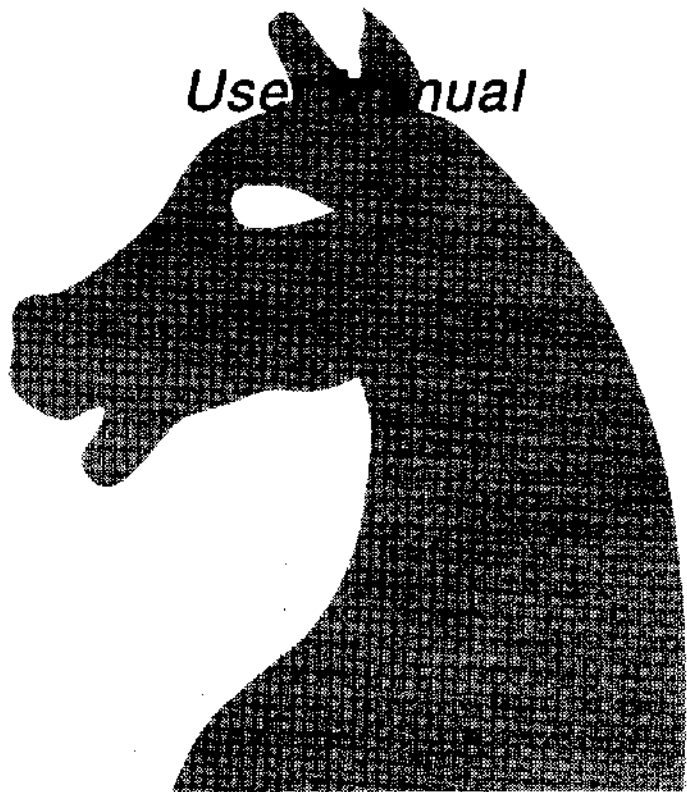


COMET CHALLENGE

CHESS COMPUTER

Krypton Regency

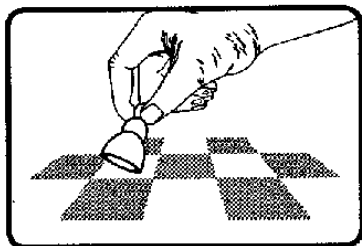
Use Manual



IMPORTANT INFORMATION

USE OF CHESS PIECES

- 1 If you are using pieces with magnets in the bases and your move does not seem to have registered, press down with the **EDGE** of the piece.



RESET SWITCH

- 2 Occasionally when you insert new batteries or connect an AC/DC adaptor, you may find that the computer acts abnormally in which case, push a thin rod into the "RESET" hole in the base of the computer and press down one or more times until the computer resumes normal operation.

WARNING

The chess pieces supplied with this chess computer may be small enough to be swallowed. Please keep the chess pieces out of the reach of small children.

NOT SUITABLE FOR CHILDREN UNDER AGE 3 YEARS.

INSTANT START

If you would like to play a game of chess against the computer immediately, without first reading the instruction manual, here is an "Instant Start" which tells you all that you need to know to get started.

INSERT BATTERIES Insert the batteries in the computer as specified by the label near the battery compartment remembering to ensure that the positive tip of the battery matches up with the + sign in the battery compartment.

SET UP THE CHESS PIECES Set up the chess pieces in their initial position with the white pieces nearest to you.

SWITCH ON Press the ON/OFF key. **IF YOU HAVE INSTALLED NEW BATTERIES AND THE COMPUTER DOES NOT RESPOND, PUSH A THIN OBJECT INTO THE "RESET" HOLE IN THE BASE OF THE COMPUTER AND PRESS DOWN ONCE.**

START THE GAME Press NEW GAME and hold it down for a few seconds. HELLO appears in the display, then the WELCOME message.

CHOOSE YOUR COLOUR If you want to play as White, press the MOVE key and the computer will suggest about its first move. If you are White make your first move.

MAKING MOVES Make your moves and those of the computer by pressing down with the piece on its current square. To capture, press down with the same piece on its new square. **USING PIECES WITH MAGNETS IN THE BASES** If your move does not seem to have registered, press down with the **EDGE** of the piece. The computer displays its moves, with the "from" square flashing in the display and then, after you have pressed the computer key for that square, it flashes the "to" square in the display and the piece completes its move.

