THE SOFTWARE TOOLWORKS

THE
CHESSMASTER
2000

INSTRUCTIONS

GETTING STARTED

Turn on the Macintosh and insert the Chessmaster program disk. The Chessmaster 2000 will automatically load its sign-on screens and then display the chessboard. You can speed up this process by pressing the mouse button when the initial sign-on screen first appears.

The first time the program loads, you will play using the white pieces. To make a move, just "grab" a white piece by positioning the cursor "hand" on the piece and holding down the mouse button, then drag the piece to a legal square and release the mouse button.

REQUIREMENTS

The Chessmaster 2000 requires a 512k Macintosh (Fatmac) or Macintosh Plus. Two disks are included. The first contains the system and application files. The second contains the classic games described in the accompanying booklet.

MOVING

To move a piece use the mouse as described above. If you prefer, you may use algebraic notation entered from the keyboard. For instance, to move King's pawn two squares forward enter 'E2E4.'

CASTLING

To castle, move your king to its destination square. The rook will move into place automatically. Don't forget that it is not legal to castle if King is in check or any of the squares between the king and rook are threatened.

EN PASSANT

The En Passant capture is a special pawn-takes-pawn capture. It is only legal immediately after the opponent's pawn moves two squares out, coming to rest beside your pawn. You may then capture the opponent's pawn with your pawn En Passant ('In Passing') by moving ahead and diagonally behind it.

PAWN PROMOTION

If you move a pawn to the eighth rank, The Chessmaster 2000 will allow you to select the piece to promote the pawn to.

CLASSIC GAMES

The 100 Classic Games of Chess described in the accompanying booklet are found on the second disk. They are named 'CG1' through 'CG100.' See the Load A Saved Game option below for details on how to load games. Once loaded, you can have the Chessmaster replay each of the moves by selecting the Replay the Move option in the Playing menu. Or, if you like, you may have the Chessmaster 2000 conduct an analysis of each game using the Analysis option described below.

CONTROL AND CONFIGURATION

The Chessmaster 2000 offers nearly limitless display configurations and variety of play. All of these options are controlled in the customary Macintosh manner using mouse and pulldown menus. Below is a full description of each menu item. Please also note that all of the most-used menu items have command key shortcut options. To learn these keys, refer to the Chessmaster 2000 individual menu items.

Playing

Begin New Game
After confirmation by you, the board is reset and a new game is begun.

Load a Saved Game...
This option uses a standard Macintosh file selector box to load a game you previously saved and now wish to continue with or analyze. Once loaded, the Chessmaster 2000 is set to the playing state it had when the game was saved except that if the opponent was to move when the game was saved, you should choose the Force Computer Move option to restart play.

Save this Game...
To save a game, make this selection and enter the name you want to save the game under. Use Load a Saved Game to reload and play or analyze the game.

Erase a Saved Game...
This option uses a standard Macintosh file selector box to allow you to select a saved game to delete. Once deleted, the game cannot be recovered and loaded.

Opponent is the Chessmaster...
The Chessmaster 2000 can play against you, against itself, or act as referee between two human players. This option lets you choose which.

Play Level is...
The Chessmaster 2000 has 12 standard levels of play, ranging from 1 move every 5 seconds (on average) to one move every 10 hours (good for postal chess). As with a human player, the faster you ask the Chessmaster to move, the weaker its play.

Your Side is...
You may play either White or Black (and may switch in mid-game if you don't like the way things are going for you). Use this option to change sides. Once you have changed sides, you may also want to rotate the playing board. See below for directions on how to do that.

Easy Mode is...
If you find that, even at the lowest levels, the Chessmaster is winning too many games, turn Easy Mode on. This will prevent the Chessmaster from thinking ahead while you consider your move.

Newcomer Style is...
When Newcomer Style is On, The Chessmaster plays its weakest game. This is the setting Chess novices should use. Newcomer is a special mode of play, unrelated to the twelve regular levels of play or the Easy Mode. For this reason, when Newcomer Style is On, Play Level is... and Easy Mode are not selectable.

Style of Play is...

The Chessmaster 2000 can recognize when moves it ranks highly are "conventional" or "unconventional" by normal Chess standards. Normally, the Chessmaster 2000 mixes these classes of moves to provide interesting, yet unpredictable, play. With this option, you can cause the Chessmaster 2000 to always choose its best move or always choose the more random move.

Opening Book is...

If the opening book is on, The Chessmaster will choose from its proven library of over 71,000 sequences of opening moves.

Force Computer Move

If you tire of waiting for the Chessmaster 2000 to move at higher levels, you may force its move with this option. The Chessmaster 2000 will then make the move that it has found so far. This option is also used if you have The Chessmaster take back one of its moves.

Take Back Last Move

This option will take back the last move in the sequence made by either you or the Chessmaster 2000. Note: If you take back moves so that it is the Chessmaster's turn to move, you must force the Chessmaster to make its next move to resume play (See Force Computer Move, above).

Replay the Move

If you take back moves, and then decide you want the taken back moves to be played again, use this option. This option is also used when replaying the Classic Chess Games stored on disk.

Quit

Quits the Chessmaster and returns you to the Macintosh desktop. To restart the Chessmaster, open the Chessmaster icon.

Board

The Board is now 2D/3D

The Chessmaster can display the board in an "overhead" 2-Dimension shot or in full "elevated 3-D" perspective. Use this option to switch between display choices.

Board Coordinates are On/Off

This option toggles row and file coordinates displayed along the edges of the board. If you use algebraic move entry, you may find it convenient to display the coordinates.

Chess Clocks Are On/Off

The Chess Clocks show who the players are, the time used by each and the last two moves played. This option toggles the display of the clocks on and off.

Rotate the Board...

For an added perspective, use this option to turn the board (two and three dimension) so any side faces you.

Display

Captured pieces are Hidden/Shown

Toggles the display of a window showing all captured pieces. This window is movable and resizable. Many players like to place it off to the side of the board in 2-D mode so they can make instant comparisons of material strength.

Show Moves So Far...

Opens a window on a list of all moves made so far in the game on the screen. You may scroll through the list using the elevator bar or arrow boxes.

The Chessmaster's Thinking is Hidden/Shown

Toggles the display of the Chessmaster's "thinking" process. Three "lines of play" are

displayed. First is the "Best" line, which is the best the Chessmaster has come up with in its thinking so far. If you force the Chessmaster to move, it will make the first move in its Best line.

The "Current" line is the line it is considering at this instant. Because this line is a "snapshot" of an incomplete thought, the moves and score for the Current line will not always make sense.

The "Previous" line is the line from the previous move made by the Chessmaster. This is the same as the "Best Variation" (see below). It has nothing to do with the Chessmaster's thinking for its next move.

The lines of play are displayed as a sequence of moves, a Score and a search Depth.

In the sequence of moves, the first move is the one the Chessmaster might make next, followed by what it expects your reply will be, its answer to your reply, and so on. Of course, you might not make the predicted reply, and even if you do, the Chessmaster might think of a better answer in the meantime, so the further you go down the moves, the less likely it is that those exact moves will actually be made.

The "Score" reflects how far The Chessmaster thinks it will be ahead or behind if the line of play is played out to the last move shown. The score is computed in pawns and fractions, so a score of 1.00 means the Chessmaster believes it will be ahead one pawn (or equivalent), and −3.00 means it will be down the equivalent of one piece. Fractional scores come from the Chessmaster's evaluation of positional strength.

The search Depth is the minimum number of plies, or half moves, the Chessmaster will look ahead. A Depth of 3, for example, means it will look at its move, your reply, and its answer; three half moves. It may look further if it sees something interesting, like a check or capture. When the Chessmaster has looked at all the moves at the current search depth, it will start a new search one ply deeper if it thinks it has time to finish.

Note: The Chessmaster 2000 may not be thinking deeply, or at all, if the Level of Play is set low, Easy or Newcomer mode is on, or the present game is following opening book moves.

Best Variation is Hidden/Shown

This displays the line of play predicted by the Chessmaster 2000 when it made its last move. Also shown are the Score, which indicates how far the Chessmaster thinks it is ahead or behind and the search Depth, which shows how many half moves it looked ahead when planning that move.

Suggest a Move

Selecting this option will cause the Chessmaster to move one of your pieces to a legal square, then back again to its starting point. It is up to you to accept the hint. On low levels, the hint may not be very good, since the Chessmaster has not had much time to consider it.

Teaching is Off/On

If Teaching is on, and a piece is selected for movement, then all unoccupied legal squares it can move to are displayed with a light gray ghost of the piece. Similarly, if any opposing pieces are threatened with capture ('En Prise') by the piece to move, they will be displayed as a dark gray ghost.

Sound is now. . .

The Chessmaster can signal moves, captures, checks, mates, and other events using several kinds of sounds. You may choose from the spoken voice of the Chessmaster, music, a bell tone, or silence.

Notation is Algebraic/Abbrev. Algebraic

With this option, the notation used by the game when displaying moves on the Chess Clocks and

Move List may be changed between standard algebraic notation and abbreviated algebraic. When typing in moves, however, you must always use algebraic.

Enter your Name...
If you would like your name to appear in your Chess Clock when playing, select this option and enter your name. If you choose Save Settings (see below), your name will be appear again the next time you play.

If The Boss Wanders By
A Panic button for tight situations. Be prepared, however, to speak knowledgeably on the subject of real estate investment analysis. (And, certainly, don't tell anyone that the figures don't add up!)

Extras

Print Moves So Far...
Selecting this option will print a list of the moves made to this point, followed by a full graphic printout of the chessboard with pieces in place. Be certain your Imagewriter or Laserwriter is connected and turned on.

Print Each Move is Off/On
When on, this option will print each move as it is made on the Imagewriter printer.

Save These Settings
The current display and configuration settings will be saved and automatically used the next time the Chessmaster 2000 is played.

Factory Settings...
By selecting this option, the Chessmaster's display and configuration settings are reset to the values they had when shipped by The Software Toolworks.

Setup

Setup A Position/Leave Setup
Select this option to enter Setup mode to try out chess problems or to play chess with a handicap. When selected, play is stopped, the Chess Clocks are removed from the board and a "piece selection kit" of each piece for both colors is displayed. Set the board up by grabbing pieces and placing them on the desired squares. After setting up the position and choosing the side to move first, select this option again to leave setup mode.

Set Up the Initial Position
Automatically places the entire chess set into its initial starting configuration. You may then modify this setup by removing or changing pieces.

Clear the Board
Automatically removes all pieces from the board to make it easier to set up end game problems.

White/Black Moves First
Selects which side will be first to move when setup mode is exited.

Analysis

Begin Analysis/Quit Analysis
Select this option to enter Analysis mode to analyze chess games that have already been played, partially played or loaded from disk. Before choosing Analysis, you should take back one or more moves. Analysis will proceed from that point.

For each move analyzed, the Chessmaster will show the best move (with score and best line of play), and then play the actual move. (If a move is made from the Chessmaster's opening book,

no line of play is shown). For more about the line of play, see "The Chessmaster's Thinking is Hidden/Shown" above.

Note: The higher the Level of Play selected, the deeper the Chessmaster's analysis will be. You may want to let your computer run for hours, or overnight, to get a better analysis. After analysis is completed, select this option again to leave Analysis mode.

