See you at
The Show

How to Speed Up Your Blizzard 1200

Turning a PC Mouse into a Amiga Mouse

2 Days

AmigaFest 98

Melbourne

October 98

Australian Amiga Gazette
Giant Moving Sale

In September we are moving to new premises, (see next months issue for details) So we need to clear stocks of ex demo and ex warranty products (not all are new).

All prices are for cash, 3% Credit card and cheque charges will be applied.

Warranty varies from 7 days to 90 Days on clearance stock all goods tested and working

<table>
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<td>3</td>
<td>Axalen optical 2 button mouse</td>
<td>$40.00</td>
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<td>5.25&quot; 880K floppy with 100 disks</td>
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<td>$30.00</td>
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<td>Scantray</td>
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<td>Joysticks from</td>
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Plus too many other bargains to mention in this advert

Last Chance Ever

20 Only Golden Image 3 Button Optical Mouse Brand new

$90.00 Each

Prices must Rise, Get in now !!

With the drop of the Australian dollar, Prices must rise, at the time of advert preparation, we have the following stock at pre price rise prices.

<table>
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<td>Power Digital Camera</td>
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<td>5</td>
<td>Monument designer V3 Pro (Amiga &amp; Movie)</td>
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<td>Clarissa Pro V3.0</td>
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<td>Animage</td>
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<td>6</td>
<td>Adorage V2.5</td>
<td>$195.00</td>
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</table>

New products and stock

Foundation CD - $77.00, Quake CD - $105.00, Genetic Species CD - $77.00
Image F/X - FD - $450.00, A1200 PC Kbd 1/F - $85.00, A1200 Buff IDE Bd - $75.00
A1200 Buff IDE + IDE fix 97 (Registered) - $125.00, Aminet 25 - $27.00, Oxy patcher $50.00

Don't forget our catalog, 10 pages with over 500 available items,
Only $3.00 or free with any purchase over $50.00.

We will mail order, with payment by Amex, Visa, M/card, B/card, Cheque, or direct deposit.

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The Australian Amiga Gazette is a grassroots publication, created for the purpose of keeping the Amiga dream alive in Australia and beyond.

The opinions expressed in editorials, articles, reviews and letters are solely the responsibility of the authors and do not necessarily reflect the position of AAG.

Letters to the editor are invited; letters may be edited to meet editorial requirements.

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After my little tizzy last month I have decided to get back to the task at hand, keeping our beloved readers informed and up-to-date with all things Amiga.

Melbourne didn't get to have an expo last year so I have started to organise the "AmigaFest 98" to be held on the 24-25 of October at Albert Park. The park has some excellent venues left over from the Formula One racing. The show is shaping up to be something not to be missed.

As you can appreciate it's not a small task to promote a show with an expected attendance of around 1700 Amiga users over the two days. For a moment if you would picture in your mind your slightly eccentric editor (that's me) down on his knees with hands clasped and a boyful frown on his face saying to you, "please help me with the show".

Now clear your mind of that horrid picture before it causes permanent damage to your neurons and get on the phone (02) 4736-8055, when it answers say the following sentence "Hi my name is (Insert your own name here) and I would like to help organise the best Amiga show in the history of computerdom" or something to that effect. I know your involvement will give you a warm fuzzy feeling and prevent me from having a possible nervous breakdown on the day of the show.

Now for a bit of informing and updating. Head of Amiga Inc. Jeff Schindler has again changed his mind about the new super Amiga announced at the "World of Amiga" show in London - you may recall that the new generation of Amiga was not going to be Intel based. In an interview with "Investor's Business Daily" a business magazine in the US Jeff let slip that the generation 5.0 Amiga platform will have processors from Intel, but that's OK because Jeff also said "The end product that users will see will not be a PC" (personal Computer) The mind boggles, A playstation with keyboard that connects to the internet?
National Amiga
Announces NIMIQ
PCMCIA Ethernet Card

The Amiga 600 and 1200 have a PCMCIA slot on the side of it that has yet been exploited for use with a cheaper ethernet card, until now. The NIMIQ card from National Amiga offers ethernet connectivity for the Amiga 600 and 1200 at a cheap price. The card has been fully tested to work with lNet, Envoy and Miami, the most common networking packages available for the Amiga. It uses the standard cnet.device SANA2 .device driver and later a specialized version will become available for registered users that will add more SANA2 functionality and speed. The card should be available in Australian soon and retail for around $129 Dollars

STFax Professional v3.3
Supports Independent Operation Mode

The recently released STFax Professional v3.3 now support8 the independent Operation Mode found within the PACE 'Solo' and 3-Com Message Plus modems. Independent Operation Mode allows you to use the modem as a digital answer and fax machine without the need for your Amiga to be switched on! The modem will answer with a greeting, the caller can leave a message as per a normal answer machine and, if they are sending a fax, the modem will automatically switch into fax mode and receive the fax transmission. These voice and fax messages are then stored on the modem and, the next time you run your Amiga and STFax Professional (v3.3+), these messages are automatically downloaded to your machine. You are then able to play/view/print/delete the messages.

NetConnect v2 Release

The long awaited NetConnect v2 is due for release on the 21st of July 1998. NetConnect v2 is the easiest and most comprehensive Internet compilation designed to enable any Amiga user, from novice to expert level, to get onto and use the Internet. The CD is based around eleven commercial programs, debuting AmiTCP-Genesis, X-Arc, Microdot-II v1 and Vapor's new 'Contact Manager'. You are given all you will need to get the most from the Internet. By using the new Genesis Wizard, a user should be able connect to the internet in a matter of minutes.

Amiga Inc. Head
Jeff Schindler was Interviewed

In a interview which appeared in the June 30, 1998 edition of The investor's Business Daily, Amiga Inc.'s General Manager Jeff Schindler gave his views on the future of the Amiga.

Mr. Schindler talked about the generation 4.0 developer platform and indicated that while the machine will be, "pretty much a PC," it will only be used to develop software for the generation 5.0 platform Amiga. According to Schindler, "The end products that users will see will not be a PC (although they will have processors from Intel.)"

When asked about the links between parent company Gateway, Schindler confirmed that Gateway's original intention was to buy the Amiga patents solely on the basis of the value of the patents. "But we've found more opportunity here," Schindler said. About compatibility with legacy Amiga software and hardware, Schindler mentioned the "Amiga Classic Card" which will include the original Amiga chipset that plugs into the new Amiga models.
This hardware device will make the new generation Amigas backward compatible with older Amiga programs.

