

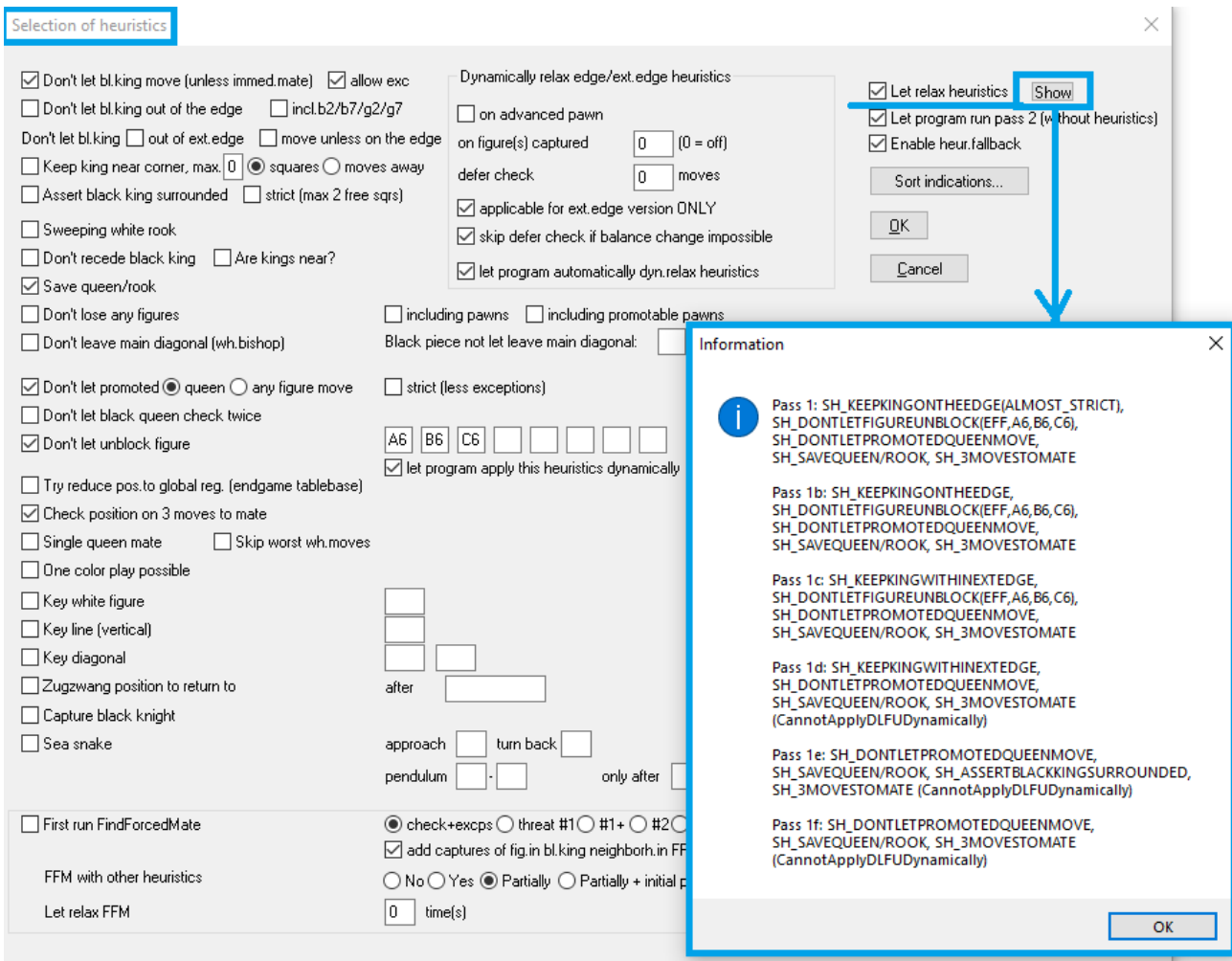




# J.G. Island

## Software for solving orthodox chess 2-, 3- and moremovers

- All you need is set a position (or paste a FEN code), set a stipulation (#2 or more) and click the **Start** button
- For majority of compositions you will get the solution(s) in a split second
- The engine automatically makes a selection of heuristics for fast solving
- This set of heuristics is automatically relaxed, if the original one is too strict to obtain solution
- Manual selection of heuristics is also possible
- The better the processor (the more cores), the better user experience
- Support for Windows Vista, Windows 7, 8, 10, 11
- Almost every element of GUI has an associated tooltip information
- Orthodox 2-, 3- and moremovers only (no support for retro or fairy pieces)
- Automatic heuristic selection – see diagram below





