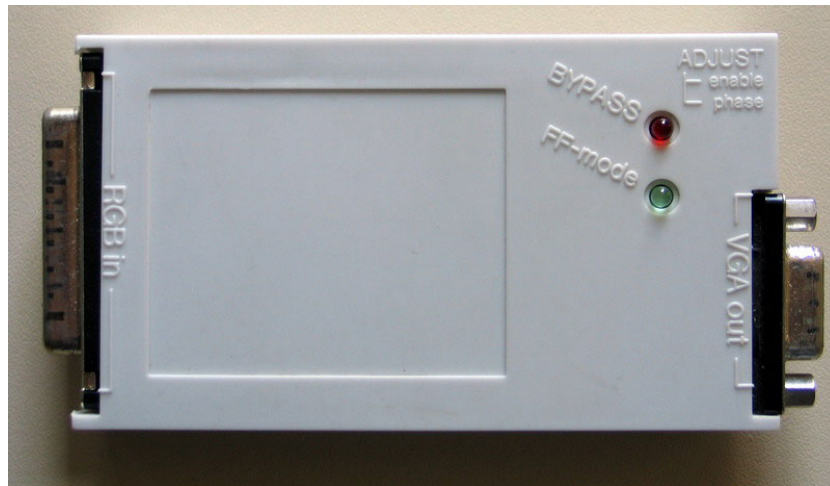# MV 1200

External
Scandoubler/FlickerFixer
For all *Amigas*

User´s Guide

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1. Preface

Dear Customer,
Thank you for purchasing the MV1200 Scandoubler/Flickerfixer. You 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 MV1200 into operation.

2. Contents

-MV1200 Scandoubler/Flickerfixer
-this manual

3. MV1200 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
-suports full 24Bit color (16 million colors) in all non-15kHZ modes

-high precision PLL circuit used for pixel clock generation (instead of 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 MV1200 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 MV1200 Scandoubler/Flickerfixer with the side labeled**----RGB in----** into the *Video* connector.

Please Note!
Do not try to install your MV1200 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 MV1200 or both !

-Connect your VGA monitor to the port of the MV1200 Scandoubler/Flickerfixer labeled **-- --VGA out ----**
-Switch on your VGA monitor, then switch on your Amiga.
-Your Amiga starts as usually
-Your MV1200 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 MV1200 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 MV1200 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 MV1200. 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 3-4 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 adjustment, close the jumper *phase* (this jumper is normally open) and perform the adjustment procedure again.

5. Jumper/LED functions
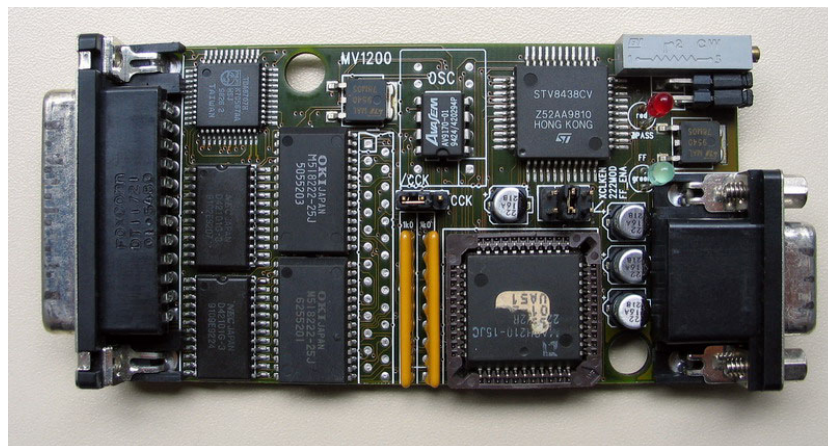
LED	info *LED on*	info *LED off*
Bypass	input H-freq » 15kHZ (24kHZ to 31kHZ)	input H-freq = 15kHZ
FF-mode	15kHZ interlace, flickerfixed (FFixer only)	anything else

