THE FIDELITY CHESSMASTER 2100

"I declare it's marked out just like a huge chess-board!" Alice said at last. "There ought to be some men moving about somewhere – and so there are!" she added in a tone of delight, and her heart began to beat with quick excitement as she went on. "It's a great huge game of chess that's being played – all over the world – if this *is* the world at all, you know."

– Lewis Carroll, *Through the Looking Glass*

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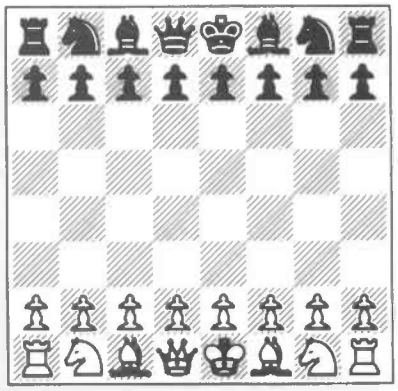
Let's Play Chess

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 below. (See the following diagrams 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").

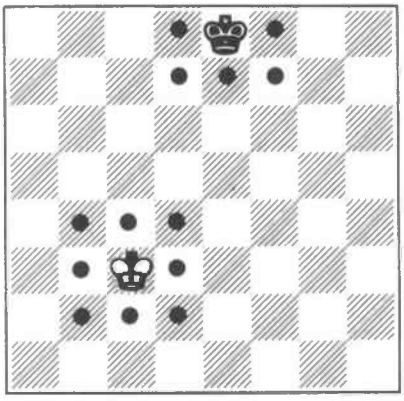
The main goal of chess is to checkmate your opponent's King. The King is not actually captured and removed from the board like other pieces. But if the King is attacked ("checked") and threatened with capture, it must get out of check immediately. If there is no way to get out of check, the position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



The Pieces

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

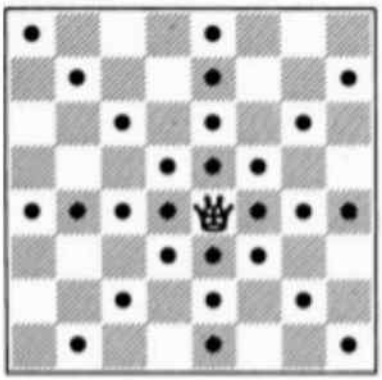


The King is the most important piece. When he is trapped, his whole army loses.

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.)

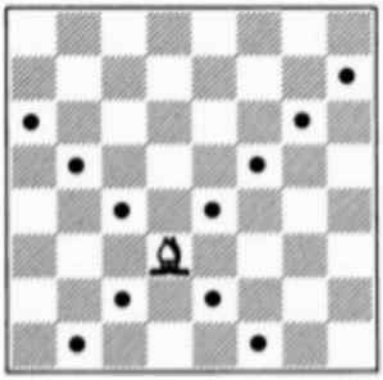
The King may never move into check – that is, onto a square attacked by an opponent's piece.

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.

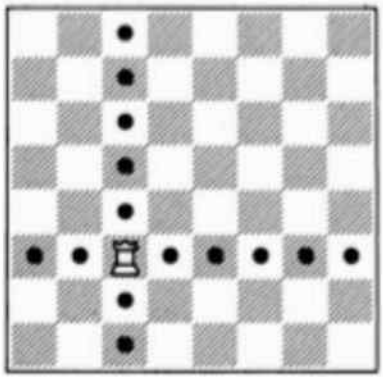
The Bishop



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.

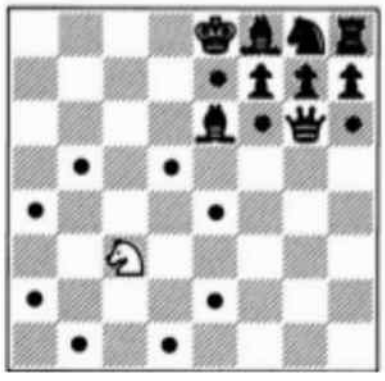
The Rook



The Rook is the second most powerful piece.

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

The Knight

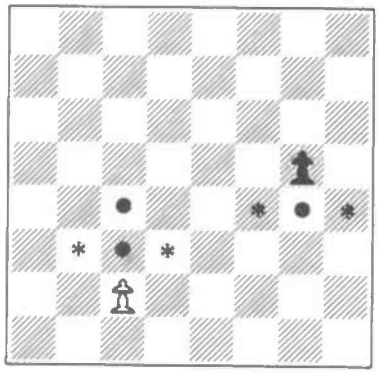


The Knight's move is special. It hops directly from its old square to its new square. The Knight can jump over other pieces between its old and new squares.

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 ✻.

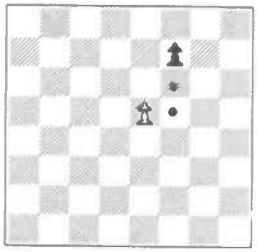
If a pawn advances all the way to the opposite end of the board, it is immediately "promoted" to another piece, usually a Queen. It may not remain a pawn or become a King. Therefore, it is possible for each player to have more than one Queen or more than two Rooks, Bishops, or Knights on the board at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

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.

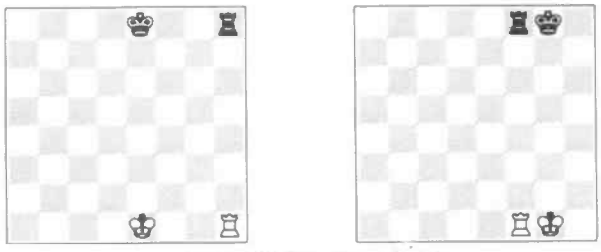


In the diagram above, the Black pawn moves up two squares to the square with the dot. On its turn, the White pawn may capture the Black one on the square marked with the ✻. If the White player does not exercise this option immediately – before playing some

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.

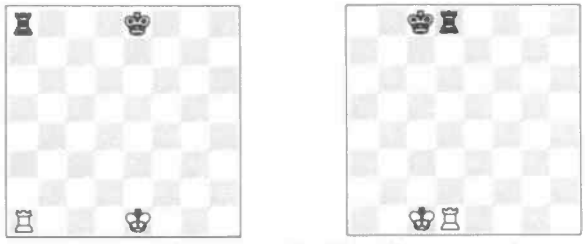
Castling

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).



Kingside Castling

Before After



Queenside Castling

Before After

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 pieces 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 wing. (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 the 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

Children in Piraeus, Greece playing street chess at Christmastime.

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 of *chatrang*, and codifying its rules. They spread a consistent game to the rest of the world, along with the idea that the rules ought to be uniform. Since the Persians took up chess, there have been rule 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 14th 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 theologians 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 1000 A.D., Christianity was established in Russia, and the church there immediately made a concerted and unsuccessful effort to stamp out chess playing. 16th 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 18th 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 20th 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 13th century, we find the first known instance of the chessboard with its now-familiar light and dark squares. 15th 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 rule changes designed to speed things up. In shantraj, 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 the 15th 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 g2 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 rule changes, the modern game of chess emerged, and there have been no other alterations since the 16th 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

World Chess Champion Gary Kasparov.

When William Steinitz beat Adolf Anderssen in 1886, 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 – a chain of "unofficial" champions can be traced back to the beginnings of the game. Each of them stood above his contemporaries, and in some way added to our common store of understanding.

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 10th 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 60 years later in Baghdad. He established the first rating system for chess players. Grandee was 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 the 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.

Few games survive from this era, and those that do are rather tedious. With the lesser attacking power of the "Queen" and "Bishop," games were rarely won by checkmate; more common was the old rule of win by "baring" – capture of all the opposing pieces. The most interesting survivals from this era are problems and studies. Those involving Rooks and Knights, whose moves have not changed, are still worth a look.

With the development of the modern game in the late 1400s, a new chess literature arose. The first chess author of whom we have a record is Luis Ramirez de Lucena, whose name has rather unfairly been attached to a dreadful opening[1] (1. e4 e5 2. Nf3 f6) which he counseled against. In 1497, 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 try to 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 (1. e4 e5 2. Nf3 Nc6 3. Bb5) is named. His matches with Giovanni Leonardo and Paoli Boi in 1574-75 marked the first recorded serious chess competition.

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. This era is sometimes known as the "Heroic Age" of chess, as the strongest masters traveled about seeking the sponsorship of wealthy patrons. It is

[1]The *opening* is the first few moves of the game. The term also refers to a specific sequence of initial moves whose consequences have been studied.

difficult to document this period; the surviving biographies of Leonardo and Boi include a plethora of magical charms, capture by pirates and poisonings by jealous rivals. Leonardo, Boi 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[2] were the preferred opening.

The culminating figure of this era was Gioacchino Greco of Calabria (1600-c.1634). Greco's contribution to chess literature lay in his inclusion of complete games to illustrate his opening variations. Although probably fictitious, his games were lively and entertaining and had much to do with the persistence of his works; for the next century, chess books were often known generically as "Calabrians." Greco's manuscripts were written as notes for his student/patrons, and without the master's instruction made heavy sledding for the average player, but nothing better was to be found until Philidor.

Phillip 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 (1726-95), 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.

The scion of a musical family, Philidor showed an early interest in chess, but his serious involvement began in 1745, when a concert tour with which he was associated collapsed, leaving him penniless in the Netherlands. For the next few years he supported himself playing and teaching, and in 1748 he published his *L'analyse du jeu des Echecs*.

This book was something new in chess literature – an attempt to instruct the student in strategy and planning, in *how* to think rather than *what* to think. Unlike his predecessors', Philidor's illustrative games were selected not to dazzle, but to instruct. He felt that the greatest weakness of his contemporaries was an ignorance of correct pawn play – in his own phrase, "*Les pions sont l'ame du jeu.*" ("The pawns are the soul of the game.")

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.

Philidor's playing strength is difficult to judge, for there is no contemporary yardstick with which to measure him; he stood head and shoulders above the

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[2] A *gambit* is an opening in which a pawn or piece is sacrificed in an attempt to gain an advantage.

players of his time, and it is hard to find a recorded game at even odds. His ability to play two blindfold games simultaneously caused astonishment at the time. It seems clear that he could have achieved much more had he been challenged, but few other figures in chess history stood so far ahead of their time. After a long and successful career both as a chess master and a composer (some of his operas are still occasionally performed), Philidor's life ended on a dark note. After 1789, his former royal patronage proved an embarrassment, and he died in exile in London in 1795.

The first of four consecutive French champions, Philidor's play created considerable interest in chess in France and England, and the center of the chess world was undoubtedly the Cafe de la Regence in Paris. Philidor was succeeded by his pupil Legall de Kermeur, of whom little is known, and he by Alexandre Deschapelles, whose repute as a great player is largely based on his own assertion.

Deschapelles was a domineering and arrogant war hero whose play consisted of nothing more than a sustained effort to checkmate his opponent's King. 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 Deschapelles'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[3] 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 line of French champions, de la Bourdonnais was one of those natural chess players whose moves came 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.

The 1834 match between de la Bourdonnais and McDonnell – really a series of six matches encompassing 85 games – was a milestone in chess in more ways than one: a formal encounter between two masters of comparable strength, in which all the games were recorded, published and studied. (See Classic Games number 1 and 2.) The record indicates 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. The Frenchman clearly proved his superiority with an overall score of 45 wins, 27 losses and 13 draws.

From a modern perspective, McDonnell was a strong player typical of his time, a fierce attacker who somewhat overvalued the initiative. De la Bourdonnais, though

[3]Strong players can handicap themselves when playing weaker ones, either by removing one or more of their pieces at the outset, or by giving the opponent one or more free moves, or both.

an equally gifted combinative player, had a grasp of position play rather ahead of his time; he valued central pawns, fought for central squares, and understood play both with and against an isolated central pawn, concepts which were not to resurface until the time of Steinitz.

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, who died in 1835.

De la Bourdonnais's successor in France was Pierre de Saint-Amant, the last of the great French masters. McDonnell's was Howard Staunton (1810-1874). In 1843, Staunton, who had lost a first match to Saint-Amant by one game, 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 and Bernhard Horwitz, 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 dominating figure in chess, both on and off the board. Though generally considered the best player in the world after his victory over Saint-Amant, his claim to fame does not really rest on his games; creatively, he was surely not the equal of de la Bourdonnais before him or Morphy after. But as a journalist, promoter and patron, he changed the image of chess from that of a parlor game to that of a serious sporting contest. His 1849 design for chess pieces has been in use ever since for matches and tournaments. It is the one most familiar today, and the one you will see on screen in your Chessmaster 2100. He founded the first successful chess magazine in English, *The Chessplayer's Chronicle*, in 1841, and wrote a chess column for the *Illustrated London News* from 1845 until his death. His books, *The Chess Player's Handbook* (1847) and *The Chess Player's Companion* (1849) were the primary sources of instruction for a generation of British and American players.

And in 1851 he organized the first international chess tournament: the Great Exhibition of London for chess players. Each entrant had to pay his own way there and put up a five pound entry fee, but there was a £183 purse for the winner.

This landmark event bore little resemblance to the round-robin tournaments of today. Sixteen players representing most of the nations of Europe, at least 12 of whom were among the best in the world, competed in a series of knock-out matches. Of course, this meant that two of the favorites might meet early on, one of the reasons why this system soon became obsolete. Staunton himself was unexpectedly knocked out in the third round by Adolf Anderssen, a high school math teacher from Breslau. (See Classic Games number 3 and 4 for examples of Anderssen's play.) He then suffered the ignominy of losing a playoff match for third place to his student, Elijah Williams. 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 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 10 hours. However, Staunton's comments on anyone's play but his own were unsportsmanlike to say the least, and he was not shy about voicing his complaints in his various press forums. For all his contributions to chess, Howard Staunton was not a very nice man.

