Diagram Manager
User Manual

A mobile-friendly web tool for scanning chess diagrams from photos, editing positions, annotating diagrams, exporting FEN, and sharing images.

File: **diagram-manager.html**

Platform: modern mobile and desktop browsers (Chrome recommended on Android)

Contents

1. Introduction and requirements
2. Getting started
3. Opening with a FEN parameter
4. Loading a diagram from a photo
5. Scanning the board
6. Board editor
7. Export & analysis panel
8. Annotating the diagram image
9. Sharing the diagram
10. Landscape layout on mobile
11. Troubleshooting
12. Privacy and technical notes

1. Introduction and requirements

Diagram Manager is a single-file web application. Open **diagram-manager.html** in a browser (preferably over a local server such as `http://127.0.0.1/…`). It helps you turn a photo or screenshot of a chess position into an editable board, a FEN string, a Lichess analysis link, and a shareable diagram image with optional caption, arrows, and square marks.

What you can do

- Open a position from a `fen` URL parameter.
- Choose an image from the gallery/files or take a photo with the camera.
- Scan the image to detect the board and pieces (requires internet on first scan).
- Edit the position manually with a Lichess-style piece palette.
- Open the position in Lichess Analysis.
- Generate a PNG diagram with optional multi-line caption text.
- Annotate the diagram with arrows and highlighted squares.
- Share the diagram image via the system share sheet (or save it).
- Copy the FEN to the clipboard.

Requirements

- A modern browser with JavaScript enabled (Chrome, Edge, Firefox, Safari).
- Internet access for the automatic board scan (model and recognition library are loaded from CDNs).
- Internet access to load Lichess piece graphics for the on-screen board and exports.
- For best results on Android, serve the file over HTTP (e.g. a simple local web server), not only as a raw file:// page.
- Sharing images works best in a secure context (HTTPS or localhost) with Web Share API support.

> **Tip:** The board editor, FEN copy, Lichess link, diagram generation, and annotations work even if scanning fails. You can set up a position by hand or via the fen URL parameter.

2. Getting started

Open **diagram-manager.html**. You will see the title, a short description, and a card with:

- **Choose from Gallery / Files** — pick an existing image.
- **Take Photo** — open the camera (rear camera preferred on phones).
- **Scan Board** — runs recognition on the selected image (enabled after you pick a file).
- **Open board editor** — skips scanning and opens an empty board for manual setup.

After a successful scan, when you open the editor, or when a valid `fen` parameter is present, a second card appears with the interactive board and the **Export & analysis** panel.

3. Opening with a FEN parameter

Deep-link into Diagram Manager with a position already loaded using the query parameter `fen`. On load, the app opens the board editor with that position.

URL form

`diagram-manager.html?fen=`*`FEN_STRING`*

Spaces in the FEN must be URL-encoded as `%20` (or `+`).

Example — starting position

```
diagram-manager.html?fen=rnbqkbnr/pppppppp/8/8/8/8/PPPPPPPP/RNBQKBNR%20w%20KQkq%20-%200%201
```

Example — after 1.f4 d5 2.Nf3 Bf5

```
diagram-manager.html?fen=rn1qkbnr/ppp1pppp/8/3p1b2/5P2/5N2/PPPP1PPP/RNBQKB1R%20w%20-%20-%200%201
```

Behaviour

- Piece placement must contain eight ranks separated by `/`.
- If the second FEN field is `w` or `b`, side to move is set.
- Castling, en passant, and clocks from the parameter are not kept in the editor’s simplified FEN export.
- Invalid FENs are ignored; the page still opens normally.

4. Loading a diagram from a photo

Use **Choose from Gallery / Files** or **Take Photo**. The image is shown centered as a preview. Crop tightly around the board, prefer clear 2D diagrams, and avoid heavy decorative frames when scanning.

5. Scanning the board

Tap **Scan Board**. The recognition library and model load over the internet, then the 64 squares are classified. On success the editor opens. If confidence is low, verify pieces before exporting. If no board is found, crop and retry, or use the manual editor.

6. Board editor

Placing and removing pieces

- Tap a piece in the palette, then a square to place it.
- Tap the same palette piece again to deselect.
- Use ✕ in the palette, then a square, to clear that square.

Controls

Control	Action
Flip	Rotate the board view.
Clear	Remove all pieces.
Start pos	Load the standard starting position.
White / Black	Side to move in the generated FEN.

Every change updates the FEN and the Lichess link immediately.

7. Export & analysis panel

On the right (landscape) or below the board (portrait), the panel groups analysis and export tools.

7.1 Lichess Analysis

Opens the current position on Lichess in a new tab. The exported FEN uses the side-to-move selector; castling and clocks are simplified.

7.2 Diagram Image

Enter an optional multi-line caption (Enter for a new line). Tap **Generate Diagram Image**. The diagram is shown in the panel only — it is **not** downloaded automatically. You can then annotate it and share when ready.

7.3 FEN / Copy FEN

The current FEN is shown in a monospace box. Tap **Copy FEN** to copy it to the clipboard.

8. Annotating the diagram image

After generating a diagram, the preview is interactive:

- **Arrow:** short-tap a start square, then short-tap a target square. The arrow snaps to square centres. Repeat for more arrows.
- **Mark a square:** long-press (~0.45 seconds) a square to toggle a blue highlight frame. Long-press again to remove that mark.
- **Clear marks:** removes all arrows and square highlights (and any pending arrow start).

Annotations are drawn on top of the board image and are included when you share or save the diagram.

> **Tip:** If a long-press is hard to trigger, hold steady without sliding your finger. A short vibration may confirm the mark on some devices.

9. Sharing the diagram

Tap **Share image** to send the current diagram (with caption and annotations) through the system share sheet — for example to Messages, WhatsApp, Facebook, Drive, or the photo gallery, depending on the device.

Only the **image file** is shared. No FEN and no extra text are attached, so social apps should not show a FEN line above the picture.

If the browser cannot share files (or sharing fails), the app falls back to saving **chess-diagram.png** as a download.

10. Landscape layout on mobile

In landscape with a sufficiently wide viewport (about 500px or more):

- Board and piece controls stay on the left.
- Export & analysis panel sits on the right and uses remaining width.
- The panel can scroll if needed.
- Subtitle and footer may be hidden to save space; title and scan card remain available.

11. Troubleshooting

Problem	What to try
FEN parameter ignored	Encode spaces as %20. Placement needs 8 ranks.
Scan fails	Check internet, prefer HTTP over file://, crop the board, or edit manually.
Long-press does nothing	Hold about half a second without moving. Press on a square inside the board.
Share has no apps / fails	Use a mobile browser with Web Share support, or accept the download fallback.
FEN appears when sharing	Current version shares image only. Hard-refresh to load the latest HTML.
Landscape layout unchanged	Rotate fully, wide viewport, hard-refresh.

12. Privacy and technical notes

Scanning runs in the browser after downloading the recognition library and model from CDNs. Images are not uploaded to a custom server by this HTML file. Piece graphics load from Lichess-related hosts.

The editor FEN uses a simplified trailer (side to move, empty castling/en passant, clocks 0 1). Diagram generation does not auto-download; sharing sends the PNG only, without FEN text.

End of User Manual — Diagram Manager (**diagram-manager.html**)