In terms of who will actually build the machines, Schindler told Investor's Business Daily that they have contacted several PC makers including current Amiga developers. Schindler confirmed that Amiga Inc. is in the software licensing business, not the computer making field. When asked if Gateway will make new generation Amigas, Schindler's response was, "I hope so."

Schindler was asked which kinds of users Amiga Inc. is targeting with the 5.0 Amiga. Schindler said, "We're looking for the percentage of the market that says, 'I'm intimidated by computers and I don't want to spend that much.' These are people who say, 'I'm mainly using my PC in home for entertainment and for general tasks.' The new Amiga will offer Internet access for people who don't need a full computer and don't want to spend much."

When asked what about the high-end graphics-arts users who have made up the bulk of the Amiga's following Schindler indicated, "We'll always have the high end. The Amiga design is scalable. But this market is not the bulk of our target." The 4.0 developers machine is slated to ship in November of 1998 and will have a target price of $1,200 US dollars according to the article.

**Cloanto Releases Personal Paint 6.4 as a Free Gift to the Amiga Community,**

in the evolution of Personal Paint, which has become the leading title for editing palette-based graphics, version 6.4 represents a milestone in new features, reliability, diffusion and new code written.

The particular release of Personal Paint 6.4 now on Aminet (biz/cloan directory, PPaint64.lha archive, easy access from http://www.cloanto.com/amiga/download.html) is little more than 18 months old. With few exceptions, such as the lack of full documentation and no support for file formats such as GIF (which is included only with the commercial package, under license of Unisys Corporation), this is the full retail version of Personal Paint 6.4, including 20 different user interface languages. Additional information on the distribution is contained in the archive, as is a special upgrade offer to the latest version 7.1. The version of Personal Paint 6.4 now released for free download is not a demonstration version, but is fully functional, and may be used without limitations for productive applications.

**Amiga Survivor Magazine Begins Distributing First Issue**

This brand new, A5 40-page print magazine dedicated to the world of Amiga games was (finally) released on the 14th July 1998, after a few teething problems by its printers! It retails for 2.95UKP in the UK, but can also be purchased outside the UK by credit card. For more information, e-mail Robert Iveson at: thedomain@enterprise.net. Or visit the website at: www.crystalsoftware.com/survindex.html.
Amiga Expo
Australian Amiga Gazette

AmigaFest 98

Melbourne Amiga Show
2 Days

24th - 25th October 98
Albert Park

Check Back Cover For Ticket Details
Eylight Announces a New Age in 3D Computer Graphics

"Mage." is a complete, modular 3D graphics package that allows to easily model, animate and render at blazing speed on Risc based computers and workstations. Because Risc architecture is perfectly suited to 3D computer graphics. Both the PowerPC and Mips R5K architectures provide the invaluable MACC (Multiply and Accumulate) all-in-one instructions that easily account for 80% of processor operations during preview or rendering. "Mage." is tentatively priced at 1299,00 USD for first promotional release. This first release distribution is scheduled to begin in October 1998, with a massive marketing campaign to follow in first quarter 1999.

Amiga International Press Release

We are very proud to report today that the first shipment of A1200's directly to Bangladesh has been done. Our goal is to expand our distribution network worldwide. We would like to be prepared for our new product range, which, according to our R&D company Amiga, Inc., will be available by the end of next year.

Amiga Boards In PokerMachines

Impea GmbH, a leading manufacturer of pokermachines in Austria, will be using A1200 boards in their machines.

Impea already used AMIGA technology in the past and now reactivates business connections with AMIGA. As a result, a first order has already been placed. In the near future there will be a special gambling software competition in cooperation with impea, AMIGA International, Inc. and the Amiga press.

Also planned is a demonstration of Impea's "Powered by AMIGA" pokermachines at the Computer '98, the biggest AMIGA exhibition in the world (November 13 - 15 in Koein, Germany). Mr. Burgstaller, Manager of Impea GmbH, and Petro Tyschtschenko, President of AMIGA International, Inc., have some more plans to be carried out in the future.

Randomize, Inc.

Announce Summer Super Pak

The "Summer Super Pak" includes almost everything you need to feel cool, look cool and play out doors including: Cloanto Amiga Forever - Amiga Emulation on your Lap Top - Really Cool! Amiga Wares Powered-by-Amiga T-Shirt - Feel Cool! Amiga Wares Premium Baseball Hat - Look Cool! Amiga Theme CD - Back for the Future - Sounds Cool! Amiga Wares Boing Beach Ball - Have Fun! Now here's the extremely cool part .. all this for just $99.95 CDN, $69.95 US! $110 AUS For more info, visit the Randomize website at www.randomize.com/ssp.html

Sunrize Audio Card Upgrades

If you are a Studio 16 user with a Sunrize Audio card and thought you were left out in the cold when Sunrize folded. Take heart. The Studio 16 mailing list has managed to make AHI and other utilities a possibility for the Sunrize audio cards. The list moderator and owner Kenny Nilsen kenny@bgnett.no , has gained valuable information and more AHI progress has been made. Kenny is an Amiga programmer and apparently very good. Armed with important library information, he has been able to use the information to write some utilities that access the Sunrize cards and play samples directly to the card with out using Studlol6. Available from Aminet.
Australian Games Developers

Vorlon Software have released their first title called "Ultra Violent Worlds". A fast action arcade style that can deliver 25Fps on a stock A1200. The CD also contains bonus audio tracks for your listening pleasure. The CD is also multi-platform (compatible with 4 operating systems) for Windows 95, MSDOS, Linux and Amiga AGA, all versions being included on the one CD. A playable demo is available on Aminet or from their Website at www.vorlonsoftware.com. You can buy the game now for only $39.95 (includes postage). Vorlon Software, 133-135 Alexander St, Crows Nest NSW 2065 Email: amiga@vorlonsoftware.com

Ultra Violent Worlds

Development of the very promising title is moving along nicely. A lot has happened to the engine since any news was last reported. Apparently, it has changed in a massive way since the last public release and there has been a host of new features that have been added to the game; these include:- Preliminary artificial intelligence support including obstacle avoidance, navigation and combat intelligence, new effects including new weapon, explosion and HUD effects. This is one area in which the new engine is far improved over the original one. Other additions includes AHI support for sound, a squadron of new ships and general coding improvements. The code has now been compiled on a PPC. Initial tests saw the game running at an amazing 70fps on a Cyberstorm 200mhz. However, it still isn't decided if PPC support will be continued.

