JBC

www.jbctools.com

Product website

INSTRUCTION MANUAL

B.TWEEZERS K

Nano Tweezer Expansion Kit for B.IRON

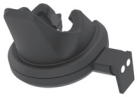
This manual corresponds to the following reference:

BP-KA

Packing List

The following items are included:

Nano Tweezers for B.IRON ..... 1 unit
Ref. BP-A
Works with app version 1.7 and higher. Cartridges not included, sold separately.



Left-Side Charging-Holder for B.TWEEZERS ..... 1 unit
Ref. 0032466

Spanner ..... 1 unit

C115 Cartridge Adapters ..... 2 units

Manual ..... 1 unit
Ref. 0034914

Important

Please read this manual and its safety guidelines thoroughly before using the product.

Note: Even if the display is turned off, the tool remains operational as long as the batteries are charged, even when the cartridge is removed.

The tool can be manually switched off and on by tapping the tool power button on the display (see page 9).

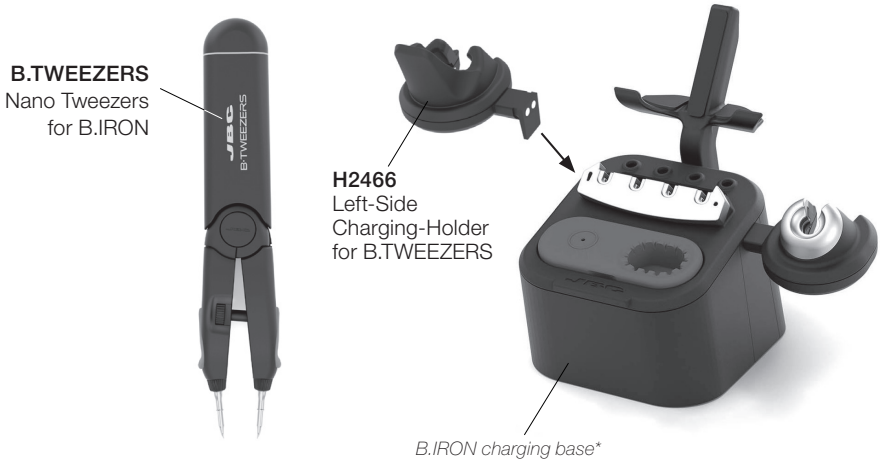
The tool turns off automatically only under the following conditions:
- The tool is out of the charging holder (without safety cap on) and remains completely still for 5 minutes (see page 8).
- The tool has the safety cap on and remains completely still for 60 minutes (see page 9).
- The tool is in the charging holder and the charging base is disconnected from the mains.

Features

B.TWEEZERS K allows extending B.IRON stations with an aditional B.TWEEZERS tool.

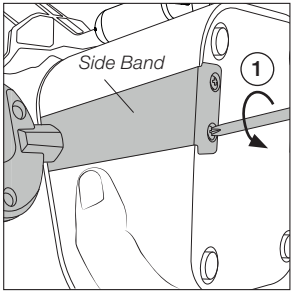
The provided B.TWEEZERS tool performs up to 120 small SMD soldering joints per charge. It is the ideal tool for highest precision applications, offering maximum control when working under a microscope.

Note: To charge the tool, a B.IRON charging base is needed.

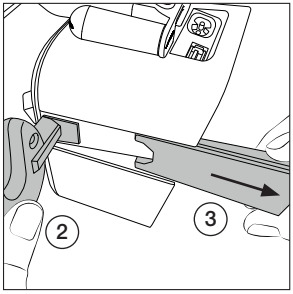


Charging Holder Assembly

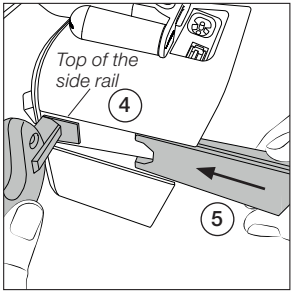
Charging holders can be replaced by loosening the screws at the bottom of the charging base.



