Spooky Sprites

Johan Karlsson
Internet: d92jk@efd.lth.se

Version 2
February 26, 1995

Contents

1 Short Introduction

With this program you can create true colour sprites for the Atari Falcon. The stuff you require are a F030 with at least 4 megs of memory and a RGB monitor or TV. It's now compatible with both screen enhancers and virtual memory. If you want this program to be VGA compatible you could supply me with the register values for a 384*240 large screen and I will put them in the program.

2 How to use this program

2.1 Choosing colours

To pick a colour press the right button on the colour you want. You can do this anywhere but on the buttons. To create new colours double click with the left button on the palette you don't want anymore and you will come to the palette creation screen. The program uses all 65000 colours.

2.2 Put me down

When you have made your sprite you can put it down into the sprite storage area by pressing the put button (arrow down on the top row). To retrieve a stored sprite use the numeric keyboard keys 4 and 6 to scroll until the correct sprite is in the middle of the screen, then press the get button.

2.3 Saving sprites

Sprites may be saved in either uncompressed or compressed format. The sprites may also be saved as both formats at once. This is chosen per sprite so you might save some of your sprites uncompressed and some compressed and the rest both. If you want to change all sprites to the same format this can be done in the preferences meny. Selecting format for single sprite is done with the symbol in the bottom right corner of the button panel. If it says 1 then the current sprite will be saved in an uncompressed format, if it says 2 it will be saved in a compressed format and if it says 1&2 it will be saved in both formats. Notice that only sprites that have been put and show up in the bottom part of the screen will be saved.

The advantages of saving the sprites in compressed format is that they are drawn faster and if they contain lots of black they will require less disc space and memory than uncompressed sprites. The drawback is that if clipping is required when saving sprites they will take longer time to draw and if they don't contain any black then they will require more memory and discspace as well. Since the save method is chosen per sprite you can save the most important sprites in both formats e.g. the shots in a shoot-em-up game.

2.4 Grabbing sprites from a picture

The grab a sprite from a picture you must first load a picture. When you have done that you may grab a sprite from it. When grabbing you shall click on the top left corner of the part you want to grab. In the preferences you might turn on a grid with an optional offset to make grabbing easier. This is all made from the file menu. The following picture formats are currently supported.

- **TGA** 24-bits type two Targa pictures.
- **TRP** 16-bits Falcon true colour picture.

3 How do I use the sprites in my own program

If you program in assembler then you can find a sprite drawing routine in falclib6. If you are using STOS then you could hope that Anthony Jacques (jacquesa@cs.man.ac.uk) gets his Falcon STOS extension ready soon, because it supports true colour Spooky Sprites. The assembler sprite drawing program is written in position independent code and could easily be used in other languages like GFA-Basic with very small modifications.

4 Keyboard commands

Note that the copy and paste commands can only be used from the keyboard.

Q quit
p preferences
x fx
s save sprites
l load sprites
z change size
c copy
v paste
V set paste mode
b paste onto picture
B paste onto last grabbed place on the picture
a animate
A set animation mode
U undo
4 select sprite to the left
6 select sprite to the right
1 select colour to the left
3 select colour to the right

5 Sprite and picture formats

5.1 TRS, True Colour Sprites (version 1)

5.1.1 File header

4 bytes Ascii header 'TCSF'.
1 word Number of sprites.
1 word File version. This should be 1.
1 word Xres that the packed sprites are calculated for.

5.1.2 Sprite locations

This section is repeated number of sprites times.

1 byte Width in pixels.
1 byte Height in pixels.
1 long Offset to unpacked data from start of file or 0.
1 long Offset to packed data from start of file or 0.

5.1.3 Sprite data

This section is repeated number of sprites times.

If unpacked data is available then it's here.
width*height words of raw true colour data
If packed data is available then it's here
1 word Number of chunks
Start of compressed chunk (the chunk is repeated number of chunks times)
1 word Screen offset. Add this value to the screen pointer.
1 word Nbr of data words -1.
1*(nbr of data words) words of raw true colour data
End of chunk.

5.2 TRP, True Colour Picture

4 bytes ASCII header 'tru?'.
1 word picture width in pixels.
1 word picture height in pixels.
width*height words of picture data

6 History

6.1 Version 2

A new improved sprite grabbing. You can now load pictures that are larger than the screen and scroll around. Loading pictures doesn't crash the virtual memory any more. You can now paste sprites to pictures and save the pictures. Now it's possible to save the sprites as raw data and to load raw data pictures.

6.2 Version 1

The quite buggy first version.