Computer Chess Reports 1993

Mid-1993 Review

By Larry Kaufman

Since our last issue, several new programs have made their appearance, and others have been announced. Most of the action has been in pc software; sales of dedicated chess computers have dropped sharply in the last year or two while pc software has soared in popularity. This is presumably due both to the great improvement in the play of pc software and to the fact that very powerful 486 based pc machines have become rather inexpensive, so the dedicated machines can no longer claim to offer superior hardware to comparably priced pc's. The trend to pc software was made apparent when the Austrian computer chess magazine "Modul" changed its name to "PC Schach".

In the race to build a monster computer to defeat Kasparov, IBM's "Deep Blue" achieved a noteworthy result in defeating Judith Polgar (FIDE rated 2630, which puts her in the top twenty in the world) 1 1/2 to 1/2 in an Action chess (game/30') match. I believe this is the first match victory (other than blitz) for a computer over a player with a 2600+ FIDE rating. Still, the shortness of the match and the fast time limit (computers usually perform somewhat better at action chess than at 40/2) make it impossible to say much about Deep Blue's current playing strength. Deep Blue had previously lost a 40/2 match by 2 1/2 to 1 1/2 to GM Bent Larsen, once a title contender but now not among the world's elite. I speculated some years ago that a world championship might take place this decade in which neither participant is a man - meaning of course Judith Polgar vs. Deep Thought or its successor ("Deep Blue"). This could still happen, but based on the rate of improvement over the last few years, most likely the computer will reach Kasparov's level before Judith or any other human rival. We shall see.

In the dedicated commercial market, both Mephisto and Saitek have announced new Senior Master level machines since our last review. One is the long awaited Saitek Sparc Modul by the Spracklens. It offers Senior Master strength in a luxury wood autosensory board ("Renaissance"). Mephisto announced no less than three Senior Master models; a much stronger 32 bit version of the Berlin for just a little more money, an upgrade of RISC, and a $1300 wood autosensory 68030 upgrade of Vancouver, similar to models that formerly cost around $10,000. Novag has proven that its hand-held "Ruby" and

its table top twin "Emerald" are the strongest such models under $150 by earning a C.R.A. Action rating of 2181. Excalibur has obtained the highest such rating to date for models under $100, the Legend and the Accolade.

In the pc software game, the Socrates programs of which I am co-author with Don Dailey are finally making their appearance in two forms. "Socrates 3.0" is our latest version that attempts to combine the best aspects of the programs that won the 1992 Harvard Cup and the 1993 ACM International Computer Chess Championship. "Kasparov's Gambit" by Electronic Arts claims to use the chess engine that won ACM, but this will be true only when a promised "patch" becomes available, since the first release often does not play the same moves at the same depth as the ACM program does. As for other pc

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programs, several new ones are out now or expected soon, including "Gideon Pro" (a software version of "ChessMachine"), as well as upgrades to existing ones ("Mephisto Genius 2", "Chessmaster 2400", "MChess Pro 3.5", "Zarkov 3.0", and "Hiarcs 2.0"), but of these only Gideon Pro, Genius 2 and Hiarcs 2 have reached me. Genius 2 does seem to be somewhat stronger than Genius 1, 33 points according to three problem sets, and Hiarcs 2 is much improved over its predecessor. Gideon Pro, although quite strong, does not run as fast as one would expect by comparison with "ChessMachine", because Gideon is in "C" language. It now looks likely that at least six unrelated pc programs will play at Senior Master level on fast 486 machines, and some may be getting close to Grandmaster level on the new Pentium 60 MHz machines. For those who own pc's with an older processor, Senior Master level play is now available for under $200, with the ChessMachine now going on sale to CCR subscribers for that price (marked down from the $600s!).

As for tournament results, first place in the prestigious man vs. machine Aegon tournament went to Chess-Machine King 30 MHz, with Saitek Sparc in second. Top pc was a tie between Chess Genius, Fritz 2, Socrates, and MChess Pro. A tournament in France at game/ 1 hour with software running on 486/66 was won by Chess Genius 1.0, followed by ChessMachine King 32 MHz, then MChess Pro, then RISC 2500 and Fritz 2, then Mephisto RISC. The strength of the field was shown by the last place finish of Novag Diablo and Fidelity Mach IV, both master level computers. The Welser (Austria) tournament was won by ChessMachine King 32 MHz, followed by Fritz 2, then Mephisto Vancouver 68030 and Chess Genius, then MChess Pro and Mephisto RISC, etc. Another tourney reported in Schach & Spiele had Genius first, MChess Pro second, then Genius on different settings, then Rex-Chess, then MChess, and finally ChessMaster 3000 and Fritz 2. The International Uniform Platform pc championship, in England, was won handily by Hiarchs 2 with MChess Pro second followed mostly by non-commercial programs. A tournament reported in "PC Schach" had Genius first, RISC 2500 second, MChessPro third (but at 25 MHz vs. 33 for Genius), Mephisto Vancouver 68020 fourth, with Zarkov 2.6 and Fritz 2 sharing last. A tourney reported in the Spanish magazine "d4+" was won by ChessMachine Schroder 30 MHz with a perfect 11-0 score, with ChessMachine King2 30 MHz second at 9, followed by Kallisto, Quest, and 18 other programs, mostly non-commercial. Since most tournaments are fairly short and the conditions are not always equal, they don't mean as much as the rating lists based on large numbers of games, but sometimes they are the only available information for programs prior to or just after their release.

1993 Aegon Tournament

The Aegon tournament is the most significant annual European computer vs. human tournament , and this year it featured 32 computers playing against a similar number of human opponents (under 40/2 time controls), most of whom would be rated as masters in the U.S. and several of whom were GMs and IMs. Each computer faced six human opponents and each human faced six computers. In previous years the human team always won handily, but this year the computers finally came out ahead, by 98 1/2 to 93 1/2. This reflects both the improved level of the computers and a slight reduction in the average rating of the humans. I imagine that the criteria for selection of the human players will be made more strict in the future to keep this event interesting.

Among the human players, last year's winner, GM David Bronstein, who drew a match for the World Championship over forty years ago, repeated his victory, but this year he gave up one draw and had to share first place with GM John Nunn. As for the computers, both the best and worst scores were made by versions of the ChessMachine King program running at 30-32 MHz, a truly remarkable result! As "CM King Aegon" it scored 5 out of 6, conceding draws only to the co-winners and earning a performance rating of USCF 2693 (I add 100 to convert from FIDE to USCF ratings), but as "TASC R30" it tied for last place at 1 1/2 with a performance rating of 2218. Since a third version took third place with a performance rating of 2543, the combined performance of all three versions of the "King" program on the fast RISC was 2485, which is close to other estimates of its strength. The long awaited Saitek Sparc module took second place at 4 1/2, but its performance rating was only 12th at 2388. Among the pc programs, running on 486/50 MHz machines, Chess Genius, Fritz 2.0, Socrates X, and MChess Pro tied for first at 4 (in that order by performance rating, the first three all coming out over 2400 USCF). At 3 1/2 we find Quest, at 3 are Dappet, Check Check, and Now, at 2 1/2 came Kallisto, Nimzo, Ananse, Cumulus 2, and Schach 3.0. With a disappointing 2 points and performance ratings under 2200 were two versions of Zarkov (2.61 and 3.0) and Hiarcs. L-Chess and Goldbar scored just 1 1/2.

As for dedicated models, Mephisto RISC scored 4, Mephisto 68030 60 MHz, Rebell, and Saitek Brute Force scored 3 1/2, RISC 2500 scored 3. Two versions of Chess-Machine Schroder scored 3 and 2 1/2. Two non-commercial multi-processor research machines played, Zugzwang scoring 3 1/2 and the venerable HiTech (using B* search) scored 3.

One unusual entrant was 3-brain, which consisted of two computers (Mephisto Lyon 68030 and a version of Chess Machine) plus a human referee to select between the moves of the two models. Are three brains better than one? Maybe so, since 3-brain took fourth place with four points and a 2500 performance rating, slightly better than the rating of any of the three brains separately.

The performance ratings of the more successful commercial programs (aside from CM King) were: Mephisto 68030 2514, Chess Genius 2457, Rebell 2451, Fritz 2 2415, Socrates X 2404, CM Schroder 3.0 2396, Saitek Sparc 2388, Mephisto RISC 2367, RISC 2500 2351, MChess Pro 2309, Saitek Brute Force 2268. Three programs (Hiarcs, L-Chess, Goldbar) actually finished below 2000.

Next year it is likely that the pc programs will all be running on Pentium machines. If so, I think that the human field needs to be restricted to players with FIDE titles to keep the contest exciting.

2nd Int'l Uniform Platform Computer Championship

as reported by Applied Computer Concepts Ltd.

Here is the result of the 2nd International Uniform Platform Computer Chess Championship for PC programs held 2nd-13th August 1993 at the University of London under the Auspices of the ICCA (International Computer Chess Association).

This tournament differs from previous computer chess tournaments in two ways: 1) Programs play each other on identical 386/40MHz computers (the "uniform platform") 2) Play is automated, not requiring human operators.

The uniform platform concept is intended to encourage improvements in programs and algorithms, without forcing competitors into a race to obtain faster machines than their opponents. This makes the tournament a true test of which program is strongest.

The competitors in the PC division this year were: Hiarchs by Mark Uniacke, UK; MChess Pro by Marty Hirsch, USA; Schach 3.0 by Thomas Kreitmair & Mathias Englbach, Germany; Mirage by Yuri Shpeer & Vladimir Rybinkin, Russia; NOW by Mark Lefler, USA; GnuChess 3.1 by Various; Pawnder by Truman Collins, USA; Psycho by Ian Kennedy, UK; Neptune by Matthew Craighead, USA; Centaur by Victor Vikrev, Russia.

Centaur was regrettably unable to compete due to software incompatibility.

Selected Aegon Results

The complete competition had 64 participants. Here we list the top 20, and then each computer thereafter. Humans in the top 20 are italicized. Many of the computers listed are experimental or simply not available to the public, so don't be surprised if you don't recognize some of the finishers.

1.	*D. Bronstein*
2.	*J. Nunn*
3.	The Chessmachine King AEGON
4.	*H. Grooten*
5.	*V. Hort*
6.	*A. van de Berg*
7.	Saitek SPARC
8.	The Chessmachine King 2.0
9.	3-Birn
10.	Mephisto RISC
11.	*G. Lighterink*
12.	M-Chess Professional
13.	Socrates X
14.	Fritz 2
15.	*L. Jongsma*
16.	Chess Genius 1.0
17.	Zugzwang
18.	Rebell
19.	*N. Ioseliani*
20.	Mephisto
. . .	
22.	Saitek Brute Force
24.	Quest
29.	The Chessmachine Schroeder 3.0
36.	Saitek RISC 2500
37.	Dappet
39.	NOW
40.	Check Check
43.	The Chessmachine Madrid
47.	Ananse
48.	Cumulus 2
49.	Schach 3.0
52.	Zarkov 2.61 / AEGON
53.	Zarkov 3.0
55.	Hiarchs 1.0
57.	TASC R30
58.	L-Chess
60.	Goldbar

Results Of PCs Of The Uniform Platform Tournament

	Hia	Mch	Sch	Mir	NOW	Gnu	Pwn	Psy	Nep	Rank	Score
Hiarchs	xxx	1.5	2	2	1.5	2	2	2	2	1	15
MChess Pro	0.5	xxx	1	2	0	2	2	2	2	2	11.5
Schach	0	1	xxx	0.5	1.5	2	2	1.5	2	3 =	10.5
Mirage	0	0	1.5	xxx	2	1	2	2	2	3 =	10.5
NOW	0.5	2	0.5	0	xxx	0.5	1	2	2	5 =	8.5
GnuChess	0	0	0	1	1.5	xxx	2	2	2	5 =	8.5
Pawnder	0	0	0	0	1	0	xxx	2	2	7	5
Psycho	0	0	0.5	0	0	0	0	xxx	1	8	1.5
Neptune	0	0	0	0	0	0	0	1	xxx	9	1

Excalibur Review

In the last CCR (v3n2) we reported that Excalibur was considering getting a C.R.A. Action rating for its top models, the table top "Legend" *(below left)* and its hand-held twin "Accolade" *(bottom right)* (same hardware and software). Based on our estimate of "slightly over 2000" and the fact that Action ratings typically run about sixty points above 40/2 ratings, we thought that Excalibur had a good chance to surpass the 2062 Action rating earned by the Fidelity Travel Master (which was discontinued due to unreliability) and improperly awarded to Saitek's "Travel Champion". Sure enough, Excalibur went for a C.R.A. Action test (I headed the operator team) and did in fact surpass the TM and TC rating -- by three points! So, at 2065, Legend and Accolade are the highest rated models with displays for the money (under $100 and $70 respectively). Each is about 70% of the price of any rival of greater strength. Some of the glory of Excalibur's success was taken away when Novag got a significantly higher C.R.A. Action rating just a few weeks later for its hand-held game "Ruby" and its table top "Emerald", but they are in a higher price range. One drawback to the Accolade is that it lacks a cover at this time, but at $70, you might choose to overlook that.

Excalibur also got the Legend/Accolade W.B.C.A. rated, and amazed us all by earning a Blitz rating after 26 games of 2344! It did this by winning two separate matches against strong masters and scoring well in a major blitz event. I was the operator so I know the result was legitimate. Usually W.B.C.A. ratings for computers run about 240 points above 40/2 ratings or 180 above Action ratings, but here it performed a hundred points above the figure this rule would predict. If a $100 toy can perform this well at blitz, how long can it be until one of the powerful pc programs on a $4,000 computer can earn top spot on the W.B.C.A. list, even above Kasparov and Karpov? I predict that this will happen in 1994.

Mephisto/Fidelity Review

In the last issue, I reported that sales and service for Mephisto and Fidelity products would be handled by a new firm in New Jersey called "Quantum America". As I expected, this arrangement has not worked out, and Quantum America no longer represents Mephisto or Fidelity. Mephisto has returned to its old policy of exporting its high-end products directly from Germany to U.S. distributors. This should allow more favorable pricing for consumers, since the old way, every middleman got a cut.

There have been no new models of note from either Mephisto or Fidelity since our last review, but some new models have been introduced or are on the way. An upgrade module for the Mephisto Exclusive and Munich boards is planned using the "Mephisto Genius 2" pc program translated to 68000 code. It will run on a 68030 processor at 33 MHz, and is expected to sell for under $800 (for the module only; under $1300 with the Exclusive wood board). Since Genius 2 does appear to be somewhat stronger than either Genius 1 or Mephisto Vancouver (the prior Lang programs on pc and dedicated boards respectively), this module should be slightly stronger than the Vancouver 68030 despite the slight (8%) reduction in MHz, and should therefore play around the USCF 2475 level. Such a machine should be the strongest dedicated board on the market with the possible exception of the TASC R30, and a real bargain at $500-$600 less than the TASC. It should arrive before the end of 1993.

An upgrade (software only, in module form) of Mephisto Risc is also planned, incorporating the version of Gideon that won the World Computer Championship. In the Exclusive board it should sell for under $1,000. If you are deciding between the new RISC and the Genius 68030, the 68030 is likely to play about 40 points stronger and have more features, but at a cost of $300. I imagine that most people who would buy such a machine would spend the extra money for the added strength, but that's up to your budget. Mephisto has announced a 32 bit version of Mephisto Berlin (the 68020) (below), at a speed of 25 MHz, with an upgraded program (but not the Genius2 program). Such a model should be stronger than the Saitek RISC 2500 128k, and is expected to retail for the same $599 price. It will run about 3 1/3 times faster than the standard Berlin, and so should play over a hundred points bet-

ter even if no improvement to the program is made. The Berlin 68020 is a best buy in the $600 price range and is expected by the end of November, 1993. At that time, the normal Berlin will probably be marked down to under $400, at which price it will also be a best buy.