Save Analysis To Disk...
By selecting this option BEFORE beginning analysis and specifying an output file, the text of the analysis messages will be stored on disk.

Analyze Moves for White/Black/Both
You may have the Chessmaster only analyze White or Black's moves. The default setting is to analyze both sides of play. Analysis will be faster if only one side is analyzed.

Take Back LAST Move
Takes back the last move made by either side. Used when you want to analyze the game from just a few moves back.

Take Back ALL Moves
Takes back all moves to the beginning of the game. Used when you want to analyze the entire game.

SolveMate

Start Solving for Mate/End SolveMate
Select this option to enter SolveMate to solve Chess endgame problems. Before choosing SolveMate, you should set up the board using the Setup feature, and then select the number of moves to look ahead and which side will mate. (See Below).

After the Chessmaster solves the problem, it will make a move. You then play against it until it checkmates you. You can take back moves to make other countermoves.

After the SolveMate exercise is done, choose this option again to return to regular play.

Mate in 3/4/... Moves...
Selects the number of moves the Chessmaster should look ahead to see the mate. Note that the Chessmaster looks for a mate in exactly the number of moves you specify. In other words, "Mate in 4 Moves" will not find a mate in 3.

Side to Mate is White/Black
Selects which side will move and checkmate the other in the SolveMate problem.

HAVE FUN!!!

THE SOFTWARE TOOLWORKS

Dear Customer:

Thank you for your recent purchase of The Chessmaster 2000. As developers of the most popular - and the most powerful - microcomputer chess game in the world, we welcome the comments of our customers.

BACKUP DISKETTES: The diskettes provided with The Chessmaster 2000 are made from the highest quality materials available. Nevertheless, some of our customers have asked for a duplicate backup diskette. If you would like a backup diskette, just fill out and return this form along with a check for $5.00 (made payable to The Software Toolworks) to the address below.

HARD DISK INSTALLATION: Other customers have requested a version of the Chessmaster 2000 that they can install on and play from their hard disks. We are pleased to be able to offer you a special personalized version of The Chessmaster 2000 which can be installed on and run from the hard disk of your Macintosh 512K, 512KE, Plus, or SE without the use of a special key disk. This version allows unlimited installations, and may be backed-up using standard Macintosh desktop methods. If you would like to receive your personalized version of The Chessmaster 2000, simply return this form along with a check for $10.00 (payable to The Software Toolworks).

400K DISKETTES: This package contains an 800K diskette. If you have an older Macintosh (i.e. one with 64K ROMS), you cannot use this diskette. To obtain two 400K diskettes, fill out and return this form to us. If you would like to order a backup or personalized copy of The Chessmaster at the same time, enclose a check for the correct amount.

We hope you are enjoying The Chessmaster 2000 and look forward to hearing any comments you may have!

Name _____

Address _____

City/State/Zip _____

Daytime Telephone Number _____

I have a Macintosh __ 512K __ 512KE __ Plus __ SE

Please send me: __ Two 400K diskettes for my older Mac!

        __ A backup copy of Chessmaster 2000 on __ two 400K or __ one 800K diskette(s).
        I have enclosed a check for $5.00.

        __ A personalized Chessmaster 2000 on __ two 400K or __ one 800K diskette(s).
        I have enclosed a check for $10.00.

THE CHESSMASTER 2000

The chess board is the world, the pieces are the phenomena of the universe, the rules of the game are what we call the laws of Nature. The player on the other side is hidden from us. We know that his play is always fair, just, and patient. But also we know, to our cost, that he never overlooks a mistake, or makes the smallest allowance for ignorance.

Thomas Henry Huxley
1825–1895

Table of Contents

Let's Play Chess

Chess is a game for two players, one with the "White" pieces and one with the "Black"—no matter what colors your set actually uses. At the beginning of the game, the pieces are set up as pictured at right. (See diagrams below to identify pieces.)

These hints will help you to remember this setup:
1. Opposing Kings and Queens go directly opposite each other.
2. The square in the lower right corner is a light one ("light on right").
3. The White Queen goes on a light square, the Black Queen on a dark square ("Queen on color").

The main goal of chess is to checkmate your opponent's King. The King is not actually captured and removed from the board like other pieces. But if the King is attacked ("checked") and threatened with capture, it must get out of check immediately. If there is no way to get out of check, the position is a checkmate, and the side that is checkmated loses.

The Pieces and How They Move

White always moves first, and then the players take turns moving. Only one piece may be moved at each turn (except for castling," a special move that is explained later). The Knight is the only piece that can jump over other pieces. All other pieces move only along unblocked lines. You may not move a piece to a square already occupied by one of your own pieces. But you can capture an enemy piece that stands on a square where one of your pieces can move. Simply remove the enemy piece from the board and put your own piece in its place.
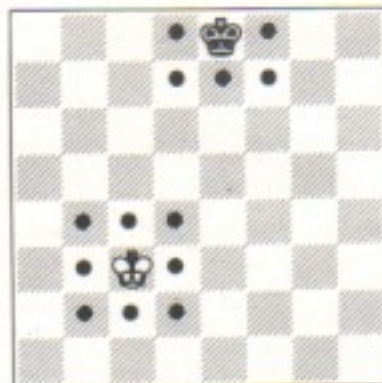
The King

The King is the most important piece. When he is trapped, his whole army loses.

The King can move one square in any direction—for example, to any of the squares with dots in this diagram. (An exception is castling, which is explained later.)

The King may never move into check—that is, onto a square attacked by an opponent's piece.
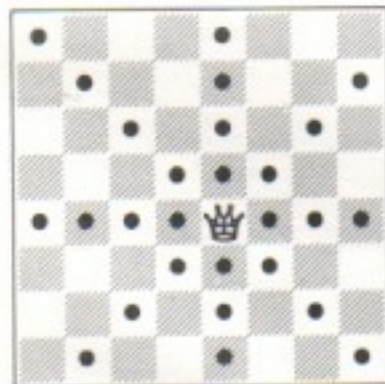
The Queen

The Queen is the most powerful piece. She can move any number of squares in any direction—horizontal, vertical, or diagonal—if her path is not blocked. She can reach any of the squares with dots in this diagram.
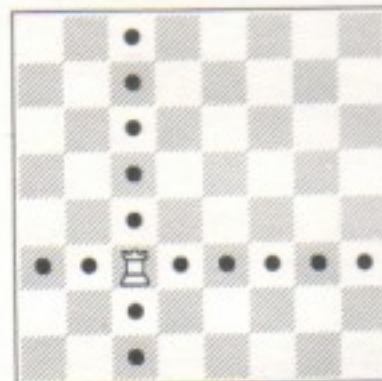
The Rook

The Rook is the next most powerful piece.

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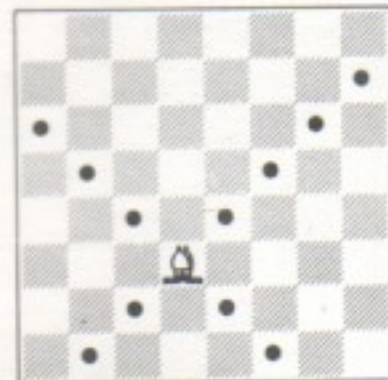
The Bishop

The Bishop can move any number of squares diagonally if its path is not blocked.

Note that this Bishop starts on a light square and can reach only other light squares. At the beginning of the game, you have one "dark-square" Bishop and one "light-square" Bishop.

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The Knight

The Knight's move is special. It hops directly from its old square to its new square. The Knight can jump over other pieces between its old and new squares.

You can think of the Knight's move as an "L." It moves two squares horizontally or vertically and then makes a right-angle turn for one more square. The Knight always lands on a square opposite in color from its old square.

Any pieces "hopped over" are *not* captured by the Knight. The Knight can capture only when "landing" on the enemy piece.

The Pawn

The Pawn moves straight ahead (never backward), but it captures diagonally. It moves one square at a time, but on its first move it has the *option* of moving forward one or two squares. (This option was introduced to speed up the game.)
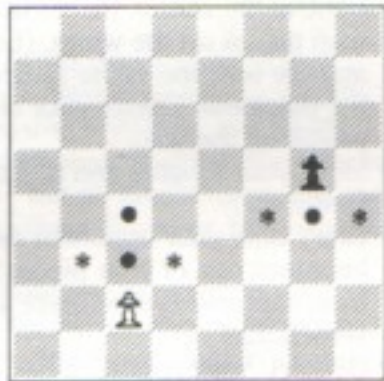
In the diagram, the squares with dots indicate possible destinations for the pawns. The White pawn is on its original square, so it may move ahead either one or two squares. The Black pawn has already moved, so it may move ahead only one square now. The squares on which these pawns may capture are indicated by an *.

If a pawn advances all the way to the opposite end of the board, it is immediately "promoted" to another piece, usually a Queen. It may not remain a pawn or become a King. Therefore, it is possible for each player to have more than one Queen or more than two Rooks, Bishops, or Knights on the board at the same time.

As soon as a pawn is "promoted" it has all the powers of its new self (though it may not move again on that turn). For example, a pawn may become a Queen that immediately "gives check" to the opponent's King.

Special Moves

En l'assant

This French phrase is used for a special pawn capture. It means "in passing," and it occurs when one player moves a pawn two squares forward to try to avoid capture by the opponent's pawn. The capture is made exactly as if the player had moved the pawn only one square forward.

In the diagram above, the Black pawn moves up two squares to the square with the dot. On its turn the White pawn may capture the Black one on the square marked with the *. If the White player does not exercise this option immediately—before playing some other move—the Black pawn is safe from "en passant" capture for the rest of the game. But new opportunities arise with each other pawn in similar circumstances.

Castling

Each player may "castle" once during a game if certain conditions are met. Castling is a special move that lets a player move two pieces at once—his King and one Rook. In castling, the player moves his King *two* squares to its left or right toward one of his Rooks. At the same time, the Rook involved goes to the square beside the King and toward the center of the board (see illustrations below).

The diagrams below show what happens:

Before Kingside Castling

After Kingside Castling

Before Queenside Castling

After Queenside Castling

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In order to castle, neither the King nor the Rook involved may have moved before. Also, the King may not castle out of check, into check, or through check. Further, there may not be peices of either color between the King and the Rook involved in castling.

Castling is often a very important move because it allows you to place your King in a safe location and also allows the Rook to become more active.

When the move is legal, each player has the choice of castling Kingside or Queenside or not at all, no matter what the other player chooses.

More About Check and Checkmate

Now that you know how the pieces move, you can understand more about check and checkmate. Your opponent is trying to checkmate your King, and you must avoid this situation if possible.

You may not move into check—for example, move into a direct line with your opponent's Rook if there are no other pieces between the Rook and your King. Otherwise, the Rook could "capture" the King, which is not allowed.

If you are in check, there are three ways of getting out:

1. Capturing the attacking piece;
2. Placing one of your own pieces between the attacker and your King (unless the attacker is a Knight);
3. Moving the King away from the attack.

If a checked player can do none of these, he is checkmated and loses the game.

If a King is not in check, but that player can make no legal move, the position is called a *stalemate* and the game is scored as a *draw*, or tie.

Some Hints to Get You Started

Some pieces are more valuable than others, because they are able to control more squares on the board. Obviously, for example, a Queen is more valuable than a pawn.

