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# ACETRONIC

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## GRADUATE CHESS

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by  **SciSys**

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### INSTRUCTIONS

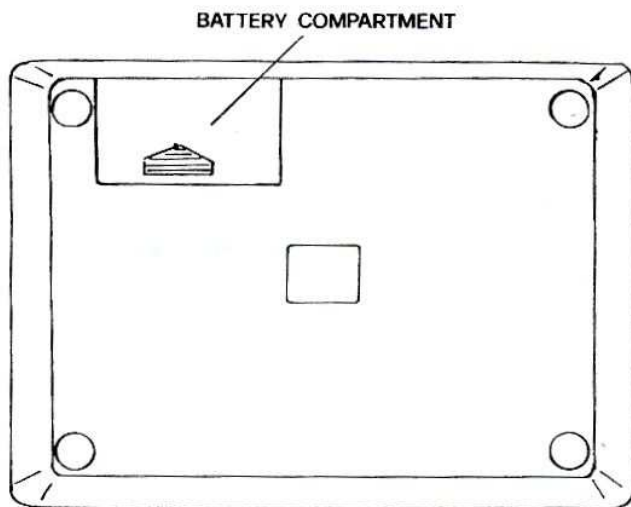
Graduate chess is a compact full feature chess computer designed with the beginner in mind. Nevertheless it contains many of the features found on more expensive larger chess computers such as, "Multi Move" which is used to set up special game positions, "Find position" for verifying the board position and "Cancel Entry" should you make a mistake and wish to change your mind before a move is entered into the computer's memory.

Graduate Chess recognises and makes when necessary such special chess moves as "Castling" "En Passant" and "Pawn Promotion" It does not make or allow illegal moves.

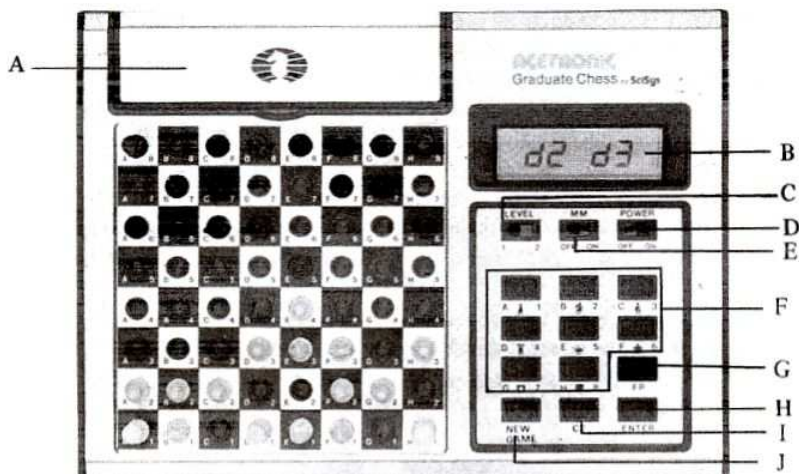
Because of the advanced programming techniques used in developing this computer it is now possible to dispense with the need for a mains electric adaptor. Graduate Chess will operate for well over 100 hrs on a single 9V alkaline battery.

To make your game more enjoyable as your skill improves try to make your moves as quickly as the computer does. This will not be easy at first but try to make your moves in, say, 30 seconds to start with and gradually reduce the time until you are making moves in five to ten seconds. This is one of the methods used by very strong chess players to improve their game and technique. At tournament level, time taken for each move is an important element and if you can learn this from the beginning your chess will improve rapidly and with it your enjoyment.

Have fun with your First Chess Computer – Graduate Chess



UNDERSIDE VIEW



A – CHESS PIECE STORAGE COMPARTMENT

B – DISPLAY

C – LEVEL SWITCH

D – POWER ON/OFF SWITCH

E – MULTI-MOVE SWITCH

F – CO-ORDINATE KEYS

A-H AND 1-8

G – FIND POSITION KEY

H – ENTER KEY

I – CLEAR ENTRY KEY

J – NEW GAME KEY

### Getting Started

(i) The Chess board:—

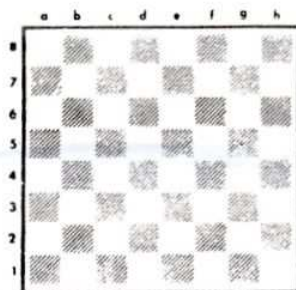


Fig. 1.1

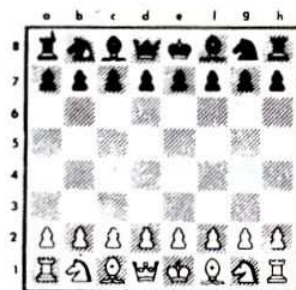


Fig. 1.2

The Chessboard is made up of black and white squares in an 8 x 8 formation. Each square is identified using algebraic notation as recommended by FIDE, the World Chess Federation. Ranks (The horizontal lines of squares) are numbered 1 to 8 and files (the vertical lines of squares) are lettered A to H.

