

BATTLECHESS 4000

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It had been sixteen years since I had last placed my hand on a chess piece. Sixteen years since I had abandoned the glorious game, sixteen years since the Chess Federation had proclaimed that I was no longer the world's champion. I was tired then, tired of the endless challenges, tired of dreaming chess games in my sleep, tired of surrendering my life to armies of black and white chess pieces, tired of fighting endless battles on a black and white chessboard.

I was standing in a bazaar, in the Near East. A man in colorful robes was holding a chess set in front of me. The board was pure alabaster and ivory; the pieces were silver and gold, and gleamed in the hot Turkish sun.

"You are a man of great kismet," the merchant told me. "This is a magic chess set, enchanted by sorcerers when the Empire of the Ottomans conquered Constantinople. It is said that the pieces will grant wishes, but only to the greatest chess player in the world.

I ignored the legend; the pieces were enchanting without magic. It had taken me sixteen years to understand that I had been fooling myself. Chess was my life, it was what I was, and what I am. It was time to start living again. My hand shaking, I reached for the golden king.

"Will you make a wish, Grandmaster?" the merchant smiled as I picked the piece from the board. The king was as hot as the noontime sun in my hand. I watched it glitter; a crowd had gathered; they were as enraptured by its beauty as I was.

"Your wish, Grandmaster," the merchant urged.

For the first time, I heard his voice clearly. I gave an unconcerned response. "I wouldn't mind seeing the future. The future of chess, that is..."

Two millennia have passed in an instant. Beneath my feet, the world, a fragile blue egg, glistens through the pane of a space station window. The chronometer tells me that it is the year 4,000, and a computer mentions that the space station is old, fifteen hundred years old, but everything around me seems new and vibrant. I wander through the station, enjoying its sights, sounds, and fragrances, until I reach a large door. A man stands before it, wearing metallic robes that gleam with the light of holograms that dance upon it. There is a faint sound of a great chorus, coming from holograms that sing on his shoulder. It is then that I notice the emblems of chess pieces upon his robes.

"Your wish, Grandmaster," he says, in the same voice that the merchant used ten minutes and two thousand years ago. The door opens, and a light beckons me. Half-unwilling, I ignore the robed man, and walk into a great hall. The floor of the hall is an arena, and in the arena, a giant, translucent chessboard of incredible beauty.

Hatchways open to either side of the chessboard, from which people, the likes of which I have never seen. Large as life, they glide into their positions, some gracefully, others comically. A life-sized chess match. I closely inspect the pawn rows. They look more like robots than people, and they carry weapons of a kind that I have never seen. Somehow I sense that their combats may be more slapstick than violent, and

worth anticipating.

In place of knights are uniformed men, carrying a large gun that would have appeared futuristic. Space captains, eager to battle for the glory of their kings. Times haven't changed that much, I thought, scowling slightly.

In place of bishops are scientists; I suppose it's appropriate. In medieval times, the Church assisted the armies and gave them the cause that sent them into battle; in modern times, technology became the partner of the military. Like the pawn, the scientist also carried a weapon whose functions I could not easily identify. Unlike the pawn, the scientist had a smirking face that made me very uneasy.

Standing in the shadows in the corner of the board were strange towering machines, whose very appearance suggested great destructive power. They stood in the same place as a rook, but looked much more foreboding.

It struck me that this could be a futuristic version of the legendary Battle Chess. I had seen the original version of the game, played on the personal computers of the late 20th Century. I thought that Battle Chess was an amusing and innovative way to present the old game. But the original Battle Chess had been medieval; this was a new, futuristic, and more dazzling version of the classic game.

Ornately dressed and exuding patience, the King and Queen did not seem as potent as the mechanical rooks. I began to scan them more closely, but I was interrupted by a trumpet fanfare that came from the corners of the room. From the opposite end of the station, a woman in regal garb glided towards me, accompanied by a large entourage. A slight smile was on her face, but her posture and her gaze indicated that she was a woman of immense intelligence and self-discipline.

"I am Princess Marcella," she said in a slow and deliberate voice. "Are you ready for battle?"

I paused for what seemed an eternity, sweat flowing from every pore in my body. "B-battle?" I sheepishly questioned.

"Surely you know of Battle Chess?" She seemed annoyed, but her smile widened, a predator's smile.

I tried to control my quivering body, and get words past the swelling lump in my throat. "It is like regular chess, no?" Like a predator, she could sense my fear. It wasn't hard to spot.

"Yes," she instructed. "But the stakes are higher. Stop stalling, Grandmaster. It's your move..."

HARD DISK INSTALLATION

Battle Chess 4000 must be installed on a hard disk. Battle Chess 4000 also requires 600k base memory and 1024k of EXPANDED Memory. A memory manager is also required.

To install Battle Chess 4000 to your Hard Disk, insert the first disk into a floppy drive and type:

**A: <Return> (or B: depending on which drive you are using)
INSTALL**

Afterwards, an installation screen will come up. Follow the on screen instructions to complete the installation procedure.

LOADING THE PROGRAM

Before loading Battle Chess 4000, if you own the Super VGA version, you must make sure that a VESA driver has been installed. During the installation program, you will be asked what type of video card you have. If you do not know what type of video card you have, you must contact the place you bought it from and find out. If you know what video card you have, but the card name was not in listed during the installation, you must contact the manufacturer of your video card to find out how to get your card in VESA mode.

