csa-Intro-FAQ

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COLLABORATORS

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csa-Intro-FAQ

1.1 The Official comp.sys.amiga.Introduction FAQ

```
              The Official comp.sys.amiga.Introduction FAQ
         (last updated on March 1, 1999)


            Read the Disclaimer now!

          View the Table of Contents

         Changes since the last update

        ASCII text version of this FAQ

         Corrections and Suggestions

           Read about the Author

                 Copyright
        IMPORTANT NOTE:  If reading this line forces you to scroll your  ←
                 screen to the
right, change your System Default Text to topaz 11.
```

1.2 The Disclaimer

```
              DISCLAIMER:  This information is intended to be helpful.
However,
              I
               can't be responsible for errors, omissions,
typos, or sheer stupidity. If your computer explodes in
a fiery mass of molten metal, and your dog catches fire
and runs around the house lighting everything up, reducing
your house to a smoldering ruin, it's your fault, not mine.
You shouldn't have let him sleep by the computer in the
first place!
```

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```
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                   magazine
   and how can I get it?
```

1.4 Changes to this FAQ

```
Changes since the last update:

Removed THANKS section to cut down slightly on the size of the FAQ.

12. AMIGA MAGAZINES
 * Removed Amiga Report and Amiga Informer magazines
```

1.5 ASCII text version of this FAQ

```
                  You can get an ASCII text version of this FAQ by one of three  ←
                     methods:

(1) Go to comp.sys.amiga.introduction and look for the subject:  Amiga
Introduction FAQ (xx/xx/xx) <- the date changes as new versions are
released.

(2) Go to
                  Aminet
                   and download the file c.s.a.i-FAQ
                  .lha
                   from the

                  docs/help
                   directory.

(3) Email
                  me
                   and request a copy of it.
```

1.6 Corrections & Suggestions

Did you find any spelling or information errors in this FAQ?

Do you have any ideas or suggestions that you feel would improve
this FAQ?

If so, please Email
                me
                  and let me know -- I'm always open to new
ideas and even criticism. :-)

1.7 Read about me!

About the Author of the Official comp.sys.amiga.introduction FAQ:

William Bill Near
Email: wnear@cecomet.net

I live in a small town in western New York, USA. My home is
about 2 miles from Lake Erie (one of the 5 Great Lakes).

I have a degree in Computer Information Systems and I
have worked as a personal computer consultant for the past
8 years. I also write reviews for
                Amazing Amiga Computing (Informer)
                magazine.

I started out with a Mattel Intellivision video game machine
back in 1982 and then I bought a C-64 a couple of years
later. I progressed to the C-128 about a year later and
bought my first Amiga, an
                A500
                , in 1987. Finally, I purchased
an A2000 in 1988 and I've been building it up ever since.

Some of my hobbies include: mountain bike riding, weight
lifting, dirt bikes, music, watching old movies (especially
Bogart), and satellite television.

Here's my Amiga configuration in case you're interested:

A2000

Workbench 3.1
MegACHIP 2000 (2 MBs
CHIP
)
ECS chip set
phase5 Blizzard 2060 with 58 MBs

```
                FAST
                Quantum Fireball 1280 hard drive
GVP
                ioExtender
                 with second serial port
Picasso IV
                graphics board
                 with 4 MBs RAM
SupraExpress 56k
                Modem

                SyQuest
                 EZFlyer drive
Plextor 32x CD-ROM drive
ViewSonic 17GS
                monitor
                Hewlett Packard ScanJet 5p
Epson Stylus Photo printer
Yamaha YST-M10 speakers
```

1.8 copyright

```
                Copyright 1996,97,98,99
                William Near
                , wnear@cecomet.net
```

You may copy or republish this document in electronic form
provided it is complete and unchanged, no money is charged
for it, and proper credit is given.

Please Email me and let me know that you wish to do so.

1.9 kickstart

```
                What is Kickstart?
```

Kickstart is the part of the
                OS
                 (Operating System) software which is
resident in the ROM chip. When you boot the computer, it kickstarts
it. Many frequently used functions and commands are contained in the
Kickstart ROM. This helps to speed up some system functions because
the commands can be quickly retrieved from the ROM, rather than
from a slower
                hard drive or floppy disk
                .

1.10 workbench

What is Workbench?

Workbench is the file manager for the Amiga. By using Workbench,
you can: open windows for the directories (or drawers) on your

disks
, run programs, set preferences, etc., all by use of a mouse-
driven graphical interface (Intuition.)

1.11   amigados

What is AmigaDOS?

AmigaDOS is the Disk Operating System portion of the
OS
, which is
responsible for input and output to disks and
devices
, the file
system, and so on.

1.12   screens

What are 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
a different palette of 256 colors.

Screens can have resolutions independent of other screens. For example, It is
possible to open the Workbench in 640x400 and open a video titling program in
1280x400.

Screens can have screenmodes independent 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, and another in a programmable resolution such as 100x100 in 3
bitplanes, etc.

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 independent 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.

1.13   multitasking

                What is this multitasking stuff all about?

Multitasking means that you can run more than one program at a time.
Without getting too deep into the technical stuff, what happens is
that the
                operating system
                 shares the CPU time between different
programs.

On the Amiga this means that you can do more than one thing at one
time. For example, you can start formatting a
                floppy disk
                , and while
it's formatting you can flip to your word processor and type away.

1.14   Windows95 invented multitasking? :-)

                But I thought Windows95 invented multitasking?

Don't believe everything you read, especially if it comes from
Microsoft. The Amiga was
                multitasking
                 ten years before Windows95.

1.15 Amiga models

What models of Amigas are there?

A1000 - The first Amiga, this one is now obsolete. This model uses a
68000 CPU.

A500 - A one-piece model (keyboard attached) with a numeric keypad
and an expansion slot on the left side, plus a trapdoor slot in the
bottom for
                RAM
                 expansion. It came with the Original Chip Set (
                OCS
) and
was surprisingly expandable. This model uses a 68000 CPU.

A500+ - An updated version of the A500, with one megabyte (MB) of RAM,
able to expand to 2 MBs of
                CHIP RAM
                , and the Enhanced Chip Set (
                ECS
).
This model uses a 68000 CPU.

A600 - Another one-piece model, without a numeric keypad, but with a
slot for PCMCIA cards. The problem with this one is that the chips are
surface-mounted on the motherboard (with the exception of the
                OS
                 ROM),
so it's not as easy to do simple repairs or upgrade the chips as with
socketed motherboards. This model uses a 68000 CPU.

A1200 - The current low-end model, a one-piece with a numeric
keypad, but smaller than the A500. It has an expansion slot and a
slot for PCMCIA cards, plus a trapdoor for RAM expansion. It is an
Advanced Graphics Architecture (
                AGA
) chipset machine. This model uses
a 68EC020 CPU.

A2000 - A big-box Amiga with a separate keyboard. It has 5 Zorro II
slots and 4 ISA slots inside for expansion, plus a Video slot and a
CPU slot for processor upgrades. This model uses a 68000 CPU.

A1500 - A version of the A2000, European only. This model uses a 68000
CPU.

A2500 - A version of the A2000, I believe it was North American only.
It came with a 68020 CPU and a SCSI (pronounced: scuzzy)
                hard drive
                interface.

A3000 - A smaller big-box model than the A2000. It has Zorro III
slots, which are 32-bit, and ISA slots, plus the Video and CPU slots.
It also has a built-in SCSI interface and a
                VGA

```
                    monitor connector.
This model uses a 68030 CPU at 16 or 25 MHz. depending on the model.
```

```
A3000T - A tower version of the A3000. Not many of these were made.
This model uses a 68030 CPU.
```

```
A4000 - A big-box AGA machine, with Zorro III, ISA, and Video slots.
The processor is on a daughterboard, so it can easily be replaced with
a faster-processor version. This model uses a 68030 or 68040 CPU
depending on the model.
```