Lambda

There hasn't been much information on this game for quite a while now, however, I can bring you a small update on some new features that have been added to the game. New additions include TCP support to allow deathmatches over the Internet, 3D stereo sound, enemy intelligence, Virge support, a script language that allows you to alter virtually anything in the game, real-time explosions and more. There will hopefully be a demo not too far in the future.

Samba World Cup

Alive Mediasoft have secured the rights to Samba World Cup. This game is shaping up to be the best footy game on the Amiga. It will be available in the first week in July and there is a demo available on Aminet World Cup fever is upon us, and you don't just want to be watching the action...you want to be playing it! AGA-version & ECS version, CD-Rom or Disks. Price yet to be announced.

Simon the Sorcerer 2 & 3

Recently there has been some talk about AdventureSoft developing Simon the Sorcerer 3 for the Amiga. Sadly, this is not true. AdventureSoft commend the platform in general but say that userbase is just too small for them to consider developing for it.

Quake 060 Patch Released

ClickBOOM has released the 060 patch that they have been promising for a while. According to what clickBOOM say the patch gives an improvement of 0.5-2fps depending on the complexity of the scene being rendered. The update is only available to registered users who have a serial number. For details on how to obtain the patch go to the clickBOOM website www.clickboom.com.
Turning a PC Mouse into a Amiga Mouse

Sick of the "good" old C= mouse and having a serial mouse "flying around"? I decided to modify this mouse to work on my Amiga. So I took a look at several texts found on the Aminet which described the modification of such a mouse. Unfortunately this didn't work for my mouse as it is a bit different to those described.

WHAT YOU NEED FOR THE MODIFICATION

Some experiences in soldering and the tools to do it :)

- 1x LM339 Quad Voltage Comparator IC (TDB0139 or LM239)
- 1x 150Ohm Resistor (1/4 or 1/10 Watt)
- 1x 5+1 10k Resistor Network (or 4+1 10k and a single 10k one)
- 1x 5+1 2.7k Resistor Network (or 4+1 2.7k and a single 2.7k one)
- and some 9pin cord with a female db9 plug.

NOTE: Please read the following text before you buy anything, you might need different resistors!

HOW IT WORKS

First disassemble the mouse and disconnect the mouse cord. Second remove the 16pin integrated circuit and clean out the holes as we need them to solder in the new mouse cable. Now follow the trace that is connected to the negative terminal of the small electrolytic (C1) capacitor, the trace should end at the cable socket (CN1). This is GND. Connect line 8 of your new mouse cord to it. Go back to C1 and follow the trace that is connected to the positive lead of C1, it should also end at CN1. This VCC (+5V), connect line 7 of your mouse cord to it. (Alternatively, you can use a voltmeter to find the correct lines, for this purpose your mouse must be connected to the serial port).

After doing this, take a look at the switches for the mouse-buttons, and check if they're connected to VCC or GND. In case that they're connected to VCC, you've to disconnect them from VCC and connect them to GND. Now follow each trace that goes from a switch to one of the holes where we removed the IC before and solder in the appropriate line of your mouse cord to it: line 6 of the mouse cord must be connected to left button, line 5 to the middle one and line 9 to the right one. As your mouse might differ from my one (BTW: it's a Genius EasyMouse), you've to check the following: pin 1 and 3 of each ir-detector should be connected to GND via a resistor (normally named RP1). If not, connect the input line of your 5+1 (or 4+1) 2.7k resistor (marked by a point) to GND and the output lines of the ir-detectors (pin 1+3) to the resistor (watch out for a group of five holes named RP1 - this is the right place for the resistor). Please note that we'll also connect these lines to the LM339 IC! If you're a lucky one because the output lines are already connected to GND, just remove the old resistor (RP1) and replace it by the new (2.7k) one (you'll probably need a 4+1 instead, but don't forget to buy an additional 2.7k resistor then).

Next we've to connect the following lines to the LM339: Connect pin 1 of the vertical ir-detector to pin 5 of the LM339 and pin 3 to pin 11 of the IC. Pin 1 of the horizontal ir-detector must be connected to pin 7 and pin 3 to pin 9 of the LM339 (simply solder a wire from the IC's holes [the holes that are connected to the detectors] to the LM339).

Now connect pin 3 to VCC and pin 12 to GND. Pin 4,6,8 and 10 must be connected to +1V: Connect one (free) line of the 5+1 2.7k resistor to one (free) line of the 5+1 10k resistor (which must be connected to +5V). This new line, just created, will give you the +1V needed for the comparator.
Finally, pin 1, 2, 13 and 14 (LM339) must be connected to VCC through the 5+1 10K resistor. When you've done this, connect pin 1 to line 1 of the mouse cord, pin 2 to line 2, pin 14 to line 3 and pin 13 to line 4.

That's all, almost:) Replace R1 (this should be the limiting resistor for ir-light emitters) through the new 1500Ohm one. IMPORTANT: The leds of your mouse might differ, so better try a stronger one before using the 1500Ohm one!

TROUBLE SHOOTING

The mouse buttons don't work:
You've forgotten to disconnect them from VCC and connect them to GND. Check the lines!

The mousepointer is moving into the wrong direction:
You've swapped the horizontal or vertical lines.

The mousepointer doesn't want to move:
1) Check for around 0.5V at pin 5, 7, 9, 11 of the LM339.
2) Pin 4, 8, 10 of the IC should get +1V. Pin 3 is VCC and must get +5V.
3) The limiting resistor for the leds is too strong, use a smaller one.

The mousepointer moves only up/down or left/right:
The resistor for the leds is still too strong, try a smaller one.

FINAL NOTE

Normally, the V and H pulses that are produced by the ir detectors should be around 0.5V. As this wasn't enough to work with my mouse (I used a 330Ohm resistor for R1), I powered up the ir-leds by using an 1500Ohm resistor. Now the ir-detectors output up to 2V for a movement. this works for me but it doesn't mean that works for you! You should also try different resistor combinations, eg. use a 330Ohm resistor for R1 and lower the voltage of the comparator circuit from 1V to 0.3V (= used by the original C= mouse). You could also try to powerup the ir-detectors, so that they output up to 5V for a movement. This way you won't need the LM339 and the 10k resistor!

