Case Study : Hassle Castle by Fred S. Randall (ReRUN Game Pak, 1988)



By newcoleco
11 minutes ago in ColecoVision Programming

Reply to this topic



newcoleco
Posted 11 minutes ago

Hassle Castle

A Commodore 64 top-notch adventure game written in BASIC.

One of the games of Special Edition ReRUN GAMEPAK *A special collection of RUN's best games!*
A game hard by design, with only about a 1% escape rate.
The author left his postal address in the original Commodore 64 BASIC listing.
The manual talks about *19 super creations to run on your C-64 and C-*



Almost all games in this manual were described in two pages, Hassle Castle, The Mystery of Lane Manor, and The Riddle Of the Symbol Code needed 3 pages. And the Introduction ends like this : "We have been waiting a long time for the opportunity to give you HASSLE CASTLE, a superb adventure game. You are lost in the depths of an ancient castle. A host of demons and monsters await your untimely demise, as you try to find your way up and out of the catacombs to safety. The sound effects in this adventure truly enhance the hopeless feeling of impending doom. You would be typing for weeks if you had to enter a program like HASSLE CASTLE by hand. These ReRUN special issues give you some superb programs that are just too long for the magazine to publish. Look forward to more of these special issues in addition to the regular bi-monthly ReRUNS. - Margeret Morabito, Technical Editor, RUN Magazine"

Hassle Castle

Can you fight your way out of the dark dungeons of Hassle Castle? Bela Lugosi would have felt right at home here, but for you it's either escape or perish.

By Fred Randall

RUN It Right

Commodore 64

Hassle Castle is an adventure game that uses text, 3-D graphics and sound effects. It's simple enough for a ten-year-old to play, yet absorbing enough to hold an adult's interest. Also—despite the seemingly random occurrence of events—it's a game of skill. Strategies that win consistently can be learned, but it isn't easy.

Unlike many games of this sort, there are no wrong moves—only foolish ones. An option menu will be presented to you whenever you are required to leave a room. You may go left (L), forward (F) or right (R) into either a room, passage, cell, a down-staircase or an up-staircase.

During play, you will be faced with trapdoors, tremors and other hassles, plus 101 of the most unlikely adversaries you will ever encounter (see Table 1). They lurk behind doors, and they jump you in hallways and on staircases.

PLAYING THE GAME

When you first run Hassle Castle, it's a good idea to read the scenario, because clues to successfully playing the game are liberally sprinkled therein. In subsequent games, you can bypass the scenario when prompted by the title screen. Just press the N key for No.

You begin your adventure on level 20, and your primary objective is to get out alive by ascending stairways and using the ancient elevator whenever possible to reach the top level.

To learn your status any time you are in a room and before making a decision, hold down the S key. The status report gives your remaining energy, remaining spells, gold pieces accumulated, creatures slain and treasure credit. It also gives your score

3

and the time you have spent so far in the castle.

Your status will be displayed in green if you're able to defend yourself well, yellow if your defenses are weak and red if you are in immediate danger. Release the S key when you finish reading your status report. Use the H key to determine a creature's energy units. If the creature has more units than you do, you will most assuredly be killed.

Use the status report and the Listen and Help options to help you avoid confrontations with creatures more powerful than yourself.

