100% homebrew & retrogaming

revival

special

All the light on Entex Adventurevision

ADVENTURE VISION

Rarity, fragility, eccentricity and uniqueness

Under the shape of a mini arcade cabinet, in tabletop fashion, the Adventurevision was made by Entex Industries Inc., in 1982. If you are a few to know it, that's because it was only distributed in the USA, and in relatively small quantities.
Zoom on one of the mythical machine of the history of video games, that you'll perhaps never see closely...

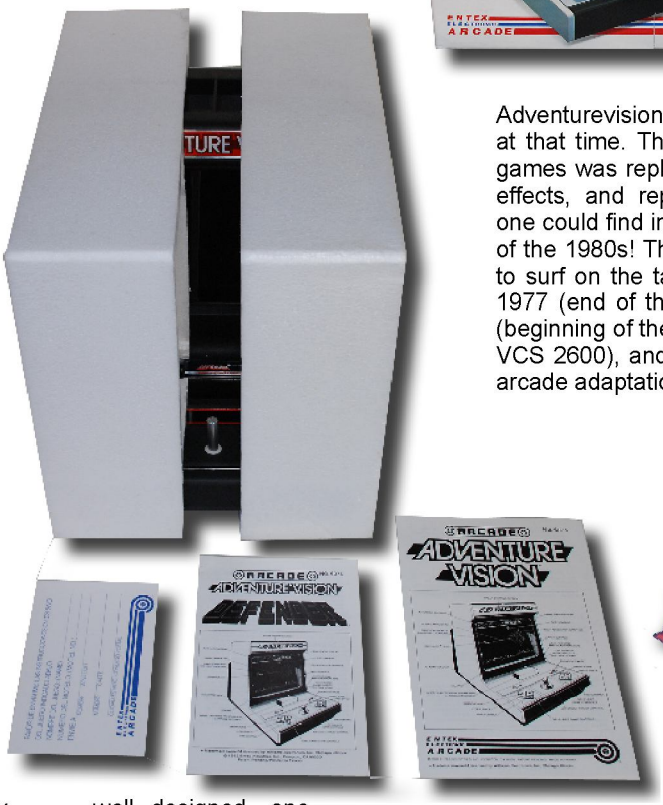
The Adventurevision is part of these atypical and unique machines that makes video gaming an art of its own. It is considered by all specialists as the "holy grail" of video game, i.e., the ultimate machine to own.

Of course, you'll always find rarer in the case of prototypes (Power Console on PcEngine and VR helmet on Jaguar), but, as far as mass production and actually commercialized machine are concerned, there is no doubt it's one of the rarest and most sought after. Indeed, the numbers mentioned talk about 10,000 machines distributed in the American market. Given the size of that country, that's really little. In addition, the Adventurevision is not known for its solidity. What is the current number of machines still working?

It is thus perfectly understandable (but not necessarily justified) to see this machine regularly above 1500 to 2000 dollars sold *loose*!

The Adventurevision concept is summarized with a single word: arcade. Just as the Vectrex, released the same year, it wanted to move the arcade sensations at home. Only, its shallow success prevented it to make a game library worth the name. There are only four titles for this machine, named: *Defender, Turtles, Super Cobra* and *Space Force*.
Other similarity with the Vectrex, the will to not use the family television, so as to please the parents. This is highlighted on the machine's packaging, with the mention "No TV required!".

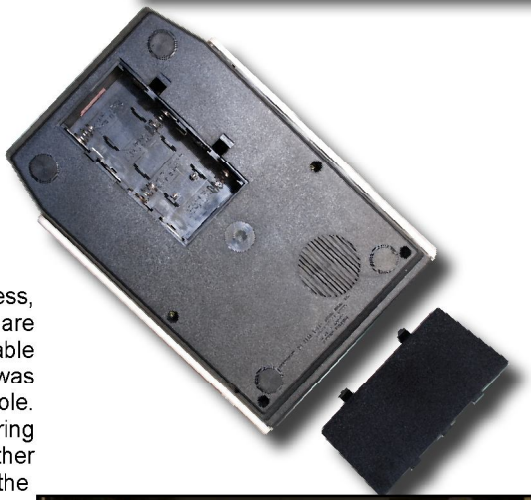
Adventurevision exploded everything existing at that time. The strident sound effect of LCD games was replaced here by successful sound effects, and reproduced rather faithfully what one could find in arcade rooms at the beginning of the 1980s! The Adventurevision wanted both to surf on the tabletop wave, popular between 1977 (end of the *Pongs* hegemony) and 1980 (beginning of the worldwide success of the Atari VCS 2600), and to be the first to make life-like arcade adaptations.