Diagram 1

Diagram 2

Australian Amiga Gazette July 98
Cloanto Answers Some Common Questions

From time to time we become aware, through direct user emails and newsgroup posts, of some questions related to our Amiga products and projects. We always answer directly to all inquiries, but we would also like to publicly try to answer and clarify some of the more popular issues.

No doubt, a frequent question is about our plans with respect to PowerPC Amiga expansion boards. Last year, when we released a PowerPC version of the Personal Paint blitting library, we were very proud to be among the first to release some PowerPC code for the Amiga. Since then, we did not port entire packages to the PowerPC. This is because porting a complex program like Personal Paint, for example, is not just a matter of simply "recompiling" it, or at least it is not with the development tools and the PowerPC libraries available so far. We still plan to do this for Personal Paint 8, which is designed with more code portability in mind, if the PowerPC will be accepted and endorsed as an official Amiga platform, or if tools emerge that make it possible to port Personal Paint to a PowerPC system by using the same code as for the 68K version. In this latter case, we might even port Personal Paint 7.x.

Another issue is that the original Personal Paint PowerPC blitting library released last year does not work with newer PowerPC expansion systems. This blitting library was tested both by Cloanto and by the manufacturers of the boards (who were aware of our release plans), and originally worked flawlessly. After the release of the library on the Personal Paint 7.1 CD-ROM, the PowerPC expansion systems were changed in a way that created incompatibilities with existing PowerPC software, such as this library. We changed the code twice, and released it on Aminet, in the biz/cloan directory, and we also shared our source code with the developers of the expansion systems, but given the continued and repeated incompatibilities, we now feel that the maintenance overhead does not justify the performance improvement, and, as explained, we are looking at the whole matter from a broader perspective. To completely solve this issue, we recommend to use the standard 68K blitting libraries, which are used by default by the program. In our tests with Amiga systems having both a PowerPC and a 68060 CPU, the 68060 blitting library was only 10% slower than the PowerPC library. It is to be expected that PowerPC Amiga systems will only be able to express their full potential when the complete Amiga OS and all new software are entirely compiled for the PowerPC. Before this occurs, and unless it can be verified that at least some software which can justify the overall investment is available for the PowerPC and runs considerably faster than on a real or emulated 68K Amiga, we recommend to use 68K Amiga systems such as the 68060, or emulation.

It is no secret that, while the power of the CPUs used in PCs doubles about every 18 months, we became aware of the fact that an Amiga can now be emulated quite well by other systems. In some cases, which can only increase rapidly over time, emulated Amiga systems are already cheaper and/or faster than silicon ones. Whatever the official Amiga of the future will be, whether it will be based on a PowerPC, or on a different (non-68K) CPU, it will need emulation to run the current Amiga OS and applications (which have now officially been defined as "Classic Amiga"). We plan to continue supporting Amiga emulation and other means of integrating the Classic Amiga with different platforms, as we have successfully done with the Amiga Forever package. We will also continue to invest in the Amiga, preferably by focusing on
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How to speed up your Blizzard1260

My friend has bought Blizzard1260 turbo board. What we did first was to testing of its speed. Yeah! Great boost, but... slower than Pentium machines! So I was desperate to think of something to speed it up yet more. Solution is simple: Replace 50MHz clock generator with faster one. Yes, I know - CPU will be overclocked then, but it's so common in PC world! So, let's begin...

MX8315 is an integrated PLL clock generator. You can get a different output frequency by changing settings of JP1, JP2 and JP3. I've removed this chip from my old, defective Pentium motherboard. Every Pentium motherboard must have this or similar circuit. Oh, yes! I forgot to explain, why to use this instead of replacing original clock generator chip with faster one. Of course, this was my first choice too. I checked 86MHz generator first. Wow! Amiga was over 90 times faster to A500, but... it didn't work too long. My computer went crazy after a few minutes. I've found it's too fast. So I tried to buy little slower generator and... I managed to buy only 55MHz one. It worked fine but I wanted to check 60MHz! So I had to make the circuit I describe below. Ok, now you know the whole story.

What you will need:

- i.c. named MX8315
- capacitor 47nF
- three resistors 10kOhm
- quartz oscillator 14.318MHz
- three jumpers

How to assemble this stuff
(see picture page 16 for schematic):

Bend all pins of U1 around. Leave only pins 1, 7, 8 and 14 (with orange bullets), with those pins you will insert generator into a socket on a Blizzard1260 board. Connect pins with a thin wire as shown on the picture, then mount other elements (oscillator, capacitor and resistors). Resistors are optional. You can tie pins FS0, FS1 and FS2 directly to 5V (DVDD) or 0V (DGND). For 60MHz output clock (CLK) connect FS0, FS2 to 5V, FS1 to 0V.

WARNING: Don't try to make this hack, if you are not experienced in soldering and electronic circuit design. This hack invalidates your warranty. I am not taking any responsibility for any computer or turboboard damages due to this hack!

Now the most difficult part: Unsolder and remove original 50MHz clock generator (square metal element). Remember this invalidates your warranty! You may need some special equipment here. Be careful! You may damage your board! You must be 100% sure you are able to do this. In the other case leave this job to your experienced friend.

OK. You made it! Have you realized that there are two more drill holes reserved for "big" generator on Blizzard board. Now clean two top and two bottom holes and place the socket for our generator. Pins 1, 7, 8, 14 are compatible with pinout of generator, so you can insert it into a socket with these pins
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http://www.uq.net.au/~zzjason

(I hope you know what I mean).

Remember to check orientation of a chip. Pin no. 1 is marked by a square both on my picture and on the board.

That's all! My Amiga works fine with 60MHz clock and now it is almost 20% faster. I hope you will not have any problems either. Anyway you can always replace the original generator. Also, try to find 60MHz chip first. You are a happy person if you have this, your task will be much simpler.

Artur Muszynski (AMST/Union) muszynsk@ipenauro.ipe.pw.edu.pl

How To Speed Up Your Blizzard 1260

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On with the show.

