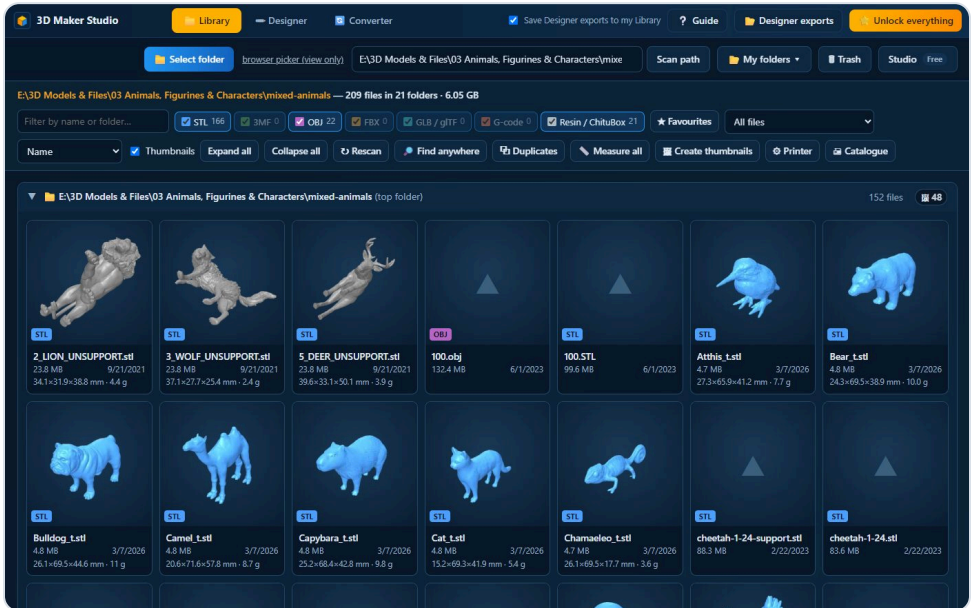


3D-LITHOPHANE.COM

3D Maker Studio User Guide

Your 3D files, the 3D Designer and the File converter in one app.



For 3D Maker Studio for Windows. October 2026.

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Using this guide

Chapters 1 to 3 explain the Studio. After that, read the part for the tab you are using. Names you see on the screen are in **bold**, and keys look like this: **Ctrl** + **1**.

PART 1

The Studio

1 Getting started

3D Maker Studio puts three tools in one window: the **Library**, which shows every 3D file on your computer in 3D, the **Designer**, where you make and change models, and the **Converter**, which turns files into the format you need. They work together, so a model goes from your folder to the Designer and back without hunting for files.

Installing

- 1 Download 3D Maker Studio from the **Supporter** page on 3d-lithophane.com and run the installer.
- 2 Start it from the Start menu or the desktop shortcut.
- 3 Sign in with your 3d-lithophane.com account. A free account is enough. You sign in once, and every tab uses the same sign-in.

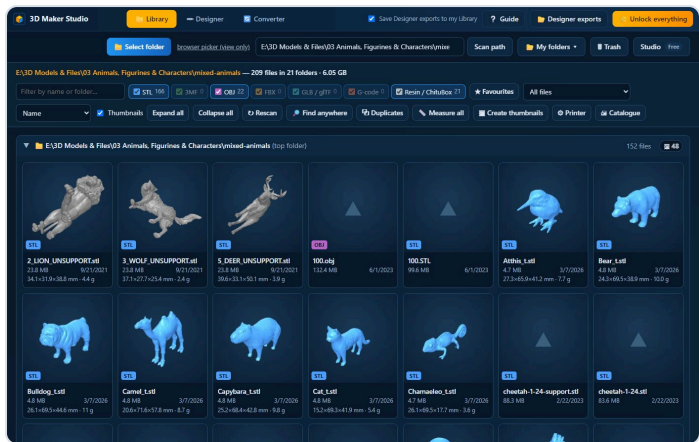
Free and unlocked

The Studio is free to use. The free version has daily limits on saving and exporting in the Designer, and the Library shows up to 1,000 files per folder. **Unlock everything** (the gold button at the top) removes the limits in every tab, for life.

Already bought the 3D Designer or 3D Previewer app?

What you bought carries over. Sign in with the same account: the Designer unlock opens the Designer tab, the 3D Previewer unlock opens the Library tab, and the bundle opens everything. The separate apps stop on 31 December 2026.

2 The window and its tabs



The Library tab, open on a folder of figurines.

Along the top are the four tabs. Click one, or use the keys:

Tab	What it is for	Key
Library	Every 3D file in a folder and its sub-folders, with 3D pictures	Ctrl + 1
Designer	Making and changing models	Ctrl + 2
Converter	Saving a file in another format	Ctrl + 3
Pictures	Editing a picture, saving it in another format, or using it in the Designer	Ctrl + 4

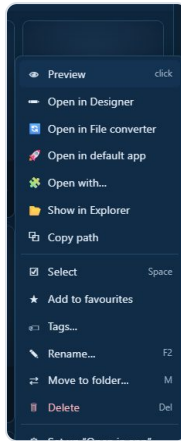
Guide (or F1) opens this guide in its own window, with **Print** and **PDF** buttons.

Each tab keeps its place while you look at another one, so you can switch back and forth freely. On the right of the top bar:

- **Save Designer exports to my Library:** when it is ticked, everything you export from the Designer is saved for you (chapter 3).
- **Designer exports:** opens that folder in the Library.
- **Unlock everything:** opens the checkout in your web browser.

3 Working between the tabs

From the Library to the Designer or the Converter



Right-click a model.

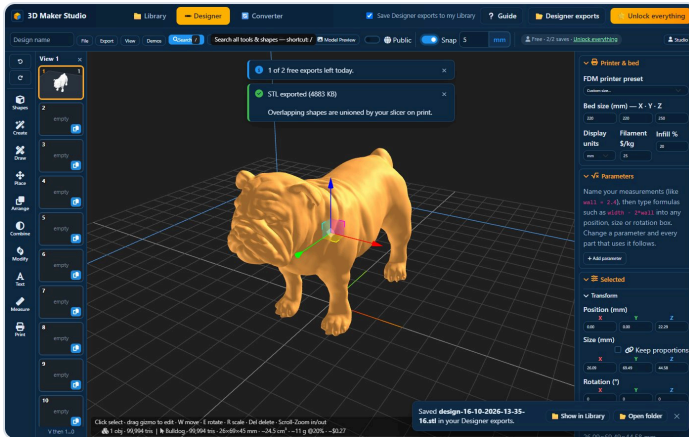
Right-click a model in the Library and choose **Open in Designer** or **Open in File converter**. In a model's preview the same buttons are called **Edit in Designer** and **Convert to other formats**.

