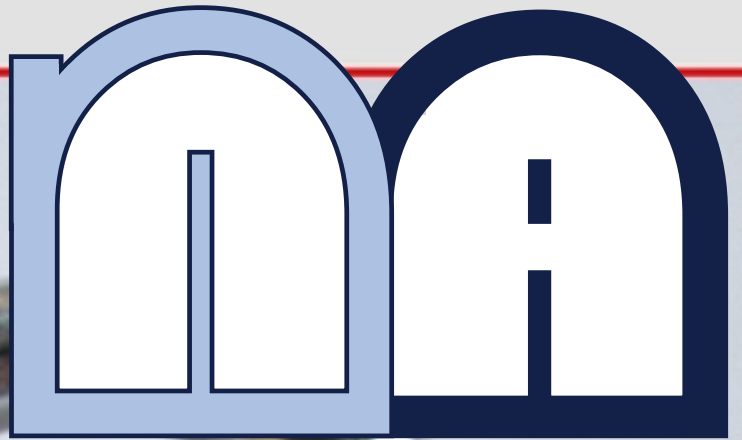


NintendoAGE eZine



Volume 2 Issue 6  
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The background of the cover features a close-up of a silver metal padlock. A wooden block is wedged between the shackle and the body of the lock. On the wooden block, a NES lockout chip is visible, which is a small green and orange component. A hand is shown using a key to unlock the padlock.

# UNLOCKING

the NES lockout chip

## IN THIS ISSUE

**Updated Prices**

*And more color, too!*

**Nintendo Canada**

*A deal you haven't heard.*

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*Jimpoleshuk gives us more.*



## Monthly Wrapup

### Editorial by Dan Langevin

By this time you've already noticed our shiny new mascot, Nindo! By the tireless effort of Aaron / xARSEFACEx and Ray / TheFrisbee, we've got some really slick graphics in store for NA. Like Nintendo Power's vintage mascot Nester, expect to see Nindo pop up everywhere from logos to merchandising to even future covers of the NintendoAGE e-Zine! Congrats also to the person who came up with the name for our mascot, DaronMalakian17, who won a copy of Bomberman II for his achievement.

The off-eBay auction wars continue! Most of you who frequent the message boards have seen the introduction and RAPID growth of ChaseTheChuckWagon.com and GameGavel.com as viable alternatives in the war on eBay fees! Their healthy rivalry promises to keep users rewarded with numerous contests, promotions and VERY low fees. I have already both bought and sold multiple items off-eBay and I have to say, it was pretty easy. Both ventures have their own distinct "flavor," and they're certainly winning business from the not-so-gentle e-Giant. Time will tell if these two startups can both coexist peacefully, or if a winner will emerge - but for the time being it's crystal clear that next to arranging your own deals in forums, they are the cheapest and easiest alternatives to the worldwide flea market that is eBay.

This month saw the first public sale of repros of the infamous X-rated NES games Bubble Bath Babes, Hot Slots and Peek-a-Boo Poker. While the unique black cartridge cases themselves were not emulated (the games were installed to standard licensed NES grey cases), the ROMs were directly downloaded from the originals. There has been quite a bit of controversy surrounding this, and although the seller Coinheaven was forthcoming that they were repros right within his sales listing, nonetheless there is controversy.

While most will agree that the introduction of these knockoffs will not harm the current market value of the real Panesians, the presence of boards that have the game rom installed to them may lead to deception. Earlier this month a copy of the Stadium Events repro (released by Yemtrader) was put up for sale as a real NTSC copy. While the item was yanked before a sale could happen, and the issue ultimately resolved to the satisfaction of most NA'ers, there is still potential for similar abuse

with Panesian repro boards. However, the technology used currently by those who make repros has recently become much more widely available, and while a scammer would have an easier time retooling someone else's handiwork, the possibility exists for someone to make a passable fake from scratch. Caveat emptor! Protect yourself, and buy from reliable sources. And when in doubt, ask for more pictures!

VGA, the self-proclaimed "Video Game Authority" and currently the foremost grader of sealed video games, has greatly increased its output of graded sealed games. Now, more than 100 exist on the market, with still more likely to be nestled away in the hands of private owners.

Without a population report it's impossible to know for sure, but it seems the highest grades currently awarded have been a handful of 90's. While these are among their "gold tier" Mint grades, one wonders what it takes to achieve absolute perfection? And furthermore, what kind of premium will the market pay for a true 100-grade copy of any game?

Speaking of the market, this month's price guide not only has revised numbers which include sales from the past 30 days, but also a big new monthly feature. You may have already noticed if you flipped ahead, that we've recorded the change in dollars from last month to the current price, so one can see if a game is cooling off or heating up. In addition to showing the amount changed, we've also highlighted "cool" games with blue, and "hot" games with pink. While most issues will show only the one-month change, expect some trend analysis in future issues that pick out a few noteworthy games and track their progress over multiple months.

This month, let's look at some of the winners and losers. First of all, it's interesting to note that we finally have some real values for the games we were missing last month (namely, the Panesians!) - so don't mistake their lack of movement as a sign that their value is static. Expect to see them increase as Christmas 2008 approaches - should any more become available for sale!

This month saw the release of Indiana Jones and the Kingdom of the Crystal Skull in theaters - and although reviews were mixed about this latest installment in the decades-old franchise, there's no doubt that its released stirred up the market for Indy nostalgia. The cheaper Temple of Doom versions both saw an

increase in price as people were reminded that in the arena of their 8-bit nostalgia, they could relive some of Indy's past adventures inexpensively. The more scarce and more collectible Last Crusade game versions didn't see much attention, likely because attention was drawn to the far more plentiful and affordable Tengen and Mindscape offerings.

Both G.I. Joe games saw a rollback this month as interest has been drawn to other franchises, but look for this to pick up in the near future as the feature film Rise of the Cobra (slated for 2009) progresses in development. Likewise, the reinvention of the Star Trek franchise due out in late 2009, and the animated Star Wars offering scheduled for the end of this year, should also inspire good sales numbers in the vintage VG market.

Biggest winners this month were Sunday Funday, Tagin Dragon, and Challenge of the Dragon. Very few copies of these games were offered recently, and Summertime spending led to more customers fighting for higher top bids. Keep flipping those burgers, teens, and buying up those scarce carts!

Big losers included a sealed copy of Cheetahmen II, which fell sharply last month. Also, notable titles Bubble Bobble 2, Action 52, Menace Beach and Maxi 15 saw extremely sharp declines due to an overabundance of listings in June. For whatever reason, more of these loose carts found their way to auction, splitting profits for the sellers and driving prices down 25% or more. Expect these to rebound quickly as the current fluke supply dries up and scarcity reasserts itself in the marketplace.

Despite the many changes in average sold value, the price of an average NES loose game collection remained steady, changing down only \$36 from \$11,060 to \$11,024. It seems that, at least this month, demand is still as steady for these games, with only availability being a real factor in the biggest single-game changes.

As always, thanks to all of our sponsors and contributors. Check a few of the sites you see featured in this issue out -- all of our advertisers are video game fans not unlike yourselves, and the powers that be here at NA all really like what they have to offer. Take a gander, punks! Thanks for reading and contributing. Keep 'em coming! -Dan



*Cheetahmen 2 got no love this month as sales cooled off.*





## The Big Score

Article by Curtis Stratuliak

I started collecting games hardcore around October 2005. I was not a member of NintendoAGE and up to that point I had only kept a small collection for NES and SNES (around 80 games). I just want you to know this up-front so you can appreciate how clueless I was when 'It' happened.

In the late summer of 2006 my brother-in-law was attending a first-aid course at a local University College. It was just a normal classroom setting and the instructor wanted to know what field everyone was in. One guy stood up and said that he was there as part of his employment requirement and that he was a warehouse employee ... for Nintendo of Canada.

My brother-in-law heard this and it triggered a thought in his brain: Curtis is a stupid video game nerd and would probably want to at least talk to this guy. So during a class break my brother in-law approached the Nintendo employee (we'll call him "Nester") and started chatting with him. He mentioned that I was a hardcore Nintendo collector and that if he had any spare games I would most certainly be interested. To say that the conversation with Nester went well would be an understatement.

I called the number literally as soon as I got a hold of it. No answer. I tried a couple more times and left a message so as to not look like a crazed collector-stalker. I finally got a call back the next day while I was at work. He mentioned to me that he had over 500 games to sell and he was looking to dump them all off at once in a quick, clean transaction. I was game. I mentioned to Nester that I collect games and I know what most are worth. (Keep in mind, I ONLY collect loose cart games and was still new to the scene). Nester mentioned to me that some of the games had boxes and some still had 'the wrap on them'. I thought to myself that maybe there were



some crappy sealed titles and boxed games...so I would still only make an offer within my modest budget. I made an offer over the phone, sight unseen offer. I mentioned to him to check my offer out and do some investigating on eBay so he could determine a fair value. He told me he had a friend that frequents eBay who said my offer was "fair."

Before our conversation had ended, I thought I would ask where the games came from. Nester told me how he acquired them:

"We were scheduled to do a major clean-up of the warehouse to prepare for a corporate visit to the Nintendo of Canada facility. The Management from Nintendo of America and Nintendo of Japan were headed to the Richmond, Canada location for their annual meetings and tour. I and other staff were cleaning up and came across several filing cabinets which also had to be taken care of. They discovered one of them was very heavy and would have to be emptied before they could move it. They opened it up to find 550+ SNES games. The warehouse foreman instructed Nester to discard all of the games into the disposal bin. After a brief discussion involving dumpster diving, the foreman allowed Nester to load them into his car as quickly as possible so as to not waste company time.

