

OWNER'S MANUAL
INSTRUCTION BOOKLET

MODEL VCC
VOICE CHESS CHALLENGER®

INFINITE LEVELS OF PLAY

VOICE
CHESS
CHALLENGER®



QUALITY MADE IN U.S.A.

INTRODUCTION

Your Fidelity "VOICE" CHESS CHALLENGER® is a thinking and talking chess game. The "VOICE" feature is not a tape recording, but a computer created voice capability that talks in response to CHALLENGER'S® "thoughts" or to instructions entered via the Keyboard. Throughout the game, CHALLENGER® will announce each move made by either side as exhibited in the display window. A vocabulary of over fifty words will verbalize play action such as illegal moves, what piece was captured or moved, when your King is in check, etc., and will tell you the location of every piece on the board (at your request) as well as announce each key that is pressed. If you desire, CHALLENGER® will even suggest your next move. Throughout the game, CHALLENGER® will, after waiting patiently, remind you that it is "your move".

If desired, you may turn off the voice at any time without affecting the game. With voice OFF, CHALLENGER® will continue to communicate via the display window. Turn voice OFF by pressing the Speaker Key **[S]**. Turn voice ON again by pressing Speaker Key again.

SELECTING CHESS LEVEL

Plug in the game. Press and release the RESET (RE) Key. Your "VOICE" CHESS CHALLENGER® will introduce itself by saying, "I am Fidelity's CHESS CHALLENGER®, your Computer opponent. Select your level". The designation **CL1** will appear in the display window, designating Chess Level One.

Should you decide to play one of CHESS CHALLENGER'S® more advanced programs, press the LEVEL (LV) Key. **CL2** will appear in the display window and "two" will be announced. By continuing to press LV, each available level will be displayed to indicate the level of difficulty CHESS CHALLENGER® is ready to play.

CHESS LEVEL

AVERAGE RESPONSE TIME

| | |
|----------------------------------|--|
| CL1 - Beginner | 5 seconds |
| CL2 - Intermediate | 15 seconds |
| CL3 - Experienced | 35 seconds |
| CL4 - Advanced | 1 minute, 20 seconds |
| CL5 - Superior | 2 minutes, 20 seconds |
| CL6 - Tournament Practice | 3 minutes |
| CL7 - Tournament Teacher | 3 minutes, 20 seconds |
| CL8 - Excellent | 6 minutes |
| CL9 - Expert | 11 minutes |
| CLH - Infinite | Computes move until stopped or search is exhausted (5 seconds to many hours) |

The LV Key can be used at any time, before or during a game, to change the level of difficulty. When the LV Key is used during a game, the window will display the level currently being played. By repeatedly pressing the LV Key, the desired level of difficulty can be reached.

SELECTING OFFENSE OR DEFENSE

Set up all the chess pieces according to the rules of chess with the white pieces at the bottom. Since the white pieces have the first move, CHESS CHALLENGER® presumes you will choose white, and thus you will make the first move to commence playing.

If you choose the dark pieces, simply press the ENTER (EN) Key and CHESS CHALLENGER® will announce and display the first move.

If you want to actually change sides and play from the top of the board, press the DOUBLE MOVE (DM) Key. The display window will exhibit **do ub**. Then press the PROBLEM (PB) Key. CHESS CHALLENGER® will display the first move for the white pieces from the bottom of the game board. Enter the move for the dark pieces and press EN.

THE GAME BOARD

Each square on the chess board is designated, in accordance with international chess notation, by a letter of the alphabet and a number which must be conveyed to the Computer when a move is made. Vertical squares (the File) are lettered A to H; horizontal squares (the Rank) are numbered 1 to 8. Thus, when the game begins, the white King's pawn is on square E2; the dark King's pawn is on square E7.

