Bedienungsanleitung · Instructions

Mephisto®
monte carlo IV

Hegener + Glaser AG

Dear chess computer enthusiast,

Welcome to the ranks of MEPHISTO chess computer owners! We are sure that your new acquisition will give you a lot of pleasure. Your MEPHISTO is a quality product from a German manufacturer. It is easy to operate and offers a wide range of options. MEPHISTO monte carlo IV is the ideal tournament and training partner for every chessplayer.

In order to enable you to get the most from your computer right from the outset, we are providing this manual with your MEPHISTO monte carlo IV. It is intended to help you become an expert in the handling of your computer within a very short time.

This instruction manual has been written in the form of independent sections which can be read in isolation if necessary. There are references to supplementary material in other sections.

We recommend that you start out by going through the entire manual section by section once. After having thus obtained a general overview of the way your computer is operated, you can make a more detailed study of individual sections whenever you become interested in some particular aspect.

We wish you a lot of fun with your MEPHISTO monte carlo IV !

TABLE OF CONTENTS:

1.GENERAL REMARKS:

MEPHISTO monte carlo IV is a chess computer that is operated in a very easy and logical fashion. The extensive explanations contained in this manual are intend ed to help you familiarize yourself with the handling of your computer and to make the most of its almost unlimited possibilities.

2.INSTALLATION:

Your MEPHISTO can be run both on batteries and with a mains adapter. If you want to play without an adapter, insert four standard AA batteries (not the recharg eable type) into the battery compartment in the bottom of your computer. Please note that spent batteries can pollute the environment and take care to dispose of them in a safe way.

When using a mains adapter, please plug the cable into the jack in the back part of your computer and connect the adapter to the mains socket. Set up the chess men in the basic position. Slide the switch on the left side of your computer towards the front, thereby turning on the power. The colour LED (light–emitting–diode) for White will light up and in the two display windows you will see the letters "–M.C.–" and "–04–" respectively.

If you have placed some pieces too far off centre on their respective squares, the computer will flash one or two LEDs to make you aware of this. Relocate them to the centre of their squares, so the LEDs will go out.

When the power is turned on, your MEPHISTO is always set to the playing level with an average thinking time of 10 seconds per move.

In the following chapter you will be given the necessary information to enable you to play a first game against your MEPHISTO. All additional features will be discussed in chapter 4.

3.MAKING MOVES:

3.1. STARTING A GAME:

Once you have installed your MEPHISTO as descri–bed in chapter 2, it is ready for action and waiting for you to make your first move. Magnetic sensors underneat h the board enable you to execute your moves directly on the wooden chessboard. One word of warning, though: please lift the pieces from the board before movin g them to their destination square; do not slide them over the board!

Let us assume that you want to open your first game with the move E2–E4. Lift the white pawn from the E2 square. The LED on that square will now start flashing and remain so until you have set the pawn down on the E4 square. When you have executed your move, the computer will respond at once, since the move E2–E4 is part of its opening library. Another indication of this is the fact that the letters "theo" (for "theory") are displayed in the lower window. The computer's an swering move will be indicated both in the upper display window and by flashing the LEDs on the corresponding squares. If you want to know whether your MEPHISTO has one or more alternate moves to the one it is indicating stored in its memory, press the number 8 key in the upper row. The move indicated in the upper di splay window and on the board will change to the next alternative. If after pressing the number 8 key there is no change in the move indicated, this means that the computer has no further alternate move in its memory. Now execute the computer's move on the board in the same way as you did your own, once again taking care to lift the piece from the board and put it down on its destination square – don't slide it!

As soon as the computer's move has been executed, the display will switch to chess clock mode, and it will be your move again.

As long as the computer is playing from its opening library and thus making its answering moves in–stantly, no time will be registered on its clock. Once the co mputer goes out of book, the display will switch to chess clock mode, and the move will not be shown until the computer has finished its calcula–tions, whereupo n it will display its choice in the usual fashion in the upper window and by flashing the corresponding LEDs on the board. In addition, the colour LED for the side for which the computer is calculating the next move will be flashing.

3.2 CAPTURES:

First take the piece that you want to capture off the board (the LED on that square will start flashing) and then execute your move. If the computer indicates that it wants to move to a square on which there already stands a piece, this also means that it intends to capture that piece. Here, too, you should always fi rst remove the piece to be captured from the board and then place the piece that is making the capture on that square.

3.3: EN PASSANT:

Execute the pawn move in the normal fashion. The computer will then remind you to remove the captured pawn by flashing the LED on the square that it stands on. If you are not sure whether the rules allow an en passant capture, please refer to the relevant chapter in any chess primer.

3.4 CASTLING:

When castling, you must always move the king before moving the rook, just as it is dictated by the Laws of Chess. Once you have executed the king move, the com puter will remind you of the rook move by flashing the respective LEDs.

In the display window, castling is represented by the respective king move (E1G1, E8G8 etc.).

3.5 PAWN PROMOTION:

If the computer has managed to move one of its pawns to the opponent's back rank, it will indicate the type of piece it wants to promote the pawn to in the low er display window (e.g. "Pr–d" if it wants to promote the pawn to a queen). Please refer to the table of piece symbols to determine which piece is indicated in the display.

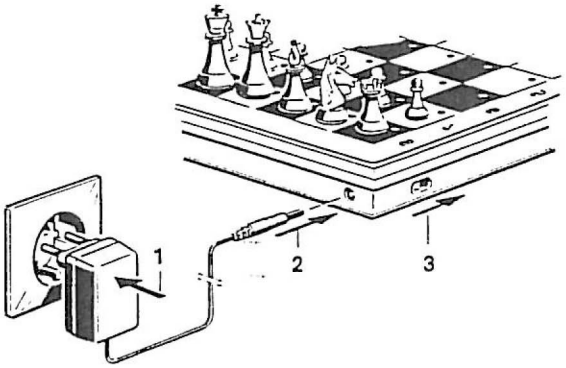
Now exchange the pawn for the desired type of piece.

