NOVAG® star ruby

- INSTRUCTION
- ANLEITUNG
- MODE D'EMPLOI

- I. INTRODUCTION
- II. LCD DISPLAY
- III. PLAYING THE CHESS COMPUTER
- IV. GAME FEATURES
 - a) Making moves
 - b) Capturing a Piece
 - c) Impossible and Illegal Moves
 - d) Castling
 - e) En passant
 - f) Pawn Promotion / Underpromotion
 - g) Stalemate / Draw
 - h) Check and Checkmate
 - i) Early Mate Announcements
 - j) Resignation

V. GENERAL FUNCTION KEYS

- A. ① On key
- B. ① Off key
- C. ① Tunction key
- D. ← Take Back key
- E. → Trace Forward
- F.

 Clear
- G. ? Hint
- H. Colour
- I. i Info
- J. □⇒ (= NEW GAME/GO) Key

VI. FUNCTIONS

- 01 LEVEL SETTING (Level)
- 02 SET UP FUNCTION (Setup)
- 03 FLIP BOARD (FlipBD)
- 04 RESTORE (Restore)
- 05 OPENING BOOK (Book)
- 06 REFEREE FUNCTION (Ref)
- 07 AUTO CLOCK FUNCTION (AClock)
- 08 SOUND FUNCTION (Sound)
- 09 EASY FUNCTION (Easy)
- 10 RANDOM FUNCTION (Rand)
- 11 AUTOPLAY (Auto)
- 12 CHANGE CONTRAST (LCD)
- VII. EXAMPLES & EXPLANATIONS
- VIII. CARE OF THE NOVAG CHESS COMPUTER:
- VIX. TROUBLE SHOOTING
- X. RULES OF CHESS

I. INTRODUCTION

We congratulate you on your purchase and recommend that you read the instruction manual thoroughly in order to learn how to fully operate and enjoy your new chess computer. The LCD chessboard and the function section at the bottom of the LCD screen are touch-sensitive and can be accessed with the special Pen, located on the left side of the unit. **Always** use this Pen when operating the unit to avoid scratching or breaking of the LCD glass. The LCD screen is protected by a cover. To flip the protective cover back, please pull the black button on the right side of the unit to release it.

BATTERIES

The chess computer runs on 3 x 1.5V UM 4 type, or size "AAA" alkaline or heavy duty batteries (not included).

IMPORTANT NOTICE

Before replacing/ inserting batteries, turn the unit off. To insert batteries, open the battery door on the back of the unit by unscrewing the screw and lifting the battery door. Insert the batteries according to the correct polarity as indicated by the +/- signs and then replace the battery door again. Do not place any other object(s) in the compartment but the batteries as described above. To remove batteries pull each battery out of its compartment. Do not use any objects to remove the batteries and remember, batteries must be removed when exhausted. Always use new alkaline or heavy duty batteries of the same type only - never mix old and new batteries or batteries of different type, e.g. disposable and rechargeable batteries. Do not recharge non-rechargeable batteries. Remove rechargeable batteries from the chess computer before charging and charge rechargeable batteries under adult supervision only. Any battery charger (for use with rechargeable batteries) should be examined regularly for potential hazards, such as damage to the cable or cord, plug, enclosure or other parts, and that, in the event of such damage, the battery charger (or any other electrical appliance) must not be used until that damaged part has been properly removed or repaired. Please note that a battery charger is not a toy. If you do not use your computer over a long period of time, please remove the batteries. Never short-circuit the unit or the battery charger or any other electrical appliance. The chess computer is not intended for children under 3 years of age. The packaging must be kept as it contains important information.

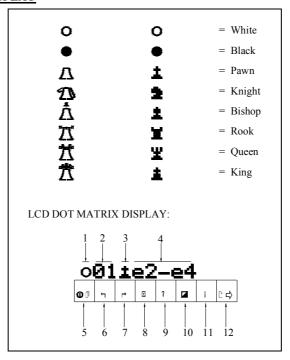
LOW BATTERY INDICATION

When the LCD shows **lobatt** it indicates that the batteries have to be replaced.

MEMORY

The computer has a long-term memory and will retain the last board position. However, make sure that there are working batteries in the chess computer otherwise you will lose the memory contents. When you change batteries, the chess computer will retain its memory for approx. 10 seconds.