Loosen the screws (1) at the bottom.



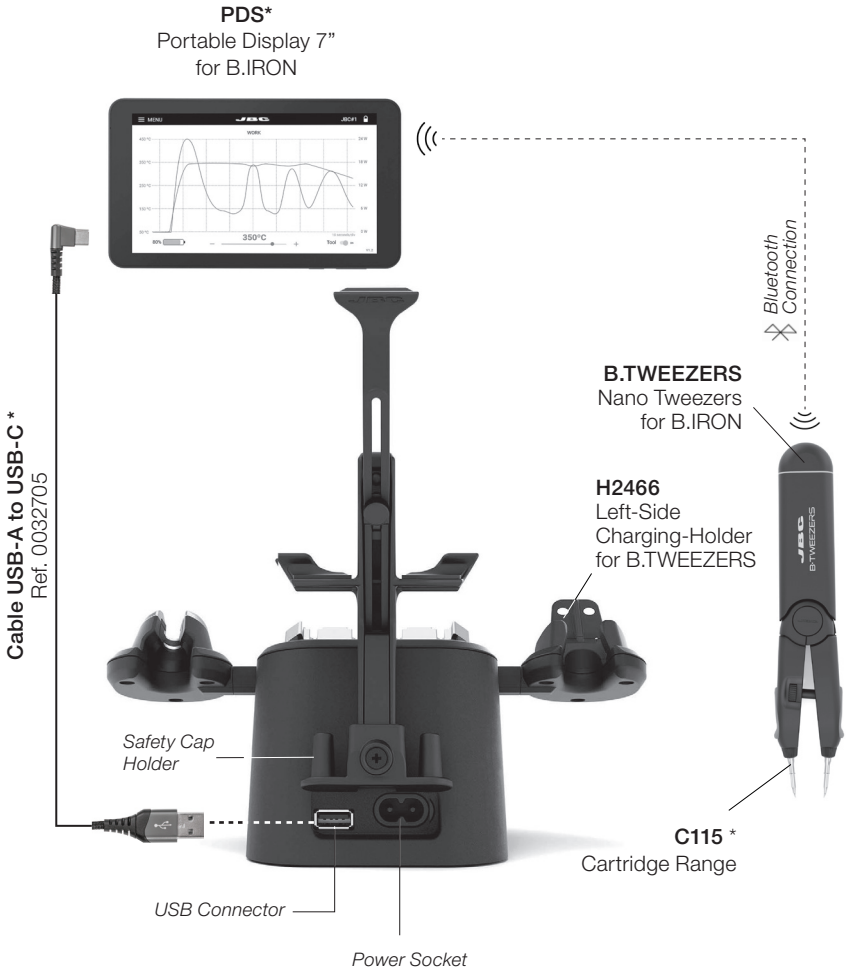
Hold the charging holder with one hand (2) and with the other pull the side band downward (3).



To install a new charging holder, place it at the top of the side rail (4) and slide back the side band (5) until the holder is secured in place. Finally tighten the screws at the base.

** Not included, sold separately.*

Connection with B.IRON Station



ESD Safe Connection

Note: All B.IRON components comply with CE standards, but the tool by itself is not grounded. Therefore, to comply with ESD regulations, the user of the B.IRON tool must be ESD-compliantly grounded.

JBC offers ESD tablemats, earthing cables, plugs and wristbands. More information at www.jbctools.com.

** Not included, sold separately.*

Cartridge Insertion and Tool Charging

Compatible Cartridges

B.TWEEZERS works with C115 Cartridges. Find the model that best suits your soldering needs at www.jbctools.com.

