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Brewster Kaleidoscopic Screensaver (V3.0b)

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Help file produced by **HELLP!** v2.7 , a product of Guy Software, on 01/09/98 for Gerard Quinn.

Overview and System Requirements

Brewster Kaleidoscopic Screensaver is a spectacular screensaver that simulates a real kaleidoscope. It can create an infinite variety of patterns, from delicate snowflake-like arrangements to psychedelic explosions. Designing your own patterns can be done either via a broad-brush approach or in painstaking detail.

It can even perpetually generate new patterns, with enough variety that you will never get bored. Brewster is a software toy as well as a screensaver - you can experiment with many different shapes and patterns. You may even find it useful for producing unique designs and patterns.

Brewster requires Windows 95, 98 or NT. A Pentium processor is recommended. More powerful processors and graphic cards will lead to smoother operation, but even relatively slow machines should be able to get satisfactory results.

The shareware version prints a message intermittently when in full screen mode - registration (cost \$20) gets rid of this. There is no time restriction - you can try it out for as long as you like. Should you choose to register this program, you must keep your registration code secret and not distribute it in any way.

The main home page for Brewster is at the following URL:
<http://bindweed.com/brewster/brewster.htm>

A secondary home page is:

<http://indigo.ie/~gerryq/Brewster/brewster.htm>

This one may not have all facilities, and is intended for use if for some reason the main page is not operational.

You can get to either of these web pages by clicking on the buttons in the registration dialog. From here you can email me with any questions or check whether updates are available etc. I will try to post the answers to any frequently-asked questions on this page. Of course I am interested in any comments or suggestions for improvements to Brewster.

Brewster Kaleidoscopic Screensaver and all its components are copyright of Gerry Quinn, 1998. You are at liberty to give individual copies of the zipped archive to anyone you wish so long as all files are present and not altered in any way, and no other files are included. However, it is not permitted to make it available for Internet download or on CDROM without permission. Linking to the Brewster home page is fine, though. It will always carry the latest version.

Email brewster_info@bindweed.com if you would like to put Brewster on CDROM or on an Internet archive - or for any other queries regarding distribution.

What's New in V3.0

Version 3.0 has a number of big changes:

- ◆ First off is the addition of a handy automatic installer. An automatic uninstaller is also generated. (The standard zip package still allows you to install manually, if you prefer. However if you install manually, you must also uninstall the same way.)
- ◆ Password protection is now available on Windows 95 and 98, as well as NT.
- ◆ The screen options have been increased to four with the addition of the 'Three Mirror' option. This creates multiple reflections which fill the screen.

Other improvements:

- ◆ The background colour now has extra options - it can be random, or slowly changing.
- ◆ Quick Help has a nicer button, and more extensive information.
- ◆ The Pattern Bank loader now remembers which directory patterns were last loaded from.
- ◆ You can now set the screensaver to cycle through the list of patterns.

What was New in V2.0

If you are upgrading from V1.1x, the main difference is the Pattern Banks option, and two banks each containing ten extra patterns. There is also a third bank containing the twenty standard patterns, in case you delete some and want to get them back later.

There are six extra shapes too, for you to use in making your own patterns. (Or for Brewster to use when generating them at random.)

Security

Brewster now provides password protection under all Windows versions.

Under Windows 95 or 98, Brewster disables Ctrl-Alt-Del only if you have entered a password. Under Windows NT, screensaver security and passwords are handled by the operating system, so all screensavers should behave identically.

Be aware that from a system security point of view, Windows 95 (and probably 98) is as leaky as a sieve! So while a screensaver password may keep your kids from disrupting your work while you are away, it won't stop anyone with a little expertise from getting at your sensitive data.

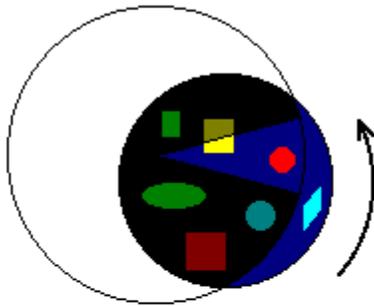
About Kaleidoscopes

The kaleidoscope was invented by the Scottish physicist David Brewster (later knighted) in 1816. Brewster is otherwise known for his experimental work in the fields of optics and the interactions of light and matter. This program is named after him.

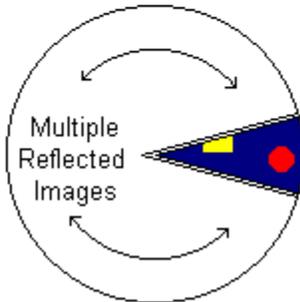
Many variations on kaleidoscope design have been tried, but the device in its simplest form consists of the following:

- A triangular tube containing two sides that are mirrors and one that is dark, with the angle between the mirrors being an exact fraction of 360, mounted vertically
- A viewfield at the bottom of the tube comprising a translucent base and a selection of brightly coloured objects
- An eyepiece at the top of the tube

How a Kaleidoscope works



The viewfield rotates, carrying the objects with it. Only some of the objects are visible in the area between the two mirrors.



