

Amiga_FAQ

COLLABORATORS

	<i>TITLE :</i> Amiga_FAQ		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
WRITTEN BY		August 2, 2022	

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

Contents

1	Amiga_FAQ	1
1.1	Table of Contents	1
1.2	Index	2
1.3	NOTES	3
1.4	Proposals	4
1.5	Revision Information	5
1.6	Introduction	6
1.7	About the Author	7
1.8	Features of the Amiga	7
1.9	Multiple Screens	8
1.10	Multitasking	9
1.11	Workbench 2.1	10
1.12	Intuition and the Operating System	11
1.13	Commodities	11
1.14	File Types	12
1.15	Shared Libraries	12
1.16	Devices	14
1.17	Handlers	15
1.18	Monitors	15
1.19	Preferences	15
1.20	Scripts	16
1.21	Benchmarks and Speedtests	16
1.22	Amiga Models Compared	16
1.23	GUI Test	18
1.24	Animation Frame Rates	19
1.25	Amiga Models and Statistics	20
1.26	stats.screenmodes	20
1.27	Expansion	21
1.28	Custom Chip Set	22
1.29	Processors and Custom Chips	25

1.30 AGA Compatible Monitors	26
1.31 Storage Devices	28
1.32 Game Systems	29
1.33 Emulators	29
1.34 IBM XT Emulators	29
1.35 IBM AT Emulators	30
1.36 Macintosh Emulators	31
1.37 UNIX Operating Systems	31
1.38 Commodore 64 Emulators	31
1.39 Atari ST Emulators	31
1.40 Miscellaneous	32
1.41 Secret Message	32
1.42 Graphics Boards	32
1.43 External Graphics Boards	32
1.44 8 bit Graphics Boards	33
1.45 24 bit Graphics Boards	33
1.46 Index - Graphics Boards	35
1.47 Opal Vision	35
1.48 Frequently Asked Questions	36
1.49 Video Toaster Questions	36
1.50 Video Toaster Questions	36
1.51 Video Toaster Questions	37
1.52 Macintosh Frequently Asked Questions	37
1.53 Video Toaster Questions	38
1.54 Processor Questions	38
1.55 Processor Questions	38
1.56 Processor Questions	39
1.57 Kickstart and Workbench Questions	39
1.58 Kickstart and Workbench Questions	39
1.59 Kickstart and Workbench Questions	39
1.60 Hardware Questions	40
1.61 Hardware Questions	40
1.62 Hardware Questions	40
1.63 Hardware Questions	41
1.64 Hardware Questions	41
1.65 Hardware Questions	41
1.66 Hardware Questions	42
1.67 Hardware Questions	42
1.68 Hardware Questions	42

1.69 Hardware Questions	42
1.70 Amiga Product Guide	42
1.71 Amiga 500	43
1.72 Amiga 500+	44
1.73 Amiga 600	45
1.74 Amiga 1000	46
1.75 Marketing the Amiga	46
1.76 Amiga 1200	47
1.77 Amiga 1500	48
1.78 Amiga 2000	49
1.79 Amiga 2500	50
1.80 Amiga 3000	51
1.81 Amiga 3000UX	52
1.82 Amiga 3000T/030	52
1.83 Amiga 3000T/040	53
1.84 Amiga 4000/030	54
1.85 Amiga 4000/040	55
1.86 Amiga 4000T	56
1.87 CDTV - Commodore Dynamic Total Vision	57
1.88 1084S Monitor	58
1.89 1950 Monitor	58
1.90 Golden Gate II Bridgecard	59
1.91 Custom Chip Set	60
1.92 OCS - Original Chip Set	60
1.93 Original Chip Set	60
1.94 OCS - Original Chip Set	61
1.95 ECS - Enhanced Chip Set	61
1.96 ECS Screenmodes	62
1.97 ECS - Enhanced Chip Set	63
1.98 AGA - Advanced Graphics Architecture	63
1.99 Advanced Graphics Architecture	63
1.100AGA - Advanced Graphics Architecture	64
1.101AAA - High End Chip Set	64
1.102AAA Screenmodes	64
1.103AAA Hardware Stats	65
1.104Secret Message	65
1.105EHB6	66
1.106EHB8	66
1.107HAM6	66

1.108HAM8	67
1.109Agnus Hardware Stats	67
1.110Thanks	67
1.11168040 Hardware Stats	68
1.112Intel Hardware Stats	68
1.113RGB Video	69
1.114Composite Video	70
1.115Periodicals and Magazines	70
1.116Compression	71
1.117Compression Programs	71
1.118Public Domain Software	72
1.119Music Programs	72
1.120Fred Fish Disks	73
1.121Computer Networks	73
1.122Internet	73
1.123Mailing Lists	73
1.124USENET Newsgroups	74
1.125Famous Amiga Uses	74

Chapter 1

Amiga_FAQ

1.1 Table of Contents

- Table of Contents -

_#	**MMp	g#00	`N##0"	_agN#0P0N#	_#L				
g##	jN##	j##F	J##	_dN0"	g##L				
_#]##	_0 ##L	jN##F	###	g#0"	_03##L				
gE_j##	#	0## jF	##F	j##F	j##	gE_j##L			
_0""N##	d"	J##L0	##F	0##	0##	"9##F"	_0""5##L		
_gF]##	jF	##0	##F	##F	`##k	d##	_gF	j##L
g#	_j##L	_g#_]N	_j##L	_d##L	`#Nh	_g#N'	_g#_	_j##L
\#####	#####/#####	"	#####	#####	#####	#####	#####	#####	#####

Amiga Frequently Asked Questions List
©1993 David Tiberio

Introduction

About the Author

I. History of the Amiga

II. Features Only Found on the Amiga

III.

Features of the Amiga

IV.

Benchmarks and Speedtests

V.

Models and Statistics

VI.

Custom Chip Set

VII.

Intuition and the Operating System

VIII.

Famous Amiga Uses

IX.

Emulators

X.

Periodicals and Magazines

XI.

Public Domain Software

XII.

Graphics Boards
XIII.
Frequently Asked Questions
XIV.
Amiga Product Guide
XV.
Compression
XVI.
Computer Networks
XVII. Compilers

Index

©1993 David Tiberio - Do not distribute for profit.

All Amiga dealers and sales groups are encouraged to use AmigaFAQ
for demonstrations and informative purposes only.

1.2 Index

- Index -

A500

OCS

EHB6
Denise 68000

A600

ECS

EHB8
Gary 68010

A1000

AGA

HAM6
Paula 68020

A1200

AAA

HAM8

Agnus
68030

A1500

			Lisa	
	68040			
	A2000			
	ZorroII	Alice		68050
A2200	ZorroIII	Blitter		68060
	A2500			
	Video Slot	Buster		68881
	A3000			
	CPU Slot	Copper		68882
	A3000T/030			
	A3000T/040			
	A3000UX			
	KS1.0	DRAM		
	Composite			
	A4000/030			
	KS1.2	VRAM		SVGA
	A4000/040			
	KS1.3	Chip RAM		
	RGB			
	A4000T			
	KS2.04	Fast RAM		
	CDTV			
	KS2.05			
CDTV II	KS3.0			

1.3 NOTES

- NOTES -

This area is for scratch info to be included in future versions of the FAQ. It is also used to verify information or to provide contradictory information.

+-----+

remember to add to REVISION table!

+-----+

- contacts -

dtiberio@libserv1.ic.sunysb.edu, (SLOW) dtiberio@xamiga.linet.org
jamesk@netcom3.netcom.com

mharwood@bruny.cc.utas.edu.au
 rkovaliv@alfred.ccs.carleton.ca
 gsarff@wicat.com

+-----+

DELETE THIS:

- Video Port
 - VGA and Multiscan monitor support
 - horizontal Scan Rates 15kHz-31kHz
 - vertical scan rates 50Hz-72Hz

+-----+

<Aikido> dtib: Chunky displays use one byte per pixel, so all 8-bits of a
 +pixel (on a 256 color mode) are in the same byte, instead of being in 8
 +different bytes.

Pixel1Byte|Pixel2Byte|Pixel3Byte|Pixel4Byte...

<ScottE> _IF_ the data is near 8 bits deep (or a multiple of 8)

+-----+

4000/040: 3 Z3<->AT, one Z3<->video, 4000T: 2 Z3<->AT, 2 Z3<->video, 2AT, 1 Z3

+-----+

wickedX> ditb: three fat ladies - when the designer of the amiga was at bingo
 +hall

<Aikido> The 030 is just an 020 with MMU and a tiny data cache.
 020 = 256 byte instr cache

+-----+

3856 lines = 149,668 bytes April 23rd
 20565 lines = 800,000 bytes (estimated) April 23rd

+-----+

```
from xterm on IRC:
bms D=system GET bms:pub/files to bms:systems/system.files
      ^^^^^^          change these          ^^^^^^^^^^^^^^^
```

1.4 Proposals

- Proposals -

- benchmarks of compression programs
- info on using FTP or FTP mail servers
- info on motherboard revisions for all amigas

- compilers and programming languages
- adding a glossary
- link FAQ questions from throughout the guide

- including other Amiga FAQ's such as
 - CD-ROM FAQ (Dan Barrett)
 - ARexx FAQ (Dan Barrett)
 - UUCP FAQ (unknown)
 - Emplant FAQ (Jim Drew)
 - FTP FAQ (Urban Mueller)
 - David Salamon's Golden Gate II compatibility list

- distributing the FAQ with Fred Fish or possibly disk magazines
- distributing via news.lists or something like that
- getting CBM to put the FAQ on every Amiga shipped

- making a monthly update
- making it modular with multiple files

- giving up all together and calling it quits (and buy a clone)
- shoot whoever made that last comment

1.5 Revision Information

- Revision Information -

March 1993 - Amiga FAQ started (due to Mac FAQ I saw)
 AmigaGuided from original ASCII FAQ

April 1993 - more stuff added
 handed out a few copies at World of Amiga show

April 1993 (about two weeks later) - more stuff added

April 19th - most of the Amiga model stats finished

3049 April 20th - Revision Information added (secretly)
 GUI Test benchmarks deleted
 Winstone v1.01b benchmark program written
 GUI Test benchmarks added
 calculated pixels per screenmode
 modified Revision Information format

3074 added Agnus model numbers and chip ram info
 added list of Amiga magazines
 added file types

3196 April 21st - added game system comparisons

3237 added Features of the Amiga section

3296 added Workbench 2.1 menu info
 added multitasking information
 concluded that Winstones has a big bad bug!

3378 April 22nd - added multiple screen information
 began organizing 'lost' nodes

3494 April 23rd - added compression programs/topic
 deleted the letter 'r' from line 30
 added computer networks topic

3513 modified Agnus chip lists, from jamesk
 added Retina graphics board

added public domain software list
added Fred Fish info (needs more info)
3578 added music program list
wrote cron to auto archive FAQ twice daily
decided to have some fun!
made the notes readable by Amiga Guide
3774 added the Future Proposals to the FAQ section
rearranged the RevInfo to make larger comments
reordered all the menus for Browse modes
3852 added Golden Gate II compatibility info
modified compression table of contents
added DCTV, HAM-E, CB to external graphics boards
removed numerous null links; made them plain text
3913 April 24th - minor things added, but I forgot what they were
finished Winstone v1.02b program
3982 April 25th - added computer networks, usenet newsgroups
added Opal Vision information
removed unused gadgets from benchmarks menu
added networks.internet mailing lists
4127 hid some secret messages (while watching ORCA)

1.6 Introduction

- Introduction -

Many of you may be wondering what the Amiga FAQ is and why it has been created. A FAQ is a list of Frequently Asked Questions, compiled and provided on a regular basis to people interested in the subject of the FAQ. In this case, I am attempting to provide as much thorough information as possible for both beginners and expert Amiga users as well as for non-Amiga users. In fact many Amiga users request this file in order to provide it to students, teachers, local dealers, or friends in an attempt to promote the Amiga.

This file is provided as is, and any typos or factual mistakes are in no way intended or purposeful. I do not guarantee the full accuracy of every item in this document as many items have been known to exist in numerous circumstances which may cause incompatibilities. I have however checked through the file and verified as much data as possible.

This file is not intended for distribution by anyone other than myself, and may not be used in any form of publication whether print or disk based, temporary or permanent, without the written permission of me, the author. Any and all freely distributable forms of this document will be clearly labelled both in this Introduction and in the Table of Contents.

If you are interested in contributing to this, or in receiving any form of distribution for private, commercial, or public purpose, please contact me at one of the addresses provided in the About the Author section in this document.

1.7 About the Author

- About the Author -

Please send additions, bug reports, or comments to me at one of the following addresses. I anxiously am looking forward to hearing from third party developers, programmers, and authors who are willing to contribute.

usenet: dtiberio@libserv1.ic.sunysb.edu
amiga_faq@xamiga.linnet.org

during school year: David Tiberio
6 Lodge Lane
East Setauket, NY 11733
VOICE: (516) 473-5156
BBS: (516) 473-6351

during summer: David Tiberio
100 Meadow River Drive
Liverpool, NY 13090

Thanks to the following people for all their continuing help:

- James Knowlton from IRC for various ideas.
- Bjorn Stenberg for the AGA monitor compatibility list.
- Tomas Arce who says I never get anything done.
- David Salamon for the Golden Gate II compatibility list.
- Skip Sauls for some AGA animation frame rates
- Whoever did the Macintosh FAQ (which encouraged me to do this one).