- STL, OBJ, 3MF, GLB and FBX files go straight into your design.
- Other formats, like STEP or PLY, open in the Designer's converter window first. Press **Add to the designer** there.

From the Converter to the Designer

Open a file in the Converter tab and press **Add it to the Designer** in the bar at the top. The size and the turn you chose in the converter come along, and a model with several colours arrives as one part per colour.

From the Designer to the Library



After an export: the file is saved, with buttons to show it.

With **Save Designer exports to my Library** ticked, every file you export from the Designer is saved straight into **Documents\3D Maker Studio\Designer exports**, without asking where. A note shows the file name, with **Show in Library** and **Open folder**. An earlier file is never overwritten: a second one gets "(2)" in its name.

Tip

Untick the box when you want to choose the folder yourself for a file. The usual Save window then opens again.

PART 2

Library

4 Choosing a folder

The Library shows the 3D files in one folder and every folder inside it, grouped by the folder they are in.

- **Select folder** opens a folder browser. Pick a drive and a folder, then **Choose**.
- Or type or paste a path, for example **D:\3D Prints**, and press **Scan path**.
- **My folders** lists the folders you opened before, so you can go back to one with a click.

A big drive takes a moment the first time; a counter shows how far it has got. It reads **STL**, **3MF**, **OBJ**, **FBX**, **GLB** and **glTF** models, **G-code** and resin files (**CTB**, **PHOTON**, **PWS** and others). Drawings, documents and pictures in the same folders (STEP, DWG, PDF, JPG ...) show as small badges next to the models.

Free and unlocked

The free version shows up to 1,000 files per folder you open. Unlocked, there is no limit.

5 Browsing your files

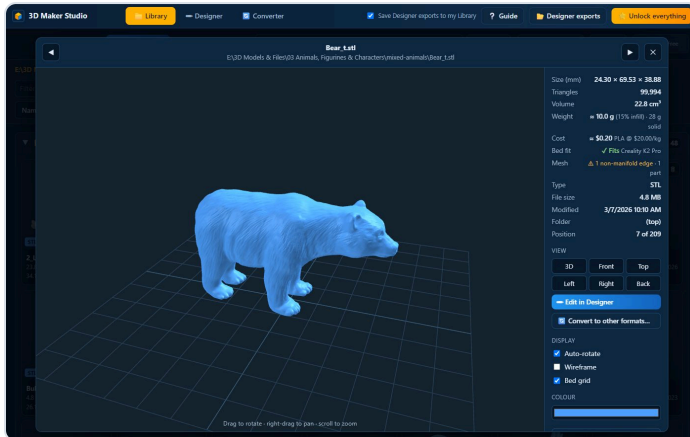
Every model gets a card with a 3D picture, its name, size and date. The pictures are made the first time you see them and kept, so the next visit is quick. The bar above the cards narrows things down:

- **Filter:** type part of a name or a folder.
- **File types:** tick or untick STL, 3MF, OBJ, FBX, GLB, G-code and resin.
- **Favourites** and the **All files** list: only favourites, files with notes, or one of your tags.
- **Sort** by name, size (largest first) or date (newest first).
- **Thumbnails** on or off, **Expand all** and **Collapse all** for the folder groups, and **Rescan** after you have added files.

Selecting several files

Hold **Ctrl** and click cards, or **Shift** + click for a row of them. **Ctrl** + **A** selects everything shown, **Esc** clears the selection. A bar appears with what you can do with all of them at once: open, favourite, tag, move or delete.

6 Looking at a model



A model in the preview, with its facts on the right.

Click a card to open the model in 3D. Drag to turn it, right-drag to slide, scroll to zoom.  and  go to the previous and next file, **R** resets the view and **Esc** closes it.

On the right you see its **size** in mm, the number of triangles, the **volume**, roughly what it **weighs** and **costs** in filament, whether it **fits your printer's bed**, and a check of the mesh.

- **View:** 3D, front, top, left, right and back.
- **Lying on its side? Flip up-axis:** for OBJ, FBX and glTF files made the other way up. The Library remembers it.
- **Display:** auto-rotate, wireframe and the bed grid. **Colour:** the file's own colours, or one you pick.
- **Save PNG snapshot** and **Turntable video** (8 seconds, square): ready for a shop listing or social media.
- **Inspect:** measure between two points, or cut through the model to look inside.

7 Keeping your files tidy

- **Favourites:** the star on a card, or **F** in the preview.
- **Tags and notes:** in the preview, type a tag and press **Enter**, and write notes like "needs supports, 0.12 layers". The **All files** list finds them again.
- **Rename** (**F2**), **Move to folder** (**M**) and **Delete** (**Delete**), from the right-click menu or the preview.
- **Rename many:** select several files and give them a common name with numbers.

The Trash

Delete moves a file to the Library's own **Trash**, never straight out of existence. The **Trash** button at the top shows what is there: restore a file to where it was, or empty the Trash, which sends the files to the Windows Recycle Bin.

Tip

Right after a move or a delete, the note at the bottom has an **Undo** button.

8 Finding things

- **Find anywhere** (**Ctrl** + **K**): search every folder you have ever opened, not only this one.
- **Duplicates**: finds identical files in this folder and its sub-folders, so you can free up space.
- **Measure all**: works out the size, volume and weight of every file shown, so you can sort and filter by them.
- **Create thumbnails**: makes every picture now, so browsing a big folder is instant afterwards.

9 Getting files ready to print

- **Printer:** your printer's bed size and your filament's price, used for the bed check and the cost on every model.
- **Open in default app** () opens the file in your slicer. **Open with** lets you pick another program, for example OrcaSlicer for one file and Bambu Studio for another.
- **Combine into one 3MF plate:** select several models (right-click the selection) and get one 3MF with all of them, ready for your slicer.
- **Project pack:** the selected files in one zip, to share or keep together.
- **Catalogue:** a printable PDF of the files shown, with their pictures and facts. Handy for a stand at a market.
- **G-code and resin files** show the slicer's own picture and the print facts: time, filament or resin, layers.