The Hungarian chess-playing Polgar sisters attract attention in tournaments around the world.

In any event, after the London 1851 tournament, Adolf Anderssen was generally acknowledged as the best player in the world (except perhaps by Staunton). He was challenged – and surpassed – only by the brief phenomenon of Paul Morphy.

Morphy (1837-84) is justly known as "the pride and sorrow of chess." He showed an early precocity for the game, allegedly learning by watching his father and uncle play.

Morphy was raised in New Orleans (which had an active chess club, thanks to Benjamin Franklin, who popularized the game in North America, founded the Philadelphia Chess Society and wrote an influential essay *Morals of Chess* in 1779). From the age of eight, Morphy played many games against the best players of New Orleans, and by the age of 13, he was clearly stronger than any of them.

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 the youngster and predicting a great future in chess for him. Obtaining a law degree in 1857, Morphy found that he was not yet old enough to take the bar examination. Instead, he devoted himself to chess and walked away with the First American Chess Congress, held in New York. (See Classic Game number 5.)

Morphy dominated his opponents for reasons they themselves did not fully understand. In calculating and combinative ability, he was at least the equal of the best of his rivals, but he had something more as well: an instinctive grasp of positional principles which would not be elucidated for another generation. Unlike his contemporaries, Morphy knew not only how to attack, but

when as well. Anderssen commented, "There is no hope of catching Morphy in a trap." Morphy's attacks were more than traps. His style had a great effect on many later players who would sometimes ignore an easy advantage in favor of Morphyesque maneuvering. (See Classic Game number 6 for another example of Morphy's style of play.)

Shortly after Morphy won the New York tournament (the only tournament, by the way, in which he ever competed), 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 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, 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. (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. For a year he wrote a chess column for a New York newspaper, but aside from a few private games with friends, he never played serious chess again. He apparently felt that chess was not a suitable career for a professional man. But his legal practice failed – in part because of his fame as a chess player, in part because of outside events (his support of the union in the Civil War was not popular in Louisiana), and in part because of his psychological problems which, while exaggerated in popular literature, were certainly real. He gradually became a recluse and died of a stroke in 1884.

In the 1860s and 70s, chess gradually assumed the form it has largely kept to this day. Tournaments were held regularly, and the introduction of the chess clock ended the interminable ponderings of such players as Williams and Paulsen.

Because Morphy hadn't claimed the championship, Anderssen remained the

man to beat. The "romantic" players of this era played a wide-open game featuring sacrifices, and 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 the 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.

After a careful study of many games, Steinitz concluded that combinations did not arise from thin air – or, as his contemporaries might have said, from the genius of the master. Trained originally as an engineer, Steinitz reasoned, as Morphy had instinctively known a generation before, that combinations must arise from a positional advantage. Thus, an insufficiently prepared combination[4] must be unsound, and it should be possible to win by defense as well as attack. Steinitz also developed the theory of strong and weak squares. From these discoveries came the beginning of the scientific era of chess and the foundation of his 20-year reign. (See Classic Games number 9 and 14 for examples of Steinitz's play.)

Although he invariably took a high place when he competed, Steinitz played in few tournaments until 1894. Unlike most of his successors, however, he sought out and challenged his most dangerous rivals to matches, defeating Blackburne, Chigorin and Gunsberg. In 1886, playing Zukertort in 1886 "for the World Chess Championship," according to the match contract, Steinitz fell four points behind before winning 10 games to 5, with 5 draws.

By 1894, Steinitz was getting on a bit in years, and with a new generation of players came a less exciting style of play. The strongest players had assimilated the Steinitz principles, and found it easiest to win against a weaker opponent by waiting for a positional error – a premature attack, surrender of the two Bishops or creation of a pawn weakness, for example. Among themselves, the top masters played "correctly" and usually drew.

Emanuel Lasker (1868-1941) took another path. He recognized that error was an integral part of the game and played always to maintain the tension

[4] A *combination* is a series of interrelated moves aimed at producing an advantage.

and place new problems before his opponent. 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. (For examples of Lasker's play, see Classic Games number 12, 16, 20, and 27.)

Lasker, a native of Germany who had moved to the United States in 1890, finally defeated Steinitz in 1894. The match was played in New York for $2,000 a side, the winner being the first to take 10 games. When Lasker won 10–5, with 4 draws, there was not too much surprise at his defeat of a player 32 years his senior. 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.

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, halving his demand for $2,000 when Marshall was unable to raise it. Lasker won easily, beating Marshall 8–0, with 7 draws.

Lasker was a formidable player in tournaments, finishing below third place only once at the beginning and twice at the end of his career. His 78 percent

15-year-old Bobby Fischer, then U.S. Chess Champion, plays chess with a polio patient at a charity benefit.

score, spread over 30 years, was by far the best tournament record of his time. Defeating Marshall, Tarrasch and Janowski, he was held to a draw only by the "drawing master" Carl Schlechter.

Lasker was continually criticized for his infrequent title defenses, but in all fairness, if the war years of 1914-1918 are omitted, he did defend his title an average of almost once every three years, the interval required by present-day international rules. He might have played more often had he not championed the unpopular opinion that a chess master should be well paid for his labors – an argument that continues today.

Lasker held the World Championship for 27 years. By 1921, though still in love with chess and with the struggle, he seemed tired of the title, and at last lost a match to a player as unlike him as any could be, the invincible Cuban, José Raul Capablanca (1888-1942).

Capablanca was a prodigy in the Morphy mold. He learned the game at the age of four, and in 1901 was strong enough to defeat Cuban champion Juan Corzo in a match. While attending university in New York, he often played at the Manhattan Chess Club, but his match against Frank Marshall in 1909 was expected to be something of a mismatch. And so it proved, but in the other direction, as the Cuban defeated one of the best players in the world by a score of 8 wins to 1, with 14 draws. In 1911, he entered his first international tournament in San Sebastian (to which he was admitted only at Marshall's insistence), and finished ahead of every top player except Lasker. (See Classic Game number 23.)

Capablanca tried for years to get a match with Lasker, 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. 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. 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. (See Classic Games number 24, 27, 30, 47, 49 and 55.)

Capablanca symbolized the post-Steinitz "technical" era; he did little that was new, but he did everything extremely well. Unlike his predecessor or his successor, he lacked the driving ambition to create something new, or to accomplish more than his natural gifts could achieve so effortlessly. At his best, though, his games are as close to perfection as any ever played. Capa's greatest triumph was perhaps New York,

1927 (see Classic Game number 42), where he finished 3 1/2 points ahead of a field including Alekhine, Nimzovich, Vidmar, Spielmann and Marshall. His greatest disaster came only a few months later.

Like many champions, Capablanca 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.

Alekhine (1892-1946) was born in Russia, but after the Revolution his Czarist sympathies eventually resulted in his settling in France. From 1914 until 1927, he was at the top of the "second tier" masters, behind Lasker and Capablanca, but few observers gave him a serious chance to defeat the great Cuban. Certainly Capablanca did not. But Alekhine was quite a different sort of player than his rival. It was said that "chess was the breath of life to him," and that he "would rather die than not win." He was a man of furious energy who constantly studied games, openings and his opponents. In 1926, already known as a brilliant combinative player and attacker, he resolved to equal Capablanca at his own game of positional play and maneuvering. He succeeded and won the Buenos Aires match 6–3, with 25 draws. (For examples of Alekhine's play, see Classic Games number 32, 33, 34, 37, 40, 43, 45 and 46.)

For the next eight years, Alekhine dominated the tournament scene to a far greater extent than any of his predecessors, but he played few matches. His lesser rivals were unable to raise an adequate stake, and it proved impossible to negotiate a rematch with Capablanca. The question of who is to blame can still arouse fevered arguments; it is safe to say that neither was a man of small ego.

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 lost the championship unexpectedly to Dr. Max Euwe of the Netherlands (see Classic Game number 50) in a match for which he had not prepared, and during which he reportedly drank heavily.

Dr. Euwe, obviously unaware of how a chess champion behaves, offered Alekhine an immediate rematch. It took place in 1937, and Alekhine got the crown back. Equally unaware of how an ex-champion behaves, Dr. Euwe failed to blame his loss on poor health. (See Classic Game number 52 for another Euwe game.) Discussion of a match with one of Alekhine's younger rivals – Fine, Keres or Botvinnik – was halted by the second World War.

When Alekhine died in 1946, the World Championship was left vacant for the first time since 1886. The International Chess Federation (usually known by its French acronym FIDE) had been founded in 1924, but, ignored by successive world champions, had done little other than to organize the world team championships ("Olympiads"). Now, strengthened by a postwar influx of member nations, including the Soviet Union and its satellites, FIDE proposed a six-player match tournament to select a new champion.

A game played with living chessmen is the finale to a chess tournament in Ebersburg, Germany.

The event was finally held in Hague and Moscow in 1948 between Mikhail Botvinnik, Vassily Smyslov, Paul Keres, Samuel Reschevsky and Max Euwe. Reuben Fine had also been invited, but he gave up the game around this time to pursue a career in psychoanalysis. Botvinnik, who had been engaged in negotiations for a match with Alekhine at the time of the latter's death, scored an overwhelming victory, finishing three points ahead of his nearest rival.

Along with his tactical gifts and strategic depth, what Botvinnik brought to the game was the concept of scientific preparation. Alekhine indeed had studied constantly and prepared for each opponent, but few could match the inhuman self-discipline of Botvinnik. On one occasion, he ordered his second to blow smoke in his face during a training game to prepare for a tournament. On another, he had Flohr, one of his aides, collect every example of an endgame with a Rook plus pawns on the f and h files[5] versus Rook, a difficult ending that is sometimes drawn. "But Mischa," Flohr

[5]See the explanation of algebraic notation on page 53.

objected, "those positions occur once in fifty years!"

"No, no," replied Botvinnik, "there is no point in playing for the World Championship unless I understand that ending." (See Classic Games number 53, 55, 57, 59 and 62 for examples of Botvinnik's play.)

Since Botvinnik's victory, save for one notable interruption, the Soviets have dominated international chess. Chess is officially encouraged and controlled by the government in the Soviet Union. At the Third All Union Congress in 1924, chess was declared a political instrument, and subsequent government programs sought to encourage chess play, and to discover and foster chess talent – programs which produced a great number of strong Soviet Grandmasters. Western players from Fine to Fischer have accused Soviet masters of colluding to insure the victory of one of their own in major tournaments.

At the time of the 1948 Hague-Moscow tournament, FIDE set up a program of qualifying tournaments to produce a challenger for the World Championship every three years. Botvinnik's first challenger was David Bronstein, who in 1951 drew a hard-fought match, permitting the champion to retain his title. (See Classic Games number 61, 71, 75 and 76 for examples of Bronstein's play.)

The result was the same in 1954 when Botvinnik faced Vassily Smyslov, but in 1957 Smyslov not only again topped the Candidates' cycle – a remarkable feat – but beat Botvinnik as well. 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.

Throughout this period, the World Champion was, in Botvinnik's phrase, "first among equals." There were perhaps half a dozen players – Botvinnik, Smyslov, Bronstein, Keres, Reschevsky – who could legitimately have held the title. Bronstein's strength was in originality and imagination, while Smyslov was an intuitive player somewhat similar to Capablanca; at his peak it seemed that his judgement was nearly infallible. (For examples of Smyslov's play, see Classic Games 64, 70, 77 and 103.)

1957 World Chess Champion Vassily Smyslov.

A certain professional courtesy developed among the top players: win with White, draw with Black, draw with one another and beat the back-rankers. Then Tal arrived on the scene.

From 1958 to 1961, the Latvian, Mikhail Tal (b. 1936) equaled and surpassed his Grandmaster colleagues. He brought to the game a furious energy, tremendous calculating ability and a willingness to take risks not seen since

Alekhine's heyday. His piratical style and ebullient personality endeared him to the chess public far more than his reserved predecessors. Confounding the experts, who had predicted a prolonged duel between Botvinnik and Smyslov until the older man at last succumbed, Tal decisively won the Bled 1959 Candidates' Tournament (See Classic Game number 70). In the process he administered a 4-0 drubbing to the 16-year-old Bobby Fischer, who already felt that he should be Champion. The "magician from Riga" went on to defeat Botvinnik in 1960, 12 1/2–8 1/2. Soviet chess authorities were quite upset by this turn of events, because Tal plays a very unorthodox game by Soviet standards. (See Classic Games number 81 and 110 for other examples of Tal's play.)

The Soviets were able to relax the next year when Botvinnik, again taking advantage of his "divine right" to a rematch, prepared carefully and recaptured the title 12–8. Though a strong and dangerous Grandmaster even today, Tal was plagued in the next few years by health problems, and never again succeeded in reaching the summit.

Botvinnik's next challenger was another countryman, Tigran Petrosian, whose game consisted mostly of waiting for his opponent to do something. (See Classic Games number 72, 79 and 83.) 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 one year rematch rule, and rather than wait three years to get another shot at the championship, Botvinnik retired from world championship competition, though he continued to play with success in tournaments for another seven years.

