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USER MANUAL

LPTP

Laser Precision Tracer PRO

Image & PDF vectorization → DXF for CNC laser machines

Program version: v12

Document: User Manual EN

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LPTP Laser Precision Tracer PRO is a Windows desktop application that converts photos (JPG, PNG), graphics and PDF files directly into DXF files ready to load in your CNC laser software — no CAD knowledge required, no subscription, no cloud.

Works offline No
internet after activation

One-time purchase
Lifetime license

Windows 10/11 64-bit

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1. System Requirements

Operating System	Windows 10 or Windows 11 (64-bit)
Processor	Intel/AMD, min. 2 GHz (4 cores recommended)
RAM	Min. 4 GB (8 GB recommended)
Disk Space	Approx. 150 MB (program + temp files)
Graphics	Any GPU with DirectX 11 / OpenGL 3.3 support
Internet	Required only for license activation

i INFO LPTP runs on Windows only. macOS and Linux versions are not planned.

2. Installation & First Run

Installation takes just a moment — no additional libraries or .NET required.

Trial version (free — 30 days or 10 exports):

1. Download LPTP_trial.zip from toolbit.pl/lptp.
2. Extract the ZIP archive anywhere on your disk (e.g. C:\Program Files\LPTP\).
3. Run LPTP.exe — the program opens immediately.
4. On first launch the 30-day / 10-export trial starts automatically — no registration needed.

Full version (after purchase):

1. Download LPTP_full.zip from the link sent to your e-mail after purchase.
2. Extract anywhere on your disk.
3. Run LPTP.exe.
4. On first launch the activation window appears — paste your license key and click Activate.

3. License Activation

After purchasing on toolbit.pl you will receive an e-mail with a license key in the format **XXXXX-XXXXX-XXXXX-XXXXX**. The key is single-use and bound to your computer.

How to activate:

1. Launch LPTP.exe.
2. The activation window appears. Copy the key from your e-mail and paste it into the "License Key" field.
3. Click "Activate". The program connects to the toolbit.pl server and verifies the key.
4. After successful activation you will see "Activation successful" — the program is ready.

Activation Status	Meaning	Action
OK — Activation successful	Key valid, computer registered	Done — use the program
ALREADY_USED	Key already used on another computer	Contact kontakt@toolbit.pl
INVALID	Key not found in database	Check if you pasted it correctly
Connection error	No internet during activation	Check connection and try again

⚠ UWAGA The key is bound to one computer. If you change your PC — contact kontakt@toolbit.pl. License transfer is free of charge.

4. Program Interface — Overview

The program window is divided into three main areas. Everything is visible on one screen — no hidden tabs or menus.

Area	Description
Left Panel (Parameters)	Vectorization sliders and settings: binarization threshold, path smoothness, minimum contour size. Load files and run export from here.
Central Area (Preview)	Live view — shows vectorization result in real time after every slider change. Supports zoom (scroll), pan (drag) and layer toggling.
Status Bar (Bottom)	Information about the loaded file: resolution, number of detected contours, layers. Hints for the current step.

Keyboard shortcuts:

Shortcut	Action
Ctrl+O	Open file (JPG/PNG/PDF)
Ctrl+E	Export DXF
Mouse scroll	Zoom In / Zoom Out in preview
LMB + drag	Pan the preview
Ctrl+Z	Undo last parameter change
F1	Open this manual
Escape	Cancel current operation

5. How to Load a File

LPTP supports several input formats. You can load a file in three ways:

1. Drag & Drop — drag a file from Windows Explorer directly onto the program window.
2. "Load File" button — click the button in the left panel and select a file.
3. Ctrl+O — keyboard shortcut opens the file picker.

Supported formats:

Format	Extensions	Notes
Raster image	JPG, JPEG, PNG, WebP, BMP	Logos, photos, scanned documents, web graphics
PDF document	PDF	Multi-page — select a specific page and crop the area you need

Loading PDF — additional options:

After loading a PDF the program shows a thumbnail of each page. Select the page containing your drawing. You can then crop an area — click and drag a selection rectangle. Only the selected region will be vectorized.

✓ **WSKAZÓWKA** If a client sends you a PDF with technical documentation — crop only the drawing itself, without borders, title blocks and labels. Vectorization result will be much cleaner.

6. Vectorization Parameters

This is the heart of the program. Three sliders control how LPTP processes the image into vector paths. Every change instantly updates the preview — no need to click "Recalculate".