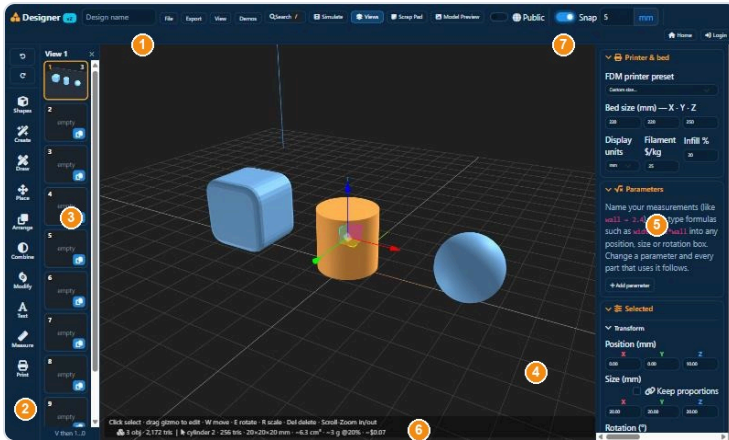
PART 3

Designer

The Designer in the Studio

The Designer tab is the same 3D Designer as on 3d-lithophane.com. Your saved designs and shapes are the same in the Studio and on the website. These chapters come from the 3D Designer guide.

10 The screen



The Designer screen.

- 1 **Top bar.** The name of your design and the menus: **File** (save, open, import), **Export** (download for printing), **View**, **Demos**, **Search**, **Simulate**, **Views**, **Scrap Pad** and **Model Preview**.
- 2 **Tool rail.** All the tools, sorted into groups: Shapes, Create, Draw, Place, Arrange, Combine, Modify, Text, Measure and Print. Click a group to see what is in it. Undo and Redo are at the top.
- 3 **Build views.** Small pictures of your ten build plates. See chapter 24.
- 4 **3D view.** Your printer bed with the model on it. Each grid square is 10 mm.
- 5 **Right panel.** Your printer and bed size, and the position, size and colour of the part you have selected.
- 6 **Status line.** The number of parts, the size of the selected part, and roughly how much filament it needs and what it costs.
- 7 **Snap.** When it is on, parts move in fixed steps (5 mm here), which makes it easy to line them up.

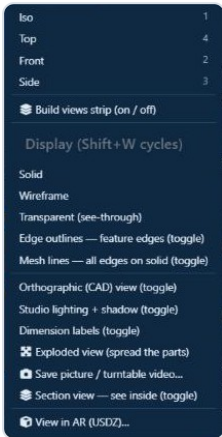
Tip

Choose your printer first, under **FDM printer preset** at the top of the right panel. The bed then has the same size as your printer's bed, so you can see straight away if a model will fit.

11 Looking around your model

You can look at your model from any side. This only changes your view. The parts stay where they are.

To	Do this
Turn around	Hold the left mouse button on an empty spot and drag.
Slide sideways	Hold the right mouse button and drag.
Zoom in or out	Roll the scroll wheel . It zooms in towards the mouse pointer.
Jump to a view	Press 1 (at an angle), 2 (front), 3 (side) or 4 (top), or use the View menu.



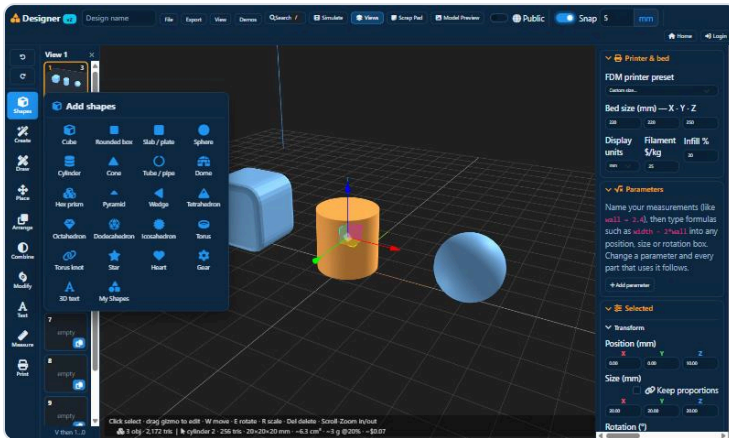
The **View** menu.

More in the View menu

- **Wireframe** and **Transparent** let you see through parts, for example to check that a hole goes all the way through. **Shift** + **W** switches between the display styles.
- **Section view** cuts the model open on screen so you can see inside.
- **Dimension labels** shows the sizes of the selected part in the 3D view.
- **Save picture / turntable video** saves an image or a short video of the model turning round, to share.
- **View in AR** lets you see the model in your room on a phone or tablet.

12 Adding shapes

Click **Shapes** at the top of the tool rail, then click a shape. It is placed on the bed and selected, so you can change it straight away.



The **Shapes** panel.

- Most models start with a **Cube**, **Rounded box**, **Cylinder** or **Slab / plate**.
- A **Tube / pipe** is a cylinder with a hole through the middle. A **Dome** is half a sphere.
- **My Shapes** holds the parts you saved yourself. To save one, right-click it and choose **Object > Save as my shape**. You can then use it in any design.

Tip

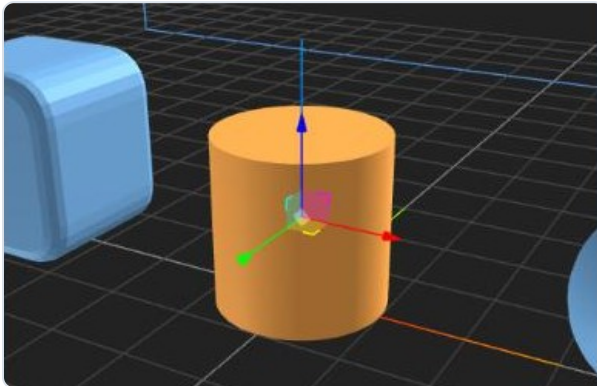
If you can't find a shape or tool, press **/** (or click **Search** in the top bar) and type what you are looking for, for example "gear", "hole" or "mirror".

13 Selecting and moving parts

Selecting

- Click a part to select it. It turns orange.
- Hold **Shift** or **Ctrl** while you click to select more than one part.
- Click an empty spot to select nothing. **Ctrl** + **A** selects everything, and **Tab** goes from one part to the next.
- The **Objects** list at the bottom of the right panel shows all your parts. Click a name to select that part. The small buttons next to it hide, lock or download the part.

The arrows on a selected part



Red moves left and right (X), green front and back (Y), blue up and down (Z).

Drag an arrow to move the part in that direction only. Drag one of the small squares between the arrows to move it flat over the bed. There are three sets of arrows:

- | | |
|----------|---|
| W | Move arrows to move the part |
| E | Rotate rings to turn it |
| R | Scale handles to make it bigger or smaller |

Small and exact moves

- The **arrow keys** move the selected part one snap step at a time. Hold **Shift** for steps of 0.2 mm.
- **Move with snapping** (**Shift** + **M**): click a corner, edge or face of a part, then click where it must go. It snaps onto the corners and edges of other parts. You can also type a distance and press Enter. Hold **Ctrl** to move a copy and leave the original where it is.