In his first defense, Petrosian sat back and allowed Boris Spassky to make the mistakes. The young and outgoing Spassky, an aggressive and well-rounded player, had scored a string of tournament victories far more impressive than Petrosian's. But he made just enough mistakes for Petrosian to win 4–3, with 17 draws, thus becoming the first

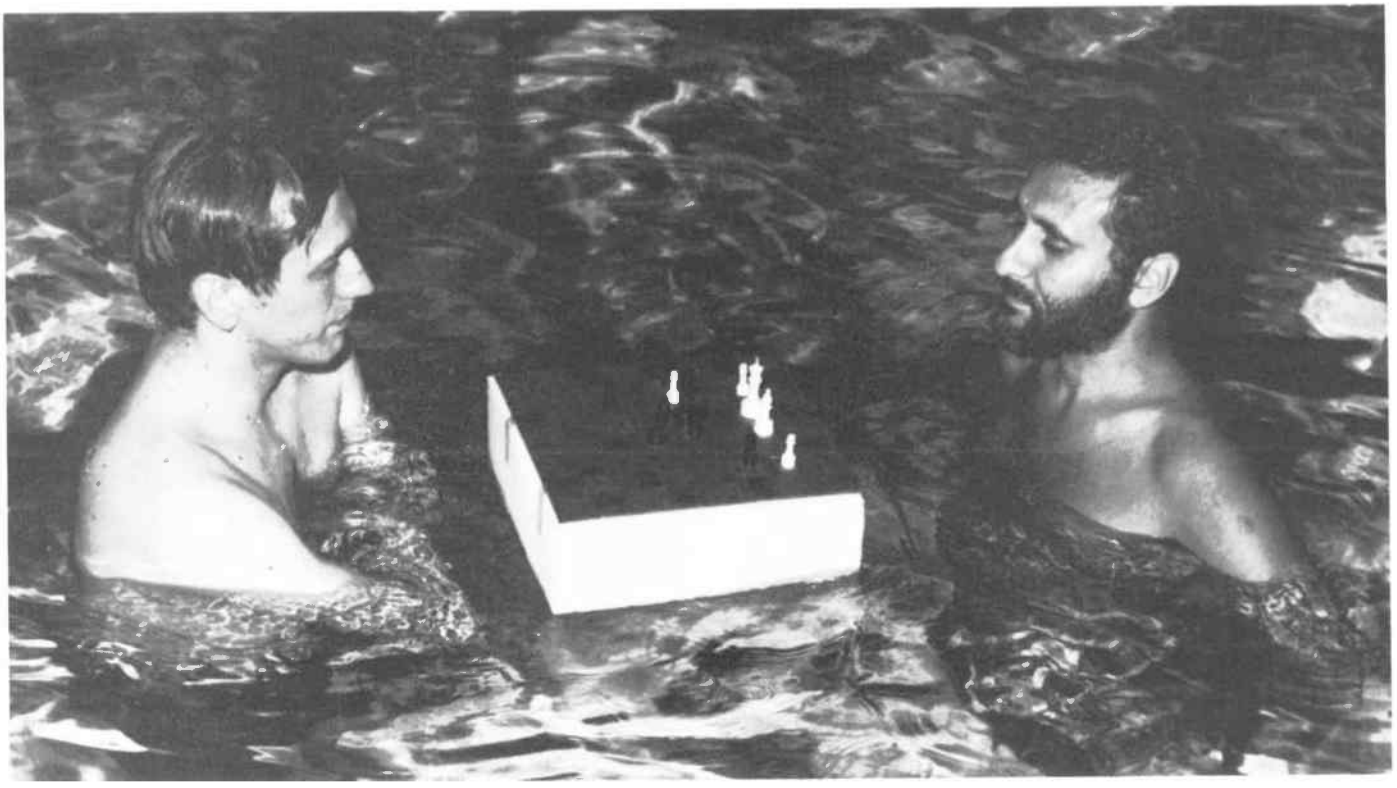
Boris Spassky, World Chess Champion 1969-72.

incumbent World Champion to win a match in 32 years. Spassky apparently learned something from experience, because in 1969 he beat Petrosian 6–4, with 13 draws. (See Classic Games number 71, 82, 89 and 94 for examples of Spassky's play.)

This circulation of the title among strong and approximately equal Grandmasters might have continued indefinitely had it not been for Bobby Fischer.

Though he has not played since 1972, Fischer remains a controversial figure in the chess world. From the time of his brilliant victory over Donald Byrne at the age of 13 (Classic Game number 65), Fischer was recognized as one of the strongest players in the world by many – and certainly by himself, as he developed a Messianic conviction that he would become World Champion. Though supremely objective in his approach to chess, his behavior otherwise did not endear him to his colleagues. It did, however, create extensive publicity for chess. (See Classic Games number 69, and 74 for other examples of Fischer's style of play.)

At the Sousse Interzonal of 1967, he withdrew while leading, after a dispute with the organizers over the playing schedule. (Fischer had by that time joined a religious sect which forbade



Former World Chess Champion Bobby Fischer (l.) enjoys a floating chess game against three-time U.S. Champion Larry Evans.

playing on its Sabbath.) He refused to compete in the U.S. Championship in 1969, apparently excluding himself yet again from the championship cycle. But negotiations by the U.S. Chess Federation (USCF) enabled him to play in the 1979 Interzonal in Palma de Majorca. His time had come.

After winning the Interzonal by 3 1/2 points, he proceeded to sweep his Candidates' Matches against Mark Taimanov and Bent Larsen with unprecedented 6–0 scores. Fischer then beat Tigran Petrosian. There remained only Boris Spassky.

The off-the-board maneuvering surrounding the 1972 Spassky–Fischer match in Reykjavik filled the news media. For a long time it seemed that Fischer would not play for reasons which he considered matters of principle, though few objective observers agreed. But a last-minute offer by British industrialist, James Slater, raised the prize fund to an unprecedented (this word occurs often when discussing Fischer) $250,000, and Fischer at last arrived.

When he finally sat down at the chessboard, the result was never in doubt. Despite a blunder in the first game and a forfeit loss in the third, he won by a score of 12 1/2–8 1/2. (See Classic Game number 85.) For the first and last time since the death of Alekhine, someone outside the Soviet bloc was chess champion.

In 1975, Anatoly Karpov unexpectedly rose to the top of the Candidates' cycle, defeating Lev Polugaevsky, Boris Spassky and Viktor Korchnoi. (See Classic Game number 89.) Karpov thus won the right to challenge Fischer for the title.

But Fischer proposed a new set of match rules, and when FIDE declined to accept one of them, he resigned his title and withdrew from the chess world. Karpov became champion.

Fischer never played again. Throughout the 1970s, Karpov played frequently. Apparently he felt the sting of being an "accidental" champion and sought to prove that he deserved the title. His play, while not overpowering, was just that much better than anyone else. (For other examples of Karpov's play, see Classic Games number 91, 100 and 105.)

His first title defense came in 1978 against Viktor Korchnoi (see Classic

World Champion Gary Kasparov (l.) and former Champion Anatoly Karpov.

Game number 93), who had by now defected to the West. This naturally did not endear Korchnoi to the Soviet chess establishment. Soviet players boycotted tournaments in which he played, his family was not permitted to emigrate, and the match with Karpov saw a degree of personal animosity unknown since Alekhine and Capablanca. Despite these handicaps, Korchnoi was only narrowly defeated. Korchnoi was again the challenger in 1981 but this time Karpov won easily with 6 wins, 2 losses and 10 draws. It was time for a new challenger. (For another Korchnoi game, see Classic Game number 101.)

The rising star now was Gary Kasparov, something of an outsider in Soviet chess circles. After some early erratic results, Kasparov in the early 80s began to win consistently, in a style reminiscent of Tal and Alekhine. Kasparov took the world title in 1985, defeating Karpov by a score of 13-11. (See Classic Game number 105 for Kasparov vs. Karpov and Classic Games number 97, 98 and 101 for Kasparov against other opponents.)

Karpov and Kasparov have played four matches between 1984 and 1988. Their overall score: Kasparov 60 1/2 – Karpov 59 1/2. The two stand well ahead of their nearest rivals on the international rating list at present, and it seems likely that they will meet again in 1990.

World Champion Gary Kasparov plays a simultaneous match with New York schoolchildren.

Chess and Machines

> "Even if we could teach a computer to play chess merely as well as a – to use Norbert Wiener's simile – 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,*

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 of 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 itself actually played chess, 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 an arrangement of levers called 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, linguistics, 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, Turning had proposed a theoretical computing machine which would simulate the operation of any other machine. This "Turing machine" became part of the foundation of modern computer theory.

At Bletchley, Turing built a device to decode Enigma messages. 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 device was not a computer, however. After the war, Turing got a large grant from the British government 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 two or three hours, and ended when Turing's program lost its Queen. Turing was quoted as saying the program has 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 (rapidly looking at all possible moves) vs. heuristic programming (choosing moves based on some set of rules). 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 (a six by six 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 win a game against a human – 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 look ahead four plies[6] in 12 minutes per move.

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[6]A *ply* is a half move. Thus, a four ply search would examine all the computer's possible moves, all

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 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 eight 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 eight by eight 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 percent 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 criteria 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 ability, 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[7].

After this, things began happening very quickly. Between 1967 and 1970, eight 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 version 3.5 in 1971 and 3.6 in 1972 also won all of 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.

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possible replies by the opponent, all the computer's responses to those, and all the opponent's responses.

[7]The system developed by Arpad Elo assigns a player a numerical rating based on his (or its) record against other rated players.

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 Championship 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 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 £1,250, 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 stakes 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 2100 far exceeds Lasker's requirement. The creators of The Chessmaster 2100 gratefully acknowledge the pioneering efforts of those programmers whose earlier chess programs paved the way for the state-of-the-art program you now own.

The Chessmaster's Library of Classic Games

1. De la Bourdonnais–McDonnell, 21st Match Game, 1834
A wild attacking game where both sides play for mate. This game has an incredible and amusing finish.

2. McDonnell–De la Bourdonnais, 62nd Match Game, 1834
In a sense, the McDonnell–de la Bourdonnais encounters marked the beginning of modern chess – a set match of serious games between recognized champions, in which all the games were recorded and published. This was the Frenchman's most famous win of the match (really a series of six matches, won by de la Bourdonnais +45=13–27[1]), in which we have the unusual spectacle of a mass of pawns overcoming a Queen.

3. Anderssen–Kieseritsky, London, 1851
Anderssen sacrifices a Bishop for a handful of tempos[2] 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."

4. Anderssen–Dufresne, Berlin, 1853
White sacrifices a piece to open the central files against the uncastled Black King, and despite his seemingly adequate development and counterattacking chances, Black comes out a tempo short in one of the finest combinations on record, justly known as the "Evergreen Game."

5. Paulsen–Morphy, New York, 1857
Paul Morphy competed in only one tournament in his short career, the First American Chess Congress in 1857. In the final round of the knock-out event, he defeated German master Louis Paulsen by a score of +5=2–1. In this game he demonstrates both his better grasp of positional play – Black's control of the center files makes a marked contrast to White's flailing on the flanks – and his combinative ability, as he finishes the game with a startling and brilliant Queen sacrifice.

6. Morphy–Allies, 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.

7. G.A. MacDonnell–Boden, London, 1861
Once dubbed the "Koh-i-Noor" of chess, this game is quite typical of the period – a slashing attack appears out of nowhere, for defensive technique was little understood even by the best players. The winner should not be confused with de la

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[1] +45=13–27 is shorthand for 47 wins, 13 draws and 27 losses.

[2] A *tempo* is the effective loss (or gain) of a move by a player who arrives at a position or situation that he would normally get to in fewer (or more) moves.

Bourdonnais's opponent, Alexander McDonnell.

8. Matchego-Falkbeer, London, 1869
In playing over these old games, it is best not to ask too many questions about the defender's play – the gap in strength between master and amateur was often enormous. Instead, relax and enjoy the tragicomic plight of the White King, as he is driven across the board and mated with his pieces still at home.

9. Rosenthal-Steinitz, Vienna, 1873
Steinitz began the era of "scientific" play, as his games and writings demonstrated that games were won or lost for objective reasons. Here he provides a (then startling) example of the proper use of two Bishops against a Bishop and Knight.

10. Zukertort-Blackburne, London, 1883
A striking combination by Zukertort, perhaps the last of the "old school" masters. After his defeat by Steinitz in 1886, it became clear that Steinitz's positional theories had brought a new aspect to the game.

11. Blackburne-Lipschütz, New York, 1889
White allows his opponent to obtain two passed pawns on the Queenside in exchange for posting a Rook on the seventh rank. The game was adjourned at move 31, and not only Lipschütz, but the spectators – including Steinitz – were certain that Black must win. The combination initiated by White's 32nd move brought a rude awakening.

12. Lasker-Bauer, Amsterdam, 1889
An early example of the double Bishop sacrifice, the "chess mill" theme, and the skill of the then-young Emanuel Lasker, who only five years later would challenge Steinitz for the world championship.

13. Chigorin-Pollock, New York, 1889
Though he demonstrated many ideas well ahead of his time, Chigorin was best known in his own era as a fierce attacker. Here, he makes good use of one of his favorite weapons, the Evans Gambit.

14. 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.

15. 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.

16. Pillsbury-Lasker, St. Petersburg, 1896
Lasker scores a brilliant combinative victory over arch-rival Pillsbury. The players castle on opposite wings, but White loses time with his prematurely developed Queen – time which Black uses to make a truly profound Rook sacrifice.

