the current template, and that attractor isn't effected by the shape of the template's seed, only the relationship between the seed and its parts in space. You can see what moving different parts does to a fractal by changing the active part to something other than '0' and unchecking "point mode". The '0' active part is the seed, which is way having it there, *while* in point mode will cause *none* of the animations of or random movements (except of course the random parts) to *any effect* on the entire attractor. In the point mode, I think very high movement increment values make the most interesting shapes, and one doesn't really need to worry about the entire fractal moving off the screen.

I could probably go on and on (I know, I already have). But then, you might think that I've told everything there is to know about creating great animations. I havent. And that's the most important point: go *try it yourself*, then tell *us* what you've

discovered. So, have fun and don't let our program take up too much of your time ;-)

## Why Freeware?

1. Its cool, no nag messages, no guilt and no carbohydrates.
2. This is like advertising, we hope you will like this product enough to check out the commercial release of this and other fine products from our [catalog](#).
3. Software should be free (but then we would be out of a really fun job). All version 1.0 software should definitely be free in order to get valuable user feedback.
4. We believe that creating interesting and robust software is an *iterative* process (allot like creating fractals is). We think this program is a neat idea. Getting a good grip on it, like any abstract concept requires reaching out and slightly missing many times before finally hitting the mark. On hitting that mark, other goals suddenly become obvious. Help us hit the mark, give us your feedback! By distributing this programs first version as freeware, we hope to give ourselves the greatest opportunity for including the most people in our iterative journey into fractal animation. Drop us a line any time we love feedback and we are working on a sound ( and midi ) interface!
5. The difference between this version and the commercial one is that we have added color cycling, a mouse disable switch and many other improvements (to numerous to mention). **Plus** you get 25 or more of the best fractal templates that we could make, a small printed manual that explains this and the FractalVision for Windows program. Of course you get the newest version as well.

This software is not crippled in any way, you may use it as long as you like.  
Please [Register it!](#)

## Color Solid

The color you choose from the [Basic](#) or [Rainbow](#) colors section is shown in the left side of the Color|Solid box. Only colors used to fill parts will be dithered, none of the lines defining the borders of the [Template](#) will be dithered. You can double-click the right side of the Color|Solid box to use the solid color that most closely resembles the one you have created.

Choose the [Add Colors](#) button or, Alt A.

Create any other colors you want, and click on Add Colors or, Alt A.

Choose the OK button to close the color dialog box and return to the composition.

## Default

You may choose to color by [Parts](#) Alt+P , by [Level](#) Alt+L or by **Default**. The **default** radio button is for compatibility with some older [Templates](#) that were made with the DOS version of Fractal Vision. Unless you have the DOS version or the Painting with light extensions (containing hundreds of FRTs) you will not use the default radio button. Default allows you to have templates with parts and levels colored independently. Some levels (and the respective colors) will only be seen when drawing. But all parts will be seen when drawing.

## **Add**

This is step three in the color adjustment process.

Press Add Color or, Alt A to "set" that color into the level or part of the template.

When you have selected and added all the colors that you want into the Template click on OK.



## Basic Colors

Step two; choose the desired color from this section.

2. Click on a color in the Basic Colors or the [Rainbow Colors](#) section that you like.
3. Press Add Color or, Alt A to "set" that color into the level or part of the template.

When you have selected and added all the colors that you want into the Template click on OK.

## Rainbow Colors section

Step two; choose the desired color from this section.

You can create your own colors and apply them to the [Template](#).

**To create your own colors;** Drag the cursor in the **Rainbow Colors** section and raise or lower the arrow beside the vertical [luminosity bar](#) to define your color. You can also create a color by typing numbers in the Red, Green, and Blue boxes, or the Hue, Sat (saturation), and Lum (luminosity) boxes.

Press Add Color or, Alt A to "set" that color into the level or part of the template.

When you have selected and added all the colors that you want into the Template click on OK.

## Special Settings

This program is unique in that there is nothing to break and every control will do something different. There is a default setting, we did set it up to look nice the first time you run it. The image you see when this program first runs on your computer is a file called GEM.FRT. If you want to get back to the original settings simply delete the FSS.INI file. For more information read the [hints](#) section.

For the wildest flowing images imaginable, turn on all the controls in the [Random Movement](#) section. You will find even the most mundane Template will spring to life with random energy and flowing colors.

You can try many different combinations of settings and files without ever repeating one. Sometimes you may find a particular combination of settings just doesn't do it for you, well that's the breaks, try something different. Sometimes you may like a setting so much that you want to preserve it. You can copy the file FSS.INI to a different directory or rename it and when you want to use those settings again just copy it back into the Windows directory.

