
The Paragon Report

Perths only free Publication
with Information News and views
for ALL ATARI users
Aug 1988

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PARAGON COMPUTERS
Shop 17a. / 5 Short Street
Perth. Western Australia. 6000
Phone (09) 221 3216

Complaining about Atari complainers

DRAM prices, ROM upgrades, Disk drives, Vaporware, Laser printers, user group support, retailer support, developer support, and even mail order supplies have been some subjects of interest lately. Complainers have been targeted in a number of editorials, teleconferencing sessions and even messages on the commercial services.

I, as a CASH paying consumer, have the right to complain or even investigate why something is not up to date, doesn't meet my expectations, or even throws a whole string of "bombs" across my screen.

BUT if I do take a course of action and complain, I am handed someone else's set of values and am preached at to "just be thankful for what you already have". I have voiced some opinions in some of the online message bases and then read several days later about what my opinion really SHOULD HAVE BEEN! That really Sux!

I really do recommend that you get involved in anyway you can with your computer, if not in your usergroup then with letter writing or even attending some of the online conferences.

* * * * *

Sound familiar?

The above text was downloaded to Paragon Computers 24hr BBS by a U.S. based BBS

Don't be afraid to have your say.

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Today

SIGNIFICANT BREAKTHROUGH IN ATARI ST SOFTWARE

NOW AVAILABLE WITH

REVOLVER

REVOLVER can take a program (TOS, GEM, TTP) and stop it at any point then write it to disk, allowing you to continue where you left off at a later time! It does this by taking a picture of the entire computer's memory and saving it as a compressed file on the built in RAM DISK, a FLOPPY DISK, or a HARD DISK. You can also set a timer to save your program at specified intervals, protecting you from a possible data disaster.

Additional convenience features such as Full Disk Commands, Control Panel options and Screen Snapshot make REVOLVER the ultimate utility. REVOLVER is not a desk accessory and is therefore active at all times, even within TOS environments. The "Roll out" and "Roll in" capabilities supply a much needed convenience to the user allowing him to effectively swap back and forth between applications at any time. Because disk is the storage medium for "Rolled out" programs there is no limit to the number of "Swapped" programs and, once "Rolled out" a program can be "Swapped" back in, even after a cold boot!

Using REVOLVER is easy, it is activated by depressing both shift keys along with the "Alternate" key. Once activated, it is controlled via the mouse.

A partial list of REVOLVER's features follows, all readily available within GEM, TOS and TTP environments:

- * "Roll in" and "Roll out" all ST memory (includes Desk Accessories)
- * Warm reset proof Ramdisk, handles large and small memory models
- * 40 Folder fix, lets you select the number of additional folders
- * Print Spooler, lets you select its size and turn it on or off
- * Extended disk commands, support "Wild cards" and "Hidden" files
- * VT-52 Emulator
- * Control Panel options, setup RS232, printer and console options
- * Screen snapshot to .NEO picture file
- * Select "Warm" or "Cold" re-boot, with the mouse
- * For more information on this product, Phone **Paragon Computers (09) 221 3216**

EZ-GRADE

EZ-Grade is a powerful tool for teachers. It keeps track of students, grades, absences, and more. Using EZ-Grade is as simple as entering scores into your regular gradebook, but as powerful as a modern spreadsheet and database combined.

View student information simply by pointing at the student's name and clicking the mouse. Rearranging the entire class is as easy as dragging the students names into the order you choose. Checking you class performance is intuitive using the built-in statistics and histograms. If you want to know which students that bar in the D- area represents, merely point at the bar and click. All the students with that grade are instantly displayed! Never pick up a calculator for grades again! Just adjust the grading scale to meet your standards and let EZ-Grade do ALL the calculations for you.

Teachers are human, and human beings make mistakes, so EZ-Grade is very forgiving. The user is always given multiple opportunities to correct mistakes during input; however, unlike many electronic gradebooks, error correction does not stop there. EZ-Grade allows all data to be easily edited at any time, even weeks or months after it was entered. With EZ-Grade there is no such thing as a fatal mistake!

Teacher's keep a gradebook with them in class, not a computer, so EZ-Grade allows you to choose from a variety of printout options. From a simple grade summary to a complete gradebook page listing which includes data for EVERY student and EVERY assignment in one compact comprehensive printout. You say you don't have a standard Epson printer... No problem! Just use the printer set-up page to configure the program to your specific printer.

EZ-Grade printouts go way beyond simple grade records. The program allows the teacher to print personalized progress reports for one, some, or all students in the class. These reports inform the students and parents of academic progress and pinpoint areas of weakness. Now here's another place where EZ-Grade leaves other gradebook programs behind. Not only do progress reports relate student grades, but they also allow you to make specific recommendations for ways to improve the student's scores. Yet, you do not have to do any extra work because you enter your recommendations only once, and EZ-Grade does the rest.