17. Tarrasch–Marco, Vienna, 1898
Siegbert Tarrasch was the great explicator of Steinitz's theories, but the dogmatic certainty with which he expounded them in the end provoked the Hypermodern reaction[3] of the 1920s. Tarrasch ignored those aspects of Steinitz uncongenial to his style (such as defense of cramped positions), but in the exploitation of a space advantage and the use of active pieces he had few peers.

18. Pillsbury–Marco, Paris, 1900
Harry Nelson Pillsbury's record is perhaps less well known than it should be; his illness and premature death in 1906 deprived the world of the match against Lasker he had long sought. Here, he scores another fine victory with the Queen's Gambit, as Marco thinks to improve on the Pillsbury–Tarrasch game (Classic Game number 15).

19. Marshall–Burn, Paris, 1900
In his autobiography, Marshall, perhaps tongue in cheek, attributes his victory in this game to the fact that it didn't last long enough for Burn to light his pipe.

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

21. Schlechter–Marco, Monte Carlo, 1904
The post-Steinitz era was thought by many to be a time of dull play in comparison to the previous century, culminating in Capablanca's prediction of a "draw death." But the greatest masters of the period were still able to rise above the uniformity of style and produce such sprightly games as this.

22. Rotlewi–Rubinstein, Lodz, 1907
In contrast to his great rival, Lasker, Akiba Rubinstein was a player of calmness and simplicity; at his best, his victories seem as inevitable as the tide. Here, he demonstrates the value of time, in a symmetrical position. White's first loss of tempo permits Black equality; the second invites a brilliant, devastating and logical attack.

23. Capablanca–Bernstein, San Sebastian, 1911
The young Capablanca was admitted to this event, intended to be limited to those who had taken at least two third prizes in international tournaments, only at the insistence of Frank Marshall, whom Capa had beaten in a match two years before. The Cuban won the event convincingly, losing only one game to Rubinstein. Ossip Bernstein had been one of the most vocal opponents of Capablanca's admission to the tournament, and by chance they met in the first round.

24. Capablanca–Molina, Buenos Aires, 1911
A famous example of the Bishop sacrifice at h7. The unusual feature of this game

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[3]The Hypermodern movement was a group of masters who rebelled against the dogmatism of Tarrasch (who claimed that the center must be occupied by pawns) and demonstrated the power of counterattack against an immobile center.

is that the sacrifice does not lead directly to mate, but rather to a sustained initiative from which Black is unable to escape.

25. Ed. Lasker–Thomas, London, 1912
The noted chess author Edward Lasker should not be confused with his distant cousin Emanuel. The young German player visited a London chess club in 1912 and was invited to play a game with the club champion Sir George Thomas. The result was a brilliancy which has graced the anthologies ever since.

26. Lewitzky–Marshall, Breslau, 1912
Though he was not quite the equal of Lasker or Capablanca, Frank Marshall was for many years one of the top half-dozen players in the world, and a formidable tournament competitor. His aggressive attitude, combinational flair and imagination produced an amazing number of brilliant games like this one. It is said that after the startling conclusion, the spectators showered the board with gold coins.

27. Lasker–Capablanca, St. Petersburg, 1914
At the end of the first half of this double-round tournament, Capablanca stood a point and a half ahead of his nearest rivals, Lasker and Tarrasch. When he met Lasker again in the seventh of the ten final rounds, even a draw would virtually assure the Cuban of first place. But Lasker, ever the chess psychologist, adopted an opening in which Black may indeed try for the advantage, but cannot readily obtain a draw. The result was a great victory over a great opponent.

28. Nimzovich–Tarrasch, St. Petersburg, 1914
Tarrasch, a master of the use of active pieces (see the description of Classic Game number 17), here gives us another example of the double-Bishop sacrifice, as in Lasker–Bauer (Classic Game number 12).

29. Spielmann–Flamberg, Mannheim, 1914
Rudolph Spielmann was in many ways a man out of his proper time. Dubbed "the last Knight of the King's Gambit," he sought a return to the swashbuckling style of Morphy and Andersson.

30. Capablanca–Marshall, New York, 1918
Marshall launches a fierce counterattack by means of a subtle opening novelty (now known as the Marshall Gambit), but Capablanca's chess instinct enables him to thread his way through the pitfalls.

31. Rubinstein–Vidmar, Berlin, 1918
During the second and third decades of the century, dissatisfaction grew with the correct but colorless play of the post-Steinitz era, in which masters scored against opponents who had not assimilated the "new" principles of positional play, but generally drew with one another. One of the attempts to enliven Black's play was the Budapest Gambit, a sharp pawn sacrifice which Vidmar here uses to score an upset of the mighty Rubinstein.

32. Alekhine–Sterk, Budapest, 1921
Alekhine considered this game very characteristic of his style. Maneuvers on

the Queenside divert the Black pieces, setting the stage for a surprising mating attack with threats on both sides of the board.

33. Alekhine–Yates, London, 1921
An extreme example of the "weak square complex." Alekhine so thoroughly dominates the dark squares that in the end even his King can march across the board to complete the mating net.

34. Bogolyubov–Alekhine, Hastings, 1922
A remarkable game, in which Black gradually takes control of the whole board. A recurring combinative theme is the strength of an advanced passed pawn, which may create mating threats or sneak through to its Queening square.

35. Maroczy–Tartakower, Teplitz-Schonau, 1922
A marvelous intuitive sacrifice. When offering the Rook at move 17, Tartakower's judgement told him that White would have no way to secure his King or obtain a counterattack, so that Black would be able to bring up the reserves at leisure.

36. Rubinstein–Hromadka, Mahrisch-Ostrau, 1923
Rubinstein's lucid play demonstrates the positional basis of the King's Gambit, as his diversionary threats on the open f-file prove a prelude to the decisive combinative blow against the Black King on the other flank.

37. Grünfeld–Alekhine, Carlsbad, 1923
Another superb Alekhine combination, as he outplays opening expert Grünfeld in the middlegame.

38. Saemisch–Nimzovich, Copenhagen, 1923
This game is known as the "Immortal Zugzwang[4] Game" – as soon as his pawn moves run out in the final position, White will have to fall on his sword.

39. Reti–Bogolyubov, New York, 1924
Emanuel Lasker won this great tournament, a point and a half ahead of Capablanca, who in turn finished two and a half points ahead of Alekhine. But Richard Reti had the distinction of defeating Capablanca – his first loss in nine years – and he won the first brilliancy prize[5] for this game against Efim Bogolyubov.

40.Reti–Alekhine, Baden-Baden, 1925
Reti was one of the leaders of the "Hypermodern" movement. Here Reti obtains a fine strategic position from his opening experiment, but is ensnared by Alekhine in a whirlwind of combinations[6].

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[4] *Zugzwang* refers to a situation in which a player would be all right if he could "pass," but any move he makes will lead to disaster.

[5] In most tournaments, a *brilliancy prize* is awarded for the most spectacular win.

[6] A *combination* is a series of interrelated moves aimed at producing an advantage.

41. P. Johner–Nimzovich, Dresden, 1926
Nimzovich's maneuvers puzzled his contemporaries, and this game is a case in point (Qd7-f5-h7). The justification lies in the importance of the Black pawn on e4, which cramps the White position. It must be "overprotected," and any pieces engaged in such activity find themselves well-posted for later attack.

42. Capablanca–Spielmann, New York, 1927
New York, 1927 was Capablanca's greatest triumph, and may have contributed to overconfidence in his subsequent match with Alekhine – he won this quadruple round-robin by 2 1/2 points, ahead of Alekhine, Nimzovich, Spielmann, Vidmar and Marshall. He also received the first brilliancy prize for his victory over Spielmann, as he elegantly refutes Black's tactical defense at move 17.

43. Capablanca–Alekhine, 21st Match Game, Buenos Aires, 1927
When Alexander Alekhine challenged Capablanca for the World Championship, few observers gave him a serious chance to win. Capablanca had dominated some of the best players in the world at the New York 1927 tournament, and he rarely lost six games in a year, let alone in a single match. But Alekhine, of whom his contemporaries said "Chess was the breath of life to him," had subjected both Capablanca's games and his own to careful study, and he set out to surpass the Cuban in those aspects of the game in which he was strongest, maneuvering in simplified positions.

44. Flohr–Lustig, Prague, 1928
In the 1930s, Salo Flohr was the most successful tournament player after Alekhine, and in 1938 negotiations were under way for a world championship match. The events of the next few years – the collapse of Czechoslovakia, where he was virtually a national hero, and the suspension of international chess for nearly a decade – relegated him, like Rubinstein a generation before, to the realm of might-have-beens. Here, he systematically demolishes the Black King's position, sacrificing a piece for each pawn, and slaughters the denuded monarch. This game was included by Hans Kmoch in his classic *Pawn Power in Chess* to illustrate the "sweeper-sealer." White's 23rd move simultaneously frees a square for his pieces and denies one to Black by forcing him to occupy it with a pawn.

45. Alekhine–Nimzovich, San Remo, 1930
In the years following his match with Capablanca, Alexander Alekhine dominated the international chess scene. He was not satisfied with winning a tournament by a small margin, but played every game with a fierce will to win. San Remo, 1930 was one of his greatest triumphs, as he won by a margin of 3 1/2 points and would not agree to draws even in the final rounds. Here his artful use of pins reduces Nimzovich, who finished second, to virtual *zugzwang* in only 30 moves.

46.Stahlberg–Alekhine, Hamburg, 1930
A brilliancy prize game, in which White's seemingly well-founded maneuvers on the Queenside are refuted by the opening of a file near the White King. For the serious student, it is notable that Black's combination centers on the apparently impregnable f3 pawn, at the intersection of the forces on the f-file and a8-h1 diagonal.

47. Lilienthal–Capablanca, Hastings, 1934-35
A rare tactical oversight by Capablanca. There is a (perhaps apocryphal) story that Lilienthal played Capa in a simultaneous exhibition as a boy. When he asked the great master for his autograph, Capablanca refused, and Lilienthal vowed to beat him one day with a Queen sacrifice.

48. Glucksberg–Najdorf, Warsaw, 1935
Polish-Argentinian Grandmaster Miguel Najdorf has had a long and remarkable career. Never lacking in self-confidence, he declared in 1947 that he would soon become world champion. Though his natural ability was perhaps the equal of that of any player in the world, he lacked the discipline and persistence required in the age of Botvinnik to reach the highest level. In this game, sometimes called the "Polish Immortal," Black strips bare the enemy King, finally sacrificing four pieces to drive it into a mating net.

49. Alatortsev–Capablanca, Moscow, 1935
At their best, Capablanca's games are models of clarity and precision. His instinct for proper placement of his pieces is most clearly demonstrated in his mastery of the endgame, but in the middle game as well, he proves here the maxim that combinations flow from a superior position.

50. Euwe–Alekhine, 26th Match Game, 1935
The "Pearl of Zandvoort" was undoubtedly the most striking game of the 1935 World Championship Match, in which Max Euwe unexpectedly took the title from Alekhine. When White sacrifices a piece for three central pawns, Black must play for counterattack, but his own King proves to be too exposed.

51. Fine–Grunfeld, Amsterdam, 1936
Reuben Fine was one of the strongest players in the world in the 1930s; his best result was undoubtedly his tie for first with Paul Keres in the great AVRO tournament of 1938, in a field of the eight best players in the world. Unfortunately, he gave up serious play after World War II to pursue a career in psychoanalysis. Here he defeats opening theoretician Ernst Grunfeld at his own game, refuting a system then considered favorable for Black.

52. Keres-Euwe, Zandvoort, 1936
Max Euwe held the World Championship for only a year – his good sportsmanship in granting his rival so early a rematch was widely admired at the time – and he has always been overshadowed by the towering figures of Alekhine and Botvinnik. But at his peak he was a very strong player indeed, and his best games are models of logic and precision. Here,

he thoroughly outplays Paul Keres, whose nervous attempt to break open the position is calmly refuted.

53. Botvinnik–Tartakower, Nottingham, 1936
Future World Champion Botvinnik wins a brilliancy prize game against the imaginative but erratic Tartakower. The attack beginning at move 20 is notable for the manner in which White closes the mating net with a series of "quiet" (non-checking) moves.

54. Keres–Hromadka, Prague, 1937
Hromadka pioneered the system of defense now known as the Modern Benoni, though it did not achieve real respectability until Tal took it up 20 years later. Here Keres demonstrates the danger of exchanging the Bg7 – even if Black wins material in the process, his King position is not easy to defend.

55. Botvinnik–Capablanca, AVRO, 1938
The AVRO tournament of 1938, sponsored by a Dutch radio network, was a double-round affair among eight of the strongest players in the world. It was widely considered a tournament to chose the next challenger for the world championship, though it is not clear that Alekhine would have agreed, and in any case the European war soon made the question moot. The young masters Fine and Keres tied for first, well ahead of the "old guard" Alekhine and Capablanca. The most memorable game of the event was Botvinnik's victory over Capablanca. The "iron logician" systematically advances in the center, inviting his opponent to capture an irrelevant flank pawn. He caps his play with a brilliant "diverting" sacrifice at move 30.

56. Pleci–Endzelins, Buenos Aires, 1939
A lesser-known masterpiece from the last pre-war Olympiad. With a flurry of sacrifices, White demonstrates that an advantage in development remains of decisive importance even after the exchange of Queens.

57.Keres–Botvinnik, USSR Absolute Championship, 1941
This event, a quadruple round-robin of the six best Soviet players, was held only once, and Botvinnik's triumph, 2 1/2 points ahead of Keres, would surely have established him as a prime challenger for the world championship had the war not suspended international chess activity. Here he scores a lightning victory over Keres, who puts too much faith in the result of an earlier game.