Mephisto also announced a wood model for under $600 called the Montreal *(right)*, with a version (upgrade?) of the old Roma program on a 68000, the last one before hash tables were introduced. I cannot recommend this model since the Fidelity Premiere is so much stronger, unless you don't need master level play (the Montreal will probably be a strong Expert).

Until about a year ago Mephisto and Fidelity were clearly the leaders in the market for master level chess computers with Saitek only talking about becoming competitive, but then the situation reversed. Mephisto has gone thru very trying times, for at least two reasons. The purchase of Fidelity turned out to be a terrible mistake, because sales have not been adequate to justify either the high price tag for the purchase or the high overhead of the large Miami factory. Also, even in Europe, Mephisto failed to anticipate the swing in interest from dedicated chess computers to pc software. After a long period of stagnation and turmoil, Mephisto is now emerging as a leaner company, making a comeback with a much smaller overhead and breaking into the software market with the top of the line Mephisto Genius 2.0 and Mephisto Gideon Professional, both for PCs. Richard Lang, their star prize-winning programmer, is apparently sticking by them. I would not be at all surprised to see Mephisto regain its leadership as a manufacturer of high level chess computers. It certainly looks like Mephisto's new products have the potential to once again make them king of the hill.

As for products currently being sold, Fidelity Premiere is still the top wood autosensory model under $1000, and Mephisto Mobil MM5 is still the strongest hand-held model on the market, although battery life is short. I understand that a limited number of Mobil MM5 units may go on sale for under $200, at which price they are an excellent value. Most older Mephisto models are now overpriced relative to competing products, although the Milano is worth considering for under $250. I think that Mephisto will be successful in its comeback bid; competition can only benefit the consumer. Since Mephisto is clearing out some of its old stock, there might be some real bargains on Exclusive boards with MMV and Polgar modules available at this time.
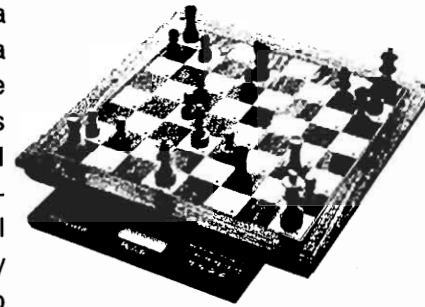
Novag Review

After a long period during which Novag had no models that we could recommend, Novag has come out with two models under $150 that are both excellent values and are recommended by CCR. They are the hand-held "Ruby" *(left)* and the table top "Emerald" *(bottom)*, both of which have the same program and the same 10 MHz h-8 processor and the same ROM (32k) and RAM (1k). They have turned out to be stronger than we expected in our last review, and are each the strongest models now available in their respective categories for under $200. The only stronger hand-held is the somewhat more expensive Mephisto MM5 Mobil, which may now be available for under $200 for the first time, and to get a stronger table top you must go up in price to the old Fidelity Mach III or the Mephisto Milano. Eric Hallsworth's "Computer Chess News Sheet" puts Ruby and Emerald at a USCF rating of 2152, about half way between our prediction and Novag's own advertising claim of 2210. The Ruby also went thru a C.R.A. Action test, and earned an Action rating of 2181, which implies 2121 at 40/2 using my current adjustment of sixty points off for Action ratings. These two figures agree quite well. If we compare the Novag Emerald to the Saitek GK 2000, the Novag model has twice the ROM and RAM (same processor and speed) and enjoys a 38 point lead on Hallsworth's list. So it seems that the two programmers (Dave Kittinger for Novag, Franz Morsch for Saitek) have done nicely with the available hardware. The Ruby is physically similar to the old Super VIP, so the choice between the travel units should be made not only on the basis of cost and strength, but also on whether you prefer keypad entry (Novag) or pressure-board move entry (Saitek TC and Excalibur Accolade). Both methods have their advantages. Novag also makes two slightly less expensive h-8 models, "Zircon" for table top and "Jade" for hand-held use, but the programs are older and significantly weaker and not recommended.

As for master rated programs, the Novag Scorpio and Diablo must now be considered obsolete, since stronger, comparably priced models are now available or coming shortly from other companies (for example: Mephisto Berlin,

the new Berlin 68020, RISC 2500, and Fidelity Elite Premiere). Novag is continuing to develop new models, but prefers not to release information about them until they are ready for market, so we'll just have to wait and see whether they can offer a master level machine at a decent price. Novag has apparently decided to focus exclusively on the h-8 processor for its strong chess computers, so the next logical step (already taken by Saitek's "Brute Force" Module) is to add enough memory for hash tables, which should suffice to reach or exceed the 2200 threshold for master level play at 40/2. As far as I know, Novag has no plans to compete with Mephisto and Saitek in the high performance battle for Senior Master level machines.

Saitek Review

A brand new program of interest is the long-awaited Sparc Module (available soon for both the Galileo and Renaissance wood autosensory boards). The program is by the Spracklens, who were formerly Fidelity's programmers. The program appears to be rather similar to the full width programs of Fidelity, but some selectivity has been introduced in the form of null-move pruning. The search algorithm used appears to be similar to the one used by Franz Morsch in the Brute Force Module (available for these same boards), but the Spracklen program has far more chess knowledge, thanks to its 256k ROM, far larger hash tables, due to its 1 Mb RAM, and a much larger opening book (over 100,000 unique positions). What makes the Spracklen program really powerful, though, is the fact that it uses a 20 MHz SPARC RISC processor. The SPARC is considered to be a faster, more powerful RISC processor than the "ARM" processor used in the "RISC 2500" and in "Mephisto RISC". At 20 MHz, its real speed may be close to double that of the 14MHz ARM used in those models. So if the programs were equally good, the SPARC Module would outrate Mephisto RISC and RISC 2500 by perhaps 60 points. However, the results on problem tests do not show the SPARC module to be as fast as I had expected, perhaps because the Spracklens are extremely conservative in their selectivity. SPARC scored below expectations on my own problem test (only 2325 USCF), and barely over 2400 USCF on the "Louguet" and "BT2450" tests. Automated play results by independent tester Max Harrell against "Zarkov" at the minute per move average level suggest a rating of 2455, which would put it somewhat above Mephisto RISC and RISC 2500, while early results from "Ply" magazine put it at 2397. So overall it appears to be about the same strength as the RISC 2500, slightly

above 2400 USCF. The features and functions of the SPARC module are those of the board in which it is used. If you already have a board, you will need to send it in to be modified to accept the module (unless you are skilled at electrical soldering), but if you buy the board and module together, the board will come already modified to take the module. Pricing is not definite yet, but the Renaissance board with the SPARC Module is expected to cost less than $1500. In conclusion, although the tactical play of the program is not as strong as I had hoped, its overall play and the luxury of the Renaissance board would make this model worth considering if the Mephisto Genius 68030, which is likely to be 50-60 points stronger, fails to come out soon or is priced too much above the SPARC.

As for the RISC 2500 *(right)*, early shipments were fine, but a defect crept in to production mid-year and shipments were halted. We have no word yet on when or if the problem will be corrected. If it is corrected, it will remain a good value as an affordable Senior Master level model, but if the Berlin 68020 model sells for about the same price, I would prefer it as it will probably be a bit stronger, and Mephisto has always had a superb track record for reliability. A RISC 2500 version with 512k is planned for 1994, which should add about 20 points for perhaps an extra $200 or so. The new Berlin 68020 already comes with 512k.

Not new but still worth considering are GK 2000 *(right)*, a nicely designed 2100+ model priced below $200, and the hand-held, pressure sensitive model "Travel Champion" *(left)* which has the same program but rates about 35 points lower due to its slower processor (7 MHz vs. 10 MHz in GK 2000). GK 2000 faces stiff competition from the new Novag Emerald, which is slightly stronger and about $40 less expensive, and Travel Champion from Novag Ruby (which is clearly stronger but uses keypad entry). An alternative to the GK 2000 is the Saitek Virtuoso, which has the same program and processor speed but comes in an elegant wood board and is priced below
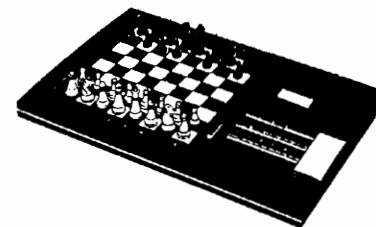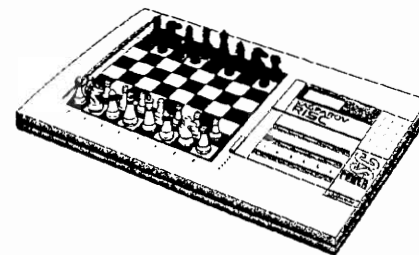
$150. Unfortunately, it lacks a display, which I consider essential for serious use, but if you just want a strong opponent in a beautiful board, the Virtuoso is a real bargain. An alternative to "Travel Champion" is "Champion Advanced Trainer" *(left)* which has the same program and processor speed in a different peg-style travel board. Since it lacks a display, it would have to be cheaper than TC to be considered. In marked contrast to the SPARC module, these Franz Morsch programs are superb tactically (relative to other programs using comparable hardware), but primitive positionally and in the endgame. Note that there is to some extent a cause and effect relationship here; the absence of sophisticated chess knowledge in models with limited memory makes the program run faster, which results in improved performance on tactics. For this reason, models with small memory are not necessarily drastically weaker than their large memory cousins with comparable processors.

The Pawn Shop

CCR is not responsible for the accuracy of any of the information printed or any typos. Call for ad rates.

Novag Super Forte "C" program. (2248) CCR10' Rating in 1992-93 Computer Chess Reports. AC adapter included. Excellent condition. Will sacrifice $175. Phone (214)495-2487. Robert W. Smeltzer, 2613 Zodiac Dr., Garland, TX. 75044.

Munich Roma 68000 in good condition. $750. Call Your Move at 516-424-3300, 21 Walt Whitman Rd, Huntington Station, NY 11746.

Behind The Scenes:

TASC Review

TASC is the manufacturer of the pc insert board, known as ChessMachine, and the dedicated chess computer TASC R30 based on the ChessMachine. All versions of the Chess-Machine use a type of RISC processor known as ARM (Acorn Risc Machine). The standard version, which has now dropped in price to under $200 for CCR readers, runs at about 15 MHz and comes with the Gideon program by Ed Schroder, whose programs are consistently among the very best on whatever hardware he is writing for. Gideon, while not by any means weak tactically, is most noted for its positional and endgame strength. ChessMachine comes with either 512k RAM or 1 MB RAM, mostly for hash tables, but since the 1 MB version runs slightly slower it is not clear which is stronger. The 512k version should be a few points stronger at faster time levels, since the extra RAM of the 1 MB is not used until the hash table has used the first 512k, which takes a couple of minutes. A 30 MHz version of the ChessMachine is also sold, which should play about 60 points stronger with the same software, but costs about $1200. Again, it will run either the King or Gideon program, with the latest versions of both rated at over 2500 USCF on the fast hardware. In general, the ARM runs much faster than a 486 at the same MHz, perhaps by about a 5-3 ratio, so the standard ChessMachine hardware is roughly comparable to a 486 dx 25 MHz, while the high priced version is comparable to a 486 dx 50 MHz (which in turn is nearly as fast as a 486 dx2 66 MHz).

The TASC R30 is basically the 30 MHz ChessMachine with the King program in a quality autosensory wood board, with piece recognition capability like the Mephisto Bavaria board. CCR has not been able to test the R30 due to the high cost ($1,800), but indications are that except for differences in the version number of the King, the chess should be the same in the R30 and the fast Chess-Machine. There was a very bad result for the R30 in May of '93 (Aegon), but whatever was wrong appears to have been fixed (although there are rumors to the contrary) as more recent results have been in line with the fast CM, and so I have combined test results for the fast CM using the King with results for the R30 in the rating lists. Currently the R30 seems to be the strongest dedicated chess computer on the market, but it now apparently has some very stiff competition from the new Mephisto Genius 68030 at $500 to $600 less! I have no basis for evaluating the R30 other than a few published tournament results and problem test results. As TASC has not made other dedicated chess computers, I have no way to predict how durable or reliable the R30 is apt to be, but if it is as reliable as Mephisto machines have been, the high price tag may be warranted.

PC Software

A few years ago no pc software could offer competitive play with the top dedicated chess computers. There were two reasons for this. One reason was that the pc's Intel processor was generally not as fast or as well suited for chess as the Motorola processor used in the best dedicated models. The other reason was that the economic incentive was greater for the top programmers to work on the play of the dedicated models; if they did offer pc software, it was generally several years old so as not to detract from dedicated sales. Both of these conditions have now reversed. Intel's processors have accelerated more than Motorola's, and are now available at higher speeds. Furthermore, software written for the 32 bit Intel processors (386 and up) can access large memory for hash tables, unlike the 16 bit pc software. This in turn has led to greater demand for high level pc software, and competition has forced the programmers to put their best and latest software into their pc programs. The result is that in just a few years the "state of the art" for pc chess has climbed from class A to Senior Master! It is no longer big news when a pc program defeats a human Grandmaster, even in a serious contest. As for the future, we can expect another jump in strength when today's programs are run on the new Pentium based machines. We timed three of our chess programs on a new 60 MHz pentium machine and got an average speedup (over 486 dx 50 or dx2 66) of about 1.6 to 1, which should add 40 points to the ratings. The more expensive 66 MHz pentium machines should add another 10 points. Another jump can be anticipated when programs are written and/or compiled for the Pentium specifically. Furthermore, a host of new RISC-based pc's (not Intel-compatible) are about to make their appearance, including ones based on IBM's "PowerPC", Digital Equipment's "Alpha" chip (already running at 150 MHz), and the "RISC PC" with a Mips processor. These are all expected to outperform even the Pentium, and those chess programs written in "C" can be easily compiled to run on these machines. So the future of pc chess is quite exciting.

As for 1993, here's what's happening. The battle for top spot on the pc rating lists has been between MChess Pro and Chess Genius, with the two running neck and neck in 40/2 testing by "Ply" magazine and also on two popular problem tests (BT and Louguet). However Genius 1.0 holds a clear lead in testing at faster time limits. A new version, Mephisto Genius 2, is now available. It will provide for use of extended memory for hash tables (as MChess Pro, Fritz2, Gideon Pro, and Socrates already do). Based on three sets of problems, the gain in strength is 14, 35, or 45-55 (depending on scoring method), which average to 33 points. Genius 2 also offers a few new features over Genius 1, including analysis mode. Current owners of Genius can upgrade for about half the normal price. A new pc program by Ed Schroder, author of the ChessMachine, is called Gideon Pro. On a 486/33, it is essentially equivalent in speed and strength to the standard ChessMachine. Since the RISC processor in ChessMachine is thought to be comparable to a 486/25 MHz, Gideon Pro appears to be slower than expected by about a 4 to 3 ratio, which would weaken it by 25 points. The reason is that Gideon Pro is written in the language "C", while ChessMachine is written in assembly language, which is faster. On my 486 dx 50 MHz machine, Gideon Pro took 333" to complete the CCR problem test, which gives a predicted USCF rating of 2436. This probably understates its true strength, as Schroder programs are most noted for their good positional play and generally perform better in actual games than in problem tests. So Gideon Pro is among the top programs, but probably not quite as strong as the new versions of Genius and MChess Pro. Chessmaster 2400 has just come out, too late for CCR to review this issue, featuring a program by Johan de Konig, author of the "King" program used in the ChessMachine as well as the Saitek RISC 2500. It should also be quite strong, unless the publishers compromised strength for features as has often happened in mass-market chess software. We'll know soon. A new version of MChess Pro, 3.50, is expected soon. Both improved play and new features are promised. Zarkov 3.0 will be released soon, and Max Harrell's testing does indicate that it is stronger than previous versions. Another new strong program, from England, is Hiarcs 2.0, by Mark Uniacke et al, which won the 1993 "International Uniform Platform PC Championship", well ahead of MChess Pro (none of the other top programs participated). Although Hiarcs 1 was not among the top programs, there is evidence that Hiarcs 2 is much stronger and is among the elite. Hiarcs 2 (on 486/50 dx) completed the CCR problem test in 158" for a "predicted" USCF rating of 2485, behind both versions of Chess Genius but ahead of all other software commercially available as of this writing, but it did not do so well on the "BT2450" test. A pre-release version did quite well in Eric Hallsworth's testing. The Hiarchs programmers are promising an even stronger version shortly.

