

CELEBRATING THE APPLE II

# II ALIVE

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Quality Computers™

A QUALITY COMPUTERS PUBLICATION  
VOL. 2 NO. 4 - SEPTEMBER/OCTOBER 94  
PRICE \$3.95

## A TALE OF ONE CITY

REPORT FROM KANSASFEST 94



**ANNOUNCING  
APPLEWORKS 5.0**

**INTERNET: THE CREATURE  
THAT HAD TO BE: PART 2**

**INTERVIEW WITH  
BILL HEINEMAN**

**CHRONOS: THE LIFE AND  
TIMES OF THE APPLE II  
OPERATING SYSTEM:  
PART 2**

# QUALITY COMPUTERS READY TO RELEASE APPLEWORKS 5.0

Quality Computers, publishers of AppleWorks 4.0, has announced a release date of October 1 for the latest incarnation of the most popular Apple II program in history. With over 40 new and improved features, the 5.0 upgrade is a huge step in the evolution of AppleWorks.

A true upgrade, AppleWorks 5.0 requires version 4.0, a 3.5" disk drive, 256K of RAM (Ile's must be enhanced). People who order the AppleWorks 5.0 upgrade will receive a set of update disks and an AppleWorks 5.0 manual addendum.

Following is the new features list as of August 15, 1994. The final version may vary.

### Miscellaneous

- Requires minimum 3.5" disk drive, 256K enhanced Ile (65C02 and Mouse Text)
- Files are compatible with AppleWorks 4
- Includes AfterWork screen saver engine with sample modules
- Includes free customizer program

### Macros

- Includes a full version of UltraMacros allowing you to create macros as well as play them. UltraMacros manual not included.
- New dot commands include "random" and "justify"
- Compiler now has "conditional" option

### Desktop

- Built-in printer buffer allows you to work while a document prints in the background
- Automatically switches desktops when current one is full
- Set pop-up alarms for any date and time, or for daily repetition
- New "Reverse" option added to ⌘-A option to let you invert the current order
- "Default sort" order can be selected for file lists
- TimeOut loads utilities only when both Apple keys are pressed for maximum speed
- Text files are loaded with margins set to "0" for maximum width
- File types can be changed
- Screen blanker delay is now reset when mouse is moved

### Word Processor

- New full-featured outliner
- Improved split screen capability with resizable windows
- Lets you print odd or even pages
- "Print to screen" option lets you easily preview (great for mail merge)
- MouseText can be printed from WP documents
- Find/replace allows wild card pattern matching
- ⌘-F text is preserved when switching to another document
- New option for more suggested spellings in spell checker
- Add non-printing comments to your documents

### Data Base

- Supports background text in SRL (single record layout)
- Displays PrintShop, hi-res, and double hi-res graphics in SRL
- New combined mode shows MRL list with SRL data updated live as you move through the list
- Categories can be hidden in SRL
- Add new records at the end of a file instead of inserting at the cursor (optional)
- Enter numbers of list item to grab it directly
- Spell out months if you want to
- Use Tab after text is entered
- New Find & Replace text feature

### Spreadsheet

- Enhanced "find" function
- Dynamic @Alert function updates each recalculation
- New @Today function updates each recalculation
- @Find is now case-sensitive
- Automatically recalculates before saving (optional)

# AN INTERVIEW WITH BILL HEINEMAN

by Tara Dillinger

*Bill Heineman is a programmer, game specialist, and Apple II visionary who works for Interplay, Parsons Engineering (where he's Manager of Software Development), and several other companies.*

*He may be reached at Parsons Engineering, 5101 Rimhurst Ave, Covina, CA 91723. Phone: 818/966-5538.*

**II ALIVE:** In some circles, Bill, you're known as "Burger Bill." Where did that nickname come from?

**HEINEMAN:** It started around 1983, when I was working 12-18 hour days at Interplay. I'd walk to work every morning and stop at a local burger place on the way and buy a couple of burgers for lunch. I virtually lived at Interplay, and when it was lunch time, I'd pull out the burgers and people would say "It's burger time!" That's when people started calling me Burger Bill.