58. Reshevsky–Vasconcellos, Boston, 1944
By no means a typical game by Reshevsky, a player noted for dour maneuvering and resourceful defense. The explanation: Reshevsky had clinched first place in the U.S. Open with a round to spare, and was determined to have fun in his last game. When Black wastes time capturing the worthless b2 pawn, White sacrifices a Knight to rip open the center and checkmates the defenseless Black King.

59. Denker–Botvinnik, USA-USSR Radio Match, 1945
The U.S. had dominated international team competition in the 1930s, and this postwar match was expected to be one-sided. So it proved, but in the other direction, as the Soviet team won 15 1/2-4 1/2. This was the first board[7] encounter between the U.S. and Soviet champions.

Former U. S. Chess Champion Samuel Reshevsky.

60. Geller–E. Kogan, Odessa, 1946
Even at the beginning of his career, it was evident that Efim Geller was a player of great potential. He correctly assesses the myriad tactical possibilities as Black and White attack on opposite wings, and drives the Black King across the board with a relentless attack.

61. Zita–Bronstein, Prague-Moscow, 1946
The long-term impact of the post-war Soviet masters lies in their exploration of unbalanced positions – how much piece activity is worth a structural weakness? This period saw a renaissance of the King's Indian Defense, in which Black accepts a space disadvantage for tactical counterchances.

62. Steiner–Botvinnik, Groningen, 1946
Another example of the Stonewall Variation of the Dutch Defense, long a favorite of Botvinnik's. It is notable how quickly White is reduced to complete passivity after adopting an inferior plan at moves 11 and 12.

63. Keres–Taimanov, USSR Championship, 1951
In a critical last-round game, Keres selects an old-fashioned opening setup in which judgment and experience are more important than preparation, and he converts his space advantage into a slashing attack on the poorly defended Black King.

64. Keres–Smyslov, Zurich, 1953
This was a game of great sporting importance. Keres desperately needed a win to retain any hope of overhauling the tournament leader Smyslov. White finds an aggressive and original means of bringing both Rooks into the attack, but Black's careful defense and central

[7] In a team match, players are paired in order of strength. The first board is the game between the strongest player on each team.

counterattack carry the day. Smyslov went on to win the tournament and the right to challenge Botvinnik for the world championship in 1954.

65. D. Byrne-Fischer, New York, 1956
Known as "the game of the century" until that title was usurped by a later Fischer brilliancy, this game saw the 13-year-old Bobby Fischer defeat one of the strongest American players with a startling Queen sacrifice that many players would not have considered. It was already clear that Fischer was far ahead of his contemporaries, and he would soon overtake even the resilient Reshevsky.

66. Tolush-Taimanov, Riga, 1958
Alexander Tolush was one of those players who, though not quite of top rank, produced a slew of brilliant and original games in his career. In this game, the players attack on opposite wings, and it seems that Black's attack is quite as strong as White's. But Tolush nonchalantly sacrifices the Exchange[8] to eliminate Black's best attacking piece, and threads his way through a maze of complications to take the win.

67. Polugaevsky-Nezhmetdinov, Sochi, 1958
Black drives the White King into a mating net in the center of the board with an amazing intuitive Queen sacrifice. The game is far more impressive than similar examples from the 19th century, for White's defense is by no means weak.

68. Holmov-Keres, Tbilisi, 1959
When Black adopts a provocative defense that leaves his pieces scattered, White essays a long-term piece sacrifice to confine the Black King to the central files. The game is particularly impressive because of several variations in which White had to judge that his initiative would persist even after the exchange of Queens.

69. Fischer-Benko, Bled, 1959
A vintage Fischer brilliancy, as he makes the demolition of a top Grandmaster look easy with a precisely calculated Kingside attack.

70. Tal-Smyslov, Bled, 1959
Throughout the 1950s it seemed that the duel between Botvinnik and Smyslov would continue until the years took their toll on the older player. But then Tal arrived on the scene, and his imagination, daring and calculating ability brought him to the World Championship in 1960. In this game from the 1959 Candidates' Tournament, he downs Smyslov with a sustained initiative and a flurry of combinations.

71. Spassky-Bronstein, Leningrad, 1960
In one sense, the most famous game of all – the final position appeared on the demonstration board in the film *From Russia with Love*. Both Spassky and Bronstein are imaginative players and afficionados of the King's Gambit. When Black thinks to gain time by attacking a Rook, White ignores it and launches a sparkling attack. In Russian, this game

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[8]The *Exchange* is the trade of a Rook for a minor piece (a Knight or Bishop). The Rook is more valuable (see p. 7).

is known as the "Bluebird," but this doesn't translate well.

72. Petrosian–Unzicker, Hamburg, 1960
With his quiet positional style, Petrosian failed to excite the chess public as did the charismatic Tal, but at his best few could match his depth of conception. Here he paralyzes the Black position by controlling the only open file, then sets off on a long King march to prepare the decisive breakthrough.

73. Gufeld–Kavalek, Marianske Lazne, 1962
A sharp opening leads to a remarkable setting, with a Bishop and swarm of pawns overcoming two Rooks.

74. R. Byrne–Fischer, U.S. Championship, 1963-64
Yet another "game of the century" by Fischer, who scored an unprecedented 11–0 in the 1963-64 U. S. Championship. Here he defeats Robert Byrne with a combination of such profundity that at the very moment at which White resigned, both masters commenting on the game for the spectators believed that he had a won position.

75. Bakulin–Bronstein, Kiev, 1964
A good game by Bronstein, who cleverly creates and then exploits weak squares near the enemy King. Black caps his positional play with a "diverting" sacrifice at move 27, the prelude to a decisive Rook sacrifice.

76. Bronstein–Larsen, Amsterdam, 1964
In the 1960s the Soviet chess hegemony was threatened first by Bobby Fischer and then by Danish Grandmaster Bent Larsen. Fischer's disputes with organizers over playing conditions kept him out of world championship competition for a decade, but Larsen produced a series of tournament victories unmatched since Alekhine, including a tie for first with Spassky, Smyslov and Tal in the 1964 Interzonal. In this game, Bronstein adopts a very aggressive continuation against the King's Indian Defense, but Larsen combines defense and counterattack to take the point.

77. Geller–Smyslov, 5th Match Game, USSR, 1965
The "Hypermodern" masters of the 1920s and 30s showed that a large pawn center was not necessarily a source of strength, but could become an object of counter-attack. But new discoveries rarely refute older experience – apples didn't stop falling because of Einstein. Here Geller shows the strength of the classical pawn center, as he trades it for a winning Kingside attack.

78. R. Byrne–Evans, U.S. Championship, 1966
During the 1960s Larry Evans was one of the strongest U.S. players after Fischer. Evans was known as a "pawn-grabber" for his (well justified) faith in his defensive abilities. Robert Byrne lures him into a prepared line of the of the "Poisoned Pawn Variation," a risky but resilient defense in which Black snatches a pawn at the cost of his development.

The result is one of the most brilliant games of the decade.

79. Larsen–Petrosian, Santa Monica, 1966
Larsen's "Evergreen Game" – he thoroughly outplays the World Champion and caps his attack with a fine Queen sacrifice. Though Larsen finished third in the Second Piatigorsky Cup (behind Spassky and Fischer), he scored 2–0 against Petrosian and 1–1 against Fischer.

80. Nikolich–Fischer, Vinkovici, 1968
Another great game by Fischer, as he adroitly stymies White's Queenside play and sacrifices a piece to keep White's King in a box.

81. Polugaevsky–Tal, USSR Championship, 1970
The Bishop sacrifice on h7/h2 is a rare bird these days, and rarer still in top-level competition, but here we see former world champion Mikhail Tal falling victim to a refined version. The game demonstrates the "transformation of advantages," as White trades space and material for time, advancing his central pawns with a sacrifice to obtain a winning attack. It also shows the level of preparation required of Grandmasters – Polugaevsky had examined the position arising at move 25 (!) in his pre-tournament analysis.

82. Larsen–Spassky, USSR–Rest of the World Match, 1970
This 10-board match was won by the USSR team by the narrowest of margins, 20 1/2–19 1/2. Bobby Fischer began his drive toward the World Championship by defeating Tigran Petrosian 3–1 on board two, while Larsen faced Spassky on board one. Spassky's results as champion were certainly less impressive than as challenger, but here he meets Larsen's opening extravagance with classical development, and scores a quick knock-out.

83. Petrosian–Gligoric, Rovinj-Zagreb, 1970
It is when both sides play to win that the most exciting chess is produced. In this game, Gligoric offers a consistent and sound piece sacrifice, which however should have only maintained the balance. Petrosian's attempt to hold on to everything results in his Queen being exiled to h1.

84. Stein–Lengyel, Moscow, 1971
Grandmaster Leonid Stein was a strong and imaginative player, particularly noted for his skill in attack. His unexpected death in 1973 at the age of 39 deprived the world of many fine games and a possible world championship contender. Here he demonstrates the power of the two Bishops, and the tactical dangers lurking in an apparently simple position.

85. Fischer–Spassky, 6th Match Game, 1972
Once the "sideshow" events had been put aside and he settled down to play chess, Fischer clearly demonstrated his superiority in his World Championship match with Boris Spassky. Many observers had suggested that Fischer's limited opening repertoire would prove

his undoing (he had rarely begun with any move but 1. e4), but in this game he showed an equal mastery of Queenside play.

86. Bronstein–Ljubojevic, Petropolis, 1973
One of the most exciting games of the "interregnum" between Fischer's retirement and the rise of Karpov. The meeting of two courageous tacticians produces a fierce battle in which both Kings are under attack.

87. N. Weinstein–DeFotis, Chicago, 1973
The Najdorf Variation of the Sicilian has long been one of Black's most popular defenses, for it leads to double-edged positions in which Black can play for a win as well as White. Fischer and Browne, among others, demonstrated the resources of the Black setup. But the White players were not idle, and inevitably Black began to take too many liberties. Here,White scores a crushing win against Black's overrefinement (11...Rb8 and 12...Rg8), sacrificing Queen and Rook for an attack that leads to a winning endgame.

88. Browne–Zuckerman, New York, 1973
Perhaps the most successful American player of the post-Fischer era, Walter Browne from 1974 to 1983 won or tied for first in the U.S. Championship no less than six times . Here he shows the advantages of the "isolated Queen's Pawn" (open e-file, open diagonals for the Bishops, outpost square on e5) in a game described at the time as an "orgy of sacrifices."

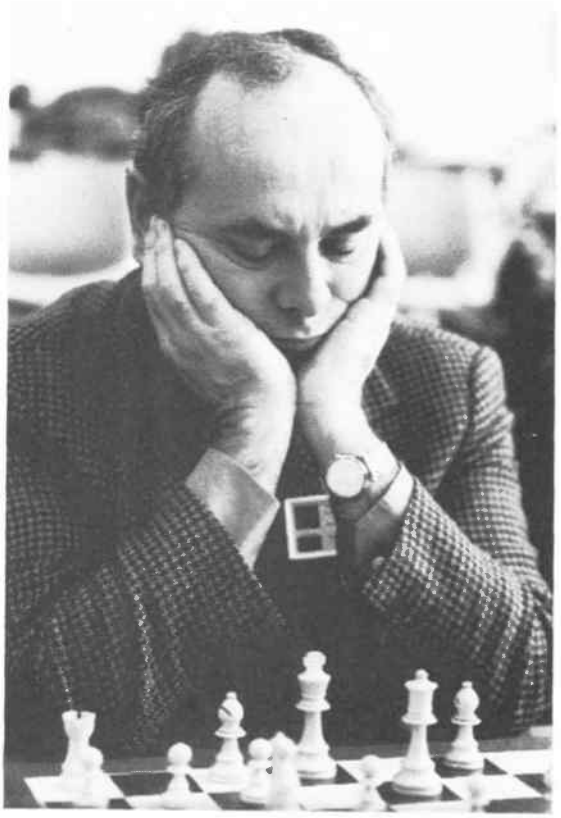
89. Karpov–Spassky, 9th Match Game, USSR, 1974
Who would be Fischer's first challenger? Most pundits chose Spassky, for though his record as Champion had not been too impressive, his dominant play in the mid-sixties had not been forgotten. But in the second round of the Candidates' Matches he faced the youthful Anatoly Karpov, who advanced to the finals with remarkably mature play. Here he gives a textbook example of exploiting a small positional advantage on the White side of the Sicilian Defense.

90. Portisch–Gligoric, Milan, 1975
The format of the Milan 1975 tournament was an unusual one – a round-robin among 12 of the world's top players, followed by playoff matches among the top four finishers. Hungarian Grandmaster Lajos Portisch won the preliminary leg, but he lost the final match to Karpov 3 1/2–2 1/2. In his game against Svetozar Gligoric, Portisch caps his strategic play with a series of finely calculated "interference" combinations. (See The Chessmaster's Problem number 7.)

91. Geller–Karpov, USSR Championship, 1976
Anatoly Karpov once suggested that Grandmasters could be divided into "maximalists" and "minimalists" – those who try to find the best move in every position, and those who economize their time and effort to achieve the best tournament standing. Efim Geller

belongs to the first group. One of the top Soviet Grandmasters since the early fifties, he has produced many, many fine games, and here he outplays the World Champion, concluding with a spectacular Queen sacrifice.

