

Myracle Chess Engine Tournament Manager

Beta Version Documentation v0.1

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PLEASE NOTE: This documentation is a work in progress. It may contain errors and/or important omissions, and any of it may change in future versions of the software.

1. Initial System Configuration

The first time you launch Myracle, it is highly recommended to navigate to the top menu item **"Tools -> Settings"** and configure the graphical user interface (GUI) to suit your specific requirements. These are global settings that will be applied by default to every tournament and will be automatically saved upon exiting the application.

Configuration Tip: As you set up Myracle, please note that some controls are equipped with "status tips." When you hover your mouse cursor over a specific control, additional explanatory information will be displayed dynamically at the bottom of the main window.



Figure 1: General view of the Myracle interface and accessing the Settings panel.

2. Breakdown of the Settings Dialog

The following tables describe the top-level options and tabs available within the Settings configuration dialog:

Section / Tab	Description and Configurable Parameters
Adjudication	Enables Miracle to automatically adjudicate games (as opposed to letting them finish by standard rules) when certain thresholds are met. • Draw adjudication: Requires defining the "Move number" (the minimum number of moves by both engines before adjudication can trigger) and the "Move count" (the minimum number of consecutive moves where the evaluation score of both engines stays within the Threshold). For instance, the default Threshold of 10cp triggers if both engines' scores remain strictly within the [-10cp, 10cp] range. • Resign adjudication: Sets the minimum "Move count" where the score of the winning engine remains higher than the defined Threshold. If "Both must agree" is checked, then both engines need to have scores above the Threshold from the winning engine's perspective. • Tablebase adjudication: Configures the maximum number of pieces ("men") left on the board before Syzygy endgame tablebases are checked for an immediate definitive result. (The data path is defined in the <i>Paths</i> tab). • Move count adjudication: Settings and criteria are completely analogous to those found in "Resign adjudication".
Analysis	Selects an engine from your list of installed chess engines to be utilized specifically as an analysis engine. You can start this analysis module at any time from the main menu, though the tournament scheduler might temporarily prevent it from executing due to hardware concurrency constraints.
Appearance	Provides various visual, theme, and aesthetic settings to adjust the interface according to your personal visual preferences.
Book	Specifies the path to an opening book file (supporting either PGN or Polyglot BIN formats) for all engines to share in a tournament. The dialog features buttons numbered 0 through 9 at the bottom, allowing you to preconfigure up to ten "default" books and quickly toggle between them when setting up tournaments.

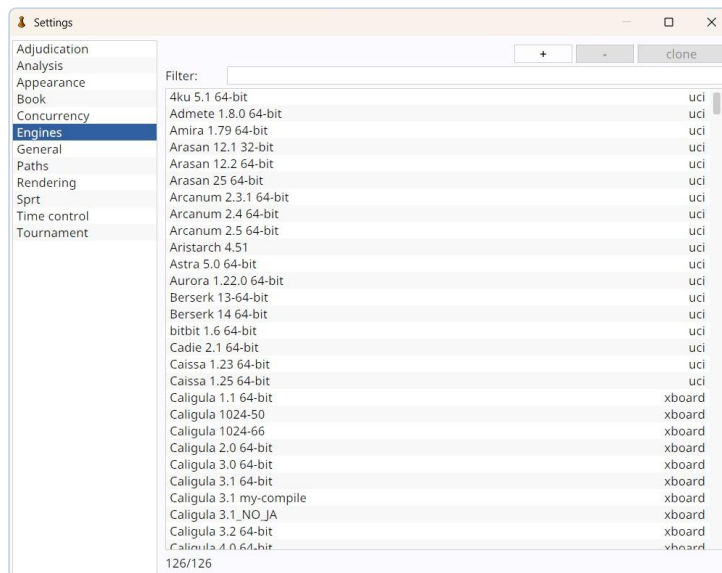


Figure 2: Settings dialog tabs focusing on engine configurations and automated rules.

Section / Tab	Description and Configurable Parameters
Concurrency	Manages system hardware resource allocation. On its initial launch, Myracle sets game concurrency defaults based on your system hardware. Increasing these values beyond defaults can be dangerous, while decreasing them is completely safe. • Core budget: The number of engine cores allowed to run simultaneously (assuming 1 CPU per engine). If set to 16 and a tournament starts with engines using 4 CPUs each with "ponder" off, Myracle plays 4 concurrent games. If "ponder" is on, the number of simultaneous games is halved. • Memory budget: Set by default to 75% of your computer's total physical RAM. Note that very large hash table sizes (configured on a per-engine basis) might force the scheduler to reduce concurrent games to prevent rebasement. • IO core budget: Core allocation dedicated to handling input/output operations when the GUI reads multiple massive PGN files simultaneously (defaults to 4).