THE PLAY

ALWAYS ENTER THE ALPHABETICAL LETTER FIRST, AND THEN, ENTER THE NUMBER. The eight Data Keys on the bottom half of the Keyboard are each marked with a letter and a number. To select a square, first press a Key for the letter designation, then press a Key for its number designation. For example: to move white King's pawn two squares forward, press Key marked E5; this will display **E** in the FROM window. Then press Key marked b2; this will add the number two, **E2** to the display in the FROM window. Now press Key marked E5; this will display **E** in the TO window. Finally, press Key marked d4; this will add the number four, **E4** to the display in the TO window. Manually move the King's pawn FROM square E2 to square E4. This move is now ready to be entered into CHALLENGER'S® memory. Press EN, which registers the move in the Computer. CHALLENGER® will immediately respond with a randomly selected countermove. Manually move CHALLENGER'S® piece in accordance with the spoken instruction (move is also shown in the display window).

If you decide not to use the above example as your opening move, and you have not pressed EN, press the CLEAR (CL) Key; this erases the **FROME2TOE4** before it is entered into the Computer. You may always erase a move before it is entered. You cannot erase a move after pressing EN.

As you ponder your next move, CHALLENGER® will periodically "speak" and remind you that it is your move. While CHALLENGER® is "thinking" about its next move, four small zeros will flash up and down in the display window.

NOTE: Turning the game OFF or pressing REset automatically resets the program to commence a new game. For lengthy games, leave the game ON, as CHESS CHALLENGER® is all solid state and is designed to be left ON for days or weeks, as desired.

VOICE CHESS CHALLENGER® KEYS AND DISPLAY INDICATORS

CHECK

Lights when the computer has you in check.

FROM WINDOW

Displays the position of the piece you want to move (your starting position).

RESET

Starts the game — will cancel memory of previous game.

SPEAKER

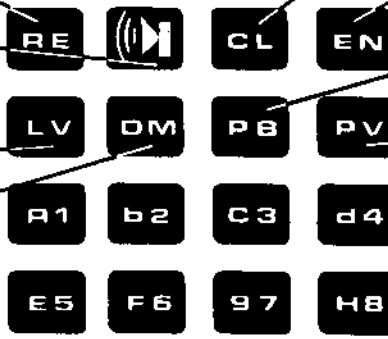
Turns voice capability OFF/ON.

LEVEL

To determine level of difficulty (choose from 10 different levels).

DOUBLE MOVE

Override Key to enter multiple moves; display suggested move.



I LOSE

Lights when computer admits defeat and is in checkmate.

TO WINDOW

Displays the new position to which you have chosen to move your piece.

CLEAR

To clear an unwanted move before pressing ENTER.

ENTER

To enter your move into the computer; to repeat announcement.

PROBLEM MODE

To set up chess problems or replace lost pieces.

POSITION VERIFICATION

Displays the board position of each piece.

DATA KEYS

Designate Rank and File board moves; used for book opening selection.

CASTLING

CHALLENGER® is programmed to castle when it decides such a move is advantageous. Since a King can only move one square at a time, CHALLENGER® informs you that it has castled when its King moves two spaces across the last Rank and announces, "CASTLE". FROM E8 TO G8 would indicate a castle to the King side, and FROM E8 TO C8 would indicate a castle to the Queen side. If you, the player, should elect to castle either King or Queen side, the procedure is exactly the same. For King side castle, press FROM E1 TO G1; for Queen side castle, press FROM E1 TO C1. Castling can only be performed when the rules of chess permit this maneuver.

EN PASSANT

Although En Passant is a relatively unique maneuver, CHES CHALLENGER® will perform En Passant when it deems such a move to be beneficial, and will recognize when you, the player, choose to execute an En Passant maneuver. CHALLENGER® will not, nor will it permit you, the player, to violate any of the rules of chess in performing the En Passant maneuver.

POSITION VERIFICATION

An outstanding feature of CHES CHALLENGER® is its ability to inform the player of the exact position of each of the pieces at any time during the course of the game. By pressing the POSITION VERIFICATION Key (PV), the FROM window displays the position of each piece starting with File A and Rank 1.

