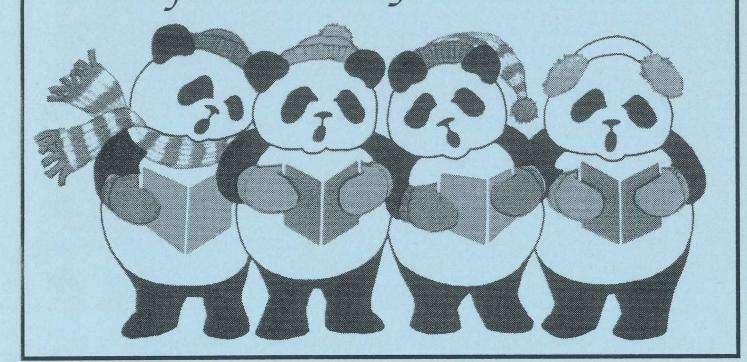
# WORKBENCH

Journal of Amiga Users Group., Inc. G.P.O. Box 684E Melbourne 3001 Victoria Australia Registered by Australia Post. Publication No. PP 349018/0016

# Merry Christmas from the AUG Committee





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Number 91 December 1993



# AMIGA USERS GROUP INC.

P.O. Box 684E Melbourne 3001, Victoria Australia

#### Who are WE?

The Amiga Users Group is a not-for-profit association of people interested in the Amiga computer and related topics. We DO NOT condone software piracy. We can be reached via an answering machine at:

527 1995

Membership

Membership of the Amiga Users Group is available for an annual fee of \$30 plus an initial joining fee of \$5. Membership forms are available from AUG and in this Journal. Send completed form with a cheque or money order for \$30 to the address above.

Disk and Book Library

AUG has an extensive collection of Amiga Related Books, Magazines and Tapes. Disks from our Public Domain Library are available for \$2 each on your own disks or for \$4 each on AUG supplied disks, which includes postage. Details of latest releases are printed in this Journal and a catalog disk is available.

#### **Member's Discounts**

AUG negotiates discounts for its members on hardware, software and books. Currently TECHNICAL BOOKS in Swanston Street in the city off AUG members 10% discount on computer related books, as does McGILLS in Elizabeth Street. ANOTHER WORLD computers in Coburg, MVB Croydon and COMPUTER MAGIC Moonee Ponds offer good deals, while MAXWELLS in Abbotsford offer 10% off RRP on all software.

#### The Bulletin Boards

The AUG operates 2 bulletin boards devoted to the Amiga. They can be accessed 24 hours a day on the numbers listed below. Parameters should be set to 8 data bits, 1 stop bit and no parity.

# Amiga Central 370 0832

Sysop: Frank Lowe

# Ratz 553 0305

Sysop: Howard Alexander

#### **CLUB EVENTS**

For details of club events and meeting dates, check SIG Reports and the AUG calendar inside the back cover. An entry fee is charged by the groups to cover the cost of hall rental and light refreshments. Meeting times and directions are listed in the rear of the Journal.

#### **Back Issues of Workbench**

All back issues of Amiga Workbench are now available, for a \$2 per issue handling & postage charge. Back issues are also available at meetings. Contact the committee for pricing on bulk orders.

#### **Workbench Contributions**

Articles, papers, letters, drawings, cartoons and comments are actively sought for publication. Contributions may be sent in on disk, paper or uploaded to Amiga Central or Ratz BBS's in the area set aside for this purpose. Please send your contribution in text-only, non-formatted if they are on file and remember to include your address for return of disks. Deadlines for articles is the first Wednesday of the month of Publication. Contributions can be sent to: The Editor, AUG, PO Box 684E, Melbourne 3001.

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#### A.U.G. Help-Network

Here is a list of AUG members who have volunteered to share their knowledge/experience with others. If you want to help and have your name listed here please contact the editor. They are not listed in any order or priority. Please keep contacts to reasonable hours (6-9 pm unless otherwise noted) and remember the basis of this service - they are volunteers.

