

Touch 8 Chess & Games



User Manual

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RESET SWITCH

The Reset Switch is a built-in specification of this product and is accessible through the base of the unit. To reset the computer, lightly press down the reset switch once.

This product is not designed to be immune to the effects of electrostatic discharge, strong electromagnetic radiation or other electrical disturbances since malfunction under such conditions is non-critical. The reset switch is included in the design to allow unit to be reset to normal operation and a new game started in the event of malfunction.

<p>This Product conforms to the EMC-Requirements as laid down by the Council Directive 89/336/eec.</p>

Please retain this information for future reference

PART 1: INTRODUCTION

1.1 YOUR Touch 8 Chess & Games COMPUTER

Touch 8 Chess & Games can play 8 different games:--

Chess	Fox and Geese
Checkers (Draughts)	Grasshopper
Reversi	Nim
Four-in-a-Row	Northcote's Game

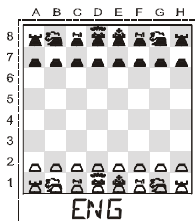
After reading Part 1 of this manual, go straight to Part 3 if you are sure you know the rules of the game you want to play.

1.2 INSERTING THE BATTERIES

The computer uses three "AAA" or "LR03" batteries. Insert them in the compartment on the underside, making sure each battery is the right way round (the "+" sign matching up with a "+" inside the compartment). You should then hear a sound signal (a sequence of rising notes). The computer's liquid crystal display (LCD) should show the

starting position for a game of Chess – like this:

*If the display doesn't look like this, press the **RESET** switch on the underside.*



The abbreviation "**ENG**", which is "flashing" on and off, asks if you want the computer to display its messages in English. To answer "yes", touch the word **Enter** in the bottom right-hand corner of the display. The best way to do this is to press lightly with the tip of a thin object like the dummy pen which is supplied with the computer.

If instead you want a different language, keep touching the ▲ or ▼ symbol (located on the left of **Enter**), until the desired language is shown. Then touch **Enter**. There are 7 languages available:

ENG = English

FRA = French

ESP = Spanish

POR = Portuguese

DT = German

ITA = Italian

NL = Dutch

1.3 THE LIQUID CRYSTAL DISPLAY (LCD)

The display consists of the 8x8 game board and also, below it, an area where messages are shown.

THE BOARD

Notice the letters and numbers round the edges. A horizontal row of eight squares is called a *rank*; the ranks are numbered from 1 to 8. A vertical column is called a *file*; the files are identified by the letters A-H. A square is identified by its co-ordinates, i.e. the letter of its file and the number of its rank. For example, the white king starts the game on e1.

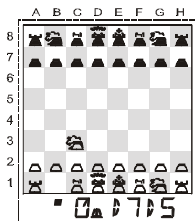
Each square is "sensitive", i.e. it responds to a light touch. When making a move, you simply touch the squares that your piece is moving *from* and *to*, using the tip of the dummy pen. A valid touch is acknowledged with a "beep". If you touch the wrong part of the display (e.g. a square you cannot legally move to), the computer gives its "error" signal -- a low buzz. Simply continue by touching the right place.

THE MESSAGE AREA

When the computer carries out its own move, the co-ordinates of the "from" and "to" squares are

displayed. While a move is being computed, a "clock" symbol with rotating "hand" is shown.

The computer is thinking of moving its pawn from d7 to d5.



Further information is supplied by the following symbols, which appear when appropriate on the left of the message area:

- This is the "White" symbol, showing that the player with the white pieces moves next.
- This is displayed when Black is to move.
- ⊙ This shows that the board is inverted: Black is playing "up" in Chess or "down" in Checkers, etc.
- # This is displayed when you are "setting up" a position -- see *Section 4.7*.
- + In Chess, this shows that a king is in check.
- ↑ This symbol shows that the computer is in "referee" mode, i.e. the user can make moves for both White and Black. See *Section 4.8*.

Like the playing board, the message area is "sensitive" -- there are some instructions that you give by touching it. For instance, at the start of a game of Chess you can touch the left half of the message area to make the computer play White.

1.4 THE CONTROLS

THE "START" BUTTON

This switches the computer on. If it is on already, pressing **START** provides you with a "menu" of commands for beginning a new game, altering the "level" of play, etc. (See Section 4.4.)

Esc ▼ ▲ Enter

These 4 "icons" respond to a touch, like the squares on the playing board.

The ▲ and ▼ icons have several functions, such as taking back and replaying moves (see Section 4.3). Whenever an item in the message area is "flashing" on and off, it can be changed by touching either of these icons. If e.g. a number is flashing, a brief touch on ▲ or ▼ will increase or decrease it by 1. If you keep the pen held against the icon, the number increases or decreases more quickly. Full details are in Parts 3 and 4 of this manual.

Enter is used to select an item from the "menu" (see *Sections 4.4* and *4.8*), to continue an operation, or to answer "yes" to a question, etc.

Esc is used to cancel an operation or answer "no" to a question, etc.

THE "HELP" BUTTON

Any time you want help in operating the computer, you can press the **HELP** button. A message will "scroll" across the display, telling you what the main possibilities are at that moment. If you want to clear the message while it is still scrolling, touch **Esc** (or any other part of the display).

1.5 SWITCHING ON AND OFF

To switch the computer off, press the **START** and **HELP** buttons together. Alternatively:

Press **START** (display: **NG**)

Touch **▲** (display: **OFF**), then **Enter**.

Normally if you leave it for 4 minutes without touching the display or pressing a button, the computer will switch off automatically -- unless it is in the middle of computing a move.

To switch on again, simply press **START**.








PART 2: THE RULES OF THE GAMES

2.1 HOW TO PLAY CHESS

THE CHESSBOARD AND PIECES

Chess is played between two opponents using a chequered board of 64 squares. Each of the players ("White" and "Black") begins with 16 chessmen, or pieces, of his own colour.

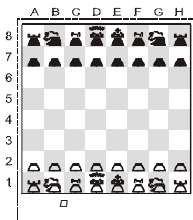
The pieces are of 6 types. At the start, each player has one king, one queen, two rooks, two bishops, two knights and eight pawns. On your computer's LCD (chessboard and message area), they are represented like this:

King	   	Bishop	   
Queen	   	Knight	   
Rook	   	Pawn	   

The most important piece is the king, since the object of the game is to put your opponent's king in a position where it cannot avoid being captured.

At the start of the game, the pieces are arranged like this:--

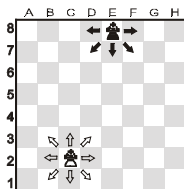
Note that each player has a light-coloured ("white") square in the bottom corner on his right; also that each queen is on a square of its own colour.



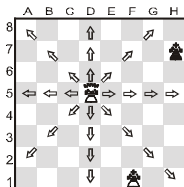
THE MOVES

White makes the first move, then the players move alternately. When it is his turn, a player must move one of his pieces onto a square which is either vacant or occupied by an enemy piece. In the latter case the enemy piece is "captured", i.e. removed from the board. Each type of piece has its characteristic way of moving.

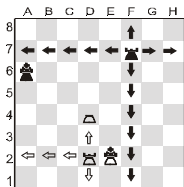
- (a) The king moves one square at a time, in any direction -- forwards, backwards, sideways or diagonally.



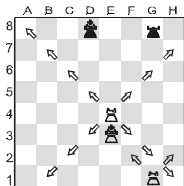
- (b) The queen can move any number of squares at once, in a straight line -- horizontally, vertically or diagonally.



- (c) The rook moves horizontally or vertically, any number of squares at once.



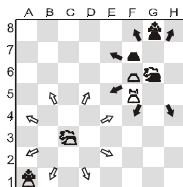
- (d) The bishop moves diagonally, any number of squares at a time.



The queen, rook and bishop can travel from one end of the board to the other in a single move, but they cannot "jump across" another piece. The sole

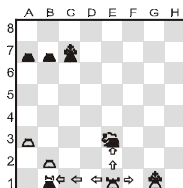
exception (where the rook "jumps over" the king) is the special move known as "castling" -- as will be explained.

- (e) The knight's move is like an "L-shape": two squares horizontally or vertically, then one square at right-angles. The knight is able to jump over other pieces (of either colour).



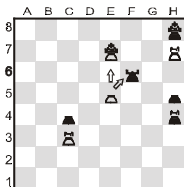
The pieces we have dealt with so far can capture enemy pieces by moving in their usual way.