EZ-Grade is designed for flexibility. Class sizes can be as large as you choose, being processed in groups of 60 students. One class record can contain up to 90 grades per grading period. Dropping a score from a students grade is no problem, just enter a negative value for the score and it will automatically be dropped from his or her total and the student's possible points will be lowered by that amount. The program even distinguishes between missing grades, represented by blank spaces, and scores of zero, which appear as zeros.

In short, EZ-Grade is THE electronic gradebook for the Atari ST. It allows you to focus the incredible power of your ST computer on the time consuming chores of teaching. Maybe the reason it can be so powerful, yet so easy to use is because the programmer is first and foremost a teacher. Order your copy now!

To Order Please Contact:

Paragon Computers
Shop 17a. / 5 Short Street
Perth
Western Australia. 6000.

Or phone (09) 221 3216 for a free demonstration disk

PARAGON COMPUTERS

Shop 17A, Piccadilly Square, Short Street, East Perth, Western Australia. 6000.

Phone (09) 221 3216. 3 lines.

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AUGUST ST SOFTWARE SALE



The Atari ST software titles listed below are available at the special August ST Software sale price.
This offer is available until August 31st or while stocks last

TITLE	RRP	SALE	TITLE	RRP	SALE
3D GALAXIAN	69.95	49.95	PANDORA	52.95	39.00
ACADEMY	69.95	52.00	PM INTERFACE	59.95	39.95
ANNALS OF ROME	69.95	49.95	POLICE QUEST	69.95	54.00
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ARKANOID	59.95	42.00	PROHIBITION	49.95	37.00
AUTO DUEL	99.00	59.00	ROLLING THUNDER	59.95	49.95
BLACK LAMP	64.95	49.95	SALES PRO PLUS	299.00	245.00
CATCH 23	59.95	45.00	SIDEWALK	69.95	45.00
CHAMONIX CHALLENGE	59.95	43.00	SKY FIGHTER	39.95	29.95
CHAMPIONSHIP WATERSKIING	69.95	49.95	SKY FOX	46.95	35.00
CREATOR	59.00	25.00	SOLOMONS KEY	69.95	55.00
DARK CASTLE	79.95	59.95	SPACE ACE	69.95	49.00
DEFLEKTOR	59.95	39.95	STAR QUAKE	54.95	39.00
DIAMOND MIKE	49.95	29.95	STAR WARS	59.95	49.00
EASY DRAW 2	189.95	139.95	SUNDOG	89.00	659.00
ECO	64.95	49.95	SUPER DIRECTORY	69.95	45.00
FLASH	79.95	59.95	SUPERBASE PERSONAL	199.00	149.00
FLIGHT SCENERY DISC "JAPAN"	69.95	44.95	SUPERTEX "VIATEL"	39.95	29.95
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GATO	95.00	65.00	TEACHERS PET	49.95	29.95
HUNT FOR RED OCTOBER	69.95	49.95	TEMPUS	89.95	79.95
IS TALK	89.95	65.00	TERRESTIAL ENCOUNTER	49.00	19.95
JACK FONT	124.00	79.95	TEST DRIVE	59.95	52.00
JET (SUBLOGIC)	79.95	69.95	THE SENTINEL	52.00	38.00
JINXTER	78.95	57.00	TIME LINK	79.95	65.00
JUGGLER	69.95	49.95	TOURNAMENT OF DEATH	69.95	49.95
KARTING	29.95	19.95	TRAUMA	59.95	40.00
LABEL MAKER	75.00	49.95	TRIVIA TROVE	39.95	28.00
M CACHE	69.95	45.00	TRIVIAL PURSUIT	59.95	49.95
MACH 3	59.95	40.00	TURBO GT	49.95	38.00
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MI TERM	79.95	64.00	WIZBALL	59.95	43.00
MICROSOFT WRITE	199.00	150.00	WORD PERFECT	589.95	450.00
MISSION ELEVATOR	59.95	43.00	WRITE 90	49.00	39.00
NORTH STAR	69.95	49.95	ZOOMRACKS	169.95	125.00
OUTRUN	69.95	52.00			

ALSO AVAILABLE NOW

Quantum Paint	Empire Strikes Back	Captain Blood	Planetarium
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PARAGON COMPUTERS



Bulletin Board System

(09) 325 5160. (24 hrs)



300/300. 600/600. 1200/75. 1200/1200. 2400/2400. Bell & CCITT Standards

Paragon Computers, now Australia's leading Atari dealer would like to take this opportunity to introduce our new **Bulletin Board System**.

This BBS established 27th June 1988, does not claim to be "*the largest*," "*the first*," "*the fastest*," etc etc...

Its only claim to fame is that it is owned and operated by the largest, most enthusiastic ATARI only dealer in Australia, hence all our sysops are enthusiastic users of Atari computers, with a total of 40 years Atari experience.

STEVE QUARTLY

Musician, MIDI expert, (*Author of CZ Dump*), Programmer, Astronomer and connector of Atari computers to the outside world!

