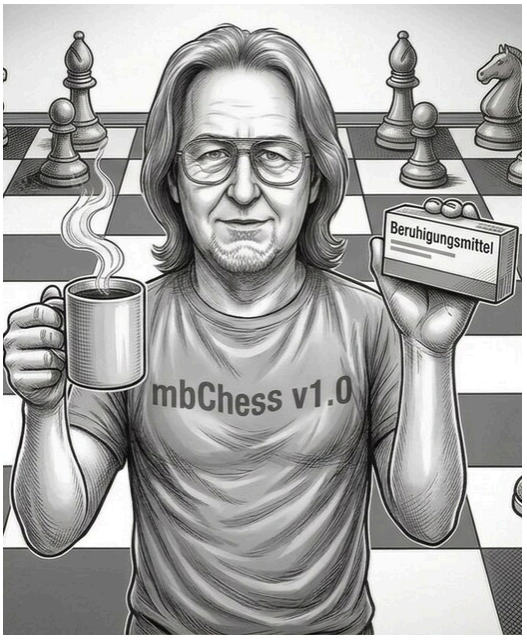
mbChess – Manual

Version 0.1.33 "Uppers and Downers"



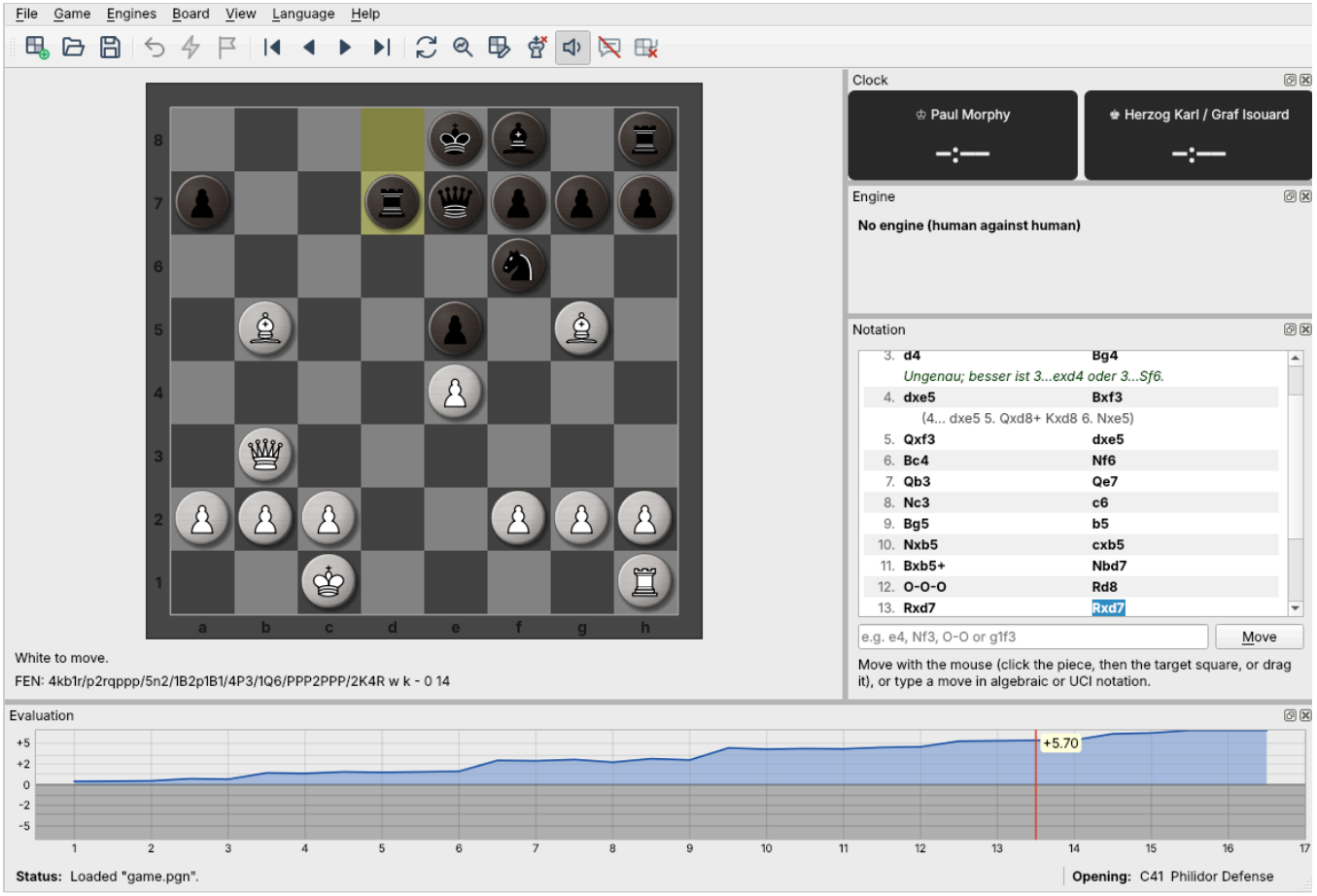
Michael Bergmann
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Welcome to mbChess

mbChess is a free chess program for Windows, Linux and macOS (Android will follow). You can play against strong chess engines and against opponents of any strength, practise with a tutor at your side, solve mate, tactics and endgame puzzles, train openings and board vision, replay and analyse games, let engines play each other and play on an electronic DGT board.



The mbChess main window with a loaded game

At a glance:

- **Play** against an engine, against a human on the same board, or watch engine against engine, with a chess clock, adjustable strength, opening book and chessbooks.
- **Ready-made opponents** in the Play menu: from the "Random mover" for your first steps through club players and masters to opponents with a character of their own.
- **Game with tutor**: a tutor looks at each of your moves and speaks up before a bad one is played.
- **Rated games** with an Elo rating of your own that grows with you.
- **Training**: mate in 1 to 3, more than 2,300 tactics puzzles in 22 themes, opening repertoire, guessing the moves of master games, holding out against the strongest engine, endgames and exercises for board vision and memory.
- **Engines included**: Stockfish, Arasan, Fruit, Toga II, Glaurung, GNU Chess, Viridithas, Texel, Patricia and the Tarrasch Toy Engine. More UCI engines can be added.
- **Analysis** with an engine, evaluation graph, variations and comments.
- **Game databases** in PGN format, even with tens of thousands of games.

- **Board editor** and **mate search**.
- **Engine benchmark**: a round-robin tournament of the engines under equal conditions.
- **Endgame tablebases**: Syzygy to download, Gaviota with the distance to mate in the analysis.
- **DGT boards** via USB or Bluetooth.
- Hundreds of **boards and piece sets**, move sounds and **move announcements** in English or German.

mbChess is free software under the GNU General Public License, version 3 or later. It comes without any warranty.

Installation and start

Windows

Run the installer `mbChess-<version>-en-setup.exe` (English) or `mbChess-<version>-de-setup.exe` (German). The wizard suggests the folder `C:\mbChess` and offers these components:

Component	Contents	Default
mbChess	the program with help (CHM), boards, pieces, sounds and training puzzles	always
UCI chess engines	the included engines, each one can be deselected	on
Voice recorder	program to record your own move announcements	off
Manual (PDF)	this manual as a PDF file	off

An existing installation is replaced; your settings, rating and training progress are kept. Uninstall mbChess with "Settings → Apps" or with "Uninstall mbChess" in the Start menu, where you also find "mbChess help".

Linux and macOS

For Debian, Ubuntu and their derivatives the download page offers a Debian package (`mbchess_<version>_amd64.deb`). Install it in a terminal with

```
sudo apt install ./mbchess_<version>_amd64.deb
```

`apt` also installs the Qt 6 libraries it needs (Debian 12 and newer, Ubuntu 24.04 and newer). The program then lives in `/opt/mbChess`, together with the engines, the voice recorder, the manuals and the folders `Openings`, `Chessbooks`, `Syzygy`, `Gaviota` and `Training`; all users may write into these folders, so you can put books and game collections there without administrator rights. mbChess appears in the applications menu under "Games" and starts in a terminal with `mbchess` (the voice recorder with `mbchess-voicerecorder`). Install a new version the same way over the old one; remove mbChess with `sudo apt remove mbchess`. Settings and games are kept.

For other Linux systems there is an archive (`.tar.gz`) with the ready-built program and the engines; it also needs the system's Qt 6 libraries. Unpack it anywhere and start `mbchess` in the unpacked folder `mbChess-<version>`.

Or build mbChess from the source code (Qt 6.4 or newer, Qt 5.15 on macOS Catalina). The instructions are in the file `README.md` of the source code. On Debian and Ubuntu, `sh tools/install-build-deps.sh` first installs all packages that are missing for the build. The result is in the folder `bin` of the build folder.

Test versions for beta testers

While mbChess is still being developed, the builds handed out are test versions. At the first start a notice says that this is a developer version and until when it runs: each version runs for **six weeks** from its first start. In the last week mbChess reminds you at every start to install the current version soon; after that it only shows where to get the new one and quits.

A new version runs for another full six weeks. Settings, games, ratings and engines are kept when you change versions. **Help → About mbChess** shows until when your version runs.

The start screen

At start mbChess shows a start screen with the version number, the part being loaded (settings, boards and pieces, engines and books, looking for a DGT board) and a progress bar. Switch it off and on with **View → Show the start screen**.

Command line

Call	Effect
`mbchess game.pgn`	opens the PGN file
`mbchess --fen "<FEN>"`	puts the position from the FEN on the board

The main window

The main window has the board in the middle and several windows around it. Each of these windows can be moved, docked at another edge, left floating or closed. Switch them on again in the **View** menu; **View → Reset window layout** restores the original layout. mbChess saves size, position and layout by itself.

