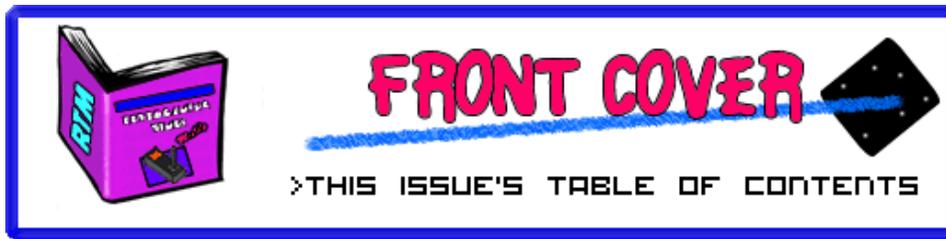




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Retrogaming Times Monthly #104 - January 2013



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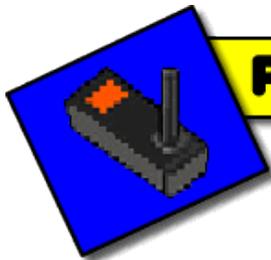
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Press Fire To Begin

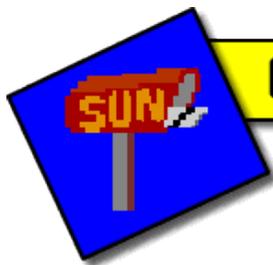
by Bryan Roppolo



Happy new year everyone! December 21, 2012 came and went and the world is still here. I have to admit, that after the Y2K scare I was not as worried about this one after already going through the hype of a previous non-event already. As a matter of fact, I remember feeling some comfort that if Y2K did bring about computer chaos, that I would still have my trusty old TI-99/4A computer which is oblivious to the date/time, so as long as there was electricity, I could play video games, write up reports on TI-Writer, etc. I remember reports on the news of people buying homes in the mountains to get away from society once 2000 hit, as there would be widespread panic in the streets. I seem to recall a computer programmer buying up a house in the mountains of the Pacific Northwest and stocking it with food and the like. I also seem to recall that 9/9/99 was supposed to bring about some type of problems as well.

It's interesting to think about now as all three of those dates have come and gone without a hitch. Although I was looking forward to using my TI-99/4A after 2000 while everyone else went computer-less (well, those who were not into classic computers at least).

Interesting topics have been discussed on our forums, one of which was what defines a "classic" system. What I found interesting is that in the early days of Retrogaming Times (late 90s), there was a lot of animosity towards the NES. People in the classic gaming circles did not view the NES as a classic system. I can still remember the debates in [rec.games.video.classic](#) about this very topic, about what systems should be discussed in the newsgroup. Nowadays the NES is most certainly in that circle as it becomes older and people who grew up playing the NES in childhood start to become the majority. That's the interesting thing about having a magazine run as long as RTM has, as you can see the progression of classic systems start to expand. Interestingly enough, [rec.games.video.classic](#) started in 1992/1993 and was centered around systems from the late 70s/early 80s (namely the Atari 2600). It's interesting to think that even after only 10 years out from when the 2600 was king, it was considered a classic. The NES on the other hand had a tough time being accepted as a classic system even 15 years after it came out. Maybe it was the type of games that put it in a different status than the 2600? Maybe it was the simplicity of the early home video game era that by the time the NES came to market was pretty much gone? Maybe it was the fact that most games on the NES had a goal of trying to "beat" the game instead of going for the highest score? I'll end this intro with a question, what makes a system feel classic to you and where do you draw the line between classic and not classic? Is there a certain cut-off date? On that note, let's get to this month's issue!



Retrogaming News

EVENTS

[Official Texas Premiere of the Twin Galaxies Video Game Trading Card Set](#)

Saturday, January 19, 12:00 - 6:00PM CST (Austin, TX)

The Official Texas Premiere of the Twin Galaxies Video Game Trading Card Set will be conducted at Pinballz Arcade, in Austin, Saturday, January 19, 2013. This is a national event that will feature an awards ceremony as more than 30 new Video Game Trading Cards will be honored. Plus, the completed "Superstars of 2011" Trading Card Set will be presented as will additional cards from "The Superstars of 2012." Plus, a sneak preview will be offered that comes about a dozen of the cards from "The Superstars of 2013," now being designed. The event is hosted by Pinballz Arcade and emceed by Walter Day, Jourdan Adler, Josh Jones, with special emceed presentations by Patrick Scott Patterson and more. In addition, this party serves as a retirement celebration for Walter Day, of Twin Galaxies fame. Don't miss out on your chance to see Walter off!

[Retro Game Beurs Deurne](#)

Sunday, February 24, 10.00 - 16.00 CET (Deurne, Netherlands)

After the succes of the first two conventions, there will be another retro gaming convention in Deurne on the 24th of February 2013! This convention in the south of the Netherlands is only a short ride from most parts of Holland and Belgium!

At the convention traders, resellers and collectors will display, trade and sell their retro games. From MSX to Atari and Playstation 2 to Gamecube, anything you'd want will be there. With more than 190 tables of gaming goodness and an arcade event this will be a convention you don't want to miss!

The information

- Location: Den Draai, Blasiusstraat 2, 5754 AV, Deurne (Zijlberg)
- Time: 10.00 - 16.00
- Entrance fee: 4 euros
- Over 190 tables of retro goodness
- Catering and abundant parking space
- Easy to reach with public transport, 10 min walk from the train station

In order to make this fair a succes we try to spread the news in as many ways as possible.

You can help us out with that by joining us on [Facebook](#) and telling your friends about it!

If you would like to have your event featured in Retrogaming Times Monthly, just send an e-mail to Bryan Roppolo at bryan@retrogamingtimes.com and he'll make sure to announce it in a future issue.



Caught On Film

by David Lundin, Jr.



Wreck-It Ralph

"Released in early November of last year, Wreck-It Ralph is a computer generated animated feature film set against the backdrop of arcade games. Admittedly I was looking forward to the film's release and caught a showing on opening weekend. The film received positive to mixed reviews and while I won't reiterate what has been said a hundred times over about the cast and crew, here's my take on a film I enjoyed. I honestly had no expectations when going to see it, understanding it was created from the ground up as a family feature aimed at children, but I was pleased with what I saw.



In a nutshell the basic idea is Toy Story meets video games in asking the question, "what do video game characters do after the arcade is closed?" They go have a drink at Tapper's of course! Class division exists between the heroes of video games and the "bad guys" who tend to be cast off even after the game ends. Ralph is one such bad guy, the antagonist of an apparent Donkey Kong clone, "Fix-It Felix, Jr." At the end of the day, while Fix-It Felix is praised by the residents of the Niceland Apartments, Wreck-It Ralph has support group meetings with other bad guys. The world of Litwak's Arcade reminds me of the CGI-animated television series ReBoot, which examined the world inside a computer system and the lives of its inhabitants. Travel between games is provided via the power strip they are all plugged into. While game characters can come and go as they please, the core rule is that if you die outside of your game you will not regenerate. Ralph decides he's had enough of the status quo in his game and heads into a modern shooter, "Hero's Duty," to earn proof that he too can be regarded as a hero.

Once the arcade opens, the game characters get into position similar to the toys in the Toy Story films. The game characters get a warning that the machine is being credited and then all stand ready in their starting positions according to the game's code. With Ralph outside of his game, "Fix-It Felix, Jr." cannot be played, resulting in the game being stickered as "Out Of Order" by the arcade owner Mr. Litwak, wearing a striped referee shirt in homage to Twin Galaxies founder Walter Day. As he is the hero of the game, Felix sets out to find Ralph before the next day, as if the game isn't working by then it will be removed from the arcade.



After bouncing around in Hero's Duty, Ralph finds his way into a Japanese made kart racing game, "Sugar Rush," where the majority of the remainder of the film takes place. Here he meets Vanellope von Schweetz, a fragmented game character who is considered an outcast by the rest since she is prone to glitching. Something to also note is the Japanese title of the film is "Sugar Rush" and the Sugar Rush theme is performed by the outrageously popular Japanese idol group AKB48.

While the film is framed in the world of arcade games, the majority of its plot and character conflict takes place in Sugar Rush. In fact three eras of arcade gaming are represented with the three unique games: the 1980's (character driven high score games like Fix-It Felix, Jr.), the 1990's (super themed multiplayer driving games like Sugar Rush), and the 2000's (humongous, overpriced, flashy action simulators that are about graphics over gameplay like Hero's Duty.) Speaking of Hero's Duty, Felix arrives there on the trail of Ralph and becomes enamored with the game's lead heroine, space marine Sergeant Calhoun, who has been programmed with "the most tragic backstory in gaming history." Felix and Calhoun set off to find Ralph together as a game enemy from Hero's Duty, a Cy-Bug, escaped along with Ralph and poses a threat to the game worlds throughout the arcade. Will Felix and Calhoun succeed in hunting down the Cy-Bug? Will Ralph accept his place in Fix-It Felix, Jr. for the good of the other game characters? Will Vanellope carve out

an existence for herself in Sugar Rush? I won't say, but it is a Disney family film so it's probably not that hard to figure out.

