CHAMPION SENSORY CHESS CHALLENGER®

MODEL CSC
CHAMPION SENSORY
CHESS CHALLENGER®

INFINITE LEVELS
OF PLAY

QUALITY MADE IN U.S.A.

PATENT NO. 4,235,442

Welcome To The Future...

Your Champion Sensory Chess Challenger is Fidelity's latest thinking chess game that talks ... and "sees" every move you make. The most advanced state-of-the-art technology provides you with an amazing computerized opponent that plays chess with skill and cunning, yet allows you to control the level of difficulty.

Your Champion Sensory Challenger is not a contrived chess board that has been gimmicked with lights and pushbutton keys —Challenger is, in every sense, a versatile and talented computerized chess playing opponent.

The voice feature is not a tape recording, but a computer created voice capability that talks in response to Challenger's "thoughts" or to a move made by the human player. A vocabulary of over fifty words will verbalize play action such as which piece was moved or captured, illegal moves, when your King is in check, etc., and it will tell you when it is verifying the locations of the pieces on the board (at your request).

In addition to being an excellent chess opponent, Champion Sensory Challenger provides a number of additional functions that enhance playability and increase enjoyment of the game. It is recommended that you familiarize yourself with this instruction manual before starting to play.

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KEYS AND INDICATORS

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DISPLAY WINDOW

TM
TIME

RV
REVERSE

◀))
SPEAKER

ST
SET

DM
DISPLAY MOVE

LV
LEVEL

CHECK LIGHT AND PROBLEM MODE LIGHT
On for white Problem Mode; Flashing for dark Problem Mode.

RE

RESET — Resets Computer to start a new game.

CL

CLEAR — Used to clear an unwanted FROM square. Also used in Problem Mode to clear a piece type from the board.

PIECE KEYS — Used to verify the location of a piece type. Also used in Problem Mode to add or remove pieces on the board.

INTRODUCTION

The Playing Surface, Voice Feature, Display Window Keys and indicators are provided as a means of communication between you and the Computer. These instructions describe how to operate and communicate with Champion Sensory Challenger and do not relate to actual playing strategies of the game of chess. For the beginner, a handy booklet entitled "Let's Play Chess" is provided with the game.

A summary of the functions and operation of the keys shown here is provided in the section entitled "Special Option Keys."

POWER ON

The game is turned on when the transformer is plugged into an AC wall outlet and the transformer line cord is plugged into the game. A new game is started when you first plug in or when the RE (RESET) Key is pressed. Challenger will introduce itself by saying, "I AM FIDELITY'S CHESS CHALLENGER, YOUR COMPUTER OPPONENT. SELECT YOUR LEVEL." When the game is first plugged in, or when RE is pressed, Chess Level One is automatically selected.

Turning the game OFF and then ON again or pressing the RE Key automatically resets the program. For lengthy games, leave the game ON, as Challenger is all solid-state and is designed to be left ON for days or weeks, as desired.

PRINTER PLUG
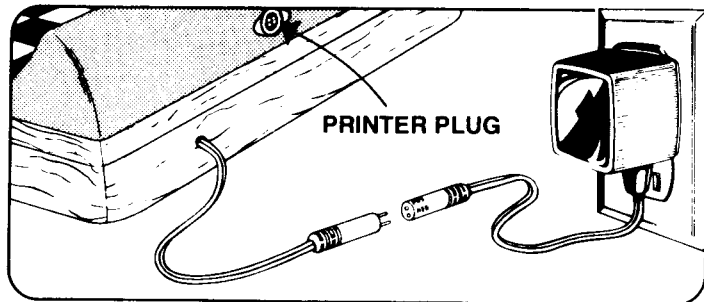
THE GAME BOARD

Set up the chess pieces with dark at the top of the board. Each square on the chess board is designated, in accordance with international chess notation, by a letter of the alphabet and a number (printed along all four sides of the playing surface). Horizontal squares (the ranks) are numbered 1 to 8. Vertical squares (the files) are lettered A to H. Thus, when the game begins, the white King is on square E1; the dark King is on square E8.

SELECTING OFFENSE OR DEFENSE

When the chess pieces are set up with the white pieces at the bottom, Champion Sensory Challenger presumes you will play white. According to the rules of chess, white has the first move, and thus you should make the first move to begin playing.

If you choose to play the dark pieces from the bottom of the board, set up the pieces with the dark King on square D1 and the white King on square D8. Before any other key is pressed, execute the following steps:

1. Press down on the dark King on square D1.
2. Now you may select any desired options such as playing level, book opening, etc.
3. Press the DM Key.
4. Press the RV Key.

Challenger will recognize that it is playing white from the top of the board and will make the first move.

CHESS LEVEL

The playing level may be selected before a game starts, or it may be changed at any time during a game (see LV Key description).

To change levels before a game, press the LV (LEVEL) Key as follows:

PRESS KEY	DISPLAY SHOWS
1. **LV**	
2. **LV**	
3. **LV**	
4. **LV** this is the Level Select Mode	

Continue to press LV until the desired level is shown in the Display Window. Level selection is achieved by simply stopping at the level shown in the Display Window. Each time the LV Key is pressed, the level will increase by one. After level twelve (CL-H), the Display will return to ▮ *-0 P-* ▮.

To change levels during a game, press the LV Key after Challenger's move is completed and before you make your next move. The Display will show the current level in effect. Continue to press LV until the desired level is shown in the Display, then continue the game by making your next move. During a game, continued pressing of LV will cycle the level through CL-H back to CL-1, CL-2, etc.

The Champion Sensory Challenger has 12 levels of play. At each level, the CSC uses its internal real-time-clock to keep track of the amount of time it has spent so far on the search and to budget its remaining time. The result is a time control that the program really adheres to.

Levels 1-8 are preset time controls and are as follows:

Chess Level	Average Response Time	Actual Time Control
1	5 seconds	60 moves/5 minutes
2	30 seconds	60 moves/30 minutes
3	1 minute	30 moves/30 minutes
4	1 minute 30 seconds	40 moves/1 hour
5	2 minutes	30 moves/1 hour
6	3 minutes	40 moves/2 hours
7	3 minutes 45 seconds	40 moves/2½ hours
8	6 minutes	30 moves/3 hours

The other four levels are special time controls and are designated by letter names E-H. They have the following meanings:

LEVEL E

Level E allows the user to select the precise time control desired for tournament play. Both primary and secondary time controls can be set by entering the number of moves to be played and the total time during which they must be played. To set the desired time control, refer to the paragraph on TOURNAMENT CLOCK.

LEVEL F

Level F is Count-Down Mode. In this level, the user enters the total time for the game for the human's moves and for the computer's moves. Each is entered separately for handicapping in either direction. The Champion Sensory Challenger budgets its time to complete the game in the time given it. To set the clocks, refer to the paragraph on COUNT DOWN MODE.

LEVEL G

Level G is a special mate finder mode. When set to this level, the Champion Sensory Challenger looks only for mates and by-passes all the usual evaluation functions. It does not stop the search until mate is found. Refer to the paragraph on MATE MODE.

LEVEL H

Level H is infinite mode. The search continues until halted by the user or until mate is found.

THE PLAY

Playing chess with the Champion Sensory Challenger is like playing with a human opponent — you make your move and Challenger responds with its move. The only difference, of course, is that you must make the actual physical move of the piece for Challenger.

