

# *ImageFX 4*



## **Getting Started Guide**

By Kermit Woodall and Jon Carroll



*...for Max and Walt*

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## INSTALLING IMAGEFX 4.x

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To install ImageFX 4 from the supplied **CDROM**, simply insert the CDROM into the drive and open the device. You will find an Install icon. Double-click on the icon and follow the instructions.

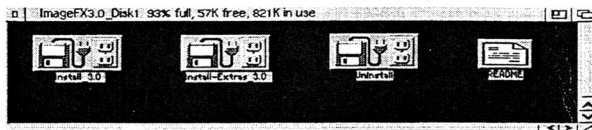
### Floppy Install

To install ImageFX 4.x, follow the instructions provided in the ImageFX manual on page 2.1. A brief summary follows:

Insert ImageFX Disk 1 into any floppy drive. Double-click on the "ImageFX4.x\_Disk1" icon.

Double-click on the "Install" icon. Follow the instructions provided.

Please be sure to read the README file for the latest changes and additions after installing!



### Install\_Extras

The Extras are Public Domain programs provided solely for your enjoyment. Nova Design, Inc. does not guarantee that they will function on all systems nor do we provide support for these. Install the Extras by running the same Install icon.

**Warning! Do not install the *Postscript loader* that comes with the Extras if you have a Toaster or Toaster/Flyer system. Newtek uses an older version of the Postscript library and the loader can cause your CG fonts to stop working or worse. You can get a compatible version of the Postscript library from our ftp site in the Official\_Upgrades directory named HWGPOST.Library.**

### Uninstalling ImageFX

The install icon/script on the ImageFX diskettes also has an option to remove ImageFX from your system. This can be necessary if you wish to move ImageFX to a different drive or for resolving problems.

### VisualFX and Control Tower Notes

If you already owned VisualFX and/or Control Tower you may experience some compatibility issues when trying to use these with the new ImageFX 4.x.

To resolve this, simply run the ImageFX\_Classic icon you find in the ImageFX drawer. VisualFX and Control Tower will both use whatever ImageFX is already running in your machine rather than attempting to run it again.

### Goodies

You will find a drawer on the CDROM with various image sequences and other free/demo goodies!

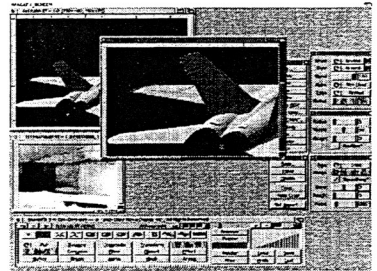
## INTERFACE

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ImageFX 4.x now offers many interface enhancements over previous releases. Primarily is the recommendation of the Windowed, or 'Workbench', interface that can be run on the Workbench (hence the name) or on a single custom screen of it's own. The classic ImageFX multi-screen interface used more of your valuable chip-ram than does the Workbench interface. The Windowed interface cannot use HAM mode displays – but does have versions for displaying on CyberGraphX displays in full color!

### Windows

New to ImageFX 4.x is the capability to open multiple image buffers. This allows you to, for instance, open two (or more) images, cut a brush from one image, and then paste it into another. In fact, you can have more than one view of the same image open, so you can be zoomed in on a frame working in fine detail and see the result on the full image in real time on a powerful system.



In addition to the scroll bars and sizing gadget, there are four other controls in the lower left corner of the image buffer preview window. The plus and minus magnify/zoom out the window they are attached to.



In addition to the Shift "-" combination to zoom out to full view, you can hold down the shift key while clicking the Zoom Out Gadget ("-") to achieve the same effect.

The arrow spawns a child window containing the same image buffer, which can be zoomed in and out independently of its parent window. The box causes the window to resize itself to the size of the image buffer preview, making it possible to free up large areas of screen space fast.

### Child Menus

ImageFX 4.x's interface has also been rewritten as an asynchronous interface, giving you the capability to leave one or more child menus open. As you can see in the image above, five control panels are open in addition to the toolbar and the image buffer window. In this way, it is easy for you to keep multiple functions within easy reach, thus making it easier to perform complex functions and keeping the most powerful tools of ImageFX a single click away. In addition, screen redraws are also asynchronous, meaning that you can perform other tasks with the program while the display refreshes. Each window can also be dragged around the screen to keep them from obscuring each other. Also, in the palette menu, a cycle gadget replaces the up and down arrows for selecting the number of colors in the onscreen palette.



### Effects Previews

The effect previews have also been improved. Each window that features previews now has the capability to zoom into or away from the preview image, thus giving you a better idea of how that effect is operating. The controls for this are placed in between the two preview windows. To pan around this preview, you just need click on the source preview and drag the image.

## ImageFX Classic

Some 24-bit display devices, such as the OpalVision, DCTV, GVP IV-24, Firecracker 24 and Video Toaster, and others, cannot produce a true Workbench display. If you use one of the above devices as your preview display in ImageFX, then you need to double-click **ImageFX\_Classic** in the ImageFX drawer in order to run ImageFX using its older, non-windowed display.

When using these displays you will not be able to use the new interface features; layers and child menus.

**Note: Do NOT attempt to select a Windowed preview when you have launched from ImageFX\_Classic or vice versa. This can cause unpredictable results.**

## Swap Buffer

Because of the capability to hold multiple image buffers open, the way Swap buffers operate has changed in ImageFX 4.x. Now, when you load an image, it becomes the Main buffer, and the second image you load becomes the Swap buffer. You can load multiple buffers and by hitting the keyboard shortcut 'j' you can cycle between main buffers. The buffer that was loaded AFTER the currently selected Main buffer will become the Swap buffer. The Alpha channel is also associated solely with the buffer it's loaded with now and can also be used to indicate transparency in layered images.

## Preferences

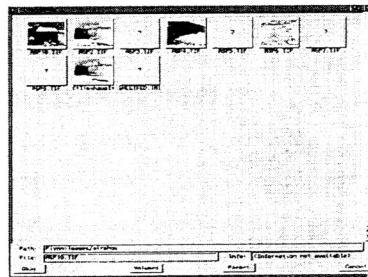
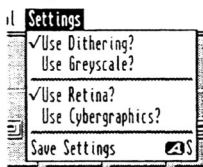
A new sub-menu is available off of the Preferences (PREFS) menu in ImageFX called Interface. In this menu you are able to change the screenmode and fonts used by ImageFX, whether child menus stay open or automatically close after use, and other interface related options.

The format of the preferences presets file ("Default.preset") has been changed slightly. There are two additional columns present to set the horizontal and vertical DPI for each preset.

**Note: The screenmode display you see ghosted out in PREFS, while in Windowed mode, is only available in ImageFX\_Classic mode. This is the menu screenmode for Classic mode.**

## Thumbnail Previews

ImageFX's Thumbnail Requester has been expanded to support 24-bit thumbnail display on a Retina or CyberGraphX display. To activate this feature, select either Use Retina or Use CyberGraphX from the Settings pull-down menu in the requester. Select Save Settings in the pull down menu to preserve this setting for future sessions.



The ImageFX Browser also includes the capability to open on a Retina or CyberGraphX screen by adding the tool types RETINA or CYBERGRAPHICS, respectively. See the section later on Browser tool types.

## Layers and Animation Layers (Frames)

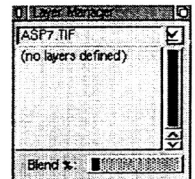
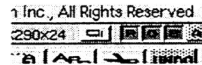
Another new feature is the ability to manipulate images by placing them into multiple layers. In its simplest form, layers allow you to merge (as in the Composite operation) a near infinite number of layers into a single image, even using alpha channels for each individual layer to control the effect. You can also do an effect on a layer and have the effect pass into all active layers in the same image.

### What are Layers?

Think of a layered image as one of those photo collages you did in elementary school. You started then with a big photograph or a blank sheet of paper and placed smaller cutout photographs on top of it. *That's Layers*. You start with a background image (the first image you loaded) or a new buffer and then use the Load Layer (or similar) menu item to add additional images on top of it. These layers of images can be moved around, copied, and you can even change how they're composited into each other. The neat thing is, if you keep your image stored as a layered image, you can change any of these things at any time!

### Layer Manager

The layer manager for ImageFX 4.x is accessed by clicking on the Layer Manager button to the left of the color channel buttons on the ImageFX toolbar. (Also note that every image, whether it uses layers or not, may have an associated Alpha channel which can be used as a transparency mask!) This will bring up the Layer Manager panel. Clicking on the chooser gadget (shown as a down arrow over a bar) will open the control menu for the Layer manager.



### Layer Manager Menu

New Layer: Creates an empty layer at the top of the stack of layers.

New Layer from buffer: Allows you to select a current image to add as a layer.

Load Layer: Loads another image to act as a layer in the image buffer.

Clone Layer: Makes a copy of the currently selected layer in the top of the stack of layers.

Delete Layer: Removes a layer from the stack.

Copy Layer To Buffer: Copies the currently selected layer to a separate image layer.

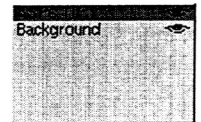
Move Layer: Select this, then click in the image window and drag to change the offset of the layer.

Layer Up: Moves the layer up in the stack, towards the top.

Layer Down: Moves the layer downward in the stack.

Clicking on any single layer in the layer manager selects it. By clicking on the 'eye' gadget after selecting the layer, you can turn on or off an individual layer's effect.

Append Sequence: Load a numbered sequence of images as a layer anim. Select the first frame to load with the file requester; ImageFX will automatically load the frames starting with the one you selected and proceeding to the end of the sequence.





**Save As Sequence:** Save frames as a numbered sequence. In the file requester, enter the filename of the first frame, INCLUDING THE FRAME NUMBER (eg. "MyAnim.0001"), and ImageFX will save the frames in the filename format you specified. You don't necessarily have to begin with 0001.

**Process Frames:** Runs AutoFX scripts over the frames in a layer anim. (Runs a script called **Rexx/AutoLayer.ifx** for this)

**Animate Brush:** Stamps the current brush down on the layer anim, applying the movement and scaling and rotating settings you specify in the requester. *Warning: There is no undo.*

## Layer Settings

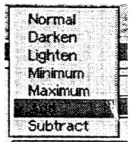
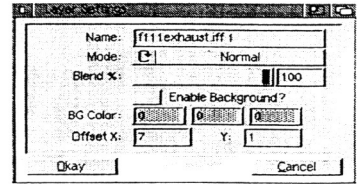
By double clicking on a layer, you bring up the Layer Settings panel. This controls exactly how the image layers interact with one another.

**Name:** Name of the layer. You may either change this or leave it.

**Mode:** This cycle gadget is used to change the layer compositing operations. The layer compositing operations are identical to the ones explained starting on page 5.94 of the ImageFX manual, with the exception that the 'Normal' setting functions as a Merge operation, receiving its blending settings from the 'Blend' slider.

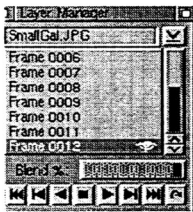
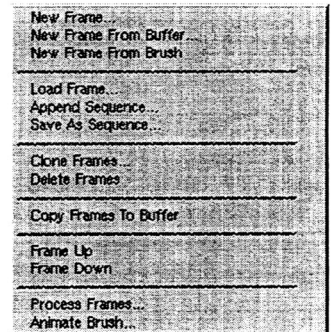
**Mask Layer?:** This option turns a layer into a "mask" layer, which is similar to Photoshop User Masks (except ImageFX can have any number of them). Basically the mask layer becomes a stencil through which a high layer is blended. It's like a floating transparency plane.

**Offset X, Y:** Sets the x (horizontal) and y (vertical) offset of the layer from the main image buffer.



## Animation Layers / Frames

When you load an animation or a sequence of frames you'll notice that the references to 'Layer' in the menu change to 'Frame' as show to the right. This is to alert you when you are in animation or frames mode.



## Animation Controls/VCR Gadgets

The controls for handling animations are show to the left. You can play an animation forwards or backwards, jump to the beginning or end, jump to any frame, or step forward or backwards by a single frame.

## Regions

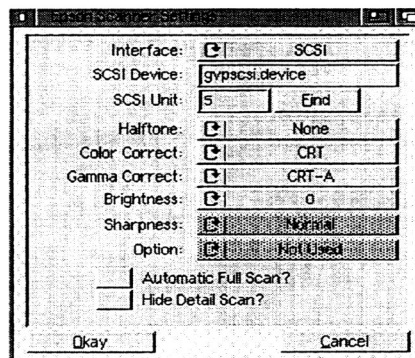
The region menu for loading/saving and controlling regions is under the buffer menu now.

## MODULES: SCANNER/EPSON

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Support for a SCSI interface has been added to the Epson scanner module. To use the SCSI interface, you must know the name of the SCSI device driver used by your SCSI interface card. For example, GVP SCSI interfaces use the driver "gvpscsi.device." If you're not sure of the device name, consult your SCSI interface manual. You will also need to know the unit number of the scanner, which you can either type in directly or you can click on the "Find" button to locate it automatically.

An additional checkbox has been added to the Extras window to disable the preview refresh while performing a detail scan. This will improve scanning speed when using some preview modules, such as the OpalVision or Video Toaster previews.



There is a known problem with the way Epson scanners set their SCSI ID and the method that some Amiga SCSI interfaces scan for IDs. If you experience this problem, set the SCSI ID selector to \*, which puts the scanner into compatibility mode and hard-wires it to produce a SCSI ID of 2 from the scanner.

This module does not support the old Epson Perfection 600. This specific scanner model is available through Epson America, but is not actually part of the Epson scanner family. It is manufactured by a different company and is incompatible with other Epson scanners and this module. All other Perfection models, such as the Perfection 636, work fine with this module.

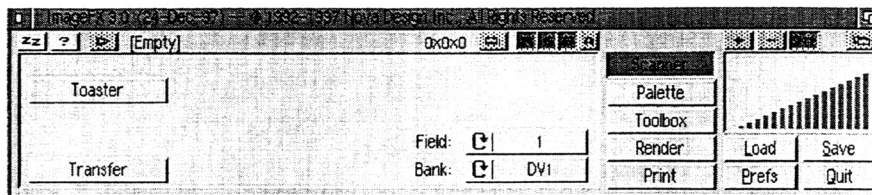
**Note: If you have difficulty in setting up your SCSI scanner, check to be sure your termination on your SCSI chain is properly configured. If this doesn't resolve the problem, try entering the SCSI Device and Unit with the scanner turned off. This is because some SCSI interfaces and the Epson don't properly handle the initial setup. Once you've entered this information save ImageFX's preferences, quit, power your Amiga down, then turn everything back on. When you run ImageFX it should find the scanner.**

**Once you've completely configured your scanner, go to the Prefs menu in ImageFX and save your preferences immediately so ImageFX will remember how your scanner is configured.**

## MODULE: SCANNER/TOASTER

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The Toaster scanner module allows you to transfer images from the Video Toaster framebuffers directly into an ImageFX buffer.