I can understand where the mixed reviews for this film come from. If you watch this movie thinking it'll be about video game character references throughout and will feature classic arcade games constantly then you will be disappointed. The arcade setting and worlds of classic video games and their characters are used as a framing device for the rest of the story. I thought a good job was done to develop original characters that didn't seem out of place among video game characters that have been around for decades. Although there are the usual jokes that will go over young viewer's heads and are directed at parents, this film never tries to act like it isn't a family film. I think most of the negativity associated with this movie was due to audience perception that it would be a gaming culture film, but I can't recall a time it was specifically advertised as such.

My opening weekend viewing was to a fairly full theater, comprised of all ages, and I was surprised the audience was as quiet as they were. That's my litmus test for family films, if kids stay quiet throughout the film then they are engaged and enjoying it. In addition to AKB48's Sugar Rush theme, Jerry Buckner and the late Gary Garcia of Pac-Man Fever fame composed a song in the same vein of Pac-Man Fever about Wreck-It Ralph. I thought the film was very solid, I had a good time and I consider the film good family entertainment with a classic gaming spin. I particularly enjoyed that the "villain" of the movie was relatively hidden until toward the very end, especially when the film didn't seem to have one up until just before that point. It's been a long time since I've seen that in a kid's film as everything is usually far more cut and dry. I also found the movie to be less preachy than family film fare of late, although it does carry with it a moral that everyone is important to the existence of a community and that everyone should be treated as equal because we all matter. Fred Rogers would be proud.

"InsaneDavid" also covers all types of video gaming at <http://www.classicplastic.net/dvgi>





The Pixelated Mage

by Jeff Wittenhagen



Top 10 Of 2012

This is a yearly tradition that I have done on my soon-to-be-defunct website vgmastersclub.com which I will now post here as well as my new blog hagensalley.wordpress.com/.

For the typical gamer my year-in Top 10 Games lists are always a bit controversial as I don't rate a lot of the popular game franchises like others do. That being said, the readers of RTM should appreciate the list due to the retro-esque feel.

#10



Street Fighter X Mega Man (PC - Capcom)

Capcom finally releases a new 8-Bit Mega Man game that incorporates the world of Street Fighter into an amalgam of nostalgic goodness and it is panned by fans worldwide? Consider me baffled as Street Fighter X Mega Man is a fun little FREE PC game that Capcom put out just for the fans. Yes, the controls are slightly off in certain aspects and the difficulty and level length is variable, but this is a fan project and was released by a major company for FREE. Any game that puts a smile on my face is worth my time and Street Fighter X Mega Man is a fun experience to be had and worthy of the initial entry into the list at #10.

http://www.capcom-unity.com/mega_man

#9



Soulless (Commodore 64 - Psytronik Games)

Reviewed by me in the historic [Issue 100 of RTM](#) Soulless is a unique platformer released on the never-aging Commodore 64. Soulless essentially limits you with no attacks which requires you to master the controls and learn the

ins and outs of the level/enemy patterns brought before you. The music is some of that classic C64 synth and is extremely catchy and completes a very solid gaming package.

http://www.psytronik.net/main/index.php?option=com_content&view=article&id=97:soulless&catid=34:commodore-64&Itemid=57

#8



Assimilate (Nintendo Entertainment System - Nessylum Games)

Assimilate is an addicting, seemingly arcade-style game that has you taking the role of alien invaders anal-probing your way to victory! Basically it is your goal in each level to perform various actions to the people of earth in order to fill your assimilation meter which allows you to complete the level. The humor in the game goes back to the 80s era and there are tons of subtle references. The addition of boss battles in the game is a pleasant surprise that keeps the game from getting stale, breaking Assimilate into tangible pieces.

<http://nessylum.wordpress.com/>

#7



Paper Mario: Sticker Star (Nintendo 3DS - Nintendo)

The Paper Mario series is part of the Mario RPG series of games that takes the world of Mario and breaks everything down to essentially a child's coloring book. As most of you are, I was very leary of the Sticker collecting aspect of the game as they are the only way you can attack or heal. Needless to say the abundance of stickers throughout the land never leaves you without a means for execution. The game is not difficult by any means, especially due to the fact that you do not level up in the traditional sense. Regardless, Paper Mario Sticker Star was one of the few current-gen games that kept me engaged in 2012.

<http://papermario.nintendo.com/>

#6



Nomolos (Nintendo Entertainment System - Gradual Games)

Another new 8-bit IP released on the NES in 2012, Nomolos is a classic platformer with aspirations of Castlevania. While Nomolos does not quite achieve perfection per say, the controls are tight enough to be engaging. The upgrading of weaponry keeps things fresh and increases the strategic aspects.

<http://gradualgames.blogspot.com/>

#5



The Walking Dead Game (PS3/Xbox 360/PC - Telltale Games)

To say Telltale Games has a knack for creating engrossing experiences would be a severe understatement. The Walking Dead Game has its own storyline that exists in the same world as that of the comic books and creates characters that you genuinely care about. The action sequences are pulse inducing and it is no wonder why it has been listed on many lists as the 2012 Game of the Year.

<https://www.telltalegames.com/walkingdead>

#4



New Super Mario Bros U (Nintendo Wii U - Nintendo)

The first Super Mario Bros. game to be released with a console since the Nintendo 64, New Super Mario Bros. U follows the “New” series formula to a “T” while bringing the series gracefully into high definition. The game itself is standard Mario fare and doesn’t stray from

that formula whatsoever. Is that a bad thing? Absolutely not! The controls are spot on, there are numerous secrets and warp zones, and there are extra “difficult” modes that keep even the most skilled gamers busy attempting to shave seconds off their time. If anything this is a very “complete” Mario experience.

<http://newsupermariobrosu.nintendo.com/>

#3



Battle Kid 2: Mountain of Torment (Nintendo Entertainment System - Sivak Games)

Released at the tail-end of 2012, Battle Kid 2: Mountain of Torment is the sequel to the everpopular Battle Kid: Fortress of Peril which helped reignite the retro-homebrew programming scene, or at least brought it more into the mainstream. Battle Kid 2 doesn't stray far from the formula that made the original so fun to play. It keeps the difficulty coming while offering improvements such as a death counter as well as new powers that offer new ways to progress through the frequent traps.

<http://sivak.nintendoage.com/BK2.html>

#2



Fez (Xbox Live Arcade - Polytron)

Offering a brand new platforming experience, Fez is truly a remarkable game. You rotate the seemingly 2D gaming world on a 3D axis that allows for unique puzzles and makes you think outside the box. Just like Battle Kid 2 above, Fez had multiple delays due to only being programmed by one individual, however I am a very patient gamer and I say the end product was well worth the wait in both cases!

<http://polytroncorporation.com/>

#1



Streemerz (Nintendo Entertainment System - Faux Game Co.)

Streemerz is a game that popped up on my radar right when it was released in ROM form by the creator. Based on the Action 52 game of the same name, it takes the gameplay mechanics and improves on it in every imaginable way! The controls are perfect and the use of checkpoints keeps the frustration level to a minimum. Streemerz offers a multitude of modes that allow of an insane amount of replayability, especially on a 25+ year old gaming system. Out of all of the legacy system game releases of 2012, Streemerz is the only one that wasn't released in a physical form. Hopefully in 2013 we will see a NES CIB release!

<http://www.fauxgame.com/>



Apple II Incider

by Donald Lee



Christmas Gifts For The Apple II Fan

Happy Holidays everyone! As I write this, it's the day after Christmas. I was fairly busy and could not devote a lot of time to a game this month. However, there is always Apple II news floating around, so here are some gift ideas for you Apple II fans, courtesy of A2-Central.com (<http://www.a2central.com>). Yes, it's a little late but these gifts can be given for birthday presents or even for Christmas of next year.

Apple II history book announced:

<http://a2central.com/4699/apple-ii-history-book-announced/>

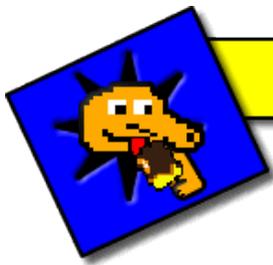
As a history fan, I have loved reading the Apple II history site Apple II History (apple2history.org). Now the owner / creator of the site, Dr. Steven Weyhrich, is taking his site (and other information) into print format. Please read the A2-Central site for more info on the project.

Activision releases "Lost Treasures of Infocom" for IOS

<http://a2central.com/4690/activision-releases-the-lost-treasures-of-infocom-for-ios/>

I've written about text adventures occasionally in RTM. For those without access to an Apple II computer or emulator, here's a chance to PLAY some old text adventures on your IOS device. I'm curious how the games are setup as text adventures require a lot of typing. The iPhone screen is small so that may be difficult though I can see the iPad working out better.

See you next month!



CoCoLicious!

by Brian Blake



The CoCo's 3rd Time Is A Charm (Part 1)

Greetings retro-fans, and welcome to another month of CoCoLicious! I hope everyone had a great time during the holidays and got to spend some quality time with your families and the retro-machine of your choice. Last month, I finally coughed up the second part of my three-part series about the TRS-80/Tandy Color Computer.

I would like to thank several people at the outset: Nick Marentes, Boisy Pitre, Dennis Bathory-Kitsz, Mark Marlette, and Frank Swygert. Without their generous donation of information and knowledge, this article would've been much shorter and much less informative. As a matter of fact, this article became so big that it had to be cut into two parts. Part two will come out next month, so check back for the conclusion then.