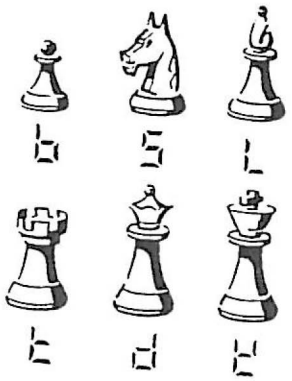
If you have managed to push a pawn to the computer's back rank, after executing your move you will be asked for the type of piece you want to promote it to by the letters "Pr ?" being displayed in the lower window. At the same time, the LEDs above the knight, bishop, rook and queen keys will start flashing.

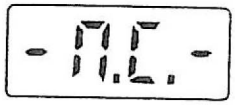
Now press one of those keys to inform the computer of the type of piece you want to promote the pawn to. Exchange the pawn for the desired piece on the board.

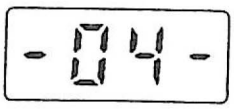
3.6. ILLEGAL MOVES:

If you happen to have made a move that goes against the rules of chess, the computer will sound a tone signal to call your attention to this. In addition, the square LEDs corresponding to the move will keep flashing. Correct your move by first replacing the piece on its original square and then making a legal move.









3.7 CHECK, CHECKMATE:

If the computer checks your king, it will announce this by flashing the LEV LED in red.

If the checking move is also checkmate, you will hear a tone signal and the letters "matt" will be displayed in the lower window.

3.8 MATE ANNOUNCEMENT:

If MEPHISTO discovers a forced mate in its calculations, it will announce this in the lower display window when making its move, e.g. "M 4" (mate in 4). If it finds a sequence of moves that allows you to checkmate the computer by force, it will likewise announce the mate, but with a minus sign in front, e.g. "M -4".

3.9 STALEMATE, DRAW:

If the computer has no legal move because you have stalemated it, it will sound a tone signal and in the upper window the letters "patt" (for "stalemate") will be displayed instead of a move.

Likewise, a tone signal will be sounded to announce a draw and the type of draw being claimed will be displayed. The following displays are possible:

"re 3" – draw by threefold repetition of position
"reun" – draw by insufficient material for mating
"re50" – draw by the 50-move rule

3.10 NEW GAME:

If you have finished a game and want to start a new one, press the RES key (for "reset"). You will hear a tone signal, and as soon as you have set up the chess men in the starting position, your MEPHISTO will be waiting for you to make your first move.

So far, you have been provided with the information necessary to play a game against the computer. Obviously, your MEPHISTO can do a lot more than just accept and play moves. These manifold and in some cases unique features will be described in detail in the following chapter.

4. USER INTERFACE:

Your MEPHISTO is operated by means of two rows of 8 keys each. The keys in the upper row serve to enter a position and to access information. The keys in the lower row fall into two categories: three input keys (CL, ENT and RES) and 5 function keys (BOOK, POS, MEM, INFO, LEV). Each of the function keys corresponds to a specific mode of operation which can be selected by pressing the respective key. The following modes are available:

Book mode (the BOOK key)

Position mode (the POS key)

Memory mode (the MEM key)

Info mode (the INFO key)

Level mode (the LEV key)

Once you have selected a certain mode, the LED above the corresponding key will light up to indicate this. Modes are always left by pressing the CL key.

The following sections will familiarize you with the options and the items of information available in the different modes.

4.1 BOOK MODE:

By pressing the BOOK key after turning on the computer, you can enter Book Mode (the corresponding LED will light up) and will then be able to investigate your MEPHISTO's opening library. In the upper display window you will see the letters "theo" (for theory). In the lower window the move "E2E4" will be indicated, a move for the side that is to move.

If you want to know whether your MEPHISTO has any other opening moves stored in its "book", press the number 8 key in the upper row. The display will change to D2D4.

Every time you press the number 8 key, the display will change to a new opening move. When there are no more stored moves, the computer will go back to the first move, E2E4. You may have noticed that in some cases the computer displays the move with dots between the letters, e.g. "F.2.F.4". Your MEPHISTO's opening library makes a distinction between active (no dots) and passive (dots between letters) opening moves. Active opening moves are those that the program will actually play when it is to move. Passive opening moves are moves that MEPHISTO knows but would not play of its own accord, as the resulting positions are not ideally suited to the playing style of its own chess program.

You can leave Book Mode by pressing the CL key, whereupon the display will switch back to chess clock mode. You can enter Book Mode at any time during the open ing phase, even when there have already been a number of moves played, and you can use the moves you find in the computer's book as suggestions for your own pl ay in the opening.

The more moves have already been played, the fewer alternate moves there are stored in memory. If after pressing the number 8 key the display does not change, you will know that there is only one continuation available.

If the computer has run out of stored moves, it will display "no". Press CL (which will take you back to chess clock mode) and go on playing.

4.2 POSITION MODE:

In Position Mode (press the POS key), you can verify or change the position stored in the computer's memory, e.g. for the purpose of entering chess problems.

Position Mode can be entered only when it is your turn to move.

