



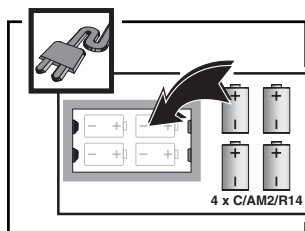
Chess Challenger

Instructions

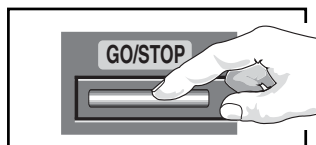
QUICK START

To play a game right away, without reading the entire manual first, simply follow these Quick Start steps!

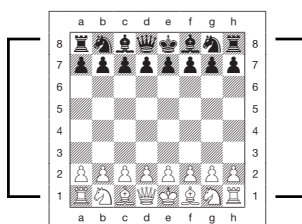
- 1 Plug in the AC adapter (supplied), or insert four "C" (Type AM2/R14) batteries into the computer, making sure to observe the correct polarity. When using the adapter (see Section 9), plug it into the wall and then into the unit.



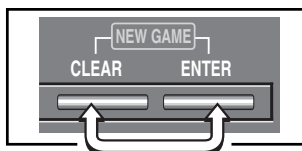
- 2 Press **GO/STOP** to turn the computer on. If the unit doesn't respond, reset it as noted in Section 9.1.



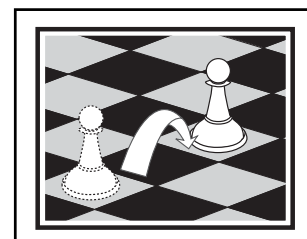
- 3 Set up the chess pieces in the initial starting position with the White pieces closest to you, as shown in this diagram.



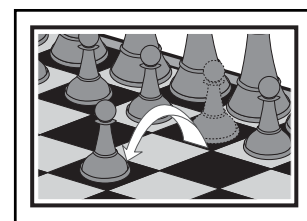
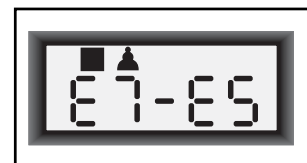
- 4 To reset the computer for a **NEW GAME** of chess, simultaneously press the **CLEAR** and **ENTER** keys.



- 5 Enter moves by making them on the board, pressing the pieces down gently on the **from** and **to** squares for each move. The board automatically senses which piece you are moving!



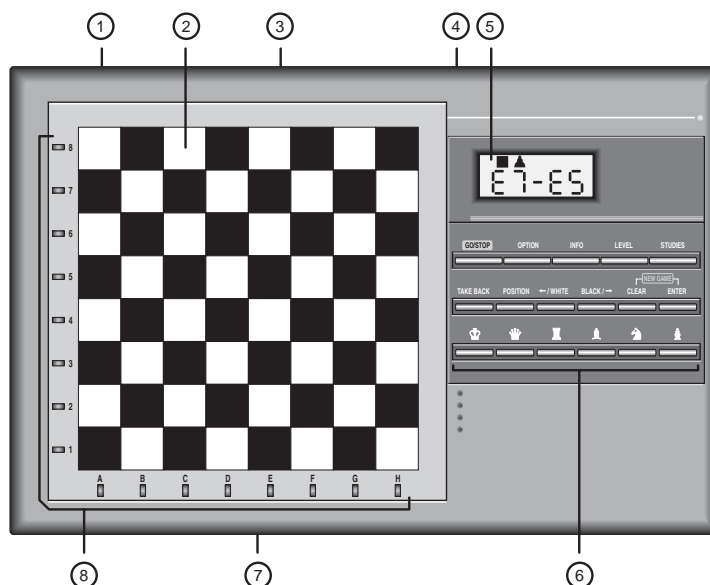
- 6 As soon as the computer makes a move, its move is shown in the display window. Two board lights also come on, pointing to the row and column of the piece to be moved. Press the computer's piece lightly onto the indicated **from** and **to** squares to complete the computer's move. That's it! Make your next move as described above. Enjoy your game!



Press **GO/STOP** at any time to turn the computer off. Your current position and game (up to 50 individual moves) will be stored in memory. When you switch back on again, you can continue right where you left off!

KEYS AND FEATURES

1. **BATTERY COMPARTMENT:** In base of unit. Uses four "C" (AM2/R14) alkaline batteries.
2. **SENSORY CHESSBOARD:** Each square contains a sensor that automatically registers piece movement. Certain squares can also be pressed within Level Mode and Option Mode to select levels and options.
3. **PIECE STORAGE COMPARTMENT:** In base of unit.
4. **ADAPTER SOCKET:** For AC-DC adapter.
5. **DISPLAY WINDOW:** Used to show moves and move information during a game. Also used for Level, Option, and Study Game selection, piece verification, position set-up, and more.
6. **GAME KEYS**
 - **GO/STOP:** Press to turn the unit on and off.
 - **OPTION:** Press to enter Option Mode; within Option Mode, press to cycle through the main option groups.
 - **INFO:** Press to enter Info Mode; within Info Mode, press to cycle through the main info groups. Press during your move to request a hint.
 - **LEVEL:** Press to enter Level Mode; within Level Mode, press to skip over eight levels at a time. Also used to access the Extended Teach Modes.
 - **STUDIES:** Press to enter Study Mode.
 - **TAKE BACK:** Press to take back an individual move (a move for either side). Take back up to a maximum of 50 individual moves.
 - **POSITION:** Press to enter Position Mode.
 - **←/WHITE and BLACK/→ KEYS:** Press to change levels one at a time in Level Mode, and press to cycle through options in Option Mode and Info Mode. Also used to select Study Games in Study Mode, and to select the color in Position Mode.
 - **CLEAR:** Press simultaneously with **ENTER** to reset for a **NEW GAME**. Press to exit Option, Verify, and Position Modes. Press to clear Info Displays and cancel Clear Board requests in Position Mode. Press to cancel Study Mode (if you haven't yet pressed **ENTER**), and press to cancel Level



Mode if you decide not to make changes (unless you have pressed board squares to change levels).

- **ENTER:** Press simultaneously with **CLEAR** to reset for a **NEW GAME**. Press to change sides with the computer, and press while the computer is thinking to force it to move. Press to turn Option settings on and off, to select Bronstein Clock settings, and to exit Level Mode with your new level or Teach Mode game selected. Press to exit Study Mode with a new Study Game selected. Press to clear the board in Position Mode, then press again to confirm.
 - **PIECE SYMBOL KEYS:** Used in Verify, Position, and Teach Modes. Also used for pawn promotions.
7. **ACL (Reset):** In base of unit. Used to eliminate static discharge after inserting new batteries or adapter.
 8. **BOARD LIGHTS:** Used to show game moves, take back moves, and verify/set up board positions.

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INTRODUCTION

We'd like to welcome you to the exciting world of computer chess! Whether you're just starting to learn about this great game or you're already a seasoned player, using your new chess computer will give you the opportunity to discover so much more about chess than you ever thought possible! Take a look through this manual to get an overview of your computer's capabilities—all the special features and modes, all the unique options and playing levels. And take advantage of them over time, one by one. You'll have great fun—and you'll never look at chess the same way again.

Your computer knows all the rules of chess—and it will never cheat. For those of you who haven't played before, we have included a brief overview of the rules to get you started. For more detailed information, why not visit your local library, where you're sure to find lots of interesting chess books.

1. LET'S GET STARTED!

1.1 First, Install the Batteries or Adapter

Your computer runs on four "C" (Type AM2/R14) batteries. Insert the batteries into the compartment in the base of the unit, making sure to observe the correct polarity. Use fresh alkaline batteries for longer battery life.

Please use only the adapter specified in Section 9.3. Using any other adapter could damage the computer and will invalidate your warranty. Please also read the precautionary information regarding adapter use in Section 9.2. When using an adapter, first plug it into a wall outlet, and then into your computer.

Important: To ensure that the computer's memory contents are not lost, keep good batteries installed in the unit even when you are using the AC-DC adapter.

Turn the computer on by pressing **GO/STOP**, and a beep will signal that the game is ready to play. If the computer fails to respond (static discharge may cause it to lock up), use a paper clip or another sharp object to press down into the hole marked **ACL** in the base of the unit for at least one second. This will reset the computer.

Tip: To conserve energy and extend battery life, turn on the Auto Power Down option (see Section 5.1).

1.2 Ready to Play? Here's How to Move!

Okay, now it's time to start a game! It's so easy—just follow these steps:

- a. Press **GO/STOP** to turn the computer on, if you haven't already done so.
- b. Press the **CLEAR** and **ENTER** keys together to reset the computer for a **NEW GAME** of chess. Set up the pieces in their starting positions, with the White pieces nearest to you, as shown in the *Quick Start*.
- c. To make a move, lightly press down on the piece you want to move until you hear a beep and two board lights turn on to indicate that square. The sensory board will recognize your piece automatically. Don't believe it? Just look at the display window, which is suddenly full of information—it shows your piece, along with the piece color and the square you just pressed!
- d. Take that piece and gently press it down on the square to which you are moving. You'll hear a second beep as the computer confirms your move. That's it—you've just made your first move of the game! Next, it's Black's turn—and the computer will make its first move.