During the production of the Color Computer series, there have been a number of differences, not only in model numbers, but also, board layouts, upgrade paths, and overall design philosophy in some cases. This month should provide a bit of a respite from all of that, but, there's still quite a bit to go over, so, on with the sho... err article!

Computing In The Mid '80's

There were lots of changes in the computer industry since the 1980 roll-out of the Radio Shack TRS-80 Color Computer (affectionately referred to as the CoCo) by mid-1985. Bill 'the Incredible Huxtable' Cosby was pushing the TI-99/4A; Radar O'Reilly and most of the M.A.S.H. cast was mugging for the IBM Personal Computer; Dick Cavet was doing Apple ads; William 'Capt. Kirk' Shatner was trying to sell Commodores; Alan Alda broke from the rest of the M.A.S.H. cast and was hawking Atari equipment; and busty spooky chick Elvira was in print selling something called LMBS.



With that much star power, was there anyone left to help sell the Tandy/TRS-80 line? Well, none other than Isaac 'I, Robot' Asimov made numerous print ads for the 'Shack's computer lines – virtually all of them. Bill 'The Incredible Hulk' Bixby made quite a few TV commercials. Celebrities mugging for computer companies weren't the only changes, either. Apple, Commodore, IBM and Atari all began marketing the first 16/32-bit computers in this time frame as well. Atari had the ST line, Commodore released the Amiga and Apple was making the Macintosh – all based on the Motorola 68000 series.

Some of you may be asking 'What does this have to do with the CoCo?' and that would be a legitimate question. While the rest of the computer industry fought amongst themselves with computer models based on the Motorola 68000 series chip, Tandy continued walking their path on three fronts.

First, Tandy invested heavily in the MS-DOS machines with the Tandy 1000 series of computers. With architecture similar to, but not tied to the fate of the PCjr, the 1000 line was a critical and commercial success. There were a number of other lines including the 2000, 3000 & 4000 that helped Tandy remain a computer powerhouse into the '90's.

Second, Tandy continued with the Model III/IV support - even though it was dwindling in sales and software support by this time.

Third, while From 1982 to 1985, several 'high profile' magazines stated that the CoCo was dead (it's notable that those publications 'died' long before the CoCo did), Tandy decide to march on with the very successful Color Computer line. Which leads us to...

The Deluxe Color Computer

One very interesting marker on the pathway to the CoCo3 is the Deluxe Color Computer. Several 'Getting Started With Extended Color Basic' manuals that shipped with the Color Computer 2 line made reference to a Deluxe Color Computer. What made the machine a Deluxe Color Computer? My first knowledge of the machine came last year when a post was made to the CoCo mailing list called '[Remembering the Deluxe Color Computer.](#)' The specs were remembered as being:

- Double speed mode
- Real RS-232 port with UART
- Sound Chip
- RAM drive
- New color palette
- True lowercase video
- Accept commands in lowercase
- 32 or 64k RAM

Evidently, there was a last minute decision to cancel the machine due to cost (more expensive than what Tandy had envisioned for a home computer) and some of it's parts being used in the CoCo2 as well. According to the post, all of the upgraded/replacement CoCo keyboards Radio Shack was selling at the time came from the Deluxe model pre-production run.

While researching this article, I came across the following information posted on Nick Marentes' website. In a 1985 issue of The Australian Rainbow, Rob Rosen, owner of Spectrum Projects, had written two articles. One was about the features and cancellation of the Deluxe Color Computer and can be read here:

http://members.optusnet.com.au/nickma/ProjectArchive/graphics/256mode/Hind_Sight.jpg.

In the article above, Mr. Rosen mentions the RMS chip – more can be read about this at [Nick Marentes' Project Archive site](#) - which was supposed to add a number of features to either a Deluxe CoCo or even the CoCo3. Since it never went into production, it's impossible to say which one was supposed to benefit from it. Some of the information on this site will be discussed later as we dig more into the CoCo3's development. It's all relevant and important, because it does show that Tandy and Motorola were very interested in providing a more capable machine to customers, but, they realized they needed to do so at an affordable price.

Now, as is par for the course with my articles, when I'm almost done and ready to send, I come across some more information that is pertinent to the discussion. In this case, Nick Marentes sent me some information relevant to the Deluxe CoCo discussion in the form of an interview he had with Mark Siegel, for his book CoCoNuts. For those who do not know, Mr. Siegel is pretty much the father of the Color Computer 3, and claimed to be the CoCo's biggest supporter at Tandy.

Below is an excerpt of the Deluxe Color Computer discussion between Mark Siegel and Nick Marentes. The information below will clarify the questions left unanswered above.

Nick: Do you have any "nightmare" stories to tell of your Color Computer 3 development days?

Mark: My biggest disappointment was the Deluxe Color Computer not coming to market. It was a pretty cool next generation Color Computer 2 but Motorola ran short of video/memory controllers and Tandy had a choice of where to put them and they chose the cheaper Color Computer 2.

(Edited out a section of this response since it didn't relate to the Deluxe CoCo)

Nick: What were the specifications of the Deluxe Color Computer?

Mark: It had a GI sound chip, a real UART, 64K of memory (in Disk Basic, 32k was used as a RAM drive). It had a 40 column display with a 320x200 mono graphics mode, the Color Computer 3 keyboard and some cool new Disk Basic commands. The OS-9 for it was very nice.

Nick: How was the 40 column display and 320x200 mode generated? The Motorola 6847 video chip used in the Color Computer couldn't produce this.

Mark: My recollection is fuzzy on this but I think we added an additional video controller to the unit. But

since it had to go out the RF it was restricted to 40 columns.

Nick: Was it to have a restyled case?

Mark: It was a Color Computer 1 case with some work on the back and it was painted black.

Nick offered the following commentary on the case issue, which does make more sense than painting the case black:

Nick Marentes: I think black was the default color of the moulded plastic and the final production models were to be painted some other color (probably silver again). The original CoCo 1 was actually black when you scraped the silver paint off."

I think it's safe to say the Deluxe Color Computer could've been a very competitive product. It was probably a beneficial decision to cancel the Deluxe model in the long run, since an upgraded model from that could've been more costly in the long run. While I'm sure many more great pieces of software would've been made, I doubt we'd have gotten a CoCo3.

Rumors, Rumbings and Ruminations

Now, as early as mid-1985 rumbings of a new CoCo began to hit the street. Lonnie Falk, editor and publisher of the Rainbow Magazine stated as much in an August 1985 editorial (and three more times thru July '86) discussing some of the new computers hitting the market from the likes of Atari and Commodore. It's no secret that most of the computer industry didn't take the CoCo line as a serious competitor. One look at the Chiclet keyboard of the CoCo1 would make most people walk right on by. Many also thought the battleship grey case was hideous looking as well. Few looked into the internals of the machine to see the potential.

At least one CoCo enthusiast shows affection for the Chiclet keyboard:

Nick Marentes: Ironic that the Chiclet keyboard has now become the preferred keyboard seen on all Mac's and PC laptops. Bring back the REAL keyboard again I say!!

When the white CoCo1 and subsequently the CoCo2 were released, the CoCo got a little more respect. With a smaller footprint, better keyboards, and a better looking case, it indicated to many that Tandy was serious about building an improved CoCo. Below is a link to an internal Tandy R&D document (again, courtesy of Nick Marentes) detailing some of the video features they were trying to provide for an even better Color Computer, <http://members.optusnet.com.au/nickma/ProjectArchive/graphics/256mode/gime-r%26d.gif>.

Of the specs mentioned, it would appear that most of the above features made it into the CoCo3. However, according to Rob Rosen's article, the RMS chip did not make it – like the Deluxe CoCo it never went into production.

Nick Marentes: The story I heard is that when Motorola canned the RMS (or couldn't get it to work reliably), some of the designers left and went to work on the GIME for Tandy. That's why I suspect, the specs of the RMS is very similar to the GIME. If anything, the GIME is a cut down version of the RMS design. Tandy didn't do the designing. It was contracted by a chip firm.

If the RMS chip didn't make it, what exactly did Tandy pull out of their hats for the CoCo3?

Enter The GIME

The hardware of the CoCo1 and CoCo2 were identical in functionality; while the hardware changed quite radically over their life spans the two machines were functionally the same. Tandy realized that to compete with some of the newer computers hitting the market, the new Color Computer needed to be able to show off better graphics; the previously

shown internal memo reflects that. The new CoCo also needed to be able to address more memory, and if the RMS chip wasn't to be included to address these issues, something else needed to be.

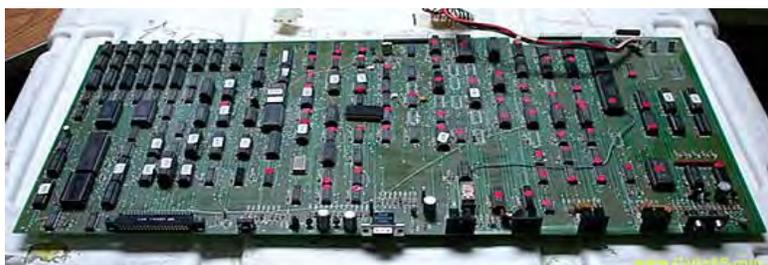
The Advanced Color Video Chip or more commonly called the Graphics Interrupt Memory Enhancement chip, or GIME, is an ASIC chip that Tandy had developed to handle graphics and memory functions for the new CoCo, bringing the following enhancements:

- 32x16, 40x24, or 80x24 character text screens
- 8 foreground and 8 background colors, underline, and blink.
- Up to 16 simultaneous colors (programming tricks permit more)
- Palette of 64 colors
- The GIME provides TV, composite video monitor, or an analog RGB monitor connections

The GIME combined the functions of the 6847 VDG and the 6883 SAM – emulating both chips, providing the above mentioned text screens in addition to all of the graphics modes of the CoCo2, as well as 320x192, 640x192 and 640x225 hi-res graphics screens.