If there is a setting you like or just can't take your eyes off of, let us know and we will incorporate into the next version. We have so many improvements planned, so it's hard to tell how many will make into the shipping version but feedback is important to us. There will be more preset animation's, color cycling, better control of [part](#) cycling and perhaps an adaptive process that learns what you like. This will make increasingly better and more pleasing images. You will also be able to store settings for recall and comparison independently of the [Template](#) names in the list box. For suggestions call Daniel 802 722-4141 or Albert 802 387 4474

Some of our favorite settings are;

Draw = on	Draw = on
Vert Move = -2	Point mode = on
Horiz Move +13	Vert = 6
Size = 3	Horz = 6
Spin = - 4	Size 13
Active part =0	Spin = 2
Reset =49 or so	Active part = 0
Level = 4	Reset = 50
Blanking = 2800	Level = 1
Use most of the	Blanking = 3000
Random	Make sure your <a href="#">coloring by part.</a>

Movements.

Paint = on	Try this one with ARROW and CARPET.FRT
Draw = off	Draw = on
Vert & Horz = 0	Point mode = on
Size = 0	Spirals = on
Spin = 3	Skew, Stretch, Size, Move, Parts = on
Active part = 3	Vert / Horz = 10
Reset = 150 or	Size = 11
more.	Spin = 1
Levels 4	Level = 2
(Depending	This one also looks good with color by part on.
on the amt. of	
color	
desired.)	

Num. of Pixels =  
3000  
Blanking = 1  
This works well  
with  
the Ferns.

The FSS.INI file can be edited by a text editor, the values are Boolean (true or false) here is the format for the strings; Note a ; marks a comment and this should not be put in the file. Also dont muck with the color values or it will default to the built in values.

```
[FractalScreenSaver]
; FractalMode=Paint, Draw.
FractalMode=0 1
Fill=0
PointMode=0
Reset=1
; Animations=None, Spiral, Tunnel, Skew + Spin, Move + Spin, All.
Animations=0 0 0 0 1 0
; RandomMovements=Spin, Skew, Size, Stretch, Move, Parts.
RandomMovements=1 1 1 1 1 1
SpinIncrement=-2
SizeIncrement=13
PixelDepth=4000
Level=2
ActivePart=0
HortMoveIncrement=5
VertMoveIncrement=-6
TimeLimit=16793
Frames/Reset=87
PercentRandom=0
SaveColorsToINI=0
Colors=0 FF FFFF 804000 FFFF00 808000 FF00 8000 FF 800080 FF00FF 808080
C0C0C0 F0C8A4 E8FFFF FFFFFFFF
FRTorIFS=C:\FVW\EXAMPLES\GEM.FRTAnimations
```

; The list here can be deleted (or edited) to clear the entries in  
; the drop down list box, the loaded templates list.  
; The numbers should be in ascending order.

```
[FractalList]
1=C:\FVW\EXAMPLES\1PART.FRT
2=C:\FVW\EXAMPLES\CARPET.FRT
3=C:\FVW\EXAMPLES\LEAF.IFS
```

## **Stretch**

Stretch changes a parts size along the x-axis. Parts stretch or squish depending on the sign of the size increment. Also by checking Stretch in the Random Movements section.

## **Skew**

Skew is a pseudo 3D effect, with the spinning along the y-axis, using the current Spin Increment. Skewing can go either to the right or the left.

## Point Mode

Normally the [template](#) and [parts](#) are manipulated by the center of each polygon. They can also be changed by [moving](#) the points at their apex. Point Mode provides a way to do this. The results of using point mode are often quite different and sometimes more stunning to behold. Try clicking on Point Mode from the [Options](#) Dialog Box. For more information read the [hints](#) section

## Screen Saver

To run this program as a Windows Screen Saver;

1. Copy the files FSS.EXE and FSS.HLP to the Windows directory.
2. Rename the file FSS.EXE to FSS.SCR
3. Open the Windows Control Panel and click on the Desktop Icon.
4. Goto the Screen Saver section ( about midway down )
5. Load the Fractal Screen Saver from the list box.
6. Click on test to view, or to configure click on Setup, then set the desired time delay.

To run the configuration program as an icon, use the command line `FSS.EXE /C` .  
Add this icon to any group and use the above command line.

You can also tell the screen saver where to look for its FRTs and IFSs;

1. Highlight the icon and press `Alt+Enter`
2. In the Working Directory edit box add the path to the FRTs. Like this; `C:\FVWIN\EXAMPLES` (or what ever the path to the FRTs and IFSs is).
3. Click on OK.



## Loaded Templates

This is a drop down list box of all the previously loaded templates.  
The [load](#) button will open the [common dialog](#) box and when you pick a [template](#), its path and name will be listed here.

## Parts

The fractal shapes that are generated with this program are made up of simple polygons.

These polygons are grouped together to form a [Template](#).

The main polygon or part of the template is called the seed shape. All the rest of the parts are copies of the main seed part. Parts can be [manipulated](#) to form the various [fractal images](#). This version of the screen maker can start on any part or randomly cycle to different parts. The current Active Part will always be used with the current animation.

## Movement

The image that you see is not stuck in the center. You can set the controls in the Vertical and Horizontal movement section of the [dialog box](#) so that the [template](#) or [parts](#) go flying off on one direction or another.