Very well designed, one will appreciate notably the center position of the joystick and the availability of 4 buttons on each side, allowing left handed as well as right handed players to play in the best possible conditions. Neither the Colorvision nor Nintendo's Tabletop offer this nicety! Similarly, the availability of a headset plug (in mini-jack format) is a witness of a well thought out machine. Another bonus, the quality of sound effects. Put in its context, the

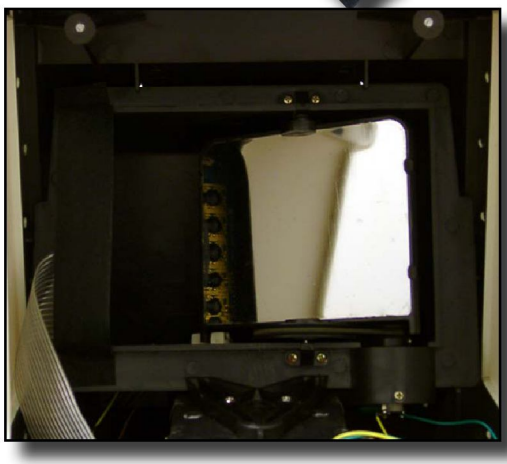
An original design, to say the least

The Adventurevision is made of a screen using LEDs (40 in one column) and of a rotating mirrors system allowing a resolution of 150 by 40 lines (giving 6000 pixels), with a refresh rate of 15 frames per second. This can make smile nowadays, but it goes without saying that it was a real feat at a time where this kind of electronic machine was only using an LCD screen with a twenty times lower resolution! The LEDs used being red, the Adventurevision offers thus a red and black two-color universe, which reminds of Nintendo's Virtual Boy. As for the latter, playing with a headset on the ears allows to better immerse oneself in this so specific universe.



Reasons for failure

The Adventurevision only had an appreciative success, and is now the Holy Grail of collectors. There are certainly multiple reasons, but one is inescapable to our eyes: *Space Invaders*! This Taiko game was adapted in 1980 on the Atari VCS 2600 console. Quickly, the "toddlers" of that time were only swearing by that console and, very fast, the LCD and other tabletops went downhill, participating in making the Adventurevision a nearly stillborn console.



Technical specifications

Intel 8048 processor running at ... 733 kHz!
Sound processor COP411L 52.6 kHz
RAM: 1 K
ROM: 4 K for the cartridge, 1 K internally to the 8048 and 512 bytes internally to the COP411L
Graphics: 150 x 40 in two-color (red, back)

