

Radio- Electronics

SPECIAL ISSUE:
VIDEO ELECTRONICS

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DGS

COMPUTERS - VIDEO - STEREO - TECHNOLOGY - SERVICE

Cover story

VIDEO COLOR PROCESSOR

build it for your VCR

New and revolutionary!

DIGITAL TV SETS

How they work

Build an inexpensive

SELECTRIC ADAPTER

for letter-quality printouts

Save money!

VCR REPAIRS

you can do yourself

How to design

FILTER CIRCUITS

to match your needs

A
GERNSBACK
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PLUS:

- ★ Hobby Corner
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SEASON'S GREETINGS

*The editors and staff
of Radio-Electronics
join in sending
holiday greetings and
our best wishes for
a happy new year*

ON THE COVER

If you're like many home-video hobbyists, your videotapes leave something to be desired. Your colors may appear washed out, the picture is filled with noise, or, perhaps your edits are far from smooth. Well, there's a way around those problems, whether you're making new tapes or duplicating old ones. With the color processor you can create fade-ins and fade-outs, reduce background noise, and you can vary color saturation from black-and-white to full chrominance. The article describing its construction—which is only one of our special video features this month—begins on page 49.

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VIDEOGAMES

Holiday shopping

DANNY GOODMAN

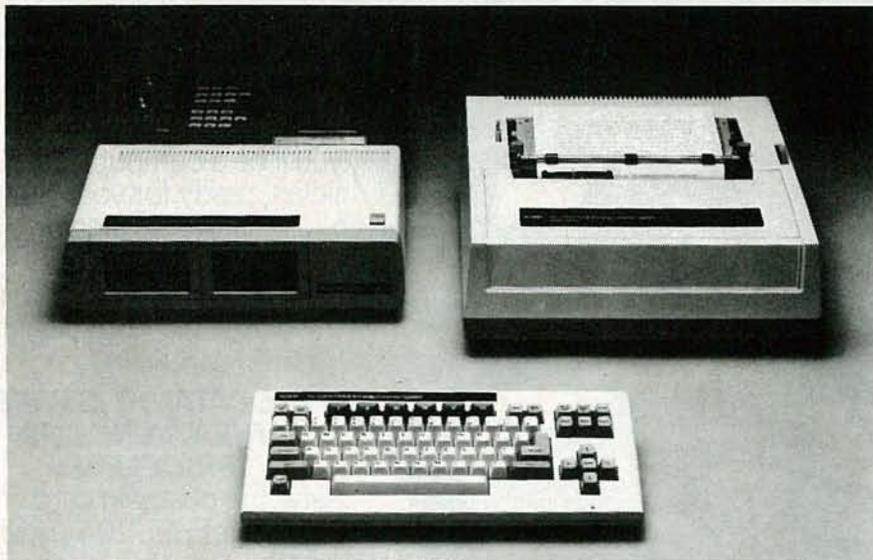


FIG. 1

IT'S TIME ONCE AGAIN TO PUT OUR Christmas wish lists in order. Fortunately, we videogame players are a pretty easy lot to shop for, what with all the cartridges and accessories that are available for just about every machine in captivity.

Probably at the top of every 2600, *Intellevision*, and *ColecoVision* owner's list is the computer add-on for the respective system. After a lot of years and hot air about turning videogame systems into full-fledged computers, we finally are going to have the real thing for each of those systems.

The *Entertainment Computer System* is a unique addition to Mattel's (5150 Rosecrans Ave., Hawthorne, CA 90250) *Intellevision* game because its primary focus is on extending the entertainment possibilities of the console. Music aficionados will want the piano keyboard and music recording/playback software before the computer keyboard. Yet with the latter, you can learn some of the basics of programming game graphics and sound.

Coleco's (945 Asylum Ave., Hartford, CT 66105) computer add-on, shown in Fig. 1, is more substantial in the realm of personal computers. The value-packed system includes a very powerful computer module with mass tape storage, a letter-quality daisywheel printer, and a few excellent software programs thrown in for good measure. (Coleco's *Adam* is essentially the same machine). While \$450 may

seem like a lot of money, it buys a real computer system that won't need a bunch of further add-ons to become a serious machine. At the same time, the computer gives the games player the ability to play Coleco's line of Super Games, with more play screens than many original arcade games.

Owners of the *Vectrex* self-contained videogame from GCE (233 Wilshire Blvd., Santa Monica, CA 90401) will surely want to experiment with the new lightpen. It's only about \$40 and comes with a special graphics cartridge that lets you draw on the screen with the pen and perform some elementary animation. Other light pen cartridges include music and geography learning tools plus a more sophisticated animation package.

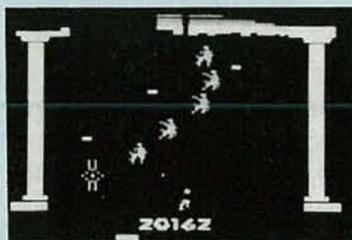
Over at Atari, roller-ball controllers are new on the scene. Some may opt for Atari's unit, but the Zircon (475 Vanell Way, Campbell, CA 95008) *Trackball Controller* (\$30) has two fire buttons for left and right-handed players as well as a built-in adjustable rapid-fire control. And for rapid firing on regular joystick controllers, the \$13 *Blaster* from Questar Controls (670 NW Pennsylvania Ave., Chehalis, WA 98532) is a simple little module that plugs in right at the connector on the console. A variable control allows firing up to 20 shots per second. That'll save wear on the thumb.

If you own a 2600 and don't have a Starpath *Supercharger* yet, let Santa know. That \$45 plug-in addition to the 2600 will give you some of the best games playable on that system with graphics resolution that rivals that of the 5200 and *ColecoVision*. Games are loaded in from cassette tapes; and some games progress through three or more loads into several levels of play. You're missing half the fun if you don't have one.