Introduction to the Amiga / ProWrite Amiga Basic (Advanced)	Rudy Kohut John Elston	- 807 3911 - 375 4142
Amiga - A/C & AMOS basics	Bill Jordan	- 417 3521
C (Introductory), Professional Page	Mal Woods	- 888 8129
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Amiga Art, Music (MIDI)	Norm Christian	- 798 6552
Music, Audio Sampling, MIDI	Neil Rutledge	- 578 5742
Beginners HelpLine	Russ Lorback	- 802 9333
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Public Domain	Rob Pemberton	- 571 4579
Graphic Arts - DPaint, Scult etc.	Joe Santamaria	- 383 3509

# Workbench

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Photo: From an old English Christmas Card

## Acknowledgments

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Professional Page 4.1 Professional Draw 3.03 Art Department Pro 2.3 Opal Paint Dir Work 1.62

#### **Printers**

Snap Printing, Braeside

# Editorial

Have you seen the Commodore ads on television, for the CD32 and Amiga 1200s? I got quite a pleasant surprise when I first saw them, not because they're very good - they're good enough - but because they were on at all. And although I would have been happier to see more of them, I don't know what the schedules were so its quite possible they were on a lot when I wasn't watching. In any case, the ads at least made the existence of these machines known in time for Christmas. Its just a shame there aren't that many games available yet for the CD32.

Regarding my suggestion last issue about changing the name of the magazine, I've had some good feedback on the reasons and the implications, but no one actually wanted the name changed. Also suggested was a regular "letters to the editor" column, which would be fine if we actually got any letters to the editor on a regular basis.

Also suggested was a "free to members" classified ad. section, so I contacted John Clearson to confirm what I thought - we already provide this service! If you want to place a non-commercial ad, contact John on the number listed in the Club Services on the opposite page.

What we did have on a regular basis was the meeting and SIG reports, but this issue we don't because they haven't been submitted. I know the music SIG has gone in to temporary (we hope) hiatus due to lack of a coordinator, the AMOS SIG restarted at last month's Holmesglen meeting, and I guess the NWAUG group are recovering from the Expo, but I don't know what's happening with the rest of the A.U.G. because I depend on the reports for info about them.

Next issue should be the annual special disc issue compiled by the S.E.A.U.G. group (perhaps that's why they've been too busy to submit a report) so you'll be seeing a much smaller package in the mail and I'll be getting the February issue ready early.

Merry Christmas. Happy Hannukah.

# Homesglen Raffle

1st Prize - Mystery Prize 2nd Prize - Ginseng Mod Collection II 3rd Prize - 5 PD Disks of your Choice

# F for Amiga

Reviewed by Jeff Kirkland

Over the last few years I've written programs using many computer languages. I started with BASIC, dabbled in Forth and Pascal, compiled the odd bit of machine code and grew to really hate COBOL. Finally, I discovered C. At last, I'd found my favorite language...or had I?

Not so long ago I was told of a PD programming language for the Amiga called E. It is a complete application development language. It's loosely based on C, pascal and Modula 2 with bits of other languages thrown in for good measure. It produces compact executables and is optimised for the Amiga. What's even better is that it's free!

Because E is a PD it is an archived distributed in format. The file AMIGA E.LHA is available on bulletin boards, most AmiNet CD ROM and from Fred Fish. The language is PD and as such the author requires no shareware fees of any kind. With a bit of careful squeezing, whole thing can unarchived onto a single floppy disk. As with most compliers, a hard drive is recommended.

One thing E won't compromise on is memory. You will be able to write small utilities with one megabyte of RAM, but to do anything larger requires at least one and a half megs. This is because the compiler does most processing in RAM of it's allowing for very fast compilation times. Ε can compile at about 30,000 lines per minute on a standard A500. This is handy as it can handle source files up to two gigabytes in length.

Once the program is unarchived and installed it's ready to use. E comes complete with all the Amiga 2.04 include files, called modules in E. Many third party programming libraries such as ReqTools and MUI are now with E modules. supplied Software is supplied to convert your own modules if you need but will you need to Commodore's normal include files and an assembler to do this.

So what's it like to use? Here's a quick example of the old faithful Hello World program in E.

/\* Hello.e - a quick \*/
/\* programming example \*/
PROC main()
 WriteF('Hello World!')
ENDPROC

Compiling this program shows one of E's main features. It produces very small executables. For example, the same program in C compiled to a size of 4112 bytes. The above E example compiled to 647 bytes. Quite a difference.