II. LCD DISPLAY



1 = O/● Colour indicator O = White ● = Black	2 = "01" Number of moves Number of moves made (here 1 move)
3 = Chess piece symbols Shows active chess piece (see above)	4 = "e2-e4" Move Move indication (here from e2 to e4)
 5 = ① ① On/Off & Function Turn unit On/Off (1 long tap for 1 sec.) System functions access (1 brief tap) 	6 = ← Take Back Each time tapped 1 half move will be taken back.
$\frac{7 = \rightarrow \text{Trace Forward}}{\text{Each time tapped it takes a move forward}}$	8 = 🗵 Clear Clears the LCD or deactivates chess piece
9 = ? Hint The computer will make a move suggestion	10 = Colour Change colour
11 = i Info Shows times, number of moves & scores	12 = □⇒ NEW GAME/ GO Key • Start new game (1 long tap for 1 sec.) • GO function (1 brief tap)

III. PLAYING THE CHESS COMPUTER

If you wish a quick game of chess without having to use all the special functions of this model, you may refer to the following instructions.

Step 1: Insert batteries as described above. Turn the chess computer on by tapping on the "On" (= On/Off & Function) square **for more than 1 second** (located on the bottom left hand corner of the LCD). The chess pieces will be set up on the LCD screen automatically.

Note: Tapping the square "On" (= On/Off & Function) briefly will access the individual functions (please refer to the FUNCTION chapter below).

Step 2: To start a new game tap the " $\Box \Rightarrow$ " (= NEW GAME/GO) symbol on the bottom right hand corner of the LCD continuously **for more than 1 second**. Three beeps will sound and the LCD will show: $\bigcirc \bigcirc \bigcirc 1$.

Note: Tapping "□⇒" (= NEW GAME/GO) once briefly will activate the GO function and the computer will make the first move for white (see "GO" function below).

Step 4: Once the chess computer has registered your move it will immediately start computing its counter move. Illegal moves are not accepted and the unit will beep 3 times and show error on the LCD. When the chess computer is ready to move it will make its move on the LCD chessboard automatically and at the same time the move will be displayed on the LCD, e.g. the black pawn is moved from c7 to c5: 01 1 c7-c5. Now you can make your counter move.

IV. GAME FEATURES

a) Making moves

Enter your move by first tapping the chess piece you wish to move. Then tap on the chess field you wish to move to (FROM ⇒ TO). Your entered move is shown on the LCD together with the colour moved ("O" = white; "●" = black). If you have chosen the "wrong" chess piece you can deactivate it by tapping on it again but only if you have not made your "TO" move, otherwise you will have to use the TAKE BACK function.

The computer's moves are executed automatically on the LCD chessboard and will also be displayed on the LCD screen at the same time. Once executed a short beep will sound. When the unit is computing it will ignore all inputs, with the exception of the "D\(\rightarrow\)" (= NEW GAME/GO) key. Once tapped briefly, it will interrupt the computer's calculation process and will force it to make its move immediately.

b) Capturing a Piece

If you or the chess computer makes a capturing move the symbol "x" will be displayed on the LCD, for example move from e5 to g7 captures a chess piece:

• e5xg7

.

c) Impossible and Illegal Moves

If you try to make an illegal or impossible move, you hear 3 beeps and on the LCD display you will see the **error** sign. You can now make another legal move.

d) Castling

According to the rules of chess you must first move the King then the Rook to complete this move. The computer accepts and executes castlings in set-up positions.

e) En passant

If you make this special pawn capture you only have to tap the "from" and "to" squares of this move as in a normal move. The captured pawn is automatically removed by the computer and the LCD shows "x".

f) Pawn Promotion / Underpromotion

If one of your pawns reaches the 8th rank, the computer will prompt you to promote or underpromote it to any desired piece and you will see the symbols for Queen, Bishop, Rook and Knight displayed. Please tap on one of the symbols to enter your choice of promotion and the computer will automatically replace your pawn with this piece. When the computer promotes one of its pawns, it will replace the pawn automatically with the promoted piece and at the same time the move is displayed in the LCD.

g) Stalemate / Draw

A draw is announced on the LCD with the appropriate message:

[dr Stl] no legal moves, but not in check, therefore draw

[dr 3rd] position repeated 3 times

[dr 50] 50 moves made without capture and pawn move

[dr ins] insufficient material for either side to check mate the other

h) Check and Checkmate

Check announcements are made with the "+" sign on the right side of the move shown on the LCD, e.g. ... g7-g8+. Checkmate will be indicated on the LCD with mate.

i) Early Mate Announcements

The computer will always announce mate if it sees it and will show the number of moves to mate on the LCD. Example: $\boxed{\text{mate 1}}$.

j) Resignation

The computer will recognise positions which are lost and will resign the game showing resign on the LCD. You may reject this resignation and play on but please note that the computer will only resign once per game. If either side's time runs out, the LCD display will show flag and you may continue the game by entering your next move.

V. GENERAL FUNCTION KEYS

A. On key

To turn the unit on, tap the multi-function key " $\mathbb{O}_{\mathbb{O}}$ " (= On/Off & Function) for 1 second continuously. The unit will power on and the LCD screen will be visible.

To turn the unit OFF, tap the multi-function key " \mathbb{O} " (= On/Off & Function) continuously for 1 second.