To limit the travel of parts when drawing adjust the [Reset](#) scroll bar to something between 30 to 60, make sure Reset is on. You can also save a fractal template off-center in FractalVision so that the image starts somewhere besides the center of the screen.

## Size and Spin Adjustment

These controls set the increment that is used by the [Random Movements](#) section and the [Animations](#) section, giving you the ability to spin and resize a part or the whole template at different rates. Setting size or spin to zero will not add any thing to the size of the object. The controls increase or decrease (indicated by a minus sign) the increment that is applied to the object or [part](#). For Spin we use degrees, for size we use fractal units.

## Random Movements

This section is for you people who would like add some extra chaos to these images. The controls here are check boxes that can be used separately or together for some really wild effects. Each of these controls adds a certain amount of randomness to the process.

NOTE: Each of the following effects will override the related scroll bar: spin, size, or movement [control](#) setting.

Checking **Spin, Skew, Size, Stretch**, or, **Move** will cause the program to choose a randomly selected direction (i.e. positive or negative) once for each series of frames between resets. This overrides the sign or direction setting on the related scrollbar. For instance the image may spin in the opposite directions from reset to reset, while the increment setting on the scroll bars still work. To increase the rate of these randomizing effects, decrease the [Frame Reset](#) setting.

Checking **Parts** will select different parts to be the active [part](#) between each reset.

NOTE: We intend to provide more control over parts in the second version, by adding a part cycling timer adjustment.

## Files

This version of the Fractal Vision Screen Saver will read two different file types.

**FRT** the default file type that contains the [template](#) information like color, size, shape and other stuff required by Fractal Vision. This file is compatible with the previous DOS and Windows versions.

**IFS** stands for **I**terated **F**unction **S**ystem and refers to a system that iterates a set of affine transformations using techniques developed by Michael Barnsley, *et al.* These files are very compact because they only contain a small set of IFS codes *i.e.* template information in ASCII (text) format and is the format used by the program [FRACTINT](#) and Winfract which is the great DOS and Windows fractal generator by the Stone Soup Group.

To run the configuration program, use the command line FSS.EXE /C .  
To run as an icon add this program to any group and use the above command line.  
You can also tell the screen saver where to look for its FRTs and IFSs;  
Highlight the icon and press Atl+Enter  
In the Working Directory edit box add the path to the FRTs. Like this; C:\FVWIN\  
EXAMPLES  
Click on OK.

This [screen saver](#) - animator, writes its configuration to the standard Windows type of INI file named [FSS.INI](#) - All the various [animation](#) settings are all stored here along with the path and file name for the [loaded fractal templates](#).

The original color information and the actual template size and shape reside in the \*.FRT files but you can only use the colors in the [color dialog box](#) which reads the color information stored in the INI file.

We are adding the capability to store multiple settings in this INI file for each file in the [drop down](#) list box. So that color, animation, mode and all other information unique to each screen animation session is saved as a selection.  
Get on the [mailing](#) list for version 2.0

## Animations

This is a group of predefined transformations, allowing for varying degrees of control for some motions and effects. If enabled, they get applied once per frame, between resets. All of the effects below can be adjustable with the related scroll bars.

- \* **All** gives you complete control over every type of movement. Every scroll bar in the Options dialog box has an effect.
- \* **Spirals** combine an increment of spin with an increment of size. These movements are linked only to the spin and size controls.
- \* **Tunnels** combine an increment of size (growth or shrinking) with an increment of width (stretching or squishing), depending on the sign ( + or - ) of the size scroll bar control.
- \* **Skew + Spin** combine an increment of skew with an increment of spin, only the spin control effects the image.
- \* **Move and Spin** combine an increment of Vertical and Horizontal Movement with an increment spin.
- \* **None** will not use any predefined animation. The Spin, Size, Vertical & Horizontal Movement controls will only have an effect if a related Random Movement control has been checked.

All the other controls like Random Movements, Levels, Number of pixels, Blanking time and all the Fractal Modes still have an effect, no matter which animation you choose.

**Screen Blanking** will redraw the screen with the background color and then start to draw or paint all over again. To have the image continue with the animations, uncheck the Reset button in the Fractal Modes area. You can set screen blanking to a really high number to see a lasting image that is never erased. We're working on a way to eliminate the screen blanking and still draw an image that erases part of itself after a user adjustable time period. Check out version 2.0 when its available.

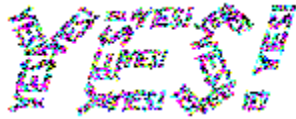
NOTE; To see real fractal tweening set the Screen Blanking to 1 and use the Paint mode.

Try this with fern.frt or fernzoom on part 3 or 4 with spin at 2. For more information see the special settings section.

**Reset** will restore the template to the original size, shape and position on the screen. Resetting is most effective (and automatically on) when used with the Part 0 setting. There is also a scroll bar to set the number of frames per reset called Reset Frame, this control is disabled if Reset is off.

