

THE NEW

C H E S S

C O M P U T E R

B O O K



T. D. HARDING

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**THE NEW
CHESS COMPUTER
BOOK**

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Publisher's Note

It should be noted that the author used practice levels for 'CONCHESS' during two of the trials, namely the Special Rate and Blitz Rate events. The comparison between 'CONCHESS' and other chess computer brands in these two events in the tables as shown on pages

122 and 123 should be read bearing this in mind. It is confirmed that tournament levels were used for 'CONCHESS' in both the Tournament Rate and Championship Rate events, and the comparison between the various chess computer brands is not affected.

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Preface to the new edition

This entirely revised edition of *The Chess Computer Book* contains more than 50 per cent new material. It includes several completely new chapters, including one about chess programs for home computers.

When the first edition appeared, the *British Chess Magazine* said of it:

The person wanting a dispassionate assessment of what model he should consider purchasing will find here the fullest information with many test games produced by the various models. We are often asked to give guidance on this subject and have always had the greatest difficulty in answering. From now on our answer will invariably be: Don't ask us, buy Tim Harding's book and study it.

By mid-1983 those chapters of the book which discussed in detail the machines on the market, games amongst them and against human opponents, and their performance on various tests, were unfortunately but inevitably out of date. It was to correct this situation and restore the authoritativeness of the book, as recognised by *British Chess Magazine*, that I accepted the publisher's invitation to prepare this new edition.

Since the first edition of the book was written there have been large numbers of machines launched, some of which I have been able to test over a long period. Others were only available to me for a shorter time, and with the proliferation of new models it was not possible to test every one as I had done in 1981–82. Inevitably there are new

Preface to the New Edition

machines, and updated modules for older ones, coming out all the time, with launch dates for machines in different countries often being different, due to commercial considerations. However, I have attempted to discuss in detail every top-of-the-range machine available on the British market.

For this purpose I was able to borrow most of the machines I was interested in, with the exception of one or two luxury models, which would be beyond the purse of most readers and which are unlikely to play significantly better than the top models in the £150–300 bracket. Computer games quoted in this book are almost entirely played under my supervision, or in official computer championship tournaments, although I have also taken note of what has been said in print by others whom I believe to be good and impartial judges, and of comments sent to me by readers of the book and of the magazine *Chess* to whom I appealed for their views.

I hope that readers of this

edition will find it as helpful as those of the first one did. Although there is a good deal of discussion of particular machines, a lot of the advice and comment is of general application, particularly now that the performance and features of machines in the various price brackets is more homogenous than it was. The publication schedule of a book means that (even with additions made at proof stage) there will always be some new machine which its sellers will claim to be 'revolutionary' and much stronger than its rivals, with whatever justification.

However, I do expect this edition of the book to have a much longer topicality. The first one was written at a time of rapid growth and many new developments in the industry; progress from now on is likely to be much slower, although there is still plenty of scope for machines to become more user-friendly. In the field of programs for home computers there is still a revolution to come, which I foresee in chapter seven.

Preface to the first edition

This book about chess-playing microcomputers is first and foremost aimed at showing you how they can improve your own understanding and enjoyment of the game. However, it covers the whole field of computer chess fairly thoroughly as well.

I have not attempted to write a 'Which Computer?' type of guide, chiefly for two reasons. Firstly, because I believe that the book I have written is of much wider interest than a narrow 'Which-guide' could be, both to computer experts and to those who know little or nothing about the subject, and to chess players whether they be master, beginner, average player or strong amateur. Secondly, because although a lot of the machines available at the time of research and writing (late 1980 to mid 1981) are

described in detail in the book, with their strengths and faults candidly assessed, existing programs are often being updated and whole new systems are being launched on to the market.

If you are thinking of buying a chess computer, whether for the first time or as a trade-up from one you already have, you should find this book very helpful in aiding your choice. You will know a lot more about what chess computers can and cannot do when you have read this book, and you will be able to assess which features of the machines on offer in your price range come closest to your needs. (I should like to make it clear that I, the author, and Pergamon, the publishers, have absolutely no commercial interest in any of the chess computers on the market, although of course

Preface to the First Edition

we are grateful to those companies who made machines available to us on extended loan.)

In the chapters on the history of chess computing and on the basics of programming a chess computer, I have tried to be as clear and lively as possible without becoming too technical. The odd paragraph may be of more interest to the advanced player, balanced by a para-

graph aimed at the beginner or the person ignorant of computer science, but the general aim has been to be comprehensible to everyone. Only a basic understanding of the rules of chess and elementary chess concepts is assumed. I have given a short reading list at the end of the book for those who wish to pursue further the subjects of chess, computing or computer chess.