Note: The SOUND, BOOK SELECT, RANDOM, LEVEL function will remain the same. EASY and REFEREE are turned off.

C. On Function key

The different functions can be accessed by tapping the multi function key "On/Off & Function) once briefly (please see Function chapter for further details).

D. ← Take Back key

The "¬" (= Take Back) key is located right next to the "On" (= On/Off & Function) key. Wait until it is your turn to move. Tap "¬" (= Take Back) and the last move will be taken back automatically. When you reach the beginning of the current game the display will show begin. To exit make your next move or tap "□¬" (= NEW GAME/GO) once briefly to recall a computer move.

Note: If you select COLOR or SET UP to alter the position of any of the pieces, all prior moves will be deleted and you may not TAKE BACK moves before the change of colour or position. If no moves are in the game history the LCD will show begin.

E. → Trace Forward

This key is located on the right hand side of the "+¬" (= Take Back) key and is mainly used for tracing forward all moves after using the TAKE BACK function. If no moves are in the game history the LCD will show end.

F. 🗷 Clear

If you start entering a move and wish to cancel it you may press this key to deactivate the initially chosen chess piece. You can also clear the LCD display by tapping "国 Clear", e.g. when in HINT mode.

G. ? Hint

The computer will suggest a move for you ("?" on the bottom LCD). To accept the suggestion tap "□⇒" (= NEW GAME/GO) once briefly and the computer will move for you. You can also make a move of your choice at any time whilst HINT is displayed. In this case do not tap "□⇒" (= NEW GAME/GO) but just make your move. If you tap the HINT icon whilst the computer is calculating, the display will show the move the computer thinks is so far the best for itself up to 9 ply.

H. Colour

- During a game tap "\(\bigcup \)" (= Colour) and you will change the colour to move.

<u>I.</u> <u>i Info</u>

This key provides information on the current game as it progresses. To exit this function at any stage simply continue with your move and the computer will do the same.

- First tap on the i Info icon shows the clock of the side to move.
- Second tap on the **i Info** icon shows the clock of the side <u>not</u> to move.
- Third tap on the i Info icon shows the evaluation of the current position adjusted to the number of pawns advantage or minus so many pawns disadvantage for the current side to move, whereas disadvantageous evaluations are marked with a "-" sign.

Example: If the LCD shows $\boxed{00.41}$ it means almost half a pawn advantage to the side to move. If the computer sees you or it is going to be mated then the score could be $\boxed{002}$, whereas "n02" stands for mate in 2.

Fourth tap on the **i Info** icon will show the current move count for the side to move.

<u>Note:</u> Use the CLEAR key to clear the INFO display. When the computer is thinking the display will show either the rotating display or one of the above INFO displays. Once the computer has finished its computing, the INFO display will disappear and the display will show the computer's move.

The rotating displays are:

- The time spent on the current search.
- The first 3 ply of the best line found so far.
- The score displayed as above.
- The current depth of search.
- The number of legal moves remaining to search and the total number of legal moves.

Note: Each display stays for 2 seconds.

J. □ ⇒ (= NEW GAME/GO) Key

The GO key is used in conjunction with many of the computer's functions and normally acts as an exit function. To access tap "D\(\mathbf{P}\)" (= NEW GAME/GO) once briefly.

MAIN USES:

- To make the unit compute for the colour to move, even if in REFEREE mode.
- To exit from the SET UP / LEVEL mode.
- To start the SOLVE MATE search (set the level to Solve Mate Level Setting, set up the chess pieces, tap "□→" (= NEW GAME/GO).
- To start the AUTOPLAY mode.
- To interrupt the computing time and force a computer move instantly. Please allow at least 5 seconds of search time before tapping "□⇒" (= NEW GAME/GO) in order to let the computer calculate a reasonable move. The evaluations of these moves do not correspond with the evaluation of the set-up level.
- To change sides during a game. Wait until it is your turn to move then tap "□⇒" (= NEW GAME/GO) once briefly. The computer will now compute a move for your colour, and you will play the other colour from now on.
- To let the computer play against itself. Every time you tap "□⇒" (= NEW GAME/GO) the computer calculates for the side to move. All moves will be computed according to the set playing levels.
- To accept a HINT. When the first Hint is shown, tap "□⇒" (= NEW GAME/GO) to accept the Hint.

