

# WORKBENCH

## FOR THE COMMODORE AMIGA USER

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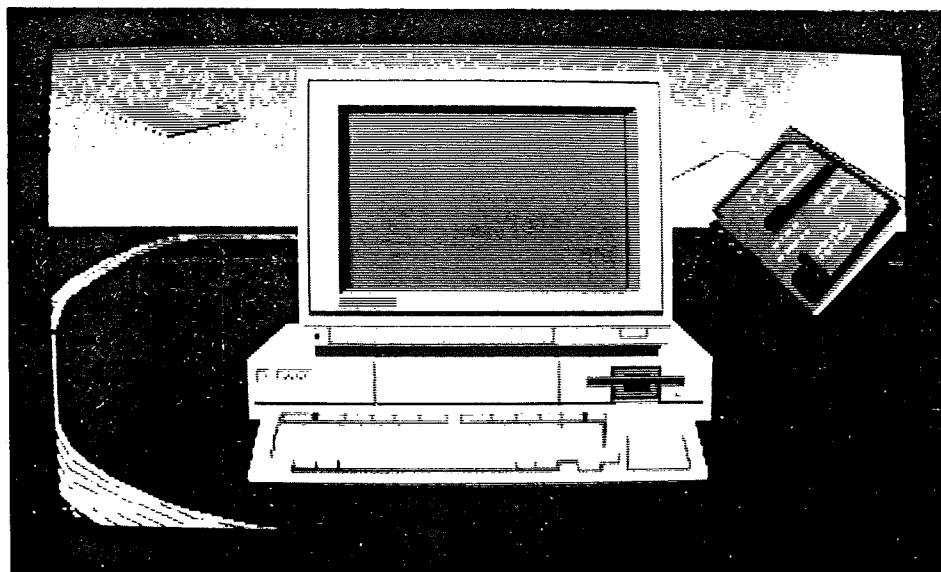
Volume 1, Issue 1

April/May 1986

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Amiga User's Group, PO Box 109, North Balwyn, 3104, Victoria, Australia

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The *Amiga User's Group* has no affiliation with Commodore

## Editorial

Welcome to the first issue of **AMIGA WORKBENCH!**

Not long after I decided that I wanted an AMIGA, I applied to Commodore for a Developer's System. This is a 512k machine with two disk drives, monitor and **FULL** documentation. On the Thursday before Easter, I recieved a letter from Commodore with the answer: No. They explained that their quota had been filled, and no more machines were available. The letter also indicated that the AMIGA would be released some time in May or June. I rang Commodore, and they confirmed this, but still couldn't tell me if the local AMIGAs were to be PAL versions, or NTSC (The American colour TV standard).

So, I had a pretty depressing Easter. I'd have to wait for months to get a machine. Two friends already had machines, they couldn't wait for Commodore. They imported their AMIGA's directly from the USA. On Easter Tuesday, I was surprised to read an advert in The Australian newspaper for the AMIGA. Two weeks to go, it said. Well, I rang Commodore again. Yes, they said, it will be in the stores from April 14th. Price will be \$2495 for a 256k machine with monitor, disks and manuals. I asked Commodore for the names of a few dealers that would be carrying the AMIGA so I could order one. They gave me 5 names, but only ONE of the dealers actually knew the machine was about to be released! Looks like I wasn't the only one to be suprised!

I'd like to think that Commodore knew what they were doing. Perhaps ALL new computers are released like that. I've never been keen enough to get any other computer before, so I don't really know.

Anyway, enough of the story of how I got my AMIGA. I'm sure you'd like to know a bit about the **AMIGA Users Group**.

## What AUG Can Do For You

The primary goal of the **AMIGA Users Group** is to act as a "clearing house" for AMIGA-related information. We seek to share the experiences of all AMIGA owners. There will be questions about the machine that the manuals don't answer, and there will be problems interfacing the machines to non-AMIGA printers and other peripherals. We'd like to be your source for AMIGA information and help. We hope to print reviews and comments about AMIGA hardware and software in **AMIGA WORKBENCH**, and we'll be trying to arrange Member Discounts on hardware, software and books. We intend to see that you, as a member of **AUG**, get the best attention and support from Commodore and your dealer.

