Nintendo Game Boy

https://nl.wikipedia.org/wiki/Game_Boy



Een **Game Boy** is een draagbare spelcomputer ontwikkeld door het Japanse bedrijf Nintendo.

De hardware is in de loop van de jaren ontwikkeld tot een volwaardige spelcomputer:

- De originele *Nintendo Game Boy*: De 8 bit-versie uit 1989. Gebaseerd op een Z80. Klein zwart-wit lcd-scherm zonder achtergrondverlichting. Spellen worden op zogenaamde ROM-cassettes geplaatst.
 - Nintendo Super Game Boy: Geen draagbare Game Boy, maar een plug-in-cassette voor het Super Nintendo Entertainment System. Voor het eerst is het mogelijk om Game Boy-spellen te spelen op de televisie.
 - *Nintendo Game Boy Pocket*: Verkleind model.
 - Nintendo Game Boy Light: Uitsluitend verkocht in Japan. Bijna dezelfde grootte als de Pocket, maar met een voorgrondverlicht scherm voor betere zichtbaarheid.
 - Nintendo Super Game Boy 2: Het is een opvolger van de Super Game Boy en werd alleen uitgebracht in Japan. Het heeft een Link-functie, waarmee multiplayerspellen gespeeld kunnen worden met andere mensen met een Game Boy.
- *Nintendo Game Boy Color* (1998): Update van 8 bitversie. De processor verdubbelde in snelheid en geheugen, en kreeg een kleurenscherm.
- Nintendo Game Boy Advance (2001): Introductie 32 bitprocessor. Enorme verbetering van het kleurenscherm. Uitwendige verandering: de oriëntatie is horizontaal gericht in plaats van verticaal.
- Nintendo Game Boy Advance SP (2003): Opvouwbaar, schermverlichting en ingebouwde accu.
- *Nintendo Game Boy Micro* (2005): Uitwendige veranderingen: zeer klein, scherm is kleiner maar scherper, horizontaal gericht.

 Nintendo Game Boy Player. De Game Boy Player is een apparaat gemaakt door Nintendo voor de Nintendo GameCube die Game Boy-, Game Boy Color-, of Game Boy Advance-spellen kan spelen op een televisie. Maar sommige Super Game Boy- en Super Game Boy 2-verbeteringen komen hier niet in voor. Het is de laatste Game Boy van de Nintendo Company. De fysieke hardware is bijna identiek aan die van de originele Game Boy Advance.

De meeste spelcomputers worden waardeloos wanneer er een opvolger verschijnt. Bij een Game Boy was dit niet altijd het geval. De cartridges van de allereerste spellen daterend uit 1989 zijn nog altijd speelbaar op de *Nintendo Game Boy Advance*. Op de *Game Boy Micro* echter zijn alleen nog maar Game Boy Advancespellen te spelen. Door de jaren heen werd de concurrentie van gelijkaardige draagbare systemen door Nintendo de grond ingeboord. Het heeft er echter een aantal jaren op geleken dat Nintendo zou worden voorbijgestreefd door de PlayStation van Sony.

Er zijn veel spellen beschikbaar voor de Game Boys. In 2003 werd de *Game Boy Advance SP* uitgebracht. De letters *SP* staan voor *Special Project*, en het apparaat is een verbeterde versie van de *Gameboy Advance*. Hiermee hoopte Nintendo de opgelopen achterstand weer in te halen.

The Chessmaster for Game Boy.

http://www.nintendolife.com/reviews/2010/09/chessmaster_retro



The Chessmaster (1991)

System: Game Boy Publisher: Hi-Tech Expressions Inc. The Software Toolworks Inc. Developer:

(Programmer Dave Kittinger, See also: http://www.schaakcomputers.nl/computerschaak/Chessmaster/Chessmaster.pdf)

Outstanding features include:

- 16 levels from Newcomer to Grandmaster
- Teaching Mode shows all possible moves
- Codeword allows you to stop play and continue at a later time without resetting the board
- Set up pieces in any position to play, analyze and solve chess problems
- Takeback/Replay option allows review of past moves for analysis all the way back to the beginning of the game, then forward again

Now you can play, practice or challenge The Chessmaster anywhere you go... best of all you'll never lose a piece!