VI. FUNCTIONS

The functions are accessed by tapping "On" (= On/Off & Function) briefly and the display will show O1 Level. To view the individual functions, please tap directly on the function number, i.e. "01". With each tap on the function number the next higher up function will be displayed, e.g. O2 Setup, O3 FlipBD, O4 Restore, and so forth. To access the desired function tap directly on the function, e.g. "Level". Please find following a list of all functions:

01	Level	(Change level setting)
02	Setup	(Board setup)
03	FlipBD	(Change colour)
04	Restore	(Go back to the beginning of the game)
05	Book	(Opening book function)
06	Ref	(Referee function)
07	AClock	(Auto Clock function)
08	Sound	(Sound)
09	Easy	(Easy function)
10	Rand	(Random generator)
11	Auto	(Autoplay)
12	LCD	(Contrast level 1-5)

01 LEVEL SETTING (Level)

The chess computer has different level settings, divided in white & black groups, to choose from. On the LCD you will see the following abbreviations for these 10 level sections:

Tr = Tournament Level	An = Analytical Level
Av = Average Time Level	Ea = Easy Level
Ft = Fixed Time Level	Bg = Beginner Level
Sd = Sudden Death Level	In mate = Solve Mate Level
Fd = Fixed Depth Level	Fn = Fun Level

Each playing level corresponds to one of the 64 board squares (see chart LEVEL GROUP WHITE "O" and LEVEL GROUP BLACK "●"). To set the desired level, tap on the level square itself. To toggle between LEVEL GROUP WHITE "O" and LEVEL GROUP BLACK "●" tap on the displayed level at the bottom of the LCD, e.g. Tr40mv4. To confirm the level setting and exit this mode tap the "□⇒" (= NEW GAME/GO) key once briefly.

Note: You may check or change the playing levels at any time during a game, but not whilst the computer is calculating. If you wish you can interrupt the computing time and call-off a computer move instantly by pressing the "□⇒" (= NEW GAME/GO) key. This will be the best possible move the computer has calculated up to that moment. If you switch the computer off to continue your game at a later time, or start a new game by tapping the "□⇒" (= NEW GAME/GO) key for 2 seconds, the previous set playing level will be retained provided you have batteries in your computer.

LEVEL GROUP WHITE "O":

8	Tr8	Tr16	At8	At16	Ft8	Ft16	Sd8	Sd16
7	Tr7	Tr15	At7	At15	Ft7	Ft15	Sd7	Sd15
6	Tr6	Tr14	At6	At14	Ft6	Ft14	Sd6	Sd14
5	Tr5	Tr13	At5	At13	Ft5	Ft13	Sd5	Sd13
4	Tr4	Tr12	At4	At12	Ft4	Ft12	Sd4	Sd12
3	Tr3	Tr11	At3	At11	Ft3	Ft11	Sd3	Sd11
2	Tr2	Tr10	At2	At10	Ft2	Ft10	Sd2	Sd10
1	Tr1	Tr9	At1	At9	Ft1	Ft9	Sd1	Sd9
·!	Α	В	С	D	E	F	G	Н

LEVEL GROUP BLACK "●"

8	Fd8	An8	Ea8	Bg8	In mate 8	Fn8	Sd8	Sd16
7	Fd7	An7	Ea7	Bg7	In mate 7	Fn7	Sd7	Sd15
6	Fd6	An6	Ea6	Bg6	In mate 6	Fn6	Sd6	Sd14
5	Fd5	An5	Ea5	Bg5	In mate 5	Fn5	Sd5	Sd13
4	Fd4	An4	Ea4	Bg4	In mate 4	Fn4	Sd4	Sd12
3	Fd3	An3	Ea3	Bg3	In mate 3	Fn3	Sd3	Sd13
					In mate 2			
1	Fd1	An1	Ea1	Bg1	In mate 1	Fn1	Sd1	Sd9
	Α	В	С	D	Е	F	G	Н

LEVEL GROUP WHITE "O":

TOURNAMENT LEVELS: Tr 1 - Tr 16

The Tournament Levels require you to make 40 moves within a stipulated time which simulates a tournament game. Maximum time is 150 minutes for 40 moves (= Tournament Level Tr16), e.g. Tournament Level 15 = 40 moves in 120 min and the LCD display will show: Tr40mv120 If you or the computer exceeds the specified time, the game will be declared lost and "flag" will be displayed on the LCD.

AVERAGE LEVEL SECTION: Av 1 - Av 16

The computer will use half of the specified time to calculate the counter-move and half of the time to complete the search. Levels reach from Av1 with 5 seconds per move Av5s/mv to Av16 with 220 seconds per move Av220s/mv. The computer tends to play faster in the openings and endgame positions, but in complicated middle game positions it may take longer to make its move. Depending on the position the computer may take up to four times the set time on these levels.

FIXED TIME LEVEL SECTION: Ft 1 - Ft 16

The computer will only use the time selected to calculate each counter-move. For example, the computer will use 2 seconds per move in Level Ft 1 Ft 2s/mv, in Level Ft2 the computer will use 4 seconds per move Ft 4s/mv and so on. The maximum is 90 seconds per move in level Ft16 Ft 90s/mv.