Here, the white rook may capture the black bishop or knight (or move to any of the other squares indicated).



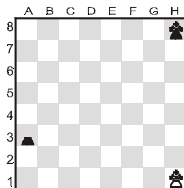
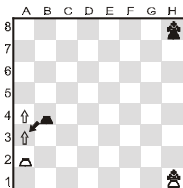
- (f) The ordinary move of the pawn is simply one square straight forward. Unlike the other pieces, it cannot retreat. When making a capture, the pawn moves one square diagonally forward.

In this position, the white pawn may move one square forward or capture the black rook. The black pawns cannot move.



On its first move, the pawn may go two squares straight forward if the player wishes (and the two squares ahead are vacant). There are also 2 more special kinds of pawn move: the capture *en passant* (French for "in passing"), and pawn promotion.

Suppose that one of your pawns is on its starting square, and there is an enemy pawn ready to capture it if it moves one square forward. The rules state that even if your pawn goes two squares forward, the opposing pawn may still capture it on the next move (but not later), just as if it had only advanced one square.



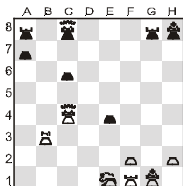
The white pawn can advance one square or two. In either case the black pawn may capture it, giving the position on the right.

On reaching the far end of the board, a pawn is "promoted", i.e. changed into a queen, rook, bishop or knight. The player chooses which piece he wants (normally a queen), and places it on the square to which his pawn has just advanced. The pawn is removed from the board.

CHECK AND CHECKMATE -- WINNING THE GAME

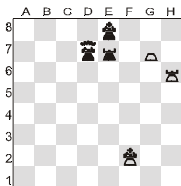
A piece is said to be under attack if an enemy piece is in a position to capture it next move. (Also a square may be "under attack", meaning that if you moved a piece there it could be captured.) If your opponent's last move has placed your king under attack, the king is said to be in check. You must now move out of check. A move which leaves (or puts) your own king under attack is illegal.

Here, White's king is in check from the black rook. White has 3 possible moves: he can move his king into the corner, place his knight in front of the



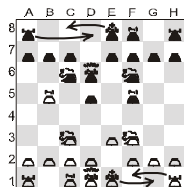
king, or capture the rook with his queen. If a player whose king is in check is unable to move out of check, the game is over. His opponent has delivered checkmate (or "mate"), and has won.

In this position, White can deliver checkmate by promoting his pawn to a queen.

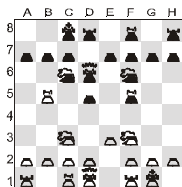


CASTLING

Castling is a special move which a player makes with his king and one of his rooks. The king moves two squares towards the rook; the rook jumps over the king, landing on the square next to it. See the next two diagrams.



Before castling.

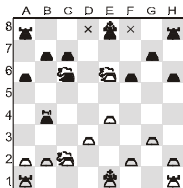


White has castled king's side;
Black has castled queen's side.

Note carefully that a player may *not* castle if:

- (a) there is any piece (of either colour) in between the king and the rook; or
- (b) the king, or the rook with which the player wants to castle, has moved earlier in the game; or
- (c) the king is at present in check; or
- (d) the square over which the king must pass (or, of course, the square where the king would arrive) is under attack from an enemy piece.

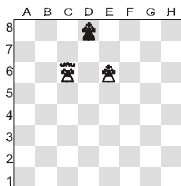
White cannot castle because he is in check. However, if he replies to the check by capturing the black bishop, he may castle later if he wishes. Black cannot castle next move (on either side), because his king would be crossing a square attacked by the white knight.



STALEMATE -- DRAWN GAME

If the player to move cannot make any legal move *and his king is not in check*, the game is a draw. This is called stalemate.

Here, it is Black's move. His king is not in check, but any move he makes with it would put it in check. Black therefore has no legal moves; he is stalemated, and the game is a draw.



A draw may also be claimed if (a) exactly the same position occurs three times, with the same player to move; or (b) during a sequence of 50 moves, no capture is made and no pawn is advanced. (For counting, "one move" means a move by one player together with his opponent's reply.)

A draw may also come about simply by agreement between the players.

HINT FOR BEGINNERS

Obviously the various types of piece have different powers and values. The following table will serve as a useful guide: --

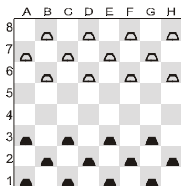
Pawn = 1 point	Rook = 5 points
Knight = 3 points	Queen = 9 points
Bishop = 3 points	

2.2 HOW TO PLAY CHECKERS (DRAUGHTS)

THE CHECKERS BOARD AND PIECES

Checkers (or Draughts) is played on a chequered board of 8x8 squares, but the pieces only move on squares of one colour (normally the dark squares). The board is positioned so that each player has a light square in his bottom right-hand corner.

Each of the opponents ("Black" and "White") starts with an army of 12 pieces of his own colour, arranged like this:



The players take it in turns to move one piece at a time. Black moves first. The object of the game is to leave your opponent without any moves. This is usually achieved by capturing all his pieces, but you also win if you can immobilize them all by blocking them.

THE MAN AND HOW IT MOVES

At the start, each of the 24 pieces is called a man. Later (as will be explained), it may be "crowned" and become a king. The ordinary move of a man is one square diagonally forward, onto a vacant square. In the starting position, for instance, the man on **c3** may move to either **b4** or **d4**. In reply, White may move his man from **b6** to either **a5** or **c5**; or his man on **h6** may go to **g5**; etc.

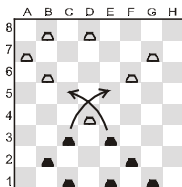
CAPTURING AN ENEMY PIECE

A man captures an enemy piece by moving *two* squares forward along the diagonal, jumping over the enemy to land on the vacant square beyond. The enemy piece is removed from the board. In Checkers, if you can make a capture, you must do so.

In this position Black has the choice of two captures:

- (a) The man on **c3** can capture the white man on **d4** by jumping over it and landing on **e5**; or

- (b) the man on **e3** can capture the same white man by jumping to **c5**.

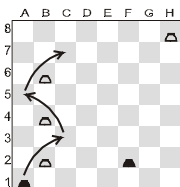


In either case, the man making the capture will be captured in turn. Then (as you can see), each player will capture one more man.

MULTIPLE CAPTURES

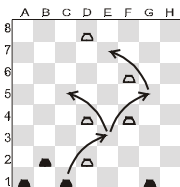
If a capturing piece lands on a square from which it can make another capture, then it must do so -- as part of the same move.

In this position the black man on **a1** must capture the white man on **b2**, landing on **c3**. The same man must then jump to **a5** (removing the white man on **b4**), then **c7** (removing the man on **b6**).



Note that the rule about multiple captures does not say that you must capture as many pieces in one move as you can:

Here Black may capture two men or three. His man on **c1** can, and must, jump to **e3**, capturing the white man on **d2**. Then the same black man has two choices. It can jump to **g5** and then **e7**, removing the white

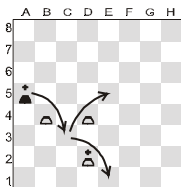


men from **f4** and **f6**; or it may jump to **c5**, capturing a single white man on **d4**.

"CROWNING" A MAN: THE KING AND HOW IT MOVES

When a man reaches the far side of the board it is immediately "crowned" -- promoted to a king. (To show this on a traditional Checkers board, we place one man on top of another.) Kings can move (and capture) backwards as well as forwards.

In this position, White has a king on **d2** and Black has a king on **a5**. If it is White's turn to move, his king may move to **c1**, **e1**, **c3** or **e3**. If it is Black's move, his king on **a5** will jump to **c3**, capturing the white man on **b4**. It can then jump to **e5** (capturing the man on **d4**), or else to **e1** (capturing the king on **d2**).



NOTE: A man which makes a capture immediately before being crowned may not continue, as part of the same move, to capture another enemy piece.

DRAWN GAME

Sometimes neither player is able to win. This is often the case when only a few pieces remain, the same number on each side.

2.3 HOW TO PLAY REVERSI

THE BOARD AND PIECES

Reversi is a game for two players using a board of 8x8 squares and a set of 64 discs, or playing pieces, which are coloured white on one side and black on the other.

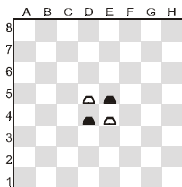
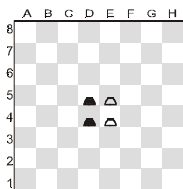
At the start of the game the board is empty. One player ("Black") has a set of 32 pieces with the black side turned up. His opponent ("White") has 32 pieces with the white side showing.