You'll notice that the computer often moves instantly at the beginning of a game, instead of taking time to think. This is because it is playing from memory, using a built-in "book" of opening moves (for more information, see Section 2.7).

1.3 Now It's the Computer's Turn

When the computer makes its move, it beeps and turns on two board lights indicating the square of the piece it wants to move. It also shows its full move in the display window. Check it out—you'll see the **from** and **to** squares of the computer's move, along with the color and type of piece it is moving. *Notice that the **from** square is flashing in the display.* Press the indicated piece down on the **from** square until you hear a beep. The **to** square is now flashing in the display—move that same piece to the indicated **to** square and press it down to complete the computer's move. And it's your turn again...

By the way, while you're thinking about your next move, notice that the chess piece symbols are displayed, one by one, counting "up" from pawn to King. This means the built-in chess clock is in normal mode, counting your elapsed time. If the Countdown Clock is activated, as noted in Section 5.1, the displayed symbols will reverse direction. You'll find details on all the chess clock features in Section 4.3.

1.4 Change Your Mind? Take Back

When you're playing chess against this computer, nothing is "set in stone"—you can change your mind or decide to play a different move whenever you want. When it's your turn to move, simply press **TAKE BACK**. The display shows the move to be taken back, with the original **to** square flashing and indicated by board lights. Press the piece down gently on the indicated square, and the computer shows you where that piece came **from** by flashing that display and using board lights to point to that square. Press the piece down on the **from** square to complete the take-back. Repeat this as often as you'd like, taking back up to 50 individual moves (or 25 moves for each side). To continue playing at any point, just make another move on the board.

After taking back a capture, the computer will make sure your board is still set up correctly by reminding you to put the captured piece back on the board! It does this by displaying the piece symbol and its location, along with a "+" symbol, and turning on the board lights for that square. Put the indicated piece back on the board and press that square to complete the take-back.

1.5 Game Over? Why Not Play Again

Whenever you finish a game (or if you give up on your current game), it's easy to start over again! Reset the computer for a **NEW GAME** by pressing the **CLEAR** and **ENTER** keys together, and a series of beeps tells you the computer is ready. The same playing level will be in effect, but you can change it if you'd like, as explained in Section 3.

IMPORTANT: Resetting the computer for a new game clears your current game from the computer's memory—be careful not to press these keys by mistake!

1.6 Too Easy/Hard? Change the Level!

When you first turn your computer on, it's automatically set to Normal Playing Level A4 (five seconds a move). However, you have 64 different levels to choose from—you'll want to try them all out! For descriptions of the playing levels and how to change levels, see Section 3.

2. MORE FEATURES TO EXPLORE

2.1 Whose Move? Check the Display

When the computer plays Black, it flashes a black square in the display while it is thinking. After it has moved, a white square shows that it is now White's turn to move. You can tell at a glance if the computer is currently thinking, and which side is to move.

2.2 Special Chess Moves

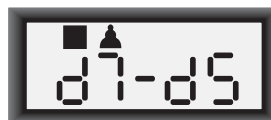
Captures: To capture, press down on the piece you want to move, remove the captured piece from the board, and press your piece down on the square of the captured piece. Captures are displayed as in E5×F4.

En Passant Captures: In this type of capture, the computer reminds you to remove the captured pawn by displaying the pawn's position, along with a minus sign, and using two board lights to indicate that square. Press down on the captured pawn before removing it from the board.

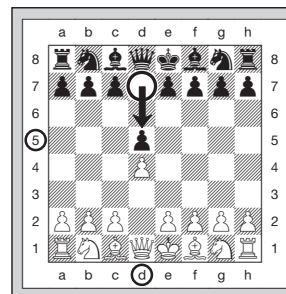
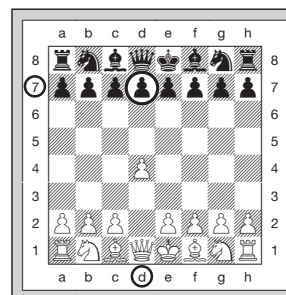
Castling: The computer automatically recognizes castling after the King is moved. After you have pressed the King down on its **from** and **to** squares, the computer uses the display and board lights to remind you to move the Rook. Press down on the Rook's **from** and **to** squares to complete the move. Note that Kingside castling is displayed as ♖-♗, and Queenside castling as ♖-♝.

Pawn Promotions: When you promote a pawn, first make your move as usual, pressing your pawn down on its **from** and **to** squares. Next, press the Piece Symbol Key for your desired promotion piece (♙, ♚, ♗, or ♜). The computer recognizes your new piece immediately, and begins thinking about its next move. Remember to change your piece on the

MAKING THE COMPUTER'S MOVE: AN EXAMPLE!



After the computer moves, it's up to you to make its move on the board! Here, the display indicates the computer wants to move its Black pawn (♟) from **d7** to **d5**. Pick up the **d7** pawn (indicated by the board lights) and press it down lightly on **Square d7**. The board lights now point to **Square d5**. Press the pawn down on **Square d5** to complete the computer's move. Now it's your turn again!



board! **When the computer promotes a pawn**, the display shows both the pawn and the promoted piece. Don't forget to replace the computer's pawn with its new piece.

2.3 Illegal Moves

Your computer will never accept an illegal move! If you try to make one, you'll hear a low double beep, and the board lights and display will simply continue to show the square the piece came **from**. Either move that same piece to another square, or press the piece back down on the original **from** square and move a different piece.

If you don't make the computer's move correctly, you'll also get an error beep. This means you are either moving the wrong piece, or moving the computer's piece to the wrong square. If the computer wants to move its pawn from C7 to C5, for example, and you press down on C7 and then C6, the display shows :C5 briefly, pointing out your error. The display then returns to showing the move again (E7-E5), and the computer expects you to press C5 to complete its move.

If you press down on a piece and the **from** square is displayed, but you decide not to make that move, simply press down on that same square again to cancel. Then make another move. If you change your mind after entering your whole move, take the move back as described in Section 1.4.

2.4 Check, Mate, and Draw

When a King is in check, the computer first displays its move as usual. After the move is made, ♔♔♔ flashes in the display for a few seconds, along with the checking move. The display then goes back to showing the clock.

If the computer discovers a forced mate against its opponent, it first displays its move as usual. After the move has been made on the board, the computer flashes a mate announcement along with the move for several seconds (e.g., ♔ ♖2 for a mate in two moves). The display then goes back to showing the clock.

When a game ends in checkmate, the display flashes ♔♔♔ (along with the mating move) for a short time after the move is made. The display then goes back to showing the clock.

The computer recognizes draws by stalemate, three-fold repetition, 50-move rule, and insufficient material. After a draw has occurred, the display flashes ♖♔♔, ♖♔♔♔, ♖♔♔♔♔, or ♖♔♔♔♔♔ (along with the drawing move) for a brief time after

the move has been made. The display then goes back to showing the clock.

2.5 Interrupting the Computer's Search

Think the computer is taking too long to move? You can interrupt it any time! Simply press **ENTER** while the computer is thinking, and it will stop and play the best move it has found so far. This feature can be handy on the higher levels, where the computer can take a long time to move, and on the Infinite Level, where the computer thinks indefinitely unless you stop it.

*On the Mate Search Levels, pressing **ENTER** won't force the computer to make a move. Instead, the computer will sound an error beep and display — — — — to indicate that it was interrupted before it found a mate. To continue play, switch to another level.*

2.6 Changing Sides with the Computer

To change sides with the computer, simply press **ENTER** when it's your turn—and the computer will make the next move for your side. Change sides as often as you wish.

*Note that if you press **ENTER** at the beginning of a new game, the computer will play White from the top of the board. For details, see Section 5.1.*

2.7 Built-In Openings

At the beginning of a game, the computer will often move instantly on many levels. This is because it is playing from memory, using its own built-in "book" of opening chess moves. This book contains thousands of positions, including most major openings and many positions from grandmaster play. If the current board position is in its book, the computer plays a response to that position automatically, instead of having to think about the move!

A special feature of this computer's opening book is its ability to handle *transpositions*. A transposition occurs when a position reached by a certain set of moves can also be reached when those same moves occur in a different order. The computer's integrated Automatic Transposition Manager handles these cases with ease.

Note that the opening book is not used in the Teach Mode games (see Section 6).

2.8 Thinking on the Opponent's Time

As you play, you may notice that the computer sometimes replies to your moves immediately, even in the middle of games played on the higher levels. This is because the computer thinks on your time, using the time you are taking for your move to think ahead and plan its own strategies. It tries to guess the move you are likely to make, and then calculates its responses for that particular move while you are still thinking. If the computer has guessed right, there's no reason for it to keep on calculating—it immediately plays the move it has already found.