The TO window identifies the piece found in that position using the single digit code described below. For your pieces, the code digit is preceded by the letter E (enemy). In addition, CHALLENGER® announces each location and the piece found thereon. For example: "A1, your Rook; A2, your Knight," etc. Each time the PV Key is pressed, the next occupied square to the right in each successive Rank row is displayed and announced, while unoccupied squares are ignored. Verification will continue indefinitely, as you continue to press PV, starting over again with square A1. You may stop Position Verification at any time by entering your next move.

CODE FOR CHESS PIECES

The final digit in the TO window represents the piece code as follows:

- | | | |
|------------|------------|-----------|
| 2 - Pawn | 6 - Bishop | A - Queen |
| 4 - Knight | 8 - Rook | C - King |

BOOK OPENINGS

Your "VOICE" CHES CHALLENGER® uses an extensive repertoire of over 40 book opening variations. CHALLENGER® will select a book opening at random, or you may select the book opening of your choice. Book openings are selectable whether you elect to have CHALLENGER® play the dark or white pieces. What's more, CHALLENGER® can help you learn book openings by suggesting your next move for each patterned response from the Computer (see DISPLAY MOVE).

BOOK OPENINGS VARIATION SELECTION

| Number | | First Move |
|--------|-----------------------------|---------------|
| A1 | CENTRE GAME | FROM E2 TO E4 |
| A2 | MAR DEL PLANTA VARIATION | FROM D2 TO D4 |
| A3 | EXCHANGE VARIATION | FROM E2 TO E4 |
| A4 | LENINGRAD DUTCH | FROM D2 TO D4 |
| A5 | NAJDORF VARIATION | FROM E2 TO E4 |
| A6 | QUEEN'S INDIAN DEFENSE | FROM D2 TO D4 |
| A7 | FOUR KNIGHTS GAME | FROM E2 TO E4 |
| A8 | SEMI-TARRASCH DEFENSE | FROM D2 TO D4 |
| | | |
| B1 | LARSEN-SANTASIERE VARIATION | FROM E2 TO E4 |
| B2 | BUDAPEST DEFENSE | FROM D2 TO D4 |
| B3 | SCOTCH GAME | FROM E2 TO E4 |
| B4 | ENGLISH DEFENSE | FROM C2 TO C4 |
| B5 | FOUR PAWNS VARIATION | FROM D2 TO D4 |
| B6 | DANISH GAMBIT ACCEPTED | FROM E2 TO E4 |
| B7 | MODERN BENONI | FROM D2 TO D4 |
| B8 | MARSHALL ATTACK | FROM E2 TO E4 |
| | | |
| C1 | PAULSEN VARIATION | FROM E2 TO E4 |
| C2 | GRUNFELD DEFENSE | FROM D2 TO D4 |
| C3 | GIUOCO PIANO | FROM E2 TO E4 |
| C4 | CLASSICAL TARRASCH DEFENSE | FROM D2 TO D4 |
| C5 | BENKO GAMBIT | FROM D2 TO D4 |
| C6 | BIRDS OPENING | FROM F2 TO F4 |
| C7 | ACCELERATED FIANCHETTO | FROM E2 TO E4 |
| C8 | NIMZO-INDIAN DEFENSE | FROM D2 TO D4 |
| | | |
| D1 | STEINITZ DEFENSE DEFERRED | FROM E2 TO E4 |
| D2 | SAMISCH VARIATION | FROM D2 TO D4 |
| D3 | PHILIDOR'S DEFENSE | FROM E2 TO E4 |
| D4 | AVERBAH'S VARIATION | FROM D2 TO D4 |
| D5 | SCHEVENINGEN DEFENSE | FROM E2 TO E4 |
| D6 | QUEEN'S GAMBIT ACCEPTED | FROM D2 TO D4 |
| D7 | OPEN DEFENSE | FROM E2 TO E4 |
| D8 | OLD BENONI | FROM D2 TO D4 |
| | | |
| E1 | DUTCH DEFENSE | FROM D2 TO D4 |
| E2 | DRAGON VARIATION | FROM E2 TO E4 |
| E3 | CLASSICAL DEFENSE | FROM D2 TO D4 |
| E4 | PETROFF'S DEFENSE | FROM E2 TO E4 |
| E5 | KING'S FIANCHETTO | FROM D2 TO D4 |
| E6 | CARO-KANN | FROM E2 TO E4 |
| E7 | COLLE SYSTEM | FROM D2 TO D4 |
| E8 | PIRC DEFENSE | FROM E2 TO E4 |
| | | |
| F1 | CLOSED DEFENSE | FROM E2 TO E4 |
| F2 | ALEKHINE'S DEFENSE | FROM E2 TO E4 |
| F3 | SLAV DEFENSE | FROM D2 TO D4 |
| F4 | FRENCH DEFENSE | FROM E2 TO E4 |
| F5 | CENTER COUNTER GAME | FROM E2 TO E4 |
| F6 | POLISH DEFENSE | FROM D2 TO D4 |