## Engine's work can be peeked and adjusted

Each engine's thread can be peeked separately

207. #28 W.A.Shinkman, 1910, [Y188117](#), [P1232084](#)

1:36

d2-e1 d6-b4  
 d6-c5 d6-f4  
 d2-d3 d6-e7  
 d2-d1 d6-c7  
 d6-g3 d6-e6  
 d6-f8 d6-d7  
 d2-e2 d6-f6  
 c2-d4 d6-c6  
 c2-a1 d2-c1  
 c2-e1  
 c2-e3  
 d6-h2  
 d6-g6  
 d6-h6  
 d6-e5  
 d6-b8  
 c2-a3  
 c2-b4  
 a2-a3  
 d6-d5

Pass 1b SH(204884h) Safe mode ON TR=581MB GR=4.7GB Thrds=4\*4+100 1. Ka1-b2 Ka5-a4 2. Kb2-c1 Ra6-a5 3. Kc1-d2 Ra5-a6 4. **Kd2-e1** Ka4-a5 5. Ke1-f2 Ka5-a4 6. Kf2-g3 Ra6-a5 7. Kg3-h4 Ra5-a6 8. Kh4-g5 Ra6-a5 11. Kg7-f8 Ra5-a6 12. Kf8-f7 Ra6-a5 13. Kf8-g8 Nd5-e7 16. Kg8-h8 Ne7-d5 17. Kh8-h7 Nd5-e7 20. Kg5-h4 Ka4-a5 21. Qd6-f8 d7-d6 22. Kd2-e1

- Copy position to clipboard
- Copy FEN of the position to clipboard
- Display position in new instance of program
- Shift current move to be analyzed as the last one
- Swap order of analysis with the next move
- Skip to analysis of next move**

Occasionally it may occur that the engine sorts possible moves for white not in the best way. An advanced user may want to adjust its work manually in such case. However note that it requires program option "Manul engine control" to be on.



# Easy links to chess sites

Within one click you navigate to your favorite portals with chess composition

The screenshot shows a chess problem interface with several navigation arrows pointing to external sites:

- Green arrow:** Points from the problem ID '13828' to the **YACPDB** website.
- Blue arrow:** Points from the problem ID '13943' to the **Schwalbe** website.
- Orange arrow:** Points from the problem ID '15666' to the **MESON Chess Problem Database**.
- Blue arrow:** Points from the file 'f' to the search results page for '13943'.

**YACPDB website details:**

- URL: [yacpdb.org/#13828](http://yacpdb.org/#13828)
- Problem ID: 13828
- Author: Kwiatkowski, Marek
- Year: 2<sup>nd</sup> HM, 1986-II
- Year: The Problemist, Jul 1986 (C7226)
- Solution:
  - f4? ~
  - c5#
  - f8#
  - c6 2. fxd3#
  - xf5 2. xg6#
  - xg5!
  - c5? ~ 2. f8#
  - xd5 2. g4#
  - xd5 2. xd3#
  - xf5!
  - f8? ~ 2. c5#

