

CZUBATRONIC 2400

End-User Manual

Welcome

CZUBATRONIC 2400 is a retro electronic chess system inspired by the chess computers and programs of the 1980s and 1990s.

It lets you play chess, set up positions, analyze games, replay PGN files, use different chess engines, save games, and customize the application appearance.

Starting CZUBATRONIC 2400

1. Run the official installer, `CZUBATRONIC_2400_<version>_Setup.exe` (for example `CZUBATRONIC_2400_0.9.1_Beta_Setup.exe`).
2. Start CZUBATRONIC 2400 from the Start menu or desktop shortcut.
3. Wait for the system-check screen.
4. Click the screen or press any key to continue.

You do not need to install Python, a virtual environment, programming packages, engine files, fonts, or source code. The installer contains the frozen application, CAPA96, Pioneer, Tacticon, opening data, piece artwork, fonts, interview sources, portrait, manual, release notes, and beta license.

Windows may show a normal SmartScreen warning because the executable is not code-signed.

The program is installed as `CZUBATRONIC.exe` together with an `_internal` folder that holds the engines, fonts and artwork. Keep the two together.

Portable Edition (ZIP)

If you cannot or do not want to run an installer, at work for example, use the portable edition `CZUBATRONIC_2400_<version>_Portable.zip`:

1. Unzip it into any folder you can write to, or onto a USB stick.
2. Start `CZUBATRONIC.exe` from that folder.

No installation and no administrator rights are needed. While the file `CZUBATRONIC_PORTABLE.txt` sits next to `CZUBATRONIC.exe`, the program keeps its settings and its diagnostic log in the `config` folder beside the program and leaves nothing behind on the PC. The same SmartScreen warning applies; if your computer's policy blocks all programs outside Program Files, ask your administrator.

The Application Window

CZUBATRONIC 2400 opens at the size its panels need and will not shrink below that size, so the board, the chess clock, the computer-status display, the engine output and the move history are always visible together. This also applies to Windows display scaling such as 125 %; on a Full HD screen the window then uses most of the screen height.

The control buttons are arranged in rows that wrap to the window width: four rows at the standard width, two rows when the window is maximised. Every button is always reachable.

If a screen is too small for everything, the engine-output area gives way first; the move history keeps its space.

The gold knight icon identifies CZUBATRONIC 2400 in Explorer, the Start menu and the taskbar. The ABOUT dialog shows the installed version number.

Playing a New Game

Click NEW to choose:

- Your side: White or Black
- A calibrated Pioneer level or an explicit CAPA96/Tacticon search control
- Game clock

The standard starting position always begins with White to move.

Play Modes

Use the MODE menu to choose:

- Human vs Engine: play against the computer.
- Human vs Human: two people play on the same computer.

Use ENGINE MATCH to select two engines and run an engine-versus-engine game under a shared fixed-depth or time-per-move condition.

After START MATCH, the setup dialog closes. The normal board displays the game, the right panel keeps the notation, and a fixed left panel shows both engines' output and match progress.

Pioneer Engine Levels

The bundled Pioneer engine has calibrated CZUBATRONIC strength profiles:

- Novice
- Beginner
- Club
- Expert
- Club Champion
- Master
- Grandmaster

These labels and displayed ELO values apply only to Pioneer. Other engines do not share this calibration.

Other Engine Controls

CAPA96, Tacticon, and other non-Pioneer engines do not use the named Pioneer levels because those engines have not been calibrated to that ladder. In NEW GAME or ENGINE SETTINGS, choose one of these explicit controls:

- FIXED DEPTH: search to the selected depth.
- TIME / ENGINE MOVE: use the selected number of seconds for every engine move. Tenths of a second are accepted, for example 0.5 or 2.5.
- USE GAME CLOCK: allocate engine thinking time from the selected game clock.

The selected value is shown as CONTROL in the computer-status panel, for example CONTROL 2.5S / MOVE.