Window	Contents
Board	the position; below it the state of the game and the FEN of the position
Clock	the players' names and their time; the side to move is highlighted
Engine	what the engine is calculating: depth, evaluation, main line, speed
Training	task, hints and buttons of a training task (as a tab next to "Engine")
Notation	the moves of the game with variations and comments, below it the move input
Evaluation	the evaluation graph of the game
Games	the game list of an open database

The menus

Menu	Contents
File	open and save games, step through a database, FEN, benchmarks, quit
Play	New game, ready-made opponents, engine against engine, game with tutor, rated game
Training	Find the mate, Tactics, Openings, Master games, Hold out, Endgames, Board and memory, Mate search
Game	take back, move now, resign, step through the game, set up a position
Engines	engine analysis, analysis engine and lines, manage engines, endgame tablebases
Board	flip board, coordinates, board style, pieces, sounds, voice, DGT board
View	show and hide windows, window layout, window theme, start screen
Language	Deutsch or English
Help	this manual (F1), About mbChess, About Qt

The status bar

The status bar at the bottom is divided into sections:

- **Status:** general messages, for example "Game saved", "Book move" or "The tutor looks at your move ...". Without a message it shows "Ready".
- **Chessbook:** progress while a chessbook is read (only while reading).
- **Opening:** the ECO code and the name of the opening.
- **Benchmark:** progress of a running engine benchmark with a button to cancel it.
- **DGT:** the state of the DGT board, for example "✓ matches the game" or "please play Nf6 on the board".

Text that is too long is shortened with "..."; the tooltip shows it in full.

The toolbar

From left to right the toolbar holds: New game, Open game, Save game, Take back move, Move now, Resign, go to the start, move back, move forward, go to the end, Flip board, Engine analysis, Set up position, Mate search, Move sounds, Announce moves and DGT board. The icons for move sounds, announcements and the DGT board show whether the function is on or off.

Playing a game

New game

Play → New game (Ctrl+N) opens the dialog for a new game. The ready-made opponents in the same menu are quicker (chapter "The Play menu").



The "New game" dialog

Setting	Meaning
Opponent	Engine (computer), Human (both sides on this board) or Engine against engine
Your colour	White, Black or Random
Your name	shown at the clock and in the saved PGN
Engine	the opponent. "Other engine..." picks a program file, "Manage..." opens the engine list
Strength	from "Beginner (about 1350 Elo)" to "Full strength"
CPU cores, **Hash table**	computing power and memory of the engine
Engine thinks on your time (ponder)	the engine already searches while you think, on the move it expects from you. If you play it, it answers faster and better. Only at full strength and with engines that can do it (Stockfish, Arasan, Texel, Fruit, Toga II, Glaurung, GNU Chess)
Time control	"No clock" or a time with increment, for example 5 min + 3 s
Always promote to queen	a pawn on the last rank becomes a queen without asking
Play from the position on the board	the game starts from the position set up instead of the initial position
Opening book and chessbooks	see the chapter "Opening books and chessbooks"

With "Engine against engine" you choose one engine for White and one for Black, and watch.

Making moves

You have several ways:

- **Click**: click the piece, then the target square.
- **Drag**: drag the piece onto the target square.
- **Type**: type the move into the field below the notation and press Enter, in algebraic notation (`e4`, `Nf3`, `O-O`, `exd5`, `e8=Q`) or in UCI notation (`g1f3`).
- **DGT board**: make the move on the electronic board (chapter "DGT board").

On a promotion mbChess asks for the piece, unless "Always promote to queen" is on.

During the game

Command	Key	Effect
Game → Take back move	Ctrl+Z	takes back your last move (and the engine's reply)
Game → Move now!	Space	the engine has to move at once
Game → Resign	–	gives up the game
Board → Flip board	Ctrl+R	turns the board round

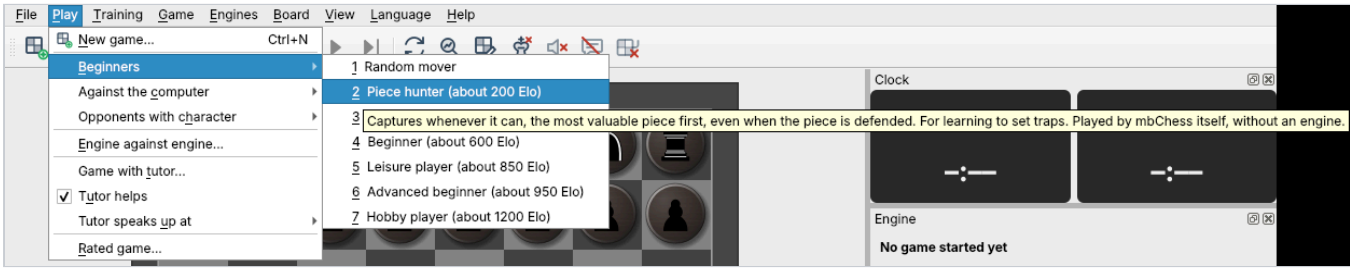
During the game you can step back with the arrow keys. Moves are made only at the end of the game, though; the End key takes you back there.

The game ends with checkmate, stalemate, threefold repetition, the fifty-move rule, insufficient material, loss on time or resignation. Then the board becomes an analysis board: you can try moves and switch on the engine analysis.

Commands that would end a running game (a new position, the board editor, the mate search, a training task, a benchmark on the board, quitting the program) ask first.

The Play menu

Besides "New game" the **Play** menu offers ready-made opponents: one click and the game starts. Colour, time control, your name, cores, hash and books are taken from the last settings of "New game". The tooltip of each opponent describes its style and names the engine that plays it. If that engine is missing, mbChess takes a suitable other one; if there is none at all, the opponent is greyed out.



The Play menu with the beginner opponents

Beginners

For everyone who is just learning chess or starting again. Beginner opponents play without a clock and without an opening book, so you have all the time in the world.

Opponent	Strength	Style
Random mover	–	plays any legal move; for learning how the pieces move and capture
Piece hunter	about 200 Elo	captures whenever it can, the most valuable piece first, even when the piece is defended; for learning to set traps
Novice	about 400 Elo	often misses threats of a single move
Beginner	about 600 Elo	usually protects its pieces, but misses forks and skewers
Leisure player	about 850 Elo	likes to attack and makes human mistakes
Advanced beginner	about 950 Elo	plays actively, loses a piece now and then
Hobby player	about 1200 Elo	solid; mistakes only in longer variations

The random mover and the piece hunter are played by mbChess itself, without an engine. The others are Texel or Patricia at reduced strength. The Elo figures were measured in test tournaments against

Texel and are a guide.

Against the computer

Opponent	Strength
Casual player	about 1600 Elo: knows the basic rules of strategy, still overlooks tactics
Club player	about 1900 Elo: a solid club player
Expert	about 2200 Elo: a strong club player
Master	about 2500 Elo: plays like a master
Full strength	the engine at full strength: far stronger than any human

These opponents are Stockfish (or else Arasan or Texel) at limited strength, with the time control and books of "New game".

Opponents with character

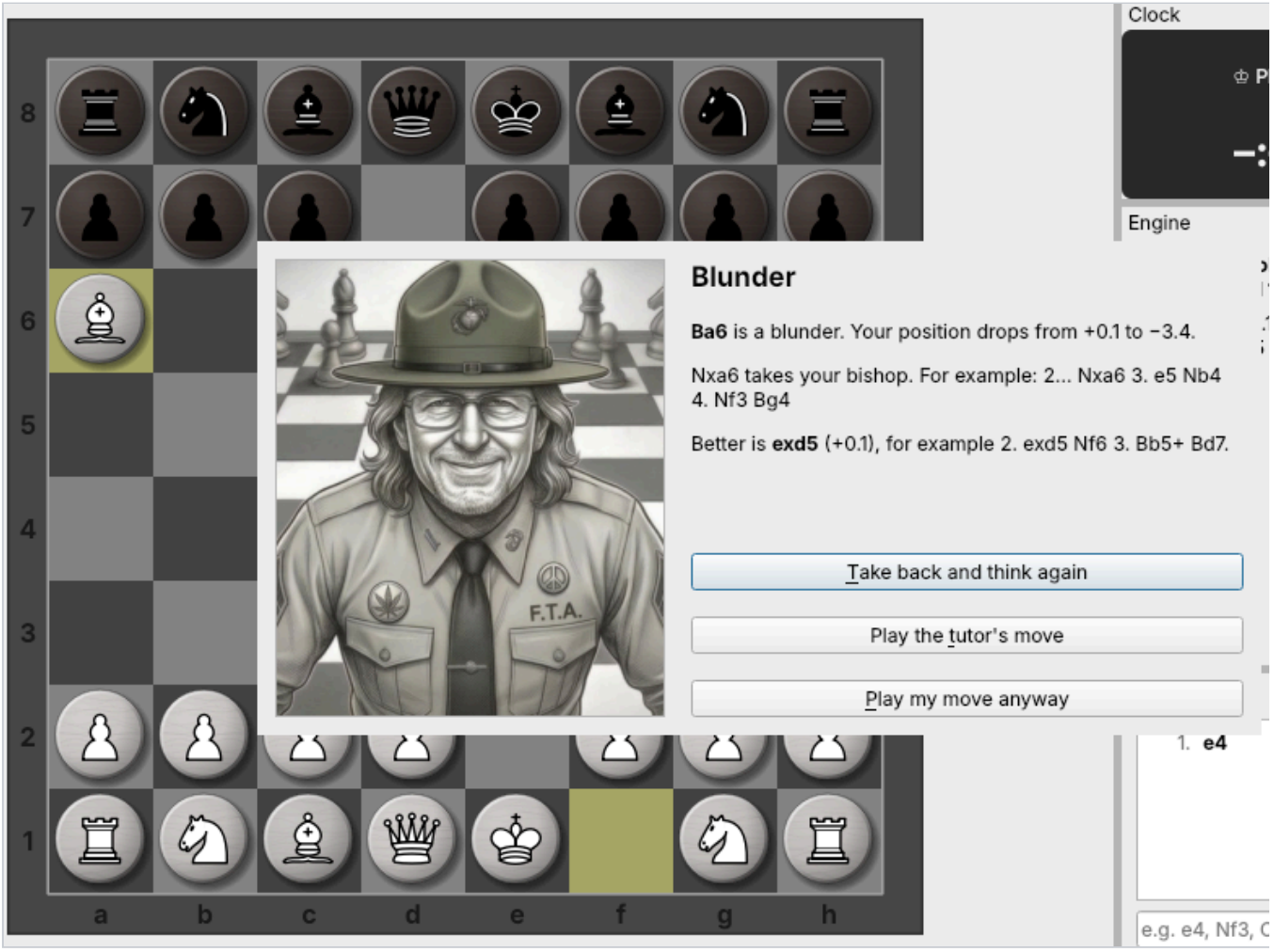
Opponent	Strength	Style
Attacker	about 1800 Elo	plays for the attack on the king and sacrifices material for it (Patricia)
Positional player	about 1800 Elo	plays calmly, improves its pieces and waits for your mistakes (Arasan)
Materialist	about 1800 Elo	grabs every pawn it can get and defends it (Texel)
Classic	about 2600 Elo	a classic engine of the 2000s without a neural network, at full strength: clear, principled chess (Fruit, Toga II or Glaurung)

Engine against engine

Play → Engine against engine... opens "New game" with the opponent "Engine against engine". Choose the two engines and the time control and watch. For many games under equal conditions there is the engine benchmark (chapter "Engine benchmark").