**Schwalbe website details:**

- URL: [pdb.dies-schwalbe.de/search.jsp?expression=PROBID=%27P1033358%27](http://pdb.dies-schwalbe.de/search.jsp?expression=PROBID=%27P1033358%27)
- Problem ID: P1033358
- Author: Marek Kwiatkowski
- Year: The Problemist 1986
- Achievement: 2. ehrende Erwahrung 1986/II Halbjahr MP 1986 - 5. Platz
- Solution:
  - Se6xd4! droht 2. Le7-c5#
  - Lf3xd5 2. Dc1-e3#
  - Sh3xg5 2. Dc1-f4#
  - Sh3-f4 2. Dc1xf4#
  - Dc4xd5 2. Sd4-c6#
  - Dc4-c6 2. Sd4xc6#
  - Sh4xf5 2. Sd4xf3#
  - Ke5xd4 2. Dc1-e3#

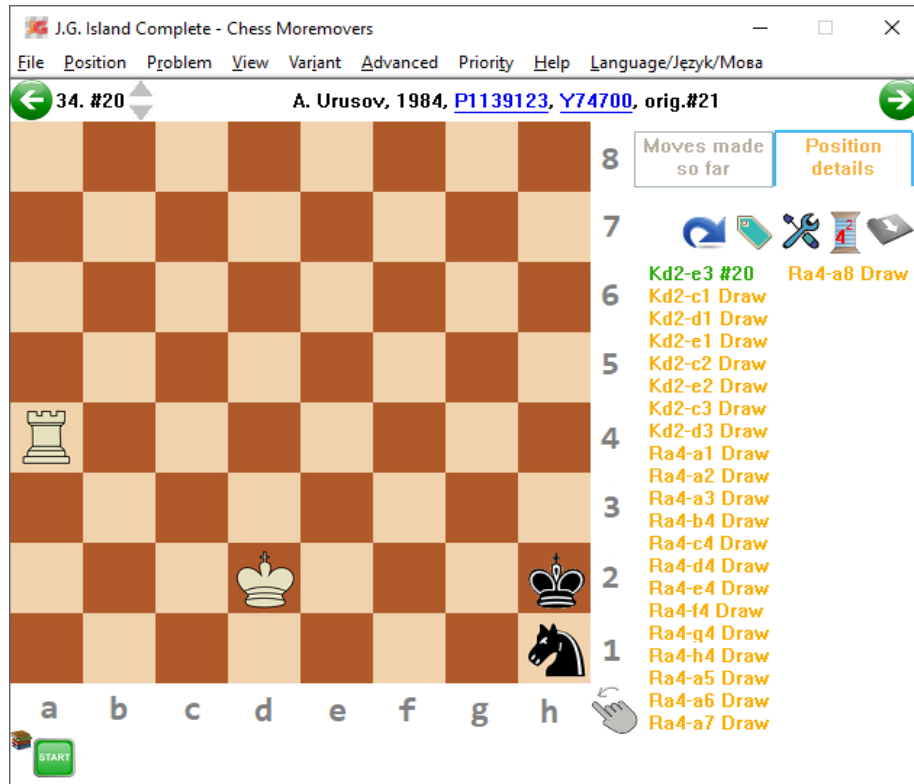
**MESON Chess Problem Database details:**

- URL: [stephen.me.uk/meson/pidsearch.pl?pid=15666&type=search](http://stephen.me.uk/meson/pidsearch.pl?pid=15666&type=search)
- Problem ID: 15666 (3KR3/2pBB3/p3NNp1/R2PkPP1/1Pqp3n/3p1bPn/1P3P1b/2Q5 w - - 0 1)
- Author: Kwiatkowski, Marek
- Year: 2nd HM, The Problemist, 1986
- Keywords: Brian Stephenson Collection (18269)
- Genre: 2#
- Computer test: Popeye 4.67
- FEN: 3KR3/2pBB3/p3NNp1/R2PkPP1/1Pqp3n/3p1bPn/1P3P1b/2Q5
- Reprints: 31 Szachy 05/1986, 2827 Problemista 228-230 04-06/1987, II Szachy 04/1989
- Innuit: Brian Stephenson, 2004-08-12



## Integrated endgame tablebases

4-piece and some 5-piece endgame tablebases provided in installer





# Show max #n in endgame tablebases

Fast access to complexities of positions

Advanced Priority Help Language/Język/Moeda

- Select heuristics and find solution Ctrl+F5
- Select heuristics and find all solutions Shift+Ctrl+F5
- Sort indications... Ctrl+W