To the immediate right of our booth was Nova Design. Kermit Woodall showed off the latest capabilities of ImageFX with the help and expertise of Corinna Cohn. She has amazing skills with ImageFX, and it looks like the back of her hand. I bought another copy of Aiddin 4D, as well as Catalyzer Volumes I & II. Big Spender, eh? Chris Aldi showed off his line of products from Finale Developments. As well as "Digital Quill" by Timothy Ashton. Luck was not with Chris for this show, as his A3000 went on the blink. However, he did a great job in spite of it. He's been dedicated to the Amiga since the beginning.

Harv Laser was right next to Finale Developments. Was he wearing the coveted crown of the mighty "User Representative"? No, he was humbly dressed, greeting people as they passed, and enjoying lots of talk and stories. Of course, he was also promoting AmigaZone.

From the retail standpoint we had Lively Computers, and VisionSoft. They were far too busy for me to even get a look at what they had for any length of time. Both companies had great representatives that were friendly, and loved to talk shop. What a great place to be.
One of the most interesting conversations I had was with Bob Scharp. A very modest individual with an extremely kind wife. He has reason to brag, however, they've done a great job with the St. Louis show over the years. And I look forward to exhibiting there next year. At his display were the nicest coffee mugs an Amigan could ever see. They had a black checkmark on one side and a big black circle on the other side. Gee, sounds great, doesn't it? Well, pour some hot liquid in there -- I suggest coffee, myself -- and the checkmark becomes colored, and the large black circle becomes a smiling face. Bob told me, "This side shows a black check mark because the Amiga died, and this side shows a black circle because the Amiga died. Put a hot liquid in the cup, and the checkmark becomes colored, and the circle becomes a smiling face because the Amiga is alive again." Cheers, Bob! It was great meeting you.

One person that is always a joy to listen to because he is a virtual knowledge bank is Holger Kruse. He knows his stuff, and if you don't have Miami, GET IT! He has worked tirelessly to give us easy internet access, and he's done it with the greatest modesty. And his intentions are unbelievable. Did he do it for the money? Did he do it for the recognition? Why did he work so hard for so little? ($30 a copy is REAL cheap for a professional package like Miami) He did it for the Amiga, and it's users. At first we all questioned his intentions. Like, was he trying to take over what AmITCP had given us? Certainly, but without malice. He did it because the Amiga community needed an easy way to get on the internet. And, for those of you that criticize Miami -- because WinSock is "free" -- don't knock it until you try it. WinSock is "FREE" for a reason. That is about all it is worth. Miami is far more complete a TCP/IP stack than WinSock. Enjoy what you have. Thank you Holger.

Now, there were some things I just had to see. I wanted to see Carl Sassenraths seminar on REBOL (sounds like "rebel"). This man has an excellent sense of humor, and he's very down to earth. REBOL sounds like a very exciting language. I can't wait to implement a REBOL interface in some of our projects. He described, in great detail, how REBOL really works, and what it's meant to do. He is so surprisingly Pro-Amiga. Dedicated to his creation, I suppose. Carl also spoke at the banquet dinner, where he showed slides from the very early days of Amiga. Included in the slides were pictures of the early MOS implementations of the Amiga Chipset. He had interesting stories about the trials of getting the Amiga to work. He shared many funny stories about events that took place at Amiga. RJ Mical blowing up fish in the microwave?

Of course, the event we had all been waiting for. Hearing Jeff Schindler speak about the Amiga. Oops. Something came up, so Jeff was unable to attend (I'll elaborate later). Well, at least now we have Dr. Allan Havemose... Oops. You know the story. Big disappointment. But they more than made up for it. Frankly, everyone was pleasantly surprised by a man that very few know anything about -- besides his name. Bill McEwen was an outstanding speaker, great motivator, and despite his lack of techno-knowledge, an expert in this field. He should be trusted as a marketing director. He spoke very well, very clearly outlining the intentions and the road map for the Amiga. Many questions were answered, without the usual thousand more that result from the answers. He covered his speech with good humor, and professionalism. His speech was long, but by no means unbearable (aside from there being no air conditioner in that room). He should be commended and thanked warmly for making this unexpected trip to Sacramento to stand in for Jeff Schindler and Dr. Havemose. I was not at all disappointed, and left with even more confidence than before.
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CAN YOU IMAGINE HOW BORING IT WILL BE NEXT YEAR TO WATCH IF THE CHALLENGER IS ALSO A COMPUTER?!
In the Beginning was CAOS
By Andy Finkel

The very first issue of Amiga Transactor - spun off from the original Transactor - featured an article by Andy Finkel, then the Software Manager at Commodore-Amiga. Fortunately, the article survived, although Amiga Transactor didn't. It's interesting to contrast the state of AmigaDOS then and now, especially in comparison to the CAOS specs. Thanks to Andy - and an intrepid Amiga owner who typed in the text and sent it to Andy - ViewPort is able to reprint that article in its entirety. So set the WayBack machine for 1988, and read on...

As most of you know, AmigaDOS was not the first choice for the top-level OS/DOS on the Amiga computer. What we now call AmigaDOS was really the backup DOS, based on an already existing OS known as Tripos (developed at the University of Cambridge Computer Laboratory by the TRIPOS Research Group, and converted with amazing speed by Metacomco's Dr. Tim King and his band of programmers). When the original, intended, designed-for-the-Amiga DOS failed to materialize (in what would no doubt be an interesting story in itself), the Amiga was launched with AmigaDOS, and the rest is history, so to speak.

Once in a while, someone suggests that the original DOS be written according to the original specs. This was even proposed by some members of the Amiga team, but Amiga management decided that it wouldn't be possible to complete the DOS and still launch the Amiga on time, especially since the software guys had already given up weekends at home. And going home. And sleeping. We're left with a big question: what would the character of the Amiga have been? Would life have then been perfect? There's really no way of knowing, of course. But if I stopped here, this would be a really short article, right? So why not take a quick look at the specs, and maybe do a little comparison with AmigaDOS...

Because these questions greatly interest developers for some reason, a small mention of CAOS on USENET brought a flurry of electronic mail, all asking for more detail (all right, they wanted the specifications). So I decided to write this - it seemed more fun than the article I was working on ("A Guide to DOSBase", or "Why is this library different from other libraries?" so I'll save that for another time. Ideally this article should have been written by one of the Amiga people who spec'd CAOS (primarily Carl Sassenrath who also wrote Exec) way back in the dim reaches of time (1984). However, as they've been quiet about it all this time, and I have played with the prototype (do you know what a pain a Sage can be to set up?) it's time. Anyway, the specs are from the CAOS draft document.