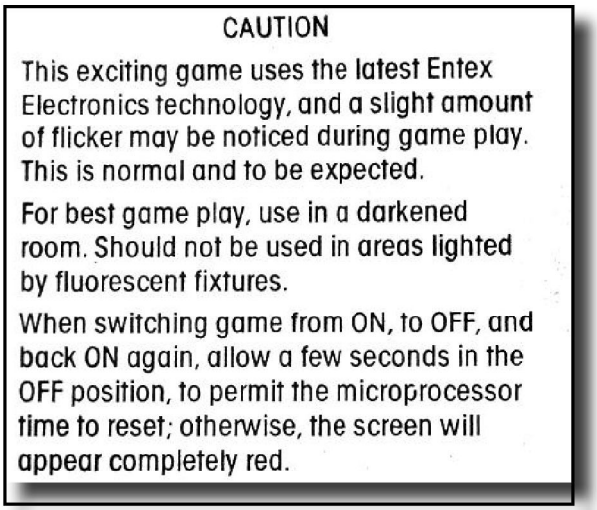
Prototype

Robert McCaslin, the designer of the console, designed and made the first prototype in 1982, after a long weekend of hard work! The aim was to prove that the rotating mirror system was doable. On this prototype, a version of *Asteroids* was tested. This version was driven by an Apple II! The next evolution of the prototype included two COPS microprocessors, working in parallel. But it wasn't enough for the display. As a result, version 3 of the prototype went for an 8051 processor.
The Adventurevision as we know it is from Robert McCaslin, but also from Ortega Orr for the box, Steve Meadows for programming and electronics as well as Larry Karr and Andy Barber for the sound.
The *adventurevision.com* site offers pictures of this prototype, provided by Robert himself. We don't resist the pleasure of showing them to you. Here is a part of the history of our passion at last revealed in broad daylight.

Test bench

What to think about the Adventurevision, then? Because yes, since ReVival's readers are privileged, we tested it for you.
With a cream and black color, with a reddish logo, the Adventurevision is a beautiful object whose plastic (and not plastic artistry!) inspires confidence. The machine is relatively huge, much larger than a tabletop, to give a reference. As a result, the red plastic windows is large (about 160 by 110 mm), but the surface dedicated to display is much smaller, giving the impression you're playing far from the screen, while you're actually very close!
Powering-up is done through a little red switch near the joystick, that one can switch on *Sound* or *Mute*, allowing to play with sound (volume cannot be adjusted, be careful!) or without.
Because of its design, the Adventurevision is noisy when running, and one hears clearly the mirror rotating. But one can look at the bright side, and think it's part of its charm! The display suffers from flickering (an issue also present on Vectrex), and also from a slight distortion and variation of the size of the image displayed. When playing, it is absolutely not an issue. The feeling of the joystick, even if not analog, and a little larger, is very close to the Vectrex's. The triangle shape of the four buttons is the presaging sign of what will appear again much later on Super Nintendo's pads. Their drawback is however that they are too hard to push, and that they do not allow to press as frenziedly as one would like it.
Because of its size and four small non-skid pads, the Adventurevision's stability in use is excellent. And it's an advantage compared to many tabletops or similar devices.

Using an Adventurevision will require some precautions. Actually, Entex didn't hide the fact then, thinking rightly that it was better to inform the users, instead of risking damaging the device.
Indeed, Entex took care of placing a sticker to inform on the flickering issue (display flickering of the graphics because of the mirror rotation). Entex thus recommended to play in the dark, and to wait a few seconds (from 5 to 7 precisely) in the *off* position, to leave time for the microprocessor to reset itself!



this sticker was fixed on the console on the left of the cartridge port)

The cartridge port is not protected against dust, but one will appreciate the four slots on the top of the console, dedicated to host the four game cartridges developed for it. Just a coincidence, or a pessimistic forecasting from the company, which didn't consider developing more than four games?
The Adventurevision also has an extension port on the right side, which can be accessed after removing a cover.

Because of the machine's very design, the electric consumption is unfortunately very high. The four batteries, LR20 (or D), suffer rapidly , and the console needs fully charged batteries to operate. For that reason, we can only recommend using a power converter plugged at the rear of the machine. It wasn't provided as standard, and it is thus not obvious at all to find. And one can reasonably not want to try one's luck, since an external power supply can, at times, give more power and risk damaging the machine, contrary to batteries.