Above all experiment experiment experiment and then - try something different.

click on the yes to print.



## Fractal Vision for Windows ® Software

Name: \_\_\_\_\_ Phone: \_\_\_\_ -- \_\_\_\_ -- \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Visa/Master Card/U.S.check #: \_\_\_\_\_

Exp. Date: \_\_\_\_ - \_\_\_\_ - \_\_\_\_ Signature: \_\_\_\_\_

Check preferred disk size: \_\_\_ 5.25" disks \_\_\_ 3.5" disks \_\_\_ Low Density disks only

\_\_\_ Send me a **Free** subscription to Dick Oliver's **Nonlinear Nonsense** newsletter.  
 \_\_\_ Check this if you tried to order the Fractal Vision for Windows Book at a store.

**To Register as a licensed user of Fractal Vision Screen Maker or to purchase Fractal Vision for Windows Software,**  
 (and to receive upgrade notices) Check items A, B, C or D below.

<u>Qty</u>	<u>Item</u>	<u>Price Each</u>	<u>Total</u>
___ A	Fractal Vision for Windows on CD-ROM and floppy disk	\$29	_____
___ B	Fractal Vision for Windows / SAMS Book, CD-ROM & Disks.*	\$45	_____
___ C	Fractal Vision Screen Animator --- <b>FREE</b> registration for version 1.0 !! (You will be notified when version 2.0 is available.)	_NC_	_____
___ D	Fractal Screen Saver-Animator (ver 1.1) 25 great FRTs & Manual \$15 (Free Shipping if you order both A and D above **)		_____

To Order additional products, please check the items below;

\_\_\_ Borland C++ Source Code for Fractal Vision for Windows \$59 \_\_\_\_\_  
 \_\_\_ Other products (Please list) \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_ Other products (Please list) \_\_\_\_\_ @ \_\_\_\_\_

Vermont residents please add 4% sales tax \_\_\_\_\_  
 Shipping within North America, please add \$6, Overseas \$15 \_\_\_\_\_  
 TOTAL: \$ \_\_\_\_\_

\* Supplies are limited order soon. \*\*Offer limited to USA only.

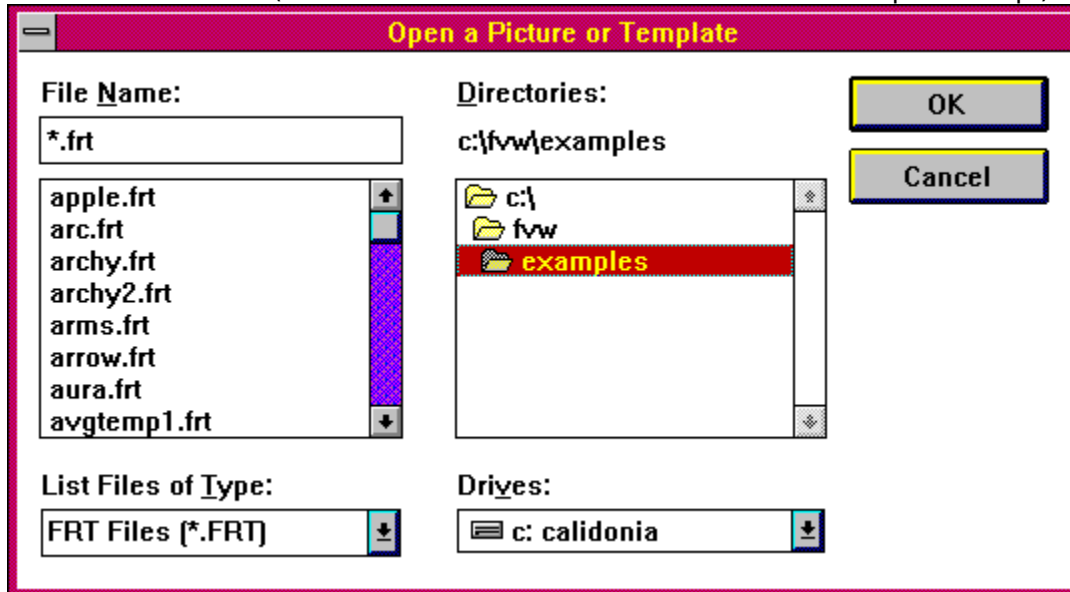
**Send to: Dosolutions RR3 BOX 520 Putney, VT 05346**  
**Call first for fax orders; Voice 802 722 4141 FAX 802 722 4223**



## Opening a File

Using the common dialog box is very easy, all you have to do is;

1. Press the [Load](#) button to load a [Template](#) .
2. If necessary change to the file type you want. You may choose FRT or IFS.
4. Type the filename in or scroll to the correct file name in the list box.
5. Click on OK. ( You could double click on the file name to skip this step )



The Windows Common Dialog box. If you need more help, consult the Windows manual

**Hint;** You may want to Associate the **FRT** and **IFS** files with FVW.EXE in file manager so that you could just double click on the file to launch that program. That is *if* you have the main program - [Fractal Vision for Windows](#) installed on your system. This screen saver will not work for associations. Perhaps in the next version.