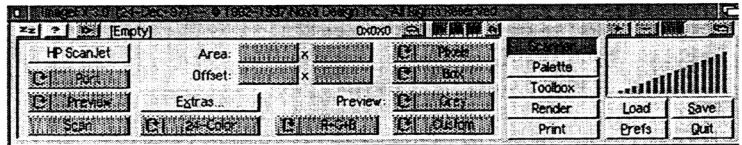
**Field:** Selects the number of video fields that will be transferred. The choices are 1, 2, 3, 4, and Motion Remove.

**Bank:** Selects which Toaster framebuffer to retrieve image data from. The choices are DV1 and DV2.

**Transfer:** Begin the transfer process to bring the image into ImageFX.

## MODULES: SCANNER/HP SCANJET™

The HP (Hewlett Packard) Scanjet scanner module supports scanning in 24-bit color, 8-bit gray or 1-bit monochrome and it supports image sizes up to 8.5 x 14 inches! This single module is also compatible all SCSI members of the HP Scanjet family of desktop color and greyscale scanners. Some features in this panel, will only work with IIXc model scanner, because this is the only model that offers those additional features.



The basic scanning controls on the menu are identical to those documented in your manual for the Epson series of scanners. The only difference is a greater range of DPI settings, including a custom setting, which is discussed as part of the Extras panel. The HP Scanjet previews do not dither in the color preview as well as they do in greyscale. This is a limitation of the scanner hardware that we hope to overcome in software in a future version.

The items in the Extras panel control features that are built into the scanner. ImageFX uses names that are consistent with the excellent HP documentation. Consult the scanner manual for a full description of these features. Options that are not supported by your model of scanner will be ghosted.

### Extras Window

The name of the model of HP Scanjet you are using will be displayed at the top of this panel. You can use this as a reference to be sure your HP Scanjet, or compatible, has been properly recognized.

Device: This is for selecting the SCSI device driver (defaulting to the standard Amiga scsi.device) that your SCSI controller uses. See the *Epson page* for complete hints and tips on connecting a SCSI scanner.

DPI: This slider/integer gadget allows you to select a much larger, and finer, range of DPI settings for the HP Scanjet. This is automatically set to the limits of the HP Scanjet you are using. To use the setting specified here, set the DPI cycle gadget on the main panel to CUSTOM.

Automatic Full Scan: Check this option if you wish to have the scanner module automatically reset to scan the full bed of the scanner whenever you reenter the scanner menu after using other ImageFX tools.

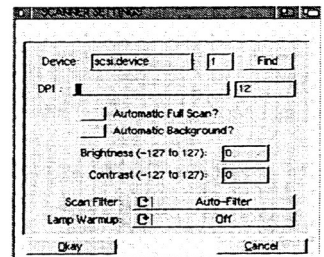
Automatic Background: Check this option if you wish

Brightness: This option controls the brightness of the scanned image. You can use this to compensate for overly dark or bright images. The values range from -127 to 127 ...a standard range for these scanners.

Contrast: This option has the same range as brightness and can control the balance of light to dark in the image. This is especially useful when you are scanning line art.

Scan Filter: The Scanjet has the ability to supersample extra pixels when scanning an image in order to produce a single pixel that better represents the color of the scanned area. You can set this to automatically determine the best mode with Auto-Filter, or set it to 2x2, 4x4 or turn it off altogether.

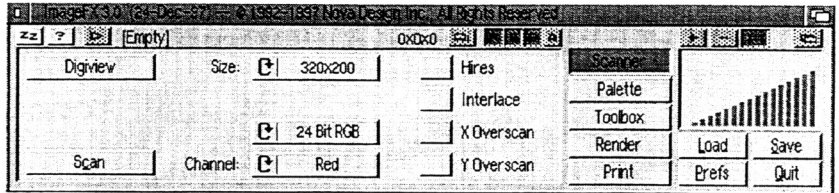
Lamp Warmup: This final option lets you control how long the lamp warms up when you begin a scanning session. Normally this is off, but as the lamp in your scanner ages it's light can take some time before it becomes pure. You can set this gadget to up to 20 seconds of warm-up to allow for this.



## MODULES: SCANNER/DIGIVIEW

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Newtek's Digiview slow scan video digitizer is supported directly in ImageFX for NTSC based users with this scanner module. Performance of this module in all possible



configurations of Digiview and Amiga is not guaranteed. With the wide variety of Digiview modules released to handle various Amiga models, we can only say that if the Digiview worked on the Amiga with Newtek's own software, then this module should also work.

Size: Directly controls which resolution to scan in by using this cycle gadget.

(Color): select 8-bit greyscale or 24-bit color.

Channel: When 24-bit color scanning you can choose which of the Red, Green or Blue channels you are scanning since only one can be scanned at a time.

Hires: If selected you will scan a 640 pixel wide screen. Otherwise, you will scan in a 320 pixel wide screen.

Interlace: If selected you will scan a 400-line screen. Otherwise, you will scan in a 200-line screen.

X Overscan: Adds 64 pixels to the width of the scan in LORES mode, 128 pixels in hires mode.

Y Overscan: Adds 40 pixels to the scan in non-interlaced mode, 80 in interlaced.

## MODULES: PREVIEW/WINDOWED

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The Windowed preview (formerly known as the Workbench preview) now includes a sizing gadget and scroll bars for easier manipulation of the preview window. Additional information about the image buffer is shown in the title bar as well.

In addition to the options listed on page 2.9 of the main ImageFX manual, there are several new controls in the Windowed Preview Options window (shown here).

Palette Width: Sets the width of the palette window in pixels.

Shade: Sets the preview to color or greyscale.

Row Height: Sets the height of the color wells, in pixels.

Gamma Adjust: Gamma adjustment for the preview rendering. Values greater than 1.0 will render brighter previews, while values less than 1.0 will render darker previews. This can be used to compensate for dark monitors.

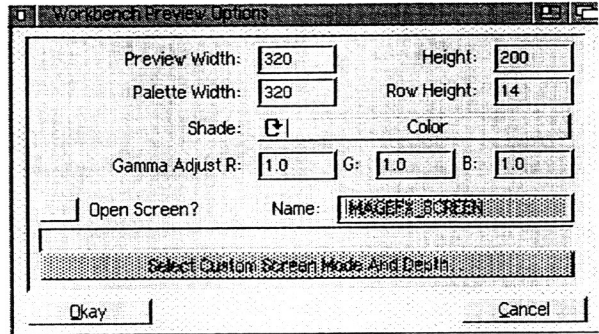
Open Screen: When checked, the preview will create a custom screen on which ImageFX and the preview will open. The screen will be "public"; that is, other applications will be able to open on the screen as well.

Name: The public name of the screen that the preview opens. You will need to know this name if you want other applications to open on the screen.

Select Custom Screen Mode And Depth: This allows you to choose the screen mode and color depth of the custom screen that is opened. You will be presented with a standard screen mode requester from which you can choose any of the available modes.

The RetinaWB and the new WindowedCGX previews also have these same Preview Options.

The Region menu is also accessed differently than through the ImageFX\_Classic interface. In that interface you double click the region cycle gadget to bring up the menu. In the new Windowed and WindowedCGX previews you select the region menu from the buffer menu on the toolbox menu.



## **MODULES: PREVIEW/WINDOWEDCGX (CYBERGRAPHX)**

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The WindowedCGX preview is similar to the Windowed preview, but operates in 16-bit color or true 24-bit color on a CyberGraphX screen. The Preview Options are identical to those of the Windowed preview (see previous), with the exception of the Shade control. The WindowedCGX preview always renders in 24-bit color, so this control is not present.

The WindowedCGX Preview and Render modules support any graphics board utilizing the CyberGraphX software by Thomas Sontowski and Frank Mariak. At the time of this writing, supported boards include the Domino™, Picasso II™, Picasso IV™, Piccolo™, GVP Spectrum™, RetinaZ3BLT™, CyberVision64™, CyberVision64/3d™, DKB WildFire™ and the CyberVisionPPC/BlizzardVisionPPC™.

***Note: Do NOT attempt to run any other preview modules other than Windowed and WindowedCGX from the default ImageFX icon that brings these modes up. Switching to another module can produce unpredictable results at best.***

## **MODULES: PREVIEW/RETINAWB (REMOVED)**

---

The RetinaWB preview has been removed in ImageFX 4.x due to the limitations of the original RetinaEMU software required on the older card.

Users of the Retina BLT are recommended to switch to using CyberGraphX so they can use the WindowedCGX preview.

Users of the older Retina display card will be limited to using the Windowed preview in 256 colors or less. We cannot guarantee full performance or compatibility however.



## MODULES: TEXT (UPDATED)

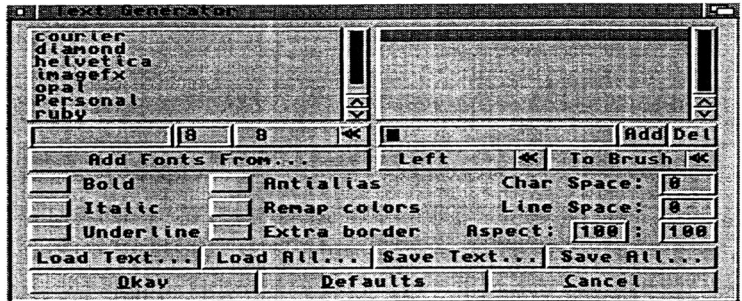
---

The Text Generator has had a major overhaul to vastly improve its abilities to create text in ImageFX. In addition to using any Amiga bitmap, CG, or Colorfont you can now also use any Postscript fonts you may have installed.

Subpixel antialiasing has also been added so that all those annoying jaggy edges are gone as well. This is the same antialiasing method that everyone has been looking at in other packages (typically more expensive packages too!) and wanting in ImageFX. It's absolutely 100% better than whatever it was that we used before.

You can also control the character spacing, line spacing and the overall aspect of the text - but best of all, you can now see the type, as you add it, over the image itself! You don't have to rely on a preview within the Text menu, you actually see the text drawn over the image. The results can be output to a brush or to a layer now for even more flexibility.

If you output the text to a layer, hit the J key to see the new text layer you've created.



## MODULES: COMPOSITE

---

Several more modes have been added to ImageFX's Composite operator, giving the user more options for blending and combining images than ever before.

Dissolve: Randomly dissolves from one image into the other on a pixel by pixel basis.

Screen: Multiplies the inverse brightness values of the pixels in both images. The resulting color is always a lighter color. The effect of the Screen option is analogous to superimposing two film negatives of two source images, and developing the results. Screening with black leaves the image unchanged, screening with white results in white.

Illuminate: The result color has the hue and saturation of the main image and the luminance of the swap color.

Color: The result color adds the hue and saturation from the swap image and keeps the luminance from the main image.

Softlight: Lightens or darkens based on the swap color. If the swap pixel's color is lighter than 50% gray, the image is lightened - if darker than 50% gray, the image is darkened. Similar to the ADD mode but ignores color information in the swap buffer.

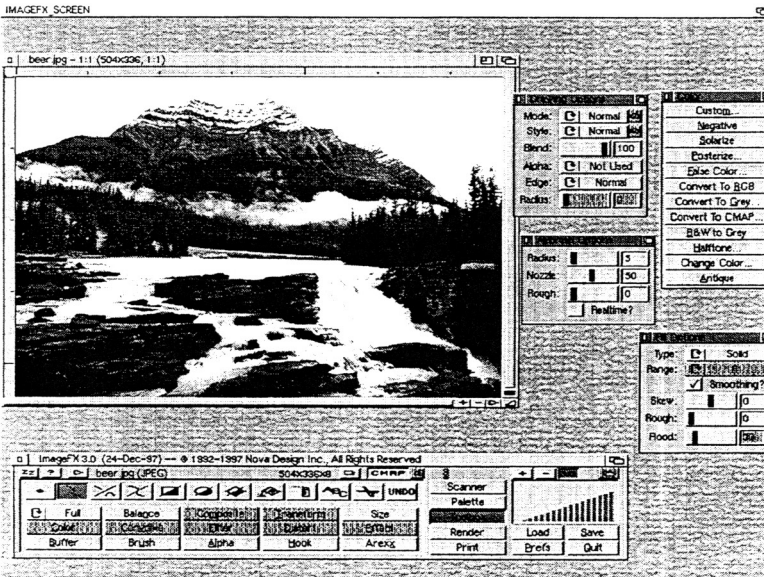
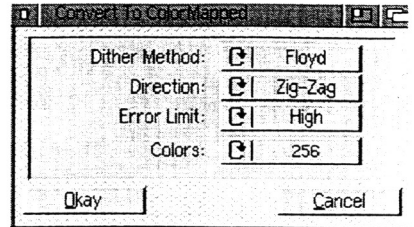
Hardlight: Multiplies or screens the colors depending the on blend color. If swap pixel is lighter than 50% gray, the main image is screened. If darker, the main image is multiplied.

***Note: The new layers system makes compositing much more flexible and precise. The Composite module is now primarily useful for batched ARexx tasks and layers can take over for all other interactive jobs.***

## MODULES: COLOR/CONVERT TO CMAP

This new feature allows the user to remap the image from 24-bit into a color-mapped image with anywhere from 2 to 256 colors. This is helpful for making surface maps and low-color images for games, where image palettes may be limited for memory or speed reasons, or for situations where there are specific palette limitations, such as .GIF files for the Internet.

Once an image is transformed into a color-mapped image (Convert to CMAP in the Colors menu), it is kept as a color-mapped image in memory, and saved as a color-mapped image. ImageFX 3 can also load color-mapped images and maintain their color maps without transforming them to 24-bit.



## MODULES: CONVOLVE/GAUSSIAN BLUR

---

A Gaussian blur works in a radial pattern creating a blur that looks like a photograph does when the lens is not in focus. The effect here allows options to automatically control this.