SWITCH OFF AND SAVE THE POSITION When you have finished playing press the ON/OFF key. The computer will remember the position and the previous 16 moves (for the computer player). To resume play press the ON/OFF key again.

KEYS and DISPLAY

- Piece Keys** Press the appropriate piece key in set-up mode before putting that piece on its chosen square. The piece keys are also used when you wish to verify the positions of one or more pieces.
- NEW GAME CLEAR BD** Press the NEW GAME key twice to start a new game.
- The CLEAR BOARD function is used in SET-UP POSITION mode.
- SET-UP FEATURES** Press SET-UP to enter the mode for setting up or changing a position.
- The FEATURES function is used, after pressing the HINT/INFO key twice, to change the weightings of the various features in the program's evaluation function.
- MULTIMOVE ANALYSIS** Press MULTI-MOVE to allow you to enter all the moves for both players.
- After pressing the HINT/INFO key twice press ANALYSIS and then the HINT/INFO key once again, to make the computer display its thinking time, the move it currently thinks is best, its predicted continuation after that move, and how it assesses the position.
- HINT INFO** Press HINT/INFO once when it is your turn to move if you want the computer to make a suggestion as to what move you should make.
- Press HINT/INFO a second time to use INFO mode (you will see InFo on the display). You may then use ANALYSIS, FEATURES, SWAP BOARD, WHY NOT?, or STYLE, by pressing the appropriate key.
- STEP FWRD** Press STEP FORWARD if you have used the TAKE BACK key and now wish to reverse the process.
- The STEP FORWARD key is also used to move a white piece in SET-UP POSITION mode.
- TAKE BACK** Press TAKE BACK after the computer has made a move if you want to take back, up to the level of the last move (8 for each side).
- The TAKE BACK key is also used to move a black piece in SET-UP POSITION mode.
- After pressing the HINT/INFO key twice, press the TAKE BACK key to activate the HINT/INFO feature. You will see ? on the display. The computer may then make the WHY NOT? move. Press the TAKE BACK key to make the computer what reply it expected if you want to make the WHY NOT? move.
- MOVE SWAP BD** Press the MOVE key to make the computer make the next move. At the start of the game, press MOVE if you want to computer to move first.
- The SWAP BOARD function is used to swap the board to play Black from the bottom of the board.
- SOUND STYLE** Press SOUND to switch the sound on or off.
- The STYLE function is used, after pressing the HINT/INFO key once, to make the computer play a style more aggressive or more cautious.
- LEVEL** Press the LEVEL key to see the current playing level. Then press STEP FORWARD key to increase the level, or TAKE BACK key to decrease the level, or hold it down to increase the level more quickly, or hold it down to decrease the level more quickly.
- ON/OFF** Press the ON/OFF key to switch on or off the game. The game is resumed from the position where the ON/OFF key was last pressed.
- DISPLAY** The display shows all the information for all the features of your computer. A low battery icon indicates when the battery is low.

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INTRODUCTION

In this instruction manual we use WHITE and BLACK for the white square and black square symbols that appear on the computer's display. The display itself is called a crystal display).

[Some models also have lights around the lower edges of the board. These are used by the computer as an additional method of indicating a square on the board.

The piece names PAWN, KNIGHT, BISHOP, ROOK, and KING describe the symbols that appear on the LCD. The keys > and < represent these chess pieces.

We use > and < to represent the STEP FORWARD and STEP BACK keys.

1 THE BATTERIES AND POWER SUPPLY

Your chess computer works from batteries as specified near the battery compartment on the base of the computer. If you wish to insert new batteries, remove the plastic cover on the base of the computer and insert the batteries. Make sure that the polarity of the batteries is correct.

Some models may be operated using an AC/DC adaptor. For case information concerning the adaptor is indicated on the label on the base of the unit.

2 STARTING A GAME

Set up the pieces on the chess board in their starting positions. Press the NEW GAME key. The LCD will show "HELLO". The WHITE symbol on the LCD will come on since it is White's turn to move. The key used for the piece (see section 10) will be the same as that used for the piece.

If you are using new batteries for the first time, or if you are using a power adaptor and do not have any batteries in the computer, press the NEW GAME key.

when you switch on the computer the level will be set at 6 (instantaneous). **OCCASIONALLY WHEN YOU INSERT NEW BATTERIES YOU MAY FIND THAT THE COMPUTER ACTS ABNORMALLY, IN WHICH CASE PUSH A THIN OBJECT INTO THE "RESET" HOLE IN THE BASE OF THE COMPUTER AND PRESS DOWN ONCE.**

3 MAKING MOVES

While you are thinking, the computer will display your thinking time as described in the next section.