Black plays first, then the opponents play alternately. Whenever it is his turn, a player places one of his pieces, with his own colour uppermost, on a vacant square of the board -- provided he can do so according to the rules which will be explained.

BEGINNING THE GAME

At the start of the game, Black places a piece on one of the four central squares: **d4**, **e4**, **d5** or **e5**. White responds by placing a piece on another of these

squares. Black then occupies a third central square, and White occupies the remaining one. At this point there are two possible patterns: --



CONTINUING THE GAME

Once the four central squares are occupied, play continues according to the following rule:

When it is his turn, a player places a piece on the board in such a way that one or more pieces of the opposite colour are enclosed, in an unbroken straight line, between this new piece and another of the player's own colour.

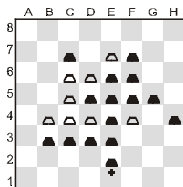
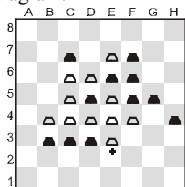
The line of pieces may be horizontal, vertical or diagonal.

So in the left-hand position (above), Black can insert a piece at **f4**, "sandwiching" the white piece on **e4** between the black ones on **f4** and **d4**. Black could also play at **f3**, **f5** or **f6**. In the right-hand position, he can play at **c5**, **d6**, **e3** or **f4**.

The pieces of the opposing colour, "sandwiched" between the player's new and old pieces, are flipped over to show the same colour as the two pieces enclosing them. They are "captured", but they remain on the board.

Example: The game begins in the way that was shown in the left-hand diagram. On his third turn, Black places a piece on **f6**. The white piece on **e5** is enclosed between this new piece and the black one on **d4** -- the three form an unbroken diagonal line. The piece on **e5** is then flipped over, so that its black side is showing.

In the left-hand position below, Black may play at **e2**. Then the white pieces on **e3**, **e4** and **e5** are enclosed in a vertical line between the new black piece and the one on **e6**. The white pieces are flipped, giving the position in the right-hand diagram.

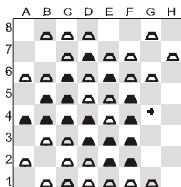


The same piece can change colour several times during the game. In the position on the right, White

can continue by playing at **e1**. Then all the pieces from **e2** to **e6** will switch to white.

More than one row of pieces can change colour at the same time. The next diagram gives an example.

If White plays at **g4**, this "captures" pieces in 3 directions: **f5-e6-d7**, **f4**, and **f3-e2**. All these pieces switch from black to white.



WHEN A PLAYER MUST PASS

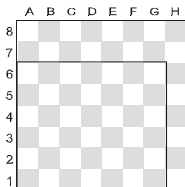
If a player cannot place a piece in such a way as to surround and capture one or more pieces of the opposite colour, he must "pass" and his opponent has another turn. (You cannot pass voluntarily).

RESULT OF THE GAME

Neither player can place more than 32 pieces on the board. The game ends when both opponents are unable to play. The winner is the player who has more pieces of his own colour on the board at the finish. If White and Black have the same number, the game is a draw.

2.4 HOW TO PLAY FOUR-IN-A-ROW

Four-in-a-Row is a game for two players using counters or playing pieces on a board or "frame" comprising seven columns. Normally the columns have space for 6 pieces each (see diagram),



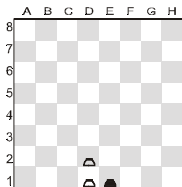
although Touch 8 Chess & Games also lets you play on an enlarged board.

One player ("White") has a set of white pieces, his opponent has a set of black pieces. At the start of the game, the "frame" is empty. White begins by inserting a piece on any square in the bottom row (a1-g1). Then the players take it in turns to insert one piece at a time. Each piece must be placed on a vacant square, either at the "bottom" of a column or else one square further "up" than a piece already there.

For example, suppose White begins by playing at **d1**. Black may then place a piece "on top of" the white one (i.e. on d2), or else occupy any vacant square in the bottom row (a1, b1, c1, e1, f1, g1). If Black plays at **e1**, and White replies by placing a

piece on **d2**, the position will look like this:

Then on his second turn, Black may occupy any of the squares **a1**, **b1**, **c1**, **d3**, **e2**, **f1** or **g1**.



The object of the game is to place 4 (or more) of your pieces together in a straight line -- horizontally, vertically or diagonally. The first player to do this wins. If neither player has made a winning line when the frame is full, the result is a draw.

2.5 HOW TO PLAY FOX AND GEESE

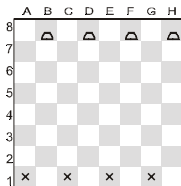
Your computer plays the following version of "Fox and Geese".

One player has four white pieces -- the geese. His opponent has a single black piece -- the fox. Play takes place on the dark squares of the 8x8 chequered board.

At the start, the geese are placed on the 4 dark squares in the row nearest to their player. The fox may be on any dark square at the opposite end, at

its player's choice.

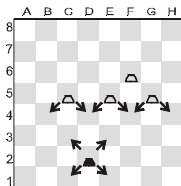
The fox may start the game on any square marked "x".



The first move is made by a goose; then the players move alternately.

Whenever it is his turn, the player with the geese moves a goose one square diagonally forward, onto a vacant square (like the ordinary move of a man in Checkers).

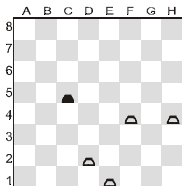
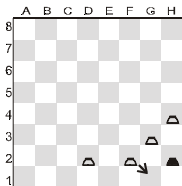
The fox moves one square diagonally in any direction, forwards or backwards -- provided that the destination square is vacant. (Like the king's move in Checkers.)



Possible moves of fox and geese

The object of the game is to leave your opponent without any moves. The geese try to hem the fox in on all sides; in the left-hand diagram below, the

player with the geese can win by moving from **f2** to **g1**, leaving the fox unable to move.

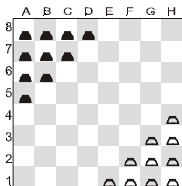


In the right-hand diagram, the fox has managed to slip past the geese, which will soon run out of moves and lose.

2.6 HOW TO PLAY GRASSHOPPER

Grasshopper is similar to the game of Halma, but is played on a board of 8x8 squares.

Each of the players ("White" and "Black") has 10 playing pieces of his own colour, which start the game in this position:



The players take it in turns to move one piece at a time; the first move is made by White.

At any time after the first move, you lose the game if your starting area (the 10 squares on which your pieces started the game) is completely occupied. Each player therefore tries to bring his pieces across the board to occupy the starting squares which his opponent vacates. The player who achieves this first, wins.

All the pieces remain on the board; there is no "capturing" in Grasshopper. A piece may only move onto a vacant square.

MAKING MOVES

A piece can move in two ways:

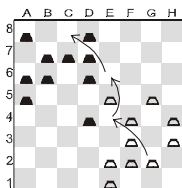
- (a) It can move one square in any direction -- forwards or backwards, sideways, or diagonally.
- (b) If there is another piece next to it (of either colour), it may jump over this piece and land on the vacant square just beyond. Like an ordinary move, a jump may be in any direction.

For example, on the first move of the game, the white piece on **e1** may move to **d1**, **d2** or **e2**. The piece on **f1** may jump to **d1** or **f3**, or move to **e2**. The piece on **g1** may jump to **e3**; and so on.

MULTIPLE JUMPS

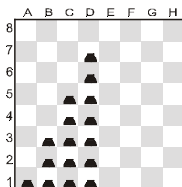
If a piece completing a jump is in a position to make another jump, it may do so as part of the same move -- though this is not compulsory, as it is in Checkers. A move may consist of a whole series of jumps, up to a maximum of 8. In the course of one move you may not, however, land twice on the same square.

Here, the white piece on **g2** can jump to **e4**, then to **e6** and **c8**. On the way it jumps over two white pieces (f3 and e5) and one black one (d7). White could make one more jump (from c8 to e8 or c6), but prefers to leave his piece on **c8**.



2.7 HOW TO PLAY NIM

Nim is played using a number of piles of objects such as discs. Unless otherwise instructed, Touch 8 Chess & Games begins the game with four piles containing 1, 3, 5 and 7 pieces respectively.