```
A4000T - A tower version of the A4000, this is the current high-end
model. This model uses a 68040 CPU.
```

```
If you would like a complete list of all Amiga models with detailed
specs, please Email
                    me
                     and I'd be happy to forward it to you.
The list would make this FAQ even longer than it already is, so I think
this is the best way of doing it at this time.
```

1.16   Custom Chip Set

```
What are:  OCS, ECS, and AGA?
```

```
The Amiga custom chips come in three versions. The OCS (Original Chip
Set) was used primarily from 1985 to 1992. In 1989 Commodore released
the ECS (Enhanced Chip Set.) Finally, in 1992 the AGA (Advanced Graphics
Architecture) was released.
```

```
So, if someone asks you which custom chip set your Amiga has, you will
reply with:  OCS, ECS, or AGA.
```

1.17   EHB6

```
                    What is EHB6?
```

```
EHB6 is the original Extended Halfbrite 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
" link Screens}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, called

                    EHB8
```

.

1.18 EHB8

What is 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.

1.19 HAM6

What is 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.

1.20 HAM8

What is 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 unnoticeable 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-bit pictures. It is possible to simulate and
display 24-bit pictures with no loss of data using software and
hardware tricks.

1.21   CHIP & FAST

What's the difference between CHIP RAM and FAST RAM?

CHIP RAM is

RAM

that can be directly accessed by the Amiga's custom
chips without having to use the CPU. This RAM is where graphics and
sound data must be stored in order to be used. You can think of it as
similar to display RAM on a PC, but this is not entirely accurate
because it is used for purposes other than graphics; in fact, it can
be used to store programs and data just like any other RAM in the
system. Low-end Amigas, such as an unexpanded

A1200

, have only
CHIP RAM as standard.

CHIP RAM is limited to a maximum of 2 MBs, and expanding it is not as
simple as installing more RAM in most machines. The actual CHIP RAM
limit on your particular machine (OCS or ECS) is determined by the
Agnus chip. If you have a Fatter Agnus, you can have as much as 1 MB
of CHIP RAM. The Obese Agnus allows a full 2 MBs. You cannot simply
replace your 1 MB Agnus chip with the 2 MB version; you must install a
board such as the DKB MegACHIP in most OCS- and ECS-based machines.
AGA Amigas (the A1200 and A4000) come with the replacement chip for
Agnus, called Alice. Alice provides AGA-based machines with access to
2 MBs CHIP RAM standard. You can read my review of the MegACHIP board in
Amiga Report magazine issue 3.06 (ar306

.lha

), which is available on the

Aminet
in the
docs/mags
directory.

CHIP RAM is slower than FAST RAM. Amigas with only CHIP RAM will
therefore run slower than expanded Amigas. If FAST RAM is installed,
programs will use it first, only using CHIP RAM if there is no FAST
RAM available.

FAST RAM can be accessed only by the CPU, so it can't be used for
graphics display (unless a 24-bit

graphics board
is present) or sound

playing. However, as the name suggests, this type of RAM is faster and
is thus preferred for storing programs and data.

1.22 ram

                How much RAM is in my Amiga?

Open a

                Shell
                 and type the command
                avail
                .

It will show you the amount of RAM currently free, the amount being
used, the total amount installed on the system, and the size of the
largest contiguous block of free RAM, for
                CHIP RAM, FAST RAM
                , and
the total for the system.

I just opened a Shell and typed avail, and it looks like this:

```
Type  Available    In-Use    Maximum    Largest
chip    1848928    244128    2093056    1706288
fast   43594320  14601648   58195968   42401752
total  45443248  14845776   60289024   42401752
```

The numbers are in bytes. Looking at the Maximum column, you can see
that I have 2 MBs of CHIP RAM and 58 MBs of FAST RAM installed, for
a total of 60 MBs of RAM.

1.23 VGA monitors

                Can I use a VGA monitor with my Amiga?

The cheap VGA monitors for PC's support only the one VGA scan rate.
The Amiga uses a much lower scan rate for its normal video modes
(low-res, high-res, etc.), which are actually the same scan rates used
for video. VGA monitors cannot display these modes.

However, if you have the ECS or AGA chipset, you can produce video
modes which are compatible with VGA. You will find a VGA-Only
monitor driver included with the
                OS
                . The problem with this approach is
that you will be limited to using only those modes. None of the
standard modes will display, which will prevent you from using almost
any games, lots of other software, the Early Startup Menu, or the
Alert
                screens
                 which appear when your computer crashes.

You can get devices called Flicker Fixers or Display Enhancers,
though, which will translate your video modes to rates which can be
displayed by VGA monitors. Why? Because using the higher scan rates
of VGA monitors is easier on the eyes. However, these devices are
rather expensive. But, by using one, you will be able to use all
screen modes.

If you have an
                A3000
                , you can ignore everything above. The A3000 has a
VGA monitor output which will allow you to use a VGA monitor for any
display mode -- the equivalent of a Flicker Fixer. Just plug it in and
go.

The final, and best, solution is to get a
                24-bit
                 display board, and a
real multisync monitor. Multisync monitors are not limited to just one
or two scan rates, like VGA or Super-VGA monitors; they are capable of
displaying any frequency within a certain range. Combining a multisync
monitor with a graphics board, such as a Picasso IV or a CyberVision
64/3D, will make a powerful graphics machine out of your Amiga. You
can read my review of the Picasso IV board in Amiga Report magazine
issue 5.04 (ar504
                .lha
                ), which is available on the
                Aminet
                 in the

                docs/mags
                 directory, or you can read it in the June 1997 issue of

                Amazing Amiga Computing
                 magazine.

If you go this route, however, you need to get a multisync monitor
which can display scan rates down to 15 kHz. Few of them do any more,
so make sure to check the specs before buying from a PC store where
they won't know what you're talking about. You can ignore this
limitation if you also have a flicker fixer installed or you buy the
Picasso IV, which has one built-in. The CyberVision 64/3D has an
optional flicker fixer available for the A4000 only. All you would
need then is a monitor that can scan down to 30 kHz.

1.24   PAL & NTSC

                What's this PAL and NTSC stuff all about?

Video signals for television in North America are different from those
used in Europe. North America uses the NTSC system, and most European
countries, as well as many others, use the PAL system. Since the Amiga
uses video-based
                screen
                 modes, they are made for the different modes
according to the country.

The main differences between the two modes are resolution and frame
rate. NTSC displays have 200 lines vertically, or 400 in interlaced
mode, and displays 29.97 frames (59.94 fields) per second (most people
round it off to 30). PAL uses 256, or 512 interlaced, with a frame
rate of 25 frames per second (50 fields).

If you have the ECS chipset, you can switch your display between the
two modes using the Screenmode Prefs program, in the Prefs
drawer. You can also switch from the default screenmode at boot time
with the Early Startup Menu, which you access by holding down both
mouse buttons when booting.

Some programs, most notably games, which are not fully
                OS
                -compliant,
only support one of the modes. Many of the games on
                Aminet
                , for
example, are PAL only. If you have an NTSC machine, you will be able
to use most, but not all, of them as long as you have the ECS or AGA
chipset and at least 1 MB of
                CHIP
                 RAM.

This method of switching to NTSC or PAL modes is only used to make
software work which is designed for the other standard. It's not
sufficient if you want to use an Amiga with hardware video equipment
from the other standard. For this purpose, you would have to rework
your Amiga's motherboard to a high degree, e.g. change the main
crystal.

1.25   24-bit graphics

                Can I get 24-bit graphics displays on my Amiga?

Yes. There are many third-party graphics boards available for the
Amiga which will allow you to run
                Workbench
                 and most other programs in
full color.

If you do purchase a 24-bit graphics board, make sure that it either
comes prepackaged with the CyberGraphX (pronounced: cyber graphics)
or the Picasso96 software packages. Either of these software packages
will allow you to take full advantage of your graphics card. You will
also need
                Workbench 3.x
                 in order to take advantage of one of these
wonderful cards.

Believe me, there's nothing like running your Workbench on a 1024x768

                screen
                 in 256 colors! You can also

```
                        browse
                         the World Wide Web (WWW)
and run most programs in 256 or more glorious colors.
```

An Amiga with a 24-bit graphics card makes an AGA machine look very
sick in comparison. It will be much faster than any AGA machine in
Workbench emulation. The only disadvantage is not being able to run
the vast majority of AGA games, unless they support CyberGraphX and/or
Picasso96.

1.26   Workbench 3.1

What is the newest version of the Amiga OS?

The newest release is 3.1, also known as version 40.

1.27   Operating System versions

```
                        What version of the operating system is my computer running?
```

There are several ways to try to discover which OS version you have
installed.