Because of the sensory characteristics of the playing surface, it is necessary to press the piece down on each square. Press down (gently), using the edge of the piece as shown in the illustration, first on the FROM square, then press down on the TO square.
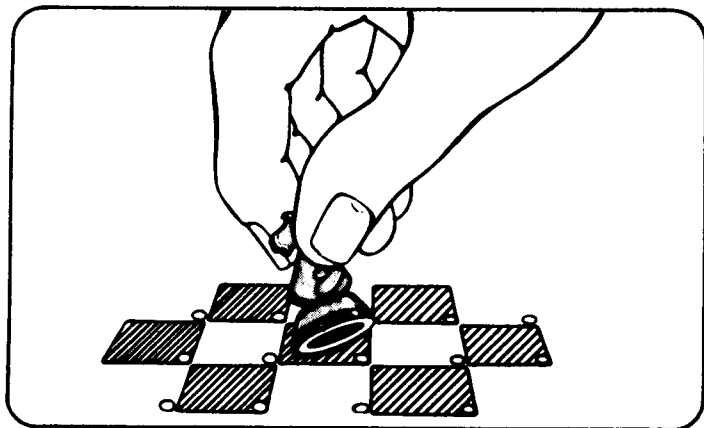
For example: if you want to move white Pawn D2 to D4, press down on the Pawn on square D2. The D2 indicator will light. Move the Pawn and press it down on square D4 to signal the move to Challenger. The indicator light on square D2 will go out and, after Challenger has decided on a move, an indicator|for|one|of Challenger's pieces will light. Challenger shows you which piece it wants moved by lighting the FROM square and announcing the move. Make the move for Challenger by pressing the piece down on the lighted FROM square —that indicator will go out and the TO square will light. Move the piece and press it down on the lit TO square. The light will go out, signifying

that Challenger's move is complete, and it is now your turn to move. NOTE: You will notice that the TO square does not light when you make your move. This is because Challenger instantly senses the piece you have placed and the move is already being recorded.

ACCIDENTAL WRONG MOVE

If you press down on a piece and the FROM square is lit, but you decide not to make that move (before the TO square is pressed), simply press the CL pushbutton, Challenger will turn that square's light off and await another move.

After the TO square is pressed and Challenger has started "thinking," do the following:

1. Press the ST Key to halt the computer and force it to make its move. See the paragraph STOP.
2. Enter the computer's move on the Sensory Playing Surface as usual. See the paragraph THE PLAY.
3. Take back the Challenger's move and your move. See the paragraph TAKE BACK MOVES.

ILLEGAL MOVE

Challenger notifies you of an incorrect or illegal move by announcing "ILLEGAL MOVE," showing four dashes in the Display Window, and by lighting the TO square to which the piece was moved. To undo the wrong move, press the piece down first on the lighted TO square (the original FROM square will now light) and then press the piece down on the lighted FROM square. This ensures that the incorrectly moved piece is returned to its original location. Alternatively, when Challenger announces an illegal move, you may simply press the Clear (CL) Key and set the piece down in its original location. This does NOT insure that the incorrectly moved piece is returned to its

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original location, but leaves it up to the user to place the piece correctly.

EN PASSANT

Challenger will perform the En Passant maneuver when it deems such a move is desirable, and will also recognize when you choose to execute an En Passant maneuver. When performing En Passant, Challenger will light the FROM square until it is pressed, then it will light the TO square until it is pressed. Finally it will light the square of the captured Pawn to remind the user to remove it. Simply press down on the captured Pawn and remove it from the board.

CASTLING

Challenger will castle by internally first performing a King move and then a Rook move and announcing "CASTLE KING" or "CASTLE QUEEN" whichever is appropriate. First, the King move must be acknowledged in the usual manner by pressing the FROM square and then the TO square. Then the Rook move must be acknowledged by pressing its FROM and TO square.

You may castle your King in a similar manner by pressing down on the King's FROM square and then its TO square. At this point, Challenger will recognize that you wish to castle and will light the Rook's FROM square to prompt you to move it in the same way.

Remember that castling is a King move. If you attempt to castle by moving your Rook first, Challenger will acknowledge the Rook's move and then immediately begin "thinking." To recover from such a mistake, see the paragraph ACCIDENTAL WRONG MOVE.

PAWN PROMOTION

As in a normal game of chess, when a Pawn reaches the "8th Rank," Challenger will promote its Pawn to the piece it considers best

(usually Queen or Knight), and will announce the piece chosen. For example, "From A7 to A8, promote to a Knight." When your Pawn reaches the eighth rank, Challenger will flash the square it stands on and wait for you to identify the piece you want to promote it to. You tell Challenger the piece you desire by pressing one of the piece symbols:

CHECK

When either you or Challenger makes a move that places the opponent's King in check, Challenger will announce "Check." When either your King or Challenger's King is in check, Challenger lights the Check light above the Reset (RE) Key.

CHECK AND MATE

When Challenger places your King in checkmate, Challenger will announce "CHECK AND MATE." When Challenger makes a move after which mate is inevitable, Challenger will announce the move and then announce how long until the mate will occur. For example, "CHECK AND MATE IN 3." In both cases, the display digits will flash to signify Challenger's victory.

I LOSE

When the Champion Sensory Challenger discovers that it will be mated, it gives no outward indication of its loss until mate actually occurs. After you have made the mating move, it will announce your checkmate and say, "I LOSE."

SECTION II—SPECIAL FEATURES

CHANGING SIDES WITH COMPUTER

Champion Sensory Challenger has the capability to change sides with the user and compute moves for the opposing pieces. To cause Challenger to change sides, first press the DM Key, then press the RV Key. Challenger will announce, "MY MOVE LIGHT" or "MY MOVE DARK." Challenger will now play your pieces and you will play Challenger's pieces. By repeating this process after each move, it is possible to watch Challenger play both sides of the game.

CHANGING COLOR WITH THE MOVE

Champion Sensory Challenger has the capability to change the color whose turn it is to move. To cause Challenger to change the color with the move, first press the CL Key, then press the RV Key. If it was White's turn to move, it is now Black's turn and vice versa. Challenger announces the color with the move by saying, "YOUR MOVE LIGHT" or "YOUR MOVE DARK." Changing color with the move can be used to give Black or White two moves in a row. In a game of chess, that's cheating. The main purpose of this feature is to assist in setting the color with the move after you have set up a position in problem mode. See PROBLEM MODE.

NON-RANDOM PLAY

You have the option of the Non-Random Play feature or of selecting the Random Play feature. In the Non-Random Play Mode, Challenger does not attempt to vary its responses and will always single out one move it considers best. The Non-Random play feature is selected automatically when a new game begins.

RANDOM PLAY

In the Random Play Mode, when a choice of good moves is available, Challenger will choose from the good moves at random so that each game will be different. Random Play is selected by pressing the ST Key during Level Selection, after reaching the desired level of play (see CHESS LEVEL), as follows:

DISPLAY SHOWS

1. For example, Level 5 is selected.

2. Press ST for Random Play.

   (Press again to return to Non-Random.)

   The dash before the number indicates Non-Random Play.

POSITION VERIFICATION

An outstanding feature of the Champion Sensory Challenger is its ability to verify the exact position of each of the pieces—both yours and Challenger's—at any time during the course of the game (after one of Challenger's moves is completed) or just before making your first move of a new game. Simply press the particular piece type key that you wish to verify. All squares with pieces of that type will light; squares with white pieces of that type will be ON continuously, squares with dark pieces will flash.

To terminate the Position Verification Mode, press the CL Key or just enter your next move.

PROBLEM MODE

The Champion Sensory Challenger is a most extraordinary, versatile device, which will permit you, the player, to perform numerous special moves at any time before or during game play.

By using the Problem Mode before starting the game, it is possible to set up various chess problems and mate puzzles, as desired. Moreover, by using the Problem Mode during game play, it is possible to alter the direction of the game, strengthen your side or Challenger's side, resurrect lost pieces, or even move your king out of an imminent checkmate situation. You may enter the Problem Mode at any time after Challenger has completed one of its moves.

To set up a particular problem, a special move situation, or a specific piece configuration, proceed as follows: Press the key for the particular piece type you wish to set up. Continue to press until indicators are showing only continuously lit (for white pieces) or only continuously flashing (for dark pieces). Indicators will light on only those squares that contain pieces.

