STAR CASTLE ARCADE

JORDI CABO

For the Atari 2600™

Star Castle Arcade
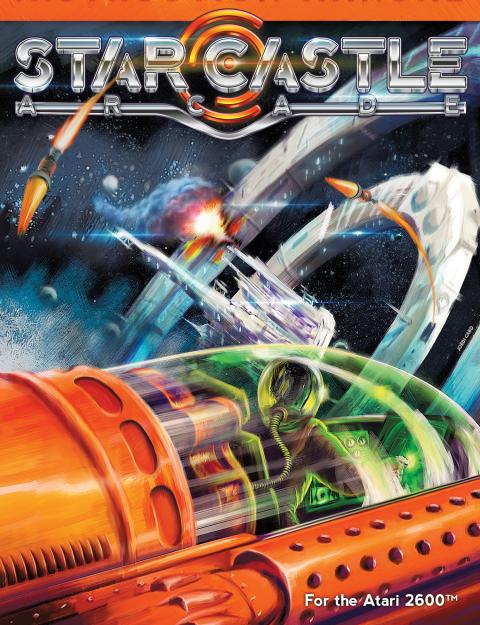A game for the Atari 2600 VCS
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FOR CENTURIES THE FEUDAL STAR LORDS HAVE CONTROLLED THE GALAXY FROM THEIR IMPENETRABLE STAR CASTLES. ONCE THEY WERE HAILED AS PROTECTORS OF PEACE, NOW THEY SERVE ONLY TO PLUNDER THE GALAXY OF ITS ENERGY AND WEALTH. YOU HAVE ASSEMBLED A SMALL FLEET OF SHIPS TO DESTROY THE STAR CASTLES AND RID THE GALAXY OF THEIR SCOURGE. HOW THEY LAUGHED WHEN THEY HEARD OF YOUR PLANS, OH HOW THEY LAUGHED!

NOTE

Star Castle Arcade is an Atari 2600 version of the classic Cinematronics arcade game. The objective of the game is simple: destroy the Star Castles, collect as many points as you can, and survive for as long as possible.

Each Star Castle is fixed at the center of the screen. The castle is protected by three rotating energy rings. Each ring consists of twelve segments, which can be individually cleared when hit twice by your ship's missiles. Beware that completely eliminating the outer ring will cause the remaining energy rings to expand outwards, and a new inner energy ring will be generated.

Star Castles are defended by three homing mines, which will kill your ship on contact. These mines will follow your ship around the screen until they run out of fuel or you shoot them. The Star Castle can be destroyed by a single missile hit on the central gun through a gap in the rings. But beware! Once such a gap has been made, the gun will be able to shoot deadly energy bolts at your ship!

You begin the game with three ships, and an extra ship will be awarded for each Star Castle that you destroy. The Star Castles will become more and more aggressively defended as you progress through the game!

Plug your joystick controller into the **LEFT CONTROLLER** port.

Press the **FIRE** button on the joystick to begin a new game.

DURING THE GAME

UP
Hold the joystick in the **UP** position to accelerate your ship in the direction that it is facing.

LEFT
Hold the joystick in the **LEFT** position to rotate your ship anti-clockwise.

RIGHT
Hold the joystick in the **RIGHT** position to rotate your ship clockwise.

FIRE
Press the **FIRE** button on the joystick to shoot a missile from the front of your ship.

PAUSE

ON AN ATARI 2600
The game can be paused by sliding the **COLOR/BW** switch to the **BW** position. The game will resume when the switch is returned to the **COLOR** position.

ON AN ATARI 7800
Press the **PAUSE** button once to pause the game, and again to resume the game.

color

b·w

PAUSE

To abandon a game and return to the title screen, press the **RESET** switch.

POINTS ARE AWARDED AS FOLLOWS:

OUTER RING - 10 POINTS PER SEGMENT DESTROYED.

MIDDLE RING - 20 POINTS PER SEGMENT DESTROYED.

INNER RING - 30 POINTS PER SEGMENT DESTROYED.

STAR CASTLE - 1440 POINTS WHEN DESTROYED, PLUS AN EXTRA SHIP.

NO POINTS ARE AWARDED FOR DESTROYING THE HOMING MINES.

OUTER RING

MIDDLE RING

INNER RING

STAR CASTLE

HOMING MINES

YOU

GAME OPTIONS

HIGH SCORE TABLE

When the **LEFT DIFFICULTY** switch is in the **B** position, the game will begin with the normal level of difficulty.

With the **LEFT DIFFICULTY** switch in the **A** position, the game will begin at a higher level of difficulty.