Game with tutor

The tutor is a friendly but honest chess teacher. In games against the computer it looks at each of your moves **before** it is played. If the move is bad, the tutor speaks up with a picture, an explanation and a better suggestion.



The tutor speaks up after a mistake

- **Play → Game with tutor...** switches the tutor on and opens "New game".
- **Play → Tutor helps** switches it on and off for all games against the computer, the ready-made opponents included.
- **Play → Tutor speaks up at** sets how strict it is: at **Inaccuracies**, at **Mistakes** (default) or at **Blunders only**.

The tutor calculates with the analysis engine (**Engines → Analysis engine**). While it thinks, your move is already shown on the board and the status bar says "The tutor looks at your move ...". It judges a move by how much your winning chances drop:

Rating	Winning chance drops by
Inaccuracy	at least 5 percentage points
Mistake	at least 10 percentage points
Blunder	at least 15 percentage points
Terrible blunder	at least 35 percentage points

Any mistake that costs 6 pawn units or more (the queen, for example) or allows the opponent a mate also counts as a terrible blunder, even if the position was already lost or still clearly won.

The tutor's window names the move and its rating, what follows (for example "Then your opponent mates you" or which piece is lost), how the evaluation drops, and a better move with an example line. After a terrible blunder it shows a different picture and asks: "Are you stoned?!" You have three choices:

- **Take back and think again**: your move is not played; you move again.
- **Play the tutor's move**: the tutor's suggestion is played.
- **Play my move anyway**: your move stands and the game goes on.

A move the tutor has nothing against is played without asking. In training tasks and rated games the tutor is off.

Rated game

In rated games you earn an **mbChess Elo rating** of your own. **Play → Rated game…** shows your rating, your record (won, drawn, lost) and the last rated games. Choose colour and time control and click **Start the game**.



The "Rated game" dialog

- You start at **1200 Elo**. Your opponent is an engine (Texel preferred) set exactly to your current rating.

- After the game the rating changes by the Elo formula: by up to 40 points in the first 20 games, then by up to 20.
- Below 1600 Elo the engine plays without an opening book.
- Taking back moves and the tutor are off.
- A game left unfinished (for example by a new game or by quitting the program) counts as lost.

Reset rating… starts again at 1200 Elo and forgets all rated games.

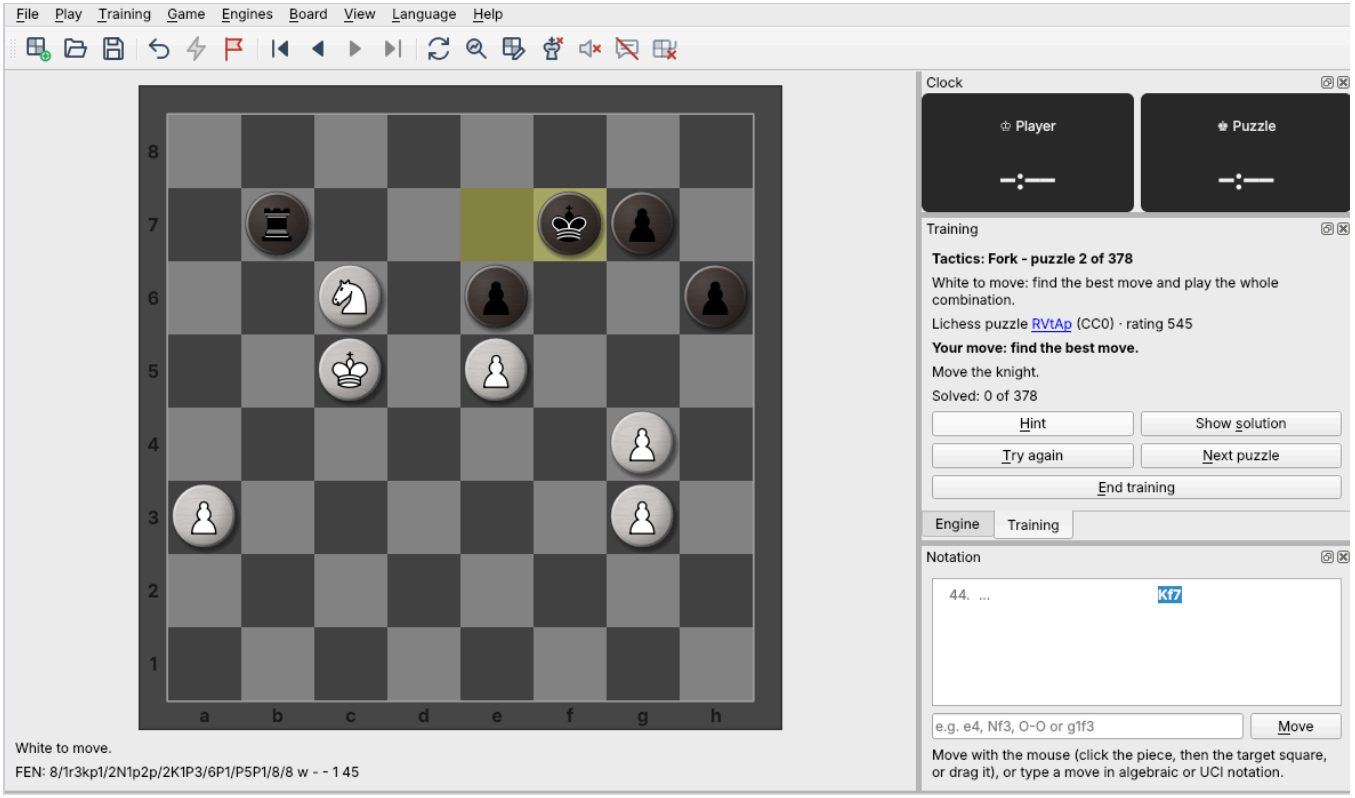
The Training menu

The **Training** menu holds tasks that make you better step by step. Most of them run on the main board, so a training task ends a running game (mbChess asks first). "Master games" and "Board and memory" open a window of their own and leave the game on the main board alone.

During a task no engine helps: the engine analysis is switched off. mbChess does not accept wrong moves at all; it says why the move does not fit, and you simply try again.

The training window

Each task on the main board comes with the window **Training** (as a tab next to "Engine"). It shows the title of the task (for example "Mate in 2 - puzzle 15 of 719"), the task itself, its source (for example a Lichess puzzle with a link), messages about your moves in green (solved) or red (failed) and your progress.



The training window with a tactics puzzle

Button	Effect
Hint	a hint, for example "Move the knight. The first move gives check."
Show solution	shows the solution (mate and tactics puzzles only)
Try again	starts the same task again
Next puzzle / **New position** / **New game**	the next task of the same kind
End training	ends the task; the board becomes an analysis board

If you need a hint or make a mistake, you still solve the task, but it does not count as solved and comes back later. mbChess remembers your progress (solved puzzles, best times, records); the menus show it after each entry, for example "Fork (3 of 378 solved)". Each kind of training has an entry **Reset progress...** (or "Reset results...", "Reset records...").

Find the mate

Training → Find the mate offers **Mate in 1**, **Mate in 2** and **Mate in 3**, with about 700 puzzles each from the free puzzle database of lichess.org (CC0) and puzzles of mbChess's own. They go from easy to hard.

In the Lichess puzzles your opponent makes a move first; watch it, then you find the mate. After that the opponent always defends with the move that delays the mate longest. mbChess solves every position exactly by itself: any move that mates in the moves left counts, even if it is not the one in the solution. A move that does not mate in time is refused ("Nf7 does not mate in time").

Tactics

Training → Tactics holds more than 2,300 puzzles from lichess.org (CC0), sorted by theme:

Group	Themes
Basic motifs	Hanging piece, Fork, Pin, Skewer, Discovered attack, Double check, Trapped piece
Combinations	Deflection, Attraction, Sacrifice, Capture the defender, Clearance, Interference, Intermediate move, X-ray attack
Special moves	Quiet move, Defensive move, Zugzwang, Promotion
Attack and endgame	Attack on the king, Pawn endgame, Rook endgame

Mixed takes puzzles of all themes. As in "Find the mate" the opponent moves first. Then you find the best move and play the whole combination; the opponent answers with the moves of the solution.

Only the move of the solution counts (or a move that mates at once). A puzzle you did not solve comes back after three others. The hint names the piece and the puzzle's other themes.

