Beacon Sign Builder — User's Manual (v1.1.6)

Getting started

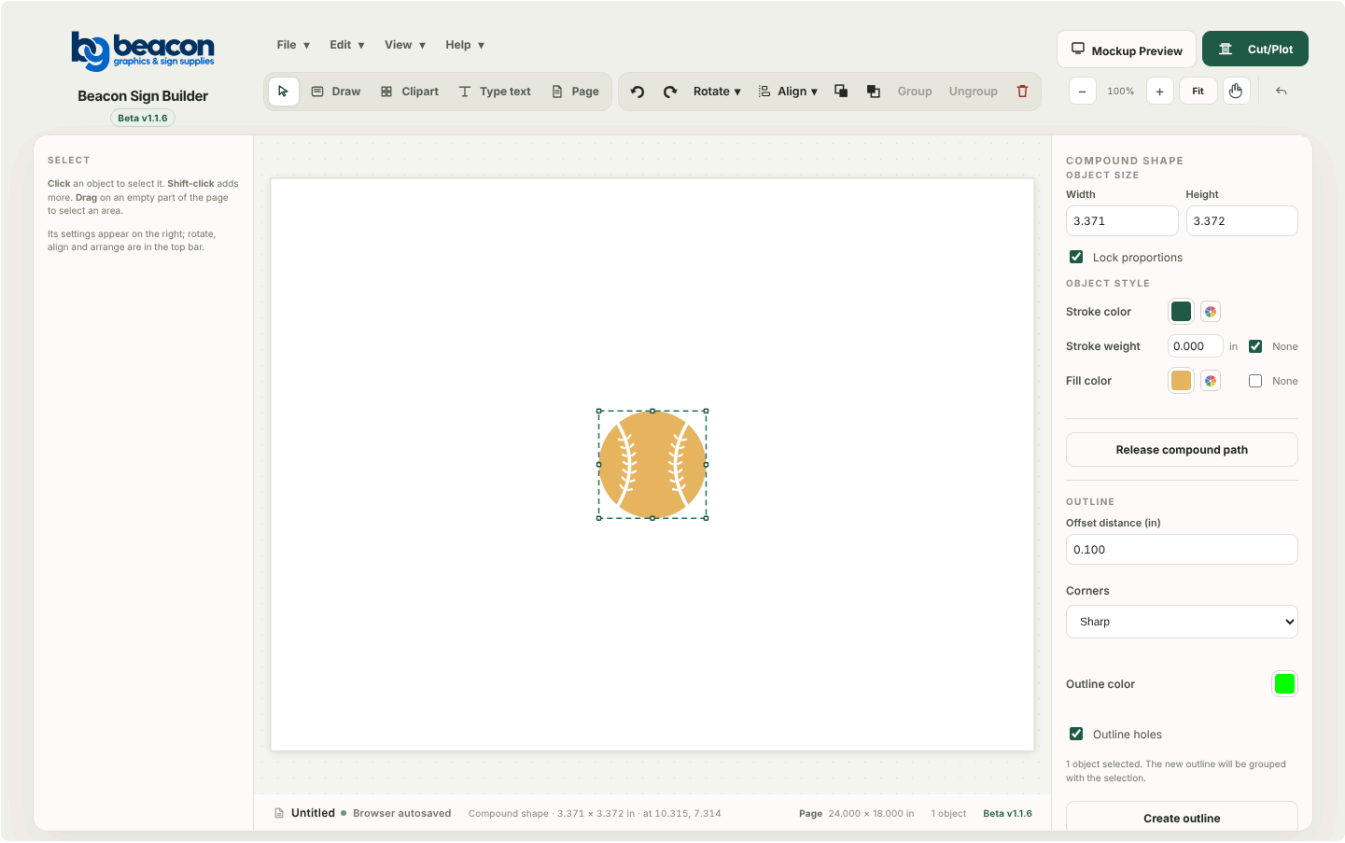
Beacon Sign Builder is a free sign and lettering designer that runs in your web browser at beacongraphics.com/pages/beacon-sign-builder. There's nothing to install to design. To send jobs straight to a vinyl cutter, you also install the free Windows app, the Beacon Cutter Bridge (see Cutting).

