



Astrocade

Originally developed by Bally, this deluxe videogame offers superb graphics and sound.

DANNY GOODMAN

FEW VETERAN VIDEOARCADE GOERS CAN FORGET SOME OF THE great old games from the late 1970's; games like *Gunfight*, *Sea Wolf* (remember looking through the periscope), and *280 Zzzap*. Those games were so much fun to play that you can still find them in many arcades, although you may have to look around a bit. You can now play them at home, too, if you own an *Astrocade* from Astrocade, Inc.

If the unit and the manufacturer are unfamiliar to you, it is because both have undergone name changes recently. The *Astrocade* was formerly known as the *Bally Arcade*; the manufacturer's old name was Astrovision. That unit was originally developed by Bally, the manufacturer of the popular Midway coin-operated arcade games; Astrovision bought all the rights to the videogame from Bally a few years ago. All those name changes are bound to cause some confusion, but Astrocade's current plans include some aggressive marketing and a hefty advertising budget—that should help things along.

In its earlier days, the unit was known for its detailed color graphics and interesting displays. No one could fail to smile when the defense ran out on the field in *Baseball*. The sound was far better than its early contemporaries, too.

Even today, that videogame is one of the most sophisticated on the market. The heart of the unit consists of three separate microprocessors. The central processing unit is a powerful Z80 IC that operates at 1.8 MHz. A custom video-processor LSI IC is used to control the color for better animation effects. In addition, that IC, operating at 7 MHz, increases animation speed 20 times. The *Astrocade* is also the only videogame with an NTSC-standard video output, making it fully compatible with all video recorders and

broadcast equipment. The third microprocessor, a custom I/O processor, handles all of the joystick and keypad inputs, and creates the sound effects; three separate on-board sound synthesizers generate both AM and FM noise, and have a frequency range of 2 Hz to 100 kHz. Of course, all of that sophistication has a price—the *Astrocade* is one of the most expensive units available, with a suggested retail of over \$300.

But you get a lot for the money—the videogame has a number of excellent features that, unfortunately, no other game makers have picked up. First of all, the hand controllers are the pistol-grip type with a trigger for the "action" button, and a single knob on top; that knob is both a joystick and rotating steering control.

But playing the game is not all that the controllers are used for. Once the unit is turned on, you don't need to touch the console again until you change or install a cartridge; everything can be done using one of the controllers. That's because the *Astrocade* is menu-driven.

When you turn the console on (the ON/OFF switch is rather inconveniently located in a recessed position at the console's rear) a menu appears on the TV screen. If no cartridge is plugged in, the four games built into the unit (*Gunfight*, *Checkmate*, *Calculator*, and *Scribbling*) are listed; with a cartridge installed, those games are listed along with all those on the cartridge.

Once you've decided what game you want to play, you have to enter that and a few other pieces of information into the unit. A series of prompts is used here to make sure that you have done it correctly. Press the controller's trigger, and it asks for the number of the game you want. Rotating the knob on the controller, changes the number shown under the prompt message. When you have the

number of the desired game on the screen, press the trigger and the game number is entered into the computer. The number of players, the number of rounds, and the difficulty are all entered in the same manner—there's no need to get up from your easy chair.

Another *Astrocade* feature is a calculator-like keypad. That can be used in place of the hand controller to enter the information required before the game begins; it is also used by the *Calculator* and *Scribbling* games, as well as by the *Astro BASIC* cartridge.

All of that aside, the reason you buy any videogame is the games available. Having four games built into the machine is an advantage. Actually, two of them aren't games at all, but could be more accurately called "activities." *Calculator*, for example, is a "video" calculator that displays all of the figures entered and all of the operations performed, as well as their results. Although only 10 lines are displayed at any one time, it is possible to scroll up and down through up to 92 entry lines. *Scribbling* lets you use the built-in keypad and the hand controllers to create a wide variety of multi-colored patterns. Perhaps the most interesting feature in that activity is that it lets you create a random kaleidoscope of color and patterns on your TV set by simply entering "0" players when the "how many players" prompt appears. Those patterns and colors are simply amazing to watch.

Getting to the games, *Checkmate*, a game similar in concept to Atari's *Surround*, is a great deal of fun. In that game, the object is to create as long a line as possible without running into your own, or any of your opponent's lines. The version here is for anywhere from one to four players. All of the games start out with four lines, however, with the computer generating any lines that are not under "human" control.

Gunfight is a two-person game that is just what the name implies. Players shoot at each other until one reaches a score determined at the start of the game. In later stages of the game, a moving "covered wagon" obstacle adds some interest.