Nester came by my house after an agonizingly painful wait – at least a week. He came to my door and asked for a hand moving the boxes in. I started laughing at the hilarious sight of all these large cardboard boxes which were crammed in the back of his family car. He came into my house; I showed him my collection and paid him the agreed amount of money. He was

on his way before I really even opened up any of the boxes to take the stuff out for an inspection.

Well, that's when 'It' happened. 560 games included in all the boxes. 545 or so factory sealed MINT, no stickers, no hang tabs, no FREAKING FINGER PRINTS, NOTHING. 10 or so CIB games and 5 loose games. It was at this point where I started to think I might have gotten a good deal, but I was still unsure as I had never in my life bought a sealed game or even looked into buying one. (I don't count a \$10 Space Invaders at the local video game store to be an accurate reflection).

At this point I started to get curious. I posted the pics in a thread on NintendoAGE and hoped to get some help from more knowledgeable members. I got a few replies from members but nothing at all that would hint to the true signifi-

cance of my score. Then Bronty contacted me and informed me he lived in White Rock, just a stone's throw from where I live! Now for all of those that know Bronty (Dan) you pretty much all know he is a stand-up honest guy. Well, he's proven that to me, and then some. He came to my house and followed me calmly down to the room where I had the games. I cracked some beers and we started looking through them. It was at this point I noticed Dan kind of frowning at me and giving me a dirty look.

I asked: "What?"

Dan replied: "Dude, you are making me cringe with the way you are handling the games...you should be more careful!"





(He was very polite about it though!)

We spent the next while looking at stuff and getting excited and he started to tell me the value of the games. He pulled out some bank drafts that were already printed in my name and asked if he could buy some games. I told him I had no idea what to ask or what they were worth and this is where Dan's true character showed. He pretty much overpaid for every game he wanted, since they were in such great condition. 15 minutes later, he much poorer than when he arrived. He also mentioned that I should keep Final Fight Guy, but then said:

"I would give you a lot for it if you sell it, I have never seen this before and it is probably very rare, but you should probably hang onto that title."

Thanks Dan.

I was so happy I had found a person I could trust and who could school me in the sealed collecting scene ... AND he was a fellow accountant nerd ;-). We came to an agreement (more like me offering and insisting that it was okay and worth while for me) that he would advise me and look over any offers or trade requests I would get in the next few months, and in exchange he could upgrade some of his personal favorite titles from his collection with my mint copies. Win-win.

A few weeks after Dan had helped me out I got another call. Nester had phoned to tell me he had missed some games that he had set aside for his kids to play with. He stated that some were opened so his kids and he could play, but he would bring them all over. He returned to my house and I was very disappointed to see a bunch for sports titles and kids games. I offered Nester a lot more money for these titles (relatively, there was only 15 or so) even though they seemed to be crap games. Well, I called Dan to

tell him I got more games and that I overpaid to secretly thank the guy for getting me the games. Dan replied (paraphrasing here not quoting):

"Well cool, good for you, what titles?"

I said: "NHL 94, NHL 96... Battletoads Double Dragon, some Mario Early Years games ...and Fun N Games."

Dan replied in a louder voice: "Jesus, Fun N Games?"

Me: "Yeah, why?"

Dan: "Hold onto that one too" then I heard some chuckling.

After a little while I got the hang of everything

and set aside the titles I wanted to keep, and started to sell off some of the titles I didn't really have any desire for. There are several members on this site that have copies of some of my games and can attest to their uncirculated condition. Nintendo of Canada (NOCL604) who auctioned off the rest of the Nintendo of Canada stock has knowledge of how I acquired my games from Nester. I made sure to ask his permission before I wrote this article!

So that is my story and I hope at the bare minimum you got a chuckle out of the whole thing. After all, Nintendo of Canada got rid of stuff occupying space at no loss, Nester got to sell some games, my brother in-law got a 40" LCD TV from me as a present and Dan got first dibs and upgrading rights for being a stand-up guy.

Well, you may be thinking, "that was pretty freaking cool, I wish I could have a part of that history and get a Nintendo of Canada game." Well, as a sign of how much I appreciate this community and the people in it I am auctioning off several items (some sealed, some not) directly from Nintendo of Canada so that everyone that is a part of the NintendoAGE community can have a piece, even if you don't have a fat bank roll.

- 50% of all proceeds from the auction will be donated to NintendoAGE (Dain) for providing such a great place for all of us!

- The balance of the proceeds will be mine! BUT, I will spend EVERY dollar exclusively on things all of YOU have for sale in the Buy, Sell & Trade thread here at NintendoAGE.





The Free Video Game Auction Site, For Video Game Enthusiasts!

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Auction Feature upgrades so low you can't afford to not use them!

No Credit Card Required!

What's being bought and sold? Here are just a few items that have been sold on Game Gavel:







## Unlocking the Lockout

Article by Brian Parker

In Japan the Famicom was plagued by pirate carts and unlicensed third party releases. These are two of the factors that contributed to the downfall of Atari and the general collapse of the video gaming industry in the USA. When Nintendo created the NES they added a security chip to ensure only authorized carts would work. This lockout chip, also known as the "Custom Integrated Circuit" or "CIC", was only available to licensed developers. Overall it did a very good job of keeping control of game releases.

### How it Works

There is one CIC chip inside the NES, and another inside every cart. The system CIC acts as a lock, with the cart CIC acting as a key. The two chips communicate through 4 of the 72 pins on the NES cart. The first pin is the clock, which is used to keep both chips running at the same speed. The next pin is reset. This signal goes from the system CIC to the cart CIC. When the system turns on both CICs are reset so they are starting from the same point. The final two pins are for data. One signal goes from system to cart, and the other goes from cart to system. These are used to communicate between the CICs.

When the system is turned on, the system CIC first tells the cart CIC which one of 16 sets of numbers to use. Then both CICs start running a complex equation using those numbers. When they are done, they each send the result to the other over the data pins. Both CICs check the result from the other chip. If either CIC finds an error, the system CIC starts resetting the console. Once this happens, the console will not recover and has to be manually reset. If no error is found, the equation is run again and the process repeats forever.

This is like if you and a friend agreed to say multiplication tables together. First you pick the starting number and tell it to your friend. Say you picked to start at 1, and the equation is to always multiply by 2. Then you both say the result at the same time, while listening to the other. You say 2, he says 2, everything is good. You say 4, he says 4, still good. You say 8, he says 10, there's an error!

### Regions

The CIC was also used to control sales regions around the world. The major regions were

North America, PAL A, PAL B, and Asia. All the CIC chips run the same equation, but they use different starting numbers. When the system CIC says "use number set 1", the system CIC and cart CIC don't agree on what is in that set. When they both run the equation they get different results and the system resets. Systems with the same video encoding like PAL A and PAL B are exactly the same except for the CIC.

### NWC

A few carts actually need the CIC. In the authentic NWC cart the CIC reset is connected to the hardware timer. When the system powers up the cart hardware is correctly reset. When the NWC is used in a top loader which has no CIC, it may not work correctly.

### Tengen

When Tengen, aka Atari, entered the NES market they came in as a licensed developer. Their initial releases included Gauntlet, RBI Baseball, and Pac Man. All three were released in the standard gray carts and had official product codes. They were very quickly unhappy with the licensing program offered by Nintendo, which forced system exclusivity and limited release quantity and frequency. They were already able to create and fabricate their own games so the lockout was the only thing stopping their production. Naturally Tengen set out to build their own lockout.

There are two variations of the story, and a few common mistakes. Some of both of these stories may be incorrect. The first version as told by Ed Logg, a programmer at Atari who did not work on the CIC, says Tengen was able to recreate their own CIC called the "Rabbit" by just examining the Nintendo CIC. At the same time a separate group of lawyers went to the US Patent Office and stole the patents for the Nintendo CIC, which were not used in the Rabbit development. This sounds good except that patents are completely public, so stealing the patent documents is not possible. The whole point of patents is to give a temporary monopoly to the creator, then have the valuable information available as public domain. Even today the Nintendo CIC patent is viewable to anyone at <http://www.pat2pdf.org/patents/pat4799635.pdf>. The patent alone also does not supply enough detailed information to make a compatible CIC. It does not list the exact equations used, only the manner in which the communication between the chips happens and the general procedure.

The second version of the story is more supported by the legal documents. In 1986 Tengen tried to create their own chip but was unable to. In December 1987 Tengen became a licensee, and released the first of their games. In early 1988 their lawyers went to the Copyright Office (not Patent Office) and fraudulently obtained the source code, called 10NES, for the Nin-

tendo CIC. The lawyers claimed they needed the documents for an infringement case, which is exactly what Nintendo later started. Using the copyrighted source code Tengen was able to make their own lockout. Tengen started the legal battles with antitrust violations in December 1988, then Nintendo fired back with patent and copyright infringement violations in November 1989. "The court" here refers to the Ninth Federal Circuit US Court of Appeals, where all the cases were eventually merged into one. It is a system of judges like the Supreme Court, not a trial by jury.

First Nintendo claimed a copyright on the data stream between the system CIC and cart CIC. Tengen's Rabbit put out the same data stream or it wouldn't work. Tengen argued that the data stream could not be copyrighted because it was not a computer program. The court agreed with Tengen, and that section was dropped.