What you need

- A desktop or laptop browser: Chrome or Edge (recommended), Firefox or Safari. A mouse helps.
- For cutting: a Windows 10 or 11 PC connected to your cutter by USB or serial cable, or over your network.

The screen

- **Menu bar (top left):** File (save, open, import, export), Edit (cut, copy, paste, undo), View (zoom, rulers, grid, guides), and Help (manual, shortcuts, support).
- **Toolbar:** Select, Draw, Clipart, Type text and Page, then Rotate, Align, Group and Ungroup, and on the right Mockup Preview and Cut/Plot.
- **The page:** the white area is your sign. Only artwork on the page is exported or cut.
- **Settings panel (right):** settings for whatever is selected: size, color, font, stroke and so on.



The Sign Builder screen with a clipart baseball selected. Its size, colors and outline settings show on the right.

Your work is saved in the browser as you go, so closing the tab doesn't lose it. To keep a copy or move to another computer, save a project file (see Saving and exporting).

Designing

Page size

Click **Page** in the toolbar to set the units (inches or mm) and the page width and height. Set it to the finished sign size; exports and cut jobs use it.

Shapes

Click **Draw** and pick Rectangle, Ellipse, Line, Arc, Freehand, Triangle or Polygon, then drag on the page. Rectangles can have rounded corners and polygons any number of sides (set them in the panel). For an arc, press where it starts, drag to where it ends, let go, then move to shape it and click. Hold **Shift** while drawing a line, or while dragging an arc's ends, to keep it level, upright or at 45°.

Text

Click **Type text**, click on the page and type. In the panel you can change:

- Font, letter height, character and word spacing, bold, italic, underline and strikethrough.
- **Warp style**: Arc, Arch, Bulge, Wave, Flag and more, or Freehand to drag the corners. Set the amount with Warp amount.

Text stays editable. Use **Convert text to shapes** when you need to edit individual letters as shapes.

