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# VIDEOGAMES

## Rolling your own

DANNY GOODMAN, CONTRIBUTING EDITOR

LAST MONTH, WE SAW HOW AN APPLE computer, a working knowledge of 6502 microprocessor assembly-language, and a special development system can help you design your own games for the Atari 2600 and 5200 systems. But for those who like to program their own games, there is another game system—and a darn good one at that—that has been open to user programming for years. And you don't need assembly language or a computer to get anywhere. I'm talking about the unit that started out as the Bally *Professional Arcade*, more recently known as the *Astrocade* (shown in Fig. 1).



FIG. 1

The system has had a long and checkered career in the volatile videogame industry. As we go to press, the future of Astrocade is unsure as they attempt to extricate themselves from Chapter XI. But that's not what this story is about.

As a good many of the estimated 120,000 *Astrocade* owners know, the *Astrocade*, in addition to playing some of the graphically and sonically best videogame cartridges ever, is programmable in BASIC with the help of the BASIC language/cassette-interface adapter. In recent times, this accessory and well-prepared BASIC tutorial/reference manual has been included as standard equipment with the unit.

The open access to the *Astrocade* has caused a closely knit and loyal following of *Astrocade* enthusiasts to band together in users groups and in an open exchange of information via the major news pipeline for Astrocoders called *The Arcadian*, a monthly newsletter published by Bob Fabris (3626 Morrie Dr., San Jose, CA 95127). Each issue contains program listings and more advanced programming tips from experienced users like Andy Guevera.

Andy has taken his interest in the *Astrocade* up to the assembly-language level (Z80 microprocessor). But in so do-

ing, he left tracks for others to follow. He now produces a plug-in cartridge called the *Machine Language Manager* (The Bit Fiddlers, P.O. Box 11023, San Diego, CA 92111-0010), which guides the way for novice programmers. You'll still need to know Z80 machine language, but in the manual that comes with the cartridge, Andy recommends some introductory books. Machine language allows you to program faster action within the limited built-in RAM of the *Astrocade*. But there is still plenty going on in BASIC.

The 114-page *Astrocade Sourcebook* (635 Los Alamos Ave., Livermore, CA 94450), produced semi-annually by Richard Houser, lists practically every one of the hundreds of third-party programs available—a large percentage of them in BASIC on cassette. Most of these tapes have been designed by dedicated hobbyists with a love for the capabilities of the *Astrocade* system. Every once in a while, one of these hobbyists finds a programming specialty.

George Moses, for example, has unlocked the secrets to the three-voice music synthesizer of the *Astrocade*. His company (George Moses Co., P.O. Box 686, Brighton, MI 48116) offers several cassettes of straight music (Scott Joplin rags, Christmas carols, Bach, and more) playable through the console's synthesizer. For the musically creative, he also has a music-assembler program to let you try your hand at it.

George, by the way, produced the continuously running musical score for one of the first third-party game cartridges for the *Astrocade*, a family-oriented game called *Treasure Cove* by Spectre Systems (Box 1741 Dearborn, MI 48121). Bret Bilbrey, one of the principals at Spectre was attracted to the Bally system back in 1977 (in the days of the Fairchild *Channel F* and dedicated Atari videogames) because he could do things with the BASIC cartridge that no other videogame could let him do. Since then, Bret and a few others have turned what was a hobby interest into a career, designing games for the *Astrocade*.

With the right system, imagination, and a strong desire to master the technical side of programming in BASIC or (preferably) machine language, rolling your own videogames is certainly within almost everyone's reach.

## Fox Video Games' Flash Gordon for Atari 2600



CIRCLE 101 ON FREE INFORMATION CARD

Fox Video Games Flash Gordon									
GRAPHICS									
SOUND									
EASE OF LEARNING									
CHALLENGE									
VALUE									
	1	2	3	4	5	6	7	8	9 10
	Poor		Fair			Good			Excellent

I'd hate to be in the shoes of the videogame designer who steps into the boss' office to receive an order to develop a game around a popular theme. It can't be easy to force a game to fit a particular mold. That's what I expected to find when I plugged Fox Video Game's *Flash Gordon* cartridge into my 2600 console. But after playing the game for a while (and being a Flash Gordon fan), I got the impression that somebody came up with a space game, and Fox simply pulled "Flash Gordon" out of its list of space movie titles.

The screen is divided into two main game-action areas. The top half is where the prime action is located—your rocket ship, targets, and stranded spacemen you can rescue. In the lower half is an aerial map of tunnels through which your rocket ship travels. Your goal is to clear each tunnel level of hatching pods and the spider warriors they produce. Two amorphous alien fields, called Disrupters, pursue your every step, trying

continued on page 14

# VIDEOGAMES

continued from page 12

to enshroud your ship in deadly debris. Every time you successfully shoot five spider warriors from a hatching pod, you have the added power of a temporary shield. Floating through the tunnels at random are your fellow spacemen whom you must pick up by touching them with your ship.