The question of value is important every time there is a possibility of capturing or exchanging pieces. Following is a guide to the value of the pieces other than the King:

Pawn, 1 point · Knight, 3 points · Bishop, 3 points · Rook, 5 points · Queen, 9 points

There are also some general principles that will help you to win games. After you practice for a few games, you will find that you are following these hints naturally, and that you do not have to work at remembering them.

• Try to capture more valuable pieces than your opponent does. The player with stronger pieces has better winning chances.
• Capture more valuable pieces with less valuable ones.
• Don't try for a checkmate in the first few moves—it probably won't work.

• Control the center. Pieces in the center have more mobility than pieces on the wings. (Look back at the Knight diagram and see how the White Knight has more possible moves than the Black one.) Move your center pawns early, but not the pawns on the side.
• Move your Knights and Bishops early.
• Castle early.
• Every time your opponent moves, stop and look carefully. Did he attack one of your pieces? Can you defend it or save it from capture? Did he make a move that allows you to capture something?
• Be alert. Your opponent has a plan, too!
• Get all your pieces into good positions and protect your King before trying to attack. It takes more than one piece to checkmate.

Getting Better

These basic rules and pointers are enough to get you started in chess. Now you are ready to find partners among the millions of chess lovers across the country and around the world.

Practice will make you better and better at the game and so will reading some of the countless books about chess. You can probably find some of these books at your local library or bookstore. They will tell you a lot about various winning strategies.

Another source for all your chess needs is the U.S. Chess Federation, a not-for-profit educational and instructional corporation and the official organizing body for chess in this country. U.S. Chess publishes the monthly magazine *Chess Life*, containing news, instruction, other articles about chess, and a monthly list of tournaments that even beginners may play in.

U.S. Chess also offers a national rating system, postal chess competitions, and a mail-order department with a large selection of chess books and equipment.

For more information about U.S. Chess and how to join, write to:

U.S. Chess Federation
186 Route 9W
New Windsor, NY 12550
Telephone: (914) 562-8350

A History of Chess

The invention of chess has been variously ascribed to the Arabians, Babylonians, Castilians, Chinese, Egyptians, Greeks, Hindus, Irish, Jews, Persians, Romans, Scythians, and Welsh. Specific individuals have sometimes been credited (the Greeks claimed Aristotle invented chess), but no invention stories are reliable. We can make a few deductions, however, from what is known.

The oldest name for chess is *chatauranga,* a Hindu word referring to the four branches of the Indian army, elephants, horses, chariots, and foot soldiers, which were not in existence after the birth of Christ. Therefore, chess is at least 2,000 years old. Its exact age can't be determined with any degree of accuracy, because it was originally played with dice and references to "skilled dice players" as long as 5,000 years ago may or may not refer to early forms of chess. The ambiguity is due at least in part to the Indian *ashtapada,* the forerunner of the modern chessboard. It has been used for various games, most of which involved dice. The Hindus didn't stop with two-player chess, either. They even developed a four-handed version, with and without dice, in which each player had eight pieces. The diceless four-handed version is still played in India.

Indian rules varied greatly from place to place, and as the game spread eastward, its rules were altered to suit local tastes. The Burmese, for instance, start their game with the kingside pawns on the third rank and the queenside pawns on the fourth rank. Before any movement begins, the major pieces are located anywhere behind the pawns according to the tactical discretion of the individual player. The actual moves are identical to the original Hindu chess moves. The Chinese place their pieces on the intersections of the lines rather than on the squares and add a *celestial river,* akin to no-man's land, between halves of the board. Their version has only five pawns to a side, but adds two *cannons* ahead of the knights, and a *counselor* on either side of the king. In China, the king is called the *general* because a Chinese emperor was so insulted at seeing a figure of himself in a lowly game that he had the players executed! In order to play the game without undue risk of life and limb, Chinese players demoted the piece on the board—or so the story goes. Interestingly, the Japanese allow captured pieces to change sides and rejoin the game against their old army at any vacant place on the board.

The Persians learned chatauranga from the Indians, corrupting the name to *chatrang,* and codifying its rules. They spread a uniform game to the rest of the world, and the idea that the rules ought to be uniform. Since the Persians took up chess, there have been rules changes, but each change was adopted universally throughout the West. Chess spread very rapidly in the Persian Empire. The Persians never took to the four-handed game, and looked down on dice-chess. The latter did spread to Europe via the Moslems, where it persisted until the Fourteenth

Century. The Moslems most likely learned dice-chess direct from the Hindus.

The Persian Empire fell to the Moslems in the Seventh Century, and chess became very popular in the Moslem world. At least, it did after their theorists decided that chess playing wasn't contrary to the teachings of Mohammed. This decision took about one hundred years, and illustrates the curious power a simple game can have: Four generations of chess players weren't quite sure that they were in good standing with their religion because of a pastime. After the official decision that there was no harm in chess, the Moslems created a greatly detailed literature about it.

Chess may have arrived in Russia as early as the Eighth Century, about a hundred years before it reached Western Europe. That Eighth Century Russians traded with the Arabs is not in dispute, and people who traded with the Arabs around that time tended to learn chess. By A.D. 1000, Christianity was established in Russia, and the church there immediately made a concerted and unsuccessful effort to stamp out chess playing. Sixteenth Century travelers to Russia reported that people of all classes played chess there. In the rest of Europe, chess playing was confined to the nobility until the Eighteenth Century. When the Mongols invaded Russia, they brought their own form of chess with them. The Mongols had gotten chess via the Eastern route, so they had a number of their own variations. As a result, in certain parts of Russia, the modern rules did not take hold until the Twentieth Century.

It is through the Moslems that Europeans learned chess and most chess nomenclature. The Persian chatrang was rendered by the Moslems as *shatranj.* The Spanish names *axedrez* or *ajedrez* (ah-hey-dres), and Portuguese *xadrez* (sha-dres), obviously derive from shatranj. "Chess" in English conforms to the pattern throughout the rest of Europe: It is the vernacular corruption of *scac,* the Ninth Century Latin rendering of the Persian *shah,* or king. The king itself is always a direct translation of *shah,* and the pawn is invariably the equivalent of the Arabic *baidaq,* or foot soldier. "Rook" is a direct corruption of *rukh,* or chariot. Interestingly enough, *rukh* was misinterpreted by the Bengalis as the Sanskrit *roca,* or boat. As a result, in certain parts of the East and Russia, this piece is in the shape of a boat. Our castle-shaped pieces come from the Farsi Indian pieces which represented the tower carried by an elephant. The knight was originally *faras* in Arabic, meaning horse, the usual shape of the piece. In Europe, the name of the horse evolved to the name of its rider, knight in English.

The bishop evolved from the Arabic *al-fil,* or elephant. The Spanish still call this piece *alfil,* and the Italians are close with *alfiere,* standard-bearer. In England, the split at the top of the piece, intended to represent the elephant's tusks, was probably mistaken for a bishop's miter. The French took the same split as

a fool's hat, so in France, the piece is *fou*, or jester.

The present-day queen, so called throughout the West, started as the *counselor*, or *farz*, or *firz*. The Spanish rendered this as *firz*, or *alfferza*, and the Italians as *farzia* or *fercia*. The French made that into *fierce*, *fierge*, and *vierge* (virgin), which may be how the gender change got started.

Europe's introduction to chess probably came in the Ninth Century, first in Italy and Spain. From Italy it spread to southern Germany and Switzerland. From Spain it went to France. The English may or may not have known chess before the Norman Conquest. Early references are confusing due to the tendency of the chroniclers of the period to refer to any and all games as "chess."

By the late Middle Ages, Europeans and Moslems had started tinkering with the rules. In the Thirteenth Century, we find the first known instance of the chessboard with its now-familiar light and dark squares. Fifteenth Century Mohammedan documents note that the Great Mogul Timor played "Great Chess," a version which required a board measuring ten by eleven squares.

Meanwhile, Europeans were frustrated by the amount of time it took to complete a game, and typically, made some rules changes designed to speed things up. In shatranj, the Bishop could originally move only two squares diagonally, but he could leap over a piece blocking his path. The queen, or counselor at the time, was easily the weakest piece on the board, moving only one diagonal square per turn. When a pawn reached the eighth rank, it could only be promoted to counselor, the lowest promotion possible and the only way the former pawn could remain in the game.

When the counselor became today's queen, an upsetting dilemma arose in the mind of Fifteenth Century nobles: Aside from the mental gymnastics required by the pawn's sex-change, what if the player's original queen were still on the board? Would the king be a bigamist? When people took their royalty seriously this was a real problem. So for a while, a pawn could be promoted to a queen only if the original had been captured. Later, of course, this solicitude on behalf of the royal marital status was abandoned; the queen was too powerful a piece to be lost through fastidiousness. The players, however, did retain the option of promoting a pawn to any piece except a king.

Given the offensive might of the newly strengthened bishops and queens, something had to be done to help the defense. The king had become too easy to capture. The answer was castling. At first, the move allowed some flexibility. A king could jump two or three spaces, to N2 if he chose. This somewhat unsettled state of affairs finally became the modern castling move.

At about this time, pawns were first given the option of a two-square advance for their initial move. So that this new move could not be used to evade an obvious loss, the *en passant* capture was devised. With these rules changes, the modern game of chess emerged, and there have been no other alterations since the Sixteenth Century.

Interestingly, in the 20th century, when José Capablanca was world champion, he proposed the addition of two new pieces. The *chancellor* would move like a rook or a knight at the player's option, and the *archbishop* would move like a bishop or knight. These pieces would require two more pawns and a larger board, but oddly enough had the effect of cutting playing time in half. Capablanca's suggestions were never acted upon.

World Champions And Their Play

When William Steinitz beat Adolf Anderssen in 1886, (see Classic Game number 14) Steinitz designated himself "World Champion." Since before that time no one had thought of calling himself that, Steinitz can, with some justification, be called the first world champion. However, most chess authorities have traced the world championship back at least to Francois Philidor, the French champion regarded in 1748 as the leading authority on chess. Certainly one can follow a more-or-less unbroken line of champions back to Philidor, but why not go back a little further? There are a few breaks in the record, but the first person to bestow upon himself the mantle of unquestioned master of the game of chess was the tenth century Arab *Grandee*, al-Suli.

The extensive Arab chess literature records four of the earliest known chess masters. Al-Adli, from the Byzantine Empire, was the first person reputed to be able to beat anyone he played, although just before his death, the champion lost to a Persian known as al-Razi at the court of Caliph al-Mutawakkil in 847 A.D.

Al-Suli entered the picture about sixty years later in Baghdad. He established the first rating system for chess players. Grandee is the highest position, which al-Suli bestowed posthumously on al-Adli and al-Razi, and which he claimed for himself. The next position was held by players able to beat a Grandee in two out of ten games when given the advantage of a pawn. Below that were grades which were defined by the player's ability to beat a Grandee with the advantage of a bishop, knight, and rook, respectively. Players who needed better odds than that were ranked "beneath contempt."

Al-Suli's writings on chess provide us with some interesting insights as to what champion-level play was like then. He noted, for instance, that a Grandee could calculate ten moves ahead. Modern chess masters, relying on positional play, no longer need to make such extensive calculations. Al-Suli also felt the need to point out to his readers that while they position their men for attack in the first 12 to 19 moves, they would do well to pay attention to the disposition of their opponent's forces and perhaps respond accordingly.