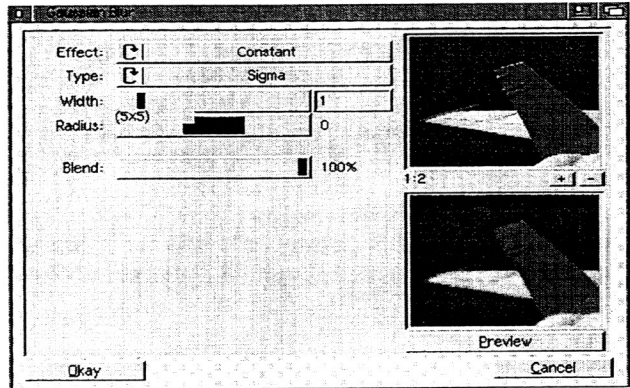
Effect: The options are - Constant, from Alpha or from Swap. Constant uses the following parameters as set values while the Alpha and Swap options scale these by using the brightness in those buffers and using the width as the maximum.

Type: Sigma - a standard gaussian, or FWHM (Full Width and Half Maximum) - a special gaussian blur related to Sigma as:  $FWHM=2*\sigma*\sqrt{2*\ln(2)}$

Width: A value between .1 and 10. That specifies the size of the blur.

Radius: Specifies the size of the radius of pixels to evaluate for each pixel being blurred. Below this slider is a display showing the resulting size of the blue from the combined Width and radius parameters.

Blend: How much the blur is blended into the original image.



## MODULES: DISTORT/DISPLACE

---

The Distort function previously occupied the menu spot that Displace now holds. Displace is a very powerful replacement for Distort that can distort your image in many ways with much more control.

Strength: The amount of distortion to allow. (0-255)

Method: Delta, Absolute and Radial. Delta is the method formally used by Distort, which distorted based on brightness changes. Absolute distorts the image based on the specific brightness of each pixel in X, Y coordinates. Radial is similar to Absolute but distorts on radius and angle coordinates.

X/Y Displace From: Selects the buffer that will control where the distortion comes from. Alpha channel, Main or Swap Buffer, Brush, or the image or brush you're distorting currently with Self.

Use Colors: Grey values can be used to get a simple brightness change, or you can distort the R, G and B channels individually from the value of each of these channels in the Displace From buffer.

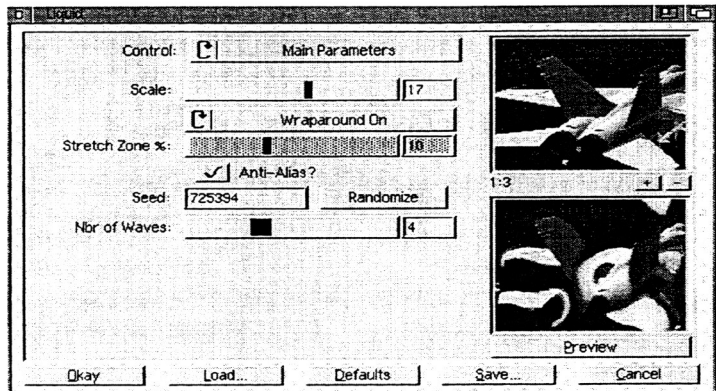
Direction: Restricts distortion to Any direction, Horizontal or Vertical.

## MODULES: DISTORT/LIQUID

This effect distorts an image by pulling it along intersecting "waves." The result is an image that can appear as a fun house mirror distortion, image Jell-O or liquid metal.

### Wave Parameters

Control: Takes you from the Main Parameters menu (shown above) to any of up to ten Waves Menu (shown below).



Scale: Once your parameters are all set, you can use the scale parameter to animate them.

Wraparound: On, Off or Stretch. If wraparound is off, the image pulls in a black border around it. If it is on, the image wraps around from one edge to the other. Stretch lets the image act like rubber, stretching pixels out from the edges to the new positions.

Stretch Zone %: Controls the strength of the stretching, or elasticity.

Anti-Alias: Turns anti-aliasing on and off. On looks much better, but is slower.

Seed: This is the random number seed. Leaving this at the same value allows you to reproduce the effect exactly. Click the **Randomize** button and the seed changes and all Wave Parameters will also be altered.

Nbr of Waves: This alters the number of intersecting waves. 1 to 10 allowed.

### Wave Number

Parameters for each wave are controlled in this menu.

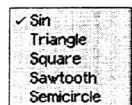
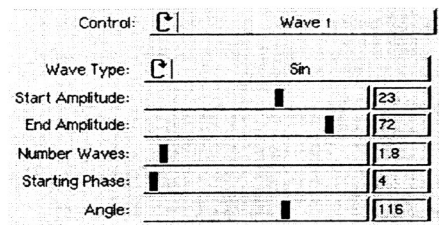
Wave Type: Several mathematical wave types are allowed here. Each produces dramatically different effects.

Start and End Amplitude: Controls the maximum height of the wave during the course of the effect.

Number of Waves: Different from the similarly named parameter on the Main menu, this controls how many peaks and valleys occur along the course of the wave.

Starting Phase: This pushes the above waves along the path set by these parameters. You can make the waves ripple along by altering this.

Angle: This controls the angle at which the overall wave takes through the image. The fun part is when you take several waves and angle them to pass through each other with the result pulling the image apart in a liquid fashion.

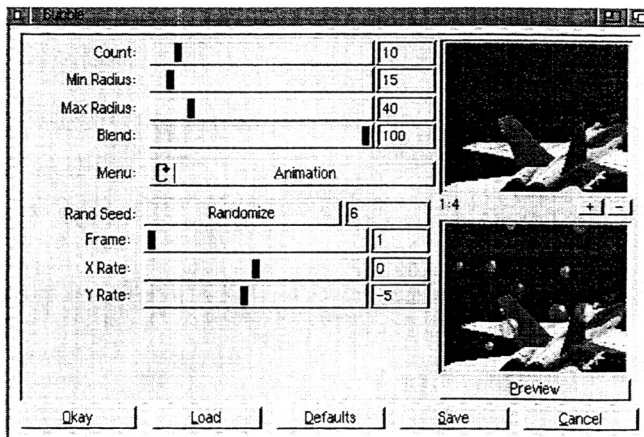


## MODULES: DISTORT/BUBBLE

The Bubble effect places ray traced glass bubbles randomly over your image in various hue and brightness tints that you specify. The effect is animated via a simple particle system that allows direction along any X, Y coordinates.

**Count:** The number of bubbles to place on the image. If Overlap? (see below) is not selected then you may get fewer bubbles when it becomes difficult to find an empty spot that is big enough to prevent the bubbles from overlapping each other.

**Menu:** The currently selected menu within this effect.



**Load/Save:** Used to load and save either premade or newly created settings for this hook.

**Defaults:** Sets all menu settings to the program default.

### Menu: Animation

Controls for animating the effect.

**Random Seed:** A random seed. If you use the same number repeatedly, you'll get exactly the same pattern of bubbles. If you change this, the bubble pattern will change.

**Frame No:** Which frame to generate. This moves the bubbles.

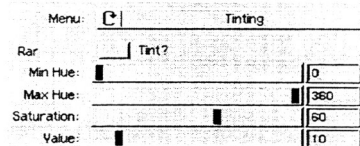
**X Rate:** Speed to travel in the X, horizontal, direction. Negative numbers move left, positive numbers move right.

**Y Rate:** Speed to travel in the Y, vertical, direction. Negative numbers move up, positive move down.

### Menu: Tinting

**Tint?** If selected the tinting controls on this menu will affect the bubbles; otherwise, the bubbles are only affected by the options menu.

**Min Hue/Max Hue:** These are used to delimit the range of colors, based on hue, with which the bubbles can be tinted. The default produces a nice range of pastels.



Saturation: The absolute saturation value to which the color of the bubbles will be set. This control can give the bubbles a pastel look, metal look, plastic and more.

Value: The range of brightness variance. This will darken or lighten the bubbles by this amount.

## Menu: Options

Specular?: Selects whether or not a light reflection will appear on the bubbles.

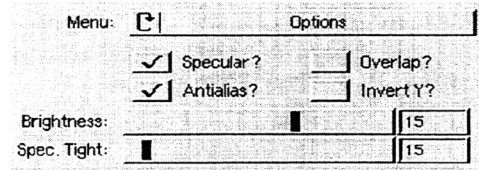
Antialias?: Turns the antialiasing of the edge of the bubble off and on.

Overlap: If selected, this will allow the bubbles to overlap one another. Off forces bubbles to avoid colliding.

Invert Y?: Inverts the image vertically in the bubble (normally it's just magnified) simulating curvature distortion.

Brightness: The brightness of the light illuminating the bubble.

Spec. Tight: Specular Tightness. The focus, or tightness, of the light aimed at the bubble.



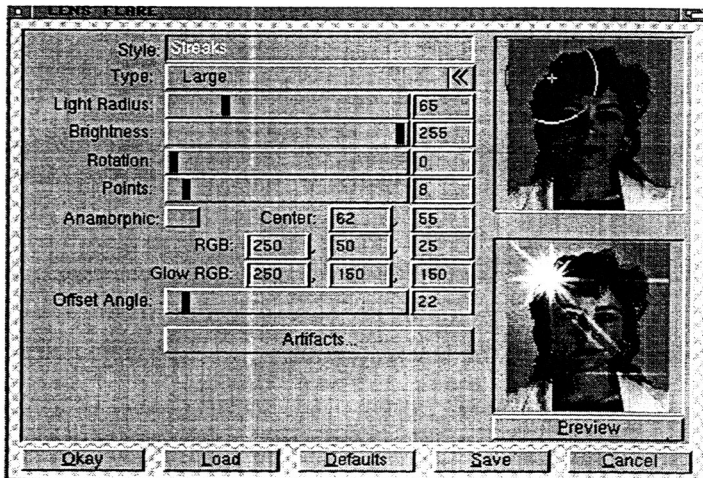


## MODULES: EFFECT/LENS FLARE (UPDATED)

The Lens Flare effect has had some very nice improvements made to it.

First off, its anti-aliasing is far better, providing far more realistic flare effects now.

We've also added two new light designs. The previous Lens Flare used a simplified version of the Radial Star effect. In the new Lens Flare that's the Medium light setting. The small light setting provides a star/light effect similar to what you'd see in PhotoShop or Lightwave. The Large light setting combines two Radial Star effects and lets you control the offset so you can design really far out light sources.



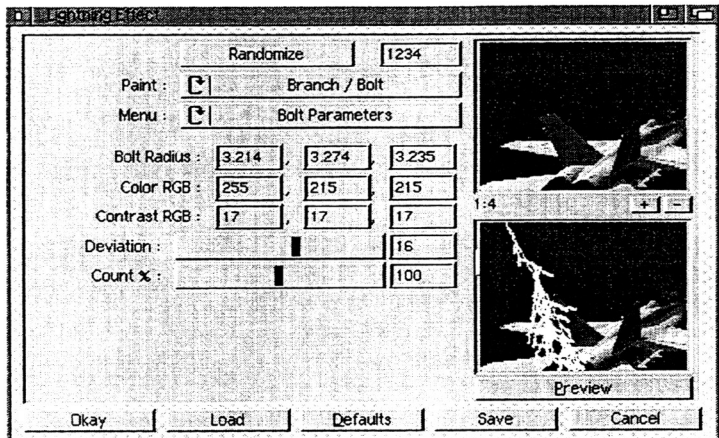
You can also rotate the light source and any of the light types can be selected to simulate an anamorphic lens stretch, which will elongate the lens flares horizontally.

## MODULES: EFFECTS/LIGHTNING

The Lightning effect is a remarkable piece of software that allows you to paint animated lightning directly into your image (or images). A lot has been changed since ImageFX 2.0 in this Effect so read this section carefully!

Random Seed: Changed from a slider to an easier to use Randomize button.

Paint: Alters how the bolt is painted to create various effects with four options. Branch/Bolt makes the branches emit from the bolt. Bolt/Branch makes the branches come from behind the bolt. Bolt Only turns off the drawing of the branches. Branches Only turns off the drawing of the bolt. This final option is very useful for creating dozens or hundreds of little lightning bolts that emanate from the path of the (not drawn) main bolt. If you combine this with the new ability to have multiple main bolts, you can outline actors or objects and have little lightning bolts, which are actually branches, radiating out from them easily!



- Branch / Bolt
- Bolt / Branch
- Bolt Only
- Branches Only

Load/Save: Used to load and save either premade or newly created settings for this hook.

Defaults: Sets all menu settings to the program default.

Menu: Changes to one of five menus:

### Menu: Bolt Parameters

Bolt Radius, Color RGB, Contrast RGB & Deviation: Unchanged

Count %: Increases the possible deviation of the main bolt only. Can even dampen the main bolt's path down to a straight line.

### Menu: Glow Parameters

Nothing changed here

## Menu: Branch Parameters

Probability %: The internal method used for calculating the probability of branching has been changed to make it much more predictable. Bear in mind that this also affects branches from branches so once you get to 40% and higher you get enormous amounts of branches!

Menu :		Branch Parameters
Probability % :	<input type="text"/>	25
Radius % :	<input type="text"/>	50
Segment Length Min/Max :	<input type="text"/> - <input type="text"/>	4 - 8
Segment Count Min/Max :	<input type="text"/> - <input type="text"/>	5 - 25
Angle Min/Max :	<input type="text"/> - <input type="text"/>	-55 - 55

Radius %: The initial size of the branch radius when coming off of the main bolt expressed as a percentage of the main bolt radius.

Segment Length (&Count) Min/Max, Angle Min/Max: Unchanged

## Menu: Seed Parameters

Nothing changed here.

## Menu: Coordinate Parameters

# Lines: The number of main bolt "lines" for the lightning bolt. Can be entered directly or altered via the Delete and Add buttons following.

Menu :		Coordinate Parameters			
# Lines :	<input type="text"/>	Delete	Add		
Line :	<input type="text"/>	Previous	Next		
Starting :	<input type="text"/>	,	<input type="text"/>	,	<input type="text"/>
Ending :	<input type="text"/>	,	<input type="text"/>	,	<input type="text"/>
Refresh					

Line: The currently active line for editing. You must toggle to the other menus to alter anything other than the starting and ending points of the line. In addition, if you do not change the Seed Parameters menu, the bolt will look practically identical to the previous bolt entered. You can enter the line you want directly or use the Previous and Next buttons to change it.

Starting & Ending: The starting and ending X, Y position in 2D coordinates and the Z coordinate expressed as percentage (1 to 200%) of the radius of the main bolt. These coordinates are no longer entered, interactively, on the thumbnail preview. You now enter these directly on the main preview display for greater accuracy and control.