```
Look for a pull-down menu item on the
                        Workbench

                        screen
                         labelled
About. Selecting it should bring up a little requester with some
version information in it.
```

```
Also, if you open a
                        Shell
                         window (see basic operations, and using the
Shell) and type version, you should get some version numbers.
```

Finally, the version numbers are usually printed to the screen when
you boot your computer.

The version numbers may not be numbers like OS 2.1, however.
The software version numbers translate into OS releases as follows:

```
40 = 3.1
39 = 3.0
38 = 2.1
37 = 2.04, 2.05
36 = 2.0
35 = ?? (Special
                Kickstart
                 for A2024 monitors)
34 = 1.3
33 = 1.2
```

```
32 = 1.1 (
                PAL
                 only)
31 = 1.1 (
                NTSC
                 only)
30 = 1.0
```

For example, typing version in the Shell on my system produces:

   Kickstart 40.63, Workbench 40.42

This means I'm running OS 3.1.

1.28   OS v3.1

                 Should I upgrade to OS 3.1?

Short answer: Yes. Do it now.

If you are running
                OS
                 1.3, or anything older than that, upgrading to

                3.1
                 will be like getting a whole new computer. It will look better,
work better, and do more. Also, 1.3 won't run many of the newer
programs, and it won't get you very far on the Internet.

If you have 2.0, 2.04, or 2.05, the answer is still a definite yes.
The look won't be too much different, but the added functionality will
be worth it, especially if English isn't your first language and you
want Locale support.

Another option is finding a 2.1 kit somewhere and going to that
instead of 3.1. However, the price of a new 2.1 kit is high enough
that you would be better advised to spend a few extra dollars and go
all the way to 3.1. There's no point in staying behind the latest
software, and it won't be long before newer versions are out and 2.1
may not be supported much any more.

The upgrade from 2.1 to 3.1 might seem like less of an upgrade, but I
would still suggest it in all cases. You can read my comparison review
between OS 2.1 and 3.1 in Amiga Report magazine issue 2.30 (ar230
                .lha
                ),
which is available on the
                Aminet
                 in the
                docs/mags
                 directory.

Going from 3.0 to 3.1 is a tougher question. (You can't upgrade to
3.0. It came standard with the
                A1200
```

's and A4000's.) It might
not be worth it to pay the full price for a 3.1 kit for such an
incremental upgrade. If you intend to develop software, I'd still say
definitely upgrade. If you are one of those people who loves to have
the latest stuff, then go for it. You can actually buy the 3.1
software only, and use it with your 3.0 ROM. Otherwise, if it's a
choice between a 3.1 kit and perhaps some more
                     RAM
                     , then you
might be better off with the RAM for now.

## 1.29  Upgrading the OS

                     What is involved in an Operating System upgrade?

The Amiga
                     OS
                      consists of the software, which comes on floppy disks,
and a ROM chip, which you have to install inside the computer. The ROM
is known as a
                     Kickstart
                      ROM, and it contains some of the system code
and
                     libraries
                     , so that it is always available to the system.

In order to upgrade your operating system, you have to replace the ROM
chip inside the computer, EXCEPT if you are upgrading to 2.1 from 2.04
or 2.05. OS 2.1 was a software-only upgrade, and you can use either
the 2.04 or 2.05 ROM chip with it. There is NO 2.1 ROM chip.

It is also possible to upgrade to the
                     OS 3.1
                      software using a 3.0 ROM
chip, but you will lose a few features of the 3.1 upgrade, including
the built-in CD-ROM support.

Upgrading an older model
                     A500
                     's Kickstart chip may require soldering a
wire between two of the legs on the chip. The chip should, however,
come with the wire in place; if it does, you will need to cut it in
order to use it on a newer (revision 6+) A500 or on an A2000.

## 1.30  What OS versions will work?

                     What versions of the Operating System will work on my computer?

You can upgrade any Amiga to a newer
                     OS
                      version by
replacing the ROM chip, or by using a softkick-type program, and

installing the new software.

OS 3.1 is available in versions for the A500/A2000, A1200, A600,
A3000, and A4000. When you order it you must specify which
computer it is for (the A500 and A2000 use the same chip).

The Commodore A1200 and A4000 came with OS 3.0 installed. There
are no 3.0 ROMs for other machines.


## 1.31   device

               What is a Device?

A device can be a Physical device, such as a hard disk or a printer,
or it can be a Logical device, like a RAM disk, which exists in
software. In general, the Amiga doesn't need to care whether a device
is Logical or Physical. The Amiga also doesn't make a distinction
between disk Devices and other types of Devices; the difference
between a disk Device and any other device is that a disk Device will
have a Filesystem installed on it.

Devices are referred to by a unique name followed by a colon. Some
examples of devices are:

DF0:  The first floppy drive on the system.
DF1:  The second floppy drive on the system.
DH0:  The first hard drive on the system. (The name may be different.)
PAR:  Any device connected to the parallel port.
RAM:  The Ram Disk drive, a software-simulated disk drive.
CON:  A console window, like the
                Shell
                 window.
SYS:  A Logical Device referring to the disk you booted from.


## 1.32   volume

               What is a Volume?

A Volume is a disk, or a part of a disk which the system sees as a
disk. The important distinction between a
                Device
                 and a Volume is that
a Device refers to the disk drive, while a Volume is the particular
disk in that drive. For hard drives, the two are usually
interchangeable, because you can't remove a disk from a hard drive,
but for floppy disks it is important to remember. A floppy disk can
end up in any floppy drive. Volume names, like Device names, end with
a colon.

A Volume will have a name, and you can name it anything you want. It
is a good idea, as with filenames, to avoid using spaces in the name.
If a disk is referred to by its Volume name, the Amiga will look for

it in all of the disk drives.

For example, if I have a floppy disk, with the volume name Stuff:, in
the first floppy drive, I can get to it by asking for the volume name
Stuff: or the device name DF0:. However, it is better to use the
Volume name; if I move the disk to the second drive, and ask for
Stuff:, the Amiga will still find it. If I ask for DF0:, however, the
Amiga will use whatever disk happens to be in DF0: at that moment, if
any.

If I ask for the disk Stuff:, and it is not present in any drive, the
Amiga will ask me to place the disk Stuff: into any drive, and wait
for me to do so. Thus, I know I'm getting the right disk.

## 1.33   partition

What is a Partition?

A Partition is a part of a disk, which is treated by the Amiga as a
separate and distinct
Volume
. If I have a very large hard drive, I can
split it up into two or more Partitions, and although they exist on
the same physical drive, the Amiga will treat them as though they were
separate. They might be DH0: and DH1:, and they will also have their
own unique Volume names.

## 1.34   assign

What is an Assign?

An Assign is a user-created (or software-created) name for a directory
or a device, which is treated by the Amiga as a Volume (or Device).
Like
Volumes
and
Devices
, Assigns end with a colon.

