Fredrik Ramsberg's hires library

This is a library for drawing hires images on a Commodore 64. It's written in assembler, and can be used from either assembler or Basic.

What this library can do

- Init the hires display, emptying the display memory and setting all of of color memory to the same value
- Plot a single pixel
- Draw a line (1 pixel wide)
- Fill an area

All of the above can be called from Basic or assembler. There are also two entry points which can be used when calling from assembler only:

- Set the current drawing mode (Draw, erase or reverse). The drawing mode is set in each call to plot a pixel or draw a line from Basic.
- Read the current value of a pixel.

Limitations

The library only supports the 320x200 mode, and it will not handle lines or dots of different colors automatically. You can, however, choose to fill parts of color memory with a different color yourself, after calling Init.

Usage

This is the instructions screen which the program prints while assembling (the addresses change if you set a different starting location):

```
Operation Assembler Basic
-----------------------------------------------
Plot         clc          sys 49155,x,y,m
             jsr $c00f

Read         sec          ---
             jsr $c00f

Line         jsr $c012 sys 49158,x,y,m

Fill         jsr $c015 sys 49161,x,y
Set Mode     jsr $c018 ---
Init         jsr $c00c sys 49152,c

x - X coordinate for next position.
y - Y coordinate for next position.
c - Value to fill color memory with.
m - Mode   0=Erase    1=Draw      2=Reverse

When calling 'Set Mode' ack should be
set to 0, 1 or 2.
All other routines expect x-coord in
Ack+x and y-coord in y.
'Read' returns Carry if position is lit.
 Ack=color when calling 'Init'    (Space)
```

Contents of the disk that you need if you just want to see the library in action

hireas.49152 – An assembled and ready to use version of the library. To start using it, load it with LOAD "hires.49152",8,1 . When it has loaded, type NEW to reset Basic memory pointers, or you will get problems with out of memory error.

hires.a.bas – A graphics demo written in Basic. To try it out, first load hires.49152 (see instructions above), then load this program and run it. When it has finished drawing, it will wait for you to press a key before it goes back to text mode and ends the program.

hires.b.bas – Like hires.a.bas above, but draws something different.

hires.c.bas – Like hires.a.bas above, but draws something different.

hires.d.bas – Like hires.a.bas above, but draws something different.

Contents of the disk that you need if you want to modify or relocate the library

assembler – A multi-pass assembler which I believe originally was published as a type-in program in a magazine (possibly the German mag "64:er"). This assembler works as a Basic extension, which means you type in assembler like you would type a Basic program, using line numbers. Variable names and labels (same thing) can be much longer than what Basic normally allows. Another difference to normal Basic is that keywords, numbers and variables have to be separated by space. So, PRINTA$ won't work, but PRINT A$ will. This particular version of the assembler has been extended with a useful find command. Type FIND "xyz" to locate these characters in the program. After the first search hit is printed, hold SHIFT to keep printing more hits.

hires.ass – The assembler source code of the hires library. To assemble it, load and run **assembler**, then load this. By default it will assemble to memory. If you want to assemble to a file, change ";" to "," in line 120. Then run the program. I originally wrote this in Swedish. I have translated the instructions and the comments. Many labels and variables are still in Swedish though.

Warranty

 None whatsoever. Use at your own risk.

License

Use it as you see fit. Please give credit if you use it in a program which you publish.

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I put most of my public stuff up on my website at http://microheaven.com