## Champion Chess

Champion Chess is a challenging 3 dimensional program that lets you play this classic game with a friend or a very intelligent computer opponent.

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## A Brief History of Chess

One of the world's oldest "war games," chess was invented around 600 A.D. in northern India. The original pieces were based on the various troops in the Indian army--the infantry, cavalry, elephants, chariots, the Indian king and his chief officer, the vizier. The game spread, reaching Europe in the 11th century. The pieces were redesigned and renamed to fit Europe's medieval society, so that the cavalry (horse) became the "knight," the elephant became the "bishop," the chariot became the "rook," and the vizier became the "queen." When the rules were changed at the end of the 15 th century, the queen became the most powerful piece and the game that we play today emerged.

The first computer algorithms for playing chess were written in 1951 by scientist Alan Turing, but it was 1958 before the first computer program was operational in the United States. The number of computer chess programs increased, and in 1974 the first world computer chess championship was held in Stockholm, Sweden. There were 13 entries, and a Soviet program, KAISSA, was named the winner. Things have come a long way since then. Though the very best computer chess programs only run on mainframe computers, you now can play a pretty tough game against your own PC with Champion Chess.

## The Goal of the Game

To win the game of chess, you must "trap" your opponent's king. This is called a CHECKMATE (or mate, for short). To checkmate an enemy king, you must deliver moves that attack him (place him in CHECK). When the king has no way to get out of check (by moving to another square or by capturing the piece you used to place him in check), he has been checkmated.

You must also fend off your opponent's attempts to checkmate your own king. A player can never place his king into check-- either by moving his king to a square that is under attack by an opponent's piece or by moving another piece that exposes his king to an attack by his opponent. If your king is placed in check, you must get out of check with your next move. If you cannot, you are checkmated and have lost the game.

Other possible endings to a game are: 1) a resignation or withdrawal, which might occur when a player is sure that his loss is imminent; 2) a draw, which might happen if both players were only left with insufficient material to force a checkmate or if both players agree that neither is likely to win the game; and 3) a stalemate, which is a situation where one player cannot make a legal move, that is when he can move only his king and it can only move into check, but is not in check.

## The Chess Board

Think of the chess board as your battlefield. It is comprised of 64 squares, arranged in eight rows of eight squares each that are alternately light and dark (typically white and black).

Each player has 16 pieces: eight pawns, two rooks, two knights, two bishops, a king and a queen. You won't have to worry about arranging them for Champion Chess since the computer handles that for you. However, in the traditional board game, you would line the "white" pieces up as follows: ROW 1 (closest to you) from left to right - Rook, Knight, Bishop, Queen, King, Bishop, Knight and Rook; and ROW 2 (next row) - a Pawn on each square in the row. This arrangement applies to both sets of pieces so that the two sets face each other in a mirror image fashion.

## Rules of Play

The "white" player always moves first at the start of a new game. The "black" player moves second. The two players continue to take turns, moving one piece at a time, until the game ends. A player cannot refuse to move a piece. Only one piece at a time can be on a square. When you move a piece onto a square occupied by one of your opponent's pieces, you CAPTURE or take your opponent's piece off the board and it is removed from the game. The only exception to this rule is the EN PASSANT move (see the section on "Special Moves"). You cannot capture one of your own pieces, nor can two or more of your pieces share a square.

Each piece may only move in a particular way. This is discussed in the section "Chess Piece Movement."

Finally, it is considered good manners in chess to move a piece once you have actually touched it. In chess tournaments, this rule is compulsory and is referred to as the TOUCH-MOVE RULE. You may, of course, choose to ignore this rule when you play CHAMPION CHESS, but it is good practice to force yourself to observe it.

## Chess Piece Movement

Each chess piece may move as described below. A move may end in the capture of an opposing piece.

PAWN - A pawn only moves straight forward, one square per move, but it may move forward two squares on its first move. However, if a pawn is moved two squares forward and lands beside an opposing pawn, the opposing pawn may capture it by moving to the square the other pawn skipped. A pawn may only move diagonally when capturing another piece, and a pawn can only capture another piece by making a diagonal move. A pawn may never move backward. When a pawn reaches the last rank or last row of the board it can be promoted (see the "Special Moves" section). This is the smallest piece on the board and it looks like a small ball placed on top of a base.