Coleco is adding all kinds of accessories for its unit, but one of the most functional comes not from Coleco, but from Zircon. It's called the *Port Expander* and plugs into one of the controller jacks on the console. It allows you to keep the original *ColecoVision* controller attached while you also plug in any other Atari-compatible joystick controller that suits your fancy. That way you have the numeric keypad readily available for selecting game level and restarting. For only \$10 each, the *Port Expander* makes an excellent stocking stuffer for the Coleco addict.

To all our readers, best wishes for the holiday season.

Imagic's No Escape for Atari 2600



CIRCLE 101 ON FREE INFORMATION CARD

Imagic	No Escape									
GRAPHICS										
SOUND										
EASE OF LEARNING										
CHALLENGE										
VALUE										
	1	2	3	4	5	6	7	8	9	10
	Poor		Fair			Good			Excellent	

continued on page 22

VIDEOGAMES

continued from page 20

While there have been dozens of games for the 2600 in which the player controls a missile-generating object across the bottom of the screen to shoot objects hovering above, *No Escape* from Imagic (981 University Avenue, Los Gatos, CA 95030) is a refreshing, new approach to the old action.

In that game, which uses a theme based on Greek mythology, one or two players (alternately) control "Jason" across the screen bottom with the joystick. He is inside a temple, the roof of which consists of several layers of colored bricks supported by columns at each side of the screen.

Scooting between Jason and the temple roof are as many as six "Furies" at a time. Jason, fortunately, has an endless supply of stones—but, to make life difficult, he can't hit the Furies directly.

To kill off each wave of Furies, Jason must hurl a stone to the temple roof, loosening a brick from it. The gently falling brick must land on one of the Furies for the demon to disappear. A direct hit with a stone brings an extra Fury back to life. That kind of bank shot is no easy feat, especially on higher levels. That's because at those higher levels the Furies are significantly more erratic in their behavior. Plus, as the waves get more intense, the Furies start stoning Jason.

Jason has a limited number of lives, as shown by a relative lifeline on the screen. As he finishes each wave, his lifeline increases. But hits by the Furies or his own bricks subtract from his total.

Every two waves, the type of Fury changes. Our personal favorite is the griffon-looking one in waves 3 and 4. Building onto the intensity of each wave is a more ominous sound repetition until all Furies are gone.

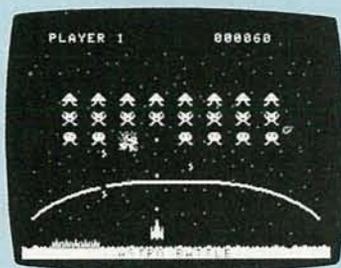
The skill involved in mastering *No Escape* is considerably more than simple hand-eye coordination. In some waves you must anticipate the moves of the Furies. In others, you have a modest amount of control over them because they rush toward your side of the temple after you hurl a stone. With careful planning, you can time a second shot so that you draw the Furies into a falling brick from the first shot.

Yet you must always be on the lookout for the stones the Furies are hurling. At higher levels, they come fast and from

quite a long distance, not giving you much time to figure out a strategy while constantly in defensive motion, furiously avoiding the falling bricks.

No Escape is not a complex game to learn, but it is no pushover in the long run. The game play may not have the broad appeal of Imagic's legendary *Demon Attack*, but for something completely different in a shoot-'em-up game, this effort is worth a try.

Coleco's Gorf for ColecoVision



CIRCLE 102 ON FREE INFORMATION CARD

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

We'll be honest up front and say that we never cared much for *Gorf* when it was in the arcades; it just seemed like a rehash of the old Space Invader/Galaxian themes. But when it comes to the *ColecoVision* version, well that's another story.

For those of you who have not seen the very popular *Gorf* in the arcades, let's go over the fundamentals. The game is essentially four different games in one, each a different kind of outer space shoot-'em-up. The first one, "Astro Battle," is indeed very much like *Space Invaders*, but

with only three rows and eight columns of aliens.

Moreover, your space fighter at the bottom of the screen has two advantages: a one-way shield that blocks the first enemy bomb at each spot, and vertical as well as horizontal movement inside the shield. Both allow experienced players to get a jump on the enemies while they're still frolicking back and forth at a slow speed.

The second game is "Laser Attack," a free-form version of *Galaxian*. One formation (at higher levels there are two) consisting of a laser ship and robot ships move rhythmically, but erratically across the sky. The laser ship occasionally lets fly a deadly blast. Again, your job is to eliminate all aliens.

In the third game, "Space Warp," robot ships come swirling out of the center of the screen (supposedly a tunnel) shooting off radiation bombs at you. It's not easy hitting a target going around in spirals. And the last game, called "Flag Ship," pits you against a mother ship and its missiles. Now, however, the shield is one-way in favor of the flag ship, so you must first blast your way through and then aim very carefully for the precise spot that destroys the ship's internal reactor, blowing the ship to smithereens in a very colorful video display.

Even with four games in one, experienced home game players might get bored with a repetition of the same four games. But two elements of the Coleco version keep us coming back for more. First of all, succeeding levels increase noticeably in difficulty. Anything that moves, moves faster; anything that shoots, shoots more accurately.

Secondly, at the successful completion of each level, you are promoted to a new rank. To us, the actual score is not as important as the rank you achieve and the number of missions (game screens) you complete. Unlike many other games of that type in which you shoot away for higher points, Coleco's *Gorf* gives you something more to hang onto than just a number.

Unfortunately with a game of such simple ancestry, the graphics execution on the Coleco edition is nothing very exciting, except perhaps the destruction of a flag ship. But unexciting graphics aside, it still beats any other version we've seen, including the original.

R-E