PHIL REEVES

Programmer, Atari Nut, Author of the very first program for the ST in Australia, Computer Graphics Nut, Desk Top Publishing and HAM Radio Operator

ROD REEVES

Programmer (Page 6 mag), Data Base Nut, Data manipulation expert! Author of the first program on the ST to actually win real money (*Burswood Island Casino*) (*Numerous Race Courses*)

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This BBS is a **FREE** service for **Atari** users. Running on an Atari ST system with the capability of up to 160Meg of storage capacity and multitasking up to 5 users at the same time, and is on line 24 hours a day

Registered users will have access to the very latest information for their machines from the U.K. U.S.A. and the true home of Atari, West Germany.

Paragon's on line software list is updated every 24 hours and our Post Script laser, Atari laser, Video Digitising, Scanning, Audio Digitising and Mail Order services are available to all registered users 24 hours a day.

Now that you use the best computer on the market today, why not keep ahead with the latest information for that computer? Please feel free to call (09) 325 5160 any time with any questions or suggestions that may help us to help others who share the same interests as yourself.

Thank you to all those without whose help and encouragement this BBS would not have happened, particularly Arie, (*Perth Observatory*), Steve (*STW Channel 7*), Chris (*Telecom Australia*), Bob (*Radio 96FM*), Atari (*AUS., U.S.A., U.K., W Germany.*)

PARAGON COMPUTERS

Shop 17A, Piccadilly Square, Short Street, East Perth, Western Australia, 6000

Phone (09) 221 3216. (3lines). Fax (09) 325 8251. BBS (09) 325 5160

THE TRANSPUTER

PARALLEL PROCESSING * UNPARALLELED POTENTIAL

by T."Rex Reade

In the past system performance increased regularly by a factor of ten each decade. This improvement has been achieved largely by advances in circuit technology. For the future, VLSI offers the potential of much higher levels of integration, but only modest increases in circuit performance.

The economics of current systems are based on the historical perspective that processing is expensive in comparison with memory. This has led to the Von Neumann bottleneck where a single processor is connected to vast amounts of memory. The economics of VLSI are different. Today, a single wafer of silicon can contain 16 MB of static memory or 256 conventional microprocessors.

To exploit this potential it will be necessary to build systems with a much higher degree of concurrency than is possible today. The TRANSPUTER is designed as a programmable component to implement such systems. The word "Transputer" reflects this new device's ability to be used as a system building block. The word is derived from "transistor" and "computer", since the Transputer is both a computer on a chip and a silicon component like a transistor.

The power of the transputer is that it creates a new level of abstraction. Just as the use of logic gates and Boolean algebra provide the design methodology for present electronic systems, so the transputer, together with the formal rules of OCCAM, provides the design methodology for future concurrent systems.

In their proposals to achieve intelligent interaction between people and computers, the designers have projected the need for fifth generation computers with one thousand times the performance of present day systems. This will only be possible using concurrency, and the TRANSPUTER has been designed to make such computers a reality.

Some useful hints which may help you when installing Aladin.

1. General information

Always use copies of files to adapt them to Aladin.

Do not adapt the running system file or Finder. This will lead to a System crash. Always use copies.

'Adaption' deletes all those files which could not be patched completely but have already been changed irrecoverably.

The Mac operating system does not allow a program to delete a System File (System, Finder, ect...). No matter whether they are in use or it's just a copy. Adaption therefore can not delete damaged (wrongly patched) system files.

If Adaption fails to patch a System file, leave Adaption, delete the copy from within the Finder, make another copy and try it again.

2. Adaption of the system file

Generally Aladin 2.01 supports System 3.2. No adaption for this System version is required.

3. Adaption of the Finder

We recommend using Finder 5.5 with Aladin. It works fine and does not require any modifications at all. However if you want to use Finder 4.1 or 5.3, both have to be modified slightly. (because of trouble with the 'Open other' function in Minifinder, that does not work with MacWorks on a Lisa either!).

The exact version of the Finder you are using may be found in the Apple menu.

'About...'. Because Apple did not set up the Version string of the Finder correctly you can't use the 'Show Version' option from the Adaption program

4 Further notes

Please do not use No-Name (cheap) disks with Aladin. The Mac Operating system is heavily disk orientated. Frequent disk access requires high quality disks.

If you want to run a program (that we did not already test) with Aladin for the first time, please be careful. Make sure that there is no important data in the Super Disk. Our experience shows that almost all Mac programs worked at once but caution is better than losing your data.

5. The Macintosh Utilities

If you are working on a Mac with one disk drive, you should copy the Mac System files to the Aladin disk to avoid disk swapping.

If you are working on a Mac with two disk drives, you should copy the Mac System Files to the Aladin disk or place the system disk in the external drive.