To make a move, press down gently on the square occupied by the piece you want to move. **IF YOU ARE USING PIECES WITH MAGNETS IN THE BASES AND YOUR MOVE DOES NOT SEEM TO HAVE REGISTERED, PRESS DOWN WITH THE EDGE OF THE PIECE.**

The computer gives a beep and you will now see the letter and number indicating the "from" square appear on the LCD, for example E2. At the same time the symbol corresponding to the piece on that square also appears on the LCD.

Two lights come on. The horizontal lights at the bottom of the computer are called "file" lights, the vertical lights at the left hand side of the computer are called "rank" lights. The two lights will indicate the square you have just pressed down. Then set the piece on the square you wish to move to, and press it lightly down again.

The computer will give another beep. It has now registered your move, and starts computing its reply.

To castle, carry out the king's move by pressing the "from" and "to" squares in the normal way, then make the rook's move in the same way, pressing on the "from" and "to" square.

4 COMPUTER MOVES

While the computer is thinking, it will flash the WHITE symbol or the BLACK symbol on the LCD, depending on which side it is playing.

It will also display the thinking time, incrementing every 10 levels 1-66 and 94-100 this is the time taken on the computer. On other levels it is the total time taken. (It displays the number of minutes and the number of seconds).

At the beginning of the game the computer will be thinking immediately because of its opening library. When the computer has decided on its move, it gives a beep, and displays on the LCD the "from" square (not flashing) and the "to" square (not flashing) of its move. At the same time it displays its colour symbol (not flashing) and the symbol of the piece it is moving.

It also switches on two lights. These two lights show the "from" square and the "to" square of the piece the computer wants to move.

Press gently on the "from" square and pick up the piece. The "from" and number of the "from" square stop flashing in the LCD and the "to" square start flashing.

The lights now change and show the square that the computer wants to move to.

Set the piece down on the "to" square, pressing it gently. The computer will now change the colour symbol on the LCD to show that it is your turn to move.

The two lights are now turned off.

The computer will also display your thinking time in minutes and seconds of its own.

5 CAPTURING MOVES

Captures are performed just like any other move. When the computer is pressed down on the "from" and "to" squares, when the piece is removed from the board without being captured, the computer makes a capture move it flashes the right symbol on the LCD when displaying the "from" and "to" squares on the LCD.

When making an *en passant* capture, the computer directs you to move the capturing pawn in the usual way. It then indicates the square from which the captured pawn is to be removed. Press down with this pawn as you remove it from the board.

6 PAWN PROMOTION

If you advance one of your pawns to the far side of the board you must promote it, as part of the same move, into a queen, rook, bishop or knight, whichever you prefer.

When you complete a pawn move which puts your pawn on the furthest rank of the board, you will see the QUEEN symbol flashing on the LCD. You may then confirm that you wish to promote your pawn to a queen by pressing the QUEEN key, whereupon the computer will beep and will then start to compute its reply move in the normal way.

If you wish to promote to a piece other than a queen, press the appropriate key (ROOK, BISHOP or KNIGHT). You will need to press this key twice, once to indicate your choice (which will then be shown on the LCD with the appropriate symbol flashing) and once to confirm the choice.

If the computer promotes one of its pawns it will flash the appropriate piece symbol on the LCD. You must then press the corresponding piece key to tell the computer that you have noted its choice of promotion piece.

7 ILLEGAL MOVES

If you try to make an illegal or impossible move, or try to do something else which is not possible, you will hear the error signal and the LCD will display "Error" briefly. Whenever you hear this signal and see the Error message, it means that you have done something wrong, and that your last move entry has been ignored.

If, for example, you have tried to make an illegal move, you can just continue and place the piece on a legal square; or you can replace it on its original square (pressing it down), and move a different piece. You will also hear the error signal if you have tried to move one of your opponent's pieces.

8 CHECK, MATE and STALEMATE

When the computer gives check it will sound immediately after you finish moving the computer's displays the KING symbol, flashing slowly, until you move.

When you give check you will not hear the beep. The KING symbol will flash slowly until the computer indicates a move.

If the computer checkmates you it will sound immediately after you finish moving the computer's displays the king symbol flashing quickly until you press NEW GAME.