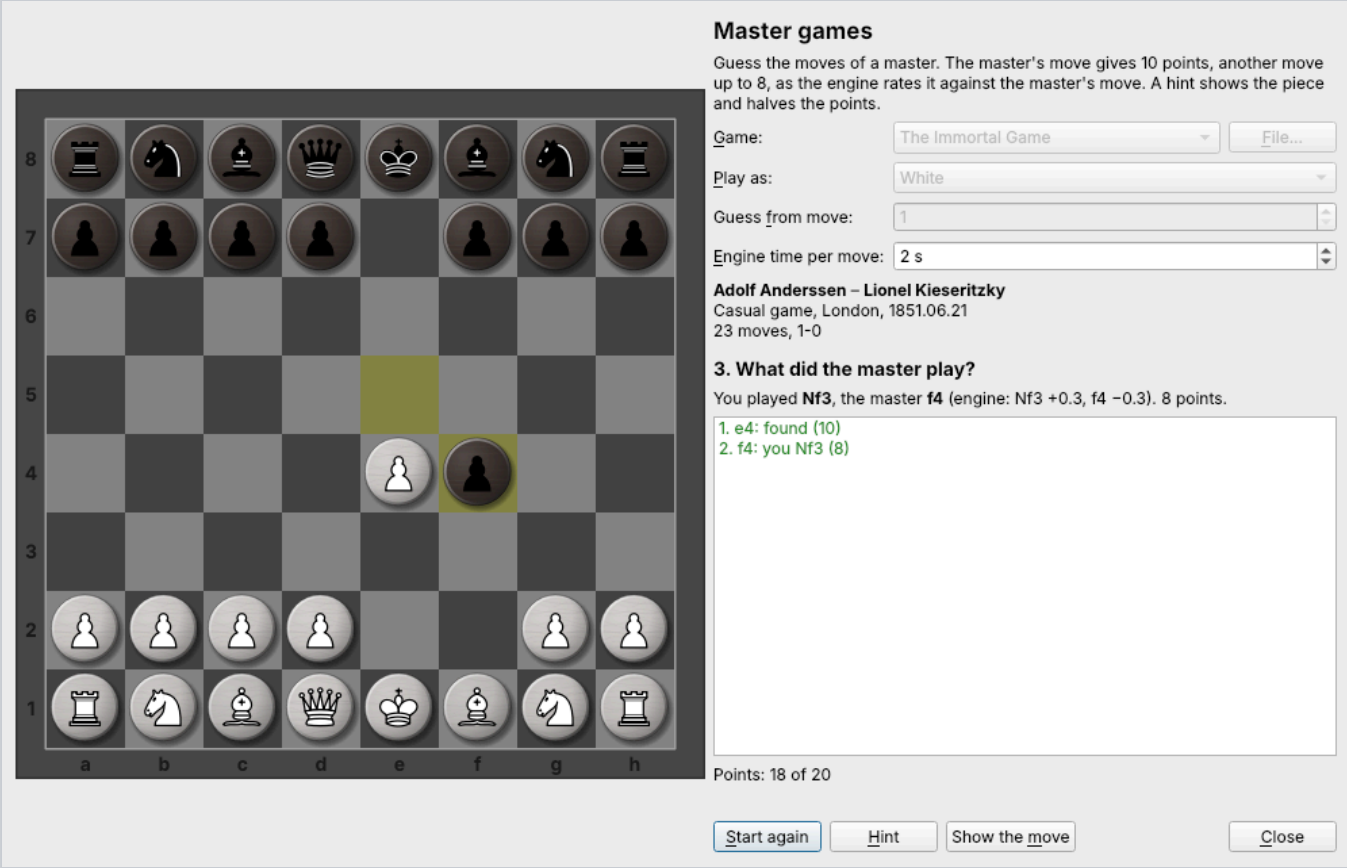
Openings

Training → Openings trains openings move by move. The opponent picks a different continuation each time, the more common ones more often.

- **Repertoire**: built in are "Italian Game for White" and "Caro-Kann for Black". You play the moves of your repertoire until the line ends. A move that is not in the repertoire is refused. The menu shows how many lines you have already played without a mistake.
- **Own repertoires (folder)…** opens the folder `Training/Repertoire` next to the program. Put PGN files with your repertoire there, variations welcome. The tag `[Repertoire "White"]` or `[Repertoire "Black"]` in the PGN says which side it is for; without it the menu offers both colours.
- **Opening book**: **Book moves as White** and **Book moves as Black** train the moves of the opening book chosen in "New game", up to the move number set there.

Master games

Training → Master games… opens a window of its own where you guess the moves of a master. Five famous games are built in: Anderssen – Kieseritzky ("The Immortal Game", 1851), Anderssen – Dufresne ("The Evergreen Game", 1852), Morphy – Duke Karl and Count Isouard ("The Opera Game", Paris 1858), Réti – Tartakower (Vienna 1910) and Ed. Lasker – Thomas (London 1912). **File…** loads any other PGN file.



Master games

Choose the game, your colour, from which move you guess, and how long the engine may check each move, and click **Start**. Then:

- The master's move gives **10 points**.
- Another move gives up to 8 points, as the analysis engine rates it against the master's move.
- **Hint** shows the piece the master moves; the move then gives only half the points.
- **Show the move** shows the master's move, without points.

At the end you see your points, the percentage and how many master moves you found; mbChess remembers your best result for each game.

Hold out

In **Training → Hold out** you play against the strongest engine there is (Stockfish, or else Arasan or Texel) at full strength. The aim is not to win but to hold out as long as possible: the game ends as soon as the engine's evaluation for you falls below a limit.

- **Play as White** / **Play as Black** starts the game; your record is shown after it.
- **The game ends below** −1, −2 (default), −3 or −5 pawns.
- **Engine time per move**: 1, 2, 5 or 10 seconds.

The moves you held out are counted. Each colour and limit has a record of its own. Taking back moves sets no record. There are no hints here.

Endgames

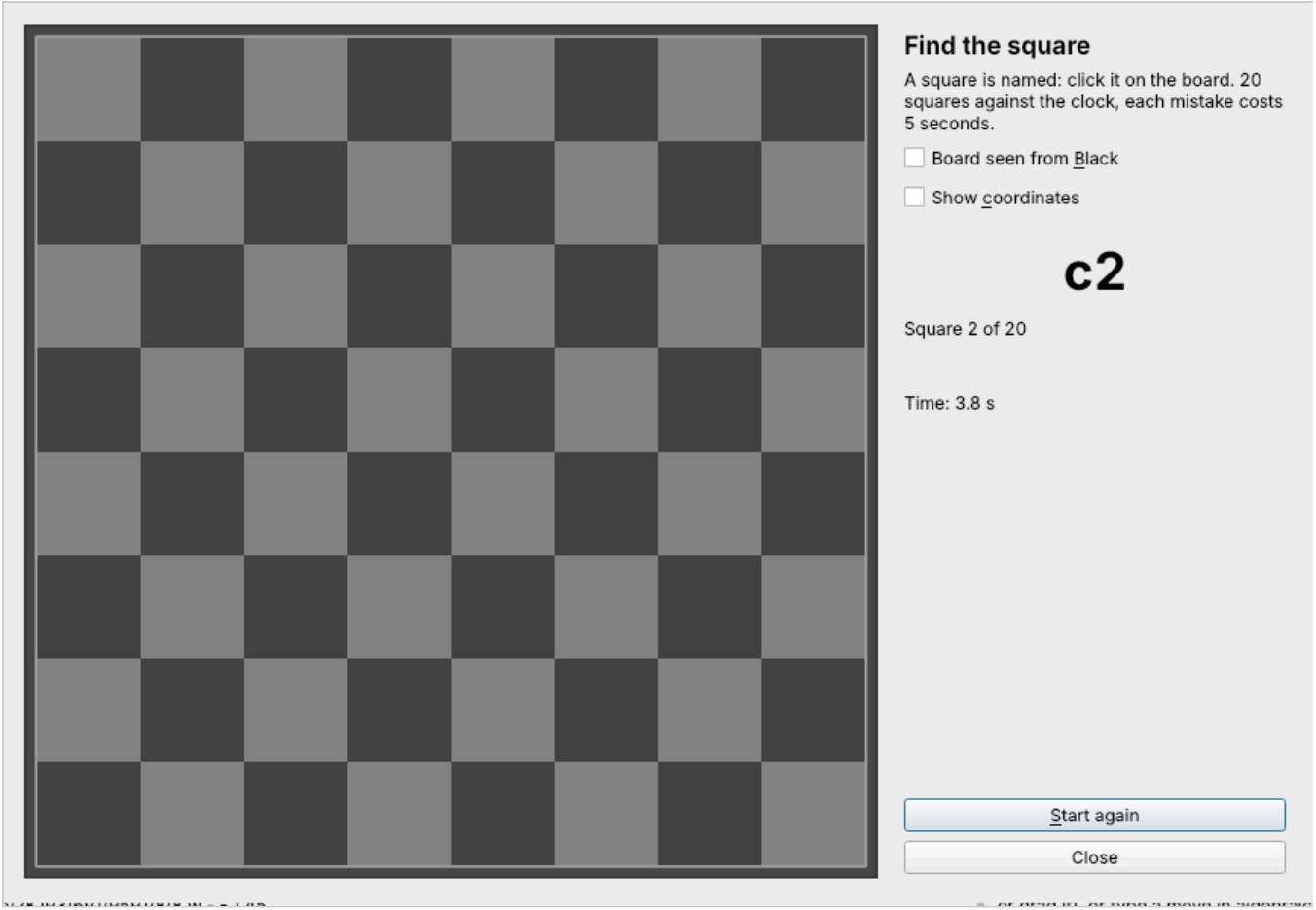
Training → Endgames trains the most important basic endgames against an engine that defends as well as it can (Texel preferred, 1 second per move). The positions are different every time.

Endgame	Task	Move limit
King and queen against king (KQK)	mate	15 moves
King and rook against king (KRK)	mate	25 moves
Two bishops (KBBK)	mate	30 moves
Bishop and knight (KBNK)	mate	40 moves
King and pawn: win	promote the pawn without throwing the win away	20 moves
King against king and pawn: hold the draw	hold the draw or take the pawn	20 moves

mbChess knows the pawn endgames completely and checks each of your moves: a move that throws the win away or loses ends the task with an explanation. For the mating endgames this needs the Gaviota tablebases (chapter "Endgame tablebases"); without them mbChess checks only the number of moves and the result. With tablebases the hint names the good moves; the training window also gives a tip on the method (for example the bishops' wall in KBBK).

Board and memory

Training → Board and memory opens a window of its own with exercises for board vision. At the bottom of the window you choose whether the board is seen from Black and whether the coordinates are shown.



Board and memory: Find the square

Exercise	Task
Find the square	a square is named: click it on the board
Name the square	a square is marked: type its name (for example e4)
Light or dark?	without looking at the board: is the named square light or dark?
Remember the position	look at a position, then set it up again from memory
All checks and captures	find every check and every capture of the side to move
All moves	find every legal move of the side to move

The three square exercises run against the clock: 20 squares, each mistake costs 5 seconds. mbChess remembers your best time.