The objects visible between the mirrors are reflected multiple times, creating a symmetric pattern.

The random selection of objects which can be seen at the triangular bottom of the tube are reflected by the mirrors into a symmetrical pattern.

The above design can be enhanced by making arrangements for the coloured objects to be confined so that the tube may be held horizontally, and for the viewfield to be rotated to generate new configurations of objects. This gives the familiar toy kaleidoscope.

The program works by simulating the above process. Some random shapes are laid out on a rotatable field, and a constant triangular section of the field is continually monitored and reflected.

Strictly speaking, only a circular pattern where the objects do not move independently simulates a real kaleidoscope of this kind. However, the program has a number of options which extend the concept without distorting it too much. In the first place there is the ability of objects to move and change colour etc. Secondly, the viewfield may be stretched horizontally into an oval shape, or more severely to approximate a rectangle.

Installation / Un-installation

The simplest way to install Brewster is to run the Setup.exe program. This will prompt you for a directory to put pattern files, and the name of a program group. An uninstall program will be created in the program group.

If you ran the self-extracting executable version of Brewster, congratulations! If you are reading this, you have successfully installed the program!

To uninstall, simply run the uninstall program which you will find in the program group you created. It should remove all traces of Brewster from your system. However, any new pattern banks you have created will not be removed.

For those who prefer to do things the hard way, manual installation is also possible. The main advantage of manual installation is that if you know what you are doing, you do not need to have 200Kb of uninstaller files hanging around. The choice is yours.

Manual Installation

- ◆ To install Brewster, just copy the three files [BREWSTER.SCR](#), [BREWSTER.DAT](#), and [BREWSTER.HLP](#) into your [Windows directory](#).
- ◆ Make a directory wherever you want, and copy any pattern banks (names like [XXX.PAT](#)) into it. You now have all the essential files for Brewster. Other files such as [FILE_ID.DIZ](#) etc. are not necessary for operation, and can be discarded.
- ◆ Now open the Display device on your [Control Panel](#), go to the [Screensaver](#) tab, and select Brewster. Click on 'Settings' to configure it, or 'Preview' to see a full-screen view. (Initially it is set up to produce random saved patterns, changing them every 15 seconds.)
- ◆ Since screensavers are normally accessed via the control panel, you do not require a Start Menu entry.

If you are upgrading from a previous version of Brewster, do not copy [BREWSTER.DAT](#). Apart from that, do exactly the same as described above. Your own patterns and configuration settings are contained in [BREWSTER.DAT](#), and will not be affected by the new version.

Screensavers have to be in the Windows or System directory to be recognised by the Windows Display device. If you want, you can try out the program in any directory by right-clicking on the [BREWSTER.SCR](#) file, and selecting 'Test' or 'Configure'. But although you can also select 'Install' from this menu to run the Display device, you cannot actually install the program if it is not in the Windows or System directory. Microsoft's bug, not mine!

If you put the program in your System directory, when you save data it will create a copy of [BREWSTER.DAT](#) in the Windows directory. This is because in networked systems, programs cannot write to the System directory. If you run it from its own directory, it will save the data in that directory rather than in Windows.

Pattern bank files ([*.PAT](#)) can be placed anywhere.

- ◆ To un-install the program, just delete the three files mentioned above. Also delete the file [BREWSTER.GID](#), which is created by Windows when you open this help file. By default Brewster does not write any other files - any patterns you save are stored in the [BREWSTER.DAT](#) file.
- ◆ Pattern bank files ([*.PAT](#)) are a separate consideration. It is up to you to keep track of any you have created or downloaded.
- ◆ Brewster saves a small amount of data in the Windows Registry under the name 'Brewster Screensaver'. *If you know your way around the Registry, you can delete this.* I'm not even going to say how, because if you don't know, you are better off leaving the Registry well alone! If you choose automatic installation, the Registry entries are deleted by the uninstaller.

Getting Started

Select Brewster in the Display device of the Control Panel. Press the 'Settings' button. You must agree to the license conditions. A large and complicated dialog will then open up. Do not be alarmed - it will soon make sense!

There are two ways to get started - you can follow the Tutorial, or jump right in! If you choose the latter, note that you can press the '??' button for quick [context-sensitive help](#) on any control. It changes the mouse pointer to a help cursor. Use this to select any control (with list boxes you must open and close them). A short description of what the control does will appear.

Also, if you are choosing this route, it may be best to familiarise yourself with the controls on the main dialog before entering the Layer Editor (three buttons near the bottom right). Finally, be sure to try out the [Randomise](#) button!