Engine Thinking Time

In Human vs Engine games the computer answers like a human opponent would, whatever engine and control you use: book moves, forced moves and recaptures come quickly, quiet positions take a few seconds, complicated middlegames longer, and now and then it thinks for a long time. With a game clock the computer never spends more than its share of the clock on this. Press MOVE NOW or F to have it move at once. Engine matches, hints and analysis are not delayed.

Time Controls

Available time modes include:

- No Clock
- 30 seconds per move
- 15 seconds per move
- 3 minutes plus 2 seconds increment
- 5 minutes per game
- 15 minutes per game
- 30 minutes per game
- 40 moves / 120 minutes

When a timed mode is active, the chess clock appears in the right information panel. The clock for the side to move counts down while that side is thinking, including while the computer is calculating.

The 15-second and 30-second per-move modes reproduce traditional chess-computer test controls. Reaching zero does not forfeit the game; make the move when ready and the display resets for the next move. Whole-game clocks, including 3+2, retain normal flag-fall behavior.

Moving Pieces

1. Click the piece you want to move.
2. Click a legal destination square.
3. The move is made if it is legal.

The selected square is marked with the chosen move indicator. A simple system beep confirms a completed move.

Illegal moves do not change the position.

Promotion

When a pawn reaches the last rank, choose:

- Queen
- Rook
- Bishop
- Knight

Move Indicators

Use the INDICATOR menu to choose:

LED

Small bright-red LEDs mark the selected or recently moved squares. Completed-move LEDs disappear after a few seconds.

SQUARE

The departure and destination squares are highlighted with the traditional full-square indication.

Board Orientation

Click FLIP or press B to turn the board around. This changes only the visual orientation. It does not change whose turn it is.

Taking Back a Move

Click TAKEBACK or press T to undo the most recent move.

Hints and Immediate Moves

- HINT or H: ask the engine for a suggested move without playing it.
- MOVE NOW or F: request an engine move immediately.
- ANALYZE: analyze the current position without making a move.

The analysis area can show the engine's evaluation, depth, nodes, time, and principal variation when the engine provides them.

Saving a Game

Games are not saved automatically when the application closes.

To save a game:

1. Click SAVE.
2. Choose a folder.
3. Enter a filename.
4. Save it as a .pgn file.

Keep the PGN file if you want to reopen the game later.

A custom setup position is saved with the game, so it can be restored correctly.

Opening a Saved Game

1. Click OPEN.
2. Select a .pgn file.
3. The game opens at its saved final position.

The move list, starting position, and game history are restored.

Replaying a Game

After opening a PGN game:

- Click a move in the move list to jump to that position.
- Click PREV to go back one move.
- Click NEXT to go forward one move.
- Press the Left Arrow key to go back.
- Press the Right Arrow key to go forward.

The status bar shows the replay position, for example:

REPLAY 12/38

Setting Up a Position

Click SETUP to open the setup tools.

The setup palette allows you to:

- Choose a white or black piece.
- Place it on an empty square.
- Erase pieces.
- Clear the entire board.
- Restore the standard starting position.
- Choose the side to move.
- Choose which side you play.
- Choose a calibrated Pioneer level or explicit CAPA96/Tacticon control.
- Choose a game clock.
- Start playing from the custom position.

Side to Move and Play As

These are separate choices.

Example:

SIDE TO MOVE: Black
PLAY AS: White

Black moves first automatically, and then you respond as White.

Or:

SIDE TO MOVE: Black
PLAY AS: Black

You move as Black immediately.

After arranging the board, click START PLAYING THIS POSITION. The application switches to Human versus Engine mode. If the selected side to move belongs to the engine, it moves immediately; if it belongs to you, the board is ready for your move.

The position must contain exactly one king for each side and must be legally playable. Invalid positions remain in setup with an error message so they can be corrected.

Right-clicking a piece on the board removes it during setup.

Chess Clock

The clock is shown inside the application when a timed game is active.

- White and Black times are shown separately.
- Only the side to move counts down.
- The clock keeps running while the engine thinks.
- Selecting `No Clock` hides the chess clock.