E is written exclusively for the Amiga and has many functions that make life easier for the programmer. As an example the WriteF() function checks to see if there is a window to write to and if there isn't, it will open one. There's no need to make your program check if it was launched from a CLI Workbench. If you do need to check though, it's just a matter looking at the system variable stdout. If it's pointing anywhere then the started program was from It couldn't Workbench. be easier.

Many of the Amiga system library functions are built in to the language so includes can be kept to a minimum. E also supports in-line assembler code and can even be used as an assembler if you need to.

I'm reliably told that version 2.5 of E should be out in the next month or so. This will be a much enhanced version of the language with more detailed documentation. It will come with the AmigaDOS 3.1 modules and the user will be able to generate new modules from their own code. It's also been hinted that there will be some AMOS-like modules for games development.

With active support from its author and an update on the way E can only get better. If you're thinking of doing some serious programming on the Amiga but don't want to pay for a C compiler then E could be well worth a look.

# Bars & Pipes Help

by Norm Christian.

With constant use of any program, one tends to find ways of doing things which seem to be the quickest, easyist and most logical. Bars and Pipes is a large and powerful program with many options, so almost any desired result can be obtained in a number of different ways. As a long-time user I have explored many of these and have compiled a few tips which may benefit beginners.

**EDITING:** On opening any track edit window, check the Show menu. Multiple choices may be made by holding the right mouse button and toggling items with the left. I always choose Piano Roll, Note Velocity, Control Change and Program Change. Some people prefer to work with the Staff options but I find the Piano Roll gives a much more accurate representation of actual, as opposed to nominal, parameters, for example note on/off positions are accurate and easily manipulated.

The most commonly used Control Change is 7, usually representing volume, but this may not be showing. Choose Control Change # in Display Options and alter to 7, that number will then appear on its edit line. Vertical lines inserted with the pencil now represent volume changes at the points selected. Use the magnifying glass to reset these accurately - 100 is a good starting value, maximum being 127. Remember that these values are interactive with Note Velocity, which does not equate with volume, but is rather a representation of how hard the key was struck. Depending on the voice used, this can alter attack and initial volume, whereas CC#7 only alters volume.

**NOTE RANGE:** Often on opening the edit window you can't see all the notes. In Display Options, choose Note Range/Piano Roll Bounds, then Auto Range. Note that when you do so the display for Upper & Lower notes changes. In the edit window the display expands to show the full range of notes but no more. If you want to extend the range up or down to allow for editing, reset the limits in the Piano Roll Bounds requester.

An important point: Any editing of whatever nature takes effect only when you close the window, at which time the track becomes modified. At this point it is too late to go back, except by using the Revert Option in the Song window, taking you back to the last Save. So be very careful NOT to close the edit window prematurely. Check and double check to make sure that your edited version sounds right before closing. If you move the window to see the Transport Controls in order to play the entire piece, or a section of it, don't expect to hear the edits you have just made. To do so you must first activate your edit window and choose Update from the Edit options. This has the same effect as closing, but is preferable to closing and then re-opening the edit window (in case you want to do further editing.) If you have messed up and want to start afresh, use Abort.

SIZING: This item in the Display Options gives 5 sizes from Very Large to Very Small, but is more quickly accessed via the large and small notes to the left of the "speaker" icon. I usually use the smallest as you can see more bars, however if you wish to play a portion of the edit window you must set the flags manually or by using the Boundaries option in the Edit menu, then the Listen option. It is quicker to reset the Sizing so that only the portion you want to work on is visible, then use the Speaker.

A problem arises if you are changing sizes at or near the start or end. You may not be able to access the first or last notes. If this happens, change to next larger size, move in the required direction, then reset sizing.

I trust these few tips will be of assistance - they are the result of many hours of experimenting. Members who need further help may contact me on 798-6552.

# Introducing

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Founding subscribers enjoy an even greater value, with a perpetually renewed \$10 off of the annual subscription rate. The \$29 domestic introductory rate is similar to general-interest magazines that don't offer disks with their publication! This offer is only extended through January 1994 by mailings to user groups and vendors. Foreign subscriptions are an additional \$10 to cover postage and mailing.

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# 4096 HAM vs AGA vs 24-Bit, BUT WHAT DO WE SEE?