✖ Options

- Save temporary register of current problem
- Save temporary register of current problem as...
- Read temporary register of current problem from default file
- Read temporary register from file...
- Clear temporary register of current problem
- Skip analysis of current move and go to the next one
- Display id of current position and copy it to clipboard
- Run regression test (solve all problems in the current file)
- Display current status of global register (precalculated data in memory)
- Verify files of precalculated data (global register) on disk
- Verify files of precalculated data on disk - resume from cur.pos.type
- Show max #n for positions of this type + next position Ctrl+M

The image shows two side-by-side screenshots of the J.G. Island Complete - Chess Moremovers software interface. Each window displays a chessboard with a list of moves made so far and a list of positions found.

**Left Window (Position #127):**

- Moves made so far: e4-e5 #127, Kd1-d2 Draw, Kd1-e2 Draw, Kd1-e1 L#17
- Position details: Ra2-a4 #74, Ra2-a5 #74, Ra2-a3 Draw, Ra2-a6 Draw, b2-b3 Draw, b2-b4 Draw, Ka7-a6 Draw, Ka7-b6 Draw, Ka7-b7 Draw, Ka7-a8 Draw, Ka7-b8 Draw, Ra2-a1 L#17

**Right Window (Position #74):**

- Moves made so far: (None listed)
- Position details: (None listed)



# Integration with 7-piece endgame tablebases

Tab „Position details” immediately loads WDL details (Win/Draw/Lose) from internet

The screenshot shows the application window titled "J.G. Island Complete - Chess Moremovers". The menu bar includes "File", "Position", "Problem", "View", "Variant", "Advanced", "Priority", "Help", and "Language/Język/Mowa". The main area displays a chessboard with a position from "Gleb Zakhodyakin, 1969, Y75669, P1162907". The board shows a white king on f8, a white knight on h8, a white queen on a8, and a white rook on h6. Black has a king on h7, a rook on h6, and two pawns on e7 and e6. A tablebase window is open on the right, listing moves and their outcomes: Qa8-a1 Draw, Qa8-a2 Draw, Qa8-g2 Draw, Qa8-a3 Draw, Qa8-a4 Draw, Qa8-a5 Draw, Qa8-a6 Draw, Qa8-c6 Draw, Qa8-a7 Draw, Qa8-b7 Draw, Qa8-b8 Draw, Qa8-c8 Draw, Qa8-d8 Draw, Qa8-e8 Draw, Kf8:e7 Draw, Kf8-e8 Draw, Qa8-e4 Win, Qa8-h1 Lose, Qa8-f3 Lose, and Qa8-d5 Lose. A blue arrow points to the "Qa8-e4 Win" entry. A "Position details" button is circled in blue in the top right corner of the board area.



## Integrated custom tablebases

Provided in program installer for a special wh.Q vs. bl.K position type

J.G. Island Complete - Chess Moremovers

File Position Problem View Variant Advanced Priority Help Language/Język/Mosa

378. #17 Josef Halumbirek, 1948, P1226917, Y89976

Moves made so far Position details

- Qf6-e7 #17
- Qf6-f3 #18
- Qf6-f4 #18
- Qf6-f5 #19
- Qf6-e6 #19
- Qf6-g6 #19
- Qf6-d4 #20
- Qf6-d6 #20
- Qf6-a1 #21
- Qf6-b2 #21
- Qf6-c3 #21
- Qf6-h4 #21
- Qf6-e5 #21
- Qf6-g5 #21
- Qf6-a6 #21
- Qf6-b6 #21
- Qf6-c6 #21
- Qf6-h6 #21
- Qf6-d8 #21
- Qf6-f2 No #
- Qf6-f7 No #
- Qf6-g7 No #
- Qf6-f8 No #
- Qf6-h8 No #
- Kd1-c2 n.a.
- Kd1-e2 n.a.