If you prefer to know what you are doing before you do it, the [Tutorials](#) are for you.

The program comes loaded with about 25 pre-defined patterns, and there are more saved in pattern banks which you can load. You can delete any of the patterns, and / or save your own. Also, you can modify any pattern, save it under a new name, and delete the original. Very probably you will want to replace many of the original patterns with ones of your own that you like better. Also, which patterns you use may depend on how powerful your PC is - some of them may not run smoothly on older machines.

Tutorial 1 - Image Controls

The current pattern is displayed in a small window. Under the window are a number of options which affect its general characteristics. We shall go through them one by one.

- ◆ First try changing the [Symmetry](#) - this means the number of double reflections which go to make up the image. You can choose any number between 3 and 20. (Kaleidoscopes sold in shops usually have a symmetry of 3.)
- ◆ Now select a shape from the list box at the top left of this section. Typically it is set to 'Oval'. You can change it to 'Circle' which is more realistic but does not fill the screen so neatly, or else 'Rectangle', which distorts the image to roughly match the shape of the screen. (With V3.0 comes the Three-Mirror option, which generates a tiled pattern of multiple reflections filling the entire screen - if you choose this option, Size works differently, and Symmetry and Balance have no effect.)
- ◆ Next on the list is the 'Size' slider. This controls the overall size of the image. When it is set halfway, as in the initial pattern, the image will be just about the right size to fit in the screen. You can make it smaller if you want, but the main use of this slider is so that you expand the image to fill the entire screen. How much you need to expand it depends on the shape of the image. An Oval image needs it set to about 75% to fill the screen. Again, put the size back to its original value.
- ◆ The [Speed](#) control will be familiar from other screensavers - all it does is change the maximum number of new images shown per second. Normally, you will leave this at its maximum value. You could call it a 'smoothness' control, really.
- ◆ The [Rotation](#) control is an important one. It affects how quickly the view field of the Kaleidoscope rotates. This is explained better in [About Kaleidoscopes](#). It can be quite interesting to experiment with, as interesting effects can be obtained over the whole range. The scale is non-linear: if the mid-point is taken as the standard, the lowest value is one fifth of this amount (close to zero) while the highest value is five times the standard.
- ◆ The [Animation Level](#) affects how quickly the shapes rotate, move, or change size independently. If the patterns make you dizzy, reduce it. Less is definitely more with this control! You will understand it better later, when you have used the Layer Editor.
- ◆ The [Reset Time](#) edit box allows you to type in the time in seconds between pattern resets. This has no effect in configuration mode, which is where you are now. In configuration mode the pattern is reset every time you change a control. This means that a new pattern of shapes is generated (according to the selected options). More about this in Tutorial 2.

When you load Brewster for the first time, it is set to show random saved patterns every 10 seconds.

- ◆ Finally, the [Balance](#) control just rotates the pattern around its axis slightly.

That completes our quick tour of the Image Controls. The next Tutorial tells you how to [create and save patterns](#).

Tutorial 2 - Loading, Saving and Creating Patterns

Open the list box to the right of the view window (labeled 'Saved Patterns'). It contains a list of pattern names. Select any of them to see some of the possibilities offered by Brewster. Note that one of them is a very simple one called 'Snowflake' - it will be needed in Tutorial 4. But first some magic!

One of the buttons in the 'Special Options' box is labeled **Randomise**. Click on it now, and a totally new pattern will be generated! Try it a few times... as you can see, all the options on the left stay the same except for Symmetry. But the patterns are startlingly different. You can change the options if you like. Try setting the Animation Level to a low value, and Rotation to 50% or a bit more - this will usually give the best results.

Keep clicking until you generate a pattern you like, then tweak the Symmetry and other options. Now press the button marked **Save** near the top right. A box will open into which you can type a name for your pattern (up to twenty characters). Now press 'Enter' and your pattern is stored in the list of patterns that can be selected. Nearby is a button called **Delete** which (guess what) erases them. (**IMPORTANT**: No changes, even Save or Delete, are permanent until you exit the Settings dialog with 'OK'. By default, the program will warn you if you quit without saving.)

Patterns are loaded simply by selecting them in the list box.

Finally, note the three options under the Saved Patterns list box. These, in conjunction with the Reset Time, control how the screensaver works when you exit configuration mode ('Settings').

- ◆ The '**Use Current**' option just tells the screensaver to use whatever pattern is shown in the window - it doesn't have to be a saved one. (To use a saved pattern, load it, then press 'OK' to quit configuration mode.) Every so often, depending on the Reset Time, it will generate a new pattern of shapes.
- ◆ The '**Use Random**' option tells the screensaver to choose randomly from the list of saved patterns every time a reset is called for.
- ◆ The '**Auto-Generate**' option uses the Randomise function to create a completely new design at every reset. Apart from the Symmetry, the overall image characteristics will be as you leave them when you exit configuration. Try setting the Reset Time to a low value (1 second is the minimum) and choosing this option. Then quit configuration mode and select 'Preview' for an interesting psychedelic experience!
- ◆ The '**Cycle**' option starts with a random pattern from the list, but then goes through them in sequence. When it reaches the end, it starts again at the beginning.