2.9 Game Memory

Press **GO/STOP** at any time to interrupt a game. Play is then suspended, and the computer stores your current game in memory (up to 50 individual moves). When you switch back on again, you can continue right where you left off.

To preserve the memory in case the unit is unplugged, keep batteries installed even when using an adapter.

3. THE PLAYING LEVELS

Your chess computer offers 64 different levels of play! When you set the level, keep in mind that when the computer has more time to think about its moves, it becomes stronger and plays better—just like a human chess player! For an overview of all the levels, refer to the Level Chart. The levels are also described individually in this section.

NEED HELP CHOOSING A LEVEL? SOME TIPS FOR YOU

- **Are you a beginning player?** You have lots of choices! Check out the Fun Levels, the lower Training Levels, or the Self-Adaptive Weak Levels. These levels all restrict the computer's search depth in different ways, resulting in weaker play and giving you the chance to learn more about the game and perhaps even beat the computer occasionally.
- **Are you an intermediate or more advanced player?** Try the Normal, Training, or Tournament Levels. The Normal Levels range from easy all the way up to a difficult 10-minute response time, and the Tournament Levels are extremely challenging. And don't forget to try the Blitz Levels for some fast and exciting games of Speed Chess! By the way, for Tournament and Blitz Games, you can activate the built-in Bronstein Clock, as you'll see in Section 5.3.
- **Want to experiment?** Use the Mate Search Levels to solve problems up to mate in eight—try searching from a position in one of your own games, or set up an actual mate problem. Choose the Infinite Level to have the computer analyze complicated positions for hours or even days.

Setting a Playing Level

See "**USE THIS CHART TO SELECT A PLAYING LEVEL!**" for an illustrated look at how to set a level and a chart showing all the levels at a glance.

There are two methods of setting levels—by using the game keys or pressing the board squares. Whichever method you use, always press **LEVEL** first to enter Level Mode, and the computer will display the current playing level. When you enter Level Mode the first time, the computer is set on Normal Playing Level A4 (with an average response time of five seconds a move), and the display shows L 0:05.

- **To select a level by using game keys:** After entering Level Mode by pressing **LEVEL**, change levels one at a time by using the **BLACK/→** and **←/WHITE** keys. As a shortcut, press **LEVEL** repeatedly to skip over eight levels at a time. When the display shows your desired level, press **ENTER** to enter your new level into the computer and exit Level Mode.
- **To select a level by pressing board squares:** As shown in the Level Chart, each of the 64 squares corresponds to one level. After entering Level Mode by pressing **LEVEL**, press a square to activate a level, using the chart as a guide. When you press down on the desired square and that level shows in the display, press **ENTER** to enter your new level into the computer and exit Level Mode. *Note that when making your selection via the board squares, pressing **CLEAR** has the same effect as pressing **ENTER**—it enters your level into the computer.*
- **To verify the level without changing it:** If you press **LEVEL** to verify the level but you don't want to actually change levels, press **CLEAR**. This returns you to normal play without changing the level or clock settings, even while the computer is thinking.

Other important points to remember regarding levels:

- *Changing the level always resets the chess clocks.*
- *We don't recommend changing levels while the computer is thinking, since the clock is reset and the current search is aborted. If you must do this, first press **ENTER** to abort the computer's search, and make its move on the board. Then, take back the computer's move and change the level. Finally, press **ENTER** to make the computer start thinking on the new level.*

- The **LEVEL** Key is also used to enter Teach Mode, as you will see in Section 6. If you accidentally press a **PIECE SYMBOL KEY** while in Level Mode, you will enter Teach Mode and lose your current game after exiting Level Mode. To prevent this and retain your current board position, press **CLEAR** to cancel Level Mode.

3.1 Normal Playing Levels (Squares A1-B7)

LEVEL	TIME PER MOVE	DISPLAY
A1	1 second	L 0:01
A2	2 seconds	L 0:02
A3	3 seconds	L 0:03
A4	5 seconds	L 0:05
A5	10 seconds	L 0:10
A6	15 seconds	L 0:15
A7	20 seconds	L 0:20
A8	30 seconds	L 0:30
B1	45 seconds	L 0:45
B2	1 minute	L 1:00
B3	1.5 minutes	L 1:30
B4	2 minutes	L 2:00
B5	3 minutes	L 3:00
B6	5 minutes	L 5:00
B7	10 minutes	L 10:00

When you choose one of the Normal Playing Levels, you are selecting an average response time for the computer. Note that the times are averaged over a large number of moves. In the opening and endgame, the computer tends to play faster, but in complicated middlegame positions, it may take longer to move.

3.2 Infinite Level (Square B8)

LEVEL	MOVE TIME	DISPLAY
B8	No time limit	9:99:99

On the Infinite Level, the computer will search indefinitely, until it finds a forced mate or forced move; until it has fully searched the position to its maximum depth; or until you stop the search by pressing **ENTER**. If you halt the search, the computer makes the move it currently thinks is best. Try experimenting with this level—set up interesting board positions and let the computer analyze them for you! It will think for hours or even days on end, trying to come up with the best possible move. And don't forget to watch the computer as it thinks—take advantage of the Rotating Display feature described in Section 5.2!

3.3 Tournament Levels (Squares C1-C8)

LEVEL	TOTAL TIME / NUMBER OF MOVES	DISPLAY
C1	1 hr. 30 min. / 40 moves	1:30:40
C2	1 hr. 45 min. / 35 moves	1:45:35
C3	1 hr. 45 min. / 40 moves	1:45:40
C4	1 hr. 30 min. / 35 moves	1:30:35
C5	2 hrs. / 40 moves	2:00:40
C6	2 hrs. 30 min. / 45 moves	2:30:45
C7	2 hrs. / 50 moves	2:00:50
C8	3 hrs. / 40 moves	3:00:40

The Tournament Levels require you to make a certain number of moves within a given amount of time. If a player exceeds the allotted time for a given number of moves, the computer flashes “time” (⌚) along with the elapsed time, to show that the game is over. If you wish, you can continue to play even after the time has run out.

If you choose a Tournament Level, you may want to set the chess clocks to display countdown time instead of the elapsed time (see Section 5.1). When the game time runs out, the countdown clock automatically reverts back to the normal clock display.

Your computer also offers the option of using Bronstein Clock time controls when playing Tournament games. For complete details, see Section 5.3.

3.4 Blitz Levels (Squares D1-D8)

LEVEL	TIME PER GAME	DISPLAY
D1	5 minutes	0:05:99
D2	10 minutes	0:10:99
D3	15 minutes	0:15:99
D4	20 minutes	0:20:99
D5	30 minutes	0:30:99
D6	45 minutes	0:45:99
D7	60 minutes	1:00:99
D8	90 minutes	1:30:99

On the Blitz Levels (also called Speed Chess or “Sudden Death” Levels), you set the total time for the whole game. If game time is exceeded, the computer flashes “time” (⌚) along with the elapsed time, to show that the game is over.

If you select a Blitz Level, you may want to set the chess clocks to display countdown time instead of elapsed time (see Section 5.1). When game time runs out, the countdown clock automatically reverts back to the normal clock display.

Your computer also offers the option of using Bronstein Clock time controls when playing Blitz games! For complete details, see Section 5.3.

3.5 Fun Levels (Squares E1-E8)

LEVEL	TIME PER MOVE	DISPLAY
E1	1 second	Fun: 1
E2	2 seconds	Fun: 2
E3	3 seconds	Fun: 3
E4	4 seconds	Fun: 4
E5	5 seconds	Fun: 5
E6	6 seconds	Fun: 6
E7	7 seconds	Fun: 7
E8	*8 seconds	Fun: 8

*Increases with user's time per move.

Are you a novice or beginning chess player? If so, these levels are especially for you! Here, the computer restricts its search so that it deliberately plays weaker and gives you a better chance to win. The Fun Levels start out easy and get a little harder as you go. The computer's playing strength goes up gradually from Levels E1 to E6—but be prepared for some stiffer competition when you reach Levels E7 and E8. The two highest Fun Levels represent a much greater jump in playing strength, and you'll see that they're quite a bit more challenging. Try out all the Fun Levels—as you beat each one, go on to the next. By the time you reach Levels E7 and E8, your improved chess skills should make them much easier to handle.

3.6 Mate Search Levels (Squares F1-F8)

LEVEL	PROBLEM	DISPLAY
F1	Mate in 1	7 in: 1
F2	Mate in 2	7 in: 2
F3	Mate in 3	7 in: 3
F4	Mate in 4	7 in: 4
F5	Mate in 5	7 in: 5
F6	Mate in 6	7 in: 6
F7	Mate in 7	7 in: 7
F8	Mate in 8	7 in: 8

Selecting one of these levels activates a special Mate Finder Program. If you have a position where there may be a mate and you would like the computer to find it, set the computer on one of the Mate Search Levels. Your computer can solve mates in up to eight moves. Mates in one to five are usually found quite quickly, whereas solutions taking six to eight moves may take quite some time. If there is no mate present or the computer can't find a mate, it will sound an error beep and display a series of dashes (-----). To continue play, simply switch to another level.