Second Nintendo claimed a copyright on the 10NES source code. There were three factors of infringement with different results. First was verbatim copying. Tengen did not disagree that they fraudulently obtained the documents from the Copyright Office, so they were found guilty. Next was reverse engineering. The court found any reverse engineering of the Nintendo CIC to determine how it works is fair use. Tengen decapped the chip (explained below) and read out the ROM, but it was not enough for them to understand how it worked and create their own. The final factor was substantial similarity. The Rabbit source code and 10NES source code were compared. Tengen's chip was found to have parts of the 10NES code not needed to unlock the console, so direct copying was likely. Tengen's chip also had instructions that Nintendo had removed from their own CIC, but still remained in the 10NES source at the Copyright Office. This is the main point against Ed Logg's version of the story. If Tengen really did create their own independent CIC, they should have been able to show it was not a direct copy of the 10NES source. When Tengen was found infringing, they claimed copyright misuse by Nintendo. Tengen said the copyright of the CIC was an exclusive antitrust monopoly through the licensing program, and therefore the copyright is invalid and cannot be infringed against. The court rejected this claim based on Tengen's fraud with the Copyright Office, without having to decide the antitrust issues. Nintendo's partial victory was more of a loss. Nintendo wanted all CIC creation shut down, but instead it gave precedent for others to copy only what was needed for CIC compatibility.

Nintendo's next move was to go after Tengen for patent infringement. Tengen had already been found in violation of the Nintendo patent, so they tried to invalidate it by claiming it was "obvious" because of a close similarity

to a previous patent. That patent at <http://www.pat2pdf.org/patents/pat4736419.pdf> was granted to AT&T Bell Labs about 8 months earlier than the Nintendo CIC patent. It also describes a set of two chips that communicate using a predetermined random number sequence. The court would not grant the obviousness claim, but stated Tengen would likely win in a trial. When that trial happened, Nintendo won. The jury decided the addition of the reset signal to the AT&T design was enough to make the Nintendo CIC not obvious.

All rulings were finally completed in 1992 and 1993. Both sides were unable to win enough ground to completely stop the other, so negotiations to avoid more jury trials and appeals were started. In March 1994 a settlement ended all disputes. By that time the SNES was out and had a different CIC. As Atari was bought, split, and sold again many times the Tengen name disappeared. The CIC patent has expired, but the 10NES copyright will last many more decades.

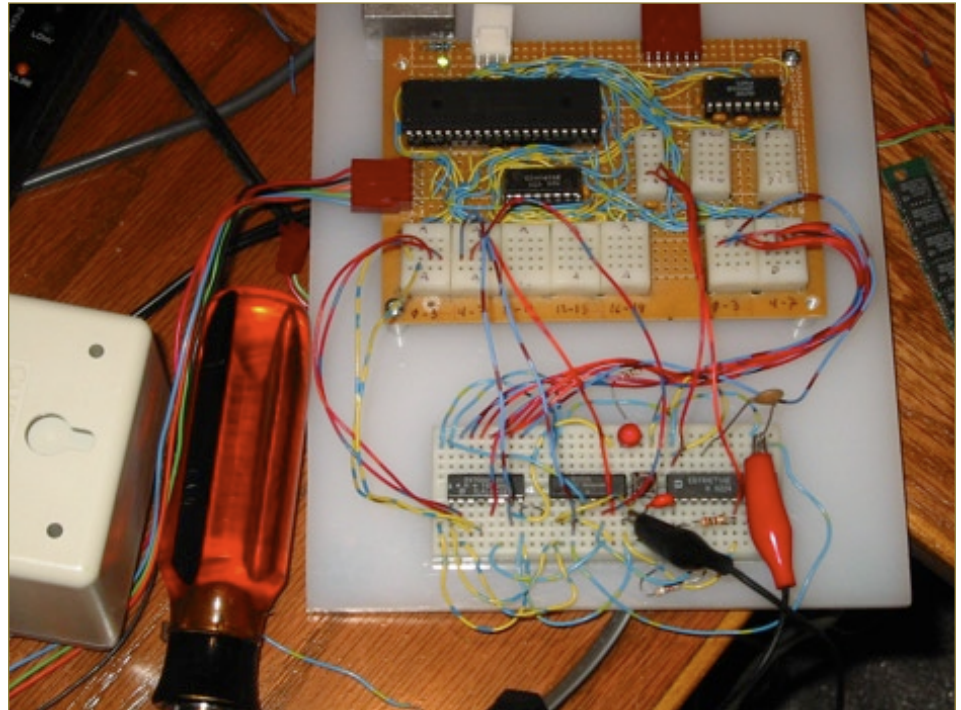
**Color Dreams, Camerica, and the Others**

Other third party cart makers didn't have the big budget or engineering skill to recreate their own CIC, so they decided to defeat the one in the system. In the first revision of the NES motherboard, marked NES-CPU-05, the lockout chip was directly connected to the cart connector. Early Color Dreams carts used a circuit designed to "stun" the system CIC so it will crash and not be able to reset the NES. A mess of small components is used to generate a -0.6 volts signal on the data line from the system to the cart. This line is usually run at 0 to 5 volts, so negative voltage going the wrong direction does Bad Things(tm). Nintendo countered by putting protection circuits on the data line, which cancelled the effect of the stunner. There are two revisions of these boards which are marked NES-CPU-07 and NES-CPU-09. Color Dreams quickly came out with a new circuit that attacked both the data and reset lines. Again large negative voltages were used to crash the system CIC. Nintendo then added protection on the reset line to their motherboard marked NES-CPU-11. Almost all lockout defeaters will not work on this system.

Sometimes the stunners would take a while to crash the CIC, which is why they tell you to

*My logic analyzer outputs showing both data signals (din, dout)*

wait for the screen to blink a few times. The



*Logger used by kevtris. Tengen and Nintendo lockouts at bottom left.*

system CIC is resetting the NES, then crashes and you can continue playing. The A/B switch on the back of the Camerica carts is to select which type of stunner to use. The "A" setting can be very bad on a top loader, which has no CIC. It will drain very large amounts of power as it is building up for the negative stun. This can cause other chips on the board to crash, and may even fry your system. Generally a loud audio buzz is heard as the interference builds.

The constant battle between Nintendo and the third party cart makers did not help their sales. Games were not guaranteed to work in any NES system, and ones that did appeared flaky. When the system CIC has crashed it can no longer reset the NES, so the reset button on the front of the console no longer works either.

**Pin 4**

In addition to defeating circuits in the cart, AVE also included an instruction sheet on how to completely disable the system CIC. As covered in the NintendoAGE Oct. 2007 eZine, pin 4 of the CIC is cut. This changes the lockout from "lock" to "key". When powered up it sits patiently waiting for the system to send a command, not knowing that it is the system. The cart CIC is also waiting so no reset ever happens. Unlike the stunners the reset line remains intact, so the

reset button

will work and NWC carts will work. Nintendo had no answer for this other than to deny warranty claims when the cut pin was spotted.

**Decapping**

In 2006 a member of the cherryroms forum named neviksti started decapping various computer chips. The NES CIC was one of his targets. Decapping means dissolving the material surrounding the chip electronics, then dying it so it can be viewed under a microscope. Every step needs really toxic acids so it is not something that can easily be done. With those pictures the processor ROM was read out. This is the same process that Tengen tried and failed. Without knowing the architecture of the processor the ROM is just random garbage. It did not appear to match up with any known processor so it was not useful.

**Data Stream Processing**

The next step was to use a logic analyzer to look at the data communication between the two CICs. In March 2006 all four signals were

captured at high speed. I was able to find out that the system CIC tells the cart CIC to use one of sixteen different streams. Once a stream is selected, it always





continues with the same output. Not much came of this effort, other than general timing that was useful later.

In May 2006 a nesdev member named loopy was able to use a parallel port on their computer to log the streams for many hours. Unfortunately the data did not appear to repeat after days of recording, so having a chip to play back the data was not an option. Various people tried data crunching on the numbers but were unable to find anything significant.

### Tengen Decapping

Neviksti returned in June 2006 with pictures from the decapping of the Tengen Rabbit CIC. The pictures were good enough to view the en-

tire gate structure of the chip. It was thought that recreating the thousands of transistors in a circuit emulation program would show how the chip worked, but only as a last resort since that would take a very long time. One small error could make the entire simulation not work. Large functional blocks like RAM and ROM were identified but the CPU core was still not known. A few people made guesses at functionality, but nothing firm was ever decided.