Quite possibly, you now know all you need to about creating patterns. Brewster's randomise function, combined with a little judicious tweaking of the image controls, can give you an infinity of possible patterns. But if you want finer control, Tutorials 3 and 4 will explain how to design your pattern in detail.

[Go to Tutorial 3.](#)

Tutorial 3 - About Layers

To use the Layer Editor, you need first to have an idea of how Brewster creates its images. Take a look at the diagram in the [About Kaleidoscopes](#) section.

The viewfield contains three layers of shapes, which are projected in turn onto a coloured background (the background is often black). To change the background, just click on the [Background](#) button near the bottom right of the main dialog. A dialog similar to the standard Windows Colour dialog, but with three extra radio-buttons along the bottom, will open up. You can select the 'Constant' button, and simply choose the colour of the background. Alternatively, choose the 'Random' button, and the background colour will change on every reset; or the 'Changing' button, which will cause it to slowly cycle through a range of colours.

One point regarding the 'Random' and 'Changing' buttons: the colours generated by Brewster will still depend somewhat on the one you have selected. If you pick bright red, random colours will be bright blue, bright yellow etc. While if you pick a dull greenish grey, you will get only various shades of dull grey as 'random' colours. If you pick black, white or grey, the random colours will have no effect.

Custom colours will be saved between sessions, so any you create will always be available to you.

In the interests of avoiding phosphor burn (this is a screensaver after all) you should not select a very bright colour for the background. This particularly applies if the pattern does not fill the screen. Still, it's your monitor, and your choice. In truth, screensavers nowadays are mainly for decoration rather than monitor protection.

Don't worry about the [Dark Border](#) checkbox for now.

Above the Background button are three buttons marked [Top](#), [Middle](#), and [Bottom](#), with a slider to the right of each. The buttons allow access to the Layer Editor for each of the three layers. The sliders control how many shapes from that layer are actually created. So if any slider is all the way to the left, that layer is completely ignored in creating the pattern, whereas if it is all the way to the right, the maximum number of shapes from that layer are inserted.

The layers are merged with the background to form the viewfield. The only difference between them is the order in which they are created. Shapes in the top layer will not be covered by those in the other two. The shapes in any particular layer will go on in a random order. If you are creating a complex background pattern, rather than a plain colour, use the bottom layer. Conversely, if you want to have certain shapes that tend not to be partly obscured by others, put them in the top.

Now, select the pattern labeled 'Snowflake'. This is a purposely very simple pattern which contains only two layers, with one shape in each. You will see white hexagons on top, with larger light blue hexagons underneath, all on a black background.

In the 'Edit Layers' section, you will see that the Top layer is not in use. The Middle and Bottom layers are both set to 70% of the maximum. If you turn them up to 100%, you will see that the pattern becomes denser - more shapes are being generated. Now press the [Bottom](#) button, and a new dialog will open up - you are now in the [Layer Editor](#).

Tutorial 4 - The Layer Editor

Each of the three layers has an editor like this. Again you can see a preview window, but it only shows the shapes which are created in this layer - large light-blue hexagons in this instance. The total number shown is always constant in this dialog. Once again, the ?? button is available to give brief descriptions of every item.

There are three sections, each devoted to a particular shape. All of these sections are equivalent. At the moment, only the section to the right of the preview window is in use. You will see a list box saying 'Hexagon' and underneath it a slider at 100%. This slider controls how much of the layer is composed of each of the three selected shapes. It is strictly proportional, so setting all three sliders to zero is the same as setting them all to 100%. If you set one to 100%, one to 50% and one to zero, there will be twice as many of the first shape (on average) as of the second, and none of the third. But the actual number is set by the slider control in the Main Editor.

The best way to learn about this is to initially play with the controls for Shape 1. If you want you can quit this editor with 'OK' at any time and go back to the Main Editor to see the effect of your changes.

The first thing to do is to try out some different [shapes](#). Just select them from the list box. The image instantly changes to reflect your new selection.

Now try out the [Colour](#) options. The initial setting is [Const](#), meaning that the shapes will have whatever colour is selected in the Colour Dialog (press the Colour button). The other three settings mean as follows: (1) [Mix](#) gives a mixture of random colours, (2) [Vary](#) means that the colour will be randomly selected at every reset, and (3) [Change](#) means that each shape will slowly change through an entire spectrum of colours. The colour chosen in the Colour Dialog only matters when Const is selected. Try clicking through these options.