As for the Socrates (aka 'Titan') programs of Don Dailey and myself, they are finally making their commercial debut. Here is the story. After completing the "C" language program "Alpha" for Heuristic Software, which was never marketed despite winning the second Harvard Cup, we developed a new 386 assembly-language program for Heuristic Software called "Socrates", which won the third Harvard Cup, defeating three out of five grandmasters in Action chess games, including a victory over that year's U.S. Champion, Patrick Wolff. We then went on to develop a new "C" language program on our own, called "Titan", which won the 1993 ACM International Computer Chess Championship. We then "traded" that program for Socrates; we felt that Socrates should be even stronger than Titan once we incorporated key improvements used in Titan into Socrates. After all, since Socrates is in assembly language, it should be stronger than Titan if they use similar algorithms. We have now put many improvements into "Socrates", and are finally marketing it, thru a company called MDI, under the name "Socrates 3.0". Meanwhile Titan, which won the title under the name "Socrates II", was purchased by Electronic Arts to be the chess engine of the mass-market program "Kasparov's Gambit". EA had intended to use Alpha for this, but our ACM title changed their plans. Kasparov's Gambit has just come out. Electronic Arts claims that it contains the chess engine that won the ACM tournament, but my own tests on the commercial version show that in the process of putting the ACM program into KG, something went wrong. Gambit in its initial release has many bugs and does not play the same chess at all as the ACM winner. Knowledge of bishop mobility appears to be missing, as does some other chess knowledge, and Gambit appears to run only about 50-60% of the speed of the ACM program in positions (without bishops) where the two do play and evaluate identically. There are also bugs in the features and in the time controls, and the program is rather difficult to use (perhaps because it has so many features). One good thing I can say is that the 3d graphics are superb. In my opinion this product was released prematurely, and Don and I disclaim any responsibility for its playing strength. EA has revealed plans for a "patch", perhaps to be made available over bulletin boards. I have tested the patched version, and have confirmed that most or all of the bugs have been corrected. The new version does play identically to the ACM program and runs at 70-75% of the speed, so it should rate just 30 points below the ACM program. The corrected version should be in stores in November. To check whether a version of Gambit is the corrected or faulty version, look at the file date for "Gambit.exe". If it is October '93 or later, it has the "patch"; if before October it is the flawed version and you should inquire how to get the "patch". With the problems corrected, I can recommend Gambit for the general public, since it has many appealing features and is both instructive and fun, and I can also recommend it for serious players who wish to keep the cost below $50. As for Socrates III, it has the highest score to date on the popular "BT" problem test (fifty or more points over both MChess Pro and Chess Genius 1.0, and nearly twenty points over Mephisto Genius 2), and has a great many improvements (mostly tactical) over earlier versions of Socrates. It has not yet been tested enough to estimate its rating accurately, but the original Socrates I defeated MChess by 50 1/2 to 49 1/2 in automated independent testing. One feature offered by Socrates (and by Genius 2) but missing in most other programs is an analysis mode, in which Socrates will analyse a game and output the results to a file. Another is the option to specify a rating level at which you want the program to play (alas, there is an upper limit!).

All of the newer programs are feature-rich. The standards are much higher than they used to be--the public expects more now. Whatever recent program you get, you should be happy with the graphics and features. Nearly all recent programs support mouse-use. All of the latest crop of programs should offer Senior master level play on fast 486-based computers. But if you don't own a 486 computer, the strongest play you can get is from the ChessMachine, which comes with its own RISC processor that is roughly comparable to a 486 at 25 MHz. Because of this, it costs more than the normal price for top software, but readers of CCR can now purchase ChessMachine for under $200, only $50 more than the top priced chess software. ChessMachine has excellent features and graphics, and at the new price is clearly the way to go for owners of 386 and lesser machines. For those with slow machines (286, 386 sx), it is the only way to get Senior Master level chess play.

For many years, chess fans have dreamed of owning a chess computer that plays at Grandmaster level. Has that dream now come true for anyone with $3,500 or so to spend? That is the cost of a 60 MHz Pentium based pc with a top new program. Let's consider: the top pc programs on the last "Ply" list (Chess Genius 1 and MChess Pro) were rated about USCF 2460 on 486/33. A Pentium 60 runs about 2.4 times as fast as a 486/33 on our chess programs, so if this holds true for other chess software we should add about 75 points to the 486/33 rating. If problem tests are any indication we can expect at least thirty more points from Genius 2 over Genius 1, and perhaps one of the new crop of programs mentioned above may even exceed this. So we can expect about USCF 2565 play from the best software on a Pentium 60 machine, which is about the level of a top International Master or a "weak" Grandmaster. This assumes tournament level play (40/2); at faster levels the computers rate higher. In conclusion, it is still a slight stretch to claim Grandmaster level play on a pc, but one more significant boost, either in software or hardware (and I hear a Pentium doubler, to 120 MHz internal speed, is planned) should put pc chess solidly in the Grandmaster zone.

PC Program Ratings

PC programs are rated here on 486 66 MHz dx2 or 50 MHz dx computers (roughly equivalent) with 256k cache and at least 4 Meg RAM. To determine these ratings, I have taken published ratings for 486/33 MHz machines (the speed at which the largest number of models have been rated) and added 35 points. The chart on the next page shows how to adjust the ratings for any specific processor, based on the assumption that each doubling of speed is worth 60 points. The exact adjustments vary from program to program; for example Chess Genius seems to lose less in going from 486 to 386 than MChess Pro or Fritz 2, at least according to CCNS.

As with the dedicated ratings list, CCNS (Computer Chess News Sheet, from England) ratings are increased by 100, and Ply (Sweden) ratings are increased by 200 for USCF equivalence. Autotest results are by Max Harrell at 30" to 1' per move, with rating differences contracted by 15% since fast games exaggerate rating differences of computers. Ratings of programs run on any hardware other than 486/33 are adjusted by the chart, so CCNS software ratings are increased by 20 instead of by 35 since they represent a mixture of 486 machines said to average 40 MHz. Programs marked with an * come with their own processor and memory, so their strength is independent of the hardware on which they are run.

For the new programs on which there are no results yet from actual play, I have compared their results on problem tests with those of previous versions and added the improvement (if any) to the rating of the previous version. Ratings so calculated are enclosed in [ ]. If there is no problem data on a previous version, I simply averaged the problem test ratings and put the result in the autotest column.

Program	Mean	Autotest	CCNS	Ply
Mephisto Genius 2.0	[2537]	****	[2544]	[2529]
*ChessMachine the King 2.0 30MHz	2523	****	2524	2522
*ChessMachine Schroder 3.1 30MHz	2507	****	2511	2502
Chess Genius 1.0	2504	****	2511	2496
MChess Pro	2490	****	2484	2495
*ChessMachine Schroder 3.0 30MHz	2481	****	2480	2481
Gideon Pro	[2472]	****	[2481]	[2464]
Hiarchs 2.0	[2456]	[2431]	(2480)	****
Socrates 3.0	[2443]	[2443]	****	****
Socrates 1.0	2427	2427	****	****
MChess (versions 1.1 thru 1.71)	2415	****	2398	2431
*ChessMachine Schroder512k 15MHz	2410	****	2406	2414
Kasparov's Gambit (patched)	[2405]	[2405]	****	****
*ChessMachine The King 1.0 15MHz	2388	****	2370	2406
Fritz 2.0	2386	****	2384	2387
Zarkov (2.5 and higher)	2336	2367	2331	2309
Psion 2	2335	****	2335	****
RexChess 2.3	2317	****	2294	2339
Sargon 5	2316	****	2316	****
Hiarcs 1.0	2315	****	2304	2325
Grandmaster	(2315)	(2334)	(2316)	(2294)
Fritz 1.0	2266	2256	2284	2257
Chessmaster 3000	2244	****	2240	2248
Chess Champion 2175	2216	****	2216	****
Chessmaster 2100	2102	****	2102	****
Cyrus	2006	****	2006	****

PC Speed Adjustments Chart

For computers other than 486/66 or dx 50, as shown on the chart on the previous page, I recommend making the following adjustments. It is assumed that 486 machines have 256k cache, 386 machines have 64k cache, and 386 sx machines have no cache. "Fast" and "Slow" refer to the absence or presence of one "wait state". For programs that use more than 640k RAM, it is assumed that 4 Meg RAM is available. Note that most of the new, strong programs require at least a 386 processor to run.

Processor	Adjustment
Pentium 66 MHz	plus 50
Pentium 60 MHz	plus 40
486 dx2 50 MHz	minus 25
486 dx or sx 33 MHz	minus 35
486 dx or sx 25 MHz	minus 60
486 sx 20 MHz	minus 80
386 dx 40 MHz	minus 80
386 dx 33 MHz	minus 95
386 dx 25 MHz	minus 120
386 sx 25 MHz	minus 140
386 sx 20 MHz	minus 160
386 sx 16 MHz	minus 180
286 fast 16 MHz	minus 180
286 fast 12 MHz	minus 205
286 slow 12 MHz	minus 230
286 slow 10 MHz	minus 245
286 slow 8 MHz	minus 265
8088 10 MHz	minus 320
8088 8 MHz	minus 340
8088 4.77 MHz	minus 385

Please keep in mind that the ratings system is not an exact science, so please allow room for some error.

Rating The Commercial Chess Computers

In the last issue, I listed four different ratings together with their average ("Mean") for each model. They were CCR30' (Action games played between models by CCR testers, mostly myself and Max Harrell), CCR10' (Quick-chess games by same), CCNS ("Computer Chess News Sheet" by Eric Hallsworth in England, based on games at 1-3' per move), and "Ply" (the magazine of the Swedish Computer Chess Association, which tests only at 40 moves in two hours). The English ratings were increased by 100 points and the Swedish by 200 to approximate the levels of USCF ratings. I have continued this policy in this issue, with one change. I have replaced the CCR10' list by a "CRA*" list. There have now been enough CRA tests that they deserve their own column. However, since some tests have been at 40/2 and others at Action chess (game/30'), I had to come up with a way of dealing with this. Since my best judgment is that Action ratings run about 60 points above 40/2 ratings on average, I subtract 60 points from all C.R.A. Action ratings and enclose the result in [ ] for this list. Also, since many programs are offered with a choice of processors running at various speeds, any model offered at a different speed than the one tested has its rating listed with ( ) around, calculated by adding or subtracting 200*log10 r, where r is the speed ratio between the tested model and the one listed. This implies that a doubling of processor speed is worth 60 points. I previously used 75, but at the high levels of recent programs, 60 seems more realistic. Note that I include in the C.R.A. list ratings that are not official but were earned under C.R.A. conditions (Mephisto Amsterdam, which never quite completed its test due to a dispute, Fidelity Par Excellence, which is officially 2100 but should be 2076 including the prelims, and Fidelity Sensory 9, which was tested before the C.R.A. was officially in existence).

As for number of games needed for a rating, C.R.A. now requires 48 (formerly just 40), and I am enforcing the same standard (48 games) for the other lists. "Ply" does not actually print a rating now until it has 100 games, but I will include their data for models with 48-99 games so that their results get equal weight with the other lists. As before, CCR30' ratings are compressed by 20% to offset the tendency of faster time limits to favor the faster machine. Also, this time I am including automated testing results by Max Harrell at 1' per move along with the CCR Action results.

For the three forthcoming Mephisto models, I have estimated ratings based on my understanding of which program is going into each, and adjusting for the hardware difference. Those ratings are listed as "est".

CCR Ratings List
Dedicated Models

Computer	MHz	MEAN	CCR30'	CRA*	CCNS	PLY
TASC R30 "King"	30	2505	****	****	2487	2522
Mephisto Genius 68030	33	2477 est	****	****	****	****
Mephisto Vanc 68030	36	2467	2486	([2511])	2435	2435
Mephisto Lyon 68030	36	2464	(2482)	****	2451	2458
Mephisto RISC World Champ	14	2435 est	****	****	****	****
Mephisto Berlin 68020	25	2435 est	****	****	****	****
Saitek RISC 2500 128k	14	2422	****	****	2421	2422
Saitek SPARC	20	2421	2455	****	2397	2412
Mephisto Port 68030	36	2417	2410	2376	2437	2445
Mephisto RISC 1 MB	14	2410	2453	[2328]	2438	2421
Fidelity Elite v10 68040	25	2395	(2425)	[2430]	2345	(2380)
Mephisto Vanc 68020	12	2375	2377	[2402]	2359	2362
Mephisto Lyon 68020	12	2357	2373	****	2347	2352
Fidelity Elite v9 68030	32	2350	(2372)	[2378]	2320	2328
Fidelity Premier Vanc 68000	16	2328	2300	[2365]	(2323)	(2324)
Mephisto Berlin 68000	12	2325	2304	([2353])	2323	2321
Mephisto Vanc 68000	12	2320	2304	([2353])	2311	2312
Mephisto Lyon 68000	12	2308	2317	****	2302	2305
Mephisto Port 68020	12	2300	2293	(2267)	2315	2325
Fidelity Mach IV 68020	20	2295	2312	[2325]	2260	2281
Mephisto Almeria 68020	12	2291	2295	****	2291	2288
Fidelity Elite v5 dual	16	2256	****	(2306)	2227	2235
Mephisto Port 68000	12	2242	2239	(2218)	2264	2247
Saitek Brute Force h8	10	2230	2233	****	2240	2218
Mephisto Roma 68020	14	2217	2212	****	2211	2229
Novag Diablo/Scorpio 68000	16	2216	2220	[2249]	2195	2201
Mephisto Dallas 68020	14	2214	2233	[2208]	2195	2220
Mephisto Almeria 68000	12	2212	2220	****	2196	2219
Fidelity Mach 3 68000	16	2207	2203	[2265]	2161	2197
Mephisto Polgar 6502	5	2171	2191	****	2151	2172

Computer	MHz	MEAN	CCR30'	CRA*	CCNS	PLY
Mephisto Mondial 68000	12	2168	2194	2154	2136	(2187)
Novag Super Expert C	6	2162	2182	****	2146	2157
Mephisto MM5 6502	5	2159	2146	****	2154	2178
Mephisto Roma 68000	12	2151	2158	****	2128	2166
Mephisto Dallas 68000	12	2147	2129	[2138]	2148	2171
Mephisto Milano 6502	5	2141	2122	****	2143	2157
Novag Ruby/Emerald h8	10	2137	****	[2121]	2152	****
Meph Amsterdam 68000	12	2136	****	(2176)	2108	2124
Novag Super Expert B	6	2136	2201	****	2102	2105
Mephisto Academy 6502	5	2132	2142	****	2118	2136
Fidelity Mach IIc 68000	12	2115	2155	(2093)	2095	2115
Mephisto Mega IV 6502	5	2109	2113	(2106)	2100	2117
Saitek GK-2000 h8	10	2108	****	****	2114	2101
Saitek Maestro D 6502	10	2105	2108	[2105]	2092	2114
Novag Expert Turbo Kit	16	2105	****	****	(2104)	2106
Novag Super Expert A	6	2104	2140	2164	2065	(2048)
Mephisto MM4 6502	5	2102	2128	****	2076	2101
Mephisto College/MCarlo 4	4	2101	2145	(2087)	2075	(2098)
CXG Sphinx Galaxy 6502	4	2086	2139	****	2041	2078
Saitek Travel Champ h8	7	2079	****	****	2087	(2070)
Mephisto Modena 6502	4	2079	****	****	2074	2083
Fidelity Travel Master	10	2074	2103	[2002]	2086	2104
Novag Super Expert A	5	2071	2092	(2148)	2011	2032
Sai. Turboking II/Corona II 6502	5	2037	1995	2045	2038	2069
Fidelity Excel 68000	12	2037	2047	****	2011	2054
Saitek Stratos 6502	5.6	2033	2091	****	1990	2018
Fidelity Par Excel/Des.	5	2033	****	(2076)	1994	2029
2100/Chesster/Phantom	5	2033	****	(2076)	1994	2029
Novag Expert 6502	6	2020	****	****	2019	(2020)
Saitek Simultano/Corona	5	2017	2073	****	1975	2004
Fidelity Avant Garde	5	2013	****	****	1994	2032
Mephisto Rebell 6502	5	2010	****	****	1996	2023
Excalibur Legend/Accol	10	2005	****	[2005]	****	****