SKYLOT v's PLANETARIUM

The Battle of the Astronomy Software!
for the Atari ST or Mega Computer

Reviewed by Steve Quartly

Product : Skyplot
Publisher : ROBOTEK LTD. (USA)
Available : Paragon Computers
Author : Frank Thielen
Cost : \$145.00

Product : Planetarium
Publisher : Deltron Ltd.
Atari Corp.
Available : Paragon Computers
Author : Frank Covitz
Clif Ashcraft
Fred Ancker
Cost : \$79.95

Introduction

Up until now the quality of software available for the Atari ST in the area of astronomy was severely lacking. The only packages available were VERY slow in processing the large amounts of data that are required to be processed in this sort of application, and they were quite cumbersome to use.

However, two pieces of software have finally been released that are not only extremely fast in processing and displaying the star data but are very easy to use. Both Skyplot and Planetarium have been brought out by two independent distributors and they are both aimed at the same task, that is, to display the night sky at any given time from any given place on the planet.

Both packages achieve this task admirably however Skyplot out shines Planetarium by not only displaying the stars, but by the host of other features it offers the first time user and the professional astronomer.

Planetarium

When you first load and run Planetarium a map of the world is displayed for you to select the longitude and latitude that you wish to display the stars from. Once selected, this is then saved to disk so that each time you use the program it is automatically set for you. A screen is then displayed with all the stars for the given time and date.

Planetarium has several features not covered in Skyplot that makes the program very useful to the astronomer. 'Track' enables one to lock the computer on any given object displayed, this means that the object you select will always be displayed in the middle of the screen. This is very useful when displaying Halley's Comet, or a Lunar or Solar Eclipse.

The program also has the ability to observe the stars moving across the sky in real time or if you like

you can change the speed to +/- 2x, 4x, 8x, 16x, 32x, or 64x normal speed. So you can watch the eclipse that is happening outside on the computer at the same time or speed it up to 64x normal speed.

As well as displaying the stars you can display the names of the major stars and the constellations, the shape of the constellations by joining it up with lines, deep sky objects, and draw a grid showing the right ascension and declination lines. If you look at a star below the horizon, the sky becomes grey to inform you that you are looking 'through' the Earth and if you go down too far, a picture of your feet is displayed!

If you find a galaxy such as Andromeda you can decrease your field of view from 72 degrees right down to 4.5 degrees. This in effect zooms in on the Andromeda galaxy and you start to see the two other galaxies that are located next to Andromeda.

Should you wish to view a particular object such as Saturn or Jupiter you can use the find command to locate it. This puts the object in the centre of the screen. The direction, and the elevation are also displayed so you know exactly where to look outside to find it.

The find function includes the Sun, Moon, eight planets not including the Earth, because that is where you are observing from, Halley's Comet in 1985, and all the constellations.

When you are observing the sky you can look and click on most of the objects and a short line of text scrolls across the bottom of the screen giving a description of the object you have selected.

All in all, this package is very good for the person who sees a star in the sky and wonders what it is. He can turn on his ST, load Planetarium, look in the correct direction, look at approximately the correct angle above the horizon and, hey presto, the star is displayed and he can find out what it is. It is good value for money.

Skyplot

When you first load Skyplot don't be in any hurry as it takes 21 minutes to load it's massive data base. For those statisticians at heart Skyplot boasts data for the eight planets, the sun, the moon, three comets (Halley, Wilson, Kohoutek), 612 stars for the visible constellations, and 1,053 nebular objects such as clusters and galaxies.

There is also data for an additional 15,383 stars. Count them!! Don't be dismayed by the long load time, it is only for the first time you load it.

Once the program is loaded you can save all this data in compressed form and subsequent loading will only take about 3 minutes. It is done this way as all the data is stored in ASCII form to allow you to add more objects as they are found. This is an excellent feature.

The program is not as straight forward as Planetarium in it's use as it's opening screen is some-what confusing for the first-time user.

To view the stars from Earth you have to select your longitude and latitude, this is done in a similar way to Planetarium however you can't store your position and consequently you have to reset it each time you run the program. This is a little frustrating.

There are five types of display, The complete sky, equatorial map, horizon map, polar map, and the visible sky. If you select the last option you can move back and forward in time to see how the bodies change their position. If you click on an object a box appears containing it's name and some information about it. If you click on a star and it's part of a constellation, a click on the right button will join the stars.

Alternatively, if you select a planet or comet, clicking on the right button will reveal a little history or observational information. If you want to zoom in on an area of the screen you can draw a rubber box around the area and the screen will then display that zoomed area.

The program is designed such that you can zoom to a factor of about 3.7 trillion! Thus you can see the rings of Saturn and the phases of the moon, although you can't see the surface of the planets or the moons of Jupiter.

There is a host of other features available in Skyplot. You can add your own parabolic and ecliptic elements. That is minor planets or new comets. You can automatically search through object conjunctions, that is solar or lunar eclipses, or Halley's Comet with the moon etc. You can display

the sky as it would be seen from another planet, or from any point in space, within a range of about 100,000 parsecs from the sun. The program will calculate the rising and settings times of an object and plot a graphic display of the planets apparent brightness and diameter over a period of a year.

You can save any screen to disk in Degas form or tell it to save an animation sequence to disk and then replay it using it's own animation program.

