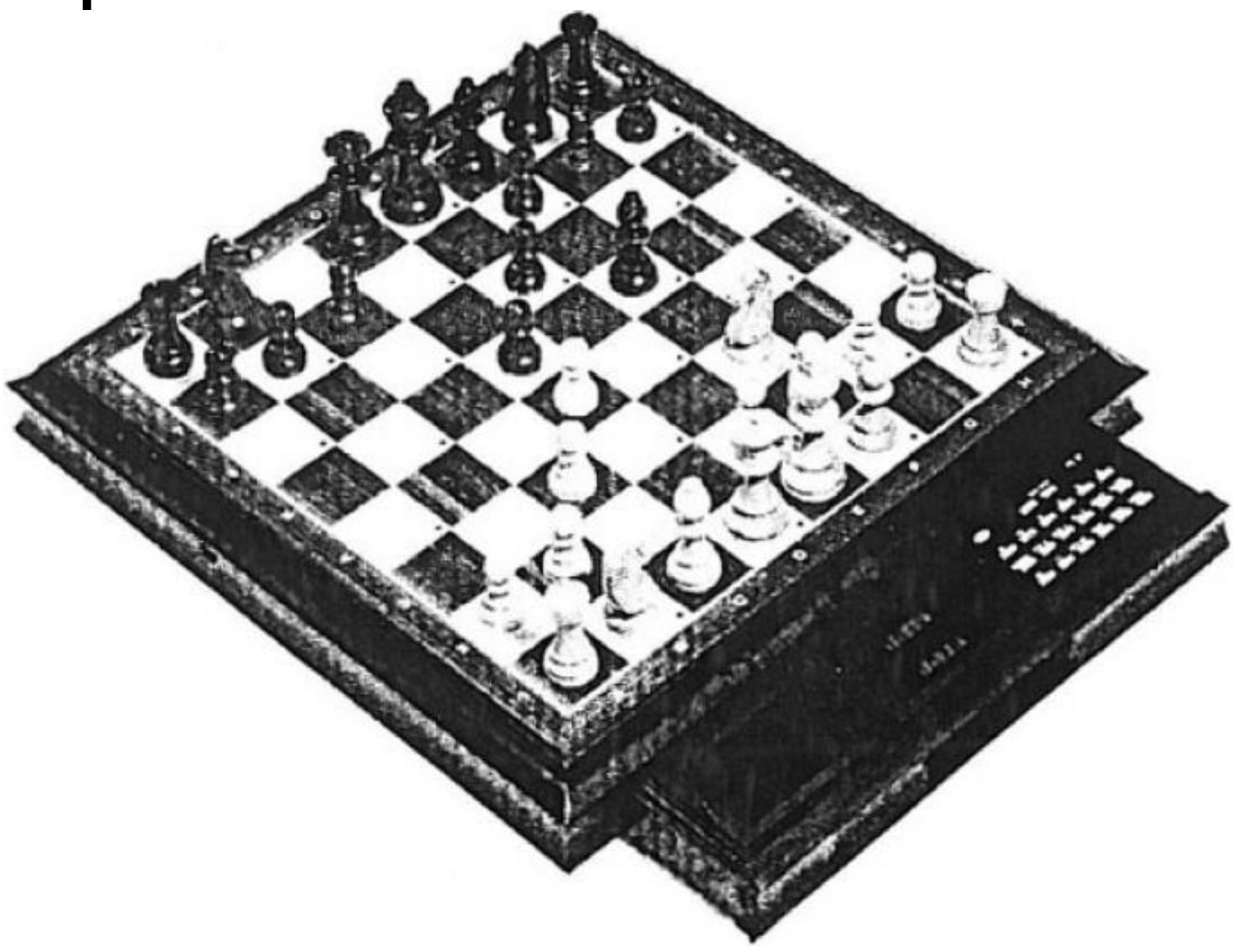
SPHINX 50 68000-50,8 MHz
SPHINX 40 68000-40,8 MHz
Operation manual



CONTENTS

1. start of game 3
2. moves 3
3. correct moves 4
4. Special line 4
   - 4.1 capture figures 4
   - 4.2 Hit "en passant" 4
   - 43 Castling 4
   - 4.4 Pawn promotion 5
5. Ending and restarting a game 5
   - 5.1 Checkmate 5
   - 52 pan 5
   - 53 Fifty Move Rule 50
   - 5.4 Repeat move 3 times 5
6. Pause the computer and change pages 5
7. Retrace moves and replay 6
8. Skill levels 6
9. Playstyles 8
10. Both sides play 9
11. Setting the clocks 9
12. Move suggestion 10
13. Game analysis and position evaluation 10
14. What if 10
15. Position check 11
16. Enter positions 11
17. chess problems 12
18. tone generator 13
19. memory function 14
20. Short overview of the functions 15

1^ Splelbeginn

Pull out the list on the front of the device. Now see. three module slots. The detent module should be on the right side. The middle slot is for the LCD displays and the left for future expansion modules.