For example, if I have a directory called
DH0:wordprocessing/documents/personal/letters, I can give that
directory its own name, such as Letters:. Now, instead of having to
refer to it with the long name, I can just use Letters:.

The Amiga creates some Assigns for you when you boot it up, such as:

C:        SYS:c, where the standard DOS commands are.
LIBS:     SYS:Libs, the
                library
                 files.
S:        SYS:s, where script files are kept.

Along with a few others. Many third-party programs use assigns, so
that they know where to find any data files they might need.

You can create your own assigns from the
                 Shell
                 , by typing:

Assign Name: directory/to/assign

## 1.35  .info

                  What are all these files ending in .info?

The .info files are the icons you see when you open a drawer on the
Workbench
                 screen
                 . Every file which has an icon on the Workbench screen
will have a corresponding .info file, with the same name as the file
plus the .info extension. The .info file contains the actual imagery
used for the icon, positioning information telling Workbench where to
place the icon, and some other information, depending upon what type
of icon it is.

There are five different types of icon files:  Disk, Drawer, Tool,
Project, and Garbage. The Garbage type is a special type, used for the
Trashcan icon.


                 Disk
                  icons are used to represent disks, such as your hard drive, or a
floppy disk inserted in the floppy drive. Double-clicking on these
icons opens up a window, in which you will see any icons present in
the top-level directory of that disk.

Drawer icons represent directories on a disk. Double-clicking on them
will open a new window, with the contents of that directory. Again,
you won't see anything that doesn't have an icon associated with it,
unless you use the View by Names or Show All options on the
Workbench menu.

Tool icons are executable programs. Double-clicking on these icons
will run the program associated with the icon. These icons can contain
various information which is to be passed to the program, called Tool
Types. For more information about Tool Types, see the
                 Workbench
                 section of this FAQ.

Project icons are used for data files saved from other programs. For
example, if you create a document in a word processor, and save it out
to the hard drive, it might have a Project icon associated with it.
The Project icon will contain the name of the program used to create
the file, called the Default Tool. If it does, double-clicking on
the icon will load up the program which created the file, and
automatically load up the file into the program.

For example, if your saved document was created in a word processor,
double-clicking on the icon will load up that word processor program,
and then the word processor will load up that document for editing.

## 1.36  .library

What are all these files ending in .library?

Any file with the extension .library is a shared library file, and
should be in your LIBS: directory. These files contain program code
which can be shared by multiple programs, and are loaded into memory
as they are needed.

The advantage of shared libraries is that programmers don't have to
reinvent the wheel when writing software. Many standard functions are
implemented in shared libraries, so all they need to do is use them.

The
                Operating System
                 comes with quite a few shared libraries, allowing
programmers to use system functions in their programs. Some of the
libraries you should have in LIBS: are:

amigaguide.library       The AmigaGuide hypertext system
locale.library           Functions allowing multi-lingual programs
asl.library              Contains the standard file requesters
datatypes.library        Used by the Data Types system
mathieeedoubbas.library  Math functions

Along with some others. There are quite a few third-party libraries
available as well. The casual user shouldn't have to concern himself
with these libraries except to ensure that they are installed; any
software which requires non-standard libraries will either come with
the libraries or provide instructions on where to find them.

## 1.37  Installer

When I click on an install icon, it says "Can't open your tool
Installer". Why?

Installer is a program used to install software onto your hard drive.
It's actually a simple programming language itself. It is used to
create an installation routine using a standard interface, so that
whenever you install a new program everything will look familiar.

Unfortunately, when you install the operating system onto your hard
drive, the Installer program is not installed for you. So, any program
using an Installer script but not including the program on its floppy
disks, expecting to find it in your C: directory, won't be able to
find it.

To solve this problem once and for all, find your Workbench Install

floppy disk. In the C directory on that floppy you will find the
Installer program. Copy it to the C directory on your hard drive.

## 1.38   Icon Images

How do I change the image used for an icon?

You should have a program in your Tools drawer called IconEdit. You
can load an icon image into this program, alter it, and save it.

## 1.39   Zip/EZ drive icons

I've formatted a Zip/EZ disk, and now I have two icons. What's going
on?

If you wrote a Rigid Disk Block (RDB) to the Zip/EZ disk and set the
RDB to mount the Zip/EZ disk, then later you decided to use a
MountList, go back Into RDPrep and change Mount to NO and save the
RDB.

This will not erase the Zip/EZ disk or cause harm, but it will stop
the RDB from mounting the Zip/EZ disk and allow the MountList to do
so, provided that the only thing you change in RDPrep is whether you
want the disk to mount or not.

## 1.40   shell

                How do I open a Shell?

It's quite simple. Just open your boot
                partition's
                 drawer and then
open the System drawer and double-click on the Shell icon.

## 1.41   General information

                General Information.

This is intended for people who don't own an official
                AmigaDOS
                 manual,
like owners of the
                A500
                 or early (Commodore) A1200's. This manual was
not shipped due to cost savings by Commodore.

AmigaDOS commands are normally invoked from the

```
                          Shell
                           on a command
line. You just type the command and any optional
                          arguments
                           on it. The
command names may be typed in upper or lower case letters because
AmigaDOS is not case-sensitive. All arguments must be separated by
spaces.
```

The first special case occurs when one of the arguments already
contains a space by itself, e.g. the
                          volume
                           name Ram Disk. The
solution for these cases is to include the entire argument in double
quotes, e.g. "Ram Disk:tempfile" for the file tempfile in the RAM
disk.

1.42   Location of Commands

                          Where are the commands located?

The first place to look is in the C: directory, which is normally

                          assigned
                           to sys:C. In other drawers of the
                          Workbench

                          (partition)
                          you will find programs which can also be invoked from the
                          Shell
                          . Most
applications can also be launched from a Shell and can be followed by
any appropriate
                          arguments
                          .

1.43   Argument Template

                          What are argument templates?

Just because you don't know the correct arguments that a command
accepts, that doesn't mean that you can't find out. Just type the
command name and a question mark as a single argument.

Example: TYPE ? <return>

You will then get the following line returned, called a template:
FROM/A/M,TO/K,OPT/K,HEX/S,NUMBER/S:

The cursor remains on the same line, so you can enter your arguments
and then press <return> to issue the command.

In the template, all possible arguments are separated by commas.

For every possible argument, you will see a list of letters after
slashes indicating certain properties:

/A this argument must be given, otherwise the command will refuse
   to work. In this case, it's the name of the file you want to have
   typed out.

/M you can use this argument multiple times.

/K this is an argument consisting of a keyword which has to occur in
   this form, followed by the argument. In this case, you can
                redirect
                  the output to the printer via to prt: or to a file via
   to filename; or you can get the output with line numbers via
   opt n or as a hex dump via opt h.

/S this is a switch where you only enter this name as an argument to
   modify the working of the command. In this case, HEX causes a
   hex dump, and NUMBER adds line numbers to the output.

/N this indicates that this has to be a numerical argument.

You can see that the names of the arguments in the template are more
or less self-explanatory. With a bit of experience you will easily
be able to understand the workings of unknown commands just by
studying their templates.

The order of arguments on the command line is normally free-form. Of
course, if there is a FROM and a TO argument, as in the COPY command,
you had better not mix up the order!

If there are ambiguities possible with some arguments you can always
precede your argument by its name in the template. And as a further
measure, but not a necessary one, you can link the argument name and
its actual contents by an equal sign, type: from=s:startup-sequence

1.44 Escape Characters

                Using escape characters.

There are several types of characters. Most of these characters are
just printable ones, like letters and figures, but several can have
very powerful meanings under certain circumstances.

  Double quotes and the asterisk.