You can simulate the movement of the solar system around the sun from different views and plot the path of movement of several bodies on the screen over a given time period. I do have one or two gripes about the program.

The manual is poorly translated from German and even some of the menu options are incorrectly named. This is really inexcusable, also you can't save the longitude and latitude, date, time, type of display, and parabolical and ecliptical elements in a file so that it automatically loads each time you run the program. This makes the start-up procedure a little tedious whenever you run Skyplot.

This review is merely scratching the surface of the ability of Skyplot. It would have to be one of the best pieces of astronomy software that I have seen for any computer. It's power is mind boggling. Skyplot can be used by novices, however it's power would be more exploited by amateur and professional astronomers. It also has extremely good educational value.

Summary

Skyplot is brilliant, I can't say it enough. The amount of number crunching must be phenomenal! Planetarium obviously hasn't even tried to go as far as Skyplot, however what it does, it does very well and both packages are highly recommended.

So if you don't want to get right into astronomy and don't want to spend much, then Planetarium is for you.

However if you have the money and want to learn something about astronomy go for Skyplot, you won't regret it.

ANOTHER NEW OPERATING SYSTEM FOR THE ST COMPUTER WILL BE RELEASED SHORTLY

A summary of the major improvements to TOS follows:

Floppy formatting is "more compatible" with IBM-PC format.

A file may be moved (i.e. copy/delete) in one operation.

File Copy/Delete/Move can be interrupted with "undo".

GEM programs can be autobooted from disk.

If a name conflict occurs during a file copy, Copy/Skip/Quit are allowed.

A folder may be renamed via "Show Info".

The static file allocation limit of 400 is removed; limited now by free memory.

"Show/Print File" are completely rewritten.

File copying on a single floppy system uses all available memory for buffers.

"wind_update(FALSE)" is set when recovering from an application crash.

All date separators are now "/".

File Selector has had major rework:

- 16 drive buttons.

- Application can send a "title" string to FSEL.

- FSEL now takes first <RETURN> on pathname edit as end-of-edit.

- Static file allocation of 100 files is removed.

- Long pathnames and "ABORT/CONTINUE" now handled correctly.

- Preserves current DTA buffer addresses, clip rectangles and default directories.

New bindings available.

"appl_init" returns version 0130 in global(0).

Editable fields may now be followed by non-editable characters in dialog boxes

"wind_get()" with field parameter WF_SCREEN returns address/length of AES menu/alert buffer.

"Ptsin" (VDI) allows 512 vertices (true since 4/22/87).

"vqt_extent": Pixel errors on some 270 degree rotations are fixed

"vq_mouse" reliability enhanced.

40-folder bug alleviated to the point of improbability. A folder only takes up space when "active". Limited now by depth of folders and the accumulated depth of open files.

FOLDRxxx still available.

"Malloc" restriction of 20 blocks/process lifted.

FAT searching code for floppy and hard-disk is MUCH faster.

Sector buffering greatly improved, and "CACHExxx" allows expansion.

"Frename" can now rename a folder.

Archive bit (0x20) fully supported.

Time stamps for "." and ".." are now correct.

"Fsettime/Fsetdate" match BIOS and GEMDOS values

"Fdatetime" input value byteswap fixed

Major improvements to "Ccon*" and redirection in general

OS Pool reduced to same size as 11/20/85 ROMs (pre Mega). This may allow some programs which fail on Mega ROMs to work again.

Soft Reset available from Keyboard if using standard keyboard handler.

Soft reset by CTRL/ALT/DEL.

Cold Boot clears all available memory (CTRL/ALT/right SHFT/DEL).

"Rsconf(-2,-1,-1,-1,-1,-1)" returns last baud rate value set by Rsconf.

Structure of the reserved part of DTA has changed, and remains reserved.

Improvements made to detection of media change.

PUBLISHING PARTNER PROFESSIONAL

The following is a fault list relating to the early release of the Publishing Partner Pro....please keep in mind that this is a pre-release edition and is here to indicate to all readers and users the reasons for the delays and the hassles to make a perfect bug free program.

Mirror, outline, backslant, or italics text disappears; usually doesn't crash but you have to select new document to type again sometimes.

You can not go from:

- block center to block left
- block right to block center
- block right to block left

Also, if you center text then center text again text jerks right a smidgin.

Rotating objects sometimes causes distortions in text and in objects.

10 pt. type hard to read.

After a carriage return no additional text can be typed in on the first line.

Rotation and object moves to edge of document or partially off page or screen makes object inaccessible sometimes. This includes rotating objects off the screen.

When re-sizing rotated objects, no matter where you are, the actual size of the object is irrelevant of that of the size of the lines that help you, in the re-sizing process, get what you see, this in turn causes you to not knowingly move an object off the screen or document.

Rotating an object then trying to re-size will cause the rotation degrees, twist degrees, and the slant degrees to change; this happens quite often.

When sizing a line that was just rotated it becomes erratic in its movements and is not corresponding to mouse movements.