6.1 — Binarization Threshold

Binarization is the first step of vectorization — the program converts a color or grayscale image into pure black and white (each pixel is either "black" or "white"). The slider controls where the boundary lies.

Low value (e.g. 50-80)	Only dark pixels become black — light grays are ignored. Good for drawings with dark, sharp lines on a light background.
Mid value (100-150)	Balanced — recommended starting point for most graphics. Start at 128 and adjust.
High value (180-240)	Even light gray pixels become black — good for faded or low-contrast scans.

✓ **WSKAZÓWKA** Start at 128. If the vectorization picks up too much noise — lower the value. If it misses details — raise it.

6.2 — Path Smoothness

Controls how much LPTP smooths the detected contours. Uses morphological operations (MORPH_CLOSE + MORPH_OPEN) — the result is smooth vector-like curves instead of jagged "staircase" lines.

Low value (1-2)	Minimal smoothing — paths follow the pixel outline closely. Use for fine, precise details where every millimetre counts.
Mid value (3-5)	Recommended for most cases. Smooth curves without jagged edges. Works well for logos, text and simple shapes.
High value (6-10)	Heavy smoothing — great for silhouettes where minor irregularities are unwanted. May round sharp corners.

⚠ **UWAGA** Too much smoothness can round sharp corners in logos or text. Always check the preview before exporting.

6.3 — Minimum Contour Size

After binarization LPTP detects all closed contours in the image — but not every contour is useful. Scanner grain, small spots, JPG compression artifacts — all create microscopic "noise" contours. This slider removes contours smaller than the set value (in pixels).

Small value (20-50 px)	Keeps all contours — even microscopic ones. Use for fine patterns where every detail matters.
Mid value (50-150 px)	Filters scanner noise and JPG artifacts. Recommended for standard logos and technical drawings.
Large value (200+ px)	Only large main shapes remain. Use when you only need the overall silhouette.

7. Preview & Navigation

The central area is an interactive preview of the vectorization result. You see exactly what will end up in the DXF file — before exporting.

- ▶ Zoom — scroll the mouse wheel to zoom in or out. Zoom is centered on the cursor.
- ▶ Pan — hold the left mouse button and drag.
- ▶ Reset view — click the "Fit to window" button (frame icon) or press Home.
- ▶ Layer toggle — in the layer panel you can show/hide individual DXF layers.
- ▶ Original overlay — the "Show original" button overlays the source image semi-transparently on the vectorization.

Colour meaning in the preview:

Colour	Meaning
Blue	Detected contours — all paths that will be written to the DXF file
Grey	Filtered contours (too small — below the minimum contour size)
Green	Selected / active contour (after clicking)

i INFO The contour count in the status bar equals the number of objects that will be written to the DXF. If there are too many — increase the Minimum Contour Size.

8. DXF Export

When the preview looks good — export the DXF file with one click.

1. Click "Export DXF" in the left panel or press Ctrl+E.
2. Choose a folder and filename in the system dialog.
3. Click "Save". The program generates a DXF file in R2000 format.
4. Open the file in your CAD software or laser controller.

Exported DXF parameters:

Parameter	Value
Format	DXF R2000 (AutoCAD 2000)
Units	Millimetres (mm)
Layers	Separate layer per contour type
Geometry type	LWPOLYLINE (lightweight polyline)
Compatibility	LightBurn, AutoCAD, DraftSight and any CAD software supporting DXF R2000

✓ **WSKAZÓWKA** Save the DXF in the same folder as the original — easier to find later.
Recommended name: same as the source file, e.g. logo.jpg → logo.dxf

9. What Graphics Work Best?

This is the most important section for new users. DXF quality depends 70% on the quality of the input file — not on the program settings. Here is a complete guide to what works well and what does not.

Graphics quality rating:

Type of graphic	Rating	Why
Vector logo exported to PNG (from AI/Corel/Inkscape)	★★★★★ Ideal	Sharp edges, no noise, full contrast. Best possible result.
Company logo on white background (PNG or JPG)	★★★★☆ Very good	Works great when background is uniform. PNG is better than JPG.
Technical drawing scan (min. 300 DPI)	★★★★☆ Very good	Good scanners produce clean results. Resolution matters.
Nameplate photo (smartphone, good lighting)	★★★☆☆ Good	Requires good contrast. Avoid shadows and reflections.
Product photo (silhouette on plain background)	★★★☆☆ Good	Requires a uniform, high-contrast background.
JPG with compression artifacts (logo from web, low DPI)	★★☆☆☆ Fair	Artifacts create noise — increase minimum contour size.
Multi-colour photo non-uniform background	★☆☆☆☆ Poor	Program cannot separate objects from complex backgrounds. Manual CAD editing required.
Photocopier scan (below 150 DPI)	★☆☆☆☆ Poor	Resolution too low — paths will be jagged even at max smoothness.