Earlier, we discussed how double quotes are used to enclose
                arguments
                containing spaces. From this you can immediately understand that ←
                  the
quote character itself is normally ignored.

So what do you do if you want it to be recognized, as in an ECHO

command to print something that already contains quotes? In this
situation you must escape the quote sign with an asterisk, as it's
called: echo "Here is a quote sign: *""

Note that the '*"' produces a '"' in the output, and the trailing
quote sign is necessary to complete the argument of the ECHO command.

Other control characters which can be produced by means of the
asterisk are:

*e normally a non-printable Escape character (dec. 27, hex $1B), which
   can be used to include ANSI Escape sequences in the ECHO or other
   string-producing commands. The available Escape sequences can be
   found in the documentation concerning the Amiga printer drivers.
   (Note: Don't mix this up with Escape sequences found in printer
   manuals, we are talking ANSI sequences here, not Epson or HP ones!)

*N produces a newline character. This allows you to produce several
   lines of output with one single ECHO or other string-producing
   command.

** produces a single asterisk, otherwise it would be ignored

   The apostrophe.

Several characters are not normally allowed to occur in filenames,
e.g. the colon, as it signifies a
                 volume
                  name as part of a file path.
But there are situations where you have to access files containing
such characters, or produce them. To do this you just precede the
offending character with an apostrophe: TYPE b'/w

This will type the contents of the file b/w.

   The backtick.

This is a powerful mechanism. When you include a whole command, with
optional arguments, in backticks then you can use this as an argument
for another command. The command is first executed and the result is
then used as an argument. The EVAL command normally only takes two
operands: eval 10 * `eval 3 + 4`

By using the backtick you can actually force the EVAL command to
accept more.

1.45 I/O

                 I/O redirection.

The console output, what gets printed in the
                 Shell
                  window, of a
command can be redirected into a file for later use. For
                 AmigaDOS

```
                    before release 2.0, the redirection had to be issued before all  ←
                        other

                    arguments
                    . In more recent versions of AmigaDOS it can be placed later
in the command line.

list >ram:clist C:

This produces a file ram:clist with a listing of all files in C:
and their properties.

echo "Hello world!" >ram:hello

This produces a file ram:hello with the contents Hello world!.

The > sign is used for output redirection. With the < sign, you
can force the use of the contents of an existing file as one of the
arguments. This is very tricky and can better be handled through the
aforementioned backtick mechanism.

You can also redirect and append material to the end of an existing
file by using the >> sign. For example:

echo "Hello world!" >>ram:hello

This adds a second line to the aforementioned ram:hello file. So, the
resulting file would look like this:

Hello world!
Hello world!

Note:  there must be no spaces between the redirection sign and its
filename.
```

1.46 lformat

```
                    The powerful LFORMAT command.

LFORMAT is an option of the LIST and EVAL commands to allow a
customizable output format. E.g. you can use LIST to scan the contents
of some directory and use the filenames found in the output string.

Now you can choose this output string to look like another
                    Shell
                    command. By means of asterisk
                    escapes
                     you can even produce multiple
lines/commands per found file (or directory). You can then
                    redirect
                    this output to a file and EXECUTE this file afterwards to achieve  ←
                        a
certain automatic action.

To find out all templates of the commands in C:, you can do this:
```

```
  list c: lformat="echo *"*n%n*"*n%n ?" >ram:x
  failat 21
  execute ram:x
  delete ram:x ; Clean up
```

For every file in C:, this generates an empty line (the first *n), then
the name of the file (the first %n). All of this is accomplished by
use of an ECHO command. In the next line is the filename itself
followed by a question mark.

All of this is redirected to the file ram:x. Before execution, the
error level is set to 21, because during execution you will be
prompted to press the Return key for every command (most commands will
break a script with an error when an
                argument
                 is not provided.)

The %n generates the filename in the LFORMAT string. Similarly,

%p = relative path, %l = file length (or Dir for a directory),
%a = protection bits, %b as %l but in blocks, %d = file date,
%e = file extension (after a dot), f% = absolute path,
k% = key (header) block, %m = file name without (last) extension,
%n = file name, %s = file name, %s%s = relative path + file name,
%t = file time

1.47 AmigaDOS commands

                What are some of the most basic AmigaDOS commands I should know?

dir (this will display the files that are in the current directory)

cd <dir or
                device
                 name> (this will switch the
                Shell
                 to the specified
                        directory name or device. Remember, a device
                        must always be followed by a colon (:) This
                        command is not necessary when using
                Workbench
                                        2.x+. You can just type the directory or
                        device name at the Shell prompt.)

avail (this will display the
                RAM
                 available in your machine)

copy from <name of file dir or device> to <destination>
        (this command allows you to copy files from one place to
         another.)

delete <name of dir or file> (this command will delete the specified
                                file(s) from the device.)

ed <filename> (this command will invoke the Amiga's editor program so
               that you can modify an existing script, or create a new
               one.)

info (displays information about all mounted devices on your system.)

makedir <name> (this command will create a directory of the specified
                name on the current device.)

why (this will print out an error message as to why the previous
     command failed.)

These are only the most basic
               AmigaDOS
                commands. See your manual for
further commands and possible options to the above commands.

1.48   Floppy drive clicking

               How do I make the floppy drive stop all that clicking?

There are quite a few easy solutions to the annoying drive click. Here
is a list of what I found on
               Aminet
               :

clicknot373.
               lha

               disk/misc
                3K
DOSPrefs22.lha   util/boot   25K
KillClick2.lha   util/boot   3K
NoClick.lha   util/boot   4K
NonClick-106.lzh util/boot   21K
tdx.lha   util/boot   6K
NoClick10.lha   util/cdity 10K
SetNoClick.lha   util/misc   6K

1.49   Library overwriting

               How do I keep lame install scripts from overwriting my LIBS: with ←
                older
versions of libraries than I already have?

Make a new directory called NewLibs, like this:

               makedir
                sys:NewLibs

Load your S:startup-sequence into a text editor, such as C:
                ed
                , and
find the line:

                Assign
                 >NIL: LIBS: SYS:Classes ADD

Change this line so it reads:

Assign >NIL: LIBS: SYS:NewLibs SYS:Libs SYS:Classes

Now (after you reboot your computer, of course) any program which
installs
                libraries
                 in LIBS: will put them in your NewLibs directory
instead of the main Libs directory, so your old library files won't be
overwritten. The newly installed version will be found first when
libraries are loaded. Once you determine that the library that was
installed is newer, or that you didn't already have it, you can move
it to the Libs directory like this:

                copy
                 SYS:NewLibs/whatever.library SYS:Libs

                delete
                 SYS:NewLibs/whatever.library

Nowadays, though, most install scripts will check the version first
before overwriting your files. However, there are still some naughty
programmers out there that ignore this golden rule, so be careful.

1.50   version

                How do I know what version a library is?

Use the
                AmigaDOS
                 Version command. Like this:

version whatever.library

This will give you the version number of the
                library
                . If you have more
than one with the same name, for example if you use the technique in
the
                previous answer
                , you will get the version of the one found first,
or if one is loaded in memory you will get the version of that one.

In that case, to get the version of a specific library file, use the
full path name, and the FILE switch for the version command like this:

version SYS:Libs/whatever.library FILE

That will give you the version of the library in the main Libs
directory, regardless of any other versions you may have in other
directories.

1.51   Zip/EZ drive

Can I use an Iomega Zip or SyQuest EZ drive on my Amiga?

Yes, you can use the SCSI version of either drive, if you have a SCSI
controller, and it will work just like any other SCSI drive. You can
get a software package called Zip Tools from HiSoft, which will make
life a little easier with the Zip drive, but you don't actually need
it. There are no such programs for the EZ drive. Just format the drive
with HDToolbox, or another hard disk partitioning program, and it will
work.