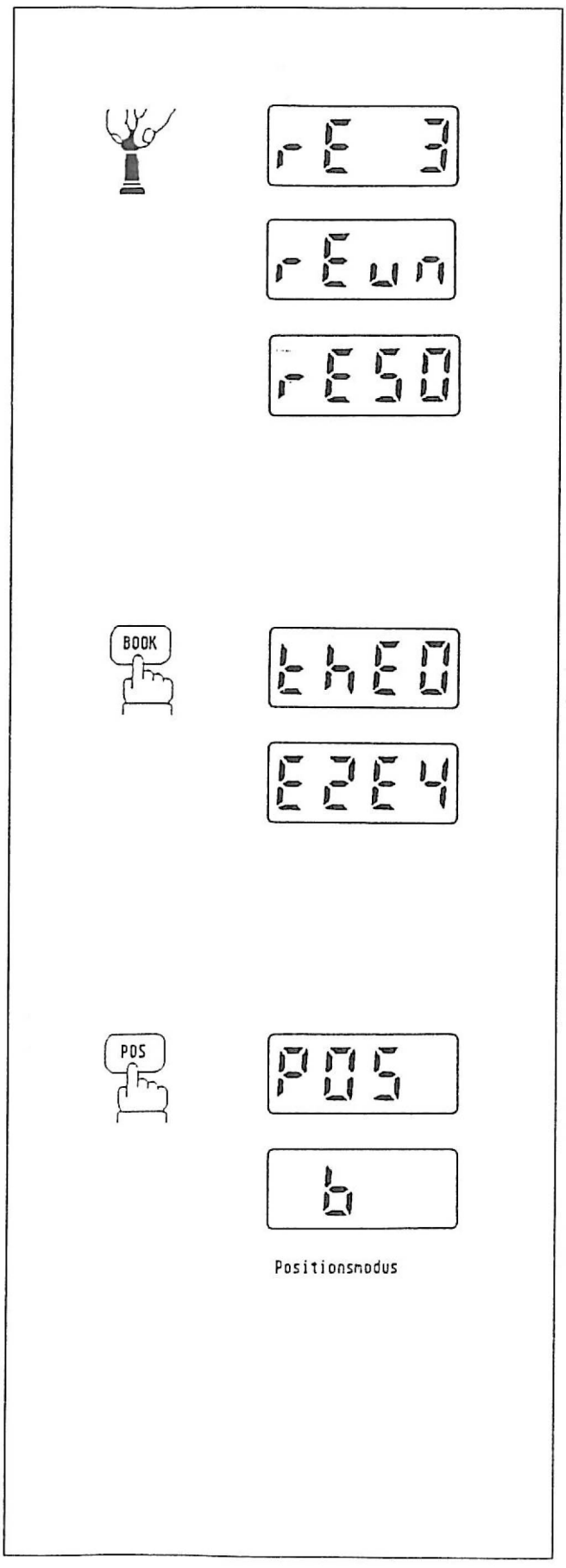
4.2.1 POSITION VERIFICATION:

If you want to check which pieces are placed on which squares (e.g. after setting up a problem position or if some pieces have been dislodged and you are no lo nger sure of their correct placing) you can carry out a position verification.

First enter Position Mode (by pressing the POS key). In the upper display window you will see the letters "POS", in the lower window the symbol for a white paw n. The LED above the pawn key will light up and on the board the LEDs on all squares with white pawns on them will start flashing.

The piece symbols that are printed underneath the keys in the upper row indicate which key you have to press to check the position of the respective piece. Pre ssing a piece key twice will switch to the display of the black pieces of that type (indicated by a minus sign in front of the piece symbol in the display wind ow). Pressing the same key once more will switch back to the white pieces etc.

When leaving Position Mode by pressing the CL key after verifying a position, you should bear in mind that the colour of the last piece checked determines whic h side will be to move after leaving Position



Positionsmodus

Mode. If after verifying a position you want it to be White's turn to move, the last piece checked just before le aving Position Mode must be a white piece, or you must at least have switched to the display of some type of white piece.

4.2.2 CHANGING A POSITION:

In order to change a position, first enter Position Mode (by pressing the POS key). In the upper display window, you will see the letters "POS", in the lower w indow the symbol for a white pawn. The LED above the pawn key will light up and on the board the LEDs of all squares with white pawns on them will start flashing.

In order to tell the computer that you want to change the position rather than only verify it, press the ENT key. The LED above the pawn key will start flashing.

Now you can remove white pawns from the board, relocate them to different squares or, if the position allows, add new ones.

The piece symbols that are printed underneath the keys in the upper row will show you which key to use in order to switch to a particular type of piece. Pressing a piece key twice will switch to displaying the black pieces of that type. Pressing the same key again will go back to the white pieces etc.

When leaving Position Mode by pressing the CL key after changing a position, you should bear in mind that the colour of the last piece changed or added determi nes which side will be to move after leaving Position Mode. If after changing a position you want it to be White's turn to move, the last piece changed or ente red just before leaving Position Mode must be a white piece, or you must at least have switched to the display of some type of white piece.

If at the moment of leaving Position Mode the position on the board should violate the rules of chess (e.g. because the king is in check and could be captured on the next move, or there are 9 pawns on the board etc.), then your MEPHISTO will draw your attention to this by sounding a tone signal and displaying "err" (for "error") in the lower window. If possible, the piece that is causing the error condition will also be signalled by a flashing square LED.

Press CL again and then ENT and correct the position on the board. Once you have done this, you can leave Position Mode by pressing CL and go on playing agains t the computer from the position then on the board and with the colour that is to move.

4.2.3 ENTERING A POSITION

If you want to enter a completely new position, e.g. for the purpose of analysis or for solving a chess problem, first remove all pieces from the board and pla ce them next to your computer.

Then press POS and ENT, just as in the case of changing a position. In the upper display window you will see the letters "POS", in the lower one the symbol for a white pawn will be displayed. The LED above the pawn key will start flashing.

Now place white pawns on those squares of the chessboard where you want them to stand. The LEDs on the squares with white pawns on them will go on flashing unt il you change to the display of a different type of piece. The piece symbols that are printed underneath the keys in the upper row will show you which key to u se in order to switch to a particular type of piece.

Pressing a piece key twice will allow you to enter the black pieces of that type. Pressing the same key again will switch back to the white pieces etc.

Place one type of piece after the other on the chessboard until you have reached the desired position. When leaving Position Mode by pressing the CL key after setting up a position, you should bear in mind that the colour of the last piece entered determines which side will be to move after leaving Position Mode. If after setting up a position you want it to be White's turn to move, the last piece entered just before leaving Position Mode must be a white piece, or you must at least have switched to the display of some type of white piece.