There is a button on the right edge of the drawer. When you press this button. you can open the drawer flap upwards. to replace or remove modules.

Connect the adapter on the left side of the device. before you start the game.

If there is an earlier game situation in memory. this game can be forced as described in Chapter 19. For now, let's assume. because you want to start a new game.

Set up the figures in the starting position. Normally the computer will expect. that you want to play with white from the bottom up. Chapter describes how to reverse the direction of play.
Some report that after turning on the device, the computer emits three beeps. Shortly thereafter, the chess clock displays appear in the two LCD displays. Press the NEW GAME button.

If some figures are not exactly on their squares, the little SF-calculating lamps light up. Correct the position of these figures and start playing.

You might want to change the game strength of the computer before starting the game. How this is done. is described in more detail in Chapter 6.

If you want to start with white. just make your first move. About the color. you want to play with. switch. need to press the MOVE button. The computer will then show you its first move (more about this in Chapter *2)*.

Train execution

Move the piece as if you were playing on a regular chess board. The lamp in the field. the figure was standing on will light up. When you place the piece on its target square. this lamp also lights up briefly. Then both lights go out and the computer beeps - that means. because he registered your train.

After the computer calculates its own move, it displays its move inside with two lights denoting its starting and ending areas. Run this train. When the lights go out the computer is ready for your next move.

When you make a move. which the computer doesn't seem to accept. then return the piece to its starting square and repeat. It is not recommended. to push the figure over higher squares . because that could be misunderstood by the computer and it might mistake one of those squares for your target square.

If one of the two kings is in check. then the lamp on his field flashes until the next move is completed.

The two LCD's show the time. the both sides. have already consumed. The display below is for that page. which plays from the bottom up - regardless of whether it's for white or black. The ur runs for each side. who moves next. When the computer calculates its next move. you will see a flashing colon in the corresponding display.

Train

Each correct move is answered by the computer with a high pitched beep. If you make an illegal move. a short, deep warning tone sounds. You will hear this warning tone, for example. when you move a piece into a space that the rules do not allow it to move into. The lamp on this field will then flash for as long. until you have removed the figure from this field again.
Then make a legal move or return the piece to its original square. so also the little lamp there goes out.
Assure yourself. that all figures are correctly located on their squares. before you took a train: becauseder
Otherwise your computer won't accept your move. becomes.
You can see by the lights that may come on. where something is wrong on the board.

4. Special Trains

4.1. Hit figures

Proceed like this. as you would do on a normal chess board. It is equally valid. whether you first remove one piece and place the other on this field or vice versa (except for an "en passanf capture").
When the computer captures a piece from you. he indicates his desired move in the usual way.

4.2. Beating en passant

Move the capturing pawn first. The lamp on the captured piece's square will then be lit for that time. until you remove this figure.

4.3. Castle

When castling, move the king first and then the rook. When the computer wants to castling, it shows the king's move first. After you have performed this move. the two lamps for the corresponding tower will burn until you have finished castling.

4.4. Pawn promotion

When you have moved a pawn to the opposite end of the game area. you have to say the computer next. which piece you want the pawn turned into. The two lamps on the farmer's old and new fields will remain lit. until you have pressed the character key that corresponds to your desire.
If the computer might have promoted one of its pawns. you have to use the position check (chapter 13) determine. what shape he wants. Usually, however, this character will be a lady.

5. Ending and restarting a game

5.1. Checkmate

If Because? Matt offers. the lights on rows 1 and 2 are on: in the case of a mate of black, the lights on row 7 are on
and S

5.2. Stalemate

You can recognize a stalemate by this. dal? all lamps on row "c" light up.

5.3. Fifty - move - rule

When a pure pawn is moved and no piece captures another piece in fifty consecutive moves. the draw is indicated by the lights on the "d" row lighting up.

5.4. Repeat move three times

When both sides make the same move three times in a row. the computer will indicate the draw by lighting up the lamps in the "e" row.