Anaconda	90	Iguanadon	13	Pit Viper	91
Bat Lizard	66	Iron Beast	71	Programmer	1
Black Widow	46	Iron Claw	72	Pterosaur	97
Blood Hulk	23	Iron Ghost	55	Pulverizer	86
Blood Newt	26	Iron Ghoul	77	Purple Pox	21
Blood Wolf	19	Iron Mummy	56	Rabid Wolf	14
Blue Smurf	41	Iron Robot	54	Rat Fink	95
Blue Witch	28	Iron Tiger	53	Red Crawler	89
Bystander	22	Iron Witch	57	Red Crusher	50
Claw Robot	49	Killer Bat	32	Red Knight	15
Cruncher	12	Killer Rat	64	Red Mauler	83
Devil Wolf	96	Kilrosaur	3	Red Spider	45
Dill Pickle	42	Mad Hacker	10	Red Witch	29
Dragonaer	51	Mad Hatter	7	Red Wizard	30
Executioner	99	Mad Jogger	0	Robot No. 1	8
Fang Wolf	48	Mad Wizard	18	Robot No. 2	9
Fire Beast	70	Mandrill	74	Sabertooth	92
Fire Cat	65	Man Eater	47	Sand Hulk	60
Fire Devil	82	Mangeluer	87	Sand Witch	59
Fire Eater	63	Mantcore	39	Sand Wolf	61
Fire Ghost	20	Mauler Cat	84	Slime Hulk	33
Fire Ghoul	75	Megabyter	11	Slime Rat	25
Fire Lizard	6	Megadonkey	67	Steel Claw	80
Fire Tiger	90	Megasaurus	4	Stegosaur	34
Fire Witch	27	Moon Devil	36	Stone Hulk	98
Fire Worm	38	Moonshiner	35	Swamp Bat	79
Flesh Eater	37	Mud Beast	66	Swamp Devil	81
Gog Wumpus	58	Mud Ghoul	76	Swamp Hulk	80
Gigasaurus	5	Mud Spider	43	Swamp Rat	78
Green Hulk	24	Mud Sucker	40	Tax Agent	100
Horned Bat	31	Mugwumpus	16	Wax Mummy	17
Ice Beast	69	Pit Crawler	88	Whomp Rat	2
Ice Lizard	52	Pit Crusher	62	Wolf Hulk	73
Idiot	94	Pit Spider	44		

Table 1: Invidiard's energy levels

4

Your score is based on the number of creatures you kill, the amount of gold you possess and your treasure credit. To win, you must reach level 1 or level 0. If you lose, your treasure credit is reduced to one. Your score totals will be tallied at the end of the game.

There are many ploys you may use when faced with an uncertain situation, but you'll have to figure them out for yourself. Good luck!



The Retreat option allows you to seize a cell's contents without engaging in combat, but you will go down one level. Retreating doesn't always work, but sometimes it's your only option. Cells contain gold and artifacts, energy units for your sword and additional spells for you to cast on demons.

5

There is only one problem with this original Commodore 64 game, a flaw in its code. Three GOTO instructions leaving subroutines without reaching a RETURN. Each one adding up to the BASIC's stack, and a "coward's trap door" inside a FOR loop adds to the problem. The game crashes after 118 to 158 actions with a message like **?OUT OF MEMORY IN 301**.

Dear reRUN Magazine, and Commodore 64 fans,

Here's a fix to the original listing if you plan to play the game again without fear of losing your progress. The correction is to make the trap door a real subroutine and to pass back "jump to 154" with a flag TD (**T**rap **D**oor).

```
153 GOSUB300:IFE>250ORR<2THENGOSUB800
178 TD=0:ONA(B)GOSUB550,550,250,9900,9700,9800:IFTDTHEN154
179 GOSUB200:GOSUB300:IFR>85THENGOSUB500
578 PRINT"... COWARD! ...":FORT=1TO500:NEXT:Z=1:IFINT(RND(0)*100
800 GOSUB300:IFL>23ORR<L*2THENGOSUB9300:RETURN
822 FORT=1TO4000:NEXT:RETURN
9426 GOSUB300:IFA(B+3)>0ANDN=2ANDR<5THENGOSUB800:TD=1:RETURN
```

- On line 153, the trap door returns and the program simply goes on to line 154, as before.
- Line 178 is split in two, so the flag check comes right after `ON…GOSUB`. When the coward's trap door or the trap door after a retreat fired, the program jumps to 154 exactly as the original did. Otherwise it carries on as before.
- On line 9426, `RETURN` also discards the `FOR C` loop, as C64 BASIC's `RETURN` drops any open loops inside the subroutine.

This doesn't fix everything. The DEATH (line 9020) and COLLAPSE cases do jump to the "game over" screen from deep inside subroutines.

Playing rules for Hassle Castle

How the game works, read from the listing:

- You start on level 20 with 100 energy and 12 spells. Going up a staircase lowers the level number, and the exit is near level 0.
- Each move has a 15% chance of a wandering monster.
- A fight costs exactly the monster's energy. If the monster has more energy than you, you die.
- A spell kills the monster if a random number from 0 to 100 beats the monster's energy.
- Retreating moves you one level down (away from the exit), and 40% of the time the monster chases you and you have to fight anyway.

Choosing a direction, best first:

1. Stairs up whenever you see them.
2. A passage. It costs nothing.
3. A door.
4. Never a wall (falling rocks cost energy), and never stairs down.