START

J.G. Island Complete - Chess Moremovers

File Position Problem View Variant Advanced Priority Help Language/Język/Mosa

485. #33 Josef Halumbirek, 1956, P1200254, dual

Moves made so far Position details

- Qc7-d6 #33
- Qc7-c8 #33
- Qc7-e5 #34
- Qc7-b6 #34
- Qc7-h2 #35
- Qc7-g3 #35
- Qc7-f4 #35
- Qc7-b8 #35
- Qc7-b7 #36
- Qc7-a7 #37
- Qc7-d8 #37
- Qc7:c1 No #
- Qc7-c2 No #
- Qc7-c3 No #
- Qc7-c4 No #
- Qc7-a5 No #
- Qc7-c5 No #
- Qc7-c6 No #
- Qc7:d7 No #

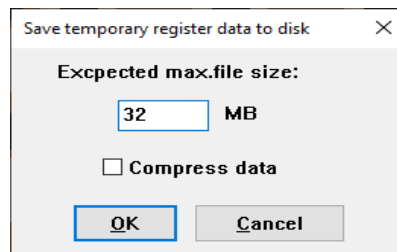
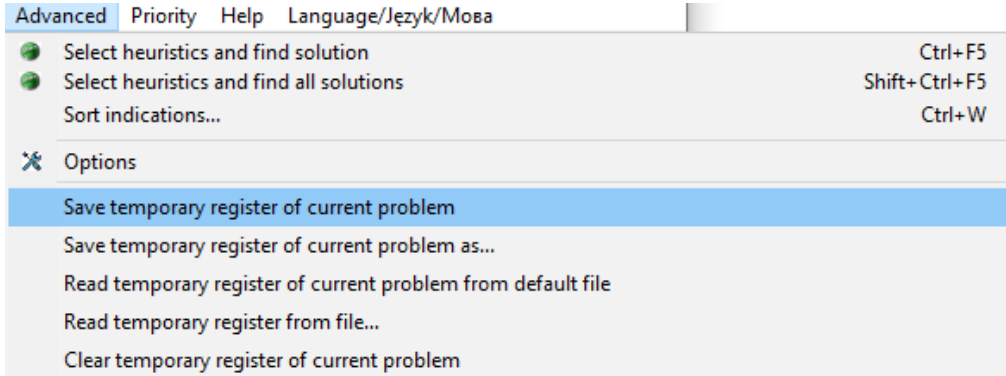
START





## Possibility to save all the solution data

Data can be saved and reused – functionality that may be particularly useful for composers



The current size of temporary data in memory is easily visible in the left bottom corner, near the Start icon (1.3M in the diagram below) :