The next option is [Size](#). Again the hexagons are set to a [Const](#) size, meaning that they obey the slider. Here the slider is set to max, meaning they are relatively large (based on the standard size for the hexagon shape). Try moving the slider to see the effect. The [Mix](#) button causes the shapes to come in a range of sizes, while the [Change](#) button causes them occasionally to expand and shrink. In contrast to the situation with Colour, however, they will always base their average size on the slider level.

To the right of the Size controls are the [Angle](#) controls. These are very simple - the shapes either do not rotate, they rotate constantly, or they occasionally spin around but otherwise stay static.

The [Animate](#) slider affects how much the shapes move around independently of the rotation of the entire viewfield. Each shape can have an elliptical orbit, the extent of which is controlled by the Animate slider.

Finally, the [Border](#) checkbox determines whether the shape has a dark border around it. By default, if this border is set it will be a darkened version of the basic shape colour. However there is an option in the Main Editor which we skipped over earlier, to make it always equal to the background colour.

Try increasing the slider for Shape 2, which is a yellow twirling star. You will now see a mixture of blue hexagons and yellow stars in the window. Select OK and when you go back to the Main Editor, you will see that they have been added to the full image. Of course you will have reduced the overall number of blue hexagons, because some of the Bottom layer is now devoted to stars. You can alter this by increasing the Bottom layer slider.

Finally, go back to the Layer Editor once more and notice that there is a [Randomise](#) button here also. This button randomises only an individual layer. So this is another way to compromise between detailed design and random selection of options.

This completes Tutorial 4. You now know how to save and create your own patterns with Brewster. There are so many possibilities that your screen need never show the same pattern as anybody else's!

The last [Tutorial](#) (for now!) tells you how to save your creations to disk, and load fresh ones.

Tutorial 5 - Loading and Saving Pattern Banks

Pattern Banks were a new feature in Version 2.0. Basically, they are about two things:

- ◆ Allowing you to load and save your own patterns in a more flexible fashion
- ◆ Allowing you to download new patterns, or swap patterns with other Brewster users

As time goes on, more banks will become available - eventually there should be hundreds of patterns to choose from. You can play your part by submitting ones you have generated for download by other Brewster users!

Click on the **Banks** button in the main Settings dialog. A new dialog will open, with two windows at the top. On the left you will see an animated window showing the first pattern in your current set of patterns. On the right is a blank window, with an empty list. The windows just show the current selected pattern in each list. Beside each window is a checkbox that you can use to turn off the animation if your PC is struggling...

As usual, there is a '??' button that gives context sensitive help on each button. I will just explain the basic ideas here.

You produce a pattern bank by copying images from your current set into the bank. The buttons **Copy Current** and **Copy All** copy just one pattern or all of them respectively. Once you have one or more patterns in the bank, you can use the **Delete Current** or **Delete All** buttons to remove them. Two more buttons (**Load Bank** and **Save Bank**) allow you to save banks to your hard disk, or load them again. (These two operations happen immediately, and cannot be taken back by quitting the dialog with **Cancel**.)

Try this out for yourself. Copy a few patterns into the bank, and save them out under a name like "Test.pat". Then delete all the patterns in the bank and load "Test.pat". Your patterns should reappear in the bank. There should be one or more other banks available which have been supplied with Brewster. One will contain the twenty standard patterns, just in case you erase them by accident!

Finally, there are three important buttons at the bottom left of the dialog, which allow you to actually use the patterns that you have loaded.

- ◆ **Add Bank** simply adds all the patterns in the bank to the end of your current list. You can easily wind up with a lot of duplicate patterns when you use this.
- ◆ **Merge Bank** is probably more useful in general. If you already have a pattern called (say) 'Stars', then any pattern of the same name in the bank will be ignored. For example, suppose you have only the twenty patterns in STANDARD.PAT loaded. You delete ten, then create five new ones of your own. If you now merge STANDARD.PAT, you will add only the ten deleted patterns, so you will have twenty five in all.
- ◆ **Replace By Bank** is the most dangerous option. It deletes all current patterns, and replaces them by the patterns in the bank (there must be at least one). If you have created your own patterns, remember to save them into a bank before you touch this button!

If it all goes wrong, you can quit the dialog with **Cancel**, and your original list of patterns will be unaltered. Otherwise press the **OK** button to confirm your changes.

It is intended that extra pattern banks will be made available on the Brewster Home Page from time to time. You can get to it from the Register dialog, or by pointing your browser at:
<http://bindweed.com/brewster/brewster.htm>

Users are invited to submit banks of their own favourite patterns for others to download.

As time goes on, extra banks may also be added to the distributed shareware version.