### Debug Breakthrough

Suddenly in November 2006 a famous nesdev member named kevtris made the single significant breakthrough. He discovered the Tengen engineers included a debug port on their Rabbit chip. By changing one of the input pins, most of

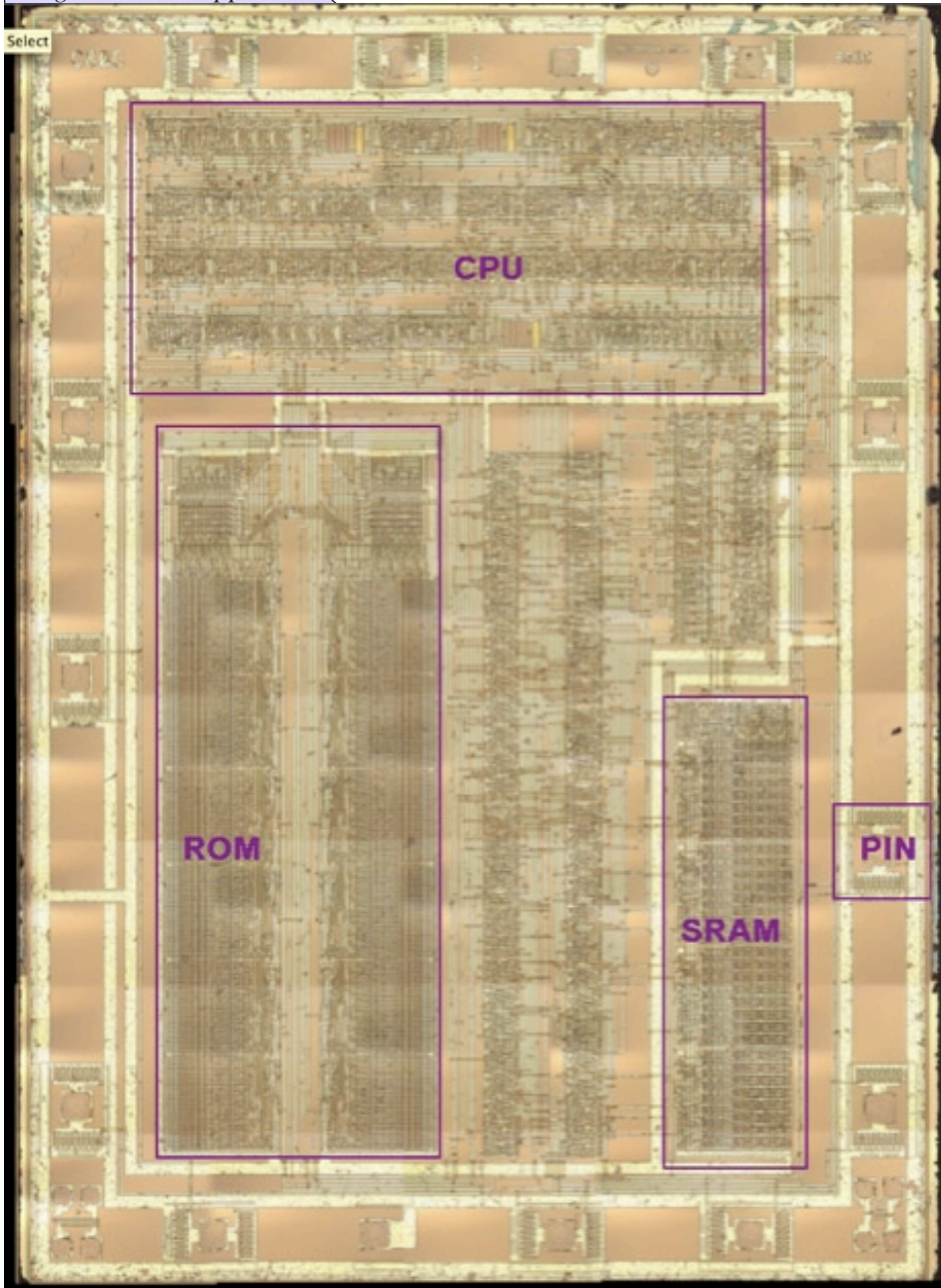
the internal CPU information was outputted on the other pins. Every step the CIC was making could be recorded. Instead of just reading the ROM as garbage, the command and result was being shown so the architecture could be figured out. Over the next month the entire instruction set was decoded. This was essentially the same as having the 10NES source code, and it was taken from the Tengen chip. By December the lockout algorithm was known. It was also shown that the Tengen chip did calculate both the lock and key sides as stated in the lawsuits, when only the key side was needed.

Once the NTSC CIC equations were known, the other CIC regions were recorded and their random numbers were calculated. A nesdev member named dvdmtb was able to quickly come up with all the data for the four major CIC regions. Simulations were run for days to make sure the equations were working correctly.

### The Cyclone

On January 18, 2007 kevtris announced his lockout clone, the Cyclone, was completed. He had taken all the data and equations and programmed them for a small common processor called the PIC. The four major regions were all included. By not using any illegal Copyright Office documents this chip is legal under fair use reverse engineering, as was decided by the original Tengen vs. Nintendo case. By only implementing the “key” and not the “lock” it avoids the substantial similarity problem. It was a huge step to getting new Nintendo games, and is used in all RetroZone releases. The SNES CIC is still a barrier to new games but hopefully it will be cracked one day too.

### Tengen CIC decapped



### Notable Links

(non-clickable for your discomfort)

Court judgements: <http://digital-law-online.info/cases/24PQ2D1015.htm>

Court summary: <http://www.patentarcade.com/2005/08/case-atari-v-nintendo-nd-cal-1993-cp.html>

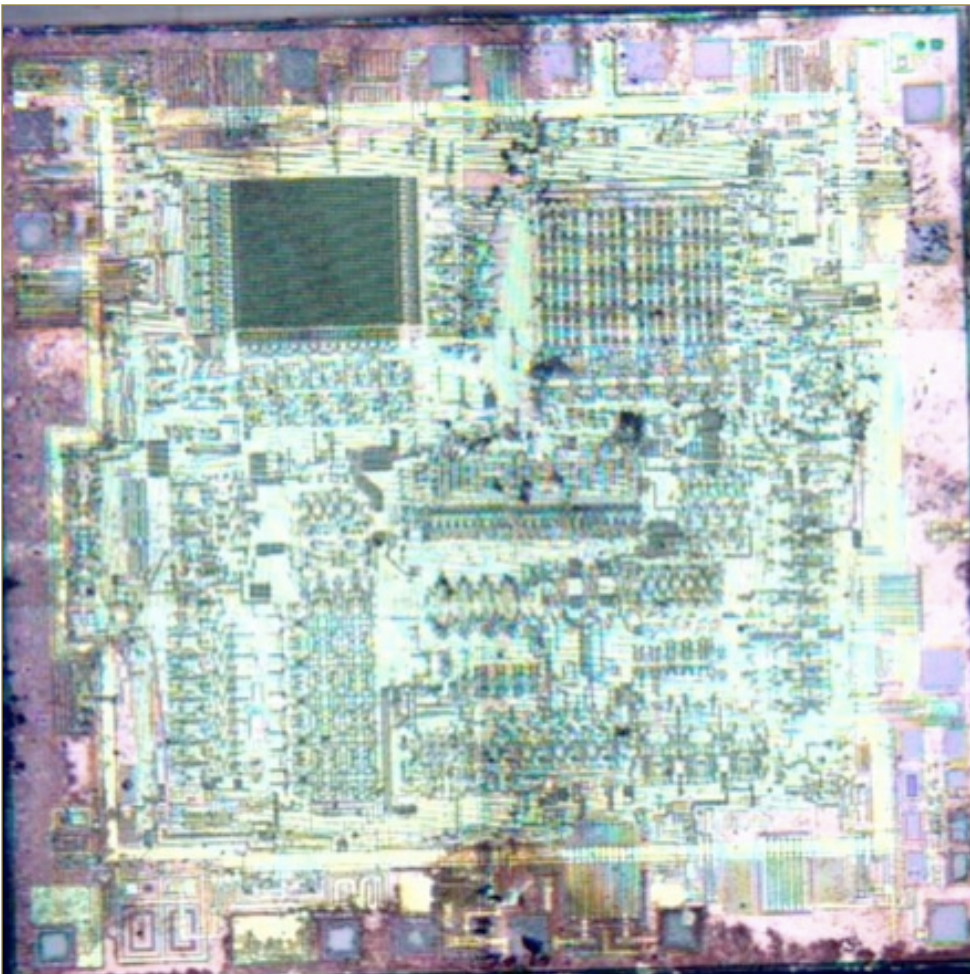
Nintendo CIC patent: <http://www.pat2pdf.org/patents/pat4799635.pdf>

AT&T security patent: <http://www.pat2pdf.org/patents/pat4736419.pdf>

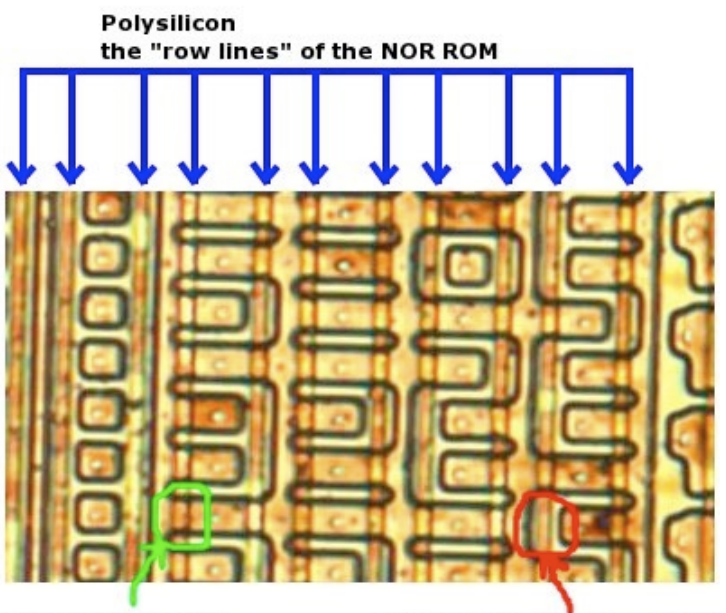
Ed Logg Interview: <http://www.atarihq.com/tsr/special/el/el.html>

Retrozone: <http://www.retrousb.com>





NES CIC decapped



Right:  
Reading NES  
ROM

Transistor exists  
(can pull bitline to 0)

Transistor does not exist  
(cannot pull bitline to 0)

# AGE EXPO 2008

>>> September 6, 2008

Finally, a gaming expo in the south!

What? Age of Gamers Expo 2008  
Where? Knoxville, Tennessee  
When? September 6, 2008  
Why? Because we're addicted!