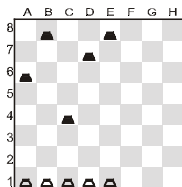
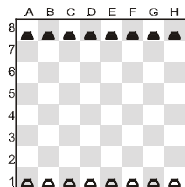
One player begins the game by removing a certain number of pieces from a single pile. He may take the whole pile, or just one piece, or any number of pieces in between.

His opponent then does the same -- he may take one or several pieces, but only from one pile.

The two opponents keep playing by turns until all the pieces have been removed. Normally, the winner is the player who takes the last piece. If you like, however, you may agree at the start of the game that whoever takes the last piece *loses*.

2.8 HOW TO PLAY NORTHCOTE'S GAME

In the normal version of Northcote's Game, the players use the full 8x8 playing board. Each of the two players ("White" and "Black") has eight pieces, which start the game on the rank nearest to him (see left-hand diagram):



Normal starting position An alternative starting position

Alternatively the board width may be restricted; also, the gap between the white and black pieces on any particular file may be reduced. For instance, the game could begin from the position in the right-hand diagram.

White begins by moving one piece forward. It can go as far as he likes, but must stop short of the black piece on the same file.

Black replies by doing the same. He can move any piece, one or more squares forward, as long as it is not blocked by his opponent's piece.

The players continue to move alternately until all the pieces are blocking each other. The player who makes the last move loses -- unless the opposite was agreed at the start of the game.

PART 3: PLAYING AGAINST THE COMPUTER

3.1 STARTING A GAME

If you have just installed the batteries and want to play Chess, you can go to *Section 3.2*. Otherwise, a game is started as follows.

Press **START**. The computer displays **NG** (= "New Game")

Touch **Enter**. (**Esc** would cancel the command.)

You can now touch **▲** or **▼** several times to display the following in rotation:

CHESS

CG (= "Classic Games" of Chess)

CK (= Checkers)

RV (= Reversi)

4R (= Four-in-a-Row)

F+G (= Fox and Geese)

GH (= Grasshopper)

NIM (= Nim)

NORTH (= Northcote's Game)

When the game that you want to start is displayed, touch **Enter**. *Sections 3.2 - 3.9* deal with each type of game in turn.

If you want the computer to play first (i.e. with White in Chess, Black in Checkers etc.), touch the bottom left-hand part of the display where the "colour" symbol (◻ or ◼) is located.

3.2 CHESS

BEFORE PLAY STARTS

If you have not just inserted the batteries or pressed **RESET**, the computer will ask you to choose between various playing "modes". The message area will show one of the following:

NORMAL

- BZ 5** (= Blitz, 5 minutes per game)
- RP 25** (= Rapid play, 25 minutes per game)
- RP 30** (= Rapid play, 30 minutes per game)
- M2** (= Mate in 2 moves)
- △** (= Kings and pawns only)
- △** **♘** (= Kings, knights and pawns only)
- △** **♗** (= Kings, bishops and pawns only)
- △** **♖** (= Kings, rooks and pawns only)
- △** **♚** (= Kings, queens and pawns only)

By repeatedly touching **▲** or **▼**, you can view all these modes in rotation. When the one that you want is displayed, touch **Enter** and play can begin.

Normal is merely the mode that you choose if you don't want any of the others.

Blitz: Each player is given 5 minutes' thinking time for the whole game. The message area shows the time used so far. If one side exceeds the limit, the computer gives five buzzes and announces the result. You may then touch **Esc** and continue playing, but the clock times will no longer be displayed.

Rapid play is like "Blitz", except that the time per player per game is 25 or 30 minutes.

NOTE: In a "blitz" or "rapid" game, even if you think for more than 4 minutes, the computer will not switch itself off unless one side has already "lost on time".

Mate in two moves: in this mode, the computer searches for a forced mate. For details, see *page 39*.

Kings and pawns only: this is a form of "mini-chess", designed to give practice to beginners.

Kings, Knights and pawns only (etc.) -- the computer offers 4 more versions of "mini-chess", in which the kings and pawns are joined by one more piece type.

MAKING MOVES

Touch the piece you want to move. (The piece starts "flashing" on and off.) Then touch the square where you want the piece to go, and your move is carried out.

Help for beginners: If you want to be shown all the possible moves with a particular piece, touch it a second time when it is already "flashing". The "+" symbol demonstrates the possible destination squares.

THE COMPUTER'S MOVES

When the computer carries out its own move, its piece jumps back and forth for a few moments. During this time, you may touch any part of the message area to see the computer's assessment of the position.


Examples:

- 157** The computer has an advantage worth roughly one and a half pawns. (1 pawn = 100 units.)
- 94** The computer thinks it has a disadvantage worth slightly less than 1 pawn.
- +M1** The computer can give mate next move.
- M1** The user can give mate next move.

OPEN The move was taken from the computer's library of standard Chess openings.

If the computer puts your king in check, you will hear a short sequence of beeps and see the "+" sign in the message area.

SPECIAL MOVES (See "How to Play Chess", page 10-18)

Castling: make the king's move (for example E1G1) in the normal way. The rook's move is made automatically.

"En passant" capture: move the capturing pawn in the usual way, and the captured pawn disappears from the board.

Pawn promotion: when your pawn advances to the end of its file, a queen appears, "flashing", on the promotion square. To promote to a queen, simply touch the square a second time. If you want to "under-promote" to a different piece, touch ▲ or ▼ as many times as required, until the right piece appears. Then touch the promotion square.

SOLVING CHESS PROBLEMS

Touch 8 Chess & Games can solve Chess problems for mate in 2 or 3 moves, unless they involve

promoting a pawn to a knight, bishop or rook. It has ten mate-in-2 problems stored in its memory. You may also "set up" a problem position that you have found elsewhere.

To use the problem-solving feature for mate in 2 moves, follow the usual procedure for starting a game of Chess, and select the mode "**M2**". On the right of the message area you will then see a flashing number, or else "**SU**" (= "set-up").

Now suppose you want the computer to solve problem number 6. Keep touching ▲ or ▼ until "6" appears. The chessboard will then be showing the position for this problem. Touch **Enter**. Then touch the "White" symbol □, and the computer starts analysing. Once it has solved the problem, it will play the first move of the solution. If you carry out a move for the opposing side, the computer will reply with a checkmating move.

Instead of selecting one of the 10 problems in memory, you can set up a problem position of your own (e.g. one taken from a magazine). When the display shows "**M2**" followed by a problem number, keep touching ▲ or ▼ until it shows: **M2 SU**

If you then touch **Enter**, the computer goes into "set-up" mode, allowing you to rearrange the pieces

on the board. For details of how to do this, see Section 4.7.

After coming out of "set-up" mode, touch the "colour" symbol (□ or ■). If the computer finds a forced mate, it will play it. (If it decides there is no mate, it will simply make the best move it can find.)

If you want the computer to find a mate in *three* moves, set up the position as in Section 4.7, then select "Analysis" level 15 as explained in Section 4.6. Then touch the "colour" symbol to start the computer analysing.

CLASSIC GAMES

Your computer can demonstrate 220 games by Chess champions. Twenty were played by "Deep Blue" (or its forerunner "Deep Thought") -- the world's strongest computer Chess program. (Wins, draws and losses are included.) Fifty games were won by Vladimir Kramnik, the new human World Champion. The remaining games were won by former champions: 50 each by Bobby Fischer, Anatoly Karpov and Gary Kasparov. The games are listed in the Appendix (*page 68*).

To use this feature, press **START** and touch **Enter**, then keep touching ▲ or ▼ until the message area displays: **CG**

Now touch **Enter**, and the left-hand side of the message area shows one of the following pairs of initials (flashing):

DB BF AK GK VK

On the right, you will see a number; by touching it you can make it "flash" while the initials are static; by touching the initials you can make them start flashing again.

When the initials are flashing, you can use ▲ or ▼ to display the five pairs in rotation. When the number is flashing, you can use ▲ or ▼ to increase or decrease it. (If "DB" is displayed, the number goes up to 20; in the other cases it goes up to 50.)

In this way you can select one of the five players and the number of a game in that player's list. When the message area shows the player and the game number that you want, touch **Enter**. The computer then starts demonstrating the game.

You may interrupt the demonstration by touching any part of the display (except ▲). The message area shows: **PAUSE**. You then have these choices:

- (a) Touch **Enter** or ▲ -- the demonstration resumes.

- (b) Touch **Esc** -- the demonstration ends. (If you like, you can play against the computer from the position on the board.)
- (c) Touch **▼** to take back the last move. You can do this repeatedly, to retract up to 8 moves for each side. At any time, options (a) and (b) are available.