1.8 Features of the Amiga

- Features of the Amiga -

A. Animation

B. Hardware

Audio Support
Blitter
Copper

- CPU Expansion Slot
 - Custom Chip Set
 - Expansion Slots
 - IBM XT/AT Expansion Slots
 - Video Expansion Slot
- C. Operating System
- AmigaDOS
 - Command Line Interface
 - Devices
 - Multiple Screens
 - Multitasking
 - Shared Libraries
 - Workbench
 - D. Video Support
 - Interlaced Video Modes
 - NTSC/PAL Video Ready
 - Record Directly to VCR

1.9 Multiple Screens

- Multiple Screens -

One area where the Amiga excels above all other platforms is in how screens are manipulated. An Amiga is capable of presenting multiple screens in the same way another computer can open multiple windows. For example, a window has a title bar which allows the window to be dragged horizontally, diagonally, or vertically. The Amiga adds to this by adding a title bar to the top of the display area, which allows the entire screen to also be dragged vertically, horizontally, or diagonally. In moving a screen, all windows also move with that screen. If a screen is opened behind the front screen, the contents of both screens are shown.

When dragging a window on most systems, a small rubber-band or outline of the window is drawn. When dragging Amiga screens however, the entire bitmap is dragged. In fact, dragging a screen moves data more smoothly and faster than dragging an individual window.

- Screens can have palettes independent of other screens, so a Workbench screen can use one palette of 256 colors while a paint program behind it can have another palette of 256 colors.
 - Screens can have resolutions independent of other screens. It is possible to open the Workbench in 640x400 and open a video titling
-

- program in 1280x400.
- Screens can have screenmodes independant of other screens. It is possible to open one screen in 640x400 interlaced, another in 320x200 non-interlaced, another in 1432x478 interlaced overscan, another in 320x512 interlaced PAL in 8 bitplanes, another in a programmable resolution such as 100x100 in 3 bitplanes, etc.
 - Screens can have gadgets. At the moment two gadgets are supported, including the drag bar and the push gadget. The drag bar allows screens to be moved and the push gadget allows the screen to be placed in front of or behind other windows.
 - It is possible to perform graphics operations behind screens. A 256 color paint program can open a small palette along the bottom of the screen with a palette of 262,144 colors, and allow you to draw behind the toolbox or clip and paste graphics behind the toolbox. A screen can also render all of its gadgets behind other screens and then push to the front when it is done rendering.
 - Screens can be attached to other screens. When a parent screen is dragged, all children will drag with it. A child screen can be dragged independant of the other screens. When a parent screen is pushed, all children are pushed with it. When a child screen is pushed, it moves independent of the other screens however within the domain of the parent screen, such that the parent screen is always behind all children.
 - Screens can be arranged in any order just as windows.
 - Screens can be animated by pushing a newly drawn screen to the front and drawing the next frame in a screen behind all other screens. Then when the back screen is rendered, it may be pushed to the front.

1.10 Multitasking

- Multitasking -

The Amiga has made multitasking an art. This started in 1985, with the release of the first Amiga and the first AmigaOS. Before the Macintosh and before the IBM clones, the Amiga had pre-emptive multitasking. Pre-emptive multitasking allows all programs to multitask without the programmer worrying about special commands or special routines to handle multitasking.

- Pre-emptive Multitasking OS's -

PRE-EMPTIVE	MACHINES	MIN_RAM	SUG_RAM	MIN_DISK	SUG_DISK
AmigaOS	ALL AMIGAS	.5 MB	2 MB	2 MB	5 MB
WindowsNT	486	16 MB	25 MB	CDROM	CDROM
OS/2	486	8 MB	16 MB	15 MB	40 MB
UNIX					

- Co-operative Multitasking OS's -

CO-OPERATIVE	MACHINES	MIN_RAM	SUG_RAM	MIN_DISK	SUG_DISK
Windows 3.1	486	2 MB	4 MB	10 MB	
Multifinder	ALL MACS	4 MB	8 MB		

- Singletasking OS's -

SINGLETASKING	MACHINES	MIN_RAM	SUG_RAM	MIN_DISK	SUG_DISK
Finder	ALL MACS	2 MB	4 MB		

- Multiprocessing -

The Amiga custom chip set offers something found on no other home computer. By dividing the tasks of graphics, audio, and memory management among various chips, the Amiga is capable of fast animation and sound without influencing other processes. For example, it is possible on the Amiga to run a 3D raytracer, using 99% of the CPU time. However, the Paula chip is capable of playing music or performing serial transfers at full speed while CPU is being used by other processes. On any other home computer, it is not possible to do this. For example, on the Macintosh Quicktime format, a slower processor will drop audio bytes or animation frames to compensate. On the Amiga, the audio and graphics are independent and will only negligibly affect each other. Since all Amigas contain the same exact audio chip, there is no need to ever drop sound bytes from Amiga movie animations.

1.11 Workbench 2.1

- Workbench 2.1 -

- Workbench

Backdrop	select Workbench as a window or a screen
Execute Command...	run an AmigaDOS, CLI, or Shell command
Redraw All	
Update All	
Last Message	report last status/error message
About...	version information for Workbench
Quit...	exit Workbench

- Window

New Drawer	create a new directory/drawer
Open Parent	
Close	
Update	
Select Contents	select all contents of window
Cleanup	sort all files and arrange them nicely
Snapshot	lock window in its current position

Show

- Icons

Open	
Copy	
Rename...	
Information...	edit/display information on file
Snapshot	lock icon in place
Unsnapshot	
Leave Out	leave icon on Workbench
Put Away	return icon to original directory
View By	edit file display mode
Delete...	delete selected icons
Format Disk...	launch disk formatting program
Empty Trash	delete all files in Trashcan

- Tools

ResetWB	reset Workbench
---------	-----------------

1.12 Intuition and the Operating System

- Intuition and the Operating System -

ARexx

Commodities

Devices

File Types

Handlers

Libraries

Monitors

Preferences

Startup Scripts

Workbench

1.13 Commodities

- Commodities -

ARQ	adds animated requesters to Intuition
AutoPoint	automatically selects windows under mouse pointer
ClickToFront	double click a window to pop to front
CrossDOS	MS-DOS floppy compatible interface
Exchange	Commodities control interface
FKKey	function key definitions
HidePointer	mouse pointer blanker
IHelp	
MouseBlanker	mouse pointer blanker
MouseOff	mouse pointer blanker
NewShell	
NoCapsLock	disables CapsLock key
Spliner	screen blanker that draws spline patterns
ToolsX	Tool menu editor
UnixDirsII	support for UNIX style cd .. command
WindowShuffle	
XFH	run-time file compression

1.14 File Types

- File Types -

8SVX	- IFF audio
ACBM	-
ANIM	- IFF animation
BMHD	- bitmap header
CAT	- IFF catalog contains 8SVX, ANIM, ILBM, etc
CMAP	- colormap
FTXT	-
GIF	-
IFF	- interchange file format
ILBM	- IFF interleaved bitmap
JFIF	- JPEG compressed 24BIT picture
LH5	- lharc or lha compressed archive
LWOB	- Lightwave 3D object
PICT	-
TDDD	- Imagine 3D object
TIFF	-
XPKF	- XPK compressed file

1.15 Shared Libraries

- Shared Libraries -

The Amiga Kickstart uses a system of shared run-time libraries to conserve on memory usage. This chart shows which libraries are available and the most current versions I have found.

	VERSION	
amigaguide	34.4	hypertext AmigaGuide documents

arp	39.1	support for ARP DOS commands
asdg-low-mem		
asl	38.3	Intuition system requesters
bullet	38.5	outline scalable fonts
commodities	38.1	commodity access library
conhandler	35.13	
ctswlib	3.1	
dctv	1.31	DCTV 24 BIT graphics card
din		
diskcode		
diskfont	38.8	
dopus	17.2	Directory Opus
dos		Intuition disk commands
duplexfont	1.0	
emplant		EMPLANT Macintosh emulator
explode		Imploder run-time compression
fifo	37.4	
future	1.0	Future Sound audio samples
gadget	38.6	Intuition gadget control
gdarexxsupport	1.0	
golddisk		
hisoftbasic		HiSoft BASIC programming language
icon	37.11	Intuition icon control
iff	22.1	
iffparse	37.2	
info		
inovamusic	2.8	Directory Opus music modules
isup	1.15	
jam		EMPLANT Macintosh emulator
kd_freq		system requesters
locale	38.27	Intuition verbal languages
mathieeedoubbas	38.1	
mathieeedoubtrans	37.1	
mathieeesingtrans	37.1	
mathtrans	37.1	
medplayer	1.0	MED music modules
metaxpr	3.3	
midi		MIDI
owndevunit	2.1	lock devices
pic	16.1	Switther IFF library
powerpacker	35.344	PowerPacker run-time compression
ppipc		
req	2.5	
reqtools	38.81	Nico Francois' system requesters
review	1.14	
rexxapp		
rexxarplib	1.0	
rexxhost		
rexxmath1.3	1.31	
rexxmathlib	1.2	
rexxmathsbii	1.0	
rexxsupport	34.9	
rexxsyslib	36.23	
screenshare	1.46	
scsidirect	.88	
skytec	1.2	
stopus	1.1	Directory Opus

streplay		
sybil		EMPLANT Macintosh emulator
tdisk		
toolmanager	2.0	ToolManager file organizer
translater	37.1	
version	38.28	Intuition version information
virtualpage		
xemamiga		terminal emulation tables
xemascii		terminal emulation tables
xemibm		terminal emulation tables
xpkmaster	2.4	XPK run-time compression
xprascii	1.0	XPR serial transfer protocol
xprbimodem	1.02	XPR serial transfer protocol
xprbplus	1.0	XPR serial transfer protocol
xprgmodem	1.9	XPR serial transfer protocol
xprjmodem	.1	XPR serial transfer protocol
xprkermit	1.112	XPR serial transfer protocol
xprquickb		XPR serial transfer protocol
xprvms	.8	XPR serial transfer protocol
xprxmodem	34.3	XPR serial transfer protocol
xprymodem	2.2	XPR serial transfer protocol
xprzmodem	2.1	XPR serial transfer protocol
xprzmodem.030		XPR serial transfer protocol

1.16 Devices

- Devices -

audio.device
clipboard.device
console.device
gameport.device
input.device
keyboard.device
narrator.device
parallel.device
printer.device
serial.device
timer.device
trackdisk.device

AUX
CON
DF0 floppy drive
DH0 hard drive
ECOM Excelsior! BBS external doors
NULL empty output
PAR parallel port
RAD recoverable RAM disk
RAM dynamic RAM disk
RAW
PC0 MS-DOS compatible floppy drive
PIPE
PRT
SER serial port

SPEAK speech synthesis

1.17 Handlers

- Handlers -

aux-handler	
CrossDOSFileSystem	MS-DOS file system
dpipe-handler	
FastFileSystem	AmigaDOS file system
fifo-handler	
MessyFileSystem	MS-DOS file system
netdnet-handler	DNET serial port networking
nfs-handler	NFS networking
null-handler	NULL output
pipe-handler	
port-handler	
powersnap-handler	PowerSnap clip driver
queue-handler	
speak-handler	Narrator speech driver
wbstart-handler	WBStartup drawer driver
XFH-handler	XPK run-time compression driver

1.18 Monitors

- Monitors -

Euro36	73Hz	15.69kHz	
Euro72	70Hz	31.43kHz	
Multiscan	60Hz	31.44kHz	
NTSC	60Hz	15.72kHz	genlockable
PAL	50Hz	15.60kHz	genlockable
Super72	72Hz	24.62kHz	

1.19 Preferences

- Preferences -

Busy Pointer	edit busy pointer; requires NickPrefs
Floppy	floppy drive speed, disable click; NickPrefs
Font	select Intuition fonts
IControl	Intuition settings
Input	edit input device settings
Locale	foreign language database
Overscan	alter screen display borders
Palette	edit screen display colors
Pointer	edit mouse pointer image
Printer	
PrinterGFX	
PrinterPS	

SASC_Options	alter SAS C compiler options
ScreenMode	alter Workbench screenmode
Serial	edit serial port settings
Sound	edit audio settings
Time	calender
ToolManager	Tools menu, file docks, hotkeys
ToolsXConfig	Tools menu
WBPattern	Workbench backdrop picture
WBPicture	Workbench pattern, window pattern

1.20 Scripts

- Scripts -

Shell-startup	invoked whenever a shell is opened
startup-sequence	used for booting the system
user-startup	customizable script for booting the system

1.21 Benchmarks and Speedtests

- Benchmarks and Speedtests -

GUI Test

Animation Frame Rates

Diskspeed Tests

System Performance

Motorola CPU

RAM Expansion

Amiga Models Compared

1.22 Amiga Models Compared

- Amiga Models Compared -

- Sieve -

A500	7.16MHz	1.00	*
A2000	7.16MHz	1.04	*
A3000	16.00MHz	4.50	*****
A3000	16.00MHz FPU	6.13	*****
A3000	25.00MHz	6.87	*****
A3000	25.00MHz FPU	9.28	*****
A4000	25.00MHz	10.63	*****
A4000	25.00MHz FPU	11.88	*****

- Sort -

A500	7.16MHz	1.00	**
A2000	7.16MHz	1.03	**
A3000	16.00MHz	4.82	*****
A3000	16.00MHz FPU	4.82	*****
A3000	25.00MHz	7.13	*****
A3000	25.00MHz FPU	7.13	*****
A4000	25.00MHz	19.81	*****
A4000	25.00MHz FPU	19.67	*****

- Matrix -

A500	7.16MHz	1.00	**
A2000	7.16MHz	1.02	**
A3000	16.00MHz	4.32	*****
A3000	16.00MHz FPU	6.76	*****
A3000	25.00MHz	6.43	*****
A3000	25.00MHz FPU	10.14	*****
A4000	25.00MHz	12.25	*****
A4000	25.00MHz FPU	16.22	*****

