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_2026.1_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 End User License Agreement.

The installer is digitally signed by DCS Analytics.

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. 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's display 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 console gives way in a fixed order: the clock shrinks first, then the engine display comes down to its three LCD rows, then the move history to a line or two, and only then the text size; the display and its six keys always keep their place (see "Finding the grips" below for RESET LAYOUT).

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 GAME to choose:

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

The standard starting position always begins with White to move.

Play Modes

Click OPTIONS and use MODE to choose:

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

Use MATCH (in the engine group of the deck; the dialog is titled ENGINE MATCH SETUP) to select two engines. GAMES above the start key makes it a series of up to 1000 games: the colours alternate each game, the running score shows in the ENGINE MATCH panel, every game is saved as PGN to one file in the matches folder under CZUBATRONIC's settings folder (%LOCALAPPDATA%\\CZUBATRONIC\\matches, or config\\matches beside the portable program), and the series gets one line in results.txt there. Use it also to select two engines and run an engine-versus-engine game under one shared condition: FIXED DEPTH, TIME PER MOVE, or a tournament GAME CLOCK such as 40 moves in 5 minutes, then 20 moves in 2 minutes more. Unused time carries over; 0 further moves means the rest of the game in the extra time, 0 first-period moves the whole game in the base time.

During a clocked match the chess clock panel shows both engines' times and the match panel the moves to the next time control. A side that oversteps loses on time (a draw if the opponent cannot mate). Older engines such as Capa may think longer than a set time per move; CZUBATRONIC then asks them to stop and waits for their move.

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. PAUSE MATCH holds the match once the move in progress is played (or between the games of a series) and turns into CONTINUE MATCH; no clock time is charged while it waits. STOP MATCH ends the match; the panel stays with the outputs and the result, and CLOSE hides it. When the match is over, the play mode from before it comes back, so a game against the engine can be continued at once; the engine does not move by itself, your move or MOVE NOW starts it. While a match runs the engine display names its two engines.

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, Zukertort, 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:

The control you choose is remembered: the next start opens with the same control, depth or time per move, the same clock and, for Pioneer, the same level.

- `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`; the – and + keys step by a second. Typing or stepping a depth or a time selects that control by itself, as choosing a clock selects the clock.
- `USE GAME CLOCK`: allocate engine thinking time from the selected game clock. Any game clock selects this control by itself: with a clock the engine plays to the clock and searches as deep as its share of the time allows, never to a fixed depth. `No Clock` brings the previous control back.

The selected value is shown in the chess clock's control line, for example `MOVE TIMES · 2.5S / MOVE`.

The splash screen at start-up shows classic games on a tilted board, with music (J.S. Bach, Cello Suite No. 1, Sarabande, performed by John Michel, public domain); it stays up to ten minutes, any key or click ends it and the music with it.

The right-hand panel can be made wider: drag the gap between the board and the panel to the left. Since version 0.9.7 nothing marks that gap (see "Finding the grips" below): move the pointer slowly across it until the pointer becomes a horizontal double arrow, then press and drag. The board gives way, and the clock digits, the move history and the engine output grow with the panel; + and – next to `MOVE HISTORY` change the text size of the two lists on their own, and nothing else: the engine display's box keeps its height whatever the text size. Both settings are remembered, and so are the window's size and position and whether it was maximised, the scheme, the piece set and the move indicator.

The gap between the display's keys and `MOVE HISTORY` in the right-hand panel is a grip too, and just as invisible: move the pointer across it until it becomes a vertical double arrow, then drag it down to give the engine display more height, up to give the move list more; CZUBATRONIC remembers the display's height in pixels, so the + and – keys of the move list leave it alone. The panel is as tall as the board, so the two boxes share the space below the clock. When the panel is short (a small window, a tablet) the console gives way in a fixed order: the clock shrinks first, then the engine display comes down to its floor of three LCD rows, then the move list to two lines and to one, and only then the text size; the display and its six keys are never cut. A remembered height the panel cannot hold is reduced for the time being, and the wish comes back in a larger window.