3.7 Training Levels (Squares G1-G8)


LEVEL	SEARCH DEPTH	DISPLAY
G1	1 move	PLY: 1
G2	2 moves	PLY: 2
G3	3 moves	PLY: 3


USE THIS CHART TO SELECT A PLAYING LEVEL!

1.  Press **LEVEL** to enter Level Mode.

2. Next, select your level, using the chart below. There are two ways to do this.

- Cycle through the levels until your level is displayed:
Press **BLACK/→** to **increase↑** levels by **one**.
Press **←/WHITE** to **decrease↓** levels by **one**.
Press **LEVEL** to **increase↑** levels by **eight**.
- **OR**, simply locate your level square and press it to display that level!

3.  Finally, press **ENTER** to exit Level Mode, using your new level!

	30 sec. per move L 0:30 A8	Infinite Level 9:99:99 B8	40 moves in 3:00 3:00:40 C8	90 min. per game 1:30:99 D8	8 sec. per move* Fun: 8 E8	Mate in 8 moves Fin: 8 F8	8 ply search PLY: 8 G8	Self- adaptive 8 Rdt: 8 H8
	20 sec. per move L 0:20 A7	10 min. per move L 10:00 B7	50 moves in 2:00 2:00:50 C7	60 min. per game 1:00:99 D7	7 sec. per move Fun: 7 E7	Mate in 7 moves Fin: 7 F7	7 ply search PLY: 7 G7	Self- adaptive 7 Rdt: 7 H7
	15 sec. per move L 0:15 A6	5 min. per move L 5:00 B6	45 moves in 2:30 2:30:45 C6	45 min. per game 0:45:99 D6	6 sec. per move Fun: 6 E6	Mate in 6 moves Fin: 6 F6	6 ply search PLY: 6 G6	Self- adaptive 6 Rdt: 6 H6
	10 sec. per move L 0:10 A5	3 min. per move L 3:00 B5	40 moves in 2:00 2:00:40 C5	30 min. per game 0:30:99 D5	5 sec. per move Fun: 5 E5	Mate in 5 moves Fin: 5 F5	5 ply search PLY: 5 G5	Self- adaptive 5 Rdt: 5 H5
	5 sec. per move L 0:05 A4	2 min. per move L 2:00 B4	35 moves in 1:30 1:30:35 C4	20 min. per game 0:20:99 D4	4 sec. per move Fun: 4 E4	Mate in 4 moves Fin: 4 F4	4 ply search PLY: 4 G4	Self- adaptive 4 Rdt: 4 H4
	3 sec. per move L 0:03 A3	1.5 min. per move L 1:30 B3	40 moves in 1:45 1:45:40 C3	15 min. per game 0:15:99 D3	3 sec. per move Fun: 3 E3	Mate in 3 moves Fin: 3 F3	3 ply search PLY: 3 G3	Self- adaptive 3 Rdt: 3 H3
	2 sec. per move L 0:02 A2	1 min. per move L 1:00 B2	35 moves in 1:45 1:45:35 C2	10 min. per game 0:10:99 D2	2 sec. per move Fun: 2 E2	Mate in 2 moves Fin: 2 F2	2 ply search PLY: 2 G2	Self- adaptive 2 Rdt: 2 H2
	1 sec. per move L 0:01 A1	45 sec. per move L 0:45 B1	40 moves in 1:30 1:30:40 C1	5 min. per game 0:05:99 D1	1 sec. per move Fun: 1 E1	Mate in 1 move Fin: 1 F1	1 ply search PLY: 1 G1	Self- adaptive 1 Rdt: 1 H1

*Increases with user's time per move.

For more details on all the playing levels, see Section 3.

NORMAL LEVELS +
INFINITE LEVEL

TOURNAMENT
LEVELS

BLITZ
LEVELS

FUN
LEVELS

MATE SEARCH
LEVELS

TRAINING
LEVELS

SELF-ADAPTIVE
WEAK LEVELS

G4 4 moves PLY: 4
G5 5 moves PLY: 5
G6 6 moves PLY: 6
G7 7 moves PLY: 7
G8 8 moves PLY: 8

On the Training Levels, the computer's search depth is limited to a certain number of moves, as shown above. As you cycle through the levels, the computer displays PLY: # for each level. A "ply" is an individual move (a move for either side), and "#" is the number representing the search depth. For example, on Level G1, the computer searches to a depth of one ply (PLY: 1), and thus looks ahead only one individual move. On this level, therefore, it will often overlook a mate in one. This produces weaker play, giving beginners a better chance of beating the computer!

3.8 Self-Adaptive Weak Levels (Squares H1-H8)

LEVEL	TYPE	DISPLAY
H1	Self-Adaptive 1	Rdt: 1
H2	Self-Adaptive 2	Rdt: 2
H3	Self-Adaptive 3	Rdt: 3
H4	Self-Adaptive 4	Rdt: 4
H5	Self-Adaptive 5	Rdt: 5
H6	Self-Adaptive 6	Rdt: 6
H7	Self-Adaptive 7	Rdt: 7
H8	Self-Adaptive 8	Rdt: 8

The Self-Adaptive Weak Levels are perfect for players who are just starting out. Here, beginners have the chance to interact with the computer on eight weakened levels of varying ELO rating strengths, and the computer's strength is adjusted to match that of the player.

On the lowest level (H1), the computer will set its playing

strength to a deliberately weakened setting of about –350 ELO. On the upper end, Level H8 matches the strength of the player by putting the ELO difference at zero. As you play, the computer will try to keep this difference constant. That is, if you play badly, the computer will not play well either—but it will fight to win back material it has lost to you, if necessary. On the other hand, if you play stronger, the computer will also play stronger. Work your way up!

For more information on ELO ratings, see Section 7.

4. INFO MODE: WATCH THE COMPUTER THINK

Imagine this: You're playing chess against a friend, and it's his move. You'd love to know what move he's thinking about, and you'd really like to get his opinion of the board position. But, of course, you won't ask—because that's just not done! Well, guess what—when you play against this chess computer, you can ask anything you want, and you'll get all the answers! In fact, you can get an incredible amount of information about the computer's thought process. On request, it will show you the move it's thinking of, the line of play it expects after that move, its evaluation of the current board position, how deeply it is searching, and more. As you can imagine, studying this information can help you learn so much more about chess.

Using Info Mode

How do you access all this game information? By using Info Mode at any time! If you do this while the computer is thinking, you'll see the information displays change as the computer considers different moves and searches deeper

See "INFO MODE AT A GLANCE" for a chart which summarizes all the Info Mode displays.

Game information is divided into four groups, and pressing **INFO** cycles from one group to another. The **BLACK/→** and **←/WHITE** keys can be used to cycle forward and backward respectively through the displays within each of the groups. Press **CLEAR** to exit Info Mode and go back to showing the normal chess clock.

After learning about Info Mode, take a look at Section 5.2 for a description of the Rotating Display feature. Selecting this feature makes the computer automatically cycle through the requested information in about one-second intervals every time it thinks about its move—you can actually watch the computer *think out loud*!

Whenever requested information is not available, the display will show dashes (– – – –).

4.1 Principal Variation


Press INFO the first time to get information on the principal variation (the predicted line of play, or the sequence of moves the computer thinks will be made). The first display you will see is the move the computer is currently thinking of making. Notice that the move is shown in the display, and the lights for the **from** and **to** squares for that move also flash alternately. This principal variation is shown to a maximum depth of six individual moves. Press **BLACK/→** repeatedly to cycle forward through all the moves:

- Move 1 (predicted line of play)
- Move 2 (predicted line of play)
- Move 3 (predicted line of play)
- Move 4 (predicted line of play)
- Move 5 (predicted line of play)
- Move 6 (predicted line of play)


Press **←/WHITE** to cycle backwards and see previous displays again. Press **CLEAR** to return to the normal clock display.

*Since the first move of the predicted line of play is the move the computer assumes you will make, you can also consider this move as a hint! So—whenever you need help, press **INFO** on your turn.*


INFO MODE AT A GLANCE
For details, see Section 4.

PRINCIPAL VARIATION INFO:

x1

- Move 1 (predicted line of play)
- Move 2 (predicted line of play)
- Move 3 (predicted line of play)
- Move 4 (predicted line of play)
- Move 5 (predicted line of play)
- Move 6 (predicted line of play)


SEARCH INFO:

x2

- Evaluation of current position
- 2 numbers: Search depth + number of moves examined so far
- Current move under consideration
- Number of positions being searched per second

CHESS CLOCK INFO:

x3

- Elapsed time since last move
- Total elapsed time for White
- Total elapsed time for Black
- Remaining time for White*
- Remaining time for Black*

**Blitz/Tournament Levels only*

MOVE COUNT INFO:

x4

- Current move number made so far
- Moves of the current game

4.2 Search Information

Press INFO a second time to get information on the computer's search. Press **BLACK/→** repeatedly to cycle forward through these four displays:

- Evaluation of the current position (based on a pawn being worth 1.0 points; a positive number indicates White is ahead)
- Two numbers: The first is the current search depth, or the number of individual moves the computer is looking ahead; the second is the number of moves the computer has examined so far
- The move currently being considered
- The search speed, or number of positions (nodes) being searched every second

Press **←/WHITE** to cycle backwards and see previous displays again. Press **CLEAR** to return to the normal clock display.