Pictures

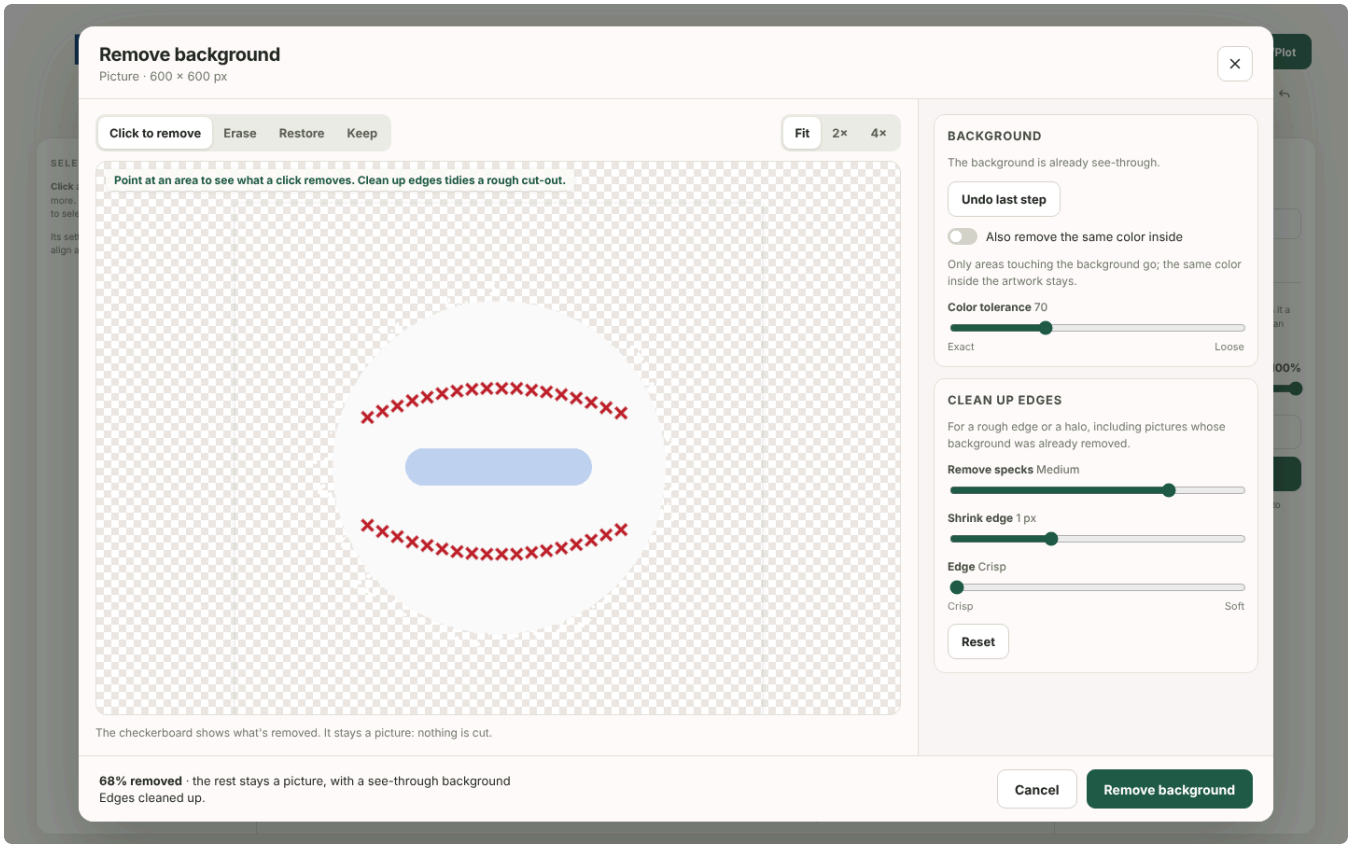
Use **File › Import**, drag a file onto the page, or paste. Pictures can be PNG, JPG, WebP, GIF or BMP; you can also import PDF and EPS artwork. With a picture selected:

- **Remove background…** erases a background color, with brushes to touch up.
- **Trace image…** turns the picture into cut-ready vector shapes.
- **Opacity** fades it, handy as a guide to draw over.

Removing a background

Select the picture and click **Remove background…**. A plain background is often removed automatically.

1. **Point before you click.** With **Click to remove**, pointing at the picture highlights in pink what a click would remove. If the pink spreads into your artwork, don't click there.
2. **Keep** what must stay. Paint over it with the **Keep** brush (it shows in light blue); clicks can't remove it, even white on a white background.
3. **Erase** and **Restore** paint the rest by hand. **[** and **]** change the brush size.
4. **Clean up edges** fixes a rough or speckled outline, including pictures whose background was already removed:
   - **Remove specks:** deletes loose bits not attached to the artwork.
   - **Shrink edge:** trims 1–3 pixels off the outline, taking a halo with it.
   - **Edge:** Crisp for tracing and cutting, Soft for printing.
5. Click **Remove background**. It stays a picture; Undo brings the background back.



Remove background with a Keep area painted on the ball (light blue) and the edge cleaned up. Pointing at the kept ball highlights nothing, so a click there can't remove it.

Clipart

Click **Clipart**, choose a category (Sports, ADA & Restroom, Business & Trades, Patriotic & Military, Borders & Ornaments, Holidays & Seasons, Arrows & Symbols, Dogs), search, and click an icon to add it. Clipart is cut-ready vector art you can resize, recolor or ungroup.

Selecting and arranging

- Click to select; Shift-click to add more; drag on an empty area to select a region.
- **Rotate**: 90° steps, 180°, a custom angle, or flip.
- **Align**: to the page or to each other.
- **Group / Ungroup** to move objects together.
- Width, height and Lock proportions are in the panel.