When you give checkmate you will not hear the beep. The KING symbol will flash quickly until you press NEW GAME.

The computer can announce mate in advance. For example, if you have carried out a move for the computer, the LCD will display

1:0 3

This means that the computer, playing White, has forced checkmate within three moves including the move just made. ("1:0", which is displayed flashing, means "White won". If a forced mate had been found for Black, the display would be "0:1".) The mate announcement remains on the LCD for a few seconds, accompanied by a quick beep.

If either player is stalemated the LCD will show:

= S

9 DRAW BY THREEFOLD REPETITION OR FIFTY-MOVE RULE

The rules of chess give a player the right to claim a draw if a position (it must be the same in all respects, with the same player to move) occurs three times.

If it detects a threefold repetition, the computer will display:

= 3

This shows you that the computer is entitled to claim a draw. However, you may disregard the claim if you wish. After about 8 seconds the clock display reappears, and the game may continue; if it is the computer's turn, it will compute and play a move.

NOTE: The computer can remember only the last 8 moves by each player, so it will detect a draw by threefold repetition only if the same pieces were moved back and forth on successive moves.

A draw may also be claimed if no capture is made and no pawn is moved during a sequence of fifty moves by each player. To indicate a draw of this type, the LCD will show:

= 50

But again the clock display will reappear after a few seconds, and you may continue playing if you wish.

10 LEVELS

Your computer has 100 different levels. Levels 1-94 are used when you are playing a game against the computer. Levels 95-100 are used to make your computer solve chess problems where one player must force mate within a certain number of moves.

The Playing Levels

At the start of the game the computer uses its openings "book" which contains more than 5,300 moves, and when it is still in its openings book the program will move instantly. Once the program is out of its openings book the thinking times for the various playing levels are:

LEVEL TIME PER MOVE

1 User Adaptable The computer calculates the time you have taken for 6 moves and will use the same average time to compute the next move down. If you start quickly the computer will compute more quickly.

EASY LEVELS

Levels 2-6 are the fastest and weakest levels and you respond almost instantly on every move. The computer improves progressively from level 2 (the weakest level) to level 6 (the strongest of this group). When the batteries or when you switch on the computer with the adaptor, it will be set to level 6.

2 instantaneous
3 instantaneous
4 instantaneous
5 instantaneous
6 instantaneous

FIXED TIME LEVELS

The computer will always respond in exactly the specified time, unless it has only one legal move in which case it responds instantly, or unless it sees that it can force checkmate in which case it will make its move as soon as it finds the mating sequence.

7 2 secs
8 3 secs
9 4 secs
10 5 secs
11 6 secs
12 7 secs
13 8 secs
14 9 secs
15 10 secs
16 11 secs
17 12 secs

18	13 secs
19	14 secs
20	15 secs
21	20 secs
22	25 secs
23	30 secs
24	35 secs
25	40 secs
26	45 secs
27	50 secs
28	60 secs
29	1 min 15 secs
30	1 min 30 secs
31	1 min 45 secs
32	2 mins
33	2 mins 15 secs
34	2 mins 30 secs
35	2 mins 45 secs
36	3 mins

AVERAGE TIME LEVELS

The computer will take an average of the specified amount of time. If it has only one legal move it will respond instantly.

37	2 secs
38	3 secs
39	4 secs
40	5 secs
41	6 secs
42	7 secs
43	8 secs
44	9 secs
45	10 secs
46	11 secs
47	12 secs
48	13 secs
49	14 secs
50	15 secs
51	20 secs
52	25 secs

53	30 secs
54	35 secs
55	40 secs
56	45 secs
57	50 secs
58	60 secs
59	1 min 15 secs
60	1 min 30 secs
61	1 min 45 secs
62	2 mins
63	2 mins 15 secs
64	2 mins 30 secs
65	2 mins 45 secs
66	3 mins

COUNTDOWN LEVELS

The computer will try to make all of its moves in time. When set to any of these levels the computer will show the total amount of time taken by each of the player's moves (the amount of time taken over a particular move). When the computer consumes the permitted total time a sour beep sounds and the game can continue after that.