At a door:

- Always LISTEN, then HELP. Help is free and tells you the monster's energy.
- GO IN if the cell is empty or the monster has no more energy than you. Cells are your only source of energy, spells and gold.
- Otherwise LEAVE. That carries a 10% chance of a trap door.

When a monster faces you:

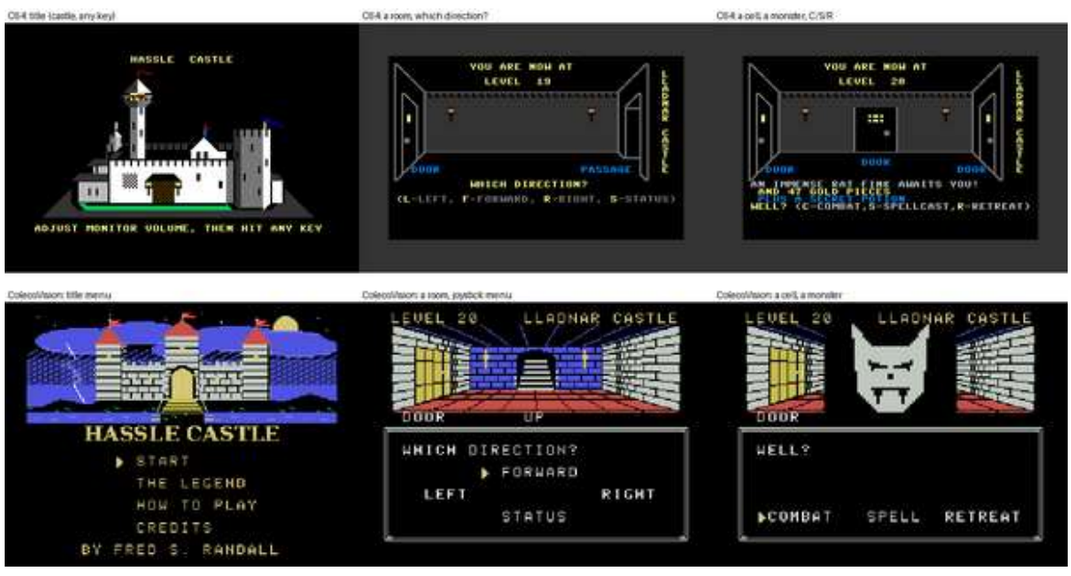
- COMBAT only if its energy is at most 80% of yours, so you keep a margin for the next fight.
- Otherwise SPELL. A failed spell can be cast again.
- RETREAT only when you have no spells left.

Always say **YES** to the elevator. It can lift you several levels at once.

These rules escape about 3% of the time.

ColecoVision adaptation

- **Title:** a castle scene under a stormy sky.
- **Rooms:** drawn as perspective corridors with doors, stairs, passages and the EXIT sign.
- **Monsters:** 13 large shapes, tinted the colours the original printed their names in.
- **Story:** the original's story kept as "The Legend" (20 pages).
- **Menus:** joystick menus replace the letter keys.
- **Packing:** pictures packed with ZX0 (26.5K down to 8.7K), and the text compressed too.



To save space, while improving the game experience, only 13 new

pictures (96x64 pixels) were added to the game to represent all the encounters.

Drawing	Count	Monsters
Person	9	Mad Jogger, Programmer, Mad Hatter, Mad Hacker, Bystander, Moonshiner, Blue Smurf, Idiot, Tax Agent
Rat	5	Whomp Rat, Slime Rat, Killer Rat, Swamp Rat, Rat Fink
Saurian	10	Killosaur, Megasaurus, Gigasaurus, Fire Lizard, Iguanadon, Blood Newt, Stegosaur, Drogonizer, Ice Lizard, Pterosaur
Robot	9	Robot No. 1 and No. 2, Megabytter, Claw Robot, Iron Robot, Iron Claw, Steel Claw, Pulverizer, Mangelizer
Wolf	5	Rabid, Blood, Fang, Sand and Devil Wolf
Witch or wizard	7	Mad Wizard, Red Wizard, Fire/Blue/Red/Iron/Sand Witch
Ghost or mummy	7	Wax Mummy, Fire Ghost, Iron Ghost, Iron Mummy, Fire/Mud/Iron Ghoul
Hulk	11	Red Knight, Blood/Green/Slime/Sand/Swamp/Stone/Wolf Hulk, Red Crusher, Pit Crusher, Executioner
Bat	4	Horned Bat, Killer Bat, Bat Lizard, Swamp Bat
Snake	7	Fire Worm, Mud Sucker, Mud Spitter, Pit/Red Crawler, Pit Viper, Anaconda
Spider	3	Pit Spider, Red Spider, Black Widow
Beast	19	Moon Devil, Swamp/Fire Devil, Manticore, Mandrill, Megadonkey, Sabertooth, the tigers, cats, beasts, eaters and maulers
Blob	5	Cruncher, Mugwumpus, Gag Wumpus, Purple Pox, Dill Pickle