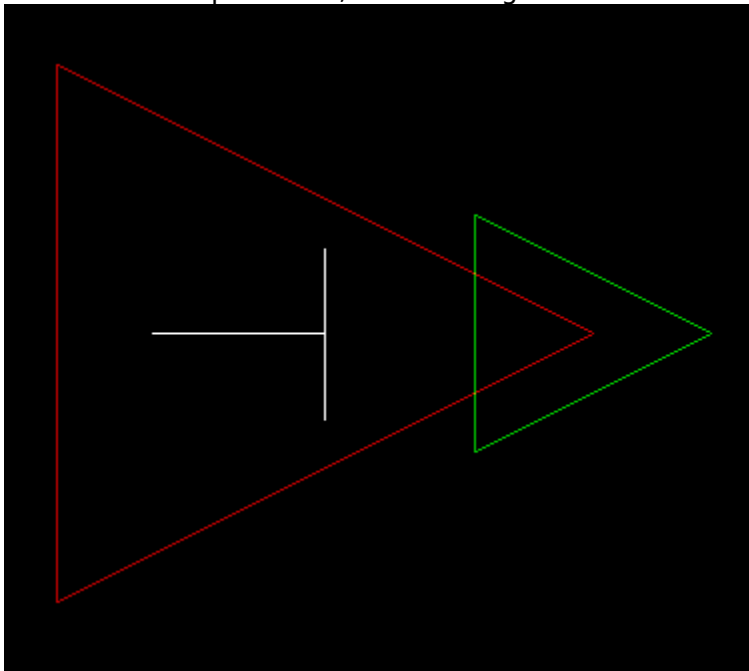
To associate a file in File manager;

1. Start file manager.
2. Highlight a file with an .FRT extension.
3. Click on File or alt F.
4. Click on Associate.
5. Type c:\fvwin\fvw.exe (or whatever path you used).
6. click on O.K.

## Templates

A **template** is the basic shape that this Fractal Screen Saver - Animator uses to create fractals. ***Even though you cannot see them in this version,*** you can think of them as the foundation or building blocks of these fractals. Templates are made of lines or polygons, the simplest of which is the triangle. Templates made of lines can not support **Filled** polygons. The [Fractal Vision for Windows](#) (or DOS) program can manipulate and create completely new Templates. FVW and FSS were designed to work together and or stand alone.

The largest part of every template (like the Red triangle below) is called the seed shape which we call part "0". A template has at least one more part, which is a shrunken copy of the seed shape that is part "1". Other parts have higher numbers. In the example below, we have a green half-sized copy of a simple seed shape.



You can explore this template by

**loading** `TEMP1.FRT`

First turn off all **Random Movements** and **Animations**, set **Spin and Size** to zero. Select **Draw** turn off Paint and press **Test**. You will notice that the computer will continue the pattern; another half-sized triangle will be drawn on the corner of the green one, another on it's corner and so on.

As you can see, there are outlines of the triangles in different colors, each color is a part or a **Level** that can be assigned it's own **color**.

```
Level 0, The "Seed"  
  Level 1, defined in template  
    Level 2 is extrapolated  
      Level 3, too!  
        and beyond...
```

Now turn on different **Animations** and fool around with **Size or Spin**.

## **Saving a Fractal**

The easiest way to save a fractal that you like is to press the Print Screen button on your key board ( Northgate keyboard users will need to press twice). This will copy the screen image to the clipboard. You can paste the image from the clipboard into just about any painting, drawing or image manipulation program. You are on your own as to which graphics program you like best. We kinda like Paint Shop PRO 2.1 for its ease of use, small size and wide feature set.

You could load a screen capture program before using this screen saver, but this seems like an unnecessary step unless you want to capture lots of pictures...

Version two will have hot keys to save and record the pictures and sequences that this program generates. Output to video tape perhaps.

## Painting

The **Paint** command will "spray" a shape onto the screen all at once, instead of building it part by part or level by level. It paints dots at only the finest level of detail, skipping all but the last **Level** . Try Painting and Drawing with the template to see the difference. You can click on the Paint or Draw radio button in the [options dialog](#) box.

Even though Painting skips to the finest level of detail, there are still levels of color in a painting. The best way to understand this is to see it. Each color box in the [Adjust Color](#) dialog box in the section "Template Colors" represents a different level. You can change the way paint looks by changing the colors in each level or limiting the amount of levels that get painted. To change the number of levels adjust the Levels slider in the main dialog box. To limit the number of levels try changing it to level 1 or 2. At level 0 only the seed color will be painted.

The number of pixels painted per frame is controlled by the slider in the [options dialog](#) box. Use a higher number for a brighter and more distinct image when painting.

## Ordering Information

To See the Registration/Order Form Click on [ORDER](#)

To Print it, choose File, then Print or just click on the big YES!

To **Register** your program please send or fax the Order form to the address below. This will put you on our mailing list for a **free** newsletter and update information.