67	2 minutes for all the moves
68	3 mins
69	4 mins
70	5 mins
71	6 mins
72	7 mins
73	8 mins
74	9 mins
75	10 mins
76	15 mins
77	20 mins
78	25 mins
79	30 mins
80	35 mins
81	40 mins
82	45 mins
83	50 mins
84	55 mins

85	60 mins
86	75 mins
87	90 mins
88	105 mins
89	120 mins

TOURNAMENT LEVELS

The computer will play within the specified rate. The clocks will show the total time consumed. Time saved during the first time period can be added to the next time period.

90	60 moves every 60 minutes
91	40 moves every 60 minutes
92	40 moves in 120 minutes then 20 moves every 60 minutes
93	20 moves every 60 minutes

INFINITE LEVEL

On level 94 the computer will normally go on thinking until you press the MOVE key. It will not otherwise move, unless:

- it has a "book" move available;
- it runs out of memory for its analysis of the position; or
- it completes the analysis to its own satisfaction, e.g. by finding a forced mate.

Problem Levels

Levels 95-100 are problem solving levels. For more information, see section 19.

95	mate in 1 move
96	mate in 2 moves
97	mate in 3 moves
98	mate in 4 moves

99	mate in 5 moves
100	mate in 6 moves

Changing Levels

If it is your turn to move and you press the LEVEL key, the computer will display the current level on the LCD. You will then press the < key followed by the level number.

You may now increase or decrease the level number by pressing the < and > keys. Each time you press the > key the level number is increased by 1 (from level 100 it goes back to level 99). Each time you press the < key the level is decreased by 1. If you press these keys the level number will jump by 10 once you reach level 90 or 110.

When the correct level is set you should press the MOVE key. The computer will beep and you will be ready to move.

11 SOUNDS

Normally, when the computer is not thinking, you will hear a beep every time you press a key or you press down on a key on the board. If you press an invalid key (for example a key for an illegal move) you will hear the error sound.

If you prefer your computer to operate without its sounds, you can press the SOUND key. The sounds can be switched on or off by pressing this key again. When the sound is switched on, you will hear a double beep, as confirmation.

12 CHANGING SIDES

You may change sides whenever it is your turn to move. Press the MOVE key and the computer changes sides and starts thinking. The next move. When it makes its move it will expect you to reply move, but you could press the MOVE key again. In this way you could make the computer play the white

13 TAKING BACK MOVES

If you press down one of your pieces but then decide not to move it after all, press on the square a second time. The letter and number of the "from" square will disappear from the LCD, as will the symbol of the piece on that square.

The lights indicating the "from" square will go out.

You may now move a different piece.

If you have already completed a move and the computer has replied (and possibly a few more moves have been made), you may press the < key when it is your turn to move. The computer then indicates on the LCD the "to" square of the last move flashing, the "from" square (not flashing) and the symbol of the moving piece.

The lights indicating the "to" square will now be on.

Press down on the "to" square with the piece which is already there, whereupon the LCD stops flashing the "to" square and starts flashing the "from" square.

The lights for the "to" square go off and those for the "from" square come on.

Move the piece back to the "from" square, pressing down on this square.

If the move you have just taken back was a capturing move, once you have moved the capturing piece back to its "from" square the symbol for the captured piece will be flashing on the LCD. You then take the appropriate piece and press it down gently on the "to" square of the move you have just taken back. When you press on this square the piece symbol will go out. The rank and file lights indicating the "to" square also go out.

Note that in the case of an en passant capture the captured pawn does not get replaced on the "to" square of the capturing pawn.

After you have taken back a move you may wish to take back more moves. The computer can take back up to 16 moves, 8 for each player.

14 STEPPING FORWARD

After using take-back, you may press the > key to go forward. The procedure is the opposite of take-back, i.e. the computer indicates the "from" square followed by the "to" square. You may then play from any of the positions reached during a take-back sequence forward, simply by making a move or pressing the > key.

15 HINT

If it is your turn to move or if you are in multi-section 20) and you press the HINT/INFO key, the computer will give you advice on what to move. When you press HINT/INFO the computer will indicate its suggested move by displaying the rank and file on the LCD, preceded by the letter H (in the first digit). Also, the LEDs for the "from" and "to" squares will flash.

If the position is checkmate and you press the HINT/INFO key, the letter H will appear (in the first digit) followed by 1-0 (if White won) or 0-1 (if Black won). If the position is a draw you will see H-D.