This entire adaptation was done by Claude.AI, using the original Commodore 64 listing and Amy Studio as the toolbox to make their version. It took about 4 hours.

First version : hassle-castle.rom

I then asked to improve the graphics since we still have space left.

Second version : hassle-castle.rom
31.27 kB · 0 downloads

It makes me laugh to see the UGLY CRUNCHER to be the cutest creature the game.
Another graphics improvement and a bugfix later.

Third version : hassle-castle-rev1.rom

The saurian, wolf, ghost, hulk/knight, bat, cobra, spider, and horned beast graphics are improved.
Reached my tokens limit - I stopped there.

[REDACTED]
I've removed this part of the text as it added nothing to the post.

Anyway, I always thank Claude for their good job as the games do work, and they helped to find bugs in Amy Studio that I wouldn't have found alone. Here's a transcription of the discussion while Claude decided to go with two games at once written in BASIC from the pile of games from the disks associated with the reRUN Magazines.

> **Quote**
>
> Thank you, that means a lot!
> **Amy bugs:** none this time. Raging Thunder compiled correctly at all five profiles, on the new compiler.
> **Next two games,** running in parallel in separate folders:
>
> - **Hassle Castle** (Game Pak, 20.3K BASIC): castle adventure and maze.
> - **Flynn’s Gold** (1985 Fall, 11.8K BASIC): grab the gold against the clock.
>
> **Sound:** yes, and the briefs ask for exactly that combination. Tiny Sound plays melody and harmony on tone 1 and tone 2, with some vibrato and no arpeggio. Tone 3 (muted) and the noise channel carry the deep periodic-noise bass and the drums. They’ll check it through the real OS7, including when an effect borrows a channel and gives it back. Any new trick goes into the music doc.
> **Lessons applied from the start:**
>
> - bots on the C64 originals, to measure how they really play;
> - rich ZX0 art instead of an emulated C64 look;
> - airy text inside its areas, and no cryptic menu codes like “A0 B0”;
> - the visual checks, with frame sheets the agents actually look at.
>
> Raging Thunder’s polish (text, art, the harsher idling) can wait until you’ve played it.

While I was playing the port of Raging Thunder, Claude was already working on Flynn's Gold and Hassle Castle, at the same time.
After 1 hour and 51minutes, Flynn's Gold was ported, ready to be played.

> **Quote**
>
> Flynn’s Gold is ported. I’ve sent the ROM (10.2K), the source, the README, look.png with the screens, and qa-c64.png with the C64 original.
> **The real game:** it isn’t timed. The “against a timer” in my catalogue came from the loader’s “ready in 177 seconds” countdown. In fact:

- Flynn catches gold nuggets falling from the cave roof, carries each one to the mine, and banks it with the button.
- Two 10-ton weights and a bat cost him a man and the nugget he's carrying.
- Banking 25 nuggets ends the game with a bonus.
- Levels 1–9 change the speed and the points.

The BASIC file only loaded 2.5K of machine code, which I extracted, checked against its checksums and disassembled.
Faithfulness: the port keeps the original's coordinates, contact rules and quirks. Bots on the C64 original measured the speeds per level, the drop timing and the catch, bank and death rates, and the port matches them.
Music: "Prospector's Jig", an original 7-second tune that plays once on the title. It uses your combination:

- **Tone 1 and tone 2:** Tiny Sound melody and harmony, with vibrato.
- **Tone 3 and noise:** muted tone 3 plus periodic noise for the bass, with the snare in the same noise stream.

The effects interrupt the music cleanly and give the channel back. The music never goes louder than attenuation 3.
Tests:

- **Model check:** no mismatches on every frame.
- **Builds:** all five profiles give the same results.
- **Visual checks:** no flicker, no half-drawn screens, no lost frames, and the text stays inside its areas.
- **Compiler:** no bugs.