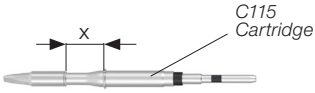
Conical Bent

Chisel

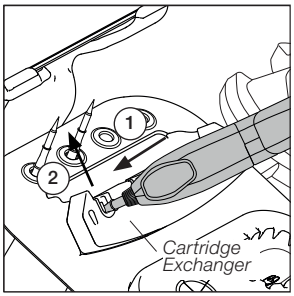
Blade

C115 Cartridges*

The holding area of C115 Cartridges is delimited by the two rings at the cartridge shaft (x).

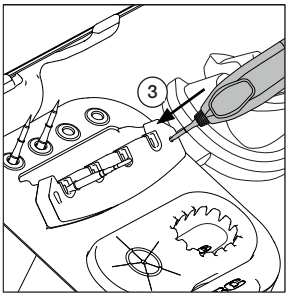


Cartridge Inserting



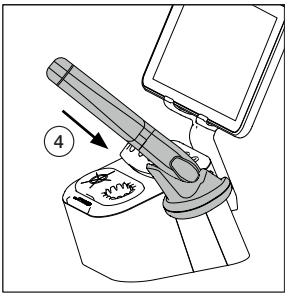
Place the tool over a cartridge and push the tool onto it to insert the cartridge (1). To release the tool with the cartridge inserted from the extractor, lift the tool upward (2).

Cartridge Fixing



Gently press the tip against the holes on the sides of the cartridge exchanger (3) to ensure that the cartridge is appropriately inserted.

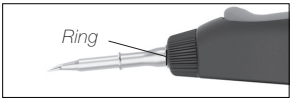
Tool Charging



Place the tool in the charging holder (4) to charge it. A beep will sound when the tool is properly placed and charging. The volume can be adjusted using the left button on the display.

Important: Charge the tool completely before using it for the first time.
A full charge takes:
-30 min for B.100
-60 min for B.500
-30 min for B.NANO
-45 min for B.TWEEZERS

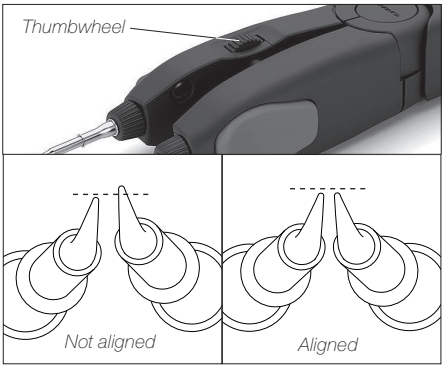
Note: Cartridges must be inserted up to the first ring for proper connection and functioning.



** Not included, sold separately.*

Horizontal Cartridge Alignment

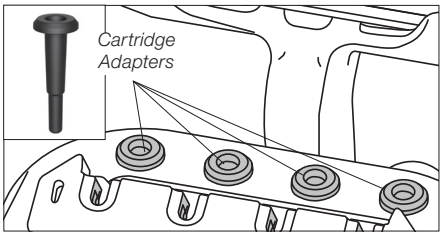
Close the tweezers and use the thumbwheel on the tool to slightly adjust the cartridges so that they are horizontally aligned.



C115 Cartridge Adapters

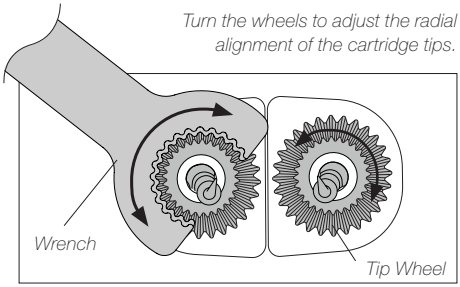
(Ref. B0643 includes 4 adapters)

Since C115 Cartridges have a smaller diameter than C210 Cartridges, adapters must be used to store them in the cartridge holder.
These adapters must simply be inserted from above into the slots of the cartridge holder.

