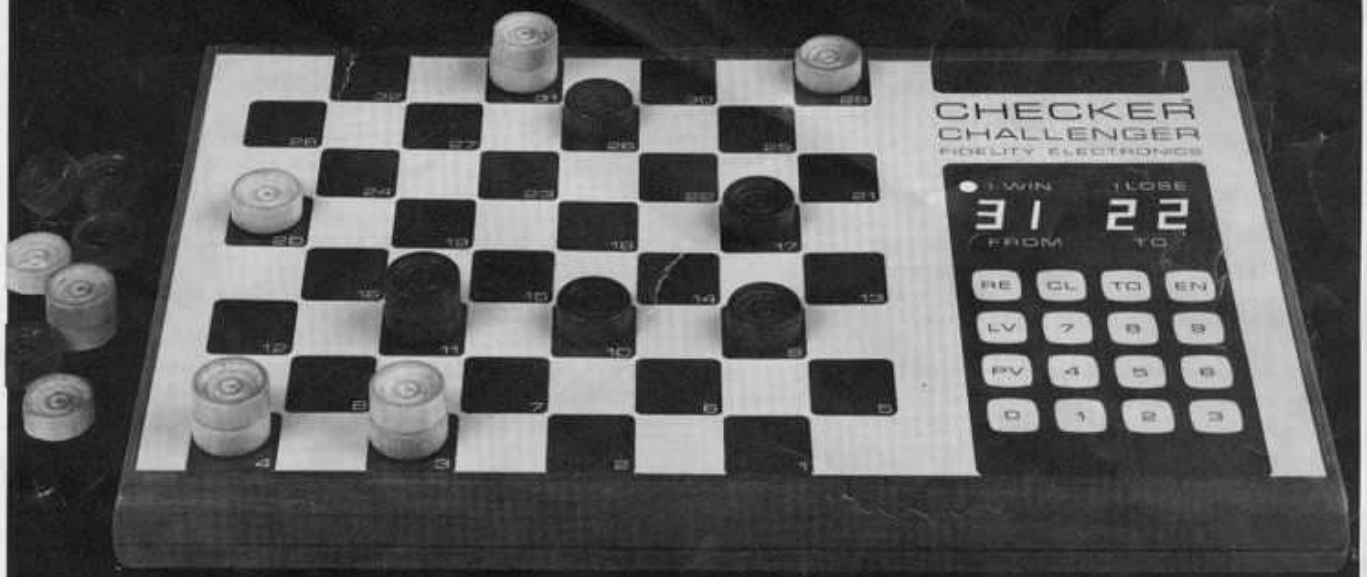
OWNER'S MANUAL
INSTRUCTION BOOKLET

MODEL CR
TWO LEVELS OF PLAY

CHECKER CHALLENGER®



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SELECTING CHECKER LEVEL

Plug in the game and L 1 (Basic Level) will appear in the display windows. Press and release REset.

Should you decide to play CHECKER CHALLENGER's more advanced program L 2, press the LV (Level) key, and the windows will display L 2. By continuing to press the LV key, the windows will either exhibit L 1 or L 2 to indicate the level of difficulty that CHECKER CHALLENGER is ready to play. The LV key can be used at any time either before or during game play to change the level of difficulty.

SELECTING OFFENSE OR DEFENSE

After deciding whether you choose the dark pieces or the light pieces, set up all the checker pieces according to the rules of checkers. Since the dark pieces have the first move, CHECKER CHALLENGER presumes you will choose the dark pieces, and thus you are ready to make the first move and commence playing.

If you choose the light pieces, simply press the ENter key and CHECKER CHALLENGER will exhibit the first move.

THE GAME BOARD

Each of the squares of the checker board is designated in accordance with the international checkers notation by a number in each dark square, which must be conveyed to the computer when checker moves are made.

THE PLAY

Assuming that you have the dark pieces (you have the first move), manually move one of your checker pieces, as if you are playing against a human player. As an example, move your checker piece from square 9 to square 13. You are now ready to inform the computer of your move. Press 9 (which will appear in the FROM window); next press the TO key, and then press 1, 3—to designate 13 (which will appear in the TO window); then press ENter (which effectively registers the move in the computer's memory). The computer now knows the move you have made (FROM 9 TO 13), and it immediately responds with its countermove, which will probably be FROM 22 TO 18. Simply move the computer's checker piece manually as indicated in the display windows (from space 22 to space 18), and you are ready to make your next move.