Colors

Set **Fill** and **Stroke** in the panel. **Vinyl palettes** lists real vinyl colors (e.g. Avery HP750) by name and number, so the design matches what you'll cut; on-screen colors are approximate, so check a physical color chart. **Custom color** takes Hex, RGB or CMYK.

Shape tools

- **Weld** joins overlapping shapes into one (Additive) or removes overlaps (Subtractive).
- **Create outline** adds an offset outline around artwork, with sharp, rounded or beveled corners, for a border or second color.
- **Convert stroke to outline** turns a stroke into a filled shape so it cuts.
- **Close path**, **Join paths** and **Smooth path** clean up drawn or traced lines.

View aids

The View menu has zoom, Rulers, Grid and Snap to grid, Guides (drag from a ruler) and a Safe margin. **Wireframes** shows outlines only, roughly what the cutter will follow.

Saving and exporting

Projects

File › Save Project (Ctrl/⌘ S) saves a .bgs file with everything: artwork, text you can still edit, pictures and page size. **File › Open Project** (Ctrl/⌘ O) opens it again on any computer. The browser also keeps your latest work automatically, but a .bgs file is your backup.

Exports

Exports include only what's on the page. Text is turned into outlines, so the file looks right on computers without your fonts.

Format	Use it for	Notes
PDF	Proofs, print shops, most design programs	Vector; reopens in Sign Builder with text editable
EPS	Older sign and cutting programs (FlexiSign, SignLab, etc.)	Vector

Format	Use it for	Notes
PNG	Printing, a RIP, the jersey names and numbers page	Picture at the real size; 150 or 300 DPI; see-through background unless you tick White background
JPG	Printing or a RIP when transparency isn't needed	Picture at the real size; 150 or 300 DPI; always a white background



Export PNG: choose 150 or 300 DPI and the background. The pixel size shows before you export.

PNG and JPG files carry their resolution, so other programs open them at the right size. Very large pages can't be made at 300 DPI in a browser; the export dialog shows the size it will use (a 4 × 8 ft page comes out at about 147 DPI) before you export.

Mockup Preview

Mockup Preview shows your design on a banner, a 12 × 18 in sign, yard signs, a sandwich board or a brick storefront. Drag and resize the artwork, add copies, and use it to show a customer the idea. It's a preview only and doesn't change your design.

Cutting with the Beacon Cutter Bridge

The Beacon Cutter Bridge is a small Windows app that lets Sign Builder send jobs straight to your cutter. Without it, you can still use **Download .plt** and send the file with your cutter's own software.

> **Getting the Cutter Bridge:** the Bridge is free. Sign in to your beacongraphics.com account, download the installer from the Cutter Bridge page, and run it. Windows asks for permission once. After installing, look for the Bridge's icon near the clock.
>
> **Only download the Beacon Cutter Bridge from beacongraphics.com.** A copy from anywhere else may have been changed.

1. Install the Bridge

1. Download **BeaconCutterBridgeSetup** from the Cutter Bridge page on beacongraphics.com (or **Help › Get the Cutter Bridge** in Sign Builder) and run it. Windows asks for permission to install. If the computer doesn't have Microsoft .NET 10 yet, Setup downloads and installs it from Microsoft first (about 70 MB, only once).
2. If Windows shows "Windows protected your PC", click **More info**, then **Run anyway**.
3. Leave **Start with Windows** ticked. The Bridge runs quietly with an icon near the clock.

2. Connect Sign Builder

1. Open Sign Builder and click **Cut/Plot**.
2. The first time, Chrome or Edge asks to let the site **access other apps and services on this device** (or devices on your network). Click **Allow**. If you click Block, see Troubleshooting.
3. The Cutter panel shows **Bridge ready** and the Bridge version.