For example, the Pawns:

PRESS KEY   **DISPLAY SHOWS**

1. (♟)   Challenger will announce   (NO CHANGE)
          "VERIFY PAWNS."

2. (♟)   Challenger will announce   (NO CHANGE)
          "PROBLEM LIGHT."
          Problem Mode indicator lights.

3. At this point you may make any of three set-up entries for the white pieces as follows:

A. To remove all white pawns remaining on the board, press CL. Indicators on all squares containing pawns wil go out.

B. To add a white pawn on a particular square, press that square, turning the indicator on.

C. To remove a single white pawn from a square, press that square, turning the indicator off.

PRESS KEY   **DISPLAY SHOWS**

4. (♟)   Challenger will announce   (NO CHANGE)
          "PROBLEM DARK."
          Problem Mode indicator flashes.

5. Proceed as in A, B, or C, above for the dark pieces.

6. (♟)   Challenger will announce   (NO CHANGE)
          "CLEAR" to signify the end of
          the Problem Mode for the Pawns.

You may now go on to the next piece type Problem Mode, or continue the game. When Problem Mode is entered before any moves have been played, Challenger assumes that you wish to set up a problem for study. Challenger clears all of the pieces from the board automatically and sets the move number to move 35.

TAKE BACK MOVES

The Champion Sensory Challenger has the remarkable ability to allow you to take back moves after they have been played on the board. Up to 19 full moves (39 half moves) can be taken back. This feature allows the user to take back accidental wrong moves, correct blunders, and gives the player a chance to try a whole different line of

play in a particular game. To tell Challenger that you want to take back a particular move, press the ST Key and then press the RV Key. Challenger will say "CLEAR MY MOVE" or "CLEAR YOUR MOVE," whichever is appropriate. One half move has been taken back. Simply put the piece back to its former location and restore any captured piece. If you are unsure of the new board position, you can check it using Position Verify. You may take back as many moves as you wish up to the beginning of the game or up to a maximum of 39.

Note that if you use Problem Mode, the history is cleared and you cannot take back any moves prior to when you entered Problem Mode. Position Verify can be used as often as you like without disturbing the game history.

PLAYER MODE

The Champion Sensory Challenger has a unique mode of operation that allows the user to use the Sensory Playing Surface as an intelligent chess board. In Player Mode, two humans can play against one another on the Sensory Board. Challenger will validate the moves of both players and announce "ILLEGAL MOVE" and call "CHECK" when necessary for each side. In addition, if a printer is available, it can be used to record the game of the two human players. Player Mode can only be requested at the start of the game before any moves have been made. Proceed as follows:

PRESS KEY   **DISPLAY SHOWS**

1. **LV**   ⬛
2. **LV**   ⬛
3. **LV**   ⬛

You are now in Player Mode and can begin the game. All normal game features such as the ability to Change Color with the Move and Take Back Moves make Player Mode a most versatile feature. Player Mode continues automatically until you press Reset or until you pass through Problem Mode. Passing through Problem Mode allows you to return to normal game play mode.

OTHER USES FOR PLAYER MODE

Player Mode has several possible uses besides playing a chess game between two humans. One very handy use of Player Mode is to set up a position that occurs near the beginning of a game. Simply enter Player Mode, play out the moves until the desired position is reached, and then pass through Problem Mode without making any changes.

Another use of Player Mode is so valuable that it alone should make the Champion Sensory Challenger an indispensable tool for the serious chess player. Player Mode coupled with the Take Back feature makes the Champion Sensory Challenger the ideal tool for use in the analysis of master chess games. When alternate lines appear in a game score, the serious chess player must rush for a second board; one board for the game and one for the alternate lines. With Challenger in Player Mode, all that is avoided. The alternate lines can be played at will. The Take Back feature can be counted on to restore the board to the original position.

SOUND CONTROL

The Champion Sensory Challenger is equipped with a computer created voice and a beeper. The Voice Control feature allows you to turn the voice off or to change it from high volume to low volume. You may also limit voice announcements to only illegal move and check

warnings. The Beeper Control feature allows you to turn the beeper off or on. You may also limit beep tones to only announce when the computer has completed its thinking and is ready to make a move.

Each can be individually controlled via the Speaker Key as follows:

PRESS KEY   **DISPLAY SHOWS**

1. 🔊 You are ready to set the Speech Control.   `-SP-`

2. 🔊 Voice is turned on (Press RV to turn off.)   `-ON-`

3. 🔊 Volume is high.   `-HI-`

4. RV Volume is low. (Press again, returns to HI.)   `-LO-`

5. 🔊 All words usable.   `ALL`

6. RV Limited announcements (Press again to return to all.)   `LE 55`

7. 🔊 You are again ready to set the Speech Control.   `-SP-`

8. RV You are ready to set the Beeper Control. (Press again to return to Speech.)   `-b P-`

9. 🔊 Beeper is turned off.   `OFF`

10. RV Beeper is turned on. (Press again to turn off.)   `-ON-`

11. 🔊 Beeper will sound for each key stroke and announce Challenger's moves.   `ALL`

12. RV Beeper will only announce computer's move. (Press again to return to ALL.)   `LE 55`

Selection is made by simply leaving the displayed option in the window. At power-on or after a reset, the voice is set to high volume with all vocabulary words and the beeper is turned off.

PEEK AT MOVE

While Challenger is thinking about its next move, you may peek to find out what move Challenger is considering by pressing the DM Key. The move being considered will be shown in the Display Window — the left two digits show the FROM location; the right two digits show the TO location.

PEEK AT DEPTH

While Challenger is thinking about its next move, you may peek to find out what depth the search has reached by pressing the LV Key. The depth of search will be shown in the display window. The number shows the ply count (number of half moves) that Challenger is looking ahead at that moment.

STOP

While Challenger is thinking, you may stop the thinking process by pressing the ST Key. Challenger will then respond immediately with its move.

DISPLAY SUGGESTED MOVE

The DM Key may be pressed at any time during a game to request Challenger to recommend a move for you to make. Challenger will respond by telling you which color has the move, "LIGHT" or "DARK." Then, if a suggested move is available, it will announce and light the FROM and TO squares of the suggested move.

PRINTER CONTROL

If a Fidelity Challenger Printer is used with Champion Sensory Challenger, plug the Printer into the printer plug in the back of the game. Printer operation is automatic and will start when the Printer is turned on.

The Printer can provide a graphic pictorial printout of the current board positions at any time during a game. To activate this feature, simply press any one of the piece type keys to establish the Verify Mode, then press the ST Key. On the printout, a dash (—) is used for an empty square and the following symbols designate the piece types.