14 Size, position and colour

The right panel shows the numbers of the selected part. Click in a box, type a new number and press Enter. All sizes are in millimetres.



Position, Size, Rotation and Colour.

- **Position** is where the part sits on the bed. X is left and right, Y is front and back, Z is the height.
- **Size** is the width (X), depth (Y) and height (Z) of the part.
- **Keep proportions**: tick this and change one size, and the other two change with it, so the part doesn't get stretched. It works with the scale handles too, and the Designer remembers the tick for next time.
- **Rotation** turns the part by the number of degrees you type, for example 90.
- **Colour** is the colour of the part. Colours are kept when you download a 3MF file for a multi-colour printer.

Under the colour you can see the size of the part, its volume, and about how much filament it uses and costs. The **Actions** buttons do common jobs in one click: drop to floor, centre, mirror, duplicate and delete.

Tip

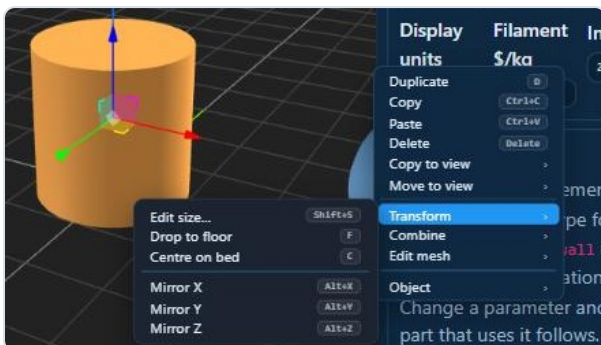
Shift + **S** takes you straight to the size box. To resize a whole design, use **Place > Scale / resize**. You can type the size you want there, or click **Fit bed** to make it fit your printer.

Parameters

In the **Parameters** box you can give a measurement a name, like *wall = 2*, and then type that name in any size box. If you change the value later, every part that uses it changes too. You don't need this to get started.

15 The right-click menu

Right-click a part to see what you can do with it. The menu changes with what you have selected. With two parts selected, for example, it also shows the ways to join them.

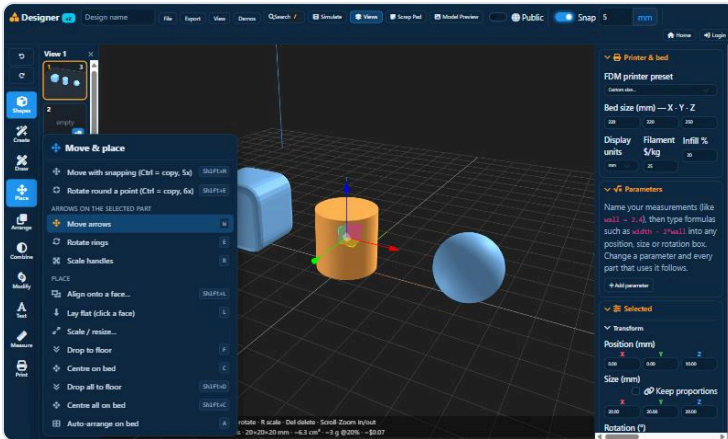


The keys on the right are the shortcuts.

- **Duplicate**, **Copy**, **Paste** and **Delete** are at the top.
- **Copy to view** and **Move to view** send the part to another build plate (chapter 24).
- **Transform**: change the size, drop it to the floor, centre it or mirror it.
- **Combine**: join parts, cut them and make holes (chapter 17).
- **Edit mesh**: cut the part in two, split it into pieces, lay it on a face or hollow it out.
- **Arrange** (two or more parts): group them, line them up or space them out evenly.
- **Object**: lock the part so it can't be moved by accident, hide it, show it see-through, save it to My Shapes, or download only this part.

You can give every item in this menu your own key. See chapter 28.

16 Placing parts

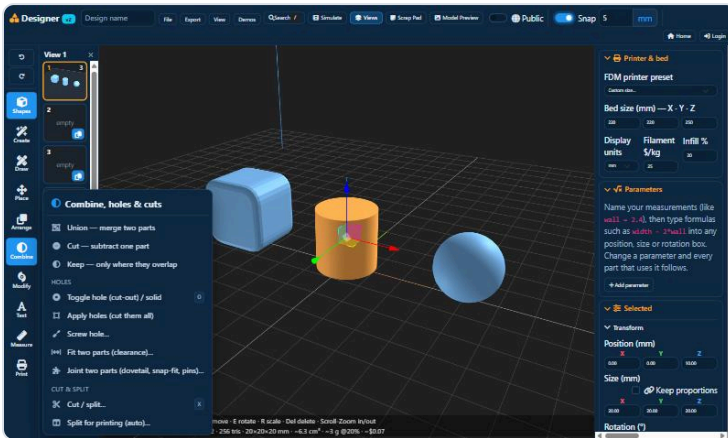


Click **Place** on the tool rail.

- F** **Drop to floor** puts the part down on the bed. Always do this before printing, otherwise the part starts in mid-air.
- C** **Centre on bed** moves the part to the middle of the bed.
- Shift** + **D**, **Shift** + **C** Do the same for all parts at once.
- L** **Lay flat**: click a flat face of the part and it turns so that face is on the bed. Good for a clean first layer.
- Shift** + **L** **Align onto a face**: click a face of one part, then a face of another part. The first part is placed flat against the second.
- A** **Auto-arrange on bed** spreads the parts out so they don't touch.
- Shift** + **E** **Rotate round a point**: click the point to turn around, then turn the part. Type an angle if you want an exact one.

17 Joining parts, holes and cuts

This is how you turn simple shapes into real objects. Click **Combine** on the tool rail.



The **Combine** tools.

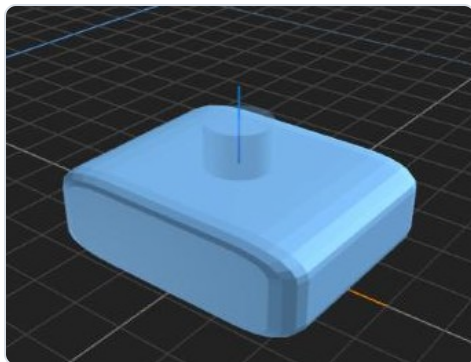
Union, Cut and Keep

Select two parts that overlap, then choose one of these:

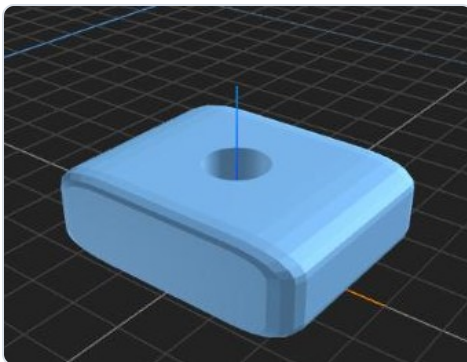
- **Union** joins them into one part.
- **Cut** takes the second part away from the first, like a cookie cutter.
- **Keep** keeps only the area where the two parts overlap.