Finding the grips

CZUBATRONIC 2400 is drawn as one console: no lines or handles mark the places where you can change the layout. There are two such places, and the only sign of them is the mouse pointer:

- Between the board and the right-hand panel. Move the pointer slowly from the board's right edge towards the panel; where it turns into a horizontal double arrow, press the left button and drag left or right to make the panel wider or narrower.
- Between the display's keys and `MOVE HISTORY` in the right-hand panel. Move the pointer slowly down from the keys towards the title; where it turns into a vertical double arrow, press and drag up or down to share the space between the engine output and the move list.

If you do not see the double arrow, move the pointer a little more slowly; the grip is a few pixels wide. Both positions are remembered from one start to the next.

If a layout ever goes wrong, RESET LAYOUT behind OPTIONS (beside SAVED ENGINES) puts the panel width, the text size of the lists, the display's height and the window back to the defaults of the current board view. CZUBATRONIC does the same by itself at start when a remembered layout would leave the display's keys out of the window, and notes it in the diagnostic log.

ENGINE OUTPUT has three views; the VIEW key under the box (three keys in the style of the classic chess computers: a red LED, a printed label, a long thin key) cycles through them, its label names the current one, and CZUBATRONIC remembers your choice. DISPLAY is a dot-matrix LCD like those of the classic chess computers, 20 columns of 5x7 dots that grow with the panel, with as many rows as the box has room for (drag the grip for more). Its top rows are the computer's own: the engine and the side it plays, whose move it is, and the opening. Below them it shows the numbers of the latest depth (DEPTH with the selective depth after the slash, SCORE from the side to move, +0.32 being a third of a pawn and MATE +3 a mate in three, TIME, NODES and NPS), then the main line the engine expects, numbered from the position it searched and wrapped to the box, page by page. The readout rotates every two seconds and carries on after the move, so the main line is always readable however narrow the panel; a box tall enough for everything shows it all at once. Two more keys beside it, their LEDs lit while on: ROTATE (off, the readout is static: the numbers on the first line and the main line below it, cut where the box ends) and LIGHT, which lights the LCD in the scheme's colour: amber on WALNUT, green on GREEN, white dots on bright blue on BLUE and GRAPHITE. Both are remembered. COACH, YES and NO complete the row (see Coach). TABLE shows the search the way Arena does, one aligned line per depth with the newest at the bottom; a long main line wraps under the MAIN LINE column and the box scrolls, so nothing runs off the edge. RAW LOG is the engine's own text, its last sixty lines.

UCI OPTIONS in the same dialog lists everything the running engine offers as settings (check boxes, numbers, choice lists, text fields, buttons), for example the Kmoch switches of a newer Capa or the Hash size of a Stockfish. APPLY sends your changes to the engine and remembers them for that engine file, so they are back the next time it starts; DEFAULTS restores the engine's own defaults. Options can only be changed between moves.

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: during the thinking delay the ready move is played immediately, during a running search the engine is stopped and plays the best move it has found so far. CAPA96 cannot be stopped mid-search; it is restarted and asked for a quick move instead. On your own turn the button reads ENGINE MOVE: the engine plays your move and you take the other colour; press it again after the reply and the engine plays on, which is the quick way to switch sides or to let the engine make several moves in a row. 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 + 60 minutes for the rest of the game
- CUSTOM...: X moves in Y minutes (0 moves = the whole game), an increment per move, then A moves in B minutes more (0 = the rest of the game); unused time carries over. For example 40 moves in 5 minutes then 20 moves in 2, or 60 moves in 60 minutes. The clock panel shows the control and, for both sides, the moves to the

next time control.

The chess clock panel is always shown. Without a game clock it shows move times: the side to move counts up from 00:00 (so you can see how long the engine needs at each depth), the other side shows how long its last move took; nothing counts before the first move of the game, as with the game clock, and under `TIME / ENGINE MOVE` the engine's display counts down from its time per move. When a timed mode is active, the panel shows the game clock. The clock for the side to move counts down while that side is thinking, including while the computer is calculating; nothing runs before White's first move, as in the club, so the first move of the game costs no time. The digits are a fluorescent display whose colour follows the scheme: amber on `WALNUT`, red on `GRAPHITE`, green on `GREEN` and `BLUE`; both times sit on one sheet of black glass behind a metal bezel, and the engine output's LCD sits behind the same kind of window.