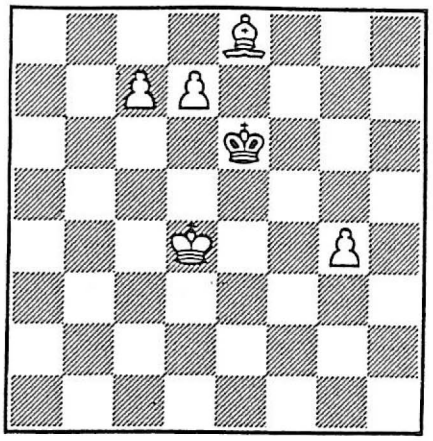
If at the moment of leaving Position Mode the position on the board should violate the rules of chess (e.g. if the king is in check and could be captured on th e next move, or there are 9 pawns on the board etc.), then MEPHISTO will draw your attention to this by sounding a tone signal and displaying "err" (for "error ") in the lower window. If possible, the piece that is causing the error condition will also be signalled by a flashing square LED.

Press CL again and then ENT and correct the position on the board. Once you have done this, you can leave Position Mode by pressing CL and either start the com puter analyzing the position or search- ing for a mate (see section 4.5, Level Mode) from the position then on the board and with the colour that is to move, or else start playing against the computer yourself.

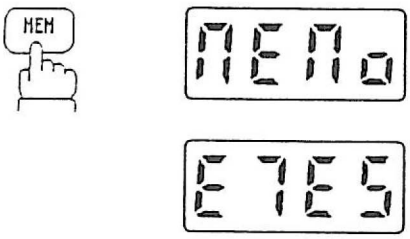
4.3 MEMORY MODE:

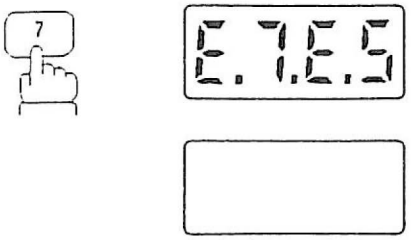
By switching to Memory Mode (press the MEM key, the corresponding LED will light up), you can either enter moves and series of moves into the computer's intern al memory or else retrieve them from storage.

Memory Mode can be selected only when it is your turn to move.



Mate in 3 Moves





4.3.1 ENTERING A SERIES OF MOVES, REFEREE OPTION

If you want to enter individual moves or a series of moves from the starting position or any other position on the board, press the MEM key to enter Memory Mode.

In the upper display window you will see the letters "memo". In the lower window, either the letters "sta" (for "start") or the last move made will be displaye d. Now execute the desired moves on the chessboard. None of these moves will start the computer calculating a reply. Once you have reached the desired position , you can leave Memory Mode by pressing CL and continue playing from the position then on the board and with the colour that is to move.

In Memory Mode, you can also play a complete game against a human opponent. In this case, the computer only acts as referee and checks whether the moves input by either side conform to the rules of chess. Illegal moves will be rejected by sounding a tone signal. Replace the piece last moved to its original square and make a legal move.

4.3.2 TAKING BACK MOVES OR A SERIES OF MOVES

MEPHISTO's internal memory allows you to play the game in progress backward either in its entirety or for a few moves only. Press the MEM key while it is your turn to move. In the upper display window you will see the letters "memo", in the lower one the last move played. Now press the number 7 key in the upper row. The last move played now switches from the lower to the upper display window. That it can now be taken back is indicated by the dots that appear between the le tters; in addition, the respec- tive square LEDs will start flashing. Now carry out this move on the board in reverse. The square LEDs will go out, and in the up per display window you will again see the letters "memo", while in the lower one the last move played before the one you just took

back will be displayed. Pres s the number 7 key in the upper row again. The last move played will switch to the upper display and can again be played in reverse on the chessboard. You may go on doing this until all the moves of the game have been retrieved from the computer's internal memory. Then the lower display window will show the letters " sta" (for "start") rather than the last move played.

When taking back a capturing move, the square LED of the captured piece will go on flashing so as to remind you of the necessity of replacing the piece that wa s captured. To help you determine which type of piece needs to be replaced, the correspond–ing LED over the piece keys will start flashing. The piece to be repl aced is of the type that is indicated by the symbol printed underneath that key. After replacing the piece, the LED above MEM will light up again.

Whenever you leave Memory Mode by pressing CL, you can go on playing against the computer with the colour that is to move.

4.3.3 PLAYING FORWARD:

MEPHISTO's internal memory allows you to do more than just take back moves as described in the last section. Moves that you have taken back in this fashion may also be played forward. If you want to do so, then after taking back a number of moves you should press the number 8 key in the upper row instead of leaving M emory Mode by pressing CL. Now the last move taken back will be displayed both in the upper display window and on the board. Execute this move on the board. Th e square LEDs will go out and in the upper display window you will again see the letters "memo", while the lower window will display the next move in sequence. Press the number 8 key in the upper row again. The next move switches to the upper display window and can be executed on the board. You can go on doing this u ntil all the moves in the computer's internal memory have been played forward. Then in the lower window the letters "end" will be displayed instead of the next move.

Whenever you decide to leave Memory Mode by pressing ENT, you can go on playing against the computer from the position then on the board and with the colour th at is to move.

4.3.4 REPLAYING A GAME:

MEPHISTO's internal memory allows you to go back to the beginning either during or after a game.

Press the MEM key while it is your turn to move. Press ENT to confirm that you want to go back to the start of the game and replace the chessmen in the startin g position. Once you have done this, the display in the upper window will change to "memo", while the lower window will display "sta".

Now you can step forward through the game by repeatedly pressing the number 8 key as described in the preceding section. Whenever you leave Memory Mode by pres sing CL, you can go on playing against the computer from the position then on the board and with the colour that is to move.

4.3.5 STORING A POSITION:

If you want to interrupt a game and continue it at some later date or in a different place, press the MEM key (to enter Memory Mode) before switching the compu ter off. Then slide the ON/OFF key to the OFF position.

