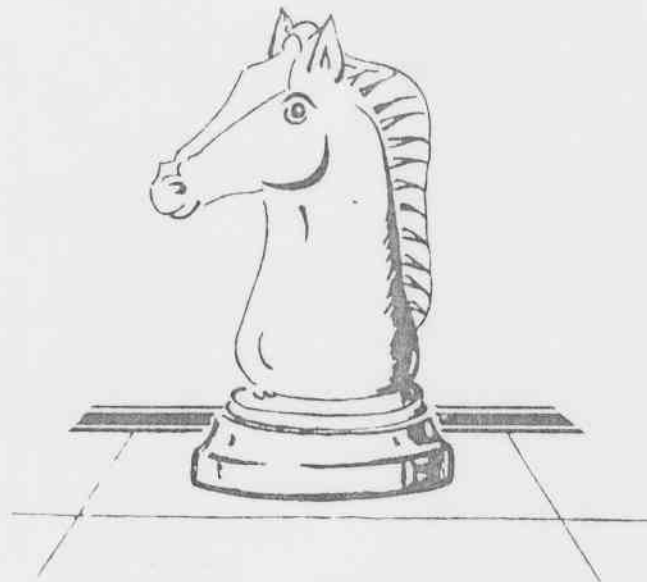


MICROCHESS

A CHESS PLAYING PROGRAM



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Player's Manual

NOTATION

MICROCHESS uses a special octal notation to identify the squares of the chess board. Each square is represented by a two digit number. The first digit specifies the rank(0 to 7) from the computer's end of the board. The second digit specifies the file (0 to 7) from the computer's right (your left). A completely numbered board is shown below:

M I C R O C H E S S

00	01	02	03	04	05	06	07
10	11	12	13	14	15	16	17
20	21	22	23	24	25	26	27
30	31	32	33	34	35	36	37
40	41	42	43	44	45	46	47
50	51	52	53	54	55	56	57
60	61	62	63	64	65	66	67
70	71	72	73	74	75	76	77

C H A L L E N G E R

PROGRAM EXECUTION

The MICROCHESS program is executed from address 0800. After printing the initial sign-on message, MICROCHESS will ask: "DO YOU WANT WHITE? (Y,N)". If you wish to play white, respond with 'Y'. If you wish to play black, respond with 'N'. If you wish MICROCHESS to decide which colour to play, respond with any other character. MICROCHESS will then display the board and prompt with a colon, indicating that the program is ready to receive any operating command.

MICROCHESS COMMANDS

MICROCHESS has seven special commands to which it will respond. Commands may be abbreviated to the first letter of the command word. All commands must be terminated with a carriage return. Typing errors may be corrected at any time by typing a control-X. This will clear the input buffer and allow you to retype the entire line.

COMMAND SUMMARY

COMMAND	FUNCTION
<u>D</u> ISPLAY	Display the board at the terminal.
<u>G</u> O	Make a move from the current position.
<u>S</u> PEED	Change the mode of the computer's play.
<u>R</u> ESIGN	End the game.
<u>E</u> XCHANGE	Exchange sides.
<u>A</u> UTO DISPLAY	Display the board after each move.
<u>N</u> O DISPLAY	Do not display the board automatically.

THE DISPLAY COMMAND

The DISPLAY command instructs the computer to display the current position of the internal chess board at the terminal. MICROCHESS is always illustrated at the top of the display, and you are always at the bottom. Each piece is indicated by a two character mnemonic. The first character shows the colour of the piece. The second character shows the type of piece occupying that square. Black squares which are unoccupied are illustrated by ::. The sample display below shows the board set up to begin a game with MICROCHESS playing white.

```

↕----- MICROCHESS -----↕
| WR WN WB WK WQ WB WR WR |
| | | | | | | | |
| WP WP WP WP WP WP WP WP |
| | | | | | | | |
| | :: | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| BP BP BP BP BP BP BP BP |
| | | | | | | | |
| BR BN BB BK BQ BB BN BR |
↕----- CHALLENGER -----↕
```

THE GO COMMAND

The GO command instructs MICROCHESS to examine the current position of the board, choose the best move available, make that move, and then print out the move that it has made. This command may be entered at any time. The computer will not check to see if you have made any moves since the last computer move, or if it is making the first move with the black men. MICROCHESS trusts you. You must referee the game.

THE SPEED COMMAND

MICROCHESS can play chess at three different levels. The best level is called the NORMAL speed, and requires from 60 to 300 seconds per move for analysis. By eliminating some time consuming portions of the strategic analysis, the speed can be increased. BLITZ mode requires only 20 seconds per move on the average, and SUPERBLITZ will make a move in about 10 seconds. In response to the SPEED command, MICROCHESS will ask: "WHICH MODE? (S,B,N)". Type one of the characters S,B, or N to choose the desired speed. This command may be entered at any time during the game.