Refresh: Redraws the image and the lines.

## MODULES: EFFECTS/FIRE

The Fire effect is an astonishingly accurate simulation of flames. You can create candle flames, forest fires and even rings of fire with this effect.

**Fire Style:** When you've loaded a previously saved fire project, the name is displayed here.

**Random Seed:** You can set your random seed here. Use of the same seed will create the same effect repeatedly so long as all other parameters remain the same.

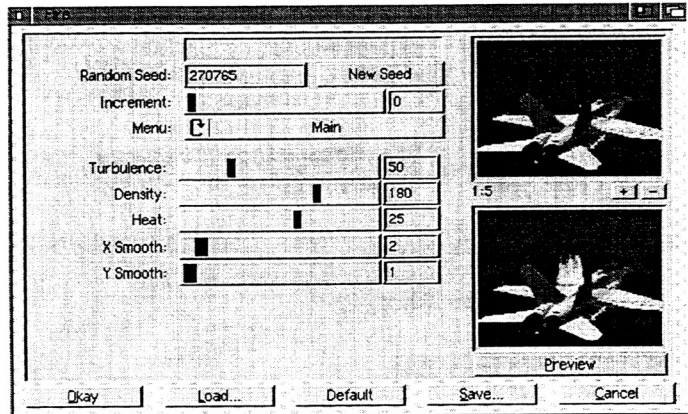
**Increment:** Accepts a number from 1 to 999,999. Used to make the fire move.

Increments of one will produce a slow flowing fire. Larger numbers create a flickering flame.

**Load/Save:** Used to load and save either pre-made or newly created settings for this hook.

**Defaults:** Sets all menu settings to the program default.

**Menu:** Switches between any of the six menus.



### Menu: Main

**Turbulence:** The amount of variation in the fire. (1 to 200)

**Density:** The solidity of the fire. At 255, the fire fills the selected area. (0 to 255)

**Heat:** Add or Subtract from the temperature of the fire. (-128 to 128)

**X Smooth:** Amount of horizontal smoothing of the fire texture. (-15 to 15)

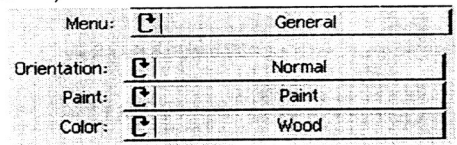
**Y Smooth:** amount of vertical smoothing of the fire texture. (-15 to 15)

### Menu: General

**Orientation:** Normal is an X, Y oriented fire. Radial In and Radial Out map the fire into a circular pattern.

**Paint:** Choices for selecting how the color of the fire is added to the buffer. Paint replaces the buffer color with the color of the fire. Add adds the color of the fire to the buffer's color. Add\_Max only adds the fire's color to the buffer's color when the fire is brighter.

**Color:** Choices for selecting which color palette to use. Wood is a built-in palette for a wood fire. Gas is a built-in palette for a natural gas fire. Greyscale is a built-in palette that is white at the fire base and goes to black at the flame tips. Draw1-7 selects from the current color palettes, and Style\_Palette is the colors from the selected Draw1-7 palette that were saved with the other fire parameters.



## Menu: Blend

Blend: Blends effect with the original buffer colors. (0 to 100%)


Taper: Controls the amount of tapering of the top of the fire. Not for radial fire (-100 to 100)

Blend Edges: When coloring using Paint, this does a tapered fading of the fire colors into the buffer colors. (0 to 100%)

Bottom: How far the fire goes below the fire's base. (0 to 100% of length)

X Stretch: Stretch or compress fire horizontally without altering the fire's size. Not for radial fire (-8 to 8)

Y Stretch: Stretch or compress fire horizontally without changing the fire's size. Not for radial fire (-8 to 8)


Menu:  Blend	
Blend%	30
Taper%	28
Blend Edges%	40
Stretch X:	0
Stretch Y:	0

## Menu: Placement

X and Y: The x and y coordinates of the fire's center. (-3\*buffer width to 3\*buffer width and -2\*buffer height to 2\*buffer height)

Angle: Angle of the fire (0-360)

Center: Resets X and Y to the center of the current buffer.


Menu:  Placement	
X:	376
Y:	249
Angle:	0
Center	

## Menu: Size

Length: How tall the fire is above the fire's base (1 to 2\*buffer height)

Width: How wide the fire is. Not for radial fire. (1 to 3\*buffer width)

Radius: Radius of circular fire, from center to fire base. Only for radial fire. (0 to 2\* buffer height)

Menu:  Size	
Length:	110
Width:	123
Bottom%:	20
Radius:	223


## Menu: Wind

Speed: Tilts the fire left or right. (-255 to 255)

Variance: Slower and larger variable part of wind. (0 - 255)

Wind\_Turbulence: Faster and smaller scale variable parts of wind. (0-255)

ANIM\_Speed: Makes the wind changes faster for Variance and Wind\_Turbulence. Increments 0 - 40.

Menu:  Wind	
Speed:	63
Variance:	81
Turbulence:	47
ANIM_Speed:	10

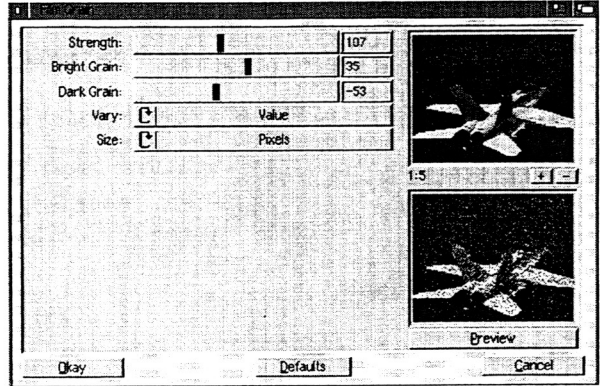
## MODULES: EFFECTS/FILMGRAIN

The FilmGrain effect impresses a noise pattern on the image allowing different strengths for Bright and Dark areas in order to simulate the look of the grain in film.

Strength: Affects how strongly the following parameters affect the image.

Bright Grain: Controls how strong the grain is in bright areas of the image.

Dark Grain: Controls how strong the grain is in the dark areas of the image.



Vary: Finds the variance of Bright/Dark by either Value, Hue or Both.

Size: This control allows you to impress a grain based on individual pixels or horizontal and vertical streaks.

Defaults: Sets all menu settings to the program default.

## MODULES: EFFECTS/SPARKLE

The Sparkle effect can be used to simulate the look of a star filter over a camera or the type of flash, or the sparkles, that appear on a "Disco Mirror Ball" by placing multiple tiny stars over hot spots on the image as specified by the following parameters.

Threshold: Allows you to create sparkles based on Luminance, Value, Hue or Saturation.

Minimum and Maximum: This sets the limits on the values in the possible ranges to allow sparkling to occur in.

Vary Angle: This parameter, when set to something other than None, will automatically alter the angle of the sparkles. Many different color options and presets to choose from.

Angle: Sets the angle directly when using None above.

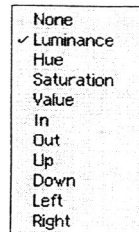
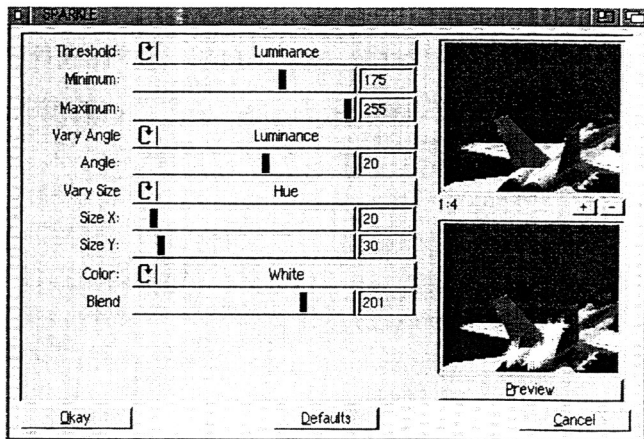
Vary Size: Similarly, you can automatically alter the size of the sparkle stars based on identical parameters.

Size X and Size Y: The absolute size when using the None option.

Color: The color can be white or come from the pixel color or the current drawing color.

Blend: The level at which the effect is blended into the final image.

Defaults: Sets all menu settings to the program default.



## MODULES: EFFECTS/PAINTFX (UPDATED)

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The Brush Stroke limit has been removed. To enter values higher than the range of the slider, click in the string gadget next to it and type in the value you want to use.

A cycle gadget to select viewing the Main, Swap, Alpha, or Brush buffers has been added below the upper preview thumbnail.



## MODULES: FILTER/COLOR BALANCING

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Color Balancing allows you to color correct an image by letting you select a color that is off balance from what it should be, and specifying the color it will be. The whole image is then color corrected to balance towards this color.

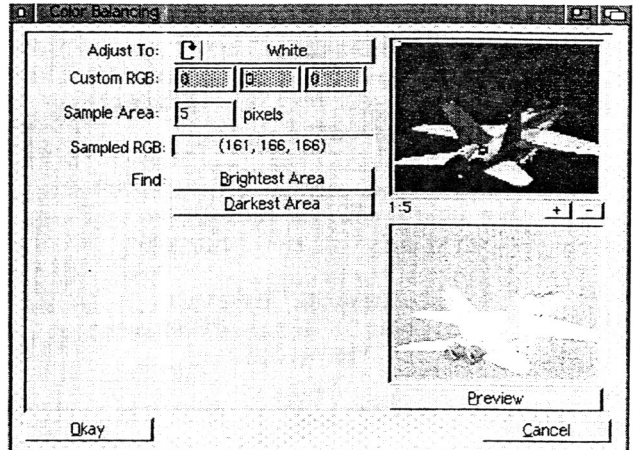
Adjust To: There are presets built in for White and Black balancing as well as the ability to specify the current Draw color and a Custom color.

Custom RGB: These gadgets allow you to enter the Custom color here.

Find: You can use this to find either the lightest or the darkest pixel automatically, which helps when doing quick white and black balancing.

Sample Area: This allows you to set how big a sample of the thumbnail preview to select. This sampled area is used to determine what the unbalanced color is that is to be corrected.

Sampled RGB: This shows you the results of the sample done above.



## MODULES: FILTER/REMOVE GRAIN

---

This effect examines the area around each pixel to see if the pixel is significantly different. If so, the pixel is removed. Special routines allow this routine to also remove lines from the image as well.

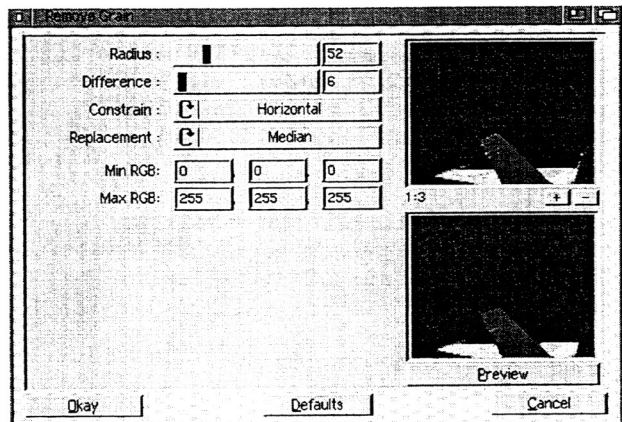
Radius: The distance around the pixel to examine for grain removal. The larger this value is, the more detail, or grain, is removed.

Difference: The maximum difference to accept. Controls how large the detail/grain can be.

Constrain: You can constrain the removal to horizontal or vertical detail only. None will remove both grains and lines.

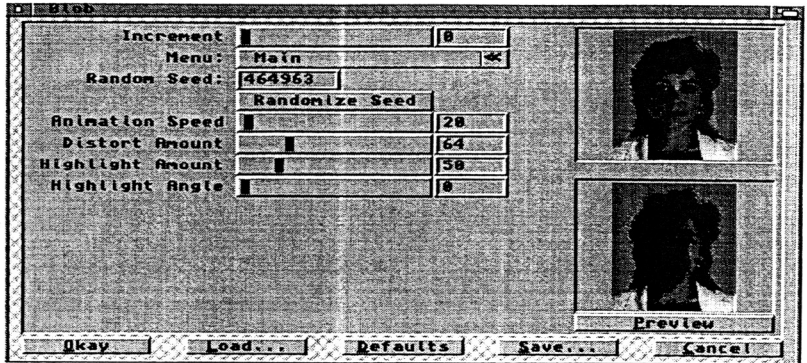
Replacement: Can replace the removed grain with an average or median value.

Min/Max RGB: Set the minimum and maximum RGB values for removal here.



## MODULES: HOOKS/BLOB

The name Blob is quite descriptive of this effect. It creates a colored, or clear, blob of digital goo on your image and can animate it flowing across the image in any direction. As a blob flows, it can create a trail of slime behind it as well. The goo distorts the image beneath it and you have full color over the color tinting.



Increment: Accepts a number from 1 to 999,999. Used to make the blob move and animate.

Menu: Switches between any of the six menus.

### **Menu: Main**

Random Seed: You can set your random seed here. Use of the same seed will create the same effect repeatedly so long as all other parameters remain the same.

Animation Speed: Sets overall speed of the animation.

Distort Amount: How much to distort the underlying image.

Highlight Amount: Controls amount of 'shine' on the image.

Highlight Angle: Controls angle of shine on the image.

Load/Save: Used to load and save either pre-made or newly created settings for this hook.

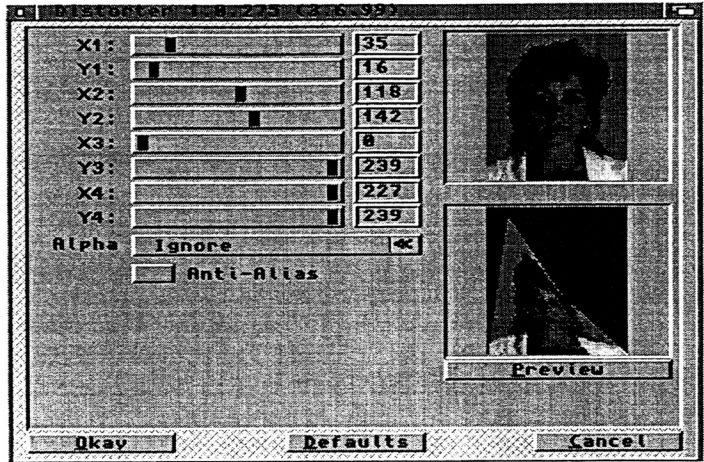
Defaults: Sets all menu settings to the program default.

