



COLUMNISTS

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Rybka vs. Benjamin: Match at Draw Odds

At the beginning of January, grandmaster Joel Benjamin played Rybka in an eight-game match in which Benjamin had draw odds. Benjamin had white in every game, and draws were counted as wins for him. Therefore, the only way Rybka could score points was to win with the black pieces. Before the match, Rybka's creator, IM Vasik Rajlich, calculated that based on ratings GM Benjamin should be more than happy with just two points in the match. However, taking other factors into consideration, he concluded that three or four points for Benjamin would be a more likely outcome. A poll on the [Rybka Forum](#) showed that the majority of the readers expected a close match, with Rybka being the more likely winner.

GM Benjamin is a three time U.S. Champion and was the chess advisor for "Deep Blue" during the famous match against Garry Kasparov in 1997. Before the match he said: "I am curious to see how well Rybka will make decisions to unbalance the game if it is headed towards an easily drawable game." The openings proved critical for the match with Benjamin aiming for exchanges, symmetrical pawn structure, and blocked positions, while Rybka of course tried to avoid the same. Benjamin did very well in the first half of the match and the score was even after the first four games. Then Rybka won three games in a row and with a score of 5-2 had secured victory with a game to spare. Rybka also won the eighth game, so the final score of the match was 6-2.

Of course, match conditions always affect the way that games are played. With a GM aiming for a draw with the white pieces it might have been expected that the games would be rather dull. In reality, however, the games were very exciting, as we can see from the following fragments.

The games were broadcast live on all the major chess servers, including ChessPlanet, the

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Or play online against [Rybka](#).

ChessOK server. I think many will agree that one of the most memorable moves of the match came in Game 5.

Joel Benjamin – Rybka

Match at Draw Odds, (5) 2008

1 d4 Nf6 2 Nf3 c5 3 d5 b5 4 Bg5 Qb6 5 a4 b4 6 c4 h6 7 Bh4 g5 8 Bg3 Bg7 9 a5 Qd8 10 Nbd2 d6 11 e4 Nh5 12 Ra2



12...b3!!

Only twelve moves into the game and in a position where most players would prefer a developing move, Rybka unexpectedly sacrifices a pawn. It must have come as a surprise to GM Benjamin, especially as this is not a typical “computer” move. Rybka followed up energetically and White never managed to organize any counterplay.

13 Nxb3 Na6 14 Qb1 f5 15 exf5 O-O 16 Bd3 Nb4 17 Ra4 Nxd3+ 18 Qxd3 Qe8 19 Ra2 Bxf5 20 Qe2 Rb8 21 Nfd2 Qg6 22 Nc1 Rbe8 23 O-O Nxc3 24 hxc3 e6 25 b3 exd5 26 Qd1 d4 27 Nf3 Bg4 28 Rd2 Qh5 29 Rd3 Re7 30 Re1 Rxe1+ 31 Qxe1 Qg6 32 Nh2 Re8 33 Qd2 Bf5 34 Nf3 Bxd3 35 Nxd3 Qe6 36 Kf1 Bf6 37 Qd1 Bd8 38 a6 Ba5 39 Ng1 Rb8 40 Nh3 Rb6 41 Kg1 Rxa6 42 Qf3 Bd8 43 Qa8 Qe7 44 f3 Ra3 45 Nh2 Rxb3 46 Qd5+ Kg7 47 Qf5 a5 0-1

Game 6 was the shortest of the match, with GM Benjamin resigning after twenty-one moves. Rajlich wrote: “The openings are proving critical in this match, and this time Benjamin lost the battle quite early. He achieved a symmetrical pawn structure, but at the cost of the bishop-pair, and black was able to get active play on the queenside. The resulting position is a nightmare for a human to try to deal with without computer assistance.”

Joel Benjamin – Rybka

Match at Draw Odds, 2008 (Game 6)

1 d4 Nf6 2 Nf3 e6 3 Bg5 h6 4 Bxf6 Qxf6 5 Nbd2 d6 6 c3 Nd7 7 e4 g6 8 Bd3 Bg7 9 Nc4 O-O 10 O-O e5 11 dxe5 dxe5



The position is balanced and it's hard to believe that the grandmaster will be forced to resign after only ten more moves.

12 b4 Nb6 13 Na5 Qe7 14 Qe2 c5 15 b5 Rd8 16 Bc2 Qc7 17 Bb3 Bd7 18 a4 a6 19 Qa2 Be8 20 Rfb1 axb5 21 axb5 Ra7 0-1