While the letter H is displayed on the LCD you can step back through the sequence of moves simply by making a move. This can be either the suggested move or a move of your own choice. Alternatively, pressing the HINT/INFO key when the suggested move is shown will normally display a possible reply. Pressing the HINT/INFO key then further presses on > may take you further along the sequence of moves. To step back through the same sequence of moves, press the HINT/INFO key.

If you press HINT/INFO a second time you will see the rank and file of the suggested move in the first 4 digits of the LCD. This tells you that you are in INFO mode and can use ANALYSIS, FEATURES, STYLE, or WHY NOT? by pressing the appropriate key. If you wish to exit from INFO mode press the HINT/INFO key. To revert to normal playing mode.

16 MOVE NOW

If you do not want to allow the computer the full use of its thinking time, press MOVE while it is thinking. The computer will cut short its search and make the best move it has found so far.

17 VERIFY POSITION

Sometimes you may wish to make sure that all of the pieces on your own board are in the same places as the computer thinks they are on its own internal board.

If it is your turn to move and you press one of the piece type keys, the computer will turn on the LCD symbol corresponding to this piece type and the WHITE symbol (assuming there is at least one white piece of this type on the board). The LCD will also show the "first" square (scanning from a1, b1, c1, ... a2, b2, ... etc) occupied by a piece of this type. It will also turn on the lights indicating the same square.

If you press the same piece type key again, the computer will show the next square occupied by a piece of this type and colour. Having cycled through all the pieces of the same type and colour the computer will then display the opposite colour symbol, and one by one it will display the squares occupied by pieces of the same type but the opposite colour.

If there is no piece of the type selected anywhere on the board then a double beep will sound and no square will be displayed.

In this case no rank or file lights will be displayed.

Once the computer has cycled through all the squares which are occupied by the selected piece type, the next time you press the piece type key it will return to the "first" square again.

While you are in "verify position" mode, pressing any key other than a piece type key (or ON/OFF) will exit this mode.

18 SET UP POSITION

You may sometimes want to set up a position, for example from a chess book, magazine or newspaper column.

If you press the SET UP key the computer goes into SET UP mode and you can then modify the current position or set up a new one. When you are in SET UP mode the "set up" symbol (two black circles) will be displayed inside the 3rd digit on the LCD. In SET UP mode, if you press the CLEAR BOARD key (or the GAME key works as CLEAR BOARD when the computer is in set up mode) there will be a double beep and the LCD will display 5 question mark symbols. If you then press CLEAR BOARD a second time the whole board will be cleared.

Once you have gone into SET UP mode, in order to set up a piece on the board or to remove them, press a piece type key. The piece type symbol will appear on the LCD. If you press a piece type key a square:

- (a) A single beep will sound if the square was previously empty. You have now put a piece on this square.
- (b) A double beep will sound if a piece of the selected colour was already on this square. The piece will be deleted from the board and the square will be unoccupied.
- (c) A triple beep will sound if some other piece of the selected colour was on that square, in which case the selected piece will have been replaced by the selected piece.

In each case, the colour of the selected piece which will be put on the board corresponds to whichever of the WHITE and BLACK symbols is on the LCD at this time.

While you are in SET UP mode, in order to change the piece which will next be put on the board, press the piece type key for the black or the > key to indicate white.

While you are in SET UP mode an error signal will be heard and the Error warning will be displayed on the LCD if you try to create an illegal position. This will happen if you attempt to place too many pieces of the same type and colour on the board, or if you try to place a piece where it could never be legal in a game. Note that if you try, for example, to place a second white king on the square where the white queen is, the computer will not allow the second king to be placed but it will nonetheless clear the white queen from that square.

When you have finished setting up your desired position, you should exit from SET UP mode by pressing the SET UP key again. Before you do this make sure that whichever of the WHITE and BLACK symbols is on corresponds to the colour whose turn it is to move next. If the wrong colour's symbol is on, simply press the < or > key.

The computer will not allow you to exit from SET UP mode until you have a legal position on the board. If you try to exit from SET UP when the position is illegal (for example, if there is not exactly one white king and one black king on the board, or if the player whose turn it is to move next could capture the opposing king) an error will be signalled.

If you try to exit from SET UP mode but the computer prevents you from doing so, you may wish to verify exactly what pieces are on the board. You can do this by pressing the keys for the various pieces in the usual way, except that after verifying pieces of one colour you will need to press < or > to switch colour.