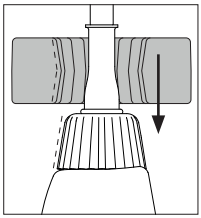


Radial Cartridge Alignment

The tips can be aligned radially using the wheels. Use the wrench to do this.
Important: When operating the wheels with your fingers, the tool must be switched off on the work screen so that the cartridges do not become hot.



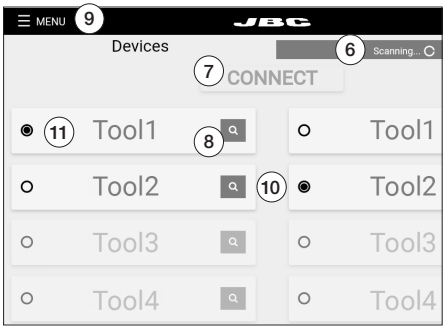
Note: The teeth of the wrench have the same inclination as the cone of the tip wheel. The wrench can be used from both sides, although it can only be inserted vertically.



Tool Connection

Make sure that the charging base is connected to the mains.
Note: Tools supplied with a station are already connected to the station.

Device List



Scanning another tool *(this process can take a while)*:
Place the tool in the charging holder to activate it. The status light band color indicates the charge level (see table below).
If the scanning process does not run automatically, tap “scan” (6) on the display while the tool remains in the charging holder. When the tool is shown in the device list on the display, select it (11) and tap “connect” (7). Now the tool is ready for soldering.

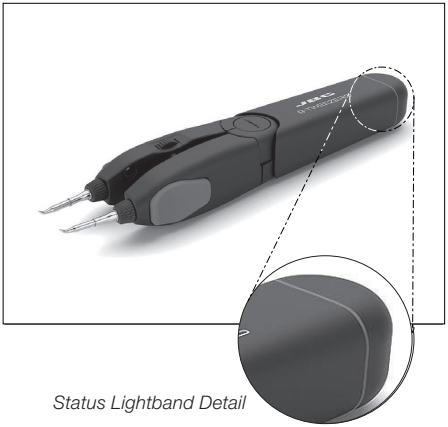
Tool search function:
When in doubt of which tool corresponds to the tool’s name, use the tool search function. Tap on the magnifying glass symbol (8) next to the tool’s name. The light band on the corresponding tool blinks in blue for five seconds to identify it.

Working with two tools *(works also for charging bases with only one charging holder)*:
It is possible to connect up to two tools at the same time. If a tool is already connected, first disconnect it from the device by selecting “Menu” (9) and tapping on “Disconnect”.

Place the second tool in the charging holder and scan it (6). The second tool is also shown in the device list on the display (10). To work with two tools, select one from the left-hand column (11) and the other one from the right-hand column (10). Then tap on “connect” (7).

Status Lightband

The status lightband on the tool indicates its status (see table on the right).

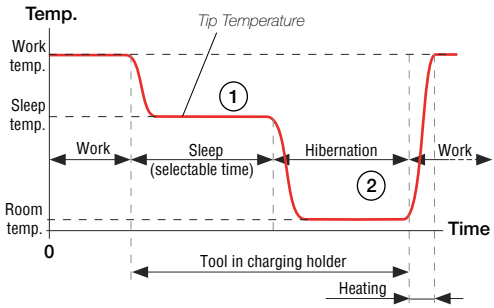


Status Lightband Detail

Color	Tool Status
Green	More than 50% charged
Orange	Between 20% and 50% charged
Red	Less than 20% charged
Green blinking	Charging (more than 50% charged)
Orange blinking	Charging (between 20% and 50% charged)
Red blinking	Charging (less than 20% charged)
No color	Safety cap on the tool and/or power off
Blue blinking	Locate Tool function activated

Operation

Thanks to the intelligent heat management, the cartridge tip recovers temperature extremely quickly.
This allows reducing the tip temperature when the device is not in use, resulting in a longer tip lifespan.
When the tool enters Sleep (1) or Hibernation (2) Modes, the tip temperature lowers automatically below the solder-melting-point temperature.