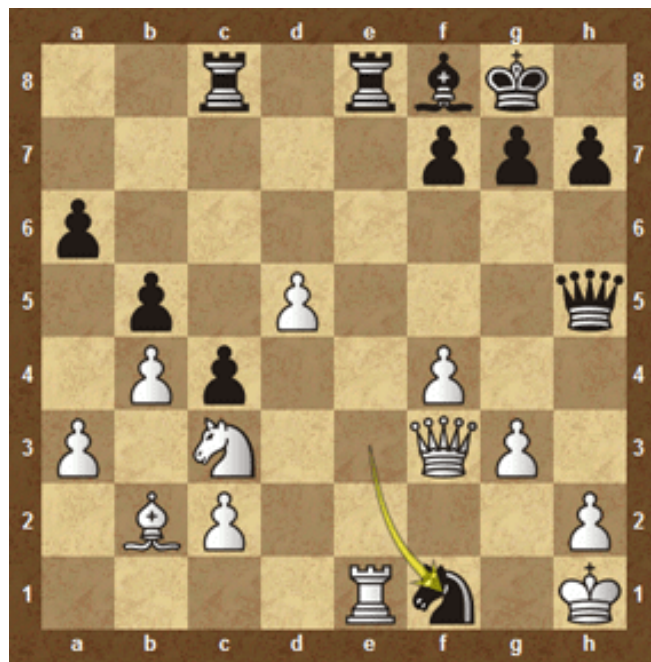


White resigned since he will lose a piece because of the pin on the a-file.

Many considered the last game in the match to be the most interesting. Rybka played the Philidor Defense (1 e4 e5 2 Nf3 d6) for the third time in the match, an opening that had been prepared with the assistance of Russian correspondence player Sergey Pligin. Rybka scored 100% with this opening. After playing on the queenside, Rybka swung the queen from a5 to h5 on the nineteenth move, and then, in the following position, after the innocent-looking but apparently fatal move **23 b4**, the game continued:



23...Bxg2+ 24 Qxg2 Ne3 25 Qf3 Nxf1



Rybka decides to exchange the queen for two rooks, but keeps the pressure. Its aggressive play forces White to resign after only seven more moves.

26 Qxh5 Rxe1 27 Kg2 Rce8 28 Qf3 Ne3+ 29 Kh3 f5 30 d6 Re6 31 Kh4 Rh6+ 32 Kg5 Rxd6 0-1

On a few occasions GM Benjamin managed to lure Rybka into positions that chess engines play poorly. Here is an example from Game 4:



This is a dream position to have for drawing against a chess engine and GM Benjamin knows how to exploit it. Here, he has decided to sacrifice the bishop on e3, with the aim of locking everything up after 68 Bxg5+. After that there is a good chance of drawing the game; however, it took 139 moves!

This was GM Benjamin's second match against Rybka. As in the previous match, he showed that he has a good understanding of the weaknesses of chess engines and how to play against them. The problem is that Rybka is getting stronger all the time and the version that played this match was furnished with a special feature that improves its results against humans. This feature will be a part of Rybka 3, which will be released later this year.

As in the previous Rybka – Benjamin match, IM Larry Kaufman operated Rybka and the match was played at his home in Potomac, MD.

Gold, Silver and Rybka

Convekta recently released two software packages:

The "Gold Chess Package":

- Chess Assistant 9.1 Professional
- Chess Openings 2007
- Rybka 2.3.2a mp (single/multiprocessor version)

The "Silver Chess Package":

- Chess Assistant 9.1 Starter package
- Chess Openings 2007
- Rybka 2.3.2a mp (single processor version only)

Each package contains software that we discussed previously in this column, but here they are packaged as one product. The main differences between the two packages are:

- Chess Assistant 9.1 Professional comes with a database of over 3 million games, while the Starter package has a more selective collection of 1 million master and grandmaster games.

- Both packages come with the single processor Rybka, but the Gold package also contains the multiprocessor version.

Rybka's Hashtable Size

Some readers have asked about the best setting for Rybka's hashtable size. The simple answer is: make the hashtable as large as possible. But, as can be expected, it is a bit more complicated than that.

Make sure that the hashtable isn't so big that the computer starts "thrashing" (constantly shuffling blocks of data between internal memory (RAM) and disks), as then performance drops dramatically. This is the most important rule. An indicator of thrashing would be increased disk activity and a drop in nodes per second.

If you set the hashtable size to more than half the size of the RAM, then be very careful that the computer doesn't start thrashing. Some prefer to set the hashtable size to ¼ (or less) of the RAM size.

Be extra careful if you plan to play engine matches. Then the hashtables for *both* engines need to fit into the RAM at the same time. In that case it would clearly be a mistake to set the hashtable size to half the size of the RAM, as thrashing would be inevitable.

Rybka, up to the current version (2.3.2a), rounds the hashtable size down to the next power of 2, so use 64MB, 128MB, 256MB, 512MB, etc. Specifying a hashtable size of, say, 700MB will result in 512MB.

Don't expect much increase in playing strength for very large hashtables. In general, the shorter the time-control for a game, the less you will gain from a large hashtable.

For playing very short games, such as bullet games (one minute per side), use no more than 256MB for hashtables. There have been reports of loss on time when large hashtables are used for bullet games.

All the Chess Assistant software described by Dadi in this column, as well as many more Chess Assistant programs, are available in the [USCFSales Online Catalog](#).

Dadi wants your questions!! Send it along and perhaps it will be answered in an upcoming column. Please include your name and country of residence. [Yes, I have a question for Dadi!](#)

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