Golden rules for good input graphics:

- ▶ Contrast is king. The sharper the difference between the line and the background, the better the DXF. Black line on white background = ideal.
- ▶ Min. 300 DPI. Lower resolution produces jagged curves. For lasers with 0.1 mm precision use 600 DPI.
- ▶ PNG over JPG. JPG compresses the image with loss — it creates a "halo" around edges. PNG does not.

- ▶ White background, not transparent (unless you have a PNG with an alpha channel — the background is ignored automatically).
- ▶ Avoid shadows, gradients and textures — the program sees only a black-and-white world.
- ▶ Pre-process the graphic before vectorizing — if you have any image editor (even Paint.NET), boost contrast and remove the background before loading into LPTP.

✓ **WSKAZÓWKA** Fastest way to improve a weak graphic: open in free IrfanView → Image → Enhance Colors → set contrast to +50, brightness to +10. Save as PNG. Vectorization result will be significantly better.

10. Troubleshooting

► Too many small contours / "noise"

Increase the Minimum Contour Size slider. Start at 100 px and go up. You can also lower the binarization threshold.

► Paths are jagged or broken

The graphic has too low a resolution (below 150 DPI). Upscale the original in an image editor to at least 300 DPI before loading. Alternatively increase the Path Smoothness slider.

► Program misses some elements of the logo

Elements are too light — increase the binarization threshold. If the problem is with thin lines, decrease the minimum contour size.

► DXF opens in CAD but scale is wrong (too large or too small)

LPTP exports in pixels as millimetres. Use the SCALE command in your CAD software or set the print scale accordingly. Measure the object and scale proportionally.

► License key does not work after purchase

Check that you pasted the key without leading or trailing spaces. Check your internet connection. If the problem persists — contact kontakt@toolbit.pl with your order number.

► Program does not start (Windows error)

Make sure Windows is up to date (min. Windows 10 build 1903). Try running as Administrator (right-click LPTP.exe → Run as administrator).

► PDF loads but page preview is black

The PDF may be encrypted or copy-protected. Try printing the PDF to a new PDF file (Print → Microsoft Print to PDF) and reload.

11. FAQ — Frequently Asked Questions

Q: How many computers does one license cover?

A: One license = one computer. The key is bound to the MAC address of your network card. If you change your PC — contact kontakt@toolbit.pl. Transfer is free.

Q: Does the program work without internet?

A: Yes — after a one-time activation the program runs fully offline. None of your files are sent to any server. Vectorization is done locally.

Q: Are updates free?

A: Yes — your license includes all future updates indefinitely. Pay once, use forever. No subscription.

Q: Does LPTP support SVG files?

A: No — LPTP processes raster files (JPG, PNG, WebP, BMP) and PDF only. If you have an SVG — open it in a browser and take a screenshot, or export it to PNG.

Q: Which Windows versions are supported?

A: Windows 10 (64-bit) or Windows 11. The program does not run on Windows 7/8 or 32-bit systems.

Q: Can I use the DXF from LPTP in LightBurn?

A: Yes — DXF R2000 format is fully compatible with LightBurn. Import via File → Import. Units are in mm.

Q: What if my trial has expired and I want to buy?

A: Go to toolbit.pl/lptp and click "Buy Full". After purchase download LPTP_full.zip and use the key from your e-mail. No need to uninstall the trial — just replace the EXE file.

Q: Can I get a VAT invoice?

A: Yes — after purchase e-mail your company details to kontakt@toolbit.pl. We issue VAT invoices.

12. Contact & Support

toolbit.pl

Software for CNC laser operators and SMEs

kontakt@toolbit.pl

toolbit.pl

Response time: within 24 hours on business days.

Technical support for licensed users is free of charge.

Before writing to us, please check:

- ▶ Section 10. Troubleshooting in this manual — most issues are already covered.
- ▶ Section 11. FAQ — answers to the most common questions.
- ▶ Whether the program is up to date — download the latest version from toolbit.pl/lptp.

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