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 short beep confirms a completed move; a move that gives check gets a double beep. Its volume is set in `OPTIONS` under `BEEP` (`OFF`, `QUIET`, `NORMAL`, `LOUD`); a sample plays when you change it.

Illegal moves do not change the position.

Promotion

When a pawn reaches the last rank, choose:

- Queen
- Rook
- Bishop
- Knight

Move Indicators

Click `OPTIONS` and use `MOVE INDICATOR` to choose:

LED

Small dots of the brightest red light on the grid crossings around the selected square and around the squares a move came from and went to, one dot per crossing as on a modern electronic board (a crossing shared by two squares has one dot), with no glow, clear of the pieces. Completed-move LEDs go out after a few seconds. `BOARD LEDS` in `OPTIONS` sets them `BRIGHT` or `DIM`.

Since version 0.9.15 the dots are a tenth of a square wide with a soft glow, so they show on a tablet too. A played move and a hint light their two squares; the coach's better move, in green, lights its whole way: a long bishop, rook or queen move lights the crossings of every square from the first to the last, a line of dots along the path the piece would take (a knight's jump lights only its two squares). `BOARD LEDS` in `OPTIONS` sets `BRIGHT` or `DIM`.

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 take a move back. In a game against the engine, on your own turn, it takes back the engine's reply and your move together, so you are on move again; while the engine is thinking it takes back your move alone and ends the engine's search. Under ANALYZE and in HUMAN VS HUMAN it takes back one ply per press.

The game survives closing the program. CZUBATRONIC keeps the running game, your side, the clock with both remaining times and the opponent engine with its level, and the next start puts them back on the display before the first key is pressed, the clocks paused until you move; an engine other than the standard one is started for it. NEW GAME, or a finished game, leaves nothing to resume. SAVE writes the same facts into the PGN file as tags (the opponent, the level, your side, WhiteClock and BlackClock), and OPEN on such a file continues the game as saved; any other PGN opens as a replay.

Hints and Immediate Moves

- HINT or H: ask the engine for a suggested move without playing it. The move flashes on the board for a few seconds, on the move indicator's LEDs (or squares) of its from and to squares, and stands in SYSTEM STATUS as HINT: Nf3. The engine searches beside the console (HINT: THINKING), and a move you make meanwhile ends the search. During an analysis it is the first move of the line on the display. An emulated chess computer gives no hint and no analysis (NO HINT FROM A CHESS COMPUTER): it plays its own game at its own pace and cannot be asked to think for your side; switch COACH off with a machine too, unless the machine gives its evaluation itself (see the chess computers chapter).
- MOVE NOW or F: request an engine move immediately. On an emulated chess computer this asks its plugin to press the machine's own move key, and asks again every few seconds until the computer moves; every computer of THORSTEN'S CHOICE answers within about four seconds.
- ANALYZE: continuous analysis of whatever position is on the board. The engine's line stays on the engine display and follows every step through the move list, every move made and every takeback, in one continuous search that deepens for as long as the position stands (when the board changes, an engine that cannot be interrupted, Capa and the personality engines among them, is restarted for the new position, which costs a moment). While it runs the board is an analysis board: you enter moves for both sides, take them back and enter others, the status reads ANALYSIS: WHITE TO MOVE or ANALYSIS: BLACK TO MOVE, and in a game against the engine the engine only analyses until you stop the analysis on its turn, when it plays on from the position entered; the key reads STOP ANALYSIS while it runs, press it again to stop. While the analysis runs the engine does not play: HINT shows the first move of its line, and MOVE NOW ends the analysis and lets the engine play the move. A new game, OPEN, SETUP and a match end it.

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

Coach

COACH, the fourth key under the engine display (the row reads DISPLAY, ROTATE, LIGHT, COACH, YES, NO), has an LED that is lit while the coach watches your moves in a game against the engine. When you make a move that costs 1.7 pawns or more against the move the engine expected of you, the engine display says so with the better move (COACH: BAD MOVE, Qh4 LOSES 2.3, BETTER: Nf3) and SYSTEM STATUS asks TAKE IT BACK? YES / NO.