19 CHESS PROBLEMS

You may set up a problem position on your computer using SET UP mode, and then set it on level 95, 96, 97, 98, 99 or 100, according to whether the problem requires a mate in 1,2,3,4,5 or 6 moves by the first player.

If you set the computer to try and solve one of these problems, and if it finds a move which forces mate in the prescribed number of moves or fewer, the computer will display this move in the usual way, as though it were announcing its move in a game. You should then make the computer's move and try to find a defence to the mate. You can play all the way through until the computer mates you, just as

though you were playing a game.

If the computer finds that there is no forced mate in the prescribed number of moves, it will simply make the best move for itself; then the LCD will display == == ==

20 MULTI MOVE

Pressing the MULTI MOVE key places the computer in the MULTI MOVE player mode. In this mode the computer will not move until you may enter moves for both players. This feature may be used for a particular opening sequence, to replay a game to a particular position or to use the computer as a normal chess board, allowing you to play against a friend while the computer makes sure that all moves are legal and can offer hints if you wish. While the computer is in MULTI MOVE mode the : symbol towards the left of the LCD will be on. Note that the MOVE key is inoperative in this mode.

To exit from MULTI MOVE mode press the key for the colour whose turn when you are not in the middle of making a move.

21 MEMORY

If you switch your computer off in the middle of a game, you can resume your turn to move, by pressing the ON/OFF button. The computer will display the position and the past 16 moves (8 for each player). Pressing the ON button you can resume the game from where you left off.

22 BATTERY LOW INDICATOR

If you are running your chess computer from batteries and the batteries are low you will see BATT displayed on the LCD. This is the "battery low" indicator. When this happens you will have a small amount of battery life remaining, but we recommend that you replace the batteries as soon as possible so that you will not run out of batteries during a game.

23 AUTO POWER DOWN

If it is not the computer's turn to move and you do not press a key or move a piece for 4 minutes the computer will turn itself off. To continue from where you left off press the ON/OFF key.

Note that when you are using one of the tournament playing levels (90,91,92 or 93) the computer will not turn itself off if you think for a long time. This is because in a human chess tournament the players sometimes think for more than 4 minutes over a move.

24 USER PROGRAMMABLE EVALUATION FUNCTION

Every chess program needs to know how to evaluate a chess position. It does so using an "Evaluation Function" which gives a point-score to various features of the position, such as king attack, material, mobility, centre control, etc. Associated with each of these features is a "weighting" which tells the program how much importance to attach to a feature.

Your chess computer allows you to change these weightings so that you, the user, are programming the computer to play in a particular way. For each feature the normal weighting is 10. The minimum weighting is 0 (when this feature would be completely ignored) and the maximum is 99 (when this feature will be given 10 times its normal importance). The features are:

FEATURE NUMBER	FEATURE
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1	<i>Pin against the enemy queen.</i>
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[Note: The bigger the weighting, the more the program likes to pin one of the enemy pieces against the enemy queen. For example, if you are playing Black and have your queen on d8, nothing on e7 and a knight on f6, the program would like to have a white bishop on g5, "pinning" the black knight against your queen. Conversely, if the weighting is big then the program will dislike having its own pieces pinned against its queen even more than normal.]

2	<i>Pawn structure around the king.</i>
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[Note: The bigger the weighting, the more the program likes to have a safe pawn structure around its king and the less it likes to have a castled K-side so that its king is on g1, pawns on, say f2, g2 and h2; or f2, g2 and h3. It will like its g-pawn on g4 and its h-pawn on h4 where there is more safety to its king.]

3	<i>King attack by pieces.</i>
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[Note: The bigger the weighting the more the program likes to attack its opponent's king with its own pieces.]

4	<i>Aggressive play by White's pieces.</i>
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5	<i>Aggressive play by Black's pieces.</i>
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[Note: A big weighting will encourage a player's pieces to be more aggressive than normal.]

6	<i>Doubled pawns.</i>
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[Note: The bigger the weighting the more the program likes to have doubled pawns (two of its own pawns on the same file) and the more it will like to double its opponent's pawns.

7	<i>Rooks on open and half-open files.</i>
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[Note: The bigger the weighting the more the program likes to place its rooks on open files (files which have no pawns of either colour), and on half-open files (files which have no pawns of one of its own colours).]