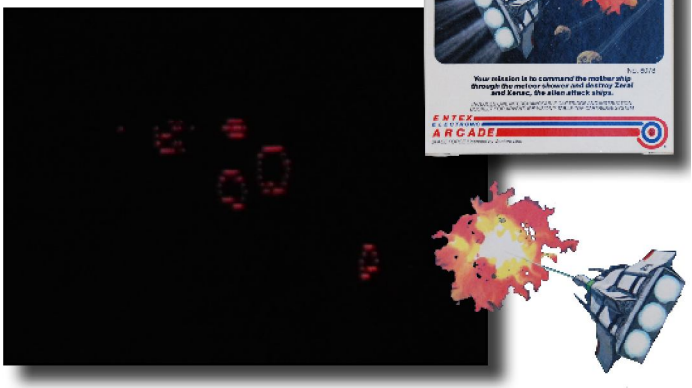
ADVENTURE VISION™

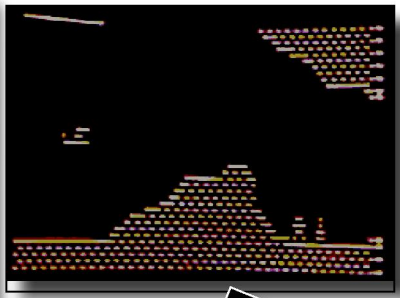
Games tests

While 10,000 units of the console were produced (a priori, the more optimistic talk about 50,000), it is not the same for each game. There would be only 1,000 copies of each title! At least, Entex didn't make the same error as Atari with E.T. for its VCS 2600: namely, produce more games than consoles!
Each game, whose memory is 4 KB, contains the following elements: carton box, black and white leaflet and small cartridge. The box is largely oversized compared with the size of the cartridge.
One thing specific to the four existing games is that they were offered for sale simultaneously with the commercialization of the console. The leaflet of the latter indeed offers to order directly from Entex the three other games available (for 18 dollars at that time).
Here is a little preview of each existing game:

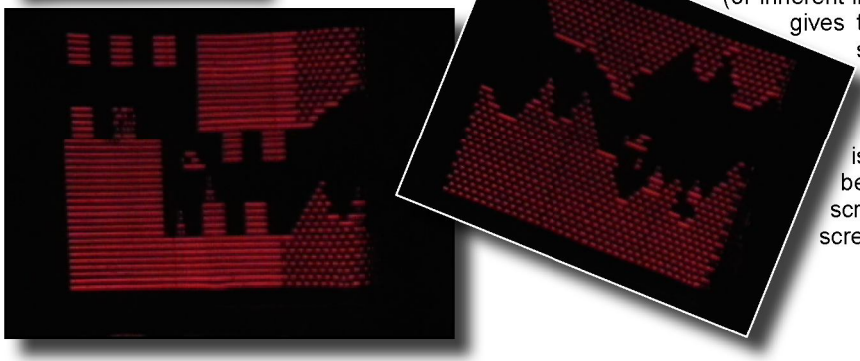
Defender.
It doesn't need introduction anymore. This arcade game was adapted on most consoles, and the Adventurevision was no exception, even offering it as a bundle with the console. It is thus the most known game and, most certainly, the strong title of this machine. Production is really excellent and reproduces faithfully the arcade game. Nothing is missing: bombs, hyperspace, thrust, shots. The game is hard to master and it is not always obvious to differentiate correctly all the sprites among explosions, enemies, humanoids, etc. Sound effects are a real success. There's no doubt choosing this title was a very good idea from Entex, because this version isn't put to shame compared with its arcade counterpart.

Space Force is a close cousin of *Asteroids*, created in arcade by Venture Line, whose best-known game is perhaps *Looping* (there is a Colecovision adaptation). Its adaptation would be a success, if only the game didn't suffer from an incredible bug: when losing a life, the replacement ship doesn't come, or at least takes a very long time to come. Actually, that comes from the very programming of the game. The ship coming can only occur when there is an empty space, of a minimal size, at the middle of the screen. Except that, in high levels, the number of sprites is so huge that it is not possible anymore to get the required size for this free space. As a result, the player can never continue! This makes the game too difficult, and much less interesting than it should have been.

