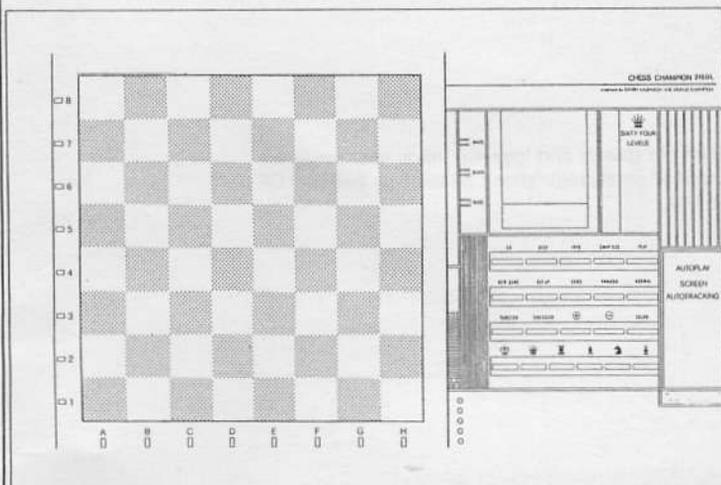


CHESSE CHAMPION

JEU D'ECHECS DE CHAMPIONNAT

SCHAAKKAMPIOEN



2150 L

GO™*

6Q-2254

* Trademark of InterTAN Texas Inc.

INTRODUCTION

Your Go Chess Champion 2150L is an advanced chess computer endorsed by world chess champion Garry Kasparov. And even though it has power and features that can challenge chess masters, it also offers levels of play for a chess novice. (There are a total of 64 different levels of play).

The Chess Champion 2150L automatically registers the moves you make in its memory and on its built-in LCD chessboard display. The display also provides a variety of other helpful information during play.

The Chess Champion 2150L lets you take back up to 50 moves which can be extremely helpful in studying and learning more about the game.

If you want to play chess with a friend, you can have the Chess Champion 2150L referee the game to be sure all the moves are legal. You can even ask the computer for advice during a two-person game.

Finally, you can use the LCD display to see the computer's thought process when it is playing a game with you. For example, you can see what move the computer plans to make next and what the computer expects you to do after that.

All of these features, and others you'll learn about as you read this manual, make your Chess Champion 2150L one of the most versatile chess computers available.

Important: All our games and toys are made in accordance with the European safety regulations, attested by the label CE fixed on the box.

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USING THIS MANUAL

Before you begin using the computer, we suggest that you at least read «Getting Started». It explains the basics:

- How to make moves
- How to correct errors
- How to understand all the things that might occur during a normal game

Then, when you've learned the basics, refer to the other sections of this manual to learn about the computer's more advanced features as outlined below:

«Setting Levels of Play» describes the different levels of play and how to select them.

«Additional Features» describes other useful features that are built into the computer.

«Verifying and Setting Up Positions» explains how you can verify and/or set up special positions.

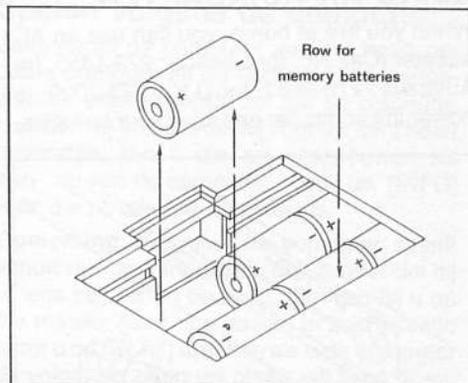
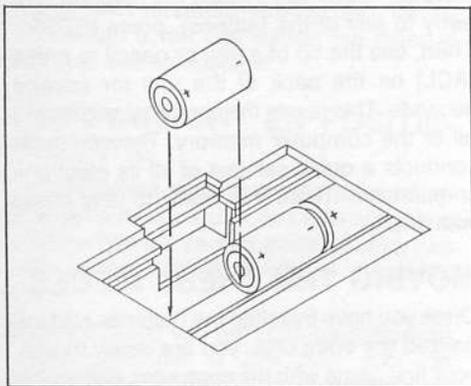
«Getting More Data from the Computer» tells you about all the extra information you can get from the computer.

Note: This computer has been programmed to play chess with you. It knows all the rules of the game, including castling, en passant, under promotion, stalemate, and draw by threefold repetition or by the 50-move rule. Sometimes the computer might appear to be playing irregularly when it is actually obeying these rules. If you are not familiar with the rules of chess, be sure to read the supplied pamphlet called Rules of Chess. If you need more information, your local library is sure to have several books on the subject.

GETTING STARTED

INSTALLING BATTERIES

Your chess computer is powered by six C batteries. For extra long battery life, use Radio Shack/Tandy alkaline batteries (Cat. No. 23-551). To install the batteries:



When battery power becomes low:

1. Have a new set of batteries ready before removing the old ones.
2. Turn off the computer by pressing [STOP].
3. Turn the computer over so that the ACL button's label appears right-side-up to you.