To run Battle Chess 4000 from the DOS prompt, type:

```
CD\BC4000 <RETURN>  
BC4000
```

The title screen will appear as the game loads. Press any key to get past the title page. After several seconds, a copy protection screen will come up, asking a question from Appendix E of the Battle Chess 4000 manual. There are 15 different chess game layouts in the appendix. The game will tell you the game board

number to look at, and will ask you a question about the game on that board. For example it will ask you to look at the game on board #9. Go into appendix E of the manual, and look at board #9. The game will ask "Where is the black pawn?". The board will have the letters A - H on the bottom and 8 - 1 on the left side. Locate the black pawn, and look at the bottom letter and the number to the left to find it's position. You will see that it is at F3. At the prompt, type in "F3". The game will finish loading after you correctly type the position.

MOVEMENT

Keyboard: To move your chess pieces, use the arrows to position the cursor over the piece you want to move, then press <Enter>. Select the desired destination square by using the arrows and press <Enter>. You can also move a piece by using Chess Notation. For example, to move your Knight you would type B1C3<Enter>. Further Explanation of Chess Notation is explained later in Appendix A in the manual.

Mouse: To move your chess pieces, use the mouse to position the arrow cursor over the piece you want to move, then press the left button. Select the desired destination square by using the mouse, then press the left button.

BATTLE CHESS 4000 MENUS

Keyboard: Press the <F1> key to bring up the menus. Use the arrows between the menus and highlight an option. Press the <Enter> key to select it. Press the <Esc> key to exit without selecting.

Mouse: To bring up the menus for Battle Chess 4000 you must move the pointer to the top of the screen. The following menu headings of FILE, VIEW, CONTROL, and SPECIAL should then appear. Each one of these options has subsequent options that will appear once you move the cursor to the heading you want. The options are as follows:

FILE: About, New Game, Load Game, Save Game, Who Are You, Preferences, Print Moves, Quit

VIEW: 2-D/3-D, Sliding , Touch and Move, Fast Moves, Intuitive, Sound

CONTROL: Swap Sides, Autoplay, Supervisor, Modem, Move Now, Replay, Rewind, Fast Forward, Take Back, Learning, Thinking, Book Control

SPECIAL: Hint, Show Info, Your Grade, My Grade, Set Time, Set Clocks, Set Draw, Alter, Pause

*"...master chess grips its exponent, shackling the mind and brain so that the inner freedom and independence of even the strongest character cannot remain unaffected."
-- Einstein*

FILE MENU

About Chess: This displays some information about the program, together with the size of the hash table. A hash table is used to increase the playing strength of the program. The hash table will take advantage of available EXPANDED memory. The amount of memory for the hash table is exponentially used. For example, if a computer has One Megabyte of available memory, the next amount Battle Chess 4000 would use is two, then four.

New Game: This option allows you to start a new game. You may wish to save your current game first as it will be lost when the new game begins.

Load Game: This option allows you to load a previously saved game. The saved game will resume exactly where you left off. After selecting Load Game, the Load window will then appear, displaying a list of your saved games. Select the game you wish to load by double-clicking with the mouse or using the arrow keys and pressing the <Enter> key if you do not have a mouse. The game will be loaded with its saved settings.

Save Game: Pick this option if you want to save a game to disk while the game is in progress. After picking this option, type in an 8 character name for your game. Battle Chess 4000 will automatically add the file extension .GAM to it.

Who Are You: This allows you to enter your name instead of HUMAN on the board display.

Preferences: This allows you to save certain options to your backup disk, so that each time you load Battle Chess 4000 these options will appear. You can always load in the original default values. The options that are saved are: 2-D/3-D, Touch and Move, Book Control (all settings), Learning, Thinking, and Who Are You.

Print Moves: The move list will be sent to your printer or disk drive. Your printer must be connected to the parallel port and be on-line.

Quit: Exits the program to DOS without saving the current game.

VIEW MENU

2-D/3-D: This flips between a two-dimensional board and the three-dimensional board with the action battle chess figures.

Touch and Move: If this option is selected, you must move the first piece that you select to move.

Sound: Allows you to turn the sound either on or off.

Sliding: Selecting this option allows you to control the way the pieces move. If on, the pieces move by sliding around from one spot to the next. If off, the pieces will move around by walking from one spot to their new location. Sliding turns off the animation

Fast Moves: This option, when selected, allows the players' moves to be entered very quickly using the mouse, most with a single click of the mouse button. When enabled, clicking the mouse button in the board area will cause moves as follows:

- Click on a piece: If the piece can only make one legal move, the move will be made automatically. If it can make more than one legal move then the piece will be picked up and you should click on the destination square, which is like the normal method of move entry.

- Click on an empty square: If only one of your pieces can move to that square, it will do so automatically. If more than one piece can move to that square then the square will be highlighted as the destination square and Battle Chess 4000 will wait for you to click on the piece to be moved. If you want to change your mind just click somewhere that is illegal or press any key.

- Click on an enemy piece: If only one of your pieces can capture the enemy the piece will do so automatically. If more than one can make the capture then the destination square will be highlighted and Battle Chess 4000 will wait for to choose the piece to make the capture.

Intuitive: This is an extension of Fast Moves, described above and is not available unless Fast Moves has been selected.