Al-Suli's play and reputation were so overpowering they were honored through six centuries of Arab chess literature. One of his pupils, al-Lajlaj, another Grandee, was the first to note that

the fewer moves a player needs to complete development of his pieces, the better off he is. Records from this period document the first instances of blindfold play.

The first Western book we have on chess comes from Spanish literature. In 1497, Luis Ramirez de Lucena wrote *Repiticion de Amores e Arte de Axedres*. Lucena was far from a master; he appears to have confused the new rules with some of the old, and had some ideas on strategy worthy of a Bobby Fischer. Lucena suggested that players position the board so their opponent's eyes were in the sun, and to try and arrange games after their opponent had eaten a large meal and had several drinks.

One of the first strong European players to emerge was the Spanish clergyman, Ruy Lopez, after whom a still-popular opening is named. Lopez wrote a very influential book on chess play, *Libro de la Invencion Liberal y arte del Juego del Axedrez. (Book of the Liberal Invention and Art of Playing Chess).* He is known to have travelled extensively, playing chess wherever he went. His book remains valuable today.

After Ruy Lopez, relatively few new chess books appeared for about 170 years. Chess masters of this period, Italians Giovanni Leonardo and Paolo Boi, both of whom had defeated Lopez, and the next generation of powerful Italian masters, Alessandro Salvio, Giulio Polerio, and Giacchino Greco, had made a number of advances over Lopez's work. However, because they played chess for money, they were understandably reluctant to give away their secrets by publishing books. What we know of their games comes from the private manuscripts they wrote and sold to wealthy patrons. Their games featured fast attack and sacrifice; gambits were the preferred opening.

Philip Stamma, a Syrian, published his *Essay sur le Jeu des Echecs* in Paris in 1737, and a revised English version, *The Noble Game of Chess* in 1745, the first to feature algebraic notation. While in London as Interpreter of Oriental Languages to the English government, Stamma customarily played at Slaughter's Coffeehouse, and it was there that he lost a famous match to Francois Andre Danican Philidor, a down-and-out French musician. As a result of the notoriety he gained at Slaughter's, Philidor became one of the most influential players who ever lived.

Philidor published his *Analyse du Jeu des Echecs* in 1748 after defeating Stamma. It was the first book to provide detailed notes on the play so that the reader could follow the master's reasoning. Philidor was a believer in strong pawn play, and constructed his games with a distinct plan in mind. He formulated what is now the classic pattern of using pawns to flush out a castled king. Another chess book, written in 1763 by the Italian master Giambattista Lolli, presented a view more concerned with mobility, and therefore a more modern approach. It too, featured extensive notes on the play. Philidor's style held sway in France and England, though, for a very mundane reason— he couldn't be beaten.

The first of four consecutive French champions, Philidor's play created considerable interest in chess in France and Eng-

land. The next champion, a domineering and arrogant war hero whose play consisted of nothing more than a sustained effort to checkmate his opponent's king, was Alexandre Deschapelles. He was interested neither in other lines of attack, nor in defense. Phrenology, a pseudo-science in vogue at the time, attempted to explain all human behavior by the shape of the head. Phrenologists believed that Deschapelle's highly developed prowess at chess was due to cranial saber wounds he had suffered in battle. For whatever reasons, Deschapelles was overpowering. He gave a pawn-and-two-moves advantage to anyone who played him, and liked to brag that he had never been beaten in an even game. While true as far as it goes, his statement is misleading: When his pupil, Louis de la Bourdonnais, was finally able to beat him with the customary odds, Deschapelles gave up the game rather than risk losing at no odds.

The third in the line of French champions, de la Bourdonnais was one of those natural chess players whose moves come after only seconds of thought. He had the misfortune to have as his principle opponent Alexander McDonnell, an Irishman, champion of the British Isles, and an agonizingly slow player. De la Bourdonnais defeated McDonnell in the first championship match for which records of most of the play are still extant. (See Classic Game number 3.) They indicate that de la Bourdonnais was driven almost to distraction by the glacial pace of McDonnell's play. Neither man gave a thought to defense; attack was everything in their games. After a long and successful career in France as a composer of operas, de la Bourdonnais moved back to England and died there in 1840. He was buried near McDonnell.

De la Bourdonnais's successor in France was Pierre de Saint-Amant, the last of the great French masters. McDonnell's was Howard Staunton. In 1843, Staunton, who had lost a first match to Saint-Amant by one point, won their second 11–6, with 4 draws. Taking his cue from Deschapelles, Saint-Amant gave up chess after this loss. Staunton declared himself champion, and although he later beat Daniel Harrwitz (see Classic Game number 4) and Bernhard Horwitz, (see Classic Game number 5) two of Europe's strongest players, he also began the now-familiar champion's practice of avoiding anyone appearing strong enough to beat him.

Staunton was a formidable figure in 19th Century chess, though less for his play, which was not particularly aggressive, than for his other activities. His 1849 design for chess pieces has been in use ever since for matches and tournaments, is the one most familiar today, and the one you will see on screen in your Chessmaster 2000. He wrote a very influential column on chess for the *Illustrated London News*, founded a magazine, *The Chess Player's Chronicle*, and, inspired by the first world's fair in London in 1851, organized the Great Exhibition of London for chess players that same year. Each entrant had to pay his own way there and put up a five pound entry fee, but there was a 183 pound purse for the winner. Staunton himself was unex-

pectedly knocked out in the third round by Adolf Anderssen, a high school math teacher from Breslau. (See Classic Game numbers 7 and 8 for examples of Anderssen's play.) In writing about his loss to Anderssen, Staunton blamed the demands of organizing the affair and poor health, thereby setting another precedent, that of a champion's blaming a loss on anything but the superior abilities of his opponent. Another of Staunton's excuses, physical exhaustion, did have at least a grain of truth in it. There was no time limit in effect then, and some games in the exhibition lasted longer than ten hours. However, Staunton's comments on anyone's play but his own were unsportsmanlike to say the least. One of his best-known and least deserving targets was the American, Paul Morphy.

Chess had been popularized in North America by Benjamin Franklin, who founded the Philadelphia Chess Society, and wrote an influential essay, *Morals of Chess* in 1779. Morphy was raised in New Orleans, which had an active chess club. At age 13, Morphy played two games with the expatriate Hungarian master, Johann Lowenthal, winning one game and drawing the second. Lowenthal wrote about the event complimenting Morphy and predicting a great future in chess for him. In 1857 at age 20, Morphy walked away with the First American Chess Congress, held in New York.

Morphy's game was a combination of modern positional play and wild, romantic combinations, although he would delay attack until his knights and bishops were in place. His style had a great effect on many later players who would sometimes ignore an easy advantage in favor of Morphyesque manoeuvering. Unlike most players of his time, Morphy did not neglect defense. He made his moves quite rapidly and preferred very clear, uncomplicated lines of attack. (See Classic Game numbers 9, 10, 11, 12 and 13, for examples of Morphy's style of play.)

Shortly after Morphy won the New York Tournament, the New Orleans Chess Club offered to pay Howard Staunton's expenses to come to America if he would play Morphy in a winner-take-all match with stakes of $5,000 a side. Staunton was his usual insulting self in refusing the offer, citing the amount of time a trip to the United States would take, the exhaustion the trip would entail, and his own recent lack of play. Not only did he decline for himself, he also turned down the club on behalf of all of Europe. Stung by Staunton's belittling of his abilities, and especially by an implication that he played chess professionally, Morphy sailed for England.

Although Staunton kept saying he looked forward to a match with Morphy, in fact, he found excuse after excuse for not playing him. Morphy played Lowenthal again, (see Classic Game number 12) while in England, this time beating him 9–3, with 2 ties. Morphy finally tired of waiting for Staunton and travelled to Paris. There, in a highly publicized match, he beat Daniel Harrwitz, a great German champion who was very unpopular in France. The public was delighted by Morphy, who used the prize money from the Harrwitz match to pay Anderssen's fare

from Breslau. While he waited for Anderssen to arrive, Morphy received a letter from Staunton. Essentially an admission that he couldn't beat the American, Staunton's letter was never made public. In fact, in his columns Staunton continued to claim that he was anxious to play Morphy, and that Morphy was avoiding him. When Anderssen arrived in Paris, Morphy beat him 7–2, with 1 draw. Anderssen actually complimented Morphy's abilities. (See Classic Game number 13.) Staunton's notes on the match, played for no stakes, are incredibly boorish. After a grand farewell banquet in London, which Staunton missed, Morphy returned to New Orleans and gave up chess.

Because Morphy hadn't claimed the championship, Anderssen remained the man to beat. A great romantic player, Anderssen was particularly adept at spotting his opponent's weaknesses and then using a sacrifice to win. He successfully defended his championship two more times (his 1861 defense was the first to feature time limits on the moves), before losing to William Steinitz 8–6 in 1866.

Steinitz, a native of Prague living in London, lost no time in claiming to be world champion. He emigrated to the United States in 1883, and two years later founded International Chess magazine, which lasted until 1891. In his highly entertaining book, *Grandmasters of Chess*, Harold Schonberg calls Steinitz "the most unpopular chess player who ever lived," which is quite an accomplishment considering Staunton's record. Steinitz richly deserved the description, however. In addition to writing excellent commentaries on games, Steinitz used his magazine to indulge in the most vile mud-slinging imaginable against other masters, readers who had the misfortune to write to him, and anyone else who managed to upset him. His repellent disposition aside, Steinitz, who had begun playing in the romantic style, made several important theoretical advances. He borrowed what we now regard as the most modern aspects of Philidor and Morphy, and created a new style of play based on position and positional logic. Trained originally as an engineer, Steinitz realized that without positional advantage, combinations meant nothing. He was particularly adept at divining the intent of his opponent's developing combination to lure him into futile attacks. He also developed the theory of strong and weak squares. While unbeatable in match play, his style was not particularly well suited to tournaments, and his record in them is undistinguished. (See Classic Game numbers 16 and 18.)

Emanuel Lasker, a native of Germany who had moved to the United States in 1890, finally defeated Steinitz in 1894. (See Classic Game numbers 16, 17 and 20.) The match was played in New York for $2,000 a side, the winner being the first to take ten games. Lasker surprised everyone by winning 10–5, with 4 draws. Steinitz wanted a rematch at once, but Lasker made him wait two years. When they met again in Moscow, Lasker won decisively 10–2, with 5 draws. During Lasker's 27 year tenure as champion, he was continually criticized for his infrequent title defenses, but in all fairness to Lasker, it should be pointed

out that if the war years of 1914–1918 are omitted, he did defend his title an average of almost once every three years. Current FIDE (*Federation Internationale Des Echecs*, the international body governing tournament chess play) regulations require a title defense once every three years.

Lasker was the first champion to demand what were regarded at the time as astronomical stakes for a title match. Again, he drew a lot of criticism, but he usually held firm. Lasker did relent when he played Frank Marshall in 1907, (see Classic Game number 25) halving his demand for $2,000 when Marshall was unable to raise it. Lasker won easily, beating Marshall 8–0, with 7 draws.

Unlike Steinitz, Lasker was also a formidable player in tournaments, finishing below third place only once at the beginning and twice at the end of his career. He played a particularly psychological game, often ignoring the best objective move to make the one most disturbing to his opponent. His attack featured incredible complications which most players found impossible to comprehend.