## MODULES: HOOKS/DISTORTER

This effect is similar to the 3D Perspective Rotate.

After you bring up the menu, you will see a grid over your image. Instead of rotating though, you can grab the corners and start moving and bending them to your needs. You can easily distort an image, skew it from one side to another, stretch it, and even bend and twist it around moving one edge under or over another. This makes reforming a logo around a product box easy.

While you can modify the X1-Y4 parameters directly, it's far easier to click on the corners of the grid that is displayed over the image and use that to manipulate the coordinates for the distortion interactively this way. You can preview the results immediately as shown above.



X1 – Y4: Are the positions of the corners of the distorted image.

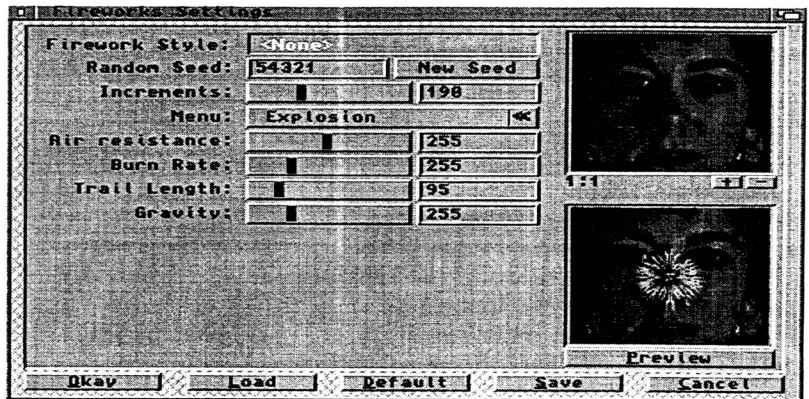
Alpha: You can set this to be ignored or to warp the alpha channel as well.

Anti-Alias: You check this to turn anti-aliasing on to make the distortion smoother.

## MODULES: HOOKS/FIREWORKS

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The ImageFX Fireworks module creates easily animated fireworks bursts. By default it will create a rather nice spherical burst and you can adjust the controls to make directional bursts to your liking. You have control over all the necessary parameters, force, gravity and the like. Even better though, you can replace the built-in particles with any brush you can load.



You can go from exploding fireworks to a shower of coins or have your fireworks explode with Happy Faces. In some experiments I've found it's not too hard to use one of the abstract smears in the Brush drawer and create fireworks in grayscales and use the False Color effect to remap the grays to a new color palette to resemble fiery explosions or psychedelic clouds.

Random Seed: You can set your random seed here. Use of the same seed will create the same effect repeatedly so long as all other parameters remain the same.

Increment: Accepts a number from 1 to 999,999. Used to make the fire move. Increments of one will produce a slow flowing fire. Larger numbers create a flickering flame.

Load/Save: Used to load and save either pre-made or newly created settings for this hook.

Defaults: Sets all menu settings to the program default.

Menu: Switches between any of the menus.

### **Menu: Explosion**

Air Resistance: Controls how fast the air will slow the particles down.

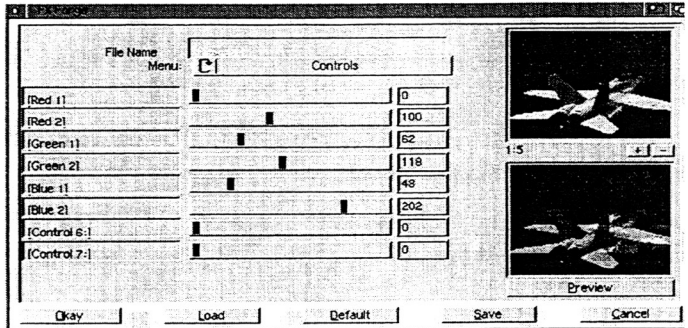
Burn Rate: Sets how fast the particles 'burn out'.

Trail Length: Enter how long you want the particle trail to be. Simulates motion blur.

Gravity: This can make particles heavier and begin falling faster.

## MODULES: HOOKS/FXFORGE

FXForge is a new hook for ImageFX 4.x that allows the user to make new image processing filters and effects by using mathematical operations that will affect each pixel in the image. This hook operates in the same way as Filter Factory™ does in Adobe PhotoShop™... in fact; it can actually import the standard text files used by the Filter Factory™ discussion group and use their functions! (Note that it imports the text files used to interchange the parameters not the finished 'plug-ins' that Filter Factory creates.)



FXForge can also do something that Filter Factory cannot... it can use both Alpha channel information and the swap buffer in its calculations. Expect FXForge filters to run slowly on all but the fastest Amigas, as the image process performed by a FXForge operation is not compiled and optimized like most ImageFX processes are. Even though the mathematics behind most FXForge operations are very complex, if you don't want to delve into the mechanics of image processing there is no need for you to worry. There are literally hundreds of Filter Factory filters already made that you can use with ease.

Load/Save: Used to load and save either premade or newly created settings for this hook.

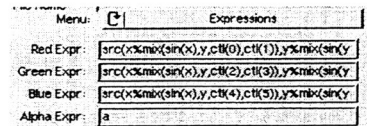
Defaults: Sets all menu settings to the program default.

### Controls Menu

The sliders in this menu are used to set the variables that are defined for use in the formula. There can be eight independently set variables, each of which may be controlled externally by Arexx.

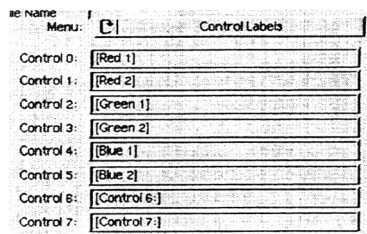
### Expressions Menu

The spaces provided in this menu are for input of the mathematical equations used to process each pixel. Separate equations may be used for the Red, Green, Blue and Alpha channel components of the individual pixels.



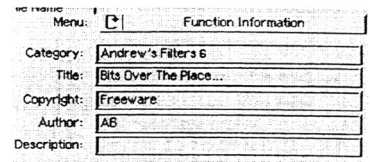
### Control Labels Menu

You can enter the names for each of the variables under the Controls menu here.



## Function Information Menu

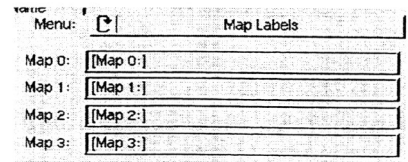
This menu is used to enter various data about the filter. Lines are provided for Category, Title, Copyright, Author and a one-line description of the function of the filter.



Menu:	Function Information
Category:	Andrew's Filters 6
Title:	Bits Over The Place...
Copyright:	Freeware
Author:	AB
Description:	

## Map Labels Menu

Allows the user to set name labels for each of the Maps. Maps place corresponding control values into an array where they are factored. The array table always has 256 entries. Map 0 is for control 0 and 1, Map 1 is for 2 and 3, etc.



Menu:	Map Labels
Map 0:	[Map 0:]
Map 1:	[Map 1:]
Map 2:	[Map 2:]
Map 3:	[Map 3:]

## Additional Information

More information on the inner workings of Filter Factory can be found via the Internet. Look at the following sites, and then try submitting 'Filter Factory' to your favorite search engine.

Adobe's documentation on Filter Factory is included on the CD-ROM for Photoshop. This information is also available on their web site at <http://www.adobe.com> in the form of a PDF (Adobe's Portable Document Format) which is readable on most Windows and Macintosh systems using Acrobat Reader, or on the Amiga using Ghostscript. For your convenience, this information is also duplicated on the Nova Design ftp page at <http://ftp.novadesign.com>

PC Resources for Photoshop - <http://www.netins.net/showcase/wolf359/fffaq.htm>, which includes a gallery collection of FF plug-ins at the URL: <http://www.netins.net/showcase/wolf359/adobepec.htm> under the Plugins section. Galleries are added as plugins are created and posted to the FF Mailing List.

The Filter Factory Discussion Group Homepage is located at <http://pluginhead.eyecandy.com>. There is a collection of almost all the codes, ideas and discussions posted in the FFDG. You can download it directly with <http://www.fhd-stuttgart.de/~ws01/zip/fftext.zip> (currently 107 KB).

Werner D. Streidt Page - <http://www.fhd-stuttgart.de/~ws01/neologye.htm>

Alf's Filter Factory Compendium (Alfredo Mateus' site) - <http://pluginhead.eyecandy.com/ffc.htm>

Many of these pages can also direct you to the filter factory discussion group mailing list where experts in the creation of these formulas post new formulas and help each other create them.

## MODULES: HOOKS/WIRELESS

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The Wireless hook is a program included with ImageFX that can be found from the Hooks menu off the Toolbox menu. This Program will allow you to set up projects that can automatically remove wires, support rods or even film scratches from a sequence of frames. This program can work with sequences of images, loading, batching and saving them internally, or if you've loaded a set of single images to work within ImageFX, it can use those as well.

Project: The name of the last saved, or loaded, project file.

Line #: The current line (wire) being worked on.

Menu: The current menu being accessed. Choices are Sequence, Frames and Line.

Load/Save: Used to load and save either premade or newly created settings for this hook.

Defaults: Sets all menu settings to the program default.

### Menu: Sequence

Sequence: Checkbox to process a sequence of images to be loaded or work with the current ImageFX buffers.

Light Table: Turns off and on the ImageFX Lighttable feature. This Lighttable (or onionskin) mode makes the current buffer translucent and lets you see through to the other image.

Main First: The first image of a numbered sequence to be loaded into the main buffer. It is recommended that the main buffer contain the image(s) to remove wires from.

Main Last: The last image of a numbered sequence to load.

Swap First: The first image of the Swap buffer sequence to load. This buffer should be a 'clean plate' (the images without wires, or with the wires in a new position) used to provide the areas that will replace the wires.

Save To: The base name to save the new image sequence to.

### Menu: Lines

This menu controls where you overlay the lines on the wires in the main buffer, then move the matching line on the swap buffer to cover an area that will replace the wire. This is the heart of the process here. The wires are removed by replacing them with matching background imagery that provides the illusion of there being no wires.

Mode: With this cycle gadget you control whether you are adding lines, moving lines, altering them, copying them or just selecting them. The select option is the first step of the Delete Current Line process.



Altering lines allows you to change the starting and ending positions. Moving lines keeps the orientation and length of the line, but allows you to move it around. This is useful when repositioning the line on the swap buffer. Adding a line puts a new line on the image in the default positions while copying a line adds a line with the same defaults as the current line.

Width: The width, in pixels, of the current line. Allows you to mask out wires and rods of varying widths.

Edge Blend: The amount of blending to do on the edges of the line in pixels. Allows you to mask out wires and rods of varying widths.

Main/Swap: The starting and ending x and y coordinates for the lines. Simply altering the lines directly on the preview image usually sets these, but for finer control, you can enter them here as well.

First Frame/Last Frame: Where the line begins and ends within the number of frames in the sequence.

## **Menu: Frames**

Keyframe: Selects the current frame to be a keyframe. A frame simply has its lines' position in the sequence calculated as a linear progression from the previous keyframe to the next keyframe. Keyframes allow you to exactly define the position of each line on that keyframe.

Frames: Display only. The number of total frames.

Frame: The currently selected frame.

Previous/Next Keyframe: Jumps to the previous or next keyframe.

Start/Finish Frame: The beginning and ending frames.

Zoom In/Out: Magnifies the preview display or backs out of a magnify.

Refresh: Redraws the preview display and the lines.

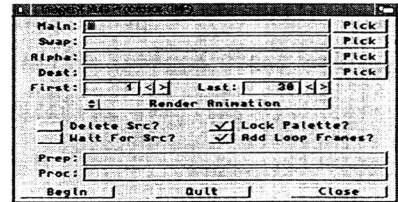
## MODULES: HOOKS/IMP

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IMP supports a new output format, "Output Animation." This option writes each frame to a 24-bit animation file, for use with such save formats as FlyerClip or JStream. Note that you will need to set the output Animation format using the menus before this procedure will work. IMP also has had a By: option added that allows you to skip frames when rendering and/or capturing an animation.

### Using IMP with Newtek's Video Flyer

This short tutorial will teach you the basics of batch processing on the Amiga using ImageFX as well as handling the Flyer from ImageFX. This tutorial will attempt to leapfrog you over much of the learning curve and get you working right away. We'll do this by showing you the basic step involved in performing some simple image processing over an entire Flyer clip.



Its possible to create Flyer clips in ImageFX, frame by frame, if you want to do so. However, there are a few things to be aware of:

Since ImageFX must use the Flyer's software compression (defaulting to HQ5 solely) the frames won't be the same size as the hardware compression. This mean you must create new clips instead of saving back to the original clip. This is a good idea in any case since you don't want to overwrite your original images.

When saving directly from ImageFX you'll need to turn off ImageFX thumbnail saving. ImageFX's thumbnails aren't compatible with the Flyer and will confuse it, preventing playback of the clip.

IMP will automatically process the entire clip. Sadly, because Flyer clips appear to AmigaDOS as a single file containing any number of frames or fields, IMP's point-and-click cousin, AutoFX, cannot read a Flyer Clip automatically. (AutoFX works by counting the number of files/frames you've added to its list of frames and creates animations based on this number. Since a Flyer clip appears, initially, to be a single file this technique fails.) If you really want to use AutoFX, you can use the Arexx script found in ToasterPaint, CliptoIFF, to make a clip into a series of IFF/ILBM frames on your hard drive then, when you've used AutoFX on those frames, use ToasterPaint's IFFtoClip to make them a clip again.

Other solutions include Visual Inspirations' Control Tower and VisualFX for ImageFX software packages. These excellent packages control the Toaster/Flyer and ImageFX to automatically create amazing animated effects and transitions. Contact Visual Inspirations for more information on their software.

### Learn Macros

IMP requires the use of ARexx commands for its batch processing. You can get these from ImageFX's help system by going to the Index and selecting ARexx Documentation, or you can use ImageFX's automated macro recording feature to have ImageFX write an ARexx script based on whatever you do in the program. There is a complete chapter on this in the ImageFX manual as well.