As nice as having all that built into the unit, the real strength of any videogame lies in the plug-in software that is available. In the *Astrocade*, the game ROM's are housed in cartridges that are shaped like audio cassettes, without the holes for the tape spools. One advantage of those smaller-sized cartridges is that they are much easier to store. In fact, there is storage space for up to 15 cartridges under the *Astrocade*'s plastic cover. Any owner of other cartridge-based video games can tell you what a headache it is keeping cartridges from being strewn around the room.

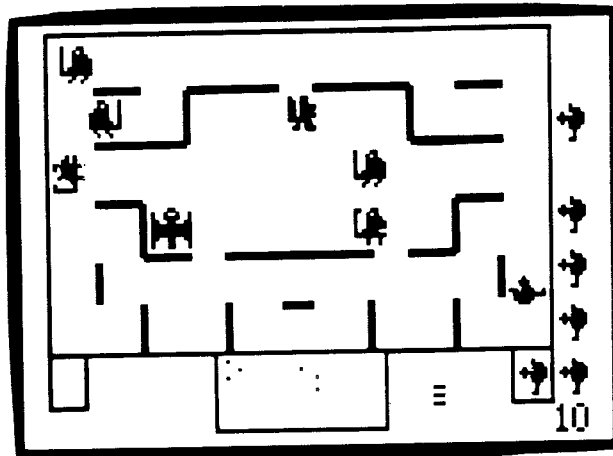
Perhaps the most frantic action of any cartridge for any game is found in *Astrocade*'s *Space Fortress*. The play is based on the arcade videogame *Space Zap*. In *Space Fortress*, you are in control of a spaceship in the center of the screen. You aim your laser in one of four directions—up, down, left, and right—using the joystick; the laser is fired by pressing the trigger. What you are shooting at is an alien gun and the fireballs it launches. The gun can appear at random at any of the four screen edges. Your goal is to keep the fireballs away from your ship. The longer you last, the more intense the barrage, until guns seem to be blasting away at you from all four directions at the same time. If all of that wasn't enough, you also have to contend with an erratic robot kamikaze.

The action and sound are superb, but the best part happens when you are finally blasted. Your ship's explosion is among the most stunning effects found in any videogame.

Galactic Invasion, which is very similar to the *Galaxian* arcade game, shows off the *Astrocade*'s detailed graphics very well. The motion of the aliens gives that "floating" or wavy look. And the individual aliens retain their colors and resolution when they peel out of formation to attack. And just like the arcade games, the number of points earned for hitting a difficult target is shown in a cloud of video "debris" where that target used to be. Other cartridges worth looking into are *Amazin' Maze*, *Astro Pin*, and *Astro Battle*.

But, as with many of the other videogame manufacturers, the best is yet to come. Several new cartridges are due by the end of 1982.

Wizard is a good home version of the popular *Wizard of Wor* arcade game. It has many of the features of the coin-operated



THE WIZARD, a home version of *Wizard of Wor*, has many of the features of that popular arcade game.

version including a "radar screen" display to track the invisible monster in the maze.

Pirate Chase, though not as graphically interesting as some other cartridges, is still a good hand-eye coordination test. The object is to steal a treasure without being "caught" by a speedy pirate.

Everyone seems to be coming out with a *Pac-Man*-type gobble game, and *Astrocade* is no exception. We tried out a prototype cartridge for their new game, *Munchie*, and found it to be one of the most satisfying home versions of that theme.

A typewriter-like keyboard addition for the *Astrocade*, *Zgrass 32*, has been in the works for some time and should be available soon (see the April 1982 issue of **Radio-Electronics** for a report on that unit). But in the meantime, you can still take advantage of the *Astrocade*'s programmability with the *Astro BASIC* (formerly *Bally BASIC*) cartridge. That version of BASIC is rather limited, but the cartridge can get the interested and creative user going quickly. The cartridge has a built-in audio interface that allows you to store your programs using a cassette recorder. An overlay for the console keypad shows you how to enter letters and commands (two-button sequences). Users groups have sprouted up in several areas around the country, giving everyone a wider library of software.

Another nice feature of the *Astro BASIC* cartridge is the above-average instruction booklet. Rather than just providing instructions, it is, in fact, a small course in computer programming—complete with programming examples, screen, and other illustrations, etc. It is really quite impressive. Unfortunately, the same cannot be said for the instruction booklets that accompanied the rest of the cartridges. Mostly, they consisted of little more than a description of game play; no illustrations, suggested strategies, etc., were included. Hopefully future instruction booklets will be upgraded to bring them up to the high level of the one included with *Astro BASIC*, and the sophistication of the *Astrocade* itself. **R-E**

MANUFACTURER

Astrocade, Inc.
6460 Busch Blvd.
Columbus, OH 43229