The GIME also provides system timing and device selection, refresh and multiplexing for the RAM, and contains an MMU which allows RAM expansion from 128k to 512k. The new chip did remove all of the semi-graphics modes, as mentioned in the memo.

At the 2005 CoCoFest, a very rare bird was put on display: a CoCo3 prototype board. As you can see, this was NOT a small board; it contained an integrated floppy controller and discrete logic circuitry that would later be condensed into the GIME chip.



(CoCo3 prototype shown at the 2005 CoCoFest in Chicago)



(Prototype, 1986 & 1987 GIME chip images provided by Nicholas Marentes)

In addition to the GIME, there were a couple of other changes that benefitted the CoCo3. First, the CoCo3's display was enhanced to provide true lowercase characters at 40 & 80 column widths (really provided by the GIME). Second, the CoCo3 was capable of running at 1.78MHz without loss of display – a problem that plagued some earlier machines. Third, the CPU was changed to the 68B09E and the PIA was upgraded to 68B21 – both which were rated as 2MHz parts. Finally, the CoCo3 got an enhanced keyboard – a full travel, 57 key enhanced keyboard. The additional keys are F1, F2, ALT & CTRL.

One of the biggest benefits of the GIME was that the CoCo3 could not only support 128k RAM, but, there was now a 512k RAM upgrade as well. As you might have guessed, the extra RAM was welcomed by many people including OS-9 users and gamers. I don't have a full grasp of OS-9 by any stretch; what I do know is it is a multi-user, multi-tasking operating system introduced on the original Color Computer. With the CoCo3, they added windowing capability. This flexibility and power of OS-9 however, is a subject for an upcoming series of articles where I'll chronicle my learning experience with OS-9/NitrOS-9.

Beyond the above info, not much else is known about the design of the CoCo3's GIME chip. There is a project

regarding the early prototype board shown above, attempting to decode the logic that is suspected to mimic the GIME functions. This is a very important project for CoCo enthusiasts since there are no known replacements for the GIME. If it goes, the CoCo3 is dead.

The CoCo3 Arrives!!!



Date: July 30th, 1985

Place: Waldorf-Astoria Hotel, New York City

Event: Tandy unleashes the Color Computer 3 on an unsuspecting world.

Well, okay, maybe not unsuspecting, but, most did not anticipate the improvements Tandy gave to the CoCo3. The September 1986 issue of the Rainbow Magazine was full of very positive commentary from CoCo luminaries from Lonnie Falk to Marty Goodman to Steve Bjork on the new hardware. Probably rightly so; below are the official specifications of the Color Computer 3 at launch time:

Display Screen size: 32x16, 40x25, 80x25

Resolution: 320 x 192 (16 colors), 640 x 192 (4 colors), 640 x 225 (2 colors)

Storage : Tape and Floppy

Operating System: Extended Color Basic; Disk Extended Color Basic; OS-9 Level II

First Released: July 1986

CPU: 8 bit Motorola 68B09E

Clock speed: 2 MHz

Bus type: Tandy Proprietary

Data bus width: 8 bit

Address bus width: 16bit

Memory: 128k expandable to 512k (third party upgrades include 1, 2 & 8 Meg upgrades)

ROM: 32 KB

Interfacing: 1 x Cassette; 1xSerial ; 2 x joystick; 1 x RGB; 1 x RF modulated (TV); 1 x RCA video; 1 RCA Audio; 1 cartridge/expansion slot

Display Screen size: 32x16, 40x25, 80x25

Resolution: 320 x 192 (16 colors), 640 x 192 (4 colors), 640 x 225 (2 colors)

Storage : Tape, floppy and hard disk

Operating System: Color Extended Basic; Disk Extended Basic; OS-9 Level II

The CoCo3 was compatible with almost all CoCo 1 & 2 hardware and software. While the CoCo3 had the same limitations of the CoCo2 regarding the lack of a 12vdc circuit, as long as a multipak interface was used, this was not an issue. Also, if you used an RGB monitor, any software for the CoCo 1 & 2 that relied on artifact colors would be shown only in black & white. There were patches made to correct this in many instances, however, not all software was fixed.

One thing you may notice missing in those specs is a dedicated sound chip. Most computers by the mid-80's had sound hardware integrated into their design - either available on the motherboard itself or as an add-on card. This is yet another example where CoCo enthusiasts still take Tandy to task. Yes, the 6809 is a very powerful 8-bit CPU. However, it just can't do all things at once. Having dedicated sound hardware (and sprite hardware for that matter) would've made the CoCo 3 a bona fide powerhouse computer. The downside would've been the cost. Here's what Mark Siegel had to say:

Nick: Why wasn't additional sound hardware included in the design?

Mark: I had been given a choice in the production budget that I could put in either a sound chip or a UART. Not enough money for both. So I opted for neither. I put in programmable timers and an interrupt controller. That way I could do both in software.

One immediate difference upon powering up a CoCo3 was the boot screen. It was still the familiar black text on nuclear green, but, the boot message added a line about Microware being involved in the licensing of Microsoft's BASIC interpreter for the CoCo3. Here's the story behind the boot screen:

Nick: Why did Radio Shack elect to use Microware for the 3's enhanced BASIC?

Mark: It wasn't Radio Shack that elected to do that, it was me. Microsoft told Tandy that any new Color Computers had to have its BASIC in it or else!! And that they would not make any changes or supply source code. So I provided Microware with my disassembly of the code and a list of new commands and features and had them do it.

My understanding of what is happening during the boot process is this:

Microsoft's unmodified BASIC interpreter is stored in the CoCo 3's ROM. During boot up, the BASIC code in ROM is copied to RAM which is then patched by Microware's updated code. This is how the additional commands Mark Siegel wanted in DECB 2.1 & Super Extended Color Basic are accessible.

During the first run production, some problems were discovered in what is now known as the 1986 GIME chip. Now, it's a matter of conjecture as to how serious the problem is, or even if it is a problem. Certain code causes sparkly type artifacts on the screen. Some say there's an issue with booting into NitrOS-9 using a machine with the '86 GIME chip. The 40 or 80 column screen tends to cause the computer to hang in the boot process.

Some programmers feel that it's a just a programming issue, others feel that the hardware is not performing as it was intended to. Regardless of personal opinions, the GIME did go thru a redesign for the 1987 models an newer. The newer model CoCo3's do not suffer from the these problems. In my opinion that lends some credence to those who feel it's a hardware problem. Nick Marentes and Mark Siegel discussed these issues as well:

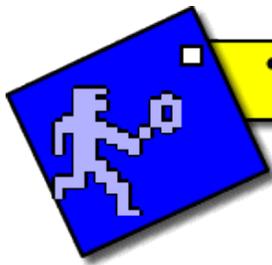
Nick: What about the "sparklies" GIME Chip problem?

Mark: I really don't consider it a problem. The video should be switched on a V-Blank. Many video chips have suffered from this. It's a RAM contention problem and in those days, RAM was slow. After all, the machine did have an MMU.

Nick: What about the horizontal scroll problem? The later GIME corrected this.

Mark: A second run may have been built with faster logic. But we could never really test all the features in the chip so there may have very well been things that didn't work, but were not part of our supported feature set. A lot of programmers used the horizontal scroll including our own demo, I'm not sure that problem you refer to. I'm sure it did not work right in every mode.

Join us next month as we dive deeper into the CoCo 3 and take a look at its Motherboard layout, the differences between the Korean and American CoCo 3's, as well as what's been happening with the CoCo 3 since 1990!



The Way Things Were

by Jonathan H. Davidson



January 1983

Happy New Year, RTM readers.

For various reasons, my previous column, *The Business of Gaming*, has ended. I have started a new series for the New Year. Each month I will look at video game magazines for the very same month thirty years ago (i.e. 1983). I will be looking at what consoles (and games) were released, and what was popular in the arcades. I will also cover announced but unreleased games (and hardware), news about the industry at large, and anything else that looks interesting.

New Consoles

Both the Atari 5200 and the ColecoVision were released towards the end of 1982, and so they were reviewed in the January 1983 issues of several magazines. Both systems launched with a good selection of ports of then popular arcade games.

The Atari 5200 launched with *Space Invaders*, *Star Raiders*, *Missile Command*, *Pac-Man*, and *Galaxian*. Atari was criticized for including *Supper Breakout* as the pack-in game, particularly because it worked far better with a paddle controller than a joystick. Another review commented that "With the exception of *Galaxian*, all titles in the first group of releases are copied from either the computer or VCS catalogs with only the slightest changes".