Computer	MHz	MEAN	CCR30'	CRA*	CCNS	PLY
Novag Forte B 6502	5	2005	****	****	1996	2013
Novag Expert 6502	5	2002	****	****	2000	(2004)
Mephisto Super Mondial	4	1996	****	****	1979	2012
Novag Forte A 6502	5	1996	****	****	1987	2005
Fidel. Designer 2000	3	1989	****	(2032)	(1950)	(1985)
Saitek TurboKing 1 6502	5	1981	1988	****	1974	****
Fidel. Excellence 6502	4	1979	****	****	1961	1997
Radio Shack 2150 6502	3	1974	(2029)	****	(1932)	(1960)
Novag Expert 6502	4	1973	****	****	1960	1985
Saitek Turbostar Kasp.	4	1955	****	****	1949	1961
Novag Super Const 6502	4	1950	****	2018	1902	1929
Mephisto MM2 6502	3.7	1949	****	****	1929	1968
Saitek Turbostar 432	4	1946	****	****	1931	1961
Fidel. Excellence 6502	3	1938	****	****	1923	1953
Saitek Prisma/Blitz h8	10	1929	1906	1965	1909	1936
Novag Super Nova 6301	16	1915	****	****	1898	1932
Radio Shack 2150L h8	8	1910	(1887)	(1946)	(1890)	(1917)
Fid Little Chesster	2	1903	****	****	(1888)	(1918)
Novag Super VIP 6301	10	1886	1912	****	1862	1883
Fidel Elite A/S 6502	3.2	1865	****	****	1858	1872
Mephisto Europa/Marco	8	1862	****	****	1840	1884
Polo/USCF Academy	8	1862	****	****	1840	1884
Fidelity Prestige 6502	4	1856	****	****	1857	1855
Fidelity Sensory 12 6502		1847	****	****	1847	****
Novag Quattro 6502	4	1839	****	****	1819	1859
Novag Primo 6301	8	1833	1850	****	1817	1833
Novag Const 6502	3.6	1832	****	****	1820	1843
Novag Const 6502	2	1776	****	****	1758	1793
Excalibur Adv. Star		1752	****	****	1744	1759
Fidel Sensory 9 6502	1.5	1732	****	1770	1693	****
Saitek Astral/Cavalier		1688	****	****	1688	****
Saitek Galileo (no module)		1669	****	****	****	1669
Saitek Turbo S 16k		1661	****	****	****	1661
Novag Mentor 16/Amigo		1660	****	****	1660	****

Automated Testing

Since it requires hundreds of games to accurately rate a new program against other programs, and since "Quick" and "Blitz" chess games are not normally rated except on their own scales, it generally requires months to get enough computer games vs. computer games played manually to generate accurate ratings. This is done by the Swedish Computer Chess Association (results published in "Ply" magazine) and also by various other publications and individual testers. By the time a program is accurately rated, it is apt to be superceded by a later one. Furthermore, there is always the question of how operator judgement may have affected the results. Did he resign games or call them draws too soon, did he adjourn games and possibly thus bias the results (suppose one program excelled at long-time analysis?) or did he set all the parameters correctly? I won't even talk about outright fraud, since the people I know who test computers generally do so out of a mixture of love of chess and curiosity as to the results, and would not be motivated to cheat. But all the other factors certainly make one wish that automated testing was done.

Fortunately, it is done, but only on a limited basis. Many of the developers of software have constructed autotesters between their programs and competing ones, but the results of such autotesting are usually confidential, and if released are questionable since the testing was usually done by one side only. One exception to this is automated testing by Max Harrell, who is an independent tester with access to autotest programs for Zarkov against several dedicated computers. He tests at various speeds, but his most serious tests are at the 1 minute per move average (30 moves in 30 minutes or 60 moves in 1 hour) time limits. His results for recent versions of Zarkov against three dedicated models are as follows, with Zarkov running on a 486 dx 50 MHz with 256k cache: Zarkov beat the Novag Diablo by 81 1/2 to 19 1/2 and beat the Saitek Brute Force Modul by 204 1/2 to 79 1/2 (note that that match required nearly a month of continuous testing to complete, since games take about two hours each). However the new Saitek Sparc defeated Zarkov by 63 1/2 to 39 1/2.

How to interpret these results? Eric Hallsworth's "Computer Chess Newsheet" puts Zarkov on 486 machines at 2213 British, or 2313 USCF, but those results are mostly with older versions and mostly on 486/33 machines. Allowing for these two factors, I would expect Zarkov 2.61 (and later) versions, running on Max's dx 50 machine, to rate in the upper 2300s. If we compute a rating from the above two matches against rated op-

ponents (Diablo and Brute Force, rated USCF 2197 and 2235 respectively), we get a score of 286-99, or 74.3% against an average rating (weighted) of 2225. This score represents a 184 point difference using the logistic rating formula as applied by the USCF. However, games at 1 minute per move slightly overstate rating differences that would be obtained at the traditional 3 minutes per move, perhaps by 15%, so Zarkov's rating would be 2225 + 184*.85, or 2381. The overall rating from all of Max's autotesting on recent versions of Zarkov was 2350 on a 486/33, which implies 2385 on 486/50. The Sparc result works out to a difference of 82.47 points before adjustment or 70 after, so Sparc's rating, based solely on these results, should be 2455. More games are needed to confirm this.

Shuffle Chess and Computers

As I write this, rumors are that Bobby Fischer may play a match with Judith Polgar for megabucks, but only if they play by special rules already dubbed "shuffle chess". The idea is to throw the players on their own resources right from the start by randomly "shuffling" the pieces on white's first rank at the start, then setting up black's pieces the same way, file by file. As far as I know, the only restriction would be that bishops start on squares of opposite color. If this match ever does take place, this form of chess might gain a certain degree of popularity, as their are many players who hate to play against memorized openings. Since these rules would allow for 2,880 starting positions (1,440 if we consider reflected positions as the same as their twins), it is unlikely that memorizing moves from any particular opening positions would be of much benefit.

Whatever you may think of Fischer and his bizarre notions about the world outside of chess, this idea like all of his chess ideas (including his clock) is well thought out and worth trying. The reason I bring it up here, in CCR, is that Fischer reportedly believes that this change will make it much more difficult for computers to defeat him or other top human players, since the computer has a larger, more permanent, and more error-free memory than does any human. I would like to make the opposite argument here; I believe that computers will do much better at Fischer's "shuffle chess" than they do from the normal starting position. In fact I would bet on Deep Blue over Fischer in a shuffle chess match right now! The reason is that current programs can only memorize what move to play in an exact position, while humans remember what moves are good in similar positions. Humans learn the types of positions that arise from their favorite

openings, and what plans and key moves to look for. Computers, once they are out of book, treat each position as if they have never seen anything like it before (it may not be so in the future, but that is the way nearly all programs run today). So a computer need not be any more disoriented by shuffle chess than it would be by a non-book opening move in standard chess, but a human player when confronted with a weird starting position will lose his edge of familiarity with similar positions.

So far I don't know of any serious games played between computer and human under shuffle rules, but it's easy to do. Using playing cards from 1 (ace) to 8, shuffle and draw cards to place white pieces on the first rank (using your computer's setup mode), the first two draws being for the bishops (re-drawing the second card if it would make bishops of the same color). Ace means a1, 2 means b1, etc. Then in similar fashion place the king, queen, and rooks, putting the knights in the last two vacant spots. Duplicate the arrangement for black (king opposite king, queen opposite queen, etc.). Just like that you can play. I presume that in shuffle chess you can castle if and only if the king and at least one rook are on their "normal" squares, which is exactly what most computer programs will do anyway when setup mode is used. So no new program is needed; you can try shuffle chess with nearly any program on the market! I tried two quick games against a top pc program and lost both, but these days the top pc programs can usually defeat me in fast chess with the normal set-up, since they play GM level speed chess, and I'm only an IM. Still, I felt quite disoriented with the random setup, while presumably the computer has no such emotions!

If any reader plays many games this way, let us know your rating, your computer, the results, and what you think about it.

Chinese Chess

There are a few programs on the market which play other versions of chess, in particular Japanese chess (Shogi) and Chinese chess (Shang Chi). Some have already been reviewed in CCR, but until now all were at a level only slightly above the novice level. The new program, "Uncle Wang Chinese Chess", despite its corny name, has broken out of this range and seems to play at the level of a competent amateur. It searches much like the pc chess programs, doing an iterative search (the depth and score are reported just like in most chess software), and has 8 levels and most of the basic features we expect in chess software (clocks, take back, saving games, replay, set up, turn board, etc.). It also offers the choice of Chinese or Americanized pieces. It does not

search nearly as deeply as do today's chess programs, perhaps because the 9x10 board is less suitable for a computer than the 8x8 chess board, and also because the program probably does not have the many refinements of current chess software (hash tables, forward pruning, null move, etc.). So it cannot be expected to play at the master level like the chess software can, but it does play better than most amateurs, perhaps like a Class A chess program or even better. I split two games with it, and I am among the best Occidental players of the game (although I'm quite rusty). It seems to have a decent opening book, and decent graphics. Its positional evaluation seems to be good for a computer, though not nearly as good as its tactics, like any chess program. One minor criticism is that the evaluation of positions in which one side is a piece ahead is about three times what it should be according to the manual. All in all, this is the first oriental chess software that I can recommend without reservation for experienced players as well as novices (an introductory leaflet will explain the game to you if you don't already play). I would love to see a shogi program reach this level, but I fear that will take many more years. All oriental chess games are extremely dynamic in nature and lots of fun to play. Enjoy!

Bits & Pieces

(letters from readers)

Gary Crum, Louisville, Ohio

Your statement "The relative strength of humans vs. computers is not so different in chess and checkers" is about as informative and misleading as to say the sun and moon appear to be the same size.

In the first place, no chessplayer (Kasparov, Fischer, Capablanca) has come remotely close to Tinsley, in his knowledge and understanding [of checkers] and ability. Mr. Tinsley only loses about 1% of the time. Also, Mr. Tinsley is past his prime, most checker games are played under the artificial 3 move opening ballot, more money, time, and effort are involved in increasing the skills of chess computers, and Deep Thought looks at more positions per second than Chinook...

Personally, I'm more interested in how well a computer can find tactical shots, than in how well it actually plays a game. [Then you should enjoy the problem test results in this and recent issues of CCR].

I can't understand the great discrepancy in prices between software (such as Chess Genius) and dedicated computers. [2200 level models have sold for only slightly

more than Chess Genius, but Senior Master level computers require processors and memory comparable to that found in 486 based pc's, so the prices are closer to computer prices than to software prices.]

Reply: Thanks for your comments on checkers. With no disrespect for Mr. Tinsley, the greatest of all checker masters, I don't see how you can say that he's better at checkers than Kasparov is at chess. He loses much more rarely because checker games are drawn much more often than chess games. If we disregard draws, both Tinsley and Kasparov dominate their rivals (except for Karpov) by huge margins. Chinook is clearly the #2 player in checkers now, while in chess it will probably be about two years until a computer program ("Deep Blue" or another?) will be able to make the same claim. I agree that if equal resources had gone into programming both games, checkers programs would have reached their present status long ago.

Although Mr. Tinsley beat Chinook 4-2, one of Chinook's losses was due to forfeiting on time after locking up in an even position (cause unknown), while according to Mr. Crum two other losses were attributable to flaws in the opening book of Chinook, so with a better book and the "bug" fixed, Chinook might even have won the match. I expect that when a computer challenges Kasparov in a couple years, we may see something similar--the computer may lose the match due to inferior opening preparation and/or bugs. Then these problems will be fixed, and the computer will win the rematch. We shall see.

Joseph Llage, Bayonne NJ

I bought a [Saitek] Travel Champion and it has the features I need. But I had a little disappointment. First, they did not fully explain about the random mode. Does it add strength to my TC? [No, it weakens it slightly but makes for more varied play.] Second, I thought that it has a 2093 strength but it lost 4 times to Chessmaster for Super Nintendo (at levels from 1-3 min/move). Both computers had opening book on and my TC was set to Active on, Tournament B on, and Brute Force algorithm. [This is your error. The selective mode is clearly stronger than the full- width (Brute Force) mode, and is used in all rating tests.] Is the Chessmaster for SuperNintendo stronger than TC?

Reply: [I doubt it, since the regular Nintendo version is thought to be in Class A, but I am not aware of any testing of the SuperNintendo version.]

Frank M. Collins, Bastrop, LA

I have recently concluded a 40 game match at 40/2 between my new ChessMachine 3.0 and my old Mephisto Portorose 16 bit. Since the Portorose has a rating, established over many hundreds of games, of about 2250, I felt that it would put up a stiff fight, while providing an accurate benchmark to estimate the CM's strength.

After playing the first 10 games I was stunned. The ChessMachine had lost 3, won 5 and drawn 2, for a score of 6-4. I seriously thought that I might have had hardware or software problems. What I actually had was a very good example of the fallacy of drawing conclusions from too few games.

The next 30 games were an astonishing exhibition of chess playing - The ChessMachine, winning 20, drawing 9 and losing only 1!

The final score of +25-4=11 or 76.25% in favor of ChessMachine translates exactly to a 200 point difference in strength, according to the ELO scale...All of the most decisive wins were by The ChessMachine.

Reply: Thanks for this example of the unreliability of small samples. "Ply" magazine has recently changed its minimum number of games (for a rating to be published) from 40 to 100, even though this means some programs may be outdated by the time they are rated. The need for huge samples explains the surge in interest in rating by problem tests, despite their inherent drawbacks. As for ChessMachine, if you own a pc but not one with an 80486 processor, CM now at under $200 is the least expensive way to get solid Senior Master level chess. Your result helps to confirm this.

Robert Basham, Marton, NJ

The new super-fast 32-bit RISC 2500 is really exciting!! It easily announced a "Mate in 9" set at only 2 seconds per move!! Scorpio took 2'51", Mach III took 8'30". [The problem called for a double rook sacrifice followed by a series of 7 queen checks.]

Reply: The RISC 2500 (and certain other programs) can solve such problems quickly because the solution consists primarily of checks to which there is only one legal reply. This program uses the rule "don't count checks or forced replies as plies" and can therefor look very impressive on problems with long sequences of one-reply checks. However the rule does slow the program down a bit on tactics involving multi-reply checks,

so it's a matter of debate as to whether this rule actually improves the real playing strength of the program. Even without the rule, RISC 2500 would probably still deserve a Senior Master rating; the rule makes it look even better in certain circumstances.

Gregg Bogosian, Ballwin, Missouri

I did the 5 new "knowledge-testing" problems with my Novag Super Expert C 6 MHz, with the following results: #21 unsolved, #22 3ply - 1", #23 unsolved, #24 1 ply - 0", #25 unsolved.