KNIGHT - A knight moves in three-square moves consisting of one square in any direction, plus two squares at a right angle ( 90 -degrees) to the first move. This can also be viewed as two squares in any direction, plus one square at a right angle to the first. This move is "L-shaped." The knight is the only piece which may jump over other pieces. This piece generally looks like a horse's head.

BISHOP - A bishop only moves in a diagonal direction, but it may move for an unlimited number of squares per move (provided no other pieces are in its path). Each player has two bishops, one on each color of squares. This piece generally appears to be wearing the conical-shaped mitre or head covering of an actual church bishop. It also may have an inset cross symbol or look as though it has a "mouth."

ROOK - A rook moves only in a horizontal or vertical direction for any number of unoccupied squares, but it may only move in one direction per move. This piece looks like a tower that might be part of a great castle.

QUEEN - The queen may move in any direction for any number of unoccupied squares, but it can only move in one direction per move. This piece wears a rounded crown. It may often be very similar to the king, but you may tell them apart because the king is either the taller of the two and/or its crown is topped by a cross.

KING - The king moves one square at a time in any direction. CASTLING (a move covered in the "Special Moves" section) is the only exception to this. The king may never move into or through CHECK.

## Special Moves

CASTLING - A move involving the King and one of your two Rooks. Once during each game, both players have the option of castling only if: 1) neither the King or the Rook have moved before; 2) the King is not in check and will not be in check following the move or will not skip check by making the move; and 3) there are no other pieces between the King and the Rook. You may accomplish castling by moving the King two squares to the right (or left) and by moving the Rook (that the King moved toward) to the square over which the King jumped.

EN PASSANT - The phrase "en passant" is a French term that means "in passing," which accurately describes this move. If a pawn is moved two squares instead of one and lands beside an opposing pawn, the opposing pawn may capture it by moving to the square that the other pawn skipped. The captured pawn is removed from the board. NOTE: this move must be taken immediately or it is forfeited and cannot be made by the opposing pawn.

PAWN PROMOTION - When a pawn is advanced to the opposite end of the board (to the last rank or row), it is promoted to another piece--usually a Queen. However, the player may also select a Rook, Bishop or Knight for the promotion. It may not be promoted to a King as you cannot have more than one King, and it cannot stay a Pawn.

## Chess Strategy

The vertical columns on the chessboard are called "files" and the horizontal rows of the board are called "ranks". Traditionally, the chess pieces have been assigned the following point values: Queen=9, Rook=5, Bishop=3, Knight=3, and Pawn=1.

Every chess game can be divided into three main phases: the opening, the middle game, and the end game.

The opening game generally lasts until around the 10th move. The goal of the opening game is to organize your pieces around a particular attack or defense. In the opening, you should try to memorize at least one or two standard opening lines (your opening "book") and use them when you play. Castle early if you can, and develop bishops and knights before your queen and rooks. We recommend that you purchase book(s) on chess if you wish to learn more about this aspect of chess.

The middle game follows the opening, and is infinitely more complex to analyze. Here are some general ideas to use in the middle game. Mobility in chess is the freedom of action of the chess pieces. In general, the player with a big advantage in piece mobility has a better position, since the pieces are more flexible and can move more freely. King safety means putting your king out of harm's way. Castling is usually the best way to insure king safety.

Pawn structure is also an important part of the middle game. Because it is easy to force an opponent's piece to retreat by attacking it with a pawn, how you move your pawns becomes of paramount importance. A detailed description of pawn structures is beyond the scope of this discussion. "Closed" and "open" files play an important part of the middle games. A file is closed when a white and a black pawn are stationed on it. An open file has no pawns on it. Open files are important because a rook can move along it without the pawns getting in the way. This increases the mobility of the rooks. Try to trade pieces when you are ahead, and find combinations that will win exchanges of pieces.

The end game is when there are few pieces left on the board, and often the king must take an active role in an attempt to promote a pawn. Place rooks behind "passed" pawns (pawns that have passed enemy pawns). When exchanging pieces, keep in mind the relative value of each piece. For example, you usually do not want to trade your rook for an opponent's bishop.

