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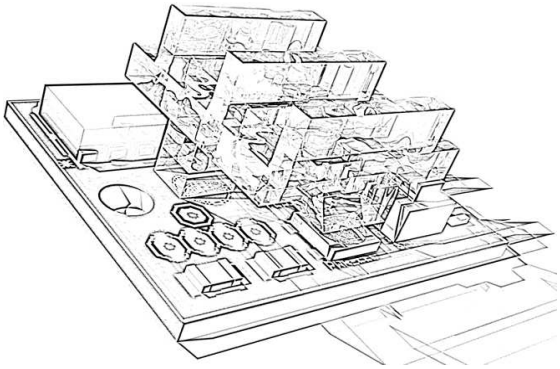

A1200 Bifrost

First of all; Greetings and thank you for supporting this product! You are now the owner of a Bifrost, a fully customizable Amiga 1200 keyboard LED replacement board. I sincerely hope you will enjoy using it as much as I enjoyed developing it!

Disclaimer

The Bifrost board is not endorsed by or associated with the Commodore or Amiga company or brands nor its owners in any way. It is a stand-alone third party aftermarket product. Using and/or installing this product or making any modifications to your computer may result in irreversible damage to either or both. Use this product at your own risk.

Now with all of that out of the way lets dive into it!

Overview

The board has three LEDs, each one indicating an activity. They are in order from top to bottom: Harddrive Activity, Floppy Drive Activity and Power On. The light from these LEDs are channeled through a small plastic top that fits between the Bifrost board and your A1200 chassis, making it look very similar to the original LEDs. The plastic top also serves as buttons so you can customize your Bifrost LEDs after your choosing without having to disassemble your computer. All you have to do is to press down the right side of a LED. This can be done with the help of a paperclip, a flat screwdriver or any other similar tool that is dull. A small plastic tool has been included in the package for this. Do not use any sharp edges as this will eventually wear out the plastic or in worst case break it. Because of the small production run of this product the plastic top is partially 3D-printed, which makes it a little more brittle than a fully molded one. Use care!

Installing

The Bifrost is a direct replacement board for the LED board that comes with the Amiga 1200. All you need to do is open up your computer, unplug the old LED board from the motherboard and unscrew it from the upper chassis. Then screw the Bifrost into its place using the same screws, making sure that positioning is correct. You should be able to use the Bifrost settings buttons by clicking on the right side of the LEDs looking at it from the top/front. Then plug the Bifrost into the same connector as the old board was connected to, making sure the connector aligns with the 3+1 pins. If one or both of the sides of the LEDs protrude up from your chassis you can use the washers included to lower the board on one or both sides to compensate.

Guru/Restart dimmings (v1.3.2 and up)

The built-in detection of Gurus/Restarts/Filters that normally would dim the Power LED works adequately out of the box, but unfortunately not perfect. The Bifrost is only designed to handle normal restarts but this should suffice for most of normal Amiga usage. For sessions where the LEDs are needed for advanced troubleshooting it is recommended to switch back to the original LED board for accuracy, so make sure to keep it around.

With Bifrost sometimes a freshly power-cycled machine may sporadically dim the LED before the first soft reset has been performed. However, as from software version 1.3.2 you can now calibrate this for your own unique machine. This is achieved by pressing and holding the Color Button during normal ”Operating Mode” until a rain effect occurs on the LEDs. A Green LED rain means you are using the stock settings, which involves a new fresh continuous self-calibration after each power cycle. Next is a Blue LED rain effect: This means it has activated Calibration mode with the current values it self-learned in the previous mode (Green). It will use these values on subsequent power cycles and self-learning is turned off. The last step is the Red LED rain: This means that the Guru dimming feature is totally turned off and the Power LED will always be lit 100% of your set Brightness.

Resetting the Bifrost to Default colours

The Bifrost is per default set with Power LED to Green and HDD and FDD LEDs to Orange. Brightness is set to 2. This should be fairly close to how the stock LEDs look. You can at any time reset the Bifrost to these defaults by pressing and holding the Colour button for three seconds while in ”Edit Mode”.