But the incident that cemented the name was the day I got to work at 6 AM and worked for nine hours before I got hungry enough to eat lunch. I pulled this burger out of my drawer and started munching. One of the guys I worked with, who was a real health food nut, saw me eating the burger, and all of a sudden his eyes bugged out as he realized that that burger had been in my drawer for at least 9 hours—probably longer! He let loose this ungodly scream, leaped to his feet, and bolted out the door. A few minutes later my boss stormed in and demanded to know what I did to him. It turned out that he'd gone into the restroom and tossed his cookies. From that day forward, the nickname stuck.

**II ALIVE:** How did you first get started with computers? When did you get your first Apple II?

**HEINEMAN:** It was really early in the Apple II era—I'd say late 1977 or early 1978. Two friends of mine both got Apple IIs. I played around with them, trying to decide whether I wanted one of those or a TRS-80. Eventually I decided that since the Apple II had color, I'd go with that. So I saved up money from my paper route—I was 13 or 14 years old. And I bought a used Apple II and took it home and started playing around with it. About a year later I bought a disk drive for it. I knew imme-

diately that I wanted to work with computers for the rest of my life. I didn't expect that I would still be working with the Apple II 16 years later, though!

I was just playing games, learning BASIC, and having fun until my first real programming experience, which involved the game *Ultima I* (of course it was just called *Ultima* back then, since there weren't any sequels yet). A lot of that program was written in Applesoft BASIC. So I started playing around with the code and changed it into a game I called *Ultima Plus*. Every single command was a parody of the way it was in the real *Ultima*. And I added a bunch of new commands and weapons, like a super zapper that could wipe out all your characters. I changed the text so that characters said sarcastic things like "What would you like to steal tonight?" or "How many bags of slime can I shove down your throat?" instead of "How much food do you want to buy?" I spent quite a bit of time with it and mastered Applesoft and learned a little assembly. After that project was complete I knew I wanted to learn assembly language.

**II ALIVE:** What was your first programming job?

**HEINEMAN:** At one point I was really into figuring out how hardware worked. I took apart an Atari 2600 and figured how to program it, and that's how I got my first programming job with Avalon Hill. Back then Atari video games were the big thing, and I wrote *Penetrator* and *UXB: Unexploded Bomb* for Avalon Hill.

**II ALIVE:** Games seem to play an important role in your life.

**HEINEMAN:** Well, in 1980-82, I was the World Video Game Champion and wrote articles for the *Electronic Games Magazine* on

how to beat video games. So, yes, games always were important to me. They just seemed like the most fun thing you could do with a computer.

**II ALIVE:** After Avalon Hill, then what?

**HEINEMAN:** I worked for Time-Warner with a company called Owl Electronics. We designed a little cartridge which plugged into an Atari 2600 to let you play games over cable TV. It's very much like what the cable industry is trying to do today with Sega and Nintendo. But in 1983, people just stopped buying video games, and I was suddenly unemployed. I worked for Atari for a short time and got canned when they laid off everybody in my department.

After that, an old hardware hacker friend of mine helped me get a job at a place called The Boom Corporation, which died shortly thereafter but was reformed as Interplay. This was in late 1983, and I've been working for Interplay ever since then.

**II ALIVE:** Interplay did a lot of Apple II games. Are they still doing that?

**HEINEMAN:** Well, we've got two Apple II products in the wings, which I worked on, but unfortunately while there are plenty of companies willing to distribute PC and Mac games, not many companies are interested in the Apple II.

A lot of the games I port to the Apple are done just because I want to see an Apple II version of the game. But of course I can't release my version of the game without the permission of the people who own the distribution rights—and those people frequently want more money than the game is worth in the Apple II market. A perfect example of that is *SimCity*. I'm 99% done with a IIGS version of *SimCity*, but I've talked to Maxis and they wanted an exorbitant amount of money to let some other company distribute it.