In **Remember the position** you choose one of six levels (from a few pieces up to the full position with 32 pieces) and the time to look. Then the position disappears and you set it up again: choose a piece below or above the board and click the squares, or drag the pieces; a right click removes a piece. **Check** shows pieces on wrong squares in red and missing ones with a red frame; you can switch between your position and the original.

In the two move exercises you make the moves on the board; they are not played, only counted. **Give up and show the rest** shows the missing moves in red.

Mate search

Training → Mate search... (Ctrl+M) lets an engine look for a mate in any position, for example a puzzle from a book. It is described in the chapter "Mate search".

Puzzles of your own

Put more puzzles into the folder `Training` next to the program:

- `mate1*.txt`, `mate2*.txt`, `mate3*.txt` for mate in 1, 2 and 3 and `tactics*.txt` for tactics, one puzzle per line in the format `Name;FEN;opponent's move;solution;rating` (moves in UCI notation, several solution moves separated by spaces; "-" if the opponent does not move first; for tactics the themes as a sixth column, for example `fork pin`).
- Or a CSV file from the lichess.org puzzle database (`lichess_db_puzzle.csv` or a part of it); mbChess sorts the puzzles in by itself.

Opening and saving games

PGN files

File → Open game (PGN) (Ctrl+O) reads a PGN file with variations, comments, symbols ($1, $2 ...) and evaluations (`[%eval]`). **File → Save game as PGN** (Ctrl+S) writes the game with its variations, comments and the engine's evaluations.

If the game holds moves, variations or comments that are not saved yet, mbChess asks before they are lost (on quitting, a new game, opening another game, a new position) and offers **Save game...**.

Game databases

If the file holds several games, the window **Games** shows a list: number, White, Elo, Black, Elo, result, moves, ECO, date, event, site and round. Click a column header to sort; the search field filters by player, event, site, ECO or year. Double click or Enter loads a game. **File → Previous game** (Ctrl+PgUp) and **Next game** (Ctrl+PgDown) step through the (filtered) list.

mbChess reads large files (60,000 games and more) in the background; you can go on working meanwhile.

FEN

File → Set position from FEN puts a position from a FEN line on the board, **File → Copy FEN** copies the FEN of the current position to the clipboard. The FEN is also always shown below the board.

Notation, variations and comments

The notation shows one move per line (number, White, Black). Comments are in italics on their own lines, variations indented in brackets.

Action	Effect
Click a move	goes to this position
← / →	one move back / forward
Home / End	to the start / to the end
Click into the evaluation graph	goes to this move

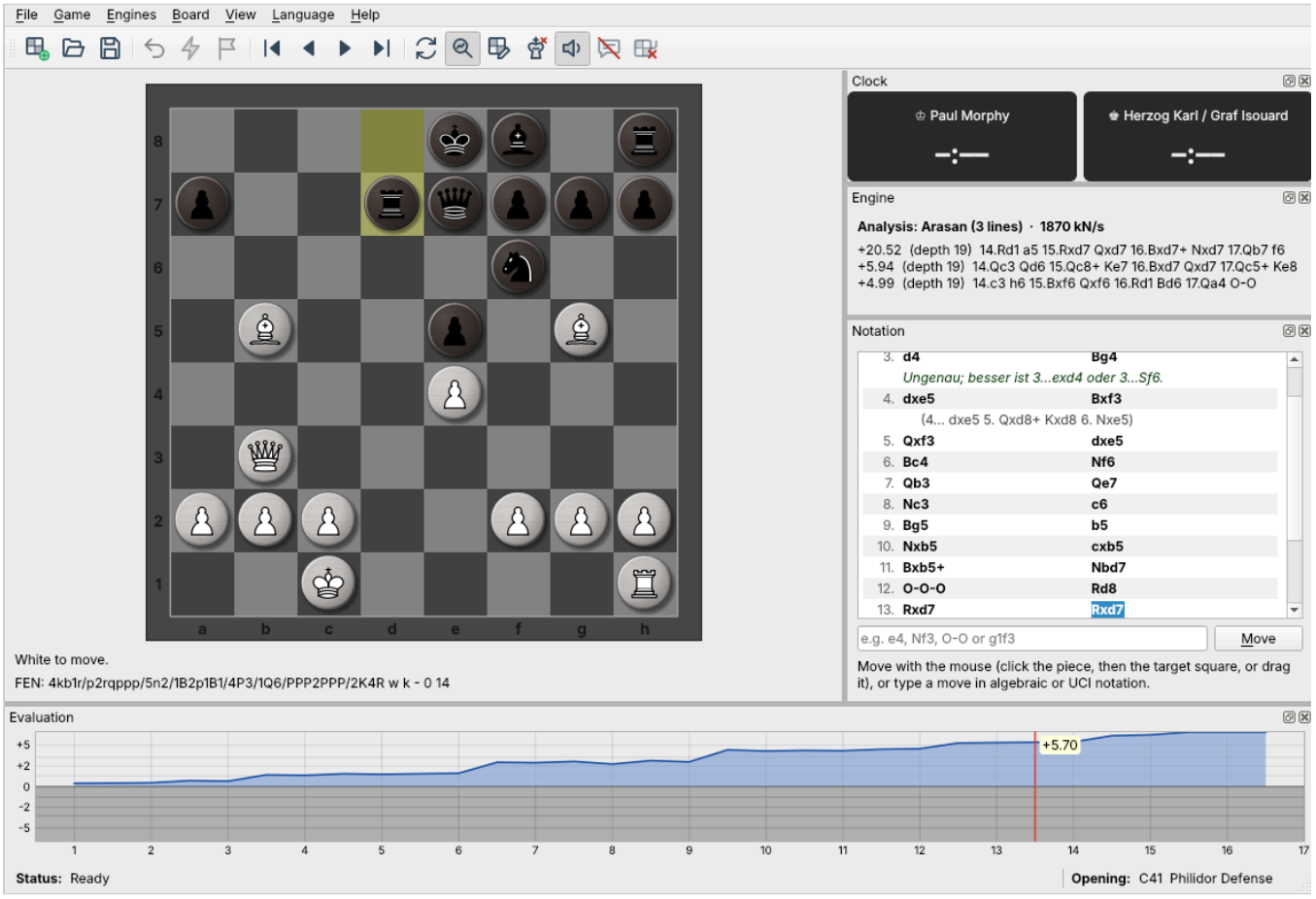
Outside a running game, a move in the middle of the game becomes a new variation. The context menu (right mouse button) of a move offers:

- **Promote variation**: the variation becomes the main line.
- **Delete from here**: removes the move and everything after it.
- **Edit comment…**: write or change the comment after the move.

Analysis

Engine analysis

Engines → Engine analysis (Alt+F2) lets an engine search the position on the board without a time limit. The engine window shows the evaluation, depth and main line of every line. The analysis follows every move and every step through the game.



Engine analysis with three lines

- **Engines → Analysis engine** chooses the engine.
- **Engines → Analysis lines** sets 1 to 5 lines (MultiPV). Some engines show only one line.

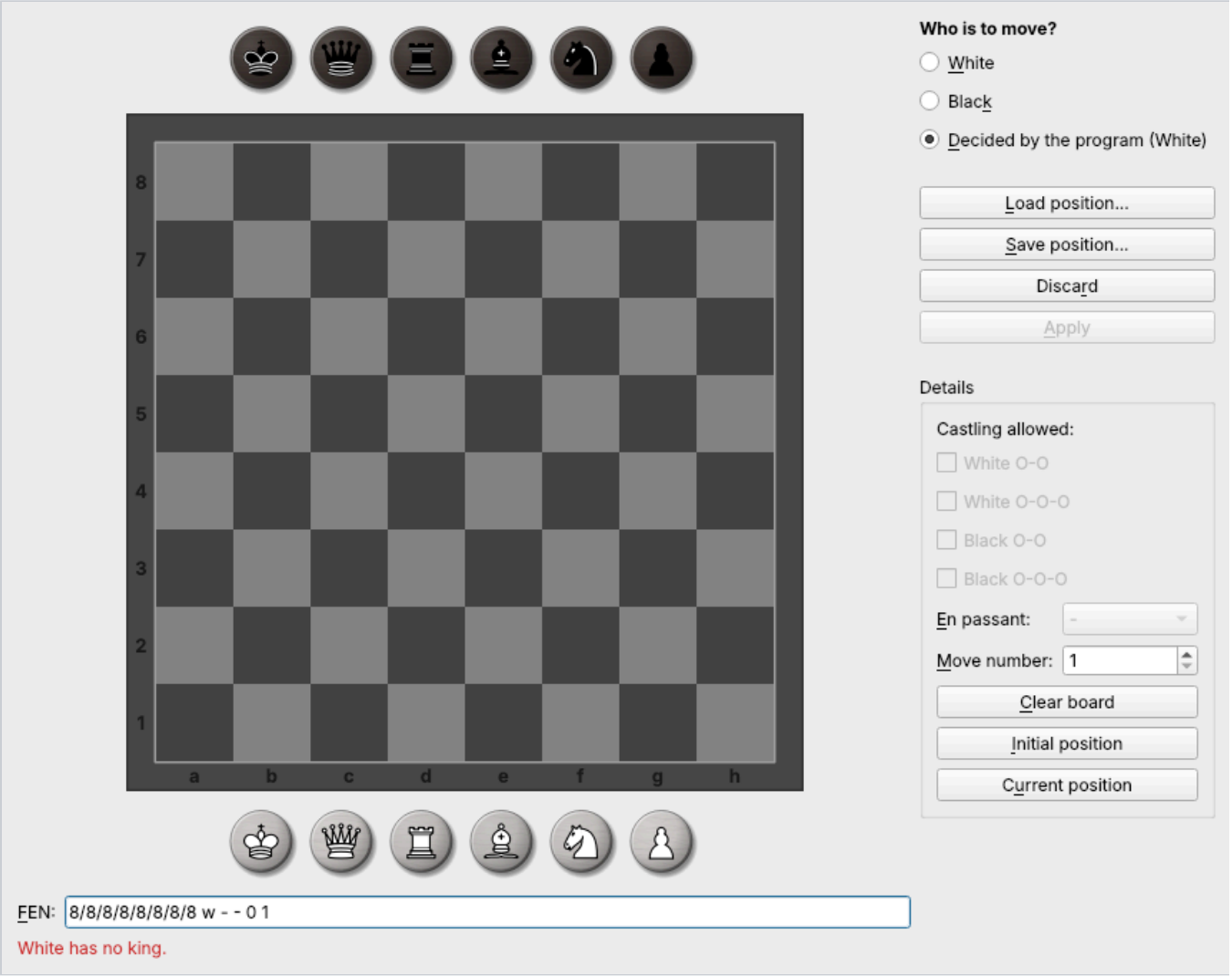
The evaluation of the best line is stored at the move; it appears in the evaluation graph and in the saved PGN. During a running game against an engine or with a clock and during a training task the analysis is locked.