The total time for the 20 best times is 9275", which works out to USCF rating of 2136 by the CCR formula. This seems a bit low.

Reply: *Novag computers are usually overrated by tactical problem sets, because Novag programs emphasize tactics at the expense of certain positional knowledge (mobility in particular), but my set includes problems designed to trip up selective programs and programs that take various "shortcuts", so in this case the rating actually came out slightly lower than its rating from actual play (US 2146 on Eric Hallsworth's latest list). Thanks for completing the test.*

Jorge L. Pichardo, Plattsburgh A.F.B. NY

I'm writing to report my findings on MChess-Pro versus Chess Genius using identical 486 dx2-66 Gateway-2000 computers. We had two separate matches of 50 games each. The result of the first match was a 24-20 victory for MChess Pro, with 6 draws. Just to prove that chess results can vary greatly from match to match, the second result was a 23-19 victory for Chess Genius with 8 draws. We also noticed that in 5 games out of the 8 draws, MChess-Pro sacrificed a pawn leaving Chess Genius with an extra pawn, but intelligently MChess-Pro managed to draw at the end...These games were all limited to a total of 1 minute per move. Surprisingly enough, at this speed both programs are very close. *[He enclosed a 104 move game in which MChess opened 1 h3, lost a pawn, but obtained enough counterplay to draw the ending.]*

Reply: *To play 100 games at a minute per move without an autotester requires a lot of patience! So your equal result agrees with the "Ply" ratings, which put the two within a few points. Again we see the need for huge samples. If they are really this close, it might take a thousand games to prove which is stronger.*

Games

Action Chess Open, Austria

White: Chess Genius on 486/50
Black: GM Chernin (Hungary), FIDE rating 2615
Source: PC Schach

1 e4 g6 2 d4 Bg7 3 Nf3 d6 4 Nc3 a6 5 Be2 b5 6 a4 b4 7 Nd5 a5 8 Bg5 Bb7 9 Qd3 h6 10 Bf4 e6 11 Ne3 Nf6 12 e5 Nh5 13 Bg3 Nxg3 14 fxg3 (I believe nearly every human master would take towards the center here.) dxe5 15 Nxe5 o-o 16 o-o Nd7 17 N3g4 Nxe5 18 dxe5 Qxd3 19 cxd3 Rfd8 20 Rac1 Rd7 21 Nf6+ Bxf6 22 Rxf6 Rc8 23 Rc5 Rd5 24 Rxd5 Bxd5 25 Rf1 c5 26 Kf2 Bc6 27 Rc1 Bd5 28 Rf1 Kf8 29 Bf3 Rd8 30 Ke3 Bb3 31 Rc1 Rc8 32 Bb7 Rc7 33 Bf3 Ke7 34 Bd1 Bxd1 35 Rxd1 Rd7 36 b3 Rd5 37 Ke4 f5+ (black could draw by Rd4+ and waiting, but wants to win) 38 exf6+ Kxf6 39 Rf1+ Rf5 40 Rf3 h5 41 h3 Kf7 42 Rxf5+ gxf5+ 43 Ke5 Ke7 44 h4 Kd7 45 Kf6 Kd6 46 Kg5 Kd5 47 g4 fxg4 48 Kxh5 Kd4 49 Kxg4 Kxd3 50 h5 c4 51 h6 c3 52 h7 c2 53 h8(Q) c1(Q) 54 Qd8+ Kc2 55 Qc8+. The remaining moves were apparently not recorded due to time pressure. At this point black seems to have the better of a probable draw, but in the time scramble he went astray and Genius won. I included this game as a matter of record because I believe Chernin is the highest ranked player (World #35) to lose a formal game to a commercial chess program.

CCR Subscriber's Game

White: Saitek RISC 2500 offensive mode, 45" per move average level
Black: Fidelity Mach III, level 6 (2' per move average level)
Source: Robert Basham, Marton, NJ

1 a3 (input by Mr. Basham for variety) e5 2 d4 exd4 3 Nf3!? (this pawn sac would probably not be played by any program in normal mode, but the "offensive" mode of RISC 2500 is very willing to sacrifice for position.) c5 4 e3 (4 c3 looks better to me) Qa5+ (I would take and then play ..d5) 5 Bd2 Qb6 6 exd4 cxd4 7 Bf4!? (Again, a very bold gambit) Qxb2 8 Nbd2 Qc3 9 Bb5 a6 10 Bd3 Bxa3?? (This is obviously too greedy. When one is ahead in material but lagging in development, grabbing more pawns instead of developing is usually wrong. Better was 10...Nc6.) 11 Be5 f6 12 Bd4 Qb4 13 o-o Nc6 14 Re1+ Nge7 15 c3 Qa5 16 Nc4 Qc7 17 Bb6 Qf4 18 Nxa3 o-o 19 Bc5 Re8 20 Nc4 Qc7 21 Nd6 Ne5 22 Nxe5 fxe5 23 Bxh7+! Kxh7 24 Qh5+ and black resigned. In my opinion the "offensive" mode of RISC 2500 does not play

sound chess, sacrificing pawns for insufficient compensation, but it's much more exciting and fun than the normal mode, and it actually seems to score better than the normal mode against computers, perhaps because they don't know when it's time to say "enough". Against strong human masters I would recommend that the RISC be set on normal (or perhaps "active") mode for best results in tournaments.

Aegon, Netherlands, 1993 -- 40/2

White: Kasparov Sparc
Black: Nana Ioseliani 2460 FIDE (One of the world's top female players.)
Source: "Computer Chess NewsSheet"

1 d4 d6 2 e4 g6 3 Nc3 Bg7 4 f4 Nf6 5 Nf3 c5 6 dxc5 Qa5 7 Bd3 Qxc5 8 Qe2 o-o 9 Be3 Qa5 10 h3 Nbd7 11 o-o a6 12 Qd2 Qc7 13 a4 Nb6 14 Qe2 Be6 15 f5 Bc4 16 fxg6 hxg6 17 a5 Bxd3 18 cxd3 Nbd7 19 Rfc1 Rfc8 20 Ng5 Qd8 21 Rf1 Ne5 22 Na4 Qxa5!? (Maybe black should have offered to repeat moves by 22..Ned7) 23 Nb6 Qb5 24 Nxa8 Rxa8 25 Ra3 Rd8 26 Qc2 Bh6 27 Rb3 Qa4 28 Kh1 Nh5 29 Kh2 Re8 30 Qc3 Nf6 31 Bd2 Qd7 32 Qb4 b5 33 Qa5 d5 34 Qxa6 Qc7 35 Kh1 Qc2 36 Qxb5 Qxd2 37 Rxf6 Rc8 38 Rc3! Rxc3?? (38...Rf8 was much better; probably white should not have gone in for the tactical sequence beginning with going after the "a" pawn with the queen.) 39 Qe8+ Bf8 40 Rxf7 Qe1+ 41 Kh2 and black resigned. I found the computer's play in the first thirty moves or so to be rather impressive, as well as the finale.

Welser Computer Tourney, 1993

White: MChess Pro 486/dx50
Black: ChessMachine The King 2.0 32 MHz (The tourney winner with 7 out of 9, and the top rated entrant.)
Source: "Computer Chess Newssheet"

1 d4 Nf6 2 c4 c5 3 d5 g6 4 Nc3 Bg7 5 e4 o-o 6 Be2 d6 7 g4?! (This obscure book move is totally inappropriate for a computer.) Na6 (book is 7...e6, following the rule "answer a wing attack by a central break") 8 Bd2 (only a computer would play such a tame move after 7 g4) Qb6 9 Rb1 Bd7 10 f4 (This shows good spirit.) Ne8 11 h3 e6 12 Nf3 Rb8 (a bit strange here) 13 e5 Rd8 14 b3 (Castling first makes more sense) Qc7 15 o-o (Now this is a gambit; trading off black's key bishop for a knight is very nice for white, but is it worth a pawn?) dxe5 16 fxe5 Bxe5 17 Nxe5 Qxe5 18 Rf3 f5?! 19 Bg5 Nf6 20 Re3 Qc7 21 d6 Qb6 22 gxf5 gxf5 23 Bh6 Rf7 24 Bh5! Rg7 (black must surrender the exchange, since taking the bishop gives white a mating attack simply by recapturing) 25 Bxg7 Kxg7 26 Rg3+ Kh8 27 Qd2! (This clever piece

sac clinches the game, with threats of attack on the black squares) Nxh5 28 Na4 Nxg3 (else 29 Qc3+ leading to mate) 29 Qc3+ Kg8 30 Qxg3+ Kf7 31 Nxb6 Bc6 (if 31...axb6 32 Qh4 with too many threats) 32 Qh4 and white won. An exciting game.

2nd International Uniform Platform Computer Chess Championship, 1993 - 40/2

White: Hiarchs
Black: M-Chess Professional
Source: Applied Computer Concepts, Ltd.

1 d2-d4 Ng8-f6 2 c2-c4 e7-e6 3 Nb1-c3 Bf8-b4 4 e2-e3 O-O 5 Bf1-d3 d7-d5 6 Ng1-f3 b7-b6 7 bc1-d2 Bc8-b7 8 c4xd5 c6xd5 9 O-O Bb4-d6 10 Nc3-b5 Bd6-e7 11 Qd1-c2 c7-c6 12 Nb5-a3 Nb3-d7 13 Ra1-c1 c6-c5 14 d4xc5 Nd7xc5 15 Bd3-f5 Bb7-a6 16 Rf1-d1 g7-g6 17 b2-b4 g6xf5 18 b4xc5 Ba6-e2 19 Rd1-e1 Be2xf3 20 g2xf3 Bc7xc5 21 Na3-b1 f5-f4 22 Kg1-h1 Rf8-e8 23 Re1-g1 Kg8-h8 24 Qc2-f5 Qd8-d6 25 Bd2-c3 d5-c4 26 e3xd4 Bc5xd4 27 Qf5-d3 Ra8-d8 28 Rc1-d1 Bd4xc3 29 Qd3xd6 Rd8xd6 30 Rd1xd6 Bc3-e5 31 Rd6-d1 b6-b5 32 Nb1-a3 a7-a6 33 Na3-c2 Be5-c7 34 Nc2-b4 Re8-e6 35 Rd1-c1 Nf6-e8 36 Nb4-d5 Bc7-d6 37 Rc1-c8 h7-h6 38 Rc8-a8 Bd6-e5 39 h2-h3 Kh8-h7 40 Rа8-a7 Nd6-d5 41 Ra7xa6 Nd6-e4 42 Ra6-a7 Ne4-g5 43 h3-h4 Ng5xf3 44 Ra7xf7 Bf4xd6 48 Rf7xf3 Kh8-g7 49 h4-h5 b5-b4 50 Kh1-g2 Bd6-e5 51 Rf3-f5 Be5 d4 52 Rf5-b5 Bd4-c3 53 f2-f4 Kg7-f6 54 Kg2-f3 Kf6-g7 55 Rb5-b7 Kg7-g8 56 Kf3-c2 Kg8-f8 57 Rb7-h7 Bc3-g7 58 Ke2-d3 Kf8-g8 59 Rh7xg7 Kg8xg7 60 Kd3-c4 Kg7-f6 61 Kc4xb4 Kf6-f5 62 a2-a4 Kf5xf4 63 a4-a5 Kf4-g4 64 a5-a6 Kg4xh5 65 a6-a7 Kh5-h4 66 a7-a8Q h6-h5 67 Qa8-g8 Kh4-h3 68 Qg8-g5 h5-h4 69 Kb4-c3 Kh3-h2 70 Kc3-d2 h4-h3 71 Kd2-c3 Kh2-h1 72 Ke3-f2 h3-h2 73 Qg5-d5 mate.

Problem Tests

Even while the chess programmers compete to write ever stronger chess software, another competition seems to be taking place to compose the problem set that best "predicts" the ratings of chess computers. A set that really did a good job of this would be very valuable to chess programmers, who could quickly find out if a new idea or change was an improvement or not. Each year the predictive value of new problem sets gets better and better, just like the programs themselves, but they are not yet good enough to replace actual testing in match play vs. other computers or humans. Still, some sets can predict ratings about as well as any match or tournament of less than fifty games, since there is so much luck in small samples. Since it takes months to play hundreds of

games at tournament level (40/2), the only ways to get a rating for a program quickly are to rely on small samples (risky), go by quick chess results (favors tactical programs over positional ones), or go by problem sets. So, although such sets are still rather crude, they are about as good as any other method of getting a rating quickly for a new program. The biggest objection to problem sets is that once they are published the programmers use them to tune their programs, so newer programs always look better than old ones even if little true improvement has taken place. A really good set would be one that is difficult to "cheat" on; it should have enough positions and be scored in such a way that special extensions or tricks to solve particular problems would hurt the score on all the other problems enough to keep the score the same (or lower) unless the extension was a geniune improvement. No set is that good yet, but we can hope.

One new set designed for master level programs that correlates quite well with the Swedish rating list is published by the new French computer chess magazine "La Puce Echiqueenne", editor Jorge Orellana. Subscriptions to that magazine cost 160 Francs for 1 year (4 issues) by air-mail; write to S.A.R.L. St Germain-Lafayette, 7 rue Lafayette, 75009 Paris, France. The problems were selected and written up by Frederic Louguet (see the next page), so I will refer to the set as the Louguet test. There are 36 problems of which 12 are "Positional", 14 are "Combinations", and 10 are "Endgames". The "rules" of the test are to run each problem in infinite mode for 3 1/2 minutes, recording the time at which the correct move appears in the display. If the move changes to an incorrect response before the 3 1/2 minute time limit, the right move must reappear before the deadline to get any credit, and the time of reappearance is the one to be recorded. Points are awarded as follows: 15 points if found in 10" or less, 10 points if found between 11" and 90" (inclusive), and 5 points if found between 91" and 210" (inclusive). Points are then totalled in each of the three categories, and the totals multiplied by 2.2 for the positional set, 1.4 for the tactical set, and 1.2 for the endgames. These products are then totalled, with that total then added to 1950 to give an estimated French rating (French ratings average 172 points below USCF ratings according to a study by "Ply" magazine). Since a perfect score on the test (all problems solved in 10" or less) works out to 870 points, a player strong enough to do this would get a French rating of 2820, just about equal to Gary Kasparov's actual FIDE rating.

One problem with converting foreign ratings to USCF ratings is that the conversion is not uniform. Most European ratings agree fairly well with FIDE ratings at the Grandmaster level, which in turn implies that the gap between European and American ratings is less than 100

points near the top. But lower down the scale, the disparity between USCF and European ratings seems to grow, probably due to bonus points which we award for outstanding performances by players below 2100. In the past I have ignored this issue, but I fear that to continue to do so with machines approaching Grandmaster level would lead to my overstating their USCF ratings. To use the Louguet test to estimate USCF ratings, I have decided to use a uniform multiplier of 1.4 to all scores, and then add 2170. This holds down the ratings of the top models a bit, as it should, and treats all problems equally. The test author apparently considers positional play more important than tactics and endgames, since he gives it more weight, but even if he is correct, positional problems are not nearly as accurate as tactical ones in rating chess computers, because solutions may be found or missed by essentially random reasons.

Here are the USCF ratings estimated by the Louguet test for all models on which data is published, plus Saitek Sparc which I tested myself. First the dedicated models and pc insert boards: "Deep Blue" (IBM's non-commercial research project) 2660, TASC R30 v. 2.2 30 MHz 2590 (!), Chess Machine The King 2.0 32 MHz 2548, Chess Machine Schroeder v3 32 MHz 2506, Mephisto Vancouver 68030 36 MHz 2464, Chess Machine The King 1.0 14 MHz 2436, Mephisto RISC 14 MHz 2429, Saitek RISC 2500 14 MHz 128k 2408, Saitek Sparc 2401, Chess Machine Schroeder v2 14 MHz 2394, Mephisto Vancouver 68020 12 MHz 2345, Mephisto Berlin 2310, Fidelity Mach IV 2282, Novag Diablo/Scorpio 2275, Mephisto Polgar 2233, Fidelity Mach III 2219. Note that since the base rating on the test is 2170, only master level programs are tested.