Hatching pods are distributed unequally through the maze of tunnels. When they are grouped together, there is a likelihood that the sluggish Disrupters will catch up to you. Unless your shields are intact while you escape from the Disrupter's field, you'll have a tough battle on your hands trying to survive the onslaught of debris. Occasionally, however, a Disrupter Generator flies across the screen. If you can shoot one, the Disrupter is stalled momentarily, giving you a head start away from it.

The joystick control in this game is a bit odd at first. When you want to move your rocket ship to the left on the tunnel map, for example, the rocket ship on the screen glides toward the left margin. But if a spaceman comes into view on the right, and you push your joystick to the right, your blip on the map immediately reverses direction while your rocket ship slowly glides over to the right of the screen. I suppose that it is the two speeds (instant on the lower map, gradual on the top screen) that makes it feel awkward. I'm sure it was designed that way, too, so that the lure of the spacemen would perhaps draw you backwards toward an oncoming Disrupter.

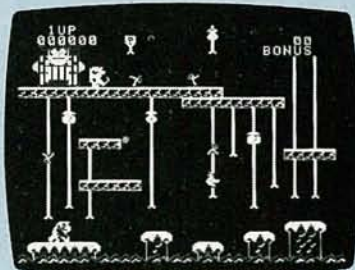
But after being tricked into retrieving spacemen for bonus points a few times, only to be annihilated by a disrupter, you lose interest in rescuing spacemen. Even though you're passing up extra bonus points, you'll gather more points in the long run if you simply ignore the men and go after the next hatching pod as planned. That takes away from the urgency of rescuing spacemen. If the game play required you to pick up spacemen by penalizing you if you didn't, then you'd have a more interesting game on your hands.

But with the same screen images reappearing wave after wave, the game doesn't hold interest for long. That's true even though the waves rapidly become more difficult. There is little in the way of discovery in this cartridge—it becomes a

simple durability contest from the first wave.

And if this game action has some connection with Flash Gordon, it eludes me. At least there should be *some* reference to Ming, Dale, and Dr. Zarkhov.

## Coleco Donkey Kong Junior for Colecovision



CIRCLE 102 ON FREE INFORMATION CARD

Coleco	Donkey Kong Junior									
GRAPHICS										
SOUND										
EASE OF LEARNING										
CHALLENGE										
VALUE										
	1	2	3	4	5	6	7	8	9	10
	Poor		Fair			Good			Excellent	

If you have ever followed the exploits of Mario and his efforts to rescue his girl from the clutches of the fierce Donkey Kong, then you'll better understand the story behind *Donkey Kong Junior*, another stunning arcade translation by Coleco for their *Colecovision* system.

The story goes that Mario finally captured Kong. Now the tables are turned. Mario is the bad guy, as jailor of Kong. Kong's pint-sized protege, Kong Junior, is on the trail of his father, trying to reach the key that unlocks cages and chains.

With the typical *Colecovision* high-resolution graphics, *Junior* is certainly one of the cutest games available for a home videogame, yet the cuteness doesn't get in the way of

sincerely challenging game play.

The game features three completely different game screens, each with its own particular challenge. The first screen makes Junior swing from vine to vine while eluding the harmful Snapjaws (they like to climb vines at random). Swinging Junior from vine to vine is accomplished by moving the joystick to one side, unless he needs to leap from a platform to a vine, in which case you need to use a side action-button to make him jump.

On to the second screen, which has Kong's cage chained down. Junior must swing to six dangling chains. As he pushes each lock to the platform, the chain holding the cage is released. All six locks need to be pushed to the top while avoiding both Snapjaws and flying Nitpicker birds.

The third screen is a repetition of the first screen, but the fourth screen features a unique jump board (a precisely timed bounce buys Junior some extra time and bonus points), moving platforms and chains, and egg-dropping Stookybirds, which Junior must swing amidst on his way to the key for dad's cage.

I find the game graphically interesting for longer periods than the excellent-looking *Donkey Kong*. For instance, the graphic depiction of this little diapered chimp character swinging from vine to vine is clever.

Each screen has its own background music or sound, and the tune played at the end of a successful screen is catchy. Moreover, as Junior makes his way through a screen, the sound he makes is believably ape like.

I wasn't sure whether the greater ease of attaining higher levels was a result of playing so many dozens of hours of *Donkey Kong* or whether it was because *Junior* is actually a little easier to control. It may just be that I have become accustomed to *Colecovision's* controllers and response-time characteristics. But whatever the reason, you will probably find that you can progress through at least one shot at all the screens within a couple of hours of dedicated play.

Unlike most spin offs (Ms. Pac-Man, most noticeably), *Donkey Kong Junior* is a far differently playing game from its predecessor. It's different enough to warrant placing *Junior* high on your "to buy" list for the *Colecovision*. **R-E**