- IMath -

A500	7.16MHz	1.00	*
A2000	7.16MHz	1.01	*
A3000	16.00MHz	4.32	****
A3000	16.00MHz FPU	11.88	*****
A3000	25.00MHz	6.75	*****
A3000	25.00MHz FPU	18.29	*****
A4000	25.00MHz	17.26	*****
A4000	25.00MHz FPU	41.66	*****

- MemTest -

A500	7.16MHz	1.00	**
A2000	7.16MHz	1.03	**
A3000	16.00MHz	4.41	*****
A3000	16.00MHz FPU	4.41	*****
A3000	25.00MHz	6.72	*****
A3000	25.00MHz FPU	6.70	*****
A4000	25.00MHz	11.54	*****
A4000	25.00MHz FPU	11.54	*****

- TGTest -

A500	7.16MHz	1.00	*****
A2000	7.16MHz	1.25	*****
A3000	16.00MHz	1.98	*****
A3000	16.00MHz FPU	1.98	*****
A3000	25.00MHz	1.62	*****
A3000	25.00MHz FPU	1.62	*****
A4000	25.00MHz	2.93	*****

A4000 25.00MHz FPU 2.93 *****

A500 - 1 megabyte Chip RAM
- MC68000
A2000 - 1 megabyte Chip RAM
8 megabytes 16 BIT Fast RAM
MC68000
A3000-16 - 2 megabytes Chip RAM
8 megabytes 32 BIT Fast RAM
MC68030, MC68881
A3000-25 - 2 megabytes Chip RAM
8 megabytes 32 BIT Fast RAM
MC68030, MC68882
A4000-25 - 2 megabytes Chip RAM
4 megabytes Fast RAM
MC68040

1.23 GUI Test

- GUI Test -

WINSTONES

ECS
320x200x1 4033

ECS
320x200x2 5016

ECS
320x200x3 6300

ECS
320x200x4 8033

ECS
320x400x1 4066

ECS
320x400x2 5017

ECS
320x400x3 6334

ECS
320x400x4 7950

ECS
640x200x1 4117

ECS

640x200x2	5584
ECS	
640x200x3	8350
ECS	
640x200x4	12851
ECS	
640x400x1	4117
ECS	
640x400x2	5600
ECS	
640x400x3	8384
ECS	
640x400x4	12934

WINSTONES measured using 40 320x200 windows. Lower winstone values have faster window drawing.

1.24 Animation Frame Rates

- Animation Frame Rates -

Following are sample speed tests of various animations. Two tables are provided of the same data.

320x200x8,	HAM8		
	, 30 frames, plays 8 times in 5 seconds,	48fps	
192x288x6,	HAM6		
	, 79 frames, plays 5 times in 5 seconds,	79fps	
640x400x3,	8 color, 152 frames, plays 2 times in 5 seconds,	60fps	
352x240x5,	32 color, 91 frames, plays 4 times in 5 seconds,	72fps	
352x440x6,	HAM6		
	, 72 frames, plays 4 times in 5 seconds,	56fps	
320x200x6,	HAM6		
	, 75 frames, plays 8 times in 5 seconds,	120fps	
320x200x8,	HAM8		
	, 58 frames, plays 4 times in 5 seconds,	46fps	
352x220x6,	HAM6		
	, 42 frames, plays 10 times in 5 seconds,	84fps	
320x200x4,	16 color, 94 frames, plays 6 times in 5 seconds,	112fps	
320x200	262,144 colors	30 frames	48fps

320x200	262,144 colors	58 frames	46fps
352x440	4096 colors	72 frames	56fps
352x220	4096 colors	42 frames	84fps
320x200	4096 colors	75 frames	120fps
192x288	4096 colors	79 frames	79fps
352x240	32 colors	91 frames	72fps
320x200	16 colors	94 frames	112fps
640x400	8 colors	152 frames	60fps

All were displayed on a Super72 SuperHires Laced screen, which sucks as much bandwidth as possible.

Skip Sauls
skip@tacky.cs.olemiss.edu

1.25 Amiga Models and Statistics

- Amiga Models and Statistics -

Custom Chip Set

Screenmodes
Colormodes

Expansion

Processors and Custom Chips

Monitors

Storage Devices

Game Systems

1.26 stats.screenmodes

- Screenmodes -

RESOLUTION	PIXELS	RATIO
320x200 1 NTSC	64,000	1.0
320x256 1 PAL	81,920	1.28
400x300 1 NTSC	120,000	1.875
320x400 1 NTSC	128,000	2.0
640x200 1 NTSC	128,000	2.0
320x512 1 PAL	163,840	2.56
640x256 1 PAL	163,840	2.56
400x600 1 NTSC	240,000	3.75
800x300 1 NTSC	240,000	3.75

640x400	1	NTSC	256,000	4.0
1280x200	1	NTSC	256,000	4.0
640x480	1	NTSC	307,200	4.8
640x512	1	PAL	327,680	5.12
1280x256	1	PAL	327,680	5.12
800x600	1	NTSC	480,000	7.5
640x800	1	NTSC	512,000	8.0
1280x400	1	NTSC	512,000	8.0
640x960	1	NTSC	614,400	9.6
1280x512	1	PAL	655,360	10.24
1000x800	1	NTSC	800,000	12.5

1.27 Expansion

- Expansion -

Models Available

OCS

A500, A1000, A1500, A2000, A2500

ECS

A500+, A600, A1500+, A3000, A3000T/030, A3000T/040

AGA

A1200, A4000/030, A4000/040

	A500	A600	A1000	1200	A2000	A3000	A4000	CDTV
List Price	\$299	\$299	N/A	\$599	\$699	\$1399	\$2499	\$499
Currently Available	x	x		x	x	x	x	x
Supports								
OCS	x	x	x	x	x	x	x	
Supports								
ECS	x	x	x	x	x	x	x	
Supports								
AGA				x		x		
Exterior Bus	x		x					
Trapdoor	x	x		x				
PCMCIA		x		x				x
Zorro II 16 bit					x	x	x	
Zorro III 32 bit						x	x	
PCAT 16 bit					x	x	x	
Video 24 bit					x	x	x	
CPU 16/32 bit					x	x	x	
External SCSI						x		

External Floppy	x	x	x	x	x	x	x	x
External Serial	x	x	x	x	x	x	x	x
External Parallel	x	x	x	x	x	x	x	x
External VGA/SVGA				x		x	x	
External RGB								
	x	x	x		x	x		
External Composite								
	x	x	x					
Internal SCSI							x	
Internal IDE			x		x			x
Internal Floppy	x	x	x	x	x	x	x	
Internal CD-ROM								x
Socketed CPU	x		x		x			x
Socketed Custom Set	x		x		x	x		x
Socketed ROM	x	x		x	x	x	x	x
CPU Used	00	00	00	20	0	30/40	30/40	00
020 Available?	Y		Y	Y	Y			Y
030 Available?	Y	Y	Y	Y	Y	Y	Y	Y
040 Available?	Y		Y		Y	Y	Y	Y
ROM Version (BASE)	1.3	2.1	1.3	3.0	1.3	2.0	3.0	1.3
ROM Version (MAX)	2.1	2.1	1.3	3.0	2.1	2.1	3.0	1.3
Motherboard RAM	1	1	1	2	1	18	18	1
Expansion Slot RAM	8	8		10	8	1GIG	1GIG	8

NOTE: RAM listed is that which is directly supported by the operating system. It is possible to add RAM above these limits using third party hardware.

1.28 Custom Chip Set

- Custom Chip Set -

The Amiga custom chips come in three versions. The

OCS

was used primarily from 1985 to 1992.

OCS

is known simply

as the Old Chip Set and has not been given any public official definition by CBM. However, in 1989 CBM released the

ECS

Extended Chip Set. This is still in production today, ←

and

offers more screen resolutions and the same number of bitplanes as used previously. In 1992 the

AGA

Advanced Graphics

Architecture was released and introduced numerous new screenmodes

(compatible with
ECS
) and a large number of new colormodes.
The

AGA
chip set is often referred to as the AA chip set in
the older literature.

Following is a complete listing of every Amiga and which chip
set it was shipped with, along with dates whenever possible. The
list includes the model number, chip set, rom version, year
introduced, rom storage format, and maximum ram accessible by the
custom chips (similar to video ram).

A500				
-				
OCS	KS1.2	1987	ROM	512k
A500				
-				
OCS	KS1.3		ROM	512k
A500+				
-				
ECS	KS1.3		ROM	1024k
A600				
-				
ECS	KS2.05	1992	ROM	1024k
A1000				
-				
OCS	KS1.0	1985	DISK	256k
A1200				
-				
AGA	KS3.0	1992	ROM	2048k
A1500				
-				
OCS	KS1.3		ROM	1024k
A1500+				
-				
ECS	KS2.04		ROM	1024k
A2000				
-				
OCS				

KS1.2	1987	ROM	1024k		
A2000					
-					
OCS					
KS1.3		ROM	1024k		
A2500					
-					
OCS					
KS1.3		ROM	1024k		
A3000					
-					
ECS					
KS1.3		DISK			
			KS1.4	ROM	
			KS2.04	1989	DISK 2048k
A3000					
-					
ECS					
KS2.04		ROM	2048k		
A3000T/030					
-					
ECS					
KS2.04	1991	ROM	2048k		
A3000T/040					
-					
ECS					
KS2.04	1991	ROM	2048k		
A3000UX					
-					
ECS					
UNIX			2048k		
A4000/030					
-					
AGA					
KS3.0	1992	ROM	2048k		
A4000/040					
-					
AGA					
KS3.0	1992	ROM	2048k		
A4000T					
-					
AGA					
KS3.0	1992	ROM	2048k		

ROMs stored on disk offer some disadvantages and advantages. First, using the computer requires an additional amount of RAM equal to the size of the ROM, which is often 512k. However, access

to the ROM is faster when stored in RAM in many cases. Also, multiple operating systems can be placed in one computer that has disk based ROM. In order to use multiple ROM revisions on the other computers, a ROM Swticher is used which is a hardware toggle that seats each ROM chip on a small daughterboard. Some machines, such as the

A3000
, also have a ROM Tower, which includes an outdated ROM revision required to boot the system.

1.29 Processors and Custom Chips

- Processors and Custom Chips -

The command VERSION, when executed from the Amiga Shell or CLI, returns the version of the Kickstart and the Workbench. Following are the various versions of the Amiga ROM chips.

```

KS1.0
KS1.1
KS1.2
KS1.3
KS1.4
KS2.04   v37.175
KS2.1    v37.175   WB38.28
KS3.0

```

The command CPU displays the configuration of the CPU and the memory burst modes. Following are the various CPU's used by the various machines, along with FPU math coprocessors. All are Motorola 68k series. The SHOWCONFIG command also returns relevant information in more detial.

	CPU	FPU	MMU
A500	68000	7.16 MHz	
A600	68000	7.16 MHz	
A1000	68000	7.16 MHz	
A1200	68020	14.32 MHz	
A1500	68000		
A2000			

	68000	7.16 MHz		
A2500	68020		???	?
A2500	68030		???	?
A3000	68030	16.00 MHz	68881	x
A3000	68030	25.00 MHz	68882	x
A3000T/030	68030	25.00 MHz	68882	x
A3000T/040	68040	25.00 MHz	68040	x
A3000UX	68030	25.00 MHz	68882	x
A4000/030	68030		???	
A4000/040	68040	25.00 MHz	68040	x

1.30 AGA Compatible Monitors

- AGA Compatible Monitors -

The following monitors are capable of displaying all modes of the

AGA
chip set for Amiga computers.

MODEL	MANUFACTURER	PRICE	SIZE	kHz	VERT Hz
MS-8431	Amazing Tech.	\$399	14	15-36	?
AML-1402	Adara Technology,	\$650	14	15-36	45-90
CM-324	AOC International	\$549	14	15-36	50-90
CM-324H/M	AOC International	?	14	15-36	50-90
CM-326	AOC International	\$649	14	15-38	50-90
Auto-Trak 714	Conrac Display	?	13	15.5-37	45-80
Auto-Trak 9250	Conrac Display	\$3,850	13	15-37.5	48-90
Model 7126S	Conrac Display	\$3,995	26	15-32	48-75
Model 7211	Conrac Display	\$4,120	13	15-37.5	47-80