Review by Dave Frear:

As all the cool kids know chess is a centuries-old strategic board game for two players, played on a eight-by-eight grid. You have 16 pieces that move in different ways, and you may have to plan several moves ahead if you are to successfully checkmate your opponent's king. The Chessmaster offers fans a portable version of the game to enjoy with the ability to play against another human player or CPU controlled opponent. If you've always steered clear of chess because you can never remember how the horsie moves, this could still be the game for you as it allows you to learn the ways of the board and become a master like the beardy bloke on the cover.





Visually, there's little you can do with a chequered board, so using a minimal amount of the Game Boy's graphical capabilities the action is presented in simple 2D. It's quite unspectacular, but it offers a clear view as you play, each type of piece having a unique appearance.

On the audio side of things the game features sampled speech such as "capture" and "check" with little else aside from a triumphant fanfare when you make a move and an error noise when you make an illegal one.

If you are unsure what can move where, you can turn on Teaching Mode in the options menu, accessible at any point of the game. Once activated, grabbing a piece will show all the possible squares to which it can move. You could also just look at the instruction booklet, which explains piece movement as well as special moves such as castling or en passant. The Teaching Mode is still useful, however, as it may reveal a move that you hadn't noticed. Although there is no proper in-game tutorial, by only allowing legal moves and showing your options if needed the game can quickly teach players the basics.



Controls are straightforward: the d-pad moves a hand which you use to manoeuvre your pieces, using the A button to pick up and place them. Get a pawn (those are the knobbly ones) to the other side of the board, and you can promote it to a queen by tapping select. Underpromotion is also possible, using the A and B buttons to cycle through the different pieces.

Having gotten used to the basics, you may find you still lack the ability to win a game, but help is available. If you make a move that you realise is a mistake as it has led to a capture (or will do shortly) you can undo it by tapping the B button. If you think you went wrong even earlier in the game you can keep rewinding the action, all the way to the beginning if necessary. It's probably not a good idea to exercise this option when playing a human opponent, but the Chessmaster is happy for you to improve. If you find yourself completely stumped when it's your turn to move, pressing start brings up the data screen, which in addition to a list of moves so far and captured pieces also suggests a move for you to try.

The more you play, the less you will rely on help as you get to know the game a bit better, and you may find yourself ignoring the suggested move in favour of something else. Chess newbies will probably be happy with The Chessmaster's default difficulty for quite awhile, but as they improve as players they will want more of a challenge. The game is happy to oblige with 16 difficulty settings, catering to players of all abilities.

Further adjustments can be made to the gameplay, such as the ability to toggle Deep Thinking on or off, which determines if the Chessmaster will constantly think about his next move or just when it's his turn. If you find he's taking too long for your liking, there is an option to force a move. You can also apply the touching rule, so once you've selected a piece, you have to move it. If you'd like the Chessmaster to make the first move of the game, this can be done in the Set Up Board options or by simply opting to control the black, rather than white, pieces, and the board can be rotated if you'd prefer to play from any of the four sides. There is an option to Solve for Mate, which will look for a checkmate solution in one to five moves; this is helpful, but often you will be presented with a "no solution" message.



Should you become engaged in a particularly drawn-out and strategic game, you may not be able to finish it in one go, but luckily you can save your progress with the

use of passwords. These are made up of a combination of numbers, symbols and letters (both cases) so you have to be careful when jotting them down. Alternatively, you could offer the Chessmaster a draw, or note where all the pieces are and use the setup option when you next switch on your system. This latter is also handy if you want to have a quick game with less pieces or to set up a specific challenge for yourself.

Conclusion

It's chess. Aside from the sampled speech, there is nothing fancy. Not that it needs to be – it just needs to offer a good version of the game, and it does so with multiple difficulty settings, the easiest of which is not off-puttingly difficult for newcomers. It could benefit from an in-game tutorial, but novice players will find the ability to undo their actions and the hints helpful. Overall, The Chessmaster is a solid simulation of the board game.

