

FUSION8V1.00

COLLABORATORS

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Chapter 1

FUSION8V1.00

1.1 Fusion8 V1.00 Guide Clear 1999

FUSION8 V1.00

Welcome to Fusion8, a programmers tool allowing register based palette manipulation and editing of 256 colour palettes only.

Fusion (in FusionV1_0 folder), is designed to deal with palettes with 128 colours or less.

This guide has details on all the features of Fusion8, and is divided into the following sections:

1. Basic usage of Fusion8
 2. GUI functions and Keyboard shortcuts
 3. Applying tints and user defined effects
 4. Preferences and Tooltypes
 5. Requirements
 6. The future of Fusion & Fusion8
 7. Credits
- Released May 1999

CLEAR

1.2 Basic usage of Fusion8

Fusion8 allows the user to view 2 palettes, the Source and Destination, which can be toggled on screen by using the "SWITCH" button.

A file, either an IFF ILBM (8 bitplanes or less) or IFF CMAP, can be loaded into Source or Destination.

1. SELECTING CURSOR POSITION(S)

The position of the 3 cursors (4, with "SPECIAL" window open) can be specified by using the left mouse button for the start of a range, and the right mouse button to mark the end of a range.

(NOTE: Cursor positions can only be marked when the "PALETTE" window is active.)

2. COPYING A RANGE

There are 2 cursors in the Source palette, which mark a start and end points of the range to be sent. The cursor in the Destination palette marks the point where the range will sent to. The register numbers of these markers are displayed in the "PALETTE" window.

Once the user has specified all three cursor positions, the range can be copied by pressing either:

- i. "SEND RANGE" button
- ii. Keyboard shortcut 'E'
- iii. Middle mouse button

The Destination palette will now contain the range of colours marked, at the required point.

(Cursors marked in the Source palette are solid, whereas in the Destination palette they are shaded/dithered)

3. VIEWING AND EDITING INDIVIDUAL PALETTE ENTRIES

In the "MAIN" window, press the button marked "RGB VALUES", this will bring up a window showing the Red, Green & Blue values of the current register marked by the cursor in the Destination palette. These values can be changed as required.

NOTE: All changes are performed on the Destination palette, and can only occur when the Destination palette is on view. The Source palette cannot, and will NOT be affected by any editing.

1.3 GUI functions and Keyboard shortcuts

Fusion8 can be operated with only the 2 permanent windows open, " ←
 MAIN"
 and "PALETTE" if the user wishes, but there are 3 other windows which
 can be opened and positioned as required. These are:

1.

CONTROL This window contains all the major functions for basic
 palette manipulation.

LOAD PALETTE	; Loads a palette into current area (i.e. Source or Destination)
SEND RANGE	; Sends the current range from Source to Destination
SEND ALL	; Sends entire Source palette to Destination
UNDO	; Reverses the last change
REDO	; Reverses the last undo
SWITCH	; Switches the displayed palette between Source and Destination
SAVE PALETTE	; Saves the Destination palette

2.

SPECIAL This window contains functions which can apply effects to a
 specified range within the Destination palette. The Gadgets
 are labelled as follows:

R, G, B, C, M, Y, K, W	; Red, Green, Blue, Cyan, Magenta, Yellow, Black, White Tint(s) to be applied
1X/2X/4X/8X/16X	; Quantity of tint to be applied
APPLY TINT	; Apply tint to specified range
R, G, B INPUT VALUES	; Any value can be entered in these cells to specify a user defined tint
APPLY CUSTOM	; Apply user defined tint

3.

RGB VALUES This window displays the RGB values for the register
 specified by the cursor in the Destination palette.
 These values can be altered if required. This function is

accessible only when the Destination palette is on view.

The positions of these 3 windows is saved along with the preferences file, also whether they are open or not. The display will be constructed as saved whenever Fusion8 is loaded.

See

Preferences
for more details.

KEYBOARD SHORTCUTS. L ; Load a palette into current area

A ; Save the Destination palette

E ; Send Source range to Destination palette

S ; Switches the displayed palette between
Source and Destination

U ; Reverses the last change to either palette

R ; Reverses the last undo

4 ; Restore GUI4 colour values (to allow GUI
to be displayed if it gets altered by)
editing.)

0 ; Toggle register zero between 3 colours
(bright, dark, original value)

1.4 Applying tints and user defined effects

Bringing up the "SPECIAL" window, presents the user with various options to apply a tint to the range specified in the Destination palette.

An "end range" cursor appears in the Destination palette only when the "SPECIAL" window is open - this additional cursor is not needed for any other functions. This cursor can be positioned using the right mouse button and is used to signify the end of the range to be affected.

1. PRESET TINTS

The tint checkbox gadgets are as follows, and will specify a tint using the associated colour(s).

R = Red	C = Cyan	K = Black
G = Green	M = Magenta	W = White
B = Blue	Y = Yellow	

A tint of more than 1 colour can be applied simultaneously, but certain ranges will not produce the desired effect.
(e.g. Cyan & Red will not change anything)

A quantity can be specified using the Cycle gadget to the right of the tint checkboxes. This quantity will be used when the "APPLY TINT" button is pressed.