But the biggest headache was *Ultima I* for the IIGS. In the fall of 1992, a couple of friends and I ported the 1986 reissue of *Ultima I*, revamped it, and updated it for the IIGS. We wanted Big Red to carry it, but when I first started to talk to Origin, the publisher, most of the people I talked to didn't even know what an Apple II was! It's amazing how short people's memories are. So we went back and forth for a while, and just when we had the wrinkles ironed out and a contract ready to be signed, Origin was bought by Electronic Arts. The whole company was in chaos, and they completely lost track of that little Apple II contract that was floating around. At this point I told Softdisk and Big Red that if they could get the rights to the game, they could publish it, but they were unsuccessful too.

So a year later, a friend of mine at Interplay asked me "What are we gonna do with this *Ultima* thing?" Out of frustration, I did what I should have done in the first place—I called

Richard Garriott, a.k.a. Lord British, the designer of *Ultima*. The first thing he said was "Oh, you have a IIGS version of *Ultima I*? Is it System 6 compatible?" He not only remembered the Apple II, but he'd kept up with it! He was ecstatic when I told him what I'd done, and ended up I getting the rights for Vitesse. It should be shipping by the time you read this.

**II ALIVE:** Speaking of games, let's quickly cover all your Apple II games. What were they?

**HEINEMAN:** For the Apple II, I did *Mindshadow*, which was a graphic text adventure, *Tracer Sanction*, *Borrowed Time* and *Tass Times in Tone Town*. For Epyx, I did *World Karate Championship*. Then *Bard's Tale III*, *Neuromancer*, *Dragon Wars*, *Ultima I*, *Mario Teaches Typing*, and *Mah Johng 2.0*.

For the IIGS, I did *Tass Times in Tone Town* and *Mindshadow*. For Casady and Greene I did *Crystal Quest*. And for Electronic Arts/Interplay I did *Bard's Tale I & II*—also *Battle Chess*, *Neuromancer*, *DragonWars* and *Out of This World*.

Oh, I forgot the ones I did for Softdisk G-S—*Rescue Rover* and a new release, *Catacombs Abyss*—a *Wolfenstein 3-D*-like game. And speaking of *Wolfenstein 3-D*, I'm working on a version of that for the IIGS, along with *Wasteland 2000* and *SimCity*.

*Bard's Tale III* and *Wasteland* for the IIGS were finished by the time we broke away from Electronic Arts. Sadly, both these programs were canned, not just for the Apple II but for the Amiga, IBM and the Mac, too.

**II ALIVE:** Interplay games seem to have a lot of detailed and subtle graphics in them.

**HEINEMAN:** Todd, our art director at Interplay, is the one responsible for that. That's an Interplay trademark, to put a lot of detail into a game. For example, in some of the dungeons in *Bard's Tale II* there are skulls in the walls, and if you stay there for a while you'll see a snake pop out, slither around and go back in again.

**II ALIVE:** You haven't just done games, though—you've also done several utilities and productivity programs, right?

**HEINEMAN:** Yes—the best-known is probably *Harmonie*, the printer driver collection from Vitesse. *The Deliverance 1.3* upgrade, also for Vitesse, was another one. I did a lot of code for their Quickie hand-held scanner, too. Another package I did was *ContactsGS*, which is now being released by Joe Kohn for Shareware Solutions. I also did a major amount of work on AppleWorks GS 2.0.

**II ALIVE:** People are curious about what happened to the AppleWorks GS 2.0 project. Since you mentioned it, what can you tell us about it?

**HEINEMAN:** AppleWorks GS 2.0 was initiated by Quality, who needed a project leader. Jim

Merritt became the project leader, but he just didn't have the time to devote to the project between his day job and his family obligations.

The source code was a nightmare. I started working on it independently from Jim Merritt in my free time. There was some duplicated effort, and Jim decided he didn't want to use my code—which was actually OK by me, because I was looking at the project as a learning experience—but then he dropped out of the project, and I didn't have time to be a real project leader. Although a few people were approached about leading the project, no one really wanted to take that responsibility. I've heard Quality Computers is letting some other groups take a shot at it now.