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http://kantack.com/chess/exclvgmby.htm

Excalibur LCD Chess vs. GameBoy ChessMaster by Chris Kantack

This web page compares the LCD Computer Chess handheld chess game system with ChessMaster for the Nintendo GameBoy. **Excalibur Electronics** manufactured the LCD Computer Chess unit. The ChessMaster franchise is now owned by a company called UbiSoft.

Note, this web page does not attempt to do a full feature by feature comparison of each product. However, you can learn more about the features for the LCD Computer Chess product by visiting my web page that discusses **Touch Chess**. (Nearly all of the chess playing features found on the Touch Chess product are also present in the Excalibur LCD Computer Chess unit.) Also available is the Excalibur LCD Chess Operating Manual in Adobe Acrobat Reader (PDF) format.

In addition to LCD Chess, Excalibur manufactured similar models such as Talking LCD Chess.

About ChessMaster on the GameBoy

Two different ChessMaster game cartridges have been released for the Nintendo GameBoy. The first cartridge was designed around the original (black-and-white) GameBoy architecture. The second version (ChessMaster for GameBoy Color) added slightly improved graphics and a few additional cosmetic features accessible for those who own GameBoy Color or Advance units. (Either

cartridge will run fine on the original black-and-white GameBoy and Gameboy Pocket units.)

My review is based on running the "ChessMaster for GameBoy Color" cartridge on the older black-and-white GameBoy Pocket system.



Overall, the GameBoy Pocket unit, pictured here measures 5 inches long by 3 inches wide. The thickness of the GameBoy Pocket unit is nearly 1 inch. The GameBoy screen has a diagonal measurement of just over 2.5 inches. (Screen dimensions are 1 15/16" wide by 1 3/4" high). Interestingly enough, the GameBoy



Pocket system features a slightly larger screen than what you find on the GameBoy Color units. GameBoy Pocket also features a contrast control that is not available on GameBoy Color or Advance. In my own testing, I find playing ChessMaster on the GameBoy Pocket screen preferable to using a GameBoy Color or Advance unless you are outdoors in bright sunlight. Only under very bright conditions do the GameBoy Color and Advance screens provide a more readable display. In any case, all the GameBoy units leave a lot to be

desired in terms of screen size and contrast.

Beginning in 2001, it became extremely difficult to find the GameBoy ChessMaster game cartridge. Neither the black-and-white nor color versions are readily available. You may still be able to dig up a cartridge on the web but you will likely have to do a lot of searching. Many sites still list the cartridge but few actually have it in stock anymore. Some people are having good results by shopping on **Ebay**. The color version of ChessMaster seems to be the one most commonly available (when you can find it). It can vary widely in price.

Note Regarding The GameBoy Advance

The Advance contained a newer 32 bit processor in addition to an 8 bit Z80 processor for compatibility with older games. It also featured a wider screen that could be utilized by those games written specifically for the GameBoy Advance. Unfortunately "non-Advance" games cannot take advantage of the 32bit processor. Thus the GameBoy Advance will play the standard ChessMaster cartridge at the exact same speed as the GameBoy Color unit. Also, the default screen presentation of the older games is even a bit smaller on the Advance than on the GameBoy Color unit. The Advance does offer a feature where you can "stretch the image" of an older game so that it will fill the wider screen that is used on the Advance. While this works well for many GameBoy games, the ChessMaster program was designed with a square presentation in mind. In short, ChessMaster will run on the Advance but don't expect it to be any better than it is on the GameBoy Color unit.

If searching for a chess program for an old Gameboy Advance, try looking for Virtual Kasparov that was released by a company called "Titus". UbiSoft also released an updated ChessMaster cartridge for the Advance that may be available. I have neither of these versions but I have posted a letter on my Handheld Chess Overview page that summarizes the difference between Virtual Kasparov and the Advance version of ChessMaster.