4.3 Chess Clock Information

Press INFO a third time for chess clock information. The chess clocks keep track of the time for both sides. Press **BLACK/→** repeatedly to cycle forward through the clock displays:

- Elapsed time since the last move was made
- Total elapsed time for White
- Total elapsed time for Black
- Remaining time for White (*Blitz/Tournament Levels only*)

• Remaining time for Black (*Blitz/Tournament Levels only*)
Press **←/WHITE** to cycle backwards and see previous displays again. Press **CLEAR** to return to the normal clock display.

The clocks stop whenever you take back a move or set up a new position. However, the times are retained in memory, and the clocks resume as soon as play is continued. Whenever you change levels or reset for a new game by pressing **CLEAR** and **ENTER** together, the chess clocks are always reset.

During the game, a clock showing elapsed time will display the piece symbols one by one, from pawn to King. A clock showing countdown time will show the symbols going in the opposite direction, from King to pawn.

4.4 Move Count/Game Moves

Press **INFO** a fourth time to show the move number in the game so far. You can then press **←/WHITE** repeatedly to cycle back through the moves of your game (up to 50 individual moves).

- Current move number (so far)
- Moves of the current game

Press **BLACK/→** to go forward through the moves again at any point. Press **CLEAR** to return to the normal clock display.

4.5 Want a Hint? Just Ask

In case you missed this feature when it was mentioned in Section 4.1, we wanted to point it out again—if you ever need advice on a move, you can always ask the computer for a hint. Simply press **INFO** when it's your turn to move, and the computer will show a suggested move for your side.

5. OPTIONS FOR FUN AND VARIETY

In addition to all the features you've learned about so far, your chess computer also offers many other exciting game options! All of these options are user-selectable at any time during a game. They are described individually in this section, and summarized in the Option Mode Chart.

Selecting Game Options

There are two methods of setting options, as described below—by using the game keys or pressing board squares.

See **“THE BASICS OF OPTION MODE: HERE'S HOW”** for a chart summarizing how to use Option Mode, and an overview of all the options.

The Game Options are divided into three groups: *Operation Mode*, *Rotating Display Mode*, and *Bronstein Clock Options*. Pressing **OPTION** cycles from one group to another, and each group contains a different set of options.

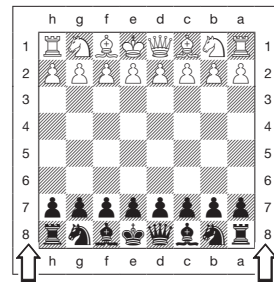
- **For Operation Mode and Rotating Display Mode options**, the **BLACK/→** and **←/WHITE** keys are used to cycle through the options within each group. For each option, a plus (+) in the display indicates the option is ON, and a minus (–) means the option is OFF. Press **ENTER** to turn each option on or off as it is displayed.
- **For Bronstein Clock Options**, press **ENTER** to cycle through the different clock options. The clock option you choose to display will be the selected time control when you exit Option Mode. If you decide not to activate the Bronstein Clock after all, simply press **ENTER** repeatedly until the display once again shows **-b7.00.** For details, see Section 5.3.

After you have made all your option selections from any or all of the option groups, press **CLEAR** to return to normal game play.

Another method of selecting game options is by **pressing the option squares**. As shown in the Options Chart, Squares A1-H1, A3-H3, and A4 can be used to turn options on and off. First, press **OPTION** to enter Option Mode; then press a square to access an option, using the chart as a guide.

PLAYING BLACK FROM THE BOTTOM? HERE'S THE POSITION!

When the computer plays White from the top of the board (Section 5.1, Option G1), be sure to set up the pieces correctly! Notice that the Kings and Queens are positioned differently, and the board notation is reversed.



- **For Operation Mode and Rotating Display Mode options**, pressing the square repeatedly turns that option on and off, with plus (+) for ON and minus (–) for OFF.
- **For Bronstein Clock Options**, pressing Square A4 repeatedly selects your desired clock setting.

Once you have made all your selections, press **CLEAR** to return to your game.

When the computer is first powered on, certain default options are set. Options which are automatically in effect at the first startup are shown in the chart with a plus, and options which are off are shown with a minus. Whenever you reset the computer for a new game, most of your selected options are carried over to your next game. Some exceptions are Auto Answer, which is automatically set back to ON when you start a new game, and Play White from the Top, which is automatically set back to OFF.

5.1 Operation Mode Options (Squares A1-H1)

Press **OPTION** once to select the **Operation Mode Options**. Then use the **BLACK/→** and **←/WHITE** keys to select options within this group, and press **ENTER** to turn options on (+) or off (–). Or, simply press the option squares to turn options on or off.

a. Auto Answer Mode (Square A1)

On: +A1.0 Off: -A1.0

Normally, the computer automatically answers with a countermove whenever you enter a move. If you turn Auto Answer off, however, you can enter any number of moves one by one, without allowing the computer to answer. You'll see that there are many great ways to use this feature!

- **Play through master games.** Press **ENTER** to see what the computer would do in any position.
- **Keep records of your own chess games.** When a game is over, play to any position to see how other moves or different strategies might have affected the outcome.
- **Study opening lines by entering them manually.**
- **Play against a friend, with the computer acting as referee.** It will monitor your game, checking all moves for legality and keeping track of time for both sides.

When playing against another person, if either side should need help, press **INFO** to see a suggested move. To see what the computer would do in a certain position, press **ENTER** and the computer will make the next move. After it has made its move, Auto Answer remains off, and you may continue your game.

Note that this option will automatically go back to its default setting of ON whenever you start a new game or a Teach Mode game.

b. Sound with Keypress (Square B1)

On: +5B1 Off: -5B1

This option lets you turn off the sound that accompanies each keypress. You will still hear beeps when the computer moves, when an illegal move or keypress is made, or when you reset for a new game or a Teach Mode game.

THE BASICS OF OPTION MODE: HERE'S HOW

1. Press  repeatedly to select a Mode:

x1 = OPERATION MODE (Auto...)
 x2 = ROTATING DISPLAY MODE (rd: 1...)
 x3 = BRONSTEIN CLOCK MODE (bron)
 x4 = back to OPERATION MODE...

2. Next, select your option(s), using the chart below. There are two ways to do this.

- Cycle through the options within that mode:
 Press **BLACK/→** to cycle **→ forward**.
 Press **←/WHITE** to cycle **← backward**.
 When your option is displayed, press **ENTER** to toggle it **on (+)** or **off (-)**.
 (For the Bronstein Clock, press **ENTER** repeatedly to select a clock setting.)
- **OR**, simply locate your option square and press it to toggle that option **on (+)** or **off (-)**.
 (For the Bronstein Clock, press Square A4 repeatedly to select a time setting.)

BRONSTEIN CLOCK OPTIONS	<div> <div>A5</div> <div>Bronstein Clock</div> <div>-bron</div> <div>A4</div> </div> <div>→ +b0:01 → +b0:02 → +b0:03 → +b0:05 → +b0:10 → +b0:20 → +b0:30</div>							
	<div> <div>B4</div> <div>C4</div> <div>D4</div> <div>E4</div> <div>F4</div> <div>G4</div> <div>H4</div> </div>							
ROTATING DISPLAY OPTIONS	<div> <div>Variation to ply 1</div> <div>Variation to ply 2</div> <div>Variation to ply 3</div> <div>Variation to ply 4</div> <div>Position Evaluation</div> <div>Depth & Moves</div> <div>Nodes Searched</div> <div>Time per Move</div> <div>-rd:1</div> <div>-rd:2</div> <div>-rd:3</div> <div>-rd:4</div> <div>-rd:5</div> <div>-rd:6</div> <div>-rd:n</div> <div>-rd:t</div> <div>A3</div> <div>B3</div> <div>C3</div> <div>D3</div> <div>E3</div> <div>F3</div> <div>G3</div> <div>H3</div> </div>							
	NO OPTIONS ON THESE SQUARES							
OPERATION MODE OPTIONS	<div> <div>A2</div> <div>B2</div> <div>C2</div> <div>D2</div> <div>E2</div> <div>F2</div> <div>G2</div> <div>H2</div> </div>							
	<div> <div>Auto Answer</div> <div>Sound with Keypress</div> <div>Silent Mode</div> <div>Coach Mode</div> <div>Ticking Clock</div> <div>Countdown Clock</div> <div>Play White from Top</div> <div>Auto Power Down</div> <div>+Auto</div> <div>+Snd</div> <div>-Sil</div> <div>-Coach</div> <div>-Tick</div> <div>-c:dn</div> <div>-top</div> <div>-pdp</div> <div>A1</div> <div>B1</div> <div>C1</div> <div>D1</div> <div>E1</div> <div>F1</div> <div>G1</div> <div>H1</div> </div>							

3. Finally, press  to exit Option Mode, using your new option(s)!

For more details, see Section 5.

c. Silent Mode (Square C1)

On: +Sil Off: -Sil

Normally, the computer always beeps when it has found its move. For completely silent operation, turn on Silent Mode.

d. Coach Mode (Square D1)

On: +Coach Off: -Coach

Selecting +Coach turns on special coaching features that encourage you to concentrate on your strategic planning! In Coach Mode, the computer looks over your shoulder while you play, watching what you do and helping you when you need assistance! In this unique "Guardian Angel" capacity, the computer will warn you with a Capture Alert if you are in danger of losing a piece. If one of your pieces is threatened by a lesser valued piece, for example, the computer will sound a series of warning beeps and flash the board lights of the threatened piece for a few seconds. To continue the game, make your next move (or take back your last move and make a different one).

