

PatchFerret user guide

Turn a mixing console show file into documentation an engineer can actually use — a patch list, a specification sheet and a wiring topology diagram, as PDFs.

Runs in the browser or on the command line. **The browser build parses and renders entirely in WebAssembly, so a show file never leaves the machine** — there is no upload and no server.

Before you rely on this: the X32 adapter is written against a real 2,104-line scene file saved by an actual console and is asserted against it in CI. **No output has ever been loaded back into a console**, and **no conversion between consoles exists yet**.

Per-format caveats matter here and are in the table below. The Yamaha MMS adapter's **patch-source encoding has never been confirmed against a console's patch screen**, and on TF no connector resolves at all — **the tool says so rather than guessing**. The X32 signal-source enumerations are derived from community documentation and corroborated against real files, not from a running desk.

This codebase was created with AI assistance, directed and reviewed by a human author.

What it reads today

Console	File	Status
Behringer X32 / Midas M32 / X-Air	<code>.scn</code>	Supported
Yamaha DM3 / DM7 / TF	<code>.dm3s</code> <code>.tfs</code> <code>.dm7s</code>	Supported — names and input patch; head amps and sends not yet
Yamaha CL / QL	<code>.CLF</code>	Supported — input patch and channel names
Allen & Heath Avantis / dLive	<code>.tar.gz</code>	Supported — input patch and strip inventory; names and preamps not yet
Allen & Heath SQ	<code>NVDATA.DAT</code>	Supported — input patch; names and socket <i>class</i> not yet identified
DiGiCo, Avid VENUE	—	Planned

```
show file → format adapter → PFX model → | patch list PDF
                                             | specification PDF
                                             | topology PDF
                                             └ PFX interchange XML
```

Run `info` first, and read the fidelity list

```
patchferret info myshow.scn
```

It prints a summary and, importantly, **the fidelity list — everything the adapter read but could not carry into the model**, and which would therefore be lost in a conversion.

That list is the honest measure of how much of your show this tool understands. Read it before you hand a PDF to anybody.

Why the patch list is not obvious

On an X32, getting from an XLR to a fader takes **three hops, and all three have to be composed**:

1. The routing block maps blocks of **eight physical connectors** onto the 32 **input slots**.
2. The channel config selects which **input slot** feeds each channel — a **free** mapping.
3. The head-amp table holds the gain for a **connector**, in a flat index across local and both AES50 links.

Assuming channel *N* is fed by XLR *N* produces a confident and wrong patch list. In the test fixture, slots 25–32 are AES50-**B** connectors 1–8 while channels 25–32 carry them, and **six channels reach no connector at all**.

PatchFerret composes the chain and **marks the dead rows** rather than inventing a connector for them.

The report header comes from you

Reports carry a header with your logo, the event, venue, engineer and so on.

None of that is in a show file — a console stores a mixer state, not the job it was built for — so it comes from a job sheet you supply:

```
patchferret job-template -o job.txt
patchferret report myshow.scn -j job.txt -o ./docs
```

The sheet is `key: value` lines, and **any key it does not recognise becomes an extra header field**, so "Truck call" or "Rider rev" work without the tool knowing about them:

```
Event: Summer Live 2026
Venue: Old Granada Studios
Engineer: A. Sargeant
Truck call: 06:00
Logo: ./logo.jpg
```

The browser version has the same fields as a form and **accepts any image** for the logo — it converts on a canvas before handing the bytes over. The CLI takes JPEG, or PNG without transparency; embedding a transparent PNG would mean decoding pixels, which the dependency-free PDF writer deliberately does not do. **It says so rather than dropping the logo silently.**

In the browser

Module scripts and WebAssembly **will not load from** `file://`, so the local build has to be served over HTTP. The hosted version needs nothing.

If something is wrong

Symptom	Cause
Rows are marked dead	Those channels reach no connector. That is the console's patch, faithfully reported.
A patch list disagrees with the desk	Read the fidelity list from <code>info</code> — the adapter may not carry that field yet.
No connector resolves on a TF file	Known: the tool reports it rather than guessing.
The logo was refused	A transparent PNG on the CLI. Use JPEG, or the browser version.
The page will not load locally	It is being opened from <code>file://</code> . Serve it over HTTP.