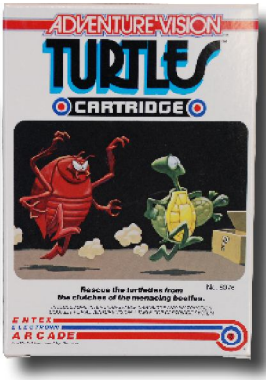




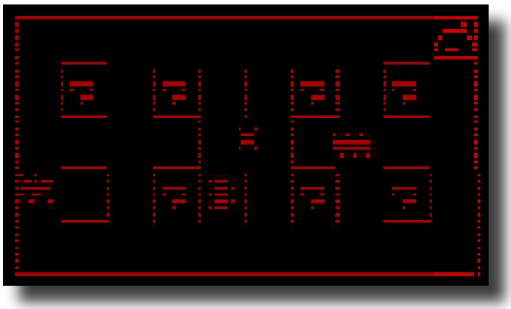
Super Cobra. Konami is decidedly on the forefront on Adventurevision. This arcade game from 1981 was adapted in 1983 on a large number of consoles of that time (Atari VCS, Intellivision, Colecovision and even Videopac) but that's on Adventurevision that it was adapted first! It exists also as a tabletop, made by Gakken. The Adventurevision version is way better than the latter. The game has ten levels. During a game, there is a deliberate effect (or inherent in the console?) that gives the feeling that the screens are scrolling continuously, as if they were on a band. This is notably the case between the score screen and the game screen.

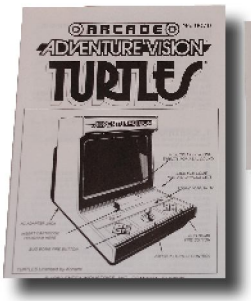


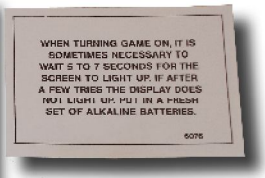
Turtles. Also called *Turpin* on Emerson Arcadia 2001 (the MPT-03 console series), it is a 1981 arcade game made by Konami (under a license by Stern, a publisher known for games such as *Astro Invader*, *Spectar*, etc. adapted recently on Colecovision). *Turtles* is a great arcade game, not obvious but addictive. The aim is to go above most question marks in the level. Each time, it will change into a baby turtle that will then climb on your back, and will have to be brought to a house in one of the corners of the level. Or, it will transform into an enemy!

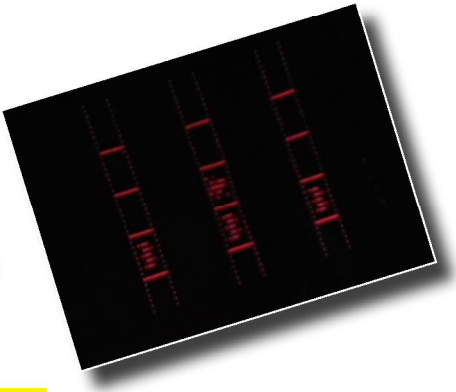


The difficulty is high, but the turtle has bombs it can drop any time. This bomb will be effective when an enemy will go over it (it has no effect on the turtle). Sound effects are sometimes annoying, despite a little tune during the game. That's also the only game on this machine to offer an intermediate animated sequence showing the turtle climbing the front of a building! A real luxury for that time.









Arcade version

Finally, and that's half a surprise, fun is really there, with the exception of the graphic resolution, which really doesn't fit in today's standards. *Defender* and *Super Cobra* are the more elaborate games, with rather detailed scenery and an adaptation respecting perfectly the arcade version. The licenses of three of these games have also be used by Entex to create a high end LCD games series (more exactly: high end VFD).
http://www.miniarcade.com/miniarcade.htm

Emulation!

As there are little chance that you would be someday the owner of this splendid little machine, emulation can allow you to have an opinion of the graphic rendering of these games, even if that will never replace the feeling and the fun from the original machine. As often, you will have to turn to the MESS emulator.
http://www.mess.org

Goodies

There's not really a vibrant community on this machine, but enthusiasts and collectors who have the feeling of being part of saving a video-gaming legacy.
Some have thus made T-shirts for a personal use or to wear them for meetings such as the *Phillyclassic* or the *East Coast Gaming Expo*

New games?