To start a game, simply enter a "book" move and CHALLENGER® will respond with a randomly selected "book" move. CHALLENGER® responds instantly to all "book" moves regardless of level of play, while it takes time to "think" for all non-book moves. If you wish to specify the opening to be played by CHALLENGER®; enter the appropriate book number via the Data Keys, then enter your first move. For example, if you select Book Opening A2: press Key A1 (for the letter A), then press Key b2 (for the number 2). Press EN to record the selection in CHALLENGER'S® memory. Your selection will be verified in the display window as **--A2**. You are now ready to make your first move.

CHALLENGER® will continue to follow a patterned book response until the player departs from the pattern or attempts to enter an illegal move. Once out-of-book, there is no return except by restarting the game. The end-of-book is signified by four zeros **0000** in the display window or when CHALLENGER® begins to "think" about its next move. When **0000** appears, enter your next move and press EN.

RANDOM PLAY

When CHESS CHALLENGER® must protect a piece or foresees an important move sequence, it will select the move that best protects its pieces while it endeavors to checkmate the player's King. When a choice of moves is available, CHALLENGER® will choose its move at random, so that each and every game will be different. With the combination of random play and selected moves, you should enjoy many hours of exciting chess play.

CHALLENGER® PLAYS CHALLENGER®

An extraordinary feature of CHESS CHALLENGER® is its ability to play against itself. To engage this feature at any time during play, the player must first enter a move "out-of-book". CHALLENGER® will respond with a countermove. For example: If your first move was for white, CHALLENGER® will respond with a move for dark. Press the DM Key, and then press the PB Key. CHALLENGER® will announce (and display) white's next move. Press PB again; CHALLENGER® will tell you dark's move. Continue to press PB and CHALLENGER® will play each side in turn. The player can take over for white or dark at any time by entering a move and pressing EN after the opposing side has made its move.

CHANGING SIDES

At any time during a game, the player may change sides by pressing DM and then PB. CHALLENGER® will automatically make the next move for your pieces and you may continue making the moves for CHALLENGER'S® original pieces.

ILLEGAL MOVES

CHALLENGER® will always respond with a legal move. Moreover, CHALLENGER® expects the player to do likewise. If you make an illegal move, CHALLENGER® will stop you immediately by displaying **---** in its display window and announcing "ILLEGAL MOVE". You need only enter a legal move to continue with game play.

PAWN PROMOTION

As in a normal game of chess, when a pawn reaches the "8th Rank", CHALLENGER® will automatically promote the pawn to a Queen. However, if you choose to promote a pawn to some piece other than a Queen, use the PB Key (explained later in Problem Mode Instructions) to substitute a Knight or any other piece desired.