3.3 CHECKERS

SYMBOLS

On the computer's Checkers board and message area, the following symbols represent an ordinary man and a king:

Man :     King :    

MAKING MOVES

Touch the piece you want to move. (It starts "flashing"). Then touch the square you want to move to, and the computer carries your move out.

A capturing move is made in the same way. If your piece lands on a square from which it can make a further capture, it will "flash" on and off. Continue

by touching the next square you want to jump to, until no more captures are left.

At any point in a multiple capturing sequence, you may touch ▼ to restore the situation before the preceding jump.

NOTE: When playing on a low "level", the computer often makes deliberate mistakes. To make it play more strongly, select a higher "level" as in *Section 4.6*.

3.4 REVERSI

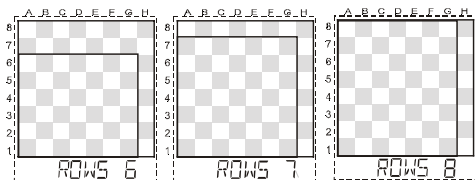
When it is your turn to play, simply touch the square where you want to insert a piece.

If you are compelled to "pass", the computer displays **PASS** in the message area. Touch **Enter**, and play continues. If the computer has to pass, it displays **PASS** for a few moments, then the message area is cleared and it is your turn again.

3.5 FOUR-IN-A-ROW

Before play starts, you must choose the size of the playing area or "frame". It may be 6, 7 or 8 rows high. To begin, the message area shows: **ROWS 6**

By touching ▲ or ▼ you can change the number from 6 to 7 or 8. Touch **Enter** when the right number of rows is displayed.



standard frame

enlarged frame

enlarged frame

When it is your turn to play, simply touch any square in the column where you want to insert a piece.

3.6 FOX AND GEESE

BEFORE PLAY STARTS

The fox may start on any dark square in the bottom row (**a1**, **c1**, **e1** or **g1**). If you want to play Black (the fox), touch one of these squares, then touch **Enter**. The fox appears, and the computer begins the game by moving a goose.

If you want to play White (the geese), start by touching ▲, and the computer places the fox on the square of its choice.

MAKING MOVES

If playing the fox, simply touch the square you want to move to. If playing the geese, touch the goose you want to move (so that it "flashes" on and off), then touch its destination square.

3.7 GRASSHOPPER

Touch the piece you want to move (it starts "flashing" on and off), then touch the square you want it to move to.

If the move is a jump and your piece "flashes" again on the square where it has landed, this means that it can continue jumping. If you want to terminate the move, touch your piece again. To continue the move, touch the next square you want to jump to.

At any point in a sequence of jumps, you may touch ▼ to restore the situation before the preceding jump.

3.8 NIM

BEFORE PLAY STARTS

You must decide whether the object of the game is to take the last piece. The message area displays:

LW (= "Last to play wins.")
Or **LL** (= "Last to play loses.")

By touching ▲ or ▼, you can switch between the two. When the right choice is shown, touch **Enter**. The computer now displays: **DEF**

This asks if you want to start from the normal (i.e. "default") position, with 4 piles of 1, 3, 5 and 7 pieces. To answer "yes", touch **Enter** and play can begin. If instead you want to start from a different position, touch ▲ or ▼. The display then shows: **COLS ?**

This asks you how many piles of pieces (i.e. "columns") you want. (Minimum 3, maximum 8.) Touch any square in the column where you want the rightmost pile to be placed. Then touch **Enter**, and the size of the piles is decided at random. You can now start play.

THE PLAY

When it is your turn, touch the top of the pile from which you want to take one or more pieces. The top piece starts "flashing". Then touch the bottom piece that you want to remove. If you are only taking one piece, touch this piece twice.

CREATING YOUR OWN STARTING POSITION

We have described how to begin from the default position or a random one. You can also play from a position of your own choice.

Follow the procedure for starting a new game and stipulating whether the last player wins or loses. If you want more (or less) than 4 piles of pieces, select the number of columns as described above. When the computer is ready to play (with the □ symbol showing), do the following.

Press **START**, then touch ▲ twice.

The display shows: **SETUP**.

Now touch **Enter**. The "set-up" symbol # appears.

One of the piles of pieces is "flashing" on and off. You can make a different pile flash by touching any square in its column. When a pile is flashing, you can alter its size. Simply touch the square where you want the top piece to be. Do the same for every pile that you want to alter. (If you touch **Esc**, all the flashing pieces disappear, leaving only a flashing "+" sign.)

When the position is ready, touch the right-hand part of the message area which displays **OK**. The

computer asks "**READY?**" Now touch **Enter**, and play can begin.

3.9 NORTHCOTE'S GAME

As in Nim, the computer starts by displaying:

LL (= "Last to play loses.")
Or **LW** (= "Last to play wins.")

To switch from one to the other, touch **▲** or **▼**. When the right choice is shown, touch **Enter**. The LCD displays: **DEF**

This asks if you want to play from the normal ("default") starting position, with 8 white pieces on the 1st rank and 8 black pieces on the 8th. To answer "yes", touch **Enter** and play can begin. To start from a different position, touch **▲** or **▼**. The display then shows: **COLS ?**

This asks how wide you want the playing area to be (minimum 3 columns). If you want it to be less than 8 columns wide, indicate the rightmost column by touching any square in it. Then touch **Enter**. The computer places the black pieces on random squares in their columns, and you can start play.

When it is your turn to move, simply touch the square that you want to move to.

CREATING YOUR OWN STARTING POSITION

As in Nim, you may play from a position entirely of your own choosing. Follow the procedure for starting a new game and stipulating whether the last player loses or wins. If you want the board to have less than 8 columns, specify its width as described above. When the computer is ready to play (with the □ symbol showing), press **START** then touch ▲ twice (this displays **SETUP**). Then touch **Enter**, so that the "set-up" symbol # appears.

Now as long as the "White" symbol □ is displayed, you can alter the positions of the white pieces. To move a piece, simply touch the square where you want to place it. To switch from White to Black (or vice versa), touch the left half of the message area (where the "colour" symbol is located). You can then move the pieces of the other colour.

When the position is ready, touch the right-hand part of the message area which displays **OK**. The computer asks **"READY?"** Touch **Enter**, and play can begin.

3.10 END OF THE GAME

To announce the end of the game, the computer displays one (or a combination) of the following messages:

WW	White wins
BW	Black wins
1:0	First player wins
0:1	Second player wins
DR ==	Draw
STALE	Stalemate -- Chess only
DRAW 3	Draw by 3-fold repetition -- Chess only
DR 50	Draw by 50-move rule -- Chess only
36:28 (e.g.)	Piece count for Black and White -- Reversi only

NOTE (1): When the computer displays "**DRAW 3**" or "**DR 50**", it still allows you to touch **Esc** and continue playing.

NOTE (2): In a "blitz" or "rapid" game you cannot "win on time" if you have insufficient material to give checkmate. If one side has a lone king and the other oversteps the time limit, the computer will display a draw (although, again, you may touch **Esc** and play on).

PART 4: ADDITIONAL FEATURES

The operations described in *Sections 4.1 - 4.3* are quite simple. Those described in later sections are rather more complicated, and require you to select items from a "menu" of commands. The menu is made available by the **START** key; this is explained in *Section 4.4*.

4.1 INTERRUPTING THE COMPUTER

While the computer is thinking about its move, the "clock" symbol is displayed. If you touch ▲, the computer will cut short its calculations and immediately play the best move it has found so far.

No other command (except a press on the **START** key) takes effect during the computer's thinking time.

4.2 CHANGING SIDES

The "colour" symbol (□ or ■), located in the left half of the message area, shows which side moves next. If you touch this part of the display when it is your turn to move, the computer will swap sides

with you; it will compute a move for the side you have been playing, and let you take over the other side.

NB: This command has no effect when the computer is acting as a "referee" (see *Section 4.8*).

4.3 TAKING MOVES BACK

If you have touched a piece (so that it "flashes") but change your mind, you can simply move a different piece in the normal way. If you want to think about your move without being distracted by the "flashing" piece, touch **Esc** (alternatively, in games other than Chess, touch the flashing piece again).

In the middle of a multiple jump in Grasshopper, **Esc** allows you to start your move again.

Sometimes, when the computer makes its move, you may realize that your own last move was a mistake and you may want to take it back.