3. Choose your cutter

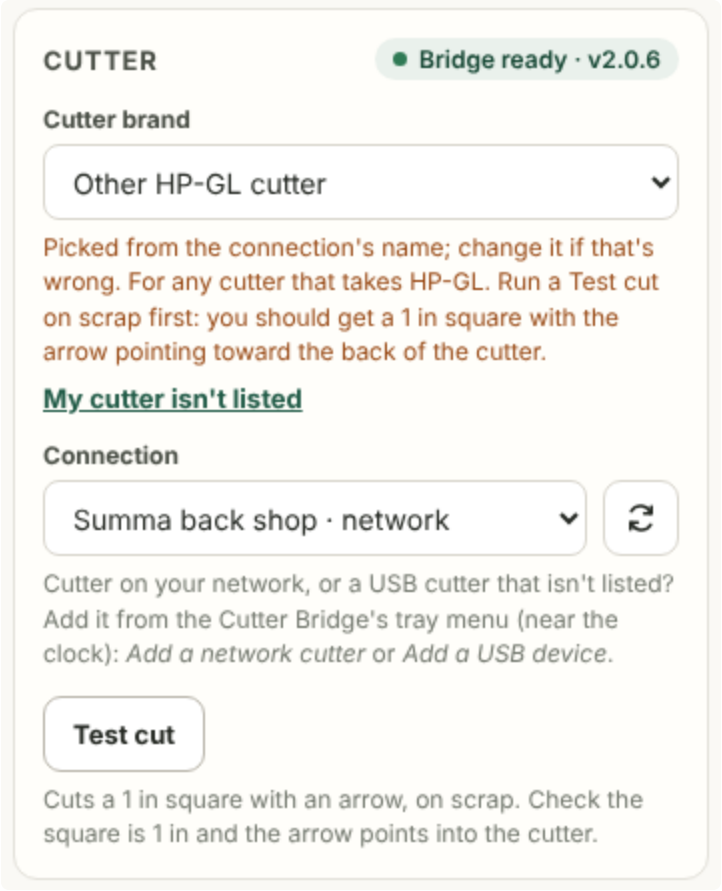
1. Turn the cutter on and connect it.
2. Under **Connection**, pick your cutter. Connections that look like a cutter are listed first under **Recommended**; the rest follow as USB, Network, Serial (COM) ports and Printer queues. PDF writers, fax and office printers are hidden until you choose **Show all connections**. Use the refresh button if yours isn't listed.
3. **Cutter brand** is usually picked for you from the connection's name. Check it, and read the setup tip under it.

4. For a serial connection, open **Serial port settings** and match the baud rate and handshake to the cutter's panel.
5. The first job to a new cutter asks you to approve it in the Bridge. Click **Allow**; it won't ask again.