Section / Tab	Description and Configurable Parameters
Engines	Management and installation of chess engine modules. • Automatic Import: If you use <i>Cutechess</i> or <i>Banksia</i>, you do not need to add engines manually. Use the "Import" top-level menu item; Myracle automatically scans and locates the engine configuration files from those programs for bulk import. • Adding a Single Engine: Click the "+" button. On the "Basic" tab, select the engine's binary file via the "..." button. If successfully loaded, Myracle auto-detects the communication protocol (UCI or XBoard), name, and options. <i>Note: XBoard engines can take up to 10 seconds to auto-detect.</i> Use the "Options" tab to tweak parameters, and the "Debug" tab as a direct command-line console to test responses.
Paths	Sets the "Engine default path" to the top-level directory where your engines are stored to speed up manual imports, and defines the "Syzygy path" for tablebase lookups.
General / Rendering / Sprt / Time Control / Tournament	Miscellaneous tabs for adjusting audio/display options (General), line anti-aliasing (Rendering), defining up to 10 customizable parameter sets for Sequential Probability Ratio Tests (Sprt), creating up to 10 distinct named time control configurations (Time Control), and managing the tournament crosstable display and disk auto-save options (Tournament).

3. Setting Up and Running a Tournament

Once your global environment is fully configured and your engines are imported, you can launch your first competition by navigating to "**Tournament -> New Tournament**" in the main menu. The dialog displays the following essential fields:

- **Event & Site:** Standard PGN metadata tags that will be automatically populated within the header records of every single game file.
- **File:** The designated file name for the tournament's PGN output. If left completely blank, Myracle dynamically generates a default filename using the exact date and timestamp of the tournament's start. All relevant outputs (PGN, crosstables, etc.) are securely stored inside the tournament's / subfolder.

Available Tournament Types:

1. **Round Robin:** Every participating engine plays against all other modules for an equal number of cycles. A "cycle" consists of an engine pair facing each other twice, ensuring alternating piece colors.
2. **Gauntlet:** Places the engine at the absolute top of the listing as a challenger against all other remaining engines once per cycle.
3. **Sprt:** Designed to test two engines directly against one another using Sequential Probability Ratio Test parameters to statistically evaluate which engine is superior.

Figure 3: Form for configuring a new tournament session, selecting types, and rules.

Managing Engines for a Tournament:

To add engines into the active tournament lineup, simply double-click any module on your global list. Double-clicking an engine already in the tournament list will remove it. If you regularly build tournaments with the exact same selection of engines, press the **"Save Engines"** button to export a saved lineup file. You can later use **"Load Engines"** to append these entries back into a new configuration (this button merely appends the files; it will never overwrite engines you have already added manually).

4. Tournament Control and Monitoring

Pressing the **"OK"** button initializes the tournament. Normally, each active live match spawns its own independent dynamic tab, allowing you to monitor engine calculations visually in real time. These game tabs close automatically the moment a match concludes. If you wish to optimize system performance or prefer not to watch live games, check the **"Quiet mode"** option either during initialization or after the tournament is running.

The tournament session itself retains a permanent dedicated tab containing a live updating cross-table grid and a complete interactive history of matches. This tab remains open as long as the session is active. You can scroll through open tabs by using your mouse wheel on the upper tab bar area. Tabs appear and disappear automatically as matches start and end, with the oldest running match always occupying the leftmost slot.

Primary Tournament Controls (Located immediately above the Crosstable):

- **Pause (Checkbox):** Triggers a "soft pause." The scheduler permits all active ongoing matches to conclude naturally but suspends the initiation of any subsequent games until unchecked.
- **Hard stop (Button):** Immediately terminates all active games in execution but leaves the overarching tournament state fully active.
- **Abort (Button):** Forces an immediate shutdown of all active games and abruptly closes the current tournament session.