By Dennis Nicholson

In the November Workbench we considered "How Many Colours can the Amiga really display at once?" Now we consider the question "Just how many colours can we see at once anyway?"

Several years ago, when 24-Bit options were first being introduced to the world of Amigans, I kept reading about the wonderful new colour modes that would be made available... "16.7 MILLION COLOURS TO CHOOSE FROM". Even today OpalVision claim... "16.8 MILLION COLOURS AVAILABLE FOR EVERY PIXEL".

It's important to remember that we have a CHOICE of 16+ million colours, we cannot put them all on the screen at once (at least not on my system!) But of more interest to me at the time that all these amazing numbers were being touted around, was the question... "Just how many colours can a human being see?"

With a lot of help from the folks at Melbourne University's Department of Optometry, I posed that very question. What follows is based on what they classified as an AVERAGE person with 20/20 vision (how you define average I will leave up to the readers).

#### WHAT WE SEE:

The human eye, or more correctly the human brain, is only capable of discerning a limited amount of colour. For example, if we view any SINGLE colour the brain can only differentiate from nine to thirty SHADES of that particular colour. Alternatively, if we look at all colours placed side by side in the spectrum, we have the ability to recognise one hundred and fifty colours simultaneously. Things do improve somewhat if our memory-machine combines the three values of colour, Brightness, Hue and Saturation. We can then visually detect approximately one million colour variations, an AGA-based Amiga can still only push out 655360 pixels in all display modes on a 1084 monitor. And as Angelo Bronchinetti correctly pointed out in his article..."the Amiga is capable of a theoretical colour range of 1,606,928 colours..." But in actual fact the chances are that you would not be able to see them all anyway, let alone a system running 16+ million colours.

But taking into consideration the brain's "limited" ability to see only around a million colour variations, viewing a 24-Bit image on the Amiga does tend to make the 4096 HAM mode look like someone has been using a box of crayons with three quarters of the crayons missing!

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E. & O. E.

# AMOS Sig

There was not a great turn out at the Amos Sig last month. Come on all you Amos users, I know you're out there! Turn up at this months Holmsglen meeting and pop into the Amos Sig. Bring along Questions, Answers, and your latest programs to show off.

Andrew Bednarz (Co-ordinator, Amos Sig)

# NWAUG Report December 1993

We should have our new projection device by the time Workbench comes out. It will be one of the new portable LCD projectors. This will allow all club meetings to use it, so to benefit all the 'meeting going' members.

In 1994 meeting frequency will be changing. Meetings will be held at the same venue but only on the third Wednesday of each month, promptly at 7.30pm. This we hope will help make meetings more informative and all round much better. The first meeting for 1994 will be in Febuary.

Keep an eye out for the MPEG module for CD32, you will be pleasently suprised.

We would like to wish everyone a very merry Christmas and a happy and joyous new year.

Frank Lowe **NWAUG** Coordinator

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Hard Disk and controller for Amiga 2000 Commodore A2091 (SCSI) with 52 MB Quantum drive Provision for up to 2 MB Ram on board. Installation and setup included if required

Lester McClure 803 5664 (AH)

# Letters to the Editor

Dear John,

Just so you know that there are people out here who read the editorial (something used to wonder about), I thought I would give my impression of a change of name for Workbench. While it is true there will be a fair number of people who will buy the CD32 as a games machine or eventually MPEG player it is doubtfull that this type of person will get anything out of membership with the AUG. It is similar other games platforms, are there any Sega/Nintendo user groups Therefore it around? doubtfull that the AUG will gain extra members who do use the workbench interface. As the newsletter is the only interface between some users and the AUG Workbench is very appropriate title.

As to the RISC based Amigas, seeing is believing as Commodore far as are concerned. I'm sure most people know how long the delay was between rumours and the first actual AGA (AA) chipset Amigas turned up.

Eric Fillisch 4/480 Nelson Road MT NELSON TAS 7007

# **EPU Review**

by Jeff.Kirkland

One of the biggest problems I have with my Amiga 1200 is hard drive space. Forty megabytes just doesn't quite make it. I don't have to put many applications in there to fill it up. Between extra fonts and all the libraries that programs need these days, my eight megabyte system partition is full. Put one of the newer adventure games on to your hard drive and say good-bye to another five or Your average Desktop six meg. Publishing program will eat away another four megabytes or so. I have that are over a AGA pictures megabyte each.