If you decide not to use the above example as your opening move, so long as you have not pressed ENter, simply press CLear; this erases the FROM 9 TO 13 before it is entered into the computer. You may always erase a move before it is entered into the computer. You cannot erase a move after pressing ENter.

Whenever you enter a move, the computer will usually respond with its best random countermove. The computer will always make a move according to the rules of checkers. If you inadvertently make an illegal move, the computer will stop you by immediately displaying four dashes "----" in its display windows; in which case you need only enter a legal move to continue play.

As in a normal game of checkers, when your checker piece reaches the last row (spaces 29, 30, 31, or 32), it will automatically be converted to a King. Conversely, if the computer's checker piece reaches the last row (spaces 1, 2, 3, or 4), it will automatically convert its checker piece to a King.

You, as the human player, have the objective of taking or blocking every one of the computer's checker pieces. Of course, CHECKER CHALLENGER has this very same objective. If the human player wins, the game will activate the red light next to "I LOSE". If CHECKER CHALLENGER wins, the game will activate the red light next to "I WIN".

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

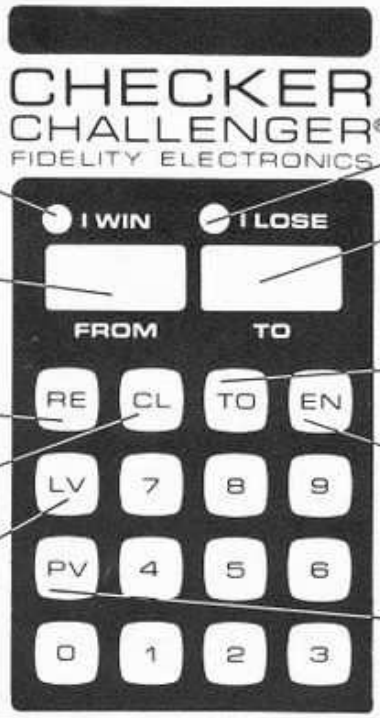
I WIN
Lights when the computer has won the game.

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

RESET
Starts the game—will cancel memory.

CLEAR
To clear an unwanted move before pressing ENter.

LEVEL
To determine level of difficulty (choose from 2 different levels).



I LOSE
Lights when the computer admits defeat.

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

TO
For moving a piece from a position to a new position.

ENTER
To enter your move into the computer.

POSITION VERIFICATION
Displays the board position of each piece.

THE JUMP

One very important rule of checkers is that when a "jump" is available to either player, the "jump" must be taken. Similarly, when a "double" or "triple" jump is available, it must also be taken—although the player can choose which jump situation is more appealing, if more than one jump is available.

If the human player ignores a jump situation and attempts to enter some other move into the computer, the windows will immediately display "JP". This informs the human player that he must enter a move which results in the computer's checker piece being jumped. Similarly, if the human player ignores the continuation of the jump (a double or triple jump), the windows will again display "JP". When this occurs, to continue the game, simply enter the correct jump move into the computer.

A double jump is entered into the computer by pressing the number of the square that your checker piece is moving FROM, then pressing TO and the number of the square to complete the first jump; then press ENter. The new position will automatically transfer to the FROM window. Now press the number of the square to complete the second jump; and finally pressing ENter to register the move in the computer's memory. As an example, to enter a double jump from square 9 to square 18 to square 25, simply press 9 TO 18 and ENter; then press 25 and ENter.

Whenever CHECKER CHALLENGER has a jump possibility, it will take the jump—although it may decide among more than one jump possibility when such a situation arises.

When CHECKER CHALLENGER has a double or triple jump, this is designated by a flashing number in the last two digits of the display window (the TO window). This flashing number instructs the human player to manually make the first jump as indicated, then to press the TO key again, so that the next jump will be reflected in the TO window, and to continue this jumping process until the number in the TO window stops flashing. For example, when the display windows exhibit FROM 26 TO 19, and 19 is flashing in the TO window, press the TO key; 19 will move to the FROM window (FROM 19), and the TO window will display the next jump move (TO 10).