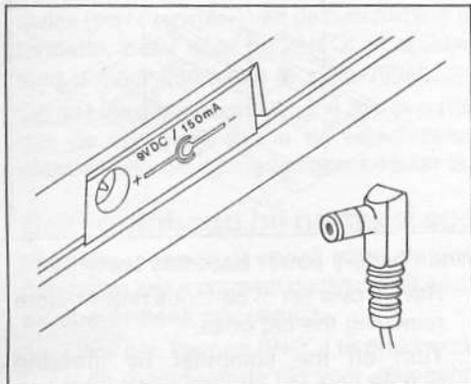
This positions the *memory* batteries in the row nearest to you. You must remove and replace these batteries in 10 seconds or less, to preserve the current game.

1. Remove the battery compartment cover by pressing its latch toward the center of the game and lifting off the cover.
2. Insert six C batteries, observing the polarity (+ and -) marked in the compartment.
3. Replace the battery compartment cover.
4. Press [STOP] if appropriate.
5. Press and hold the [PLAY] key and press the [GO] key to initialize the computer. The computer conducts a quick self-test of all its electronic components. Then, it is ready to play chess with you.

A set of alkaline batteries provides about 100 hours of playing time.

USING AN AC ADAPTER

When you are at home, you can use an AC adapter (Cat. No. for Canada: 273-1455, for Australia: 273-9663, for U.K.: 273-7000) to power the computer and save your batteries.



1. Press [STOP] to turn off the computer.
2. Plug the adapter into the computer's DC jack.
3. Plug the adapter's power module into a standard AC outlet and operate the computer as usual.

Notes:

- Turn off the computer before disconnecting the adapter from the computer or from the wall.
- To ensure that the contents of the memory are not lost, you should keep good batteries in the computer even when you are using an adapter. If batteries are not installed, memory data is lost when you unplug the adapter.

USING THE ACL BUTTON

Caution: The following procedure erases all memory information in your chess computer. Use this procedure only when you are sure the computer is locked up.

If the computer locks (does not respond properly to any of the buttons), press [STOP]. Then, use the tip of a pen or pencil to press [ACL] on the back of the unit for several seconds. This resets the computer and clears all of the computer memory. The computer conducts a quick self-test of all its electronic components. Then, it is ready to play chess with you.

MOVING THE CHESS PIECES

Once you have installed the batteries and initialized the computer, you are ready to play your first game with the computer. Set up the pieces in the opening position with the white pieces nearest to you.

1. Press [NEW GAME] to set all the pieces to their starting positions on the display (and in the computer's memory).
2. Press down the piece you want to move on its current square. A short beep sounds and row/column indicators flash to *point* to the piece you are moving.

Note: Normally, you play the white pieces and the computer plays black. See «Changing Sides».

- Place the piece on the square you want to move it to and press it down again.

Another beep sounds and the move is reflected on the computer's display. This means that the computer has accepted your move, and the computer begins *thinking* about its move.

Note: At the beginning of a game, the computer's moves are often instantaneous because the computer is playing moves that are stored in its *opening book* memory.

Special Moves and Capturing

To capture one of your opponent's pieces, you simply move one of your pieces onto the captured piece's square.

In case of an en passant capture, the computer uses the row/column indicators to remind you to remove the captured pawn. (Press it down before removing it.)

When castling, make the king's move first. Then, the computer uses the row/column indicators to remind you to move the rook.

When you promote a pawn, it is automatically changed into a queen on the computer's display. If you wish to *underpromote* the pawn, do so in the following manner:

- Press down the pawn and remove it from the board.
- Press the rook, bishop, or knight piece button to tell the computer which piece you are promoting the pawn to.
- Press down the piece you have chosen on the promotion square.

When the computer promotes a pawn, it indicates the desired promotion piece at the bottom of its display.



PLAY ♔ K7F5



PLAY ♔ K7F6



PLAY ♔ K7H8

How the Computer Makes Moves

- When the computer is ready to make a move, it sounds a high-pitched double beep and turns on row/column indicators to indicate the piece it wants to move.

The computer indicates its move on the LCD display by alternately showing the desired piece in its current and new locations. The computer also indicates its move at the bottom of the display. For example:

PLAY (♔) d5 E4

The letter/number coordinates (d5 E4) indicate the current and new positions of the piece the computer wants to move.

- Press down the indicated piece on its current square. The row/column indicators now show you where the computer wants to move the piece.
- Move the piece to the indicated square and press it down to complete the move.

Illegal Moves

If you attempt to make an illegal move, the computer does not accept the move. Instead, it continues to flash the row/column indicators for the current position of the piece you are trying to move. The computer will display CLr (coordinates) to show you the wrong square you pressed. Press down the piece on the indicated square and it will remind you to replace the piece back to the right location by showing Put (piece symbol, coordinates) at the bottom of the LCD.

If you do not correctly execute the computer's move, the computer sounds an error tone and continues to indicate the move it wants. Be sure to press down the computer's piece on the square it indicates.

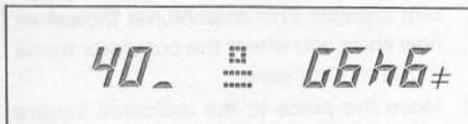
CHECK, MATE AND DRAW

A "+" will appear on the display only in Analysis mode and normal count-up or count-down window when one of the kings is being checked. If a game ends in checkmate, a[#] appears on the display and an end-of-game tone sounds. The WHITE or BLACK indicator lights to tell you which side has been checkmated.