When a square has been highlighted because more than one piece can make the move, as described above, Battle Chess 4000 will intuitively choose the most likely piece to move to that square, highlighting the most likely origin square. If you agree with the move just click again on the destination and the move will be executed. If you disagree, click on the desired origin piece and that will be the one to move to the destination square. If, after the first click you decide that you want to choose a different move, just click on the screen somewhere that is not valid, or press any key.

CONTROL MENU

Swap Sides: Selecting this option allows you to switch places with your opponent. Note that this option will take Battle Chess 4000 out of Autoplay and Supervisor options.

Autoplay: If chosen (shown with a check mark) Battle Chess 4000 will play a game against itself, until stopped by selecting

this option again.

Human Vs. Human: This option will allow two human players play against each other.

Modem: Allows you to play Battle Chess 4000 against an opponent either over a serial port or over the phone line.

Move Now: If you get impatient while waiting for Battle Chess 4000 to make its move, you can force it to move with this option. This interrupts the computer's thinking process and makes it take the best move that it has thought of so far (this command is not instantaneous).

Replay: This option can be selected after a Take Back, a Rewind, or a Load Game has been selected. It will step through the game one move at a time. You can Replay through each move made one at a time until you reach the last move made.

Rewind: If you would like to see how a game progressed, this option allows you to play back all the way to where the game began.

Fast Forward: This option allows you to replay an entire game without stopping until you press the ESC key or it reaches the last move made.

Take Back: If you did not like your last move or your opponent's last move, you may use this option to back up to the previous move. You can take back as many moves as you like.

Learning: Selecting this option allows Battle Chess 4000 to record what it considers strong moves to its opening library of potential moves. This learning process occurs after the result of the game is known. At that time, Battle Chess 4000 will ask you

if you would like the opening added to the library. Upon confirmation, the opening moves will be added to the USERBOOK.TXT file.

Thinking: If chosen, Battle Chess 4000 will try to predict your next move and use your time to consider its response. In our tests, Battle Chess 4000 predicted correctly about 30% of the time, and thus gained substantial free thinking time.

Book Control: This option allows control over the choices Battle Chess 4000 can use for its opening moves. For further information on this, see the Opening Library section later in this manual.

SPECIAL MENU

Hint: The Hint option will give you what Battle Chess 4000 considers to be your best move. The squares will hi-light showing you the suggested move.

Show Info: The information included with this option are tournament clocks showing the total time used in the game, a list of moves given in chess notation, and an indication of which side Battle Chess 4000 thinks is winning. In show info mode, the board will switch to a 2-D mode. At the bottom of the screen will show what move the computer is thinking about if the difficulty is set in the STRONGER settings.

Your Grade: This unique feature abandons the current game and presents you with a series of twenty-four chess positions, for each of which you will need to suggest up to four candidate moves. On the basis of your replies Battle Chess 4000 will grade

you on your performance. Grading is calculated at 1,000 ELO, a chess novice, to 2,750 ELO for World Champion Kasparov. The average chess player has an ELO grading of 1,400. You should allow about two minutes per position. For the solutions to the test positions, see Appendix D later in this manual.

My Grade: Battle Chess 4000 will attempt to solve the same test positions, according to its currently set time allowance. However, I warn you—Battle Chess 4000 scores well in excess of 2,000 ELO at two minutes per move, placing me in the Candidate Master class.

Set Time: This option allows you to set Battle Chess 4000's level of play. The choice of how weak or strong the program plays is of your doing. A weak opponent has ten different levels of play ranging from 1 to 10. These are considered beginner levels with 1 being the weakest, while 10 being the strongest.

Playing Modes:

For a strong opponent, Battle Chess 4000 has the following modes:

***Average**—will try to stick to the selected move time for every move.

***Matching**—will spend roughly as long thinking about its moves as you spend thinking about your own.

***Infinite**—will give the program as long as it needs to come up with a desirable move. You could hurry up this choice if you use the Move Now option.

***Tournament-** will be the strongest level of play. Battle Chess 4000 will spend more time to find it's way out of difficult spots in this mode.

Set Clocks: Allows you to set the clocks, This option can only be used at the beginning of a turn.

Set Draw: If this special option is selected Battle Chess 4000 will play for a stalemate.

Set Up Board: Allows you to set up the board any way you want. The only restrictions to this are, You may not place a King in check, and You must have two kings on the board.

Pause: This option allows you to temporarily halt the timers without incurring a time penalty.

SHORTCUT KEYS

If you do not have, nor want to use the mouse to select the menus, certain shortcut keys are available in combination with the <ALT> key. They are as follows:

<ALT> F = Fast Forward

<ALT> R = Replay

<ALT> W = Rewind

<ALT> M = Move Now

<ALT> S = Swap Sides

<ALT> N = New Game

<ALT> L = Load Game

<ALT> P = Print Moves

<ALT> Q = Quit

<ALT> B = Take Back

<ALT> H = Hint

<ALT> I = Show Info

<ALT> T = Set Time

OPENING LIBRARY

An opening library is a database of opening lines (a line is a sequence of moves). The inclusion of an opening library allows the computer to play moves early in the game quickly, giving it a time advantage later on in the game. (An opening Library is known as a BOOK). The opening library in Battle Chess 4000 contains over 300,000 moves.