José Capablanca of Cuba, long the fair-haired boy of chess, had been trying to get a match with Lasker for years, and in 1921, Lasker knew he had to give in. Dreading the humiliation of losing publicly, Lasker considered resigning the championship in Capablanca's favor, but Capablanca had raised such high stakes that Lasker couldn't turn him down. They played in Havana, and after Capablanca had won 4 games, lost none, and drawn 10, Lasker resigned the match. (See Classic Game numbers 33, 36 and 37.) In his notes, Lasker reported that he had been fatigued by the climate, but was gracious enough to admit that Capablanca probably could have beaten him no matter where they played.

Capablanca had long deserved the match; he had been unbeatable for years. (See Classic Game number 44 for a further example of stellar Capablanca play.) When he lost a game to Richard Reti of Vienna in a New York tournament in 1924 it was the subject of a New York *Times* headline. An employee of the Cuban foreign ministry, Capablanca had the advantage of being assigned to any city in which he had to play a game. Like Morphy, he was a fast and intuitive player, fond of simple, direct lines of attack.

Capablanca, too, was accused of avoiding matches, and when he finally did defend his crown in Buenos Aires against Alexander Alekhine in 1927, the match took several months. Capablanca finally lost 6–3, with 25 draws. Alekhine had studied Capablanca's play, and decided to engage in very complex attacks, which he believed the Cuban player would not analyze in sufficient depth. Alekhine never risked a rematch with Capablanca, although he frequently hinted that one was about to take place. (For examples of Alekhine's play, see Classic Game numbers 38, 43, 48, 50 and 55.)

The son of a Russian noble, and a French citizen since 1925, Alekhine made his first title defense in 1929 when he beat a Russian named Bogolyubov, knowing that Bogolyubov would be easy to beat. A rematch with Capablanca was announced, but the prospect of beating Bogolyubov again proved to be too alluring, and Alekhine trounced him in a rematch in 1934. In 1935, Alekhine played Dr. Max Euwe of the Netherlands and unexpectedly lost the championship.

Dr. Euwe, obviously unaware of how a champion behaves, offered Alekhine an immediate rematch. It took place in 1937, and Alekhine got the crown back. Unaware of how an ex-champion behaves, Dr. Euwe failed to blame his loss on poor health. For his part, Alekhine began negotiations again with Capablanca, who was still waiting for a rematch when he died in 1942. Alekhine retained the crown until his death in 1946.

In 1948, FIDE took over the administration of championship play, and set up a match tournament to decide the new chess king. Mikhail Botvinnik of the USSR won, and save for one notable interruption, the Soviets have dominated international chess ever since. (Chess is officially encouraged and controlled by the government in the Soviet Union, having been declared a political instrument at the Third All Union Congress in 1924). After winning the championship, Botvinnik played little chess for the next three years, although his preparation for a title defense was always quite intense and included the minute study of his opponent's style. (See Classic Game numbers 54 and 82.)

It was not until 1957, when another Soviet, Vasily Smyslov, beat Botvinnik in their second match. (See Classic Game numbers 56 and 58 for examples of Smyslov's play.) At the time, FIDE rules permitted an ex-champion to demand a rematch after only one year, so Botvinnik was able to get his crown back in 1958.

In 1960, the Latvian Mikhail Tal, who is another very rapid player in a modern-romantic style, easily took Botvinnik's championship away. Soviet chess authorities were quite upset by this turn of events, because Tal plays a very unorthodox game by Soviet standards. (See Classic Game numbers 64, 65, 67, 87 and 89 for examples of Tal's play.) The Soviets were able to relax the next year when Botvinnik took the championship back.

Botvinnik's next challenger was another countryman, Tigran Petrosian, whose game consists mostly of waiting for his opponent to do something. (See Classic Game number 68.) Botvinnik must have done something wrong, for Petrosian beat him in 1963, winning 5–2, with 15 draws. By this time, FIDE had abandoned its 1 year rematch rule, and rather than have to wait three years to get another shot at the championship, Botvinnik retired. In his first defense, Petrosian sat back and allowed Boris Spassky to make the mistakes. Spassky made enough for Petrosian to win 4–3, with 17 draws. Spassky apparently learned something from the experience, because in 1969 he beat Petrosian 6–4, with 13 draws. (See Classic Game numbers 66, 69, 70, 71, 72 and 85 for examples of Spassky's play.)

For his first title defense, Spassky had to face Bobby Fischer,

whose bizarre behavior managed to alienate everyone associated with the match. While Emanuel Lasker might make a move designed to upset his opponent, Fischer would apparently say or do absolutely anything in an effort to throw the opposition off balance. Fischer's style might be considered the ultimate extension of Lucena's advice about making sure your opponent's eyes are in the sun. Fischer's antics made his beating Spassky in 1972 the most publicized chess match in history, and for the first time since the death of Alekhine, someone outside the Soviet bloc was chess champion. (See Classic Game numbers 57, 62, 63, 75, 77, 80, 84 and 86 for examples of Fischer's style of play.)

Although he stated that he would defend his crown frequently, Fischer played no one, and when he refused to abide by FIDE rules for a match in 1975, he lost his crown by default to Anatoli Karpov of the USSR. (See Classic Game numbers 90 and 91.)

Karpov defended his championship successfully until November of 1985, when he lost it to Gary Kasparov, also of the Soviet Union. Something of an outsider in Soviet chess circles, Kasparov appears to be embroiled in a dispute with FIDE over the championship, although nothing will be known with any certainty until the time of the next defense. (See Classic Game numbers 97 and 98, for Kasparov vs. Karpov, and Classic Game numbers 92, 93, 94 and 95, for Kasparov against other opponents.)

Chess and Machines

"Even if we could teach a computer to play chess merely as well as—to use Norbert Wiener's simile—'the vast majority of the human race (no offense meant), we would be furnishing definite proof that a machine can solve problems of sufficient complexity to defy the reasoning ability of millions of people throughout their lives."

—Edward Lasker, *The Adventure of Chess*, new Dover edition, 1959.

In 1769, a Viennese expert in hydraulics and acoustics, Wolfgang von Kempelen exhibited an interesting conjurer's trick to the Imperial Court of King Joseph II. It was a life-sized figure dressed as a Turk seated behind a chessboard on top of a chest. The chest appeared to be filled with cogs and gears, which von Kempelen would demonstrate in the course of a game of chess against a human challenger. The Turk would invariably win, and its entertainment value was the same as any magic act: How did he do that? It was obvious to all that no machine could possibly play chess.

After von Kempelen's death, the Turk was bought by a Bavarian musician and showman, Johann Maelzel. Maelzel had already built and exhibited mechanical devices of his own: A

mechanical trumpet player, and the Panharmonicum, which played a variety of orchestral instruments. (Beethoven composed pieces specifically for both devices.) Maelzel took over the Turk, and was successful far beyond anything he could have imagined, making huge amounts of money. Never claiming that the device actually played chess itself, he made it part of the show to demonstrate the impossibility of hiding a human inside the Turk.

Even today we are not sure how the Turk actually operated. We know there was a man hidden inside the device, and that he used a pantograph to make the Turk's arm move his pieces, but beyond that we have only guesses. We will never know for certain, because the Turk was destroyed by a fire in 1854.

Another device, called Ajeeb and dressed as an Egyptian, was built in 1868 and had a similar career. Ajeeb also beat all comers, and at one time the "inside man" was the American master Harry Pillsbury. Ajeeb, too, was destroyed in a fire, this one at Coney Island in 1929.

However, in the late 19th century, something much more interesting and more directly related to computer chess was happening at the *Escuela Technica Superior de Ingenieros de Caminos* (The School of Road Works) at Spain's Polytechnic University. Leonardo Torres y Quevedo had devised a pressure sensor connected to a rudder which would keep torpedoes at a constant depth. Torres y Quevedo was impressed by the "intelligence" of the sensor in performing its limited task. It functioned much more efficiently than any human could, and Torres y Quevedo wondered if there might be more things a device might be "taught" to do. So, in 1890 he built a prototype device which would play the chess ending of white king and rook against a human with the black king. Not only did the device win, it also said "check" and "mate." A final version was exhibited at the Paris World Fair in 1914, but the World War prevented any further work.

In 1939, the British Foreign Office established the Department of Communications at Bletchley, 50 miles north of London. Their purpose was to build a device which would crack German coded messages no matter how the ingenious German encoding device known as "Enigma" was set. In order to accomplish this task, the Foreign office had to go beyond cryptanalysis experts, so they also employed mathematicians, electronic engineers, linguists, crossword puzzle buffs, and chess players. The man most responsible for the success of the project was Alan Turing, a prominent and eccentric mathematician, and a chess buff. Earlier, Turing had proposed a "universal machine" which would simulate the operation of any other machine, and at Bletchley it was built. Known as "the bomb" or "Ultra," Turing's machine worked so well that Allied leaders frequently had German messages decrypted and translated before their intended recipients got them.

Turing's universal machine was not a computer, however. After the war, Turing got a large grant from the British govern-

ment to build a general purpose electronic computer. Although he had established the mathematical concept for such a machine in 1936, building a working model was not easy. Turing talked to reporters about it in 1946, calling it an "automatic computing engine," and in the same interview discussed the possibilities of computer chess. He was quoted as saying "That is a question we may be able to settle experimentally in about 100 years time."

But Turing had worked out the formulas necessary for a chess program, and in 1951 or 1952 he used it in an actual game. Working his program from notes on paper, Turing played Alick Glennie, who was an admittedly weak player. Glennie reported that Turing had trouble operating his own program because it often chose moves that Turing knew were wrong. The game took about 2 or 3 hours, and ended when Turing's program lost its queen. Turing was quoted as saying the program had resigned "on the advice of his trainer." In his spare time, Turing began programming the Manchester University computer to play chess, but died before he could complete his work.

In the United States, Dr. Claude E. Shannon of Bell Labs described in March of 1949 how an electronic computer could be programmed to play chess. Shannon was interested in computer chess only because most people felt that chess required "thought." If a computer could be programmed to play chess, Shannon felt, that would hold great theoretical implications for the future of computers. Two of Shannon's proposals are still of interest. He defined the two schools of chess programs, brute force vs. heuristic programming (the school of knowledge). Shannon favored brute force because that approach takes advantage of the computer's obvious strengths. He also suggested that machines be programmed to learn directly from their mistakes, a refinement that in the main has thus far eluded programmers.

In Los Alamos, New Mexico in 1956, Ulam and Stein actually programmed a computer to play a simplified version of chess on a 6×6 square board (leaving out the bishops, limiting pawns to a one square advance on opening, and omitting castling). They wanted to know whether a computer could make reasonable moves solely on the basis of material gain and increased mobility. The computer played itself first, revealing an inordinate fear of being in check. After a few improvements, the program, MANIAC I, became the first computer program to beat a human in a game—an unnamed volunteer who had learned the game only a week before. Capable of 11,000 operations per second, MANIAC I used exhaustive search to examine 4 plies in 12 minutes per move.