Synchronization of Changing Modes

All non-solid Colour- and non-fixed Brightness modes are synchronized. This means that if more than one LED is programmed with the same setting they will always be synchronized. For example, if two LEDs have the ”Fast Random Color Pick” they will always show the same colour as one another. If they have the ”Slow Pulsating Brightness” they will pulse in synchronization.

Power LED / Select button

The bottom button (Power LED) is the Select button. Pressing it once takes you into ”Edit Mode” and selects the top LED. All LEDs light up when you are in ”Edit Mode” and the selected LED will blink. You can select the middle LED by pressing Select again, and then again for the bottom LED. If you have already selected the bottom LED pressing Select again will take you back into ”Operating Mode” and the LEDs will only light up as your Amiga tells them to. Pressing and holding Select for more than 3 seconds will Save all your custom settings to memory and all your LEDs will flash four times to indicate this. Bifrost will automatically enter normal ”Operating Mode” when done.

Floppy LED / Colour button

The middle button (Floppy LED) is the Colour button. Pressing it will iterate to the next Colour for the LED you have selected. Bifrost comes preprogrammed with 26 different solid colours you can choose from as well as two ”Cycling Colour” Modes (one slow and one fast) and two ”Random Colour Pick” Modes (one slow and one fast). Normal Red colour is the first of all solid colours, and warm white is the last of the solid colours. After warm white the two ”Cycling Colour” Modes will be selected and then the two ”Random Colour Pick” Modes will be selected before returning to Red again. Please see the following table for the sequence of available colour settings:

Clr#	Colour Description	Clr#	Colour Description	Clr#	Colour Description
1	Red	11	Sea Green	21	Magenta
2	Fiery Red	12	Turquoise	22	Pink
3	Orange	13	Cyan	23	Hot Pink
4	Pale Orange	14	Sea Blue	24	Neon Pink
5	Yellow	15	Light Blue	25	Cold White
6	Pale Yellow	16	Pastel Blue	26	Warm White
7	Lime	17	Blue	27	Slow Colour Cycle
8	Pale Green	18	Violet	28	Fast Colour Cycle
9	Green	19	Purple	29	Slow Random Color Pick
10	Aqua Green	20	Pastel Pink	30	Fast Random Color Pick

Harddrive LED / Brightness button

The top button (Harddrive LED) is the Brightness button. Pressing it will iterate to the next Brightness level for the LED you have selected. You need to be in ”Edit Mode” for this to work (see Select button above). Bifrost comes preprogrammed with four different solid Brightness levels and two ”Pulsating” levels, one slow and one fast. The dimmest level is the first and the brightest level is the fourth. After the brightest level the two ”Pulsating” levels will be selected before returning to the lowest brightness level again. Please see the following table for the sequence of available brightness levels:

Bri#	Brightness Description	Bri#	Brightness Description	Bri#	Brightness Description
1	Dim	3	Bright	5	Slow Pulsating Brightness
2	Moderate (Original)	4	Very Bright	6	Fast Pulsating Brightness

Inverting LED operations

You can invert the operation of each LED. This means it will be lit when no activity is happening on it and vice versa. While in ”Edit Mode” just press and hold the Brighness button for three seconds and you will toggle Inverted Mode for the selected LED. The mode change is indicated by a short blue strobe light (Inverted Mode is activated). A short green strobe light indicates normal operation. Note that if you activate Inverted Mode for the Power LED you are effectively turning it off.

It's all in the Mix!

All different colour and brightness settings are fine to mix. For example, you might want to customize your Power LED to have a Colour Cycle with a Pulsating brightness. Thats perfectly fine! All in all the Bifrost board can be customized in 3x30x6 different ways for a total of 540 unique custom combinations. With the new feature of Inverted Modes (in v1.4) this has now increased even further!

Memory Read Error Indicator

If the Bifrost fails to read valid settings from its memory all the LEDs will be having a white colour on them but still working as normal. This can happen if your board has been powered off for a longer time (months) or suffered corruption from nearby magnetic sources. You can still set new colours and save them, but if you get many of these errors in a short time your Bifrost may be faulty.

Thats it really! Now I bid you a fond farewell, the best of good luck and tons of fun with the modding! :-)

Conny ”Amiga 'Fuzzie' Fuzzler” Larsson, Creator of the Bifrost