92. Ljubojevic-Andersson, Wijk aan Zee, 1976
When two players of contrasting styles meet, the result is a battle of ideas which can only enrich the game. Ljubojevic is one of the most dangerous attacking players of the modern era, while Ulf Andersson is one of the most difficult players to defeat. With a sharp pawn sacrifice, White places many practical problems before his opponent, and with the clock ticking, Andersson is unable to find the hidden path to the draw.



Grandmaster Lajos Portisch.

93. Korchnoi-Polugaevsky, 7th Match Game, Evian, 1977
Karpov's first challenger for the World Championship was Viktor Korchnoi. Korchnoi played under many handicaps: after his defection to the West in 1976, Soviet Grandmasters boycotted tournaments in which he competed, and it is difficult for any master to stay in top form without top-flight competition. Still, he came to the Candidates' Matches armed with many new ideas and a fierce will to win and scored decisive victories over Tigran Petrosian, Lev Polugauvsky and Boris Spassky.

94. Spassky-Korchnoi, 2nd Match Game, Belgrade, 1977
The Winawer Variation of the French Defense leads to sharp, unbalanced positions requiring both strategic judgement and precise calculation. Long a favorite of Botvinnik, it is also very well suited to Korchnoi's counter-attacking style. In this game from his final Candidates' Match with Boris Spassky, Black sacrifices a pawn for the initiative, and the White King is unable to find a safe haven on either side of the board.

95. Christiansen-Seirawan, Berkeley, 1978
In the round-robins which predominate at the international level, every player may expect a reasonable prize, but in American "Swiss" tournaments (a large

number of players compete over a weekend, with equal scores being paired in each round), a last-round game may mean the difference between a substantial prize and a long walk home. In this game, Seirawan outplays his opponent strategically, but Christiansen launches a clever counterattack which leads to a King hunt and a very long discovered check[9].

96. Adorjan–Ribli, 4th Match Game, Budapest, 1979
Hungarian Grandmaster Andras Adorjan shows a fine tactical flair in prosecuting his attack against the denuded Black King. The use of an advanced passed pawn to support mating threats is not new, of course, but Adorjan adorns it with several witty and original points.

97. Kasparov–Butnoris, USSR, 1979
An early example of the future World Champion's promise. Many players, even very strong ones, would have rejected the White position after move 19, but Kasparov looks just a little further.

98. 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 Kaparov sends his to the Kingside. Marjanovic's Kingside pawns are no match for all of the pieces sent against them.

Grandmaster Viktor Korchnoi (l.) and U.S. Champion Yasser Seirawan.

99. Alburt–Peters, U.S. Championship, 1981
In this brilliancy prize game from the 1981 U.S. Championship, Black's sharp Exchange sacrifice produces a complex position with the struggle ranging all across the board, an example of Modern Benoni at its best.

100. Seirawan–Karpov, London, 1982
A rare slip by Karpov in the opening allows Seirawan to win a piece, and he exploits his advantage precisely and energetically. This was the first tournament victory by an American over a reigning world champion since Dake defeated Alekhine at Pasadena 1932.

[9] A *discovered check* occurs when one piece attacks the opponent's King because another piece, which blocked the attack, is moved out of the way.

101. Korchnoi–Kasparov, Lucerne Olympiad, 1982
A titanic struggle. Karpov chose not to play in the match in which he would have to face his bitter enemy Korchnoi, and so the first board encounter was between the former challenger and the next one. Kasparov chose a sharp and risky piece sacrifice to stir up threats against the White King, and even Korchnoi's great defensive skills proved insufficient.

102. Hanken–BELLE, Pasadena, 1983
Man versus machine, as a human master faces the world computer champion at the 1983 U.S. Open. Hanken exploits the computer's primary weakness, a lack of positional judgement: it will grab material if it cannot see a bad consequence within the number of moves it looks ahead, while a human player would see trouble on the horizon.

Gary Kasparov (l.) and Anatoly Karpov.

103. Smyslov–Ribli, 5th Match Game, London 1983
The old lion proves that he can still bite, as Vassily Smyslov, World Champion in 1957, crushingly defeats favored Hungarian Grandmaster Zoltan Ribli. Smyslov won the quarter-final Candidates' Match 6 1/2–4 1/2, avoiding modern theoretical variations and relying on classical positions in which his greater experience gave him the edge.

104. Beliavsky–Nunn, Wijk aan Zee, 1985
Despite the vast amount of theory that has accumulated on the King's Indian Defense over the last 40 years, it is still possible for a creative player to produce an original game. John Nunn is one of the new generation of Grandmasters who have made England one of the world's leading chess powers (silver medal in the 1986 Olympiad, behind the Soviet Union). Beliavsky is one of the top Soviet players after Kasparov and Karpov.

105. Karpov–Kasparov, 24th Match Game, 1985
Once more a game in which the sporting factors outweighed the chessic ones. After 23 games, Kasparov led by a score of 12–11, but a 12–12 tie would allow Karpov to retain the World Championship, and he had White in the last game. Kasparov remained true to himself, eschewing passive defense and once more adopting the double-edged Sicilian Defense. Karpov obtains an attack sufficient for a draw, but his attempts to obtain more lead only to a slashing counterattack and a decisive victory for the challenger from Baku.

106. Ribli–Kouatly, Lucerne, 1985
The romantic gambits of the 19th century are rarely seen nowadays, but any opening can lead to exciting play in the hands of an imaginative player. Here Hungarian Grandmaster Zoltan Ribli uses a quiet *fianchetto* opening[10] as the springboard for a Kingside attack with several witty points.

107. Yusupov–Nogueiras, Montpellier, 1985
Even in a quiet Queen's Gambit, opening inaccuracies may meet with a drastic refutation. It is true that in closed positions maneuvering may be more important than rapid development – but you must be certain that the position will remain closed.

108. Rohde–B. Kogan, U.S. Championship, 1986
A brilliancy prize game by one of the best young American players. White's control of the center prevents the Black pieces from gathering to exploit the weakened position of the White King, and White makes use of the corollary of the doubled pawns[11] – an open file[12] – to prepare a sacrificial attack against the Black King.

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[10] A *fianchettoed* (fixed) Bishop is one that is placed on the square originally occupied by the Knight's Pawn after it has been pushed one square.

[11] Doubled pawns are two pawns of one color on the same file. They are usually a weakness.

[12] An open file is a file which is not blocked by any pawns. It can provide a path of attack for a Rook or Queen.

109. Short–Ljubojevic, Netherlands, 1988

Though his results have been uneven, young British Grandmaster Nigel Short is considered by many the West's best hope to regain the world championship. After a tiny inaccuracy, he is able to sacrifice two pieces to smoke out the Black King and drive it all the way to h2 before administering the coup de grace.

110. Seirawan–Tal, Brussels, 1988

In the early 80s Seirawan was closely associated with Tal's nemesis Viktor Korchnoi. In this game, he chooses a solid opening well-calculated to put the aggressive Tal off his game, and improves his record against the former world champion to 4–0.

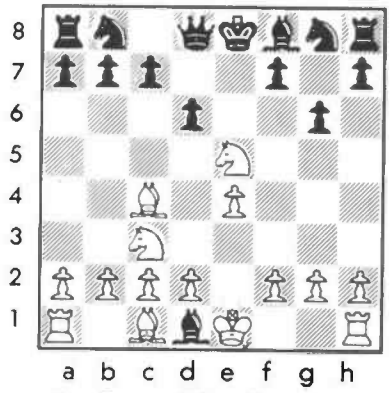
Brainteasers

These ten problems are designed to teach you tricks and techniques you can use to win.

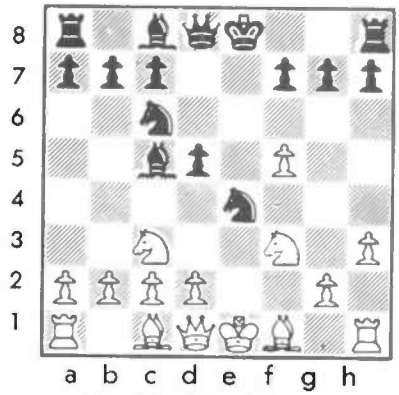
If the problem calls for White to move and mate in some number of moves, then you must find the move for White that will force checkmate of Black in that number of moves (or possibly less if Black errs.)

If the problem calls for White to move and win, then you must find the move for White that leads to an overwhelming advantage, such as the win of a piece, or a passed pawn (one which can not be prevented from Queening).

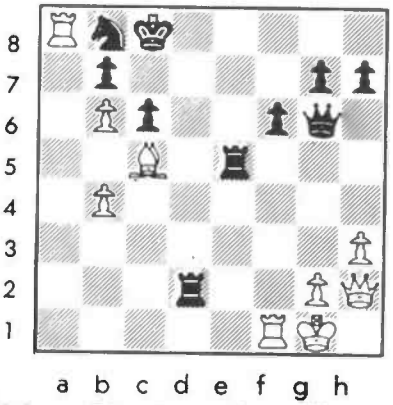
The solutions to the problems begin on page 54.



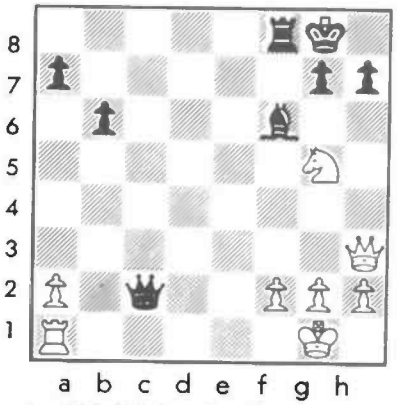
1. Legall's Legacy
White to move and mate in 2 moves.



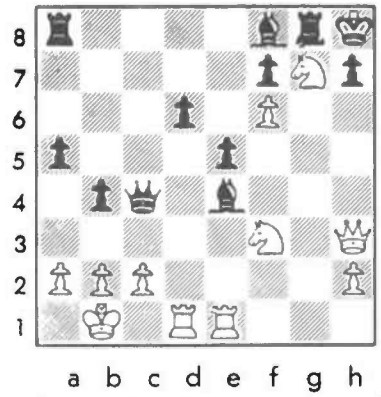
2. Deflection
Black to move and mate in 4 moves.



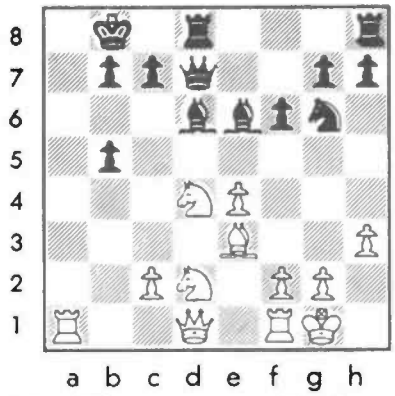
3. Alekhine–Reshevsky, Kemeri 1937
White to move and win.



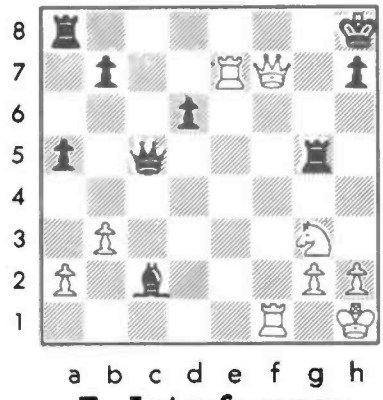
4. Philidor's Legacy.
White to move and mate in 5.



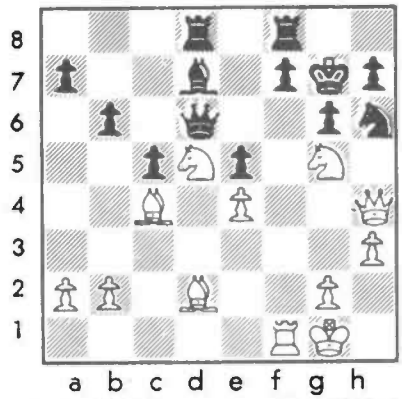
5. Saunina–Chekhova, Sochi, 1980
White to move and win.



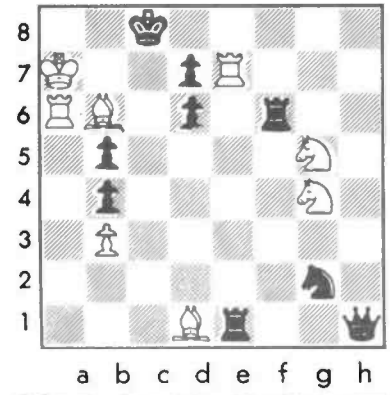
6. Wahls–Bjarnason, Malmo, 1985
White to move and mate in 7.



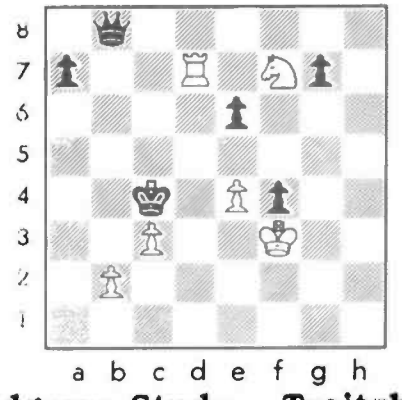
7. Interference
White to move and win.