In an article in the June 1958 *Scientific American*, Alex Bernstein, a mathematician and a very strong chess player, and Michael Roberts described how they, Timothy Arbuckle and M. A. Belsky had programmed an IBM 704 to play chess. Their program ran on 8,000 punch cards, and required that its opponent punch his moves into a card and then feed it into a reader. The

machine conducted a 4 ply search like the Los Alamos program, but also added two new considerations, king defense and area control. Bernstein's program also used a ratio to consider material evaluation, which was an advance over the simple point system used previously. Running at about 42,000 operations per second, this program was able to play a fair amateur game at the rate of a move every 8 minutes.

The next year, Herbert Simon, Allen Newell, and Clifford Shaw of the Rand Corporation and the Carnegie Institute of Technology came up with a very complex program that could play at the medium amateur level. It took about an hour per move, but because it represented such a huge leap in computer chess technology, it led Herbert Simon to predict that within 10 years a computer would be the world chess champion.

In 1965, Professor Hubert L. Dreyfus evaluated the play of MANIAC II (an improved MANIAC which played on a full 8×8 board), Bernstein's program for the IBM 704, and a program of his own, and announced, "Still no chess program can play even amateur chess." By December of that year, Dr. Dreyfus had lost a game to MAC HACK, developed by Richard Greenblatt and Donald Eastlake of M.I.T. MAC HACK was another breakthrough, able to defeat about 80% of non-tournament level players. Greenblatt and Eastlake were good programmers with a very fast computer for the time, the PDP-6. Their "plausible move generator," with 50 considerations for a move, cut down on the number of moves the machine had to consider. And there was one other important factor: Most opponents resigned too soon. Believing that MAC HACK's strong opening and middle game represented its end game, few humans got as far as MAC HACK's dreadful endgame. By 1968, when MAC HACK VI was demonstrated at the International Federation of Information Processing (IFIPS) meeting in Edinburgh, its rating was 1500 elo.

After this, things began happening very quickly. Between 1967 and 1970, 8 new programs appeared in the United States alone, and in 1970 the first U.S. Computer Chess Championship took place. CHESS 3.0, created by David Slate, Larry Atkin, and Keith Gorlen of Northwestern University swept the tournament, winning all three of its games. The CHESS program as 3.5 in 1971 and 3.6 in 1972 also won all its games in the next two U.S. championships. The 1972 contest featured notes on the games by Samuel Reshevsky, a master player and ex-U.S. champion.

In 1974, CHESS 4.0 appeared, a completely new version which marked a switch from selective search to full-width search, in keeping with Dr. Shannon's predictions of the greater suitability of the brute-force approach. Unfortunately, this was the version that lost the first World Computer Chess Championship in Stockholm. It placed second to KAISSA from the Soviet Union, a program on which Mikhail Botvinnik, the ex-World Champion had worked. In all fairness, it should be pointed out that CHESS did not play KAISSA in the tournament, and in an unofficial game played after the event, the outcome was adjudicated a draw after the 65th move. In the second World Computer Cham-

pionship, held in Toronto in 1977, CHESS 4.6 won in a clean sweep, although again, it did not meet KAISSA during the match. This time, however, when they played afterwards, CHESS beat KAISSA in 44 moves.

In 1978, it was time to play the Levy challenge. Ten years earlier, the International Master David Levy had bet two computer scientists 500 pounds that no computer chess program would be able to beat him in ten years' time. When the match came around, the bets had increased to 1250 pounds, and Levy played a series of matches against CHESS 4.5, KAISSA, MAC HACK VI, and CHESS 4.7. Levy won every match, and only CHESS 4.7 was able to score a point against him. While disappointing to its programmers, its one win against Levy represented the first time a computer had won a game against an International Master.

Omni Magazine then offered $4,000 to the first program to beat Levy. Levy increased the stake to $5,000, and in 1983, he was challenged by the creators of CRAY BLITZ, the winner of the 1983 World Computer Chess Championship. Levy played CRAY BLITZ in April of 1984, and although he did not lose a game, Levy did compliment the programmers by studying CRAY BLITZ's games in detail.

CRAY BLITZ was also beaten as North American Computer Champion in October of 1985 by HITECH, designed by Hans Berliner, Carl Ebeling, and Murray Campbell of Carnegie-Mellon University. Berliner designed a unique processor he called the searcher which employs 64 chips, one for each square on the board. Each chip examines the entire board for moves and determines the best one. The searcher then ranks the 64 choices, and the game tree is searched as deep as 14 plies based on the searcher's ranking. So far, HITECH has had an easy time playing computer opponents.

Earlier, we quoted from Edward Lasker's *The Adventure of Chess*. Lasker stated that if a computer could play chess *merely as well* as the vast majority of the human race, "we would be furnishing definite proof that a machine can solve problems of sufficient complexity to defy the reasoning ability of millions of people throughout their lives." Your Chessmaster 2000 far exceeds Lasker's requirement. The creators of The Chessmaster 2000 gratefully acknowledge the pioneering efforts of those programmers whose earlier chess programs paved the way for this state of the art program you have purchased.

The Chessmaster's Library of Classic Games

1. Greco, 1620
Greco plays for mate right from the start as he sacrifices piece after piece.

2. Legal—St. Brie, 1700+
This game, played sometime in the eighteen hundreds, is the only known game we have from the great French player Legal. The final position, known as Legal's Mate, shows the folly of making too many Pawn moves in the opening and not developing the Kingside pieces.

3. De la Bourdonnais—McDonnell, Match, 1834
A wild attacking game where both sides play for mate. This game has an incredible and amusing finish.

4. Harrwitz—Staunton, London, 1846
Staunton's pieces force Harrwitz to weaken his Kingside Pawns, until his last move, 25 f6-d5 creates a decisive threat. (Qh8 checkmate and N×e7 winning the Queen).

5. Horwitz—Staunton, London 1846
Horwitz makes a decisive tactical mistake overlooking Staunton's family Knight fork.

6. Schulten—Horwitz, London, 1846
This game features a wonderful Queen sacrifice in order to deliver a deadly "double discovered check" 16f5-d6 + (by the Rook and Bishop).

7. Anderssen—Kieseritsky, 1851
Anderssen sacrifices a Bishop for a handful of tempos (moves that gain time for one player while the other player is forced to retreat a piece or weaken his position in some way) and an attack on Black's Queen. Later he sacrifices both Rooks to continue his assault on the Black King. Finally, Anderssen parts with his Queen for a pretty mate with his two Knights and Bishop. Hence, the "Immortal Game."

8. Anderssen—Dufresen, 1852
Anderssen's other name game, The Evergreen, played one year later in 1852. Black appears to have defended, and even created a winning counter attack, when Anderssen surprises his opponent with a beautiful Queen sacrifice leading to an unusually pretty checkmate.

9. Lichtenheim—Morphy, 1857
Morphy again shows the virtues of rapid development as he whips up a strong attack with his Queen and two Bishops.

10. Morphy—Amateur, New Orleans, 1858
A typical Morphy game. Morphy played this game during a simultaneous blindfold exhibition. Here he sacrifices a handful of pieces while driving the opponent's King into the center of the board, and a quick checkmate.

11. Morphy—Duke of Brunswick, Paris, 1858
Morphy develops his pieces quickly and effectively while his opponent's development is hindered by his own pieces. Morphy is rewarded for his better development by a beautiful attack, crowned with a Queen sacrifice and a pretty checkmate.

12. Morphy—Lowenthal, London, 1858
Morphy, the master of attack, plays a brilliant Pawn sacrifice to keep the opponent's King in the center of the board. Showing masterly technique, Morphy finishes off his opponent as effectively as any world class grandmaster of today.

13. Morphy—Anderssen, Paris, 1858
Morphy and Anderssen play a wildly tactical game from their match in 1858. Anderssen allows his King to get too exposed and he quickly succumbs to Morphy's attack.

14. Anderssen—Steinitz, London, 1866
Anderssen attacks and Steinitz defends and pushes his passed Pawn down the board. Finally Steinitz counter attacks and wins.

15. Schiffers—Harmonist, Frankfort, 1887
A beautiful attacking game with a nice example of a deflection sacrifice, White temporarily sacrifices his Rook 16.e1-e8 to remove the Black Rook defending the Pawn at f7. But White allows Black to win his other Rook with a Knight fork 18.f4-e2+ because he sees that the attack on the Black King with Queen, Bishop and Knight will be overwhelming. Notice that Black's Queenside Rook and Bishop are out of play and unable to help defend the King.

16. Steinitz—Lasker, Montreal, 1894
Steinitz, trying to defend his World Championship against Lasker, gives us a marvelous example of the power of connected passed Pawns in the endgame. Lasker won the match with 10 wins, 5 losses and 4 draws.

17. Lasker—Steinitz, Philadelphia, 1894
Lasker wins because of his better Pawn structure. Notice that Steinitz has three distinct Pawn islands while Lasker has only two. A nice endgame win by Lasker.

18. Steinitz—von Bardeleben, Hastings, 1895
Steinitz takes advantage of his lead in development and his opponent's King being stuck in the center by playing one of the most remarkable Rook sacrifices of all time.

19. Pillsbury—Tarrasch, Hastings, 1895
Pillsbury, a virtual unknown, comes to Hastings, England in 1895 and wins one of the strongest tournaments of all time. Here, he shows that the Queen's Gambit Declined opening can lead to a strong attacking position. Note Pillsbury's beautiful 44th and 45th moves.

20. Lasker—Steinitz, Moscow, 1896
In 1896 Lasker defended his World Championship title against Steinitz even more convincingly with 10 wins, 2 losses and 4 draws. Here he draws Steinitz into a mating net in the middle of the board!

21. Janowski—Schallopp, Nurenburg, 1896
Janowski gives us a marvelous example of a line blocking sacrifice with 12.c4-d5! This move defends the White Rook, attacks the Black Queen and allows White to continue his attack on the Pawn at c6.

22. Lasker—Napier, Cambridge Springs, 1904
Napier plays his best game of chess against Lasker, but loses in this truly remarkable game.

23. Marshall—Tchigorin, Ostend, 1905
Marshall, one of the original five Grandmaster of chess, shows his high level of tactical mastery in this game. It appears his Knight is lost, but Marshall defends it with clever tactics.

24. Dus-Chotimirski—Rubenstein, Lodz, 1907
This game has been called Rubenstein's "Immortal Game." Rubenstein gives up his Queen and a Rook to capture the best defender of White's King (i.e. the Bishop at e4). Mate soon follows as White's Kingside is fatally weakened.

25. Lasker—Marshall, World Championship;—Memphis, 1907
Marshall attempts an attack without first completing his development. The attack fizzles while Lasker's counter attack comes to full steam.

26. Rubenstein—Lasker, St. Petersburg, 1909
Rubenstein defends against Lasker's threats with a beautiful counter attack! He hangs onto his extra Pawn and neatly wins the endgame.

27. Capablanca—Marshall, Match, 1909
Capablanca outplays his opponent in the opening, establishes his Knight in front of Marshall's backward Pawn at c5, and wins a Pawn. Marshall then tries to muddy the waters with some tricky tactical play, but Capablanca outplays him tactically too.

28. Teichmann—Schlechter, Carlsbad, 1911
This game is a beautiful example of the power of the White Bishop on the a2-g8 diagonal. The Bishop applies pressure on the f7 square and is finally sacrificed there to bring up two more attacking pieces with gain of time. The Queen and Knight attacking the undefended Kingside waste little time in finishing the game. White uses his Rook at e1 for the deciding blow.