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NINTENDO DS™

PSP



Wii™

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PS2  
PlayStation.2



XBOX 360

NINTENDO 64

AGE





**nintendo**  
**PRICE GUIDE**

July 2008

www.NintendoAGE.com

Title	Price/Change	Title	Price	Title	Price
3-D World Runner	4 --	Baseball Simulator 1.000	5 1	Bugs Bunny B'day Blowout	5 --
10 Yard Fight	3 --	Baseball Stars	9 --	Bugs Bunny Crazy Castle	6 --
720	3 -1	Baseball Stars 2	12 --	Bump 'N Jump	4 --
1942	7 -1	Bases Loaded	3 --	Burai Fighter	4 -1
1943	7 --	Bases Loaded 2	3 --	Burgertime	7 -1
8 Eyes	4 1	Bases Loaded 3	3 --	Cabal	4 --
Abadox	3 --	Bases Loaded 4	12 -2	Caesar's Palace	3 --
Action 52	46 -17	Batman	3 -1	California Games	7 1
AD&D Dragonstrike	13 -1	Batman Return of the Joker	7 -1	Caltron 6 in 1	187 -13
AD&D Heroes of the Lance	6 --	Batman Returns	5 --	Captain America	7 -1
AD&D Hillsfar	14 --	Battle Chess	4 --	Captain Comic	5 --
AD&D Pool of Radiance	10 --	Battle of Olympus	6 2	Captain Planet	5 --
Addams Family	6 --	Battleship	6 -1	Captain Skyhawk	3 --
Adventure Island	8 -1	Battletank	4 1	Casino Kid	3 --
Adventure Island 2	11 --	Battletoads	9 -2	Casino Kid 2	19 4
Adventure Island 3	17 -1	Battletoads & Double Dragon	16 --	Castelian	5 1
After Burner	3 -1	Bayou Billy	3 --	Castle of Deceit	37 -3
Air Fortress	3 --	Bee 52	7 --	Castle of Dragon	4 --
Airwolf	3 --	Beetlejuice	6 1	Castlequest	3 --
Al Unser Jr's Turbo Racing	3 --	Best of the Best	7 1	Castlevania	11 2
Alfred Chicken	13 -2	Bible Adventures	7 -1	Castlevania 2	6 --
Alien 3	7 --	Bible Buffet	24 1	Castlevania 3	11 -1
Alien Syndrome	3 -1	Big Bird's Hide & Speck	3 -1	Caveman Games	7 --
All Pro Basketball	2 --	Big Foot	4 --	Challenge of the Dragon	55 10
Alpha Mission	3 --	Big Nose Freaks Out	21 2	Championship Bowling	3 --
Amagon	3 --	Big Nose Freaks Out (Aladdin)	14 -1	Championship Pool	8 -1
American Gladiators	6 --	Big Nose the Caveman	8 --	Cheetahmen 2	330 -70
Anticipation	3 --	Bill & Ted's Excellent Adventure	5 --	Chessmaster	3 --
Arch Rivals	3 --	Bill Elliot's NASCAR Challenge	4 --	Chiller	27 2
Archon	5 --	Bionic Commando	6 --	Chip N' Dale Resc. Rangers	7 --
Arkanoid	9 --	Black Bass	5 -1	Chip N' Dale Resc. Rangers 2	35 -1
Arkista's Ring	6 -1	Blackjack	24 5	Chubby Cherub	10 1
Astyanax	3 --	Blades of Steel	4 --	Circus Caper	3 1
Athena	3 --	Blaster Master	4 --	City Connection	4 --
Athletic World	5 --	Blue Marlin	9 1	Clash at Demonhead	3 --
Attack of the Killer Tomatoes	7 --	Blues Brothers	9 -1	Classic Concentration	8 --
Baby Boomer	28 -1	Bo Jackson Baseball	4 --	Cliffhanger	10 2
Back to the Future	3 -1	Bomberman	10 2	Clu Clu Land	5 1
Back to the Future 2 & 3	5 --	Bomberman 2	23 -2	Cobra Command	3 --
Bad Dudes	4 1	Bonk's Adventure	45 -1	Cobra Triangle	3 --
Bad News Baseball	6 --	Boulder Dash	7 1	Codename: Viper	3 --
Bad Street Brawler	3 --	Boy and His Blob, A	4 --	Color A Dinosaur	14 4
Balloon Fight	8 1	Break Time	5 --	Commando	3 -1
Bandit Kings of Ancient China	31 1	Breakthru	4 --	Conan	14 5
Barbie	5 --	Bubble Bath Babes	641 --	Conflict	11 2
Bard's Tale	7 --	Bubble Bobble	16 1	Conquest of Crystal Palace	4 --
Base Wars	5 --	Bubble Bobble 2	93 -17	Contra	17 --
Baseball	3 --	Bucky O'Hare	12 2	Contra Force	36 -4



Cool World	8	2	Dragon Warrior 2	18	--	Gauntlet (unlicensed)	3	--
Cowboy Kid	21	-2	Dragon Warrior 3	29	-1	Gauntlet 2	3	-1
Crash a/t Boys St. Challenge	7	-1	Dragon Warrior 4	45	3	Gemfire	22	2
Crash Dummies, Incredible	6	--	Dragon's Lair	5	-1	Genghis Kahn	8	1
Crystal Mines	14	4	Duck Hunt	6	2	George Foreman KO Boxing	5	1
Crystalis	6	--	Duck Tales	7	--	Ghost Lion	11	2
Cyberball	4	--	Duck Tales 2	27	3	Ghostbusters	5	-1
Cybernoid	3	--	Dudes with Attitude	5	2	Ghostbusters 2	5	1
Dance Aerobics	5	--	Dungeon Magic	3	-1	Ghosts 'N Goblins	6	1
Danny Sullivan's Indy Heat	9	1	Dusty Diamond's All Star Softball	30	-6	Ghoul School	6	1
Darkman	5	1	Dyno Warz	3	--	Gilligan's Island	7	--
Darkwing Duck	8	-1	Elevator Action	5	--	Goal!	2	--
Dash Galaxy	3	--	Eliminator Boat Duel	8	1	Goal! 2	7	--
DayDreamin' Davey	4	--	Empire Strikes Back	7	-2	Godzilla	4	--
Days of Thunder	3	--	Everet/Lendel Top Player's Tennis	3	--	Godzilla 2	21	-2
Deadly Towers	3	--	Excitebike	7	--	Gold Medal Challenge	6	1
Death Race	19	2	Exodus	6	-1	Golf	3	--
Deathbots	6	-1	F-117a Stealth	5	1	Golf Challenge Pebble Beach	2	--

**AGE** EXPO 2008

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 Saturday September 6th, 2008  
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Defender 2	3	--	F-15 City War	4	--	Golf Grand Slam	3	--
Defender of the Crown	3	--	F-15 Strike Eagle	4	1	Golgo 13: Top Secret Episode	3	--
Defenders of Dynatron City	6	1	Family Feud	10	--	Goonies 2	3	--
Déjà Vu	5	--	Fantastic Adv. Dizzy (Aladdin)	12	-3	Gotcha!	3	--
Demon Sword	3	--	Fantastic Adventures of Dizzy	7	1	Gradius	6	2
Desert Commander	4	1	Fantasy Zone	6	1	Great Waldo Search	8	-1
Destination Earthstar	2	--	Faria	27	4	Greg Norman's Golf Power	3	--
Destiny of an Emperor	9	--	Faxanadu	3	--	Gremlins 2	4	--
Dick Tracy	3	--	Felix the Cat	9	--	Guardian Legend	3	--
Die Hard	15	-2	Ferrari Grand Prix	3	--	Guerilla War	5	--
Dig Dug 2	5	1	Fester's Quest	2	--	Gumshoe	5	--
Digger T. Rock	7	3	Final Fantasy	12	-1	Gun Nac	17	2
Dino Riki	3	--	Fire and Ice	33	--	Gunsmoke	7	--
Dirty Harry	4	--	Fire Hawk	7	1	Gyromite	3	--
Disney Adv. Magic Kingdom	5	1	Fisher Price Firehouse Rescue	5	1	Gyruss	3	--
Dizzy: Adventurer (Aladdin)	20	-5	Fisher Price I Can Remember	5	1	Harlem Globetrotters	3	-1
Donkey Kong	11	1	Fisher Price Perfect Fit	4	1	Hatris	10	1
Donkey Kong Jr.	11	-1	Fist of the North Star	6	1	Heavy Barrel	4	--
Donkey Kong 3	11	--	Flight of the Intruder	4	-2	Heavy Shreddin'	3	--
Donkey Kong Classics	11	1	Flintstones	7	--	High Speed	4	--
Donkey Kong Jr. Math	12	-2	Flintstones 2 Surprise Dino Peak	177	-8	Hogan's Alley	4	--
Double Dare	8	-1	Flying Dragon	2	--	Hollywood Squares	4	--
Double Dragon	8	--	Flying Warriors	2	--	Home Alone	4	--
Double Dragon 2	7	1	Formula One: Built to Win	8	1	Home Alone 2	3	--
Double Dragon 3	9	--	Frankenstein	7	1	Hook	3	--
Double Dribble	3	--	Freedom Force	4	--	Hoops	2	--
Double Strike	6	2	Friday the 13th	4	--	Hot Slots	597	--
Dr. Chaos	3	--	Fun House	4	--	Hudson Hawk	3	-1
Dr. Jekyll & Mr. Hyde	3	--	G.I. Joe: Real American Hero	19	-3	Hunt for Red October	2	--
Dr. Mario	6	--	G.I. Joe: Atlantis Factor	12	-1	Hydride	2	1
Dracula	8	2	Galactic Crusader	20	--	Ice Climber	7	1
Dragon Fighter	15	-3	Galaga	6	--	Ice Hockey	3	--
Dragon Power	3	--	Galaxy 5000	9	1	Ikari Warriors	4	--
Dragon Spirit	3	--	Gargoyle's Quest 2	8	--	Ikari Warriors 2	4	--
Dragon Warrior	4	--	Gauntlet (licensed)	4	--	Ikari Warriors 3	7	1