Version 3.0 is distributed with four pattern banks, all designed by the author:
STANDARD.PAT contains twenty patterns
EXTRA-1.PAT contains ten more patterns
EXTRA-2.PAT contains ten more patterns
MIRROR-1.PAT contains five 'three-mirror' patterns

Originally, Brewster was by default loaded with the patterns in the STANDARD.PAT bank. Now, the default pattern set contains most of these, and a scattering of patterns from the other sets. The reason is since the standard set was produced, extra shapes and options have been added, and I wanted to show some of them among the default patterns. You can use the 'Merge Bank' option to bring in all the patterns from any bank without creating duplicates.

If you try to load pattern banks created by a future version of Brewster, you will get a message telling you that you need to upgrade to the latest version. Banks created by older versions will always be readable by newer versions.

The file extension *.PAT is also used by Corel Draw™, and possibly by other programs. If you have Corel Draw installed, *.PAT files will appear as pretty balloons in the load and save dialogs. This doesn't make any difference to the file contents - files saved by Brewster are pattern banks irrespective of what Windows has been persuaded to call them.

There is no fixed limit on the number of current patterns, by the way. If you like you can load in all the banks at once. At some point Windows will start to grumble, probably if you have more than a few thousand loaded at once...

Preferences

These are a few system options which you can choose to affect the operation of Brewster. They are not at all vital; if you don't understand them, stick with the defaults. In the case of the first two, some would say that it is bad to interfere with the standard Windows interface. I just happen to find certain Windows quirks extremely annoying - surely I am not alone in this!

If you want Brewster to conform exactly to Windows standard practice, turn all these options off.

- ◆ **No Tab Marks** is off by default. If you only use the mouse to operate controls, you may find the dotted line that appears around the most recently used control a bit irritating. This gets rid of it. Of course, if you use keyboard or voice control, or some alternative interface, leave this well alone. If you select it, you will need to use the mouse to change back! (To avoid accidents, the program checks that you are in fact using a mouse before permitting you to select this option. If you don't move the mouse while in this dialog, the No Tab Marks option cannot be selected.)
- ◆ **Enter Key does not quit by default:** this is designed to alleviate another annoying feature of Windows, in which if you press Enter in an edit box (as one often does naturally) a 'Quit and Save' message is sent to the application. This doesn't stop you deliberately selecting the OK button and pressing Enter to quit (so long as you haven't also selected No Tab Marks). Using the Esc key to quit without saving causes no problems, so that option is unaffected...
- ◆ **Polite Mode** is off by default (change from V1.1). If you are running the screensaver normally from the Display device, it should have no real effect, since screensavers are automatically given a low priority. A low priority means that if any other program needs to run, or Windows wants to re-organise your hard disk, that will be done first even if it means that Brewster has to slow down. Probably this should be left off if you are running normally. It may be useful if you are running some sort of screensaver manager or randomiser program. Note: on slow machines, if a random pattern is selected, the program may not switch to a new pattern when it is supposed to, if Polite mode is selected.
- ◆ **Warn if you quit without saving** - this just gives a friendly reminder if you exit from configuration mode without saving your data. Leave it on for a while, until you are used to the system - switch it off when you no longer exit by mistake.

Registration

Registering Brewster costs **US \$20** and gives you a permanent license to use the program on any computer while you are that computer's major user. If you sell the computer or cease to use it, you must erase your name and registration code (feel free to leave the program itself installed, if you wish - it will start popping up its 'Demonstration' message again). The registration code is copyright and must not be reproduced in any medium.

It is intended that a once-off registration fee should be valid for future updates. Certainly this will be the case for any bug-fixes (should they prove necessary) or minor revisions. The author reserves the right to optionally impose an upgrade charge for major revisions if this should be appropriate. (This is likely to occur only if there are major changes in functionality, e.g. if a future version downloads data from the Internet at night, or something equally exotic.)

Thanks to all those who have registered so far. Your registration fees have helped speed the development of this version. I hope to make many further improvements in the future.

[Register via the Internet](#)

[Register by fax or post](#)

[Register by phone \(toll-free in the US\)](#)

[After you have registered](#)

Register via the Internet

When you run Brewster, Register button takes you to the Registration and Communication dialog. This allows you to register Brewster or visit its home page. (Obviously this only works if your computer can connect to the Internet - if it can't see [here](#)).

Pressing Register will fire up your browser and point it at a secure site maintained by the [Share-It](#) registration service. Here you can directly register Brewster by credit card (price US \$20). Share-It have been provided with a program for generating registration codes, so they do not have to contact the author (me). You should therefore receive your registration code by email within about **24 hours**.

This is the best and quickest way to register Brewster.