About Excalibur LCD Chess



The handheld Excalibur LCD Computer Chess game was introduced in June of 2000. This unit has proven to be more than a worthy competitor to GameBoy ChessMaster. The LCD Chess unit fits very comfortably in one's left hand. Overall dimensions are 5 3/4" H by 2 1/2" W by 1" D. The screen measures nearly 3" diagonally. More details are provided in the paragraphs below. But, to



summarize, the Excalibur LCD Chess unit has become one of my favorite portable chess computers. With a great screen, great

features, smart brain, and extremely long battery life, the Excalibur LCD Chess unit does it job well. The LCD Chess unit was also a tremendous value when it was introduced with a retail price of just under \$30. Later it was found at various retailers for as little as \$14.95. The original LCD Chess model featured on this page is now very difficult to find. However, you still find some of its successors (LCD Chess Express and similar units) for around 15 to 25 (U.S.) dollars. Shop around when looking for LCD chess handhelds on the internet. I've seen some dealers charging considerably higher prices than even the suggested retail price for some Excalibur systems.

What Both These Units Can Do

Both the Excalibur LCD Computer Chess unit and GameBoy ChessMaster game offer:

- LCD screen technology (no pieces to lose)

- a very challenging chess opponent (unless you are a strong "over 1600 Elo" rated player)

- multiple computer playing levels and features for beginners to advanced players
- a "human vs. human" mode that is also quite useful for entering and studying other chess games

- the ability toset up specific positions for "solve for mate" purposes or other practice

- the option to view the moves that the computer is considering for its move

The units differ widely though on feature selection and usability. Depending on what you value in a portable chess gaming system, you may prefer one unit over the other. Here are some key points to consider:

Scope of Function

1. The Excalibur LCD Chess unit plays chess and only chess. The Nintendo GameBoy plays hundreds of different games. Of course you need to purchase a game cartridge for each GameBoy game you wish to play. Typical cartridge prices range from 20 to 35 dollars.

Price and Availability

2. Both of these units are no longer readily available. But generally speaking, an Excalibur LCD Handheld is easier to find and usually less expensive.

Battery Consumption

3. The GameBoy unit loves to "eat batteries". If, like me, you often play long chess games under classical chess time controls, a set of 2 AA Alkaline batteries will only last you a few (maybe 3) long chess games. Of course, I've long since gone to an AC adapter and a rechargeable battery pack for the GameBoy. Still, I often make sure my GameBoy is plugged into a nearby AC outlet, when starting a long game.

On the other hand, the Excalibur runs seemingly forever on a set of 3 AAA batteries. Indeed, there is no option to plug the Excalibur into a wall outlet---but you won't need to either. I first received my Excalibur LCD Chess handheld in mid-November 2000. Thus I've now owned my Excalibur LCD unit for nearly two years. I no longer play it that often, as I now own a number of handhelds. But I've certainly played a number of many long games. It wasn't until July of this year (2002) that I had to change out my original set of batteries!

Saving/Resuming a Game

4. If you want the ability to easily adjourn a game (to resume later), forget the GameBoy and go with the Excalibur unit. While the GameBoy unit does have "a method" of saving a game, it is extremely difficult and not at all practical. Indeed, I've never bothered to try to reload a saved game as one must enter a cryptic password of many characters to retrieve a previously saved GameBoy ChessMaster game.

To adjourn a game on the Excalibur, just turn the unit off. When you later decide to resume the game, simply turn the unit on and continue.

Display Quality

5. The GameBoy and Excalibur have very different qualities in their respective displays. The GameBoy unit has more traditional looking pieces and can

provide smooth motion with its bitmapped display. But the Excalibur LCD Chess handheld has a larger display with better contrast. Since the Excalibur unit only plays chess, it has a permanent pre-printed chessboard on its screen. This allows each piece (black or white) to stand out well against the playing board. On the other hand, the GameBoy must use its screen pixels to both draw each piece and to draw the chessboard. Looking at a black chess piece on a black square is extremely difficult on the black-and-white screen of the GameBoy Pocket. The GameBoy Color and GameBoy Advance units do not have this exact problem as the board is colored differently from the pieces. However, the GameBoy Color and Advance have no contrast control. It requires a lot of light to see the board and pieces clearly on a GameBoy color screen. Bright sunlight (or a nearby lamp) is almost mandatory for serious chess play if you have a GameBoy Color or Advance unit. Indeed, since purchasing the Excalibur, I haven't used my GameBoy ChessMaster much as I prefer the legibility and larger screen size of the Excalibur. Note, the Excalibur screen also holds up very well in direct sunlight.