29. Rubenstein—Capablanca, San Sebastian, 1911
Rubenstein comes up with a remarkable middle game combination 15.c3 × d5 and 17.d1-c1!! and then plays a nearly flawless endgame to win this masterpiece from one of the world's strongest chess players.

30. Capablanca—Bernstein, San Sebastian, 1911
The first encounter between Capablanca, the future World Champion from Cuba, and an established European master. Capablanca calmly gives up two Pawns on the Queenside to develop a Kingside attack. 28.f5 × g7 breaks up Black's defense. If 28.e6 × g7, then 29.h5f6 + and White captures the Bishop at d7, and the attack on the exposed Black King would be both swift and deadly.

31. Janowski—Marshall, New York, 1912
During this game, while Marshall captured a piece, offering a Queen for a sacrifice, his opponent muttered, "Swindle." Marshall plays a series of beautiful moves taking advantage of his opponent not getting castled.

32. Lewitzky—Marshall, Breslau, 1912
This is Grandmaster Marshall's most famous game. Marshall's 23rd move is truly amazing. Marshall was showered with gold pieces after the game. Any capture of the Queen quickly loses. If you're not sure how, take the Queen and let the Chessmaster 2000 continue the play.

33. Lasker—Capablanca, St. Petersburg, 1914
World Champion Lasker plays a beautiful game. Lasker shows us a wonderful Pawn sacrifice at move 35.e4-e5 in order to free the e4 square for his Knight, which leaps in with devastating effect.

34. Lasker—Alekhine, St. Petersburg, 1914
Who's attacking whom? Both sides develop attacks against the other King, but White has a better attack, and a better defense due to his Bishop at g2.

35. Adams—Torre, New Orleans, 1920
This game is a beautiful example of an overworked defending piece. White attacks the Black Queen, which is tied down to defending the Rook at e8. If the Black Queen leaves the defense of the Rook then White will checkmate the Black King in two moves beginning with e2 × e8 + . With 18.d4-g4 White begins one of the most incredible series of moves in chess.

36. Capablanca—Lasker, Havana, 1921
Lasker parts with the exchange to develop an attack, but Capablanca is able to hold on and counter attacks to win.

37. Lasker—Capablanca, Havana, 1921
Capablanca didn't lose a single game to Lasker in their World Championship match of 1921. Lasker, behind the exchange, creates active play for his Rook and two Knights, but Capablanca's accurate defense snuffs out all resistance and any hope of a winning attack.

38. Alekhine—Yates, London, 1922
Alekhine demonstrates how to win a chess game with crystal clear strategy and an extraordinary final combination. After move 11f7-f5? Alekhine considers Black's game strategically lost. Black creates a permanent weakness at e5; since once White establishes a Knight there, Black can never drive it away with a Pawn. Alekhine takes control of the only open file with his Rooks, penetrates with them to the seventh rank and is able to double his Rooks on the seventh. Having control of the opponent's seventh rank, Alekhine marches up his King for the final assault on Black's position.

39. Rubenstein—Hromadka, Mahrisch-Ostrau, 1923
White offers up a startling Queen sacrifice which cannot be accepted. The game ends four moves later when White wins a piece.

40. Reti—Bogoljubow, New York, 1924
Reti wins the brilliancy prize in one of the strongest tournaments of all time: New York 1924. He concludes the game with a beautiful line blocking sacrifice, 25.f7-e8! when checkmate is unavoidable. Ex: if 25 . . . d8 × e8 26.f5 × f8 + e8 × f8 27.f1 × f8 mate; or 25 . . . h7-h6 26.f5 × f8 + h8-h7 27.e8-g6 + h7 × g6 28.f8-f5 mate.

41. Torre—Lasker, Moscow, 1925
Lasker is upset by Torre in what has become a classic example of a "see-saw" check. With 25.Bg5-f6! White gives up his Queen, but by a series of force checks he is able to get Lasker's Queen and more, obtaining a won endgame.

42. Yates—Rubenstein, Budapest, 1926
White makes short work of one of the best players in the world. Black overlooks the power of 11.c1-g5. He should have responded 11 . . . h7-h6 right away. 12 . . . h7-h6 is no longer any good because White would win the exchange with h4-g6 (attacking both Queen and Rook). Notice the Pawn at f7 is pinned to the Black King. In the final position Black could respond f7 × e6, but after e2-g4 + he could choose to get checkmated or after e8-g6 lose his Queen to the move f5-e7 + . He therefore resigned.

43. Alekhine—Tartakower, Kecshkemet, 1927
Alekhine sacrifices two pieces in order to break up Black's Kingside. He gives up a Rook, Bishop and Knight for the opponent's Queen, which would be too much material for a Queen. But he is able to win another piece due to an attack on Black's undefended Rook at a8

44. Capablanca—Spielmann, New York, 1927
Capablanca won the brilliancy prize for this nice piece sacrifice. Capablanca gets more than enough compensation in three Pawns, one being a strong passed Pawn which rolls down the board to victory.

45. Colle—Johner, Carlsbad, 1929
Johner neutralizes any ideas of a White Kingside attack by playing a stonewall defense (i.e., Pawns at d5, e6 and f5). With the center stabilized and having castled on opponent's wings, Black proceeds with his Queenside attack. White is finally able to open some lines in the center but it proves too late, as Black crashes through on the Queenside.

46. Canal—Johner, Carlsbad, 1929
White comes up with a surprising Knight move 20.d4-e6 which opens a line to the Black King. White's attack picks up steam as he gets his Rooks doubled on the King Bishop file and penetrates with decisive effect by 27.f5-f6 which threatens d3-g6 mate! If e6 × f6 then 28.f1 × f6 g7 × f6 29.d3-g6 + f6-e5 30.g6-f5 mate.

47. Mattison—Nimzowitsch, Carlsbad, 1929
A wonderful game by Nimzowitsch from his greatest tournament victory. The position is somewhat closed, which means that Knights will be stronger than Bishops. Black trades Queens and soon his Knights penetrate White's position with decisive effect.

48. Alekhine—Nimzowitsch, San Remo, 1930
Alekhine uses pins with good effect in this game, especially on the c file. His opponent finally runs out of moves, as every move he can make will lose material. This is called *Zugzwang*.

49. Lasker—Thomas, c.1930
Ed. Lasker shows us what a King hunt is all about. After a beautiful Queen sacrifice, the Black King is forced to march straight into enemy territory. The final blow is that checkmate is delivered when White moves his King, allowing a discovered check by the Rook at a1.

50. Alekhine—Nimzowitsch, Bled, 1931
Alekhine completely dominated the tournament at Bled, 1931. This game is an example of his dynamic play.

51. Keres—Winter, Warsaw, 1935
Keres allows his greedy opponent to win three Pawns. In exchange for the Pawns, Keres gets a giant lead in development, which turns into an overwhelming attack.

52. Landau—Book, Kemeri, 1937
Landau uses the "Colle System" to great effect. A dazzling Kingside attack follows, and after most of the pieces come off the board, White ends up two Pawns ahead. Black resigns rather than play out a hopelessly lost endgame. White's first nine moves comprise a system of play called the "Colle System." White develops his pieces in preparation to play e3-e4 and if Black allows him, then e4-e5 with a strong Kingside attack.

53. Keres—Reshevsky, Stockholm, 1937
Keres, probably the strongest player never to become World champion, wins a game from the great American Grandmaster Reshevsky. This game was named the "Jewel of the Stockholm Olympiad of 1937."

54. Botvinnik—Capablanca, Holland, 1938
This is one of Botvinnik's most famous games. He plays a wonderful deflection sacrifice 30.b2-a3!! and a Knight sacrifice to advance his passed Pawn. The game ends when Capablanca runs out of checks.

55. Alekhine—Book, Margate, 1938
Alekhine sacrifices an entire Rook for a deadly pin on the a4-e8 diagonal, and the threat of Qe2-h5 + . The Black King is stuck in the center of the board and White uses all of his pieces to their full effect. Notice 17 d7 × e5 would lose to c1-g5 + , winning the Black Queen.

56. Smyslov—Rudakovsky, Moscow, 1945
White places his Knight in a magnificent outpost at d5 where it dominates the game. White carefully eliminates all defenders of d5 and Black has no Pawn that can drive it away. Once his Knight is established and the center closed, he finishes off his opponent with a Kingside attack. A very instructive game.

57. Byrne—Fischer, U.S. Championship, 1951
One of many famous Fischer games. This one against Robert Byrne, the brother of Donald Byrne. Fischer comes up with a surprising Knight sacrifice to break up the White Kingside. Then he gets rid of White's best defending piece and his attack comes quickly on White's unguarded light squares. Two grandmasters who were commenting on the game to spectators in another room believed that Byrne was winning, at the very moment he resigned. Fischer would have won after 22.d2-f2 d7-h3 + 23 f1-g1 e8-e1 + 24.d1 × e1 g7 × d4 when mate follows at g2.

58. Keres—Smyslov, Zurich, 1953

A remarkable game! Keres attacks on the Kingside and offers up a whole Rook for Smyslov to capture. Smyslov, unable to calculate all of the variations, plays a move based on his intuition and opens up the center. White continues his attack on the King Rook file, which looks overwhelming, but accurate defense saves the day, followed by a strong counter attack.

59. Taimanov—Najdorf, Zurich, 1953

The Kingside attack is most effective when you control the center of the board, or when it is closed. In this game, White attacks on the Queenside and Black attacks on the Kingside. Najdorf breaks through in brilliant style, sacrificing a Pawn to open up lines of attack.

60. Averbakh—Kotov, Zurich, 1953

Kotov makes a spectacular and intuitive Queen sacrifice to drive the opponent's King where there is no support. There is no forced mate in sight, but Kotov figured that he must be winning. And this game made chess history.

61. Keres—Fuderer, Gothenbourg, 1955

Keres, playing against what has since been known as the "Poisoned Pawn" variation of the Sicilian defense, plays havoc with his opponent's inaccurate defense. In the final position White threatens e4-c5 + forking the Black King and Queen.

62. Byrne—Fischer, New York, 1956

This game was dubbed the "Game of the Century." Thirteen year old Bobby Fischer, playing against international master Donald Byrne, plays a beautiful combination beginning with 11Nb6-a5! but really uncorks the shocker with 17g4-e6! giving up his Queen but getting an overwhelming attack.

63. Fischer—Larsen, Portoroz, 1958

Fischer slays Larsen's "Dragon Sicilian" defense with a nice exchange sacrifice on the King Rook file.

64. Tal—Geller, Riga, 1958

Future World champion Tal startles his opponent with a beautiful offer of the exchange (Rook for Bishop or Knight). The move gives Tal a Rook on the seventh rank and changes his weak Pawn at d5 into a strong one. Geller later plays a weak move 25g7 × f6 and loses the game.

65. Nikitin—Tal, Tiflis, 1959

A spectacular game in which both sides have strong attacks against the opposing Kings. After the fireworks subside, an endgame ensues where Black's central Pawn mass decides the game.

66. Spassky—Bronstein, Leningrad, 1960

This famous game was named "The Bluebird," for its beauty. It even appeared in the James Bond film, *From Russia With Love.* Spassky and Bronstein take a time trip back 100 years and play the romantic King's Gambit opening. The King's Gambit is still played every now and then in tournament play today, but not by such top strength grandmasters. Bronstein considers his position lost after 9.c3-e4. The attack that Spassky plays is simply beautiful to watch. Hence the name, "The Bluebird."