Acknowledgements

I should like to thank everybody who has helped to bring this book to fruition in either or both of its editions, including the human guinea pigs who took on the computers in test games, and the many people who sent me games, comments or other information about chess computers, especially in response to my appeal in *Chess* magazine. In particular, I should like to thank my wife Joan who generously put up with computers taking over the house for months on end, and my disappearing to my study to test them and write about them.

This book would also have been impossible without the contribution of Martin J. Richardson whose idea it was originally and who tempted me to have a second go at the topic. He undertook the labour of borrowing most of

the machines tested and arranged for their shipping and all the hassles involved.

I should also like to thank all those people who lent me the computers, and programs for computers, and answered my questions. Here particularly worthy of mention are Andrew Page and Diana Holt of Scisys; David Morein and Nick Beddoe of Computer Games Ltd.; Maurice Cohen and Neville Kuttner and their staff from Tomorrow's World in Dublin for much help (including the loan of the Morphy and the Sinclair Spectrum); Lendac Data Systems of Dublin for the loan of the BBC microcomputer and 'White Knight'; The Big Byte Shop of Dublin for the 1K ZX Chess and many others. David Levy helped by granting an interview and supplying bulletins of computer tournaments, as did

Acknowledgements

Professor Monroe Newborn. Especial thanks are also due to John Frain, John Luce, and those like Maura Murphy who helped organise *Computa-*

chess 81, without whom the first edition would have been much poorer.

Thank you all, and I hope you enjoy the book.

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A note on chess notation

Most of the world's chess-playing countries now use the algebraic system of chess notation. For readers unfamiliar with this system a brief description is given below.

1. Each piece is designated by a letter as follows:

K = king Q = queen R = rook N = knight B = bishop.
Pawns are indicated by the 'file' (see diagram below) on which they stand.

2. Each square of the chess board is designated by a unique combination of a letter and a number, as indicated in the following diagram.

8	a8	b8	c8	d8	e8	f8	g8	h8
7	a7	b7	c7	d7	e7	f7	g7	h7
r	a6	b6	c6	d6	e6	f6	g6	h6
a	a5	b5	c5	d5	e5	f5	g5	h5
n	a4	b4	c4	d4	e4	f4	g4	h4
k	a3	b3	c3	d3	e3	f3	g3	h3
2	a2	b2	c2	d2	e2	f2	g2	h2
1	a1	b1	c1	d1	e1	f1	g1	h1
	a	b	c	d	e	f	g	h

file

The board is viewed from the point of view of the player with the *White* pieces.

3. Moves are indicated by
 - (a) the symbol of the piece in question, followed by
 - (b) the square to which the piece moves

A Note on Chess Notation

e.g. Kf1; Nc3; Be2
(= move the king to the square 'f1'; move the knight to the square 'c3'; move the bishop to the square 'e2')

Pawn moves are indicated only by the *square* to which the pawn moves

e.g. e4 (= move the pawn on 'e2' or 'e3' to 'e4')
e5 (= move the pawn on 'e4' to 'e5')

Notes

If it is possible for either of a player's knights, bishops or rooks to move to the square in question, then the piece is distinguished by the *file* on which it stands.

e.g. Rae1 (= move the rook on the 'a' file to the square 'e1')

If both of the above pieces are already on the same 'file' then the rank is indicated *instead*.

e.g. R2e2 (= move the rook on the second rank to the square 'e2')

4. Captures are denoted by an 'x'. The notation does not indicate the *type* of piece that is being captured, only the *square* on which it rests.

e.g. Nxd5 (= knight cap-

tures piece on the square 'd5')

The same rules as in the notes to 3 above apply if either of the two knights, bishops or rooks are able to make a given capture.

e.g. Rxf5 (= rook on the 'e' file captures on the square 'f5')

Pawn captures are denoted by the *file* on which the pawn originally stood followed by the *square* that it captures.

e.g. exf5 (= pawn on the square 'e4' captures on the square 'f5')

Essential abbreviations

0-0 = king side castling

0-0-0 = queen side castling

+ = check

ep = *en passant*

! = a good move

? = a bad move

!? = an interesting move

?! = a dubious move

!! = a very good move

?? = a very bad move

g8 = Q/R/N/B

= move pawn to g8 and promote to a queen/rook/knight/bishop

For a fuller explanation, readers are advised to consult any introductory book on chess.