When the **RIGHT DIFFICULTY** switch is in the **B** position, your ship will be deflected by the rings should it get too close.

With the **RIGHT DIFFICULTY** switch in the **A** position, a collision with the Star Castle will destroy your ship.

The game colors can be switched between **NTSC**, **PAL**, and **BW** modes by pressing the **SELECT** switch on the title screen.

Note that changes to the difficulty switch settings will only take effect when you begin a new game.

At the end of the game, you may be prompted to enter your initials into the high score table

Hold the joystick **UP** or **DOWN** to change the currently selected initial.

Hold the joystick **LEFT** or **RIGHT** to select the next or previous initial.

Pressing **FIRE** will save your initials into the high score table.

There is a separate high score table for each combination of difficulty switches. The game type shown at the top of the high score table relates to the following difficulty switch settings:

Game1

Game2

Game3

Game4

WARNING

Star Castle Arcade will store high scores permanently on the game cartridge. Do not switch off the console or unplug the cart immediately after entering your initials on the high score table. Doing so may cause the saved scores to become corrupt.
It is safe to switch off the console when the title screen is showing.
To reset all of the saved scores, hold the joystick **RIGHT** and then press **FIRE** during the Champ Games start-up screen.

STAR-CASTLE-ARCADE-
THE-DEVELOPMENT-STORY

EVERY COMPUTER GAME HAS A STORY - THIS IS THE STORY OF STAR CASTLE ARCADE FOR THE ATARI 2600.

STAR CASTLE ARCADE HISTORY

THE ORIGINAL STAR CASTLE ARCADE GAME WAS RELEASED IN 1980 BY CINEMATRONICS. THE GAME WAS DESIGNED BY TIM SKELLY AND PROGRAMMED BY SCOTT BODDEN. AROUND 14.000 STAR CASTLE ARCADE CABINETS WERE PRODUCED, AND AROUND 150 ARE KNOWN TO STILL EXIST.

CINEMATRONICS ARE PROBABLY BEST KNOWN FOR PRODUCING THE CARTOON GAMES DRAGONS LAIR (1983) AND SPACE ACE (1984). THEY ARE ALSO WELL KNOWN AMONG ARCADE FANS FOR THEIR EARLIER ARCADE GAMES USING VECTOR DISPLAY TECHNOLOGY. DURING THE VECTOR ERA, FROM 1978 THROUGH 1983, CINEMATRONICS RELEASED 15 ARCADE GAMES USING VECTOR DISPLAY TECHNOLOGY, INCLUDING CLASSICS SUCH AS RIP OFF, ARMOR ATTACK, AND OF COURSE STAR CASTLE. ALL OF THESE GAMES HAD NEARLY IDENTICAL CIRCUITRY, AND RELIED ON CLEVER PROGRAMMING TO ADAPT IT TO THE REQUIREMENTS OF EACH GAME.

WITH VECTOR DISPLAY TECHNOLOGY, SHAPES ARE DRAWN DIRECTLY ON THE TUBE BY THE ELECTRON GUN. THIS GIVES VECTOR GAMES A VERY DISTINCTIVE APPEARANCE, AS THE GAME OBJECTS HAVE ESSENTIALLY UNLIMITED RESOLUTION. THE GAMES HAVE A CRISP ANALOGUE APPEARANCE, WITH SMOOTH ROTATION AND NO JAGGED EDGES. UNFORTUNATELY VECTOR DISPLAY TECHNOLOGY CANNOT EASILY SHOW COLOUR, SO GAMES LIKE STAR CASTLE RELY ON COLOUR OVERLAYS FIXED TO THE FRONT OF THE SCREEN.

VECTOR GAMES REQUIRE AN EXPENSIVE TUBE AND SUFFER FROM VISIBLE FLICKER WHEN MANY OBJECTS ARE DRAWN ON THE SCREEN. AS A RESULT, VECTOR DISPLAY TECHNOLOGY IN THE ARCADES WAS QUICKLY REPLACED BY RASTER-SCAN TECHNOLOGY, WHICH ITSELF IS NOW BEING RAPIDLY MADE OBSOLETE BY DIGITAL LED/LCD DISPLAY TECHNOLOGY.
FOR CINEMATRONICS, THE VECTOR ERA CAME TO AN END IN 1983, AND AFTER A LENGTHY BANKRUPTCY THE COMPANY WAS DISMANTLED IN 1987.