You can NOT use the parallel port version of either drive on the
Amiga. No, it is not due to lack of driver software. The Amiga's
parallel port is physically different from the PC's, so it is not
possible to use the parallel Zip or EZ drive.

1.52   Faster... faster... faster!

What's the most cost-effective way to make my unexpanded Amiga ←
faster?

If you don't have any
                FAST
                 RAM, which an unexpanded Amiga
                500
                , 600,
1200, or 2000 won't have, adding some is the best single upgrade you
cam make to your machine. Adding 4 MBs of FAST RAM to a standard
A1200 with 2 MBs of
                CHIP
                 RAM will double the speed of the machine, at
least in interactive response.

Keep in mind, though, that if you add a RAM-only expansion to the
trapdoor of an A1200, you won't be able to install an accelerator in
there without removing the RAM board. The best plan is to do both at
the same time.

1.53   Hard drives for A1200

What kind of hard drives work with the built-in controller in the ←
    A1200?

The
                A1200
                 has an IDE controller built in. It has a 44-pin connector
which is designed for 2.5 inch IDE drives. There are also adaptors
available for 3.5 inch drives. The power for the larger hard drive
is then taken from the floppy drive power connector. Be sure that
the hard drive you want to install is slim enough to fit into your
A1200.

So, it is possible to use 3.5 inch drives with an A1200; however,
there have been some power supply and heat related problems reported
by some users. If you want to remain on the safe side, stick to a
2.5 inch hard drive, otherwise you can opt for a, usually cheaper,
3.5 inch drive.

1.54   simms

My accelerator can take 72-pin SIMMs. What kind do I need? What about
parity & EDO?

If you have a board which can use standard 72-pin SIMM modules, you
can use any standard PC SIMMs. Check your hardware documentation to
see if a specific minimum speed is needed, but in most cases 70 ns
should be fast enough.

Parity makes no difference in the Amiga, since the Amiga doesn't use
it. You can use a parity or non-parity SIMM.

EDO makes no difference in the Amiga, since the Amiga doesn't use it.
You can use EDO or standard SIMMs, but you won't see any advantage
with EDO.

1.55   mui

What is MUI?

MUI stands for Magic User Interface. MUI is a system for creating and
maintaining graphical user interfaces. It allows programmers to create
a powerful GUI easily and quickly, with far less effort than it would
take to code it from scratch. It also allows the user to customize the
interface to personal taste.

Programs which use MUI require the MUI user system to be installed
on the user's machine. The archive comes with an Installer script. It
can be found on
                Aminet
                , at
                util/libs/

```
                    muixxusr
                    .lha
                     (xx = latest version
number.)
```

MUI is shareware. The registered version allows you to configure the
GUI's of any MUI programs almost any way you want; the unregistered
version has limited configuration options, but is completely usable.
You are allowed to use the unregistered version as long as you want;
you only have to pay if you want the extra options.

1.56   Arguing about MUI is silly!

                    Why is everyone always arguing about MUI?

Short answer: Because they don't have anything better to do.

Basically,
                    MUI
                     has its good and bad points. People on both
sides like to argue about it; the pro-MUI camp seems to feel that they
can convince everyone in the entire world to use MUI, while the
anti-MUI people try to blot it out of existence. Neither side will
succeed, and the arguments have never done any good and will never
do any good.

Here are the arguments on both sides, so that you can forever ignore
MUI flamewars on the newsgroups:

Pro-MUI:

- MUI looks nice.
- MUI standardizes the user interface from program to program.
- MUI offers features not present in GadTools or BOOPSI interfaces.
- MUI code is shared among multiple MUI programs running at the same
     time, saving on memory.
- MUI allows easy GUI development, making the software development
     process faster, and allowing the programmer to concentrate on
     the important parts of the program.

Anti-MUI:

- MUI wastes lots of hard-drive space.
- MUI is big and uses entirely too much memory.
- MUI is very slow, especially on an unaccelerated machine.
- MUI sometimes doesn't give the user instant feedback.
- You have to have the MUI software installed in order to use any MUI
  programs.

There. Now you know. Now you can avoid participating in useless MUI
flamewars.

1.57 Directory Opus

                    What is Directory Opus?

Directory Opus is a file-management program, and much more. It can be
used for anything from straightforward file copying and moving, to
running programs, and any number of other things. In fact, the latest
version, 5.x, can be installed as a replacement for
                    Workbench
                    .

Opus is highly customizable. If you want to spend the time with it,
you could make it do just about anything you like. You can create
banks of buttons, and attach actions to those buttons, including
built-in actions, running external programs, ARexx scripts, FTP from
one lister window to another, look inside of
                    LhA
                     archives and read
text files or pull single files out of the archive without actually
unpacking the whole mess, etc.

It is a commercial program by Jon Potter & GPSoftware, and costs
somewhere around US$80. An older version of Directory Opus 5 can also
be found on the AminetSet 4 CD. It should be owned by every Amiga
user!

You can read my review of Directory Opus 5.6 in Amiga Report magazine
issue 5.07 (ar507.lha), which is available on the
                    Aminet
                     in the

                    docs/mags
                     directory, or you can read it in the November 1997 issue
of
                    Amazing Amiga Computing
                     magazine.

1.58 executive

                    What is Executive?

Executive is a task-scheduler. It manages the
                    multitasking
                     of the
Amiga in a better way than the
                    operating system
                     does, giving more CPU
time to interactive programs and less to background programs, so that,
even when you are running many programs in the background, you can
still use your computer without it bogging down. It even, in my
experience, increases the interactive response time of the computer.

Executive is not a hack; it is system-friendly. It is shareware. You
can obtain the demo version from

Aminet
, at
util/misc/
Executive
.lha
.

1.59 ixemul.library

What is ixemul.library?

The ixemul

.library

is a shared library which emulates the functions of
a Unix system, so that many Unix programs can be ported to the Amiga
with few or no changes. Unix programs ported using this library will
require that you have the library installed on your system. If you're
interested in any of these programs you can just install the library
in your LIBS: directory and they will work.

ixemul also comes with another library, ixnet.library, which handles
networking with AmiTCP, Inet225, Miami, etc.

1.60 ade

What is ADE?

ADE stands for Amiga Developers Environment. It is a collection of
software tools, most of which are ports of GNU Unix software. Although
the ADE is mainly meant for software developers, it contains many
useful programs for users as well, especially

Shell

users. If you like
Unix you will find many familiar programs in ADE.

The main ADE ftp site is ftp.ninemoons.com, in the pub/ade directory.
The most recent snapshot can be found in the directory current,
which is a link to the actual location.

1.61 modems

What kind of modems will work with the Amiga?

Any standard PC modem will work. The one thing you have to keep in
mind is that many newer PC's have 9-pin serial ports, and your Amiga
has a 25-pin port. So, you will need a cable to plug in to a 25-pin
port. Since most modems have 25-pin ports, the cable you will most
likely need is a 25-pin-to-25-pin modem cable. However, if you have
an

ioExtender

```
                    or
                  MultiFace
                   card in your Amiga then you probably
already have a 9-pin serial port connector. You can read my review of
the ioExtender board in Amiga Report magazine issue 2.33 (ar233
                  .lha
                  ),
which is available on the
                  Aminet
                   in the
                  docs/mags
                   directory.
```

1.62 Serial port speed

```
                  How fast can I make the serial port go?
```

The Amiga's serial port is outdated, and not as fast as a PC's port.
Actually, the biggest problem is in the buffering; the Amiga's serial
port has only a one-byte buffer.

However, you should be able to run the serial port at 38,400 bits per
second with no problem (if you have a 68000 processor this may still
be too fast, but has been known to work fine). Use a 4-color
                  screen
                  ,
because the more colors you use, the more processor time is used to
display the screen (unless you are using a
                  graphics board
).