While the question stands the COACH key's LED flashes green and the better move flashes as green dots on the board, so you see from the board that the coach has something to say. The engine holds its reply until you answer with the YES or NO key under the display: YES takes your move back and it is your move again; NO lets your move stand and the engine answers it. TAKEBACK and MOVE NOW answer the same way. The coach judges by the engine's own search: after a book move, or before the engine's first search, it stays silent. It also stays silent for a turn when the engine played a move other than the first move of its best line, as a personality engine such as Zukertort does when its style decides between near-equal moves: the reply the engine expected belongs to a line it did not play, so the coach has nothing sound to compare with. The setting is remembered.

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, or a `.fen` or `.epd` file holding a position.
3. A game opens at its saved final position; a position becomes the start position of a new game, with whoever is to move to move.

The move list, starting position, and game history of a game are restored. Of a position file the first FEN or EPD line counts: a FEN with fewer than six fields is completed, an EPD's operations (`bm`, `id` and so on) are ignored.

Replaying a Game

After opening a PGN game:

- Click a move in the move list to jump to that position.
- Under the move list sit four keys like a CD player's: ■■ to the start of the game, ■ one move back, ■ one move forward, ■■ to the end. The move indicator shows each replayed move. They work during a replay (after OPEN, or a click on a move in the list) and on a finished game; a game in progress is left alone.
- 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 from the two rows of pieces, white above black.
- Place it on an empty square.
- Erase pieces.
- Clear the entire board.
- Load a position from a `.fen` or `.epd` file (`LOAD FEN / EPD FILE`), or use the `FEN` field: it shows the setup board's FEN, you can paste or type one into it and press `SET` (or Return), `PASTE` takes the clipboard's FEN straight to the board, and `COPY` puts the board's FEN on the clipboard.
- Restore the standard starting position.
- Choose the side to move.
- Set the castling rights with the four `CASTLING` switches. A pasted or loaded FEN brings its own rights (its third field, `KQkq`); a position built by hand has none until you switch them on, and a switch is offered only while that king and rook stand on their own squares.
- Choose which side you play.
- Choose a calibrated Pioneer level or explicit CAPA96/Tacticon/Zukertort 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.

Move Notation

The move list shows figurine notation: the piece letters are chess glyphs. Click OPTIONS and use NOTATION to choose FIGURINES or LETTERS; the choice is remembered. Saved PGN files use letters either way.

Selecting Chess Pieces

Click OPTIONS and use PIECES to choose between:

- 2D GLOSSY: glossy Staunton pieces with a dark outline; the set the program starts with
- 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

Click OPTIONS and use SCHEME 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.

Maximized Board View (Tablet)

On a small screen, a 10-inch tablet used as a pure chess computer, the board wants every pixel. Click OPTIONS and set BOARD VIEW to MAXIMIZED: the board sits at the left, flush with the top of the console, as large as the window's height allows; the fascia strip with the product name moves to the top of the right-hand panel, in its own material and lettering; the SYSTEM STATUS window goes (the LCD's rotating header rows carry whose move it is and the engine's state); and the deck becomes a keypad plate at the foot of the panel, five keys to a row, with the DCS Chess logo in its corner, so every key stays in reach. The captions printed above the keys grow a size, since they were hard to read on a tablet. The grip between the board and the panel still works and the width it sets is remembered for this view on its own; should a dragged or zoomed panel ever hide the display's keys, RESET LAYOUT behind OPTIONS restores this view's defaults. STANDARD is the console as before. The choice is remembered, and the interface is rebuilt in place either way.

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, bundled ZUKERTORT, 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. If the check fails, the message shows what the engine reported.

Newer Capa builds from Thorsten Czub need their opening book `ENGOPEN.TXT` in the same folder as the engine file; without it Capa stops immediately with "runtime error 2 (file not found)". The builds published on playchessgate.com/czubatronic contain the book; CZUBATRONIC also offers to copy its own bundled book next to a Capa engine that lacks one.