Note, the photos illustrated at the beginning of this web page will show a very bright and well-defined screen for the GameBoy. However, these photos were taken under "ideal" flash photography lighting. Under most circumstances, the GameBoy screen is much darker and murkier than what you'll see here. However, the Excalibur images shown are quite realistic and provide a good representation of how well that unit's screen performs under normal lighting. (Note, you may click on any of the images above for a larger view.)

One final note regarding Excalibur LCD displays: When one first receives the LCD Chess unit, you tend to hold the unit so as to directly face the chessboard. That is, the plane of the chessboard is perpendicular to your angle of vision. (Lets call this point the 0 degree viewing angle.) If you adjust the contrast control accordingly, you can get a good image at "0 degrees". However, you may prefer to adjust the contrast control so that your optimum contrast occurs when looking at the chessboard at an angle of 30 degrees upward. In other words you tilt the unit so that the top of the chessboard will be a bit further away from your eyes than the bottom of the chessboard. It often works to your favor to have the optimum viewing angle done this way. It can reduce nearby reflections and works well when the unit is on a desk or table lying flat in front of you.

User Interface

6. As for the "user interface" (a very critical part of any gaming system), both GameBoy ChessMaster and the Excalibur LCD Chess handheld will require somewhat more effort at selecting and moving the chess pieces than what you would find with a regular chessboard or on a full-fledge home computer graphical display. Here's one area where ChessMaster on the GameBoy does win out over the Excalibur LCD Chess unit.

With the GameBoy unit, one uses a 4 way directional control to guide a "hand" to the piece one wishes to move. The A button is then press which grabs the

piece. Once again, using the 4 way directional control, one directs the hand to the desired square. Again the A button is pushed, depositing the piece on the destination square. I've done some "keystroke counting" in the past, the GameBoy averages around 5 to 6 keystrokes to enter a single move (1 ply) move.

The Excalibur has an 8 way directional control. At the beginning of each turn, you use this control to highlight the piece you wish to move. You then press a Move button to indicate that this is the piece you wish to move. Once again the 8 way directional control is used to highlight the destination square. The Move button is again pushed to confirm the desired destination and complete the move. Unlike the GameBoy, where you can press and hold the directional control to slide your cursor across the board, the Excalibur requires a distinct pressing of the appropriate directional control in order to advance a piece across each square. It's a little bit more work to enter a move on the Excalibur, but still quite reasonable. The Excalibur averages around 6 to 8 keystrokes per move.

The best user interface for chess, in my opinion, is the PDA (stylus with touch sensitive screen) interface. Excalibur's Touch Chess features such an interface along with the chess programs available for the Palm computer.

Sound Control

7. When it comes to sound and sound control, ChessMaster on the GameBoy, is certainly more sophisticated with voice output on the initial welcome message, captures, castling moves, checks and checkmates. You can also, using the volume control, turn off the sound completely on the GameBoy. The Excalibur provides the necessary beeps for game play and entry errors. However, even with the sound control set to off, the Excalibur will still beep after each computer move. It is possible to disconnect the Excalibur's speaker if you're willing to open the unit. Of course, this will permanently disable all sounds unless you choose to reconnect the speaker.

The ultimate sound control solution, is to place a switch on the Excalibur handheld in order to mute the sound as needed. Tobias Giesen has done just that. Check out his page at: http://www.tobiasgiesen.de/excalibur.htm (From his page you can easily email him for further instructions.)

Some features unique to each unit

A very nice feature on the Excalibur LCD Chess unit, is the SLEEP (automatic shut off) feature. This is an adjustable feature that allows the unit to switch itself off if no move has been entered for a given period of time. To resume a game, you simply turn the unit back on.