NOTE! Pressing the Reset Key repeatedly in quick succession, while the printer is attached and on, will cause further printout to be unreadable. If this occurs, simply turn the printer off, wait for the Printer On Light to go off, and turn the printer back on.

```
      CHESS
   CHALLENGER

01 E2E4 E7E5
02 G1F3 B8C6
03 F1B5 . . .

   ABCDEFGH
8 ♜-♝♛♚♝♞♜ 8
7 ♟♟♟♟-♟♟♟ 7
6 --♞----- 6
5 -♝--♟--- 5
4 ----♙--- 4
3 -----♘-- 3
2 ♙♙♙♙-♙♙♙ 2
1 ♖♘♗♕♔--♖ 1
   ABCDEFGH

03 . . .  A7A6
04 B5A4 G8F6
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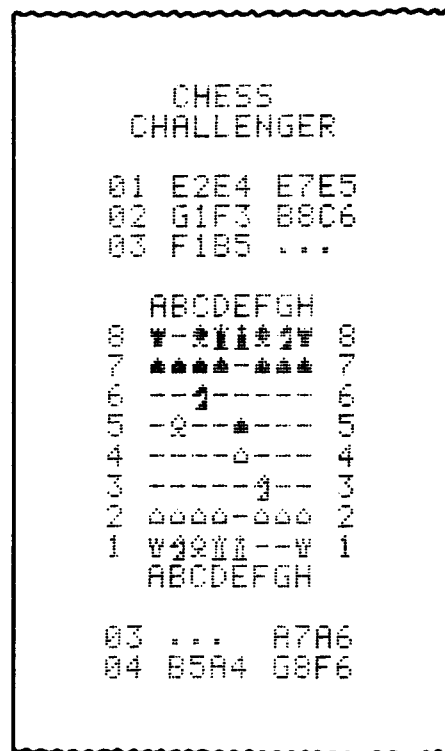
MATE MODE

When Challenger finds a forced mate of your King, it will announce "MATE IN" and then say the number of moves, such as "MATE IN THREE," and the display will flash.

If you desire to set up a specific Mate problem, you may do so using the Problem Mode. Following is an example of a typical mating problem set-up:

PRESS KEY		DISPLAY SHOWS
1. (RE)		▰▰▰
2. **LV**	Select Chess Level G	▰▰▰
3.	Using Problem Mode, set up the position shown in the illustration.	
4. **DM**	Challenger says "LIGHT"	▰▰▰
5. **RV**	Challenger says "MY MOVE LIGHT," and immediately announces: "FROM H5 to G6 QUEEN MOVE CHECK AND MATE IN THREE."	▰▰▰
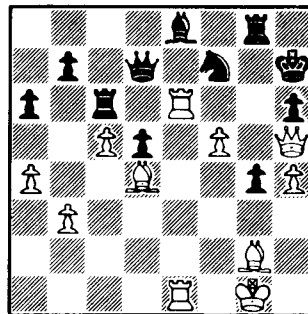
Note that since the mating problem was set up for white to win, it was necessary to have Challenger change sides in order to make the move for white. This was accomplished using the DM and RV Keys (see CHANGING SIDES).

CHESS CLOCK

The Champion Sensory Challenger has two built-in Chess Clocks (clocks are not used during Greatest Games play). One clock is for the user; the second is for Challenger. At the start of a move, the Chess Clock is automatically switched to the moving side, but either clock may be selected for viewing in the Display Window. At the start of a new game, the clocks are reset to zero.

New Game — Zero Time
User's Clock

The colon in the center of the Display Window indicates which clock is being displayed. The bottom colon indicates the User's Clock. At zero time—the start of a new game—Challenger assumes you want to play white and shows your clock, since white always moves first.

To view the second clock, first press the TM Key and then press the RV Key. The colon is at the top of the Display Window. The top colon indicates Challenger's clock.

Challenger's Clock

To view total elapsed time for the player since the start of the play, press (and hold) the TM Key. If during the game you change sides with Challenger, your time will still be shown on the clock with the lower colon, and Challenger's time will be displayed with the higher colon.

The Clocks have two modes of operation: Elapsed Time Mode and Count Down Mode. Challenger automatically selects the Elapsed Time Mode at the start of a new game. Counting begins immediately after Challenger responds to your first move. Each clock records the time used to make the current move and the total time used by that side to make all moves so far. Both clocks operate independently, although only one is being displayed.

In Count Down Mode (Chess Level F), the clocks may be preset to a certain time (maximum of nine hours and 59 minutes) and will

count down from the start of the game (see COUNT DOWN MODE). If the clock count goes beyond 59 minutes, the Display will start showing hours/minutes. The top segment of the first digit lights to indicate it is showing hours/minutes.

.59 Minutes

1 Hour 15 Minutes

TOURNAMENT CLOCK

Chess Level E allows you to set the precise time control that you desire for tournament practice. The time control is set using the Tournament Clock. Challenger will strictly adhere to the time control which you assign it, and should never exceed its bounds. Challenger may, and usually will, complete the required time control with some time to spare. There are two reasons for this. One is that certain moves are played from Challenger's opening book or are "obvious" moves that do not require as much time to play. The other reason is that Challenger has a sophisticated chess program that allows it to use the time its opponent spends thinking to "think" about its own response. As a result, Challenger usually saves up some extra time. Challenger knows how much extra time it has saved up. It budgets some of its extra time for the current time control, and some is saved over for the next time control.

Suppose you wanted to set the tournament Clock for a primary time control of 40 moves in 90 minutes with a secondary time control of 20 moves in 30 minutes. You would proceed as follows:

PRESS KEY		**DISPLAY SHOWS**

1. **LV**   Select Chess Level E   `CL -E`

2. **DM**   You are ready to set the number of   `P  00`
moves in the primary time control.

3. **ST**   Hold key until move count reads   `P  40`

If you inadvertently enter too high a count, press and hold the RV Key until move count drops to the desired level.

4. **TM**   You are ready to set the number of   `P  00`
hours and minutes in the primary
time control.

5. **ST**   Hold key until time reads   `P 1:30`

Again, if you inadvertently enter too much time, press and hold the RV Key to lower the time setting.

6. **DM**   You are ready to set the number of   `5  00`
moves in the secondary time control.

7. **ST**   Hold key until count reads   `5  20`

As before, if you enter too high a count, you may reverse it by pressing and holding the RV Key.

8. **TM**   You are ready to set the number of   `50:00`
hours and minutes in the secondary
time control.

9. **ST**   Hold key until clock reads   `50:30`

As usual, you may adjust the clock setting down by pressing and holding the RV Key.

10. Press any key (other than ST and RV) to signal that you have finished setting the tournament clock.

NOTE! The time you give Challenger is the time it will spend "thinking" about its moves and does not include any allowance for physically making the moves on the board. In an actual tournament, you should deduct about 10 seconds per move from the official time control to allow for the time required to move Challenger's pieces.

COUNT DOWN MODE

Chess Level F is Count Down Mode. In Count Down Mode, you enter the total time for all of the moves of the game up to a maximum of 9 hours and 59 minutes. Time is entered separately for you and for Challenger. Suppose you wanted to allow yourself 15 minutes for the game, but wanted Challenger to make all its moves within 5 minutes. You would proceed as follows:

PRESS KEY		**DISPLAY SHOWS**

1. **LV**   Select Chess Level F   `CL -F`

2. **TM**   You are ready to set the number of   `H0:00`
hours and minutes for the human's
total game.

3. **ST**   Hold key until clock reads   `H0:15`

If you inadvertently enter too much time, press and hold the RV Key to reverse.

4. **TM** You are ready to set the number of hours and minutes for Challenger's total game. `00 00`
5. **ST** Hold key until clock reads `00 05`
6. Press any key (other than ST and RV) to indicate that you have finished setting the Count Down Clock.