Model 7211	Conrac Display	\$4,120	19	15-37.5	47-80
Model 7241	Conrac Display	\$2,995	19	15-37	47-80
Model 9214	Conrac Display	?	13	15-38	50-80
Multiscan 3436	CTX International	\$780	14	15-38	50-90
TSM-1431	Darius Technology	\$699	14	15.5-39	50-90
ECM 1410	Electrohome, Ltd.	\$1,195	14	15-40	45-90
ECM 2010	Electrohome, Ltd.	\$3,195	20	15-38	45-120
Eversync Color	Everex Systems	\$599	14	15.5-35	50-70
FMS	Falco Data	\$750	14	15-38	47-90
MTS-9608S	Forefront Technology	\$499	14	15-38	50-90
TY-1411	Golden Dragon	?	14	15.5-3	50-120
Idek MF-5017	IDEK/Iiyama North Amer	\$1,275	17	15-40	50-90
Idek MF-5021	IDEK/Iiyama North Amer	\$2,695	21	15.5-38	50-90
C21LV-65MAX	Image Systems Corp.	?	21	15-65	55-90
C24LV-65MAX	Image Systems Corp.	?	24	15-65	55-90
CM-1403	Intra Electronics USA	\$300	14	15-38	40-100
GD-H4220US	JVC Information	\$2,895	19	15-37	45-87
CMON M	Leading Edge	\$599	14	15.75-39	50-90
MagicVIEW 20	Mac	\$1,999	20	15.75-36	50-100
Model 2014/LP	Microvitec,	?	14	15-40	45-100
Model 2020	Microvitec,	\$2,495	20	15-38	?
Model 710MH	Mitsuba Corp.	\$415	14	15-38	50-90
Diamond Pro 26M	Mitsubishi Electronics	\$11,300	25	15-38	45-90
HC-3505SK	Mitsubishi Electronics	\$11,300	26	15.7-38	45-90
XC-3315C	Mitsubishi Electronics	\$5,495	33	15-38	40-120
XC-3715C	Mitsubishi Electronics	\$7,599	37	15-36	45-120
AM-2752A	Mitsubishi Electronics	\$3,700	27	15.6-36	45-90
AM-3151A	Mitsubishi Electronics	\$5,200	31	15.6-36	45-90
AM-3501R	Mitsubishi Electronics	\$6,900	35	15-35.5	45-70
AM-1381A	Mitsubishi Electronics	\$839	14	15.6-36	45-90
MG-3430	Modgraph,	\$985	9	15-35	50-70
DM-2710	NEC Technologies,	\$3,995	27	15-38	40-100
PanaSync C1391	Panasonic Communicatio	\$899	13	15.5-36	40-80
Ultra 1200	Princeton Graphic Syst	\$450	12	15-38	45-120
Ultra 1400	Princeton Graphic Syst	\$899	14	15-38	45-120
Ultra 1600	Princeton Graphic Syst	\$775	16	15-38	45-120
AlphaScan	Sampo Corp. of America	\$649	14	15.75-36	50-87
CE-8	Sceptre Technologies,	\$995	14	15-38	50-90
CM-3	Sceptre Technologies,	\$795	14	15.5-36	50-70
CPD-1302	SONY Corporation	\$995	13	15.75-36	50-100
GVM-1310	SONY Corporation	\$1,295	13	15.75-36	50-100
GVM-2020	SONY Corporation	\$1,595	20	15.75-36	50-100
Tuff/CRT	Talon Technology Corp.	\$6,000	14	15-35	47-73
Omniscan CM-1495H	Tatung Co. of America,	\$899	14	15-37	40-120
MultiVision 770+	TAXAN America	\$895	14	15-37	50-90
MediaScan 3+	TVM Professional Monit	?	14	15-38	46-100
TM-5414	TW Casper Corp.	?	14	15.5-35	50-70

Bjorn Stenberg
 Stockholm, Sweden
 bjst@sth.frontec.se

1.31 Storage Devices

- Storage Devices -

	AMIGADOS	MS-DOS	MACINTOSH
KS1.0	720k		
KS1.2	880k		
KS1.3	880k	720k	
KS2.04	900k 1.76mb	720k 1.44mb	1.44mb
KS3.0	900k 1.76mb	720k 1.44mb	1.44mb

In order to read 1.76mb AmigaDOS or 1.44mb MS-DOS a high density disk drive is required. These include the CBM drive, the Applied Engineering drive, a floptical drive, or a high density IBM floppy drive. Some floptical drives do not support standard Amiga disks. IBM floppy drives may require a special driver. To read IBM disks from WB revisions older than 2.1, public domain software or WB upgrades are required. The Atari ST uses the same format as MS-DOS so no special conversion is necessary. In order to read Macintosh 800k disks, third party hardware is required or a Macintosh emulator card.

THIRD PARTY HARDWARE

	FLOPPY HD-FLOPPY SCSI IDE				FLOPPY HD-FLOPPY SCSI IDE				
A500	x				x	x	x	x	
A600	x			x	x		?	N/A	
A1000	x				x	x	x	x	
A1200	x			x	x		?	N/A	
A1500	x				x	x	x	x	
A2000	x				x	x	x	x	
A2500	x			x	x		x	x	
A3000	x			x	x		x	x	
A3000T	x	x	x	x	x		x	x	x
A3000UX	x			x	x		x	x	
A4000	x	x		x	x		x	x	N/A

1.32 Game Systems

- Game Systems -

	CPU	MHZ	BITS	RES	COLORS	PALETTE	RAM
SNES	65816	3.6	16	256x224	256	32768	192k
Genesis	68000	7.6	16	320x224	128	512	136k
Neo Geo	68000	12.5	16	320x224	4096	65536	132k
Amiga 600	68000	7.16	16	1280x512	4096	4096	1024k
Amiga 1200	68020	14.32	32	1280x512	262144	262144	2048k

1.33 Emulators

- Emulators -

IBM XT

IBM AT

Macintosh

UNIX

Atari ST

Commodore 64

Miscellaneous

1.34 IBM XT Emulators

- IBM XT Emulators -

		TEXT	CGA	EGA	VGA	A500	ZorroII	ALL
Transformer	XT 8088	x				x		x
PC Task	XT 8088	x	x			x		x
IBeM	XT 8088	x	x			x		x
Cross PC	XT 8088	x	x			x		x
Power PC Board	XT 8088	x	x		x	x	x	x
2088 Bridgeboard	XT 8088	x	x	x			x	

- See also:

Golden Gate II Bridgecard

1.35 IBM AT Emulators

- IBM AT Emulators -

			TEXT	CGA	EGA	VGA	A500	ZorroII	ALL
2286	Bridgeboard	AT 286	x	x	x	x		x	
2386	Bridgeboard	AT 386	x	x	x	x		x	
	ATOnce	AT 286	x	x			x	x	x
	GoldenGate	AT 386	x	x	x	x		x	
	GoldenGate	AT 486SLC	x	x	x	x		x	
	EMC 486SLC	AT 486SLC	x	x	x	x		x	
	GVP 286	AT 286	x	x	x	x	x	x	

	GVP286	ATOnce	PowerPC
NortonSI	15		
Hercules	x	?	?
CGA	x	x	x
EGA/VGA	MONO	?	?
Multitask?	x	x	
Shared RAM?	x	x	x
FPU	80C287	80C387SX	?

	GG386	GG486	2088	2286	2386	EMC486
mHz		25				33
NortonSI	23	45	?	?	?	66
Landmark 2.0		78				103
Hercules	x	x	?	x	x	?
CGA	x	x	x	x	x	x
EGA/VGA	x	x	x	x	x	x
Multitask?	x	x	x	x	x	x
Shared RAM?	x	x	?	?	?	?
FPU	?	?	?	?	?	?
IDE PORT	x	x	?	x	x	x
FLOPPY PORT	x	x	x	x	x	x
SERIAL PORT	SW	SW	?	?	?	2
PARALLEL PORT	SW	SW	?	?	?	1
GAME PORT			?	?	?	1

- See also:

Golden Gate II Bridgecard

1.36 Macintosh Emulators

- Macintosh Emulators -

		PLUS	IIx	ZorroII	ALL	SYSTEM7	COLOR
AMax	68000	x			x	x	
AMax II+	68000			x		x	
EMPLANT	68030	x	x	x		x	x

	ROM	SERIAL_PORT	APPLETALK	MIDI_PORT	SCSI_PORT
AMax II+	128k	x	x	x	
EMPLANT	256k	x	x		x

All ports listed above are exterior ports.

AMax allows emulation of black and white Macintosh software designed for the Macintosh Plus. It does not allow the user to run Amiga software at the same time as Macintosh software.

Emplant is capable of multitasking Amiga and Macintosh software at the same time on independent screens. Emplant also allows emulation of other computers simultaneously.

1.37 UNIX Operating Systems

- UNIX Operating Systems -

		ALL	ZorroII	MULTIUSER
Amiga UNIX	68030		x	x
LINUX				
MINIX				

1.38 Commodore 64 Emulators

- Commodore 64 Emulators -

GO 64 Emulator	6502	Commercial
A64 Package	6502	Shareware

1.39 Atari ST Emulators

- Atari ST Emulators -

		A500	ZorroII	ALL	MULTITASK
Medusa	68000	x			
Cameleon	68000	x			

1.40 Miscellaneous

- Miscellaneous -

		ALL
BBC Micro		x
ZX80 Spectrum	Z80	x
Apple II	6502	x
GameBoy	Z80	x

1.41 Secret Message

- Secret Message -

Only the Amiga! Thanks to Readysoft, Jim Drew & Joe Fenton, GVP, Vortex, EMC, David Salamon, and all the other hardware and software authors out there who make these beautiful gifts!

Oh and Commodore too!

1.42 Graphics Boards

- Graphics Boards -

8 bit Graphics Boards

24 bit Graphics Boards

Video Production Hardware

Genlocks

Workbench Support

External Graphics Boards

Index

1.43 External Graphics Boards

- External Graphics Boards -

These graphics boards should be compatible with all Amigas.

- DCTV

- NTSC or PAL

- RGB optional

- image capture in 10 seconds

- color video cameras
- still video cameras
- video disk
- still frame capable VCR's
- paint and animation software included
- compatible with other software packages
- 1 megabyte RAM required
 - 3 or 5 megabytes RAM recommended
- HAM-E
 - NTSC or PAL
 - RGB standard
- Colorburst

1.44 8 bit Graphics Boards

- 8 BIT Graphics Boards -

	BITS	PALT	RES	RGB	COMP	NTSC	PAL	SLOT	FPU
Resolver	8	24	2048x2048	x		x	x	ZorroII	34010
Lowell A2410	8		1280x1024	x		x	x	ZorroII	
AVideo12	12			x		x	x	DENISE	
HAM-E	16		1600x1280	x		x	x	RGB PORT	
AGA	18	24	1280x512	x	x	x	x		
Retina	8	24	2400x1200	x		x	x	ZorroII	

1.45 24 bit Graphics Boards

- 24 BIT Graphics Boards -

	BITS	RES	RGB	COMP	NTSC	PAL	DIGI	GLOCK	VIDEOSLOT
Retina	24	1024x768	x		x	x			
Harlequin	24	910x486	x		x	x			
Vivid 24	24	2048x2048	x		x	x		x	
Rembrandt	24	1024x1024	x		x	x	x	x	
Visiona	24	8192x4096	x		x	x		x	
OpalVision	24	768x476	x		x	x	x	x	x
FireCracker	24	1024x480	x		x	x		x	
EGS	24		x		x	x		x	
IV24	24	768x480	x	x	x	x	x	x	x
AVideo24	24		x		x	x		?	
Video Toaster	22	768x480		x	x		x	x	x
DCTV	22	768x480		x	x	x	x	x	
AGA	18	1280x480	x	x	x	x			
HAM-E	?	1600x1280	?	?	x	?		?	
AVideo12	12		x		x	x		?	
Resolver	8	2048x2048	x		x	x			
Lowell A2410	8	1280x1024	x		x	x			

		Denise	ZorroII	ALL	FPU	PIP		
Retina	24		x					
Harlequin	24		x					
Resolver	8		x		34010			
Vivid 24	24		x		34020 (4)			
Rembrandt	24		x		34020			
Visiona	24		x		INMOS			
OpalVision	24		x				x	
FireCracker	24		x					
Lowell A2410	8		x					
EGS	24			COMBO				
IV24	24			x				x
AVideo12	12	x						
AVideo24	24	x						
Video Toaster	22			x				
DCTV	22				x			
HAM-E	?				x			

	A500	A600	A1000	A2000	A3000	A4000	CDTV
Retina				x	x	x	
Harlequin				x	x	x	
Resolver				x	x	x	
Vivid 24				?	x	x	
Rembrandt				?	x	x	
Visiona				x	x	x	
OpalVision				x	x	x	
FireCracker				x	x	x	
Lowell A2410				x	x	?	
EGS				x			
IV24				x	x	x	
AVideo12	x		x	x			x
AVideo24	x		x	x			x
Video Toaster				x	x	?	
DCTV	x	x	x	x	x	x	x
HAM-E	x	x	x	x	x	x	x

NOTES: A2000 includes
A1500

,

A2000

,

A2500

A3000 includes

A3000
, A3000T

EGS Requires an
A2000
with a GVP Combo accelerator.

DCTV and HAM-E are external units.

Video Toaster requires endplate adjustment for
A3000

.

A3000UX

may use Lowell A2410 or Resolver.

1.46 Index - Graphics Boards

- Index of Graphics Boards -

		PALETTE BITS
Retina	24	24
Harlequin	24	24
Vivid 24	24	24
Rembrandt	24	24
Visiona	24	24
OpalVision	24	24
FireCracker	24	24
EGS	24	24
IV24	24	24
AGA	24	18
AVideo24	24	24
Video Toaster	24	22
Video Toaster II	24	
DCTV	22	22
HAM-E	16	16
AVideo12	12	12
OCS	12	12
ECS	12	12
Resolver	24	8
Lowell A2410	8	8

1.47 Opal Vision

- Opal Vision -

- 24 BIT RGB output
 - video bandwidth greater than 7 MHz
 - 1.5 megabytes RAM
- video slot capable
- 24 BIT frame buffer
- 16.8 million color palette
- double buffered animation
 - 24 BIT or 15 BIT in low and medium resolutions
 - 8 BIT in all resolutions
- VLSI graphics coprocessor
 - resolution changes
 - stencil modes
 - transition effects
 - smooth scrolling
- screen colors update in realtime
- dual playfield and overlay priority stencil modes
- 20ns video switch
- autoconfigures for NTSC and PAL
- software included
 - Opal Paint

- Opal Animate
- video special effects chip (optional)
- frame grabber and genlock module (optional)
- scan rate converter (optional)
- Roaster Chip for digital video effects (optional)

1.48 Frequently Asked Questions

- Frequently Asked Questions -

Video Toaster
Operating System Software

Kickstart and Workbench

Processors
Custom Chip Set

Emulators
Hardware Expansion
Software Drivers

1.49 Video Toaster Questions

- Can a Video Toaster work in an
A3000
or A3000T ?