THE STORY OF STAR CASTLE ON THE ATARI 2600 VCS BEGINS IN 1981 WITH HOWARD SCOTT WARSHAW. WHILE WORKING FOR ATARI, HE WAS ASSIGNED THE TASK OF PRODUCING A CONVERSION OF STAR CASTLE FOR THE VCS. BUT HE SOON DECIDED THAT A STRAIGHT PORT OF THE GAME WOULD NOT BE POSSIBLE. INSTEAD, HE WAS INSPIRED TO WRITE YARS' REVENGE, WHICH HAS SOME VISUAL SIMILARITIES TO STAR CASTLE, BUT VERY DIFFERENT GAME-PLAY. THE STORY OF STAR CASTLE ON THE VCS WOULD END AT THIS POINT WERE IT NOT FOR THE EFFORTS OF ENTHUSIASTS NEARLY 30 YEARS LATER.

STAR CASTLE ON THE VCS

THE ATARI 2600 VCS HAS A LARGE CATALOGUE OF ARCADE PORTS, BUT THERE ARE ALSO MANY GAPS WHERE ARCADE GAMES DID NOT MAKE IT TO THE VCS. SOME OF THESE PORTS WERE PLANNED FOR RELEASE ON THE VCS, BUT ABANDONED DURING THE VIDEO GAME CRASH OF 1983. A FEW OF THESE ARCADE PORTS HAVE SINCE BEEN UNEARTHED AS PARTIALLY COMPLETED PROTOTYPES (E.G. TURBO AND IXION), WHILE OTHERS (E.G. ZOO KEEPER) REMAIN AS RUMOURS BASED ON MAGAZINE ARTICLES AND PRESS RELEASES. FOR GAMES LIKE STAR CASTLE AND ROBOTRON, PORTING WAS SIMPLY DEEMED TOO TECHNICALLY CHALLENGING FOR THE VCS AND A DIRECT PORT WAS NOT ATTEMPTED.

THE VCS STILL HAS A LARGE COMMUNITY OF FOLLOWERS, SOME OF WHOM WRITE GAMES FOR THE CONSOLE. THESE ARE ENTHUSIASTS WHO SPEND COUNTLESS HOURS OF THEIR SPARE TIME TO KEEP THE VCS CONSOLE ALIVE, LONG AFTER ITS COMMERCIAL SHELF LIFE HAS EXPIRED. THANKS TO THE INTERNET, AND THE ATARIAGE WEBSITE IN PARTICULAR, THESE ENTHUSIASTS OFTEN WORK TOGETHER, THOUGH MANY OF THEM WILL LIKELY NEVER MEET IN REAL LIFE. SOME ARE INTERESTED IN FILLING THE GAPS IN VCS CATALOGUE AND HAVE PORTED MISSING ARCADE TITLES, SUCH AS LADY BUG, STAR FIRE, COLONY 7, JUNO FIRST, ETC.

PORTING AN ARCADE TITLE TO THE VCS IS NOT A STRAIGHTFORWARD TASK. THE VCS IS A VERY LIMITED PLATFORM AND THE ARCADE MACHINES HAVE MANY TIMES MORE PROCESSING POWER. A PORT GENERALLY TAKES A MINIMUM OF A YEAR OF EFFORT TO COMPLETE. THE KEY TO A SUCCESSFUL PORT IS CAPTURING THE ESSENCE OF THE ARCADE GAME WITHIN THE LIMITATIONS OF THE VCS. FOR STAR CASTLE ARCADE, THE VCS IS INCAPABLE OF VECTOR GRAPHICS, BUT FLICKER IS USED CLEVERLY IN PLACES TO GIVE THE GAME THE LOOK AND FEEL OF VECTORS.

THE FIRST ENTHUSIAST-DRIVEN ATTEMPT TO PORT ACROSS STAR CASTLE TO THE VCS WAS ANNOUNCED BY TROGDOR IN DECEMBER 2005, CALLED STELLAR FORTRESS. HIS VERSION USED LOW RESOLUTION PLAYFIELD GRAPHICS TO DRAW THE RINGS. NEW FEATURES WERE ADDED UP TO MAY 2008 BUT SADLY THE GAME WAS NEVER FULLY PLAYABLE AND TROGDOR MOVED ON TO OTHER PROJECTS.

IN AUGUST 2008, JOHN PAYSON POSTED A DEMO TO HIS BLOG SHOWING THAT THE RINGS COULD BE DRAWN USING HIGH RESOLUTION SPRITE GRAPHICS. HOWEVER, HE DID NOT DEVELOP THE DEMO FURTHER AND MOVED ON TO OTHER PROJECTS TOO. MANY OF THE TECHNIQUES THAT WERE EVENTUALLY USED IN STAR CASTLE ARCADE, SUCH AS THE MULTI-COLORED RINGS, WERE INSPIRED BY THIS DEMO.