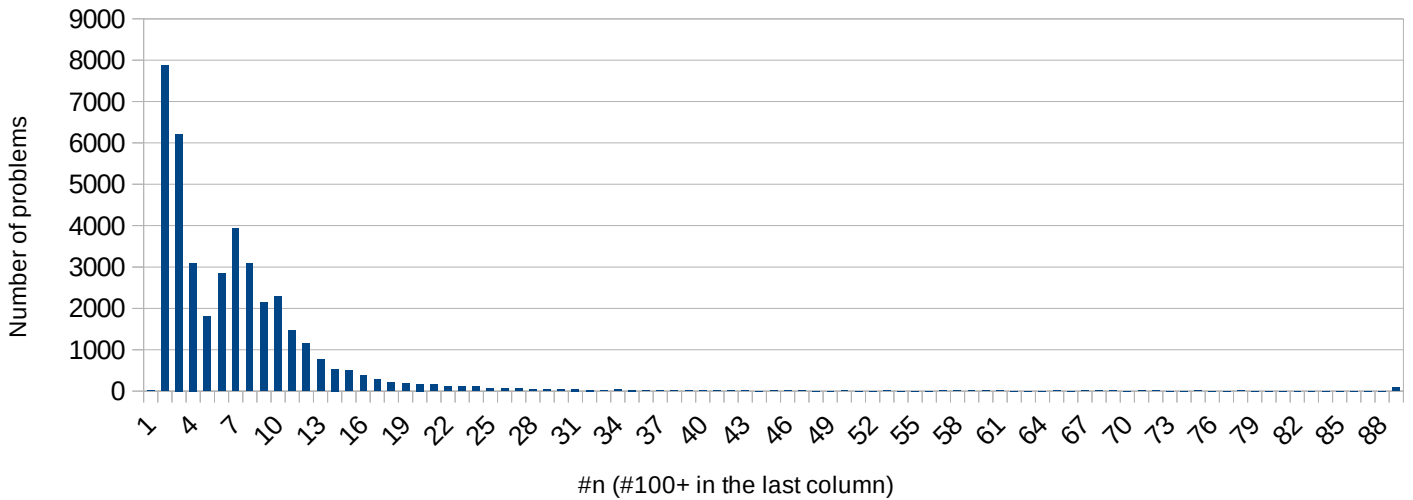




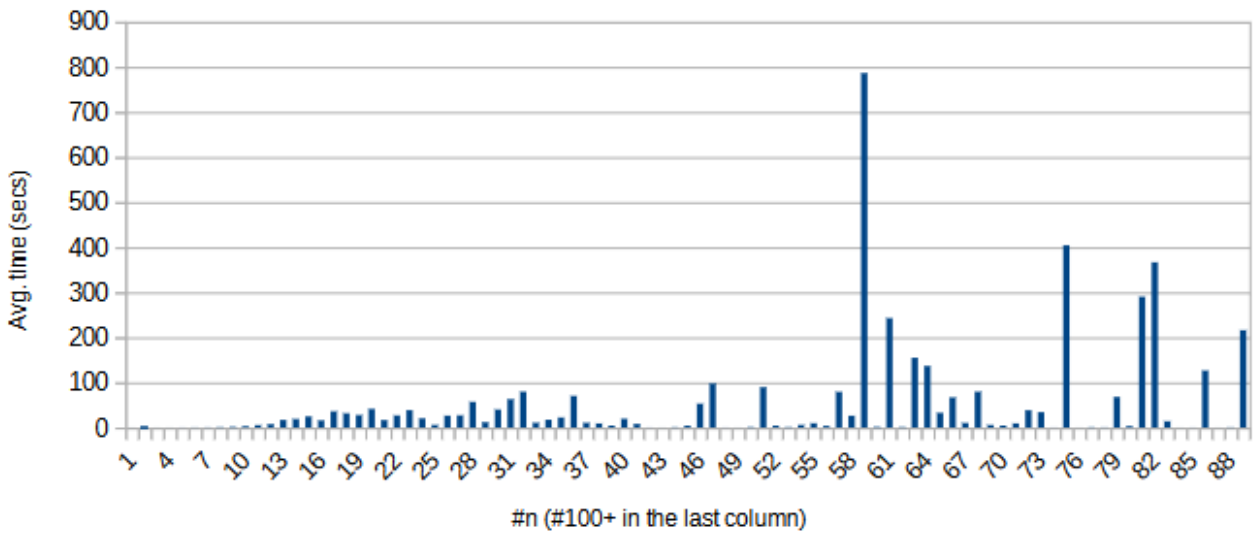
## Tested on thousands of compositions

Complete test suite runs more than 43h on more than 41.000 problems

Number of problems in test suite per #n



Average time of solving per #n (up to #100+)



The diagrams above are for version 6.5 (rev. 965h). These are averages for problems that are within the test suite (there is still a set of moremover compositions that are beyond J.G. Island capacities).