Next, here are the comparable figures for pc programs tested on 486/66 dx2 MHz machines with 16 Mb RAM: Mephisto Genius 2 2520, Chess Genius 1.0 2506, M Chess Pro 3.10 2492, Fritz 2.0 2457, M Chess 1.70 2422, Socrates 3.0 2408, Zarkov 2.6 2380, Chessmaster 3000 2373, Hiarcs 1.0 2352, Zarkov 2.5 2338, Grandmaster Chess 2324, Fritz 1.0 2310. Note: Mephisto Genius 2 was actually tested on my 486/dx 50 with 8 Mb RAM and scored 2513; the 2520 figure allows for the slight difference between my hardware and the hardware used on the other tests (a dx50 is nearly as good as a dx2 66, and the difference between 8 and 16 Mb RAM is miniscule). Overall the test relates fairly well to ratings derived from actual computer vs. computer games, but there is a tendency for programs that emphasize tactics over positional play (Fritz, TASC R30, The King, Chessmaster 3000, etc.) to be overrated. Weighting positional scores more heavily does not help because the positional problems do not show the positional weaknesses of these programs.

The rating of "Deep Blue" at USCF 2660 seems a bit high, but within the margin of uncertainty as to its real strength.

Another set that we have mentioned in the past in the BT2450 test, published in "Modul" magazine and "Computer Schach und Spiele". Most of the problems are tactical, but a few positional and endgame problems are included to give the test some balance. I have come up with a revised scoring method for the test to try to estimate USCF ratings, which method correlates better with "real" ratings better than the rather crude method published with the test. My way also has the advantage that a rating can be calculated for any program on faster or slower hardware without having to actually rerun the test, so long as the ratio of hardware speed is constant and known. Yet another advantage to my method is that it allows for a much higher maximum rating (the BT test has a maximum rating of 2450 German scale) The test rules are the same as for the Louguet test, except that the time limit is 15' per problem instead of 3 1/2'. Like the Louguet test, the BT2450 is rather difficult, and my scoring method only works for master level (USCF) programs. My formula is to take the 18 best times (out of 30 problems), sum them, take the base 10 logarithm, multiply by 200, and subtract from 2950. This method assumes that each doubling of processor speed is worth 60 points. Note that if a program fails to solve at least 18 problems in the allotted 15', it cannot be rated by my method. I chose 18 because it corresponds roughly to USCF 2200, so nearly all master rated programs can be rated by this test, and nearly all weaker programs cannot.

Here are the predicted USCF ratings for dedicated models and insert boards using my scoring method on the BT2450 test: Mephisto Vancouver 68030 2484, Mephisto Lyon 68030 2473, Saitek RISC 2500 2430, Saitek SPARC 2425, ChessMachine 512k Schroeder 2410, Mephisto Vancouver 68020 2376, Fidelity Elite v.9 2353, Mephisto Portorose 68030 2343, Fidelity Mach IV 2296, Novag Diablo 2276, Fidelity Mach III 2230, Mephisto Polgar 10 MHz 2220.

Next, here are the corresponding ratings for some pc programs running on a 486 dx 50 MHz with 256k cache and 8 MB RAM: Mephisto Genius 2 2550, Fritz2 2500, Chess Genius 1.0 2495, MChess Pro 2482, Socrates 3.0 2456, MChess 1.41 2388, Rexchess 2.30 2387, Hiarcs 2 2377, Fritz 1.0 2374. For ratings on 486/33, subtract 35; for 486/25 subtract 60, for 386/33 subtract 95.
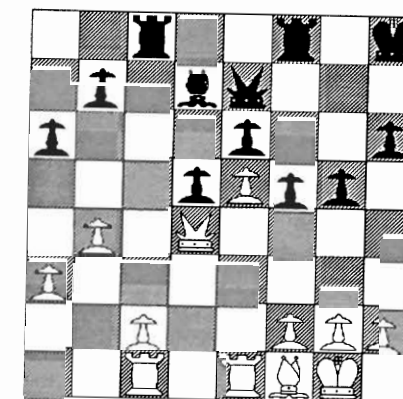
The Louguet Test Problems
The 36 problems and solutions are shown on the following pages. Problems with solutions starting "..." are black to move.
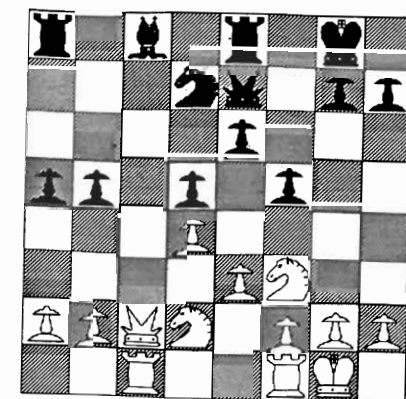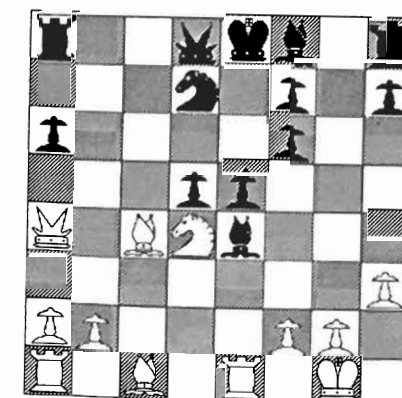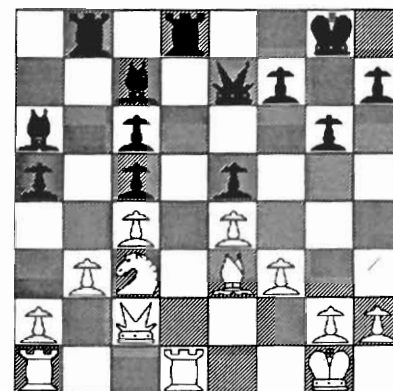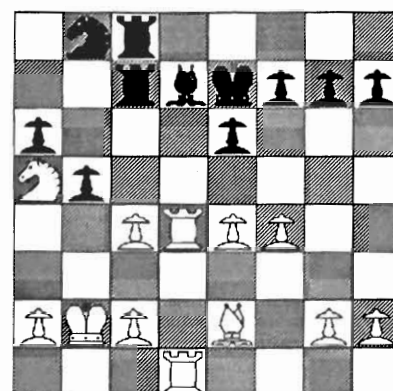

Positional 1:
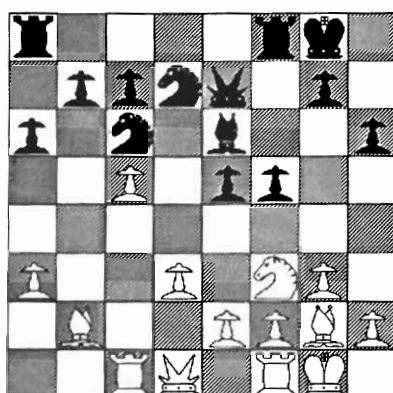Nb3!
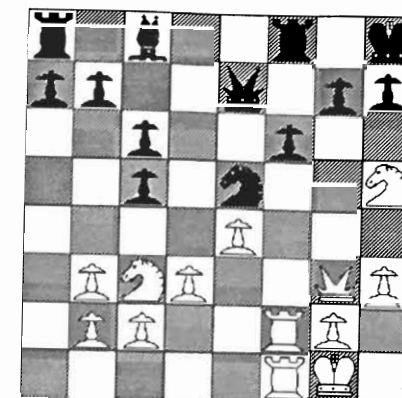
Positional 2:
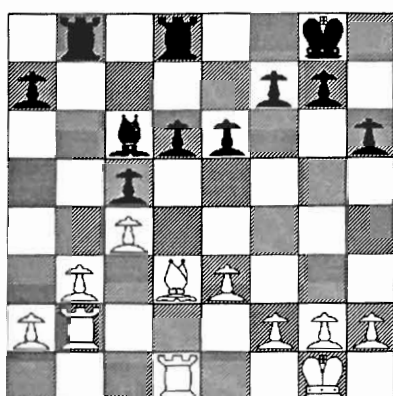Nd1!

Positional 3:
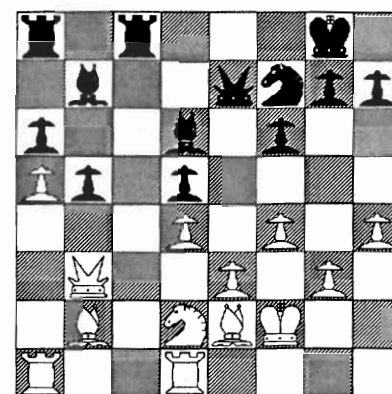...Bb5!

Positional 4:
Rxe4!

Positional 5:
...Rd4!

Positional 9:
...Rc4!!
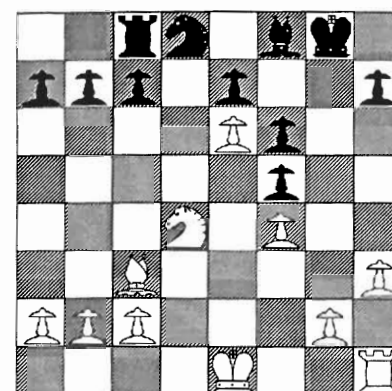
Combination 13:
Nxh7!!

Combination 17:
Nxb5!

Positional 6:
...e5!

Positional 10:
b4!

Combination 14:
...Rxd2!!

Combination 18:
...Qxh3!

Positional 7:
Nh4!

Positional 11:
...Rxc3!

Combination 15:
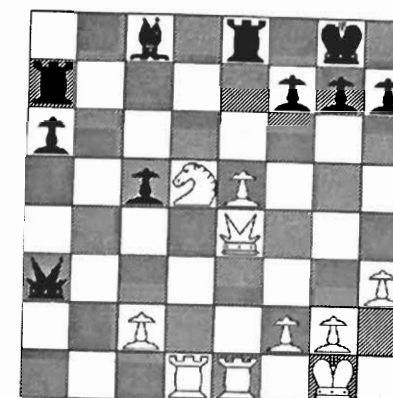Nf6!

Combination 19:
Rxh6!

Positional 8:
...a5! or ...Kf8!

Positional 12:
Bh3!

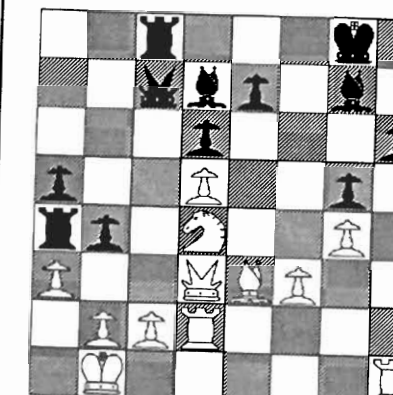Combination 16:
Rxh7!
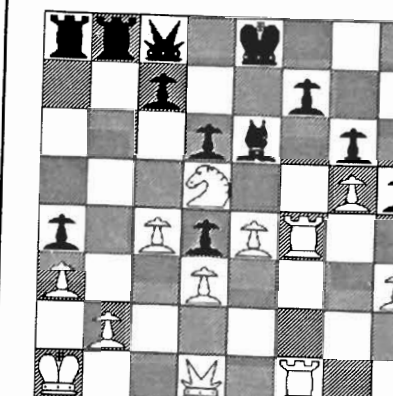
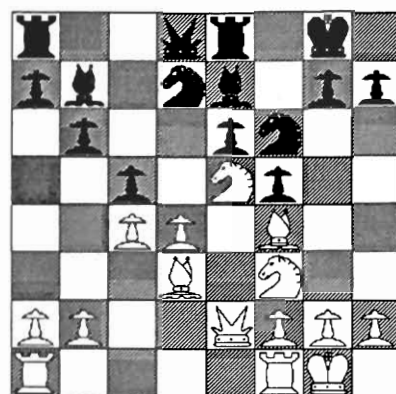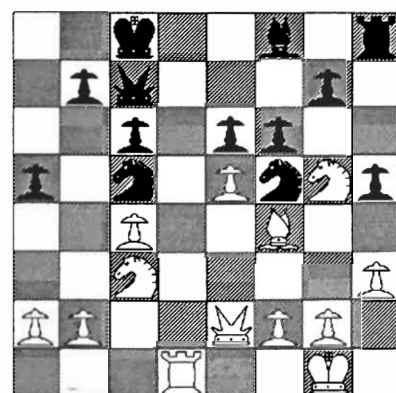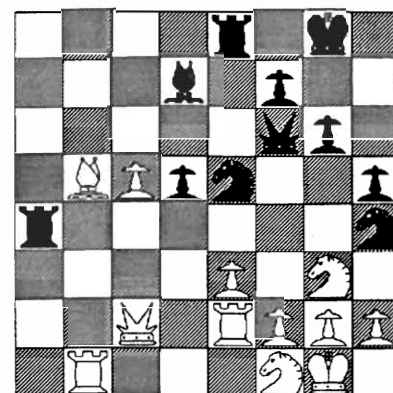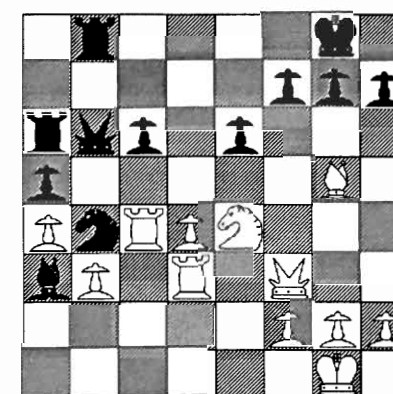Combination 20:
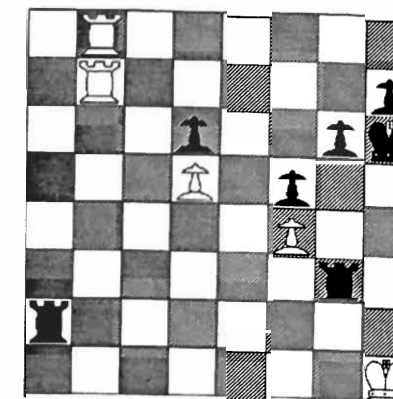Rxf7!

Combination 21:
Nf7!

Combination 25:
...Qf3!

Ending 29:
Rxh7!

Ending 33:
...Kg8!

Combination 22:
exf6!
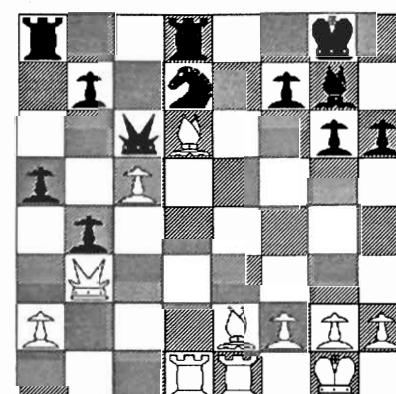
Combination 26:
Nf6!

Ending 30:
Kg4!!

Ending 34
Bb4!!