To do so, touch ▼. This retracts the computer's last move. You can then touch ▼ once again to take back your own move and play whatever you like in its place.

In games other than Chess, the computer only "remembers" the last move played by each side. In

Chess, it remembers the last 8 moves by White and Black. This means that in Chess you can keep on touching ▼, up to a maximum of 16 times.

In Chess, if you touch ▲, this replays a move you have just retracted. By touching ▲ repeatedly, you can replay a whole sequence. At every stage you have the option of continuing play from the position currently on the board; carry out a move, or touch the "colour" symbol (□ / ■) to make the computer do so.

4.4 SPECIAL COMMANDS -- THE "MAIN MENU"

After pressing **START**, you may repeatedly touch ▲ or ▼ to display these items (flashing) in rotation:

- NG** (start New Game)
- LV** (select Level)
- RB** (Reverse Board; not in Reversi, 4-in-a-Row or Nim)
- OP** (Options)
- SETUP** (Set Up position)
- OFF** (switch computer Off)

These 6 operations are called the 6 items on the *main menu*. To select a menu item, display it and touch **Enter**. If you touch **Esc** instead, this takes

you back from the menu to normal playing conditions.

We have already dealt with two of the items ("**NG**" and "**OFF**") -- see *Sections 3.1* and *1.5*. The others are described in the next sections of this manual.

4.5 REVERSE BOARD

If you are playing Black in Chess or White in Checkers (etc.), you may want to turn the board round: --

Press **START**, then touch ▼ twice. This displays the main menu item "**RB**", followed by "0" (if the board is the usual way round) or "1" (if it has been inverted).

To switch the board round, touch **Enter**. Then touch **Esc**, to return to the game.

When the board is inverted, you must of course disregard the co-ordinates round the edge. If you switch from one type of game to another, the board reverts to "normal".

4.6 LEVELS OF SKILL

You may choose the computer's level of playing strength. On a higher level it plays more slowly and strongly.

LEVELS FOR GAMES OTHER THAN CHESS

In Checkers there are 16 levels; in other games there are 10. To inspect the current level or switch to a different one: --

- (1) Press **START**, then touch ▼.
- (2) The current level number is shown, e.g.: **LV 1**
- (3) To resume play on the same level, touch **Esc**.
To change the level, touch **Enter** and the number starts "flashing".
- (4) To alter the "flashing" number, touch ▲ or ▼.
When the display shows the level that you want, touch **Enter**.

If you touch **Esc** while the number is flashing, any change is cancelled and you are back at stage 2. You also return to stage 2 if you re-select the same level as before.

CHESS LEVELS

These fall into 5 categories:

- (a) "**Timed Move**" Levels (**TM**) -- 5, 10, 20, 30, 60 or 120 seconds. The computer makes each move within the specified time. You may also give yourself a time limit; then, when it is your move, the LCD displays a "countdown". However, if your time runs out, the computer will still accept your move.

When you first insert the batteries, the computer is set to play at 10 seconds per move. This is also the case when you start a "mini-chess" game; or when you return to Chess from a different game type, and select "normal" mode.

- (b) "**Timed Game**" Levels (**TG**) -- 5, 25 30 or 60 minutes per game, i.e. "blitz" or "rapid" Chess.
- (c) "**Analysis**" Levels (**AN**), numbered 1 (weakest) to 15. On these levels the computer has no time limit, but a prescribed routine for analysing its moves. On each level it will "look ahead" for a certain fixed distance, and evaluate the positions by taking a fixed set of factors into account.
- (d) "**Mate-in-2**" Level (**M2**) -- whenever the computer is to play, it searches for a forced mate in 2. See *Section 3.2*, under "Solving Chess Problems".
- (e) "**Fun**" Levels (**FL**), numbered 1 (weakest) to 5. These are beginners' levels, on which the computer often makes deliberate mistakes.

SETTING THE LEVEL (IN CHESS)

One way to set a "**Timed Game**" level (or "**Mate in 2**") is to choose the appropriate "mode" when starting a new game (see *Section 3.2*). You may also set the level at any time when it is your move.

- (1) Press **START**, then touch **▼**. This displays:
LV
- (2) Touch **Enter**. This displays the category of the current level.
- (3) By touching **▲** or **▼** repeatedly, you can view all the categories in rotation, i.e.:

TM TG AN M2 FL

- (4) When the LCD shows the category you want, touch **Enter**.
- (5) If the category is not "M2", you will see a flashing number on the right. The number corresponds to a level within the category. You can alter it by touching **▲** or **▼**.
- (6) In "Timed Move" category, the letter **C** (on the left) means the computer's time limit is being displayed. If you touch the message area, this switches to the player's time limit (denoted by "**P**" on the left). You can alter the limit with **▲** or **▼**. "**P InF**" means that the player has "infinite" thinking time.
- (7) When the right number for the level (and, if appropriate, the player's time limit) is selected, touch **Enter** and play can continue.

At any stage of the level selection process, you may touch **Esc** to return to the previous stage and abandon any changes you have made in the

meantime. If you keep touching **Esc**, this will take you back to the game on the same level as before.

NOTE: If the "teaching" feature is active (see Section 4.8), the computer may think for slightly longer than normal.

4.7 SETTING UP A POSITION

You may rearrange the pieces to set up (e.g.) a Chess problem from a magazine. Most of the games that your computer plays have roughly the same procedure for "setting up" a position. In Nim and Northcote's Game the method is a little different; it is described in *Sections 3.8* and *3.9*, under "Creating Your Own Starting Position". For Four-in-a-Row, see the note at the end of this section.

To set up a position, begin as follows:

Press **START**, then touch **▲** twice. This displays: **SETUP**. Touch **Enter**.

The symbol # appears, showing that the computer is in "set-up mode". In this mode you may do any of the following:

- (a) To remove a piece, touch it (so that it "flashes" on and off) and touch **Esc**.

- (b) To clear the whole board, touch an empty square (so that a flashing "+" appears there), and touch **Esc**. The computer asks: **CB ?** (= "clear board ? ") Touch **Enter** to confirm. (Touching anything else would cancel.)
- (c) To insert a piece, touch the desired square then touch **Enter**. The piece will be of the same type and colour as the one currently displayed in the message area.
- If you try (e.g.) to put a pawn on the back rank, the computer gives its "error" signal. When a king is placed on a new square (in Chess), it is automatically removed from its old square.
- (d) To change the colour of the piece in the message area, touch the colour symbol (□ or ■).
- (e) To change the *type* of piece (in Chess or Checkers), touch ▲ or ▼. Repeat until the required piece type appears. In the other games, touching ▲ or ▼ will change the *colour*.
- (f) When the position is ready, touch **OK**. This displays: "**READY?**" To confirm, touch **Enter** (touching anything else would cancel). The computer now exits from "set-up" mode, and you can play from the position you have constructed. (Carry out a move, or touch the "colour" symbol to make the computer do so.)



If a white piece and symbol (□) are in the message area when you exit from "set-up" mode, it will be White's turn to move next. So before exiting, you may need to switch to the right colour by touching the left half of the message area.

If you want to abandon the position you are setting up, press **START**. Then **Enter** begins a new game, while **Esc** restores the situation that existed before you entered "set-up" mode.

In "set-up" mode for Four-in-a-Row: A flashing "+" appears at the top of the board; to move it to a different column, touch any square in that column. **Esc** removes the top piece from the column where the "+" is located; **Enter** adds a piece to the top of the pile. If the column is empty, **Esc** followed by **Enter** clears the board. Otherwise the set-up procedure resembles that of other games.

ILLEGAL POSITIONS

In Chess, if you try to exit from set-up mode with a king missing, the computer will ask:

 ? (= "Where is the white king?")
or  ? (= "Where is the black king?")

Similarly, if the side that moves next is giving

check, the computer indicates your error by "+". Alter the position to make it legal.

In other games, the display shows "???" if you try to exit from "set-up" mode in a position where no play is possible (e.g. with all the Checkers pieces blocked). Alter the position, then take the computer out of "set-up" mode.

NOTE: In Chess, there can be no castling with a rook that has been inserted on the board in "set-up" mode.

4.8 THE "OPTIONS" SUB-MENU

As already explained (Section 4.4), by pressing **START** you gain access to the "main menu"; then by touching ▲ three times you can display **OP** (= "Options"), which is one of the menu items.