Making a hole

The easiest way to cut something out is with a hole part. A hole part is see-through, and you can keep moving and resizing it until it is in the right place.



The cylinder is marked as a hole.



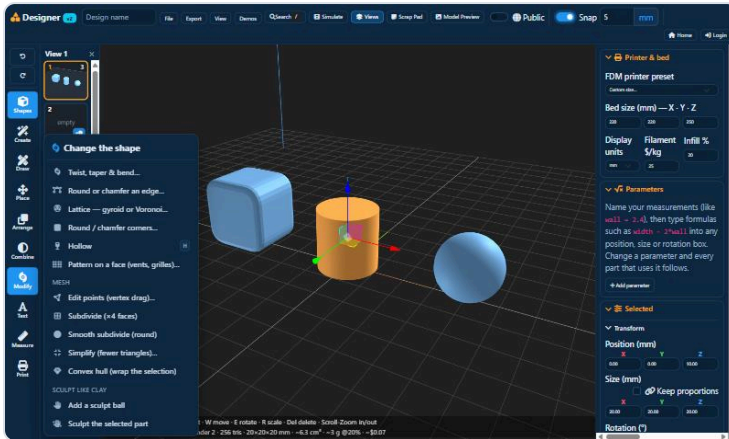
After **Apply holes**.

- 1 Add a cylinder (or any other shape) and put it where you want the hole. Make it a bit taller than the block, so it goes right through.
- 2 Select it and press **O**, or right-click and choose **Combine > Mark as hole**. It becomes see-through.
- 3 Move or resize it if you need to. You can mark more than one hole.
- 4 Choose **Apply holes** (**Shift** + **H**). All the holes are cut out of the parts they touch.

Also in this group

- **Screw hole** makes a hole for a screw or bolt, with room for the head or a six-sided pocket that holds a nut.
- **Fit two parts** leaves a small gap between two parts so they fit together after printing, like a lid on a box.
- **Joint two parts** adds a dovetail, snap-fit or pins so two printed pieces lock together.
- **Cut / split** (**X**) cuts a part in two with a flat cut, for example to print a tall model in two halves.
- **Split for printing** cuts a model that is too big for your printer into pieces that fit, with pins to join them again.

18 Changing a shape



Click **Modify** on the tool rail.

- **Twist, taper & bend:** twist a box into a spiral vase, make it narrower at the top, or bend it.
- **Round or chamfer an edge:** click an edge to round it off or give it a slanted cut.
- **Round / chamfer corners** does all the corners of a part in one go.
- **Hollow** (**H**) makes the part a shell with walls as thick as you choose. It saves a lot of filament, and turns a solid block into a box or a cup.
- **Lattice (gyroid or Voronoi)** turns a model into an open web. Voronoi gives the well-known cell pattern. You choose how many cells you want, and the outside edges stay closed.
- **Pattern on a face** puts vents, grilles or rows of holes on a flat face.
- **Edit points** lets you drag the corners of a shape by hand.
- **Smooth subdivide** rounds off a blocky shape.
- **Simplify** makes a very detailed imported model lighter, so the Designer stays quick.
- **Sculpt** lets you push and pull the surface with a brush, like clay.

Try them out. If you don't like the result, press **Ctrl** + **Z** and it is back the way it was.

19 Drawing your own shapes

If the shape you need isn't in the list, you can draw it. Click **Draw** on the tool rail.

Drawing on a part

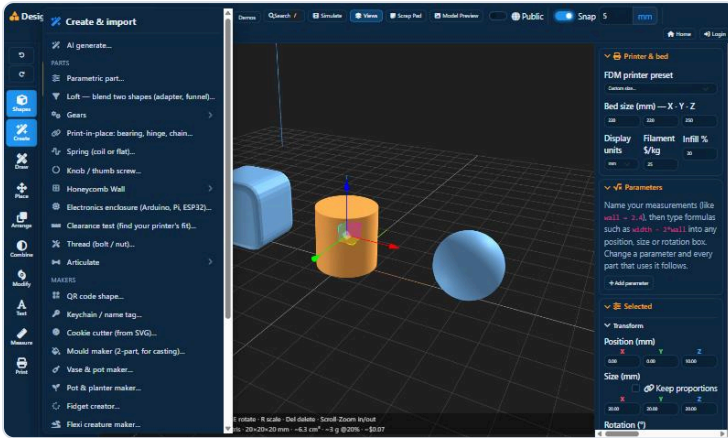
- 1 Choose **Draw on a face** (**Shift** + **R**) and pick Rectangle, Circle, Polygon or Lines.
- 2 Click on a flat face of your part and draw. Points snap to corners and edges. You can also type a size, for example *40,20* and Enter for a rectangle of 40 by 20 mm.
- 3 Choose **Push/Pull** (**Shift** + **P**) and drag what you drew. Push it in for a hole or pocket, or pull it out for a raised part.

Sketching a new shape

- Pick a plane (the bed, the front or the side), draw a **rectangle**, **circle** or **polygon**, and it is pulled up into a solid shape.
- **Revolve a profile**: draw half the outline of a vase, cup or bottle, and it is turned round into a round object.
- **Sweep along a path**: draw a path, and a tube or bar follows it.
- **Offset a face** draws a border on the inside of a face. **Follow Me** runs a profile around the edge of a face, like the moulding on a picture frame.

20 Ready-made parts and makers

Click **Create** on the tool rail. Each item asks a few questions, such as the size, the number of teeth or the text, and then builds the part.



The **Create** menu. Scroll down for more.

- **AI generate** (Supporter): describe what you want, for example "a desk organiser with three pen holes and a phone stand, 120 mm wide". The AI builds it from normal parts, so you can change it afterwards.
- **Parts**: gears, bearings and hinges that print in one piece, springs, knobs, screw threads, boxes for electronics, a honeycomb wall system, and models with moving joints.
- **Clearance test**: a small test print that shows how much gap your printer needs between moving parts.
- **Makers**: QR codes, keychains and name tags, cookie cutters, two-part moulds for casting, vases and plant pots, fidget toys, flexi animals, grips and multi-colour keychains.
- **Bring in**: open a model you already have (STL, OBJ, 3MF, GLB, FBX), turn an SVG drawing into 3D, or add a **Reference image** to trace over.