YES. In order for this to fit in the case, you must either desolder the Toaster endplate and slide it over, break off two of the video inputs from the Toaster, cut a hole in the case of the

A3000
, or leave the case off the
A3000
.

If you are using Toaster software older than 2.0 than you will have to remove the

ECS
Super Denise chip and replace it
with an old non-
ECS
Denise .

1.50 Video Toaster Questions

- Can a Video Toaster work in an A4000 ?

POSSIBLY. It is rumored that an A4000 specific version of the Toaster will be out sometime this year. It is not known if a Toaster is

AGA
compatible.

1.51 Video Toaster Questions

- Is there a version of the Video Toaster for the Amiga?

YES. The Video Toaster only works on Amiga computers. It does not work on any other computer. If you own a Video Toaster Workstation then you are in fact using an Amiga 2000. There is currently no version of the Video Toaster for the Macintosh or for IBM PC clones. However, via the serial port, data can be transferred between the systems. If you require running Macintosh software and a Video Toaster at the same time, then I highly advise you to use the EMPLANT Macintosh II emulator board inside a Video Toaster equipped Amiga. At one time NewTek VAR'd Amiga 2000's and sold them as Toaster Workstations but they no longer do so.

1.52 Macintosh Frequently Asked Questions

- Macintosh Frequently Asked Questions -

10. How do I get balloon help for Balloon Help?
 9. The Macintosh Video Toaster? It sure looks a heck of a lot like an Amiga 2000.
 8. The Macintosh excels in productivity software.
 7. Best Seller This Week: Screenblinker Modules!
 6. When I open a new window does it lose the information from the old window?
 5. Sure it has multitasking. Just don't try to do more than one thing at the same time.
 4. Small, monochrome, low resolution monitors are awesome!
 3. The LC III; a price performance break through and all new technology. Introducing color to low cost computers!
 2. Introducing a whole new line of Apple computers! No, not just
-

the same old thing in a new box! Would we do that?

1. Maybe Marc will buy a Centris. God I hope so.

Amiga - Computer for the Creative Mind

Macintosh - Computer for the Rest of Us

1.53 Video Toaster Questions

- Do I need a Time Based Corrector (TBC)?

POSSIBLY. The Toaster is capable of recording live video without a time based corrector. However, if you wish to use a video recorder to input to the Toaster than a time based corrector is needed.

1.54 Processor Questions

- Why is my stock computer slow?

YOU NEED Fast RAM . If your computer only contains Chip RAM , than it may be as much as 4 times slower than a computer equipped with Fast RAM . This is true for all but the A3000 and A4000 , which come with adequate Fast RAM . At least 512k of Fast RAM is suggested, although a minimum of 1 megabyte is greatly preferred. Any Fast RAM above 1 megabyte has a negligible impact on CPU speed.

1.55 Processor Questions

- Can I replace my 68000 with a 68010 ?

POSSIBLY. If you have an A1000 , A500 , A1500 , or A2000 then you can. On an A600 , the 68000 is not socketed and cannot be

removed.

The 68010 allows you to access FPU chips via a special disk based library. Speed increases are on the order of 10-15%. However, software compatibility suffers, so it is advised that you do not do this. 68010 chips sell for under \$10.

1.56 Processor Questions

- Can an 040 accelerator work on KS1.3 or lower?

NO. If you intend on using an 040 accelerator, it is suggested that you either use KS2.04 or greater. The KS must also be in ROM and not on disk. Some older 040 accelerators permit the use of KS1.3 or KS2.04 in RAM but this is not widely used. The KS2.04, if needed, sell for \$50 or less.

1.57 Kickstart and Workbench Questions

- Can I have different versions of the Kickstart and Workbench?

YES. If you have KS1.2 you can also run WB1.3. If you have KS2.04 you can also run WB2.1. It is also possible to run older versions of system software but it is suggested to use the most compatible versions as older versions may suffer from software incompatibilities.

1.58 Kickstart and Workbench Questions

- What is a Tower ROM?

KS1.4 for the
A3000
. It is available on early model
A3000
's.

It is not suggested that you use KS1.4 as it is outdated and not supported. These should not be removed.

1.59 Kickstart and Workbench Questions

- Why should I upgrade my Kickstart or Workbench?

If you are running anything lower than KS1.2, you have an obsolete version that is no longer generally supported. If

You are running KS1.2, you may wish to upgrade to KS1.3 if you require better compatibility or autobooting hard drives. If you have KS1.3 or less, you will want KS2.04 if you intend to use a

68040

accelerator. Also, KS2.04 offers much more compatibility with productivity software, while KS1.3 is more compatible with entertainment software. If you are running KS2.04, you may wish to look into WB2.1 if you need to read MD-DOS disks. KS3.0, although a major upgrade, is not yet required by existing software.

1.60 Hardware Questions

- What is the difference between Chip RAM and Fast RAM ?

Chip RAM is similar to video RAM found on other computers. On the Amiga, the custom chip set can only directly access the RAM found in the Chip RAM. Chip is required by all Amigas, while Fast RAM is not required but highly suggested. Chip RAM stores screen data and audio data among other things.

1.61 Hardware Questions

- Why does the Amiga come with so little RAM or disk space?

The Amiga requires less RAM and disk space than other computers. It is possible to use the Amiga operating system with less than 20k of disk space and less than 100k of RAM. It is possible to run most Amiga software with 1 megabyte of RAM and one floppy drive.

1.62 Hardware Questions

- Does the Amiga support high density floppy disks?

YES. The A4000 includes a 1.76 megabyte floppy drive which also reads IBM 1.44 megabyte and IBM 720k disks. This floppy drive should work with most Amigas. Some

A3000

's in Australia were

shipped with high density floppy drives. Applied Engineering also manufactured a high density floppy drive, but it did not sell well due to its high price. The Amiga high density drive from CBM sells for under \$100. Many people have used standard IBM high density drives using a special device driver.

1.63 Hardware Questions

- Is it possible to access the IBM slots in my computer without buying a Bridgeboard?

YES. The Golden Gate II card allows one to use the IBM slots without purchasing a bridgeboard. IBM peripherals can therefore be used by Amiga software. The Golden Gate II is not an IBM emulator and should not be confused with the Golden Gate IBM emulator.

1.64 Hardware Questions

- If I purchase an Amiga, what additional hardware will I need?

Generally, the only additional hardware required is a monitor or television to be used as a display device. The Amiga comes with all the necessary hardware to provide a fully working system. Some models do not include hard drives, however are fully capable of operating from floppy drives since Amiga software occupies less disk space than software for other formats.

1.65 Hardware Questions

- What is the difference between the

A500
,
A500+
, and
A500
Plus?

The

A500
contains either KS1.2 or KS1.3. The
A500+
contains
KS2.04 with the
ECS
chipset and is only available in Europe.

The

A500
Plus is an
A500
with a special set of software
packages and is similar in hardware to an
A500
.

1.66 Hardware Questions

- Can the Amiga run IBM PC software?

YES. Every Amiga is capable of running IBM PC software, including MS-DOS, Windows 3.1, OS/2, and all supporting software. This also includes SVGA cards, SoundBlaster, and time-based video correctors. In fact, many of these emulators can multitask PC and Amiga software simultaneously with minimal usage of CPU time.

1.67 Hardware Questions

- Does the Amiga multitask?

YES. The Amiga has multitasked since its conception in 1985. It works pre-emptively similar to UNIX and OS/2, as opposed to Windows 3.1 and System 7 which multitask co-operatively. It is generally accepted that pre-emptive multitasking is much cleaner and more reliable than co-operative multitasking. Also supported is multiprocessing. It is possible for the Amiga's custom chip sets to perform different operations simultaneously.

1.68 Hardware Questions

- Is the Amiga text based or window based?

BOTH. The Amiga offers a windowing system called Intuition, that is accessed through the Workbench and most software. There is also a command line interface know as the CLI, and an advanced shell known as the AmigaShell. Also available is CSH, KSH, and BASH. The newer Kickstarts offer more shell commands in ROM than the previous versions.

1.69 Hardware Questions

- Is the Amiga for games only?

NO. The Amiga is used by numerous television stations and other studios to produce broadcast quality video images and animations. The Amiga is used by Nickelodian, MTV, Prevue Guide, many cable TV stations, and movie studios. For example, the computer graphics in the science fiction movie Babylon 5 was produced using Amiga video and morphing software.

1.70 Amiga Product Guide

- Amiga Product Guide -

A500

A500+

A600

A600HD

A1000

A1200

A1200HD

A1500

A2000

A2000HD

A2000HDA

A2500

A3000

A3000T/030

A3000T/040

A3000UX

A4000/030

A4000/040

A4000T

CDTV

1.71 Amiga 500

- Amiga 500 -

	OS	CHIPSET
A500	KS1.2 WB1.2	
OCS		
	A500	KS1.3 WB1.3
OCS		
	A500+	KS2.0 WB2.0

- ECS
 - Motorola MC68000 7.16 MHz CPU
 - 512k Chip RAM or 1 megabyte Chip RAM on motherboard
 - maximum 512k Chip RAM or 1 megabyte Chip RAM
 - 512k Fast RAM in trapdoor expansion bus (optional)
 - maximum 8 megabytes Fast RAM
 - 512k RAM or 1 megabyte RAM on motherboard
 - 256k ROM or 512k ROM on motherboard
- 3.5" drive bay
- 2.5" drive mountable
- 3.5" 880k internal floppy drive
- integrated keyboard
- 2 button mouse
- A1000 sidecar expansion bus
- A500 trapdoor expansion bus
- compact case
- external power supply port
- external floppy drive port
- RS-232 serial port
- Centronics parallel port
- 2 mouse/joystick ports
- monochrome composite video port
- 15kHz color RGB analog video port
- 2 stereo audio output ports

1.72 Amiga 500+

- Amiga 500+ -

	OS	CHIPSET
A500	KS1.2 WB1.2	
OCS		
	A500	KS1.3 WB1.3
OCS		
	A500+	KS2.0 WB2.0
ECS		

 - Motorola MC68000 7.16 MHz CPU
 - 512k Chip RAM or 1 megabyte Chip RAM on motherboard
 - maximum 512k Chip RAM or 1 megabyte Chip RAM
 - 512k Fast RAM in trapdoor expansion bus (optional)
 - maximum 8 megabytes Fast RAM
 - 512k RAM or 1 megabyte RAM on motherboard
 - 256k ROM or 512k ROM on motherboard
- 3.5" drive bay
- 2.5" drive mountable
- 3.5" 880k internal floppy drive

- integrated keyboard
- 2 button mouse

- A1000 sidecar expansion bus
- A500 trapdoor expansion bus

- compact case
- external power supply port
- external floppy drive port
- RS-232 serial port
- Centronics parallel port
- 2 mouse/joystick ports
- monochrome composite video port
- 15kHz color RGB analog video port
- 2 stereo audio output ports

1.73 Amiga 600

- Amiga 600 -
 - OS CHIPSET
 - A600 KS2.05 WB2.1
 - ECS
 - A600HD KS2.05 WB2.1
 - ECS
 - Motorola MC68000 7.16 MHz CPU
 - 1 megabyte Chip RAM on motherboard
 - maximum 2 megabytes Chip RAM
 - maximum 8 megabytes Fast RAM
 - 512k RAM or 1 megabyte RAM on motherboard
 - 512k ROM on motherboard

 - 3.5" drive bay
 - 2.5" drive mountable

 - 3.5" 880k internal floppy drive
 - 2.5" 40 megabyte IDE hard drive (optional)

 - integrated keyboard
 - 2 button mouse

 - A600 trapdoor expansion bus
 - PCMCIA 2.0 expansion bus

 - compact case
 - external power supply port
 - external floppy drive port
 - RS-232 serial port
 - Centronics parallel port
 - 2 mouse/joystick ports
 - color composite video port
 - 15kHz color RGB analog video port
 - 2 stereo audio output ports

1.74 Amiga 1000

- Amiga 1000 -
 - OS CHIPSET
 - A1000 KS1.2 WB1.2
 - OCS
 - Motorola MC68000 7.16 MHz CPU
 - 256k Chip RAM on motherboard
 - 256k Chip RAM in frontpanel expansion bus (optional)
 - maximum 512k megabyte Chip RAM
 - maximum 8 megabytes Fast RAM
 - 256k RAM on motherboard
 - 256k Writable Control Store for OS on daughterboard
 - 256k ROM on floppy disk
 - 3.5" drive bay
 - 2.5" drive mountable
 - 3.5" 880k internal floppy drive
 - detached keyboard
 - 2 button mouse
 - A1000 sidecar expansion bus
 - A1000 frontpanel expansion bus
 - pizza box case
 - keyboard storage garage
 - signature case
 - external floppy drive port
 - RS-232 serial port
 - Centronics parallel port
 - 2 mouse/joystick ports
 - color composite video port
 - 15kHz color RGB analog video port
 - 2 stereo audio output ports

1.75 Marketing the Amiga

- Marketing the Amiga -

I would like to take this time to say that CBM better get its marketing department moving in the US. CBM used to have a decent name recognition, and it still does. However, many people have NOT heard of the Amiga. My suggestion is plain and simple; hit the educational market and the kids only. Advertise during Saturday morning cartoons. Give posters for free with the purchase of an A500, A600 or A1200. Kids will put the posters up in their rooms, and their

friends will see them, and their parents, and the kids will go to elementary school and brag about their Amigas, just like they do now with Nintendos and Segas. The kids have the want and the parents got the money. The time to advertise is not in the Fall during the Christmas season. The time to advertise is over the summer, when parents have yet to decide what to buy their kids for Christmas. Then by September they start making decisions. Then in November, if sales are high and stores are out of stock, the media will declare A600's and A1200's as hot products.