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, Zukertort, and other engines use the explicit depth or time-per-move setting from `ENGINE SETTINGS`. Zukertort, one of playchessgate.com's historical personality engines, also has its own `Skill Level` (800 to 3000) and `Style Weight` options, set in `UCI OPTIONS`. Tacticon has a built-in maximum of 7 plies, which it reaches in under two seconds: depth settings up to 7 change its play, a higher depth or a longer time per move does not.

Saved Engines (Expert)

Readers who run emulated chess computers or several settings of one engine asked for the way Arena and Shredder keep engines: an engine file with its UCI options saved under a name of your own, as many as you like from one file, for example `MM5 [level3]` and `MM5 [level6]`.

- Set the options you want in `ENGINE SETTINGS`, `UCI OPTIONS`, then press `SAVE AS ENGINE` and give the engine a name. It becomes the engine in use, and its name appears on the engine display, in the notation and in saved games.
- `SAVED ENGINES`, behind `OPTIONS` and in the `ENGINE` chooser, lists them. `USE` starts one; `NEW` takes an engine file (set its options afterwards in `UCI OPTIONS`, where `APPLY` saves them to the engine in use); `RENAME`, `REMOVE`; `SET AS STANDARD` remembers one for the next start.
- In `ENGINE MATCH SETUP`, `SAVED` beside `BROWSE` picks a saved engine for either side, so a series can pit Tacticon against MM5 at level 3.
- **Chess computers.** `THORSTEN'S CHOICE` in the `ENGINE` chooser is the curated list: the thirteen emulated classics Thorsten Czub picked, with his portrait, the year and programmer of each machine from the History Module, what each tells the console about its search, and the Module's words on its playing character for the one chosen: Mephisto III-S Glasgow, MM V and Milano, Novag Constellation Expert, Saitek Analyst D++, the Fidelity Designer 2000, 2100, 2265 and 2325 Display models, the Conchess Plymate Victoria, Amsterdam and Glasgow, and the Tasc R30. They run in Franz Huber's CB-Emu (MessChess), which you install yourself (free, from fhub.jimdofree.com and his thread on schachcomputer.info); the first time, CZUBATRONIC asks for your CB-Emu folder and remembers it, and a machine your CB-Emu does not have is marked `not in your CB-Emu` in the list and not started. `USE` starts a computer without keeping it (a machine tried for a moment is not a saved engine): a small `STARTING ENGINE` window shows while it boots, which can take up to a minute for some machines, and the console stays alive meanwhile; then it plays at its own level and pace, shows only its move (the emulation reports no search), and `MOVE NOW` makes it move at once. `ADD TO SAVED ENGINES` keeps computers as saved engines, for matches and for the next start; set a computer's level in `UCI OPTIONS` and `SAVE AS ENGINE` under a name like `MM5 [level 3]`, which keeps it too. The Chess Computers edition, a test build for readers, includes the emulator and the thirteen machines, so it asks for no folder: pick a computer and it plays. The emulator shows no window of its own; the computer's own display appears on the first rows of the LCD, as the machine shows it: the MM V's `PLAY`, then your move as it goes in and its answer; the Milano's two rows of text, the move it

considers, the opening's name and its clocks, through a small plugin of CZUBATRONIC's own that runs inside the emulator. Below a computer's display the remaining rows always rotate through CZUBATRONIC's own lines, whatever ROTATE says, so the machine's output comes first and the rest still comes by. TABLE logs every text the computer's display held, with the time since power-on it appeared, and RAW LOG shows the same lines between the computer's moves, in plain characters. The Mephisto Milano and its family (the Polgar, the Academy, the RISC, the Nigel Short) go further: while they think, CZUBATRONIC presses their INFO key every three seconds, and the machine's own line, evaluation, depth and positions searched appear as the engine display's numbers as the search deepens, the way the machine shows them to an owner at the keys; after the move its evaluation page stays on its display while you think. The Mephisto MM V (and an imported MM IV) shows its evaluation while it thinks: CZUBATRONIC presses INFO and 1 for it at the start of its search, and the machine's 0.09 stands on the LCD's first row and feeds SCORE as the search goes on (this needs the Chess Computers edition's plugin, or Franz Huber's plugin update of 2026-09-30 in your own CB-Emu).