With Coach Mode on, the computer will also sound a Tactical Alert if it thinks you have committed a blunder and your move is about to lead to an avoidable material loss. It does this by sounding a series of warning beeps and flashing the move it intends to make. You can either enter the computer's move, or take back your own move and make another one.

e. Ticking Clock (Square E1)

On: +Tick Off: -Tick

When you turn this option on, you activate a ticking sound that makes the computer's clock sound like a real chess clock! Just imagine—you can create the atmosphere of a championship chess tournament in your own living room!

f. Countdown Clock (Square F1)

On: +c:dn Off: -c:dn

Turning this option on causes the computer to display the countdown time instead of the elapsed time. Notice that the piece symbols also reverse direction, counting "down" from King to pawn. *This option is only available in combination with the Tournament and Blitz Levels.*

g. Play White from the Top (Square G1)

On: +top Off: -top

Want to depart from the usual standard and let the computer play the White pieces from the top of the board? Then try out this interesting option! Choose +top at the beginning of a new game (or a Teach Mode game), and set up the board with the Black pieces closest to you. The piece set up for a new game when White plays from top is shown in the diagram in this section. Press **ENTER** to start the game, and watch as the computer makes the first move for White from the top of the board.

See **“PLAYING BLACK FROM THE BOTTOM? HERE’S THE POSITION!”** for a diagram showing the correct piece set-up when using this option.

When the computer plays White from the top, board notation is automatically reversed. Additionally, this option will go back to its default setting of OFF when you start a new game or a Teach Mode game.

h. Auto Power Down (Square H1)

On: +ⒶⒹ Off: -ⒶⒹ

Auto Power Down option is a handy battery-saving feature. With this option activated, the computer will automatically turn itself off if no keypresses or moves are made for about 15 minutes. To continue the game where you left off, press **GO/STOP** to turn the computer back on. *Note that the computer will not turn itself off while it is thinking about a move.*

5.2 Rotating Display Options (Squares A3-H3)

Normally, the computer’s display shows the time for the player to move. However, the computer can also display other information, as described in Section 4 (Info Mode). The Rotating Display feature works hand-in-hand with Info Mode, since it allows you to choose which of the Info Displays you want to see, and then cycles your choices in about one-second increments. You may turn on any or all of the Rotating Display options, as desired.

IMPORTANT: The Rotating Display feature is only activated WHILE THE COMPUTER IS THINKING.

Press **OPTION** twice to select the Rotating Display Options. Then use the **BLACK/→** and **←/WHITE** keys to select the options you want to see rotated in the display. The options are described below and summarized in the Option Mode Chart in this section. Press **ENTER** to turn these options on (+) or off (-). Or, simply press the option squares to turn the options on or off.

If you think the display information is changing too quickly when it rotates, press **INFO** to freeze the display. Successive presses of **INFO** and the **BLACK/→** and **←/WHITE** keys will allow you to cycle through all the displays manually, as described in Section 4. To start the display rotation again, press **OPTION** followed by **CLEAR**. In any event, when the computer starts thinking about its next move, the display automatically starts rotating again.

The game information you can see *while the computer is thinking* includes the following:

- ⒶⒹ: 1 to ⒶⒹ:4 = the predicted line of play (up to four individual moves)
- ⒶⒹ:Ⓔ = an evaluation of the current position
- ⒶⒹ:Ⓓ = the computer’s search depth, and the number of moves examined so far in the game
- ⒶⒹ:Ⓐ = the number of nodes searched per second
- ⒶⒹ:Ⓒ = the amount of time the move has taken so far

When requested information is not available, the display will show a series of dashes (— — — —).

For complete descriptions of these options and details on exactly how to interpret the displays, see Section 4.

5.3 Bronstein Clock Options (Square A4)

On the Blitz and Tournament levels, you have a fixed amount of time for each game, and the remaining time decreases as you think. On these levels, players often find themselves running out of time towards the end of the game—struggling to try and make good moves in a hurry, and often ending up making inferior moves instead.

The Bronstein Clock option offers special time controls that can help alleviate such problems. This is accomplished by adding a certain amount of time back to your remaining time **after** each move, where the remaining time for the whole game is **only** reduced if you go over this fixed time level.

Here’s an example: Let’s say you’re playing Blitz Level D4, where you have a total of 20 minutes for the whole game.

A LOOK AT THE TEACH MODES

1. Press **LEVEL**, and the current playing level is displayed.
2. If you want to change levels, press a square to select a different level.
3. To enter Teach Mode, press any **PIECE SYMBOL KEY** (except **KING**):

Press	To study	Pieces on the board	Display
	QUEENS	Queens + Kings	
	ROOKS	Rooks + Kings	
	BISHOPS	Bishops + Kings	
	KNIGHTS	Knights + Kings	
	PAWNS	Pawns + Kings	

*Note: Press more than one key to study any combination of pieces! To cancel a piece, press the same key again. Pressing **KING** selects a new game position—all 32 pieces ().*

4. Press **ENTER**. The computer will reset for a new game, using only the pieces you have chosen to study. Make sure you put only those pieces on the board!
To reset and return to the standard game, press

For more details, see Section 6.

Activating the Bronstein +ⒶⒹ: 10 option will give you a maximum of 10 seconds time compensation per move (added after you make your move). Note that you can’t gain extra time or increase overall thinking time by playing each move more quickly, since:

- If you use 7 seconds to make your move, only 7 seconds will be added back to your total remaining time, not 10 seconds.
- If you use 10 seconds or more to make your move, only 10 seconds will be added back to your total remaining time.

Press **OPTION** three times to select the Bronstein Clock Mode. Then press **ENTER** repeatedly to select your desired Bronstein Clock setting, as described below:

BRONSTEIN CLOCK SETTINGS	DISPLAY
Bronstein Clock off	-br-on
Maximum of 1 sec. added after each move	+b0:01
Maximum of 2 sec. added after each move	+b0:02
Maximum of 3 sec. added after each move	+b0:03
Maximum of 5 sec. added after each move	+b0:05
Maximum of 10 sec. added after each move	+b0:10
Maximum of 20 sec. added after each move	+b0:20
Maximum of 30 sec. added after each move	+b0:30

6. TEACH MODE: LEARN ABOUT TACTICS

The Extended Teach Modes offer a wonderful learning tool, allowing you to study basic moves and master the tactics of the individual chess pieces. For each Teach Mode game, the only pieces on the board are Kings and the selected piece type(s). This will help you concentrate on one piece at a time, without losing focus and being distracted by other pieces on the board! This feature is ideal for beginners or anyone wanting to improve basic skills.

See “A LOOK AT THE TEACH MODES” for a step-by-step example of how to use this feature!

Using the Teach Modes

To enter Teach Mode, first press **LEVEL**, and the computer will display the current playing level. If you want to change the

level, press a board square as described in Section 3. If you don't change the level, the current level will remain in effect. When you are using any of the Teach Modes, the computer's playing strength will be determined by the level you choose—just like in a normal game. After deciding on the level, you are ready to activate Teach Mode.

Selecting a piece to study is easy—simply press any **PIECE SYMBOL KEY** (♖, ♗, ♘, ♙, or ♚) except **KING** (♔). Notice that the symbol for your selected study piece shows in the display as soon as you press its key! You'll also see the King symbol displayed automatically, since the game can't be played without the Kings. Finally, exit Teach Mode by pressing **ENTER**. The computer is now ready for a new game, with only the pieces you have selected to study. Make sure that you only set up those pieces on the board!

If you want to study a *combination* of pieces (Rooks and Bishops, for example), follow the above instructions, pressing more than one **PIECE SYMBOL KEY** (♖ and ♗, in this case). If you change your mind about studying a piece after pressing a **PIECE SYMBOL KEY**, press that same key again to cancel that piece.