Coleco titles initially available included *Space Fury*, *Zaxxon*, *Carnival*, *Mouse Trap*, *Venture*, *Cosmic Avenger*, and *Lady Bug*. The pack-in title was *Donkey Kong*. All of the reviews placed great emphasis on the expansion possibilities. Expansion Module #1 (the Atari 2600 adaptor, MSRP \$60) was already available and #2 (the driving controller and Turbo) was expected to be available shortly. Rumours of other expansion possibilities abounded, including "an adaptor for all Intellivision-compatible titles" and there was much speculation about the price, specifications, and availability of Module #3, "a full-scale, high-powered home computer system".

Top Ten Lists

Top 10 Home Games:

1. Pitfall
2. Donkey Kong (Coleco)
3. Megamania
4. Frogger
5. Berzerk
6. Empire Strikes Back
7. Defender
8. Demon Attack
9. Dungeons & Dragons (Mattel)
10. Pac-Man



Top 10 Arcade Games:

1. Jungle Hunt (It was called Jungle King just before its release)
2. Ms. Pac-Man
3. Donkey Kong, Jr.
4. Tron
5. Donkey Kong
6. Moon Patrol
7. Pac-Man
8. Tutankham
9. Centipede
10. Galaga

Industry News, Rumours, and Editorial Comments

Richard Stearns, Parker Brothers VP for Consumer electronics, stated that the company's focus was on acquiring licenses rather than producing original games. Sky Skipper was based on a Nintendo arcade game that was only released in Japan.

Unhappy with the recent changes in the corporate culture at Activision, co-founder Larry Kaplan departed the company to rejoin his former employer, Atari.

Video Games observed that Japanese games (e.g. Scramble, Donkey Kong) are more often based on pattern memorization; there is only a single "right" way to beat the game, whereas American games (e.g. Tempest, Defender) are more random and freeform.

Electronic Fun with Computers & Games lamented that "While the Japanese seem to be doing all the innovation in video gaming (e.g. Space Invaders, Pac-Man, and Donkey Kong), American companies are lackadaisical – grinding out more of the same tired, unoriginal, but profitable games".

A coin-op version of the Atari 2600 game E.T. was expected in arcades "shortly".

Foreshadowing what was to come, in late-1982 Games by Apollo declared bankruptcy (after just over one year in business). Announced but unreleased titles include Pompeii, Kyphus, Squoosh, and an untitled VCS game with speech. Several titles and conversions were planned for the Atari 5200, but it is unclear if development had actually begun on them.

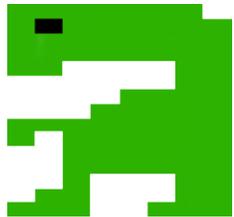
In January 1983, one columnist peered into his crystal ball to determine what Atari VCS games would be collectible rarities in the future. He certainly guessed right on some titles, but he was very far off the mark on some others:

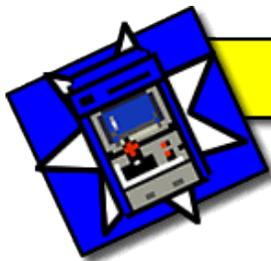
Hits

- The original release of Lochjaw – before it was renamed to Shark Attack; according to the Atari Age website, it is now a Rarity 9
- Monogrammed Space Chase – only \$89 for a custom version
- Magic Card – reportedly there were only 500 copies produced; MSRP \$59.95

Misses

- Maze Craze (R2)
- The Atari titles that were discontinued early in the system's lifespan - Star Ship, Slot Machine, and Miniature Golf (All are rated R3)





MAME Reviews

by Mark Sabbatini



Astro Blaster

A game ain't nothing these days without secrets. Only it's gotten to the point of In-N-Out Burger, where the "secret" menu is so well known it's listed on chain's website ("in reality, we don't have any secrets at all," the site notes).

But it turns out the first arcade game packed with secrets – a game common enough to question if it merited a MAME review – may still be clad in a few remaining tatters of clothing in today's reveal-all world. While that brought an instinctive twinge of frustration when I was playing it just for fun and struck out Googling for help, the feeling quickly gave way to a warped pleasure that gamers might still be stuck figuring some things out on their own.

If hearing (yes, hearing) phrases like "fighter pilots needed in sector wars" and "fuel status marginal" revive memories, you may know I'm referring to Astro Blaster, Sega's 1981 "me-too" vertical shooter during the great Space Invaders/Galaxians clone explosion. But it was better than most due to the large variety of aliens and their attack wave patterns (which helped inspire the Activision hit Megamania), plus extra touches like navigating meteor showers and docking with a mother ship to refuel.



Ah, fuel. There's the memory that's probably most unpleasant for those familiar with the game.

Astro Blaster's main criticism then and now is it's far too difficult, even though Sega released two updated ROMs that made the game easier each time. Yeah, the aliens can be numerous and devious, but modern gamers used to vertical shooters where hundreds of enemies and bullets (along with power-ups and hapless things to rescue) can probably deal with that. But the fuel thing is the ultimate killer in all senses.

You're piloting a ship (actually three of them, most likely) with left-right buttons, a fire button and a warp button. The game is divided into sectors consisting of several waves. You begin a sector with a full tank of fuel, but it burns up dismayingly fast. If you run out it's not just the end of your ship – it's game over, man. And, no, crashing your ship deliberately doesn't give you a replacement with a full tank.

Each of Astro Blaster's seven rounds (plus a "secret" one those skilled in hacking MAME ROMs can access) features several waves of aliens, followed by a meteor shower and then docking. You'll almost certainly be critically low on fuel if you reach the meteor shower, but you get a tiny bit extra for each one you shoot. Docking refuels your ship, but if you crash the game ends immediately.

In other words, this is an arcade operator's dream machine – if (s)he can entice customers to play it – since it eats quarters at practically a slot machine pace. Interestingly, however, Sega's promotional fliers avoid the "maximize your revenue" jargon that was quickly becoming one of the main sales pitches back then. Instead, the main brochure depicts one of the least-likely



settings for an arcade game: a wild party where decidedly un-gaming revelers are mingling boozily around someone playing the machine (a subsequent flier shows a couple old cleaning ladies having a blast, presumably after one of those wild parties is over).

Anyhow, getting through rounds means you need to be quick and precise with shots, except – in another of the game's headaches – not too quick. Ships in most games back then could only fire one shot at a time, but the designers the craft in Astro Blaster made the laser capable of firing any number of shots at once. Unfortunately, like a version 1.0 software release, the leap forward in virtual weaponry is a bit glitchy. The laser is prone to overheating rather quickly, especially if you rapid-fire more than a few shots, and you'll have to wait for it to cool down if you pass the limit. Practically speaking, you can get by with a slight delay between single shots and fire off a rapid burst in an emergency or to finish a wave.

The player gets one other asset although, like the rapid fire, it can be dangerous in the hands of the novice. Hitting the warp button will slow enemies and their shots to a crawl for ten seconds (which the voice helpfully counts down). You're still moving and firing at regular speed, which also means you're burning fuel at the regular rate. This can be a game-saver or game-ender depending on the circumstances, the most important of which is if all of the enemies in a particular wave are on-screen. If so, you can pick them all off and speed your progression through that round of waves. If not, you'll be stuck with few targets and an agonizing (and possibly fatal) wait for more to appear.

The number of waves in a round and types of enemies you'll face depends on the ROM version. Revision 1 is the hardest, with the first round consisting of five waves of aliens before reaching the meteors. Revision 2 features four waves and Revision 3 three waves. The trade off is Revisions 2 and especially 3 add more waves of enemies in later rounds (Revisions 1 and 2 feature eight waves of aliens in round four, while Revision 3 has nine, for instance). The types of enemies also vary notably by revision, although breaking that down by behavior/difficulty is beyond the scope of even my excessive verbiage.

To give you an idea of the game's difficulty, a key tip is if you enter the meteor stage with almost no fuel, the best strategy is probably to crash your ship and hit warp as soon as the next appears since the fireballs move too fast for most people to hit many of them. When committing suicide is one of the best ways to extend gameplay, it's a good sign you're not getting maximum value for your quarter.

Yet, somehow I had a fondness for Astro Blaster and so did/do a lot of others (it's a lot easier now since a long string of "one more game" vows doesn't cost anything). The only two reasons I can offer are: 1) the variety of enemies makes it a more interesting vertical shooter than most and 2) the enticement of discovering/achieving all those secrets mentioned at the beginning of this column.

There are 25 secret achievements, if what's suggested on the screen is to be believed, all awarding varying levels of points. Some examples are: 600 points for not letting your laser temperature get critical during a round ("Secret Bonus Number 22"), 1,000 points for shooting all enemies during a wave without missing ("Number 03"), and 500-1,500 points for not moving during docking (Number "04"; you get 1,000 points for being perfectly centered and 1,500 for a "paint scraper" docking if you brush the docking clamp - hugely risky since colliding with it ends the game).

Now here's the caveat: Only 15 of those bonuses are known and an examination of the game's source code by a guy who knows his stuff indicates there aren't any more (his findings are at http://donhodges.com/Astro_Blaster_Secret_Bonus_01.htm). His theory is the programmers meant to include more bonuses, but never got around to it.

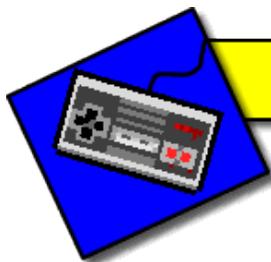
Similarly, he discovered the code contains an extra round beyond the seven that are playable in the arcade version. Playing it requires entering a MAME hack (":astrob:00000000:C97C:00000008:FFFFFFFF:Play Sector 8"), with the details also available at his site.