The **AMIGA Users Group** is contacting user groups in the USA to obtain newsletter reprint rights and other benefits. **AUG** is maintaining a Public Domain Software Library; see elsewhere in this issue for a review of some of our disks.

As soon as possible, we'll commence regular club meetings, at a venue still to be decided. We hope to have regular demonstrations and guest speakers.

- Peter Jetson, Editor

## WARNING WARNING WARNING WARNING WARNING WARNING

This is **REAL** important! Do **not** under **any** circumstances use an RS-232 cable with all 25 pins connected with the AMIGA (ie using ribbon cable). You will most likely burn out the unit connected to the AMIGA, and possibly damage the AMIGA internally.

The AMIGA RS-232 pinout is as follows:

Pin 1	Ground
Pin 2	Tx Data
Pin 3	Rx Data
Pin 4	RTS
Pin 5	CTS
Pin 6	DSR
Pin 7	System Ground
Pin 8	DCD
Pin 20	DTR
Pin 22	RI

The following pins differ from the RS-232C Standard:

Pin 14	-5v on the AMIGA
Pin 15	Audio out of the AMIGA
Pin 16	Audio in to the AMIGA
Pin 21	+5v on the AMIGA
Pin 23	+12v on the AMIGA
Pin 24	3.58 Mhz clock on the AMIGA

These differences are the reason that ribbon cable type RS-232 cables are NOT TO BE USED with the Amiga.

## Using Printers with the AMIGA

Here's a list of the printer drivers that are currently supported by the machine:

Alpha P-101	Diablo C-150
Brother 15XL	Epson
CBM MPS1000	Epson JX-80
Diablo 630	Okimate 20
Diablo ADV D25	Qume LP 20

According to Commodore-Amiga, the list is extendable by anyone who cares to write his or her own printer driver. Rumour has it that there are a few other drivers "just around the corner".

The **AMIGA Users Group** has access to the Amiga software developers manuals, so we might be able to create drivers at some time in the future. Since I've got a Gemini-10x printer, which isn't on the list, I'll need to do something about it for myself anyway!

## The AMIGA Users Group Public Domain Disk Library

Well, you've bought your new computer, you're the first on the block with an Amiga. You've watched the demos, you've seen how slow AmigaBasic is (Microsoft down to its usual standard!). What are you going to do now?

As is well known, the largest range of software for most machines is in the public domain. The standard varies from excellent commercial quality software to stuff you wouldn't touch with a ten-foot pole!

Fortunately, the Amiga is on the way to getting a similar large base. It also seems that the software is of a higher quality. Most of the public domain software seems to have come from much larger UNIX systems, with little modification to run on the Amiga. There are also many programs demonstrating various features of the Amiga. Most of this software is written by members of Commodore-Amiga itself, straight from the horse's mouth, so to speak!

We have 14 disks of software, most of it written in Lattice C, but for those who don't have the compiler, compiled versions are also supplied. What follows is my impressions of the software in the first 11 disks.

## AUG Library Disk #1:

Hello	- Short demo of screens and windows.
Balls	- Executive toy, let it run for a minute.
Dhrystone	- Computer benchmark, lots of other results given.
Dotty	- Source of the Dots demo on the Workbench disk.
Halfbrite	- Not sure what this one does!
Palette	- How to display color palettes like Dpaint.
Colorful	- Demo of Hold and Modify mode.
Freedraw	- Very cut down Dpaint.
Latfpp	- Benchmark of maths library versus the compiler.
Amigaterm	- Functional, no frills communication program with XMODEM and Ascii file uploading and downloading.
Speechtoy	- Demo of speech library including a talking face!
Speech	- Cut down version of Speechtoy (for 256K I think).
Gad	- How to use gadgets - What's not documented!
Gfxmem	- Shows you how much memory you're using.
Amigademo	- Demo of the speed of the graphics.
Trackdisk	- Demo of using device drivers directly.
Requesters	- How to use requesters - What's not documented!