Choose Next Move By

When the computer needs to choose between two or more moves from it's opening library, it can do it one of three ways.

***Random:** In this mode the decision of which line to use is chosen randomly.

***Strength:** The opening library contains strength information which is used by this setting. Using this setting will cause a slide bar to appear, moving it up and down causes the Strength to lean towards either weaker or stronger opening moves.

***Popularity:** Similar to Strength, this option causes a slide bar to appear in which you can make the computer select either more common or less common moves.

Manual Selection

When the computer has to make a decision between two or more possible moves in the opening library it will use the criteria above. For even greater control, and for sake of curiosity, if Manual selection is On, a dialog box will appear showing all the moves the computer is contemplating. The move the computer is currently thinking about will be highlighted. If you wish to change this move, on the computers next turn, you will get the warning that the computer is no longer using the Opening Library.

Name Openings

Battle Chess 4000 has a database of named opening lines, such as Queen's Gambit and Sicilian Defense, and these names will be displayed when an opening line is recognized if this option is ON. Please note that the database of named openings is much smaller than the full opening library. Name Openings defaults to On.

User Book Priority

As well as the large built-in opening library, there are two supplementary opening library files. One of these is an ASCII file which can contain opening lines of your own, created with a word processor in ASCII mode. The file can be up to 6000 bytes in size and each line must contain moves in algebraic notation, such as e2e4 b7b6. Each move sequence must be on its own line. Any spaced in the file will be ignored.

If the learning option is selected then another supplementary file will be created. This will contain any opening moves the computer thinks that are good that it has learned from its own thought processes and from it's human opponent. This file is also in ASCII but should not be edited or written to, though you can use it as a basis for your user book file, i.e. by copying portions of it into the user book file then deleting it.

Force Opening Line To Be

The computer will normally choose an opening line from one of the book files, as described above. However you can force it to play a particular opening line by using one of these two options. Note that you can only select these options at the very start of the game, before either side has moved.

My Line

This allows you to enter a move sequence of up to twelve half moves (in algebraic notation) that will be used as the opening line.

Named Line

This displays a list of named opening lines that you may scroll through and choose by clicking on with the mouse. This list only shows named openings- the number of un-named openings in the main opening library is much larger!

Once you have selected a forced opening line, the computer will play it as long as it makes sense; if you selected e2e4 g7g6 then started out with d2d4, the computer obviously can't use the forced opening line so it will instead use one of it's book files, which it will also do when your forced opening runs out.

A forced opening will remain until cleared, by selecting My Line and clearing the first move, then clicking OK.

Book Files Used

All files concerning the opening library are in the BOOKDATA directory. They are as follows:

BOOK.BOK	Main opening library file
OPENINGS.BOK	Named openings file
MOREBOOK.TXT	ASCII file created with the Learning option
USERBOOK.TXT	ASCII file of user opening lines

Only the latter two files are human readable and only the last file should ever be edited.

HOW TO PLAY CHESS

Chess is a game for two players, one having the white pieces and the other having the black pieces. There are 64 alternating white and black squares on which you can move. The object of the game is to checkmate your opponent's King (see "Checkmate.")

- * Only one piece can occupy a given square.
- * You may only move one piece per turn, with the exception of castling (see "Castling.")
- * You must move when it is your turn.
- * No piece, except the Knight, can move through other pieces.
- * Any piece may capture any of the opponent's by landing on the same square as it. The captured piece is removed from the board and is out of the game.
- * You may not capture any of your own pieces in order to clear the way for your other pieces.

THE PIECES

This is how the various pieces are represented and how many of each piece you start out with.

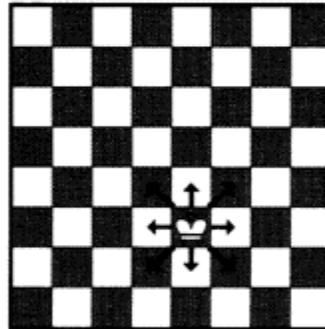




MOVEMENT OF THE PIECES

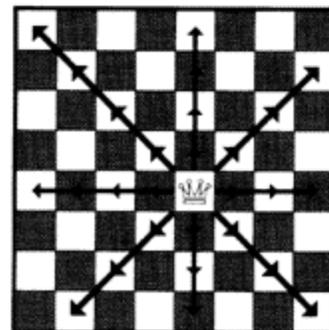
The King

The King can move one square in any direction. It is generally a good idea to not move your King into an offensive position early in the game because that could leave the King vulnerable and once you lose your King the game is over. Under no circumstance may your King move into check, that is, your King may not move directly into a clear line of attack from an opposing player's piece.



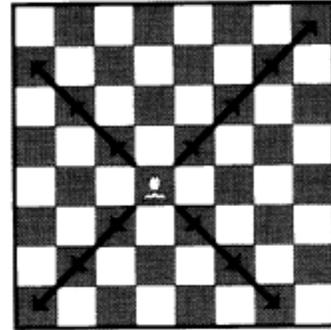
The Queen

The Queen is your most powerful offensive piece. The Queen can move any number of squares horizontally, vertically, or diagonally if path is not obstructed. The Queen becomes very effective in being used with a combination of other pieces rather than being the lone attacker in your offense.