CHECK AND MATE

Whenever CHESS CHALLENGER® places your King in Check, the "CHECK" light will activate and it will announce that your King is in Check. The Check light will not activate if you place CHALLENGER'S® King in Check, as it is immediately aware of this situation.

If you checkmate CHALLENGER'S® King, CHALLENGER® will announce "I LOSE", and the display windows and "I LOSE" light will flash to signal your victory. If CHESS CHALLENGER® should checkmate your King, the display windows and "CHECK" light will flash to notify you that it has been victorious.

When CHESS CHALLENGER® loses a game, it will automatically display the number of moves taken to win. By recording each move made during the game, the player is in a position to improve chess tactics by attempting to replay the same game in fewer moves.

NOTE: In the higher levels of play (above Chess Level One), when CHESS CHALLENGER® determines that you are mated in two moves, it may start to flash a victory and announce, "MATE IN TWO" even before the actual checkmate. This feature alerts you that it has set up a "Mate in Two" situation from which you cannot escape.

If CHALLENGER'S® King or the player's King is cornered in a stalemate situation (not a draw by repetition), the display windows and the "I LOSE" light will flash.

DOUBLE MOVE

The DM Key can be used throughout the game to instruct CHALLENGER® not to respond as you move pieces. Before each move in which you do not wish a response with a countermove, press the DM Key and the display will exhibit **do ub**. Then press the Data Keys for the squares you wish to move **FROM** and **TO**, respectively. Now press EN, and the window will display **do ub** again. This means that your move was effectively registered, but CHALLENGER® has not responded with a countermove. You may continue using the DM Key for a succession of moves. Before the final move, do not use the DM Key, and CHALLENGER® will respond in a normal manner.

DISPLAY MOVE

The DM Key can be used during a book-opening series to have CHALLENGER® display your next patterned response to a book-opening move made by the Computer. Press the DM Key; the appropriate move will be announced and will appear in the display window. Press EN to enter that move. You may repeat this procedure until all patterned responses for a given "book" have been executed. In addition, if you have not selected a specific opening, repeatedly pressing DM will display all possible responses (against a given move in the pattern), if more than one exists.

When requesting a display of your move in levels 2, 5, 7, 9 and H, press the DM Key twice. First, **do ub** will be displayed; then, your suggested move will be announced and displayed. If you wish to make the suggested move, it must be re-entered via the Date Keys before pressing EN.

SEARCH LEVEL

The CHESS CHALLENGER® Computer has the capability to consider the probable result of an almost infinite number of move/countermove strategems against each move made by the player (except for book openings). In the first playing level **CL1**, CHALLENGER® is restricted to relatively few of the more obvious move/countermove combinations, thus making it an easier opponent and consuming no more than five seconds to respond. Beginning with **CL2**, the search levels are expanded and an increasing number of move combinations are executed, with corresponding increases in the response time. These levels of move combinations are referred to as "plies". In playing levels 2, 5, 7, 9 and H, the ply-level to which CHALLENGER® has completed its search is momentarily displayed (Example: **2222**). When all plies related to a given playing level have been examined, the move finally selected will appear in the display window.

In the "H" level of play, CHALLENGER® may consume a great deal of time while it examines the almost infinite possibilities through all the ply levels before executing a move. Essentially, this means that the Computer can conceivably consume days, weeks, or even longer in its attempt to find the best possible move. You may, at any time in the "H" level, interrogate CHALLENGER® as to which move it is presently considering by holding down the DM Key for several seconds until the move appears in the display window. The move will remain displayed until the DM Key is released (depressing DM does not stop the Computer from continuing its search). The player has the option to halt CHALLENGER'S® search effort at any time by pressing and holding the EN Key for a few seconds, until the move being considered at the given moment is announced and displayed.