CAOS stands for the Commodore Amiga Operating System. Its purpose was (good place to quote from the draft specifications here):

"It is a small, full-bodied operating system, functioning on a small (but great) machine bound for the consumer marketplace. Its primary purpose is not to provide a sophisticated software development environment - rather, it provides a foundation for pleasant and useful application programs. This is not to say that it neglects the programmer's needs. Externally it is meant for end users; internally, however, it is designed to support the complex demands of most applications. It provides extra rich functionality for an operating system of its class.

The goals of CAOS are:

• functionality usability (easy to use at both outer and inner interfaces)
• programability (interactive batch language, rich set of programmer functions)
• extensibility (modular and extensible)
• reliability performance
• size (reasonably compact)
• maintainability
CAOS was always meant to be built on top of Exec (in much the same way that AmigaDOS is built on top of Exec). Exec would provide the low level services. It would initialize the hardware, bring the system software up, handle interrupts and exceptions, do the low-level device control (like the trackdisk.device), provide system error-handling, supply the low-level timing routines and semaphores, provide some useful utility functions, and handle the basic multitasking. This sounds familiar, right? Yes, it's true. AmigaDOS depends on Exec for the same functions.

What would CAOS itself have given? How about multiprocessing, a file system, memory management, and commands? Basically, the same things that AmigaDOS gives us - not surprisingly, as AmigaDOS had to step into the shoes of CAOS. Both CAOS and AmigaDOS have their own special strengths, though. For instance, CAOS also did memory management to a greater extent than AmigaDOS, and would have had resource tracking.

There are three (well, at least three) general interesting areas to look at about CAOS: Multiprocessing, the File System and Memory Management. And then there's also the projected commands (for fooling around with files and similar operations.) We might as well start with the easy ones ... multiprocessing and memory management. You may wonder why multiprocessing is one of the simple ones. It's because multiprocessing (at least in general outline) is much the same as multiprocessing under AmigaDOS. CAOS processes are built around Exec tasks. CAOS depends heavily on the Exec data structures and control primitives for multiprocessing (sound familiar?) A CAOS Process structure is built on top of an Exec Task structure. Exec handles the context switching, inter-task communication, synchronization, queuing, and mutual exclusion. As with AmigaDOS, only Processes can talk to the file system.

The CAOS Process structure contains (along with the Task structure) information about its stack, the program data, resource tracking, and exception code. (Once again, except for the 'resource tracking' area, it sounds much like the AmigaDOS process information, right?)

The resource tracking is a key difference. CAOS was intended to keep a linked list containing blocks of resources used by the process - file control blocks, I/O blocks, message ports, libraries, memory usage, shared data, overlays and so on. (This part of CAOS lagged behind the rest; which may explain why we don't have even a semblance of it now.)

Processes run in user mode, using a single (user mode style) stack. Except for context switches, which run in supervisor mode (using the supervisor stack) and of course interrupts, everything was going to stick to user mode. OS system routines are well behaved (they don't mess with the stack) and use well defined amounts of stack space (they don't allocate large areas for local variables or recurse). Now, that's a big difference. AmigaDOS makes extensive use of the stack for its operations. Oh well.

There are three ways to create a process: create it from scratch, allocating new data structures and code; clone it from the parent process, making new data structures, but sharing the parent's code; or chain it from the parent, and replace it.

The general description of process creation is:
1) Allocate the process structure
2) Allocate the stack
3) Open standard in, out, and error
4) Load the code and make it ready to execute (relocate it)
5) Load static data
6) Translate the package file (if one exists), and create a package control block
7) Pre-load the package file
8) Initialize exception vectors
9) Add the task to Exec's task list (with AddTask), which puts it on the queue to run.

To Be Continued
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Choosing an accelerator is based on a number of factors which may affect your choice:

a) Which model of Amiga you own.
The A1200 and A4000 are well supported with new boards. The older Amigas have a limited choice of accelerators. If accelerating your current Amiga is next to impossible then upgrading your Amiga to an AGA Amiga would be advisable. It is unadvisable to run an 040 board on a plain A1200 as the heat produced by the 040 board is quite high, however if you do get an 040 then leaving the trapdoor lid off and attaching a fan unit will make it more usable though.

b) What software you are planning to run on it.
Modern games now require much faster processors. A 68030 is considered to be minimum specification these days and they are very cheap (<$200). High end Graphics and 3D Rendering work would require a 68060 processor for maximum performance but it is also the most expensive. A 68040 processor would be a cheaper alternative for the best of both worlds (fast but cheap).

c) How much money you are willing to spend.
Always include in the price some memory. An accelerator without any Fast RAM would be like running a Ferrari with no petrol. If you don't own a SCSI card then buying the SCSI interface option should also be considered.

d) Other expansions do you intend to buy.
Buying a faster processor is not the only way to get faster speed from your Amiga. AGA is considered to be too slow especially for quality graphics. A good Graphics card is considered to be essential to improve graphics speed. Floppy disk systems are a rare breed these days and a Hard disk is absolutely essential - the difference is incredible once you've installed one.

e) Quality of the accelerator board.
It is important that the accelerator board is well built and that it doesn't crash the Amiga every five minutes. Check that your Amiga can handle a fast new processor - you may have to upgrade some other parts of your Amiga to get the best out of it.

f) Acceleration isn't everything.
An accelerator will improve the speed of the programs but won't improve drive speed or graphics speed. Buying a graphics card will substantially improve graphics performance better than any fast processor. Some programs will benefit more than others such as rendering programs which use a lot of processor time.

Getting a better accelerator may actually speed up your drive, especially if you have an IDE drive, that's very dependent on the CPU. After all, the controller used in Amigas can only do PIO (Programmed Input/Output).

An accelerator can provide more options and features than your old processor e.g. a Floating Point Unit for math intensive applications like rendering

* Memory Management Unit for Virtual Memory and...
FastROM (copies ROM image into Fast RAM for speedy access) and using alternative Kickstarts (Soft-kicking).