Reading evaluations

Evaluations are from White's point of view, in pawn units: +1.00 means White is about a pawn better; −0.50 means Black is slightly better. "#3" means mate in three moves for White, "#−3" for Black.

Setting up a position

Game → Set up position (Ctrl+E) opens the board editor with an empty board.



The board editor

- **Place pieces**: drag a piece from the bar at the top (Black) or bottom (White) onto the board, or click the piece and then click as many squares as you like.
- **Move**: drag pieces on the board; hold Ctrl to copy.
- **Remove**: drag the piece off the board or right-click it.
- **Clear board** and **Initial position** reset the board, **Current position** brings the position of the running game into the editor.

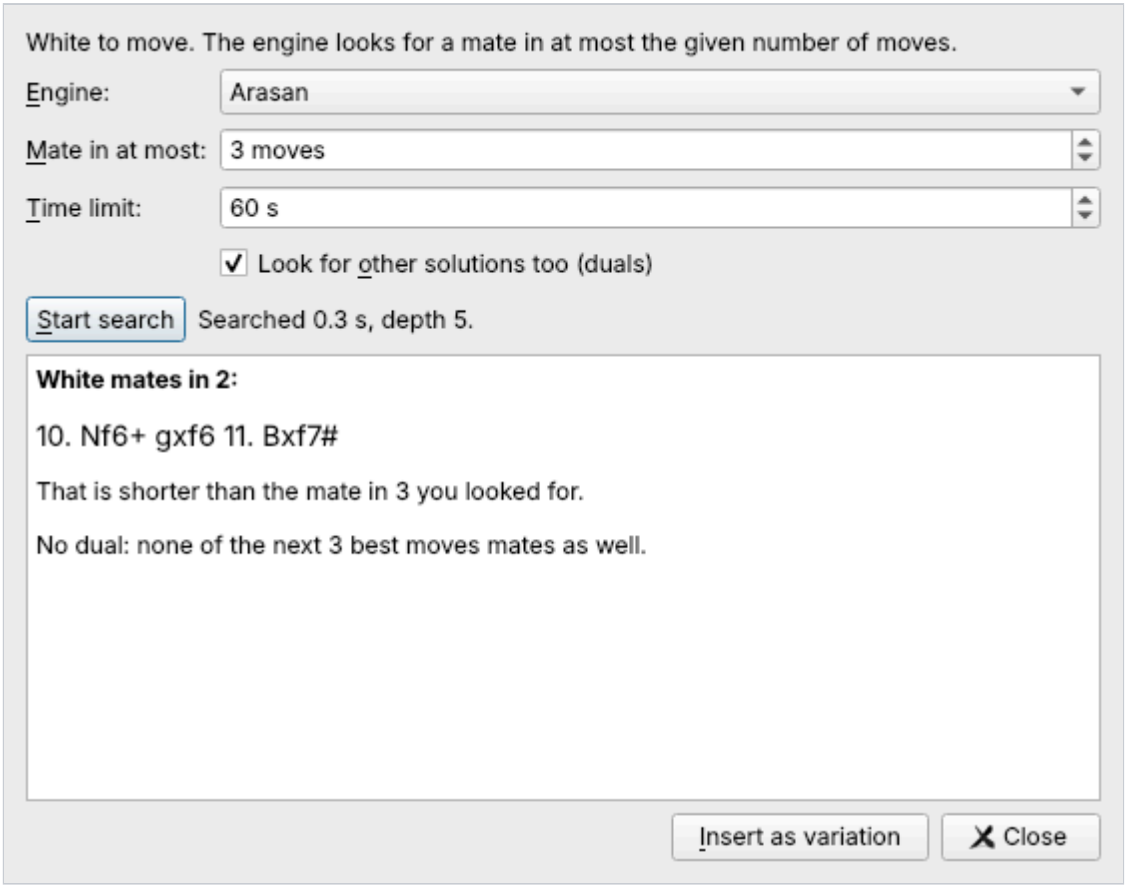
On the right you set who is to move (White, Black or "Decided by the program": the side in check, otherwise White), the castling rights, the en passant square and the move number. In the FEN line at the bottom you can also type or paste a FEN and apply it with Enter. **Load position…** and **Save position…** read and write `.fen` files.

mbChess checks the position all the time (kings, pawns on the back ranks, check of the side not to move) and shows the result below the FEN. **Apply** puts the position into the main window as an

analysis board; "New game" then offers **Play from the position on the board**.

Mate search

Training → Mate search… (Ctrl+M, toolbar) looks for a mate in the position on the board. Unlike the puzzles in "Find the mate" it works with any position, for example one you set up with the board editor.



The mate search found a mate in 2

Setting	Meaning
Engine	Stockfish by default, which has its own mate search
Mate in at most	the number of moves
Time limit	how long the search may take at most
Look for other solutions too (duals)	checks whether other moves mate as well (slower, only engines with MultiPV)

Start search begins the search. mbChess shows the solution, whether there is a shorter mate and whether other solutions exist. **Insert as variation** adds the solution to the game; step through it with the right arrow key.

Engines

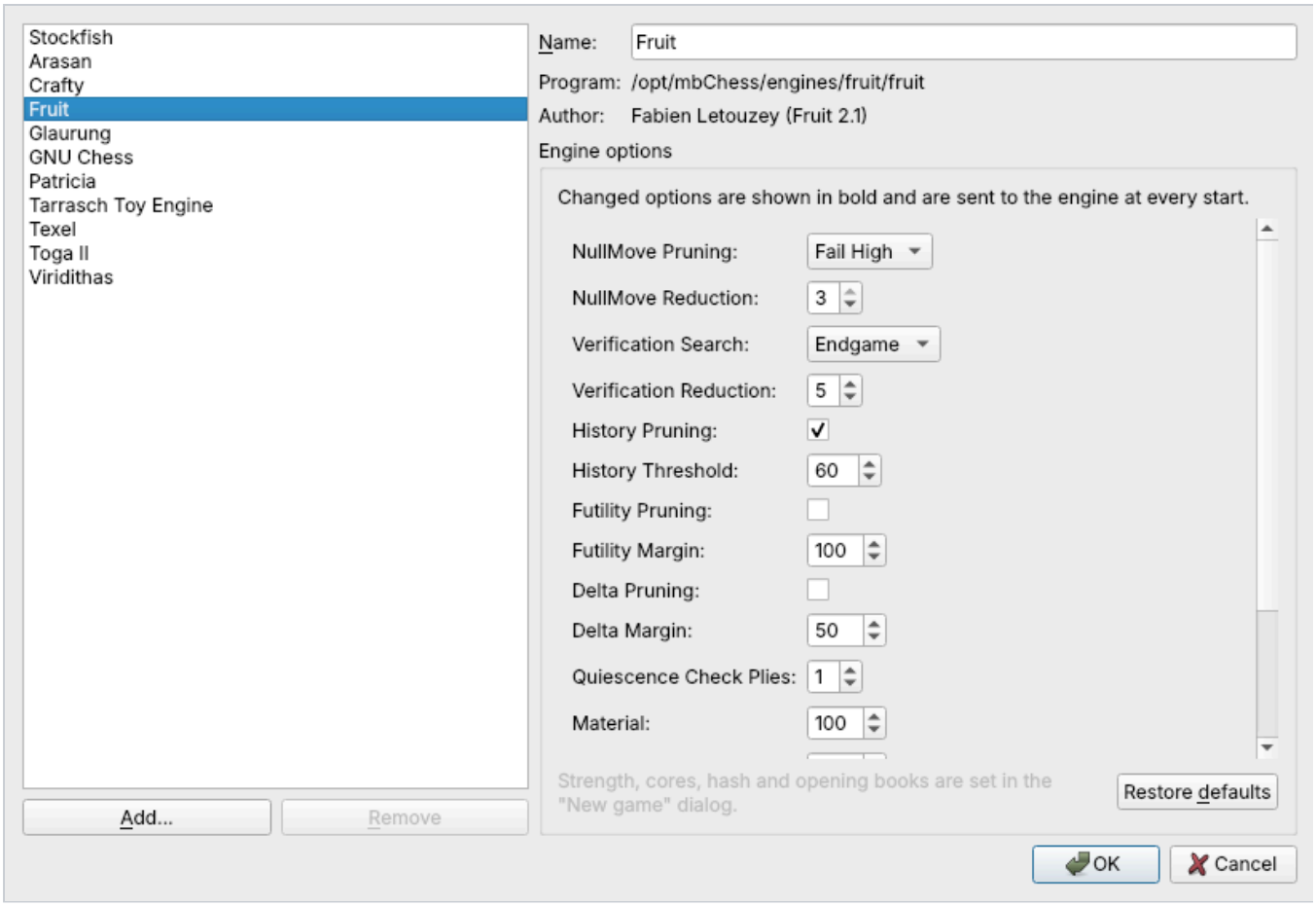
Included engines

Engine	Strength	Notes
Stockfish	one of the strongest engines	neural network, mate search, Syzygy
Arasan	very strong	Syzygy, own book
Viridithas	very strong	neural network, Syzygy
Texel	very strong	neural network, Syzygy and Gaviota, adjustable strength
Patricia	strong, very aggressive	neural network, Syzygy, adjustable strength
Toga II, Fruit	medium to strong	classic, PolyGlot book
Glaurung	medium to strong	classic
GNU Chess	medium	own book
Tarrasch Toy Engine	weak	small and simple, good for beginners

Crafty is not included because its licence forbids redistribution. If you build it yourself, put it into the folder `engines` next to the program.

