

Indivision ECS V2 short manual

Dear customer,

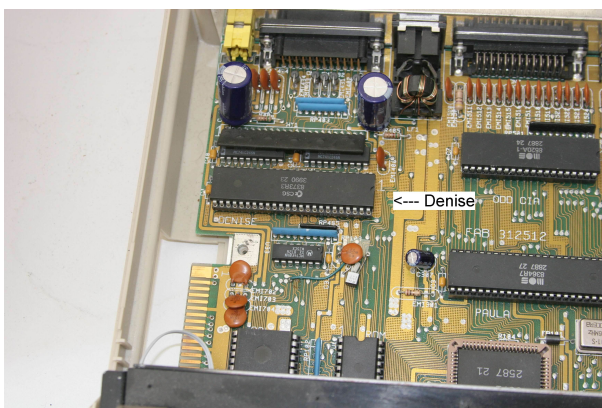
thank you for purchasing a product from Individual Computers. We're sure that your new flickerfixer will satisfy all your needs. However, we would like to emphasise that installing the product in an Amiga is very complicated. The installation steps require a lot of experience and skills. Please read this manual thoroughly to ascertain if you can perform the installation. If you have any doubts regarding installation, please seek help from an expert.

Please read this guide carefully before commencing installation. Ensure you take suitable anti-static precautions. Serious damage may result from failure to accurately follow this guide. Individual Computers cannot be held responsible for incorrect installation of this product, including bent/broken pins, damaged motherboard or damage to the Indivision ECS V2 unit itself.

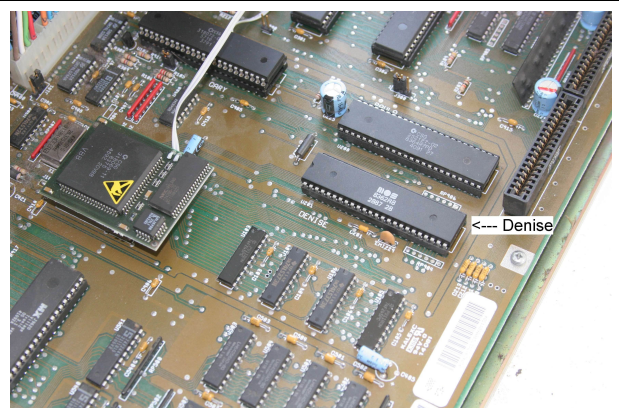
A PDF-version of this short manual is available in our Wiki at wiki.icomp.de. This online version of this manual contains high-resolution colour pictures. The zoom-function of a PDF reader will give you a lot more detail in the pictures of this manual.

Step 1: Open the computer and locate the Denise-chip

Open the computer and remove everything that may cover the Denise-chip, such as Zorro-cards or the RF-shield. The following pictures show the most common Amiga models:



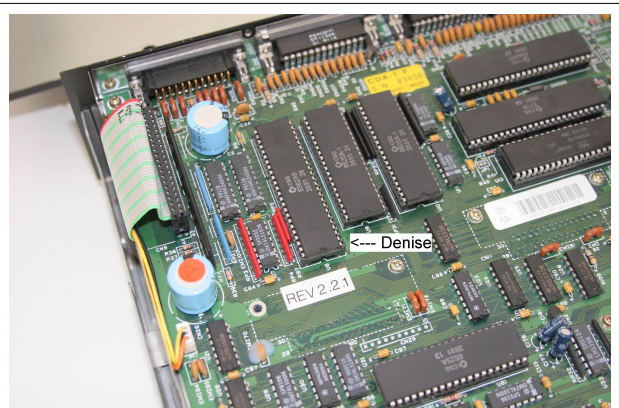
Amiga 500



Amiga 2000



Amiga 3000



CDTV

For installation in an A3000T, A1000 and A600, additional parts are required that are not included in the normal Indivision ECS V2 package. If you want to install the flickerfixer in one of these computers, please download the respective manual from our Wiki wiki.icomp.de. Please understand that we cannot cover these extremely rare Amiga models in this short manual.

Step 2: remove obstacles

Indivision ECS V2 is trying to avoid as many obstacles as possible in as many Amiga models as possible. However, a fully universal shape is impossible due to the diversity in design of Amiga revisions, so a few motherboard revisions require modifications to accommodate Indivision ECS V2.

We are not aware of any Amiga 500 or CDTV version that requires modifications. In this case, you can skip to step 3 of this manual.

In A3000 desktop computers, the rechargeable battery must be removed to make space for Indivision ECS V2. This has already been done on many computers, because the batteries are already years beyond their lifecycle. Leaking batteries are a danger to the whole computer, so any NiCad cell should be removed from all Amiga computers. We recommend to use high-quality 3V cells as a replacement.

Removing the battery should be done by an expert (such as a radio- and television engineer). Breaking away the contacts of the battery could lead to serious damage of the mainboard and is not recommended.

On A2000 versions 4.1 and 4.3, the electrolytic cap C225 (near the Paula chip) must either be replaced by a physically smaller type (max. 8.5mm height), or moved to a different place by using short wires (max. 2 inches). We recommend using a new radial type with 470µF and 16V. Since low-profile capacitors are extremely hard to find, we recommend using an 8mm diameter type that can be mounted flat (for example Digi-Key part number P5141-ND). This job should only be done by an expert, for example a radio- and television engineer. Please take the time to completely remove the board from the case. Removing the capacitor by force from the top side may damage the mainboard and is not recommended.

