FIXHUB™
POWER SERIES

SMART
SOLDERING IRON

SLD101

USER GUIDE

IFIXIT

WELCOME!

We've done our best to make this manual user-friendly and worth your time to read from cover to cover before you get started (meaning it's pretty bare-bones and down-to-business). For more in-depth coverage, explanations, how-tos, and an entire community of fixers and tinkerers like yourself, head over to **ifixit.com/FixHub**

TABLE OF CONTENTS

QUICK START

1 Push and twist the blue cap of the USB-C cable to secure it to the soldering iron. Connect the other end of the cable to a Smart Port on your FixHub Portable Power Station or any compatible USB-C power source.
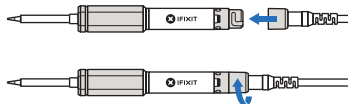
2 Push the Power Switch on the soldering iron to the ON position (switch shows orange).

OFF

ON
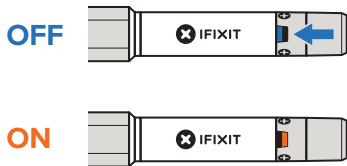
3 Understanding the LED Indicator

Blue LED: The iron is below 40°C/100°F and is safe to touch.

Purple LED: The iron is actively heating up or cooling down. Iron tip is **not safe to touch**.

Orange LED: The iron has reached the user-set temperature and is ready for soldering. Iron tip is **not safe to touch**.
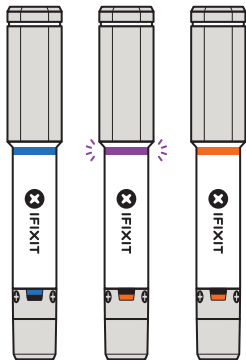
4 Remove the iron from the heat-resistant cap and begin soldering when the LED turns orange. The iron comes set to 350°C/660°F out of the box, but will remain at whatever temperature was last set using a Portable Power Station or other USB device.

5 The iron will enter a low-temperature mode after 30 seconds of inactivity, and completely power off the tip after 60 seconds of non-use.

After soldering, switch the soldering iron to the OFF position (the LED indicator will turn purple and pulse). The heat-resistant cap can be put on at any temperature.

ON

COOL DOWN

OFF

IMPORTANT SAFETY INFORMATION

Read this section carefully to learn the applications, limitations, and potential hazards related to your new soldering iron.

WARNING Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire, or serious injury.

- Always wear eye protection with side shields marked to comply with ANSI Z87.1 when assembling parts, operating the product, or performing maintenance.

- Prevent unintentional starting. Ensure the switch is in the off position before connecting to a power source, picking up, or carrying the soldering iron. Carrying the soldering iron with your finger on the switch or the energizing appliance it's mounted on invites accidents.

- Use this product with specifically designated battery packs and power sources, such as FixHub Portable Power Station (IF145-494-1) or iFixit 65W GaN Fast Charger (IF145-542-1). Use of other power sources may create a risk of injury and fire.

- When the battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws, or other small metal objects that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.

- Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, seek additional medical help. Liquid ejected from the battery may cause irritation or burns.
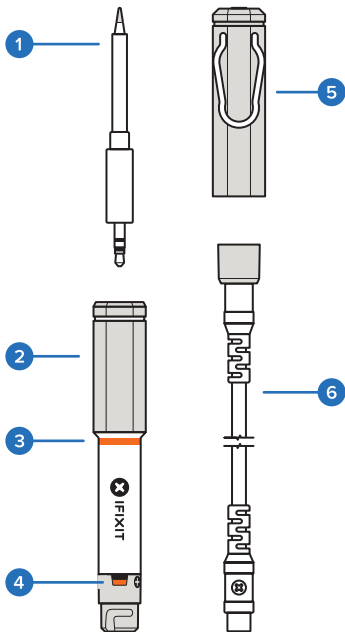
- Do not use a battery pack or appliance that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion, or risk of injury.

- Do not expose a battery pack to fire or excessive temperature. Exposure to fire or temperature above 130°C/265°F may cause explosion.

- Follow all charging instructions and do not charge the battery pack or appliance outside of the temperature range specified in the instructions. Charging improperly or at temperatures outside of the specified range may damage the battery and increase the risk of fire.

- Have servicing performed by a qualified repair person using only identical replacement parts. This will ensure that the safety of the product is maintained. (With the free repair information available at **ifixit.com/FixHub**, that qualified repair person can be you!)

- Do not modify or attempt to repair the appliance or the battery pack (as applicable) except as indicated in the instructions for use and care.

- This appliance can be used by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. (EN)

- This appliance is not to intend for used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. (CAN)

- Children shall not play with the appliance. Keep the appliance and its cord out of reach of children.

SAFE SOLDERING

- Do not touch the heated tip of the soldering iron.