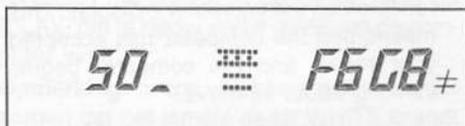
If the computer anticipates a *forced* mate, it displays M in n at the bottom of the display. This means the computer will end the game by mate in n moves.

If a game ends in a draw, the end-of-game signal sounds and the draw indicator appears on the display. The computer recognizes four types of draws:

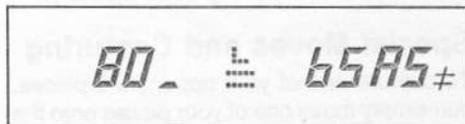
Draw by Stalemate — the side waiting to move is not in check but has no legal moves. The display shows:



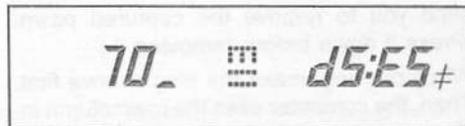
Draw by Threefold Repetition — the same board position has occurred three times in the game. The display shows:



Draw by the Fifty-Move Rule — there have been 50 moves without a capture or pawn advance. The display shows:



Draw by Insufficient Material — neither side has sufficient strength to win the game.



BEGINNING A NEW GAME

To start a new game at any time and from any mode of operation, simply press [NEW GAME]. The new-game signal sounds (low-high-low-high) and the computer enters the normal mode. Pressing [NEW GAME] clears the current game and resets the memory, so be careful not to press it by mistake.

Note: If you accidentally press [NEW GAME], you may replay the game up to the last move as described in « Replaying an Game ».

USING THE CHESS CLOCKS

In a normal game, two clocks appear at the bottom of the display. They keep track of the total time each side uses in the game. Initially, hours, minutes and seconds are displayed. After 10 hours, the display changes to hours and minutes (with a H on the leftmost digit).



Both clocks are reset to 0:00:00 when you press [NEW GAME]. When you make white's first move, black's clock starts. (White's clock doesn't actually start until it's time for white's second move). The clocks also keep track of the time when two people are playing against each other with the computer as a referee. (See «Play with Two People».) If you interrupt a game by pressing [STOP], both clocks stop and the computer remembers the current piece positions until you resume play by pressing [GO].

THINKING DURING THE OPPONENT'S TIME

You can look at the board and think about your next move while the computer is deciding on its move. *Well...* the computer can do the same. This sometimes allows the computer to make a move almost immediately after your move, even in the middle of a game played at one of the higher levels.

In all but the novice levels, the computer tries to anticipate the move you are likely to make and to calculate its responses for your move while you are thinking. If the computer guesses correctly, there is no reason for it to continue calculating. It makes its move immediately.

TURNING OFF THE SOUND

If the computer's beeps are distracting to you or others during a game, you can turn off the sound by pressing [SOUND]. Pressing the button again turns the sound back on. (A double beep sounds to confirm this.) You must carefully watch the indicators and the display if you play without the sound.

The computer remembers the sound setting (on or off) even when you press [STOP] to turn off the computer.

TURNING OFF THE COMPUTER

To turn off the computer, press [STOP]. You can turn off the computer any time - even when the computer is thinking. Then, if you press [GO], the computer comes back to life and continues to play. (Even the clock times are held in memory.) We suggest that you press [STOP] whenever you want to suspend play for more than a few minutes. This conserves battery power and prevents confusion for the computer.

With a fresh set of batteries installed and the computer off, the computer can retain the current game status and other memory information for up to two years.

SETTING LEVELS OF PLAY

Your chess computer has a total of 64 different play levels. They include levels for casual play, tournaments, speed chess, game analysis, problem solving, and eight special novice levels for beginners.

The levels are identified by the row (1-8) and column (A-H) indicators on the board. When you initialize the computer, level A3 is automatically selected. You can verify this by pressing [LEVEL]. The MODE indicator flashes orange, indicating the computer is in the level mode, and the row/column indicators point to square A3.

Also 0:05/1 L appears on the display. The highlighted L indicates the computer is in the level mode.

While you are in the level mode, you can change the level as follows:

Press [+]. The row/column indicators change to indicate square A4 (level A4). Repeatedly press [+] to step through all 64 levels in sequence (A3-H8). The [-] button lets you move backward through the levels.

The [TAB/COLOR] button can help you step through the levels more quickly. Pressing this button advances the indicated level across the columns. Use the [TAB/COLOR] button to select the desired column. Then, use [+] or [-] to select the desired row.

You can change the play level at the beginning of, or at any time during a game. Once you have selected the desired level, press [NORMAL] to return to normal play. (The MODE indicator changes to green.) The new level setting remains until you change it, even if you begin a new game or turn off the computer.

Note: If you change the level while the computer is thinking, you must press [PLAY] after you press [NORMAL] to exit the level mode. This tells the computer to start thinking again.