You can start a new game at any time. Put the pieces in the starting position and press the NEW GAME button. When all figures are correctly positioned on their squares and no more lamps light up on the board. you can start a new game.

Do not forget. dal? the previous position is in the game memory of the computer. until you make a move Or cause the computer to do so. You can restore the original position. when you press the FW button « see chapter 7 >.

6. Interrupting the computer and changing sides

When you press the MOVE button. while the computer calculates its next move. he will interrupt his thinking process and make the move. which he thinks is the best at the moment.
When you press this button. while it's your turn. the computer calculates the next move for the side you were playing with up to that point. He expects. dal? Then continue playing with the other Faroe.
This way you can switch sides as often as you want. The computer will play a complete game against itself. if you press this button after each move.

7. Retrace and replay moves

There is another possibility. either to interrupt the computer or to switch sides.
Press the BW (backwards *) button.* When you print BW. while the computer calculates or displays a move. this move is discarded. You can now play for the site. that the computer had before.

You can also use the BW button to take back moves. When you have made a move and want to undo it afterwards. then press BW once to interrupt the computer's thinking process and then press the same button again. The machine will show you your last move. Move the appropriate character as shown to turn off the lights and continue playing.

By pressing BW you can retrace the game as far back as you like. Press the button several times and pull the figures back. You can continue the game at any point by either moving yourself or using MOVE to have the computer do so.

The BW key also retains its function in the event of a mate or stalemate (see Chapter 5 >.

The FW key allows you to do exactly the opposite - you can use it to make moves. re-export that you have already withdrawn; the computer shows you the next move in each case as usual by means of two illuminated lamps on the game board.
Imagine. They liked a position like it was on the board ten moves ago. watch again.
Take ten moves back and look at the position. If you want to continue playing the game as it was, simply press the FW key repeatedly until you get back to the last position of the pieces.

You can play the same sequence of moves forwards and backwards as many times as you like.

Definitely keep that in mind. da(3 you within a replayed position, if you ''normal" i so without FW *)* Or continue playing with MOVE. delete the contents of the move memory.

Should you wish to repeat the whole game, press NEW GAME, place the pieces in the basic position and press the FW key before each move. So you can watch the whole game again.
However, this is not possible if you have entered a special position with SET UP *(* see Chapter 16).

You can change the game strength of the computer. by limiting the time he needs to calculate his moves. The following table explains the average times that the computer needs for the calculation, as well as the associated playing strength up to level 16 » level 17 is something special and is explained separately).

Level	draw per move
1	5 seconds
2	10 seconds
3	15 seconds
4	20 seconds
5	30 seconds
6	45 seconds
7	1 min
8	1 min 15 sec
9	1 min 30 sec
10	1 min 45 sec
11	2 min
12	2 min 15 sec
13	2 min 30 sec
14	2 min 45 sec
15	3 min 5 sec
16	3 min 45 sec

At all levels of the game, the computer sets up a time budget. which he constantly controls. He allows himself more time in difficult positions than in manageable ones. Overall, however, it is based exactly on the times you specify. If he saved time in the opening phase thanks to his extensive opening library, he can think longer about it later. The number of moves in the opening library is about 10600 .

You can view or change the current level at any time. Press the LEVEL button to have the LCD display for Weill show the letter "L" and the current skill level. If you wish. you can increase the playing strength by pressing FW once or several times or decrease it by BW. When your desired skill level for the computer is displayed. you can just keep playing. The LCD disappears as soon as you move a character or press any button I except SOUND). You can change the playing strength as often as you like during the course of the game.

When you switch skill levels while the computer is thinking about a move. he will still end his turn with the "old" playing strength. before changing them.

It's the easiest. regulate the playing strength of the computer. if you choose a skill level between 1 and 16.
You can also give the computer much more precise timing by telling the computer the number of moves it has to make in a given time and how many moves are to be completed after that period and in what time. You can say (as an example): "The first thirty trains in one and a half hours and thereafter ten trains every half hour".

To do this, you must first press LEVEL and then FW until the number 17 appears in the display. Then press CLOCK. The number you can now see on the LCD indicates the number of moves the computer has to make before its first time control. You can increase or decrease this number with FW or BW. For our example you would have to set the number 30.

If. Now press CLOCK again . you can specify the time in minutes. after which the first time control should take place (in our example 90 - one and a half* hours).
Press CLOCK again to set the number of moves up to the second time control (example: 10). Print CLOCK a fourth May to tell the computer. in which time he should execute these ten moves (the computer also adheres to these two specifications for all subsequent time controls).