Demos

The **Demos** menu in the top bar has finished example designs, such as gears and models with moving parts. Open one to see how it was made, and change it if you like.

21 Text, pictures and colour

Click **Text** on the tool rail.

- **3D text**: type your text and choose the font, size and height. It stands on the bed as a separate part.
- **Text on a face** (

Tip

Text prints best if the letters stand out (or go in) at least 1 mm and the lines are at least 0.8 mm thick. Bold fonts work best.

22 Measuring

Click **Measure** on the tool rail.

M **Measure:** click two points to see the distance between them. You can also measure an angle or the width of a round hole.

Shift + T **Tape measure & guides:** measure, and leave guide lines and points that other tools snap to. Guides are saved with the design but not printed.

Shift + A **Protractor:** guide lines at an exact angle.

Section view: cut the model open on screen to look inside.

Dimension labels: show the sizes of the selected part in the view.

Scrap Pad

Click **Scrap Pad** in the top bar for a small notepad that stays on the screen while you work. It is handy for writing down measurements. Your notes are kept after you close the page.

23 Copies, mirrors and groups

Click **Arrange** on the tool rail.

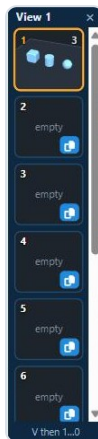
- **Duplicate** () puts a copy next to the original.
- **Mirror** flips a part left to right, front to back, or upside down. **Mirror copy** makes a flipped copy, for example a left and a right bracket.
- **Row, ring** and **grid of copies** make many copies at once: a row of pegs, holes in a circle, or feet in a grid.
- **Align** (two or more parts) lines parts up by their left sides, centres, tops, bottoms and so on.
- **Even spacing** (three or more parts) puts the same gap between all of them.
- **Group** () joins parts so they move and resize together. **Ungroup** () separates them again.
- **Split into separate bodies** turns an imported model that is really several pieces into separate parts.

24 Build views

One design can have up to **ten build views**. Each view is a printer bed of its own. You can use them for:

- parts of one project that are printed separately, for example a box on view 1 and its lid on view 2,
- different versions of the same idea,
- a full bed of parts, with a spare view next to it.

The pictures beside the tool rail show all ten views. The view you are on has an orange frame.

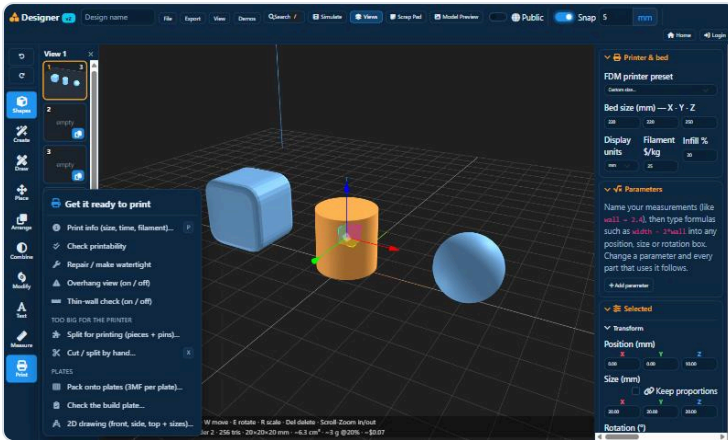


The build views.

- To go to a view, click its picture, or press **V** and then the number of the view. **V 0** is view 10.
- To copy parts to another view, select them and click the small copy button on that view's picture. Hold **Shift** to move them instead. You can also right-click and choose **Copy to view** or **Move to view**.
- The **Views** button in the top bar shows or hides the pictures.
- **Export** downloads the view you are on. **Export > All views as 3MF** downloads all of them.

When you save, all ten views are saved together.

25 Getting ready to print



Click **Print** on the tool rail.

- **Print info** (**P**) shows the size, roughly how long the print takes, and the filament and cost.
- **Check printability** looks for things that would spoil a print, such as gaps in the surface or walls too thin to print, and tells you how to fix them.
- **Repair / make watertight** fixes most of those problems for you. It is useful for models you downloaded from the internet.
- **Overhang view** colours the areas that hang in the air and need supports.
- **Thin-wall check** shows walls that are too thin for your printer.
- If a model is too big for your printer, **Split for printing** cuts it into pieces that fit, with pins to join them.
- **Pack onto plates** spreads a lot of parts over as many printer plates as needed.
- **2D drawing** makes a drawing of the front, side and top with all the sizes, which you can print on paper.

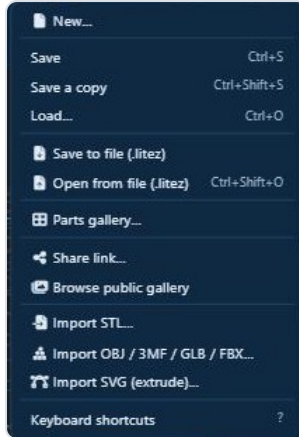
Simulate

Click **Simulate** in the top bar to watch the model being printed layer by layer, with the print time and how much filament it uses. It is a good way to spot a problem before you start a real print.

Before you print

Drop all parts to the floor (**Shift** + **D**), put large flat faces down on the bed (**L**), and run **Check printability**.

26 Saving and opening designs



The **File** menu.

- Type a name for your design in the **Design name** box at the top.
- **Save** (**Ctrl** + **S**) saves the design to your account, so you can open it on any computer. **Save a copy** saves it as a new design and leaves the old one as it was.
- **Load** (**Ctrl** + **O**) shows your saved designs, each with a small picture.
- **Save to file** and **Open from file** keep the whole design as one file (.litez) on your own computer. Use this for backups, or to give a design to someone else.
- **New** starts an empty design.
- **Share link** gives you a link that other people can open to see your design.
- Switch on **Public** at the top before you save, and your design is shown in the public **Gallery**. Other people can then open a copy of it and change their copy. Your own design stays as it is.
- **Import** brings in a model or drawing you already have (STL, OBJ, 3MF, GLB, FBX or SVG).

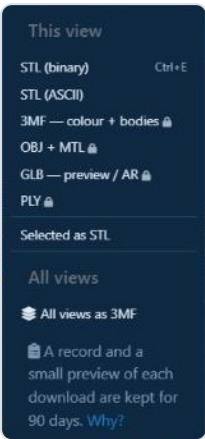
Unsaved work

While you work, the Designer keeps a copy of your design in the browser. If the page reloads or closes by accident, it offers to bring the design back. This copy is only in this browser on this computer, so use **Save** for anything you want to keep.