Create a package for teachers. Include word processing and a database, and put it with an A600 or A1200 and sell them or give them to teachers for below retail prices. Teachers decide what computers the schools buy. Get teachers addicted to cheap computers and they will surely push their schools during the budget proposals to buy the more affordable Amigas.

Do the same with businesses. To enter the business market, find the top business schools in the United States and offer great astounding deals to incoming freshmen. By the time they graduate, if they learn to use Amigas, that is what they will order for their future companies. People buy computers for various reasons. Some buy because of the price. Literate users buy due to power and support. Illiterate users buy due to name recognition and peer pressure. Peer into the future; then apply pressure.

- David Tiberio -

Now, onto the Amiga 1200 (if you are browsing forward that is, otherwise the Amiga 1000 is next)...

WARNING: AMIGA INSIDE

1.76 Amiga 1200

- Amiga 1200 -

- | | OS | CHIPSET |
|-------|---------|-------------|
| A1200 | KS3.0 | WB3.0 |
| AGA | | |
| | A1200HD | KS3.0 WB3.0 |
| AGA | | |
- Motorola MC68EC020 14.32 MHz CPU
 - 2 megabytes Chip RAM on motherboard
 - maximum 2 megabytes Chip RAM
 - maximum 8 megabytes Fast RAM
 - 512k ROM on motherboard
 - 3.5" drive bays
 - 2.5" drive mountable
 - 3.5" 880k internal floppy drive
 - 2.5" 40 megabyte IDE hard drive (optional)
 - integrated keyboard
 - 96 keys
 - 10 function keys

- numeric keypad
- cursor keys (inverted T layout)
- 2 button mouse

- A1200 trapdoor 150 pin local bus expansion
- PCMCIA 2.0 expansion bus

- compact case
- external power supply port
- external floppy drive port
- RS-232 serial port
- Centronics parallel port
- 2 mouse/joystick ports
- color composite video port
- 15kHz color RGB analog video port
- 31KHz SVGA video output
- 2 stereo audio output ports
- 32 BIT data path
- 24 BIT address space
- optional battery backed clock

- weight: 8 lbs.
- 9.5" deep x 18.5" wide x 3" high
- 110 volt/60Hz 23 watts power supply (external)

1.77 Amiga 1500

- Amiga 1500 -

	OS	CHIPSET
A1500	KS1.3	WB1.3
OCS		
	A1500+	KS2.0 WB2.0
ECS		

 - Motorola MC68000 7.16 MHz CPU
 - 1 megabyte 16 BIT Chip RAM on motherboard
 - maximum 1 megabyte Chip RAM
 - maximum 8 megabytes Fast RAM
 - 256k ROM or 512k ROM on motherboard

 - 1 5.25" internal drive bay
 - 2 3.5" drive bays
 - 2.5" drive mountable

 - 2 3.5" 880k internal floppy drives

 - detached keyboard
 - 2 button mouse

 - 5 Zorro II 16 BIT Amiga internal expansion slots
 - 2 IBM AT internal expansion slots
 - 2 IBM XT internal expansion slots
 - internal CPU expansion slot
 - internal video expansion slot

- slot for external connectors
- desktop case
- internal power supply
- internal fan
- external floppy drive port
- RS-232 serial port
- Centronics parallel port
- 2 mouse/joystick ports
- monochrome composite video port
- 15kHz color RGB analog video port
- 2 stereo audio output ports

1.78 Amiga 2000

- Amiga 2000 -

- | | OS | | CHIPSET | |
|-------|-------|----------|---------|-------|
| A2000 | KS1.3 | WB1.3 | | |
| OCS | | | | |
| | | A2000HD | KS1.3 | WB1.3 |
| OCS | | A2000 | KS2.0 | WB2.0 |
| ECS | | A2000HD | KS2.0 | WB2.0 |
| ECS | | A2000HDA | KS2.0 | WB2.0 |
| ECS | | | | |
- Motorola MC68000 7.16 MHz CPU
 - 1 megabyte 16 BIT Chip RAM on motherboard
 - maximum 1 megabyte Chip RAM
 - maximum 8 megabytes Fast RAM
 - 256k ROM or 512k ROM on motherboard
 - 1 5.25" internal drive bay
 - 2 3.5" drive bays
 - 2.5" drive mountable
 - 3.5" 880k internal floppy drive
 - 3.5" 52 megabyte SCSI hard drive (optional)
 - detached keyboard
 - 2 button mouse
 - 5 Zorro II 16 BIT Amiga internal expansion slots
 - 2 IBM AT internal expansion slots
 - 2 IBM XT internal expansion slots
 - internal CPU expansion slot
 - internal video expansion slot
 - slot for external connectors
 - desktop case
 - internal power supply
 - internal fan
-

- external floppy drive port
- external SCSI hard drive port (optional)
- RS-232 serial port
- Centronics parallel port
- 2 mouse/joystick ports
- monochrome composite video port
- 15kHz color RGB analog video port
- 2 stereo audio output ports

1.79 Amiga 2500

- Amiga 2500 -
 - OS CHIPSET
 - A2500 KS1.3 WB1.3
 - OCS
 - Motorola MC68020 25 MHz CPU or MC68030 25 MHz CPU ←
 - A2630/4 accelerator card
 - 1 megabyte 16 BIT Chip RAM on motherboard
 - maximum 1 megabyte Chip RAM
 - 4 megabytes 32 BIT Fast RAM on CPU card
 - maximum 8 megabytes Fast RAM
 - 256k ROM on motherboard
 - 1 5.25" internal drive bay
 - 2 3.5" drive bays
 - 2.5" drive mountable
 - 3.5" 880k internal floppy drive
 - 3.5" 105 megabyte SCSI hard drive
 - detached keyboard
 - 2 button mouse
 - 5 Zorro II 16 BIT Amiga internal expansion slots
 - 2 IBM AT internal expansion slots
 - 2 IBM XT internal expansion slots
 - internal CPU expansion slot
 - internal video expansion slot
 - slot for external connectors
 - desktop case
 - internal power supply
 - internal fan
 - external SCSI hard drive port
 - external floppy drive port
 - RS-232 serial port
 - Centronics parallel port
 - 2 mouse/joystick ports
 - monochrome composite video port
 - 15kHz color RGB analog video port
 - 2 stereo audio output ports

1.80 Amiga 3000

- Amiga 3000 -

	OS	CHIPSET
A3000	KS1.3	WB1.3
ECS		
		KS1.4
ECS		WB1.4
		KS2.0
ECS		WB2.0
	A3000	KS2.0
ECS		WB2.0

- Motorola MC68030 16 MHz CPU or MC68030 25 MHz CPU ↔
- 68881 16 MHz or 68882 25 MHz FPU
- 1 megabyte Chip RAM on motherboard
 - expandable to 2 megabytes 32 BIT Chip RAM
- 1 megabyte Fast RAM or 4 megabytes Fast RAM on motherboard
 - expandable to 16 megabytes 32 BIT Fast RAM
- 256k ROM and 512k ROM on hard disk
 - or 512k ROM on hard disk
 - or 512k ROM on motherboard
- 32 BIT architecture
- 3 3.5" drive bays
- 2.5" drive mountable
- 3.5" 880k internal floppy drive
- 3.5" 52 megabyte or 3.5" 105 megabyte SCSI hard drive
- detached keyboard
- 2 button mouse
- 4 Zorro III 32 BIT Amiga internal expansion slots
- 2 IBM AT internal expansion slots
- internal 32 BIT CPU expansion slot
- internal video expansion slot
- desktop case
- internal power supply
- internal fan
- external SCSI hard drive port
- external floppy drive port
- RS-232 serial port
- Centronics parallel port
- 2 mouse/joystick ports
- 15kHz color RGB analog video port
- 31KHz SVGA video output
- built in video de-interlacer
- display enhancer bypass switch
- 2 stereo audio output ports

1.81 Amiga 3000UX

- Amiga 3000UX -

- | | | |
|---------|------|---------|
| | OS | CHIPSET |
| A3000UX | UNIX | |
| ECS | | |
- Motorola MC68030 25 MHz CPU
 - 68882 25 MHz FPU
 - 1 megabyte Chip RAM on motherboard
 - expandable to 2 megabytes 32 BIT Chip RAM
 - 4 megabytes Fast RAM on motherboard
 - expandable to 16 megabytes 32 BIT Fast RAM
 - 512k ROM on motherboard
 - 32 BIT architecture

 - 3 3.5" drive bays
 - 2.5" drive mountable

 - 3.5" 880k internal floppy drive
 - 3.5" 105 megabyte SCSI hard drive

 - detached keyboard
 - 3 button mouse

 - 4 Zorro III 32 BIT Amiga internal expansion slots
 - 2 IBM AT internal expansion slots
 - internal 32 BIT CPU expansion slot
 - internal video expansion slot

 - desktop case
 - internal power supply
 - internal fan
 - external SCSI hard drive port
 - external floppy drive port
 - RS-232 serial port
 - Centronics parallel port
 - 2 mouse/joystick ports
 - 15kHz color RGB analog video port
 - 31kHz SVGA video output
 - built in video de-interlacer
 - display enhancer bypass switch
 - 2 stereo audio output ports

1.82 Amiga 3000T/030

- Amiga 3000T/030 -

	OS	CHIPSET
--	----	---------

- A3000T/030 KS2.0 WB2.0
ECS
- Motorola MC68030 25 MHz CPU
 - 68030 surface mounted on motherboard
 - 68882 25 MHz FPU
 - 68882 surface mounted on motherboard
 - 1 megabyte Chip RAM on motherboard
 - expandable to 2 megabytes 32 BIT Chip RAM
 - 4 megabytes Fast RAM on motherboard
 - expandable to 16 megabytes 32 BIT Fast RAM
 - 512k ROM on motherboard
 - 32 BIT architecture
-
- 3 5.25" internal drive bays
 - 4 3.5" drive bays
 - 2.5" drive mountable
-
- 3.5" 880k internal floppy drive
 - 3.5" 210 megabyte SCSI hard drive
-
- detached keyboard
 - 3 button mouse
-
- 5 Zorro III 32 BIT Amiga internal expansion slots
 - 4 IBM AT internal expansion slots
 - internal 32 BIT CPU expansion slot
 - internal video expansion slot
-
- floor mountable tower case
 - internal power supply
 - internal fan
 - external SCSI hard drive port
 - external floppy drive port
 - RS-232 serial port
 - Centronics parallel port
 - 2 mouse/joystick ports
 - 15kHz color RGB analog video port
 - 31KHz SVGA video output
 - built in video de-interlacer
 - display enhancer bypass switch
 - 2 stereo audio output ports
-
- internal audio speaker
 - system lock key

1.83 Amiga 3000T/040

- Amiga 3000T/040 -
- OS CHIPSET
A3000T/040 KS2.0 WB2.0
ECS
- Motorola MC68040 25 MHz CPU
 - 68040 on expansion card in CPU slot

- 68040 25 MHz FPU (emulated)
 - 68040 FPU emulates 68882 FPU on expansion card
- 1 megabyte Chip RAM on motherboard
 - expandable to 2 megabytes 32 BIT Chip RAM
- 4 megabytes Fast RAM on motherboard
 - expandable to 16 megabytes 32 BIT Fast RAM
- 512k ROM on motherboard
- 32 BIT architecture

- 3 5.25" internal drive bays
- 4 3.5" drive bays
- 2.5" drive mountable

- 3.5" 880k internal floppy drive
- 3.5" 210 megabyte SCSI hard drive

- detached keyboard
- 3 button mouse

- 5 Zorro III 32 BIT Amiga internal expansion slots
- 4 IBM AT internal expansion slots
 - 4 IBM AT slots inline
- internal 32 BIT CPU expansion slot
- internal video expansion slot
 - 1 video slot inline

- floor mountable tower case
- internal power supply
- internal fan
- external SCSI hard drive port
- external floppy drive port
- RS-232 serial port
- Centronics parallel port
- 2 mouse/joystick ports
- 15kHz color RGB analog video port
- 31KHz SVGA video output
- built in video de-interlacer
- display enhancer bypass switch
- 2 stereo audio output ports

- internal audio speaker
- system lock key

1.84 Amiga 4000/030

	- Amiga 4000/030 -			
		OS	CHIPSET	
A4000/030	KS3.0	WB3.0		
AGA				
		A4000/040	KS3.0	WB3.0
AGA				
		A4000T	KS3.0	WB3.0
AGA				

- Motorola 680EC30 25 MHz CPU
 - CPU on expansion card in CPU slot
 - CPU card may be removed and exchanged for a faster card
 - CPU card compatible with A3000T, A4000/040, and A4000T
- 68882 25 MHz FPU
- 2 megabyte Chip RAM on motherboard
 - expandable to 2 megabytes 32 BIT Chip RAM
- 2 megabytes Fast RAM on motherboard
 - expandable to 16 megabytes 32 BIT Fast RAM
 - expandable using SIMM modules
- 512k ROM on motherboard
- 32 BIT architecture

- 5.25" internal drive bay
- 4 3.5" drive bays
- 2.5" drive mountable

- 3.5" 1.76 megabyte internal floppy drive
- 3.5" 120 megabyte IDE hard drive

- detached keyboard
- 3 button mouse

- 4 Zorro III 32 BIT Amiga internal expansion slots
- 3 IBM AT internal expansion slots
- internal 32 BIT CPU expansion slot
- internal 24 BIT extended video expansion slot

- desktop case
- internal power supply
- internal fan
- external floppy drive port
- RS-232 serial port
- Centronics parallel port
- 2 mouse/joystick ports
- 15kHz color RGB analog video port
- 31KHz SVGA video output
- 2 stereo audio output ports

- weight: 20 lbs.
- 15 1/4" deep x 15" wide x 5" high
- 110 volt/60Hz 150 watt power supply (internal)