Tool Status

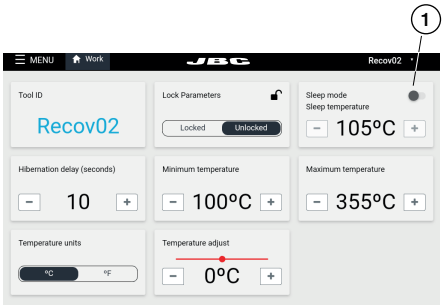
Tip Temperature

The tool can go into a number of statuses under different circumstances *(see the diagram on the next page)*. Depending on the status, the cartridge tip reaches different temperatures:

Tool Status	Tip Temperature
Sleep and charging	Cools down to the set Sleep temperature. Selectable between 70 °C and 150 °C.
Hibernation and charging	Cools down to room temperature.
Working	Heats up to the set work temperature.
Resting without cap	Cools down to room temperature (after 5 min of being completely still).
Tool with cap on	Cools down to room temperature.
Hibernation	Cools down to room temperature.
Shut off	Remains at room temperature (tool is shut off).

Sleep and Charging

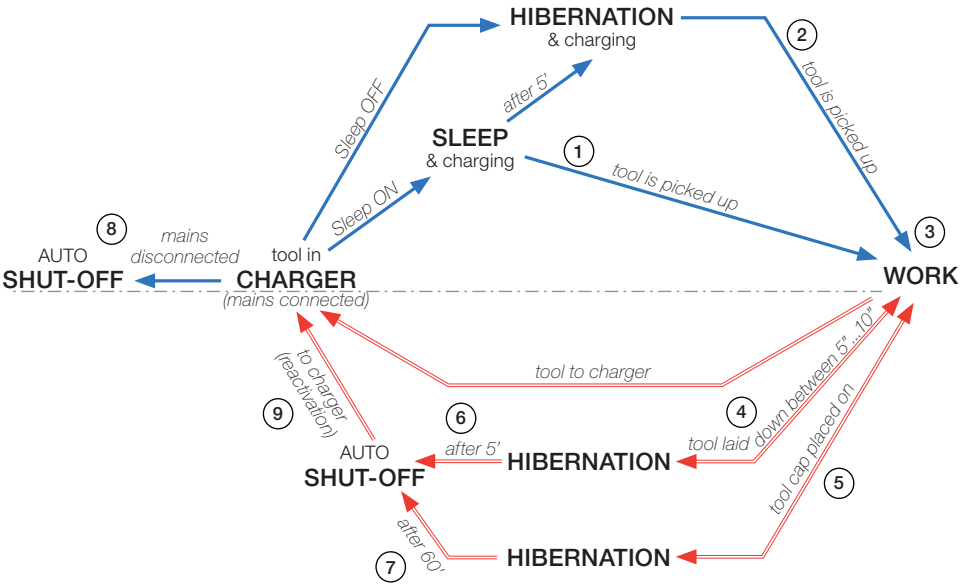
Sleep Mode can be activated/deactivated (1). If it is activated and the tool is placed in the charger, the tip cools down to sleep temperature and the tool keeps charging.



Hibernation and Charging

If Sleep Mode is not activated and the tool is placed in the charger, it goes into Hibernation. The tip cools down to room temperature and the tool keeps charging.

Tool Status *(continuation)*



Work

When the tool is taken out of the charger while in Sleep (1) or Hibernation (2) Modes, the cartridge tip heats up to the set work temperature and the tool is ready to use (3).

Hibernation

The tool goes into Hibernation Mode in two different cases:
a) After working, when the tool is laid down (4) and is resting between 5 and 10 seconds (time is adjustable).
b) After working, when placing the cap on the tool (5).

Note: Before the tool enters Hibernation Mode, it can be picked up to work with it and the cartridge tip heats up to work temperature.