27 Downloading for your printer

Your printer can't read a design directly. You download a file and open it in your **slicer**. That is the program that came with your printer, such as Bambu Studio, PrusaSlicer, OrcaSlicer, Cura or Creality Print.

Open the **Export** menu and choose a format.



The **Export** menu.

Format	When to use it
STL	Every printer and slicer can open it. It has no colour. Shortcut: Ctrl + E .
3MF	For printing in more than one colour, or when you want the parts kept separate in the slicer.
OBJ, GLB, PLY	For other 3D programs, websites or AR.
Selected as STL	Only the selected part, not the whole design.
All views as 3MF	All your build views at once.

A padlock next to a format means it needs Supporter. STL is free for everyone with a free account.

Colours

STL files have no colour. If your model has colours, download a 3MF to keep them. In Bambu Studio, Creality Print, OrcaSlicer and PrusaSlicer each colour of your design arrives on its own filament: the first colour on filament 1, the second on filament 2, and so on. Set those filaments to the colours you have loaded.

OrcaSlicer and PrusaSlicer

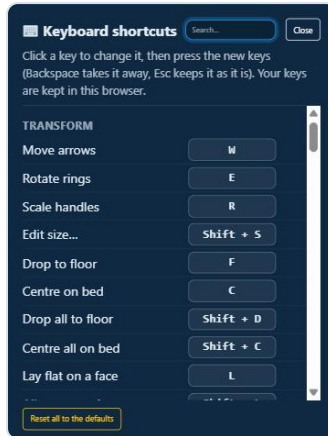
In OrcaSlicer, bring the file in with **File > Import** (**Ctrl** + **I**) or drag it onto the plate. If you use **Open project** instead, Orca keeps only one filament and the other colours don't show. In PrusaSlicer, choose a printer with more than one filament, such as one with an MMU3 or the XL with several tool heads.

Bambu Studio message

When you open the file, Bambu Studio says it will load the geometry data only. It says that for every 3MF that wasn't made in Bambu Studio. Click OK. Your model and its colours load as normal; only print settings are not taken from the file.

28 Keyboard shortcuts

Most things have a key, which saves a lot of clicking. Press **?** or choose **File > Keyboard shortcuts** to see them all.



The **Keyboard shortcuts** window.

Changing a key or adding one

- 1 Press **?** to open the window. Type in the search box to find what you want, for example "floor".
 - 2 Click the key button next to it. It now waits for you to press a key.
 - 3 Press the new key or keys, for example **Alt** + **F**. If that key is already used for something else, you are asked first whether to swap them.
- Press **Backspace** while it waits to remove the key, or **Esc** to leave it unchanged.
 - **Reset all to the defaults** puts all the keys back the way they were.
 - You can give a key to every item in the right-click menu and to every tool in the menus on the left (Shapes, Create, Draw and the others). Tools that have no key yet are listed under their menu's name. The menus then show your key next to the item.
 - Your keys are saved in this browser.

All the standard keys are listed on the quick reference card at the back.

29 Other useful things

- **Search** (**/**): type a word to find a shape or tool.
- **Undo** and **Redo**: the two arrows at the top of the tool rail, or **Ctrl** + **Z** and **Ctrl** + **Y**.
- **Snap**: when it is on, parts move in steps (type the step in mm next to it). When it is off, they move freely.
- **Scrap Pad**: a notepad for measurements and ideas. You can drag it anywhere and make it bigger or smaller.
- **Model Preview**: a small window for a photo or drawing of what you are making, so you can look at it while you work. Drop or paste a picture into it.
- **Simulate**: watch your model being printed, layer by layer.
- **Demos**: finished example designs to open and learn from.
- **Lock** (**K**): a locked part can't be selected or moved by accident. Unlock it in the Objects list.
- **Hide** (**Alt** + **H**): hide a part so you can get to what is behind it. The eye button in the Objects list shows it again.

30 Problems and fixes

Problem	What to do
A part is floating, or sits inside the bed	Select it and press F (drop to floor). Shift + D does all parts.
The hole wasn't cut	Make the hole part a bit longer so it sticks out on both sides, then choose Apply holes (Shift + H).
I can't click a part	It is probably locked or hidden. Check the Objects list in the right panel.
Two parts print as two pieces	Let them overlap a little, select both and choose Union .
My model lost its colours	STL files have no colour. Download a 3MF instead.
It is too big for my printer	Tick Keep proportions and make it smaller, use Place > Scale / resize > Fit bed , or use Split for printing .
The Designer is slow	Use Simplify on big imported models, and hide the parts you are not working on.
I lost my design	Open the Designer again in the same browser. It offers to bring back work that wasn't saved. Press Ctrl + S often.
A key does nothing	Click once in the 3D view first, because the key may be going into a text box. Also check the key in the shortcuts window (?).
There is a padlock	That tool or format needs Supporter. Everything else still works.

The full help, with more detail on every tool, is at 3d-lithophane.com/designer-guide.php.

31 Quick reference card

These are the standard keys. You can change any of them (chapter 28).

Looking around

Left-drag	Turn around
Right-drag	Slide
Scroll wheel	Zoom
1 2 3 4	Angle, front, side, top
Shift + W	Display style
V then 1 ... 0	Go to build view

Edit

Ctrl + Z / Y	Undo / redo
Ctrl + C / V	Copy / paste
Ctrl + A	Select all
D	Duplicate
Delete	Delete
Tab	Next part
Arrow keys	Nudge (Shift : 0.2 mm)

Move and size

W E R	Move, rotate, scale
Shift + S	Edit size
F / Shift + D	Drop to floor / all
C / Shift + C	Centre / all
L	Lay flat on a face
Shift + L	Align onto a face
A	Auto-arrange
Alt + X / Y / Z	Mirror
Shift + M	Move with snapping
Shift + E	Rotate round a point

Combine

Alt + U	Union
Alt + S	Cut
Alt + I	Keep
O	Hole / solid
Shift + H	Apply holes
X	Cut / split
Shift + X	Split into parts
H	Hollow

Parts

G / U	Group / ungroup
Alt + B	Align bottoms
K	Lock / unlock
Alt + H	Hide
Alt + W	See-through (this part)

Draw and measure

Shift + R	Draw on a face
Shift + P	Push / pull
Shift + O	Offset a face
Shift + F	Follow Me
T	Text on a face
M	Measure
Shift + T	Tape measure
Shift + A	Protractor
Shift + I	Reference image
P	Print info