Hard drive prices are coming down all the time but what to do while I'm saving? Like many people with small hard drives, I started using Powerpacker. This program is great and has almost become the Amiga standard for program and data compression. Using Powerpacker let me pack my programs and fit much more onto the drive but it wasn't long before I ran into a couple of problems.

One drawback with powerpacker is that I had to pack the programs and data manually. I had to keep track of what had been compressed and what hadn't. Data could only be packed for use by programs that supported powerpacked data files.

The best space saving came from using Powerpacker.library for decompression. This meant that if I gave a program to someone else, I also had to remember to unpack it first. I've lost track of the number of times I've passed on the latest Virus\_Checker only to be told that it doesn't run or crashes the system. There had to be a better way...

After looking at many compression systems, I finally came across a program called EPU. EPU is small program that patches the Amiga operating system to use a compression library as it reads and writes data from the disk. This means that the compression is invisible to the user. Any programs or data written to the drive will be automatically compressed.

EPU comes with an install script that will copy the libraries and device handlers to the appropriate directories and will put EPU itself in your C: directory. To start EPU simply use the command EPU DEVICE <dev:> LIBRARY <lib>. This can be added to your startup-sequence so that EPU is always running.

EPU supplied is with two compression libraries. EPU0 is a quick compressor suitable for files that are read and written many times. Its average compression ratio is around twenty percent. EPU1 is a better but slower file compressor based around LHA type compression. It will usually compress at a ratio of thirty-five percent. It is also possible use the much better XPK compression libraries if you have them. The author recommends that you use the xpkNUKE library for best results.

I started by testing EPU on a floppy drive with the xpkNUKE library. With EPU active I managed to transfer over 1.5 megabytes of files to a single 880k disk - and I still had 50k free! All the files, programs and icons were completely usable by the system with no need to remember what had been crunched or not. Files transferred from the EPU floppy drive to another drive were automatically uncrunched and restored to normal.

I then assigned EPU to my DH1: and DH2: hard drive partitions. EPU comes with a small utility called RECOMP. Once EPU is installed, RECOMP can be used to compress all the files already on the drive using the selected compression library.

The result is that I now have 44 megabytes of files stored on my 40 meg hard drive still have almost ten megabytes free. I could increase this figure by compressing the system partition as well, but I wouldn't recommend doing it. If EPU isn't active for some reason, there's no way of executing or decompressing the compressed files. I like to have one partition that doesn't need EPU in order to operate just to be on the safe side.

The compression library that EPU uses can be changed at any time using the CHNG command line option. EPU can also be removed by using EPU DEVICE <dev:>KILL. If the XPK libraries are used for compression it's possible to use RECOMP and the xpkNONE library to decompress files.

One negative aspect of using EPU is a loss of speed. As you would expect, having to compress and decompress all the data being written or read does slow down the system a little. The difference in loading and saving is noticeable especially on large files but for the most part it's not too bad. I can certainly put up with it in order to gain an extra ten megabytes of drive space. For loading files the time taken by decompression compensated by the time saved in actually reading the smaller files from the disc, but writing to disc is noticably slower.

The other problem I've had with EPU is software related. I've had two programs do strange things with EPU installed. Both SPOT V1.1b and TERM V3.4 seem to have problems. TERM crashes when it tries to save anything to disk and SPOT's message area database seems to have become corrupted. The SPOT problem may have been caused by using RECOMP though, as all the new messages added with EPU active have been fine.

There would also be a risk using this with disc caching software such as Fastcache, which would theoretically overcome the slowdown on writing due to the compression, but the problems seem to be inherent with the caching software.

I would thoroughly recommend EPU to anyone suffering a lack of drive space.

I find it to be a much more versatile and efficient system than either Powerpacker or Imploder, especially when it's used with the XPK compression libraries.

EPU is shareware and is available on Fred Fish disk #858. The XPK compression libraries are available on Fred Fish disk #754.

