Tools Best Practices

There are thousands of devices on the market...

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INTRODUCTION

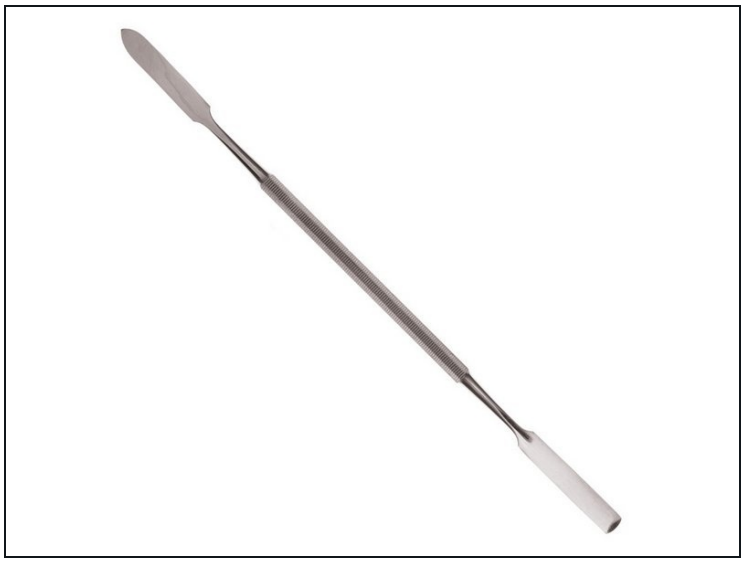
There are thousands of devices on the market and a plethora of specialized tools for their repair. Figuring out which tool to safely use for the job can be difficult, so we’re here to help.

We’ll walk you through some of the more commonly used tools and explain their most practical—or impractical—uses. Repair connects people and things, but we don't want to connect electricity to your body. Your safety is our priority!

TOOLS:

Pro Tech Toolkit (1)
Metal Spudger (1)
iFixit Opening Tool (1)
Tweezers (1)
Heavy-Duty Spudger (1)
iFixit Opening Picks (Set of 6) (1)
Spudger (1)
Essential Electronics Tool Kit (1)
Repair Business Toolkit (1)

Step 1 — Metal Spudger





- The **metal spudger** is a fantastic tool, but it's also a tool of much debate. Here at iFixit, we tend to call on the metal spudger only when we need a member of the brute squad.

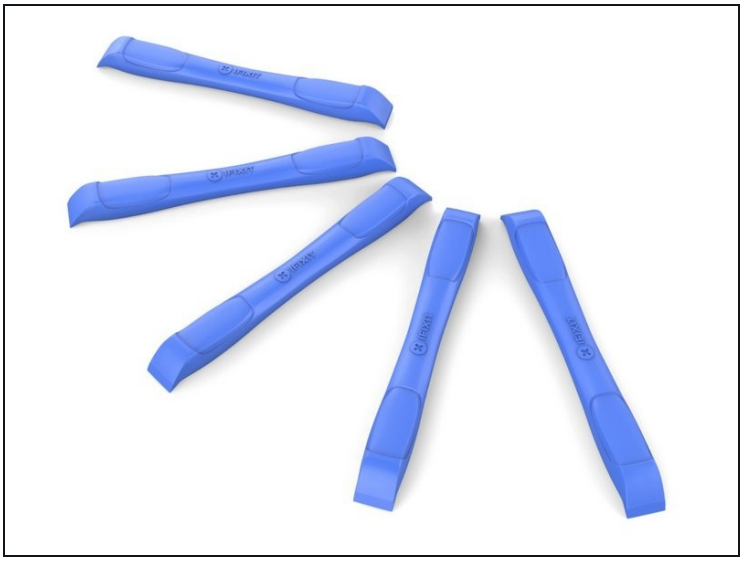
ⓘ **Use the metal spudger to:**

- Remove extra-stubborn plastic/metal casings, or scrape away tough adhesive.
- Depress or lift stubborn release tabs.

⚠ **Keep in mind:**

- The metal spudger is **not** electrostatic discharge (ESD) safe. Irresponsible use may result in electrical shock or permanent injury.
- Poor use may permanently damage your device.
- **Do not** use this tool on exposed or fragile internal components, batteries, or glass screens.

Step 2 — Plastic Opening Tool



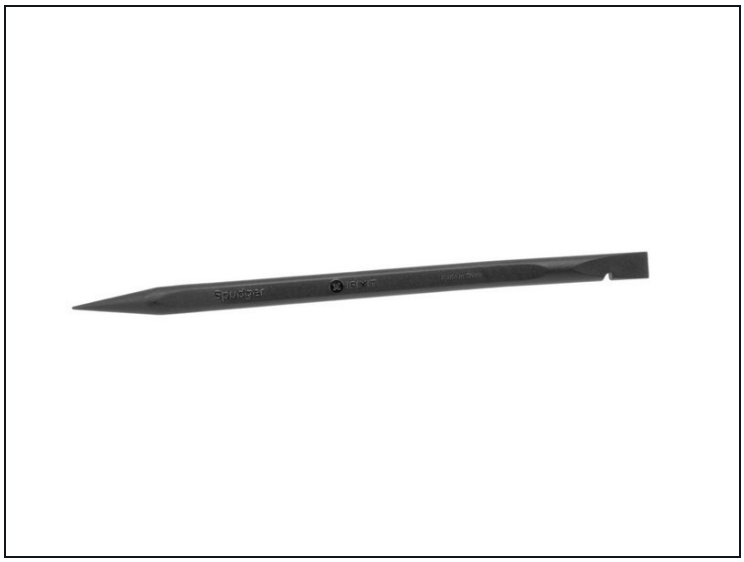


- The **plastic opening tool** comes in a few different styles, and is your go-to tool for removing screens and separating cases. It has a very thin non-destructive edge that gets in between small cracks easily.

