01 / CRYSTAL STUDIO

A photo. A keepsake.

Sign in with your approval email and choose a new password on your first visit. This guide follows the existing Studio workflow. Your settings remain editable.

01 Upload your original

Use a sharp JPG, PNG or WebP. Keep the original photo and save an editable project so you can revisit your work.

02 Match the crystal

Choose the actual shape, width, height and material depth. Keep the artwork inside the engraving margins. Dimensions describe your blank, not the screen size.

03 Choose the background

In AI Smart, choose With background or Remove background. Keep scenery, lettering and decorative borders when they are part of the design.

04 Prepare once

Choose AI Smart Prepare or Portrait Layers UHD; UHD includes preparation. Wait for completion and review saved preparation activity before submitting again.

05 Inspect the real points

Review the actual point cloud from Front and Side. Check faces, hair, dark gaps, lettering, margins and depth. Display lighting changes the preview, not exported geometry.

06 Generate and save

Review the current PLY credit price, choose the supported export format and select Generate PLY. Keep the completed download and an editable project. Re-downloads of the same available export do not create another generation charge.

Choose **Instructions** in the Studio for the online guide and video. Keep the original image, editable project and finished PLY. The visual glass lighting is a simulation.

02 / RELIEF STUDIO

Give your artwork depth.

Create a grayscale height map for surface embossing. Start from the existing **Relief Studio** navigation button. Choose **Guided tour** to highlight the controls without starting generation.

01 Upload artwork

Use Upload photo for a sharp PNG, JPEG or WebP. Keep the original in your editable project. You can also import a prepared grayscale depth map.

02 Choose the preparation

Photos use estimated geometry. For flat text and logos, choose the clean text route so lettering stays stable. Remove background only when wanted; inspect fine edges and use the cleanup brush if needed.

03 Match machine and material

Select the actual F2 Ultra 60W MOPA or F2 Ultra UV profile and the material. These are different machines. Image presets do not configure laser power or guarantee a physical result.

04 Generate and wait

Review the displayed AI preparation price, then choose Generate AI Relief. Check saved preparation activity before submitting again. Once depth is ready, downstream surface adjustments reuse it.

05 Review the height map

Compare Original, Depth map and Height map, then rotate the simulated 3D relief. White normally means highest or shallowest; black means lowest or deepest. Check faces, outlines and unwanted bumps.

06 Set size and surface

Choose Raised relief or Recessed engraving, then enter the artwork dimensions. Adjust depth contrast and smoothing gently. Design relief span is a preview target, not calibrated cutting depth.

07 Download the right PNG

Review the export price and choose Download PNG. The full bundle also includes the 16-bit master, 8-bit compatibility PNG and settings. The same unchanged map shares one export charge across PNG and bundle downloads.

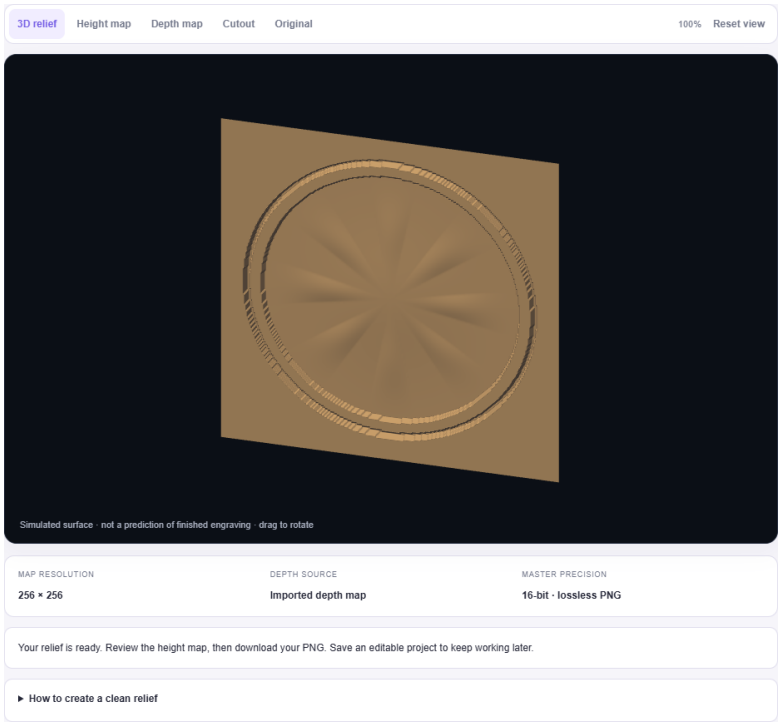
08 Finish in xTool Studio

Import the 8-bit compatibility PNG in Embossment mode. Check its dimensions and light/dark direction. Select tested settings for the exact machine and material, then test a small sample. Save an editable Pixel project too.

03 / EXPORT & SUPPORT

Keep the right file.

A grayscale surface map and a crystal point cloud serve different purposes. Check the file type and physical dimensions before machine import.



Actual Relief Studio preview with an imported demonstration map. This is a simulation, not a measured or guaranteed engraving result.

Crystal PLY vs. Relief PNG

Crystal: use the generated PLY for the supported inner-engraving workflow.
Relief: use **compatible-8bit.png** (or Download PNG) for xTool Embossment. Keep the 16-bit master for editing. White is normally highest/shallowest; black is lowest/deepest. Leave inversion off unless your target workflow requires it.

One account. Shared credits.

Check current prices in the Studio. Crystal PLY generation and Relief use the same balance; Relief AI preparation and export may have separate prices. Waiting and failed preparation are not charged. PNG and bundle downloads of the same unchanged map share one export charge. Keep completed downloads because online retention is limited.

Need help or a repeat walkthrough?

Check preparation activity before creating another job. For an error, include the project name and error reference when using project support. Never share passwords or payment details.

Open the written guides and captioned videos
xTool F2 Ultra embossing instructions | xTool F2 Ultra UV instructions