Shift-1 (!) turns macro recording on. Generally, you'll do this after loading one or more sample images to use as the basis of your macro script, but before you actually start to use the effects or image editing features you wish to record. It is also advisable to use images of the same size and color depth as some effects work differently on different sized images. When you first turn macro recording on, you'll be prompted for a name for your Learn file (the recorded macro). Enter a name, e.g.: sample.ifx, with the .ifx on the end simply to remind you that the file is a script for ImageFX. You'll also be prompted to save current drawing settings. Only confirm this if you're saving a series of painting operations.

Shift-2 (@) turns off macro recording and saves the script. Remember the path and name of the script.

## Setting Up

The first thing to do to set up IMP to process a Flyer clip is to hit the right mouse button to gain access to the pull-down menus.

Go to Setting and select ANIM Format you will get a string requestor into which you must enter the word **Flyer**. Next, select ANIM Options and replace whatever comes up with the word **Append**. (Don't bother entering the Load or Save formats. They aren't used when processing solely to and from Flyer clips.)

The four checkbox items should be OFF. (i.e.; no checks in the boxes)

The cycle gadget should be set to **Save 24-bit Animation**, which is what a Flyer clip is.

Select your Flyer clip for your main buffer by either keying the path and name of the clip into the Name: string or select it by hitting Pick at the end of the string gadget area.

If you are going to do Compositing, bluescreen or otherwise, select the Swap buffer in a similar manner.

Select the name for a new Flyer clip to save by entering the name in the Dest: string or use Pick to select a Flyer drive then enter the name following it.

If you recorded a macro script to use in IMP key it in now into the Proc: string (e.g.: Rx "sample.ifx" Otherwise key in the ARexx commands you will be using.

Once you've done all of the above, click Begin and away it will go!

## Advanced Tips

The ImageFX manual and addendum manuals contain a complete list of IMP's variables for passing frame numbers and more to your scripts. If you want to pass these variables into an ARexx script simply add them after the name of the script in the Proc: string, e.g.: Rx "sample.ifx \$f \$s \$e", and then read the parameters from within the ARexx script.

Many animations can be created by editing a macro script to add formulas that use the variables to animate parameters from a starting point to an ending point. More information on using ImageFX's macro recording ability can be found in **Legacymaker Production's** excellent **Catalyzer** series of videos on the use of ImageFX. Contact them for more information on these videos, you'll find their brochure in your package or call them at **(773) 465-5158**.

## MODULES: HOOKS/CLOUDS

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This new ImageFX hook allows you to render and animate realistic-looking fractal clouds that can be used as still or animated backdrops for images, animated sky texture maps in your favorite 3D program, and even animated fiery clouds for realistic-looking explosions!

Style: If you have loaded or are working with a named style it will be displayed here.

Increment: This sets the increment for cloud movement during animation. Slow-moving clouds should have small numbers, while a fast-rolling storm cloud might have a much higher one.

Nbr of Clouds: Sets the total number of cloudbanks in the image.

Cloud Number: Sets the number of the cloud currently being worked on.

Parameter Menu: Selects from the Fractal Parameters, Painting and Animation menus. Values changed in the individual menus effect the cloud whose number is set in Cloud Number. You can create and animate multiple layers of multiple types of clouds and have them using slightly different colors and properties.

Load/Save: Used to load and save either premade or newly created settings for this hook.

Defaults: Sets all menu settings to the program default.

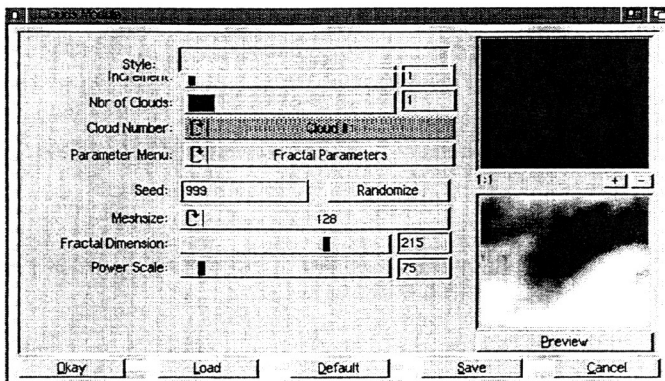
### Fractal Parameters Menu

Seed: Sets the random seed used to create the cloudbank. Either enter it numerically or you can click on Randomize.

Mesh Size: Sets the density of the fractal mesh used to create the cloud.

Fractal Size: The size of the fractal used to create the cloud.

Power Scale: Sets the geometric scale of the fractal.



## Painting Menu

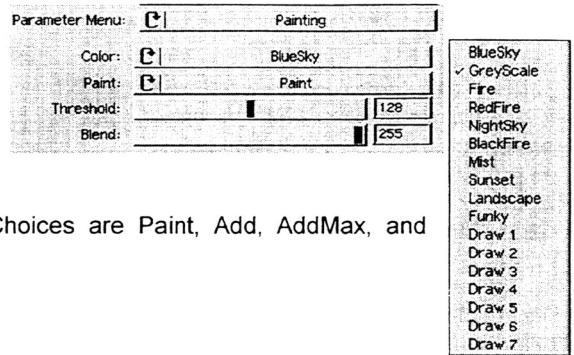
This menu sets the coloration and paint methods for the cloud.

Color: Sets the paint color for the cloudbank.

Paint: Sets the painting method for the cloud. Choices are Paint, Add, AddMax, and Translucent.

Threshold: Sets the color threshold for the cloud.

Blend: Sets the blending amount with the existing image buffer.



## Animation Menu

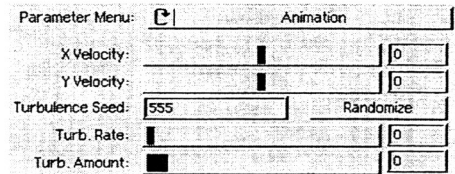
This menu sets the parameters of the clouds when you wish to animate them in motion.

X, Y Velocity: The rate of movement (in pixels per frame) of the cloudbank.

Turbulence Seed: Random seed for turbulence within the cloud.

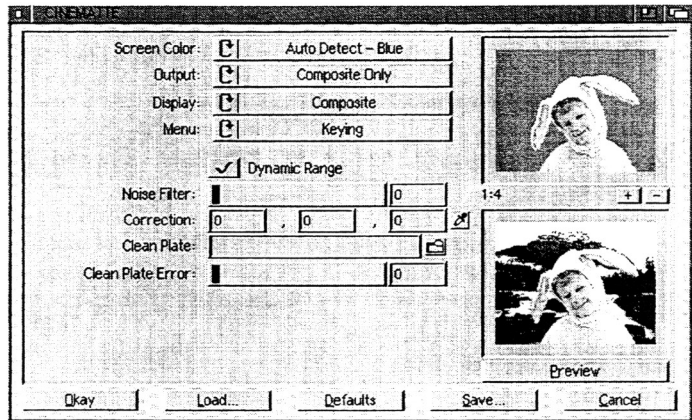
Turb. Rate: Sets the rate at which turbulence proceeds within the cloud.

Turb. Amount: Sets the relative strength of the turbulence.



## MODULES: HOOKS/CINEMATTE™

This hook performs a matte composite using the traditional blue or green screen, or a selection of other colors. To run Cinematte, click on the **Hook** button in the ImageFX toolbox and select **Cinematte** from the list shown. To use it you must have the image with the colored screen to be matted in the main buffer. If you set the output to have the composite performed (see "Output", below), you will need to have a new background image in the swap buffer. The background will be scaled to match the foreground, if necessary. Ordinarily, once the hook is run it will scan the image in an attempt to find blue screen settings for it.



Cinematte works by analyzing the image and deciding where it is actually the background color, and where it isn't. This information is called a matte, and can be saved into the alpha buffer. Once this is known, the background color is removed. (This is called keying the foreground.) This is done so that it does not show through in the final composite, and the composite can be performed.

Additionally you can control several steps of the operation through the following options, to help adjust for imperfect (not quite blue or green, poorly lit, or scuffed) screens, and in general to give you complete control over the results. Below is an explanation of these options.

Screen Color: Selects the color for the background to be removed.

Output: Selects the components of the composite to output to buffers. Choices are Matte, Composite, Composite & Matte.

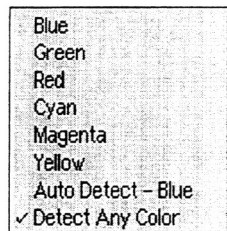
*Matte* puts a matte in the alpha buffer, keys the foreground in main, and does not require a swap buffer to be present.

*Composite* simply performs the composite, saving the results in the main buffer. No matte is generated.

*Composite & Matte* does the same as Composite, with the exception that it does save a matte in the alpha buffer.

Note that when the matte is written to the alpha buffer, the contents of the alpha will be lost without possibility of getting it back.

Display: Allows you to set what component of the composite you want to preview: the matte, the keyed foreground, the swap, or the final composite.



Menus: Allows you to access the Keying, Output and Matte menus.

Load/Save: Used to load and save either premade or newly created settings for this hook.

Defaults: Sets all menu settings to the program default.

## Keying Menu

*(Shown on previous page)*

Dynamic Range: Turns Dynamic Range on/off. The Dynamic Range option allows you to have your matte automatically adjusted to the full greyscale range. This option analyzes the image to determine what the matte would look like, and then it adjusts the entire matte to fit from pure white to pure black, scaling all the values up or down to the new range. Dynamic range is performed before any of the other matte adjustment options.

Noise Filter: This sets the amount by which you need to remove noise from the foreground (bluescreen) plate.

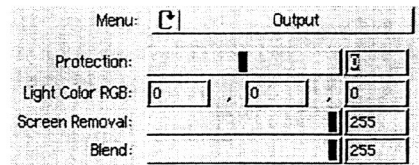
Correction: Also known as screen correction, this function works by finding the color furthest from the key color in the region selected by the eyedropper gadget and calculates a red, green and blue correction value to apply when creating the matte to make the screen as pure color as possible. Unlike Dynamic Range, this function can force the background of a matte to a much purer black without the loss of fine details.

Clean Plate: Brings up a file requestor to load in a clean plate.

Clean Plate Error: sets the amount by which to compensate for errors in the clean plate.

## Output Menu

Protection: This determines how much of the background color is removed from the foreground of the image as determined by the brightness of the matte. This option relies on the matte to determine where the foreground of the image is, so you should make sure you have a good matte before you set this option. This value is scaled against the brightness of the matte, so a value of 1 is often sufficient to retain desired color spill from the background.



Light Color RGB: Usually used separate from Protection, this substitutes a new color (specified as an RGB value) for any blue spill on the foreground subject. By using this parameter, you can alter the spill lighting as a post-process on the foreground subject so that they match the background more precisely. This can also be used to alter the color of a screen background to another color for special effects. To do this, you would have to suppress Screen Removal.

Screen Removal: A threshold of screen color that is to be removed from the foreground image. If left at the default of 0 (zero), no color is removed. The higher this value, the more screen color is removed

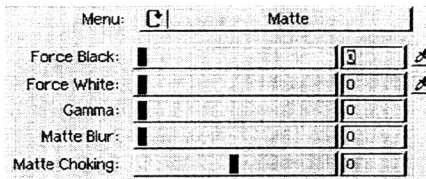
**Blend:** This determines how much of the foreground should be mixed into the composite. This is opposite of the way Blend works in composite.

## Matte Menu

**Force Black:** Forces the darker grays to pure black (the higher this value the more grays affected), which makes them totally transparent allowing the background to come through at full intensity.

**Force White:** The opposite of Force Black, this forces some of the lighter grays to become pure white, making them completely opaque so none of the background comes through.

The eyedroppers used by Force Black and Force White allow you to sample the preview image for the most contaminated black or white areas of the image. After clicking the eyedropper gadget you click and drag on the image, outlining a region to sample for contamination. If the matte is not already being shown, it will be temporarily displayed for this purpose.



**Gamma:** Allows you to adjust the overall contrast and brightness of the matte. Increasing this value will darken the background and lighten the foreground while maintaining the midtone grays that can be washed out by overuse of Force Black and Force White.

**Matte Blur:** Applies a Gaussian blur to the matte over the specified radius. This allows you to soften the edges. This can help when the image is acquired from video that has bad artifacting or dot crawl. The drawback is that you will lose some definition on the edges as a result. If you're creating the frames for multimedia or game output, you can restore some definition by scaling the size of the image down. You are advised to use only low values (between 1 and 16) because the matte begins to noticeably lose definition at values of three or higher. At values higher than 16, the matte is likely to become a soft, useless blob.

**Matte Choking:** This value sets the radius for pull the matte in or push it out. Use this at a value of negative one (-1) to remove blue outlines caused by a badly lit background or excessive blue spill. The soft edges are maintained and this usually fixes the problem. Positive values for choking can be used for interesting effects.



## MODULES: HOOKS/PAGECURLER

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Pagecurler gives you the option to create the effect of turning down a page in a book or stack of papers.

Orientation: Sets the orientation of the curl on the page (Horizontal or Vertical)

Position: Sets which corner of the image the curl is in. Options are, Upper Left, Upper Right, Lower Left and Lower Right.

Curl: Sets the color of the page curl itself to either Use Active Pen Color or White.

Background: Sets the source for the background revealed by the curl.

*Use Active Pen Color* uses the color of the active pen as the background color.

*Copy From Original* uses a copy of the appropriate part of the original image.

*Copy From Swap* uses a copy of the appropriate part of the Swap buffer.

*Black/White* uses a plain backdrop of the designated color.

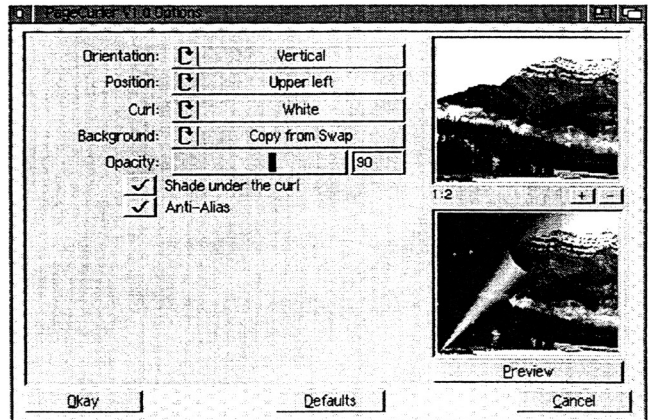
*Copy From Alpha* uses a copy of the appropriate part of the Alpha channel.

Opacity: Sets the opacity of the portion of the curl that is folded onto the original image.