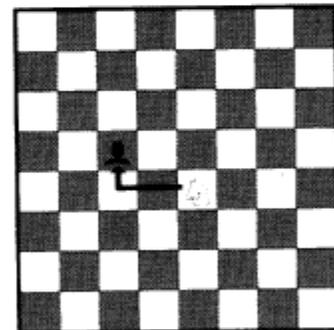
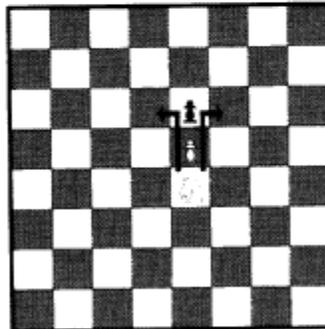
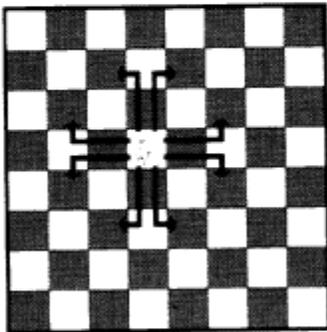
The Bishop

The Bishop moves diagonally any number of squares in either direction if path is not obstructed. Since one Bishop starts on a black square and the other on a white square that would make each bishop confined to that color square for the entire game since Bishops can only move diagonally.



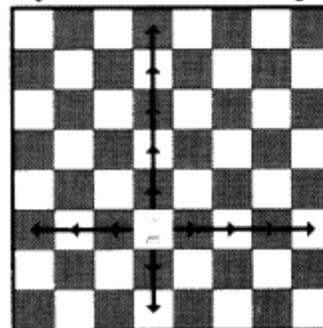
The Knight

The Knight always moves in the same pattern—one square forward or backward and then two squares to either side, or one square to either side and then two squares forward or backward. The three squares form a “L” shape. The knight is the only piece which may jump over other pieces.



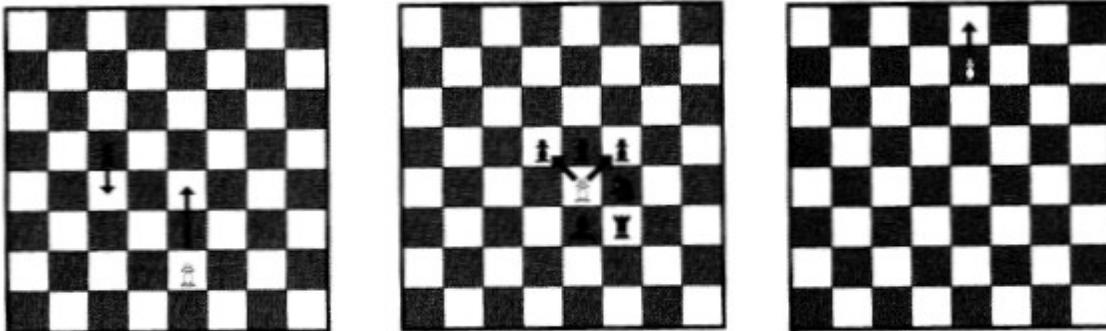
The Rook

The Rook can move any number of squares vertically or horizontally if path is not obstructed.



The Pawn

The Pawn moves straight ahead (never backward), but it captures diagonally. The Pawn's movement is indicated below left, while its capture is illustrated below center. When a Pawn is in its starting position, it has the option to advance one or two squares the first time it moves. After that, it may advance only one square per move. If a Pawn advances all the way to the opposite end of the board it can be "promoted" to your choice of a Queen, Rook, Knight, or Bishop (below right). You can promote as many Pawns as possible.



EN PASSANT

To capture "en passant" (in passing): when your opponent moves a Pawn two squares on its initial move and your Pawn is on the fifth square on an adjoining file, you may capture your opponent's Pawn by moving to the square over which it has moved, just as if it had moved only one square on its first move. This option must be exercised immediately or the option is lost. This is illustrated below. Note that if the black pawn moved two spaces on its initial move (a), white on the very next turn could capture the Pawn diagonally on the square which was passed by the black Pawn (b). The black Pawn is removed from the board

and the white Pawn is placed on the diagonal square in the next file (c).

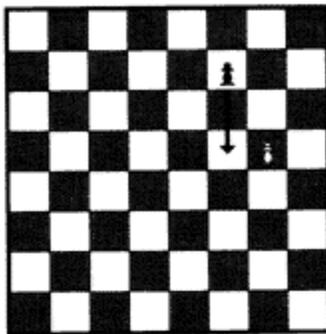


Figure a.

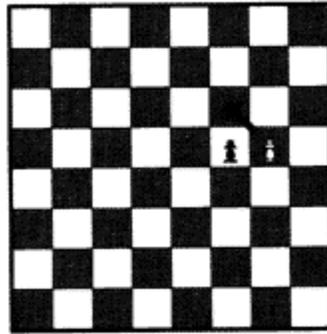


Figure b.