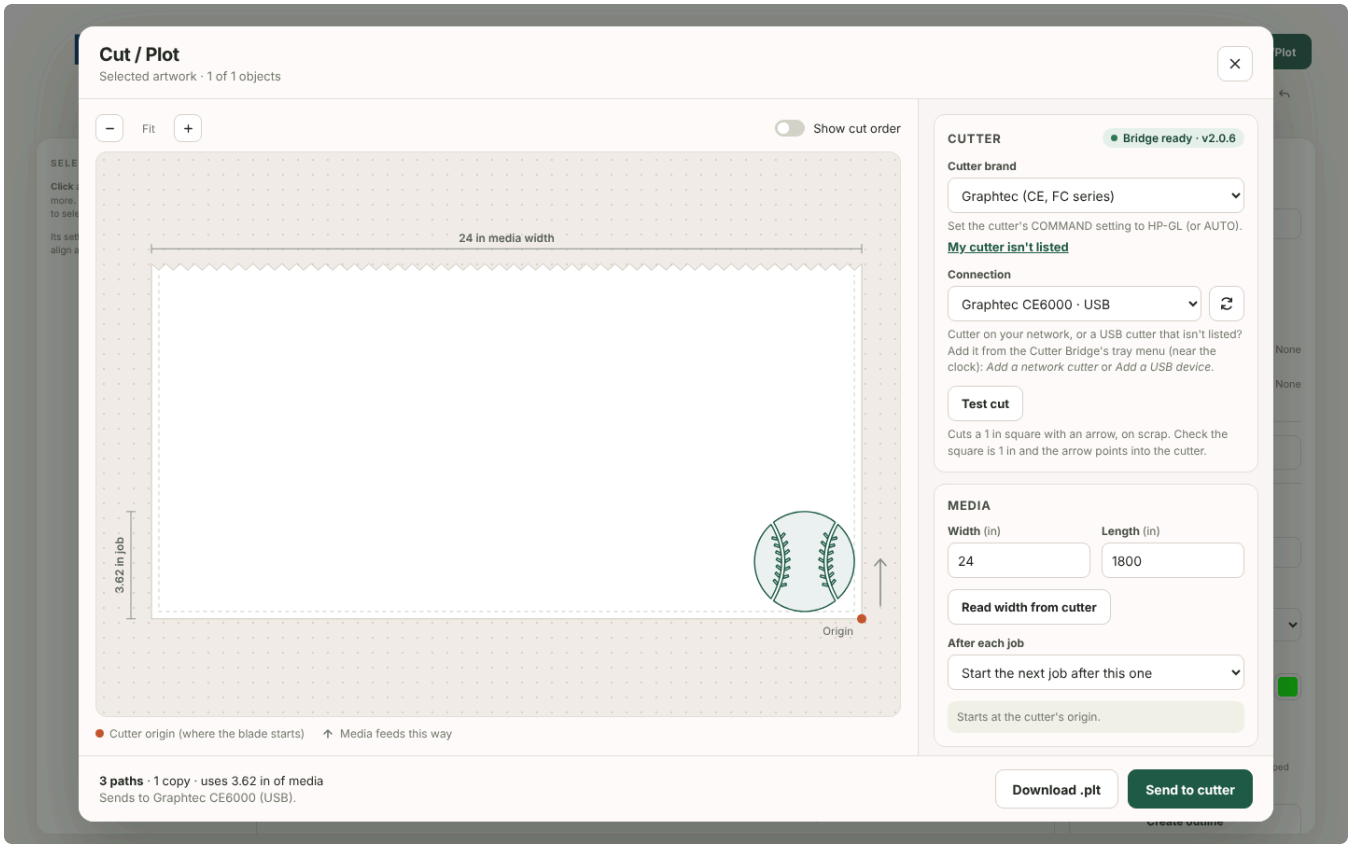
Network cutter, or a USB cutter that isn't listed? Add it in the Cutter Bridge, not in Sign Builder: right-click the Bridge's icon near the clock and choose:

- **Add a network cutter…** — give it a name, type its IP address (usually shown on the cutter's display or network menu) and leave the port at 9100 unless the cutter's manual says otherwise.
- **Add a USB device…** — for a USB cutter that uses its maker's own driver. Pick it from the list of plugged-in devices and give it a name.
- **Added cutters…** — see or remove what you've added.

The cutter then shows in Sign Builder's Connection list under Recommended. Run a **Test cut** before your first job.



A network cutter added in the Bridge, chosen under Connection. Its brand isn't confirmed yet, so Sign Builder uses Other HP-GL cutter and asks for a Test cut.



Cut/Plot with a Graphtec on USB. Top right: Bridge ready, Cutter brand, Connection and Test cut. Below: Media and Colors to cut. The preview shows where the job lands; the red dot is the cutter's origin.

4. Run a Test cut

Load scrap, then click **Test cut**. It cuts a 1 in square with an arrow inside. If the square measures 1 in and the arrow points into the cutter (toward the back), you're set up correctly. If not, try another brand, or contact us with your cutter's make and model.