During play, when one of the clocks counts down to zero, the Display will begin to flash, no matter which clock is shown in the Display Window. The clock that has counted down to zero will display nine hours and 59 minutes.

In the Elapsed Time Mode, the clock displays the move time and shows total elapsed game time when the TM Key is pressed and held. In Count Down Mode, it is the opposite.

In the Count Down Mode, the clock displays the time remaining for the game and shows the move time when the TM Key is pressed.

If you should desire to interrupt or delay the progress of the game and not have the clocks continue to run, you may do so by simply not acknowledging Challenger's move until you are ready to continue play. Both Clocks stop the instant Challenger indicates its move and will resume only after the move is physically accomplished.

BOOK OPENINGS

Challenger is programmed to respond to a variety of book openings (e.g. Sicilian, French, Ruy Lopez, Queen's Gambit Declined, etc.). Challenger will continue to follow a patterned book response until the player departs from the pattern or attempts to enter an illegal move.

If you wish to play a particular book opening (see BOOK OPENINGS list), you may make a book opening selection before the game begins as follows:

PRESS KEY   **DISPLAY SHOWS**

1. **LV**
2. Press a square for one of the Book Openings; for example C4.
3. You may now select the desired playing level of difficulty.
4. Make your first move.

If desired, you may request Challenger to show you the next book opening move by pressing the DM Key when it is your turn.

GREATEST GAMES

Champion Sensory Challenger is programmed to replay any one of 64 of the world's greatest games (see GREATEST GAMES list). This special feature allows you to test your skill by playing against one of the masters.

To play one of the Greatest Games, make your selection at the beginning (when the game is first plugged in or after RE is pressed) by using the LV Key as shown below. You may play white or dark (see CHANGING SIDES). Your objective in a Great Game is to try to duplicate the moves that were made by the master during the actual game.

PRESS KEY   **DISPLAY SHOWS**

1. **LV**
2. **LV**
3. Press a square for one of the Greatest Games; for example, A3.

You are given two opportunities to make the correct move. A running total of correct first try and correct second try moves is shown in the Display Window (the left two digits are the first try count and the right two digits are the second try count).

After an incorrect first try, Challenger says "CLEAR" to prompt you to clear your move and try again. After an incorrect second try, Challenger says "CLEAR," then announces the correct move. Make the move by pressing both squares as in regular play.

If desired, you may request Challenger to show you the next correct move that should be made by pressing the DM Key when it is your turn.

If you decide to make a different move from the move the master made, Challenger will accept it, but the Great Game will be terminated and normal play will resume.

To compute your score and find out how well you did against the master, refer to the SCORING TABLE.

(RE) RESET KEY

Pressing the RESET Key will recycle Challenger to the start of a new game.

(CL) CLEAR KEY

The CL Key is used to clear an unwanted entry. It is also used with the RV Key, as described in CHANGING COLOR WITH THE MOVE, to set the proper side to move after setting up a position in Problem Mode. Another use of the CL Key is to clear all of the pieces of a given piece type in Problem Mode.

◖◗ SPEAKER KEY

The Speaker Key is used to control the Voice and the Beeper. Complete use of this key is described in the section SOUND CONTROL.

TM TIME KEY

The TM Key may be pressed any time to view the built-in Chess Clock readout. It is used with the RV Key to reverse the Chess Clock readout to the other side. The TM Key is also used while setting the chess clocks in Chess Levels E and F (see TOURNAMENT CLOCK and COUNT DOWN MODE).

In the Elapsed Time Mode, each clock displays the move time. When the TM Key is held down, the clock displays total game time.

In the Count Down Mode, the clock displays the remaining time for the game; holding down the TM Key allows you to view the move time.

If the clock counts beyond 60 minutes, the Display will start showing hours/minutes. The top segment of the first digit will light to indicate that the Display is showing hours/minutes.

RV REVERSE KEY

The RV Key has several functions. As described under the TM Key, the RV Key is used to select which of the two Chess Clocks you wish to view. As described under the CL Key, the RV Key is used to change the color with the move. As described under the DM Key, the RV Key is used to change sides with Challenger. As described under the ST Key, the RV Key is used to take back one or as many as 19 moves in the game. The RV Key is also used in Chess Levels E and F to set the time and number of moves (see TOURNAMENT CLOCK and COUNT DOWN MODE).

LV LEVEL KEY

The LV Key is used to select one of the 64 Book Opening Variations; one of the 64 Greatest Games; one of the eight preset time controls; one of the four special levels; or the Player Mode (see the section on CHESS LEVEL).

While Challenger is thinking, the LV Key may be used to view the current ply depth of the search. (A ply is a half-move and represents either a turn for white or a turn for black.)

DM DISPLAY MOVE KEY

The DM Key may be pressed at any time during a game to request

Challenger to recommend a move for you to make. The DM Key is also used with the RV Key to change sides with the computer. In Chess Level E, the DM Key is used in setting the time control (see TOURNAMENT CLOCK).

While Challenger is thinking, DM may be pressed to find out what move it is "thinking" about.

⬛ⓈⓉ SET KEY

During Level Selection, when the desired level is reached, you may select Random Play by pressing the ST Key. The dash in front of the level number will disappear, signifying that the Random feature is in effect. Pressing ST again causes the dash to reappear.

The ST Key is used in Chess Levels E and F to set the time control (see TOURNAMENT CLOCK and COUNT DOWN MODE).

This Key can also be used as a Stop Key. While Challenger is thinking, you may press the ST Key to stop Challenger from thinking. Challenger will then respond immediately with its move.

The last use of the ST Key is to start a printout of the current board position on the accessory printer (see PRINTER CONTROL).

SECTION IV—BOOK OPENINGS

1. MASTER PRACTICE

2. AVERAGE TOURNAMENT PLAY

(B4)	Bird's Opening	F2-F4=
(A2)	Dutch Defense - Staunton Gambit	D2-D4=
(H2)	Queen's Gambit Accepted	D2-D4=
(H4)	Queen's Gambit Declined - Orthodox Defense (Main Variation)	D2-D4=
(G2)	Nimzo-Indian Defense - Leningrad Variation	D2-D4=~
(E8)	King's Indian Defense - Four Pawns Attack	D2-D4=

3. SOCIAL "CLUB" PLAY

(H5)	Center Game	E2-E4= +
(H7)	Bishop's Opening	E2-E4=
(E1)	Philidor's Defense	E2-E4+ =