CASUAL PLAY LEVELS (A1-A8)

The first eight levels (A1-A8) are designed for casual play. Level A1 is the easiest and A8 is the most difficult. The computer's average time to make a play increases as the level of play increases. The average time for the computer's moves at each level are:

Level	Average Time per Move	Display
A1	1 second per move	0:01/1 L
A2	2 seconds per move	0:02/1 L
A3	5 seconds per move	0:05/1 L
A4	15 seconds per move	0:15/1 L
A5	30 seconds per move	0:30/1 L
A6	1 minute per move	1:00/1 L
A7	2 minutes per move	2:00/1 L
A8	3 minutes per move	3:00/1 L

The listed times are averaged over a large number of moves. In the beginning and near the end of the game, the computer tends to play faster. In the middle of a game, the computer might take considerably longer to make a move.

THE TOURNAMENT LEVELS (B1-B5)

Levels B1 through B5 are for tournament play. In these levels, there are primary and secondary *time controls*. For example, in level B1, each player must make the first 30 moves in 30 minutes (primary time control). Then, each player must make 30 moves every 30 minutes thereafter (secondary time control).

This is exactly what happens in real tournaments. After a certain length of time, a judge checks to see that both players have completed the required number of moves. If one of them hasn't, he or she loses the game. The primary and secondary time controls for levels B1-B5 are shown in the chart below.

For these levels, the display indicates the length of time for the moves and the number of moves on the left hand side as primary time control and secondary time control on the right. For example, the display for the level B5 is 2:30/50 L 1:00/20.

In accordance with tournament regulations, any time remaining from a previous time control is added to the next time control. For example, if the computer has made the first 40 moves in only one hour when using level B2, it has a total of two hours for its next 20 moves. Any time remaining after each secondary time control is accumulated until the end of the game.

The computer's built-in clocks indicate the total time for black and white. The clocks do not run when the computer is in the set up or Verify mode.

Note: If you do not stop the computer by pressing [STOP] when you do not plan to continue play for an extended period of time, the computer might play irrationally or instantaneously.

Level	Description	Primary Time Control	Secondary Time Control
B1	Club	30 moves/30 minutes	30 moves/30 minutes
B2	International	40 moves/2 hours,	20 moves/hour
B3	Grandmaster	40 moves/2.5 hours,	16 moves/hour
B4	Fast	45 moves/1.5 hours,	15 moves/30 minutes
B5	U.S. Open	50 moves/2.5 hours,	20 moves/hour

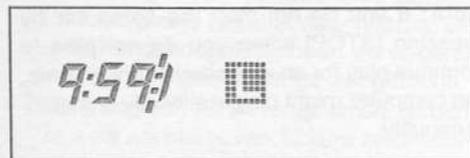
SPECIAL PLAY LEVELS (B6-B8)

Column B offers three more play levels.

B6— this level allows a one hour for each move.



B7 (Analysis) — in this level, the computer continues thinking until you interrupt it by pressing [PLAY] or the computer has fully searched to a depth of 16 moves. You can use this level to have the computer analyze complicated positions for many hours or even days. See «Getting More Data from the Computer».



B8 (Solving for Mate) — in this *problem solving* level, the computer searches for a *forced* mate in 16 or fewer moves. If it finds one, it announces mate and plays the *key* move. You can try to defend for the other side, but the computer checkmates against any defence in 16 or fewer moves.



If the computer does not make a move in the B8 level, it cannot find a forced mate in 16 or fewer moves. Be prepared for a long wait, however. Solving mates in six or more moves can take hours or even days.

In «Verifying and Setting Up Positions», there is an example of setting up and solving a chess problem with the computer.

MODERN TOURNAMENT LEVELS (C1-C8)

A tournament form that is rapidly gaining popularity is one that requires each player to make all moves in a certain amount of time, regardless of the number of moves in the game. If a side runs out of time without checkmating the opponent, that side loses the game. These tournaments are sometimes referred to as *sudden death*. You can end one of these games as a technical draw if there is insufficient material for mate or if both players agree to a draw.

Level	Time Limit	Display
C1	5 minutes	L 0:05/99
C2	7 minutes	L 0:07/99
C3	10 minutes	L 0:10/99
C4	15 minutes	L 0:15/99
C5	20 minutes	L 0:20/99
C6	30 minutes	L 0:30/99
C7	60 minutes	L 1:00/99
C8	90 minutes	L 1:30/99

In levels C1 through C8, the computer tries to complete all the moves of the game in the specified time. In a game with many moves, the computer gradually increases its speed in an attempt to stay within the allocated time.

NOVICE LEVELS (D1-D8)

If you are a beginner or a very casual player, you might find that the computer is impossible to beat using any of the normal play levels. This can be discouraging.

To solve this problem, your chess computer has eight *novice* levels (D1 through D8). In these levels, the computer plays almost instantaneously on each move. This prevents the computer from using its full power and makes it possible for even a beginner to win occasionally. The D1 level is the easiest, and the computer's level of play gradually increases up through level D8.

OTHER TIMED-PLAY LEVELS

There are a number of other time controls that have become popular in Europe and North America. You are sure to find your favorite among levels E1 through G8, as shown in the following chart.

The display indicates each of these levels by displaying the primary time control on the left hand side and the secondary time control information on the right. For example, the display shows 1:00/60 L 0:30/30 for the G8 level.