One gap: the author isn't named anywhere on the disk, and I couldn't find the name online, so the credits say "author not named". If you have the RUN Fall 1985 article, the name is in it. Hassle Castle is still being ported.

With thousands of bots, Claude discovers the game by reading the listing and by playing it, taking measures, time, space, overall look and feel.



And 33 minutes later, Hassle Castle was done as well.

> **Quote**
>
> Hassle Castle is ported, by **Fred S. Randall** (ReRUN Game Pak). I've sent the ROM (28.3K), the source, the README, look.png and qa-c64.png. It's the best-looking of the three:
>
> - **Title:** a castle scene under a stormy sky.
> - **Rooms:** drawn as perspective corridors with doors, stairs, passages and the EXIT sign.
> - **Monsters:** 13 large shapes, tinted the colours the original printed their names in.
> - **Story:** the original's story kept as "The Legend" (20 pages).
> - **Menus:** joystick menus replace the letter keys.
> - **Packing:** pictures packed with ZX0 (26.5K down to 8.7K), and the text compressed too.
>
> **Faithfulness:** the model follows the BASIC listing line by line. Fed the random numbers recorded from the real C64, it matched the original at all 1,003 prompts of 11 bot runs. The original crashed with "OUT OF MEMORY" after 118 to 158 answers, because of GOTOs jumping out of GOSUBs, and that's fixed.
> **Music:** "Lladnar's March", with your combination: Tiny Sound melody and harmony on tones 1–2, and the tone 3 + periodic-noise bass and drums. The effects borrow a channel for a frame

> and give it back. The monster growl reuses the bass trick, and the method is now in the kit’s music doc.
> **Tests:** no errors at all five profiles, nothing flagged by the visual checks over 11,500 frames, and the text stays inside its areas. No compiler bugs.
> **For you:**
>
> - **Address left out:** the original listing contains the author’s postal address and phone number. Neither appears anywhere in the port.
> - **Hard by design:** careful play escapes only about 1% of the time, as in the original.
> - **Black frames:** each new room shows about 21 black frames while it loads.
> - **Dense text:** the Legend pages are still single-spaced.
> - **Credits:** the year and issue aren’t on the disk.
>
> All three RUN games are done (Raging Thunder, Flynn’s Gold and Hassle Castle), and none of them found an Amy bug. Nobody has listened to their music yet, so your ear decides.

Claude found no new bug in Amy Studio which is good news.
They improved their own toolkit while making these games.
When I read about the OUT OF MEMORY some bots faced exploring the original game, I was shocked.
Did these hundreds of bots playing the original game find a bug nobody had seen before? Unlikely, but they certainly demonstrated it.

Programming questions

How much time do you spend testing your projects?
Do you expect the compiler to provide you meaningful warnings?

I knew I had something here to mention, even if it's not specific to ColecoVision programming.

OUT OF MEMORY issues may occur in our own projects, and may only happen after dozens of gameplay actions.
What is the depth of the stack, subroutines calling other subroutines or the same (recursive), do we need?
Is there enough space to store local values and return addresses as they are typically stored in the stack?
No C, BASIC or AMY program will tell you if your code may fill up the stack and cause memory corruption.

According to the examples in Amy Studio, the stack size usage is just shy of 32 bytes.
I added a warning in Amy Studio with an arbitrary size of 64 bytes for the stack.

Will this warning be useful or be too alarmist? I don't know.
It won't determine if a recursive subroutine will fill up the RAM or not.
Things get complicated if storing temporary tables in stack like for a minimax tree algorithm.

So I made an improvement to Amy Studio regardless of no bug found in it this time.

Conclusion?

Claude has generated more than 500 adaptations from magazines and books, mostly from Commodore 64, IBM and TI99/4a, none using Z80 CPU.
This game is no exception. It is playable and do have the addition of 13 pictures to represent the 101 encounters to make it its own adaptation.

Join the conversation
You can post now and register later. If you have an account, sign in now to post with your account.
Note: Your post will require moderator approval before it will be visible.

Reply to this topic...

push the limits of Amy Studio? I don't know.
In a way, this experience made me rediscover treasures we forgot from books and magazines we enjoyed so much.

Share Followers 1

I've seen several channels talking about coding Commodore 64, the return of Compute! Gazette, and more.
I would love to see these C=64 viewers trying these 500 ports and compare them with their Commodore 64 versions.

