FIBER OPTIC FIELD GUIDE

AI fiber optic analysis, built by a field tech

There are three kinds of AI for fiber built into one free tool: a chat expert that answers any fiber question from inside your results, AI acceptance testing that verdicts a whole job pass or fail per fiber, and AI-assisted reporting that turns raw traces into a closeout package. Here is what each one does, and how to use it.

Johnstone Technical Services · https://johnstonetechs.com/guides/ai-fiber-optic-analysis

The AI here is built for working techs, so it stays out of your way. It never contradicts a measurement, never invents a reading, and never gets between you and your results. The hard numbers from your files are always ground truth; the AI does the judgment and the explaining on top.

There are three pieces to AI fiber optic analysis at JTS, and they all live inside one free tool, Fiber Analysis.

An expert on fiber, right in the chat

The newest piece is Ray, the Fiber Expert: a chat window built into your results that will answer just about any fiber question you throw at it. Not a generic chatbot bolted on, but a fiber specialist that already knows the tools, the standards, and the field. Ask Ray anything.

Ask it what a reflectance number means, how chromatic dispersion differs from PMD, whether you can splice 200m fiber with your splicer, or how the color code runs past fiber twelve. It answers in plain language, the way a senior tech would over the radio, so you are not leaving the job to go search the web.

Because it is wired into the whole JTS library, it does more than talk. When a guide goes deeper on the topic, it hands you the link. When your question is really a job for another tool, it points you to the right one: the Chart Builder for a custom count chart, the Splice Matrix Builder for a closure, the Link Loss Calculator for a budget, or the printed fiber color code charts for the truck.

AI acceptance testing: a whole job, verdicted at once

AI acceptance testing is the part that saves real hours. On a build of any size, the bottleneck is never the testing, it is the review: someone has to open every trace, apply the thresholds, and write the pass or fail. At hundreds or thousands of fibers, that is an evening on a whiteboard, and a single wrong number can cost a truck roll days later.

Fiber Analysis automates that review. Drop a whole job's files in (OTDR, OLTS, iOLM, power meter), and it groups both directions and every instrument onto one row per fiber, applies your pass/fail thresholds (ANSI/TIA-568.3-D by default), and gives you a verdict on every fiber. The AI layer reads across the whole set for the things rules miss: the same event at the same distance on twenty fibers is one shared enclosure problem, matching break distances are one cut, a cluster of end-connector failures is a dirty panel.

And because the assistant can see the results on your screen, you can just ask it. “Which fibers failed?” “What is the worst reflectance?” “How many need a second look?” It answers from your actual numbers, not a guess.