Combination 23:
Qxf7!!
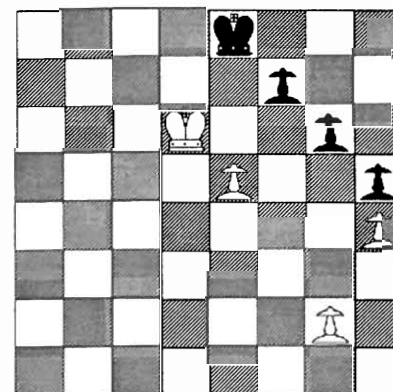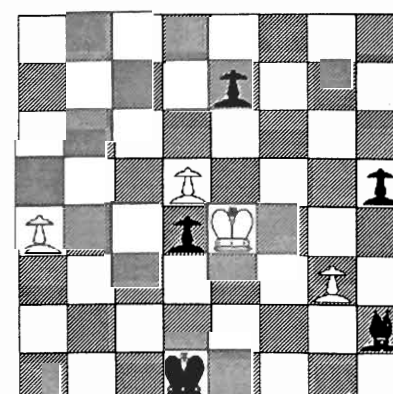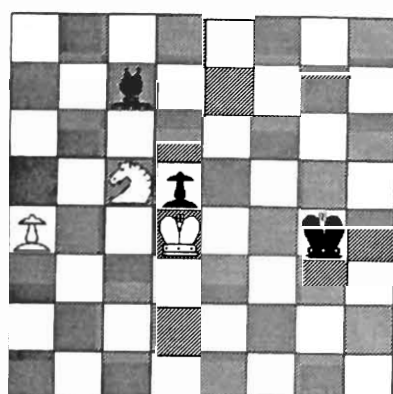
Ending 27:
g3!

Ending 31:
Nb7!

Ending 35:
c5!

Combination 24:
Rh7!!
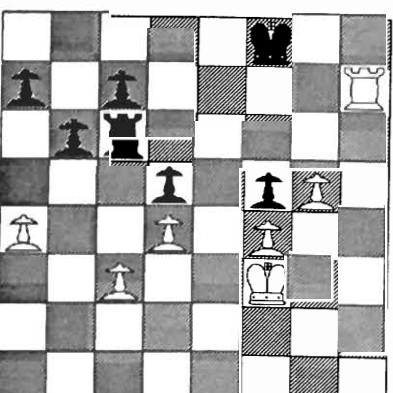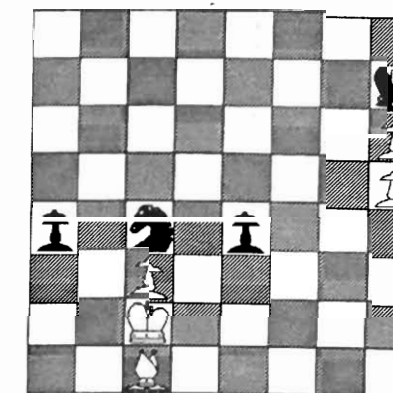
Ending 28:
d6!

Ending 32:
Kg3!!
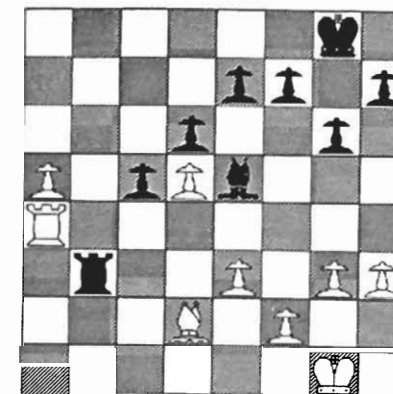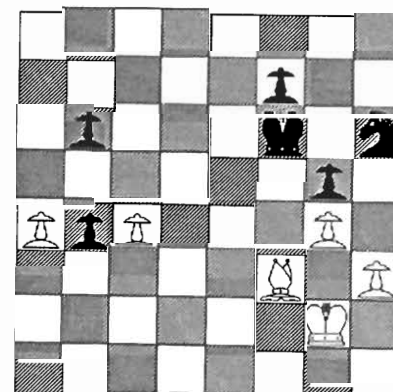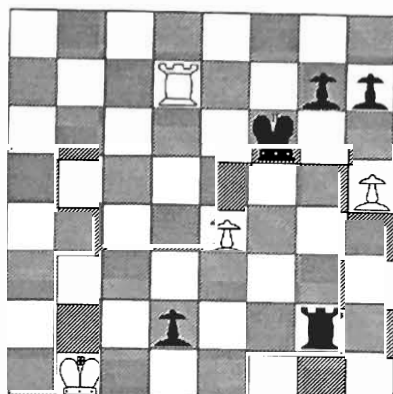
Ending 36:
...Rg1!

War on Warranties

by The CCR Staff

Before the shake-out in the computer chess field - the "good old days" when Conchess, Applied Concepts, A.V.E. Microsystems, Hanimax, Alcott and White and other chess computers roamed the earth, there was a sense of competition that was the incentive for improving the strength, quality, and service of computerized chess playing equipment.

No longer was the consumer confronted with defect rates of 40% or greater that existed when only one or two chess computer companies existed in the early and mid 1970s. With more companies around, company "X" knew that if it could not supply a working computer to Mr. or Mrs. Consumer, then company "Y" would. Nevertheless, to up the ante (in similar fashion to the car manufacturers who started competing on the basis of length of warranties back in the early 80's) the warranty periods grew from 90 days to 6 months, to 1 year, and even, on a limited basis, to two years!

I am not speaking here of a retailer who might proclaim that everything is guaranteed for two years (despite what the manufacturers support) because such a promise is no better than the paper it is written on. It, of course, is quite logical that a chess computer is very intricate and made up of many proprietary parts; a retailer is "dead in the water" if he sticks his neck out beyond what the manufacturer will support. It is an excellent advertising gimmick, but eventually someone will get stuck and you can be sure it will not be the retailer - buyer beware!

Since getting warranty information is sometimes like pulling teeth, we thought it might be helpful if we explained the warranty situation as it exists right now. Please note that since the industry has changed so fast and dramatically in the last few years, the warranty information might change just as quickly.

As mentioned elsewhere in this issue, Quantum America is gone as Fidelity and Mephisto's U.S. distributor and service center. Hegener & Glaser, the parent company of Mephisto and Fidelity, in its new-found lean and mean stature, has come back into the U.S. market with a vengeance. A new U.S. service center is up and running with the best of the former Fidelity technicians staffing it. In order to show its dedication to the U.S. market, all new Fidelity and Mephisto product are being offered with full one year warranties. We congratulate Hegener and Glaser and welcome them back.

Novag, which has had a rocky road in the U.S. for years, came out of its one year strange relationship with Fidelity (discussed in an earlier Reports) in pretty weak shape in the U.S. market, and then proceeded into an agreement with basically the same people that recently ran Quantum America. That group went nowhere with the product and eventually filed for bankruptcy. So, it was back to the drawing board for Novag and essentially back to shipping directly to dealers in the U.S. from Hong Kong. There appears to be an agent in New York representing Novag but there seem to be no facilities there for repair of product. Consequently, either the dealer must repair/replace the product or have it sent back to Hong Kong. The warranty period, as with Mephisto and Fidelity, now stands at 6 months.

Excalibur, which maintains an office in Florida, continues to offer a one year warranty as they have since their inception in 1992, and their policy appears to be to exchange defective machines for working ones in warranty. Units needing service, in or out of warranty, are returned directly to Excalibur in Florida.

Saitek has its U.S. office and service center in California. Saitek continues to offer a one year warranty on all of their products. U.S. computers needing service are returned by the customer to California for repair or replacement.

Since Radio Shack chess computers are manufactured by Saitek in Hong Kong, Saitek's U.S. office has no responsibility for that product, and its one year warranty is handled by Radio Shack. However, please note that even though Radio Shack chess computers look like those with Saitek's own logo, in just about every case the Radio Shack programs are weaker and slower.

When all is said and done, chess computers are basically solid-state machines which, if they work for the first week or two should last at least 5 or 6 years. Naturally, if you play them 24 hours a day, 7 days a week, you are likely to experience problems somewhat earlier (maybe personal problems as well). So, if you are buying from a retail store (if there is a retail store within a thousand miles of you), try to make sure that the unit is tested before you buy it, and if you order a machine via the mail, you should insist that the computer be put through a full-function test to assure that you do not get stuck with a lemon. You might also be sure to ask the salesperson what the company's return policy is if the machine malfunctions within the first couple of weeks. It should be their headache if that happens, not yours! Be wary of any chess manufacturer who sells direct to the public because they rarely, if ever, pre-test anything, for they are not oriented towards individual attention.

The biggest problem that a chess computer buyer is consistently confronted with is that he has no one to go to if he has a question about how to operate his computer. This is probably the single most important factor in the decision by many department stores not to carry chess computers; they could not support the customers who purchased the product because they never learned the product or even how to play chess.

Since most instruction manuals are written for either morons or geniuses, those of us who fall somewhere in the middle are lost when it comes to setting up a problem or asking for hints or setting time controls. It is here where your choice of where to buy a product (if you can find more than one company selling the same one) becomes paramount. The consumer only possesses power before he purchases, so ask nice, pointed questions - ask about support and service. Will the company be as helpful after you purchase as before? How knowledgeable are they? How long have they been around? What do the people at the chess club say about them? How did they handle the problem that your friend had with his computer? Be observant; listen carefully; you should instinctively be able to tell the good guys from the bad guys.

If you are not satisfied with a company's service, what is your recourse? Well, the use of a credit card to purchase is a powerful tool, because you can always complain to the credit card company that you will not pay your bill unless and until the company makes you happy. It is a little known fact, but a mail order company is fully liable because it does not have your physical signature. Ironically, the retailer's responsibility for you ends at about the same time that you pay your credit card bill. The general rule of thumb is that the manufacturer has the legal obligation to maintain your chess computer in warranty, and if you are not happy with their service, you need to let them know. You also can file a complaint with the Better Business Bureau, and if things get really difficult, the attorney general might be able to get some satisfaction for you. At first glance the U.S. Chess Federation might seem to be a good outlet for your complaints, but please be aware that they sell chess computers as well, and they are not, nor should they be, considered a policing agency.

The field of chess playing software for computers is a totally different situation. Whereas the numbers of stand-alone chess computer manufacturers is decreasing and, in some cases, bringing less service and slower improvements relative to 10 or 12 years ago, the chess playing software field is exploding. Of course, there is the proliferation of mass market software for chess, almost all of which would not interest anyone who reads this magazine; then we have the wonderful explosion of professional quality chess playing software.

In many cases the need for support after buying such professional quality software is even greater than after purchasing a stand-alone chess computer because so MANY things can go wrong with a PC (don't we all know that!) M-Chess Professional is the only one of the group that relies on its own hot-line in addition to the support that its dealers are supposed to give. All the other programmers rely mainly upon the dealer who sells you the product.

Fritz2 maintains support indirectly through the Chessbase people, but I recommend that you use your dealer for Fritz related questions, and the Chessbase people for your database questions.

The warranty question is clouded by the fact that none of these programs come with a real warranty. Basically, since software is non-refundable (even a major software chain just stopped offering refunds on all their software because they were losing a fortune), you pretty much are stuck with what you select; so you might want to be even more thorough in your search for the right program for you. And, similarly, you should delve deeply into the mind of the salesperson to see how much knowledge he has. That should give you a pretty good idea of how knowledgeable the support will be AFTER the sale. You might also ask whether that really neat toll-free number you are using to pick the salesperson's brain BEFORE the sale will be available AFTER the sale. You might be surprised to find that all the support will be on your nickel (or quarter or dollar or 10 dollars).

Since most, if not all, of the professional grade software will incorporate a bug or two, you should not go hog wild. It is to be expected, and probably will not be corrected unless it seriously affects the playing capability of the software. What is a bigger problem is the fact that almost all of the really good software incorporate some sort of pain-in-the-neck copy protection (obviously, the paranoia from the stand-alone chess computer industry is contagious). This means that if you get one or two installs and use them up through error or stupidity (my favorite method), you are out of both luck and the great software that you spent perhaps $150 on. What do you do now?!

Well, suicide is a bit drastic. If you purchased the software at a legitimate place, and if the programmer supports that dealer properly, and if your excuse is realistic enough, and if you send the disk back to the dealer, and if you pay a relatively small service and return shipping charge, and if you do not mind waiting, you might just get a replacement disk. Occasionally, the dealer is forced to ship your disk to the programmer (sometimes to Europe) to get the exchange made - so be patient. Stupidity is rarely rewarded (and don't I know that!)

So there you have it. The shake-out of companies in the stand-alone computer chess field has caused two things to happen. First, the speed at which newer, stronger, and faster product used to be introduced to the public has slowed to a crawl, and second, the need for longer warranties has, in some manufacturers' minds, subsided. After all, if company "X" is halving its warranty, why shouldn't company "Y"? Hopefully, the pressure that a

new, more powerful and more efficient Mephisto will exert on the market place will benefit the consumer in the end. On the other hand, the growing entrants into the professional chess playing software field have created tremendous gains in chess playing ability, but one must be very vigilant with respect to the support behind the product. You can be sure that we will keep you posted on further developments in both arenas.

Chess Business 1993

by Phil Klett

1993, so far, has continued to amaze us even though we could not imagine things getting more discombobulated than they already were. Hegener and Glaser, the parent company of Fidelity and Mephisto, closed down the Fidelity facilities in Florida for all intents and purposes on December 31, 1992, and essentially sold the name of Fidelity, the U.S. distribution rights for Fidelity and Mephisto product, and the warranty service rights to a company named Quantum America.

It took only about 8 months for Hegener and Glaser and Quantum America to agree that they never could agree. Between the after- Christmas slump, the lack of new product, the inability to repair product quickly and correctly due to Hegener and Glaser not sending parts to Quantum or Quantum not knowing how to repair (depending upon whom you speak to), and much, much more, the shaky partnership ended in mid-summer. For a short period of time, there was no official representation or service for Fidelity or Mephisto. That situation is now fully resolved.

As with all such situations, before the Quantum body was cold, a company out on the West coast shrewdly got the phone company to issue it a toll-free number under the name Fidelity Electronic. Were they Fidelity? No. Was it legal? Probably not. Why did they do it? Well, take all the people out there with older Fidelity product that now wanted to buy something new. If they wanted to reach the company to buy another chess computer, calling toll- free information would do the trick. And who did they actually reach when they called the number given to them by toll-free information? Not the real Fidelity but rather the impostor. Pretty ingenious,eh! In fact, the ruse was so believable that I.C.D. received calls from people who said that they had just spoken with Fidelity which recommended other company's products. Since I.C.D. was aware of the scam, we told the callers that they should question why a manufacturer would push other company's product on them, and, more importantly, just about every product pushed was old and obsolete; would you believe Prestiges and Super Enterprises???

The advertising found in Chess Life (the U.S. Chess Federation publication) is an interesting topic in and of itself. If you look through any recent issue of Chess Life, you are likely to see numerous pages of chess computer advertising. One or two pages of black and white ads always belong to I.C.D., but in the latest issue (November, 1993), the Chess Federation devoted the better part of 20 pages to its own advertising of chess computers, software, and chess computer manufacturer sponsored events (broken down specifically: 15 full color, 2 two color, and 3 black and white ads.) More than one out of every five pages in that issue has the Federation hawking chess computers to its own membership!!