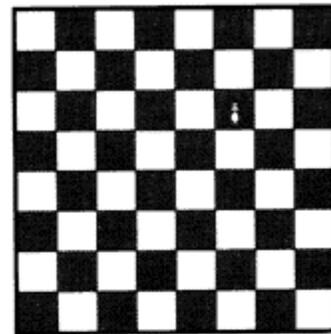
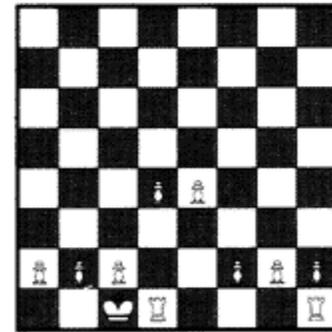
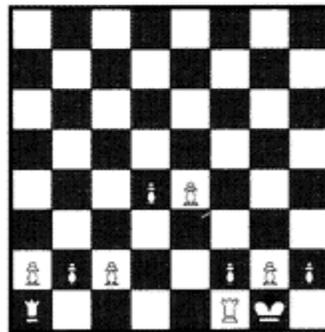
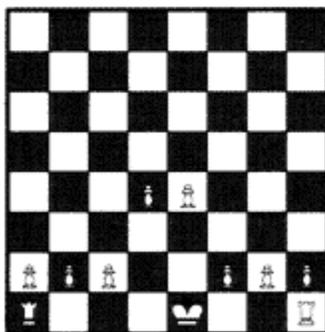


Figure c.

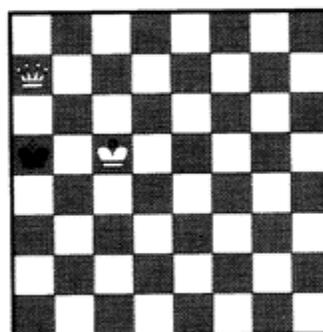
CASTLING

Once during a game each player has the option of castling, that is, moving the King two squares either to the right or left, and placing the Rook on that side of the board on the square over which the King has passed. In order to castle, the pieces between the King and Rook must have been moved, giving a clear pathway, and the King must not be in check, that is, must not be under attack by an enemy piece, or pass through a square under attack. If either the King or the Rook on the castling side have previously moved, you may not castle.



CHECKMATE

The object of the game is to attack the opponent's King in such a way that no matter where the King moves, the King will still be under attack. This is called "checkmate" and wins the game. Any move that attacks a King is called "check." If the King can escape, the King must be moved on the next turn, and then the game continues. If there is no way of getting out of check, by either moving away from an attacking piece or by placing a piece to block the check, then the King is checkmated and the game is over. If the only possible move on the board would place a King in check, then the game is not won by either player and is considered a stalemate because a King may not move into check.



HELPFUL HINTS

1. Some pieces are more powerful than others because they are able to control more squares on the board. The question of value of each piece arises every time there is a possibility of capturing or exchanging pieces. The following table shows the approximate value of all the pieces except the King, because this piece is never captured.

Queen.....9 points
Rook.....5 points
Bishop.....3 points
Knight.....3 points
Pawn.....1 point

2. The player who gains control of the center squares of the board has an advantage because their pieces have greater mobility. To gain control quickly, move only your center pawns and develop your minor pieces (Bishops and Knights) early in the game.

3. Castle your King into safety at the earliest opportune moment. It is usually best to castle on the King's side because there is less area to defend on that side of the board.

4. Capture enemy pieces and Pawns when it will strengthen your position on the board. Remember the value of the pieces: if you exchange a Knight for a Bishop it is an even trade. If you get a Rook for a Bishop, you will be ahead in material. The player with a material advantage usually wins the game.

5. Every time your opponent moves, stop and look carefully. Is your opponent plotting to capture an important piece? Can you defend against it? Did your opponent make a move which allows you to make a capture? Did your opponent put themselves in a position vulnerable to a checkmate?

6. Try to think ahead a few turns. Think about using a combination of moves to try and expose a weakness in your opponent's game plan. You should also be wary that your opponent will probably be trying the same thing on you.

*Chess is a sea in which
a gnat may drink and an
elephant may bathe.*

- Proverb from India

THE OPENING GAME

The opening game can be defined as that portion of the game that occurs generally between the first move and the eighth to the fifteenth move. The point of the opening game is to organize and co-ordinate your pieces as quickly as possible in order to take maximum advantage of their power. If you are a beginner, this is where you are going to make most of your mistakes. There are endless choices to decide how to set up your strategy for playing chess. In fact, there are 169,518,829,100,544,000,000,000,000 possible combinations for the first ten moves. To avoid making the wrong opening moves, keep the following things in mind:

***Your first move should be the movement of either your King's or Queen's Pawn. It is also a good idea not to move too many of your Pawns during the opening game because Pawns can not move backwards and often times opponents can home in and capture Pawns because of a hasty offensive strategy.**

***Avoid moving the same piece twice during the opening game, unless your opponent has made an obvious blunder. Remember that if the point of the opening game is to organize and co-ordinate your pieces as quickly as possible, then wasting several moves on one piece is not likely to assist this.**

***It is usually a good strategy to move out your Knights and Bishops before you move out the Rooks and Queen. For best control of the board, try to move them toward the center of the board because from the center, each piece will then have greater control of the board around it.**

***If you have castled, it is usually best to move your Rooks to K1 or Q1. This will allow your Rook a great range of power than leaving them in either corner.**

THE MIDDLE GAME

The middle game is the part of the game that follows the initial movement of pieces towards the center of the board in powerful positions, but before the final sequence of moves to finish off your opponent. This phase of the game is where the attack is critical and it is best to be on the offensive side of the attack.

It is advised that you concentrate on capturing pieces, to get ahead in points, and to gain territory on the board, so you can plan out your final assault.