I still want to work on it, but my time is limited. I'd like to re-engineer the software so that every part of AppleWorks GS is a separate program—then you could use a program like The Manager to run whichever modules you needed. Publish and subscribe, like Mike Westfield has developed for his products, could be used to tie the modules together. It's doable, but a big job. Maybe someday. . .

**II ALIVE:** What other projects have you worked on?

**HEINEMAN:** Well, there was the Apple IIGS clone, the Avatar. We had done a lot of work on that, including all the hardware design and the Toolbox, but we wanted it to run at a much higher speed than the IIGS and we couldn't get a commitment from a supplier to make fast 65816 processors. You can get them now, but you couldn't when we first started working on the project. We redesigned it to use the ARM 7 RISC processor, and planned to have a 65816 emulation, but then Apple came out with the PowerMac, using a RISC chip, and we heard there were some people working on Apple II emulators for that. Between the lack of funding and the production cost, and the changes in the industry, the Avatar's market window came and went.

Steve Parsons and I also designed a product that combined the Avatar technology with the Game Wizard, a Super Nintendo add-on which allowed people to save cartridge games to disk and to modify them to have extra lives, skip levels, and so forth. The gadget we came up with was a plug-in for the Super Nintendo which could run Apple IIGS software like *HyperStudio*, *Teach*, and the Finder. The Super NES has a 65816 processor just like the IIGS, but there are a lot of other hardware differences between the two machines, and the design was complicated and expensive. Also, even though it ran IIGS software, programs had to be stored on IBM-style MFM disks. It didn't seem likely that people would spend \$400 for a IIGS emulator on their Super Nintendo when they could buy a used IIGS for the same price or a brand new one for \$599. If we could get the price down to \$199 it might be feasible, but we'd need to know for sure we could sell

(Continued on page 46)

## Interview

(Continued from page 25)

10,000 units to do that.

**II ALIVE:** There was some talk about you doing a 486 PC emulation card for the IIGs. What happened with that?

**HEINEMAN:** All of our energy and time went into the Avatar. We could still do the 486 card, if there was a demand—it's a trivial project as far as the hardware. The software is where the main time would need to be spent. The price we were considering was \$500, so if there are people who are willing to spend that amount for a 1 megabyte 486/33—or a 66 for a little more money—expandable to 16 MB, we might be persuaded to build them. You'd also need a SuperVGA monitor for your GS, which would drive up the price. I don't know if people will spend that much to put a PC into their IIGs.

**II ALIVE:** Tell us about the Focus HardCard. What is it?

**HEINEMAN:** It's a hard drive on an interface card that plugs into a slot on the IIGs or the Iie. They range in size from 40 to 500 megabytes. Since it's all on one interface card, there are no wires to hook up, nothing else to install. Plus it's an IDE drive, which is the PC standard for hard drives—the volume of IDE drives keeps the cost low. Parsons Technology sells them.

**II ALIVE:** In closing, people usually assume that anyone who is doing well or seems to be creative or literate has gone to college. But you didn't, did you?

**HEINEMAN:** Not only did I not go to college, but I didn't actually graduate from high school. The school was bad—gangs, drugs, violence—so I took the California equivalency test and got out of there.

Sometimes a college education can be a negative for someone in programming, especially with games. You have to be able to think creatively, but the way they teach programming in college is more of a "follow this recipe" approach. The student can make the mistake of thinking that what they learned in school is the only solution, and stop thinking on their own. Sometimes we get job applicants at Interplay with a Master's or even just a Bachelor's in computer science, and they can't answer the simplest technical questions. They know how to write a program in C but they don't know how the machine works. One tipoff that someone went to college is when they tell you to buy a faster computer if a program doesn't run fast enough. That attitude just doesn't work in the game industry—the program has to run on a 386 or an unaccelerated Apple IIGs. The original Atari video games and even the original Nintendo weren't exactly speed demons. When you do a game, you have to write good code, and you have to understand and exploit the machine's capabilities to the fullest. Writing games separates those who really understand the art of programming those who don't. ■