Here are some general guidelines to use when playing chess:

1) In the opening and mid-game, try to control the center of the board.
2) Don't move the same piece twice in the opening. Since each piece controls only a limited number of squares, it is better to move more pieces and so control more squares.
3) Try to make moves that achieve multiple goals. Attacking an opponent's piece with a developing move requires him to lose time and defend.
4) Castle early in the game. This offers extra protection for your king and activates a rook.
5) Don't be too anxious to move your queen and rooks out too early. The rooks especially are more end game pieces, and the queen is easily chased around the board by the opponent's bishops and knights. Move your knights and bishops out first.
6) If you are ahead, exchange pieces of equal value.
7) Learn the "openings". This is especially important if you want to play in tournaments; having a repertoire of opening moves at your fingertips speeds up the opening game and offers more time to think about moves later. Sometimes it has the additional effect of disturbing the opponent, especially if you know the more unusual or rarely-used openings.
8) Watch out for knight forks, pinned pieces, discovered checks, and double checks!
9) And finally, the most important guideline: Practice, practice, practice!

## Playing a Game

Whenever you first run Champion Chess, it is already prepared to play a new game. All you have to do is move the first white piece for the game timer to begin. If you have played the game before, any game settings from the previous session you had with Champion Chess will be retained. These include board view (2 or 3 dimensional viewing), chess set-board-background selection, piece movement speed, player names, opponent type (human or computer) and computer intelligence (a rating from 1 to 8 ). Changing these settings during the game can be done through the Options and Board menus.

To move a piece (while viewing the board in 3 dimensions), simply drag it to its desired location. To drag a piece, move the mouse cursor to the piece you want to move, push and keep pressed the left mouse button, move the mouse cursor to the intended location and then let go of the button. If the location chosen is not valid (the piece cannot move like that or it places you in check), the piece will be returned to its original location. Dragging is also supported in the 2 dimensional view, but it also has keyboard support. With the keyboard, to move the mouse cursor, use the numeric keypad or cursor keys. To pick up or drop a piece, use the SPACEBAR or the 5 key on the keypad.

## Game Menu

New - Starts a new game. If one is currently in progress you will be asked if you would like to abandon it.

Open - Loads a saved game off of a disk. If any game is in progress you will have to abort it before choosing the file name.

Save As - Saves the current game to a disk file. If you are playing the computer, its intelligence level is also saved with the file.

Print Move History - Brings up a print dialog to allow you to print a history of the moves for the current game.

## Exit - Leaves Champion Chess.

## Move Menu

Undo - This option is only available if a game is in progress and at least one move has been made. If you are playing the computer and it is your turn, selecting undo will take back the computer's move and will allow you to move for it. This allows you to answer questions like "I wonder what would happen if it moved here instead of there at this point in the game?" The philosophy here is: If you are going to be able to cheat (undoing is strictly prohibited in the rules of chess) then you might as well go all the way with it! If you only want to undo the previous move you made, then undo again. Unless you have exceeded the maximum number of moves Champion Chess keeps up with (hundreds) you are always able to undo as many moves as you wish, even up to the first one made in the game. If you save a file, these previous moves made are saved with the file, so you can load up an old game and start undoing moves just like you never exited Champion Chess.

Force Move - This option is only available when the computer is thinking about a move (whether it be its own move or a suggested one for you). This forces the computer to stop thinking and make the best move it has come up with so far.

Suggest Move - Shows you what move the computer would make if it was in your shoes. If the Computer/Suggested Move Intelligence is at a high setting, it will take some time to consider what move it should suggest. Just like contemplating which move to make when it is its turn, the best move found so far will be used if you Force its Move (see above). If you use a Suggested Move every time it is your turn, it is just like making the computer play against itself.

Move History - Displays a dialog that shows all the moves that were made during the game. There are three different types of notation you can use for the listing of the piece moves. These types are listed and described below. If the number of moves made during the game has already exceeded the maximum number of moves Champion Chess retains for a game, this option will be unavailable.