Auto Shut-off

The tool shuts off automatically in three different cases:
a) When the tool (without the tool cap) is laid down and remains completely still in Hibernation Mode for 5 minutes (6).
b) When the tool (with the tool cap on) remains completely still in Hibernation Mode for 60 minutes (7).
c) When the tool is in the charger and the charging base is disconnected from the mains (8).

Tool Status *(continuation)*

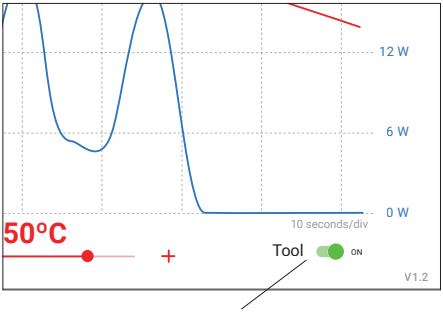
Tool Reactivation

Once the tool has automatically shut off, place it back in the charging holder (9) to reactivate it *(see diagram on previous page).*

Manual Tool Shut-Off

Besides the “automatic shut-off” feature, the tool can also be manually switched off by tapping the tool power button on the display. When it is switched off, the cartridge cools down to room temperature.

Note: To switch the tool back on, tap the same button on the display.



Tool On/Off Button

JBC Software

No installation or initial download are required for newly purchased JBC products. Both JBC display and tools come with its current software/firmware installed and updated, and are ready to use.

Note:
App: If a third-party display (tablet or smartphone) is used, the B.IRON app must be downloaded from JBC's web page and installed on the device.
Firmware: The tool's firmware is not automatically updated and the updates must be carried out manually by the user. To do so, follow the instructions on the next page.

App Versions

Make sure that the required app version is installed on the display (tablet or smartphone):

- B.100, B.500 and B.NANO require app versions **1.6** or higher.
- B.TWEEZERS requires app versions **1.7** or higher.

App Installation

On **JBC's portable display** *(Android),* the B.IRON app is already installed.

On the **user's smartphone or tablet** *(Android / iOS)*, go to the App Store/Play Store and search for "JBC B.IRON" on the search bar. **Note:** Internet connection is required to download the app.

Alternatively, scan these QR codes to access the B.IRON app page directly:

Download on the App Store

ANDROID APP ON Google play

App Update

Display with Internet connection *(Android / iOS)*
Update the app via Google Play *(Android)* or the App Store *(iOS)*.

Display without Internet connection *(Android)*
Download JBC's installer program to another device with an Internet connection from JBC's website: https://www.jbctools.com/jbcsoftware.html

DOWNLOAD ANDROID Installer

Then copy the downloaded program to the internal storage of the display used with B.IRON. Access the internal storage of the display and run the downloaded program. Once the program is completed, the app will be updated to the latest version.
Note: For JBC displays, swipe down to open the internal storage folder.

Downloading the Tool Firmware Update File

Display with Internet connection:

Download the firmware update file to the display used with B.IRON from https://www.jbctools.com/jbcsoftware.html. Go to the internal folder and unzip the downloaded file.

Display without Internet connection:

Download the firmware update file to another device with an Internet connection from JBC's website: https://www.jbctools.com/jbcsoftware.html and unzip the downloaded file.

Then do as described in the table.

PDS JBC's display (android)	**Other android devices**	**iOS devices**
Copy the unzipped files on the device used with B.IRON:		
Folder:	Folder:	Path:
\Internal shared storage\Android\data\es.infinitysource.jbc_soldering.JBCBiron\files	\Internal shared storage\Android\data\com.jbctools.jbcbiron\files	Files > On my iPad > JBC B.iron

Executing the Tool Firmware Update File

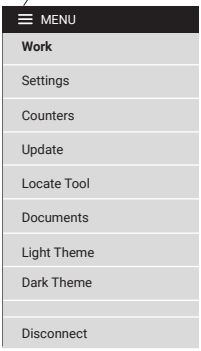
Tool firmware updates are not executed automatically; they must be carried out by the user.