# What's New From Troll?



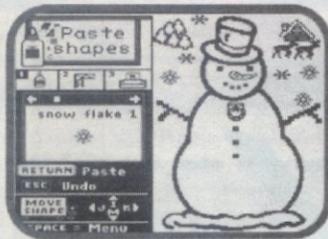
## Troll First-Start Biographies

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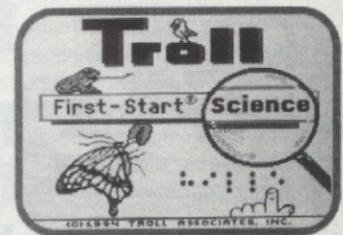
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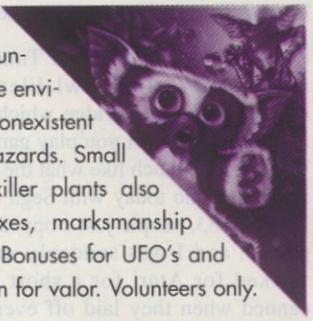
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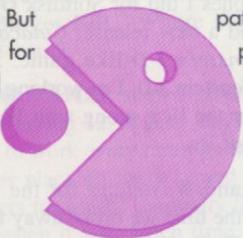
Applications being accepted for replacement gunners in high-risk job. Hostile environment. Road conditions nonexistent due to meteor and crater hazards. Small native population of killer plants also reported. Quick reflexes, marksmanship and diving skills a must. Bonuses for UFO's and enemy tanks. Recognition for valor. Volunteers only.



**PAC-MAN**

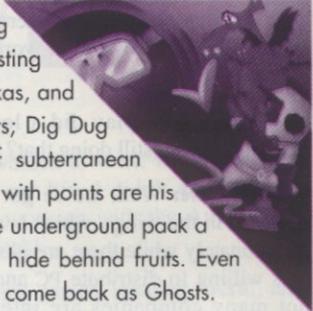


The refinements of dot chomping lead to high scores as hungry Pac-Man avoids ambush by voracious goblins. When Pac-Man gulps an energy dot he can turn the tables and eat everything in sight. . . that includes yummy bonus nuggets, sending scores into the thousands. But goblins won't allow themselves to be gobbled for long; and soon become their old selves, fast and sneaky, to try to put an end to Pac-Man's three lives.



**DIG DUG**

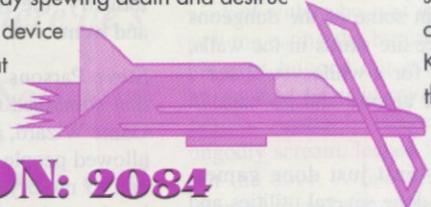
Dodging and blasting Pookas, and dropping rocks on fire-breathing Fygars; Dig Dug burrows his way through a maze of subterranean paths. Ripe fruits and veggies, loaded with points are his passion. But the evil denizens of the underground pack a potentially lethal wallop, and can hide behind fruits. Even when Dig Dug kills them they may come back as Ghosts.



**STARGATE**

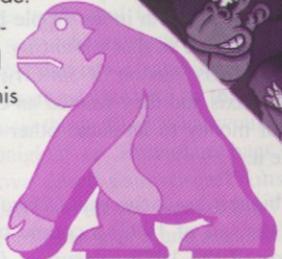
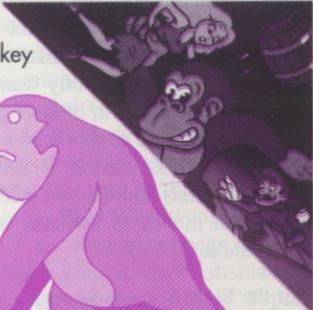


The entire universe is your enemy as you struggle to rescue humanoids stranded on the planet surface. To take them into a Warp you must reach the Stargate. But getting there isn't easy. Yllecian space guppies, Dynamos, Space hums, Phreds, Big reds, Munchies, landers, Baiters, Pods and Swarmers block the way spewing death and destruction. Will your cloaking device protect you from the threat within. . . Mutant humanoids?