SUDDEN DEATH LEVEL SECTION: Sd 1 - Sd 16

The game has to be finished within a selected time, from 3 minutes up to 120 minutes. The LCD display will show Sd 3min, Sd 4min, ... Sd 120 min. If you or the computer exceed the specified time, the game will be declared lost and the side to move loses on time (clocks count down to zero and LCD shows flag). If you wish you can continue to play and finish the game; in this case the total time will be displayed and will be counted continiously.

LEVEL GROUP BLACK "●":

FIXED DEPTH LEVEL SECTION: Fd 1 - Fd 8

The computer will only compute up to the depth selected with a maximum depth of 8 half moves. This provides a means of limiting the computer play to suit a wide range of opponent's abilities. Please note that the time the computer needs to reach the set search depth will vary with the board position. As a general rule the computer needs 3 to 6 times as much time to reach the next depth as it is needed to reach the current depth.

ANALYSIS LEVEL SECTION: An 1 - An 8

These levels provide deeper searches for more complicated positions starting at 9 half moves. On level An 8 the computer searches indefinitely until a Check Mate is found or you stop the search by tapping " $\Box \Rightarrow$ " (= NEW GAME/GO). If the search is halted the computer makes the move it currently thinks is the best.

NOVICE LEVEL SECTION: Ea 1 - Ea 8

The computer restricts its search to 1 half move with limited capture search up to 9 ply. This will force the computer to play weaker, thus giving beginners a better chance of winning. The computer tends to search for more captures rather than trying to balance its game. The LCD will display Ea 1ply2x, Ea 1ply3x, Ea 1ply9x.

BEGINNER LEVEL SECTION: Bg 1 - Bg 8

Same as NOVICE LEVELS, but the computer searches 2 half moves with limited capture search up to 9 ply.

Note: All of the above levels can be modified by turning on the EASY mode. This keeps the computer from searching while you are thinking and weakens its play.

SOLVE MATE LEVELS SECTION: In mate 1 – In mate 8

If you have a position with a possible mate and you want the computer to find it, set the computer on one of the Solve Mate Levels (In mate 1], In mate 2, ... In mate 8]). The chess computer will search for the shortest possible solution to a mate problem up to Mate-in-8. If the computer discovers a forced mate it will display a mate announcement.

Whilst the chess computer is searching it will show the main variations which it is presently

Whilst the chess computer is searching it will show the main variations which it is presently considering and will rotate a variety of information on the LCD display:

- a) 1st move of main line (e.g. **g5-g4**, display of the most anticipated move for Black)
- b) 2nd move of main line (e.g. [f3-h4], display of the expected counter-move for White)
- c) 3rd move of main line (e.g. d6-d5, display of the anticipated counter-move for Black)
- d) Position evaluation = score from computer's standpoint (e.g. 00.21, +0.21 Pawns up)
- e) Depth of search (e.g. d 06 means now searching 6 halfmoves)
- f) Moves not searched during current iteration (e.g.: 15/21), means 15 moves out of 21 are not searched during the current iteration)
- g) Time used up so far (e.g. 00:12:32)
- h) If there is no solution you will see [none]

FUN LEVEL SECTION: Fn 1 - Fn 8

On these levels the computer makes some very human mistakes and plays almost instantaneously with very little strategy or tactical insight.

02 SET UP FUNCTION (Setup)

This mode is designed to enable you to set up board positions to solve chess problems or to set handicaps by removing or entering a piece, as well as changing the positions of pieces. Here the computer's legality check as to the movement of pieces is disabled and you can enter, remove or change positions of any piece, but you cannot set up an incorrect position, e.g. play without both Kings or with more than one King for each colour etc. The computer will not let you exit this mode if your SET UP includes an illegal position. The computer will accept and execute castlings, pawn promotion and en-passant captures if you play from a set up board position.

Note: All previous stated moves are cancelled as soon as you enter the SET UP mode.

A. REMOVING A PIECE / CLEARING THE ENTIRE BOARD

To remove a piece, tap the chess piece you wish to remove once in SET UP mode. To clear the entire board of all pieces tap the colour symbol square once briefly.

B. ENTERING OR MOVING A PIECE / SETTING UP A BOARD POSITION

To set up a chess piece on an empty chess field tap the desired chess piece symbol on the LCD and then the empty field you wish to set it up on. The colour is indicated by ● for Black and O for White. The selected chese piece is indicated by — shown beneath the chess piece symbol. To change colours re-tap the chess piece symbol.

Note: The computer memorises the last chess piece used for SET UP and will use this piece until you select a new chess piece. To end this mode, tap "□⇒" (= NEW GAME/GO).

03 FLIP BOARD (FlipBD)

Entering this function turns the chessboard around and the Black chess pieces will be placed on the bottom 2 rows of the LCD chessboard.