## The longest moremover in the test suite

Solution for this #210 is found in less than 10 minutes

The screenshot shows a chessboard with the following pieces: White King on a3, White Rook on b3, White Knight on c3, White Bishop on d3, White Pawn on e3, White Pawn on f3, White Pawn on g3, White Pawn on h3, White Pawn on a4, White Pawn on b4, White Pawn on c4, White Pawn on d4, White Pawn on e4, White Pawn on f4, White Pawn on g4, White Pawn on h4, White Pawn on a5, White Pawn on b5, White Pawn on c5, White Pawn on d5, White Pawn on e5, White Pawn on f5, White Pawn on g5, White Pawn on h5, White Pawn on a6, White Pawn on b6, White Pawn on c6, White Pawn on d6, White Pawn on e6, White Pawn on f6, White Pawn on g6, White Pawn on h6, White Pawn on a7, White Pawn on b7, White Pawn on c7, White Pawn on d7, White Pawn on e7, White Pawn on f7, White Pawn on g7, White Pawn on h7, White Pawn on a8, White Pawn on b8, White Pawn on c8, White Pawn on d8, White Pawn on e8, White Pawn on f8, White Pawn on g8, White Pawn on h8. Black King on d3, Black Rook on c3, Black Knight on b3, Black Bishop on a3, Black Pawn on e3, Black Pawn on f3, Black Pawn on g3, Black Pawn on h3, Black Pawn on a4, Black Pawn on b4, Black Pawn on c4, Black Pawn on d4, Black Pawn on e4, Black Pawn on f4, Black Pawn on g4, Black Pawn on h4, Black Pawn on a5, Black Pawn on b5, Black Pawn on c5, Black Pawn on d5, Black Pawn on e5, Black Pawn on f5, Black Pawn on g5, Black Pawn on h5, Black Pawn on a6, Black Pawn on b6, Black Pawn on c6, Black Pawn on d6, Black Pawn on e6, Black Pawn on f6, Black Pawn on g6, Black Pawn on h6, Black Pawn on a7, Black Pawn on b7, Black Pawn on c7, Black Pawn on d7, Black Pawn on e7, Black Pawn on f7, Black Pawn on g7, Black Pawn on h7, Black Pawn on a8, Black Pawn on b8, Black Pawn on c8, Black Pawn on d8, Black Pawn on e8, Black Pawn on f8, Black Pawn on g8, Black Pawn on h8.

2943. #210      Ottó Titusz Bláthy, 1890, [yacpdb=278027](#)

- Bh5-d1      h6-h5
- Ka3-b4      Ba1-b2
- Kb4-a5      Bb2-c1
- Ka5-b6      Bc1-b2
- Kb6-c7      Bb2-c1
- Kc7-d8      Bc1-b2
- Kd8-e7      Bb2-c1
- Ke7-f8      Bc1-b2
- Kf8-g8      Bb2-c1
- Kg8-g7      Bc1-b2
- Kg7-f8      Bb2-c1
- Kf8-e7      Bc1-b2
- Ke7-d8      Bb2-c1
- Kd8-c7      Bc1-b2
- Kc7-b6      Bb2-c1
- Kb6-a5      Bc1-b2
- Ka5-b4      Bb2-a1
- Kb4-a3      h5-h4
- Ka3-b4      Ba1-b2
- Kb4-a5      Bb2-c1
- Ka5-b6      Bc1-b2...

During regression tests this problem as well as its mirror are solved in a single solution mode, which means that solving is stopped as soon as a solution is found. Here are the outputs from regression tests on the most recent version of the program (6.5, rev. 965h) :

[SnglSolution, 4thrd(s)] Test #2943 M0 ok (**599766** msec).  
 [SnglSolution, 4thrd(s)] Test #2943 M1 ok (**568281** msec).

(Test suite run on AMD Ryzen 7, 3.2 GHz, 8 cores/16 threads)



## Written in C++

- The multiparadigm programming language
- The most suitable for tasks involving maximum speed
- Possibility to mix high-level code with very low-level optimizations
- Used all possible tricks to make the program run as fast as possible
- Developed since 2009; more than 100k lines of code
- Robustness of multithreaded code verified using Assertive MultiThreading Library (AMTL) : <https://github.com/msterkowicz/AMTL/> (a very promising library that may be considered a side-effect project that was created during work on J.G. Island Chess Moremovers)
- LZ4 compression used due to its properties (outstanding decompression speed)
- Extensive regression test suite and unit tests of selected components
- Support for Unicode national characters
- Possibility to choose one of three available languages (Polish, English and Ukrainian)