The Excalibur LCD unit also allows you to practice against 30 different book openings. There are also 16 "Great Games" in its memory that can be replayed at any time.

If you have a GameBoy Color unit, GameBoy ChessMaster provides 5 different board colors, 5 different piece colors, and 4 different piece types. This flexibility is a nice plus as you may find one or more settings a bit easier to see than the default. Unfortunately, these settings are not retained when the GameBoy is turned off. (Any setting changes different from the default settings, must be made each time you turn your GameBoy unit back on.)

I do like the fact that regardless of what color I'm playing, in GameBoy ChessMaster, I can choose to have either color play from the bottom of the screen. On the Excalibur, the human player always plays with his pieces initially positioned at the bottom of the screen. Generally this is fine, but when doing computer versus computer comparisons, it's nice to be able to select which player plays from the bottom so as to keep your screen perspectives consistent between systems. The GameBoy even allows you to place either team on the left or right side of the screen. (Definitely overkill and a feature I doubt used by anyone.)

A much more practical feature provided in GameBoy ChessMaster is the option of displaying algebraic coordinates and time clocks for each player.

Strength of Computer Opponent

Excalibur LCD Chess Levels

Both the Excalibur LCD handheld and GameBoy ChessMaster provide multiple strength levels for the computer opponent. Having multiple levels is a standard feature for any modern chess program as most programs, set at their maximum strength level, can easily defeat most human opponents virtually all the time.

The Excalibur LCD handheld chess unit has a total of 73 levels of play. Levels 1 thru 4 are beginner levels. Level 5 is a fixed 1 ply (1 half-move) search. Each increasing level will take slightly longer (1 to 2 seconds per level) for the computer to make its move. As you move on to the higher levels the computer will look more deeply into each board position when calculating "the best move". Level 73 is an infinite level. That is, on this level, the computer will usually "think" on the next move indefinitely until you press the MOVE key to force it to move. (When you press the MOVE key on level 73, your telling Excalibur to make the best move it has found so far.)

The amount of time Excalibur spends thinking on a specific move will depend on the level you play at and the board position. The first few opening moves may occur almost instantaneously regardless of level. Complex middlegame positions will take the longest. A lot depends on the options you select. Generally at level 72, I find the Excalibur typically taking around 1 1/2 to 2 1/2 minutes per move.

GameBoy ChessMaster Levels

ChessMaster on the GameBoy platform provides a total of 16 levels. They are broken down in this way:

Level	Move/Time unit
Newcomer #1	beginner level, moves are made under 1 second
Newcomer #2	beginner level, moves take about 1 second
1	60 moves in 5 minutes
2	40 moves in 5 minutes
3	60 moves in 10 minutes
4	60 moves in 30 minutes
5	60 moves in 45 minutes
6	60 moves in 60 minutes
7	30 moves in 45 minutes
8	30 moves in 60 minutes
9	40 moves in 90 minutes
10	40 moves in 100 minutes
11	40 moves in 120 minutes
12	40 moves in 150 minutes
13	40 moves in 180 minutes
14	Infinite

Note, that the amount of time that ChessMaster GameBoy spends "thinking" about a move is not the same for each move. For example, you might surmise that when playing at level 11, the GameBoy takes 3 minutes per move. When playing at level 11, it will average 3 minutes per move--but, just like a human opponent, it will make some moves almost instantly (when it is still in an opening book for example, or if in a forced move situation). When GameBoy has sufficient time on the clock, it may spend 5 minutes or more on a tricky middlegame board position. Once again, not unlike what a human opponent might do.

Level Options

There are other options that affect the level of play. Excalibur has a FAST mode that can be toggled on or off at any level. It may miss some tactical moves with FAST on but it will also look more deeply into certain "promising lines".

GameBoy ChessMaster has a mode called "Deep Thinking". It too can be turned on or off at any level. With "Deep Thinking" on, GameBoy will think about a move even when it is your turn.

So Which Program is Smarter?

Many people choose a chess computer based on how strong it is. I believe this is a mistake unless you are a already established as a strong club player. If you're a frequent club player with an official USCF Elo rating much over 1600 then you probably would not be interested in either of these units as a serious computer opponent.