Workbench provides three methods to control features of your processor:

a) Early Startup Screen. Allows you to turn off/on caches for backward compatibility with older software esp. games.

b) The CPU command displays your current processor settings and allow you to set them e.g. Caches, Burst Mode, Copyback, FastROM, Traps, MMU etc. You will need a newer version of CPU if using an 68060 processor.

c) 68040.library. Patches missing CPU instructions esp. FPU functions that exist on the 68882 but not on the 68040. Enabled with Seipatch program.

There are loads of third party programs that can make use of your accelerator, refer to list below.

A lot of programs now can come in different versions - some are optimised to run faster on newer processors. The installer will allow you to choose the best program to install and in some cases install an FPV version. You can achieve big speed ups upgrading from a 16-bit 68000 version to a 32-bit version 020 or better and you will need an 040/060 version for fpu functions.

PowerPC Acceleration

The latest Accelerator cards now have PowerPC 603e and 604e Processors as well as 68040/060 processors. Those who are considering buying one of these cards must realise that:

Standard 68000 Programs will NOT run faster on the PowerPC cards. This is because Amiga programs are written in 680x0 code which the PowerPC cannot run because it uses a completely different instruction set. The Programs must be written

<table>
<thead>
<tr>
<th>Processor Based</th>
<th>FPU Based</th>
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<tbody>
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<td>SysSpeed.</td>
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<td>PCM_1.0</td>
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<tr>
<th>MMU Based</th>
<th>commercial software</th>
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<tr>
<td>CheckMMU</td>
<td>CPU060. Newer version of the CPU command.</td>
</tr>
<tr>
<td>VirtualMEM</td>
<td>CyberPatcher. Replaces missing 040/060 instructions with emulated ones.</td>
</tr>
<tr>
<td>FastROM</td>
<td>68060.library. replaces missing FPU instructions.</td>
</tr>
<tr>
<td>VMM_3.3a</td>
<td>OxyPatcher. Commercial 68060 instruction patcher. Faster than other patch programs available and more compatible with some programs.</td>
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<tr>
<td>MMULlist</td>
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<tr>
<td>MMUX32</td>
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A lot of programs now can come in different versions - some are optimised to run faster on newer processors. The installer will allow you to choose the best program to install and in some cases install an FPU version. You can achieve big speed ups upgrading from a 16-bit 68000 version to a 32-bit version 020 or better and you will need an 040/060 version for FPU functions.
specifically for the PowerPC to run on the PowerPC otherwise they will run normally on the 680x0 processor on the card like other 68k accelerators.

There are two different methods of running PowerPC programs on the Amiga.

Phase 5 has a ppc.library which has a range of functions written for the PPC including Exec type functions for memory management and 64 bit math functions. PPC programs are loaded via ELFLoadSeg which resides in memory.

WarpOS by Haage and Partner is a different system to access the PPC

1. My machine keeps crashing after installing my accelerator.

There are a number of factors that can cause this to happen, some are hardware related or software related:

Software:
   a) You may be trying to use software which breaks under a new processor. This will especially occur with WB 1.3 software, demos and games. b) You are using a patch program which no longer works or trying to patch something which is incompatible. c) Make sure that appropriate software is installed before attaching the board. Copy the files onto other bootable disks in case of emergency.

Hardware:
   a) The accelerator is using too much power. IF using a standard 23W A1200 PSU, it is advisable to remove other devices or upgrade the PSU to a higher wattage. b) The accelerator isn't fitted properly. You must ensure that the accelerator is plugged in correctly. For the A1200 it may help to dismantle the casing to allow you to fit in the accelerator.

   c) The processor is getting too hot and it is shutting itself down (thus causing a crash). Make sure enough air is getting to the processor. It is advisable to leave the trapdoor lid off. If using a 040 or PPC processor that a fan is fitted to the processor to keep it cool. Placing the system in a tower unit will allow for more air to get to the processor. Also, lifting the unit off the desk will allow more fresh air to get to the processor. If you are using a fan, make sure that it is spinning fully and that it is the right way up (it has happened!).

   d) Other hardware is too old or incompatible with the new accelerator card. Check custom chip versions and upgrade them if necessary. Check docs for these things. This will occur on older OCS and ECS Amigas.

   e) Get the right kind of RAM. Most Amiga accelerators will use 32-bit Paged non-parity SIMM memory. Single sided SIMMs will fit better than double-sided SIMMS (chips on both sides). There are newer types of RAM eg EDO and SDRAM but check with the manufacturer/dealer before buying these kind as they may or may not work on your accelerator.

2. My accelerator isn't as fast as it should be.

Check that all the caches are enabled and that other features are enabled. Some features like Burst modes and Copyback can cause problems with some programs. Make sure that if using a Benchmark program, that you are using a more recent version (AIBB and SysInfo won't work on 060 processors).

3. I cannot get older software to work.

Disable some of the new features of the board eg Caches and Copyback are the best ones to disable. Disable AGA for really old games or programs KILLAGA2 and Degrader are good programs to get for this.

4. The MMU doesn't work on my machine.

The MMU is only used for ROM kicking and Virtual Memory. The 68030 probably won't have it enabled on processors slower than 50MHz. The 68040 and 060 has it built in. To check that the MMU works, use a virtual memory type program to check eg GigaMem, VMM, VMEM. Anything that says EC or LC do not have MMUs.
5. Can I overclock my processor to a faster speed.
This is possible by replacing the clock oscillator to a faster clock speed. Whether it works and for how long depends on the processor. Some can work at faster speeds than others up to 10-15% faster in some cases. So it may be possible to speed up a 25MHz processor to 28MHz clock rate, a 33MHz to 37MHz and a 50MHz to 55MHz. Bigger clock speeds may cause your machine to crash as the processor may fail to run at the higher speed - reduce the clock speed if this occurs.

6. Can I replace my processor with a different one directly.
Only if the new processor is pin and volt compatible. For example, it may be possible to replace a 25MHz 68030 with a 50MHz 68030 if the oscillator AND the processor were changed. The chip itself usually indicates the recommended clock speed on the end of the number eg 68EC030-50 for a 50MHz 030. A 040 and 060 are pin compatible but the 040 runs at 5V and the 060 runs at 3.3V so replacing it is not possible.