Shade under the curl: This checkbox determines whether the curl casts a shadow onto the original image.

Anti-Alias: Enables anti-aliasing on the edges of the curl.

Defaults: Sets all menu settings to the program default.

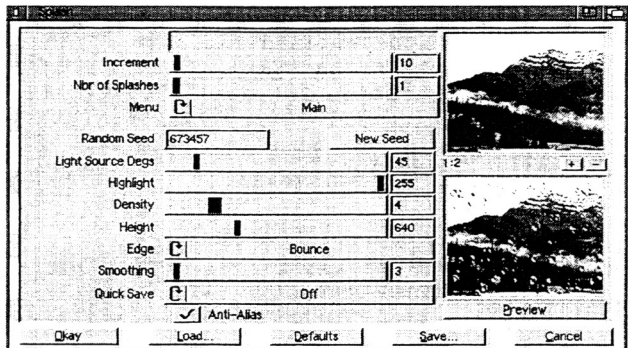


## MODULES: HOOKS/SPLASH

The new ImageFX hook, Splash, allows you to create rendered, animated waves and ripples in the image as if it were seen through a window on a rainy day or it were reflected on the surface of a pond. Splash uses ray tracing and height fields to achieve its effect, so expect its operations to take some time.

Increment: Sets the increment for animating.

Nbr of Splashes: The number of splash effects to apply.



Menus: Accesses the menus for controlling the Splash effect.

Load/Save: Used to load and save either sample settings or newly created settings for this hook.

Defaults: Sets all menu settings to the program default.

### Menu: Main Menu

Random Seed: Input for random number seed that is used when generating Rain coordinates and generating the Surfers path.

Light Source Degs: Angle of the light source.

Highlight: Brightness of light source.

Height: Strength of a splash.

Edge: Bounce means the ripples bounce off of the edges of the image while wraparound means it wraps to the corresponding edge of the image buffer.

Smoothing: Blurs the internal Splash buffer before it is applied to the image. This will remove some low-level noise in the buffer that is generated during splash processing.

Quick Save: Sets how the quick save file is used. Splash uses internal buffers to generate the splash effect. Without quick save file, Splash would always have to regenerate the splash buffers starting at increment 0, which would be slow for animations. By using the quick save file, splash saves and reuses the buffers that were generated in a previous execution of splash. Splash only uses valid quick save files, which are valid if the quick save file has the same width and height as the present image buffer and the increment you want to generate comes after the increment that was used to generate the quick save file.

*Read/Write*- Reads the quick save file before generating the next increment, then saves new quick save file. This is the normal option when using the quick save file.

*Write*- Only saves the new quick save file. Use this option when you want make sure you don't read previous quick save file. Such as when you change an already generated splash's options so that the quick save file is now wrong.

*Read*- Only reads the quick save file before generating the next increment. Use this option when you want make sure you don't create a quick save file. Such as when you are fine-tuning a splash's options and that splash occurs at the end of a long splash effect that has already been saved.

Antialias: Checkbox to turn off or on splash antialiasing.

## Menu: Splash Menu

This menu allows the user to set the traits for each splash effect in the animation or image buffer.

Type: Selects the type of splash effect desired .

*Drop*- Put one drop right where you tell it to.

*Rain*- Puts random drops over the whole area.

*Surfer*- Random moving spot traveling over the image.

*Swirl*- Spot that moves in a circle.

*Line*- Draws a line of spots between two points.

*Arc*- Draws an arc of spots between two points.

Type	Rain	
Begin at Increment	<input type="text" value="0"/>	<input type="text" value="0"/>
End at Increment	<input type="text" value="100"/>	<input type="text" value="100"/>
Start/Center X	<input type="text" value="0"/>	Y <input type="text" value="0"/>
End X	<input type="text" value="0"/>	Y <input type="text" value="0"/>
Drop Radius	<input type="text" value="6"/>	<input type="text" value="6"/>
Arc Radius	<input type="text" value="100"/>	<input type="text" value="100"/>
Spacing	<input type="text" value="10"/>	<input type="text" value="10"/>

Drop
<input checked="" type="checkbox"/> Rain
Surfer
Swirl
Line
Arc

Begin, End at Increment: This splash type starts/stops affecting the image when the Increment reaches this number.

Start X, Y: These are x and y coordinates for the splash effect's point of origin.

For Drop, this is the center of the drop. For Swirl, this is the center of the swirl's circle. For Line, this is the starting point of the line. For Arc, this is the starting point of the arc. This is ignored for all other splash types.

End X, Y: These are x and y coordinates for the splash effect's point of termination.

For Line, this is the ending point of the line. For Arc, this is the ending point of the arc. This is ignored for all other splash types.

Drop Radius: For RAIN, this is the maximum raindrop radius. For all other types it is the splash radius.

Arc Radius: For SWIRL, this is the radius of the circle. A negative radius reverses the swirl direction.

For ARC, this is the radius of the arc drawn between start x, y and the end x, y points. A negative radius bows the arc in the opposite direction. This is ignored for all other splash types.

Spacing: For SWIRL, LINE and ARC, this is the pixel spacing between successive drops.

For SURFER, this is roughly the maximum pixel spacing between the successive drops.

For RAIN, the raindrops occur per increment at this speed.

## MODULES: HOOKS/SCATTER

The new Scatter hook breaks an image up into fragments and scatters the individual brushes, creating a photo-montage effect, or an interesting transition for video or animations.

Cell Size: The size of the individual chunks the main image buffer will be broken into, in pixels.

Random Seed: Random seed for the direction and distance of the scatter effect.

Threshold Min/Max: Sets the minimum or maximum grayscale values to be picked up from the pieces.

X, Y: Sets the X and Y values for the center of the scatter effect.

Source: Sets the source of the backdrop. (The backdrop fills in the blank spaces left by the scatter effect on the foreground image)

*Swap Buffer* uses the swap buffer as the backdrop

*Exchange Pixels* switches the pixel elements of the source and destination pixels

*Black/White* uses the appropriate color

*Draw Color* uses the currently selected draw color.

Type: The type of scatter used.

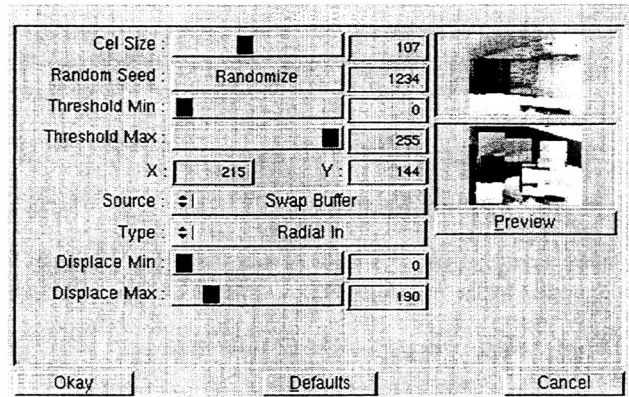
*Radial In/Out* the image fragments are moved in a circular pattern either starting at the outside (In) or the center (Out)

*Linear* uses a normal linear progression.

*Swirl In/Out* creates a swirl pattern using the designated angle for rotation.

Displace Min/Max: The minimum and maximum amounts to displace the image elements from their origin.

Angle: Sets the rotation angle between the image elements. (Swirl In and Swirl Out only)



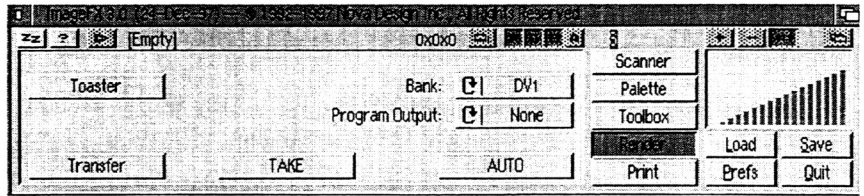
Swap Buffer  
Exchange Pixels  
Black  
White  
Draw Color

Radial In  
Radial Out  
Linear  
Swirl In  
Swirl Out

## MODULES: RENDER/TOASTER

---

The Toaster Render module (shown below) allows you to transfer an ImageFX buffer directly to one of the Video Toaster's two framebuffers.



Bank: Select which Toaster framebuffer to transfer image data into. The choices are DV1 and DV2.

Program Output: This option determines what action the Switcher is to take when the image is transferred to the Toaster. The choices are None, Take, and Auto.

Transfer: Transfer the current buffer to the Video Toaster.

TAKE: Direct the Switcher to do a take.

AUTO: Direct the Switcher to do an automatic transition using the currently selected wipe effect.

## MODULES: PRINTER/FOTOFUN AND PRIMERAPRO™

---

Two new printer modules, supporting the Fargo FotoFun and PrimeraPro printers, have been added to ImageFX.

In most respects, these modules function in the same way as the Primera printer module. There is an additional cycle gadget to set the output resolution (either 300x300 or 300x600).

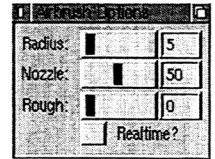
There is a new gamma correction curve for color thermal (wax) printing. This makes for far superior prints in wax mode. The wax gamma curve is adjustable in the Default.Primera file.

The global defaults menu has a "# Copies" gadget. This lets you print more than one copy without taking the time to reformat it.

***NOTE: Both of the above changes apply to the standard Primera module as well.***

### Changes to Paint Menus

In ImageFX 4.x, the old paint menus have been replaced with two separate menus accessed by double clicking on any drawing or paint icon. The Airbrush options are accessed through the Airbrush tool, the Drawing options and the Fill options are activated by double clicking any other paint tool. These menus can be left out to be accessed anytime you need them.

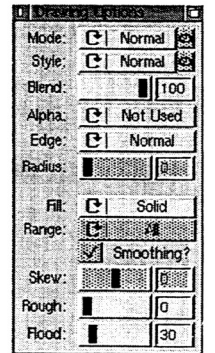


### Lighten and Darken Drawing Modes

The Lighten and Darken drawing modes each have a single option to control the amount of lightening and darkening, respectively. The control ranges from 1-255, with higher values producing more lightening or darkening.

### Sponge

The Sponge Drawmode works by starting to paint in the currently selected color and treats the colors on the image as wet paint that are picked up by the brush.



Absorption: Specifies how much, as a percentage, of the image's paint to allow the brush to pick up.

Load Sponge: Allows you to load any custom brush that will be used as the "shape" of the sponge.

Auto Clean: When selected this will cause the paint on the brush to reset to the draw color between uses.

## **MODULES: LOADERS/SAVERS**

---

### **New INGF (ImageFX Native Graphics Format) (Loader/Saver)**

This format can be used to load and save images that use the new layered structures and store animation frames as well. The only internal difference is in the order of the layers vs the frames.

### **New Photoshop Document Modules (Loader/Saver)**

A new Photoshop Document (.psd) loader and saver has been added. This supports much of the Photoshop format through the Photoshop 4.01 release excepting CMYK support. The Saver is only designed to save flattened images – Photoshop will not read a layered .PSD saved from ImageFX.

### **New JPEG Modules (Loader/Saver)**

The JPEG loader and saver are based off the current IJG JPEG source code, revision 6. This means that you can load and save all JPEG images, even Photoshop CMYK formatted JPEG images.

### **Anim**

You can load individual frames or sequences of frames from an animation and save sequences as well using the Layers/Frames manager to edit complete or partial animations.

### **Recombining (RGB/CMY/CMYK) (Loader)**

This new loader allows you to recombine any of the files produced by the save/separate option. Files from other platforms, whether in RAW or ILBM/IFF format, can be recombined as well.

### **Video Toaster® Framestore**

Note that while ImageFX allows you to save nearly any size image as a Framestore, remember that the Switcher can only load Framestores that are 752x480.

### **Flyerclip**

The Newtek Toaster/Flyer Flyerclip format is also supported and you can load single frames or a sequence of frames. If you load a sequence of frames be ready for some hefty memory requirements!



## **FITS**

NASA FITS (Flexible Image Transport System). Because FITS is a greyscale format, color images saved in this format will be converted to greyscale automatically.

## **TIFF**

The TIFF loader now loads CMYK format files.

## **Where is GIF?**

The GIF modules, Loader and Saver, were based on CompuServe's GIF image format specifications. CompuServe failed to properly license the use of a compression method used in GIF that is patented by Unisys. Unisys is now asking license fees that CompuServe, in turn, is passing on to developers with additional fees for all commercial uses of GIF. Because of this, we have removed the GIF loader and saver from the commercial distribution of ImageFX. We have now released these modules, which are compliant with GIF 89a specifications, into the public domain. They can be downloaded from CompuServe and the Internet. See information elsewhere in this manual on how to find our FTP site.

The GIF modules now fully support GIF Animation as well now! You can load a GIF animation and edit it and save a GIF animation as well.

## **Image Sequences**

You can load any numbered sequence of frames by hitting ALT while clicking the LOAD gadget or select Load or Append Sequence from the Layers Manager menu. These sequences can be immediately saved as an Anim, GIF anim, or Flyerclip or out to a new Sequence as well.

## **ARexx Programs**

The following ARexx programs have been added:

### **ChangeFPS**

ChangeFPS is used to modify the frame rate of an animation stored as a series of frames. You can use this, for example, to convert an animation sequence from 24fps to 30fps.

### **MotionReq**

MotionReq allows you to animate brushes across a background. You provide starting and ending positions, rotation amounts, and whether or not you would like a shadow generated. The script will then output frames that can then be assembled into an animation using IMP or AutoFX.

## MANUAL CORRECTIONS

---

### Epson Scanner Cable

On page B.2, the pinout for the GVP-specified cable is incorrect. The correct pinouts are below.

DB25 Male (Amiga)	Centronics 36 Male (Scanner)	
2:	2: D0	
3: D1	3: D1	
4: D2	4: D2	
5: D3	5: D3	
6: D4	6: D4	
7: D5	7: D5	
8: D6	8: D6	
9: D7	9: D7	
10: ACK*	10: ACKNLG*	
11: BUSY	11: BUSY	
12: POUT	36: DIR	
13: SEL	1: STROBE*	
16: Reset*	31: INIT*	(this is the corrected pinout)
22: GND	30: GND	
25: GND	33: GND	

You can buy these cables at most Amiga dealers, mail order or direct from Redmond Cable at their *new* numbers: (423) 478-5760 or (425) 882-2009. They are on the Internet at <http://www.redcab.com> as well.