04 RESTORE (Restore)

This function allows you to restore the board position to the very beginning of the game. The computer can store 104 halfmoves in its memory which normally will allow you to go back to the new game position. If, however the game was started from a SET UP position or if more than 104 halfmoves have been played the game will not be at the new game position. After pressing the RESTORE key the moves will be taken back automatically and the display will show begin and then 01 ----- to indicate the beginning of the game history.

Note: You may use the complementary function key "\rightarrow" (= Trace Forward) to replay through the entire game. Should you enter a move for your colour you will erase all of the game history and the computer will treat this as a new game.

05 OPENING BOOK (Book)

When the LCD displays 05 Book = it means that the opening book function is enabled. The chess computer will then choose moves from the pre-programmed opening book. To turn the function off tap on the word "Book" and 05 Book will be displayed. To exit tap on the "D\(\disp\)" (= NEW GAME/GO) once briefly.

06 REFEREE FUNCTION (Ref)

This is a toggle function which allows the user to play a game on the computer with the computer only checking the legality of the moves and declaring DRAW, CHECK MATE, and STALE MATE. The LCD display will show 06 Ref when REFEREE is off and 06 Ref when REFEREE is on. The REFEREE mode may be selected at any time during a game except when the unit is computing. To exit tap "D\(\this\)" (= NEW GAME/GO).

Note: Following functions will work whilst in REFEREE mode: TAKE BACK / HINT / SET UP / COLOUR / SOUND / GO/OFF.

07 AUTO CLOCK FUNCTION (AClock)

When this function is activated 07 AClock = the computer will automatically display the elapsed time during each move after approx. 3 secs. To turn disable the Autoclock function tap on "AClock" and 07 AClock will be displayed. To exit tap "□⇒" (= NEW GAME/GO).

08 SOUND FUNCTION (Sound)

The sound can be turned on or off. When the sound is turned on $\boxed{08 \text{ Sound}} = \boxed{\text{will be displayed. Re-tap the word "sound" to change. To exit tap "<math>\square \Rightarrow$ " (= NEW GAME/GO).

09 EASY FUNCTION (Easy)

The computer always uses the opponent's time to compute its best response. To disable this advantage switch the display from 09 Easy = to 09 Easy by tappingon the word "Easy". To exit tap "D\(\rightarrow\)" (= NEW GAME/GO).

Note: Each time you start a new game the EASY function will be turned off.

10 RANDOM FUNCTION (Rand)

Every time you switch the computer on, the move with the highest rating is automatically chosen based on the depth of search which is determined by the level. This is always the case after the opening is finished. However, this may not always provide the desired variety. There are 4 options with RANDOM. The default is Rand 0 which means little randomness and will generally make the computer play its very best. The next options designated as Rand 1, Rand 2 and Rand 3 make the computer vary its play more and more. To change the RANDOM level, please tap on the word "Rand". Each tap will change to the next higher level and when the highest level Rand 3 is reached it will go back to Rand 0. To exit tap on the "D\(\there\)" (= NEW GAME/GO) square once briefly.

11 AUTOPLAY (Auto)

Note: Tapping any function key during the AUTOPLAY mode will stop the repeat cycle.

12 CHANGE CONTRAST (LCD)

To change the contrast tap on the word "LCD" when in the change contrast function. Each tap will change the contrast level. Levels range from 1 (low contrast) to 5 (strong contrast).

VII. EXAMPLES & EXPLANATIONS

The following are examples of the most important displays of the NOVAG chess computer.

0011	The computer is ready and it is your first move or the move for White ("01" for 1st move and "O" for White).
0011e2	Display after input of 1 st half move of White, indicating chess piece (here Pawn) and where you moved FROM.
0011e2-e4	Display after input of the destination square that you wish to play TO (from E2 to E4).
●01±c7-c5	Display of the computer's first counter-move (Black ["•"] Pawn from C7 to C5).
●00:02:27	COMPUTING INFO-Display: Shows the total time used so far for Black, while the computer is computing.

● b8-c6	COMPUTING INFO-Display: The computer's counter move.
● c1-e3	COMPUTING INFO-Display: The chess computer expects this move after the previous b8 c6.
• c5-b4	COMPUTING INFO-Display: On c1 e3 this would be the computer's reply.
• 00.03	COMPUTING INFO-Display: Score for Black currently being computed.
• d 05	COMPUTING INFO-Display: Number of half moves the computer has searched so far.
• 39/43	COMPUTING INFO-Display: Out of 43 variations there are still 39 to compute.
000:08:13	INFO-Display: Shows the total time used by White so far.
●00:09:14	INFO-Display: Shows the total time used so far for Black.
012	INFO-Display: Shows the total number of moves made so far.
●021c5xd4	The piece on square d4 gets captured by the Black Pawn in the second move from C5 to D4.
●251h4×93+	Black's Pawn move was from h4 and captures on the square g3 and announces check.
O mate 1	The computer announces a mate-in-1, the game is lost for you.
mate	The announcement of a checkmate.
flag	Time out.
error	Any illegal move or input will be indicated by the ERROR message.
resi9n	The chess computer resigns the game.
dr Stl	Shows the announcement for a draw, due to stalemate.
dr 3rd	Shows a draw with 3 time repetition of the position.
dr 50	Shows a draw according to the 50-move rule.
dr ins	Draw due to insufficient mating material (see F.I.D.E. rules).
2111	The computer asks into which piece your pawn will be promoted/underpromoted.
●12 a1	The chess computer promoted its pawn to a rook which moved to square a1.
be9in	Shows that the game is set back to the beginning of the game by activating the — Take Back icon or the RESTORE function.