1.85 Amiga 4000/040

- Amiga 4000/040 -

	OS	CHIPSET
A4000/030	KS3.0	WB3.0
AGA		
	A4000/040	KS3.0 WB3.0
AGA		
	A4000T	KS3.0 WB3.0
AGA		

- Motorola MC68040 25 MHz CPU
 - CPU on expansion card in CPU slot
 - CPU card may be removed and exchanged for a different card
 - CPU card compatible with A3000T, A4000/030 and A4000T
- 68040 25 MHz FPU
 - 68040 FPU emulates 68882 FPU on expansion card
- 2 megabyte Chip RAM on motherboard
 - expandable to 2 megabytes 32 BIT Chip RAM
- 4 megabytes Fast RAM on motherboard
 - expandable to 16 megabytes 32 BIT Fast RAM
 - expandable using SIMM modules
- 512k ROM on motherboard
- 32 BIT architecture

- 5.25" internal drive bay
- 4 3.5" drive bays
- 2.5" drive mountable

- 3.5" 1.76 megabyte internal floppy drive
- 3.5" 120 megabyte IDE hard drive

- detached keyboard
- 3 button mouse

- 4 Zorro III 32 BIT Amiga internal expansion slots
- 3 IBM AT internal expansion slots
- internal 32 BIT CPU expansion slot
- internal 24 BIT extended video expansion slot

- desktop case
- internal power supply
- internal fan
- external floppy drive port
- RS-232 serial port
- Centronics parallel port
- 2 mouse/joystick ports
- 15kHz color RGB analog video port
- 31KHz SVGA video output
- 2 stereo audio output ports

- weight: 20 lbs.
- 15 1/4" deep x 15" wide x 5" high
- 110 volt/60Hz 150 watt power supply (internal)

1.86 Amiga 4000T

- Amiga 4000T -

	OS	CHIPSET
A4000/030	KS3.0	WB3.0
AGA		
	A4000/040	KS3.0 WB3.0
AGA		
	A4000T	KS3.0 WB3.0

- AGA
- Motorola MC68040 25 MHz CPU
 - CPU on expansion card in CPU slot
 - CPU card may be removed and exchanged for a different card
 - CPU card compatible with A3000T, A4000/030 and A4000/040
 - 68040 25 MHz FPU
 - 68040 FPU emulates 68882 FPU on expansion card
 - 2 megabyte Chip RAM on motherboard
 - expandable to 2 megabytes 32 BIT Chip RAM
 - 4 megabytes Fast RAM on motherboard
 - expandable to 16 megabytes 32 BIT Fast RAM
 - expandable using SIMM modules
 - 512k ROM on motherboard
 - 32 BIT architecture

 - 5.25" internal drive bay
 - 4 3.5" drive bays
 - 2.5" drive mountable

 - 3.5" 1.76 megabyte internal floppy drive
 - 3.5" 210 megabyte SCSI II hard drive
 - SCSI II hard drive controller

 - detached keyboard
 - 3 button mouse

 - 5 Zorro III 32 BIT Amiga internal expansion slots
 - 4 IBM AT internal expansion slots
 - 2 inline with 2 Zorro III slots
 - internal 32 BIT CPU expansion slot
 - 2 internal 24 BIT extended video expansion slots
 - 2 inline with 2 Zorro III slots

 - floor mountable tower case
 - internal power supply
 - internal fan
 - external floppy drive port
 - RS-232 serial port
 - Centronics parallel port
 - 2 mouse/joystick ports
 - 15kHz color RGB analog video port
 - 31KHz SVGA video output
 - 2 stereo audio output ports

1.87 CDTV - Commodore Dynamic Total Vision

- CDTV -

	OS	CHIPSET
CDTV	KS1.3 WB1.3	
OCS		
- Motorola MC68000 7.16 MHz CPU
- 1 megabyte Chip RAM on motherboard

- expandable to 1 megabyte Chip RAM
- expandable to 8 megabytes Fast RAM
- 512k ROM on motherboard

- 5.25" internal drive bay
- 2.5" drive mountable

- 5.25" 640 megabyte CD-ROM drive
 - supports caddy based disc loading

- wireless control keypad
 - numeric keypad
 - cursor keys
 - volume control
 - power ON/OFF switch
 - CD-ROM control function
- detached wireless keyboard (optional)
- wireless 2 button mouse (optional)

- PCMCIA 1.0 expansion bus
- external video expansion bus

- consumer compact disc player style case
- internal power supply
- external floppy drive port
- RS-232 serial port
- Centronics parallel port
- 2 mouse/joystick ports
- color composite video port
- 15kHz color RGB analog video port
- S-Video color output
- 2 stereo audio output ports
- external MIDI input/output ports
- stereo headphone output jack
- channel select switch (3 or 4)

1.88 1084S Monitor

- 1084S Monitor -

The 1084S monitor is compatible with all Amiga computers and CDTV multimedia players.

- 15kHz color RGB analog video input
- color composite video input
- audio input jack
- built in speaker
- overscan compatible
- interlace compatible

1.89 1950 Monitor

- 1950 Monitor -

The 1950 monitor is compatible with the A1200, A3000 series, and A4000 series of Amiga computers.

- 15kHz and 31kHz multiscan SVGA video input
- overscan compatible
- interlace compatible

1.90 Golden Gate II Bridgecard

- Golden Gate II Bridgecard -

The Golden Gate II Bridgecard does not run IBM software emulation. It does however allow the Amiga to utilize IBM internal peripherals on the Amiga. This card should not be confused with the Vortex Golden Gate Bridgeboard, which does allow IBM software emulation.

"Here is my current list of PC cards known to work with the GoldenGate boards. If you know of any more, please tell me. Also listed are known working hosts."

David Salamon
d-salamon@uiuc.edu

- Comtable Products:

original IBM-AT serial/parallel I/O card
Datatech Mini286 Courier I/O Card
Dell/PCs Limited IO card
Galil 3-Axis Motion Controller board
Data Translation DT2805 16 channel data acquisition board
Lightspeed v.32 internal modem
Xeltek Superpro Universal PAL/GAL/EPROM programmer
EVEREX Multi I/O card
Supra v.32bis FAXmodem internal
JDR Multi I/O card with 16550 chips
SMC PC270E 8-bit Arcnet adapter card
AST Advantage! 16 bit I/O card
SunTek IO card with 16550
DTK 8250-based IO card
Boca Research "Boca IO 2 by 4"
2 parallel ports, 4 serial ports

- Working Hosts:

A500 with Phoenix Expansion Box
A2000
A2000 with 68030
A2000 with 68040
A3000 25 MHz
A4000

1.91 Custom Chip Set

- Custom Chip Set -

OCS

- Original Chip Set

ECS

- Enhanced Chip Set

AGA

- Advanced Graphics Architecture

AAA

- High End Chip Set

Agnus

OCS/ECS

Alice AGA

Amber ECS

Buster OCS/ECS/AGA

Denise OCS/ECS

Gary OCS/ECS

Lisa AGA

1.92 OCS - Original Chip Set

- Original Chip Set -

Screenmodes

Colormodes

Hardware Stats

The OCS chips originated in 1985 and were designed by the original Amiga crew of Los Gatos, California. These people included Jay Miner (Father of the Amiga) and RJ Michael. In its day OCS was the most advanced graphics set available on any home computer.

1.93 Original Chip Set

- OCS Screenmodes -

Maximum Size	16368 x 16368		
Monitor Types	RGB		
	, VGA, SVGA, Multiscan,		
	Composite		
	Display Formats		NTSC, PAL
Horizontal Scan Rates	15kHz - 31kHz		
Vertical Scan Rates	50Hz - 72Hz		
NTSC:Low Res	320x200	6	60Hz
NTSC:Low Res Laced	320x400	6	60Hz
NTSC:Low Res		6	
NTSC:Low Res Laced		6	
NTSC:High Res	640x200	4	60Hz, 15.72kHz
NTSC:High Res Laced	640x400	4	60Hz, 15.72kHz
NTSC:High Res	724x241	4	60Hz, 15.72kHz
NTSC:High Res Laced	724x482	4	60Hz, 15.72kHz
PAL:Low Res		6	
PAL:Low Res Laced		6	
PAL:High Res	640x256	4	50Hz, 15.60kHz
PAL:High Res Laced	640x512	4	50Hz, 15.60kHz

[overscan modes wanted also]

1.94 OCS - Original Chip Set

- OCS Colormodes -

Palette	4,096
Maximum Colors	4,096
Low Res	2 4 8 16 32
Low Res	
EHB6	
	64
Low Res	
HAM6	
	4096
High Res	2 4 8 16

1.95 ECS - Enhanced Chip Set

- Enhanced Chip Set -

Screenmodes

Colormodes

Hardware Stats

1.96 ECS Screenmodes

- ECS Screenmodes -

Maximum Size	16368 x 16368		
Monitor Types	RGB		
	, VGA, SVGA, Multiscan,		
	Composite		
	Display Formats		NTSC, PAL
Horizontal Scan Rates	15kHz - 31kHz		
Vertical Scan Rates	50Hz - 72Hz		
A2024_10Hz	1000x800 2	60Hz,	15.72kHz
A2024_15Hz	1000x800 2	60Hz,	15.72kHz
EURO:36Hz Low Res			
EURO:36Hz Low Res Laced			
EURO:36Hz High Res	640x200	73Hz,	15.69kHz ECS
EURO:36Hz High Res Laced	640x400	73Hz,	15.69kHz ECS
EURO:36Hz Super-High Res	1280x200	73Hz,	15.69kHz ECS
EURO:36Hz Super-High Res Laced	1280x400	73Hz,	15.69kHz ECS
EURO:72Hz Productivity	640x400	70Hz,	31.43kHz ECS
EURO:72Hz Productivity Laced	640x800	70Hz,	31.43kHz ECS
MULTISCAN:Extra-Low Res			
MULTISCAN:Extra-Low Res Laced			
MULTISCAN:Low Res			
MULTISCAN:Low Res Laced			
MULTISCAN:Productivity	640x480 2	60Hz,	31.44kHz ECS
MULTISCAN:Productivity Laced	640x960 2	60Hz,	31.44kHz ECS
NTSC:Low Res	320x200 6	60Hz	
NTSC:Low Res Laced	320x400 6	60Hz	
NTSC:Low Res		6	
NTSC:Low Res Laced		6	
NTSC:High Res	640x200 4	60Hz,	15.72kHz
NTSC:High Res Laced	640x400 4	60Hz,	15.72kHz
NTSC:High Res	724x241 4	60Hz,	15.72kHz
NTSC:High Res Laced	724x482 4	60Hz,	15.72kHz
NTSC:Super-High Res	1280x200 2	60Hz,	15.72kHz ECS
NTSC:Super-High Res Laced	1280x400 2	60Hz,	15.72kHz ECS
NTSC:Super-High Res	1440x241 2	60Hz,	15.72kHz ECS
NTSC:Super-High Res Laced	1440x482 2	60Hz,	15.72kHz ECS
PAL:Low Res		6	
PAL:Low Res Laced		6	
PAL:High Res	640x256 4	50Hz,	15.60kHz
PAL:High Res Laced	640x512 4	50Hz,	15.60kHz
PAL:Super-High Res	1280x256 2	50Hz,	15.60kHz ECS
PAL:Super-High Res Laced	1280x512 2	50Hz,	15.60kHz ECS
PAL:Super-High Res	1440x261 2	50Hz,	15.60kHz ECS
PAL:Super-High Res Laced	1440x522 2	50Hz,	15.60kHz ECS
SUPER72:Low Res			
SUPER72:Low Res Laced			
SUPER72:High Res	400x300	72Hz,	24.62kHz ECS
SUPER72:High Res Laced	400x600	72Hz,	24.62kHz ECS
SUPER72:Super-High Res	800x300	72Hz,	24.62kHz ECS
SUPER72:Super-High Res Laced	800x600	72Hz,	24.62kHz ECS

[overscan modes wanted also]

1.97 ECS - Enhanced Chip Set

- ECS Colormodes -

Palette	4,096	
Maximum Colors	4,096	
Extra-Low Res		
Low Res	2 4 8 16 32	
Low Res		
EHB6		
	64	
Low Res		
HAM6		4096
High Res	2 4 8 16	
Super-High Res	2 4	

1.98 AGA - Advanced Graphics Architecture

- Advanced Graphics Architecture -

Screenmodes

Colormodes

Hardware Stats

1.99 Advanced Graphics Architecture

- AAA Screenmodes -

Maximum Size	16368 x 16368	
Monitor Types		
RGB		
, VGA, SVGA, Multiscan,		
Composite		
	Display Formats	NTSC, PAL
Horizontal Scan Rates	15kHz - 31kHz	
Vertical Scan Rates	50Hz - 72Hz	

1.100 AGA - Advanced Graphics Architecture

- AGA Colormodes -

Palette	16,777,216
Maximum Colors	262,144
Extra-Low Res	2 4 8 16 32 64 128 256
Low Res	2 4 8 16 32 64 128 256
Low Res EHB6	
	64
Low Res HAM6	
	4096
Low Res HAM8	
	262,144
High Res	2 4 8 16 32 64 128 256
High Res HAM6	
	4096
High Res HAM8	
	262,144
Super-High Res	2 4 8 16 32 64 128 256
Super-High Res HAM6	
	4096
Super-High Res HAM8	
	262,144

1.101 AAA - High End Chip Set

- High End Chip Set -

Screenmodes
Colormodes

Hardware Stats

The High End Chip Set is often referred to as the AA+ or ↔ AAA Chip Set, and is not currently available. However it has been discussed at various World of Amiga shows in keynote speeches by CBM, and here is all information that has been provided at this time.