While the machine has a cartridge port, hoping to see news coming seems however unlikely. The shallow number of "active" owners of this machine doesn't speak in favor of it. It isn't the case for a console such as the Atari 2600, of which millions of units were sold. But, contrary to a large number of its close relatives (Colorvision, Microvision, etc.), the cartridge contains the game program, and not hardware. Furthermore, it should be possible to recreate the cartridge without much issues, since it is rather basic. Because of that, there's still hope.
Indeed, some people had "fun" dissecting the machine's guts and were able to recreate electronic blueprints and output listings of computer code. The essentials to hope, one day, see news coming on Adventurevision. All this technical information is available - in English - at *http://www.atarihq.com/danb/adventurevision.shtml*

So, off to the *Adventure*?

Cyril Denis

Entex

Entex Industries is a Californian American company, founded in 1970 by G.A. Clowes, Nicholas Carlozzi and Nick Underhill. Its initial activity was making toys and other construction games. It is only at the beginning of the 1980s that it became known for its portable electronic games. Those are certainly among the best ever made. And, even if they barely reached the old Europe, it shouldn't stop us from assessing them.

This started with very classical LCD games based on major arcade licenses (similarly to Coleco's tabletops) with *Galaxian*, *Defender*, etc. Then quickly VFD (Vacuum Fluorescent Display) games appeared. The quality of design and manufacturing cannot be denied, with facts that don't lie: demo mode, control accuracy, variable speed, etc.

But Entex also made one of the very first VFD game system with cartridges! Called *Select-A-Game*, it offers several interchangeable games (mainly sport games). Perhaps this idea was the basis for the Adventurevision's concept?

Entex closed its activity in 1984, a crash year for the video game industry.

make the sound adjustable

Because the sound cannot be adjusted, it can be judicious to connect the mini-jack plug to the input of an amplifier, and to plug a headset on the latter. The volume becomes thus adjustable via the amplifier. As playing with a helmet is recommended in terms of fun, it would be a pity to do without it!

collector!

When a machine is that rare, the pure collection aspect gets the upper hand over everything else. Because of this, one tracks any small object, detail, anecdote that can be related to the history of this machine. Why then not show you the delivery box Entex sent to the resellers? It is a box that can contain four Adventurevision consoles. Well, if Pix'n Love wasn't there to manage to make you go into raptures over a plain delivery box...

in case of issues

The Adventurevision has this interesting specificity that a total ignorance of electronics is not a handicap in case of working issues. The mechanical (rotating mirror) aspect of its design could be an incentive to attempt a repair, should your unit fail. However, you will need a minimum amount of practice to be able to solder and re-solder some of the components. However, it is judicious not to rush and open its guts. The issue might simply come from the cartridges or the cartridge port contacts that you have to clean thoroughly.

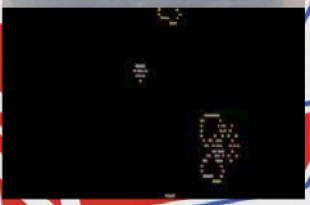
Adventurevision trivia

- The Entex name is based on the initials of founders. N for Nicholas, T for Tony (nickname of G.A. Clowes who, later one, started to found the Tomy company, that still exits today) then an X to make it pretty! This gives NTX, which naturally pronounces « Entex ».
- The Entex logo was made by Ben Templeton, who used a strong inspiration from the Royal Air Force logo. The latter was contacted, and gave its agreement for the use of the design of their logo!
- The launching price was 80 dollars in 1982.
- There is another machine with a 8048 processor: it is the Odyssey2 (Videopac in Europe)
- Yes, anybody can make mistakes, but acknowledging and correcting them is even better. Let's thus compliment Entex which, with the *Space Force* game, added a little note specifying the correct function of buttons 1 and 2, because of a typo in the leaflet.
-Dropping the Adventurevision on the floor is generally a reason for it to be out of order. That's the main reason why very few machines are still working today.

Links

http://www.miniarcade.com/miniarcade.htm
http://www.atarihq.com/danb/adventurevision.shtml
http://www.adventurevision.com/

Thanks to Steven Read to have kept his Adventurevision in such a state for more than 25 years!



NO TV REQUIR

ENTEX ELECTRONIC ARCADE