## AUG Library Disk #2:

Portar	- Combines small text files into one large file, less overhead, easier when transmitting. From Decus Library (DEC User Society), modified for Amiga.
Make	- Useful for maintaining large C programs, seems to be VAX/MS-DOS based, with no modification for the Amiga. Probably needs some work.
Dbug	- Internal debugger for C programs. With 10% overhead provides function and variable tracing in a neat package. Seems to be a very useful programming tool.
Make2	- Simpler version of make
Microemacs	- Much more extensive editor than Ed. Based on the famous Emacs, uses multiple windows, multiple buffers, macros, etc. Revised version on library disk Disk #6.
CC	- Compiles and links all in one line, saves heaps of typing.
Alib	- Maintains object libraries for use with C compiler, assembler etc.
Xrf	- Produces cross reference listing of variables and functions of C programs.

## AUG Library Disk #3:

Gothic	- Prints large banner using a gothic character set.
Roff	- Text formatter upward compatible with UNIX nroff.
FF	- Fast text formatter.
Cforth	- Portable and extensive Forth implementation.
Xlisp	- Minor bugs, but looks like an interesting language (if you like parantheses!). Introduces Object/Class programming to small computers.

## AUG Library Disk #4:

Kermit	- Basic implementation of kermit file transfer protocol.
Bison	- Replacement of "YACC" (Yet Another Compiler Compiler) Currently not working on Amiga (Compiler bugs)
Banner	- Prints big letters on screen.
GREP	- Searches for strings in file.
MyCLI	- New CLI with inbuilt commands and terminal.
BM	- Faster version of grep
Mandel	- Mandelbrot program - revised version on disk Disk #5.
Bgrep	- Yet another string searcher.

# Write about your AMIGA experiences

Share them with other AMIGA Users Group members

**AUG Library Disk #5:**

This disk has revised versions of most of the programs on disk #1, as well as some new demos of bitplanes, playfields, window control etc. This disk also has what must be the final word in mandelbrot programs. If you're interested in demos of all sorts of stuff in the Rom kernel and Intuition then this disk is a good place to start.

**AUG Library Disk #6:**

- Compress - Compresses text files up to 50% of original size. Combining compress with the portar archiver (AUG Disk #2) will make very small files for transmission or backup. Also programs to decompress, compare and list compressed files. Programs to convert binary files to Ascii and back again are also useful for transmission to systems without XMODEM.
- Microemacs - Revised version of the editor on AUG Disk #2.
- Scales - Demo of Amiga sound capabilities.
- Sort - Quicksort, but actually slower than the one supplied by AmigaDOS
- StripC - Strips comments and whitespace from C programs for faster loading.
- Mult - Removes multiple lines from files.
- Setserial/ - Sets parameters on serial or parallel ports.
- Setparallel

**AUG Library Disk #7:**

This disk only has one program, Hack, a well known UNIX adventure/D&D game that probably uses more computer time at UNIX installations than any other one program.

**AUG Library Disk #8:**

The source to Hack (disk #7) is included on this disk, along with copious documentation.

**AUG Library Disk #9:**

- MVP-forth - Another version of Forth, this one is shareware, if you like it, then you're asked to send money to the authors.
- Proff - Text formatter program, the best on this set of disks, automatically builds Table of Contents, centers, underlines, indents etc. etc.

This disk also includes a couple of small, pretty Amiga graphic demos.

**AUG Library Disk #10:**

- Fixobj - Chops extraneous data from the end of object files.
- Filezap - Excellent file editor in hex or Ascii.
- Trek73 - It had to happen, Star Trek for the Amiga!
- Ld - Lists directories using pretty colors, good demo of AmigaDOS file handling.
- Conquest - Fight the computer for control of galactic empire.
- Yachtc - Computer version of yahtzee.
- Iff - Reads and writes IFF (Interchange File Format) files, Dpaint pictures etc.
- Ls - Another directory lister
- Dehex - Doesn't do much at all.
- SQ,Usq - Amiga versions of the CP/M squeeze and unsqueeze but compress (disk #6) is better.

