

3D Printer Cable Clip Print & Fit Guide

Lift a sagging printer cable and keep it gently tensioned — without a zip tie.

Two Parts

One Plate

30 Minutes

Built by MakerX Designs · Virginia Beach, VA · makerxdesigns.com · © 2026

The X-axis cable running from the side of my printer out to the printhead had started to sag — right across the front of the camera I use to watch prints, and heading for the point where it would eventually touch a tall part. This lifts it and holds it under gentle tension, and it comes off again without a mark.

In the download

File	What it is
<code>cable-clip-for-printer-cable.3mf</code>	Start here. Both parts on one plate with the tested profile.
<code>...-hook.stl</code>	The clip that snaps onto the cable.
<code>...-beltloop.stl</code>	The tab the badge reel clips to.

1 • The one thing you need to buy

The printed parts do half the job. A **retractable badge reel** does the other half — it takes up the slack so the cable stays lifted as the head moves.

Retraction force is the spec that matters — not the price

Too strong a reel drags on the printhead. I researched this specifically and settled on the **Key-BAK Mini-BAK**, 36 in nylon cord, steel belt clip, model `0057-005`. It pulls at about **2 oz**: enough to take up slack, nowhere near enough to load the motion system or pull a print off course. If you substitute one, check that figure before anything else.

2 • Slice it

- 1 Open `cable-clip-for-printer-cable.3mf` in Creality Print, or any slicer that imports 3MF project files.
- 2 When it asks whether to load the project's print settings, **say yes**.
- 3 Both parts are already arranged on one plate. Slice and print — the whole job is half an hour.

A word on supports

The profile ships with tree supports set to auto at a 30 ° threshold. Both parts sit flat on the plate, so **look at the sliced preview**: if your slicer reports no support material, that is expected and nothing is wrong. Leave the setting alone either way — it costs nothing when it finds nothing to build.

3 • The profile baked into the 3MF

Quality	
Layer height	0.20 mm
Walls	3 loops
Top / bottom	5 / 5 layers
Infill	25 % gyroid
Brim	None

The parts	
Hook	32.1 × 43.6 × 5.0 mm
Belt loop	50 × 75 × 4.5 mm

Material & plate	
Filament	PLA as sliced
Nozzle temp	220 °C
Bed temp	60 °C
Sliced on	Creality Hi, 0.4 mm nozzle

What it costs you	
Print time	30 m 10 s
Filament	14.99 g · 5.03 m
Rough cost	\$0.27

Managing more than one cable? Duplicate the plate before you slice — at 15 g a set you will use more of these than you expect.

4 • Set it up

- 1 **Mount the belt loop above the printer.** Mine is screwed to the top of the hutch over the bench. Anything solid and roughly above the printer works — a shelf underside, an enclosure frame, a wall bracket.
- 2 **Clip the badge reel to the loop.** That is what the tab is for; the steel belt clip grips it directly.
- 3 **Snap the hook onto the cable.** Press it on where the sag is worst, usually about midway along the run. No screws, no adhesive, nothing to unplug.
- 4 **Hook the reel cord to the clip and let it take up.** The cable should lift clear and stay under light tension through the whole travel.
- 5 **Run the head end to end before you print.** Move it through the full X travel and watch the cord. It should pay out and retract smoothly with nothing catching.

★ **Get the anchor point roughly above the middle of the travel**

Anchored off to one side, the cord pulls the cable sideways at the far end of the run. Directly above the center of the X travel keeps the pull vertical wherever the head is.

5 • Making it yours

- **Thicker or thinner cable.** The hook holds on a snug gap rather than by pinching, so a uniform scale in your slicer retunes it without creating a fatigue point.
- **Print a few.** One on the X-axis cable is the obvious use; the next ones end up on a PTFE tube, a webcam lead or an enclosure light cable.
- **A printer-specific mount.** This version clips to the cable itself, so it works on any machine. A version that bolts directly to a Creality Hi is in progress — and if you want one cut for a different printer, leave a comment saying what you have.

Where precision meets the printer

Thanks for printing this one. It started as a cable drooping in front of my print camera, which is about as ordinary a problem as this hobby produces.

For years my design world existed entirely behind a screen. As a mechanical engineer I spent countless hours building complex CAD models, but there was always a missing link — the ability to hold an idea in my hands. That changed in January 2026, when I went headfirst into 3D printing. The moment that first layer stuck to the bed, the gap between concept and reality vanished.

Coming from a background where precision is everything, tolerances aren't suggestions to me — they are a religion. I didn't want to print trinkets; I wanted to apply industrial engineering discipline to desktop manufacturing. Every wall count, every layer height and every infill percentage in this guide is a deliberate decision backed by testing.

Three principles behind every print

01**Functional Engineering**

High-utility, real-world solutions rather than purely decorative models. If it doesn't solve a practical problem, it doesn't leave the workstation.

02**Rigorous Tolerances**

Designed in professional CAD with mechanical intent — press-fits that click and assemblies that work straight off the build plate. No sanding, no filing, no guesswork.

03**Bridging the Gap**

Industrial structural integrity at maker speed. Proving a desktop printer can produce parts worthy of real engineering applications is what drives every release.

The workshop

Mechanical engineering degree · SolidWorks precision modeling · two Creality Hi printers · Virginia Beach, Virginia · every design free to download.

A note on sharing

I'm thrilled when people use and share these designs. I just ask that you respect the license shown on the model listing and give the required credit.

IF THIS ONE EARNED ITS SPOT

A **Like** or a **Favorite** on the model page takes a second and genuinely helps. A **Boost** helps more than either — it is what puts a design in front of makers who would never otherwise come across it. And if you **Follow** me, new models land in your feed as they are released.

Want one that bolts to your specific printer instead of clipping to the cable? Leave a comment with the machine. That is where the next version starts.

Happy printing. — MakerX Designs · makerxdesigns.com · © 2026