

Chess Openings by ECO Code

eco.html

User Manual

A complete reference to browsing, filtering, and exploring the ECO opening classification with move sequences and PGN links.

Version 1.0

Data source: lichess-org/chess-openings

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1. Introduction

eco.html is a self-contained, offline-capable web page that presents the full Encyclopaedia of Chess Openings (ECO) classification. It lists all standard ECO codes from **A00** to **E99**, together with named openings and variations and their characteristic move sequences.

The page is designed for quick lookup, study, and sharing. You can filter by volume or free text, jump to any ECO code, count openings under the current filter, and open any move sequence in an external interactive PGN viewer.

Main capabilities

- 500 ECO sections (A00–E99) with named openings and move sequences
- Live search by ECO code, opening name, or moves
- Volume filter (A / B / C / D / E)
- Clickable ECO index for fast navigation
- Row-level filtering inside each ECO section
- Live counter of openings/variations matching the current filter
- Clickable moves that open a full PGN (with ECO and Opening tags) in a PGN viewer
- Deep links via URL parameters (e.g. `eco.html?eco=B32`)

2. Getting Started

Open **eco.html** in any modern browser (Chrome, Firefox, Safari, Edge). No installation or internet connection is required for browsing and filtering. An internet connection is only needed when you click a move sequence to open the external PGN viewer.

Place the file anywhere on your computer or host it on a web server. The page is a single HTML file with embedded CSS and JavaScript.

3. Page Layout

The interface uses a dark theme and is organised into a sticky header and a scrollable main area.

Header (always visible while scrolling)

- **Title** — “Chess Openings by ECO Code”
- **Search field** — filter by ECO, name, or moves
- **Volume selector** — All volumes, or A / B / C / D / E
- **Counter** — number of openings/variations matching the current filter
- **ECO index** — compact list of all ECO codes; click to jump

Main area

- One **section per ECO code** (e.g. B32, D31)
- Section header shows the code and the number of visible **move sequences**
- Table with two columns: **Opening** (name) and **Moves** (clickable sequence)

Footer

A short attribution links to the Lichess chess-openings data repository.

4. Searching and Filtering

4.1 Text search

Type into the search field to filter. Matching is case-insensitive and applies to the full text of each table row (opening name and moves). Only matching rows are shown; non-matching rows inside a section are hidden. A section is hidden entirely if it has no matching rows.

Examples

Query	Effect
Najdorf	Rows whose name or moves contain "Najdorf"
1.e4 g6	Rows containing that move string (e.g. Modern Defense)
Kalashnikov	Named Kalashnikov lines (typically under B32)

4.2 Exact ECO search

If the search text is exactly an ECO code in the form **A00–E99** (letter A–E plus two digits), the page shows **only that ECO section** in full (all of its rows). Example: typing **B32** shows only the B32 section.

4.3 Volume filter

The volume dropdown restricts results to one ECO volume:

- **A** — Flank openings, irregular, Dutch, Benoni-related, etc.
- **B** — Semi-open games (Sicilian, Caro-Kann, Pirc, Modern, ...)
- **C** — Open games and French Defence
- **D** — Closed games, Queen's Gambit, Grünfeld, ...
- **E** — Indian defences (Nimzo-Indian, King's Indian, Queen's Indian, ...)

Volume filter and search work together: both conditions must be satisfied for a row to appear.

5. ECO Index Navigation

The index under the controls lists every ECO code present on the page. Click a code to:

- Put that code into the search field (exact ECO mode)
- Show only that section
- Scroll so the section header sits just below the sticky header
- Update the browser URL to **?eco=Xnn** (without reloading the page)

Codes that are hidden by the current filter are shown dimmed. The active code (exact ECO match) is highlighted.

6. Opening Sections and Move Sequences

Each ECO code has its own section. The header shows the code and a count of **move sequences** currently visible in that section (after filtering).

A **move sequence** is one concrete line of play (PGN moves) associated with a named opening or variation. Several sequences can share the same opening name (different branches or move orders). The same name can also appear under neighbouring ECO codes when the classification splits a family across codes.

Moves are displayed in compact notation (e.g. 1. e4 c5 2. Nf3) without a space after the move number.

7. Opening Moves in the PGN Viewer

Click any move sequence to open it in the external viewer:

```
https://thomasheyl.de/chess/tools/pgn-viewer.html
```

The link passes a complete minimal PGN in the **pgn** query parameter, including metadata:

```
[Event "?"]
[Site "?"]
[Date "????.??.??"]
[Round "?"]
[White "<opening name>"]
[Black "?"]
[Result "***"]
[ECO "<code>"]
[Opening "<opening name>"]

1. e4 c5 2. Nf3 ... *
```

The viewer requires an **[Event ...]** header to recognise a game; bare move lists are not enough. White is set to the opening name so the line is easy to identify in the viewer. Links open in a new browser tab.

Note on URL length: Modern browsers accept long query strings, but some servers limit URLs to about 8 KB. Opening lines used here are typically well below that limit.

8. URL Parameters (Deep Links)

You can open the page with query parameters so a filter is applied immediately:

Parameter	Meaning	Example
eco	Exact ECO code; shows that section and scrolls to it	eco.html?eco=B32
q or search	Free-text filter (same as the search box)	eco.html?q=Najdorf
vol or volume	Volume A–E	eco.html?vol=B

Parameters can be combined, e.g. `eco.html?vol=B&q=Dragon`. Clicking an index code updates the URL to `?eco=...` via the History API (no full reload).

9. Understanding the Counters

Top counter: “openings/variations”

Counts **unique opening names** in the rows currently visible, summed per ECO section. If the same name appears under two different ECO codes, it is counted once in each section. With no filter, this is typically about 3,329.

Section header: “move sequences”

Counts the number of **visible rows** (concrete move lists) in that section after filtering. One opening name may correspond to several move sequences.

Both counters update live when you change the search text or the volume.

10. Data Source and Coverage

Names, ECO codes, and move sequences are derived from the public **lichess-org/chess-openings** dataset (TSV files for volumes A–E). That project standardises opening names used on Lichess and related tools.

Coverage includes the full ECO range A00–E99. Irregular and rare first moves are grouped mainly under A00. Some well-known families (e.g. Najdorf, Sämisch, Orthodox King's Indian) are split across several adjacent ECO codes; the same display name may therefore appear in more than one section, each with its own move sequence.

11. Tips and Troubleshooting

Search tips

- Prefer an exact ECO code (e.g. B90) when you know the classification.
- Use distinctive name fragments (Kalashnikov, Sämisch, Maróczy) to narrow variations.
- Move searches use the compact form stored on the page (e.g. 1.e4).
- Clear the search box and set volume to “All” to reset the full catalogue.

PGN viewer does not load the game

- Confirm you are online; the viewer is hosted on thomasheyl.de.
- The PGN must include [Event "..."] — the page always sends that header.
- Very long URLs can be rejected by some networks; try a shorter line if needed.

Section header hidden under the top bar

The page sets a dynamic scroll margin based on the sticky header height. If a jump still lands slightly wrong after resizing the window, click the ECO code again in the index.

12. Keyboard and Accessibility Notes

- The search field and volume selector are standard form controls and can be reached with Tab.
- ECO index entries are normal links; they can be activated with Enter when focused.
- Move sequences are links opening in a new tab (target=_blank) with rel="noopener noreferrer".
- Semantic structure uses section elements with id equal to the ECO code for deep linking and screen-reader landmarks.