If your machine is very fast, you can probably drive the
                  modem
                   even
faster. Try it out, and see what speed gives you no errors. I can run
57,600 on my
                  A2000
                  , with an 030, most of the time before I purchased
an ioExtender.

Purchasing a fast serial port card, such as the ioExtender or
MultiFace card, will enable you to drive your modem's serial port
connection at
                  rates as high as 115,200
                  . This is highly recommended if
you are planning on using a 28.8k, 33.6k, or 56k modem.

1.63 Serial port preferences

But the Serial Preferences editor doesn't go up that high!

Forget about the Serial Prefs. I've never even touched mine. Set the

port speed with whatever communication software you are using and it
will override the settings in Serial Prefs.

1.64   lha

                What is LhA? How do I use all these files with .lha extensions?

LhA is a compression and archiving program. It takes a bunch of files,
squashes them, and stores them all in one file. LhA archives have the
extension .lha on the filenames.

To decompress them you need the LhA program. It is available on

                Aminet
                 at
                util/arc/
                LhA_e138.run. This is a self-extracting archive;
execute it as a program and it will decompress for you. Then take the
LhA program and put it in your C: directory, or wherever else you like
to keep CLI programs (but make sure it's in your DOS search path).

To decompress an LhA archive from the
                Shell
                , type:

lha x <archive-name>

1.65   aminet

                What is Aminet?

Aminet is the central source for Amiga shareware, freeware, public
domain, and demo software. Just about every non-commercial Amiga
program can be found on Aminet, as well as demo versions of many
commercial products.

The main ftp site for Aminet is ftp.wustl.edu, and the archive is

                mirrored
                 at other sites all over the world, so you can use whichever
is closest to you. All of the mirror sites are
                organized
                 the same way,
so any files on Aminet will be referred to by their place in the
directory structure.

The Aminet archive is also available on CD-ROMs, which should be
available from most Amiga dealers.

1.66   Aminet mirrors

Where are the Aminet mirror sites?

Here is the list of full mirrors, taken straight from
                Aminet

                (pub/aminet
                ):

Country	Address	IP Address
Australia	mirror.livewire.com.au	203.16.26.21
Germany	ftp.uni-paderborn.de	131.234.22.34
Italy	ftp.cised.unina.it	192.132.34.17
Sweden	ftp.sunet.se	130.238.253.4
UK	sunsite.doc.ic.ac.uk	193.63.255.4
USA	ftp.wustl.edu	128.252.135.4

1.67 Aminet hierarchy

How is Aminet organized?

Aminet is divided into directories which contain subdirectories within
them, with the exception of the new, priv, and recent directories.

Top-level directories in
                Aminet
                :

biz/	Business software
comm/	Communications
demo/	Gfx and sound demos
dev/	Development software
disk/	Disk/Harddisk tools
docs/	Text documents
game/	Games
gfx/	Graphics
hard/	Hardware
info/	General FTP information
misc/	Miscellaneous
mods/	Music modules
mus/	Musical software
new/	Upload area
pix/	Pictures
priv/	Private uploads
recent/	Files uploaded the last seven days
text/	Text related
util/	Utilities

1.68 netscape

Can I run Netscape Navigator?

Quite possibly.

 No, really, can I run Netscape Navigator?

Well, actually, you can run the Macintosh version, if you have the

                 Shapeshifter
                  Mac emulator installed on your machine.

1.69   Amiga browsers

The source code for Netscape Navigator is being released so that ports can be
made to other platforms that were formerly unsupported. I have no
doubt that some enterprising Amiga programmers will pounce on this and
a port of Netscape Navigator will appear on the Amiga in the near future.

Netscape is evil. I want an Amiga browser.

There are several good web browsers available for the Amiga. Some of
the most popular are: AWeb-II, VoyagerNG, and Ibrowse.

1.70   Reading Amiga disks with a PC

Can I read Amiga disks on a PC?

You can't make a PC read Amiga disks. The format is physically
different, and anyway there is no PC software to support it.

1.71   Reading PC disks with an Amiga

                 Well, then, can my Amiga read PC disks?

Of course. The Amiga is much more flexible than the PC.

If you have
                 OS
                  2.1 or later, you have a program called CrossDOS, which
allows you to read, write, and format MS-DOS disks. If you have a
standard, double-density floppy drive (880k), you will only be able to
use double-density DOS disks (720k). If you have a high-density floppy
drive (1.76 MB) you can use high-density DOS disks (1.44 MB) too. If
you are going to be transferring a lot of files from Amiga to DOS and
back again, a high-density floppy drive would be a good investment
because that is the standard on the PC, and of course because they
hold almost twice as much information.

In order to use CrossDOS to read and write DOS disks, you will first
need to mount the
                 device

```
                      . If you look in the drawer called Storage
on your system hard drive, you will see another drawer called
DOSDrivers. Inside there should be an icon called PC0.

Double-clicking on this icon will mount the PC0: device. Now, if you
install an MS-DOS floppy disk into your first floppy drive (DF0:) it
will appear as PC0: and you will be able to use it just like any other
floppy disk. Of course, you have to limit your filenames to the
eight-character plus three-character extension (8.3) used by MS-DOS.

If you want the PC0: device to be mounted automatically every time you
boot your Amiga, all you need to do is move the PC0: icon to the
other DOSDrivers drawer, located in the Devs drawer. If the icon is
there, it will be mounted for you whenever you boot.
```

1.72   Reading Mac disks with an Amiga

```
Can the Amiga read Macintosh disks?

Yes, but it's a little more complex than PC disks. There are
commercial packages such as CrossMac which will allow you to
read Mac disks. However, the older Mac double-density disk drives
used a proprietary format which is not readable using a standard
floppy drive; to read these you will need a special Mac drive.

High-density Mac disks will be readable with a standard Amiga
high-density floppy drive, using CrossMac or other software.
```

1.73   Transferring files from an Amiga to a Mac, and vice-versa

```
               Can I transfer files from Amiga to Mac and vice-versa without  ←
                  getting
special software like CrossMac?

Yes. This is actually the easiest way to get files from Amiga to Mac
and back again. The Macintosh can read MS-DOS disks, and so can the
Amiga, so all you need to do is put your information on an MS-DOS disk
for the transfer.

On the Amiga side, proceed according to the
               instructions
                for reading
and writing MS-DOS disks. On the Mac side, if you are using System 7.5
or later, the system should be set up to read MS-DOS disks automatically.
Under System 7.0, you need to use the Apple File Exchange program to
transfer the files from the MS-DOS disk to the Mac hard drive.
```

1.74   Transferring graphics from an Amiga to a PC or Mac

When I transfer graphics from the Amiga to the PC/Mac, they end up
squashed! When I transfer them from a PC/Mac to the Amiga, they end up
elongated vertically! What do I do?

The reason for this is because the Mac and the PC use square pixels,
while the Amiga uses rectangular pixels the same as video images.
Pictures transferred from one to the other will end up with a
different aspect ratio.

Going from the PC/Mac to the Amiga, the pictures will end up looking
taller than they are supposed to. Use an image processing program, on
either system, to scale the image vertically to 83% of the original
height.

If you're going in the other direction, scale vertically to 117% of
the original height.

1.75   Transferring text from an Amiga to a PC

                 When I transfer a text file from the Amiga to the PC, it comes out ←
                   all
messed up, like it doesn't know where the lines are supposed to end. What
do I do?

The Amiga uses a Linefeed character (LF) to indicate End-Of-Line, like
any decent computer should. MS-DOS and Windows, however, use a
Carriage Return followed by a Linefeed (CR/LF).

The
                 CrossDOS
                  program on the Amiga knows about this. Before you
transfer your file to the MS-DOS disk, you need to enable Text
Translation. Go to the Tools drawer, open the Commodities drawer, and
double-click the CrossDOS icon. A window should pop up. Select PC0:,
and check the boxes for Text Translation and Text Filtering. Now,
when you save your Amiga text file to the MS-DOS disk, it will have
the proper end-of-line characters.