67. Nezhmetdinov—Tal, USSR Championship, 1961

Tal, the supreme master of tactics, is given a taste of his own medicine. His King gets stuck in the middle of the board, and is unable to weather the storm.

68. Petrosian—Pachman, Bled, 1961

Petrosian, always known as a great defensive player, surprises his opponent with a wonderful Queen sacrifice, drawing Pachman's King into a mating net.

69. Spassky—Zinn, Lasne, 1962

Spassky creates a strong Kingside attack and sacrifices lots of material to expose the Black King. Spassky is able to gobble up material while driving the Black King across the board. Black finally realizes he is in a hopelessly lost endgame and resigns.

70. Liptai—Spassky, Lasne, 1962

White sacrifices a Knight, and then the exchange, for a Kingside attack, but accurate defense by Spassky leaves him a Rook behind.

71. Spassky—Ciric, Lasne, 1962

Spassky walks into prepared analysis, but comes up with a beautiful defensive move (17.f1-f4!), which was overlooked by the Yugoslavians in their home analysis.

72. Spassky—Evans, Varna, 1962

Spassky demonstrates how open lines can lead to a strong attack against then U.S. Champion Larry Evans. Spassky sacrifices two pawns against the King's Indian Defense and the investment pays off with a beautiful attack.

73. Averbach—Estrin, Moscow, 1964

White plays a very sharp opening, the Vienna variation of the Queen's Gambit declined. Black grabs a Pawn 10 . . . f6 × e4? and underestimates the power of White's reply. Both Kings come under attack but all of the White pieces participate, and there's the difference.

74. Bakulin—Bronstein, USSR Championship, 1964

Bronstein parts with both a Bishop and a Rook in order to penetrate the Kingside with his Queen. A beautiful example of how an enemy Pawn (at h3) can decisively weaken the King's position.

75. Fischer—Benko, U.S. Championship, 1964

Fischer gives us an excellent example of a blocking sacrifice. 19.f1-f6! prevents Black from moving his 'f' Pawn and prepares e4-e5, which opens up the diagonal for his Bishop, and would threaten h5×h7 mate.

76. Velimirovich—Nikolich, Belgrade, 1964

Velimirovich clearly demonstrates that the amount of material you have is not as important as what you are doing with it. Here he sacrifices a Rook and a Knight to open lines of attack for his other pieces. His investment pays off beautifully.

77. Tringov—Fischer, New York-Havana, 1965

Fischer plays his favorite Poisoned Pawn Sicilian and improves on the known theory with 18 . . . b8-c6! In the final position, he threatens not only a8×c8 winning a piece, but also a Philidor mate. Ex: if White played 23.b3-b1 the mate would follow 23.g4-f2 + 24.h1-g1 f2-h3 + (check by the Queen and Knight) 25.g1-h1 (g1-f1 would allow c5-f2 mate) c5-g1 + 26.b1×g1 h3-f2 checkmate.

78. Larsen—Petrosian, California, 1966

This is Larsen's "Evergreen Game" against the then World Champion Petrosian. A beautiful attack develops with two Rooks and two Bishops after Larsen parts with his Queen.

79. Bogdanovich—Suetin, Yugoslavia vs. USSR, 1967

After parting with his dark squared Bishop, Black succumbs to a surprise attack on the undefended dark squares.

80. Fischer—Geller, Skopje, 1967

Fischer plays a beautiful attack against Geller but makes a fatal error and is quickly forced to resign. Instead of 20.a2-a3?, 20.f1-f4 would continue White's attack.

81. Gheorghiu—Uhlmann, Sofia, 1967

White makes a positional exchange (Rook for Knight or Bishop) sacrifice and shows us a beautiful display of tactics. Note how the advanced White Pawn plays a decisive role in the final attack. Black resigns without waiting for White's 27th move. The final combination would be 27.a1×f6 c6×e4 (if 27 g7×f6 then 28.e4-g4 + g8-h8 29.g2×c6 when White is a piece ahead) 28.f6×f7 + f8×f7 29.e6×f7 +. g8×f7 29.g2×e4 and White is again a piece ahead.

82. Botvinnik—Portisch, Monaco, 1968

Botvinnik, not know for sharp tactical play, must have surprised Portisch with the combination beginning with 16.c2×c7! The final assault is very pretty as the Black King is surrounded with the White pieces.

83. Bilek—Gheorghiu, Bucharest, 1968

White plays a pretty exchange sacrifice in order to get a quick attack on the Black King. Black has no way to defend his Pawn at h7 after 10.c8-f5? 11.f1×f5! White's attack follows quite naturally.

84. Nikolich—Fischer, Vinkovici, 1968

With the center closed, Fischer mounts an attack on the Kingside. He gives up a piece just to open the King Rook file and the attack proves fatal.

85. Spassky—Petrosian, Moscow, 1971

Spassky defeats World Champion Petrosian during their match for the World Championship. He sacrifices a Pawn to open the lines to Petrosian's King, and then throws everything but the kitchen sink at him in this quick victory.

86. Fischer—Rubinetti, Palma de Mallorca, 1970

Fischer, in fine form, sacrifices a piece for a Pawn and a strong attack, and his opponent is quickly swept off the board.

87. Tal—Uhlmann, Moscow, 1971

Tal plays against Uhlmann, probably the world's leading authority on the French Defense. Uhlmann wins a Pawn but is shocked by Tal's 12th move, d4-f5! and spends almost two hours trying to find the right response. After his long think, Uhlmann decides to capture the Knight, but he is quickly dispatched by Tal's sharp play.

88. Velimirovic—Ljubojevic, Yugoslavia, 1972

Velimirovic, a fierce attacking player, dismantles Ljubojevic's Sicilian defense with a Rook sacrifice at e6. Black survives the attack by giving back some material, but the endgame is hopeless due to White's strongly placed Knight and passed Pawns.

89. Spassky—Tal, Tallinn, 1973

Tal, one of the most brilliant attacking players of all time, has suffered with poor health for many years. Here he is feeling fine and demonstrates his skill on former World Champion Spassky. This game shows the power of the Queen and two Bishops to attack an exposed King.

90. Karpov—Korchnoi, Moscow, 1974
Karpov defeats his bitter rival Korchnoi with a nice Kingside attack against the Dragon Sicilian. The fight ensues around Black's lone defender of his King, the Knight at f6. Once the Knight is eliminated the attack comes in with full force down the King Rook file.

91. Karpov—Unzicker, Nice, 1974
Karpov slowly squeezes his opponent like a boa constrictor in this game. While running out of moves, Black weakens his Kingside. Karpov penetrates the weakened light squares with his Queen and Knight and the game ends.

92. Kasparov—Ligterink, Malta, 1980
Kasparov comes up with a beautiful Knight move 22.b6-c8 which his opponent probably overlooked. The Knight is defended by a threat. If Black had played e8 × c8 then White would play f4-f5 attacking the Rook at c8 and threatening mate in two with 23.Qf5 × h7 + g8-f8 24.Qh7-h8 mate.

93. Kasparov—Marjanovic, Malta, 1980
The 17 year old Kasparov plays a line first played by Polugayevsky in his match against Korchnoi. Marjanovic's pieces congregate on the Queenside and Kasparov sends his to the Kingside. Marjanovic's Kingside Pawns are no match for all of the pieces sent against them.

94. Kasparov—Anderssen, Tilburg, 1981
Kasparov demolishes one of the strongest players of today. Black errs at move 5.f6 × e4? and never recovers. By move 23.a1-d1 all of White's pieces poised for the attack, while the Black pieces are badly misplaced and are unable to cooperate. The final combination is both swift and beautiful.

95. Kasparov—Petrosian, Bugojno, 1982
Kasparov manages to outplay Petrosian at his own game, i.e., positional chess. In the final position after 24 . . . e7 × c5 25.d1 × d8 + c5-f8 26.d8 × f8 + 27.c1-c7 Black quickly runs out of moves.

96. Portisch—Pinter, Magyarorszag, 1984
Pinter surprises many time Hungarian champion Portisch with a theoretical novelty on move 13 . . . c8-b7. Then he sacrifices a Knight to keep Portisch's King in the center of the board, then beautifully finishes up the game with a mating attack using his Bishop, Rook, Pawn and King!

97. Kasparov—Karpov, World Championship, 1985
Even World Champions are human. Former World Champion Karpov blunders with 23c8-d8?? Kasparov quickly finds the winning combination 23 . . . g4 × d7. If Black had continued the game with 25 . . . g7-g6, 26.d1 × d7 wins a piece because after b7-a6 27.e4 × c6 the Black Queen couldn't recapture because of 28.d7 × f7 checkmate.

98. Karpov—Kasparov, World Championship, 1985
The final game of the 1985 World Championship finds Karpov attacking on the Kingside. Kasparov plays accurate defense and then counter attacks in the center. Karpov's position proves to be full of holes and Kasparov's counter attack finally breaks through to victory!

99. Chessmaster 2000—Sargon III, Los Angeles, 1986
This and the following game were played between Sargon III and an early version of CHESSMASTER 2000, both running on IBM PC computers at level 2. In this game, Sargon goes Pawn grabbing while his King is in the center and is quickly punished by CHESSMASTER's sharp attack.

100. Chessmaster 2000—Sargon III, Los Angeles, 1986
CHESSMASTER develops a better position out of the opening. SARGON creates a fatal weakness at move 18 . . . g7-g5? White opens up lines of attack with 19.f2-f4 and makes short work of Black's Kingside defense.

The Chessmaster's Problems

1. Legal's Mate (See Classic Game #2)

Position After Move #5

White to move and checkmate in two moves.

2. Position from the Vienna opening

Black to move and checkmate in four moves.

3. Philidor's Legacy

White to move and checkmate in five moves.

4. Charles Badley's Twist

Black to move and mate in three.

5. Reti Domination Theme

White to play and win.

6. Endgame

White to play and win.

Solutions

Problem One:

1. c4 × f7 +   e8 - e7
2. c3 - d5 mate

Problem Two:

1. d8 - h4 +   f3 × h4
2. c5 - f2 +   e1 - e2
3. c6 - d4 +   e2 - d3
4. e4 - c5 Mate

Problem Three:

1. h3 - e6 +   g8 - h8
2. g5 - f7 +   h8 - g8
3. f7 - h6 (Double discovered check) g8 - h8
4. e6 - g8 +   c8 × g8
5. h6 - f7 mate

Problem Four:

1. f3 - e1 +   h1 - g1
2. a8 - h1 +   g1 × h1
3. f7 - f1 mate

Problem Five: (The White Knight completely dominates the Black Bishop, so that wherever it moves, the White Knight will win it by checking (forking) the Black King and the Bishop at the same time.)

1. c2 - d4 +   c6 - Cc
2. g2 - h1! ... and Black loses after his next move
if ... c5 × d4
3. a5 - a6 ... and White will make a Queen. A Bishop move to c1 or d2 allows d4 - b3 + or any move to f4, g5, g7 or f8 allows d4 - e6 +

Problem Six:

1. b5 - b6 Creates a passed Pawn and wins . . .
   Example . . .   c7 × b6
2. a5 - a6   b7 × a6
3. c5 - c6   and White will make a Queen in two moves!

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