Some more Teach Mode points to remember:


- If you press **LEVEL** and then decide not to change the level or Teach Mode, press **CLEAR** to cancel.
- If you press **LEVEL** and a **PIECE SYMBOL KEY**, and then decide not to use Teach Mode, press **LEVEL**, and **←/WHITE** or **BLACK/→** to cancel Teach Mode and continue level selection.
- If you accidentally press a **PIECE SYMBOL KEY** in Level Mode, you will lose your current game after exiting Level Mode. To prevent this and retain your current board position, press **CLEAR** to cancel.
- If you reset for a new game by pressing **CLEAR** and **ENTER** together, the computer will switch back to the standard game, with the current level still in effect.
- The **KING** key is reserved for the standard game, using all 32 pieces. If ♔ is pressed in Teach Mode, all six piece symbols are displayed, indicating the 32-piece board. Pressing **ENTER** to exit Teach Mode at this point simply returns you to a new game, playing with all the pieces.
- The computer will not make use of its openings library in Teach Mode games.

7. STUDY MODE: TRY RATING YOURSELF

Want to try out a fascinating learning tool? Then Study Mode is exactly what you're looking for! Twenty famous and exciting games from the history of chess are built into your computer, incorporating 413 different chess puzzles. It's up to you to play through the games and make the correct moves that were played for the winning side in the original games! This feature offers great potential for improving your chess knowledge, while allowing you to practice your skills and learn all about making the best move in a particular position! And, to make this feature even more exciting, you'll actually be able to determine your own ELO rating after completing each Study Game.

Understanding ELO Ratings

Before we explain how to use Study Mode, just a few words regarding the concept of chess ratings. A "rating" is a way to measure chess performance or describe relative playing ability. The international body which governs chess is called *FIDE*, or *Fédération Internationale des Échecs*, and FIDE ratings are sometimes referred to as ELO ratings. The United States Chess Federation (USCF) uses a similar rating system. Ratings are usually four-digit numbers, with stronger players having higher ratings. On the high end of the scale, masters rank in at 2200 and above, and international grandmasters are rated at 2500+. Want to know where you stand? Go ahead and try out Study Mode!



STARTING UP STUDY MODE

1. Set up the pieces for a new game.
2. Press **STUDIES**. Display shows the current Study Game (♖♗♘♙♚ = Study Game 1).
3. Press **BLACK/→** or **←/WHITE** to cycle through the 20 Study Game displays, one at a time.
4. When the display shows the Study Game you want to try, press **ENTER**.
5. Make each move on the board as it is shown. When you come to the first puzzle move, the clock will start a 3-minute countdown. Try to guess the correct move!
6. At the end of the game, you'll get a point score and your very own ELO rating!

For all the details, see Section 7.

Using Study Mode

See "**STARTING UP STUDY MODE**" for an example of Study Mode basics.

Set up the pieces for a new game, and press **STUDIES** to enter Study Mode. The display will show the current Study Game (as in ♖♗♘♙♚ for Study Game 1). Press **BLACK/→** or **←/WHITE** to cycle through the 20 Study Game displays, one at a time, from ♖♗♘♙♚ to ♖♗♘♙♚. When your chosen Study Game is displayed, press **ENTER** to select that game. (Note that pressing **CLEAR** at this point will cancel Study Mode and return you to normal play.)

After pressing **ENTER**, the computer will automatically reset itself for your selected Study Game. You'll see ♖♗♘♙♚ displayed briefly, and then the first move is displayed. Follow along, making the moves on the board as they are shown. When you come to the first **puzzle move**, you'll hear a series of beeps and the clock will start a three-minute countdown. Time for you to guess the White move that was played in that position in the original game.

Here's how it works:

- There is only one "correct" move per study position.
- The puzzle moves will always be for White (the winning side, in each case). The computer will play the Black moves, and you must make those moves on the board.
- **If you make the correct move**, the computer will show the points you get for that move, as in ♖♗♘♙♚. Depending on the difficulty of the move, you'll be awarded from 1 to 8 points. The computer will then go on to the next move.
- **If you make the wrong move**, you'll hear an error beep and see — — — — briefly in the display. Points will automatically be deducted for the incorrect guess, and you can put your piece back on its original square. For difficult moves, you'll be allowed more than one guess. After the maximum number of wrong guesses, the correct move will be displayed automatically.
- **If you still haven't found the move at the one-minute mark**, you'll hear three warning beeps. Then, at the 10-second mark, you'll get a ticking sound. When your time finally runs out, the correct move will be displayed. Make that move on the board.
- After the first puzzle move, all the rest of the White moves in the game are subsequent puzzle moves. In other words, you'll be guessing each White move, all the way until the end of the game.

At the end of the game, the computer will count up and display your total points score on the study game (as in ♖♗♘♙♚), up to a maximum of 50 points. You will then see your

estimated ELO rating, based on how well you did. The display alternates between the points and the ELO rating until you press **CLEAR** or start a new game. If your first try doesn't give you as high a rating as you'd like, just keep working on the Study Games—and watch your rating go up as you learn and improve.

Bonus: The Appendix at the end of this manual gives a complete listing of all 20 Study Games. These games have been included for reference and historical value, and to provide details on the players, locations and dates for each match. Remember that the listings are included as a reference—you will only be cheating yourself if you look at the game listings before trying to solve the puzzles on your own!

8. VERIFYING/SETTING UP POSITIONS

8.1 Verifying Positions

See **"IT'S EASY TO VERIFY PIECES"** for a step-by-step example of using Verify Mode.

If you should knock over the chess pieces or if you think your board position may be incorrect, the computer can verify all the piece locations for you.

When it is your turn, press one of the **PIECE SYMBOL KEYS** (♙, ♚, ♜, ♞, ♠, ♡, or ♢). The computer shows you where the first piece of that type is located on the board—the display shows the piece symbol, color indicator, and square designation, and board lights also indicate the square. Press the same **PIECE SYMBOL KEY** again to see the location of the next piece of that same type. All the White pieces are shown first, then the Black pieces. When there are no more pieces of that type on the board, only the piece symbol remains in the display.

Want to verify more pieces? Repeat the above procedure using the other **PIECE SYMBOL KEYS**, verifying the entire board if desired! Press **CLEAR** to return to normal play.

8.2 Changing and Setting Up Positions

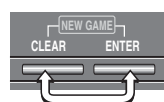
See **"TRY OUT POSITION MODE!"** to get an idea of how this feature works.

Position Mode is an exciting feature which lets you set up special board positions to play from, or problems you want the computer to solve! **Caution:** All previous moves in your current game will be erased from the computer's memory if you make changes to the position during a game.

Press **POSITION** to enter Position Mode, and the display shows -P05-. You can change or set up a position whenever it is your turn to move. After you have set up your new position, press **CLEAR** to exit Position Mode.

- **To remove a piece from the board**, press the piece down on its square and then remove it. Notice that the display indicates the piece type and color, along with a minus sign (-) and the square location.
- **To move a piece from one square to another**, press the piece down on its original square, pick it up, and then press it down on the new square. As you do this, the display will show a minus sign (-) for the first square, and a plus sign (+) for the second square.
- **To add a piece to the board**, first press the **PIECE SYMBOL KEY** for that piece (♙, ♚, ♜, ♞, ♠, ♡, or ♢). Make sure the display shows the correct color symbol for the piece you want to add. If it does not, press **BLACK/→** or **←/WHITE** to change the color. When the display shows the correct piece type and color, place that piece on the desired square and press down gently. The display shows a plus sign (+), along with the location for that square. To add another piece of the same type, simply press down on another square. To add a different piece, press a different **PIECE SYMBOL KEY** and follow the same steps outlined above.
- **To clear the board**, press **ENTER** while you are in

IT'S EASY TO VERIFY PIECES



1. Press **CLEAR** and **ENTER** to reset the computer, and set up the pieces in their starting positions.
Display: □ 0:00:00.



2. Press the **KNIGHT** Key.
Display: □, ♠, b1 (first White Knight).
Board lights on: B+1.



3. Press **KNIGHT** again.
Display: □, ♠, c1 (second White Knight).
Board lights on: G+1.



4. Press **KNIGHT** again.
Display: ■, ♠, b8 (first Black Knight).
Board lights on: B+8.



5. Press **KNIGHT** again.
Display: ■, ♠, c8 (second Black Knight).
Board lights on: G+8.



6. Press **KNIGHT** again.
Display: ♠ (no more Knights left on the board).



7. Repeat the above for any piece you want to verify! Press **CLEAR** to exit Verify Mode.

For more details, see Section 8.1.

TRY OUT POSITION MODE!



1. Press **CLEAR** and **ENTER** to reset the computer, and set up the pieces in their starting positions.
Display: □, 0:00:00.