1.102 AAA Screenmodes

- AAA Screenmodes -
 - Chunky Pixel Modes in 2, 4, 8, 16 BITS
 - Hybrid Chunky Pixel Modes in combinations of Chunky Pixel Modes
 - 800x560x9 using DRAM
 - 800x560x24 using VRAM hybrid modes
 - 1280x1024x24 using VRAM and multiple sets of AAA chips
 - 640x200x2 scroll 6x faster than ECS
640x400x4 scroll 9x faster than ECS
 - 1280x1024x24 VRAM systems operate as fast as ECS 640x200x4
 - 640x400x16 plus numerous other new screenmodes not yet released

1.103 AAA Hardware Stats

- AAA Hardware Stats -
 - 4 VLSI integrated chips
 - DRAM and VRAM support
 - 40 DMA channels with dynamic allocation
 - 32 BIT Blitter
 - 32 BIT Copper
 - chunky pixel modes, hybrid chunky pixel modes
 - video pixel bus reversal
 - 16 BIT audio, 8 voices, 50KHz sampling rates, 8 BIT sampling
 - 1, 2, and 4 megabyte floppy disk support
 - 2 FIFO UARTS (buffered serial ports)
 - built in frame grabber

1.104 Secret Message

- Secret Message -

The hands hold the power of the creative mind. One hand, the right, feeds the body. The other hand, the left, sculpts and molds

the mind. The right hand is now burnt in the fire. If the left hand doesn't help the right hand, the body will starve.

1.105 EHB6

- EHB6 -

EHB6 is the original Extended Half Brite mode found on most Amigas. The original A1000 did not include support for EHB6 mode, however, later versions of the A1000 did include support for the EHB6 mode. All machines since then support EHB6. You can test your EHB6 mode by opening an EHB6 screen and viewing the palette. If the second set of 32 colors is identical to the first 32, then you do not have EHB6.

EHB6 allows the Amiga to double the number of colors allowed by using half the intensity of every available color. The original EHB6 mode supports 64 colors, of which 32 are base colors and 32 are half the intensity of the first 32 colors. There is an AGA version of the EHB6 mode.

1.106 EHB8

- EHB8 -

EHB8 is the AGA version of the EHB6 mode. This allows the Amiga to double the number of colors by using half the intensity of every available color. This mode supports 256 colors, of which 128 colors are half the intensity of the first 128 colors.

1.107 HAM6

- HAM6 -

HAM6 is the original Hold and Modify mode supported by the OCS, ECS, and AGA Chip Sets. This uses 6 BITS per plane to simulate 12 BITS using internal hardware compression. HAM6 uses 4 BITS for base colors and 2 BITS to control and modify the base colors to produce more colors. By using only base colors, HAM6 has a nice clear display, however taking advantage of the 12 BIT palette causes fringing of the display. This means that some pixels will affect the color of the pixels next to them. A good HAM6 routine will show very little fringing, while a poor HAM6 routine will show excessive fringing.

HAM6 is supported by OCS and ECS only in low resolution. However, AGA supports HAM6 in all resolutions. HAM6 is the slowest graphics mode on OCS and ECS machines and supports 4096 colors from a palette of 4096 colors.

1.108 HAM8

- HAM8 -

HAM8 is similar to HAM6 yet supports more colors and more bitplanes. HAM8 is only supported by the AGA Chip Set. This uses 8 BITS per plane to simulate 18 BITS using internal hardware compression. HAM8 uses 6 BITS for base colors and 2 BITS to control and modify the base colors. Although this causes fringing, this is mostly unnoticable especially when using higher resolutions. Some pixels may affect the pixels next to them.

HAM8 is supported by the AGA Chip Set in any resolution and supports 262,144 colors from a palette of 16,777,216 colors. HAM8 is the slowest graphics mode on AGA machines, yet produces very astonishing pictures that closely resemble 24 BITS. It is possible to simulate and display 24 BIT pictures with no loss of data using software and hardware tricks.

1.109 Agnus Hardware Stats

- Agnus Hardware Stats -

	MODEL	VIDEO	CHIPRAM	CHIP TYPE
Agnus	8361	NTSC	512k	A1000 Subsystem DIP
Agnus	8361	NTSC	512k	A1000 Subsystem DIP
Fat Agnus	8370	NTSC	512k	DIP
Fat Agnus	8370	NTSC	512k	PLCC
Fat Agnus	8371	PAL	512k	DIP
Fat Agnus	8371	PAL	512k	PLCC
Fat Agnus	8372	NTSC/PAL	512k	PLCC
Fatter Agnus	8372a	NTSC/PAL	1024k	PLCC
Super Agnus	8372b	NTSC/PAL	2048k	PLCC A3000
Super Agnus	8375	NTSC/PAL	2048k	PLCC A500+
Alice		NTSC/PAL	2048k	PLCC A4000/A1200

1.110 Thanks

- Thanks -

I would like to thank James Knowlton, who on a regular basis helped make suggestions and research information (and correct mistakes). The AmigaFAQ is now 3621 lines and 140,793 bytes. I never expected it to grow so large since my first FAQ posting which was less than 300 lines! My personal goal is to reach around 800,000 bytes of information by September 1993. That gives me five months, and if I match what I have already done I just might reach that goal. I am expecting much of the work to come from the frequently asked questions lists directly.

So here are some of my questions:

- Who the heck is Agnus anyway?

- What are the revision numbers of the Amiga motherboards?
- What is BLAZEMONGER?
- Who designed the various Amiga computers, and who writes the software?
- How does one find the various secret messages in the Amiga ROMs and software distributions?
- Will I ever graduate from college? Gee I hope not. Then I may lose my access to USENET.

Farewell to all for the summer. I will be going home at the end of May 1993 and will not return until September 1993. And I promise not to waste so much time on my Amiga. :)

1.111 68040 Hardware Stats

- 68040 Hardware Stats -
 - 68040, 68EC040
 - 25 MHz, 33 MHz, 40 MHz
 - 32-bit microprocessor
 - .8 micron CMOS technology
 - 1.2 million transistors
 - optimized 68030 integer unit
 - 3x faster than a 68030 integer unit
 - memory management unit (not available in 68EC040)

 - integrated FPU
 - no external floating point unit required
 - ANSI/IEEE 754 standard floating point math
 - compatible with 68881 and 68882
 - internal caches
 - 4K data cache
 - 4K instruction cache
 - caches can be accessed simultaneously
 - copyback mode
 - 93% hit ratio

 - 179 pin grid array
 - not pin compatible with earlier 680x0 chips
 - executes on average one instruction per cycle
 - 25MHz version runs at 20 MIPS
 - 3.5 MFLOPs

1.112 Intel Hardware Stats

- Intel Hardware Stats -
 - The Intel line of processors is clearly superior to the

Motorola chips, and I find it hard to believe that anyone, including Commodore, is still using Motorola chips. Below are the reasons why the Intel i486 far surpasses any recent offerings by Motorola.

- i486, i486DX, i486DX2
- 25 MHz, 33 MHz, 50 MHz, 66 MHz
- 32-bit microprocessor
- .8 micron CMOS technology
- 1.2 million transistors
- optimized i386 integer unit
 - 3x faster than an i8088 CPU
- marketing management unit (MMU)
 - looks good on the outside, but Intel inside

- integrated FPU
 - no external floating point unit required
 - IBM 000 standard floating point math
 - compatible with nothing
 - 10x faster than a 6502 CPU
- internal caches
 - 8K instruction/data cache
 - loop-copyback mode
 - .99% hit ratio

- 4 pin grid array
- not pin compatible with earlier dried banana chips
- executes on average one false instruction per cycle
- 25 MHz version runs at 15 MIPS
- 3.5 MFLOPPiEs required just for the OS!

- a pain to program for, but fun to pick on

1.113 RGB Video

- RGB Video -

- 15kHz RGB analog output signal
- color video signal
- 23 pin Amiga video output port
- NTSC and PAL compatible
- A520 compatible RF modulated video converter
- interlaced and non-interlaced signals

- See also:

1084S Monitor

1.114 Composite Video

- Composite Video -

- RF modulated video output signal
- monochrome or color composite video signal
- RCA standard output jacks
- VCR compatible video signal
- TV compatible video signal
- NTSC and PAL compatible
- interlaced and non-interlaced signals

- See also:

1084S Monitor

1.115 Periodicals and Magazines

- Periodicals and Magazines -

- .Info
 - Amazing Amiga
 - Amazing Computing's Guide to the Amiga
 - Amazing Computing's Tech Journal
 - Amiga Format
 - Amiga Video/Graphics Magazine
 - Amiga News
 - Amigaphile
 - Amiga Report
 - Amiga User International
 - Amiga World
 - Amiga World Tech Journal
 - AVID
 - Breadbox
 - Compute!'s Amiga Resource
 - Computer Graphics World
-

- DeskTop Video Magazine
- Imagine Mailing List
- Lightwave Mailing List
- The One
- Video Toaster User
- Viewport

1.116 Compression

- Compression -

Compression Programs
 Frequently Asked Questions
 Tutorial

1.117 Compression Programs

- Compression Programs -

	VERSION	FILE	DISK	GUI	EXE	LIB	
ARC	.23 87	.arc		x			outdated
CFX	2.2b 90				x		identifier
Compress		.z		x			UNIX compatible
DMS	1.11 91	.dms		x			Disk Masher
DMSWIN		.dms		x	x		Disk Masher Windows
Imploder	4.0 92		x		x	x	
LHA	1.50 93	.lha	x				
LHARC		.lzh		x			outdated
LHARCA		.lzh	x		x		outdated
LHUNARC		.lzh		x			outdated
LHWARP		.lhw		x			outdated
LX			x				
LZ	1.92 92	.lha	x				outdated
NIBWARP		.wrp		x			outdated
Power Packer		.pp	x	x	x	x	
PPAnim		.pp	x				x loader
PPLoadSeg		.pp	x			x	file handler
PPMore		.pp	x		x		x loader
PutTraxx		.trax		x			outdated
SHAR		.uu	x				UNIX binary/ascii

UNSHAR		.uu	x				UNIX binary/ascii
TAR		.tar	x				UNIX tape backup
UNARC		.arc	x				outdated
UUencode		.uu	x				UNIX binary/ascii
UUdecode		.uu	x				UNIX binary/ascii
WARP		.wrp		x			outdated
UNWARP		.wrp		x			outdated
XDIR		xpk				x	identifier
XDROP		xpk	x		x	x	xpk appicon
XFH		xpk	x		x	x	file handler
XPK		xpk	x			x	
XUP		xpk	x			x	xpk unpacker
ZAP		.zap		x			outdated
ZIP	1.0	.zip	x		x		outdated
ZOO	2.00 92	.zoo	x				outdated
ZOOM		.zoom		x	x		outdated

1.118 Public Domain Software

- Public Domain Software -

Compression Programs
 Eric Schwartz Animations
 Euro Demos

 File Formats

 Fred Fish Disks

 Music Programs
 Terminal Programs
 Text Editors

1.119 Music Programs

- Music Programs -

	EDIT	MOD	MED	GUI
DeliTracker		x		x
EdPlayer		x	x	x
IntuiTracker		x		x
MED	x	x	x	x
MEDPlayer			x	x
Module Master		x		x
OmniPlay				
ProTracker	x	x		x
SoundTracker	x	x		x
SuperPlay				

1.120 Fred Fish Disks

- Fred Fish Disks -

Fred Fish Disks are a collection of public domain and freely distributable software for the Amiga. Volumes are often shipped in batches of 10-15 disks once every two months. The current total number of disks is about 850.

There are catalogs available for Fred Fish software. Two popular disk based catalogs are the Aquarium and King Fisher sets, which include programs to update the catalogs from the Fred Fish Disk announcements. The programs allow you to search for public domain software by category.

Subscription to the Fred Fisk Disk collection is \$50 per year. The collection is available on CD-ROM, FTP sites, and BBS systems.

1.121 Computer Networks

- Computer Networks -

American PeopleLink
BIX
CompuServe
GENie

Internet
 Portal
Prodigy

1.122 Internet

- Internet -

Bulliten Boards
FTP Sites
IRC

Mailing Lists

USENET Newsgroups

1.123 Mailing Lists

- Mailing Lists -

AMOS
 DCTV
 Golden Gate II
 Imagine 3D
 Info Amiga
 Lightwave 3D
 Opal Vision
 UUCP

1.124 USENET Newsgroups

- USENET Newsgroups -

alt.sources.amiga	
alt.sources.amiga.d	
alt.sys.amiga.demos	
alt.sys.amiga.uucp	
alt.sys.amiga.uucp.patches	
bit.listserv.i-amiga	- Info Amiga Mailing List
comp.binaries.amiga	- moderated
comp.sources.amiga	- moderated
comp.sys.amiga	- outdated
comp.sys.amiga.advocacy	
comp.sys.amiga.announce	- moderated
comp.sys.amiga.applications	
comp.sys.amiga.audio	
comp.sys.amiga.datacomm	
comp.sys.amiga.emulations	
comp.sys.amiga.games	
comp.sys.amiga.graphics	
comp.sys.amiga.hardware	
comp.sys.amiga.introduction	
comp.sys.amiga.marketplace	
comp.sys.amiga.misc	
comp.sys.amiga.multimedia	
comp.sys.amiga.programmer	
comp.sys.amiga.reviews	- moderated
comp.sys.amiga.tech	- outdated
comp.sys.amiga.telecomm	- outdated
comp.unix.amiga	

1.125 Famous Amiga Uses

- Famous Amiga Uses -

Babylon 5
 Bit.Movie
 Eric Schwarz Animations
 Euro Demos
 Info Channel
 Nick Arcade
 Prevue Guide

Todd Rundgren Music Videos
Video Toaster