THE END GAME

This is the portion of the game where, all things being equal, both sides will have relatively few pieces left on the board, the King may actually be part of an offensive strategy, and where a Pawn or two may even have crossed the board to become a Queen or some other powerful piece. Because you will have fewer pieces on the board, the pieces that remain will increase in importance. Therefore, now more than ever, use every piece to its full potential.

APPENDIX A

CHESS NOTATION

To be able to follow an existing chess game a certain set of codes and abbreviations have been created. There are different forms of chess notation depending on where you are playing chess. To understand the following games you will need to comprehend the following codes.

Since a chessboard has 8 squares both horizontally and vertically, it is probably easiest for a beginner to give a separate coordinate to each of the 64 squares on the board. To do such you could divide the chessboard as follows:



For example, the starting point of white's queen would be on square D1, while black's queen starts on D8. A movement of a piece would work in the following manner: If you are playing

white and you want to move your queen's pawn two spaces forward the move would be represented as D7-D5 because the starting point of the pawn is on square D7 and you want to move it two spaces ahead to square D5. The following codes are also used in chess notation, so please use the below key as a reference, until you have them memorized.

KEY:

- moves to

x capture

O-O castles king-side

O-O-O castles queen-side

ep en passant

ch check

1-0 checkmate, white wins

0-1 checkmate, black wins

APPENDIX B

THE HISTORY OF CHESS

The exact origin of chess is a matter of conjecture and speculation. The creator of the game as well as the time of its inception are unknown. However, it is believed that chess was created in the ancient province of Punjab, an area that encompasses the northwest sector of India as well as part of present day Pakistan.

The earliest known form of chess is a game called “chaturanga,” which is the same as a Hindu word that referred to the four branches of the Indian army that existed over 2,000 years ago. This information could mean that the game is about 2,000 years old or even up to 5,000 years old based on the knowledge that the remains of similar games have been dated by scientists as being from about 3000 B.C. However, once again this is mere speculation.

Chaturanga greatly differed from the modern chess game. Its pieces included elephants, chariots, horses, and foot soldiers—the four branches of the ancient Indian army. The game varied, depending on which village in Punjab you were in. Some towns played the game with dice; others with varied board configurations and piece movement. Some towns even changed the game to allow four people to play at once!

Chaturanga began to develop into a wide variety of games as merchants who traveled through the Punjab brought back to their homelands tales of a game that some people were so fanatical over that they would be more concerned over finishing a game than tending to their businesses or families. As the game spread eastward, the rules began to change as well. In Burma, before play even begins, you are allowed to change the starting location

reached Russia from Byzantium, and even Viking invaders brought knowledge of the game back to the lands divided by the Baltic Sea.

Chess began to take on new configurations and popularity within the European community by the 14th Century. There are many accounts of royalty wagering on the game as well as monks including mention of chess in their sermons. The game began to take on the medieval look that most of us associate with it today. The fers and alfils were deleted from the game and the bishop and queen pieces were created with a much wider range of movements than their predecessors. The popular medieval lore of the knight and the castle (rook) also made their way onto the modern chessboard, leaving the board literally void of its Indian roots.

By the 18th Century chess began to move across class lines. The aristocracy lost much of their zeal for the game with the introduction of many playing card games. However, the popularity of chess reached the coffee houses of middle class neighborhoods within every major European city. Soon professionals played at these coffee houses for small sums. In 1749 a Frenchman, Philidor, who many regarded as the best chess player at the time, published the first chess book dealing with advanced strategies of the game and soon chess captured an audience greater than any other known game.

Chess is still considered the most popular game in the world today. There are chess clubs located around the world as well as chess masters, who pit their skills against each other regional and international tournaments on a yearly basis. Chess has also garnered over 20,000 published titles, which is more than any other game. Though the game of chess knows no international boundaries, no people have taken to the game the way the Russian people have. They have provided many of the recent world champions as well as the vast majority of chess masters that exist today.

APPENDIX C

ADVANCED OPENINGS

The following four opening games are actual tournament games played between masters. The sequence of moves have been made so famous amongst the chess community that particular names have been given to each opening game. A master chess player would quickly be able to figure out and defend against such openings, but considering few people are masters, you may want to experiment with the following opening games. Also, it may be helpful to play out such games with Battle Chess 4000 to develop your skill with being able to out flank your opponent during the opening game.

The Ruy Lopez

This opening is named after the Spanish priest who wrote one of the first chess books in 1561. The following game occurred in 1976 between Nigel Short, who was only 12 years old at the time, and G. Knapton.

	WHITE	BLACK
	Short	Knapton
1.	E2-E4	E7-E5
2.	G1-F3	B8-C6
3.	F1-B5	B7-B6
4.	B5-A4	G8-F6
5.	D2-D4	B7-B5
6.	A4-B3	F8-E7

- | | |
|-----------|---------|
| 7. D4xE5 | F6-G4 |
| 8. H2-H3 | G4-H6 |
| 9. B1-C3 | O-O |
| 10. O-O | D7-D6 |
| 11. E5xD6 | D8xD6 |
| 12. D1-E2 | D6-G6 |
| 13. C3-D5 | F8-D8? |
| 14. F3-E5 | G6-D6 |
| 15. E5xC6 | Resigns |

The Sicilian Defence

This game was played in 1948 between Viktor Korchnoi at age 17 and Boris Spassky at age 11. As adults, both would reach high honors. Spassky won the World Championship in 1969 and held it until Bobby Fischer defeated him in 1972. Korchnoi narrowly failed in the World Championship against Anatoly Karpov in 1978.