**AUG Library Disk #11:**

This disk has a lot of pretty pictures as well as a program (DPslide) to display them.

That's about it for now, we hope to be getting more disks soon. Distribution details are outlined elsewhere else in this issue.

-from Ron Wall

UNIX is a trademark of Bell Laboratories

Star Trek is a Trademark of Paramount Pictures Inc.

**Converting AMIGA text files for use on other computers**

Text files created on the AMIGA are non-standard, in that there is only a line feed at the end of a line, instead of a line feed and carriage return.

First, a program in Microsoft Basic to add carriage returns. This program is designed to be run on the computer you have transferred the file to.

```
100 input "Input file name"; input.file$
110 input "Output file name"; output.file$
120 open "I", 1, input.file$
130 open "O", 2, output.file$
140 while not eof(1)
150   a$ = input$(1, #1)
160   if a$ = chr$(10) then a$ = chr$(13) + a$
170   print #2, a$
180 wend
190 close
200 end
```

To modify the program to remove the carriage returns (ie if you want to send a file to the AMIGA), simply change line 160 as follows:

```
160   if a$ = chr$(13) then 180
```

Here's two similar programs, written in Lattice C by Charlie Smith, taken from a message left on BIX (Byte Information Exchange):

```
/*
 * ibmtxt.c
 * This program will convert an AMIGA text file so that it
 * can be used on an IBM PC. It may also be used for
 * printers that require a CR/LF, rather than just a LF,
 * which the AMIGA provides.
 *
 * The program uses stdin and stdout. For instance:
 * ibmtxt <inputfile >outputfile */

#include "lattice/stdio.h"

main()
{
  int c;

  while ((c = getchar()) != EOF) {
    if (c == 0x0a)
      putchar(0x0d);
    putchar(c);
  }
}
/** End of program ibmtxt.c **/
```

```
/*
 * amigatxt.c
 * This program will convert an IBM text file so that it
 * can be used on the AMIGA.
 * The program uses stdin and stdout. For instance:
 * amigatxt <inputfile >outputfile */

#include "lattice/stdio.h"

main()
{
  int c;

  while ((c = getchar()) != EOF) && c != 0x1a {
    if (c != 0x0d)
      putchar(c);
  }
}
/** End of program amigatxt.c **/
```

These programs can be compiled (assuming you have the Lattice C package!) using the execute file below:

```
.Key file
lc1 -idf1:include/ -idf1:include/lattice/ -oram: <file$t1>
if not exists "ram:<file$t1>.q"
  echo "Compile failed"
  quit 20
endif
lc2 ram:<file$t1>
alink df1:lib/1startup.obj,ram:<file$t1>.o LIB
df1:lib/lc.lib,df1:lib/amiga.lib
TO ram:<file$t1>
```

**Parallel Printer Port Connections:**

Here's the details of a Centronics Printer Cable suitable for the AMIGA:

```
Centronics pins 1 to 13 go to Amiga pins 1 to 13
Centronics pins 14 to 22 go to Amiga pins 19 to 27
Centronics pin 25 goes to Amiga pin 31
```

These are the ONLY connections needed.

**Ask the AMIGA Users Group**

[Editor's Note: This section is a fake at the moment. We've made up some questions that we think will be of general interest. However, we'd be happy to receive your questions. Write to:

AMIGA Users Group  
PO Box 109,  
North Balwyn, 3104

We'll do our best to try to answer your questions.]

-- Dear AUG: I am writing to find out when the Amiga's operating system will be in ROM, so I can purchase a system without the need to upgrade later.

AUG replies: The operating system will NOT be put into ROM for the Amiga. This allows easy upgrades, apparently most users want it that way. Don't wait, buy your Amiga now!