[Please Register](#)

to: Dosolutions  
R3 Box 520  
Putney, VT. 05346

Orders, or questions about our products:

Voice 802-722-4141

Fax 802-722-4223 (Please call voice line first)

### Other Products from Dosolutions and Cedar Software:

Fractal Vision Screen Animator version 1.1 \$15  
with 25 or more FRTs and a small manual.

FractalVision for Windows CD-ROM and \$29  
floppy disk  
containing hundreds of pictures, templates,  
3D animated FLC files, Fractal Tweens and  
bonus programs like Wingif, Pixfolio,  
Thumbsup, Paint Shop, VPIC and other  
windows applets with source code and more.

FractalVision for Windows Book / Disk & CD- \$45  
ROM  
Fascinating book based on a best seller,  
containing hundreds of pictures, templates,  
3D animated FLC files, Fractal Tweens and  
bonus programs like Wingif, Pixfolio,  
Thumbsup, Paint Shop and other windows  
applets with source code and more.  
While supplies last...

Multi-User Site License for DOS or Windows \$139

Source Code for Fractal Vision for Windows, \$59  
BC 3.1

Painting with Light ( 800 FractalVision \$19  
Templates )

[Click Here to see Order Form](#)

## Levels

There are sixteen levels that this program can **Draw** to. Normally only the first six are used because adding more levels adds detail and slows down your computer while drawing. You can adjust the number of levels by moving the slider in the main dialog box from 0 through 15 . If you pick Level 0 it will only Draw to the first level and it will only Paint to that level i.e. in one color, unless you pick color by parts in the [color dialog box](#).

Levels can be assigned to different colors (in the color dialog box) to form flowing transitions or striking compositions.

## Fractals

Exist in nature and are by definition self reflective, that is to say that each part of a fractal image resembles the larger whole in which it resides.

Example:

Trees contain branches that make up the tree. These branches contain leaves which if you look at closely enough, contain "branches" of veins, which resemble the tree's structure.

In natural systems, the structure of the whole system is often reflected in every part. Benoit Mandelbrot coined the term "fractal" from the Latin "fractus" meaning an irregular fragment. He also called it the "geometry of nature", because it's form so closely resemble those of the untamed natural world.

If you Open the file LEAF1.FRT or PINE.FRT and Draw them you will see for your self how fractals mimic the natural world.

## Fill - Luminosity

You can Fill the inside of each part of the template when [Drawing](#) by clicking on the Fill check box in the Options [dialog box](#). You can ( sort of ) adjust the amount of Fill by bringing up the [Adjust Colors](#) dialog box . On the extreme right is a vertical "Luminosity Bar" with an arrow. If you drag the arrow with the mouse up and down you will see the color in the Color | Solid box change. You are affecting the amount of fill! From the bottom to halfway up, you will be adjusting from black i.e. no fill to the color you originally chose, i.e. 100 % fill. From halfway up to the top, it's reversed, from 100% at the middle to no fill at the top, only this time the color at the top is white.

This is not the same "fill" that the DOS Fractal Vision had, and yes the color changes as the fill is adjusted but that's how the Windows Common Dialog works.

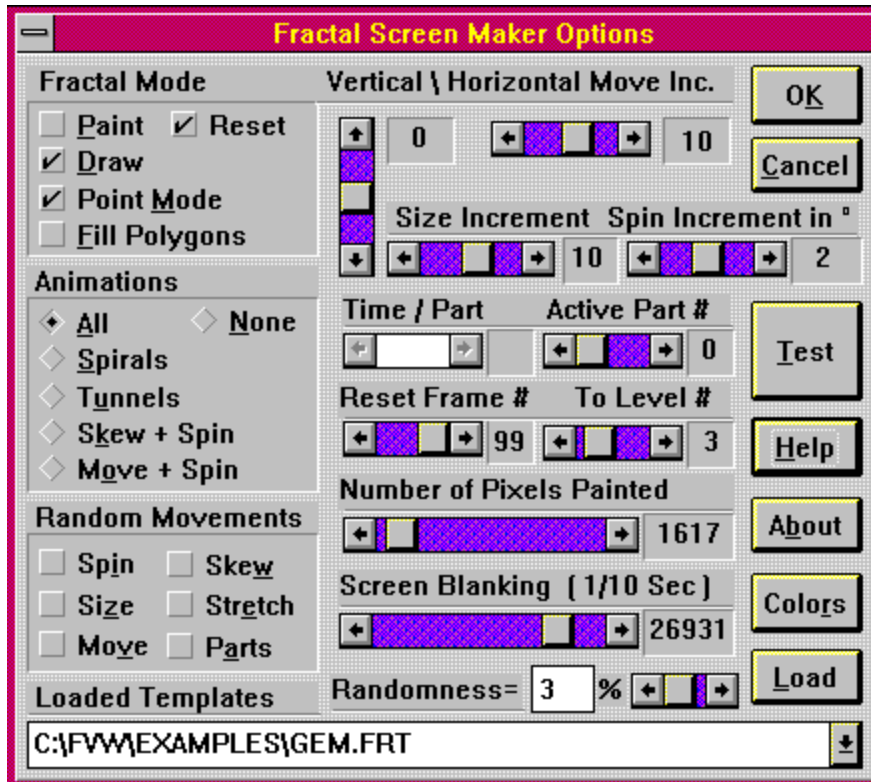
We are redesigning the color dialog box for the next version to allow 256 simultaneous colors and real "fill" with levels of transparency. [Register](#) your program and we will send you a flier announcing the new version.