Changing the Weighting of the Evaluation Function

In order to change the weightings of one or more of the features in the program's evaluation function, press HINT/INFO twice. The LCD will now display:

InFo

Now press SETUP/FEATURES to go into "change weightings" mode. The LCD will display something like:

F 1 10

where the numbers on the right is the current setting for the weighting of feature 1. Each time you press the SETUP/FEATURES key, the feature number will increase (it goes from 7 back to 1 again). To change the weighting for a feature, press SETUP/FEATURES enough times until you see the appropriate feature number immediately after the letter F. Then press > or < to change the weighting of this feature.

When you have set the weighting for a feature you may press the SETUP/FEATURES key again to change the weighting for another feature, or you may press HINT/INFO to take you out of "change weightings" mode. When you quit "change weightings" mode the new weightings will be used until they are changed again (or until you replace the batteries or disconnect your power adaptor, if you are using one).

As an example of the fun you can have, try changing the weighting of the "king attack" feature to 99 for both White and Black. This will make the program play very aggressively.

Note that the computer will probably play at its best when you use the normal values for all the weightings. When you change the weightings you may make the computer play less well.

25 ANALYSIS

When the "analysis" feature is switched on, the computer will tell you what it is thinking about and how it assesses the position. Press HINT/INFO twice and the LCD will display:

InFo

Now press MULTI-MOVE/ANALYSIS and the LCD will display:

A

Now press HINT/INFO again and continue to play.

While the computer is thinking (but not when it is actually moving) the LCD will cycle through the following information:

- [i] The computer's thinking time
 - [ii] The move it is currently thinking about playing
 - [iii] The move it expects you to make in reply
 - [iv] The move it is currently thinking about making in response to your reply (if the display is "—", the computer is currently chosen any particular move to analyze in depth)
 - [v] Its current assessment of the score for the position. The score is shown before the score shows that the computer thinks it is in a poor position. The numerical part of the score is in hundredths of a pawn, for example 2.64 means the computer thinks it is the equivalent of 2.64 pawns, while -11.57 means that it thinks it is losing by the equivalent of 11.57 pawns.
 - [vi] The computer's thinking time
- And so on.

To switch off the "analysis" feature, simply repeat the above procedure. Press HINT/INFO twice, press MULTI-MOVE/ANALYSIS and then HINT/INFO once again.

26 WHY NOT?

After the computer has made a move you can ask it the question: "Why did you not play" and suggest a different move. The computer will then tell you what it expected you to play in reply if it had chosen your suggested move. (This will not always be the best move but it will be a move which the computer considered strong enough to counteract your suggested move.)

To go into "Why Not?" mode, press HINT/INFO twice and the display will show:

Info

Press < and take back the computer's last move in the usual way (see section 13). When you have completed the takeback procedure the LCD will display ?

Now make the "Why Not?" move and the computer will then display its predicted reply on the LCD.

When you have seen what move the computer expected as your reply to the "Why Not?" move, you should take back the "Why Not?" move by pressing < and following the usual procedure again (section 13). You may now press the > key to see the computer display the move it actually played in the game (preceded by a ?) and you can then make that move and continue the game. Alternatively you may try a different "Why Not?" move.

27 SWAP BOARD

Sometimes you may find it more convenient when playing Black to have the black pieces at the bottom of the board, playing "up the board". You may do so by swapping round all the pieces and then:

Press HINT/INFO twice to display **Info**

Press MOVE and you will see the letter b.

Press HINT/INFO and you may now start to play. The board will have swapped around all the pieces on its internal

WARNING !!

When you swap the board around remember that White's nearest, left-hand corner is always a1, and Black's nearest left-hand corner is always h8. When Black moves from the bottom of the board the letters a-h are reversed (a-h left) and the numbers 1-8 are reversed (1 at the top), and numbers printed on the board do not apply. Also the board around while in the middle of a game will be different. You verify the position before continuing the game.

28 CHANGING STYLES

Your computer can play in 9 different "styles" ranging from cautious play when the program is White and ultra-cautious when it is Black (style number 1), to ultra aggressive play when the program is White and ultra-cautious play when it is Black (style number 9). The normal style of play is number 5.

To change style, first press HINT/INFO twice and the display will show **Info**

Press SOUND/STYLE and you will see S in the first position on the LCD while the current style number is displayed in the second position.

Now use the < and > keys to change the style number. When you have selected the new style number press HINT/INFO twice to start the game.

Note that the computer's normal style (number 5) will be the strongest play. When you change to a different style the computer's play may be reduced.