EZ-VGA

external ScanDoubler/FlickerFixer for all *Amigas*

User's Guide

V1.0ᴀᴠ

1. Preface

Dear Customer,

thank you for purchasing the EZ-VGA ScanDoubler/FlickerFixer. Your are now able to connect nearly any standard VGA monitor out of the world of PCs to your Amiga. Please read these important instructions before you put your EZ-VGA into operation

2. Contents

3. EZ-VGA technical data

■ external ScanDoubler/FlickerFixer for all Amiga models
■ converts all 15kHz-modes to standard-VGA 31 5kHz
■ completely external, no opening or modification of the Amiga computer needed
■ supports full 24Bit color (16 million colors) in all non-15kHz modes
■ high precision PLL circuit used for pixel-clock generation (instead cf external clocking of the Amiga), therefore compatible with any Amiga type (STD, ECS, AGA) and video norm (PAL, NTSC)
■ genlock friendly
■ with FlickerFixer-option installed, all 15kHz Interlace modes are converted to non-flickering 31.5kHz standard-VGA
■ ScanDoubler-only version can be upgraded with the FlickerFixer-option anytime - just by adding the Field-memory chips

4. Installation of the EZ-VGA ScanDoubler/FlickerFixer

• Firstly switch off your Amiga computer.
• If connected, disconnect your formerly used monitor (e.g. 1084S) or any other device connected to the *VIDEO* connector
• Plug your EZ-VGA ScanDoubler/FlickerFixer with the side labeled — *RGB In* — into the *VIDEO* connector

> **PLEASE NOTE!** Do not try to install your EZ-VGA ScanDoubler/FlickerFixer while your Amiga is turned on and do not try to connect it to a different port than the *VIDEO* connector. Doing so can destroy your Amiga or the EZ-VGA or both !

• Connect your VGA monitor to the port of the EZ-VGA ScanDoubler/FlickerFixer labeled — *VGA out* —
• Switch on your VGA monitor, then switch on your Amiga
• Your Amiga starts as usually.
• Your EZ-VGA ScanDoubler/FlickerFixer is production-line adjusted to be correctly set to most of the Amiga 1200 models. Anyway it is useful to fine-adjust the video signal of your EZ-VGA ScanDoubler/FlickerFixer for your configuration to obtain the maximum picture quality.
• Before starting the adjustment procedure, keep your Amiga running for at least 5 minutes for the EZ-VGA ScanDoubler/ FlickerFixer to reach its operation temperature.
• Try to have as many vertical lines on the screen as possible or load a drawing with alternating black and white vertical lines.
• Use a normal miniature screwdriver to turn the potentiometer labeled *Adjust* at the left-hand side of your EZ-VGA. Please note that this is a multi-turn high-precision potentiometer, so you have to perform about 20 turns from end to end. In the middle of the adjustment range there is the maximum distortion of the picture. If you then perform 3-6 turns counter-clock-wise, you will find the best adjustment.

> **PLEASE NOTE!** If you feel a resistance while trying to turn further, you have reached one end of the adjustment range. Stop turning in this direction to avoid damaging the potentiometer.

• If you can't find a satisfying adjustent, close the jumper *phase* (this jumper is normally open) and perfrom the adjustment procedure again.

5. Jumper / LED functions

Jumper	function *open*	function *closed*
enable	Adjustment disabled	enabled
phase	normal clock used	inverted clock used
FF-ena	FlickerFixer mode	ScanDoubler mode
222mod	518221 FRAMs fitted (FlickerFixer only)	518222 DRAMs fitted (FlickerFixer only)

Standard configuration

⇒ jumper *enable*   *closed*
⇒ jumper *phase*   *open*
⇒ jumper *FF-ena*   (inside)   *open* for FlickerFixer, *closed* for ScanDoubler-only version
⇒ jumper *222mod* (inside)   *open* if 518221 FieldRAMs fitted, *closed* if 518222 FRAMs fitted
⇒ jumper *XCLKEN* (inside)   factory use only, must be *open*
⇒ jumper *CCK*   (inside)   factory use only, must be set to left position

LED	info *light*	info *dark*
BYPASS	input H-freq >15kHz (24kHz to 31kHz)	input H-freq = 15kHz
FF-mode	15kHz Interlace, flickerfixed (FFixer only)	anything else

6. Important notes

- In SuperHiRes modes, only every 2nd pixel is displayed
- all video modes with a horizontal frequency above 15kHz will be bypassed (the *BYPASS* led is on), but since some of these modes are outside the VGA frequency range (>= 31.5kHz), your monitor might not be able to display them correctly. These video modes are:
  - *Super72* (H-freq 24kHz)
  - *DblNTSC* (H-freq 29.5kHz)
  - *DblPAL* (H-freq 29.5kHz)
  - *Euro72* & *Multiscan without* prior execution of the VGAonly tool
- Please note that only 15kHz Interlace modes are flickerfixed, 24kHz or 31kHz Interlace resolutions (e.g. *Multiscan* interlaced will stay interlaced because they run in *BYPASS* mode)
- Please ensure that the *VGAonly* (which is part of the monitor drivers) is executed prior to the monitor-driver programs to ensure that the *Multiscan* and the *Euro72* modes are fully VGA compatible. You can verify this by opening the *Screenmode* prefs. If the *Multiscan* and *Euro72* modes have a horizontal frequency of 31.44kHz, *VGAonly* is installed properly. If they have a H-freq of 29.3kHz, *VGAonly* is not installed correctly.

7. Power Requirements

The A1200 power supply is not able to provide sufficient current for an expanded A1200. If the power supply is overloaded, system crashes, loss of data and the defect of the power supply unit can occur.

If your Amiga 1200 is already expanded (hard drive, external floppy drive, etc.), then the EZ-VGA ScanDoubler/FlickerFixer may overload your power supply. You should consider purchasing a higher output power supply.

PLEASE NOTE! We are not liable for any faults caused by an overload of the power supply !

If you put your EZ-VGA ScanDoubler/FlickerFixer into operation with the original power supply please watch out for symtoms caused by an overloaded power supply (system crashes, over-heating of the power supply).

8. Warranty disclaimer

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