(D7)	Petroff's Defense	E2-E4=
(C5)	Four Knight's Game	E2-E4=~
(A1)	Center Counter Defense	E2-E4+ =
(F5)	Sicilian Defense - Larsen-Miles Variation	E2-E4=
(B6)	Queen's Knight Opening	B1-C3=
(F4)	Colle System	D2-D4=

LIST OF SYMBOLS USED:

+ =   White has a slight advantage.
= +   Black has a slight advantage.
+ −   White is clearly better.
− +   Black is clearly better.
  =   Equal for both sides.
= ~   Compensation for the sacrificed material exists.
  ~   The position is unclear; most likely, the practical chances are in balance.

THE 64 GREATEST GAMES BY WORLD CHESS CHAMPIONS

	PLAYERS	OPENING	TOTAL MOVES	WINNER
(A1)	L. PAULSEN-MORPHY	Four Knights' Game	28	BLACK
(A2)	MORPHY-HARRWITZ	Philidor's Defense	35	WHITE
(A3)	MORPHY-BRUNSWICK/ISOUARD	Philidor's Defense	17	WHITE
(A4)	MORPHY-DE RIVIERE	Giuoco Piano	35	WHITE
(A5)	ANDERSSEN-DUFRESNE	Evans Gambit	24	WHITE
(A6)	ANDERSSEN-ZUKERTORT	Evans Gambit	44	WHITE
(A7)	STEINITZ-L. PAULSEN	Vienna Game-Steinitz Gambit	36	WHITE
(A8)	ROSENTHAL-STEINITZ	Three Knights' Game	38	BLACK
(B1)	ENGLISH-STEINITZ	Ruy Lopez	43	BLACK
(B2)	STEINITZ-BARDELEBEN	Giuoco Piano	35	WHITE
(B3)	EM. LASKER-BAUER	Bird's Opening	33	WHITE
*(B4)	PILLSBURY-EM. LASKER	Queen's Gambit Declined-	31	BLACK
(B5)	EM. LASKER-NAPIER	Semi-Tarrasch Defense / Sicilian Defense-Dragon Variation	35	WHITE
(B6)	ILYIN-GENEVSKY-EM. LASKER	Sicilian Defense-Scheveningen Var.	38	BLACK
(B7)	MARSHALL-CAPABLANCA	Queen's Gambit Declined- Tarrasch Defense	49	BLACK
(B8)	ALEKHINE-CAPABLANCA	Ruy Lopez-Steinitz Defense	35	BLACK
(C1)	CAPABLANCA-MARSHALL	Ruy Lopez-Closed (Marshall Attack)	40	WHITE
(C2)	CAPABLANCA-TARTAKOWER	Dutch Defense	52	WHITE
(C3)	NIMZOWITSCH-CAPABLANCA	Caro-Kann Defense	46	BLACK
(C4)	CAPABLANCA-LOEWENFISCH	Queen's Gambit Declined Meran Var.	26	WHITE
(C5)	MIESES-ALEKHINE	Center Game	33	BLACK
(C6)	ALEKHINE-STERCK	Queen's Gambit Declined-Orthodox Defense	30	WHITE
(C7)	ALEKHINE-WOLF	Queen's Gambit Declined-Symmetrical Defense	40	WHITE

Code	Players	Opening	No.	Color
(C8)	BOGOLJUBOV-ALEKHINE	Dutch Defense	53	BLACK
(D1)	RETI-ALEKHINE	King's Bishop Fianchetto Opening	40	BLACK
(D2)	ALEKHINE-BOOK	Queen's Gambit Accepted	25	WHITE
(D3)	SAEMISCH-EUWE	King's Indian Defense-Four Pawns Variation	30	BLACK
(D4)	EUWE-ALEKHINE	Queen's Gambit Accepted	41	WHITE
(D5)	GELLER-EUWE	Nimzo-Indian Defense-Saemisch Var.	26	BLACK
(D6)	RAUZER-BOTVINNIK	Sicilian Defense-Dragon Variation	29	BLACK
(D7)	BOTVINNIK-CHEKHOVER	Nimzo-Indian Defense	41	WHITE
(D8)	BOTVINNIK-CAPABLANCA	Nimzo-Indian Defense-Rubinstein Var.	41	WHITE
(E1)	LYUBLINSKY-BOTVINNIK	Ruy Lopez	53	BLACK
(E2)	BOTVINNIK-SMYSLOV	Nimzo-Indian Defense-Rubinstein Var.	30	WHITE
(E3)	BOTVINNIK-HOLMOV	Nimzo-Indian Defense-Rubinstein Var.	52	WHITE
(E4)	SMYSLOV-PANOV	Old Indian Defense	45	WHITE
(E5)	SMYSLOV-RESHEVSKY	Ruy Lopez-Steinitz Deferred Defense	52	WHITE
(E6)	KERES-SMYSLOV	Queen's Indian Defense	28	BLACK
(E7)	BOBOTZOV-TAL	King's Indian Defense-Saemisch Var.	30	BLACK
(E8)	TAL-MILEV	Queen's Gambit Declined-Semi-Tarrasch Defense	20	WHITE
(F1)	TAL-BOTVINNIK	French Defense-Winawer Variation	32	WHITE
(F2)	TAL-LARSEN	Sicilian Defense-Scheveningen Var.	37	WHITE
(F3)	SPASSKY-TAL	Nimzo-Indian Defense-Leningrad Var.	38	BLACK
(F4)	POLUGAEVSKY-TAL	English Opening	28	BLACK
(F5)	PETROSIAN-PACHMAN	King's Indian Reversed	21	WHITE
(F6)	PETROSIAN-BOTVINNIK	Gruenfeld Defense	48	WHITE
(F7)	SPASSKY-PETROSIAN	Queen's Pawn Opening	43	BLACK

*NOTE: In the games shown with an asterisk, one side has resigned where the reason may not be apparent to the inexperienced. In these cases, the likely continuing play has been appended.

WHY THE GAMES ARE GREAT

A1   L. PAULSEN — MORPHY
One of the most brilliant Queen sacrifices of all time.

A2   MORPHY — HARRWITZ
Crystal clear modern strategy leading to instructive tactics.

A3   MORPHY — DUKE OF BRUNSWICK
An immortal series of combinations presents a textbook illustration of how to exploit an edge in development.

A4   MORPHY — DE RIVIERE
With opening sophistication one hundred years ahead of his time, Morphy obtains a positional advantage and then employs characteristically sharp tactics to gain material.

A5   ANDERSSEN — DUFRESNE
The combination envisioned with White's 19th move is one of the most beautiful and famous of all time. Often referred to as "The Evergreen Game."

A6   ANDERSSEN — ZUCKERTORT
The creativity at move 24 combined with verve and accuracy

later on stamp this as one of the great attacking games of the 19th century.

A7 STEINITZ — L. PAULSEN
A marvelous demonstration of two of Steinitz's major tenets: (a) the King can be safe in the center; (2) combinations played from a position of strength will be both brilliant and effective.

A8 ROSENTHAL — STEINITZ
The first perfect demonstration of the use of the Two Bishop advantage in a nominal middlegame position is the crown jewel in a strategic masterpiece.

B1 ENGLISH — STEINITZ
The first classical endgame, demonstrating how an accumulation of small advantages — including importantly the Two Bishops — can be transformed into a win.

B2 STEINITZ — BARDELEBEN
One of the immortal combinations, deftly set up by a square freeing sacrifice very much in the modern tradition.

B3 LASKER — BAUER
A brilliant attacking game which added the concept of the Two Bishop Sacrifice to the theory of chess combinations.

B4 PILLSBURY — LASKER
The most creative and scintillating example of Rook sacrifices, with Black sacrificing both of them for "nothing" on a3.

B5 LASKER — NAPIER
Perhaps the greatest fighting game of all time with the piquant ultimate point that White gives up all of his material advantage and achieves the win from a superior endgame.

B6 ILYIN-GENEVSKY — LASKER
One of the earliest and most outstanding examples of purely psychological play: Black allows his Queen to be trapped to both complicate the position and induce in his opponent over-confidence and carelessness.

B7 MARSHALL — CAPABLANCA
An early and perfect demonstration of how to transform the strategic advantage of the Queenside Pawn majority into a win.

B8 ALEKHINE — CAPABLANCA
A perfect blend of middlegame concepts: Capablanca uses strategy to obtain the superior position and creatively thematic tactics to achieve the decisive advantage.

C1 CAPABLANCA — MARSHALL
The greatest defensive game of all time. Capablanca meets the inaugural of the Marshall Attack head on, defends perfectly, consolidates smoothly and then launches a devastating counterattack.

C2 CAPABLANCA — TARTAKOWER
An outstanding endgame overall, within which appears the first demonstration of the value and use of the active King in a Rook and Pawn endgame.

C3 NIMZOWITSCH — CAPABLANCA
The methodology of infiltrating along a half open file is so perfect that the loser used this game as a model in his middle-game treatises.

C4 CAPABLANCA — LOEWENFISCH
One of the most devastating, quietly elegant Kingside attacks ever to come out of a closed opening.

C5 MIESES — ALEKHINE

The Queen sacrifice envisioned on move 10 and executed next move is probably the earliest and deepest one on record.

C6 ALEKHINE — STERCK