- | | WHITE | BLACK |
|-----|----------|-------------------------------|
| | Korchnoi | Spassky |
| 1. | E2-E4 | C7-C5 |
| 2. | G1-F3 | D7-D6 |
| 3. | D2-D4 | C5xD4 |
| 4. | F3xD4 | G8-F6 |
| 5. | C1-B3 | G7-G6 |
| 6. | F2-F4 | C8-G4 |
| 7. | F1-B5 ch | B8-D7 |
| 8. | B5xD7 ch | D8xD7 |
| 9. | D1-D3 | E7-E5 |
| 10. | D4-F3 | G4xF3 |
| 11. | D3xF3 | D7-G4?? (the kid was only 11) |
| 12. | C3-D5 | Resigns |

The King's Gambit

Sometimes a name says it all. The King's Gambit is such a case.

WHITE	BLACK
A. Planinc	V. Korchnoi
1. E2-E4	E7-E5
2. F2-F4	E5xF4
3. G1-F3	G7-G5
4. H2-H4	G5-G4
5. F3-E5	D7-D6
6. E5xG4	G8-F6
7. G4-F2	H8-G8
8. D2-D4	F8-H6
9. B1-C3	D8-E7
10. F2-D3	C8-G4
11. F1-E2	G4xE2
12. D1xE2	B8-C6
13. C1xF4	C6xD4
14. E2-F2	F6xE4
15. C3xE4	E7xE4 ch
16. E1-D1	O-O-O
17. F4xH6	G8xG2
18. F2-F1	D4xC2
19. A1-C1	E4-G4 ch
20. Resigns	

"Hence if the knowledge of the chess-master were built into a computer program we should see not master chess but something very much stronger To capture in a formal descriptive scheme the game's delicate structure - it is here that future progress lies."

*-Professor Donald Michie
"Programmers' Gambit"
New Scientist,
1972*

Queen's Gambit

The following moves are from the first game of the 1978 World Championship. You may notice the similarities between this game and the King's Gambit.

	WHITE	BLACK
	V. Korchnoi	A. Karpov
1.	D2-D4	D7-D5
2.	C2-C4	E7-E6
3.	B1-C3	G8-F6
4.	C1-G5	F8-E7
5.	E2-E3	O-O
6.	G1-F3	H7-H6
7.	G5-H4	B7-B6
8.	A1-C1	C8-B7
9.	F1-D3	D5xC4
10.	D3xC4	B8-D7
11.	O-O	C7-C5
12.	D4xC5	D7xC5
13.	D1-E2	A7-A6
14.	F1-D1	D8-E8
15.	A2-A3	F6-E4
16.	C3xE4	C5xE4
17.	H4xE7	E8xE7
18.	F3-D4	C1-C2

At this point Karpov offered Korchnoi a draw, which he accepted. Both masters realized that from this position that continuing the game would be futile. However, you should not copy this example of an early draw since you and your opponent probably are not near the skill level of the likes of Karpov and Korchnoi. You should always play to win and only when a draw is the assured outcome, should you consider a draw.

APPENDIX D

Solutions to the Test Positions

**The following answers are in the format
Number, Side to Move, Best Move, Comments**

- 1, Black, d6-d1, queen sacrifice leading to mate.
- 2, White, d4-d5, after c6-c5, e4-e5 white has complete control.
- 3, Black, f6-f5, pawn lever, black gains space.
- 4, White, e5-e6, if c5-d4, e2-b5+ wins.
- 5, White, c3-d5, (or a2-a4), after exchanges on d5, white forks king and rook.
- 6, White, g5-g6, white recovers pawn and keeps rook on 7th.
- 7, White, h5-f6, if g7-f6, e5-f6 and f6-f7 forking the rooks.
- 8, White, f4-f5, gives the white knight access to f4.
- 9, White, f4-f5, idea is f1-d3 and c3-e2 followed by e2-f4.
10. Black, c6-e5, with the idea e5-g4 and winning tactics.
- 11, White, f2-f4, pawn lever, white gains space.
- 12, Black, d7-f5, simple move, defends against both white threats.
- 13, White, b2-b4, pawn lever, mobilizes white's center pawns.
- 14, White, d1-d2 (or d1-e1), nasty pin, wins the black bishop.
- 15, White, g4-g7+, wins a pawn.
- 16, White, d2-e4, idea is e4-d6+, if d5-e4 then b3-f7+ wins the queen.
- 17, Black, h7-h5, white's king side pawns comes under attack.

18, Black, c5-b3, after c2-b3, d8-b6+ with advantage of bishop pair.

19, Black, e8-e4, after e1-e4, idea is d6-d5 with gain in activity.

20, White, g3-g4, and white pieces penetrate black's king side.

21, White, f5-h6, tactics - white wins the exchange.

22, Black, b7-e4, after d3-e4, c7-c4 wins back the piece.

23, Black f7-f6, pawn lever before white plays f5 (if c8-f5, g2-g4!)

24, White, f2-f4, pawn lever, white stands better.

APPENDIX E

1



2



3



4



5



6



13



14



15



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