Here is the breakdown of the Federation's own chess computer advertisements in the November, 1993, issue of Chess Life:

- Inside Cover - Legend, Emerald, Ruby, Accolade - Full Color/ Full Page
- Page 15 - Novag Grand Prix - 1/3 Page B/W
- Page 17 - Ruby and Emerald (second time) - 1/2 Page B/W
- Page 37 - Fritz2, Chessbase - Full Color/ Full Page
- Page C1 - Ruby, Emerald, Accolade (third time) - Full Color/ 1/2 Page
- Page C2 - Ruby (fourth time) - Full Color - 1/3 Page
- Page C3 - Emerald (fourth time), Topaz, Scorpio - Full Color/ Full Page
- Page C6 - Legend and Accolade (fourth time) - Full Color/ 1/2 Page
- Page C8 - Chessmaster 3000 - Full Color - 1/4 Page
- Page C9 - Berlin - Full Color - 1/4 Page
- Page C10 - Fritz2, Chessbase (second time) - Full Color/ Full Page
- Page C11 - Zarkov - Full Color - 1/4 Page
- Insert - Topaz and Scorpio (second time) - 2 Color/ 1/3 Page
- Insert - Fritz2 (third time) - 2 Color/ 1/2 Page
- Page C24 - Travel Champion, Premiere - Full Color/ 1/2 Page
- Page C27 - Chesster, Phantom, Mach IV - Full Color/ Full Page
- Page C30 - Academy - Full Color/ 1/4 Page
- Page C31 - TASC R-30, Chessbase (third time) - Full Color/ Full Page
- Page 64 - Novag Grand Prix (2nd Prix, 8th Novag!!!) - 2/3 Page - B/W
- Inside Back Cover - TASC R-30 (second time) - Full Color/ 1/3 Page

If a new advertiser were to place the exact same ads in the exact same places using the same colors, it would cost $52,160!!! And that does *not* include any of the costs involved in creating the ads - a substantial sum all by itself.

To be fair to the Chess Federation, the November issue happens to include the Holiday Catalog, but anyone can be a Santa Claus with $52,160 to spend. The Federation also spent the advertising space-only equivalent of

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$12,350 in August, $19,420 in September, and $12,270 in October on chess computers and software, and none of these issues included a catalog. Unfortunately, the December issue is not yet available for our scrutiny. Some quick addition, however, will reveal that the U.S. Chess Federation has spent almost $100,000 (equivalent advertising space-only money) in the last four months simply to promote their sales of chess computers and software. This total does NOT include the promotion of books, video tapes, boards, pieces, magazines, clocks, or other, just chess computers and software.

In recent issues of Chess Life the Federation's own ads featuring Novag product have exhibited some inexplicable irregularities. The Federation's ad covering the Scorpio and Diablo suddenly switched from stating that 2309 was an "action" rating (June, 1993, page 49) *(top left)* to stating that it was a "certified" rating *(bottom left)* (October, 1993, Page 15). Other than this unusual change, the ads were essentially identical. It appears that someone went through the trouble of changing the word "action" to "certified" but made no other changes! In fact, the 2309 was an action rating when it was first awarded, has always been an action rating, and it is STILL an action rating; why did someone go through the trouble of changing the wording to "certified" - terminology which has always denoted tournament (NOT action) chess?

Additionally, in the following issue of the magazine, the Topaz by Novag is apparently labeled as "now officially rated at 2181!" Since the Topaz was never rated, and likely plays no better than 1100 or 1200, one finds it hard to fathom. But right next to the label are the words,"Novag: Proud sponsor of the 1993 Grand Prix of Chess!" We assume that this mistake was unintentional, but the perception is not good. I understand that the USCF has since acknowledged the unintentional error and will have a retraction in an upcoming issue of Chess Life.

The whole issue of official chess computer ratings has been disturbing because the original intent was to negate the tremendous exaggerations promulgated by manufacturers and dealers and supply the potential consumer with accurate information that would assist him in making the right chess computer choice. However, the goals of the official ratings process have been defeated by several events. First of all, the overwhelming majority of chess computers are not rated because of the high expenses involved. Second, the results of some of the testing have been questioned because of their apparent deviation from "true" ratings. Third, some tested computers, especially

early on, had opening books designed expressly to get a higher "official" rating but, in actuality, resulted in a commercial computer that had a terribly limited opening book. Fourth, since the Federation has recently allowed manufacturers a choice of getting a "certified" rating (under 40/2 conditions) or an "action" rating (game in 30), all have chosen action, because it is common knowledge that action ratings for chess computers are higher than tournament ratings. In fact, the only chess computer ever officially rated by the USCF at tournament time*AND* action chess, the Mephisto Mega IV Turbo, had an action rating which was 152 points higher than its tournament rating!!! Fifth, the U.S. Chess Federation, which sells chess computers, also has assigned itself as the sole organization responsible for the "official" ratings of chess computers.

Thusly, Chess Life advertising policy states, "Neither USCF nor Chess Life makes any endorsement of any product by outside advertisers, though we do want to hear from you if you have a problem with a Chess Life advertiser. Except for those chess computer advertisements bearing the official seal of the USCF Computer Ratings Agency, claims made by advertisers are strictly their own estimates. Advertisers of chess computers are reminded that no ratings - other than official CRA ratings - can be claimed."

This advertising policy was originally intended to cut through all the hyperbole that surrounded the chess computer field 10 years ago. But decisions like allowing manufacturers to choose action chess instead of tournament chess have accomplished nothing but confusion on the part of the customer by making him think that Ruby plays 2181, the Scorpio plays 2309, and the Premiere plays 2424, while simultaneously allowing ads for the Mach IV - 2325, the Mach III - 2265, and Chesster - 2100, when the first three had the distinct advantage of action chess while the latter played tournament time chess. And worst of all, there are scores of other computers that cannot make claims because the manufacturers could not or did not want to lay out large sums of money.

Human nature is such that the assumption is that these "non- rated" computers are inferior, when, in many cases, the very opposite is true. We get many phone calls from people who are choosing the Scorpio "because the Federation says it plays 2309!" Wouldn't it be in the consumer's best interest if he was informed in Chess Life or by the Federation that the Berlin at at least $100 less plays 128 points better according to the Eric Hallsworth list, or the new Berlin 68020 at $50 more by 240 points or the RISC 2500 also at $50 more by 226 points. Is there anyone who would select a Scorpio if he knew the facts???

The Federation continues to claim a 2062 rating for Travel Champion even though it never performed in a ratings event. Perhaps there was some confusion on their

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part a year ago when they might have thought it had the identical program as the Fidelity Travel Master which WAS rated, but after all these months, and after being informed of the mistake, one would think that they would have stopped using the rating which it never actually received. Ironically, Saitek was thrilled with the error in the beginning, but now, with Accolade and Ruby exhibiting higher numbers, they can not be pleased.

We must stop burying our heads in the sand. The official ratings system was always controversial, but now it appears to be much more of a negative influence than a positive one. If its intent were to be comprehensive, it is not because it is much too expensive. If its intent were to be accurate, it is not because the numbers of games are too limited. If its intent were to eliminate exaggerated claims, it does not because the Federation does not make clear the differences between tournament time and action time ratings. If its intent is to sell chess computers, it does!

If you have an experience or thought to share, please send it along. We will print what can be validated as truthful and what will not land us all in jail.

Reprint Problems

Here at CCR, we try to give you what you want. It seems that all of you want issues Volume 3 Number 1 and Volume 3 Number 2 to get the problem sets printed there. Well, to make CCR history, for the first time in 12 years, we are reprinting our own material. The 25 problems here are the test problems Larry Kaufman has assembled from various sources to test computers when he first receives them.

The procedure is as follows: Set your computer for a short (3 ply for most models) fixed depth search, and rerun the problem each time it is not solves, increasing the depth by one each time, until the correct move is found. Note the total time taken to complete the search in which the problem is solved. Discard the five worst times and sum the remaining times in seconds. Time the complete iteration of a solution, not just the time to display the move.

To estimate a rating, add 10 seconds to the total to compensate for the fact that times are normally reported with fractions of a second dropped, and so each time on the average is underreported by a half a second. Then take the base 10 log, multiply by 200 and subtract from 2930 for a US rating.
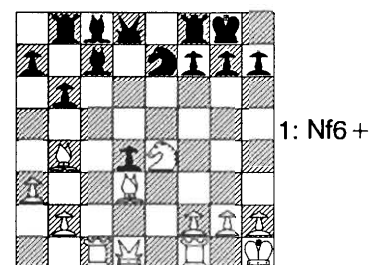
1: Nf6 +
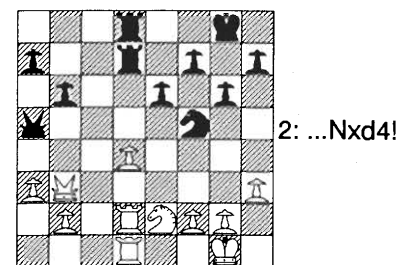
2: ...Nxd4!

3: *not* Rd1
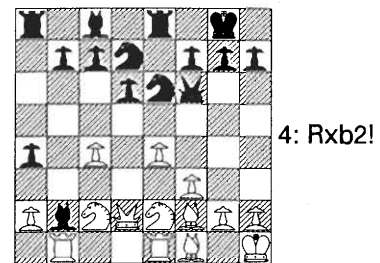
4: Rxb2!
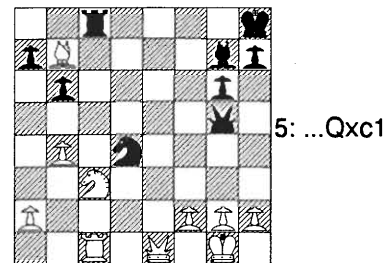
5: ...Qxc1
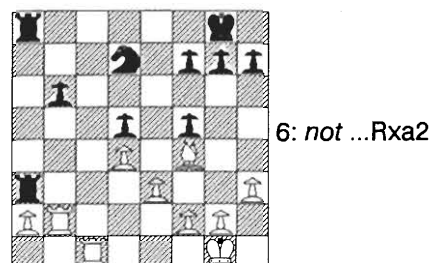
6: *not* ...Rxa2
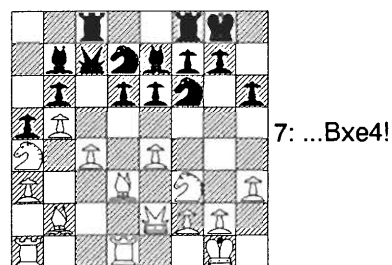
7: ...Bxe4!
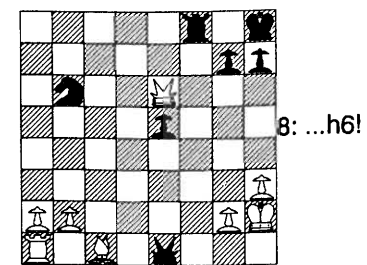
8: ...h6!
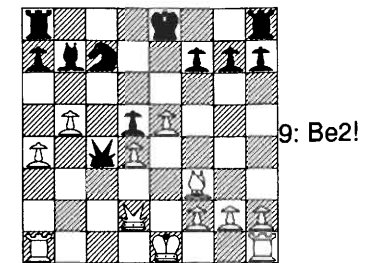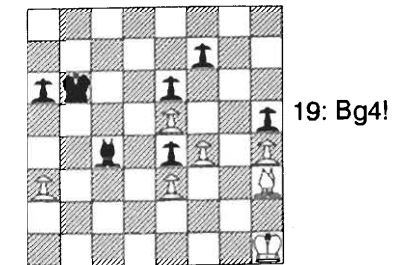

9: Be2!
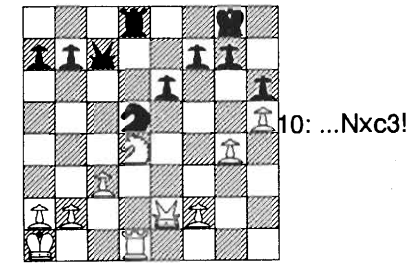
10: ...Nxc3!
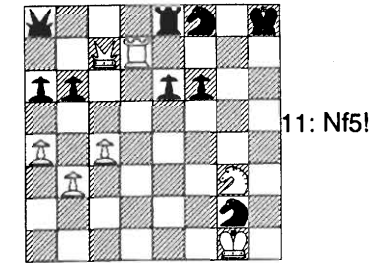
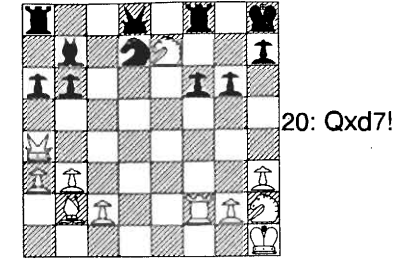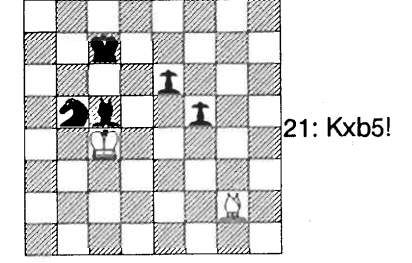11: Nf5!
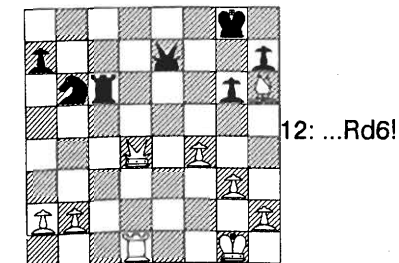
12: ...Rd6!
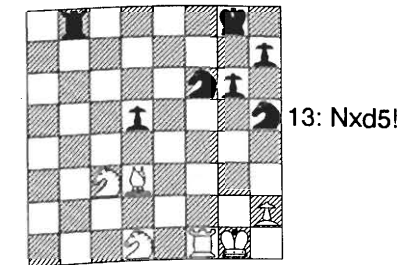
13: Nxd5!
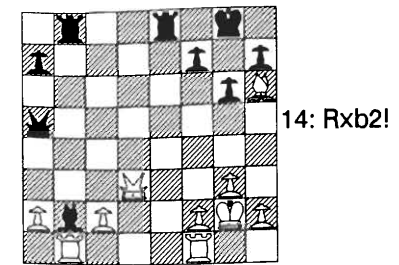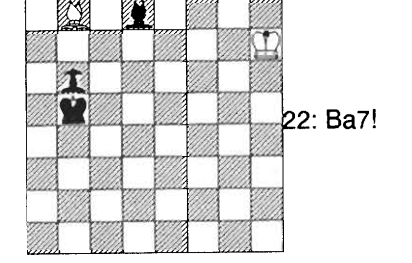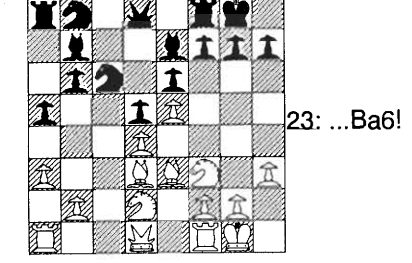

14: Rxb2!
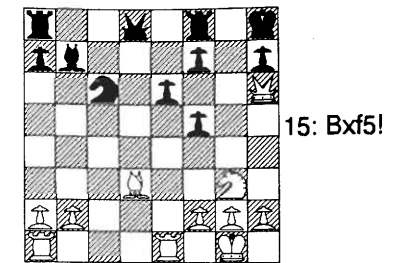
15: Bxf5!
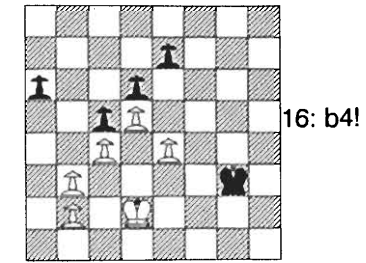
16: b4!
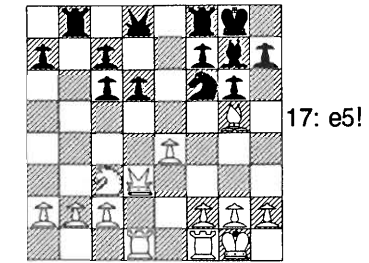
17: e5!
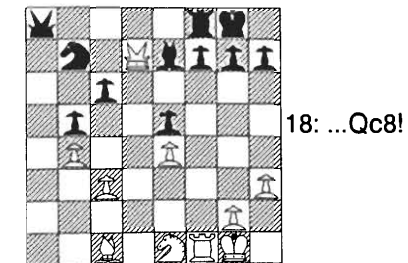
18: ...Qc8!

19: Bg4!

20: Qxd7!

21: Kxb5!

22: Ba7!

23: ...Ba6!

24: Bxc6!

25: Bxd7!