File

Ctrl + S	Save
Ctrl + Shift + S	Save a copy
Ctrl + O	Load a design
Ctrl + Shift + O	Open a file
Ctrl + E	Export STL
Ctrl + Shift + E	Export this part

Help

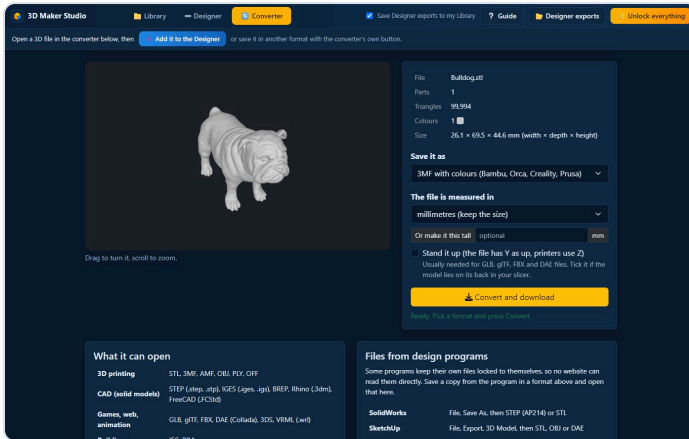
/	Search all tools
?	Keyboard shortcuts
Esc	Cancel or close

3d-lithophane.com

PART 4

Converter and Pictures

32 Converting 3D files



The Converter tab, with the Add it to the Designer bar at the top.

- 1 Drop a file onto the box, or click it to pick one. An OBJ needs its .mtl file (and its pictures), a glTF its .bin file: pick them together, or a zip.
- 2 Check the model in the preview and the facts next to it: parts, triangles, colours and size.
- 3 Choose **Save it as**: STL, 3MF with colours (for Bambu, Orca, Creality and Prusa), OBJ, GLB, glTF, PLY, OFF or Rhino 3DM.
- 4 If the size is wrong, choose what the file is measured in, or type how tall it should be. Tick **Stand it up** if it lies on its back.
- 5 Press **Convert and download**. Or press **Add it to the Designer** at the top to carry on in the Designer.

It opens STL, 3MF, AMF, OBJ, PLY, OFF, STEP and IGES (from CAD programs), BREP, Rhino, FreeCAD, GLB, glTF, FBX, DAE, 3DS, VRML and IFC. A STEP or IGES file is turned into triangles when it opens: that is what printers need, but a mesh cannot become a CAD solid again.

Files from design programs

SolidWorks, SketchUp, Inventor, Fusion and FastCAD keep their own files to themselves. Save a copy from the program as STEP, STL or OBJ, and open that.

33 Converting pictures

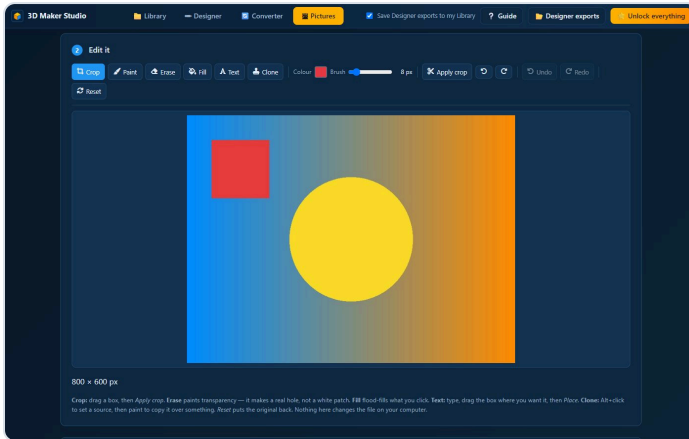
Click **Pictures** at the top of the Converter. Drop one picture or several (JPG, PNG, WebP, GIF, BMP, AVIF, SVG or ICO).

- **Save as** PNG, JPG or WebP (with a quality slider), BMP, or ICO for a website icon.
- **Colour**: keep it, greyscale, black and white (with a slider for where black starts), sepia or negative.
- **Black and white, dotted** turns shades into dots, which is what most laser engravers want for photos.
- **Width** and **Turn** resize and rotate. Several pictures come back together in one zip.

Tip

iPhone photos (HEIC) can't be opened yet. On the iPhone, Settings, Camera, Formats, **Most Compatible** saves photos as JPG.

34 Editing pictures



The Pictures tab.

The **Pictures** tab is a picture editor. Drop a picture onto it, or open one from the Library: in the Library's picture viewer, click **Edit in Pictures**.

Edit it

- **Crop**: drag a box, then **Apply crop**. The arrows next to it turn the picture.
- **Paint** and **Fill** in the colour you pick, at the brush size you set.
- **Erase** makes the picture see-through there, a real hole rather than a white patch.
- **Text**: type it, drag the box where you want it, then **Place**.
- **Clone**: **Alt** + click a spot to copy from, then paint it over something you want gone.
- **Undo** (**Ctrl** + **Z**), **Redo** and **Reset** (back to the picture you opened).

Save it, or use it in the Designer

- Choose **Save as** (PNG, JPG, WebP or BMP) and a **Colour**: as it is, greyscale, black and white, dotted black and white for a laser engraver, sepia or negative. **How it will look** shows the result before you save.
- **Save picture** puts it in **Documents\3D Maker Studio\Pictures**, with **Show in Library** and **Open folder**.
- **Use it in the Designer**: a **Raised picture** or a **Decal** on a part of your design (add a part first, a flat plate works well), a **Reference picture** behind your model to trace or match its size, or a **Multi-colour keychain** where every colour becomes its own filament.

35 Problems and fixes

Problem	What to do
A tab asks me to sign in again	Sign in on that tab, or switch to another tab and back: once you are signed in on one tab, the others follow.
The Library shows only part of my folder	The free version shows 1,000 files per folder. Unlock everything, or open a smaller folder.
No pictures on some cards	Very big files get a picture when you open them. Create thumbnails makes them all at once.
A model is lying on its side	In the preview, Flip up-axis . In the Converter, tick Stand it up .
An export didn't show up in the Library	Click Designer exports at the top, or Rescan . Check that Save Designer exports to my Library is ticked.
"Add a part first" when I use a picture in the Designer	A raised picture and a decal go on a part. Add one in the Designer (Shapes , a flat box makes a good plate), then use the picture again.
A STEP file takes a while to open	The first STEP file needs an extra helper from the internet. After that it is quicker.
I bought the 3D Designer or 3D Previewer app, but the Studio says Free	Sign in with the email address you bought it with. Then open your account in that tab and click Check again .
Something else	Email contact@3d-lithophane.com.

