

Spliner

A spline screen blanker for the Amiga
Version 1.17

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by Tom Rokicki and Sebastiano Vigna

1 The birth of Spliner

Tom Rokicki's **Mackie** is one of the most well-known and most beautiful utilities for the Amiga. It has two separate functionalities: it's a blanker which draws wonderful splines, and a powerful hot-key manager.

What I did was taking out the spline code from the original **Mackie** sources and encapsulate it in a standard Commodity (of course, this means someone else will have to port the hot-key part. . .).

Commodities are the new way, designed by Commodore, by which all special utilities like mouse accelerators, macro expanders etc. should be designed. This standard, available *only* under Release 2 and higher, allows easy and customizable control of the interaction of different utilities. This means, of course, that **Spliner** will work only under version 2.04 or higher.

In the process of moving to 2.04, some new features were added, namely programmable pattern change timeout, and the possibility to open the blank screen in *any* of the modes available on your Amiga.

For the generic use of a Commodity, please refer to the 2.0 manual. **Spliner** will (more or less) work just like the screen blanker supplied on the Workbench 2.04 disk.

2 Gadgets

If you activate **Spliner** by double-clicking on its icon, you will see a window popping up. The detailed list of the available gadgets follows:

HIDE

QUIT work exactly like in Commodore's blanker.

TIMEOUT lets you set the number of seconds after which the screen is blanked; defaults to 60.

CHANGE lets you set the time after which the drawing pattern is changed: set this to zero to go psychedelic 8^); defaults to 60.

CHECK

THRESHOLD

set the auto-disabling of spline drawing under heavy CPU load. If CHECK is nonzero, every CHECK seconds a high priority task checks if at least THRESHOLD lines were drawn from the last check. If this doesn't happen, the screen is completely blanked (no splines). This feature saves your screen when some CPU-intensive task (e.g., 3D rendering) is stealing all the CPU power so that **Spliner** can't draw and a fixed pattern appears on the screen. As soon as more CPU time is available, **Spliner** will restart to cycle colors. Moreover, each CHECK seconds **Spliner** re-blanks the mouse and **ScreenToFront()**s its screen. If you set CHECK to 0, the control task is not set up, thus gaining about 1K of memory. CHECK and THRESHOLD default to 8.

CYCLE COLORS

allows you to enable/disable the color cycling (mainly for special screen modes such as 2024.10Hz).

- DMA OFF** enables the DMA disabling. When **DMA OFF** is selected, instead of drawing splines **Spliner** will simply turn off the video DMA. This mode is not particularly nice to see, but frees the Chip bus from every DMA video access usage. This can have a certain impact on computationally intensive programs, in particular on a machine which has only Chip RAM. If, for instance, you're doing ray tracing on an A600, turning off DMA could really give you an edge. See Chapter 4 [Important Notice], page 3.
- COLOR** allows you to select a specific color to use for spline drawing when cycling is disabled. The format is a bit rude, i.e., $R*256+G*16+B$, where R,G and B are the four-bit components of the color. For instance, 4095 is pure white, while 15 is pure blue.
- IMMEDIATE EFFECT**
blanks immediately (after 1 second) the screen (this feature was coded by Jean-Michel Bezeau).

The list displayed on the right represents all video modes installed on your system. This list could also include some modes that aren't really displayable on your Amiga, but no harm can be done. You can click on any display mode in order to force **Spliner** to use that kind of display when blanking the screen.

Everything that can be selected by a gadget can also be configured by a tooltypes. See Chapter 3 [Tooltypes], page 2.

3 Tooltypes

There are five extra tooltypes: 'TIMEOUT', 'CHANGE', 'CHECK', 'THRESHOLD', 'DISPLAY', 'CYCLE', 'DMA', 'COLOR' and 'BLANK'. The first six act just like the corresponding gadgets (see Chapter 2 [Gadgets], page 1). Note that the name you set 'DISPLAY' to must be an exact copy of the name appearing in the window list (up to lower/upper casing). For instance, 'DISPLAY=PAL:Lores-Interlaced' (note that on localized machine, the name has to be written in the localization language). If you have a PAL (resp. NTSC) Amiga and you have a real MultiSync monitor, you can even add the NTSC (resp. PAL) monitor to your system and open the blank screen with another video frequency! This has no usefulness at all, but it's amusing. The 'CYCLE' and 'DMA' tooltypes can of course be set to 'ON' or 'OFF'.

'BLANK' lets you specify an hotkey (in the same format as 'CX_POPKEY') which will immediately (after 1 second) blank the screen, just like the IMMEDIATE EFFECT gadget (the delay is necessary because otherwise the input event caused by the hotkey would unblank the screen).

In order to start **Spliner** at power-up, the best thing is to move its icon into the **WBStartup** drawer, and to set its tooltypes to the desired values. Don't forget to add the 'DONOTWAIT' tooltype, too. You'd probably also want to set 'CX_POPUP=NO'. Another thing to consider is that since **Spliner** reads the display modes in the graphical database, you must be sure **Mode_Names** is ran before it. In order to obtain this, you should add the tooltype 'STARTPRI=-120'.

4 Important Notice

Some people think that terrific blankers steal CPU time. This is not the case with **Spliner**. If a task is using the CPU, **Spliner** will stop drawing. If in particular your application has a hi-res multi-color screen, the presence of the blank screen will actually speed up whatever the Amiga is doing, by lessening the DMA contention. If, moreover, you select the DMA off switch (see Chapter 2 [Gadgets], page 1), you will definitely gain in speed, but you won't have a terrific blanker any longer.

5 Changes

From revision 37.8, the mouse is blanked “legally” by opening a window on the blank screen and using `SetPointer()`. This means that when the blanker starts the current active window will be deactivated. This shouldn't however have any side-effect.

From revision 37.12, there is an ‘About...’ menu item, and the copyright notice is no longer in the window title. The `CHECK/THRESHOLD` control were introduced, and the user interface was made font-sensitive. A comprehensive optimization greatly reduced the CPU time used while checking the input events (i.e., while the screen is not blanked). Finally, an important bug fix (the window could have been closed without `GT_ReplyIMsg()`ing all pending `IntuiMessages`).

Revision 37.15 fixes a stupid bug (not enough stack size) which was really difficult to reproduce. Thanks to Alessandro Pelosi at Agemo for his precise report, and to Martin Taillefer at Commodore for his precious suggestions: with the new mouse blanking code, **Spliner** doesn't deactivate the current window any longer, and in particular it doesn't deactivate gadgets.

Revision 37.17 introduces the `COLOR` and `DMA` switches and support for some `V39` features (like new look menus).

6 Disclaimer and Author Info

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Comments, complaints, desiderata are welcome.

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