Should you be reading this file without running Brewster, the following are the correct URLs:

[Home Page](http://bindweed.com/brewster/brewster.htm): <http://bindweed.com/brewster/brewster.htm>

[Share-It](http://www.shareit.com/programs/101202.htm): <http://www.shareit.com/programs/101202.htm>

To register via Share-It using fax or postal mail

(Note: You can print out directly from Windows Help by selecting Print Topic from the File menu. Alternatively, select the topic with the mouse, copy it, and paste it into a text file or Word document.) (To copy or paste a selected piece of text, either use the Edit menu, or use the key commands Ctrl-C to copy and Ctrl-V to paste.)

To register via Share-It using fax or postal mail, print out the following form, and fax or mail it to one of the following:

ShareIt! Inc.
PO Box 844
Greensburg, PA 15601-0844
U.S.A.

element 5 AG
ShareIt!
Habsburgerring 3
50674 Koeln
Germany

Phone (orders only): 1-800-903-4152
Phone (customer support): +1-724-850-8186
Fax: +1-724-850-8187

Phone: +49-221-2407279
Fax: +49-221-2407278
E-Mail: register@shareit.com

Registration form for Brewster Kaleidoscopic Screensaver
Program No.: 101202

Last name: _____

First name: _____

Company: _____

Street and #: _____

City, State, postal code: _____

Country: _____

Phone: _____

Fax: _____

E-Mail: _____

How would you like to receive the registration key?

e-mail - fax - postal mail

How would you like to pay the registration fee of \$20:

credit card - wire transfer - EuroCheque - cash

Credit card information (if applicable)

Credit card: Visa - Eurocard/Mastercard - American Express - Diners Club

Card holder: _____

Card No.: _____

Date of Expiration : _____

Date / Signature _____

Toll-Free Ordering in the US

Customers in the US may also place their order by calling ShareIt's toll-free order number 1-800-903-4152, available 24 hours a day. Please make sure to have the Brewster program ID #101202 ready.

You will also need to give your address, and a fax number if you have it.

Please note: this number is for orders only and is not qualified to provide customer service, technical support or to give information on the status of your order in any way. For these services phone +1-724-850-8186 or fax +1-724-850-8187.

No toll-free ordering is currently possible elsewhere. However, you can use the two numbers above from outside the USA, or else call the European office (phone +49-221-2407279 or fax +49-221-2407278).

After you have registered

Once your payment has been confirmed, you should receive an email or fax from ShareIt containing your registration code. To activate your registration, open the 'Register' dialog and enter your name and code in the spaces provided. You must enter your name exactly as given - "John Smith" is not the same as "john smith".

Nothing will happen immediately. Close the dialog with 'OK' and then open it again - it should now have the caption 'Registered User' at the top.

You are still not quite finished. Close the dialog and then exit Brewster by pressing 'OK' (not Cancel). It is only now that your registration code is saved permanently.

If you have problems, do not hesitate to email me at: brewster_tech@bindweed.com

Finally - if problems occur in the future, don't suffer in silence! No version of Brewster is released until I believe it is 100% bug free, but sometimes issues might arise due to events being timed differently on different machines, or problems with certain graphic cards. Or I might have missed a bug that depends on a particular combination of circumstances. If I don't know about these problems, I can't fix them!

Copying and Printing Patterns

It is not unknown for designers of patterns for the textile or wallpaper industry to take inspiration from kaleidoscopes. Web page designers may also find these images useful. There are no copyright restrictions on your use of images generated by you using Brewster, although if you find the program helpful it would be nice if you were to mention it, or link to the Brewster homepage. (Think of Brewster as a paintbrush. The images it produces, if selected and processed by you, become your copyright rather than that of the brush manufacturer.)

Go to the [Display](#) device on your [Control Panel](#) and set Brewster running in full-screen mode by pressing the [Preview](#) button. When you see a pattern you like, press the '[Print Screen](#)' button on your keyboard. (This button is usually found above the numeric keypad, and is sometimes called '[System Request](#)').

When the button is pressed, the current image is saved into the computer's memory (the 'Clipboard') Now press another key or jog the mouse to stop Brewster, and load up your favourite paint program (the Paintbrush program that comes with Windows will do at a pinch). Select '[Paste](#)' from the 'Edit' menu, and the saved image will be loaded.

From here you can edit the image and/or print it out. Since it will be the same size as the screen, you will probably want to reduce the size first. Any good image processing software will have a 're-sampling' (as distinct from simply 're-sizing') option - this will add extra colours to the image so that the reduced image looks almost as detailed as the original.

Tip: if you are trying to grab patterns, it may be a good idea to set the speed control to a low value - that way you will not miss the exact image you want to get.

Generating Patterns

The best way to generate patterns is probably to use the Randomise buttons freely, either on an individual layer or on the main screen. When an interesting pattern comes up, think how it might be modified. Get rid of any 'nasty' shapes which do not suit the pattern, and select suitable symmetry and rotation values. Choose appropriate 'weights' for each level.

Remember, you don't have to use all of the possible shapes, layers and options!