## **Drawing**

Drawing is the process of extrapolating the fractal shape (the main seed part of the Template) with successive versions of itself. These parts are identical in shape but usually smaller. Parts or polygons can be [filled](#) or not filled. Drawing is toggled on and off with the Draw radio button in the main [dialog](#) box.

## Dialog Commands

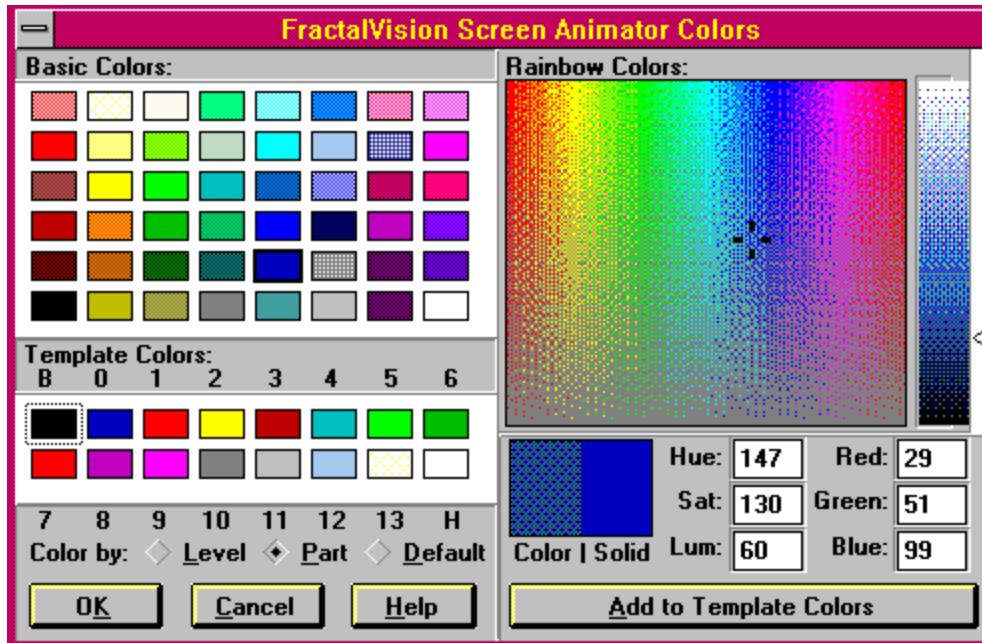


This is the entire interface for all the options for the Fractal Vision Screen Saver.

Simply click on the controls you would like more information about.

When your done, click on the OK or Cancel button. To get to this dialog box run the program with the /c switch. Command line example; c:\windows\fs.exe /c

## Color Selection



This is an example of the Fractal Vision Color dialog box. Simply click on the spot you need more information about.

Changing the color of a [part](#) or level is a three step process.

### To change colors;

1. Select a color box in the Template Colors section, ( the numbers correspond to the levels or parts you would like to change )
2. Click on a color in the [Basic](#) Colors or the [Rainbow](#) Colors section that you like.
3. Press Add Color or, Alt A to "set" that color into the level or part of the template.

When you have selected and added all the colors that you want into the Template click on OK.

NOTE; B is for [Background](#) and the H is for the handle which you never see ( except if you use Fractal Vision for Windows).

You may choose to color by [Parts](#) Alt+P or, by [Level](#) Alt+L or, by clicking on the radio button in this dialog box. The default radio button is for compatibility with some older Templates that were made with the DOS version. Default allows you to have templates with parts and levels colored. Some levels and the respective colors, will only be seen when drawing.

You can create your own colors and apply them to the [Template](#).

**To create your own colors;** Drag the cursor in the [Rainbow Colors](#) section and raise or lower the arrow beside the vertical luminosity bar to define your color. You can also create a color by typing numbers in the Red, Green, and Blue edit boxes, or the Hue, Sat (saturation), and Lum (luminosity) edit boxes.

**Note** that the color you create is shown in the left side of the [Color|Solid box](#). Only colors used to fill parts will be dithered, none of the lines defining the borders of the

Template will be dithered.

You can double-click the right side of the Color|Solid box to use the solid color that most closely resembles the one you have created.

Choose the Add to Template Colors button or, Alt A.

Create any other colors you want, and click on Add to Template or, Alt A.

Choose the OK button to close the color dialog box and return to the composition.