Jumper	function *open*	function *closed*
Enable	adjustment *disabled*	adjustment *enabled*
Phase	normal clock used	inverted clock used
FF-ena	FlickerFixer mode	Scandoubler mode
222mod	518221 FRAMS fitted (FF only)	518222 FRAMs fitted (FF 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 fitted
-jumper *XCLKEN* (inside)	factory use only, *must be open*
-jumper *CCK* (inside)	factory use only, *must be set to left position*.
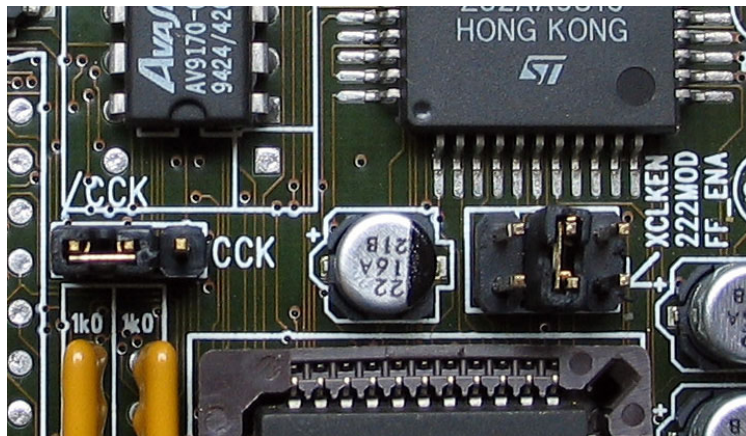
6. Important notes

-in SuperHiRes modes, only every second 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 flicker-fixed, 24kHZ or 31kHZ interlace resolutions (e.g. Multiscan interlaced) will stay interlaced because they run in **BYPASS** mode.
-Please ensure that the **VGAonly** tool (which is part of the monitor drives) 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 horizontal frequency of 29.3kHZ, **VGAonly** is not installed correctly.

7. ScanDoubler to FlickerFixer Upgrade
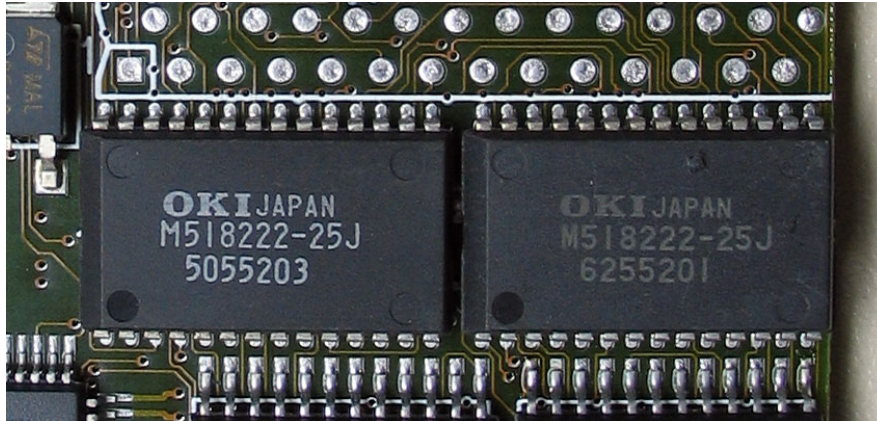
To upgrade your ScanDoubler only version of the MV1200 to the FlickerFixer version, you need two video field memories of the type **OKI 518221Z-30 or OKI 518222Z-30** in **ZIP** (zig-zag) **package**. These chips can be purchased as an upgrade kit from the dealer where you bought the MV1200.
-To add the memory chips, open the case of your MV1200 by removing the two screws.
-Insert the Field RAMs into the ZIP sockets inside. Ensure the correct orientation of the chips: the writing has to face towards the 23pos connector that fits into the Amiga video output.
-After pressing the two RAMs firmly into the sockets, bend them towards the 23pos connector to allow the top case to close.
-Open the jumper labeled *FF-ena.*
If you added 2 FRAMs 518221, keep the jumper *222mod* open, if you added 2FRAMs 518222, close this jumper.

Advantages of the flickerfixer version:
-Flicker-free 31kHZ display of all 15kHZ interlace modes
-Flicker-free display of all programs that use 15kHZ interlace modes and cannot be rerouted to other display modes (e.g.games)
-dramatically speed-up of high-resolution high-color AGA-modes. If you want to have e.g. a flicker-free 640*512 pixel display with 256 colors, normally you have to select Multiscan. But then your ChipRAM bandwith drops to as low as 0.6MB/sec (measured with Bustest 0.09 utility) which results in unbearable slow display refresh. With the flickerfixer option installed you obtain the same 640*512 resolution in PAL interlace (then flicker-fixed), but with still a bandwith of 3-4MB/sec.

8. 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 MV1200 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 MV1200 ScanDoubler/Flickerfixer into operation with the original power supply please watch out for symptoms caused by an overloaded power supply (system crashes, over-heating of the power supply).

9. Warranty disclaimer

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