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## (ii) Introduction to Computer Chess

After first switching on the computer will normally play "black" and so you playing "white" will make the first move.

In Computer Chess to "enter" a chess move it is necessary to identify the piece you wish to move, say, the pawn on square File E, Rank 2. Once you have done this, press  followed by . The display will then show

E2 JJ

It is now necessary to identify to the computer which square you wish the pawn to be moved to. In this example you may wish it to be moved to the square, File E Rank 4. You then enter  followed by  on the computer keyboard and the display should now show:

E2 E4

Once you have verified that this is the move you want, press  which will input the move into the computer and then display:—

ENTER

COMPUTING

while the computer is deciding on its reply. As soon as it has decided it will display its move. Such as:—

E7 E5

or

d7 d5

or

08 F6

or any other opening move it decides to make.

#### 4. Keys and Functions

##### The Keys

	Rank 1	File A
	Rank 2	File B
	Rank 3	File C
	Rank 4	File D
	Rank 5	File E
	Rank 6	File F
	Rank 7	File G
	Rank 8	File H
	Find Position	
	New Game	
	Clear Entry	
	Confirm Move or Entry	

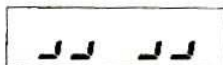
##### Switches

Power : On/Off  
Multi Move : On/Off  
Level : 1 / 2

#### 5. Power Supply

**Battery Requirement:** One 9V Alkaline Cell. Alkaline batteries are recommended for longer life.

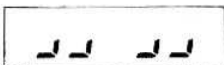
Before starting to play check that as soon as the set is switched "On" the display shows:



If the battery begins to "Run down" during a game the display will start showing erratic moves or be impossible to read.

## 6. Playing your game

When you are ready to play chess against the computer, set the POWER Switch to ON. The Display will then look like this:



This means you are ready to start playing.

Your Graduate Chess Game has two levels of difficulty. Set the level switch to either Position 1 or Position 2. You can switch from level 1 to level 2 by just moving the level switch. This can be done at any time during the game.

Level 1 usually takes 3-6 seconds to compute a move

Level 2 usually takes 5-15 seconds to compute a move

If you want to play with the white pieces, you make and enter the first move.

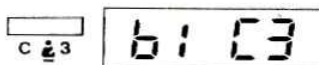
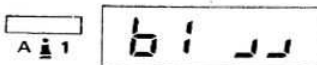
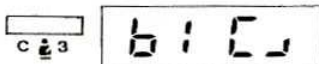
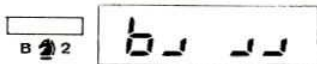
If you want to play with the black pieces, press  and the computer will make the first move with the white pieces.

### Making and Entering Moves

To make and enter moves, you'll use  through  and the

The chessboard on your Computer shows the standard international notation for each square. Each square is identified by a letter and a number, as shown as Fig. 1.1

Let's take an example. Suppose you want to play with the white pieces and your first move is moving a knight from square B1 to C3. You do this by first entering the square where the knight is now located (B1) and then entering the square you want to move the piece to (C3). Here are the Keys you would press and then resulting Display:



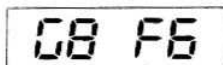


Each time you make a move you'll have to press four keys. The first press will automatically enter a letter, the second a number, the third another letter and the fourth press will enter a number. There's no need to indicate whether the piece you want to move is a pawn, knight, etc. — the Computer keeps track of that for you.

Now that you have your desired move indicated on the Display, press  to enter it into the Computer. When you do, you'll see this on the Display:



That means the Computer is evaluating your move and is deciding its response. Early in the game the computer will reply quickly. As the game progresses, the computer will take more time. When the computer finishes evaluating your move, its response will appear on the display such as

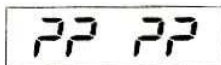


This means the computer has decided to move a knight from square G8 to square F6. Move the pieces on the chessboard so you can keep up with the game — the Computer keeps track of where all the pieces are in its memory.

### Errors and Impossible Moves

You may make an error when entering your move. If you discover a mistake before pressing  just press  This will clear the display and you can begin entering your move again.


Sometimes you may accidentally enter a move which is impossible according to the rules of chess. Suppose that your opening move in a game was to move a pawn from square C2 to square C8. After you entered this move, the display would show this:



You'll also get this Display if you enter a move that violates some rules of chess (such as a move which places your king in check). To clear the Display, press  and enter another move.

## Special Moves

Your Chess Computer will let you perform all the moves permitted in ordinary chess. An En Passant capture can be made simply by indicating the beginning and ending squares of the move in the usual way. The Computer will keep track of the capture in its memory.