This will store the current position in permanent memory, so you will be able to continue the game from that position after switching the computer back on.

If some pieces should happen to have been dis–lodged in the meantime or if you are not sure about the placing of the pieces, then you can do a position verifica tion as described in section 4.2.1

4.4 INFORMATION MODE:

By entering Information Mode (press the INFO key, the corresponding LED will light up), you can make information about the computer's calculating process appea r in the display windows.

In contrast to all other modes, Information Mode can be entered even when the computer is analyzing. All other modes can only be entered while it is your turn to move.

4.4.1 MAIN LINE:

If the computer has left its opening library and has already calculated a few moves or is in the process of doing so, then pressing the INFO key will cause the first two half moves of its anticipated main line to be shown in the display windows. If you want to see more moves of the main line, you can do so by repeate dly pressing the number 8 key in the upper

row. A maximum of 6 half moves may be displayed in this fashion. The number 7 key allows you to step back through th ese moves right to the beginning of the main line. While it is your turn to move, you can use the second half move of the main line as a hint what to play.

You can leave Information Mode at any time by pressing CL, which will switch the display back to chess clock mode.

4.4.2 INFO 1:

If the computer has already calculated some moves or is in the process of doing so, pressing the number 1 key will cause the search depth to be displayed in th e upper window and the position evaluation in the lower one. Information Mode is entered automatically when pressing the number 1 key (the corresponding LED wi ll light up).

The position evaluation is given in pawn units. A minus sign (–) in front of it means that MEPHISTO thinks it is at a disadvantage. If, for instance, after pre ssing the number 1 key you see the number –1.56 in the lower display window, this means that MEPHISTO thinks it is 1.56 pawn units behind. An evaluation of –9. 99 means that you can stop playing and consider yourself the winner.

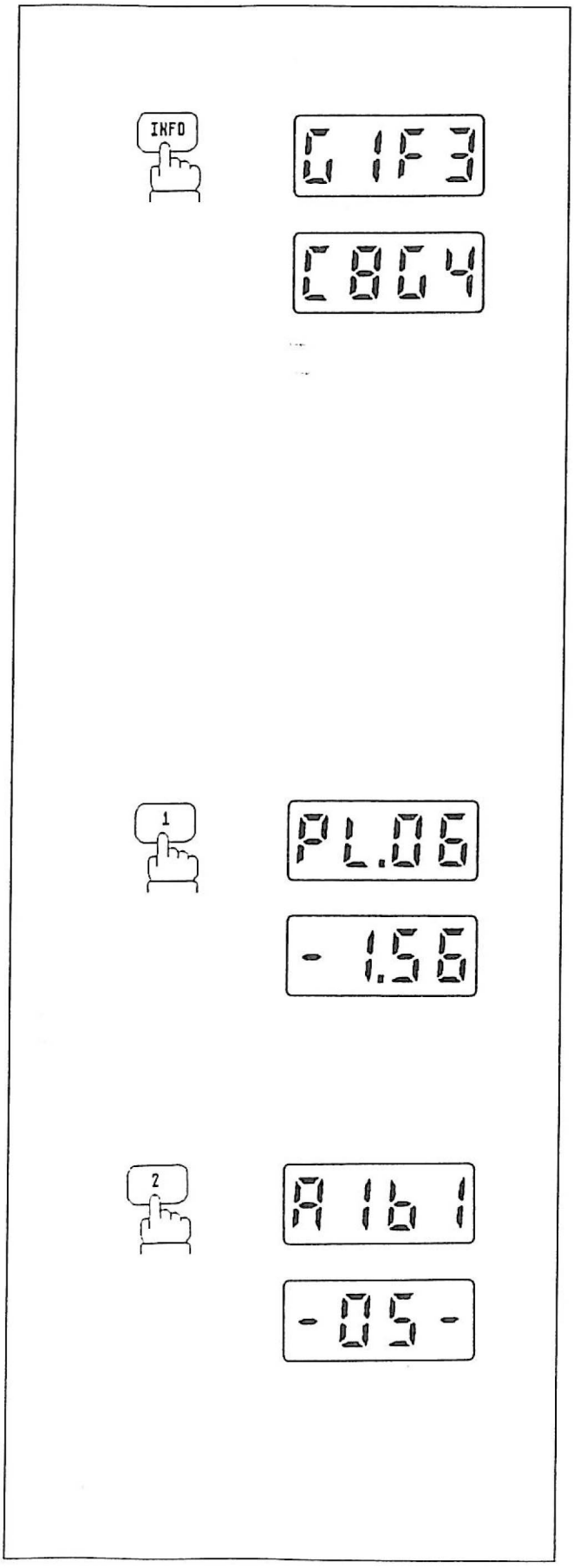
On the other hand, an evaluation of 9.99 means that you should acknowledge MEPHISTO's superiority and resign in your turn.

You can always leave Information Mode by pressing CL, which will switch the display back to chess clock mode.

4.4.3 INFO 2:

If the computer has already calculated some moves or is in the process of doing so, pressing the number 2 key will cause the move it is currently considering t o be displayed in the upper window and a number indicating which branch of the current half move this is in the lower one. Information Mode is entered automati cally when pressing the number 2 key (the corresponding LED will light up).

You can always leave Information Mode by pressing CL, which will switch the display back to chess clock mode.



4.4.4 INFO 3:

If the computer has already calculated some moves or is in the process of doing so, pressing the number 3 key will cause the number of the current move to be d isplayed in the upper window and the game phase in the lower one. "open" stands for the opening, "midg" for the middlegame and "endg" for the endgame. Informat ion Mode is entered auto-matically when pressing the number 3 key.

You can always leave Information Mode by pressing CL, which will switch the display back to chess clock mode.

4.4.5 INFO 4 CHESS CLOCK:

Your MEPHISTO's chess clock can provide three different varieties of information:

the time taken for the current move the time left until the end of the game (countdown mode) the total time taken so far

Depending on the playing level the computer is set to, pressing CL will result in one of these three items of information being displayed.