When text editing or anytime you can highlight and change font style but you can't change font style then type and expect to get anything but 12pt Times.

Pasting in graphics locks up program.

In text runaround sometimes text show is messed up and a total redraw has to be done to see all text; can usually be done by switching views.

Files generated on PP 1.02 still can't be read to PPP.

When 2 lines of text are entered and the cursor is placed at the end of the first line and return is pressed, text disappears until "delete" key is pressed.

Can't create text outside column.

Pressing the "tab" key produces an umlaut "U" or "o".

After column is created when using arrow keys in any mode will cause it to crash.

Text flow around columns is nonexistent.

Program sometimes forgets what text runaround mode it is in.

When selecting text runaround in a column grouped together with a box causes text to disappear.

In new doc. if carriage return a few times then back space back and type it skips to next line then displays your typing.

HARD DISK HARDWARE MODIFICATION

TURN-ON DELAY TIME INITIALIZATION

If you have a Hard Drive for your ST you presently have to turn on the HD, wait until it stops making noise (initialization...about 14 sec) and then turn on your computer. With this circuit modification you can now turn both on at the same time (idiot proof). It's relatively simple in that it requires the replacement of only one resistor (in the 520 & 1040 series).

Modification to the ST power-on reset delay timer

Jeff Rigby - Intersect Software

24/06/88

The following modification will cause the ST to be in a Halt condition for apx 14 sec following turn-on. This allows a Hard Drive time to go through its initialization. The modification will not affect reset timing (.3 sec). It's relatively simple in that it requires the replacement of only one resistor (in the 520 & 1040 series).

If you have a Hard Drive for your ST you presently have to turn on the HD, wait until it stops making noise (initialization...about 14 sec) and then turn on your computer. With the circuit modification below you can now turn both on at the same time (idiot proof).

520ST and 1040ST

All computers have reset circuits and a circuit to perform a reset after the computer has been turned on (allowing the power supply to stabilize). In the ST these two reset circuits are in one chip, a 556 timer IC (a 556 is two 555 timers in one package). Both circuits use the same timing components for a delay of .3 seconds. One circuit holds the reset low for .3 sec after the reset button has been pushed and the other holds the reset low for .3 seconds after power turn-on. This second circuit (power on reset) is the one we are going to change.

Basically we are looking at a 22Uf cap charging from B+ through a resistor (12k). When the voltage on the cap reaches trigger level the 555 timer turns off allowing the reset line to go high.

The formula for Time T with Cap C and Resistor R is as follows:

$$\begin{aligned} \text{Resistor} &= R \\ \text{Cap} &= C \quad T = (1.1) * R * C \\ \text{Time (hold down)} &= T \end{aligned}$$

For a stock ST

$$\begin{aligned} R &= 12k \\ C &= 22Uf \end{aligned}$$

$$\begin{aligned} \text{Thus: } T &= (1.1) * (12000) * (0.000022) \\ T &= .29 \text{ sec} \end{aligned}$$

Ok now for your computer....

Turn on your Hard drive and count the seconds until the activity light goes out. Mine is about 14 seconds. This time is what you need to determine the value of the resistor you are going to add to your ST.

For a time of 14 sec we use the following formula to determine the resistor we need.

$$\begin{aligned} R &= (14 \text{ sec}) / (1.1) * (0.000022) \\ R &= 578k \end{aligned}$$

Look in your ST for a Chip that has the number 556 on it (NEAR THE RESET BUTTON). Off pin 8 you will find a resistor with the color bands; brown, red, orange (12k).

520ST R83
1040ST R9

Cut this resistor loose and install a 560K resistor; green, blue, yellow.

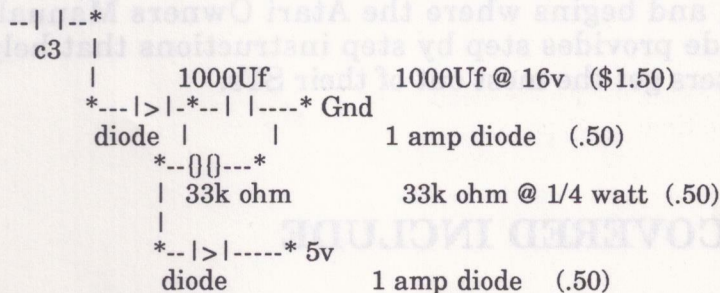
HARD DISK HARDWARE MODIFICATION

TURN-ON DELAY TIME INITIALIZATION

Now reassemble and check. Extremes of temperature can affect the timing of this RC circuit. I have found that a very cold computer (40F) can knock almost two seconds off the circuits reset time. Also, the 22Uf cap is manufactured with a tolerance of 20%. A 20% difference can make a 4 second difference in your calculations. You may want to install a variable resistor in place of a fixed resistor. If you are like me, you can't wait for your computer to come on and you will want the min wait time that still allows the HD to initialize properly. The variable resistor will allow you to set the time to the nearest second. Use a 360K resistor in series with a 500 K pot.