- Use the soldering iron in a well-ventilated area to avoid breathing fumes.

- Always wear eye protection with side shields marked to comply with ANSI Z87.1 when soldering.

- Do not point the tip of the soldering iron at another person.

- Do not place your hands or fingers near the tip of the soldering iron.

- Never leave the soldering iron unattended while it is in the on position.

- Keep your work area clean and well lit. Cluttered or dark areas invite accidents.

- Do not operate battery products in explosive atmospheres, such as in the presence of flammable liquids, gasses, or dust. Battery products create sparks which may ignite the dust or fumes.

- Always assume that the soldering iron tip is hot.

- Do not solder live circuits.

- Hold the soldering iron by insulated gripping surfaces when performing an operation where the tip may make contact with hidden wiring. Tips contacting a "live" wire may make exposed metal parts of the soldering iron "live" and could give the operator an electric shock.

- Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges, and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.

ASSEMBLE AND FEATURES

ASSEMBLY AND FEATURES

1 **Quick-Swap Soldering Tip**

A soldering tip that can be easily changed out without any tools.

2 **Soldering Iron Handle**

Soft-touch comfort grip is easy to hold and ensures steady control over the Smart Soldering Iron.

3 **Touch-Safe Indicator**

This glowing ring is a safety feature that indicates if the tip is safe to touch or not.

Orange: Too hot, don't touch
Purple: Too hot, don't touch
Blue: Cooled, safe to touch

4 **Power Switch**

This switch sends power to the Smart Soldering Iron tip. Its status is indicated by the color being shown next to the black switch.

Orange: ON
Blue: OFF

5 **Soldering Iron Cap**

A vented, heat-resistant cap that magnetically attaches to the Smart Soldering handle.

6 **Soldering Iron Cable**

Flexible, 100 Watt USB-C cable for the FixHub Smart Soldering Iron.

Installing or Changing the Tip

To install a Quick-Swap Soldering Tip, ensure the Smart Soldering Iron Power Switch is in the OFF (**Blue**) position, then push the tip into the Soldering Iron Grip until it clicks.

When removing the tip, **always ensure the tip has fully cooled before touching it.** This normally takes about 5 minutes. If the Smart Soldering Iron is plugged into the FixHub Portable Power Station, the Touch-Safe Indicator will change from orange to blue when the tip is safe to touch. Remove the tip by pulling it straight out of the Soldering Iron Grip.
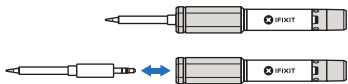
## How to Read the Touch-Safe Indicator

When the tip is too hot to touch (above 40°C/100°F), the ring glows orange. After it has cooled enough to touch (below 40°C/100°F), it will glow blue. While the tip is heating or cooling, it will pulse up or down to indicate if it is heating up or cooling down. The indicator ring only functions when the Smart Soldering Iron is connected to a power source, so use caution when handling an unplugged Smart Soldering Iron.

Turning the Iron On and Off

The Power Switch controls power delivery to the Soldering Tip and has colored ends to indicate if you are sending power. When switched OFF (**Blue**), the Smart Soldering Iron can still connect to and communicate with the FixHub Portable Power Station, and the Touch-Safe Indicator will still function, but the tip heater will not heat up. When switched ON (**Orange**), the Smart Soldering Iron will heat the Soldering Tip to reach and maintain the set temperature.

How to Use the Soldering Iron Cap

The cap can be installed on a hot iron to allow safe storage of the iron immediately after use. It can also be mounted onto either side of the FixHub Portable Power Station, where it functions as a soldering iron stand while you're working. Attach the iron to either side of the power station by sliding its Spring Clip onto the Tool Mount.
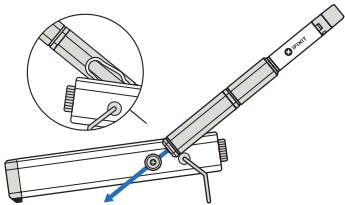
Soldering Iron Cable

Connect the Soldering Iron Cable to the Smart Soldering Iron by plugging the end with a blue retaining cap into the blue socket on the end of the Smart Soldering Iron. Then push and twist the retaining cap to lock the cable in place. Connect the other end to one of the USB-C Smart Ports on the front of the Portable Power Station.