PROBLEM MODE

CHESS CHALLENGER® is a most extraordinary, versatile device which will permit you, the player, to perform numerous special moves at any time either before or during game play. It is possible to set up chess problems before a game has begun, or to alter the position of pieces during game play, or even to "resurrect" any pieces which were previously captured by either side.

The Problem Mode feature may be used before starting the game by pressing the PROBLEM MODE (PB) Key. The display windows will exhibit **Prob**. Then press the PV Key, and the display windows will exhibit **A1 D**, which means that there is no chess piece on square A1. If you desire to place a chess piece, such as your white bishop, on this square, press "6" (the code for bishop). CHALLENGER® will announce "A1, MY BISHOP". Now press the EN key (the enemy Key in this mode). The display windows should now exhibit **A1E6**, which means that your white bishop is on square A1. Then, by pressing the PV Key again, the next square to the right will be exhibited. If you wish to place CHALLENGER'S® black Rook on this square, press "8" (the code for Rook). CHALLENGER® will announce "B1, MY ROOK". The display windows should now exhibit **b1 8**, which means that CHALLENGER'S® black Rook is on square b1. By continuing to press PV, you can decide to place pieces wherever you wish. If you wish to erase a piece, press the CLEAR (CL) Key, which will eliminate the piece on the square. Once you have completed placing the chess pieces on the squares desired, press the PB Key once again, and the display windows will exhibit **0000**. Then enter your move and proceed with the game. It is recommended that you verify all the piece placements by continuously pressing the PV Key before entering your first move.

By using the Problem Mode before starting a game, it is possible to set up various chess problems and "Mate in Two" 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.

If you wish CHALLENGER® to solve a particular chess problem or a "White to move a Mate in Two" situation, press the DM Key and then press the PB Key. CHALLENGER® will then respond with White's first move and will assume that you are playing the dark pieces.

If you elect to use the Problem Mode during game play, the same procedure may be used at any time after the first move is entered, except that the pieces already on the board will be displayed on each of the squares. It is then up to you to determine if you wish to eliminate certain pieces by using the CL Key, or to add certain pieces by using the method described above.

REPEAT

The EN Key may be used to repeat any announcement of CHESSE CHALLENGER'S® moves made during out-of-book play. Press EN after the original announcement is completed and the move appears in the display window. The Repeat Function is not used during book opening sequences, as it will cause an illegal move indication.

SPECIFICATIONS

POWER SOURCE: Operates on 110, 220, or 240 volt AC house power (depending upon transformer used), 50-60 Hz, 500 milliamphere current drain, continuous use.

ELECTRONICS: All solid state. 96K bit Read Only Memory Unit for Program and Operational Stages; 32K bit Read Only Memory for Voice Program; 8K bit Random Access Memory for Scratch Pad and Intermediate Storage; Z80-A 8-bit Central Processing Unit.

READ OUT: Voice Reproductions via 2-inch, 8 ohm Speaker, fixed volume; 7-Segment Alpha-numeric L.E.D. Display Characters.

KEYBOARD: Sixteen Key Tactile.

SIZE: 13-1/8 x 7 x 1-1/4 inches.

WEIGHT: Housing, Transformer, Chess Pieces, and Carrying Case: Six Pounds.

TEST PROGRAM

By means of the science of microprocessors, a miniaturized computer implanted in a solid state 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 ask that you write down the series of moves and forward same to our customer service department.

The following is a test program that indicates correct functioning within the microprocessor unit:

COMPUTER RESPONSE

1. Press RE Key CL I
2. Press FROM E2 TO E4 E7 E5
Because of the random feature of "VOICE" CHESSE CHALLENGER® the computer may respond with a different move (i.e. E7 E6 or C7 C5). Repeat steps 1 and 2 as necessary until the computer responds with E7 E5
3. Press FROM G1 TO F3 B8 C6
4. Press FROM F1 TO C4 F8 C5
5. Press FROM F3 TO H4 D8 H4
6. Press FROM A2 TO A3 Check and Mate



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