5. Set up the job

- **Media:** enter the width and length, or click **Read width from cutter** (Graphtec and Mimaki). With a sheet loaded, the length is read too.
- **Colors to cut:** tick the colors to cut in this job. Cut one color per vinyl.
- **Layout:** rotate the job, set copies and the space between, shrink to fit, place it at the origin or centered across, and **Mirror** for reverse-cut material such as heat transfer or window film.
- **After each job:** start the next job after this one (saves material) or return to the origin.
- **Margins and fine positioning:** nudge the job to fit leftover media.

The preview shows the job on your media. **Show cut order** shows the order paths will be cut.

6. Send

Click **Send to cutter**. A message confirms when the job is sent.

Cutter setup by brand

All cutters receive HP-GL. Graphtec and Mimaki are confirmed on our machines. Any other cutter that takes HP-GL (Summa, Roland, GCC, Lynx and others) uses **Other HP-GL cutter**: run a Test cut first and check you get a 1 in square with the arrow pointing toward the back of the cutter.

Brand	Status	Connection	On the cutter	Read media size
Graphtec (CE, FC series)	Tested (CE6000, FC8000)	USB, network, serial or printer queue	Set COMMAND to HP-GL or AUTO	Yes
Mimaki (CJV, CG series)	Tested (CJV150, CG-AR)	USB, through Mimaki's driver (installed with RasterLink or FineCut)	Press **REMOTE** before every job; close RasterLink and FineCut while cutting	Yes, width and sheet length
Other HP-GL cutter	Run a Test cut first	USB, network, serial or printer queue	Set the cutter to HP-GL	Depends on the cutter

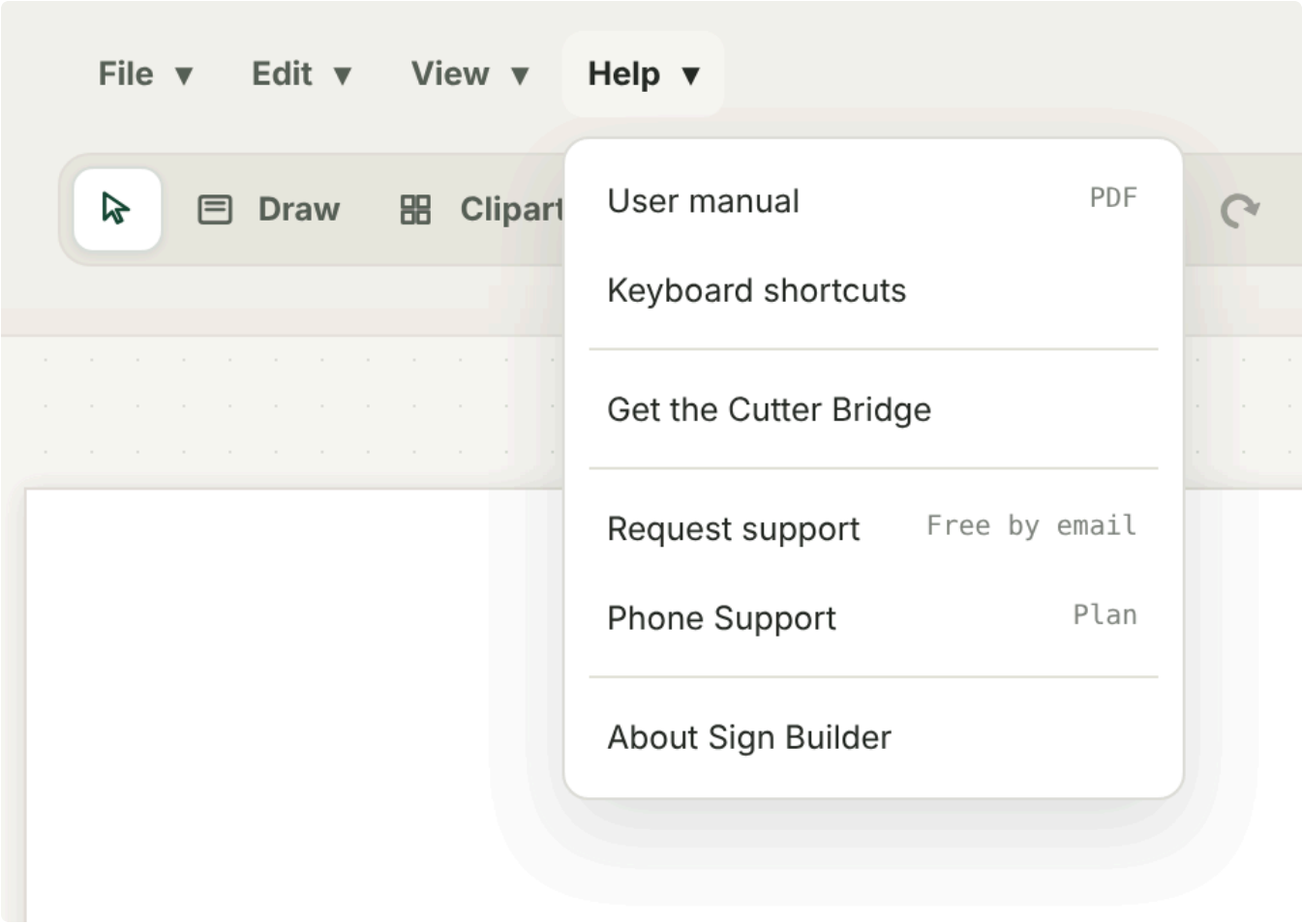
Mimaki cutters don't go online by themselves. Sign Builder checks before each job and Test cut; if the cutter isn't in REMOTE, nothing is sent and you're asked to press REMOTE.