You can only use 16 colors at a time but you can adjust each of them to any hue by changing the mix of Red, Green, and Blue values that make up that color. Windows also allows dithering, which gives you an even greater choice of apparent color. FSS will support most video graphics cards. A super VGA card that supports 65 thousand colors or 16 million colors is great! For best results try to make sure that you have the most current video driver for your system. Many companies will send you the latest drivers for next to nothing, or you can download the files from their bulletin boards for free.

In version two ( are you sick of hearing about version two yet?) you will have the ability to save each parameter like size, spin and color as a separate selection to the [INI file](#).

## Background Color Selection

This is the same [color dialog box](#) that you use to adjust the [Template](#) colors!  
To change Background colors ;

1. Simply click on the color button to bring up the color dialog box.
2. Click below the "B" in the Template Colors box.
3. Click on a color from the [Rainbow](#) Color box, or the [Basic](#) Colors boxes, or Click on and edit the Red, Blue, or Green edit boxes by entering a number to find the color you like.
4. Make sure that the color box that has a "B" above it, is highlighted (a frame around it).
5. Then click on the button that says "Add Color" or, Press Alt A.
6. Then if that is the only color you want to change click on OK or, Alt K or, Enter.

**Hint;** The color boxes under the label "Template Colors" has a "B" as it's first color, the "B" stands for Background Color.

**Note** that the color you create is shown in the left side of the [Color/Solid](#) box. Only the colors used for the background color will be dithered, none of the lines will be dithered.

You can double-click the right side of the color|solid box to use the solid color that most closely resembling the one you have created.

We are adding color cycling and other cool effects to the next version.  
Register now for [upgrade](#) notification.

## Introduction; Welcome to the Fractal Vision Screen Saver for Windows

Fractal Vision Screen Saver is a revolutionary new way to draw [Fractals](#)

Read the [Special Settings](#) section in this help file to **GET STARTED** right away!

This screen saver is really a fractal generator and animator that makes use of the unused processor time. You can create amazing shapes and really cool images without any effort. Be careful you might get hooked and find that hours have gone by without noticing them. You don't need to know any mathematics, or be any good at art. The mission is to let YOU get creative with the geometry that has revitalized both science and art, from the prediction of earthquakes to state-of-the-art motion picture special effects.

Using only one [dialog box](#) to predefine different attributes you can create amazing pictures of coastlines, clouds, trees, leaves snowflakes, spirals and much more. But realism is only half the story, these are real live fractals, each one is unique and has its own character. There is no need for drawing skill, you'll embark on a breathtaking journey into the fantastic world of fractal geometry. The easiest shapes to create are spiraling vortexes, other-worldly plants, enchanting galaxies of color, and dazzling portraits of infinity. The Fractal Vision Screen Saver is designed to be intuitive and easy to use for anyone. We think its easy to use but then, we wrote it. If you have a suggestion or a request please let us know so that we can incorporate it into the second version.

This program will run on any computer with 2Mb or more of RAM and Windows 3.1 It will run blazingly fast on a Pentium system with a serious video card. The code was tested and compiled on systems from a 386 with no coprocessor and a 486 DX2/66 VLB - STB w/4Mb to a Pentium / PCI system with a Matrox Ultima video card! The later was one hot system.

This program maintains full compatibly with the previous DOS and Windows versions, of FractalVision and works well with them. Adding a full screen output and the flexibility and functionality of the Windows interface. This is also the first Windows animation module for Fractal Vision. There are many new features; Now there is a way to control [spin and size](#) of the fractals. All the commands work automatically (without user input) for [animated](#) sequences. You can set the screen blanking rate to match the frame rate and your images will dance about the screen.

This is only the beginning, in the next versions there will be a direct link to Fractal Vision software and visa-versa. There will be more control for many aspects of fractal creation and we are working on a scripting and image recording system so that you can play back your favorite sequences to the screen or any other medium like the hard drive or a tape. If there is any interest in adding a sound interface to FSS let us know right away.

If your interested in gaining more information about fractals, [buy the book!](#)

If your a C++ programmer and you want to contribute, please contact the [authors](#). We welcome the chance to expand our mutual understanding of C++, fractals, Windows programming or anything else that comes up.

This release of Fractal Vision Screen Saver is the *other* companion program to the special new book Fractal Graphics for Windows by **SAMS Publishing**. This

program was not included with the first printing of the book. But it complements FractalVision for Windows very nicely. All of the fractal templates were made with the DOS or Windows version of FractalVision.

If you really like this program go out and buy the book from your favorite book store, make them order it if its not available. The ISBN # is 0-672-30347-7  
If you still cant find it order it from us, but try the stores first as there is a limited amount in stock and we want to write a second updated edition

## About the Authors

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Albert & Dan both failed a C programming class at a local community, thus proving that there are no successes without failures. Its the old yin yang principle in action. This program would never have happened without the perseverance and constant attention to detail that comes from living with your computer. And of course the great feedback we got from our precious beta testers. Thanks - you know who you are.