Remember that in the rules of checkers, when a piece becomes a King, the move sequence is at an end, and any further jumping must wait for the player's next move.

SPECIAL FEATURES

COMPUTER PROGRAM LEVELS OF DIFFICULTY

If you are playing at Level 1 (L 1), the computer will always display its countermove almost immediately. If you are playing at Level 2 (L 2), on many moves the windows will exhibit four lower case zeros "oooo" at either the top or bottom of the window display. The zeros will move up and down at varying speeds to indicate that it is thinking. For every move possibility that the computer has, it will display the four zeros "oooo" in either the upper or lower position of the window display. If CHECKER CHALLENGER has only two pieces on the game board, and each of these pieces can move into two empty spaces for a total of four move possibilities, the window will flash the four zeros "oooo" four times before displaying the computer's countermove.

Level 1 (L 1)

CHECKER CHALLENGER is only looking ahead one offensive and one defensive move, and thus may make some tactical errors during the course of game play. For this reason, L 1 is recommended for children and beginners, as it will respond with countermoves almost immediately, and without much

thinking time. While CHECKER CHALLENGER will never make an illegal move, in CL 1 it may allow itself to get into a predicament to afford the beginner a chance of winning.

Level 2 (L 2)
CHECKER CHALLENGER is looking ahead two offensive and two defensive moves, and thus requires an average of 15 seconds to respond with a countermove. Checker Level 2 is recommended for most average adult players, since it will play a good game of checkers.

RANDOM PLAY

One of the most unique features of CHECKER CHALLENGER is that it randomly chooses its moves throughout the game. In certain move positions, the computer may choose among four or five move possibilities, while in other move positions, it will be relegated to only two possibilities, or perhaps only one possibility.

The choice of the particular response move is totally at random, so CHECKER CHALLENGER may repeat the same move again in a similar situation, or it may choose another, depending upon how it responds at the particular moment.

POSITION VERIFICATION

A unique feature of CHECKER CHALLENGER is its ability to inform you, the player, of the exact position of each of its pieces on the board during the course of the game. By pressing the PV (Position Verification) key, the FROM window will display the position of each piece starting from square 1 and continuing through square 32. The first digit of the TO window will display H (Human) for the player's pieces and nothing for the computer's pieces. The final digit of the TO window will display either 1 or 2 to indicate a regular piece (1) or a King (2). As an example, if one of the human player's regular checker pieces is on square one, the first designation after pressing PV will be FROM 1 TO H1.

Each time you press PV, the next occupied square will appear in the windows. You may elect to stop the position verification at any time, continuing the game by making your next move; or you may choose to go through all the positions and continue the verification starting over again from the first occupied square. The computer will not display an empty square. To continue game play, you must first press CL (Clear).

CHECKER CHALLENGER®

THE THINKING MACHINE

A computer is a complex electronic device comprised of numerous components working together to digest the data in its memory banks, and to ultimately reach conclusions as directed by its programmed instructions. Just such a computer enables CHECKER CHALLENGER® to play the game of checkers.

The programmed instructions contain both the rules of checkers and a strategy of play. The computer not only responds to your move, it also investigates all of the possible moves and counter moves, and then selects its best response based on a plus or minus point factor. The "level of play" instructs the computer how many moves and counter moves to examine. In Level 1, CHECKER CHALLENGER® investigates all of its possible moves and all of your responses before making a determination. In Level 2, it investigates twice as many offensive and defensive moves. Amazingly, this game examines 25 board positions, or possible moves, every second. Therefore, if CHECKER CHALLENGER® takes 15 seconds to determine a move, it has already examined 375 possibilities.

A calculator will always give the same response to a given input, whereas a computer thinks of the probabilities before making a decision. Obviously, the efficiency of a computer program is always dependent upon the human programmer and his skill. We at Fidelity Electronics take great pride in the achievements of our engineering research and development team, who has developed the checker program in your CHECKER CHALLENGER® computerized electronic game.

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