Level	First Time Control	Second Time Control
E1	20 Moves/30 Min.	Rest/30 Min.
E2	20 Moves/30 Min.	20 Moves/30 Min.
E3	20 Moves/40 Min.	20 Moves/40 Min.
E4	25 Moves/60 Min.	25 Moves/60 Min.
E5	30 Moves/45 Min.	30 Moves/45 Min.
E6	30 Moves/60 Min.	Rest/30 Min.
E7	30 Moves/60 Min.	30 Moves/60 Min.
E8	30 Moves/70 Min.	30 Moves/70 Min.
F1	30 Moves/75 Min.	30 Moves/75 Min.
F2	30 Moves/80 Min.	30 Moves/80 Min.
F3	30 Moves/90 Min.	10 Moves/30 Min.
F4	30 Moves/100 Min.	30 Moves/100 Min.
F5	35 Moves/90 Min.	Rest/15 Min.
F6	40 Moves/40 Min.	20 Moves/20 Min.
F7	40 Moves/60 Min.	20 Moves/30 Min.
F8	40 Moves/80 Min.	20 Moves/40 Min.
G1	40 Moves/90 Min.	20 Moves/45 Min.
G2	40 Moves/100 Min.	20 Moves/50 Min.
G3	40 Moves/105 Min.	Rest/15 Min.
G4	45 Moves/120 Min.	23 Moves/60 Min.
G5	50 Moves/90 Min.	25 Moves/45 Min.
G6	50 Moves/100 Min.	25 Moves/50 Min.
G7	50 Moves/120 Min.	25 Moves/60 Min.
G8	60 Moves/60 Min.	30 Moves/30 Min.

EXPERIMENTAL LEVELS (H1-H8)

Levels H1 through H8 are experimental levels in which the computer searches to a fixed *depth* (looks only a certain number of moves ahead). In level H4, for example, the computer only looks at all the possibilities for the next four moves for each side. In level H8, it looks at the next possible eight moves for each side.

The display indicates these levels as LE F1 nL where n is the depth of the computer's search for possible moves.

Level	Search Time (min)	Search Time (sec)
H1	10	10
H2	20	20
H3	30	30
H4	40	40
H5	50	50
H6	60	60
H7	70	70
H8	80	80

ADDITIONAL FEATURES

All the features we have explained so far are enough to provide countless hours of fun with your chess computer. You can play games against the computer, correct mistakes, and select different levels of play to match your needs. But there are many other things the computer can do that make it even more versatile and fun to use. This chapter explains some of these additional features.

CHANGING SIDES

Would you like to play the back pieces and let the computer play white? If so, simply set up the board with the black pieces closest to you. Remember that the black queen must be on a black square and the white queen must be on a white square. Then, press [NEW GAME] [SWAP SIDE] [PLAY]. The computer makes the first move for white and play continues as usual.

Pressing [PLAY] always causes the computer to play the next move (for black or white). You can change sides with the computer at any time during the game by simply pressing [PLAY] instead of making your own move. You can change sides as often as you like during a game. You can even press [PLAY] after every move, forcing the computer to play the entire game against itself!

INTERRUPTING THE COMPUTER'S THOUGHT

The [PLAY] button has another important function. If the computer is taking too long to make a move, you can press [PLAY] to force the computer to immediately make its move. This is useful in the more advanced modes, especially in the B7 analysis mode, where the computer can think forever.

Notes:

- There is one exception to this rule. In the B8 mode (problem solving), pressing [PLAY] does not cause the computer to make a move. The computer only sounds a double beep to inform you that it had not found a forced mate at the time it was interrupted.
- If you press [PLAY] to force each of the computer's moves, you are not letting the computer play at its current level setting. It might be better to lower the play level.

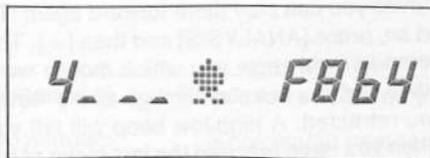
TAKING BACK MOVES

Normally you are not allowed to take back moves in a serious game of chess. However, if you commit an unnecessary blunder or if you want to analyse several different plays from a certain position, it is helpful to be able to take back one or more moves. To take back a move:

1. After the computer makes a move, press [ANALYSIS]. The MODE indicator turns orange, indicating that you are in the *analysis* mode.

At the bottom of the display, the computer indicates the last move as in the following example:

4—(♙) F8b4



The 4 tells you that the move was part of the fourth round of moves in the game. The graphic symbol (♙) tells you which piece was moved, and the two letter/number coordinates tell you what the move was.

2. If you wish to take back the displayed move, press [-].

The display shows the positions of the pieces with the move to be taken back and the row/column indicator shows the last piece moved. Press the piece down and the indicators will show its previous position. Move the piece to that position and press it down again. Then the next previous move is shown.

- If you want to take back another move, follow the steps as before. You can continue taking back moves until you reach the available limit. (An error tone sounds).
- If you want to return to normal play and replay a certain portion of a game, press [NORMAL] when the desired piece positions appear on the display. (The mode indicator turns green). Then you can replay the game from that point.

It is the computer's turn to play, you must also press [PLAY] to tell the computer to make its move.