The FixHub Soldering Iron Cable can support 100 Watts of power from the Portable Power Station to the Smart Soldering Iron. Some other USB-C cables are compatible, but may not support a proper data connection or as much power. This just means your soldering tip will heat up a little slower.
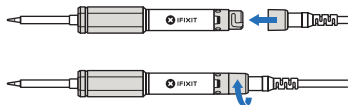
OPERATION

This soldering iron is designed for soldering and desoldering circuits and electrical connections. It can also be used for wood burning, stained glass assembly/repair, jewelry making/repair, and other crafting activities. **This soldering iron should NOT be used on live circuits.**

Setup with Generic USB Power Sources

The FixHub Smart Soldering Iron is designed to work best when paired with a FixHub Portable Power Station, which will allow fine control of the soldering iron's temperature and performance preferences. However, it will also operate with any power source capable of delivering at least 20 Watts via the USB-C Power Delivery standard. When running off of a third-party power source, the FixHub Smart Soldering Iron will use the factory default setting of 350°C/660°F, or the most recent temperature configuration used with a FixHub Portable Power Station.

Setup with the FixHub Portable Power Station

Press and hold the Action Button on the FixHub Portable Power Station for 3 seconds to power it on. The Portable Power Station will boot up and play an exciting introduction animation, then display the ready screen:

With the Smart Soldering Iron Power Switch in the off position, connect your soldering iron to either of the USB-C Smart Ports on

the Portable Power Station. It will recognize the soldering iron and display its icon:

Once the Smart Soldering Iron and Portable Power Station are initialized, the Portable Power Station will automatically enter Control Mode. Rotate the Selector to set the desired Soldering Iron Tip temperature. Up and Down arrows beside the displayed temperature indicate that you are currently adjusting the set temperature:

Stop turning the Selector when the desired set temperature is displayed. After one second, the currently displayed temperature will be applied as the set temperature. Turn on the Smart Soldering Iron Power Switch to send power to the tip, and it will start to heat up to reach the set temperature.

As the temperature increases, the screen will display the current tip temperature.

Now Let's Solder!

Now you're ready to start soldering! Hold the Smart Soldering Iron by the soft grip, like a pen. Do not touch any of the exposed metal parts of the Soldering Iron Tip, as they will be hot. To solder a simple joint between two wires, melt some solder onto the Soldering Iron Tip, then press the hot solder-covered tip against the wires to heat the joint. Apply more solder to the other side of the joint until some melts in and covers the wires. Remove the iron from the joint, and you're all done! For more advanced soldering techniques and tips, visit **ifixit.com/FixHub**

Shut-Off Safety Features

The FixHub Smart Soldering Iron is equipped with an accelerometer-powered auto shut-off safety feature. The specific setpoints are configurable from the FixHub Portable Power Station, but the default settings are as follows.

After 30 seconds of no movement, the soldering iron enters Rest Mode, which is a low-power mode that sets the tip set-point to 200°C. This saves battery power, protects the tip from damage, and keeps you safe. After 60 seconds of inactivity, the tip completely powers off.

Picking up a resting soldering iron will wake it up, and the tip will automatically heat back up to your set temperature. When powered by a FixHub Portable Power Station, warming from rest temperature to set temperature will only take a few seconds.

Additionally, if the soldering iron detects that it has been dropped, it will automatically shut off the tip to prevent damage or injury when it lands. Toggle the Soldering Iron Power Switch off and back on again to resume soldering.

When you're done soldering, switch the Soldering Iron Power Switch into the OFF (**Blue**) position. If you're packing up the Portable Power Station, leave the Soldering Iron connected until the Touch-Safe Indicator turns **Blue**, indicating it is safe to handle the tip. Then, hold down the left button on the Portable Power Station to shut it down, and unplug the soldering iron. It is now safe to transport the Iron and Portable Power Station.

MAINTENANCE

Soldering Tip Maintenance

A clean tip works better and lasts longer. Clean your tip frequently with brass wool or a wet sponge while soldering, to remove any nasty burnt-on flux residue. When you're done soldering, tin the tip by applying a thin layer of fresh solder, then immediately turn it off. This will create an anti-oxidizing shield that will protect your tip until you're ready to use it again.

After enough soldering (or enough abuse— clean your tips!), your Soldering Iron Tip will wear out and need to be replaced. See the *Installing or Changing the Tip* section (p. 14) for instructions on tip replacement.

Storage

• Always tin the tip when you're done soldering.

• Disconnect the USB cable before storing.

Troubleshooting and Repair

• **Soldering Iron plugged into FixHub Portable Power Station but not recognized:** Check connections, try the other front USB port on the Portable Power Station, or try a different USB-C cable.

- **Soldering Tip does not get hot:** Ensure that the Soldering Tip is properly installed and clicks into the base. Ensure the Soldering Iron Power Switch is in the ON (**Orange**) position. If using the FixHub Portable Power Station, ensure it is turned on and that the iron is connected and recognized.

- **Solder does not wet (melt and adhere) to the tip:** The tip may be too oxidized. Clean or replace the tip.

For more in-depth troubleshooting, disassembly and repair guides, and a helpful community of fixers like you, visit **ifixit.com/FixHub**

Firmware Updates

To check for firmware updates and update your soldering iron, go to **ifixit.com/FixHub**