After selecting this item with **Enter**, you can touch ▲ or ▼ repeatedly to display the following in rotation:

- SN** (= Sound signals)
- TC** (= "Teaching" feature)
- PR** (= Play Rate)
- REF** (= Referee)
- CN** (= Contrast)
- LN** (= Language)

These 6 items constitute the "Options" sub-menu. (If you touch **Esc**, this takes you back to the "main menu".)

For "Play Rate", "Contrast" and "Language", see *Sections 4.9* and *4.10*. The other 3 items are features which can be switched "on" or "off" as follows:

- (1) Display the item, in the way described above.
- (2) "1" on the right of the LCD means that the feature is currently "on"; "0" means it is "off".
- (3) To switch between "1" and "0", touch **Enter**.
- (4) Then touch **Esc** twice, to return to the game.

SOUND SIGNALS

With this feature "off", the computer plays silently. It sometimes displays "**ERROR**" instead of giving its "buzz". Touch **Esc** then correct your mistake.

REFEREE (USER PLAYS BOTH SIDES)

With this feature "on", the computer lets you play for both colours. So you can play against a friend, with the computer just acting as a "referee" (making sure the moves are legal, announcing the result, etc.).

THE "TEACHING" FEATURE (CHESS ONLY)

If this feature is "on" and the computer thinks your move is a mistake, it gives a sound signal (a falling tone), and displays:

SURE ?

You then have three choices:

- (a) Touch ▼ to retract your move.
- (b) Touch Esc or ▲ to let your move stand.
- (c) Touch the message area, for explanation.

If you choose (c), one of these messages will appear:

- (a) **IT** (= "I take"). The piece you have just moved can be captured.
- (b) **WM** followed by a number. You could have won material equivalent to that number of pawns.
- (c) **LM** followed by a number. Your last move loses material equivalent to that number of pawns.
- (d) **-MATE**, meaning the computer can checkmate you.
- (e) **+MATE**, meaning you could have given checkmate.
- (f) **DRAW**, meaning your move brings about a draw when you could expect to win.

Again you have 3 choices: retract your move (▼), let it stand (**Esc** or ▲), or ask for more explanation. If you touch the message area again, it will display a move (the good one you missed, or the one that takes advantage of your error).

You can touch the message area as many times as you like to switch between the 2 explanations. Finally you must retract or confirm your move.

After carrying out the computer's move, you will sometimes hear a *rising* note, and the message area will show:

CARE

The computer's move contains a threat. For explanation, touch the message area. The display shows:

- (a) **MATE** -- the threat is to checkmate you; or
- (b) **WM** and a number -- the threat is to win material worth that number of pawns.

If you touch the message area again, it displays the move your opponent is threatening. When ready, touch **Esc** and make your move.

4.9 PLAY RATE and LCD CONTRAST

After the computer completes its move, its piece is displayed "flashing" for a short interval. The length of this interval is the "play rate". You can alter the play rate to any number of seconds between 1 and 10.

Similarly the LCD contrast can be adjusted, to make the images darker or lighter; there are 10 possible settings.

To alter either of these parameters:

Press **START**, then touch **▲** three times (display: **OP**). Touch **Enter**, then **▲** twice (to display **PR** = Play Rate), or **▼** twice (to display **CN** = Contrast).

Touch **Enter**. The number on the right starts "flashing". Keep touching **▲** or **▼** until the right setting is displayed.

Touch **Enter**, then **Esc** twice, and continue play.

NOTE: If you select play rate 0, the piece that the computer has moved will keep on "flashing" until you touch the **▲** symbol.

4.10 LANGUAGE

To alter the language of the computer's messages: --

Press **START**, then touch ▲ three times (display: **OP**). Touch **Enter**, then ▼ (display: **LN**), then **Enter**.

If you now touch ▲ or ▼ repeatedly, the languages are displayed in rotation:

ENG DT FRA ITA ESP NL POR

When the right language is shown, touch **Enter**. Then touch **Esc** twice, and continue playing.

APPENDIX TO "CLASSIC GAMES"

Games by Deep Thought / Deep Blue

- 1 Larsen - Deep Thought, 1988
- 2 Kasparov - Deep Thought, 1989
- 3 Deep Thought - Kasparov, 1989
- 4 Miles - Deep Thought, 1989
- 5 Danielsen - Deep Blue, 1993
- 6 Hansen - Deep Blue, 1993
- 7 Deep Blue - Polgar, 1993
- 8 Deep Blue - Kristiansen, 1993
- 9 Deep Blue - Kasparov, 1996
- 10 Kasparov - Deep Blue, 1996
- 11 Deep Blue - Kasparov, 1996
- 12 Kasparov - Deep Blue, 1996
- 13 Kasparov - Deep Blue, 1996
- 14 Deep Blue - Kasparov, 1996
- 15 Deep Blue - Kasparov, 1997
- 16 Kasparov - Deep Blue, 1997
- 17 Kasparov - Deep Blue, 1997
- 18 Deep Blue - Kasparov, 1997
- 19 Kasparov - Deep Blue, 1997
- 20 Deep Blue - Kasparov, 1997

Games by Bobby Fischer:

- 1 D.Byrne - F, USA ch 1956
- 2 F - Bisguier, New York 1957
- 3 Pilnik - F, Mar del Plata 1959

- 4 F - Rossetto, Mar del Plata 1959
- 5 F - Shocron, Mar del Plata 1959
- 6 F - Benko, Yugoslavia 1959
- 7 F - Euwe, Leipzig 1960
- 8 Szabo - F, Leipzig 1960
- 9 Lombardy - F, New York 1960
- 10 Gudmundsson - F, Reykjavik 1960
- 11 F - Tal, Bled 1961
- 12 F - Geller, Bled 1961
- 13 F - Reshevsky, Los Angeles 1961
- 14 F - Keres Curacao 1962
- 15 F - Korchnoi, Stockholm 1962
- 16 F - Robatsch, Varna 1962
- 17 Unzicker - F, Varna 1962
- 18 F - Evans, New York 1963
- 19 F - Bisguier, Poughkeepsie 1963
- 20 F - Benko, USA ch 1963
- 21 R.Byrne - F, USA ch 1963
- 22 F - Rossolimo, New York 1965
- 23 F - Benko, New York 1965
- 24 F - Bednarski, Havana 1966
- 25 F - Reshevsky, New York 1966
- 26 F - Zuckerman, New York 1966
- 27 Portisch - F, Santa Monica 1966
- 28 F - Najdorf, Santa Monica 1966
- 29 F - Dely, Skopje 1967
- 30 R.Byrne - F, Sousse 1967
- 31 Ciocaltea - F, Netanya 1968
- 32 F - Geller, Netanya 1968

- 33 F - Wade, Vinkovci 1968
- 34 F - Jovanovac, Vinkovci 1968
- 35 F - Schweber, Buenos Aires 1970
- 36 Korchnoi - F, Herceg Novi blitz 1970
- 37 F - Mecking, Palma 1970
- 38 Reshevsky - F, Palma 1970
- 39 Smyslov - F, Palma 1970
- 40 F - Nicevski, Zagreb 1970
- 41 F - Uhlmann, Zagreb 1970
- 42 F - Camara, Siegen 1970
- 43 F - Petrosian, Buenos Aires 1971
- 44 Petrosian - F, Buenos Aires 1971
- 45 Taimanov - F, Vancouver 1971
- 46 F - Taimanov, Vancouver 1971
- 47 F - Spassky, wch Reykjavik 1972
- 48 Spassky - F, wch Reykjavik 1972
- 49 Spassky - F, match 1992
- 50 F - Spassky, match 1992

Games by Anatoly Karpov

- 1 K - Vogt, 1969 Stockholm 1969
- 2 K - Mecking, Hastings 1971
- 3 Keene - K, Hastings 1971
- 4 K - Grigorian, USSR ch 1971
- 5 K - Enevoldsen, Skopje ol 1972
- 6 Williams - K, Nice ol 1974
- 7 K - Korchnoi, Moscow 1974
- 8 K - Spassky, Leningrad 1974
- 9 K - Korchnoi, Moscow 1974