8. Hector–Talavera, Seville, 1986
White to move and mate in 5.



9. Problem by D. Densmore, 1916
White to move and mate in 4.

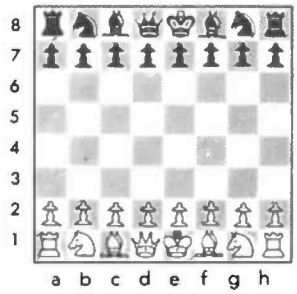


10. Endgame Study – Troitzky, 1914
White to move and win.

Algebraic Notation

The solutions to the Brainteasers are written in *algebraic notation*, one of a number of shorthands for writing down chess moves. Here's how to read it.

The columns of the chessboard, called *files*, are lettered a through h. The rows, called *ranks*, are numbered 1 through 8, like this:



Each square is referred to by its file and rank. For example, the White King is on e1.

Each piece is referred to by a letter:

King	K
Queen	Q
Rook	R
Bishop	B
Knight	N

There is no symbol for a pawn; it is referred to by the absence of a piece letter.

A move is described by the move number, the piece moving and the square it moves to. For example, from the starting position in the diagram above, the moves 1. Nf3 d5 mean that on move 1 White moves a Knight (N) to f3, and then Black moves a pawn (no piece letter) to d5.

The move 4...d5 means on move 4 Black moves a pawn to d5; the "..." tells you that White's move number 4 is not shown.

In all these examples, the move is clear because there is only one piece of the type called for that can move to the destination square. But sometimes two identical pieces can move to the same destination square. In that case, the correct piece is indicated by the rank or file the piece starts from. For example, Nef5 means the Knight on the e file moves to f5.

If a capture is made, the letter x appears before the square: Bxg6 means a Bishop captures on square g6.

Other symbols are also used:

O-O	Castles Kingside
O-O-O	Castles Queenside
+	Check
++	Checkmate
Q	Promotes to Queen
ep	En passant
!	Good move
!!	Excellent move
?	Poor move
??	Blunder
!?	Interesting move
?!	Questionable move

In the solutions to the Brainteasers, bold type is used for the moves in the problem solution and light type for other possibilities being discussed.

Solutions to Brainteasers

1 Legall's Legacy
White to move and mate in 2 moves.

This is the only surviving game of Philidor's pupil Legall de Kermeur, played at Paris c. 1750. Black blundered on his last move, capturing the Queen on d1, and now White mates with **1. Bxf7+ Ke7 2. Nd5++.**

2. Deflection
Black to move and mate in 4 moves

The mating pattern should be familiar after problem number 1, but here the Nf3 guards the d4 square. So, **1...Qh4+! 2. Nxh4** [or 2. g3 Qxg3+ 3. Ke2 Qf2+ 4. Kd3 Nb4++] **2...Bf2+ 3. Ke2 Nd4+ 4. Kd3 Nc5++.**

3. Alekhine–Reshevsky, Kemeri, 1937
White to move and win.

A combination exploiting the weak back rank. After **1. Rxb8+! Kxb8 2. Qxe5+** there are three variations: i) 2...Kc8 3. Qc7++, ii) 2...Ka8 3 .Ra1+ Ra2 4. Rxa2++, and iii) 2...fxe5 3. Rf8+ and mate in two moves.

4. Philidor's Legacy.
White to move and mate in 5.

This "smothered mate" is often known as "Philidor's Legacy," though it was known to Lucena. **1. Qe6+ Kh8 2. Nf7+ Kg8** [If it were not for the weak back rank, Black could play here 2...Rxf7] **3. Nh6+ Kh8 4. Qg8+ Rxg8 5. Nf7++.**

5. Saunina–Chekhova, Sochi, 1980
White to move and win.

Though hidden by the presence of other pieces, the pattern here is the same as "Philidor's Legacy." **1. Rxe4 Qxe4** [Black can avoid immediate mate only by losing a full Rook, e.g. 1...Qc6 2. Rh4 Rxg7] **2 .Ng5 Qg6 3 .Qxh7+! Qxh7 4. Nxf7++.**

6. Wahls–Bjarnason, Malmo, 1985
White to move and mate in 7.[1]

A *clearance* sacrifice involves vacating a square with gain of time, so that it can be occupied by another of the same color.

Here White would like to combine the action of his Queen and the Be3 for an attack on a7, and plays **1. Ra8+! Kxa8 2. Qa1+ Kb8.** Now 3. Nc6+ doesn't work – 3...Qxc6 4. Qa7+ Kc8 5. Qa8+ Kd7 and the King escapes. So White uses the motif of attraction (see problem number 8): **3. Qa7+! Kxa7 4. Nc6+ Ka6** (or 4...Ka8) **5. Ra1+** and mates in two moves.

7. Interference
White to move and win.

Interference involves placing a piece at the intersection of lines of action of two enemy pieces. If one of them captures, it will block the action of the other.

1. Nf5 Bxf5 [Forced, as other moves either allow mate at h7/g7 or lose the Queen for nothing. But now the Bf5 blocks the Black Queen's defense of the

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[1] A computer solution of this mate would require examining some 4,500 trillion board positions. This would take a few thousand years, more or less, depending on the speed of your machine. If you solved this problem, you can not be replaced by a computer.

Rg5.] **2. Qf6+ Kg8 3. Qxg5+ Bg6 4. Qf6** and wins.

8. Hector–Talavera, Seville 1986
White to move and mate in 5.

The combination based on *attraction* involves forcing an enemy piece to occupy a bad square, on which it is subject to a fork, discovery or some other combinational motif. Classic Game number 25 (Ed. Lasker–Thomas) is an extreme example.

This one is similar: **1. Qxh6+ Kxh6 2. Ne6+ g5 3. Rf6+ Kh5 4. Ng7+ Kh4 5. Be1++.**

9. Problem by D. Densmore, 1916
White to move and mate in 4.

Composed problems are a world quite apart from practical play; aesthetic principles govern, as every piece must be needed, and ideally every variation should be thematically related to the main idea.

Here the idea is a "Plachutta interference" – two Black pieces defend against two threats, their lines of action intersecting on a *critical square*. By sacrificing a piece on that square, White forces one of the Black defenders to occupy it and "interfere" with the other.

After the key move, **1. Ra2**, White threatens 2. Rc2++. Black has several defenses:

i) 1...Rf2 2. Be2
   a) 2...Rfxe2 3. Re8+ Rxe8 4. Rc2++
   b) 2...Rexe2 3. Rc2+ Rxc2 4. Re8+

ii) 1...Qf1 2. Be2
   a)2...Qxe2 3. Re8+ Qxe8 4. Rc2++
   b)2...Rxe2 3. Rc2+ Rxe2 4. Re8++

iii) 1...Qh7 2. Ne4
   a) 2...Qxe4 3. Re8+ Qxe8 4. Rc2++
   b) 2...Rxe4 3. Rc2+ Rc4 4. Re8++

iv) 1...Rf5 2. Ne5
   a) 2...Rfxe5 3. Re8+ Rxe8 4. Rc2++
   b) 2...Rexe5 3. Rc2+ Rc5 4. Re8++

v) 1...d5 2. Ne6
   a) 2...dxe6 3. Rc2++
   b) 2...Rxe6 3. Re8+ Rxe8 4. Rc2++

10. Endgame Study, Troitzky, 1914
White to move and win.

Endgame studies differ from problems in that they do not lead to a mate in a specified number of moves, but to a winning position by means of a forced maneuver.

The theme of this study is domination of the Black Queen by the two White pieces. **1. Rb7 Qg8** We can quickly dismiss 1...Qxb7/c8/e8 2. Nd6+. Squares attacked by the Knight or Rook are obviously out, leaving a8, f8 and g8. 1...Qf8 fails to 2. Ne5+ Kc5 3. Nd7+, and 1...Qa8 to 2. Ne5+ Kc5 3. Rb8 Qxb8 4. Nd7+. But the main line seems safe. **2. Ne5+ Kc5 3. Rb8 Qh7** Again, 3...Qxb8 loses to 4. Nd7+. But now the Queen seems to be out of the box... **4. b4+ Kd6 5. Rh8** and the Queen is trapped – 5...Qxh8 6. Nf7+ wins.

The Software Toolworks appreciates the assistance of the publishers of *Pergamon Chess* magazine.

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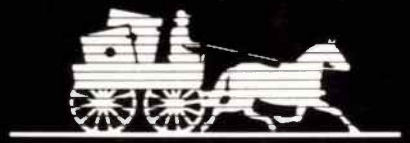

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--THE FIDELITY--
CHESSMASTER
2100

How to Use
--THE FIDELITY--
CHESSMASTER
2100
on your Macintosh computer

Requirements

The Chessmaster 2100 requires at least one megabyte (1 MB) of memory, and System 6.0 or later.

Installing The Chessmaster 2100

We recommend that you make a backup copy of your distribution diskette prior to using the program, and keep the original in a safe place.

Hard Disk Owners: create a new folder named "Chessmaster 2100" on your hard disk, and drag the contents of the distribution diskette to that folder.

To run the program, just double-click on the Chessmaster icon.

Moving Pieces On The Chess Board

Using the mouse, position the cursor "hand" over the piece you wish to move. Press and hold the mouse button, and drag the piece to the desired square. Release the mouse button to complete your move.

You may also enter moves directly from the keyboard by typing them in the current notation (e.g. **e2e4** in coordinate notation, or **e4** in algebraic notation). See **Notation** on the **Choices** menu below for information on changing the notation used by the Chessmaster. Note: When using the keyboard to input moves in algebraic notation, each move must be terminated by pressing the Return key.

When entering moves from the keyboard, the program will beep as soon as it recognizes an illegal move.

Special Moves

Castling: when legal, Castle by moving your King two squares towards the Rook. The Rook will move into place automatically.

En Passant: When legal, capture your opponent's pawn "in passing" by moving your pawn ahead and diagonally behind it.

Promotion: If your pawn reaches the opposite edge of the board, the Chessmaster will ask you to promote your pawn to a Queen, Rook, Bishop, or Knight. Click on the

corresponding radio button, and then the **Promote** button.

The Features

The explanations below are grouped by menu, and cover every feature offered by The Chessmaster 2100.

Features which can be turned on or off are indicated below by a u next to their name (this same symbol appears in the menu itself when that item is turned on).

About The Chessmaster 2100...

Copyright and version information for the curious player.

Chessmaster Help... (⌘?)

Selecting this item will present a dialog box with a list of help topics on the left, and the text for the currently selected help topic on the right. Select a new topic by scrolling through the list and clicking on a particular topic of interest. Return to play by clicking the **Ok** button.

Context-sensitive help is available by holding down the **Shift** key while pressing ⌘?. When you do this, the cursor will change from a hand into a question mark. Use the question mark cursor to select an item from the menu to get help on that menu item.

Desk Accessories

The Chessmaster 2100 operates normally with all Desk Accessory programs.

File

New Game (⌘N)

Starts a new game against the currently selected opponent. If your opponent is the Chessmaster and you have chosen to play Black (see **Action/Switch Sides** below), the Chessmaster will move first.

Open... (⌘O)

Presents a standard file dialog with the names of any games you have saved in the current folder. To load a previously saved game, select it and click on the **Open** button.

If the current folder contains the file **Classic Games**, it will also be displayed in this list. Opening **Classic Games** will display the titles of the Chessmaster's Classic Games of Chess. You may then select the classic game you wish to view (see **Animate Replay** on the **Action** menu below).

Save (⌘S)

Lets you save the current game under a name of your own choosing.

Save As...

Allows you to save the current game under a name different from the one it has at present.

Erase Game...

Allows you to erase a previously saved game without having to leave the program. This feature is useful when you want to make room to save the game in progress on a diskette that is already full.

Settings...

Allows you to see the current state of all the Chessmaster's features. You can also adjust their setting without having to access each feature from its associated menu item.

Once you have set features to match your preferences, you can make those settings the default by selecting the **Save Current Settings** button. These settings will then be in effect every time you start the Chessmaster 2100. You may also return to the original settings chosen by The Software Toolworks by selecting **Restore Toolworks.**

Tutorial...

The Chessmaster 2100 offers a complete introduction to the game of Chess. You may select the complete tutorial, or any section of it. When **Tutorial...** is selected, the menu bar changes to include a **Tutorial** menu, which allows you to pause the tutorial, change the tutorial section, or leave the tutorial to resume normal play.

Page Setup...

This command sets paper size, orientation, and special printing effects. Page setup options depend on the selected printer and the installed printer driver. If you change printers, make sure the Page Setup options are correct.

Print

Board... - Prints the current board position.

Move List... - Prints all the moves in the current game. The name of each player appears at the top of the list, followed by the moves in the current notation.

Quit (⌘Q)

Had enough for today? Selecting this item exits the program and returns you to the desktop.

Edit

Undo (⌘Z)

This command may be used to take back the last move, or replay the last move taken back.

Cut (⌘X)
Copy (⌘C)
Paste (⌘U)
Clear

These editing features are disabled when the Chessmaster 2100 is in use.

Play

Play Level is

Newcomer - When a + appears next to this item, the Chessmaster will play his easiest game.

The Chessmaster's playing strength is determined largely by how far he looks ahead (considering his move, your response to his move, his response to your response, and so on). Newcomer play restricts the Chessmaster to considering his moves and your responses to them, and no more.

Fixed Time... - The Chessmaster will always respond within the specified amount of time (less if he is using a move from his vast opening library). You may select from a list of present values, or manually enter your own.

Time Controls... - Each side must complete a certain number of moves within a given time. If a side runs out of time before making the required number of moves, they lose!

Fixed Depth... - The Chessmaster will look ahead a fixed number of moves (specified by you), and select his move based on that information.