end	The last move of the game has been made, there are no other moves stored in the memory.
01 Level	The SET LEVEL function has been chosen. You will see the selected level when tapping "Level".
Tr 40 mv5'	Tournament level 1 has been selected and will be effective after tapping the □⇒ NEWGAME/GO key.
Av 2s/mv	Average Time playing level 1 has been selected and will be effective after tapping the □⇒ NEWGAME/GO key.
Ft 2s/mv	Fixed Time playing level 1 has been selected and will be effective after tapping the □⇒ NEWGAME/GO key.
Sd 15min	Sudden Death playing level 4 has been selected and will be effective after tapping the □⇒ NEWGAME/GO key. Clocks will count down to zero time.
Fd 1 ply	Fixed Time level 1 has been selected and will be effective after tapping the □⇒ NEWGAME/GO key.
An 11 Ply	Analysis level 3 is selected and will be effective after tapping the □⇒ NEWGAME/GO key.
Ea 1 Ply 2×	Easy level 1 has been selected and will be effective after tapping the □⇒ NEWGAME/GO key.
B9 2 ply 2×	Easy level 1 is selected and will be effective after tapping the □⇒ NEWGAME/GO key.
In mate 4	A mate-in-4 is entered by using the SOLVE MATE Function.
Fn 2s/mv	Fun level 1 is selected and will be effective after tapping the □⇒ NEWGAME/GO key.
02 Setup	In SET UP you may remove or add any chess piece to make up a new position. By tapping the On/Off & Function key the chessboard will be cleared.
03 Flip BD	Change Colour.
04 Restore	Restore board position.
05 Book =	The chess computer will consult the opening book.
06 Ref =	The REFEREE-Function is activated .
07 AClock=	Auto clock function is turned on.
08 Sound =	The SOUND is switched on.
09 Easy =	Easy mode is activated.
10 Rand 0	The RANDOM Function is deactivated.
10 Rand 1	RANDOM level 1 is activated.
10 Rand 2	RANDOM level 2 is activated.

10	Rand	3	RANDOM level 3 is activated.
11	Auto	1	The AUTOPLAY function 1 is on and the chess computer will play 1 game against itself.
11	Auto	3	The AUTOPLAY function 3 is on and the chess computer will play against itself continuously.
11	Auto	0	The AUTOPLAY function is turned off.
12	LCD	5	Contrast level 5 has been selected.

VIII. CARE OF THE NOVAG CHESS COMPUTER:

Dirt and dust can be removed with a soft slightly damp cloth (please remove all batteries prior to cleaning the unit). Do NOT use any chemical solvents or other fluids or solvents on the unit or expose it to rain or moisture (it is not water proof!). Any damage caused by their use/ exposure invalidates the warranty. Always keep the chess computer in a dry and cool place (normal room temperature). Avoid exposing the computer to heat, e.g. spot lights, radiators, sunshine, etc. as this may lead to permanent damage caused by overheating which is not covered by the warranty. Be careful not to scratch the LCD screen and only use the supplied Pen, or specially designed pens for touch screens. Also be reminded that the LCD screen is made of glass and therefore the chess computer should not be dropped, exposed to any impact, or sat on as the glass may break! Breakage or scratching of the LCD screen is not covered by the limited warranty.

ADDITIONAL INFORMATION REGARDING WARRANTY:

For details regarding the warranty of this product and how to obtain warranty service please refer to the enclosed Warranty Card. In addition, Perfect Technology Ltd. or the Distributors of Novag branded products shall not be liable under the product's warranty if its testing and examination disclose that the alleged defect in the product does not exist or was caused by Customer's or any third person's misuse, neglect, improper installation or testing, unauthorised attempts to repair or modify, or any other cause beyond the range of the intended use, or by accident, fire, lightning, or other hazards or acts of God. The product's warranty does not cover physical damage to the surface of the product, including cracks or scratches on the LCD touch screen. The product's warranty does not apply when the malfunction results from the use of this product in conjunction with accessories, other products, or ancillary or peripheral equipment and Perfect Technology Ltd. or the Distributors of Novag branded products determine that there is no fault with the product itself. LIMITATION OF LIABILITY. To the full extent allowed by law Perfect Technology Ltd. also excludes for itself and its suppliers any liability, whether based in contract or tort (including negligence), for incidental, consequential, indirect, special, or punitive damages of any kind, or for loss of revenue or profits, loss of business, loss of information or data, or other financial loss arising out of or in connection with the sale, installation, maintenance, use, performance, failure, or interruption of this product, even if Perfect Technology Ltd. or the Distributors of Novag branded products have been advised of the possibility of such damages, and limits its liability to replacement or repair of the product or part at the option of Perfect Technology Ltd. or the Distributors of Novag branded products. This disclaimer of liability for damages will not be affected if any remedy provided herein shall fail of its essential purpose. GOVERNING LAW: The product's limited warranty shall be governed by the laws of the Hong Kong Special Administrative Region unless otherwise specified.

VIX. TROUBLE SHOOTING

All NOVAG computers are extensively tested before leaving the factory to ensure trouble free performance. However, if you encounter any problems during play, please check the following list first before calling your dealer or sending it in for repair or contacting us at our website: http://www.novag.com.

- The computer does not work and the LCD is blank: Check if your batteries have sufficient charge, always use heavy duty or alkaline batteries for reliable performance.
- The letters on the LCD display are faint and get dimmer as you use the NOVAG computer:
 - The batteries might be run down, please change them.
 - Change the contrast.
- 3. The computer locks up and will not respond to any icon tap: Please reset the computer by switching it off and removing the batteries. Then press the RESET button on the back on the unit below the back label with a pin like object. You may set it up again after a few seconds and continue using the computer normally.

X. RULES OF CHESS

I. GENERAL MOVES

- The two players must alternate in making one move at a time. The player with the white pieces moves first to start the game.
- 2. With the exception of castling (section II.1.), a move is the transfer of a piece from one square to another square which is either vacant or occupied by an enemy piece.
- No piece, except the Rook when castling and the Knight (section II.5) may cross a square occupied by another piece.
- 4. A piece moved to a square occupied by an enemy piece captures it as part of the same move. The captured piece must be immediately removed from the chessboard by the player making the capture.
- 5. When one player moves a piece into a position whereby he can attack the King, the King is in "Check" (announced by the LCD display) and must either:
- a) move the King,
- b) block the path of the attacking piece with another piece,
- c) or attack the attacking piece.
- 6. The game is over when there is no escape for the King from an attacking piece. This is known as "Checkmate" (the CHECK & MATE on LCD display).

II. INDIVIDUAL MOVES

1. KING

Except when castling, the King can move only one space to any adjoining square (including diagonally) which cannot be attacked by an enemy piece.

Castling is a move of both the King and either Rook which counts as a single move (of the King) and is executed as follows:

- The King is moved from its original square two squares toward either Rook on the same rank, and
- b) The Rook is moved to the opposite side of the King.

Castling cannot occur if:

- the King has already been moved.
- the Rook has already been moved.
- the King's original square or the square which the King must cross or the one which it is to occupy is attacked by an enemy piece.
- d) there is any piece between the King and the Rook.

The Queen can move to any square along the same rank, file or diagonal on which it stands (except as limited by Article I.3).

ROOK

The Rook can move to any square along the same rank or file on which it stands (except as limited by Article I.3)

BISHOP

The Bishop can move to any square along the same diagonal on which it stands (except as limited by Article 1.3).

5. KNIGHT
The Knight's move is in the shape of an "L", moving two squares horizontally vertically, and then one square at 90° angle from the first move. These two moves can be reversed (one square and then two) if desired.

PAWN

The Pawn can move either one or two squares forward on its original move, and then one square forward at any time afterward. When capturing, it advances one square diagonally (forward). When a Pawn reaches the last rank, it must be immediately exchanged for a Queen, Rook, Bishop, or a Knight of the same colour as the Pawn, at the player's choice and without taking into account the other pieces still remaining on the chessboard. This exchange is called a "promotion"

En Passant: A Pawn can attack a square crossed by an enemy Pawn which has been advanced two squares in one move from its original square as though the latter had been moved only one square. This capture may be made only on the move immediately following such an advance and is called capturing "en passant". (When your computer makes an en passant capture it will display the icon "ep".)

III. **HINTS & TIPS**

Get a feel for the values of different pieces, which will be useful when making decisions on captures

- Castle your King into safety as soon as possible.
- If you control the centre squares, this will give you the advantage. To do this, move your centre pawns and develop your Bishops and Knights early in the game.
- Take advantage of capture situations, particularly if you will gain material.
- Concentrate don't be caught off guard by your opponent!

NOVAG®

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