Note: You may take back at most 50 moves.

REPLAYING A GAME

As long as you remain in the analysis mode, you can move forward or backward through the moves of the current game if available.

After you have taken back one or more moves you can play them forward again. To do so, press [ANALYSIS] and then [+]. The computer will show you which moves were made and you can play through all the moves you retracted. A high-low beep will tell you when you have reached the last move of the game. To return to normal play (at any stage), press [NORMAL].

TAKEBACK AND REPLAY ON THE LCD SCREEN

Now we come to something really useful. You can retract a number of moves or replay them without actually moving the physical pieces on the board. Just press [ANALYSIS], [-], [-], [-], ... or [ANALYSIS], [+], [+], [+], ... and watch the moves executed on the LCD chess-board. In this way you can go back during a game to see what happened, without disturbing the game. If you press NORMAL at any stage you are automatically returned to the current board position!

You may want to go back to an earlier position and play on from there. It is possible to retract moves by actually moving the pieces backwards until the desired position is reached, or you can take back moves rapidly on the LCD board and then transfer position to the main board. This is done by pressing [FUNCTION], [NEW GAME] when you are in analysis mode.

Say you want to go back 15 moves. Press [ANALYSIS], [-], [-], [-], ... until you reach the position and then press [FUNCTION], [NEW GAME]. The position is transferred to the main board. The LCD helps you to adjust the pieces so that you will be able to play on from there.

Marking positions

To enhance the functions described above, Chess Champion 2150L allows you to «mark» positions in a game and return to them later. This is useful if, for instance, you wish to take a closer look at a crucial point in the game. Press [ANALYSIS] (MODE light yellow) and then [FUNCTION], [SET UP] to mark the position during the game. In the LCD display you will see «POS on». Press [NORMAL] and continue the game in the normal fashion. Of course you can also mark positions when replaying a game in analysis mode - you only need to press [FUNCTION], [SET UP] to mark it. And you can also «un-mark» a marked position by pressing [FUNCTION], [SET UP] again (display: «POS off»). When you wish to return to a marked position, press [FUNCTION], [+] or [FUNCTION], [-] in analysis mode. In the first case the computer will jump to the next marked position, in the second case to the previous one (watch the LCD board). If no positions are marked then the computer will jump to the final or the initial position respectively.

ENTERING ALL MOVES MANUALLY

The analysis mode has one more important use. It allows you to enter moves for both sides to force the play of a particular series of moves. For example, if you want to try an opening that the computer would not play on its own.

1. Press [NEW GAME] [ANALYSIS].
2. Then, begin entering moves for both sides.

In the analysis mode, the computer does not try to make moves, but it does keep track of the moves you make to be sure they are all legal. The display shows the moves that you make. Once you have reached the position you want, press [NORMAL] and continue as usual. If it is the computer's turn to play, press [PLAY] to tell the computer to make a move.

PLAY WITH TWO PEOPLE

The analysis mode also lets you use the computer as a judge for a game between two people.

Simply, press [NEW GAME] [ANALYSIS] and begin play with two people. The computer monitors the game to be sure all moves are legal.

If either side needs help, you can press [PLAY] and allow the computer to suggest the next move. If you don't like the computer's move, you can take it back.

Note: Pressing [PLAY] to get help changes the computer to the normal mode. After asking the computer to make a move for either side, you must press [ANALYSIS] to return to the two-person play mode.

SELF-PLAY MODE

There is a way to make the computer automatically play an entire game against itself - you don't have to press a key for each move.

Press [FUNCTION] [PLAY] [PLAY] and the computer automatically makes moves for both sides and displays the moves on the display. You don't have to move the playing pieces.

If you want to interrupt the computer's play and make a move manually, press [ANALYSIS] [NORMAL]. If you do this, however, you should set up the pieces as shown on the display.

The automatic play mode can be useful if you want to closely analyze the computer's moves at a very difficult level. Set the level of play (3 minutes per move, for example) and press [FUNCTION] [PLAY] [PLAY]. Then, let the computer play unattended even overnight or for several days. Then, you can take back and quickly replay it and study the moves at your leisure.

To exit self-play mode, press [FUNCTION] [PLAY] in Normal mode.

VERIFYING AND SETTING UP POSITIONS

In this part of the manual, we explain how to do two important things: how to check whether all pieces are correctly positioned on the playing board, and how to set up special positions.

VERIFYING PIECE POSITIONS

If you or someone else accidentally disturbs the pieces, you can simply look at the computer's LCD display (in the normal mode) to see the correct piece positions.

CHANGING PIECE POSITIONS

You can use this procedure to set up special board positions that you want to play from or that you want the computer to solve for you.

1. Press [SET UP] to put the computer into the setup mode. The MODE indicator changes to red. You can now remove or add pieces as follows:
 - To remove a piece, press it down on its current square and remove it from the board.
 - To add a new piece, first select the color by pressing [TAB/COLOR] so that the desired color indicator lights. Then, press the appropriate piece button, and press the new piece on an empty square.
2. Press [NORMAL] to return to normal play.

Note: Before pressing [NORMAL], be sure that the desired color indicator (WHITE or BLACK) is on (to indicate who moves next).