MEGA ST

Atari changed the design of the Reset circuit in the Mega ST. There are no longer two separate circuits for reset. I had to kluge my Mega to get the same functionality. See below:



C3 is a 10Uf cap under the switching power supply. This cap is charged by a resistor network similar to the 555 circuit in the 520ST. When the voltage reaches 1.2v the reset line goes high. The circuit has the same .3 sec delay for reset and 13 seconds for turn-on.

The above circuit connects to the Mega at three places: 5v, Ground and the positive terminal of C3.

Increasing the value of the 1000Uf cap increases the turn-on reset delay. The 33K resistor is used to fine tune the reset delay for power turn-on. Increasing the value of the resistor decreases reset delay and decreasing the value increases power on reset delay. Typical resistor values are from 18k (19 sec) to 50k (11 sec).

The bottom diode discharges the 1000Uf cap to the 5v supply (when you turn off the computer the 5v supply goes to 0) when you turn the Mega off. You should count to 5 before turning a Mega back on to insure a complete cold boot. Waiting 1 sec will not allow the 1000Uf to discharge enough (the 5v supply in the Mega discharges slowly after dropping to .6v) and your power-on reset delay may drop to 9 sec from 13 sec.

The top diode provides isolation so that pressing the reset button after the 1000Uf cap has charged (power on) will cause only a .3 sec reset.

The above modifications require some technical skill and should be done by a service center or a qualified person. Intersect Software makes no guarantees regarding the reliability of the above modifications. You, as always, perform the modifications at your own risk.

This technical note may be freely copied as long as the credits remain intact.

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Perth, W.A. 6000

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The ST's friendly mouse makes an excellent controller for the GEM-based WIMP environment, but the machine is being increasingly used as a hard working professional tool.

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introduces

ARTablet

A Professional alternative to mouse-drawing in graphics and CAD packages, for the ST range of computers.

Drawing with a mouse as required by many paint programs can be very difficult, not to mention imprecise. The solution to all of these problems is a graphics tablet, a peripheral that allows you to enter designs and data by drawing or tracing with an electronic pen, or in the case of point-by-point entry (as required by CAD programs), with a mouse-like "puck."

The tablet is very easy to use, you simply attach the cable from the tablet to the modem port on the back of your ST, plug the power supply for the tablet into an AC outlet, and place a copy of the installation accessory on your boot disk. When you boot up the system, just click on the ARTablet heading under the Desk selection on the menu bar, click on the install button, and you done.

The first thing you will notice when using the ARTablet is that, although the pen does not have to touch the tablet, it must be held close enough to be read by the tablet. The magnetic field that emanates from the tip of the pen can be read as far as 2cm away, a very nice feature-that allows you to trace material from a book, magazine, or other bulky source without cutting the original

When used with a drawing program like Degas Elite, Public Paint, Easy Draw 2, CAD 3D2 and GFA Draft the ARTablet is invaluable, the difference between drawing with a mouse and drawing with the electronic pen is comparable to the difference you would expect to notice if you tried drawing with a regular pen after drawing a picture with a brick, try signing your name with a mouse and then do the same thing with the ARTablet pen. You will notice quite a dramatic difference. The pen fits into your hand more comfortably and is very easy to manipulate.

With the ARTablet you can use the pull down menus, choose items from the item selector, respond to answer dialogs and alerts, there is also a button on the shaft of the pen that will mimic the right mouse button, which is especially helpful when flipping between screens in Degas Elite.

All this means that you can use the ARTablet without ever picking up the mouse. If, however, you prefer the mouse for certain operations, you will find that it remains active and unaffected by the installation software.

If you are serious about computer graphics, the ARTablet will be a useful, professional addition to your computer system. It is an efficient and reasonably inexpensive brush that will help you make ever-better use of your ST computer.

ARTablet is available in two sizes 15x23cm (6"x9") and 30x46cm (12"x18")
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Psssssst!

- * A 68000 "GAME MACHINE" is in the works..Atari will "try" to make sure it is not associated with the ST line...
- * FOR XMAS? A Transputer in every stocking? Looking good ATARI!....
- * CD - ROM By Christmas, There will be a very comfortable price tag on these babies...next, affordable Read & Write CD-ROM.

- * Overseas chip manufacturers plan to increase their production of one mb D-RAMs, which have four times the memory of the 256-k chips, to 52 million units in the third quarter of the year, up 32 percent on the corresponding period last year.

This will increase to 71.3 m chips in the last quarter, up 35 percent. Demand for D-Ram chips for use in personal computers, office equipment and non-military electronic devices has been overrunning production and is likely to remain at about 10 - 15 % above supply for the rest of the year.