Selecting Chess Pieces

Use the `PIECES` menu to choose between:

- `2D CURRENT`
- `2D ORIGINAL`
- `2D WOOD`
- `2D WOOD TRADITIONAL`

The board position and game state remain unchanged when changing the piece set.

Changing the Application Colors

Use the `SCHEME` menu to change the application interface colors:

- `WALNUT`
- `BLUE`
- `GREEN`
- `GRAPHITE`

This changes the casing, buttons, panels, frames, application background, and dark board squares. It does not change the selected piece set or game position.

Selecting Another Chess Engine

`CAPA96` is the bundled standard engine and is loaded automatically when `CZUBATRONIC` starts, unless you have chosen a different standard engine (see below).

Click `ENGINE` to choose bundled `PIONEER`, bundled `CAPA96`, bundled `TACTICON`, or browse for another local UCI-compatible chess engine. The dialog shows which engine is currently the standard engine.

The selected engine must support the UCI protocol. `CZUBATRONIC` checks that it responds correctly before switching to it.

Remembering a Standard Engine

Tick `Set as standard engine (remember for next launch)` before choosing an engine, and `CZUBATRONIC` loads that engine at every start instead of `CAPA96`. The choice is stored in your Windows user profile as `%LOCALAPPDATA%\CZUBATRONIC\engine_config.json`.

At startup the remembered engine is checked again. If its file has been moved or deleted, or it no longer answers the UCI handshake, `CZUBATRONIC` falls back to `CAPA96` and tells you why. `RESET STANDARD ENGINE TO CAPA96` removes the remembered choice.

Pioneer uses its calibrated level ladder. CAPA96, Tacticon, and other engines use the explicit depth or time-per-move setting from ENGINE SETTINGS.

Opening Books

Click BOOK to choose an external opening-book file for the active engine.

Common file types include:

- .bin
- .txt
- .book

Opening-book support depends on the selected engine. Some engines accept an external book file. Other engines use a built-in book and do not allow an external file to be selected.

About CZUBATRONIC 2400

Click ABOUT to view:

- DCS Analytics & Digital Consultancy Services
- Universe Connect KG business division information
- Address and contact details
- Team information
- Arne Baillière's concept, design, implementation, and product-direction credit
- The complete engine history
- The full Thorsten Czub interview with portrait
- The separate Story of Capa article
- Copyright, beta license, warranty, and distribution restrictions
- The DCS Chess supporter link
- Custom software services
- The tribute to the chess computers and programmers of the 1980s and 1990s

CZUBATRONIC 2400 pays tribute to the people and companies who helped shape computer chess and computer history, including:

- Mephisto / Hegener + Glaser
- Fidelity Electronics
- Novag
- SciSys
- Saitek
- TASC
- CXG / Newcrest
- Applied Concepts / Chafitz
- Conchess
- Excalibur Electronics

- RadioShack / Tandy
- Milton Bradley
- Mattel Electronics
- Avalon Hill

Keyboard Shortcuts

Key	Action
N	New game
T	Take back
H	Hint
F	Move now
B	Flip board
Left Arrow	Previous replay position
Right Arrow	Next replay position

Important Saving Reminder

A game is kept only in memory until you click SAVE and create a PGN file. Closing the executable without saving loses the current unsaved game.

If Something Goes Wrong

CZUBATRONIC 2400 writes a short diagnostic log with startup, shutdown and error information:

- Installed edition: %LOCALAPPDATA%\CZUBATRONIC\czubatroni.c.log (paste that path into the Explorer address bar)
- Portable edition: config\czubatroni.c.log next to CZUBATRONIC.exe

When you report a problem, attach that file and say which version the ABOUT dialog shows. If Setup reports that CZUBATRONIC is still running although you see no window, let Setup close it: versions before 0.9.1 could leave an invisible process behind.

Contact

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Piece Artwork Credits

The 2D WOOD piece set is based on **Staunton-Pieces** by James Clarke (clarkerubber):

<https://github.com/clarkerubber/Staunton-Pieces>

The artwork is distributed under the MIT License. The complete license text is included with the piece assets in the application distribution.