Head position: Graphtec cutters report where the head is, so Sign Builder checks the start point before each job. Mimaki cutters don't, so each job starts at the cutter's origin; with "Start the next job after this one", the origin moves past each job automatically.

Help menu

The **Help** menu, next to View, has:

- **User manual** — this manual as a PDF.
- **Keyboard shortcuts** — every shortcut in one list.
- **Get the Cutter Bridge** — the download page.
- **Request support** — opens our support form with your Sign Builder version, Bridge version and cutter already filled in as the subject. Describe the problem in Message and click Submit Request. Email support is free.
- **Phone Support** — our yearly plan for help by phone.
- **About Sign Builder** — your versions and cutter, with **Copy details** to paste into an email.



The Help menu.

Troubleshooting

You see	What to do
"The Beacon Cutter Bridge isn't running"	Start the Bridge from the Start menu (look for its icon near the clock), then click **Check again**. Not installed? See Cutting, step 1.
Bridge is running but Sign Builder can't reach it	You probably clicked Block on the browser's access prompt. Click the icon at the left of the address bar, set **Local network access** (or apps on this device) to **Allow**, and reload the page.
My cutter isn't in the Connection list	Turn the cutter on, check the cable, and click the refresh button. A Mimaki needs Mimaki's USB driver, installed with RasterLink or FineCut.
"Your Mimaki isn't in REMOTE, or it's still busy"	Press **REMOTE** on the cutter and wait for it to finish measuring the media, then send again.
"The cutter didn't answer" (Read width)	Load media, let the cutter measure it, and check it's in HP-GL mode (Mimaki: in REMOTE). Or type the width in.
The Test cut square isn't 1 in, or the arrow points the wrong way	Try another Cutter brand. If none works, contact us with your cutter's make and model.
The job is mirrored or on the wrong side of the vinyl	Turn **Mirror** on for heat-transfer and reverse-cut material, off for regular sign vinyl.
Nothing happens on a Mimaki after sending	Close RasterLink and FineCut; they can't share the cutter with the Bridge.
"Windows protected your PC" when installing	Click **More info**, then **Run anyway**.
My cutter isn't listed as a brand	Choose **Other HP-GL cutter** and run a Test cut. Use **My cutter isn't listed** to tell us the model.

Still stuck? Choose **Help › Request support**. Your versions and cutter are filled in for you, so we can start right away.