Press CLOCK last May to get the current skill level of 17 back into the display. Now if you keep playing. the computer will try. To reach train *<0 before his clock reads 90, train *0 before 120 minutes.* Train 50 before 150 minutes and so on.
If you do not change this timing. the computer will always use them from now on when you work with level 1/.

You can specify any number of moves between 1 and 99 for a time control; the number of minutes can range from 1 to 199 (the "1" in numbers greater than 99 is represented by an arrow pointing up).

If you specify "0" as the number of minutes. the computer will try to finish the whole game in the allotted time. For example, if you enter 25 minutes as the time and 0 as the number of moves, the game will only last 25 minutes for the computer < don't forget. still have to print three times on CLOCK. so that level 17 appears again in the display and you can continue playing *).*

you can also z. say. "68 moves in two hours. Then 15 minutes for the core of the game". Enter *8 and 120 for the first time control. then 0 and 15 for the second. This is a so-called "Blitz Endspiel". that chess players know from weekend tournaments.

If you press LEVEL while the skill level is displayed. you can call up the special functions described in Chapters 10 and 17.

play style

In addition to the normal playing strengths, you can also define which playing style the computer uses. The individual options are as follows:

1	extremely passive
2	very passive
3	very reserved
4	somewhat reserved
5	normal
6	slightly aggressive
7	delicate aggressive
8	very aggressive
9	extremely aggressive

To show the current style. need to press the FUNCTION button. If you want, you can now change the playing style with FW or BW. •

If you want to continue playing, you have to press FUNCTION again. The computer is then t-ready for your next move.

Note : the FUNCTION knob is used with extension modules that are already in development, enable further special functions.

Both sides scroll

When you print LEVEL several raals in a row. the lower LCO display will show the letters "L", "P" and "U" in sequence.
"U" stands for human player vs human player (User). As with "L" (Level), the current playing strength is also displayed here.

You have the option to hit for both white and black by toggling "U" - for example, if you want to play a special opening.
As soon as you have made a 2ug, the normal time display reappears.

Once you have reached the desired position. press two times on LEVEL to get the ”L ,, display.
You have now returned to normal gameplay. Now that you make a move or press MOVE, the computer will continue playing the color you want.

11 Clock setting

You have the option to change the times by pressing the CLOCK button. while both seasons are in the ad. An LCD will fade. while the other now shows the time in minutes. You can now increase or decrease this time as usual with FW and BW.
The next press on CLOCK shows you this time again in minutes and seconds. You can now change the number of seconds with FW and BW.

With the next two presses on CLOCK you can now change the times for the other side.

After making so many changes. as you liked. you can just keep playing.

Remember. daft the "l" in front of numbers greater than 99. is represented by an arrow pointing up !

You should also not forget that if you have set your skill level to 17 < see Chapter 8), the computer which you specified. stop. So if you change his watch now. Will he take that into account?

When the two displays show something other than time, you can turn the chess clocks back on by pressing CLOCK.

12 ^ Move suggestion

You may not be able to think of a suitable move in some positions. Press HINT ("Hint"). and the computer will show you with two lights flashing on the playing field. which 2ug he would now do in your place. Of course you don't have to do this move!

13^ Game analysis and position evaluation

By pressing the ANALY button you gain insight into the way the computer thinks. First, the chess clock for Black shows you his evaluation of the position in tenths of a pawn. So if the display shows "♦20", then the computer accepts it. because he has an advantage of two pawns. A negative reading means he thinks their position is the better one.

If you now print on FW. the computer shows the move it deems best for the pulling side.
For this he uses the generally accepted form of algebraic notation. For example "d3cV - regardless of whether a piece is captured with this move or not.

By repeatedly pressing FW you can let the display "scroll" to the left. around the whole game development. as the computer foresees them.
The BW button "rolls" the display back to the right.

This analysis mode remains switched on. until you make a move Or press any button except SOUND.

14 "what if..."

When the computer made a move, you may wonder why it rejected that particular move and why it rejected the other alternatives. The computer will show you when you press WI ("what if").

Now you can watch the game analysis in the display as in the last chapter. First you see a position evaluation in tenths of pawn units: repeated use of FW shows the further development.
After the computer has displayed this series of moves and no other moves, by pressing WI you can see the game progress towards an alternative move.

You can watch with FW how the game could probably develop after that. With BW you can trace back this development. When you get back to the exit train. you can see another alternative with WI.