Image Fight	4	--	Legend of Kage	3	--	MIG-29	4	1
Immortal	4	--	Legend of Zelda	11	1	Might & Magic	17	2
Impossible Mission 2 (AVE)	7	--	Legendary Wings	3	--	Mighty Bombjack	3	--
Impossible Mission 2 (SEI)	12	--	Legends of the Diamond	5	--	Mighty Final Fight	19	-5
Indiana Jones: Crusade (Taito)	12	-1	Lemmings	17	-2	Mike Tyson's Punch-Out!!	15	--
Indiana Jones: Crusade (UBI)	24	--	L'Empereur	19	--	Millipede	4	--
Ind. Jones: Temple (Mindsep)	6	2	Lethal Weapon	7	1	Milon's Secret Castle	3	--
Ind. Jones: Temple (Tengen)	6	1	Life Force	6	--	Miracle Piano System	11	3
Infiltrator	3	--	Linus Spacehead	21	-4	Mission Cobra	20	2
Iron Tank	3	--	Linus Spacehead (Aladdin)	12	--	Mission: Impossible	2	--
Ironsword: Wiz. & Warriors 2	3	--	Little League Baseball	10	--	Monopoly	5	--
Isolated Warrior	6	--	Little Mermaid	6	--	Monster in My Pocket	7	--
Ivan Stewart's Sup. Off Road	7	--	Little Nemo	5	--	Monster Party	3	--
Jack Nicklaus' 18 Holes Golf	2	--	Little Ninja Brothers	11	1	Monster Truck Rally	9	-1
Jackal	6	2	Little Samson	64	-4	Moon Ranger	41	-5
Jackie Chan's Action Kung Fu	9	3	Lode Runner	3	--	Motor City Patrol	14	1
James Bond Jr.	7	1	Lolo	7	--	Ms Pacman (Tengen unlic.)	20	1
Jaws	5	--	Lolo 2	13	-1	Ms Pacman (Namco licensed)	14	--
Jeopardy!	4	--	Lolo 3	22	-1	MULE	10	1
Jeopardy! 25th Anniversary	3	--	Lone Ranger	8	--	Muppet Adventure	4	--
Jeopardy! Junior	3	--	Loopz	3	--	MUSCLE	3	--
Jeopardy!, Super	4	--	Low G Man	3	--	Mutant Virus	4	--
Jetsons	16	4	Lunar Pool	3	--	Myriad 6 in 1	900	--
Jimmy Connors Tennis	11	1	Mach Rider	3	--	Mystery Quest	4	--
Joe and Mac	7	1	Mad Max	4	--	NARC	3	--
John Elway's Quarterback	2	--	Mafat Conspiracy	3	--	NES Open Golf	5	1
Jordan vs. Bird: One on One	3	--	Magic Darts	5	-1	NFL Football	3	--
Joshua	12	1	Magic Johnson's Fast Break	2	--	Nigel Mansell's World Racing	5	--
Journey to Silius	5	1	Magic of Scheherazade	4	--	Nightmare on Elm Street	12	1
Joust	4	--	Magician	7	1	Nightshade	3	--
Jungle Book	10	1	Magmax	3	--	Ninja Crusaders	5	--
Jurassic Park	4	--	Major League Baseball	3	--	Ninja Gaiden	6	--
Karate Champ	3	--	Maniac Mansion	10	--	Ninja Gaiden 2	6	--
Karate Kid	4	--	Mappyland	4	--	Ninja Gaiden 3	17	--
Karnov	3	--	Marble Madness	6	1	Ninja Kid	3	--
Kick Master	4	--	Mario Brothers	13	1	Nobunaga's Ambition	7	--
Kickle Cubicle	6	--	Mario Is Missing	15	--	Nobunaga's Ambition 2	32	2
Kid Icarus	12	-1	Mario's Time Machine	24	-4	North and South	18	--
Kid Klown	18	-2	Master Chu and the Drunkard Hu	10	--	Operation Secret Storm	35	1
Kid Kool	3	--	Maxi 15	34	-16	Operation Wolf	3	--
Kid Niki	5	--	MC Kids	8	1	ORB-3D	3	--
King Neptune's Adventure	41	-3	Mechanized Attack	6	1	Othello	2	--
King of Kings	5	--	Mega Man	18	2	Overlord	4	--
King's Knight	3	--	Mega Man 2	10	1	Pac-Man (Namco)	12	--
Kings of the Beach	2	--	Mega Man 3	9	1	Pac-Man (Tengen licensed)	7	--
King's Quest 5	9	--	Mega Man 4	12	2	Pac-Man (Tengen unlicensed)	7	1
Kirby's Adventure	9	--	Mega Man 5	21	1	Pac-Mania	7	--
Kiwi Kraze	6	--	Mega Man 6	14	1	Palamedes	3	--
Klash Ball	6	1	Menace Beach	59	-21	Panic Resturant	35	-4
Klax	4	--	Mendel Palace	4	--	Paperboy	10	1
Knight Rider	3	--	Mermaids of Atlantis	23	-5	Paperboy 2	9	--
Krazy Kreatures	6	--	Metal Fighter	8	--	Peek A Boo Poker	580	--
Krion Conquest	7	--	Metal Gear	7	1	Pestertinator	24	1
Krusty's Fun House	7	1	Metal Mech	4	--	Peter Pan and the Pirates	4	--
Kung Fu	4	--	Metal Storm	12	1	Phantom-Fighter	3	--
Kung Fu Heroes	3	--	Metroid	8	--	Pictionary	3	--
Laser Invasion	4	1	Michael Andretti's World GP	3	--	Pinball	3	--
Last Action Hero	8	1	Mickey Adv. in Numberland	8	2	Pinball Quest	4	--
Last Ninja	6	1	Mickey Mousecapade	3	--	Pinbot	3	--
Last Starfighter	3	--	Mickey Safari in Letterland	5	-1	Pipe Dream	5	--
Lee Trevino's Fighting Golf	2	--	Micro Machines	16	1	Pirates!	11	-3
Legacy of the Wizard	3	--	Micro Machines (Aladdin)	15	-5	Platoon	3	--



Play Action Football	2	--	RoadBlasters	3	--	Smash TV	5	1
Popeye	8	--	Robin Hood: Prince of Thieves	4	--	Snake Rattle 'N Roll	4	--
POW	3	--	Robocop	3	--	Snake's Revenge	8	2
Power Blade	3	--	Robocop 2	4	--	Snoopy's Silly Sports	6	1
Power Blade 2	22	6	Robocop 3	7	--	Snow Brothers	48	-2
Power Punch 2	7	1	Robodemons	12	2	Soccer	4	--
P'radikus Conflict	32	-3	RoboWarrior	2	--	Solar Jetman	3	--
Predator	5	1	Rock N' Ball	3	--	Solitaire	34	8
Prince of Persia	10	1	Rocket Ranger	2	--	Solomon's Key	6	1
Princess Tomato	21	1	Rocketeer	3	--	Solstice	3	--
Pro Sport Hockey	13	3	Rockin' Kats	11	--	Space Shuttle	4	-1
Pro Wrestling	3	--	Rocky and Bullwinkle	5	-1	Spelunker	3	-1
Pugsley's Scavenger Hunt	9	-1	Roger Clemens Baseball	3	--	Spider-Man: Sinister Six	7	--
Punch-Out!!	9	-1	Rollerball	2	--	Spiritual Warfare	8	--
Punisher	7	1	Rollerblade Racer	3	--	Spot	3	-1
Puss 'N Boots	4	--	Rollergames	3	--	Spy Hunter	4	--
Puzzle	8	-1	Rolling Thunder	4	1	Spy vs. Spy	5	--
Puzznic	7	--	Romance o/t Three Kingdoms	9	1	Sqoon	10	-2