Castling is performed by entering the beginning and ending positions of the king (not the rook). For example, if you are playing with the white pieces and wish to castle on the king's side, just enter E1 and C1 on the display and press  ENTER

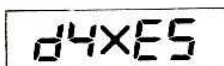
The computer will also indicate its castling moves in the same way. The computer will move the rook automatically in to memory. Don't forget to move it on the chessboard!

The rules of chess allow any pawn that reaches the opposite side of the board to be changed into any other piece except a king. If one of your pawns should reach the opposite side of the board, the computer will assume you want the pawn to become a queen.

Likewise, if the computer manages to get one of its pawns to the other side of the board, it will change it into a queen.

## Capturing Pieces:

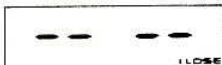
When the computer makes a move which results in the capture of one of your pieces the display will show for instance:



The X sign is the international chess notation symbol show a "Capture".

## Game Endings

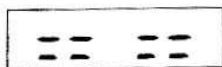
If you manage to checkmate the Computer, it will concede defeat using the following Display:



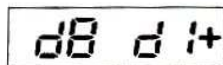


Just like a human player, the computer will resign when it sees no way to avoid being checkmated.

If you make a move that stalemates the computer, you will see this on the display:

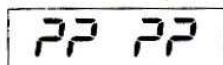


If you are in check by the Computer. The computer will show for example




The '+' sign is the international chess notation symbol to show "check".

You will also discover that all moves you try to enter will produce error displays until you remove your king from check.



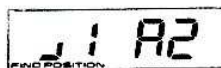
If you are checkmated, you'll find that all moves you enter will result in error Displays.

### Changing Colors

If you wish to change sides during a game this can be done very simply. When it is your turn to make a move — do not make the move — just press  and the computer will make the move for you. You then carry on and make the next move with the opposite color to which you started with. (So if you get yourself in a jam, you can see if the computer can get out of it). You have changed sides.

## Find Position

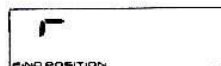
First press FP Key. Display will for example show:—



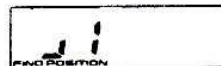
This means White



This means Black



This means White Pawn



This means White Knight



This means White Bishop



This means White Rook



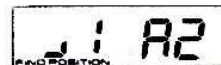
This means White Queen



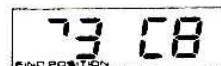
This means White King



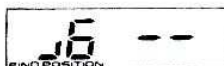
This means White Pawn is on square A2




This means a Black Bishop on square C8





To check the location of other pieces of the same type repeat pressing the key corresponding to the piece type. When all pieces have been displayed the computer shows: color, piece code then – (This means no other piece of that type).



To recheck the same pieces press the same by again and the computer will repeat the display sequence.

To change color – white to black: press 

black to white: press 

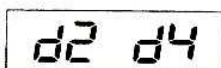
to get out of FP mode press  CE


### Multi Move

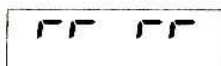
This is handy if you want to practice particular openings or gambits. To use it switch “ON” the Multi Move switch.

Then enter your white move

e.g.

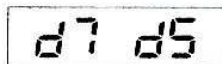



then press  . If this move is accepted, the display show:

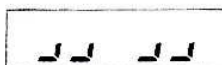


then enter your black move

e.g.

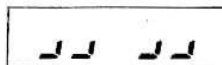


Then press  If this move is accepted, the display show:

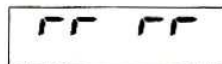


Continue through your special opening until you reach the position you wish to start playing from. When you reach this switch OFF the "Multi Move" switch and continue playing as normal. The display will indicate which side to play

White to play




Black to play

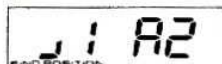


## ENTER POSITION (EP) FUNCTION


This special function allows you to change the board setup (or make a special game setup)

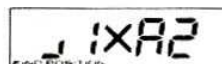
NOTE: This special function is quite complicated, so you may want to read through this section entirely (at least once) before you actually start to use the EP Function .

1. First press  key to enter the "Find Position" mode; the Display will show:








(If you are in the New Game state, or with any pawn in the lowest possible row.)


2. Then press  to enter the EP (Enter Position) mode; this is confirmed by the CAPTURE sign "X" coming on in addition to the usual FP-type display. For example:






Now some keys in the keyboard have additional functions as below:


- a.  or  = cursor Keys to move the square examined one square to the left.
- b.  = a cursor Key to move the square examined one square upward.


c.  or  = cursor Keys to move the square examined one square to the right.

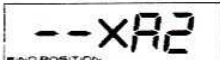
d.  = a cursor Key to move the square examined one square downward.