NOTE: The unit of measure for this quantity is in AGA colour values.

2. USER DEFINED EFFECTS

On the right of the "SPECIAL" window are gadgets relating to a user defined tint process. The 3 RGB boxes can contain any values which will be added to the range of colours specified - minus figures will reduce the values. These values are applied to the range by pressing "APPLY CUSTOM".

3. CUTTING RANGES

Lastly, the "CUT RANGE" button will replace all registers in the range with the user defined default colour as specified in Prefs. This colour is also used across the entire palette upon startup.

1.5 Preferences and Tooltypes

Preferences can be accessed by pressing the "PREFS" button in the "MAIN" window. Saved along with the Preferences file, is the position of all the windows, and whether they are open. The display is then restored when Fusion8 is loaded.

GUI (registers 0-3) and mouse (registers 17-19) are copied from the Workbench screen.

1. PREFERENCES

LOAD LOCATION...	The path where the user loads palettes from.
SAVE LOCATION...	The path where the user saves palettes to.
SCREEN MODE...	Any screen mode can be selected but it must be greater or equal to than 640 x 256 pixels.
FONT...	Font used for Fusion8 screen and windows.
DEFAULT COLOUR	RGB values for initial colour of all registers within a palette. This colour is also used when cutting a range from the Destination palette.
PROTECT GUI4	With this ticked, registers 0-3 will NOT be affected by any editing or copying - thus

preserving the Intuition GUI colours.

PROTECT MOUSE With this ticked, registers 17-19 will NOT be affected by any editing or copying. This will keep the mouse colours the same as Workbench.

Fusion8 also contains 4 TOOLTYPE values which can be altered. These are not necessary for the functioning of Fusion8 and all have default values if these are found to be absent.

2. TOOLTYPES

NOABOUT= ; Value 0 - The Fusion8 "About" requester will be displayed on startup and is available to view at any time.

 ; Value 1 - Fusion8 will immediately display the GUI, and will not load the "About" imagery, thus saving memory, and time if loading from floppy.

WRAP= ; Value 0 - Any tinting will put a limit on RGB values at 0 and 255, these values will not be exceeded.

 Value 1 - If a colour index value exceeds 255 it will return to 0, and vice versa.

SLOWSEND= ; Value 0 - Range will be sent from Source to Destination immediately (in 1 frame).

 Value 1 - Range will be sent from Source to Destination with a 1 frame delay between each register.

TOL= ; Value between 0 and 255 - When the user positions the cursor over a colour within either palette, this value is used to determine whether to display a cursor using colour 1 or 2 (generally black or white).

1.6 Requirements

The requirements for running Fusion8, are:

1. AGA graphics chipset (or a display capable of 8 bitplanes).
 2. OS3.0 or higher.
 3. Approximately 200K free program memory.
 4. For hard disk installation: Around 220K of free space.
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Technical info for using Fusion8:

1. Due to the nature of the Amiga's AGA chipset, Fusion8 cannot display both Source and Destination at the same time.
2. To install Fusion8 to a hard disk, copy Fusion8 executable and the directory "Data" (i.e. the entire Fusion8 folder) to any area on your HD. Fusion8 does not need any special fonts, assigns or libraries to run.
3. If the intention to have the "NOABOUT" tooltype set to 1, you may delete the following files to save disk space if required;

```
/Fusion8V1_0/Data/FusionData1  
/Fusion8V1_0/Data/FusionData2
```

4. Fusion8 has NOT been tested on any 24 bit graphics cards.

1.7 The future of Fusion & Fusion8

I am aware that Fusion8 does not perform and ground breaking functions, but it could prove invaluable for games programmers wishing to work on many different IFF ILBM files, without having the hassle of combining each one's colours into a palette for use within the game.

As can be seen, Fusion8 is fairly primitive in it's operation (Slider gadgets for tinting etc.. could be implemented) and is to be developed much further, along with other BlitzBasic programmer related tools. One such tool is ORPHEUS, an AGA copper editor which creates the source code necessary for displaying a gradient effect using the co-processor (copper) chip featured in the Amiga. ORPHEUS V1.00 is already complete and available on the Aminet in "dev/basic", but is due to be revamped and will use the Fusion/Fusion8 internal "engine".

1.8 Credits

DISCLAIMER AND DISTRIBUTION INFO

Fusion8 is Freeware, meaning anyone can use it for whatever means they desire, for no fee whatsoever.

Fusion8 CAN be included on coverdisks, Aminet CD's or Public Domain resource - however, the author assumes no responsibility for damages or losses caused by the use of Fusion8. The program operates in an operating system "friendly" manner, and has been thoroughly bug tested.

CREDITS

Computer programming - Howard Wilsher

Documentation
Bug Testing

AmigaGuide assistance - Matthew Wilsher
Final bug test

Created using - BlitzBasic 2.1
- Personal Paint 7.1
- Amiga A4000/030

CONTACTING THE AUTHOR

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///End of Fusion8 guide///

THANKS TO THE FOLLOWING PEOPLE/ORGANISATIONS.

COMMODORE
ACID SOFTWARE/MARK SIBLY
CLOANTO