2. Press **POSITION** to enter Position Mode.
Display: -P05-.



3. Press the White pawn down on Square E2, and remove it from the board.
Display: □, ♠, -E2.



4. Press that same pawn down on Square E3 to add it to the board.
Display: □, ♠, +E3.



5. Press the Black Queen down on Square D8, and remove it from the board.
Display: ■, ♠, -d8.



6. Press that same Queen down on Square H5 to add it to the board.
Display: ■, ♠, +H5.



7. Press **←/WHITE** to change the color to move next.



8. Press **CLEAR** to exit and return to normal game play.

For more details, see Section 8.2.

Position Mode. The display will show [] to symbolize an empty chessboard. Press **ENTER** once more to confirm that you do want to clear the board. Then add pieces as described previously. If you decide not to clear the board, press **CLEAR** to cancel. This feature can be handy when you want to set up a position with only a few pieces, where it would be much easier to start out with an empty board.

- **Once you have changed the board position as described above**, make sure the color indicator in the

display is showing the correct color of the side to move. Change the color, if necessary, by pressing **BLACK/→** or **←/WHITE**.

•To exit **Position Mode**, press **CLEAR**. You will return to normal game play, with your new board position.

*Note that any legal position can be set up using the above procedures. The computer will not permit you to set up an illegal position, such as one where there are more than the prescribed number of pieces for a normal game, or one where a King is in check and is not to move. In such cases, the computer will simply beep when you press **CLEAR**, and you will not be allowed to exit **Position Mode**. Check the position using the **PIECE SYMBOL KEYS**, if necessary, and correct the position (by adding a piece, removing a piece, or moving an incorrectly placed piece). Then press **CLEAR** to exit **Position Mode**.*

9. TECHNICAL DETAILS

9.1 The ACL Function

Computers sometimes "lock up" due to static discharge or other electrical disturbances. If this should happen, take out the batteries and use a pin or another sharp object to press into the hole marked **ACL** in the base of the unit for at least one second. This resets the computer.

9.2 Care and Maintenance

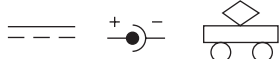
Your chess computer is a precision electronic device, and should not be subjected to rough handling or exposed to extreme temperatures or moisture. Be sure to disconnect the adapter (if applicable) and remove the batteries before cleaning the unit. Do not use chemical agents or liquids to clean the unit, as they may damage the plastic.

Weak batteries should be replaced promptly, since they can leak and damage the computer. Please also note the following regarding the use of batteries. **Warning: Use only alkaline or zinc carbon batteries. Do not mix different types of batteries or new and used batteries. Do not recharge non-rechargeable batteries. Use only the recommended batteries or equivalent. Be sure to observe the correct polarity when inserting batteries. Worn out batteries should be removed from the unit promptly. Do not short circuit the supply terminals.**

If an AC-DC adapter is used with this unit, it must be as specified in Section 9.3. An adapter is not a toy and should be handled with care. Please also note the following regarding the use of an AC-DC adapter. **Warning: Use a center positive adapter with safety isolating transformer. The polarity symbols confirming its center positivity should be clearly marked on the adapter, and the adapter must comply with EN60742. The adapter should be regularly examined for potential hazards such as damage to the plug, cable or cord, casing or other parts. In the event of damage, the adapter should not be used.**

9.3 Technical Specifications

Keys:	17
LCD Display:	48-segment, 5-digit
Batteries:	4 x C/AM2/R14 (1.5V) cells
Power Consumption:	330 mW maximum
Dimensions:	336 x 252 x 40 mm
Weight:	1 kg (without batteries)
AC-DC Adapter:	9V/300mA center-positive



Please retain this information for future reference.

Saitek reserves the right to make technical changes without notice in the interest of progress.

CONDITIONS OF WARRANTY

1. Warranty period is 2 years from date of purchase with proof of purchase submitted.
2. Operating instructions must be followed.
3. Product must not have been damaged as a result of defacement, misuse, abuse, neglect, accident, destruction or alteration of the serial number, improper electrical voltages or currents, repair, alteration or maintenance by any person or party other than our own service facility or an authorized service center, use or installation of non-Saitek replacement parts in the product or the modification of this product in any way, or the incorporation of this product into any other products, or damage to the product caused by accident, fire, floods, lightning, or acts of God, or any use violative of instructions furnished by Saitek plc.
4. Obligations of Saitek shall be limited to repair or replacement with the same or similar unit, at our option. To obtain repairs under this warranty, present the product and proof of purchase (e.g., bill or invoice) to the authorized Saitek Technical Support Center (listed on the separate sheet packaged with this product) transportation charges prepaid. Any requirements that conflict with any state or Federal laws, rules and/or obligations shall not be enforceable in that particular territory and Saitek will adhere to those laws, rules, and/or obligations.
5. When returning the product for repair, please pack it very carefully, preferably using the original packaging materials. Please also include an explanatory note.
6. **IMPORTANT:** To save yourself unnecessary cost and inconvenience, please check carefully that you have read and followed the instructions in this manual.
7. This warranty is in Lieu of all other expressed warranties, obligations or liabilities. **ANY IMPLIED WARRANTIES, OBLIGATIONS, OR LIABILITIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED IN DURATION TO THE DURATION OF THIS WRITTEN LIMITED WARRANTY.** Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. **IN NO EVENT SHALL WE BE LIABLE FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WHATSOEVER.** Some states do not allow the exclusion or limitation of special, incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.



Information for Customers in the United States:

FCC Compliance and Advisory Statement

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Saitek Industries, 2295 Jefferson Street, Torrance, CA 90501, USA

TROUBLESHOOTING GUIDE

SYMPTOMS	POSSIBLE CAUSES	ACTION TO TAKE
The computer doesn't react, behaves erratically, or "freezes" during a game.	<ul style="list-style-type: none"> Batteries are not installed correctly. Batteries are weak or bad. Static discharge or an electrical disturbance has caused a lock-up. 	<ul style="list-style-type: none"> Reinstall the batteries, making sure to observe the correct polarity. Replace the batteries. Press into the hole marked ACL to reset the computer (see Section 9.1).
The display is difficult to read.	<ul style="list-style-type: none"> Batteries are weak or bad. 	<ul style="list-style-type: none"> Replace the batteries with fresh alkalines.
The computer won't make a move.	<ul style="list-style-type: none"> The Auto Answer option may be turned off. You may be on a level where the computer thinks for a long time. 	<ul style="list-style-type: none"> The computer only responds automatically if Auto Answer is on (see Section 5.1). To interrupt the computer and force it to make a move, press ENTER.
The computer won't accept your move.	<ul style="list-style-type: none"> Is it your turn? Is your King in check? Will your move put your King into check? Are you trying to castle incorrectly? Are you moving to an illegal square? The computer is thinking (its color symbol is flashing in the display). 	<ul style="list-style-type: none"> Review the chess rules. Verify the position to make sure it is correct (see Section 8.1). To interrupt the computer, press ENTER.
An error beep sounds when a square is pressed.	<ul style="list-style-type: none"> You have not entered the computer's last move correctly (wrong from or to square). 	<ul style="list-style-type: none"> Check the display, and press the correct square to complete the computer's move.
You hear a series of beeps, and flashing lights indicate one of your pieces.	<ul style="list-style-type: none"> Coach Mode is activated, and a Capture Alert is advising that one of your pieces is in danger. 	<ul style="list-style-type: none"> Make your next move, or take back your last move and make a different one. (see Section 5.1).
You hear a series of beeps, and flashing lights indicate a move.	<ul style="list-style-type: none"> Coach Mode is activated, and a Tactical Alert is advising that you are committing a blunder. 	<ul style="list-style-type: none"> Enter the computer's move, or take back your last move and make a different one. (see Section 5.1).
You can't exit Position Mode with CLEAR —the computer only beeps.	<ul style="list-style-type: none"> You have set up an illegal position. A King may be in check, it is opponents turn to move, you may have too many pawns on the board, etc. 	<ul style="list-style-type: none"> Check your position, and make the necessary changes (see Section 8.2). Then press CLEAR again to exit Position Mode.
The display is showing [----].	<ul style="list-style-type: none"> You are in Position Mode, and have pressed ENTER to clear the board. 	<ul style="list-style-type: none"> To clear the board, press ENTER once more; to cancel, press CLEAR (see Section 8.2).
The computer seems to be making illegal moves.	<ul style="list-style-type: none"> The computer has made a special move, such as en passant, castling, or a pawn promotion. Your board position is incorrect—pieces have been moved. Batteries are running out. 	<ul style="list-style-type: none"> Review the chess rules. Verify the position as described in Section 8.1. Verify the position (see Section 8.1). Replace the batteries with fresh alkalines.
The computer is making instant or irrational moves.	<ul style="list-style-type: none"> The computer may be on a low level, where it moves quickly and plays weaker than normal because its search depth is limited. Batteries are running out. 	<ul style="list-style-type: none"> Press LEVEL to see which level is selected (see Section 3). Change to another level, if desired. Replace the batteries with fresh alkalines.
The computer is silent.	<ul style="list-style-type: none"> The Silent Mode option may be activated. 	<ul style="list-style-type: none"> Check the option settings (see Section 5.1).