This function has a wrap-around feature, i.e. if the square examined reaches the edge and you continue to move the cursor in the same direction, the cursor will wrap-around to the opposite edge of the board. For example, you have been pressing  to move along the "A" file until you are now at A8; pressing  once more will move the cursor to square A1.

e.  = clears the entire board (no chess pieces anywhere).

f.  = clear the indicated square only.

3. If you wish to enter some chess pieces on the chess board, then press key to clear the whole board first; the display will show: for example 



then press the cursor Keys to the position wanted. By pressing  to indicate the selection of "White Piece" or by pressing  to indicate the selection of "Black piece", you can then select the desired piece by pressing one of the Keys 1 through 6 as below:

 = Pawn

 = Knight

 = Bishop


 = Rook

 = Queen

 = King

For example, if you want to enter a 'White King' in location C3, and the display now shows:


--xR2  
FIND POSITION

Press  C  3 twice; the display will show:


--xb2  
FIND POSITION

Then

--xC2  
FIND POSITION


Then press  B  2 once; the display will show

--xC3  
FIND POSITION

indicating you are on squares C3, then press  G  7 to indicate you want a 'White' piece; the display will show:


--xC3  
FIND POSITION

(no change of the display, same as above step.)

Now press  F  6 to indicate to enter a 'King'. The display will show

FXC3  
FIND POSITION

You have now entered a "White King" onto square C3. If you want to continue to enter a "Black King" onto square B1, then follow the steps as below:


a. Press  E  5 twice; the display will show

--xC2  
FIND POSITION

then

--xC1  
FIND POSITION




- b. Press  A  1 once; the display will show

--xb1  
FIND POSITION

- c. Press  H  8 once; the display will show

--xb1  
FIND POSITION

- d. Press  F  6 once; the display will show

6xb1  
FIND POSITION

And so you can continue, entering pieces where you want them. After you enter your last piece, you check who goes first. Press  ENTER Key once, the Display will show

51 JJ

indicating white to move after exit of EP mode

If you want to "change sides" or who goes first, press  ENTER again for,

51 rr

indicating Black to move after exit of EP move.

Then press 'FP' Key twice; the Display will show

JJ JJ

indicating White to move now

rr rr

indicating Black to move now

5. Here in a chart form is a summary of the above steps:

State that you want	Normal	FP	EP	Side to move
Your state now				
Normal	-	FP	FP, ENTER	FP, ENTER, ENTER
FP (FIND POSITION)	FP	-	ENTER	ENTER, ENTER
EP (FIND POSITION WITH 'X')	FP, FP	FP	-	ENTER
Side to move(51 rr)(51 JJ)	FP, FP	FP	FP, ENTER	-

Example:

- a. Let's say you are now in Normal mode and you want "EP mode", then press

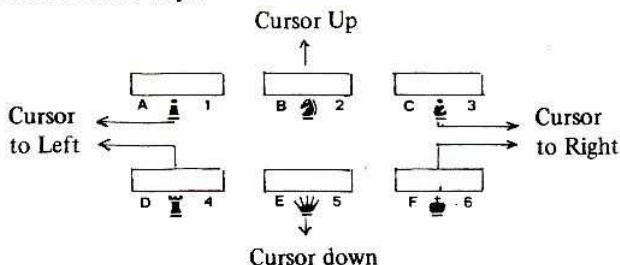
FP

once, followed by  ENTER once.

- b. If you are now in "EP mode" and you want "Normal mode", then press  FP twice.

- c. Or if you are now in "side to move" mode and you want "Normal mode", press  FP twice. etc.

Action of Cursor Keys:



**IMPORTANT NOTE** – Because of the limited memory capacity of this computer it cannot recognize in the Enter Position function whether castling is allowed or not. Therefore do not enter a position which places either king on its original square. If you do this the computer will give wrong information.

### Computer Versus Computer

The computer in your set can also play itself; just press  ENTER after setting the POWER Switch to ON. The display will then show a move for the white pieces.

Press  ENTER again, the display will now show a move for the black pieces. Continue pressing Enter and the computer will keep making moves for both sides. This can help you to familiarize yourself with the various chess piece moves and game openings.

### New Game

The key 'NEW GAME' is used to set up the board again/ready to start a new game. The level of play will remain the same as the previous game.

## Care and Maintenance

Your Chess computer is a precision electronic device. Don't drop it or subject it to rough handling. Keep your Game out of extreme cold or heat, don't leave it in moist or damp areas either.

If the display begins to dim or the Computer starts to make "impossible" moves, the battery needs to be replaced. Never leave a weak or damaged battery in your computer — it can leak damaging chemicals (even if they're "leakproof" types). Use only high-quality alkaline batteries. A good Alkaline battery will give you 100 hours of playing time.

Always remove the battery if you're not going to play with your computer for a few days.

## Specification

Power consumption	0.045W
Supply Voltage	9V
Battery	1 x 9V (National 006 P-UE or equivalent)

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