### Text Generator

The Text Generation tool operates slightly different from the way the manual describes starting on page 5.13. When you first open the text window, the cursor is positioned in the blank text entry string gadget ready for you to enter text (it does not say "Test Text" as the manual indicates). When you press **return**, a new line of text is automatically created for you; you do not need to click Add for each line of text.

### Virtual Memory Explained

The virtual memory preference window now includes a "Defaults" button to set suitable defaults for the buffer size and maximum RAM settings. Here is a quick explanation of the other gadgets.

**HD Buffer:** Transfer block size i.e. If 40MB vmem is to be allocated then the allocation will be transferred in n size blocks where n is the figure in HD Buffer.

**Max Ram:** Set to half available contiguous FastRAM. – Maximum RAM to allocate in one chunk.

This means that if Max Ram is 16MB, HD Buffer is 512K and you load a 60MB image then ImageFX will load the 60MB scan to vmem in 16MB chunks and each chunk will transfer to/from disk in 512K blocks.

## AUTOFX SCRIPTS

---

Following are brief descriptions of some of the less obvious AutoFX scripts. Scripts not listed below perform the function associated with their name.

Add.ifx	Composites images using the Add option.
Adjust_HSV.ifx	Color correct using HSV color model.
Adjust_RGB.ifx	Color correct using RGB color model.
Anim_to_ANIM.ifx	Convert any animation format to ANIM5.
Anim_to_ANIM7.ifx	Convert any animation format to ANIM7.
Anim_To_FLC.ifx	Convert any animation format to PC FLC format.
AutoFX.ifx	These scripts are automatically executed before and after the entire set of processes. May be used to turn off redraw and other functions.
Bust_Anim.ifx	Takes an animation (any type) apart into frames.
Channel.ifx	Lets you set which RGB channels are to be used. (Defaults to all)
Cinematte_Load.ifx	Load a set of Cinematte settings into Cinematte
Composite_Matte.ifx	Composites images using the Matte option.
Composite_Merge.ifx	Composites images using the Merge option.
Copy_AlphaToMain.ifx	For accessing the Alpha channel via AutoFX.
Copy_MainToAlpha.ifx	For accessing the Alpha channel via AutoFX.
Crop_Auto.ifx	Crops single color borders from images automatically.
Custom.ifx	Lets you enter a command string to execute on each frame.
EOT_Bubble.ifx	Effect Over Time for the Bubble effect.
EOT_Dream.ifx	Effect Over Time script for Dream function.
EOT_Fire_Load.ifx	Loads a set of EOT settings into the Fire effect.
EOT_LensFlare.ifx	Effect Over Time script for Lens Flare.
EOT_Lightning.ifx	Effect Over Time script for Lightning.
EOT_Mosaic.ifx	Effect Over Time script for Mosaic.
EOT_Perspective.ifx	Effect Over Time script for Perspective.
EOT_PolarMosaic.ifx	Effect Over Time script for Polar Mosaic.
EOT_PondRipple.ifx	Effect Over Time script for creating a Pond Ripple effect using Splash.
EOT_RadialStar.ifx	Effect Over Time script for Radial Star.
EOT_Rotate.ifx	Effect Over Time script for Rotate.

EOT_Scatter.ifx	Effect Over Time script for Scatter.
EOT_Spherize.ifx	Effect Over Time script for Spherize.
EOT_Splash_Adjuster.ifx	Adjust a set of Splash settings once they have been loaded using EOT_Splash_Load.ifx
Halftone.ifx	Performs a 45-degree cluster halftone on a frame.
Load.ifx	Loads a frame. Needed as start for most operations.
Load_Mapped.ifx	Loads only color mapped images directly to rendered image buffer. Saves time for simple conversions.
Load_Region.ifx (2.1)	Load a region mask from disk.
Redo.ifx	Does a REDO (repeats last command).
RenameForFrameStore.ifx	Renames selected frames for Toaster compatibility.
RenameForSequence.ifx	Renames selected frames to a single sequence name.
RenameOneForSequence.ifx (2.1)	Copy a single input file into multiple sequenced output files.
Render.ifx	Renders images using currently selected ImageFX render module.
Render_Amiga.ifx	Renders images using Amiga rendering.
Render_Foreign.ifx	Renders images using rendering for non-Amigas.
SaveBufferAs.ifx	Saves buffer in selected format and name.
SaveBufferAs_ILBM.ifx	Saves buffer as ILBM.
SaveBufferAs_JPEG.ifx	Saves buffer as JPEG.
SaveBufferAs_MPEG.ifx	Saves buffer as MPEG.
SaveRenderedAs.ifx	Saves rendered image in selected format and name.
SaveRenderedAs_ILBM.ifx	Saves rendered image as ILBM.
SaveRenderedAs_ANIM.ifx	Saves to ANIM5.
SaveRenderedAs_ANIM7.ifx	Saves to ANIM7.
SaveRenderedAs_FLC.ifx	Saves to PC FLC format.
Scale_Absolute.ifx	Scale frame to an exact size.
Scale_Percent.ifx	Scale frame by a percentage.
Swap.ifx	Swap contents of main with swap frame.
Swap_Alpha.ifx	Swap contents of main frame with whatever is in alpha.
Template.ifx	Sample frame script template.
Text.ifx	For placing text on frames.

## IMP "VARIABLES"

---

There are some special identifiers you can place into an IMP prep or proc string that will be replaced when the batch is run. All identifiers begin with a "\$" symbol. Case is not important.

\$(<start>, <end>)

Calculates the value between <start> and <end> that corresponds to the current frame number. Used to vary an effect parameter over time. EG: "Sharpen \$(10,128)" will vary the sharpen parameter from 10 to 128 over the course of the IMP batch.

\$( [<start>, <end> ]

Almost identical to \$(<start>, <end>) above, but in this format the <end> value is never reached. This is useful when constructing looping animations. EG: "Rotate \$[0,360]" will create a 360-degree rotation over the course of the batch, without creating a "hitch" at the loop point.

\$F

Current frame number.

\$S

Starting frame number.

\$E

Ending frame number.

\$1

Source 1 name.

\$2

Source 2 name.

\$D

Destination name.

## IMAGEFX TOOL TYPES

---

ASPECTADJUST=<num>

Aspect ratio correction for aspect lock. Values greater than 1.0 adjust the image wider, values less than 1.0 adjust the image taller.

ASSIGN=<assign\_name: >

Select the Assign name for the directory where ImageFX resides.

ASYNCHHELP (2.1)

Enable asynchronous help windows for the Workbench ImageFX.

CYCLE\_GADGET=CLASSACT (4.X)

Enable cycle gadgets to use ClassAct to allow cycling and a pop-up menu of options.

DEBUG

Turns on debugging mode. This can strongly slow ImageFX down.

DEBUGLEVEL=<num>

Configures the debugging to levels 0-2. 0 is the most detail. 2 is the least.

DEBUGFILE=<file>

Outputs debugging information to a specified file. If omitted the file will be put in RAM:.

DRAWMODEPATH=<directory>

Select the directory where Drawmodes reside.

FILETYPE=IMAGE

Identifies a file as an image that may be loaded automatically by Workbench extended selection.

FONTNAME=<name.font>

Name of font to use for ImageFX display. Must also use FONTSIZE.

FONTSIZE=<size>

Size of font to use for ImageFX display. Must also use FONTNAME.

GTCOMPLIANT

When specified, cycle gadgets perform exactly as GadTools cycle gadgets. (That is, clicking anywhere in the gadget cycles up, shift-clicking anywhere in the gadget cycles down.)

HELP=<directory>

Select the directory where help text is located.

HOOK=<file>

Automatically run the given hook upon starting ImageFX.

HOOKEXIT

Exit ImageFX upon completion of an automatically run hook. Generally not useful unless you also specify HOOKSYNC.

## HOOKSYNC

Specify that the startup hook should be run synchronously (i.e. ImageFX is suspended until the hook completes).

## ICONIFY

Start ImageFX iconified.

## INITVMEMLATE

Do not initialize virtual memory RAM buffers until they are first required.

## LEFTEDGE=<coord>

Select left edge of Workbench ImageFX. Only useful in conjunction with the WORKBENCH tool type.

## LOADERPATH=<directory>

Select the directory where loader modules are located.

## MACRO=<file>

Launch the given Arexx macro automatically upon startup.

## NOASYNCHHELP

Disable asynchronous help windows in the Workbench ImageFX. This is the default in ImageFX 2.1.

## NOATTACHEDSCREENS

Under OS 3.x, opens all ImageFX screens separately instead of attached together.

## NOSTARTUP

Do not start the default startup Arexx macro.

## NOWBPREVIEW

Disable preview capability in the Workbench ImageFX.

## PALETTE=<file>

Select the palette file to load upon startup.

## PREFS=<file>

Select the Prefs file to load upon startup.

## PREVIEW=<file>

Select the preview module to load upon startup.

## PRINTER=<file>

Select the printer module to load upon startup.

## PUBSCREEN=<name>

Select the name of the public screen on which to open the Workbench version of ImageFX. This is only useful in conjunction with the WORKBENCH tool type.

## QUANTIZE=<file>

Select the quantize module to load upon startup.



## QUIET

Disable the status indicator window on startup.

## RENDER=<file>

Select the render module to load upon startup.

## SAVERPATH=<directory>

Select the directory where saver modules are located.

## SCANNER=<file>

Select the scanner module to load upon startup.

## TEXT=<directory>

Select the directory where localization text is located.

## TOOLCONFIG=<file>

Select the toolbox configuration file to load upon startup.

## TOPEdge=<coord>

Select top edge of Workbench ImageFX. This is only useful in conjunction with the WORKBENCH tool type.

## WINDOWED

Force ImageFX to use the new-style windowed interface.

## WORKBENCH

Open ImageFX on Workbench instead of on its own screen.

## **ImageFX Command Line Arguments**

Image, Prefs/K, Macro/K, NoStartup/S, WB/S, Iconify/S, Scanner/K, Render/K, Preview/K, Printer/K, Quantize/K, PubScreen/K, Text/K, Hook/K, HookExit/S, Assign/K, Quiet/S, NoWBPrev/S

### Image

Select initial image to load.

### Prefs/K

Select the Prefs file to load upon startup.

### Macro/K

Run an Arexx macro upon startup.

### NoStartup/S

Disable startup Arexx macro.

### WB/S

Run ImageFX on Workbench.

### Iconify/S

Start ImageFX iconified.

### Scanner/K

Select scanner module to load upon startup.

Render/K

Select render module to load upon startup.

Preview/K

Select preview module to load upon startup.

Printer/K

Select printer module to load upon startup.

Quantize/K

Select quantize module to load upon startup.

PubScreen/K

Name of public screen on which to open Workbench ImageFX.

Text/K

Use this to indicate the directory where localization text resides.

Hook/K

Hook to execute upon startup.

HookExit/S

Exit ImageFX upon completion of startup hook.

Assign/K

Select the Assign name for the directory where ImageFX resides.

Quiet/S

Disable the status indicator window on startup.

NoWBPrev/S (2.1)

Disable preview capability in the Workbench ImageFX.

## **ImageFX Browser Tool Types**

CYBERGRAPHICS (2.1)

Open Browser on a CyberGraphX screen. Requires CyberGraphX software.

DRAWER=<directory>

Initial drawer to scan.

GREYSCALE

Select a greyscale screen.

IMAGEFX=<command>

Select the command and arguments to run ImageFX.

MPEG=<command>

Select the command and arguments to run the MPEG player.

## NOVERIFY

Disable verification requesters (e.g. "Are you sure you want to quit?").

## RETINA (2.1)

Open Browser on a Retina screen. Requires RetinaEmu.

## REXXDIR=<directory>

Select the directory where browser Arexx commands are found.

## SCREENDEPTH=<bitplanes>

Screen depth, in bitplanes (e.g. 4 is 16 colors, 8 is 256 colors).

## SIZEGADGET (2.1)

Provide a sizing gadget when opened on a custom screen.

## VIEWTEK=<command>

Select the command and arguments to run Viewtek.

## WORKBENCH

Open browser on Workbench.

## **ImageFX Browser CLI Arguments**

Drawer, ScreenDepth/N, Grey/S, ImageFX/K, Viewtek/K, Mpeg/K, WB/S, NoVerify/S

### Drawer

Initial drawer to scan.

### ScreenDepth/N

Screen depth, in bitplanes (e.g. 4 is 16 colors, 8 is 256 colors).

### Grey/S

Select a greyscale screen.

### ImageFX/K

Select the command and arguments to run ImageFX.

### Viewtek/K

Select the command and arguments to run Viewtek.

### Mpeg/K

Select the command and arguments to run the MPEG player.

### WB/S

Open browser on Workbench.

### NoVerify/S

Disable verification requesters (e.g. "are you sure you want to quit?").

## **CineMorph Tool Types and CLI Arguments**

(There are none.)

## SUPPORT: GETTING HELP WITH IMAGEFX

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If you require technical support for ImageFX, or Nova Design's 3D program Aladdin 4D, please visit Nova Design's web site at <http://www.novadesign.com>. This is Nova Design's official support site for their software, and patches, updates, and example scripts for ImageFX and Aladdin 4D can be found here. This replaces Late Night BBS as Nova Design's primary support site for its software. If you don't have web access, most of the files on the site can be accessed via FTP at [ftp.novadesign.com](ftp://ftp.novadesign.com) in the directory `/pub/imagefx`. Some technical support is also available through graphics-related Amiga Usenet groups, or by subscribing to the ImageFX mailing list documented in the next chapter.

Nova Design's primary email address is also now [kermit@novadesign.com](mailto:kermit@novadesign.com) for all support issues.

You can also reach technical support for ImageFX at (804) 282-6528 from 12noon to 4pm eastern time.

## IMAGEFX MAILING LIST

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The ImageFX mailing list is now hosted directly by Nova Design, Inc. as a forum for discussions of the techniques and use of ImageFX. This mailing list should serve as a forum for people to talk about the uses of ImageFX, tricks you can try, general help, etc. Nova Design personnel read the mailing list frequently to provide feedback as well as interacting in ongoing discussions.

Many thanks to Matt Perry, the founder and original moderator of the ImageFX mailing list, without his efforts, none of this would have originally been possible! We haven't forgotten you Matt!

As the mailing list is (currently) hosted from 'egroups' and has changed twice before, we now refer you to look up the most recent instructions on joining the mailing list. The instructions can be found on the Nova Design, Inc. web site at [www.novadesign.com](http://www.novadesign.com) in the ImageFX section.

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