- * GEM 2.2, A version of Gem is in circulation in Europe, not by Atari Overseas ...but private and reported to be excellent. Handles bigger H/D partitions and many other small problems are corrected.
- * Unix now has a mouse driven, icon-based, graphics interface. It's name is "OPEN LOOK". It features pop-up dialog boxes, pull down menus, overlapping windows and push buttons.
- * Seems the 68000 game machine is a happening after all....
- * In West Germany, Atari computers represent 10% of the total market for computers selling over 1000 Deutsch Marks (roughly equivalent to Aus \$800).
- * In Switzerland, the Atari ST's share is about 30% of the educational market.
- * In the United Kingdom, Atari sales accounted for some 40% of the 16 bit computer market.
- * In the U.S., over 1000 schools use ST's for math, reading, and language skills.
- * A U.S. firm will be the first to publish a personal computer magazine in the U.S.S.R. The magazine to be printed in the Russian language will be under the editorial control of the publisher of PC World
- * The Financial Times of London recently reported that the European recording industry is experiencing financial difficulties. Recording studios in Hamburg, Paris, and London are being forced out of business. The problem stems from the introduction to the music world of the personal computer and the midi interface.
- * By the way, the home computer which dominates the European recording market is ... the Atari 1040.

Psssssst! continued

- * If we all were to vote on the top ten graphics people in the Atari World I am sure that Tom Hudson would be among them. It hurts my heart to hear that Tom, in his quest for financial security, has left the Atari arena for the greener pastures of IBM land.
- * Transputer system is a fact but not for the USA for many months to come.. watch for it in Europe (UK) first.
- * The portable ST is a full scale reality, seems it's even nicer than the one displayed at Hanover.
- * IBM has now gone after the midi market with a vengeance, with a keyboard that has both the video and audio controllers built in and full audio spectrum available with full video potential also available.
- * Atari settles it's D-RAM suit...Rumor has it, the settlement was MORE than advantageous to Atari, We may see the so-called shortage (1040) dissipate quite rapidly.
- * IBM has reportedly purchased huge amounts of scarce chips to supply itself and render competition a severe blow.
- * Atari will introduce a 68030-based computer in the fall, as well as a laptop ST with a built-in hard drive.
- * In January, 1989, Atari will introduce "what will probably be the first 68000-based game machine." It should retail at around \$299Aus.
- * Atari will double the \$10 million it spent advertising video games last year.
- * Management is cautious about video games and expects the current excitement to wane, so Atari plans to undersell the market continually. Atari also will increase its emphasis on software, which is seen as less risky than hardware.
- * Because of the DRAM shortage, Atari is currently producing a few thousand PC clones a month, but later this year, the company will begin making the PC-5, an 80286 machine.
- * In addition to the 50 transputers currently in the hands of developers, Atari will have sent 200 more in June. The transputer should be available to the public before the end of the year.
- * Demand for Atari products, mostly computers, exceeds supply by at least 50%.
- * Video game sales this year should be twice last year's \$80 million, with the Atari 7800 and XE Game System accounting for more than half of these sales.
- * Over 80% of Atari's computer sales, around \$400 million to \$500 million this year, are outside the United States. Management hopes for 50% of computer sales to come from the United States in 1990.
- * Atari will probably open a factory in the United States before the end of the year.

TOS Error & BOMB Codes

The following is an official list of the errors that can appear while you are operating your ST computer.

This first list gives you the GEM error messages:

Error description	GEM Error code:	Error description	GEM Error code
OK (no error).....	0	Unknown device.....	15
Fundamental error.....	1	Bad sectors on format.....	16
Drive not ready.....	2	Insert other disk.....	17
Unknown command.....	3	Invalid function number.....	32
CRC error.....	4	File not found.....	33
Bad request.....	5	Path not found.....	34
Seek error.....	6	No handles left.....	35
Unknown media.....	7	Access denied.....	36
Sector not found.....	8	Invalid handle.....	37
No paper.....	9	Insufficient memory.....	39
Write fault.....	10	Invalid memory block address.....	40
Read fault.....	11	Invalid drive specified.....	46
General error.....	12	No more files.....	49
Write protect.....	13	Range error.....	64
Media change.....	14	Internal error.....	65
		Invalid program load format.....	66

Those bombs that appear on your screen are error messages from the 68000 micro-processor.

Description	Number of bombs	Description	Number of bombs
Reset: Initial PC2.....		Format Error.....	14
Bus Error.....	2	Uninitialized Interrupt Vector.....	15
Address Error.....	3	[unassigned, reserved].....	16-23
Illegal Instruction.....	4	Spurious Interrupt.....	24
Zero Divide.....	5	Level 1 Interrupt Autovector..	25
CHK Instruction.....	6	Level 2 Interrupt Autovector..	26
TRAPV Instruction.....	7	Level 3 Interrupt Autovector..	27
Privilege Violation.....	8	Level 4 Interrupt Autovector..	28
Trace.....	9	Level 5 Interrupt Autovector..	29
Line 1010 Emulator.....	10	Level 6 Interrupt Autovector..	30
Line 1111 Emulator.....	11	Level 7 Interrupt Autovector..	31
[unassigned, reserved].....	12	Trap Instruction Vectors.....	32-47
[unassigned, reserved].....	13	[unassigned, reserved].....	48-63
		User Interrupt Vectors.....	64-255