Indivision ECS V4 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 throughly to ascertain if you can perform the installation. If you have any doubts regarding installation, please seek help from an expert.

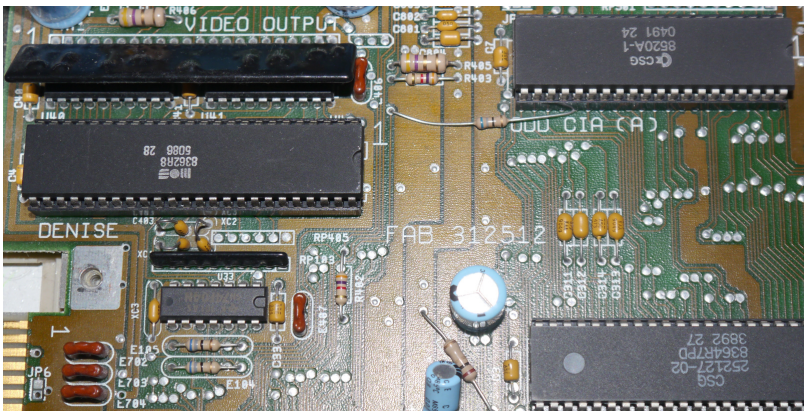
Please read this guide carefully before commencing installation. Ensure you take suitable anti-static precautions. Serious damage may result from failure to accurately follow this guide. Individual Computers cannot be held responsible for incorrect installation of this product, including bent/broken pins, damaged motherboard or damage to the Indivision ECS V4 unit itself. **Make sure you have enough light during installation!**

This short manual only contains pictures for installation in an A500 computer. For other target systems like A600, A1000, A2000, A3000(T) and CDTV, please look at the pictures that we have published in our Wiki:

http://wiki.icomp.de/wiki/Indivision_ECS_V4

Step1: 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.



Amiga 500

For installation in A3000T, A1000 and A600, additional parts are requried that are not included in the normal Indivisino ECS V4 package. For installation in an A3000, another 48-pin socket is needed to raise the flickerfixer, for A1000 models we have an adapter that allows installation on the Paula-socket, and for the A600, you'll need our memory expansion A604n. Find out more in the Wiki article linked above.

Step 2: remove obstacles

Indivision ECS V4 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 V4.

We are not aware of any Amiga 500 or CDTV revision 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 V4. 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 TV repair technician). 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 Vishay part no. 25471E3 or 35471E3, available from Digi-Key). 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: install the CIA-adapter

The CIA-Adapter for the interface chip 8520 allows your flicker fixer to see keyboard and mouse button signals. This is required for “live config mode”, which lets you pan and zoom the VGA output picture.

The adapter must be in installed on the “Odd CIA”. You can find more pictures in your Wiki. The location designation is different for every type of Amiga:

Computertyp	**Bezeichnung**	**Lage**
A500	ODD CIA (A)	Near the parallel port
A600	U7	Under the disk drive
A1000	U6P	Directly next to the 68000 processor
A2000a	U10	In-line with the Kickstart ROM chip
A2000	U300	The CIA chip closer to the video slot
A3000	U350	Corner between Floppy conn and daughterboard
A3000T	U350	Near Agnus, lowest in a group of 3
CDTV	U9	Directly next to Denise chip

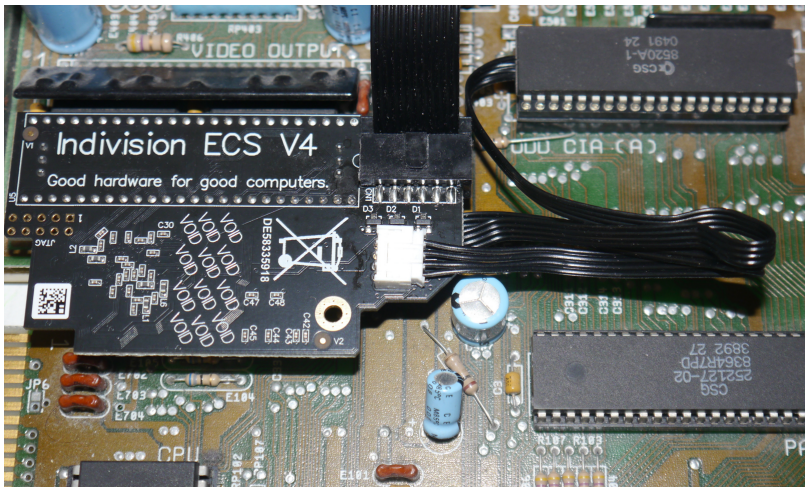
Carefully remove the CIA-Chip and insert it into the CIA-Adapter. The correct orientation is indicated with the notch in the chip and the CIA-adapter. Insert the adapter into the empty socket, minding the correct orientation,

Live config is activated by pressing **left-shift, CTRL and the Tilde-key** (next to the 1-key) at the same time. Pan the picture by moving the mouse, and zoom it while holding down the left mouse button. Leave live config mode by pressing the Tilde key. Please be aware that live config does not yet work with A600 and A1000 computers. This will be fixed with an update that we will publish before the end of 2024.

Step 4: Installation of Indivision ECS

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 V4 is in use.

Carefully insert the flickerfixer into the empty socket. The notch in the socket must match with the print on the flicker fixer. Pictures in our Wiki will provide additional 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 it most likely displaced by one pin.



Amiga 500

Please bear in mind that the sockets of many Commodore computers are very low-quality. Frequent insertion/removal cycles may lead to contact problems that can only be resolved by exchanging the socket on the mainboard. We therefore recommend to only remove the flicker fixer from the system for very important reasons.

Step 5: connect the VGA-cable

Plug the included cable into the black VGA-connector of your Indivision ECS V4. 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.

Using the included ground wire is optional for most Amiga models, but it is recommended for the A500. Do not over-tighten the screw on Indivision ECS V4! It's enough to hand-tighten the screw, without any tools. Connect the other side of the ground cable with a motherboard screw or (if available) to the metal case of the Amiga.

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're a user of our AmiTCP install-disk (free with X-Surf-100 and X-Surf-500, also available separately), you can also find the configuration tool in the iComp-drive.

The flickerfixer has a default configuration to generate an output picture that is very similar to a VESA mode with 800x600 pixels, which is standard for today's VGA monitors. As a result, you can use Indivisino ECS V4 without additional adjustments.

You can choose almost any screenmode by using the screenmode application in the Amiga Workbench's Prefs drawer. Currently, there is only a single exception: A2024-screenmodes are currently not supported by Indivision ECS V4. These modes can only be used with a later update for Indivision ECS V4.

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/BBlank.lha`.

In addition to the standard screenmodes, Indivision ECS V4 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, so they remain available after a reset or power-cycle of the computer. You will find extensive documentation in the download archive, which would go beyond the scope of this short manual. **Please do read the readme documentation files and/or the Wiki documentation!** The topic is very complex, so the manual is indispensable.

Individual Computers Jens Schönfeld GmbH
Im Zemmer 6
52152 Woffelsbach
Germany

INDIVIDUAL
COMPUTERS
Good hardware for good computers.