-- Dear AUG: I only have the internal Amiga 3.5" disk drive. I wanted to copy a certain file from one disk to another disk. The DISKCOPY function doesn't do this, since it erases the entire "other" disk. Can I copy only one file?

AUG replies: Without an external drive, it is only possible if you have a 512k machine. Then you can make a RAM drive and use the CLI to transfer the file to the RAM drive and then out again to a second disk in the internal floppy disk drive. Other than that, we don't think there is any way to do it with 256k and only the internal drive.

-- Dear AUG: What can I do with a 256k Amiga??? I can't afford either a second disk drive or the 256k expansion right now.

AUG replies: Not much, we're afraid. You can use the Amiga Notepad to send short letters (assuming you have a printer and cable). You can run most of the demo programs or the Textcraft word processor. The Amiga has a costly overhead (memory-wise) in the Intuition/Workbench interface. You really need a 512k upgrade to get to begin to get some real "horse-power". 512k is needed for some of the demo programs, and for any multi-tasking programs. You only have about 150 to 160k of free space before loading an application program, after loading the workbench.

**Support AUG**  
Its to your advantage!

**Extra Memory for the Amiga**

As you've no doubt heard, the Amiga can have up to 8 Megabytes of memory connected to it. What you haven't heard, however, is that the present release of AmigaDOS (Version 1.1) isn't quite smart enough to look at the expansion port to check for additional RAM or a hard disk. To enable extra memory, you have to run a special program provided with AmigaDOS. No doubt, with a future release, this problem will be overcome. You also (for the time being, anyway) won't be able to boot from a hard disk, you will probably have to go through the normal Kickstart-Workbench startup, then run another program which will "attach" the hard disk to the system. That's not quite all the bad news, however. Almost none of the copy-protected software will be able to run on a hard disk, anyway. Since it is rumoured that some copy-protection schemes will try to destroy copies, it seems like a good idea not to even try to run them on a hard disk.

Even with a 512k Amiga, you only get about 400k free for programs once Workbench is loaded. That's even worse than the IBM-PC, which can have nearly 600k left after PC-DOS is loaded.

**Hardware Update**

Two American companies have hardware expansions for the Amiga- TECMAR and MICRO-FORGE. TECMAR are represented locally by ACI Computer Services, but we can't find a local agent for MICRO-FORGE. All prices quoted below are in US dollars, and you can get the Australian equivalent by dividing by the exchange rate (which is about 0.70 at the moment). A lot of Australian distributors like to try to sell US products at about the Australian equivalent plus tax (Add another 20% for hardware, no tax for software).

This news from The National Amiga Users Group Newsletter (an American group):

TECMAR, whose peripherals T-CARD, T-DISK, T-MODEM, etc were supposed to be available at the Amiga's introduction (Sep 85) still doesn't seem to have working prototypes of all their products. You need either a T-CARD or a T-CONNECT to use with their T-DISK to make it work. The T-CONNECT is a US\$495 SASI interface card, without memory or other functions. One dealer who had a prototype T-CARD/T-DISK is rumoured to have said that it didn't work properly, and cancelled an order for 50 sets. Please note that this was based on a "prototype", and that it is unconfirmed from any "confirmable source". The T-DISK now costs US\$1495, a price rise of 50% since the September announcement. The T-CONNECT and T-DISK are reportedly shipping at the end of January, with the T-CARD reportedly available in early February, at US\$795 for 256k RAM and US\$995 with 1M of RAM.

On the other hand, MICRO-FORGE has a full line of equipment almost ready for market, some of which is shipping as of late December 1985. They are readying a five-slot expansion box available with or without case and a hefty 130 watt switching power supply. A single board adapter is available

now, as is the 10 and 20 Mbyte hard disk. Also planned is a 2 Mbyte RAM board. Four of these will fit in the expansion box, leaving the fifth slot free for the hard disk interface card. At least one half height hard disk (10, 20 or 40 Mbyte) will also fit within the expansion box. Maybe even two- the box is yet to be finalised.