The following experiment shows you exactly how to set up a special board position:

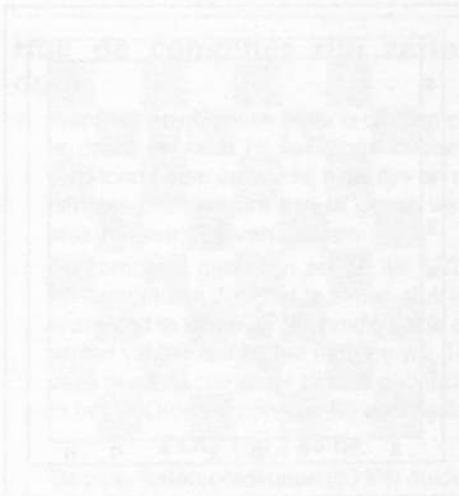
1. Press [NEW GAME] [SET UP]. The display shows the normal starting piece positions.
2. Press down the black queen on its square and remove it from the board.
3. Press [NORMAL]. The familiar new-game signal (low-high-low-high) tells you that the computer has accepted the position.

The computer now plays the game without its queen — this is known as a *queen-odds* game.

Try adding a second black king to the board. When you press [NORMAL] to exit the setup mode, an error beep sounds (high-low) because it is illegal to have more than one king for each side.

Setting Up Only a Few Pieces

To set up a special position that contains only a few pieces, it is easier to start with an empty board. Press [NEW GAME] [SET UP] [FUNCTION] [NEW GAME]. This clears the board of all pieces. You can now add pieces as described previously. The display shows the pieces you add.



A Sample Chess Problem

Your chess computer has a special problem-solving mode (level B8) that tries to solve for mate in 16 or fewer moves from any given board position.

Here's an example:

Set up these piece positions using the procedure in «Setting Up Only a Few Pieces».

Black

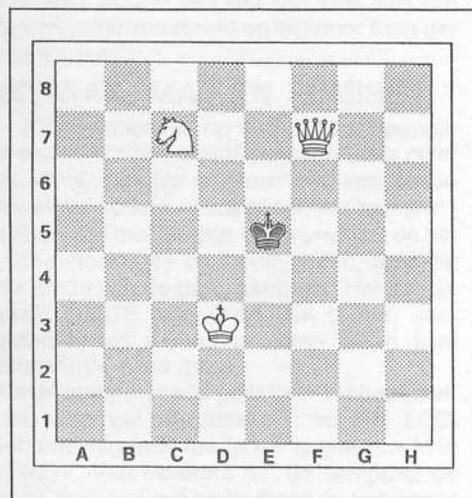
King on E5

White

King on D3

Queen on F7

Knight on C7



Problem by William A. Shinkman
White to play and Mate in 3 Moves

In this position, white has an overwhelming material advantage and there is no doubt that he can easily mate the black king. Set the level to B8 and press [PLAY] to see what solution the computer finds.

Note: In our example, be sure the WHITE indicator is on before you press [PLAY]. Otherwise, the computer tries to solve for mate of white by black.

GETTING MORE DATA FROM THE COMPUTER

Would you like to know what the chess computer is thinking? Well, your chess computer can provide a wealth of information about its *thought process*. It can show you which move it is presently considering, what *continuation* it expects after that, its evaluation of the position, and the depth of its search. This information can help you to learn more about the game of chess.

THE MAIN VARIATION AND POSITION EVALUATION

The main variation is the next series of moves the computer thinks is best. If you want to see what those moves are, press [INFO] twice while the computer is thinking.

Then, using the LCD chessboard, the computer shows you its next move (the *from* square and the *to* square flash alternately three times). After that, the computer indicates the move it expects you to make and what move it intends to play after that.

At the end of the main variation the computer displays the depth and the evaluation. The evaluation displays is in 100ths of a pawn (e.g. «2:00» means that it thinks that White is the equivalent of two pawns ahead). A minus sign in front of the value means that Black is leading.

Note: If the computer decides on a move while displaying this information, the information display is canceled. Try again the next time the computer is thinking.

Playing Hints from the Computer

Even after the computer plays a move, it remembers the rest of the main variation. Because the first move the computer displays is the best it has found for your side, you can consider this move as a hint from the computer. Press [INFO] to see the hint when it is your turn.

Note: When the computer is playing out of its *openings* library and not actually computing moves, it cannot give you any hints in this way. In this situation, press [PLAY] if you want the computer to make the next move for you.

While the computer is showing its main variation, pressing [+] displays only the first move of the main variation. Pressing [-] gives you an instant position evaluation. You can watch the evaluation change as the search progresses.

MORE ABOUT THE LCD DISPLAY

Your computer's built-in LCD display can provide a wealth of information during a game. Normally, you see only a small section (a *window*) of the available information but, by pressing [INFO], you can display much more information.

In the following pages we provide a summary of the information available in the computer's different operation modes.

Normal Game Displays

When you are playing a game against the computer, you normally see the time each side used up so far.

1. Pressing [INFO] once displays the time remaining for each side.



0:04:30 ♙ 0:04:52

The time is in hours, minutes and seconds. This information is not available for levels A1-A8, B7, D1-D8, H1-H8 and B8 - the display shows 0:00:00.