You can design patterns on a shape by shape basis, but so far I have found that a combination of randomising and modification is best. It is hard to predict what a pattern will look like from first principles! But the layer randomiser may give you ideas which you can then modify.

Experiment with the [Rotation](#) slider. Do not be tempted to overdo the [Animation Level](#).

Read the section on [Making Patterns Move Smoothly](#), and design patterns that suit your PC. Brewster was created on a two-year old P133 - if you have something newer, you will probably have more pattern design options open to you - for example, 'Filigree' is at the limits of my machine, but you might want to add more intricacy to it.

Here are some observations on the set of saved patterns that load initially with the program:

The [Change Colour](#) option gives a nice effect which is used in all the shapes of 'Bacteria' and 'Quadspiral'

The [Vary Colour](#) option should not be under-rated. It is probably the best way to create a pattern that always looks different. 'Splash' and 'Active' use this.

'Slicing' 'Ripple' and 'Splash' use rapid [Rotation](#) to create a dynamic effect. 'Pulse' and 'Three Fold' use [Shape Rotate](#) and [Size Change](#) to do the same. 'Herbs' combines [Shape Rotate](#) with moderately fast [Rotation](#).

The effect of rotating shapes depends on the shape itself - rotating circles is completely useless, whereas rotating lines is usually a bit too much. If you rotate lines, you should probably set the [Animation Level](#) very low.

'Metal Flower' was created almost entirely by the [Randomise](#) option. I just tweaked the values a little bit. The [Randomise](#) button also had a big hand in creating 'Pulse', 'Miasma' and 'Green'.

'Droplets', by contrast, was designed from first principles. I wanted to recreate the effect of those coloured blobs that are sometimes shown on cinema screens before the film starts. 'Bacteria' and 'Stars & Planets' were also designed from scratch to create a certain effect.

You can evolve one pattern from another, too. 'Snowstorm' (from the Mirror-1 pattern bank) is based on 'Snowflake' with some extra shapes, faster rotation and animation, and the Three-Mirror screen option rather than the circle.

As you can see, there's no single good way to create patterns. Don't be afraid to experiment.

Making Patterns Move Smoothly

Depending on your CPU, your graphics card, and the screen mode you operate in (a very big factor), you may find that some patterns move jerkily on screen. This will happen in full-screen mode mostly.

First of all, don't worry about jerky movement if your hard disk is making grinding noises. Windows 95 gives screensavers a low priority, and likes to tidy up its files when they are running. This jerkiness will go away in a few seconds once the files are sorted out, and the graphics will then flow smoothly.

However, you may find that the patterns move jerkily (only a few times per second) on an ongoing basis, especially when there are many objects on screen. This means that your computer is struggling to keep up with the (literally) millions of calculations Brewster throws at it every second.

Here are the important factors regarding speed:

- ◆ Total number of objects (controlled by the three Layer sliders). You can improve the speed by reducing these. Reduce them all in the same proportion to keep the pattern constant.
- ◆ Complicated shapes. The 'Spiral' is probably the worst offender here. If you have a lot of Spirals, you will get slow movement unless you have a very powerful machine - especially if they are large.
- ◆ Large shapes. Often the 'Big Circle' can cause a slowdown, especially if it is set to a large relative size, and the Mix or Change Size options are selected. Also, complicated shapes are worse affected when they are large, compared to simple ones.

If you can reduce any or all of the above, your pattern will run more smoothly. If your PC is relatively slow, and operating in a large-screen mode, you may find some of the saved patterns are too jerky. On the other hand, some of them should be fine. When you upgrade your PC, you can always experiment with more demanding patterns.

Things like Animation, Rotation, Colour Changing etc. don't have any significant effect on the speed.

Tip: If the patterns move too fast on the screen, don't reduce the Speed slider! Instead, reduce both the Animation and Rotate sliders. This will give much smoother results.

Version History

V3.0b	31 August 1998	Fixed bug that caused multiple copies to start up on some machines when password was set Made screensaver less sensitive to small mouse movements / vibrations
V3.0a	24 August 1998	Fixed bug that could blank out settings window under certain circumstances
V3.0	23 August 1998	Password protection on all systems Automatic install / uninstall Three mirror option Background colour options Cycle patterns option Better 'quick help' Remembers location of pattern banks
V2.0b	27 June 1998	Extra patterns, minor text changes
V2.0a	10 June 1998	Tiny change to pattern bank files so that the format can be extended in the future
V2.0	9 June 1998	Added option to load and save pattern banks Added extra shapes Added extra patterns (in banks) Small change to Randomise option Fixed bug which stopped the program working on some Windows NT machines
V1.1b	15 April 1998	Previous bug could still occur under one condition - fixed it
V1.1a	9 April 1998	Fixed bug which can cause lockup on slow machines Removed polite mode default Improved Help manual
V1.1	6 April 1998	First public release