Go to topic listing

Home > Classic Con > Case Study : Hassle Ca



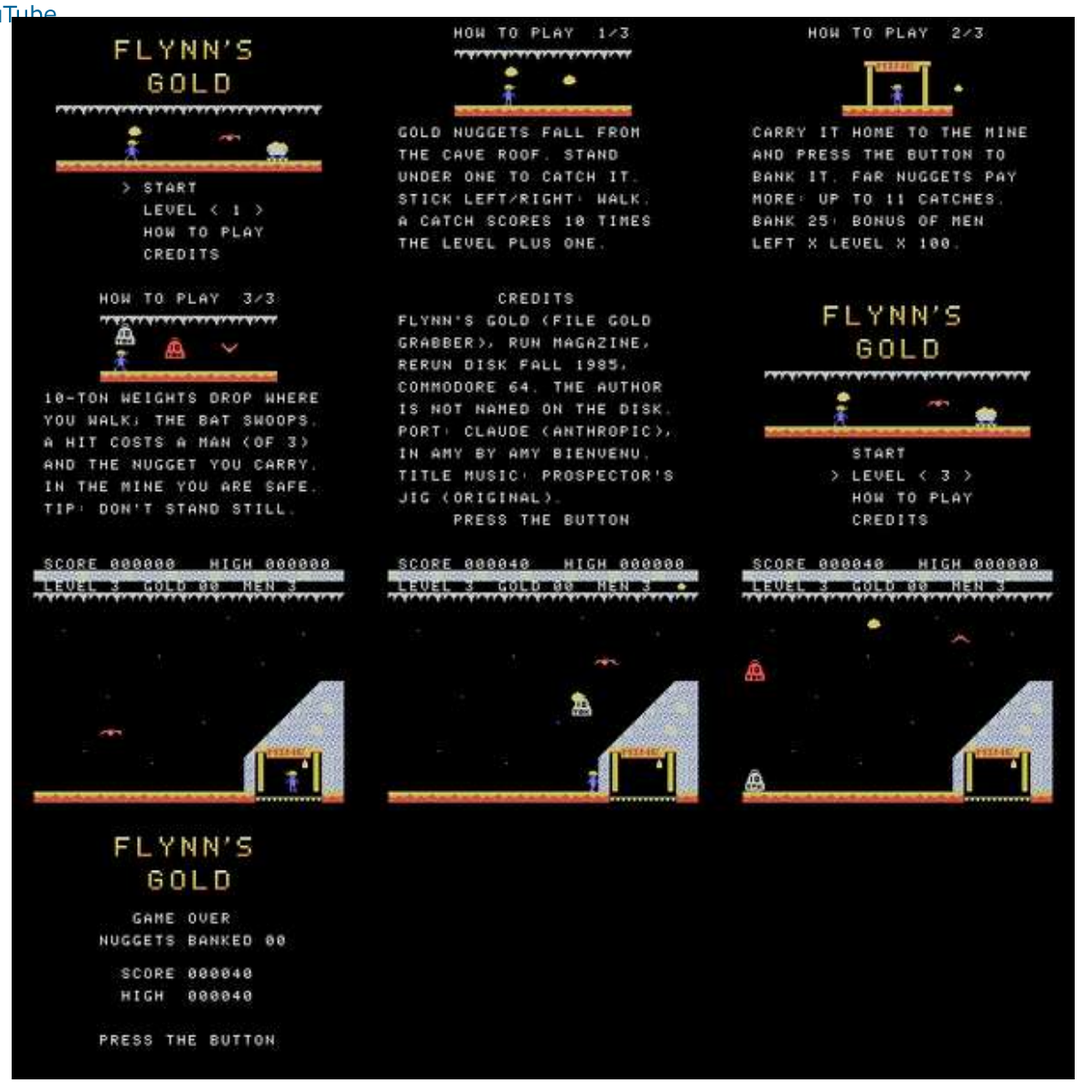
Theme Privacy Policy Contact Us Cookies
Powered by Invision Community

AtariAge
Home
2600
5200
7800
Lynx
Jaguar

Store
Store Home
New Products
Bestsellers
Gift Certificates

Follow AtariA
Like us on Faceb
AtariAge Faceboo
Follow us on Twitter
AtariAge on Instagram

Watch us on YouTube
Chat on Discord



Quote

1