2. Pressing [INFO] again displays the main variation.

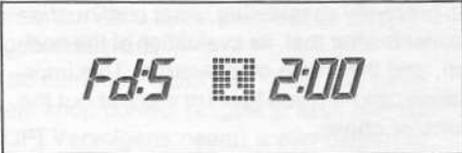


PLY 1 ♙ d7d5

The computer shows you the continuation (series of moves) it expects and the depth of the currently displayed move.

At the end of the main variation the computer displays the depth and the evaluation. The evaluation displays is in 100ths of a pawn (e.g. «2:00» means that it

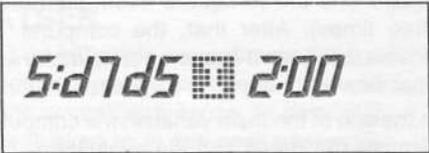
thinks that White is the equivalent of two pawns ahead). A minus sign in front of the value means that Black is leading.



Fd5 ♙ 2:00

If this information is displayed too quickly for you, you can press [+] to freeze the display. Then, you can step forward through the information by pressing [+] or backward by pressing [-]. Press [INFO] to cycle the variation again.

3. Pressing [INFO] again displays the depth of search, next move and the evaluation.



5:d7d5 ♙ 2:00

The display shows you to what depth the computer has examined all possible continuations (5: means full-width depth search to three rounds of moves). Again, the evaluation is displayed in 100ths of a pawn.

Note: The computer examines certain important variations far deeper than the indicated full-width depth.

4. Pressing [INFO] a fourth time displays the number of possible moves the computer has examined (in thousands), and the amount of time spent considering the current move. If the computer displays

21 10³ 0:01:13

it means that the computer has been thinking for 1 minute, 13 seconds and has evaluated 21,000 positions.

5. Pressing [INFO] once more returns you to the standard window (time for each side).

Once chosen, any of the above windows remains active until you change it by pressing [INFO].

Analysis Mode Displays

Pressing [ANALYSIS] followed by [-] or [+] prompts you in taking back or replaying moves on the LCD as described in «Takeback and Replay on the LCD Screen». If you repeatedly press [-] or [+] in the analysis mode, the display shows you all the moves in the game.

You can press [FUNCTION], [NEW GAME], [NORMAL] to return to normal play at the point of the currently displayed piece positions. Then, move the actual pieces to the same positions shown on the display and continue play in the normal mode.

Position Verification Display

When you press a piece button to verify the board position, the row/column indicators point to the piece positions, and the symbol for the piece and its coordinates are shown at the bottom of the display. Of course, the simplest way to verify piece positions is to look at the LCD display.

Illegal Move Displays

During a game, illegal moves are also corrected with the help of the display. For instance, **CLrG4** means that the piece on square **G4** is incorrectly located (press it down and remove it from that square).

Put  **G1** means that the piece should be placed on square G1. The position indicated by the **Clr** and **Put** displays are *pointed* to by the row/column indicators.

Play Level Displays

When you choose a level of play that uses time controls, (see «Setting Levels of Play») information about the time controls appears.

For example:

0:30/30 means each player must make 30 moves in 30 minutes or less.

9:59/1 means one move in an unlimited time. This is the analysis mode.

0:05/99 means you must make all moves in 5 minutes or less.

In the novice levels (D1-D8) **Handl** is displayed. In the problem-solving level (B8) **Probl** is displayed. And, in the experimental levels with a fixed depth of search (H1-H8), you see **F_i** and the depth of search.

Position Setup Displays

When you press [SET UP], **SEL UP** on the display indicates that you are in the setup mode. Whenever you enter a piece (as described in «Verifying and Setting Positions») the piece type and position is indicated on the display.

Information While Solving Problems

When you are using the problem-solving level (B8), the computer is looking only for a forced mate. Pressing [INFO] twice while it is thinking does not produce the normal display. Instead, the computer shows the current depth of search on the depth of search window. If, for instance, **Fd 1** is displayed, the computer is currently looking for a mate in one move.

If you press [INFO] after the computer has found (and announced) a forced mate, it shows you one of the variations that lead to mate, followed by the number of moves to mate.

Note: The first move is always the key move. The others might, in certain cases, be a side variation.

Exiting the Information Mode

If the computer is thinking while you display information, the information display is turned off when the computer decides its move. However, when the computer starts thinking again (for its turn), the information display returns. Even pressing [NEW GAME] does not change this. If you want to completely turn off the information display, you must press [INFO] to cycle back the desired window.

An Information Display Example

Press [NEW GAME] [ANALYSIS].

Then, enter the following moves:

1. e2-e4 e7-e5
2. g1-f3 d7-d6
3. f1-c4 h7-h6
4. b1-c3 c8-g4

Now set the computer to level A8 and press [PLAY] [INFO] [INFO] [+]. You can watch how the computer keeps changing its mind until it finds a really good move (f3-e5). You can press [-] while the computer is thinking to see how the position evaluation changes. Or, you can press [INFO] to cycle through the entire variation.

Experiment to find out why the white queen cannot be captured after the last move (f3-e5). If you play g4-d1 for black, the computer immediately shows you why it was advocating another move in its main variation.

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