Beyond this, it is possible to access any of these different items of information separately. Pressing the number 4 key in the upper row will show you the time taken for the current move. In the upper window you will always see the computer's time, in the lower one your own. Information Mode is entered automatically when pressing the number 4 key. You can leave Information Mode again by pressing CL.

4.4.6 INFO 5 CHESS CLOCK:

Pressing the number 5 key in the upper row will cause the time left until time control to be displayed (countdown mode). The computer's time is always displaye d in the upper window, your time in the lower one. Information Mode is entered automatically when pressing the number 5 key. You can leave Information Mode aga in by pressing CL.

4.4.7 INFO 6 CHESS CLOCK:

Pressing the number 6 key in the upper row will cause the total time taken so far to be displayed. The computer's time is always displayed in the upper window, your time in the lower one. Information Mode is entered automatically when pressing the number 6 key. You can leave Information Mode again by pressing CL.

4.4.8 INFO GENERAL REMARKS:

If you want to access different items of information in sequence, e.g. first the position evaluation, then the move counter and then the total time taken so fa r, you do not have to leave Information Mode in between; simply press the number 1, 3 and 6 keys one after the other.

4.5 LEVEL MODE:

By entering Level Mode (press the LEV key, the corresponding LED will light up) you can select playing styles and time limits as well as the special options of your computer.

Level Mode can be entered only when it is your turn to move.

4.5.1 GENERAL REMARKS:

After turning on the computer or after pressing RES (to start a new game), the computer is automatically set to the default time control of 10 seconds per move .

If you want to play on a level other than the default setting, your MEPHISTO offers you a choice between the following playing levels:

Normal levels

Tournament levels

Blitz (quickplay) levels

Blitz levels with handicap

Fixed depth levels

Mate levels

After pressing the LEV key (to enter Level Mode), the square LED corresponding to the current playing level will light up and information about this level will be given in the display windows. In order to change levels, all you have to do is place a piece on the square corresponding to the desired level. If there is already a piece on that square, then simply lift this piece briefly from the board and replace it. To find out which square corresponds to which playing level, please refer to the following sections. A new square LED will light up to indicate the new setting, and the display will change accordingly. You can leave Lev el Mode as usual by pressing CL.

4.5.2 NORMAL LEVELS (Squares A1 to A8):

On these levels, the computer is set to an average response time per move. Naturally, the computer may take a little more or less time over a particular move, but on the whole it will stick to the average time indicated. When the computer is set to one of the normal levels, you will see the letters "time" in the uppe r display window and the average thinking time per move in the lower one. The following settings are available on the A–file:

A1 = about 3 seconds
A2 = about 10 seconds
A3 = about 30 seconds
A4 = about 1 minute
A5 = about 2 minutes
A6 = about 3 minutes
A7 = about 6 minutes
A8 = analysis

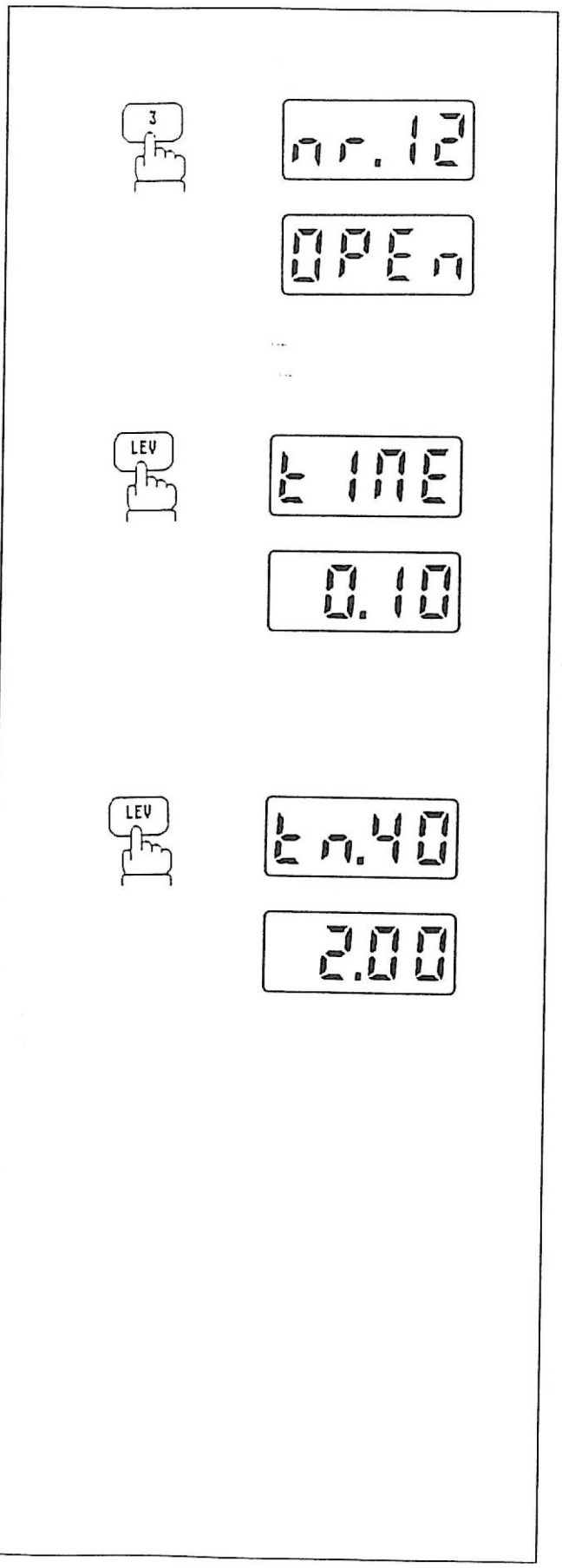
When set to the analysis level (A8), the computer will go on calculating until its internal memory is full (which will normally take several days) or else unti l it is interrupted by pressing the ENT key.