# Callemdlar

Wedmesday	Dec 15	NWAUG Meeting
Sumday	Dec 19	Holmesglen Meeting
Tuesday	Jam 11	SEAUG Meeting
Sumday	Jam 16	Holmesglen Meeting
Tuesday	Feb 8	SEAUG Meeting
Wednesday	Feb 16	NWAUG Meeting
Sunday	Feb 20	Holmesglen Meeting
Tuesday	Mar 8	SEAUG Meeting
Wednesday	Mar 16	NWAUG Meeting
Sumday	Mar 20	Holmesglen Meeting

# Whats on at Holmesglen

- Major Prize Raffle
- Amos Sig
- Latest News
- PD Library
- Book Library
- Software Buyers Service
- Ginseng Mod Collection
- Robert 'Ginseng' Wells demoing the finer points of ProTracker Music

Holmesglen AUG meetings are held on the the third Sunday of each month at 2.00 p.m. Doors open at 1.00 p.m. The venue is the Conference centre at Holmesglen T.A.F.E. College on the corner of Warrigal Road and Batesford Road, Holmesglen (Melways Map 69 reference F1).

North West AUG meetings are held on the first and third Wednesday from 7.30 p.m. on the first floor of the Essendon Community Centre, corner of Mt.Alexander Road and Pascoe Vale Road, Essendon (Melways Map 28 reference J7).

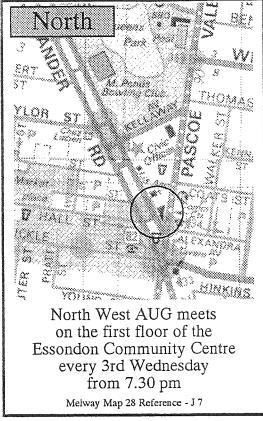
South East AUG meetings are held on the 2nd Tuesday of each month from 7.00 p.m. in the Cheltenham Hall, corner of Nepean Highway and Charman Road, Cheltenham (Melways Map 86 reference H1).

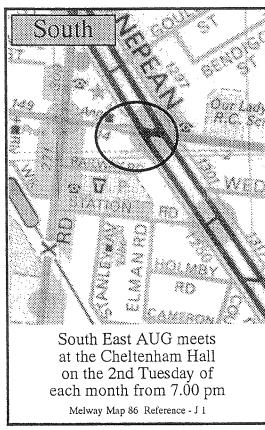
Art SIG meetings are held on the 3rd Tuesday of each month (N.B. this is NOT always the Tuesday following the Holmesglen meeting!! The venue may vary, so check the Art SIG reports for the location of the next meeting.

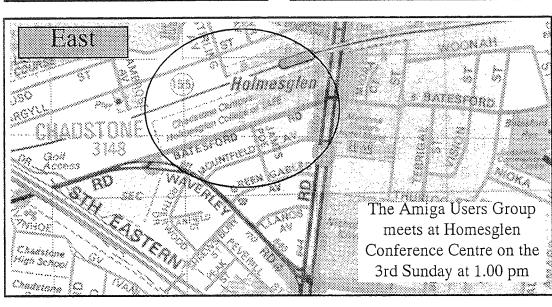
If you are arranging (or know of any) forthcoming meetings, demonstrations, lectures or other events that would interest readers, please let us have the details so that we can publicise them here. Country members are encouraged to use this calendar for local events.

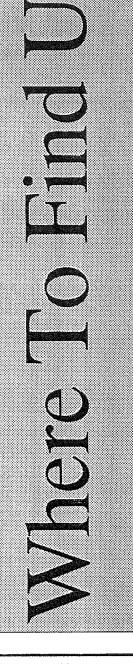
#### **Event Organisers!**

The dates in the calendar are based on information provided to us. If the dates are incorrect or changed, please advise the editor as early as possible to ensure updating of the calendar.









# Application for Membership of The Amiga Users Group Inc. Membership is \$30 per year plus an intial \$5.00 joining fee.

Send your cheque to: Amiga Users Group Inc., P.O. Box 684E, Melbourne 3001

Surname: First Name: Address:			Year of Birth:  Which model Amiga: Occupation: Interests:		
Postcode: Phone Number: Which group do you attend: Where did you hear about AUG:					
Signed: Date:  If admitted as a member I agree to abide by the rules of the Asociation for the time being in force.					
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Please check your membership expiry date on the address label. would be appreciated. A renewal form is inside the back cover. If your membership is due for renewal soon, prompt payment

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