Pyramid	7	--	Romance o/t Three Kingdoms 2	25	-2	Stack Up	18	1
Q*Bert	5	--	Roundball	3	--	Stadium Events	1443	--
Qix	14	2	Rush N' Attack	3	--	Stanley	9	2
Quantum Kabuki Fighter	4	1	Rygar	5	1	Star Force	3	--
Quattro Adventure	5	--	SCAT	7	--	Star Soldier	2	--
Quattro Adventure (Aladdin)	7	-1	Secret Scout	44	-6	Star Trek: 25th Anniversary	5	--
Quattro Arcade	13	1	Section Z	3	--	Star Trek: Next Generation	8	--
Quattro Sports	3	--	Seicross	2	--	Star Voyager	2	--
Quattro Sports (Aladdin)	10	--	Sesame Street 1-2-3	3	--	Star Wars	8	--
Race America, Alex DeMeo's	7	--	Sesame Street 1-2-3/A-B-C	6	--	Starship Hector	3	--
Racket Attack	2	--	Sesame Street A-B-C	3	--	StarTropics	3	--
Rad Gravity	5	2	Sesame Street Countdown	6	--	Stealth	3	--
Rad Racer	3	--	Shadow of the Ninja	7	1	Stinger	4	--
Rad Racer 2	4	--	Shadowgate	4	--	Street Cop	13	--
Rad Racket	22	-1	Shatterhand	4	--	Street Fighter 2010	4	1
Raid 2020	7	1	Shingen the Ruler	4	1	Strider	3	--
Raid on Bungeling Bay	3	--	Shinobi	6	--	Stunt Kids	19	5
Rainbow Islands	20	--	Shockwave	4	--	Sunday Funday	72	17
Rally Bike	3	--	Shooting Range	9	1	Super C	13	-1
Rambo	3	--	Short Order/Eggsplode	7	1	Super Cars	8	-1
Rampage	5	--	Side Pocket	3	-1	Super Dodge Ball	14	--
Rampart	6	1	Silent Assault	8	1	Super Glove Ball	3	--
RBI Baseball (licensed)	7	--	Silent Service	2	--	Super Mario Brothers	6	--
RBI Baseball (unlicensed)	7	--	Silk Worm	5	1	Super Mario Brothers 2	12	--
RBI Baseball 2	5	--	Silver Surfer	5	--	Super Mario Brothers 3	11	1
RBI Baseball 3	7	--	Simpsons: Bart vs. The World	6	--	Super Mario/Duck Hunt	6	-1
RC Pro-Am Racing	5	1	Simpsons: Radioactive Man	7	--	Super Mario/D. Hunt/WCTM	4	--
RC Pro-Am Racing 2	25	--	Simpsons: Space Mutants	5	-1	Super Pitfall	5	--
Remote Control, MTV's	4	--	Skate or Die	3	--	Super Spike V'Ball	3	--
Ren and Stimpy: Buckaroos	8	1	Skate or Die 2	4	--	Super Spike V'Ball/W. Cup	4	--
Renegade	3	--	Ski or Die	4	--	Super Sprint	4	1
Rescue: Embassy Mission	2	--	Skull and Crossbones	4	--	Super Spy Hunter	8	--
Ring King	4	--	Sky Shark	3	--	Super Team Games	4	--
River City Ransom	16	1	Skykid	4	1	Superman	7	--
Road Runner	5	1	Slalom	3	--	Swamp Thing	13	1





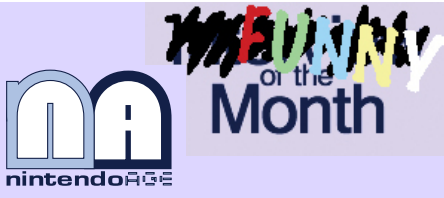
Sword Master	12	-1	Ultimate League Soccer	11	1	Win, Lose or Draw	3	--
Swords & Serpents	3	--	Ultimate Stuntman	4	--	Winter Games	3	--
T&C Surf Design	3	--	Uncharted Waters	19	2	Wizardry	5	--
T&C Surf Design 2 Thrillas	8	--	Uninvited	14	--	Wizardry 2: Knight/Diamonds	11	-2
Taboo: The Sixth Sense	2	--	Untouchables	4	-1	Wizards & Warriors	4	--
Tag Team Wrestling	3	1	Urban Champion	3	--	Wizards & Warriors 3	10	--
Tagin' Dragon	36	10	Vegas Dream	3	--	Wolverine	4	--
Talespin	5	1	Venice Beach Volleyball	5	--	World Champ	8	--
Target: Renegade	3	1	Vice: Project Doom	3	--	World Class Track Meet	4	--
Tecmo Baseball	3	--	Videomation	2	--	World Cup Soccer	3	--
Tecmo Bowl	6	-1	Vindicators	3	1	World Games	3	--
Tecmo Cup Soccer	13	-5	Volleyball	4	-1	Wrath of the Black Manta	3	--
Tecmo NBA Basketball	4	--	Wacky Races	19	2	Wrecking Crew	5	1
Tecmo Super Bowl	13	--	Wall Street Kid	3	--	WURM	3	--
Tecmo World Wrestling	3	--	Wally Bear and the No! Gang	13	-1	WWF King of the Ring	7	1
Teenage Mut. Ninja Turtles	4	--	Wario's Woods	9	1	WWF Steel Cage	4	--
Teenage Mut. Ninja Turtles 2	8	--	Wayne Gretzky Hockey	3	--	WWF Wrestlemania	3	--
Teenage Mut. Ninja Turtles 3	12	-1	Wayne's World	25	-2	WWF Wrestlemania Chall.	3	--
Teenage Mut. Ninja Turt. TF	32	2	WCW: World Champ. Wrestling	4	--	Xenophobe	3	--
Tennis	3	--	Werewolf	3	--	Xevious	3	1
Terminator	7	--	Wheel of Fortune	4	--	Xexyz	3	--
Terminator 2: Judgement Day	4	2	Wheel of Fortune: Family Edition	4	--	X-Men	4	--
Terra Cresta	7	-1	Wheel of Fortune: Junior Edition	4	1	Yo! Noid	6	1
Tetris (Nintendo licensed)	6	--	Wheel of Fortune: Vanna White	5	--	Yoshi	6	1
Tetris (Tengen unlicensed)	34	-1	Where in Time/Carmen San.	5	1	Yoshi's Cookie	5	-1
Tetris 2	6	--	Where's Waldo?	5	--	Young Indiana Jones	12	2
Three Stooges	5	--	Who Framed Roger Rabbit?	4	--	Zanac	4	--
Thunder and Lightning	6	1	Whomp 'Em	4	--	Zelda 2: The Adv. of Link	10	1
Thunderbirds	3	--	Widget	7	--	Zen Intergalactic Ninja	5	--
Thundercade	3	--	Wild Gunman	10	1	Zoda's Revenge StarTropics 2	5	--
Tiger Heli	3	--	Willow	4	--	Zombie Nation	32	4
Tiles of Fate	10	--						
Time Lord	3	--						
Times of Lore	8	--						
Tiny Toon Adventures	5	--						
Tiny Toon Adventures 2	6	--						
Tiny Toon Cartoon Workshop	5	--						
To The Earth	2	--						
Toki	8	--						
Tom and Jerry	7	--						
Tom Sawyer	4	--						
Tombs and Treasure	8	--						
Toobin'	7	--						
Top Gun	3	--						
Top Gun 2	3	--						
Total Recall	3	1						
Totally Rad	3	--						
Touchdown Fever	4	--						
Toxic Crusader	7	-1						
Track and Field	4	--						
Track and Field 2	3	--						
Treasure Master	4	--						
Trick Shooting	4	--						
Trog	5	1						
Trojan	3	--						
Trolls on Treasure Island	13	1						
Twin Cobra	4	1						
Twin Eagle	5	1						
Ultima: Exodus	4	--						
Ultima: Quest of the Avatar	6	-1						
Ultima: Warriors of Destiny	20	--						
Ultimate Air Combat	9	-2						
Ultimate Basketball	3	--						



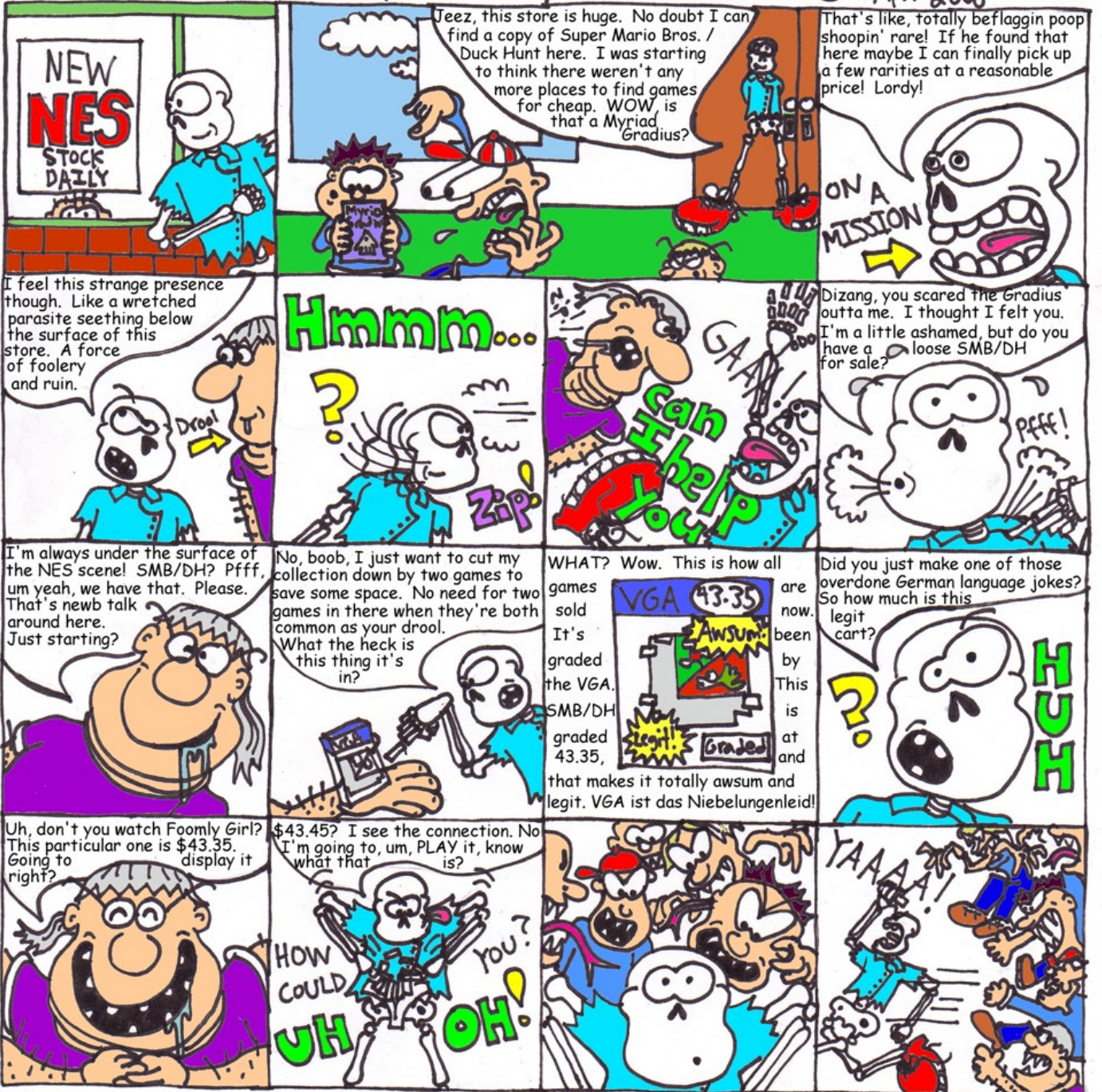
Add a NES or SNES Port to your Wii, Mac, or PC and use your original controllers to play! [www.retrousb.com](http://www.retrousb.com)