- 10 K - Unzicker, Nice ol 1974
- 11 K - Portisch, Portoroz 1975
- 12 Portisch - K, Bugojno 1978
- 13 K - Korchnoi, wch Baguio 1978
- 14 K - Korchnoi, wch Baguio 1978
- 15 Korchnoi - K, wch Merano 1981
- 16 K - Korchnoi, wch Merano 1981
- 17 K - Chandler, London 1984
- 18 K - Miles, London 1984
- 19 K - Korchnoi, London 1984
- 20 Timman - K, London 1984
- 21 Kasparov - K, wch Moscow 1985
- 22 K - Kasparov, wch Moscow 1985
- 23 K - Spassky, Bugojno 1986
- 24 Winants - K, Brussels 1986
- 25 K - Ljubojevic, Brussels 1986
- 26 Sokolov - K, Linares 1987
- 27 Kasparov - K, wch Seville 1987
- 28 Kasparov - K, wch Seville 1987
- 29 Timman - K, Tilburg 1988
- 30 K - Short, Amsterdam 1988
- 31 K - Speelman, Brussels 1988
- 32 K - Farago, Wijk aan Zee 1988
- 33 K - Timman, Brussels 1988
- 34 K - Yusupov, Moscow 1988
- 35 K - Kasparov, Belfort 1988
- 36 Hjartarson - K, Seattle 1989
- 37 K - Hjartarson, Seattle 1989
- 38 K - Kasparov, wch 1990

- 39 Timman - K, Kuala Lumpur 1990
- 40 K - Kasparov, wch 1990
- 41 K - Kasparov, wch 1990
- 42 K - Timman, Kuala Lumpur 1990
- 43 K - Khalifman, Reykjavik 1991
- 44 K - Hansen, Biel 1992
- 45 K - Salov, Madrid 1992
- 46 K - Short, Linares 1992
- 47 K - Adams, Dos Hermanas 1993
- 48 K - Serper, Dortmund 1993
- 49 Timman - K, Jakarta 1993
- 50 K - Ilincic, Belgrade 1996

Games by Gary Kasparov

- 1 Magerramov - K, Baku 1977
- 2 K - Roizman, Minsk 1978
- 3 K - Yusupov, USSR ch 1981
- 4 K - Andersson, Tilburg 1981
- 5 Kavalek - K, Bugojno 1982
- 6 Korchnoi - K, Lucerne ol 1982
- 7 K - Nunn, Lucerne ol 1982
- 8 K - Korchnoi, London 1983
- 9 Karpov - K, wch Moscow 1985
- 10 K - Karpov, wch Moscow 1985
- 11 K - Karpov, wch Moscow 1985
- 12 K - Miles, Basel 1986
- 13 Miles - K, Basel 1986
- 14 K - Van der Wiel, Brussels 1987
- 15 Larsen - K, Brussels 1987

- 16 K - Tal, Brussels 1987
- 17 K - Ljubojevic, Brussels blitz 1987
- 18 K - Karpov, wch Seville 1987
- 19 K - Van der Wiel, Amsterdam 1988
- 20 K - Sokolov, Belfort 1988
- 21 Short - K, Belfort 1988
- 22 Ljubojevic - K, Belfort 1988
- 23 K - Nogueiras, Belfort 1988
- 24 Beliavsky - K, Belfort 1988
- 25 K - Smirin, USSR 1988
- 26 K - Hjartarson, Madrid 1988
- 27 K - Andersson, Reykjavik 1988
- 28 Ehlvest - K, Reykjavik 1988
- 29 Gheorghiu - K, Thessaloniki 1988
- 30 K - Short, Thessaloniki 1988
- 31 K - Ivanchuk, USSR 1988
- 32 K - Salov, Barcelona 1989
- 33 K - Spassky, Linares 1990
- 34 Psakhis - K, Murcia 1990
- 35 K - Karpov, wch 1990
- 36 Short - K, Debrecen 1992
- 37 K - Vaganian, Debrecen 1992
- 38 K - Kramnik, Paris 1992
- 39 Kamsky - K, Paris 1992
- 40 Karpov - K, Linares 1993
- 41 K - Gelfand, Linares 1993
- 42 K - Kamsky, Linares 1993
- 43 K - Short, wch London 1993
- 44 K - Shirov, Horgen 1994

- 45 K - Shirov, Novgorod 1994
- 46 K - Kramnik, Novgorod 1994
- 47 K - Lautier, Moscow ol 1994
- 48 K - Short, Moscow ol 1994
- 49 K - Shirov, Dos Hermanas 1996
- 50 K - Anand, Moscow 1996

Games by Vladimir Kramnik

- 1 K - Yakovich, Belgorod 1989
- 2 K - Tiviakov, USSR ch 1990
- 3 Brodsky - K, USSR ch 1991
- 4 K - Knaak, Dortmund 1992
- 5 K - Lerner, Gausdal 1992
- 6 Van Wely - K, Manila ol 1992
- 7 K - Lanka, Manila ol 1992
- 8 K - Ribli, Groningen 1993
- 9 Korchnoi - K, Groningen 1993
- 10 K - Hodgson, Groningen 1993
- 11 K - Nunn, Bundesliga 1994
- 12 Yudasin - K, Wijk aan Zee 1994
- 13 Ivanchuk - K, Monte Carlo 1994
- 14 K - Anand, Monte Carlo 1994
- 15 Shirov - K, Novgorod 1994
- 16 K - Yudasin, Moscow 1994
- 17 Kupreichik - K, Moscow ol 1994
- 18 K - Georgiev, Moscow ol 1994
- 19 Lutz - K, Bundesliga 1995
- 20 K - Hjartarson, Paris 1995
- 21 Gulko - K, Novgorod 1995

- 22 K - Timman, Belgrade 1995
- 23 Topalov - K, Belgrade 1995
- 24 Karpov - K, Monte Carlo 1995
- 25 K - Ehlvest, Riga 1995
- 26 K - Topalov, Amsterdam 1996
- 27 Huebner - K, Dortmund 1996
- 28 Kasparov - K, Dos Hermanas 1996
- 29 K - Ehlvest, Vienna 1996
- 30 K - Polgar, Vienna 1996
- 31 Anand - K, Monte Carlo 1996
- 32 Polgar - K, Moscow 1996
- 33 K - Ivanchuk, Dortmund 1997
- 34 K - Karpov, Dos Hermanas 1997
- 35 K - Polgar, Linares 1997
- 36 K - Topalov, Novgorod 1997
- 37 K - Van Wely, Tilburg 1997
- 38 K - Ivanchuk, Monte Carlo 1997
- 39 K - Svidler, Dortmund 1998
- 40 K - Svidler, Linares 1998
- 41 K - Zviagintsev, Tilburg 1998
- 42 K - Gelfand, Wijk aan Zee 1998
- 43 Van Wely - K, Monaco 1998
- 44 Nikolic - K, Monaco 1998
- 45 K - Korchnoi, Las Vegas 1999
- 46 K - Adams, Linares 1999
- 47 K - Shirov, Wijk aan Zee 1999
- 48 K - Short, Wijk aan Zee 2000
- 49 Ljubojevic - K, Monaco 2000
- 50 K - Kasparov, wch London 2000

PRODUCT SPECIFICATION

PRODUCT: Chess computer with
teaching system Battery
Operated.

MICRO-PROCESSOR TYPE: 8-bit
single chip

ROM SIZE: 256K bytes

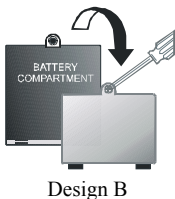
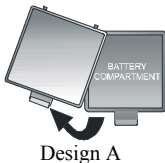
RAM SIZE: 704 bytes

OSCILLATOR FREQUENCY: 4MHz

BATTERIES: 3 X "AAA"(LR03)

**Product specification is subject
to change without notice.**

BATTERY INSTALLATION



- 1 Place the game face down on a flat surface and locate the battery compartment on the bottom of the unit.
- 2 Depending on the model, open the battery compartment door by pressing on the tab with your thumb and lifting up as show in Design A or by use of a Phillips head screwdriver as shown in Design B.
- 3 When inserting batteries, make sure that the positive tip of each battery matches up with the + sign inside the battery compartment.
- 4 Close the battery compartment cover.

WARNING : ALWAYS INSERT BATTERIES CORRECTLY

1. Non-rechargeable batteries are not to be recharged;
2. Rechargeable batteries are to be removed from the toy before being charged;
3. Rechargeable batteries are only to be charged under adult supervision;
4. Different types of batteries or new and used batteries are not to be mixed;
5. Only batteries of the same or equivalent type as recommended are to be used;
6. Batteries are to be inserted with the correct polarity;
7. Exhausted batteries are to be removed from the toy;
8. The supply terminals are not to be short-circuited;
9. Do not mix old and new batteries;
10. Do not mix alkaline, standard (carbon-zinc), or rechargeable (nickel-cadmium) batteries.

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