Minutes Per Game... - Each side has a fixed number of minutes in which to win the game. The side whose clock runs out first loses!

Equal Response Time - When the Chessmaster is your opponent, he will try to move about as quickly as you do, based on the average amount of time you spend making each move.

Infinite Time - The Chessmaster will think until you select the **Force Move** item from the **Action** menu.

Style is

Normal - The Chessmaster will choose among several moves that he considers good.

Coffeehouse - The Chessmaster is more likely to make a poor move than when the **Style** is **Normal**.

Best - The Chessmaster will always make the best move available

Opponent is

Chessmaster - Pits you against the Fidelity Chessmaster 2100.

Human - The Chessmaster referees a game between you and another human player.

Autoplay - Lets you watch while the Chessmaster plays both sides of the board.

Deep Thinking (◆)

Like a human opponent, the Chessmaster normally thinks ahead while you consider your move. Should you find the

Chessmaster winning too many games, turn Deep Thinking off to prevent the Chessmaster from thinking ahead.

Championship Play (◆)

When Championship Play is on, the Chessmaster will play his very strongest game. Tournament rules are enforced: you must move the first piece you touch, you cannot take back moves, and you will lose the game if time runs out.

Opening Book (◆)

If the opening book is on, the Chessmaster will quickly consult his library of over 150,000 positions during the early part of the game, rather than thinking about each move. When playing a time-controlled game, the Chessmaster will use the time gained in this manner to think more deeply about moves in the middle game. The Chessmaster plays a stronger game when the opening book is on.

Practice An Opening...

Good chess players are familiar with a large number of opening move sequences. Select this option before the first move is made and the Chessmaster will help you learn. The Chessmaster will always tell you the first move to make, and let you know when you blunder off course. If **Commentary** is enabled, the Chessmaster will prompt you with the next move from the opening you have chosen to practice.

Print Each Move (◆)

Each move will be recorded on the printer in the currently selected notation.

Rate My Play...

When this feature is turned **On**, each complete game (ending in checkmate, stalemate, draw or resignation) will be used to rate your play. Selecting **Off** will let you play practice games which will not be included in your rating total. You may also **Reset** your rating to start over. You should play at least ten games before taking the Chessmaster's rating seriously.

The basic idea is that your rating should increase more if you beat a stronger player than if you embarrass a much weaker player. The exact formula is

New Rating = ±16 + (.04 * min(350, W-S))

where **W** is the weaker player's rating, and **S** is the stronger player's rating. This says that against a player of equal strength, your rating will increase by 16 points if you win, and decrease by 16 points if you lose. This value is adjusted based on whether you are "expected" to win (because you are stronger or weaker than your opponent).

You rating can increase by as much as 30 points, should you be skillful (or lucky) enough to beat a player whose rating is more than 350 points greater than yours.

The United States Chess Federation (USCF) assigns the following ratings:

Class D:	below 1400
Class C:	1400 - 1599
Class B:	1600 - 1799
Class A:	1800 - 1999
Expert:	2000 - 2199
Master:	2200 and above

Important Note: The Chessmaster's rating of your play is approximate and unofficial. If you are serious about playing tournament chess, join the USCF! (See the manual for more information.)

Action

Switch Sides (⌘I)

You and your opponent exchange sides. If you want the Chessmaster to play the White pieces, select this item at the start of a game.

Take Back Last Move (⌘T)

Undoes the last move done by either side.

Important Note: If you take back or replay moves so that it is the Chessmaster's turn to move, you must use Force Move when you want the Chessmaster to continue play.

Take Back All Moves

Undoes all moves which have been made so far.

Replay Last Move (⌘R)

Replay the last move which was taken back.

Animated Play...

Allows you to sit back and watch as moves which have been taken back are replayed automatically. This is an excellent way to view the Chessmaster's Classic Games, which are saved with all moves taken back.

Force Move (⌘F)

If you become impatient while playing at higher levels, you can force the Chessmaster to move immediately by selecting this item. Note that this is the only way to make the Chessmaster move when **Play Level is Infinite Time** has been selected from the **Play** menu.

Analysis...

When this item is selected, you will be asked to specify which side should have its moves analyzed (Black, White or Both) and how long the Chessmaster should spend analyzing each move. You may analyze an entire game, or just the last few moves. For each move analyzed, the Chessmaster will show the move it would have made at that point (including score and predicted line of play), and then play the actual move. Game commentary for classic games will not be shown. For more information about the score and line of play, read about the Thinking Window under the **Window** menu below.

Hint (⌘A)

Ask the Chessmaster for advice. If the Chessmaster has had sufficient time to look a couple of moves ahead, he will respond immediately. Otherwise, he will ask for time to consider the board and suggest a move.

Resign

If you find yourself in a hopeless position, you may resign. Resignation is considered a loss of game.

Offer Draw

If you believe that neither side can win the game, you may offer your opponent a draw. Of course, your opponent is under no obligation to accept your offer!

Solve For Mate...

Asks for the Chessmaster to examine the current position and determine whether the side whose turn it is to move can checkmate his opponent in the number of moves you specify. Normally, you will use the **Setup** feature above to place pieces on the board and choose the side to move before selecting this option.

Pause Game (⌘P)

In case you need to answer the phone or stretch your legs. While paused, the clocks do not tick and the Chessmaster does not think.

The BOSS! (⌘B)

A panic button for tight situations! Be prepared, however, to speak knowledgeably about the migration patterns of the Arctic tern.

You can customize the picture that is displayed by this command. If the folder containing The Chessmaster 2100 also contains a file named "The Boss" with a PICT resource of 1234, that PICT will be displayed when the BOSS key is pressed.

Board

View

2-D — Displays a "flat," two-dimensional chess board.

3-D — Shows a three-dimensional "perspective" view of the board.

War Room — In addition to a small two-dimensional board, the War Room simultaneously displays captured pieces, the move list and the Chessmaster's thinking process. For a discussion of these displays, see these same items under the **Window** menu below.

Chess Set...

Displays a standard file dialog which allows you to choose an alternate piece set.

The Chessmaster 2100 comes with a utility to convert a PICTure file (edited using a program such as MacPaint or SuperPaint) into a "chess set" file which can be selected using this command.

Clocks (◆)

For each player, the chess clocks show the name, the elapsed time and the last two moves made. When the clocks are off, this information is hidden from view.

Important: The clocks tick even when not displayed. If time controls are in effect, a player can lose on time even if the clocks are hidden.

Coordinates (◆)

Using this option, you may toggle the display of rank and file coordinates along the edge of the chess board. If you enter moves using the keyboard, you may find coordinate display convenient.

Rotate

For added insight into the game, use this option to view the chess board from any side. If you have chosen to play Black, you will probably want to rotate the board so that White is at the top.

Setup

Enter Setup — Selecting this item allows you to place pieces on the board in almost any position you want. Move pieces already on the board normally. To remove a piece, pick it up and drop it off the board. To add a piece, pick up a piece from the "grab bag" and place it on the desired square.You cannot remove the Kings from the board or place another piece on top of a King.
Clear Board — Clears the board of all pieces except the Kings.
New Game Setup — Places the pieces in position for a new game.
Cancel Setup — Return to the game in progress without change.
Setup Complete — You will be asked which side should move first. If one side is in check, only that side is allowed to move. Selecting the "Cancel" button will leave you in setup mode.

Choices

Enter Name...

Let the Chessmaster know who's the boss! The name you choose will be displayed above the clock for the side you have chosen to play.

Sound

The Chessmaster 2100 uses sound and voice to keep you informed of the progress of the game. You may choose from the following settings:

Silent — Ideal for playing at work or late at night.
Bell — The Chessmaster will use a single sound for all occasions.
Music — The Chessmaster uses different songs to signal check, capture, promotion, checkmate, stalemate and other situations of interest.
Voice — On systems with adequate free memory, the Chessmaster will verbally inform you of interesting events.

Piece Slide (◆)

When this item is turned on, the pieces will slide to their destination square. When Piece Slide is off, chess pieces "pop" from their starting square to the destination square.

Notation

Algebraic — All moves will be displayed using algebraic notation. For an explanation of algebraic notation, choose **Tutorial** from the **Game** menu and select the tutorial section of that name. Note: When using the keyboard to input moves in algebraic notation, each move must be terminated by pressing the Return key.

Coordinate — All moves will be displayed in coordinate notation, e.g. e2-e4.

Teaching

Legal — When this item is selected, picking up a piece will display "ghost" pieces on the squares to which that piece can legally move. If a destination square is occupied by an opponent's piece, the opponent's piece will be ghosted, indicating that you can capture it.

Threatened — When active, those pieces which your opponent can capture are shown as "ghost" pieces. You may find this useful if you are losing pieces to your opponent because you missed the fact that you were under attack.

Off - disables the Chessmaster's teaching features.

Commentary (◆)

When this item is turned on, the Chessmaster will provide additional information about the progress of the game. If **Practice an Opening** has been selected from the **Play** menu, the Chessmaster will tell you each move you must make in the selected opening line.

Announce Openings (◆)

If this item is turned on, the Chessmaster will announce an opening line of play as soon as it is recognized.

Touch Piece (◆)

When this option is turned on, you must move the first piece that you pick up. This is the rule in serious games of chess. If you attempt to move another piece, you will receive a message telling you the piece you are required to move.

Blindfold Chess

Off — Pieces are displayed normally.
Hide White — The White pieces will be hidden from view.
Hide Black — The Black pieces will be hidden from view.
Hide Both — Sharpen your skills at true blindfold chess!

You may hold down the Space bar to "peek" at the hidden pieces. Release it to hide the pieces once more.

Set Hash Table...

The Fidelity chess algorithm uses a block of memory (known as a "hash table") to

remember positions that it has already seen and evaluated while thinking about the next move. The more memory available for this table, the stronger the Chessmaster will play. On systems with inadequate free memory, this menu item will be disabled.

Change Colors...

You can choose the colors used to display light squares, dark squares, the background and the foreground color (used for drawing text). Choose the item whose color you wish to adjust, and select a new color from the palette displayed. You may save your choices, in which case the program will use the colors you have chosen each time it starts. You may also restore the original colors chosen by the Software Toolworks.

Note: this menu item will only appear if your monitor is set to display 16 colors or more. You can adjust the setting for your monitor via the Control Panel desk accessory.

Window

Show/Hide Thinking

Gives you a peek into the Chessmaster's brain. Here's how to interpret the various pieces of information displayed:

Best: The best (based on resulting score) sequence of moves that the Chessmaster has found thus far. If you were to force the Chessmaster to move at this instant, he would make the first move from this sequence. The rest of the moves in this sequence are your expected reply, the Chessmaster's answer to your reply and so on.

When the Chessmaster is thinking during your turn (Deep Thinking is on), the Best line is based on your making the move that the Chessmaster predicted you would make in reply to his last move (see **Prev**).

Score: Reflects how far ahead (+) or behind (-) the Chessmaster thinks he will be if the Best line of play is played out to the last move shown. The score is computed in pawns and fractions of a pawn, so a score of 1.00 means the Chessmaster will be ahead by one pawn, and -3.00 means the Chessmaster will be behind by three pawns (the equivalent of a Knight or Bishop). Fractional scores come from the Chessmaster's evaluation of positional considerations, e.g. how well he controls the center of the board.

Positions: The total number of board positions that the Chessmaster has examined while contemplating its next move. In general, the more positions the Chessmaster examines, the better it will play.

Depth: The number of half-moves (plies) ahead that the Chessmaster has searched. For example, a Depth of 3 means the Chessmaster has examined all its legal moves, your replies to those

moves, and is now looking at its answer to your reply.

Curr: The line of play that the Chessmaster is examining at this instant. If the score of this line is better than that of Best, this line will become the new Best.

Prev: The Best line from the Chessmaster's last move. If the Chessmaster is thinking while you consider your move, it expects that you will make the second move in this line and bases its search on the resulting board position. This is the same information displayed in the **Best Variation** window.

Show/Hide Best Variation

This window displays the Chessmaster's anticipated line of play immediately after its last move.

Show/Hide Capture

Shows all the pieces that have been removed from the board. This window gives you a quick idea of whether you are ahead of your opponent in material (pieces).

Show/Hide Move List

Displays a list of all the moves in the current game. Moves that have been taken back are displayed in a different color than moves which have already been played. You may take back or replay to a particular move by clicking on that move.

Show/Hide Legal Moves

Displays a list of all the moves that are legal to make. Moves are displayed using the currently selected notation. If it is your turn to move, you may make one of the moves displayed by highlighting it and selecting the **Make Move** button, or by double-clicking on the desired move.

Hide All

Hides all visible windows.

Show All

Makes all of the above windows (**Thinking, Best Variation, Captured Pieces, Move List,** and **Legal Moves**) visible.

We are certain that you will enjoy playing The Chessmaster 2100, the finest chess program in the world.

Have Fun!!

WARRANTY

LIMITED WARRANTY
The Software Toolworks warrants that the diskettes upon which the program is recorded shall be free from defects in material and workmanship for a period of thirty (30) days from the date of purchase. If you are having any problems with the program, write our Technical Support department at 19808 Nordhoff Place, Chatsworth CA 91311 or call (818) 885-9000.

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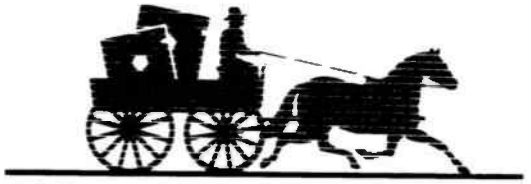

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