Managing engines

Engines → Manage engines shows all engines. Engines in the folder `engines` next to the program are always in the list.



Managing engines

- **Add...** adds another UCI engine (choose the program file).
- **Remove** takes it off the list; the file stays where it is.
- **Name** changes the name shown.
- **Engine options** shows all options the engine reports. Changed options are shown in bold and are sent to the engine at every start. **Restore defaults** resets them.

Strength, cores, hash and opening books are set in the "New game" dialog.

Opening books and chessbooks

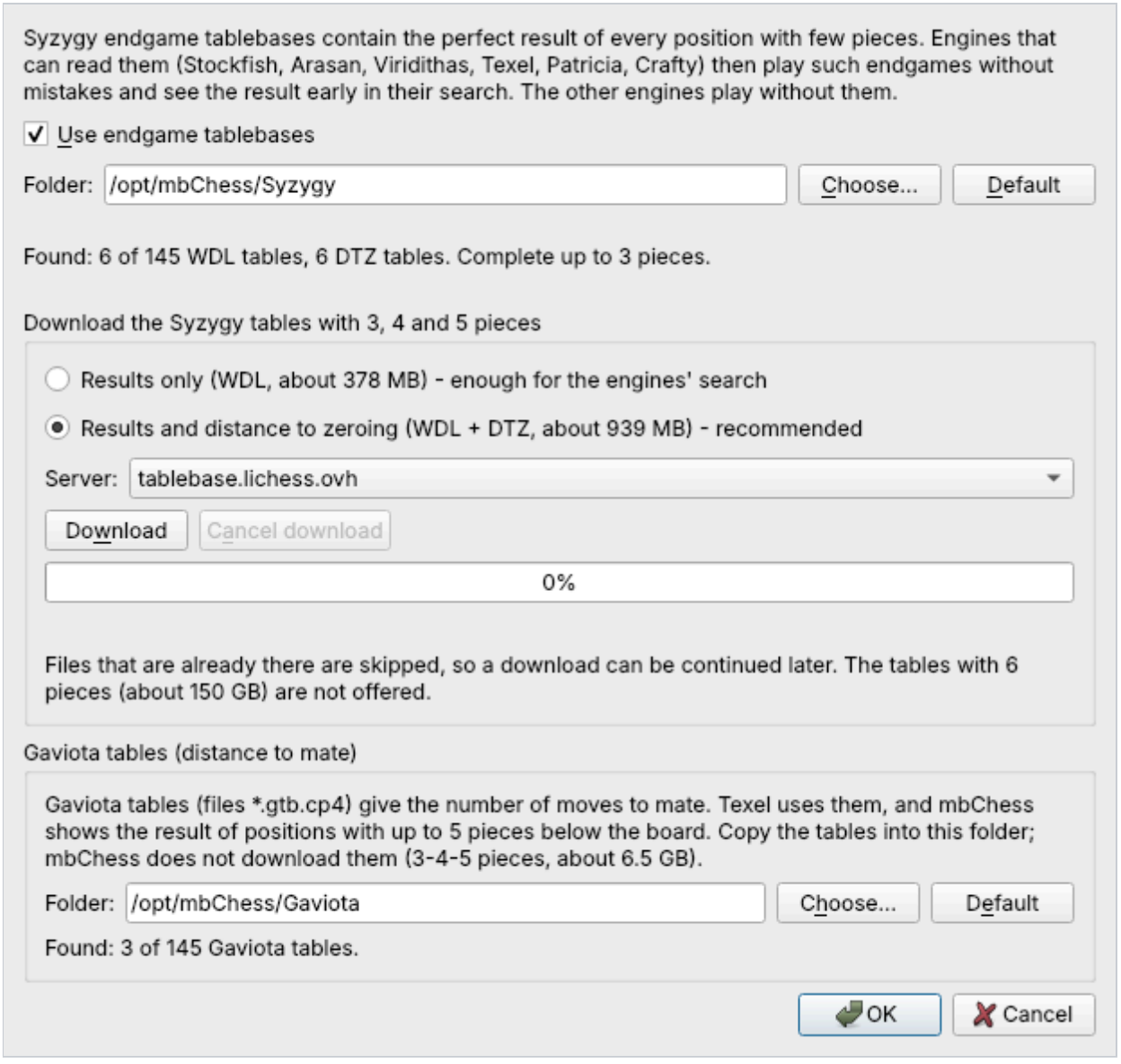
In the "New game" dialog you decide where the engine takes its opening moves from.

- **Engine plays from the opening book**: a book in PolyGlot format (`.bin`), up to a move number you choose. A book made from the named openings is built in. Put more books into the folder `Openings` next to the program.
- **Engine also plays from game databases (chessbooks)**: mbChess reads a PGN database (or all of them in the folder `Chessbooks`) and plays moves that scored well in these games, much like Crafty does with its books.
- **Let the engine use its own book**: Fruit, Toga, GNU Chess and Arasan have their own books.

When the engine plays a book move, "Book move: ..." is shown in the engine window.

Endgame tablebases

Syzygy endgame tablebases hold the perfect result of every position with few pieces. Engines that can read them (Stockfish, Arasan, Viridithas, Texel, Patricia, Crafty) play such endgames without a flaw.



Downloading endgame tablebases

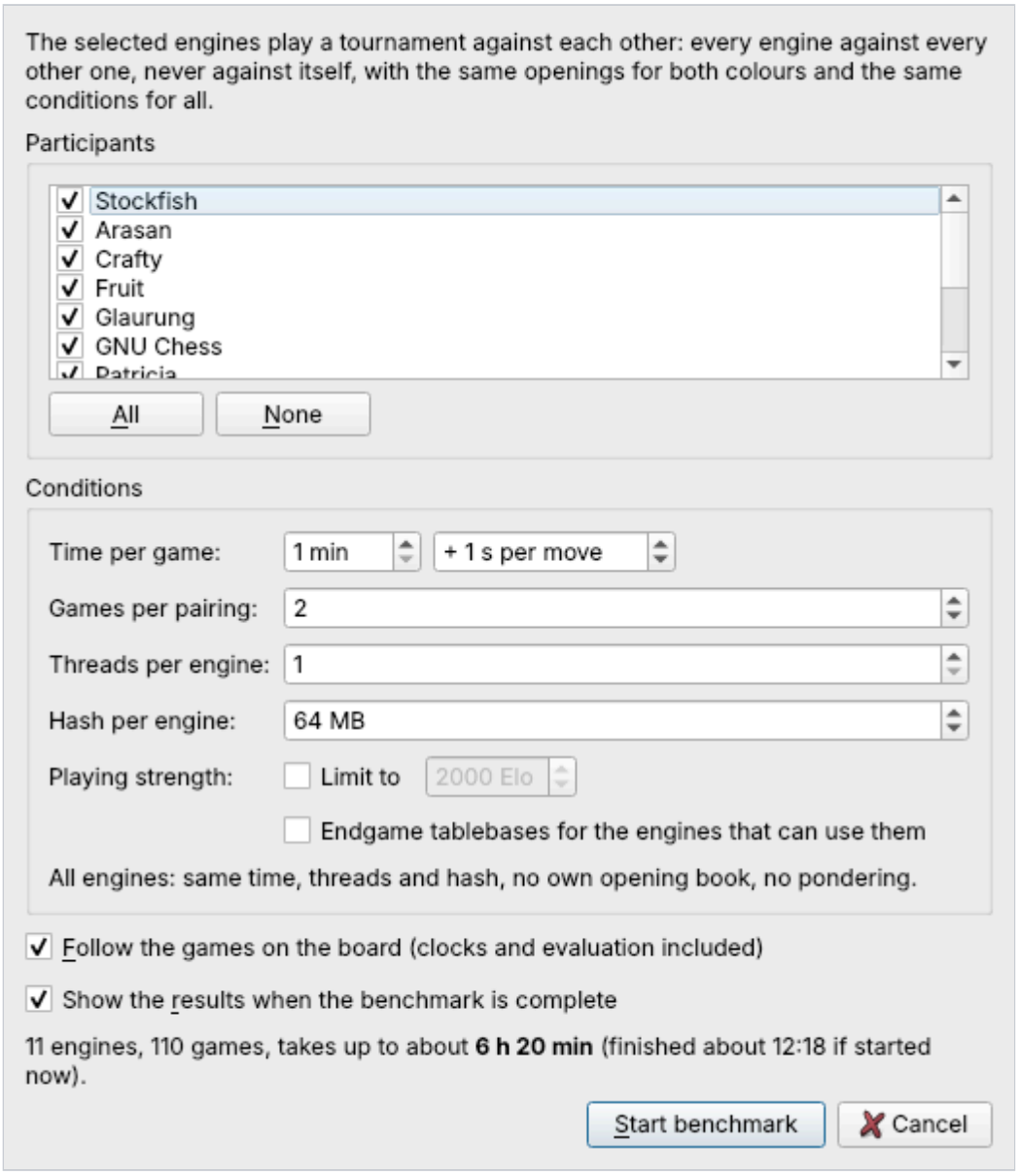
Engines → Endgame tablebases shows how many tables are there and downloads the tables with 3, 4 and 5 pieces: results only (WDL, about 378 MB) or also the distance to the next pawn move or capture (WDL + DTZ, about 939 MB, recommended). A cancelled download can be continued later. The folder is `Syzygy` next to the program and can be changed.

Gaviota tables (files `*.gtb.cp4`) also hold the number of moves to mate. Put them into the folder `Gaviota` next to the program or choose another folder in the same dialog; mbChess does not download them itself (3–5 pieces, about 6.5 GB). Texel uses them when playing, and in the analysis

(no engine opponent, no clock) mbChess shows the result of positions with up to 5 pieces in the status line, for example "Tablebase: White mates in 9 moves." During a game this hint is not shown.

Engine benchmark

File → Benchmarks → Engine tournament lets the selected engines play a round-robin tournament: every engine against every other one, with the same openings for both colours and equal conditions.