ⓘ **Use the plastic opening tool to:**

- Lift zero insertion force (ZIF) tabs and disconnect cable connectors.
- Pry open tightly sealed device cases.
- Remove digitizers and glass screens.
- Lift, cut, or remove tape, adhesive, and/or thermal paste.

Step 3 — Spudger





- Your friendly neighborhood nylon **spudger** can do amazing things. With antistatic pointed and blunt tips, it's a great all-around tool to use on internal components.

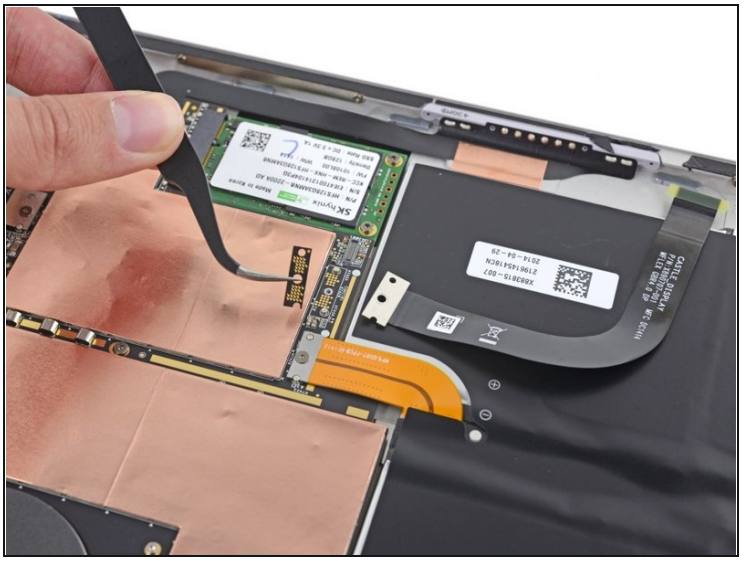
ⓘ **Use the spudger to:**

- Disconnect cable connectors.
- Pry components free.
- Aid in soldering.
- Remove thermal paste, adhesive, or tape.

ⓘ Be sure to list the appropriate tool in your guide. The **heavy duty spudger** is a more robust version of the standard **spudger**. They look similar, but one of these things is not like the other.

Step 4 — Tweezers





- With blunt or curved tip options, the ESD safe **tweezers** are a tricksy little tool. They're especially helpful if you have thick, hobbitsy, fingers.

ⓘ **Use tweezers to:**

- Remove loose screws or small components that are difficult to access.
- Gently remove ribbon cables.
- Peel heated panels after applying heat.

⚠ The **angled** and **fine-tip tweezers** have very sharp tips. Exercise caution around delicate ribbon cables and your fingers.

Step 5 — Opening Picks





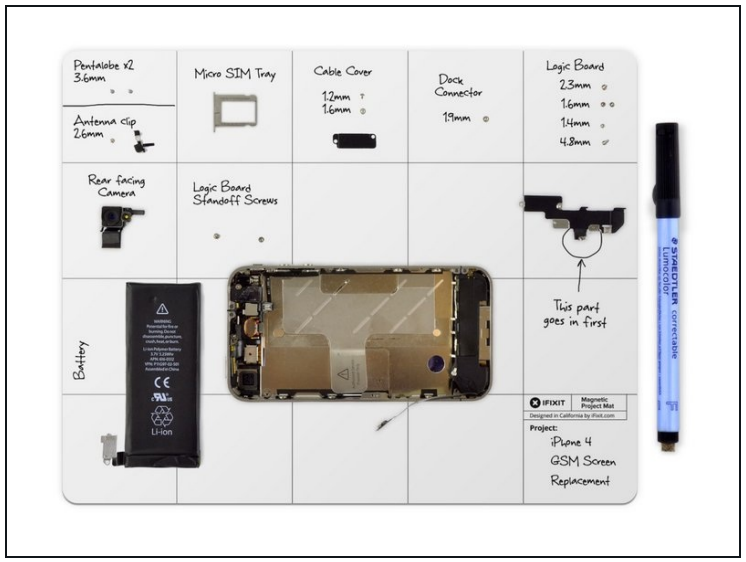
- **Opening picks** are an industry favorite for maintaining a separation between screens and cases, or for breaking up long sections of adhesive. Feel free to explore your options.

ⓘ **Use opening picks to:**

- Cut adhesive strips that secure screens.
- Use as a placeholder to prevent large screens from receding back into the frame.
- Scrape or remove adhesive or tape.
- Apply or remove thermal paste.

Step 6 — Magnetic Project Mat





- This handy mat can be your best friend during a replacement. Be sure to take advantage of the dry erase surface and keep track of your screws and steps along the way! You won't regret it.

⚠ The **magnetic project mats** are covered with a thin layer of plastic to create a dry erase surface. **Do not** remove this layer or peel the edges up.