- **Every other emulated computer (MessChess, CB-Emu).** CHESS COMPUTERS in the ENGINE chooser, beside THORSTEN'S CHOICE (the makers as keys beside its filter field narrow the five hundred machines to a brand) finds the MessChess.lst of your CB-Emu folder by itself (straight in MessChess or in MessChess\Hiarcs; it asks for the file only when it sits somewhere unusual), lists the emulated computers by name; a double-click or USE starts the one chosen at once without keeping it, IMPORT SELECTED keeps the ones you choose as saved engines. It lists the emulated computers by name in alphabetical order, MessNew machines included; CZUBATRONIC writes the batch file that starts each one into its own settings folder, with the emulator's full path, so nothing in the CB-Emu folder is changed; the emulator is told not to save its options either (-nowc), so your own MessChess keeps its settings. Set a computer's level in UCI OPTIONS (its Level option) and SAVE AS ENGINE under a name like MM5 [level3]; then it can play matches at that level. Engines that start through a batch file appear in the file dialogs too (Engines (exe, bat, cmd)). The thirteen computers of THORSTEN'S CHOICE and the bundled engines are checked by CZUBATRONIC move by move; every other computer of the list runs as its CB-Emu interface provides it, with the console's general handling (one start, the moves entered by the plugin, MOVE NOW through the key the interface knows, the level forms from CB-Emu's level list), and nothing is adjusted for it machine by machine. The list has a scrollbar and scrolls with a finger drag or the mouse wheel; a tap picks a computer.
- **The expert's other route: MessChess engines with their own window.** CZUBATRONIC starts an emulated computer without the emulator's window, because the console is the interface and the machine's own readout appears on the LCD. If you want MessChess's own functions instead (its engine options, Save Reset State, the level information), Franz Huber's CB-Emu offers MessChess\UCI-GUIs\MAKEALL /name /hide: it writes a folder MessEngines with one batch file per machine, named in full; copy that folder next to CZUBATRONIC.exe and load a machine through BROWSE UCI ENGINES (or NEW in SAVED ENGINES) like any other engine. It then runs minimized, with an icon in the taskbar that brings its window up. What you lose on that route: the readout on the LCD, the FORMS key for its level, and the reset-and-replay after a takeback. On the few Windows installations where the command processor does not search the current folder, these batch files do not start; use IMPORT MESSCHESS instead, whose batch files carry the emulator's full path.
- **What of the computer's display you see.** Seven-segment digits (the MM V, the Fidelity Designers), alphanumeric displays of fourteen or sixteen segments (the ACI Boris and its kin) and the character LCDs of the Mephisto and Saitek machines appear on CZUBATRONIC's LCD as the real machine shows them. A display the program cannot read yet, such as the Tasc R30's graphic screen, is left out rather than garbled; the header row stays.
- **What the computer tells about its search.** The Mephisto Milano and MM V give their evaluation on request (see above). The Conchess Plymate Victoria has only LEDs, but after its move the console presses its ? key and reads them for as long as you think (the machine ponders on your time, and the figures go on changing until you move; the console ends the display just before your move goes in): the six piece lights give its search depth and its evaluation of the position (coded as its 1990 user's guide describes: king light on, White is better; blinking, Black is better; the queen light for the size of the advantage, the pawn to rook lights for the detail), and two pairs of squares light on the board in turn for the reply it expects and its own answer to that. Score, depth and the line appear on the display as for the Milano, and go on deepening while you think, since the machine analyses on your time. The Victoria shows its evaluation only once it has been selected in its level mode; the console makes that selection itself at the first move of every game (and again after a takeback, which resets the machine), so a move played within a few seconds of the machine's first reply waits a moment for those keys. After a move from the machine's opening book the lights stay dark, there was no search to show, and the display says BOOK. The Plymate

Amsterdam and Glasgow programs show the depth and the line the same way; they have no evaluation display. The Saitek Renaissance and its modules (Analyst, Maestro, Sparc, Brute Force) have an info line on their big LCD whose right field shows, in its third SCROLL mode, the evaluation while the machine thinks (-0.41) and its move once made; the console presses SCROLL three times for the machine after its first move of each game, and from then on that field stands on the first row of the LCD (above the Analyst module's own two rows) and its evaluation feeds SCORE during every search. The Analyst D++ also shows its search depth and the move it thinks best so far, read from the machine's own memory through the console's plugin; the other modules' programs keep that in places of their own and show the evaluation alone. While the Analyst D++ thinks, its row on the LCD reads in the LCD's own order, 3:g8f6 -0.43. A move made within a few seconds of the machine's first reply waits for the SCROLL presses.