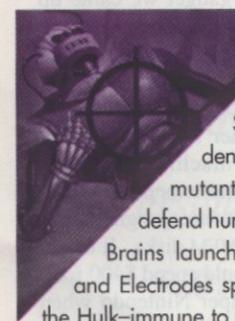


**DONKEY KONG**

You can feel an excitement tingle up and down your spine when you play Donkey Kong at home, just like at an arcade. Your joystick guides Mario, the fearless carpenter, up the girders and elevators as he attempts to rescue his sweetheart from the clutches of Donkey Kong. All the thrills of the arcade game.



**ROBOTRON: 2084**

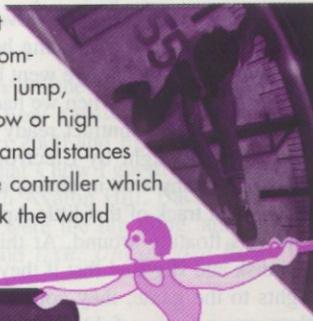


It's the year 2084, and robots are turning against their masters. Saved by a genetic accident, only you can resist their mutant re-programming and defend humanity. Grunts close in. The Brains launch missiles. Tanks, Sheroids and Electrodes spell death. And then there's the Hulk-immune to your laser. Your mission is to rescue, evade and destroy. Good Luck.



**TRACK & FIELD**

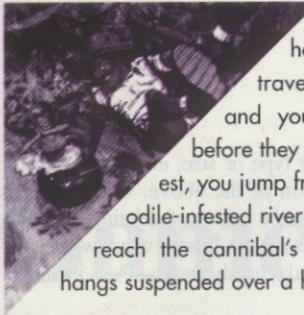
You've worked long and hard to make it this far. Now it's time for head-to-head competition in the 100 meter dash, long jump, javelin, 110 meter hurdles, hammer throw or high jump. You're out to beat the best times and distances on record. Included is a special arcade controller which gives you everything you need to break the world record in athletic competition.



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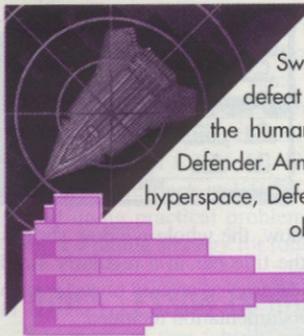


## GALAXIAN

You feel that spine-tingling exhilaration every time you play GALAXIAN in an arcade. Now the same sensation is yours at home. Wave after wave of Drones, Emissaries, Hornets and Commanders come winging in from deep space. Skillfully you slide your ship right and left with your joystick, dodging their fire and blasting them out of the universe.

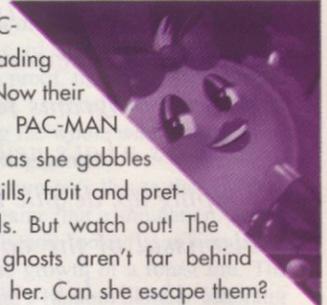
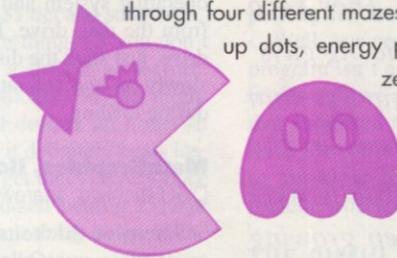


## DEFENDER

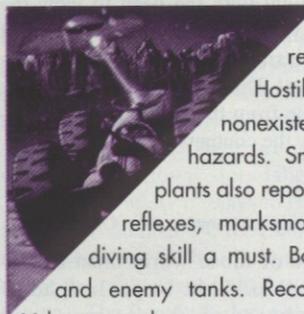


Landers, Bombers, Baiters, Pods, and Swarmers. The alien attack has come, and defeat at the hands of crazed invaders threatens the humanoids. Their only hope is the spaceship, Defender. Armed with smart bombs and able to shift into hyperspace, Defender evens the score only to become the object of another foul attack: kidnapped humanoids transformed into killer mutants.