Preliminary MICRO-FORGE prices are: Five slot expansion box with power supply and case- just over US\$700, available early Feb 86. The single board adapter is US\$99, available now. 10 Mbyte hard disk, controller and interface card- just under US\$1400; 20 Mbyte, just over US\$1500, both available now. 40 Mbyte version, just over US\$1800, available February. 2 Mbyte RAM card- US\$999 each, available early march.

If you had enough money, dual 40 Mbyte hard disks, 8 Mbytes of RAM, expansion box, power supply and case would set you back about US\$7900 (About \$11,300 Australian!). (PS: Don't forget you also need the Amiga!)

All these expansion devices have a connector that goes into the expansion slot on the side of your Amiga. The amount of power available from the Amiga's power supply is very limited beyond the ability to power two external micro-floppy disk drives.

TECMAR Inc live somewhere in Solon, Ohio, and MICRO-FORGE are in Winston, Georgia.

**AMIGA Dealers:**

Why not take out an advert in

**AMIGA WORKBENCH**

An advert this size costs only

**\$20**

Other sizes (from supplied artwork)

Half Page:	<b>\$40</b>
Full Page:	<b>\$70</b>
Double page:	<b>\$120</b>

AMIGA Users Group  
PO Box 109, North Balwyn, 3104

**AMIGA Users Group**

The AMIGA Users Group is a non-profit, self-help group, consisting of people interested in the Commodore AMIGA computer and related topics.

**Club Meetings**

Regular meetings of AUG will commence shortly, at a venue still to be decided. Input from the membership about exactly what they want would be very helpful.

**Production Credits**

This month's AMIGA WORKBENCH was edited by Peter Jetson. Equipment and software used was: TurboDOS S-100 computer, Diablo 630 printer, Gemini 10x printer, Wordstar and Fancy Font.

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**Contributions**

Articles, papers, letters, drawings and cartoons are actively sought for publication in AMIGA WORKBENCH. It would be appreciated if contributions were submitted on disk, since that means they don't have to be re-typed! We have access to a wide range of computers, so we should be able to accept almost any type of disk, but AMIGA disks are certainly the easiest. Absolute deadline for articles is the last weekend of the month before the cover date. Contributions can be sent to:

The Editor, AUG, PO Box 109, North Balwyn, 3104

**AUG Users Group Disks**

Disks from the AMIGA Users Group Library are on quality 3.5" disks for \$10 plus postage. As soon as AUG secures a supply of reasonably priced disks, this price will be reduced.

**Member's Discounts**

The AMIGA Users Group is currently negotiating discounts for its members on hardware, software and books. Members will be notified when negotiations are complete.

**Membership and Subscriptions**

Membership of the AMIGA Users Group is available for an annual fee of \$20. To become a member of AUG, fill in the form on this page, and send it with a cheque for \$20 to:

AMIGA Users Group, PO Box 109, North Balwyn, 3104

**AMIGA Users Group Membership Application Form**

Membership is \$20 per year. Make cheques payable to the AMIGA Users Group, and send to:

AMIGA Users Group  
PO Box 109,  
North Balwyn, 3104

Details this side are optional

Surname: \_\_\_\_\_

Phone number: \_\_\_\_\_ STD code: \_\_\_\_\_

First name: \_\_\_\_\_ (no initials)

Date of birth: \_\_\_\_\_

Address: \_\_\_\_\_

Occupation: \_\_\_\_\_

Postcode: \_\_\_\_\_

Interests: \_\_\_\_\_

Where did you hear about AUG: \_\_\_\_\_

How can AUG help you: \_\_\_\_\_

Dealer's name: \_\_\_\_\_

Dealer's Address: \_\_\_\_\_

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

Postcode: \_\_\_\_\_

I agree to abide by all Articles, Rules and Constitution of the AMIGA Users Group.

Are you happy with your dealer: \_\_\_\_\_

April/May 1986 AMIGA WORKBENCH

P.O. Box 109, North Balwyn, Victoria, Australia, 3104

**AMIGA**™ *Users Group*

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