I'd say either of these units will provide most players (including myself) with more than enough challenge. The "fairest test" I've been able to come up with, when comparing the ChessMaster GameBoy against the Excalibur LCD Chess handheld is to provide both computers with an equal amount of think time, then have them play against one another. This test is done by: Setting both computers to "Infinite Time" level.

Ensuring that the "Deep Thinking" option is OFF for ChessMaster GameBoy.

Ensuring that "Fast Mode" is OFF for Excalibur.

Giving both computers exactly the same amount thinking time for each move.

Both units appeared to be equally strong when tested under the above conditions. On the other hand, there is no reason not to have "Deep Thinking" turned on (if you want a stronger opponent) when running GameBoy ChessMaster. With Deep Thinking off for GameBoy and "Fast" off for LCD Chess, the units both have a strength of around 1350 to 1450 Elo. Turning on "Deep Thinking" definitely strengthens GameBoy ChessMaster's play. My recent testing seems to show that (with Deep Thinking on), GameBoy ChessMaster plays with a strength of around 1700 Elo. Newer versions of Excalibur's LCD Chess (like Talking LCD Chess), have about equal strength as the GameBoy ChessMaster cartridge with Deep Thinking turned on.

<u>Virtual Chess 64</u> is a chess simulation game for the Nintendo 64. It was released in 1998. The game features no true "completion" in the form of a goal or a score, so one could theoretically play an endless number of matches. When a piece is captured, a short animated cutscene plays back depicting the battle, as in 1988's *Battle Chess*.



Virtual Chess 64 came with a basic text and visual tutorial written for beginners and novices about how to play chess. In the third section the tutorial continues explaining how to play using simple chess positions in which you learn from by finding the best move each time. The short fourth section is analysis of two badly played well-known games titled "Fool's Mate" and "Scholar's Checkmate". In the fifth and sixth sections these chess problems become increasingly complicated, and the player is expected to, by some means, find the solution and understand it. The seventh section is about basic endgame checkmating approaches and patterns, and just one basic endgame concept for beginners: the square of the promoting pawn. The last three sections focus on improving opening, middlegame, and endgame chess play by using example games for analysis.

In disregard to the unrecorded completion of the tutorial you could play a full game yourself using either a 2D or 3D board. There was a "Rotate Board" option for the 2D and 3D boards, although the C-left and C-right buttons could be used to rotate the 3D board by a greater variety of angle measures. On the 3D board every time a piece was captured you would have a short cut scene depicting the capture of said piece unless this is disabled or only limited to one-time only scene play per piece capture combination via configuration. The idea was to amuse the player. There

were no cut scenes on the 2D board for captures, but you could change the design of the pieces and board by pressing the C-left or C-right button and use the "flash think" and last move square lights. There were four 2D chess sets to select from: standard white and black icons, arctic and jungle animals, silver and gold pieces, and heroic and demonic characters. You could also play as either white or black pieces and you could even make situations of your own by adding or removing pieces from the board and placing them in different positions, but there is a bug removing the option to castle in games starting from positions customized through this feature. Like most board games, you had the option of two human players instead of one, but also the option of seeing the chess engine play itself.

The game also had a "Level" option in which you could set the time taken for the chess engine to respond based on the complexity of the position. "Beginner #1" is the top and default setting of the list, and "Level 12" is the bottom setting. Time is the only real factor behind the quality of the engine's moves, and while the default difficulty level setting resulted in analysis in a matter of few seconds (seldom more than 10), the "Level 12" setting resulted in waiting times greatly variant based on the position. (The longest time might be no more than 30 minutes in any reachable chess position, most such instances subject to see in replay of certain correspondence chess games.) There is a "Meditation" setting by which, if enabled, the chess engine will think on your time except usually during the opening phase of the game in which predefined moves are played. Again based on the complexity of the position, analysis will continue for a matter of hours or days until either a forced checkmate is found or you make your move.

Review: http://www.ign.com/articles/1998/06/18/virtual-chess-64