Somewhat surprisingly, Astro Blaster was never ported to home machines back then despite its influence on a number



of subsequent shooters. The only home version now is as an unlockable bonus on the Sega Genesis Collection for PSP disc (no, there was never a Genesis port; it's an emulation of the arcade version). Perhaps more useful and enjoyable for gamers intrigued by Astro Blaster's concept but put off by the difficulty is a hacked MAME ROM that slows down fuel consumption and laser heating considerably.





NES'cade

by David Lundin, Jr.



Cabal

TAD Corporation was an arcade developer founded by former Data East employees and although the company was rather short-lived, they struck gold right out of the gate with a great shooter known as Cabal. Released to arcades in 1988, TAD Corporation's first game plays like a cross between a run-and-gun a shooting gallery, Contra meets Carnival in a sense. Although Cabal was a new property it shared some basic similarities with an earlier Data East game, Shoot Out, released in 1985. Cabal allows up to two commandos to infiltrate enemy bases and installations. Their objective: to destroy everything in sight, literally. Each stage is presented as a series of static scenes viewed from behind the commando. Enemy soldiers and vehicles come out of hiding or travel across the screen, taking shots at the commando, requiring the player to take cover and dodge shots while firing back. In addition to a gun with unlimited ammo, the player also has a limited supply of grenades at their disposal. Tossing a few grenades to clear out a concentrated area of enemy troops before diving out and using your regular gun is a basic strategy to stay alive in Cabal. It's not just the troops and vehicles that must be destroyed however as buildings, bushes, trees, and anything else that your enemy may hide behind can and often must be destroyed as well. In addition to the unique perspective and gameplay requirements Cabal also introduced a unique control scheme. Instead of controlling your commando directly, you instead control a crosshair that represents where the commando is aiming. As the crosshair moves around the screen the commando will follow suit. Temporary gun upgrades can also be picked up that increase the firing speed and size of the target reticle. After eliminating enough enemy forces on a screen the commando will dance off onto the horizon, completing the stage. Cabal was a successful introduction into the market and TAD Corporation licensed the rights for a home conversion on the NES. Milton Bradley would publish the game while Rare would handle development.

Things start off pretty great on the NES with a title screen that is almost a perfect recreation of the arcade original. In fact, other than slight color and resolution discrepancies the two title screens are nearly identical, very impressive for an arcade to NES conversion. Once the game starts up things continue to look as they did in the arcade, with the stage preview screen looking nearly identical as well. Even once the game begins proper, things look very similar to the original. Sure the color depth isn't as good and nothing is as detailed as it was in the arcade version but the environments and perspectives are all extremely close. Buildings and objects are in the same locations and can be destroyed in the same manner. It's almost as if Rare had the arcade game running in the same room while they designed the NES version and the staff were very astute observers concerning the operations of the game they were recreating. Enemies react as they did in the arcade, including the command officers who are taken away on stretchers once they are defeated. If there is one minor gripe I have when it comes to the graphics it's that your commando tends to look like he's facing the "camera" in certain positions due to how he is drawn. Again, it's an extremely minor gripe and over all the visual design and presentation are outstanding. Audio is equally as good with a gun firing sound that doesn't become grating or repetitive along with solid effect chimes for picking up items. The music is also very accurate to the arcade original however the music in Cabal wasn't anything special to begin with. This is understandable considering you're almost always shooting. The victory tune at the end of each round is nicely recreated and considering it's a staple of the game it's nice it was done right.



Movement in Cabal was controlled with a trackball in the arcade version although joystick implemented versions are also out there. In addition to the trackball for movement, a button was provided to fire your commando's gun and another button would throw grenades. The trackball moves the crosshair around the playfield, moving your commando in the same direction unless the fire button is held down. If the fire button is held down then your commando will hold his position while the crosshair remains mobile. Rapidly spinning the trackball in a direction while not firing will cause your commando to go into a roll, leaving him unable to fire but also invulnerable to damage. The key to playing well in Cabal is mastering these unique controls. While there are barricades to hide behind at the start of a level they will fall to enemy fire, eventually leaving you out in the open. Knowing when to attack, where to shoot, when to use your grenades, and most importantly when to roll are all necessary to stay alive. I've always considered playing Cabal in the arcade a bit like playing Defender in that once you understand and get a natural feel for the unique controls, doing what you want in the game world becomes almost effortless and second nature. That doesn't mean the game isn't challenging once you become accustomed to the controls but it's a big step to becoming a good player.

Now obviously a trackball controlled game will have to be reworked for the standard NES control pad. However, the way that Rare went about it will leave most people scratching their heads and most others turning the game off. The control pad moves the crosshair with your commando following along much in the same way as in the arcade original. One would assume moving a target reticle with the control pad would be a relatively simple thing to implement but this is where we hit our first snag. The crosshair moves around fine but it has an odd momentum about it and it tends to slide around when you want it to stop and lag behind when you want it to move. I can only assume the intention here was to simulate the movement and momentum of a trackball but it just feels strange. Simulating trackball momentum is always the completely wrong way to go when converting this type of input to conventional controls. With Rare opting to simulate trackball control instead of design the NES version with the control pad in mind, it means we get an acceleration button, similar to how they did things with the NES port of Marble Madness.

This brings us to the second snag in the controls, as pressing the B button not only accelerates the crosshair, it also accelerates the strange momentum and lag in crosshair movement. Pressing Up or Down and a direction while holding the B button will allow your commando to roll, making him invulnerable just as in the arcade. However, this maneuver tends to make the crosshair fly off into one of the corners of the screen. With a trackball it would be a matter of moments to get it centered again but due to the clunky control pad reimplementations, the roll move usually means then having to work the crosshair back to an actual target, negating most of the advantage of the roll in the first place. I'll call that the third control snag.

With one of the NES controller buttons being taken up to facilitate control acceleration, that leaves us with a single button to fire two different weapons. That's right, this is one of "those" NES games. The A button is used for both firing your commando's gun as well as throwing grenades. Of course Cabal utilizes the fire button to halt your commando's movement so the fire button was already performing double duty. To throw a grenade you must tap the A button. That means you must release the A button if you are firing, then tap it for each grenade you want to throw, then hold it down again to resume firing. Make sure you aren't pressing any directions on the control pad when performing a grenade throw or else your commando will move since you have to release the fire button to do so. Gone are the fast horizontal grenade launches to clear an area before running out like in the arcade. That's been replaced with a series of presses, releases, and movement halts all on top of fighting the unnatural momentum of the crosshair. Control snag number four, NES Cabal. Say what you will about games that use Up as the jump button but tapping a button for dual functionality is

something that should have been left on the Atari VCS. When you toss that into a game that requires fast action and precise control you're simply asking for trouble. I almost would have preferred the roll button be relegated to the Select button or at the very least a double tap Left or Right, similar to running in a Technos beat 'em up.

Cabal is a strange one and it's hard for me to decide if I can recommend it or not. On one hand the game looks a lot like the arcade original, sounds a lot like the arcade original, and is designed to play a lot like the arcade original. On the other hand the whole game is hampered by a poor simulation of trackball controls and questionable use of the NES control pad functionality, a decision that hurts the game from the ground up. I usually dismiss games with poor play control but with Cabal you can tell there was an honest attempt to bring the arcade game to the NES. Perhaps if the controls had been redesigned to take advantage of the directional pad, rather than attempt to use it like a trackball, I would find it easier to come to a conclusion about this game. I really want to like the NES version of this game but I simply don't find it all that entertaining to play so I'll say to pass on this one. It really is a shame since Rare got so very close with this conversion. Interestingly enough, a year after the NES release of Cabal, TAD Corporation followed up the original in arcades with a spiritual sequel called Blood Bros. Blood Bros. was designed for play with a joystick from the beginning, moving the "roll" command to a dedicated button due to lack of a trackball as an input device. Aside from the roll command being initiated via a button, the game played exactly the same with "fire" and "dynamite" (replacing grenades) each having a dedicated button just as before. Blood Bros. proved that this type of game could be expertly controlled with a standard interface, in fact Blood Bros. is one of my all-time favorite arcade games. Unfortunately Blood Bros. never made it out of the arcade, a disappointment nearly on par with the odd control decisions of Cabal on the NES.

"InsaneDavid" also covers all types of video gaming at <http://www.classicplastic.net/dvgi>



Beyond The Plastic

by Elena García Méndez



Tom & Jerry (NES)

The Mouse Must Jump, the Cat to Trump!

This videogame brings back a lot of memories to me. My parents always bought me games to entertain me during Christmas. One year we went holiday shopping at a local mall. My dad looked after me and made sure I was deeply distracted looking at toys so that my mom could shop in peace. Unbeknownst to him, she secretly bought *Tom & Jerry* for me from the videogame store.

Later, while I spent some time with my mom, my dad went to the videogame shop and noticed that only one copy of *Tom & Jerry* remained, so he made a rush purchase. Afterwards in the cafeteria he whispered to my mom that he had bought the game. “And me too!” my mom replied.

Yes! One of them had to race back to the shop and return a copy!

I remember as a kid playing this game for hours and hours. My dad and I were always fond of the *Tom & Jerry* cartoons so I'm sure it was another reason for my parents to buy me this game.

Now let me tell you all about *Tom & Jerry*!