THE NEXT ATTEMPT WAS IN 2009 BY D.SCOTT WILLIAMSON, A FORMER ATARI LYNX PROGRAMMER. HE WAS INSPIRED TO ATTEMPT THE PORT, BASED ON THE STORY OF YARS' REVENGE IN THE BOOK "RACING THE BEAM: THE ATARI VIDEO COMPUTER SYSTEM [2009]". HE WORKED IN SECRET FOR AROUND A YEAR, FINALLY REVEALING THE COMPLETED GAME AT THE 2010 VIDEO GAME SUMMIT IN CHICAGO. HOWEVER, HE DID NOT PLAN TO RELEASE THE GAME TO THE COMMUNITY AT THIS POINT, AND ENCOURAGED OTHER PROGRAMMERS TO REPLICATE HIS FEAT.

A FURTHER DEMO OF STAR CASTLE ON THE VCS WAS POSTED TO AN ATARIAGE BLOG BY THOMAS JENTZSCH IN JULY 2010. HE DETERMINED HOW D. SCOTT HAD WRITTEN HIS PORT, AND REVERSE-ENGINEERED THE RING-DRAWING TECHNIQUE, BASED PURELY ON VIDEO FOOTAGE. HOWEVER, THIS WAS JUST FOR TECHNICAL CURIOSITY AND HE DID NOT INTEND TO PRODUCE A FULL PORT AT THAT TIME.

THE FINAL ATTEMPT AT A STAR CASTLE PORT WAS STARTED BY CHRIS WALTON IN DECEMBER 2011. HE WAS ALSO INTERESTED IN THE TECHNICAL CHALLENGE AND PRODUCED A QUICK DEMO, INSPIRED BY THE PREVIOUS EFFORTS. THE RING DRAWING CODE WAS COMPLETED IN AROUND A WEEK, AND A DEMO POSTED TO HIS ATARIAGE BLOG. HE DID NOT INTEND TO ATTEMPT A COMPLETE PORT, BUT THE COMMUNITY RESPONSE WAS SO ENCOURAGING THAT HE CONTINUED WITH THE PROJECT.

OVER THE NEXT FEW MONTHS, THE CORE GAME WAS COMPLETED AND A PLAYABLE VERSION WAS UPLOADED TO THE ATARIAGE WEBSITE IN MARCH 2012. CHRIS WALTON WAS ASSISTED BY NATHAN STRUM, WHO PROVIDED THE GAME GRAPHICS, IVAN MACHADO WHO PRODUCED THE GAME SOUND EFFECTS, AND RICHARD "KULOR" ARMIJO WHO SUPPLIED THE TITLE MUSIC.
THE TWO VERSIONS OF STAR CASTLE ARE RATHER DIFFERENT: D. SCOTT KEPT WITHIN THE 8K LIMITATION COMMON TO ATARI VCS GAMES OF THAT TIME. CHRIS USED 28K AND EXTRA RAM TO INCLUDE FEATURES SUCH AS MULTI-COLOURED RINGS, EXPLOSION EFFECTS, TITLE MUSIC, A SPLASH SCREEN, AND A HIGH-SCORE TABLE.

IN MAY 2012, D. SCOTT DECIDED TO START A KICKSTARTER PROJECT, SO THAT HIS GAME COULD SEE A LIMITED RELEASE TO THE COMMUNITY. THE RESPONSE WAS VERY ENTHUSIASTIC, AND THE FUNDING GOAL WAS QUICKLY REACHED. HE USED THE FUNDING TO BUILD CUSTOM CIRCUITRY AND CASES FOR THE GAME, AND RELEASED THE GAME TO SEVERAL HUNDRED BACKERS A FEW MONTHS LATER.

AT THIS POINT, CHRIS WAS CLOSE TO COMPLETING HIS OWN STAR CASTLE ARCADE PORT, BUT THERE WERE BLOCKERS BOTH TECHNICALLY AND IN REAL-LIFE. HE HAD CHANGED TO A MORE CHALLENGING JOB, AND THE BIRTH OF HIS DAUGHTER WAS IMMINENT, SO HE HAD LITTLE SPARE TIME TO WORK ON THE GAME. ALSO, THE GAME HAD REACHED THE TIMING LIMITS OF THE VCS AND IT DID NOT SEEM POSSIBLE TO PROVIDE THE GAME WITH PERFECT COLLISION DETECTION. FORTUNATELY, AT THIS POINT THOMAS JENTZSCH STEPPED-IN AND AGREED TO TAKE OVER THE PROGRAMMING OF THE GAME.