There are a few symbols that are common to all of these three types of notation. The rows on the board are called ranks and are labeled, starting from the white side of the board, "a" through "h". The columns on the board are called files and are labeled, starting from the Queen's Rook, "1" through "8". Therefore, each square has a unique label. For example, the square on which white's Queen's Rook stands is labeled "a1." "X" or ":" means that there was a capture in the move. An en-passant is shown by "ep". Castling on the king side is indicated by "O-O" and on the queen side by "O-O-O". "+" indicates check, while "++" indicates a checkmate (the end of the game).

Coordinate - This is the purest form of notation. Coordinate notation consists of the starting and ending squares of the move without any indication of the piece that moved.

Standard - This is probably the easiest of the notations to read. In addition to the starting and ending squares of the move, the type of piece (except pawns) that made the move is added to the beginning of the move ( K for king, Q for Queen, B for Bishop, N for knight, and R for rook).

Abbreviated - This is a simplified form of the standard algebraic notation. The notation of the square the piece moved from is eliminated unless two pieces of the same type can move there.

Rate of Movement - Brings up a dialog allowing you to vary the speed at which the computer animates the movement of pieces.

## Options Menu

Sound - Turns game sounds (like pieces moving or getting attacked) on or off.
Switch Sides - Choosing this option is identical to you and your opponent getting up and exchanging seats. The board rotates 180 degrees (relative to its previous position) and whoever moved last will have to move again with a piece of the opposite color. The player names and times also change sides. This is a good way to see if the computer or other player can salvage a game that you are losing.

Opponent - Brings up a dialog that lets you change and/or swap the names of Player 1 and Player 2. You also have the ability to choose the computer to play for Player 1 or Player 2 (it cannot play both). If a computer player is chosen, its intelligence can be set by the Computer/Suggested Move Intelligence. Remember, the higher the intelligence, the longer it takes for the computer to make a move.

## Board Menu

Show Coordinates - Allows you to turn the coordinates (the numbers and letters that are used to represent different squares of the board for notation purposes) on or off.

## Dimensions

2 Dimensions - Displays the chess board and standard piece figures in a flat, 2 dimensional view. This is also the only view that has keyboard support.

3 Dimensions - Displays the chess board and pieces in a more realistic view.

3D Graphics - Allows you to mix and match different 256 color chess sets, boards and backgrounds. For those of you that only have 16 color support, there is a check box at the top of the dialog that can be checked to use a standard 16 color set, board and background. Of course, you can leave this box unchecked and see if you like the way 256 colors are mapped to 16 colors. If you find a pleasing 256 color combination on a 16 color setup, there is no harm in using it. If you do uncheck this box in anything less than a 256 color support setup, a warning message will be displayed alerting you to the fact that the colors may appear a bit strange on your screen. Also, the next time you run Champion Chess, you will automatically be setup for 16 colors (the check box will be checked).

## Rotate

Normal View - Puts the first player's side at the bottom of the window.

90 degrees - Puts the first player's side at the right side of the window.

180 degrees - Puts the first player's side at the top of the window.

270 degrees - Puts the first player's side at the left side of the window.

## Note: Speeding up Board Menu Options.

If your computer seems to be taking too long to carry out some of these options, here are some tips on how to increase your computer's performance.

1. If you want the coordinates to appear on the board, make this the LAST option you choose.
2. If you are experimenting with different sets, boards and backgrounds, make sure you are in the normal view (0 degree rotation) or the 180 degree rotation view. Whenever you have found the right combination, then rotate the board 90 or 270 degrees if you would like.
3. During the game, switching from Normal View to 180 degrees and vice versa should be a fairly instantaneous procedure as well as switching from 90 degrees to 270 degrees (with Show Coordinates turned off). Also, rotating from 90 degrees or 270 degrees to Normal View or 180 degrees should happen fairly quickly too. The longest rotations will be switching from Normal View or 180 degrees to 90 degrees or 270 degrees.
4. Having Show Coordinates enabled slows down all of these options.

## Help Menu

Contents - Pulls up this help.

Help on Help - Gives general instructions on how to get the most out of this help file.

About Champion Chess - Gives a brief history and description of Champion Chess.