The Author

This guide was written by Peter J Hutchison on an A1200 with Blizzard 1230-IV, 16MB RAM, 1.1GB 2.5" HD, Microvitec 1440, 12x CDROM, ZyFi Speakers.

Disclaimer:
Information in this guide is accurate as far as I know. Any modifications made to your system is done at your own risk. I cannot claim responsibility for any damage caused directly or indirectly by the advice given in this guide.

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Random Pic
Being able to place pictures and patterns as backdrops on your Amiga’s Workbench is a good thing, but at times you can get tired looking at the same thing. Sure you can change it but what if you can’t be bothered going into WB pattern each time you wish to change the background.

If this is you then simply get a copy of RandomPic which will give you a small surprise each time you boot your machine by randomly selecting a backdrop. The program is small and comes with a series of backdrops. All you have to do is copy the program to your harddrive and add a line to your user startup sequence. If the selection of backdrops is not enough you can add your own patterns to the list.

The documentation is very brief and really only covers the steps required to setup the program to run. Once the program is setup you can forget about it, and enjoy a small surprise each time you boot your machine.

By: Pierre-Yves Guigna
Requirements: Wb2.0+

Mouse Accelerator
The Amiga’s operating system is fast, efficient and well designed. However one thing is lacking and that is simple features which allow us to fine tune the way that we see and use our own Workbench. One of the things that I believe is lacking, and that has most certainly been getting under my skin, is the speed of the mouse. Not only is it too slow for my liking, but you can’t adjust the speed. There are numerous programs such as MCP which have mouse accelerator features, but if that is all you want you have to run this whole program. This wastes resources. To overcome this I found a very small commodity program that does nothing but let you control the speed of the mouse.

Use of the commodity is as simple and dragging the icon into your startup-drawer. If you need to make adjustments to the speed click on the icon and a small window will appear with two sliders, one for the speed of the mouse and the other for the accelerator. If you like you can make the speed very fast; almost to the point of no control.

I can’t honestly say that this program will make you use your computer faster, but it will ease a small frustration with one inky small part of the operating system.

Programmed By: Stephen Sticht
Requirements: Any Amiga

MemoMeter
Yet another small commodity program which produces a small bar graph of your memory usage. Although the Amiga already has something like this in the form of the title bar, this makes it a bit easier to see just how your memory is being used. You can adjust the graph according to the memory configuration of your computer and its type, e.g a A3000 or A4000. There are also a whole heap more options to

By:...
Requirements: Wb2.0+
choose from in the menu, so that you can really customize the graph that it produces, for such things as the frequency and priority.

Tree
This is for the CLI users out there. Tree simply creates a tree structure of a directory that you wish to look at. Unlike the dir command which shows the root director, using the tree command will produce a tree structure of the root directories and the directories that follow it. Deeper sub directories will appear indented so you can see how deep the directory structure goes. To use the command simply copy the small tree file into your C directory and when you wish to use it type in tree and the cli prompt in place of list or dir.

Programmed By: Howard Hull
Requirements: Any Amiga

Imperial
Imperial is a game for two players, taken from the ancient Chinese game called tiles. The game presents a series of randomly placed tiles stacked on-top of each other. Each tile has a pattern or number printed on it.

The object of the game is to remove the tiles from either the top or the sides. Sounds easy.

The trick is that you must remove the tiles in matching pairs, and both tiles have to be from either the top or the sides. The game ends when you have removed all the tiles or you cannot find any other matching tiles to remove.

Matching tiles come in several combinations. The tiles have patterns and numbers on them. To find a match you can either remove two tiles that have the same pattern and number on them, or if it's a picture only tile you can remove them by matching the types of tiles. An example might be to remove the winter and summer tiles from the seasons. Other pictures include winds, flowers and dragons. There are many games to choose from, each having a different layout. Each game also has more than one solution, so if you fail to solve the solution don't blame the computer for cheating.

The game allows you to save your game, and also saves your scores in a table. Another option from the menu is an option to play the computer, and the solution to the game is available, should you get stuck and wish to end the game.

One good feature of the game is that you can design your own tiles and forms and save it as a game. The game has a good guide file describing the object of the game in more detail than the one above, and how to design your own forms and tiles. The graphics are reasonable and the playability is good. Overall a good challenging game that requires a train of concentration.

By: Jane-marc Bousett
Requirements: Wb 1.3+
RushHour

RushHour is a re-make of the classic C-64 game Traffic. The object of the game is simple, you have to control a grid of traffic lights and keep the traffic flowing, so as to not create a traffic jam. Sounds easy, but like real life the more traffic thats around the harder it gets to prevent a traffic jam. The game consists of levels, and in order to complete each level you have to let the set number of cars pass through before a traffic jam is created. A traffic jam is defined as when the cars in the queue stretch beyond the screen. Once all the cars pass through OK, you proceed to the next level. In all there are fifty three levels to work your way through with each level having more cars to get through, more traffic lights to control and less time to do it in. You get one point for every car that passes through. There are some cars that have bonus points, the bonus varying on the speed that the car passed through the screen. The traffic lights are controlled easily. Simply click on a traffic light to switch it between green and red. This adds to the game's good playability.

If you work your way through the levels easily enough, you can redo the challenge by playing in the higher skill sets. If this is still too easy, you could go and create your own levels, using the level editor, or add some real spice to the game by playing in the two player mode.

The graphics are clean and tidy, and there is a high res mode if you want that edge in clear graphics. The sound is nothing special, but fitting to the games needs. There is a high score table to save and keep track of you high scores. The game multitasks and is Workbench friendly, so you can play it while having processes running in the background. The game archive includes a guide file and a selection of Magic Workbench icons.

Overall, I have to say that this little game is quite impressive. I should warn you that the game can be quite addictive, as I found out the hard way. Should keep you busy and off the streets for quite a while.

By: Andreas Spreen
Requirements: N/A

DO YOU HAVE A PD OR SHAREWARE PROGRAM ON YOUR SYSTEM THAT DESERVES MENTION?
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Jenny Burak
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Saturday - Sunday
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October 98
Albert Park

AmigaFest 98 Ticket Reservation Form

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<td>$ 8.00</td>
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<tr>
<td>Sunday</td>
<td>$ 8.00</td>
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<tr>
<td>Two Day</td>
<td>$15.00</td>
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<tr>
<td>Banquet</td>
<td>$27.00</td>
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