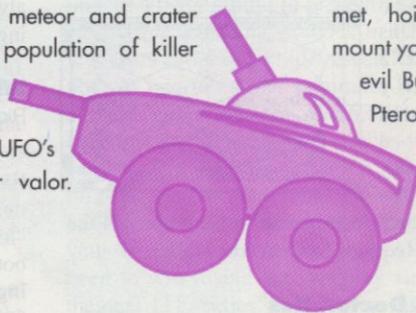
It was the love match of the century, PAC-MAN, star of the arcade, and his leading lady the unforgettable MS. PAC-MAN. Now their romance continues. You guide MS. PAC-MAN through four different mazes as she gobbles up dots, energy pills, fruit and pretzels. But watch out! The ghosts aren't far behind her. Can she escape them?



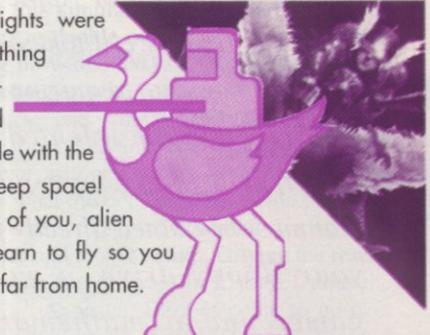
## MOON PATROL



Applications being accepted for replacement gunners in high-risk job. Hostile environment. Road conditions nonexistent due to meteor and crater hazards. Small native population of killer plants also reported. Quick reflexes, marksmanship and diving skill a must. Bonuses for UFO's and enemy tanks. Recognition for valor. Volunteers only.

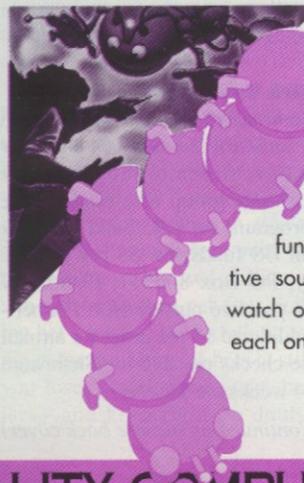


In days of olde, when knights were bolde—they never saw anything like this! You don your helmet, hoist your lance and mount your ostrich to do battle with the evil Buzzard Riders in deep space! Pterodactyls to the right of you, alien eggs to the left—learn to fly so you won't die so very far from home.

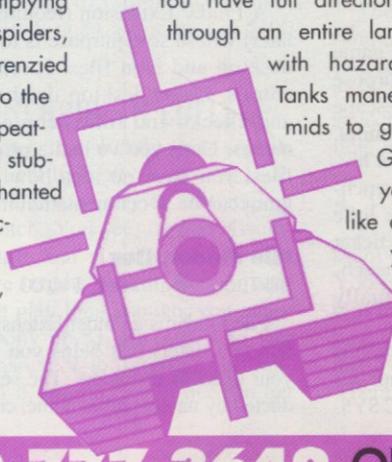


## JOUST

## CENTIPEDE



An insidious invasion of multiplying insects (centipedes, jumping spiders, poisonous scorpions, and frenzied fleas) pose different perils to the mushroom patch. You must repeatedly blast enraged creepers and stubborn obstacles or lose your enchanted fungus. Remember to listen for distinctive sounds of the attacking bugs; and watch out for blasted centipede segments, each one grows a new head.



You have full directional control through an entire landscape filled with hazards and targets. Tanks maneuver around pyramids to get you in their sights. Guided missiles hurtle toward you. But your vehicle handles like a dream on 0-gravity glide, and you've got plenty of ammunition for saucer hunting. What could go wrong?

## BATTLEZONE