 <p><b>USB NES RetroPort</b> Original Nintendo NES to USB No drivers needed. Use 2 for Multiplayer. Windows 2000, XP, Vista Macintosh OS 9, OS X</p> <p><b>USB retroPORT NES</b></p>	 <p><b>USB SNES RetroPort</b> Super Nintendo to USB No drivers needed. Use 2 for Multiplayer. Windows 2000, XP, Vista Macintosh OS 9, OS X</p> <p><b>USB retroPORT SNES</b></p>
 <p><b>Wii NES RetroPort</b> Original Nintendo NES to Wii and GameCube Plug and Play. Up to 4 for Multiplayer. Works with Virtual Console.</p> <p><b>Wii retroPORT NES</b></p>	 <p><b>Wii SNES RetroPort</b> Super Nintendo to Wii and GameCube Plug and Play. Up to 4 for Multiplayer. Works with Virtual Console.</p> <p><b>Wii retroPORT SNES</b></p>

• Works with Multiplayer Games!
• Fully Authentic Response and Feel!
• No button limits or delays!



in The Very Gay Assholity © Stan Stepanic April 2008







## A Gunslinger's Review Part Dos

Article by Jim Poleshuk

In this the 2nd installment of my review of Zapper-compatible games, I'll review eight more games. While Chiller and Shooting Range feel like target practice, the rest involve some action, and some are actually quite intense. Games where the enemies shoot back are among the best of the Zapper games. The following games, ranked worst to first, are among the best NES games made for this peripheral.



### Baby Boomer

Color Dreams' Zapper game entry and one of only two unlicensed gun-enabled submissions to the NES library. As baby crawls to the right, you use the Zapper to keep harm from befalling the persistent infant.

**Pros:** Unique and loosely akin to Gumshoe, the baby blue cart color suits this game well.

**Cons:** Though it's not the worst of the Color Dreams' releases, it's still pretty lame, replayability 2/10, and that's generous.

### Chiller

Originally an arcade game, it's one of AGCI's three NES releases. Shoot ghosts and torture "Zombies". Definitely graphic in its day.

**Pros:** Like a bad car wreck, you can't help but look. Finding hidden objects to break a code provides a small amount of replay-ability and challenge.

**Cons:** Worth a look, that's about it.

### Chiller



### Shooting Range

A largely unknown title. Four stages of shooting targets held by creatures ranging cowboys to aliens.

**Pros:** Difficulty setting and up to 4 players can compete.

**Cons:** Too short and too easy. Childish and simple gameplay are not enough to keep your interest. Almost a good title ... but not quite.

### Gotcha

Familiar to many, this is capture-the-flag with a paintball gun. You against 50. I like those odds.

**Pros:** The best part about this game is the difficulty setting in the opening menu. In the advance setting you have little time to react to an enemy that has you in their sites. One shot, Boom! You've been Gotcha'd. This is a pretty good game.

**Cons:** My only real beef with it is that there are only two scenes: urban and forest. This lack of variety and visual progression do not motivate the player to continue much past level 4 or 5.

### Mechanized Attack

Operation Wolf's little sister. The game play and controls are nearly identical.

**Cons:** It's entirely too easy. I finished this game on only my 2nd attempt. Granted, all the gangs want me to join 'cause I got gun skills, but c'mon. Not a bad game though. I'd recommend it.

**Pros:** Worth playing, could be a quick addition to games you've beaten.

### To the Earth

Another little-known title. You're in a cockpit flying through space & shooting down fast mov-

ing, hostile enemies that aren't afraid to shoot back.

**Pro/Con:** Both... I found this game frustratingly difficult and humbling. This game requires both accuracy and unmatched precision to advance. Not an entry level zapper game. Practice!! If you can make it beyond Saturn, I tip my hat to you, gunslinger.

### Operation Wolf

Shoot your way out of war zones. IMO this is the one best of the zapper games.

**Pros:** It incorporates a health meter, has over 6 distinct levels, and is sufficiently challenging. Also, you have specific enemy quotas and even Bosses at the end of some levels. A new control: hold the A button as you pull the trigger to launch a grenade.

**Cons:** The only way this one could be better would be 2 player capabilities, or rather 2 guns, one for each hand. <evil grin>

### Freedom Force

Arguably the best Zapper title, this one mixes elements of Hogan's Alley (don't shoot the hostages) with a standard scroller.

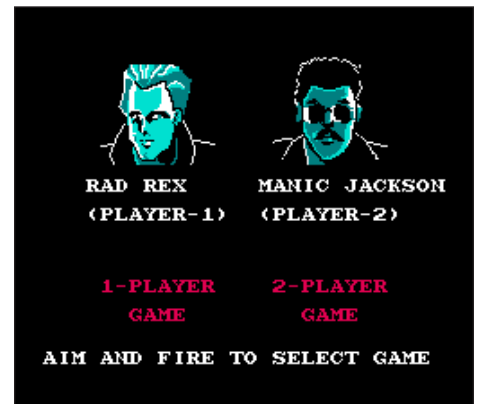
**Pros:** Weapon upgrades and "Harder" setting are a plus. I found the music to be very intense as well. Health replenishment is difficult making advancement in the game a real challenge.

**Cons:** Takes some work to get good at this one. Pfft, like that's a negative.



Mechanized Attack

Though Hogan's Alley and Duck Hunt are novel and fun games, some of the titles below would spank 'em and send 'em home crying to momma. If you haven't played Freedom Force and Operation Wolf, you're missing the crème de' la crème for our 8-bit sidearm. For those of you that have dismissed light gun games as childhood novelties, it's time to reconsider.



## Mr. Gimmick

**Name:** Mr. Gimmick

**Age:** 18

**Location:** Wouldn't you like to know?

**Occupation:** Student.

**Which school?** University of Hartford.

**What are you studying?** Art (Illustration and Graphic Design)

**What made you start getting interested in art?** I've always been interested in art, pretty much from the time I picked up my first crayon as a kid. I guess I always had it in me. However, video games and movies have been a huge inspiration for my artwork more recently.

**Nice segue! Describe your collection?**

My NES collection consists of a mix of CIBs and carts. Right now I'm aiming at crossing off the rares from the list first. Some highlights of my NES collection are my CIB Bubble Bobble 2, CIB Snow Bros, and my sealed Challenge of the Dragon and Conan. In total I have 300 or so carts and about 70+ CIBs. I also collect SNES, Atari, Genesis, Sega Saturn, Dreamcast, PS1, N64, Famicom and many more.

**Is it safe to say your favorite game is Mr. Gimmick?** Yeah, definitely.

**Just how far would you go to obtain a CIB Mr. Gimmick?** Well, I'd trade anything in my collection for one and spend all the cash I could



on a minty one if I had the chance. Unfortunately I can't buy really expensive items right now because I need the cash for college.

**Tell us the story about how you became obsessed with a green blob:** Back when I first started collecting, around two years ago or so, I found some NES games at Goodwill and looked them up to learn more about the NES. I checked eBay and one of the first games that really caught my eye was Mr. Gimmick. I instantly fell in love with the box art and wanted to learn more about the game. I eventually downloaded the ROM and my obsession with the game grew to new heights. Now I'm determined to collect everything Gimmick, including the CIB

Famicom version which I just bought recently, and also the PS1 Sunsoft collection with Gimmick on the cover. I am very excited about that.

**Least favorite game?** Dr. Jeckyll and Mr. Hyde. Enough said. (Apologies to all the Dr. Jeckyll fans, if they exist.) It's the one game that gives you a weapon that you can't even use. That frustrates me to no end.

**Best NES memory?** Well, I don't have any past memories to reminisce about, seeing as how I didn't own a NES until a few years ago. However, I have to say the first time I held a NES controller in my hands I instantly fell in love with the system. I guess that was the first day I turned away from modern gaming and began playing the good stuff.

I grew up in a generation of crappy games and really missed out on the NES' greatness. All I can say is I wish I was alive in the 80s.

**Do you ever have dreams that you are, in fact, Mr. Gimmick, and you're sliding around to save the world? I'm not judging ...** Sadly, I have had Gimmick dreams. And a heck of a lot of strange yard sale and eBay dreams where I found variations of Gimmick that never existed, like a SNES version. If only Gimmick 2 were real ... In other words, I have no life. Hooray!  
**Okay, I've bugged you enough. Any last words?** Attention NA members, I WANT YOUR MINTY CIB GIMMICK.

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