WI can provide information about this at any point in the analysis. which move and which subsequent sequence would be possible as an alternative to the one actually played.

The analysis disappears from the display. when you make a move or give the computer another "command".

15^ Positional Supervision

If you ever get confused about the position on the board (e.g. if pieces have fallen over >, you can ask the computer to show you which piece goes where. To do this, press the six piece symbol keys in turn. Each of them corresponds to one Type of figures i king, queen, lurm, bishop, knight, pawn). The computer then tells you. where the characters go. by letting LEDs light up on the board. A constantly burning lamp means. dai3 dor thin a white figure belongs, while flashing LED's signal. that a black piece has to be on the square.

The lights turn yellow as soon as you make a move or give another command.

16 ^ Enter positions

You may wish to place the pieces in a particular position on the board. for example to be able to play with your favorite opening or to let the computer solve a chess problem.

Begin. by pressing the SET-UP button. You have switched the computer to a special input mode in which you can fill the field with any number of figures.

If you now remove a piece from the field. then it is also automatically yellowed from the position memory (the same happens with the pieces that were not in their square when you pressed SET-UP). However, most of the time it is the most convenient. first removing all pieces from the board and then creating a position from scratch.

For example, to place a black rook on the field. you must first press the BLACK (black » and tower keys. From the .leather figure. that you now place on the field. the computer will assume that 13 is a black tower - sc-long. until you either press another character key Or change color.

If there are still figures of the desired color and type on the board. then the computer will show you this by burning lamps on the corresponding field, as described in chapter IS. Before you press a character key. the computer will accept. that the desired piece is a pawn.

After you finish creating the position. you have to tell the computer which side to pull next by using the WHITE or BLACK keys. Then press SET-UP again. to exit setup mode. Press MOVE so that. the computer pulls. Or move a figure yourself.

Remarks:

Prohibited Positions : If youe.g. a position set up. in which there is no white king Or two black queens and eight at the same time black pawns Or when Black is in check. a It is because3's move. the computer will

recognize the position as illegal. when you try to print **SET-UP** su now. to continue playing.. then you will hear the "Error" sound and the computer will flash all the lights on the fourth and fifth rows for a moment. This means. that a move can be made from this position and that the pieces have to be set up differently.

Castling and "en passant": if you have a king or placed a tuna on the field as described. you cannot castling with these pieces. To e.g. B. a position heroeizuliefern. in which Weift has the right to castling. first start a game normally gar.z. Then press **SET UP.** Now leave the white king and the corresponding rook where they are and position all the other pieces as desired.
After you set up a position .-en. the next move cannot be a capture en passant. To bring about such a position. you have to get to the position directly in front of it and then rush the train. which allows the "en passant".

When you are in SEi-UP mode. The fast **FW** and **BW have** a function to determine the direction of the game. If you print on **FW** . then that means. daft Weiii plays from bottom to ot-en. **BW** means the opposite of that.

To start with a game where white plays from ot-en down. proceed as follows.- Press **SET-UP.** dan-r. **BW.** Press **SET-UP** again and then **NEW GAME.** Arrange the figures accordingly and start playing.

Sc-11 you want to know more. who plays from the bottom up. just press **LEVEL.** When the game strength is displayed in the lower LCD. then does that mean daft because? plays from bottom to top.

17 chess problems

Many chess problems sound something like this: "Woman moves and bids
Mate in three moves". This means that you should find a combination of moves in which you can make a maximum of three moves to mate Black - regardless of how the other side tries to defend itself. The other Mc -possibility is to say in how many moves < "ply") the opponent's king is to be checkmated. A move is only the move of one suit, while normally a move consists of a black and a white "move half". A "mate in five moves " thus means that one side draws areimal and the other side draws twice.

Your chess computer can solve chess problems up to "mate-in-eight" or rtal deductions.

If you want the computer to Ibsen a chess problem, you must first determine the position as described in Chapter 16 t-e. Assure yourself. that the computer knows. which side is next to move.

When you exit SET-UP mode. press the LEVEL button so lanee. until the display shows the letter "P" followed by a number. The computer is now in troubleshooting mode. .

Now print FW oder BW until the number that appears corresponds to the required solution in half moves. It must therefore always be an odd number (in the case of "mate-in-three" 13 the display must read "P 5" - three moves by White and two by black J.

Now press MOVE. so that the computer starts searching for a solution. The display automatically switches to the chess clocks.