Step 3: installation of Indivision ECS V2

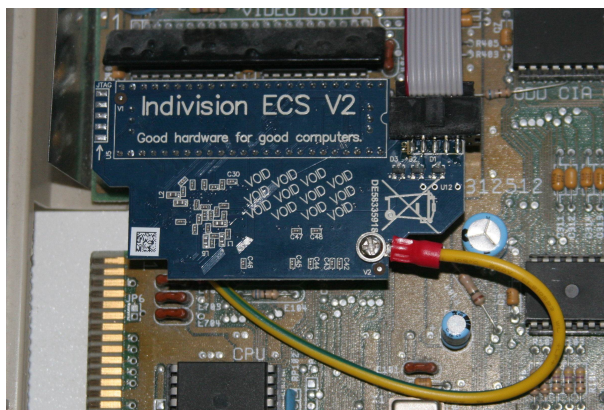
Carefully remove the Denise chip from it's socket, for example by using a flat screwdriver as a lever. Ensure to only gently lever one side a few millimeters at a time. The Denise chip is extremely delicate, and pins easily bend or break away. Keep the chip in a safe place; it is not required any more while Indivision ECS V2 is in use.

Now insert the bare socket into the Denise socket of the main board. The correct orientation is indicated by the notch in the socket, which must face into the same orientation.

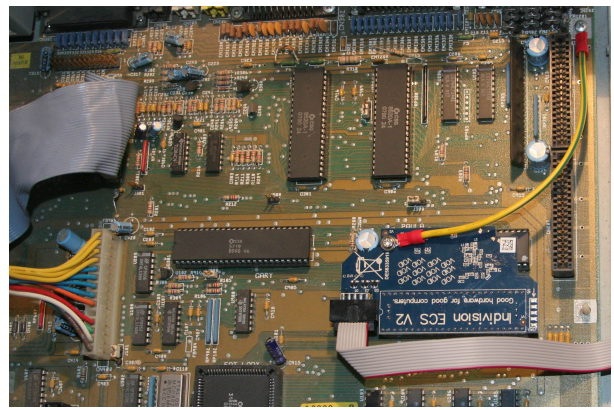
Carefully insert the flickerfixer into the empty socket. Once again, the notch indicates the correct orientation, which is printed on the flicker fixer. The following pictures should provide all necessary information.

Displacing the unit by one pin is not possible due to the added inner pins in the flickerfixer. Don't apply too much force! If the flicker fixer does not slide into the socket with gentle pushes on both sides, it is most likely displaced by one pin.

Please bear in mind that the sockets of Commodore computers are very low-quality. Frequent insertion/removal cycles may lead to contact problems that can only be solved by exchanging the socket on the mainboard. We therefore recommend to keep the additional socket installed, even if you remove the flicker fixer from the system.



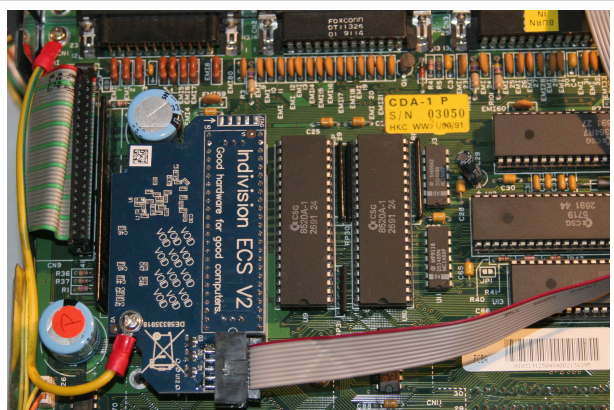
Amiga 500



Amiga 2000



Amiga 3000 desktop



CDTV

Step 4: connect the VGA-cable

Plug the included cable into the black VGA-connector of your Indivision ECS V2. When routing the cable through your computer, please ensure that the cable cannot be damaged upon re-assembly of the computer. For best picture quality, the 15-pin VGA connector should be mounted on a grounded metal part.

We recommend the use of the included grounding cable, especially on A500 and A2000 computers. As you can see in the pictures above, there are motherboard screws near the Denise-socket that can be used for an additional ground connection. On CDTV and A3000 computers (including towers), the ground connection is already sufficient through the socket, because these computers have multilayer mainboards.

If you decide not to use the ground cable, please remove it completely from the computer. Don't leave it in the computer unconnected, as it may short out and damage other components.

You do not need a driver to operate Indivision ECS, therefore we haven't included a disk. For adjustments, general configuration and possible flash-updates, we're providing programs and documentation in our Wiki wiki.icomp.de. If you own an X-Surf-500, you can also find the Indivision ECS V2 configuration tool in the iComp-drive

Indivision ECS V2 is configured at the factory to output at 72Hz refresh rate. This rate corresponds to the VESA 800x600 mode, which is standard for today's VGA monitors and flat screens. As a result, you can use the product without any adjustments.

You can choose almost any screenmode by using the screenmode application in the Amiga Workbench's Prefs drawer. The only exception is A2024 monitor types, which Indivision ECS V2 does not support.

When operated on a flat screen, it might be helpful when the Amiga does not display the overscan-area in the background colour, but in black. The tool "BorderBlank" is suitable for this, you can find it on Aminet under `util/boot/BB1ank.lha`.

In addition to the standard screenmodes, Indivision ECS V2 supports the HighGFX driver with higher resolutions. HighGFX can be found on Aminet under `util/wb`.

We recommend downloading the configuration tool from our Wiki. It allows you to select the refresh rate and lets you adjust the scanline emulation intensity. All settings can be saved in the non-volatile memory of Indivision ECS V2, so they remain available after a reset or power-cycle of the computer. You will also find further documentation in the program archive. A full description of the tool would go beyond the scope of this short manual. **Please carefully read the readme documentation files or the Wiki documentaion!** The configuration tool allows a wide range of individual output settings, but it will take some time to work through the documentation and understand the meaning of each setting. The topic is very complex, hence using the configuration tool is impossible without the manual.

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Good hardware for good computers.