One of the most creative combinations of all time, starting on move 17 and climaxing on moves 23-24. The game gains in stature because of Black's tough resistance.

C7 ALEKHINE — WOLF

The game that provided the definitive proof for the thesis of the "hypermoderns" (in the 1920's!) that the quality of opening moves is of much greater importance than a static count of developmented tempos. White has a strategically won position after move 11, despite having made 4 Queen moves and 3 with his KN!

C8 BOGOLJUBOV — ALEKHINE

An extraordinary deep queening combination is the decisive element in a brilliant strategic effort encompassing both edges of the board.

D1 RETI — ALEKHINE

An exceedingly deep attacking combination — a cardinal part of which is an early Queen exchange — tops off a tremendous strategic battle.

D2 ALEKHINE — BOOK

A brilliant attacking game featuring the first great intuitive "positional" Rook sacrifice.

D3 SAEMISCH — EUWE

The game that established the legitimacy of the King's Indian Defense by showing how to tame the imposing looking White center.

D4 EUWE — ALEKHINE

An incomparable demonstration of the value of a developmental tempo in an attack carried out without Queens.

D5 GELLER — EUWE

The most creative and devastating counterattack ever.

D6 RAUZER — BOTVINNIK

The center break — discovered and brilliantly executed by Black in this game — has become the definitive counterplay method in the Sicilian.

D7 BOTVINNIK — CHEKHOVER

A brilliant strategic exposition of the value and utilization of a key central square (d5).

D8 BOTVINNIK — CAPABLANCA

Demonstration of the building and utilization of the latent pawn center.

E1 LYUBLINSKY — BOTVINNIK

The discovery/introduction of the "Russian Exchange Sacrifice," a concept combining both defensive and offensive characteristics.

E2 BOTVINNIK — SMYSLOV

For the player of closed variations, a perfect illustration of the methodology to use and the power that can result from an accurately timed early opening of the game.

E3 BOTVINNIK — HOLMOV

A virtuoso technical demonstration of the use of the active King to generate winning chances in a symmetrical minor piece endgame.

E4 SMYSLOV — PANOV

A consummate lesson in the exploitation of a spatial advan-

tage in a closed position.

E5 SMYSLOV — RESHEVSKY
Masterful creative strategy in first creating and then exploiting pawn weaknesses.

E6 KERES — SMYSLOV
The most famous and impressive show of ice cold nerves in demonstrating that an attack on the wing can be best countered by action in the center.

E7 BOBOTZOV — TAL
The most unexpected and electrifying "positional" early (move 11!) Queen sacrifice.

E8 TAL — MILEV
In power and creativity, an unparalleled breakthrough against a King in the center.

F1 TAL — BOTVINNIK
The virtuoso example of skillfully juggling all pieces and squares during extremely complicated, unbalanced play all across the board.

F2 TAL — LARSEN
One of the most creative intuitive "positional" piece sacrifices, based on both chess and psychological factors.

F3 SPASSKY — TAL
How to first gain and then keep the initiative is demonstrated by Black with exceptional creativity and vigor.

F4 POLUGAEVSKY — TAL
The value of the initiative for Black is demonstrated with a rare combination of sophistication and power.

F5 PETROSIAN — PACHMAN
Perfect strategy prepares a Queen sacrifice — which appears to be out of the blue — drawing out the King from its shelter for ultimate death.

F6 PETROSIAN — BOTVINNIK
The most impressive realization of a tiny endgame advantage in world championship play.

F7 SPASSKY — PETROSIAN
Perhaps the most creative, strategically perfect game in world championship play.

F8 HORT — PETROSIAN
A marvelous exhibition of the defensive and counterplay prospects inherent in the French Defense.

G1 SPASSKY — BRONSTEIN
One of the great romantic attacking games of the 20th century. The final phase appeared in the James Bond movie "To Russia With Love."

G2 SPASSKY — FISCHER
A classical example of using accuracy and power in the opening and middlegame to obtain just enough of an endgame advantage for a win.

G3 LARSEN — SPASSKY
The most brilliant drastic capitalization of an edge in development by Black.

G4 KESTLER — SPASSKY
Brilliant strategy and tactics of opening lines against a King castled on the Queenside.

G5 BILEK — FISCHER
The game that opened the labyrinth of the most complicated modern opening variation.

G6 R. BYRNE — FISCHER
The quiet moves following the first sacrifice mark this as one of the most profound and elegant attacking games of all time.

G7 PORTISCH — FISCHER
The strategy of demonstrating the superiority of the Queen over two Rooks from early on in the game is brilliantly conceived and beautifully executed.

G8 FISCHER — PORTISCH
A perfect strategic game which caused the rebirth of the Exchange Variation of the Ruy Lopez after more than 50 years in the doldrums.

H1 FISCHER — PETROSIAN
An incomparable example of how to turn a slight endgame advantage into a quick win — even if the opponent is a former world champion.

H2 FISCHER — SPASSKY
A perfect strategic Kingside attack against a slightly weakened pawn formation.

H3 KARPOV — SPASSKY
An incomparable blend of strategy and tactics on the White side of the Ruy Lopez: a perfect game.

H4 KARPOV — UNZICKER
How to use a spatial advantage to squeeze your opponent to death.

H5 KARPOV — KORCHNOI
The definitive combination of strategy and tactics in formulat-ing the attack against the Dragon Sicilian.

H6 LJUBOJEVIC — KARPOV
A perfect demonstration of how to win by defending the Ruy Lopez for Black.

H7 TATAI — KARPOV
An extremely creative pawn sacrifice — for a closed position — and a marvelous exploitation of the resulting edge in development.

H8 TIMMAN — KARPOV
A pawn exchange — which would be dismissed by every strong player as being too anti-positional — is the surprising prelude to an unexpectedly powerful Kingside attack.

SCORING TABLE
64 GREATEST GAMES

The following tables may be used to rate your performance against the master who actually played that side in the original game. To determine a score, proceed as follows: 1) Take the number of first-try points (the left two digits in the Display) and multiply by two. 2) Add this first-try sum to the number of second-try points (the right two digits in the Display). 3) Compare the computed total of first and second-try points to the scoring table for the particular game you played.

For example: Suppose you played the white pieces in game numer A1. Suppose, also, that your final score was displayed as 14:15. Using the method described above, 14 X 2 = 28, 28 + 15 = 43,which is your total computed score. Compare the 43 against the white column in the table for game number A1. Since 43 is within the 42-46 block, your rating for this game would be **B**.

64 GREATEST GAMES SCORING

GAME NO. ▶	A1		A2		A3		A4		A5		A6		A7		A8	
FIDELITY SKILL LEVEL	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black