When the computer has found the right solution, it will display it on the board in the usual way. Make the move indicated and play one for the defending side. Now that you've made half moves, the computer will decrease its "problem solving level" by two and look for the next move. The second and all subsequent correct moves will also be displayed in the normal way.
You can also undo a move you have already made. to see how the computer then draws..

If the computer does not find a solution in the required number of moves, it beeps several times and does not display a move. Both chess clocks will then stop.

The current problem level can be queried again by pressing the LEVEL button. If the LEVEL button is pressed again while the LCD clock is indicating this, the clock will jump back to the level. Another push of the button brings the chess computer back to the normal game position, see points 8 and 10.

You can also have your computer search for mate defenses. He will then show you. how to defend yourself against a threatening mate. To get him to do that, you have to turn on trouble mode. specify an even number of half-moves and let the computer go.

Suppose the problem is: "White to move and mate in S moves” < so 9 half moves *)*. You think you have found a solution, but you want to know if there is a defense against it. To do this, you need to search the computer for a Ask defense in 8 moves Set up the position, choose "P S" and make your move for White The computer will now try to find a move against which there is no compelling mate in the next 7 moves If if there is such a train, he will indicate it: if not, he beeps and the
both chess clocks stop. The maximum number of moves for a defense is 16 half-moves.

18^ Tone Generator

It is possible. that you prefer to use your computer without the support of sound signals. If you press the SOUND button, it will stop making sounds. To turn the sound back on, simply press the button again.

12. Memory function

If a game has to be interrupted(3, the position can still be saved. To do this, you must switch off the computer with the ON/OFF switch. before unplugging the adapter cable. Once you have done this, you can use the just continue playing where you left off the next time you turn it on (you may have to check or correct the position if pieces have slipped >. If all pieces are in the position they were in before they were saved, all the lights go on the field and you can continue playing as normal.
When it is the computer's turn to turn, you must first tell it by MOVE.

Maybe it happens sometimes that after switching on the computer, in addition to the usual three sounds, one more
emits an additional beeper. This means. dal3 the battery. which supplies power to the storage unit.
must be exchanged |3. In this case, the saved game situation may be incomplete.

You need to open the round lid on the bottom of the Cerate. to replace the battery.

Summary of commands

game mode

LEVEL. LEVEL ... switching between three modes:
- "L" human player vs computer
- "U" human player vs human player
- "P" problem solving mode

MOVE button

means : "Please change sides" Or "Please pull now"

Position verification

Use the character type keys.
A flashing light means : black figure. A non-flashing light means : white figure

Take back moves

BW aborts the computing process of the computer. then BW allowed to take back the last move (also several times) FW equalized. to repeat a withdrawn move

Skill level

To select playing strength 1 to lb:
LEVEL,LEVEL, then FW or BW up to the desired skill level.

Zum Einstellen von "Vierzig Zuge in den ersten danach 2.5 hours:
16 Zuge pro Stunde" : 17",
LEVEL,LEVEL ... dann FW c-der BW bis zur Anzeige "L
dann CLOCK. BW/FW bis zur Anzeige
dann CLOCK,BW/FW bis zur Anzeige 5.0 < = 150)
dann CLOCK.BW/FW bis zur Anzeige 16
dann CLOCK.BW/FW bis zur Anzeige 60
dann CLOCK, um den Modus zu verlassen

To set "25 minutes for the whole game" LEVEL.LEVEL, FW.FW to "L 17"
CLOCK.BW/FW to display 0 CLOCK.BW/FW to display 25
CLOCK three times to exit the mode

set the time

CLOCK displays the minutes. FW/BW changes them
CLOCK displays minutes and seconds, FW/BW changes seconds
CLOCK shows minutes for the other side
CLOCK shows minutes and seconds for the other side
CLOCK to exit time mode

Game analysis and position evaluation

ANALY shows a position evaluation in tenths of pawn units FW.FW shows the expected game development

Set up position

SETUP to set the mode
buttons WHITE or BLACK for the desired color; also to set which side is next to move t $_t$ pW/BW to determine who plays from bottom to top "piece keys" for the pieces to be set up

Cess problems

Set up position with SETUP
LEVEL,LEVEL until "P" appears in the display. Enter the number of desired solution half digits with FW/BW (e.g. PS)
Print MOVE
to calculate a defense:
Enter the desired number of half moves with FW/BW (e.g. P 4 ;
make a move for the attacking side

As moves are made or withdrawn, the solution level changes accordingly!

* * *A* A *M*

And now we wish you a lot of fun with your chess computer!