4.5.3 TOURNAMENT LEVELS (Squares B1 to B8):

On these levels, the computer is set to a specific number of moves to be made in a specific amount of time.

When the computer is set to one of the tournament levels, you will see the letters "tn." and the number of moves until time control in the upper display window and the time limit in the lower one. For example, "tn.40" " 2.00" means that 40 moves have to be made in two hours. The following settings are available on th e B–file:

B1 = 40 moves in 1 hour
B2 = 40 moves in 2 hours
B3 = 40 moves in 2,5 hours
B4 = 50 moves in 2 hours
B5 = 50 moves in 2,5 hours
B6 = 60 moves in 1 hour
B7 = 60 moves in 2 hours
b8 = 60 moves in 2,5 hours



If the required number of moves is not played within the stipulated time, the computer will draw your attention to this by sounding a tone signal and displaying "time" in the lower window.

4.5.4 BLITZ LEVELS (Squares C1 to C8)

In blitz or quickplay chess, the whole game must be played within a given amount of time. When the computer is set to one of the blitz levels, you will see the letters "blit" in the upper window and the time limit for both sides in the lower one. For example, "blit" "05.05" means five minutes for the entire game for both sides. The following settings are available on the C–file:

C1 = 5 minutes C5 = 20 minutes

C2 = 7 minutes C6 = 30 minutes

C3 = 10 minutes C7 = 45 minutes

C4 = 15 minutes C8 = 1 hour

4.5.5 BLITZ LEVELS WITH HANDICAP (Squares D1 to D8):

On these levels, the time limits for the entire game can be set differently for the computer and the human player. When the computer is set to one of the handi cap levels, you will see "blit" in the upper display window and the time limits for the two sides in the lower one. For example, "blit" "02.05" means that the computer has 2 minutes for the entire game while the human player has 5. The following settings are available on the D–file:

D1 = Computer: 2 minutes Player: 5 minutes

D2 = Computer: 2 minutes Player: 10 minutes

D3 = Computer: 5 minutes Player: 10 minutes

D4 = Computer: 5 minutes Player: 15 minutes

D5 = Computer: 5 minutes Player: 30 minutes

D6 = Computer: 10 minutes Player: 15 minutes

D7 = Computer: 10 minutes Player: 30 minutes

D8 = Computer: 15 minutes Player: 30 minutes

4.5.6 FIXED DEPTH LEVELS (Squares E1 to E8):

On these levels, the computer always calculates to a fixed search depth of half moves or "plies".

When the computer is set to one of the fixed depth levels, you will see "ply" in the upper display window and the letters "LE." together with the number of pli es in the lower one. The following settings are available on the E–file:

E1 = 1 ply E5 = 5 ply

E2 = 2 ply E6 = 6 ply

E3 = 3 ply E7 = 7 ply

E4 = 4 ply E8 = 8 ply

4.5.7 MATE LEVELS (Squares F1 to F8):

The mate levels are specifically intended for the solving of chess problems. On these levels, the computer does not look for ordinary moves but only for a forc ed mate.

When the computer is set to one of the mate levels, you will see the letters "matt" in the upper display window and the letters "in" together with the number o f moves to mate in the lower one. The following settings are available on the F–file:

F1 = Mate in 1 F5 = Mate in 5

F2 = Mate in 2 F6 = Mate in 6

F3 = Mate in 3 F7 = Mate in 7

F4 = Mate in 4 F8 = Mate in 8

4.5.8 SPECIAL OPTIONS (Squares H1 to H8):

Apart from setting the playing level, Level Mode also enables you to turn 8 special options on or off. The following options are available:

AUTOMATIC INFORMATION ON/OFF

TURN BOARD ON/OFF

TONE SIGNAL ON/OFF

OPENING BOOK ON/OFF

BEST MOVE ON/OFF

PERMANENT BRAIN ON/OFF

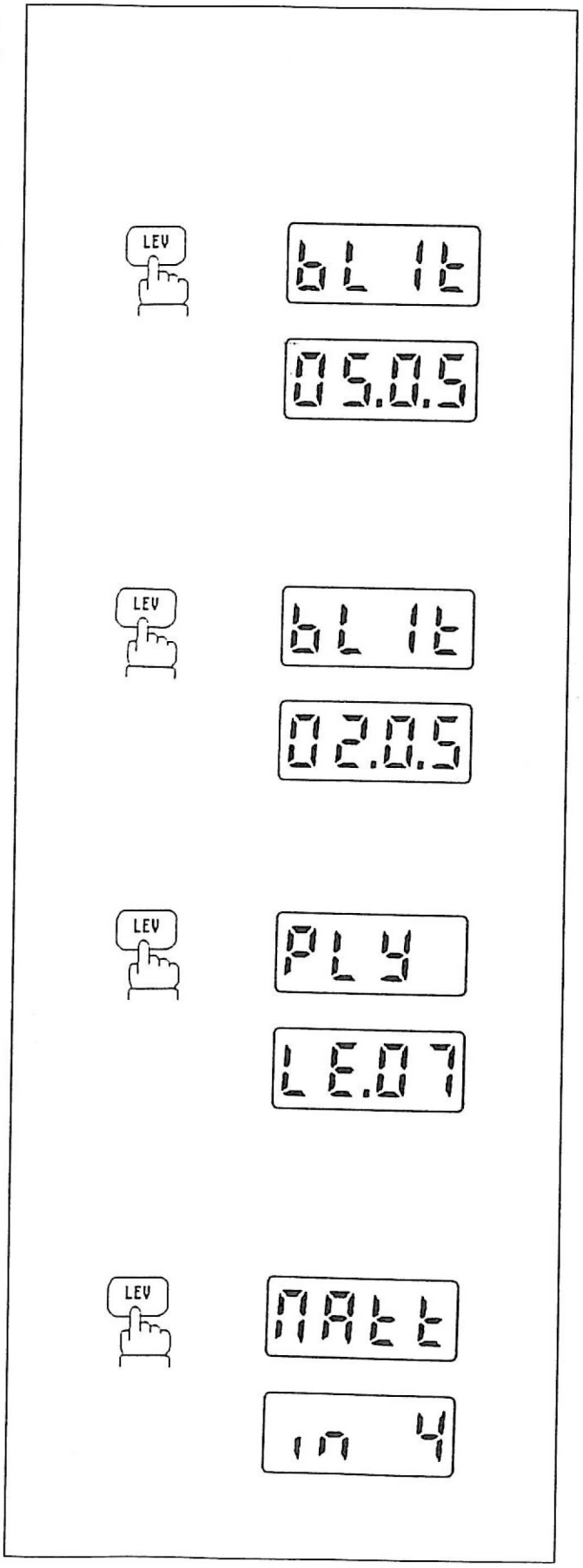
CORRESPONDENCE CHESS ON/OFF

BRUTE FORCE ON/OFF

These special options are not in themselves playing levels. They are options that can be added to the desired playing level.

In order to turn one of these options on or off, all you have to do is place a piece on the square corresponding to the desired option. If there is already a p iece on that square, simply lift the piece from the board briefly and replace it. A new square LED will light up to indicate the selected option. The display w ill inform you whether the option is on or off at the moment. To change the setting of the selected option, lift the piece from its square again and replace it . The display in the lower window will now change from "on" to "off" or vice versa.

You can find out which square corresponds to which special option by referring to the following sections. Level Mode can be left as usual by pressing CL.



4.5.9 AUTOMATIC INFORMATION (Square H1):

When the Automatic Information option is turned on ("info" "on"), the computer will display the following items of information in the lower window while it is caclulating:

The best move calculated so far The best reply to the above The search depth The number of the branch being investigated The position evaluation

The display changes at two-second intervals. This option cannot be used with blitz levels.

4.5.10 TURN BOARD (Square H2):

With this option ("turn" "on") you can inform the computer that you want to play against it with the black pieces from the bottom of the board. When using this option, please bear in mind that the numbers and letters printed along the edges of the board and designating the ranks and files are no longer valid.

4.5.11 TONE SIGNAL (Square H3):

With this option ("tone" "off") you can turn off the tone signal of your computer. All input and output is then carried out without a tone signal being sounded

4.5.12 OPENING BOOK (Square H4):

With this option ("theo" "off") you can turn off the computer's opening library. The chess program then has no access to the opening moves stored in its memory and will start calculating moves on its own from move 1.

4.5.13 BEST MOVE (Square H5):

Normally, MEPHISTO will always play the best move it has found in the course of its calculations. By turning this option off ("best" "off"), you can cause the program to choose one of several moves of approximately equal strength at random. This will make MEPHISTO play a more varied game but slightly reduce its overall playing strength.

4.5.14 PERMANENT BRAIN (Square H6):

You may already know that a computer calculates not only when it is to move but also uses the opponent's thinking time to go on analyzing. This is referred to as "permanent brain" in computer terminology. If you turn this option off ("-Pb-" "off"), your computer's overall playing strength will be slightly reduced.

4.5.15 CORRESPONDENCE CHESS (Square H7):

This option was developed specifically to suit the requirements of the correspondence chess player. When it is turned on ("-CS-" "on"), you can tell the comput er which moves to consider in its analysis and which moves to exclude. Using this option makes sense only in conjunction with the analysis level A8.

Let us assume that in one of your postal games you have reached a position where in your opinion there are only three reasonable continuations to be considered , and you want the computer to find out which of the three is the best.

1) Enter the position in question either by setting it up in Position Mode or by playing up to it in Memory Mode.

2) Set the computer to the analysis level A8 and in addition turn on the correspondence chess option ("-CS-" "on").

3) Leave Level Mode by pressing CL and start the computer calculating by pressing ENT.

4) Now you have to inform your MEPHISTO which moves of all those possible in the current position you want it to analyze. This is done by playing these moves o n the board and taking them back while the computer is thinking. As soon as the program has registered a move, the display will switch from chess clock mode to showing the coordinates of the move.

MEPHISTO will now consider only the moves entered in the above way in its calculations. All other moves will seem practically non-existent to it. This has the great advantage that it can dispense with the calculation and evaluation of millions of positions, which saves a lot of time. If the computer has only two, thr ee or four moves to choose from rather than the 40 or even 50 that may be possible in a given position, it will be markedly faster in its analysis and can ther efore calculate to greater depths and with greater accuracy.

If after some hours or even days you want to learn the result of the computer's analysis, enter Information Mode to see the main line, search depth and position evaluation of the move that the computer considers best among those that were preselected by you.

If you let the computer continue with its analysis, you can also get a limited amount of information about the other preselected moves in the following way: Play one of these moves on the board, and the display will switch to showing the first two halfmoves of the line of play following that particular move.

When you feel you have collected all the information you need, you can stop your MEPHISTO's analysis by pressing ENT.

4.5.16 BRUTE FORCE (Square H8):

Your MEPHISTO's chess program normally analyzes all possible moves to a certain search depth and then (selectively) investigates a limited number of promising continuations even deeper. If this option is turned on ("-bf-" "on") the selective part of the computer's analysis is not carried out. Using this so-called "brute force" approach will make the program stronger tactically but also slow it down considerably.

4.6 THE INPUT KEYS:

4.6.1 THE ENT KEY:

Pressing the ENT key will either start the computer calculating a move (e.g. if you want to change sides or make the computer calculate the next move for you) or interrupt any computer analysis in progress at the time.

4.6.2 THE CL KEY:

Pressing the CL key always leaves the current mode and switches to chess clock mode.

4.6.3 THE RES KEY:

Pressing the RES key causes a reset (new game) and returns all settings (e.g. tournament level, tone signal off etc.) to their default values. Set the chessmen up in the starting position, and MEPHISTO will be expecting your first move.

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