Setting up the benchmark

Setting	Meaning
Participants	the engines (at least two)
Time per game	for example 5 min + 3 s per move
Games per pairing	with an even number every opening is played with both colours
Threads, **Hash**	the same for all; one thread is the fairest comparison
Limit playing strength	all engines at the same Elo
Endgame tablebases	off by default, because they help only some engines
Follow the games on the board	the board shows the running game with clocks and evaluation

Before the start mbChess shows the expected duration. The progress is in the status bar; cancel with the button next to it or with **File → Benchmarks → Cancel benchmark**. If a game is running and you want to follow the benchmark on the board, mbChess asks first, because the game is ended then.

While the benchmark runs, the board and the engines belong to it: New game, opening games, Set up position, Paste FEN, Mate search, taking the position from the DGT board and Manage engines are greyed out until it is finished or cancelled.

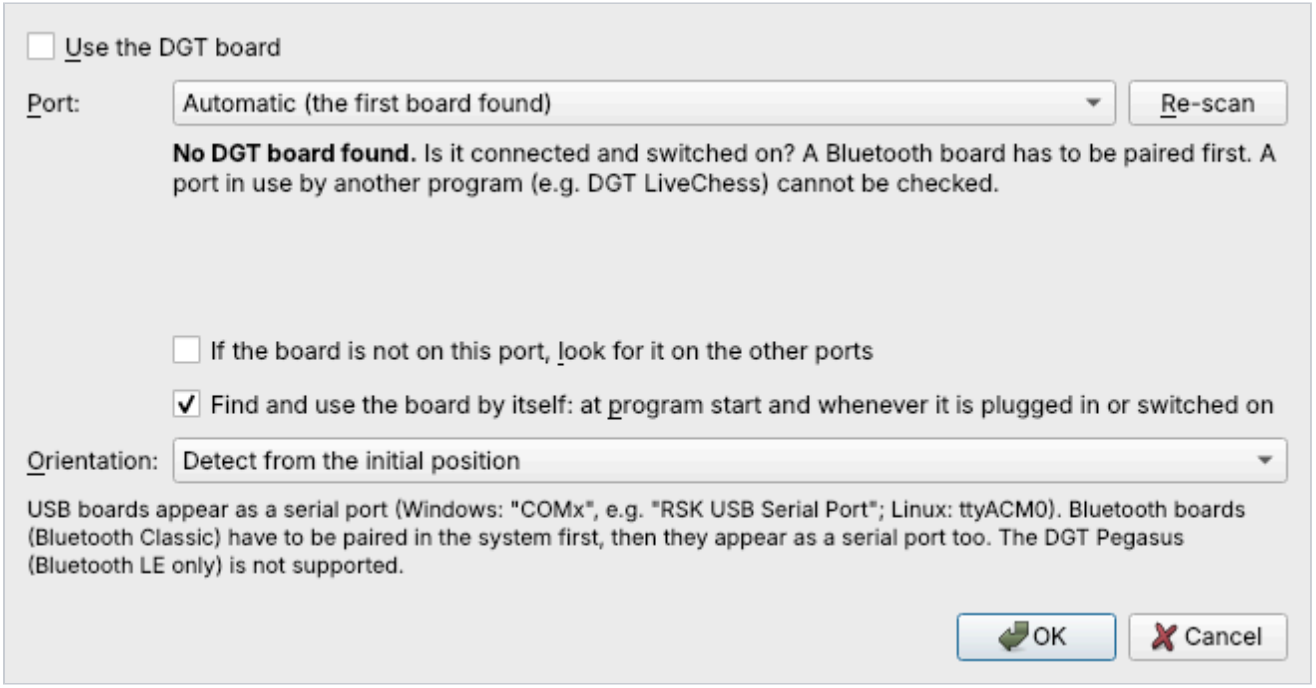
File → Benchmarks → Show results shows the table (the winner is highlighted) and all games with their duration; the games can be saved as PGN.

DGT board

mbChess plays with electronic boards from DGT connected via USB or Bluetooth Classic. The boards appear in the system as a serial port (Windows "COMx", Linux `ttyACM0` or `rfcomm0`). Bluetooth boards have to be paired in the system first. The DGT Pegasus (Bluetooth LE only) is not supported.

Setting up

Board → DGT board settings... looks for a board at once when it opens and shows on which port it answers, with name, version and the position on the board.



DGT board settings

- **Port**: "Automatic (the first board found)" or a particular port. **Re-scan** looks again.
- **Look for it on the other ports**: if the board is not on the chosen port, the others are checked.
- **Find and use the board by itself**: at program start and whenever the board is plugged in or switched on.
- **Orientation**: "Detect from the initial position" (set up the initial position, mbChess sees which way round the board lies) or fixed.

Playing

Board → Use the DGT board (Ctrl+D, toolbar) switches the board on and off. The check mark and the icon show a connected board; if none was found, a click searches again, and mbChess connects anyway as soon as the board is plugged in or switched on. Make your moves on the board: as soon as the board is still for a moment and exactly one legal move fits, it is played. The status bar shows the engine's move ("DGT: please play Nf6 on the board"); make it on the board. "✓ matches the game" confirms that board and game agree; otherwise it says on how many squares they differ.

Board → Take the position from the DGT board… opens the board editor with the pieces standing on the board.

If the board is switched off or unplugged, mbChess says so and connects again as soon as it answers.

During an engine benchmark and an engine-against-engine game the board pauses: moves on it are ignored and the status bar shows "DGT: paused …". Afterwards it works again by itself.

Boards, pieces, sounds and language

Board and pieces

In the **Board** menu, **Board style** and **Pieces** offer many themes: the grey mbChess board with pieces on wooden discs, the wooden board "mbChess (classic)", the boards and pieces of AmiChess and more than 170 boards and about 50 piece sets from Lucas Chess. **Show coordinates** shows the letters and numbers at the edge. Put your own themes into the folder `themes` next to the program.

Sounds and announcements

Board → Move sounds and **Board → Announce moves** switch sounds and announcements on and off, as do the two icons in the toolbar. **Board → Voice** chooses the voice: automatic by program language, German (Thorsten), English (LibriTTS), English (AmiChess original) or a voice you recorded yourself. Record your own voice word by word with the program **mbChess voice recorder**.

Window theme and language

View → Window theme chooses between "System" and "Dark design". The **Language** menu switches between English and German, including the piece letters in the notation (K Q R B N or K D T L S).

Keyboard shortcuts

Key	Command
Ctrl+N	Play → New game
Ctrl+O	Open game (PGN)
Ctrl+S	Save game as PGN
Ctrl+Q	Quit
Ctrl+PgUp / Ctrl+PgDn	Previous / next game of the database
Ctrl+Z	Take back move
Space	Move now!
Ctrl+E	Set up position
Ctrl+M	Training → Mate search
Alt+F2	Engine analysis on/off
Ctrl+R	Flip board
Ctrl+D	Use the DGT board on/off
Home / ← / → / End	go to the start / back / forward / to the end
F1	this manual

In the menus one letter of each entry is underlined; Alt and that letter opens the menu (for example Alt+P for "Play", Alt+T for "Training").

Files and folders

Next to the program (on Windows usually `C:\mbChess`) are these folders:

Folder	Contents
`engines`	the engines, one per subfolder; put new engines here
`Openings`	opening books in PolyGlot format (`*.bin`)
`Chessbooks`	game databases (`*.pgn`) for the chessbooks
`Syzygy`	endgame tablebases (Syzygy)
`Gaviota`	endgame tablebases (Gaviota)
`Training`	your own mate and tactics puzzles, Lichess CSV files
`Training/Repertoire`	your own opening repertoires (`*.pgn`)
`themes`	your own boards and piece sets
`Handbuch` / `Manual`	this manual (CHM on Windows, PDF)

mbChess stores its settings in the registry on Windows (`HKEY_CURRENT_USER\Software\mbChess`), in `~/.config/mbChess/mbChess.conf` on Linux and in `~/Library/Preferences/com.mbchess.mbChess.plist` on macOS. Your rating, training progress, best times and records are kept there too.

Troubleshooting

The engine does not start. Check in **Engines → Manage engines** whether the engine answers. An engine has to speak the UCI protocol; engines that only speak XBoard are not supported.

I cannot move. During a game moves are made only at the end (End key). If the engine is to move, wait or press Space. While you follow a benchmark your own moves are locked. While the tutor checks your move, wait a moment for its verdict.

My move is not accepted in a training task. That is on purpose: mbChess refuses wrong moves and says why in the training window. Try another move or click **Hint**.

An opponent in the Play menu is greyed out. The engine that plays it is missing (the tooltip names it). Install the included engines or add the engine in the engine list.

The tutor never speaks up. Is **Play → Tutor helps** checked? It only helps in games against the computer, not with human against human, in training tasks or in rated games. Set **Tutor speaks up at** to "Inaccuracies" if it should help more often.

mbChess says the test version has expired. Test versions run for six weeks. Install the current version from the download page; your settings are kept.

The DGT board is not found. Is it connected and switched on? A Bluetooth board must be paired. mbChess cannot check a port that another program (for example DGT LiveChess) uses; close the other program.

There are no sounds. Check **Board → Move sounds**. Builds without Qt Multimedia are silent.

The window is in a mess. View → Reset window layout. If the training window has gone, bring it back from the **View** menu.

Licence and thanks

mbChess © Michael Bergmann 2026, free software under the GNU General Public License, version 3 or later. The licence text is in the file `LICENSE.txt` in the program folder.

mbChess uses Qt (The Qt Company, LGPL) and material of many free projects: the "cburnett" pieces by Colin M.L. Burnett, boards and pieces from AmiChess and Lucas Chess, the voice "Thorsten" by Thorsten Müller, the voice "LibriTTS", the opening names and the mate and tactics puzzles of lichess.org (puzzle database under CC0) and the engines Stockfish, Arasan, Fruit, Toga II, Glaurung, GNU Chess, Viridithas, Texel, Patricia and the Tarrasch Toy Engine with their authors, as well as the Gaviota probing code by Miguel A. Ballicora. Many ideas for the Play and Training menus come from Lucas Chess by Lucas Monge. The full list is in the file `CREDITS.md` of the source code.

Many thanks to DGT for the description of the board protocol, and to all beta testers.