1.76   shapeshifter

                 What is Shapeshifter?

Shapeshifter is a software Macintosh emulator. It is shareware, and
the demo version is available on
                 Aminet
                 . It will allow you
to run Mac software on your Amiga.

To run Shapeshifter you will need: an 020 or better processor, at
least 4 MBs of
                 RAM

```
                     (though at least 8 would be nice),
                  OS
                   2.1 or
later, and a
                  Macintosh ROM
                   image file. If you are using an 020 or 030
processor you can use a 512K Mac ROM; an 040 or 060 will need a 1 MB
ROM. Of course, you will also need the Mac OS System software.
```

To read Macintosh floppies, which are almost all high-density these
days, you'll need a high-density floppy drive. Also, the graphics will
not be very fast without a
                  graphics board
                   installed.

These are fairly hefty hardware requirements, but bear in mind that
this gives you a fully-functional Macintosh inside your Amiga.

1.77   Mac ROM

                  What? Where do I get a Mac ROM from?

                  Shapeshifter
                   comes with a Mac program which captures
the ROM image into a file for use with the emulation. You could grab the
image from a friend's Mac, or from a machine at your school, but of course
that would be illegal.

Your best bet, I would think, would be to purchase a Mac ROM from an
Apple dealer. Of course, you need a complete, working Mac to grab the
image. So, having fulfilled your legal obligation by buying the chip,
now go and grab the image from whatever Mac you can find. I think this
would be legal, but I take no responsibility if Apple breaks down your
door. :-)

1.78   Amazing Amiga Computing magazine

                  What is Amazing Amiga Computing (Informer) magazine and how can I ←
                      get it?

Amazing Amiga Computing (Informer) is the only remaining
North American print magazine dedicated solely to the Amiga. Amiga Informer
magazine has merged with Amazing Amiga to form a single magazine.

You can subscribe to the magazine by contacting them in the following ways:

Phone: 1-800-345-3360
         1-508-678-4200

Fax: 1-508-675-6002

```
WWW:     http://www.pimpub.com


Subscription Rates (12 monthly issues):
                                        $24 (US)
                                        $34 (Canada & Mexico)
                                        $44 (Foreign Surface)


All payments must be in US funds on a US bank. All foreign rates are
one-year only.

Hey, please tell them that
                Bill Near
                  sent you! :-)
```

1.79 Glossary

```
                        Glossary

AGA - Advanced Graphics Architecture Chip Set.

AmigaDOS - The Amiga's disk-based command set, accessible
           via the CLI or Shell.

AmigaGuide - The Amiga's hypertext application.

Application - A software program.

Archiving - Placing a file or group of files into another
            file, often reducing its size, for temporary storage.

ARexx - A script-based programming language for communication
        within programs and/or the CLI or Shell.

Boing! - An Amiga demo designed to run on the A1000 in 1985.
         The Boing! ball is a red and white checkerboard sphere
         that bounces around the screen and casts a shadow.

BOOPSI - Object oriented programming for Intuition.

Boot Block - The area of a disk that defines whether the disk
             is capable of loading itself automatically.

Cache - A buffer used to increase access rates to a device.

Chip RAM - RAM accessible only by the custom chip set.

CLI - AmigaDOS Command Line Interface for accessing DOS.

Commodity - A preference program accessed by the Commodities
            Exchange.

Compression - To reduce the size of a file by removing repetitive
              patterns and replacing them with a code.
```

Cursor – A symbol used to mark the location of activity by
         the user.

CPU – Central Processing Unit.

CPU Slot – An expansion slot designed to provide simple upgrades
           to the Central Processing Unit for faster computer
           operations.

Daughterboard – An expansion board that plugs into a main
                processor board.

Data Type – A file format structure that allows any program to
            access various file formats.

Decompression – To make a file readable by returning it to its
                original form after decoding a file of codes.

DOS – Disk Operating System.

Driver – A software file that defines how to use a hardware
         device, such as a printer.

ECS – Enhanced Chip Set.

Editor – Program that allows modification of text files.

Emulator – A software or hardware combination that allows one
           computer to run software written for another computer.

EuroDemo – A program written primarily in Europe to demonstrate
           the capabilities of the animation and sound of the
           Amiga.

Fast RAM – RAM not accessible by the custom chip set, but from
           other devices and processors.

FFS – Fast File System disk file storage system.

FPS – Frames Per Second that an animation or video is displayed.

FPU – Floating Point Unit.

Gadget – An area of a window that accepts input from the keyboard
         or mouse.

Hard Drive – Any hardware device that uses disks that are not
             flexible or bendable.

Hardware – Electronic computer devices.

Icon – A picture on the Workbench that can be manipulated in
       order to manipulate a file that it represents.

IDE – A format for hard drive expansion buses.

IFF – Interchange File Format for storing pictures and sounds.

Interlace – A screen display mode that has double the vertical
          resolution.

Intuition – The Amiga's graphics environment.

Kickstart – The Amiga's operating system.

Library – A collection of compiled routines that can be
        accessed by more than one application.

Locale – The Amiga's multi-lingual environment.

Memory – The area where data is stored temporarily in order to
        work with programs and any software.

Menu Button – The right mouse button.

MMU – Memory Management Unit.

Motherboard – The computer hardware that contains the chips and
            expansion required to operate a computer.

Mouse – A device used to control the sprite cursor on the screen.

MUI – Magic User Interface.

NTSC – A North American television broadcast standard.

OCS – Original Chip Set.

OS – Operating System, the set of commands in the computer.

Overscan – The area surrounding the visible screen that is unused
          or available using the Overscan preference program.

PAL – A primarily European television broadcast standard.

Palette – The selection of colors made available to a screen.

PCMCIA – An expansion bus using small credit-card like memory
        storage units.

Pixel – A small colored dot used to create any image.

Priority – A value assigned to a task to determine how frequently
          it may have access to the CPU or devices.

RAD – A fixed size RAM disk that survives a warm reboot.

RAM – Random Access Memory. Temporary data storage area of
      computer chips.

Resolution – The measure of the number of pixels used in a screen.

ROM – Read Only Memory. Permanent data storage area of computer
      chips.

RTG - Retargetable Graphics, allowing any graphics board to
       have direct support by the operating system.

Screen - A rectangular display area with an independent palette
           and an independent resolution.

Script - List of commands in a text file, such as for AmigaDOS,
           which can be executed in order.

SCSI - Small Computer System Interface, a format for hard drive
         expansion buses.

Shared Library - Set of routines that may be accessed by many
                 executable programs simultaneously.

Shell - Enhanced CLI for accessing DOS commands.

Slow-Fast RAM - Fast RAM added to the second 512k of an Amiga 500
                 via the Trapdoor expansion bus.

Software - Information stored and altered on various media.

Sprite - A graphics object that moves freely between screens.

Startup-sequence - An AmigaDOS script that is executed when
                   the Amiga boots. This script sets up the
                   hardware and other functions of the system.

Surface Mount - A computer chip that is soldered to a motherboard
                 and cannot be removed easily.

Trapdoor - Internal expansion bus on the A500, A600, and A1200
           allowing cards to be added beneath the keyboard without
           opening the computer's case.

Video Slot - An expansion slot that permits access to video devices
             and Zorro slots simultaneously.

Warm Reboot - To reset the computer without turning the power off,
              using the CTRL-LAMIGA-RAMIGA key sequence. Also
              known as, the 3-fingered salute.

Window - A portion of a screen defined by a rectangular border.

Workbench - The Amiga's graphic oriented file manipulation
            program.

Zorro Slot - An expansion slot in 16-bit or 32-bit wide data paths
             for adding hardware to the Amiga.