SPEED SUMMARY

ENTER	SPEED	TIME PER MOVE
S	SUPERBLITZ	5 TO 10 SECONDS
B	BLITZ	10 TO 30 SECONDS
N	NORMAL	30 TO 300 SECONDS

THE RESIGN COMMAND

The RESIGN command may be entered at any time to end the game. MICROCHESS will display the final position of the board, and then ask if you wish to play again.

THE EXCHANGE COMMAND

The EXCHANGE command enables you to turn the board around at any point during the game. This forces MICROCHESS to play with your pieces in the position that you have left them. You must play with the computer's men. The relative positions of the pieces remain the same, but the numbering of the squares changes because the notation always has its origin at the computer's lower right.

It is possible to have MICROCHESS play a game against itself by entering the EXCHANGE command, then the GO command, then the EXCHANGE command, and so on. Remember that each move printed is being described from opposite ends of the board because of the intervening exchanges. It is best to display the board every two or three moves to be sure that you are following the game correctly.

ENTERING YOUR MOVE

Your move is described to MICROCHESS by specifying the square the piece was moved from, and the square the piece was moved to, using the octal notation described above. For example, with the computer playing white, a KP to KP4 response would be entered at the colon prompt as:

```
:      63-43
```

MICROCHESS will immediately move the appropriate piece internally and begin to consider its response. The GO command is assumed as soon as the move is entered. Note that MICROCHESS carries out no legal validity check on your move. The program will accept a move of any piece on the board to any square on the board. If the square you move the piece to is occupied, the occupying piece will be captured and removed from the board. Therefore, it is very important when entering your move, to take great care not to enter an incorrect square number. As with the commands, typing errors may be corrected by typing a control-x and retyping the entire line.

SPECIAL MOVES

Normally, MICROCHESS begins to consider its response as soon as you have entered your move in the format shown above. If you wish to inhibit this action, in order to make two consecutive moves to set up a test position, or to make an en passant capture as described below, enter an M after the move. For example:

```
:      63-43M  
:
```

MICROCHESS will move the appropriate piece on its internal chess board, and then return to the command mode for further commands or moves. Note once again, that you may move any piece on the board in this manner, This includes the computer's pieces, which you may wish to move in order to set up a special position.

CASTLING

Castling is accomplished by entering 0-0 to castle on the king's side (short), and 0-0-0 to castle on the queen's side (long). The letter O is used, not the numeral 0.

:0-0

PAWN PROMOTION

If you move a pawn to the eighth rank (rank 0 in the octal notation of MICROCHESS), you may promote it to a piece. This may be done by following the move entry by an equal sign and the mnemonic of the piece you wish the pawn promoted to. For example, if you wish to promote the king pawn to a Queen, the following move would be entered:

: 13-03=Q

Because of the internal board representation of MICROCHESS, only one queen is allowed per side at any given time. If you already have a queen, it will be necessary to choose another piece which has already been lost.

EN PASSANT

En passant pawn capture may be accomplished by making two moves with the capturing pawn. The first move is a lateral move to capture the computer's pawn. The second move is forwards to the final square that you are moving your pawn to. For example, a capture of the computer's queen pawn which has just moved from 14 to 34 with your king pawn, now located at 33, is accomplished by first moving 33 to 34 to capture the pawn (using the M suffix to prevent MICROCHESS from moving), and then moving from 34 to 24 to move your pawn to the appropriate final square.

: 33-34M
: 34-24

THE COMPUTER MOVE

MICROCHESS indicates its move using the same notation that you use to enter your moves. To distinguish your moves from those of the computer when going over an old listing, the computer's moves are preceded by the notation: MC : , as shown in the example game illustrated in appendix F. En passant capture is not a part of the MICROCHESS move generation routines. Consequently, the computer will never capture en passant or recognize the danger of you capturing en passant when it formulates its optimum move.

NOTES

Some players may find that their level of play exceeds that of MICROCHESS. In order to make the game more challenging, these players may make the same sacrifice they might make to a weak human player. They can spot the computer a piece by removing it at the beginning of the game, or shortly after the opening play is concluded. This can easily be done by capturing it with one of your own pieces, then returning the piece to its own square. For example:

: 74-73M
: 73-74M

MICROCHESS has been designed for your enjoyment. Have fun! In addition, we are always open to suggestions, ideas, or criticisms. Please let us know if you feel that there is anything we can do to improve our products, or if there are any new products you would like to see us present.