Hi Tech Expressions Company

The Hi Tech Expressions Company was an early 1990s developer of console games based in Lower Manhattan, New York. The company made games for Game Boy, NES and SNES, Sega Mega Drive/Genesis, and PC platforms.

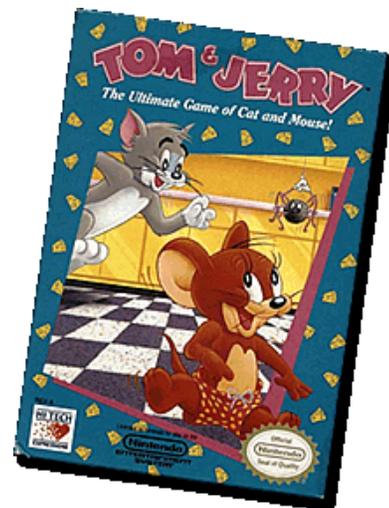
Hi Tech mostly manufactured videogames meant for younger players, though it did create a few with teen and young adult gamers in mind. Hi Tech's videogames included *Mega Man* for PC, *Beethoven's 2nd* and *Hunt for Red October* for Game Boy, and *The Chessmaster* for NES.

The Story

Tom's at it again, always furiously intent on entrapping the playful mouse, Jerry! This time, Tom has kidnapped Jerry's nephew Tuffy and caged him in the attic. Jerry has to race against time to save his poor little nephew! On his way through the house and grounds he will encounter many homemade obstacles, hidden treasures and other surprises—not to mention of course having to battle Tom every now and then! Watch out for him!

The Controls

- Use your control pad to move Jerry in any direction you please
- Press the A button to make Jerry jump
- Press the B button to make Jerry use a weapon (the default one is marbles)
- Press the Select button to choose among the weapons (once Jerry has obtained them)
- To stop the game at any time, press Start. To resume playing, press Start again.



The Bottom Screen

This screen will help you to check the following aspects:

- **Score:** This is the score you currently have.
- **Jerry:** This represents the total hearts you have. You start with three hearts. If you get hit three times, you will lose one life. It is not possible to obtain more hearts. However, you can earn an extra life every 50,000 points.
- **High:** This is “high score” for short. If you lose all your lives and wish to continue playing, you can check how many points you have obtained in your previous game by looking at this section. If, in your second game, you beat your previous score, your high score will keep changing again until you finish the game or lose all your lives.
- **Lives:** This indicates how many lives you have. Unlike cats which have nine lives, Jerry only has three.
- **Weapon:** In the centre of this screen, you will see the weapon you are using at that moment. You start with marbles, but you are able to obtain some other objects as you progress in the game.

The Objects

Jerry’s primary weapon is the marbles. You have an unlimited quantity of them. As you go through the several levels of the house, you will have to keep your eyes open in order to find some other defensive objects. They can be extremely useful sometimes so as to avoid the attacks of spiders, bats and such enemies.

The defensive objects are:

- Chewing Gum
- Hammer
- Meat Knife
- Invisible Ink
- Water Cup
- Chisel
- Naphthalene

Bear in mind that in some cases you can use these defensive objects for a limited amount of time. Once you have acquired them, you can press the Select button to choose which one you will use for a certain enemy. Once you see the object you wish to use, you will also see under it a number indicating the amount of times you can use it. When you have exhausted its power, the object will disappear from the select option panel and you will no longer have access to it.

The number of times you can use an object varies greatly. For instance, you can use the hammer and knife each up to 30 times; however you can only use the bubble gum twice!

The Cheese

What are all mice crazy about? You’ve guessed it! Cheese!! In this game, you will encounter lots of cheese portions. There are two types:

- **Small portions:** Each of these will give you a hundred points. It may not seem very much, but keep working toward 50,000 points and earning an extra life!
- **Big portions:** These each give you 1,000 points! But wait, there’s more! If you have lost one heart, one of these portions will replenish it!

Jumping, Climbing, & Mouse Holes!

- **Jumping:** Like most mice, Jerry is really quick and agile and can jump long distances. However, he can also make shorter jumps! You can control the height and distance of these jumps by pressing the A button. For instance, if you wish to make a little jump, simply press the A button; if you wish to make a longer jump, press and hold the A button.
- **Climbing:** Jerry is also able to climb using some objects which are found throughout the house such as wires and cables. In order to do this, place Jerry in front of the object you desire to climb and then press the Up arrow of

your control pad. Jerry will then jump and climb as long as you keep this button pressed. You can increase Jerry's climbing speed by pressing the A button. If you jump while keeping the Up button pressed, you can stop jumping on one surface and start climbing another. Note: if you jump while you're climbing and you forget to press the Up button, Jerry will fall, costing you one heart!

- **Mouse holes:** There are mouse holes hidden in the different levels of the house. Some of them will lead you to a bonus room in which you can find large proportions of cheese! Some others are simply exits to other areas of the house. You can enter these mouse holes by pressing the Up button on your control pad.

The Levels

This game is divided into five different worlds. Each world consists of three stages. In the last stage of each world, you have to defeat a boss. Can you guess who it can be? That's right! Tom!

World One:

You start in the basement. This is a good stage to become familiarised with the controls and the enemies. But don't get too confident if you pass this stage; the level of difficulty will increase as you progress! You will encounter a variety of enemies here, for instance, a toy soldier (you can get rid of him with one marble), spiders (two marbles will knock them out!), wasps (pretty annoying I must say!) and the strangest of them all, a set of wind-up chattering teeth!!

In the second stage of this world more surprises await you. You will have to go through the pipes! The enemies you will come across are crabs and snails! And sometimes a drop of water will cause you to fall down to the lower platform! You will find here a little help though—grab that bottle of invisible ink and make yourself disappear for ten seconds! You will be able to sneak past your enemies without getting hit!

In stage three you will encounter Tom for the first time. He's to your right, throwing marbles at you. You have to jump onto two moving platforms (making sure you don't fall into the water) while throwing marbles at Tom's head! Good luck!



World Two:

When you have finally defeated Tom, your next mission is to survive through . . . the kitchen! Here you will encounter a new enemy: beetles!! Be careful too with the saucepan that is making popcorn! But soon it will be over and you'll reach the window.

Your next stage is a tree, which you will have to climb through without disturbing the busy ants! If you don't move quickly, it's very likely you'll end up getting hit by a falling nut! A pink worm is your friend here. Jump on him so that you can reach the higher platforms!

You'll soon see a beehive under which Tom is sleeping peacefully. You must climb the three moving platforms and strike the beehive. Once you do this, one



of the bees will come your way to attack you! Quickly throw a marble at the bee so that instead of assailing you, it stings Tom! You have to repeat this procedure three times. What is the result? Tom wakes up with an enormous swelling on top of his head!

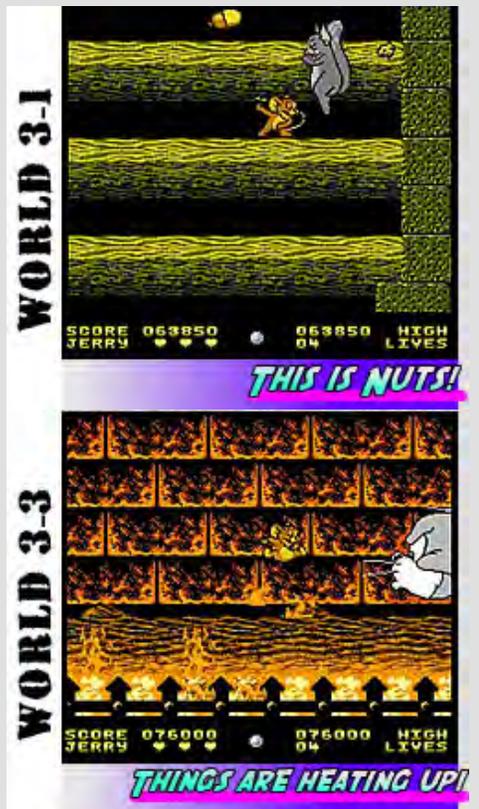


World Three:

You are now in the garden! My! I've never seen such giant squirrels in my whole life! Watch out for them as they throw acorns at you in this first stage! Those leaves are aggravating too as they can make you fall onto the lower platform!

Stage two is dedicated to . . . the chimney! So what is your enemy here? Of course! The flames! There are two types though: the little flames can be eliminated if you manage to get the cup of water which is hidden on a platform. Simply make Jerry drink a little and spit out a bit of water onto the flame and it will be extinguished! The other type of flame is much bigger. You have to use the whole cup of water to douse it a little and quickly dash past it.

Tom however will try to make things difficult in stage three. He has blocked your path and he won't let you get out of the chimney! You have to be really quick in this boss battle, as the flames and ashes are everywhere! Keep jumping while you aim (as usual) at Tom's head!



World Four:

Where are we now? In the living room! And what do we immediately see? Why, that's a NES! With the control pad too! There is also something not too thrilling—purple marbles all over the place! They are very dangerous as usually if you aim at destroying them, you will not have enough time and will get hit. The best advice I can give you is to go under them, because they are bouncing all the time! Don't stop! Run, run, run!

In stage two one object will be vital to you: the chisel! You will need it to cut through the wood and make your way to the next platform! However, not every piece of wood you can see can be chiselled through, so you will have to guess which the correct one is in order to keep going! Apart from this, you will have to avoid getting shocked while you're climbing wires, and watch out for the



cockroaches crawling around!