- **The level of an emulated computer.** Most of these computers take their level as text in UCI OPTIONS, in the form their manual uses, and keep the old level silently when the text does not fit. The FORMS key beside the field lists the values the computer takes with what each means, read from the level\Levels.txt of your CB-Emu (Franz Huber's list, one block per machine): an MM V's le 4 is a minute a move, a Fidelity Designer's a1 is sixty moves in five minutes, an Academy takes forms such as NORMAL m:ss or MATE IN n, which are inserted with the placeholder selected so that you only type the value, NORMAL 0:30 for thirty seconds a move. Set levels between moves: while the computer is thinking, an option is refused and listed as failed at the bottom of the dialog. KEYBOARD in UCI OPTIONS and in CHESS COMPUTERS opens Windows' On-Screen Keyboard for a tablet without one; close it with its own key. With TOUCH KEYBOARD set to ON in OPTIONS a tap into a text field opens it by itself; it is OFF unless you switch it on, so a touch screen with a keyboard attached sees nothing of it.
- **Taking a move back against an emulated computer.** TAKEBACK works, but it costs the computer a reset: the emulation enters moves on the machine's keys and cannot un-press them, so CZUBATRONIC resets the computer and has the whole game entered again before it thinks about your new move, which takes a few seconds; the RAW LOG view of the display says so. A few computers have no such entry mode in the emulation; the status then reads NO MOVE: THIS COMPUTER CANNOT TAKE MOVES BACK, START A NEW GAME. The console waits for the plugin's word that the game is entered before it presses any key of its own, so the readout of the Milano family and the MM V cannot land in the entry.

Nothing of this is needed for the bundled engines; the everyday keys are unchanged.

The Chess Computer Museum (HISTORY)

Press HISTORY on the deck (the engine cluster, beside BOOK) and the machine tells the story of the computer living inside it. A reading screen appears at the left of the board, a light LCD in a dark bezel with its own keys under it, and the board stays where it is (the screen takes the free margin; only a narrow window has to give it room). Press HISTORY again, or CLOSE on the screen, and it goes away. When an emulated chess computer plays, the screen shows that computer's article: its name and maker, the year, who wrote the program, the hardware, the program family it belongs to, the story of the machine, its playing character, and a "did you know". Below the article stand the emulated variants of that family (a machine came in several ROM versions and boards, which the museum keeps under one article) with the one in the machine now marked. The machine goes on thinking while you read.

From the article you can walk on: MAKER opens the manufacturer's history and the list of its computers in the museum; click one to read its article; MUSEUM opens the index of all manufacturers; SOURCES shows where the article's research comes from; BACK retraces your steps; CURRENT returns to the computer in the machine now; the ▲ and ▼ keys scroll the glass a page at a time (the mouse wheel and the scrollbar do too). Reading about another computer changes nothing in the machine: the engine in use stays what it is, and choosing a computer to play remains the ENGINE key's job.

With Pioneer, Capa or any other engine that is no emulated computer, HISTORY opens the museum's index instead. For an emulated computer the museum does not know (a batch file of your own, a machine outside its catalogue), it says so, and the emulator's id goes to the diagnostic log. The museum holds 273 historical computer families of 17 manufacturers, from the CZUBATRONIC History Module's research; the texts are shown as researched, nothing is added to them, and the whole of it works offline.

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

- 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, license, warranty, and distribution restrictions
- 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. When you close CZUBATRONIC it shows a short closing card for two seconds, the shutdown sequence and the DCS Chess logo; any key or click ends it at once.

If Something Goes Wrong

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

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

When you report a problem, attach that file and say which version the ABOUT dialog (behind OPTIONS) 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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Tel: 0049 175 979 73 08

License

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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

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