A	47-56	50-56	63-70	63-68	28-34	27-32	65-70	61-68	44-48	37-46	83-88	76-86	64-72	63-70	65-76	69-76
B	42-46	40-49	50-62	55-63	24-27	26	42-64	45-60	35-46	30-36	56-82	46-75	40-63	43-62	45-64	41-68
C	34-42	34-39	43-49	44-54	22-23	25	36-42	36-44	29-34	26-29	43-55	44-45	32-39	33-42	33-44	32-40
D	33	29-33	24-42	25-43	13-21	23-24	23-35	24-35	20-28	22-25	30-42	34-43	20-31	20-32	21-32	17-31
E	23-32	19-28	9-23	9-29	5-12	13-22	11-22	9-23	6-19	13-21	11-29	19-33	7-19	11-19	5-20	7-16
F	0-22	0-18	0-8	0-8	0-4	0-12	0-10	0-8	0-5	0-12	0-10	0-18	0-6	0-10	0-4	0-6
GAME NO. ▶	B1		B2		B3		B4		B5		B6		B7		B8	
FIDELITY SKILL LEVEL	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black
A	79-86	77-86	63-70	63-68	60-66	59-64	51-62	56-62	65-70	62-68	71-76	69-76	93-98	89-98	63-70	64-70
B	50-78	42-76	37-62	51-62	44-59	49-58	37-50	38-55	39-64	42-61	46-70	44-68	63-92	48-88	46-62	40-64
C	35-49	32-41	30-36	44-50	35-43	40-48	29-36	31-37	28-38	33-41	33-45	32-43	46-62	34-47	34-45	29-39
D	20-34	17-31	15-29	31-43	17-34	21-39	15-28	14-30	15-27	15-32	13-32	12-31	32-45	19-33	24-33	16-28
E	7-19	7-16	5-14	19-30	6-16	15-20	7-14	6-13	5-14	6-14	5-12	6-11	11-31	5-18	7-23	6-15
F	0-6	0-6	0-4	0-18	0-5	0-14	0-6	0-5	0-5	0-5	0-4	0-5	0-10	0-4	0-6	0-5

64 GREATEST GAMES SCORING

GAME NO.	C1		C2		C3		C4		C5		C6		C7		C8	
FIDELITY SKILL LEVEL	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black
A	73-80	75-78	94-104	95-102	83-92	81-92	46-52	45-50	59-66	57-66	49-60	49-58	72-80	71-78	95-106	94-106
B	49-72	55-74	50-93	59-94	58-82	47-80	32-45	33-44	40-58	37-56	36-48	31-48	52-71	44-70	56-94	51-93
C	43-48	42-54	35-49	39-58	43-57	37-46	25-31	25-32	29-39	29-36	28-35	22-30	38-51	30-43	36-55	38-50
D	40-42	35-41	18-34	17-38	33-42	32-36	15-24	15-24	18-28	21-28	14-27	10-21	27-37	21-29	17-35	19-37
E	11-39	6-34	6-17	6-16	6-32	6-31	6-14	6-14	7-17	6-20	6-13	6-9	17-26	13-20	9-16	6-18
F	0-10	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-6	0-5	0-5	0-5	0-16	0-12	0-8	0-5

GAME NO.	D1		D2		D3		D4		D5		D6		D7		D8	
FIDELITY SKILL LEVEL	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black
A	74-80	72-80	42-50	43-48	55-60	52-60	71-82	75-80	47-52	45-52	53-58	51-58	72-82	75-80	74-82	75-80
B	55-73	39-71	30-42	36-42	41-55	34-51	51-70	47-74	35-46	28-44	39-52	34-50	42-71	55-74	45-73	49-74
C	40-54	26-38	26-29	28-35	30-40	26-33	38-50	31-46	26-34	22-27	29-38	27-33	32-41	39-54	35-44	33-48
D	20-39	8-25	22-25	22-27	22-29	18-25	23-37	17-30	17-25	13-21	18-28	14-26	19-31	17-38	24-34	23-32
E	6-19	6-7	6-21	6-21	6-21	6-17	6-22	6-16	6-16	6-12	6-17	6-13	6-18	6-16	7-23	6-22
F	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-6	0-5

64 GREATEST GAMES SCORING

GAME NO.	E1		E2		E3		E4		E5		E6		E7		E8	
FIDELITY SKILL LEVEL	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black
A	100-106	100-106	53-60	53-58	95-104	97-102	81-90	83-88	95-104	97-102	52-56	49-56	57-60	53-60	35-40	31-38
B	60-99	54-99	35-52	35-52	52-94	56-96	42-80	48-82	48-94	63-96	39-51	32-48	41-56	38-52	26-34	25-30
C	40-59	35-53	26-34	24-34	38-51	35-55	29-41	30-47	31-47	42-62	30-38	25-31	31-40	30-37	22-25	20-24
D	24-39	19-34	21-25	19-23	27-37	23-34	14-28	11-29	19-30	24-41	11-29	10-24	22-30	24-29	8-21	8-19
E	9-23	6-18	6-20	6-18	6-26	6-22	6-13	6-10	6-18	6-23	6-10	6-9	6-21	6-23	6-7	6-7
F	0-8	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5

GAME NO.	F1		F2		F3		F4		F5		F6		F7		F8	
FIDELITY SKILL LEVEL	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black
A	55-64	54-62	67-74	67-72	69-76	67-76	51-56	49-56	37-42	35-40	86-96	89-94	75-86	76-86	89-96	97-96
B	37-54	40-53	43-66	46-66	44-68	37-66	35-50	28-48	27-36	29-34	49-85	52-88	47-74	39-75	50-88	45-96
C	27-36	27-39	32-42	33-45	29-43	26-36	24-34	19-27	22-26	24-28	34-48	32-51	32-46	28-38	27-49	27-44
D	24-26	23-26	17-31	14-32	20-28	19-25	9-23	9-18	8-21	8-23	15-33	12-31	13-31	13-27	19-26	22-26
E	6-23	6-22	6-16	6-13	6-19	6-18	6-8	6-8	6-7	6-7	6-14	6-11	6-12	6-12	6-18	6-21
F	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5

64 GREATEST GAMES SCORING

GAME NO.	G1		G2		G3		G4		G5		G6		G7		G8	
FIDELITY SKILL LEVEL	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black
A	39-46	39-44	92-100	90-98	29-34	28-34	55-62	57-62	50-54	46-54	45-48	42-48	63-70	64-70	59-68	57-66
B	31-38	32-38	52-91	51-89	24-28	20-27	43-54	37-56	40-49	34-45	33-44	28-41	39-62	39-63	38-58	43-56
C	26-30	24-31	37-51	33-50	18-23	16-19	32-42	25-36	31-39	29-33	25-32	22-27	26-38	28-38	30-37	32-42
D	16-25	13-23	21-36	18-32	11-17	8-15	29-31	23-24	28-30	27-28	12-24	12-21	20-25	21-27	26-29	27-31
E	6-15	6-12	6-20	6-17	6-10	6-7	9-28	6-22	6-27	6-26	6-11	6-11	6-19	6-20	6-25	6-26
F	0-5	0-5	0-5	0-5	0-5	0-5	0-8	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
GAME NO.	H1		H2		H3		H4		H5		H6		H7		H8	
FIDELITY SKILL LEVEL	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black
A	61-68	61-66	75-82	73-80	68-76	69-74	77-88	79-86	48-54	49-52	79-84	75-84	53-60	52-60	57-62	55-62
B	34-60	39-60	50-74	46-72	41-67	50-68	39-76	51-78	36-47	39-48	53-78	40-74	36-52	37-51	41-56	33-54
C	24-33	26-38	27-49	31-45	33-40	37-49	30-38	35-50	27-35	30-38	36-52	27-39	26-35	30-36	29-40	21-32
D	13-23	14-25	8-26	12-30	27-32	29-36	26-29	28-34	22-26	20-29	29-35	23-26	11-25	13-29	16-28	12-20
E	6-12	6-13	6-7	6-11	7-26	6-28	6-25	6-27	6-21	6-19	6-28	6-22	6-10	6-12	6-15	6-11
F	0-5	0-5	0-5	0-5	0-6	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5

SECTION VI — GENERAL INFORMATION

TEST PROGRAM

A miniaturized computer, as part of the solid state electronic system within the game, analyzes each position. After considering all possible chess moves, the computer makes a decision which it has determined to be the best available move.

Since the sophisticated program used in this decision-making process is thoroughly tested, the possibility of computer error is remote. If you suspect that your game is responding improperly, we suggest that you play the Test Program listed below to ensure correct functioning of the unit. If you still suspect improper response after playing the Test Program, we ask that you write down the series of moves and forward same to our Customer Service Department.

PLAYER'S MOVE	CHALLENGER'S RESPONSE
1. Press RE Key	Display ▮▮▮▮
2. Press LV Key	Display ▮▮▮▮
3. Select Book Opening F7	Display ▮▮▮▮
4. Press FROM E2 to E4	E7 to E5
5. Press FROM G1 to F3	B8 to C6
6. Press FROM F1 to C4	F8 to C5
7. Press FROM F3 to H4	D8 to H4
8. Press FROM A2 to A3	H4 to F2, CHECK AND MATE

TRANSFORMER

The transformer provided with your Sensory Chess Challenger® has been specifically designed for use with this game. We strongly recommend against the use of any transformer or power source other than the transformer provided by the manufacturer.

SPECIFICATIONS

POWER SOURCE: Operates on 110, 220, or 240 volt AC house power (depending upon transformer used), 50-60 Hz, 10 watts.

ELECTRONICS: All solid state.

READ OUT: Voice reproduction via 2-inch, 8-ohm speaker; 7-segment alpha-numeric display; 65 L.E.D. indicators.

KEYBOARD: 6-key tactile and 72 pressure sensitive.

SIZE: 13 x 11-1/2 x 3-3/16 inches.

WEIGHT: Housing, transformer, chess pieces, literature, dress box: 6 pounds.

FIDELITY ELECTRONICS, LTD.