TOGETHER WITH ANDREW DAVIE, THOMAS HAD PREVIOUSLY WORKED ON A NOVEL TIME-SLICING TECHNIQUE FOR THE BOULDER DASH VCS PORT. THIS TECHNIQUE WOULD BE PERFECT TO OVERCOME THE TIMING LIMITS THAT WERE AFFECTING STAR CASTLE. MOST VCS GAMES PERFORM ALL OF THEIR CALCULATIONS ON EVERY FRAME, 60 TIMES A SECOND. WITH TIME-SLICING, THE GAME CALCULATIONS MAY BE SPREAD ACROSS SEVERAL FRAMES. HOWEVER, USING THIS TECHNIQUE WOULD REQUIRE AN ALMOST COMPLETE REWRITE OF THE STAR CASTLE GAME CODE.

UNDETERRED BY THE EFFORT REQUIRED, THOMAS SPENT THE NEXT YEAR REWORKING STAR CASTLE TO USE AN IMPROVED VERSION OF HIS TIME-SLICING TECHNIQUE. AN ADDED BONUS OF USING TIME-SLICING WAS THAT IT ALLOWED HIM TO INCLUDE MANY MORE FEATURES FROM THE ARCADE VERSION. THE END RESULT WAS A VERY CLOSE MATCH TO THE ARCADE VERSION, AND SO THE GAME WAS NAMED "STAR CASTLE ARCADE".

THE STORY OF STAR CASTLE ON THE VCS ENDS AT THIS POINT. THERE ARE NOW TWO COMPLETE VCS PORTS, QUITE DIFFERENT FROM EACH OTHER. THE STAR CASTLE ARCADE PORT TOOK NEARLY 3 YEARS TO COMPLETE AND WAS A TRULY INTERNATIONAL COLLABORATION: THE GAME CODE WAS WRITTEN BY CHRIS WALTON FROM SCOTLAND, AND THOMAS JENTZSCH FROM GERMANY. THE GAME GRAPHICS WERE SUPPLIED BY NATHAN STRUM FROM THE USA. THE CARTRIDGE LABEL, BOX ART AND MANUAL WERE CRAFTED BY JORDI CABO FROM CATALONIA. THE SOUND EFFECTS WERE DEVISED BY IVAN MACHADO FROM BRAZIL. THE MELODY CARTRIDGE ON WHICH THE GAME IS STORED WAS DESIGNED AND BUILT BY FRED QUIMBY FROM THE USA. FINALLY, THE GAME WAS PACKAGED AND RELEASED BY ALBERT YARUSSO, THE OWNER OF THE ATARIAGE WEBSITE, ALSO IN THE USA. TOGETHER, THIS GROUP IS KNOWN AS TEAM ANTONYM.
AS OF 2024 STAR CASTLE ARCADE IS PUBLISHED BY CHAMP GAMES.

STELLAR FORTRESS
HTTPS://FORUMS.ATARIAGE.COM/TOPIC/80748-STELLAR-FORTRESS/

JOHN PAYSON DEMO
HTTPS://FORUMS.ATARIAGE.COM/BLOGS/ENTRY/5736-STAR-CASTLE-ANYONE/

THOMAS JENTZSCH DEMO
HTTPS://FORUMS.ATARIAGE.COM/BLOGS/ENTRY/7275-STAR-CASTLE-BRAINSTORMING/

CHRIS WALTON DEMO
HTTPS://FORUMS.ATARIAGE.COM/BLOGS/ENTRY/8769-STAR-CASTLE-KERNEL/

KICKSTARTER
HTTPS://KICKSTARTER.COM/PROJECTS/698759745/ATARI-2600-STAR-CASTLE

CREDITS

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JORDI CABO

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PUBLISHING:
CHAMP GAMES

STAR CASTLE ARCADE WOULD NOT HAVE BEEN POSSIBLE WITHOUT THE HELP AND SUPPORT OF THE GREAT FOLKS ON ATARIAGE WWW.ATARIAGE.COM

PROPER BRIGHTNESS CALIBRATION

If you hold the joystick **LEFT** and then press **FIRE**, a simple brightness calibration screen shows up. At this screen you should adjust contrast and brightness, so that you can see and distinct all 8 bars. You leave the screen by pressing **RESET**.

ERASE HIGH SCORES

If you hold the joystick **RIGHT** and then press **FIRE**, a simple menu shows up which allows you to wipe the high scores. With joystick **UP** and **DOWN** you select one entry and then press **FIRE**.