Tom this time is armed with an explosive device: rockets! You will first see his paw coming out and launching three rockets, and then he will show his head. This pattern will keep repeating over and over but you have to be very fast, avoiding the rockets and throwing marbles at Tom! Best of luck!



World Five:

We have finally arrived at the very last world of the game. We're getting close to rescuing Tuffy! Your first stage here is the bathroom! It is a similar level to the kitchen in that you will find exactly the same enemies and you will have to climb and time your jumps so as to reach the next platform! The only difference is that you have to watch for some nails placed throughout this level. If you are not careful, you will lose hearts very fast!

In stage two, you are finally in the attic! Here you will encounter two different enemies: ghosts and bats! The latter look pretty similar to Jerry himself, only that they are winged! Apart from this, you have to watch out again for the many nails which are scattered in this stage! You can't complete this stage until you have found the key that opens the cage in which your nephew Tuffy is trapped!

In stage three, Tom will again attack you with a rocket! This time it is only one, but it sure goes fast! You will have to repeat the procedure explained in World Four: whenever you see Tom's head, aim at it while you avoid the rocket! Arm yourself with patience as this world generally is the hardest of them all! When you have defeated Tom, Jerry will climb his way up and open Tuffy's cage!

Once again, Tom failed to achieve his malevolent ends! Congratulations! You have finished *Tom & Jerry!*



And The Grading Is...

First of all let us consider this game's originality. Even though the story in itself may seem simple in its concept—Tom kidnapping Tuffy—the levels are all varied and greatly executed. They are also filled with detail. You will encounter radios, televisions and that NES console in the living room! And don't forget that in the kitchen level you can find a frying pan making popcorn!

Moreover, *Tom & Jerry* offers you the chance to grab new objects which you can use to defeat your enemies, adding variety to the gameplay. This game is plenty of fun!

The frustrating part is that this game is very difficult! As you progress in the stages and worlds, you will get killed many times. And the other sad news is that if you have lost all your lives, you have only two more chances to complete the game!

Even so, it is surely worth a try!

Jerry's features and movements are also nicely done. Whenever he hits an enemy with marbles, or he enters a mouse hole, or he's climbing, you cannot help but admire the character's sweet motions.

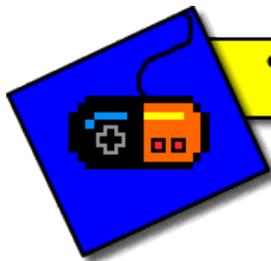
The only negative aspect and one that should have been improved is that you cannot throw a marble and run at the same time! If you're not aware of this, it is very likely you will crash into an enemy!

Regarding the music, the tunes are quite catchy and you will probably end up whistling them. However, there are only two different songs for the whole game! So even if you do enjoy them, you'll eventually get bored with hearing them over and over again!

Overall, I would say that *Tom & Jerry* is seriously worth consideration. It has excellent graphics and variety of levels. Don't be put off by its difficulty—try this game!



8 stars out of 10 possible ones



The Retro Junkie

by Rob Luther



NHL '94

1994. For me, this year was synonymous with two things: Mighty Morphin' Power Rangers and NHL '94. While the Power Rangers eventually fizzled out of my childhood in the late 90s only to experience a nostalgic renaissance years later, NHL '94 remained a close companion—a teammate who was always willing to drop the gloves in my defense.

I was blessed to grow up on McKee Ave, a dead end street in a small New Jersey town. For nearly 10 years, my friend Mark and I shared a passion for street hockey that was truly special. While our school didn't have a hockey team, that never mattered to us. Each night, he and I always found a way to meet under McKee's street lights and fire pucks off of buckets, milk jugs, or leather-strapped goalie pads. We even invited kids from neighboring streets to take us on in weekly tournaments, hosted "skills" competitions, and even staged a hockey fight or two for our imaginary fans!

However, when Mark and I didn't have a hockey stick in our hands, we often had a Sega Genesis controller in its place. For hours on end we played NHL '94—even after '95, '96, '97, and some 32-bit hockey games were released. Back then, I often wondered why NHL '94 stood head and shoulders above the other hockey games of the 90s. Now, 19 years since NHL '94's release, I believe the difference is in the details.



The Retro Run-Down:

Publisher: Electronic Arts, Inc.

Developer: High Score Productions

Released: 1993

Platform: Sega Genesis, Sega CD, DOS, SNES

Genre: Sports, Hockey

The Retro Review

"While NHL Hockey and NHLPA Hockey 93 were released for the Sega Genesis first, NHL '94 takes the series to a whole new level with enough features to make it one of the most memorable games in the NHL franchise. At first glance, NHL '94 might seem like a slightly polished version of NHL Hockey, but upon closer inspection, one can see that there are a lot of subtle differences that make NHL '94 exceptional.

New Features:

NHL '94 introduces dozens of new features like the traditional hat-toss on the ice after a hat-trick, goalies slamming their sticks in frustration, children pounding the glass, urging the players to fight...(Well, that's what I always thought they were doing!)



The NHL players will also have cold and hot streaks that will affect their ability on the ice and their ratings when it comes to playing and trading them. Another new feature that makes NHL '94 a blast is the fact that players can be checked over the boards! This rare, albeit, glorious event can be captured through player-tracking instant replay, so gamers can replay their hits over and over again...much to their competitors' chagrin! Another welcomed addition to NHL '94 is the automatic line change. Finally, NHL '94 introduces one of the more dramatic features of professional hockey: the notorious penalty shot...Shoot it top shelf, blocker side!

Music:

Another notable improvement in NHL '94 is the music itself. While composer Rob Hubbard and the Sega Genesis sound hardware are once again a dynamic duo, there's even more going on in NHL '94 that evokes our inner hockey fan! In addition to the traditional organ tunes played during each face-off, now each team has a customized song that plays once a goal is scored. It's a lot fun to hear the variety of songs. I particularly like the Hartford Whalers' theme!

Controls:

There has also been a huge upgrade in the controls. Now players can perform one-timers—which are genuinely effective!—but be careful; the computer can fire off one-timers, too! The computer defense has been improved from previous titles, as well. The goalies will now dive or lunge for the puck, so don't bank on using the same deke to fool the goalie. It won't work; I've tried!

Rob's Retro Recap

NHL '94 for the Sega Genesis. Can anyone give the single, greatest reason why many consider this one of the best hockey games of all time? I can't. Perhaps it's just the classic case having the right amount of features complemented by a timeless simplicity. NHL '94 is for all generations of gamers. After all, you know you're doing something right when games like NHL 13 still include the NHL '94 controls.



Although the NHL season is in jeopardy this year, I think I'll settle for those hockey memories on McKee Ave while playing a couple rounds of NHL '94. How else am I going to see Wayne Gretzky, Mark Messier, and Mario Lemieux hit the ice?

**Overall, I give NHL '94 for the Sega Genesis
5 goals out of 5!**



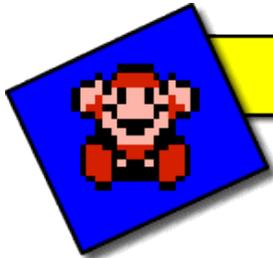
Happy New Year!

Rob Luther

www.facebook.com/retrogamingjunkies

Image Credits:

Title Screen screen and player images courtesy of <http://buffalosabresnation.com/2012/08/16/who-took-the-fun-out-of-my-nhl-videogames/>
Hat Trick screen shot courtesy of http://article.wn.com/view/2012/06/23/Blackhawks_draft_Jeremy_Roenick_s_nephew_Chris_Calnan/



Game Over

by Bryan Roppolo



I hope you all received awesome retro gaming gifts this Christmas and can possibly share some of your experiences with us. We'd love to hear what you got and if you would recommend it for other readers. I know that after reading the Wreck-It Ralph review this month, that I might try and get a copy of it when it comes out on DVD, since I am probably one of the few in the classic gaming world that has not yet seen this movie, even though most of the reviews seem to be favorable.

I want to take a little bit of a deviation from the standard 80s video game talk and trek down a path that I don't wander down very often. For some reason I have been thinking about all those great memories of playing Shareware titles on the PC. I used to have this CD with 700+ games on it, all being shareware or titles that were old/short and included as filler. It was Shareware that really kick started me into PC gaming. I must have played over 100 of the games off of that CD, and most of them were very good. Titles that come to mind are Apogee titles (like Duke Nukem, Commander Keen, Monster Bash, etc.), X-Com, Capture the Flag, Eternam, The Adventures of Maddog Williams, and countless others that I can't recall off the top of my head. I also had a standalone CD of Doom: Knee Deep in the Dead and King's Quest V (I think this was not shareware, but the whole version). Anyway, I would play the games on that CD like crazy and thought I would never get a chance to relive those memories without having to search for each game separately (most of the titles I don't even remember) until I was informed by a member on our forums that the Internet Archive has a large collection of Shareware CDs at <http://archive.org/details/cdbbsarchive>. If you haven't checked this out yet, I recommend that you do, as it is full of downloadable Shareware CDs! If you were a fan of Shareware back in the day, you need to check this out, as it's chock full of all those great games that helped define that era of PC gaming. All you need to do is download DOSBox from <http://www.dosbox.com/> and you're all set.

Now excuse me while I go and fire up a game of God of Thunder!