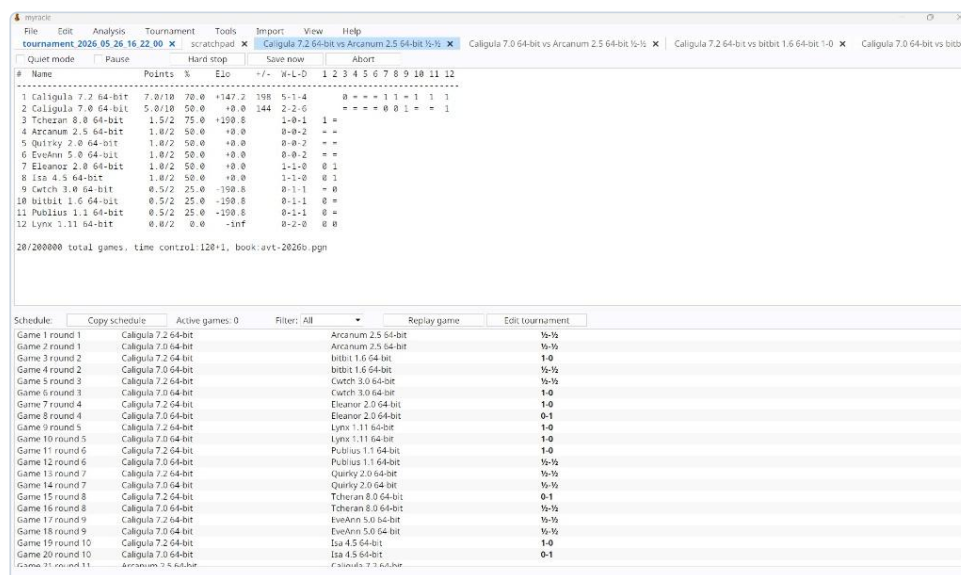


Figure 4: Tracking a tournament in progress, including execution controls and filtering dropdowns.

Schedule Management & Lower Controls:

Directly beneath the crosstable lies the main schedule interface. Utilizing the **"Filter"** dropdown list, you can narrow down the match lists to show: all games in the tournament, only active live games, or exclusively matches that have run into a technical "Anomaly" (see section below).

Highlighting a completed match on the list and clicking the **"Replay game"** button completely deletes the previous result record from the database and orders a clean, fresh replay of that matchup. Additionally, whenever the tournament state is paused (via soft or hard pause), the **"Edit Tournament"** button unlocks, granting you the ability to modify engine participants on the fly.

Resuming Interrupted Tournaments:

Because Myracle features automated incremental disk saving after every completed game, loading and continuing an unfinished tournament session is fully supported. Select **"File -> Open"** from the menu, change your file filter type extension to **.tour**, navigate into the tournaments/ subfolder, and select your file. Alternatively, you can drag and drop a **.tour** file directly into the main window. *Note: Tournaments loaded from disk always initialize in a soft-paused state; you must manually uncheck the pause box to resume engine execution.*

5. Anomaly Management and Technical Logs

When an anomalous or unexpected technical failure occurs during match execution (such as an engine running out of time due to a flag-fall timeout, transmitting an illegal move, or losing communication with the GUI), Miracle executes the following automated debug routine:

- Dumps the final 4,000 lines of raw bidirectional text communication between the engine module and the GUI into a specialized log file named `.anomaly.txt` inside the `tournaments/` subfolder.
- Includes accurate microsecond timestamps of the GUI-to-engine transmission strings alongside the game's exact PGN text record up to the precise point of failure.

Matches plagued by technical anomalies are highlighted in bright **red** font directly inside the tournament schedule list view. Furthermore, users can press the '~' (tilde) key at any point to open up a specialized Debug Console, providing a comprehensive, structured summary of all anomalies logged across the current tournament session.

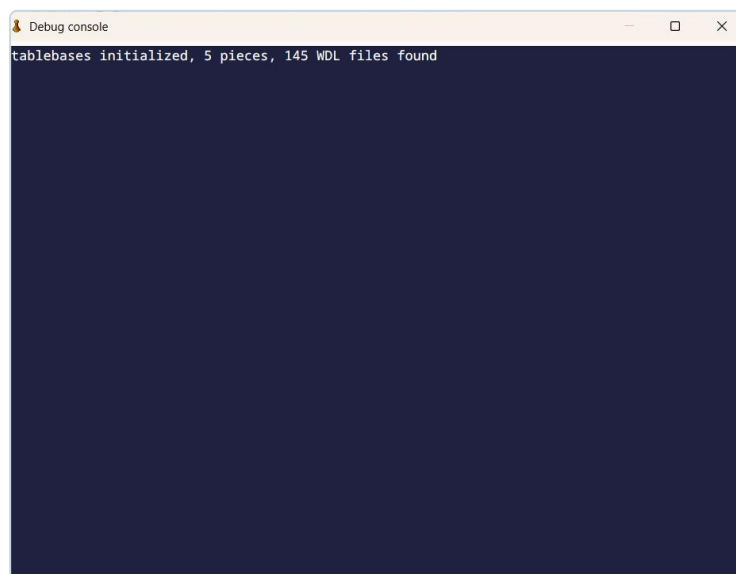


Figure 5: The debug console summarizing engine-to-GUI communication strings during a critical anomaly.

6. Supplementary Utilities and Support

Viewing External PGN Match Files:

Miracle functions perfectly as a standalone, lightweight PGN viewer. To review a previously saved external match archive, click **"File -> Open"** and choose your target PGN, or simply drag and drop the document file directly over any region of the application window. The **"View"** menu remains fully accessible, offering options to alter visual boards, pieces, and aesthetic settings.

Project Support and Developer Donations:

If you enjoy using Myracle Tournament Manager and would like to extend a monetary thank-you contribution to the author via PayPal to help support ongoing software development, you can do so easily by clicking on the top menu navigation item **"Help -> Donate"**. Any contributions made towards the project are highly valued and greatly appreciated.