On the display you are using with B.IRON, and with the latest app version installed, access the B.IRON app:

Select he tool you want to update. Then, in the main menu, select "update".

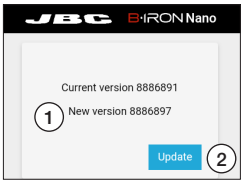
Note: At least one tool must be connected to see the expanded menu options.

Main menu with expanded menu options



Executing the Tool Firmware Update File *(continuation)*

If the downloaded tool firmware update file contains a newer version than the one already installed, the current and new version are displayed (1). Tap “Update” to start the update (2).



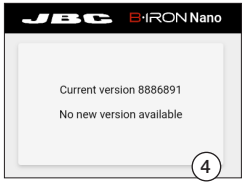
The update process takes about 10 minutes.

Note: If the firmware update is interrupted, the app automatically recognizes this and starts a new update process. “Device needs recovery” appears on the top left corner of the display. Press the “Update” button (2) in the pop-up window to continue the firmware update.

The B.IRON status light continuously changes its color during the update process.

Once the update is completed, “Tool updated” (3) will be displayed.

If “No new version available” is displayed (4), no update is possible or required.



Maintenance - Station and Tools

Before carrying out maintenance, always extract the cartridge from the tool and disconnect the charging base from the mains. Allow the equipment to cool down.

- Use a damp cloth to clean the casing and the tool. Alcohol can only be used to clean the metal parts.

- Periodically check that the metal parts of the tool and charging holder are clean so that the charging works properly.

- Keep the tip surface clean and tinned prior to storage in order to avoid tip oxidation. Rusty and dirty surfaces reduce heat transfer to the solder joint.

- Do not use liquids such as alcohol, thinner or benzene to clean the portable display.

- Repairs should only be performed by a JBC authorized technical service.

Clean the contact surfaces regularly to ensure that the tool gets charged correctly

Safety - Battery

It is imperative to follow safety guidelines to prevent electric shock, injury, fire or explosion.

- **Caution:** This product contains lithium-ion batteries. Mishandling or improper use may result in fire, explosion, or personal injury.

- Always use the provided charger. Do not use damaged chargers or batteries.

- Never attempt to disassemble or modify the batteries or the product. Doing so may lead to electric shock, fire, or damage to the product.

- In the event of damage, leakage, or overheating of the batteries, discontinue use immediately and contact customer support or JBC technical service facility.

- Dispose of devices with batteries inside, responsibly according to regulations. They must be disposed of in accordance with local regulations so that they can be recycled.

- Do not throw devices with batteries into household waste and do not dispose of them in fire or water.

Safety

It is imperative to follow safety guidelines to prevent electric shock, injury, fire or explosion.

- Do not use the units for any purpose other than soldering or rework. Incorrect use may cause a fire.

- The power cord must be plugged into approved bases. When unplugging it, hold the plug, not the wire.

- Do not attempt to dismantle or open the housing of the tool as it may cause damage.

- Do not work on electrically live parts.

- The tool should be placed in the charging holder when not in use in order to charge the batteries.

- The soldering tip, the metal part of the tool and the charging holder may still be hot even when the station is turned off.

- Do not leave the tool unattended when it is on.

- Avoid flux coming into contact with skin or eyes to prevent irritation.

- Be careful with the fumes produced when soldering.

- Keep your workplace clean and tidy. Wear appropriate protection glasses and gloves when working to avoid personal harm.

- Utmost care must be taken with liquid tin waste, which can cause burns.

- This appliance can be used by children over the age of eight and also persons with reduced physical, sensory or mental capabilities or lack of experience provided that they have been given adequate supervision or instruction concerning the use of the appliance and understand the hazards involved. Children must not play with the appliance.

- Maintenance must not be carried out by children unless supervised.

- Do not expose the portable display to high temperatures, humidity or dust. Avoid direct sunlight.

- Do not drop the portable display or the tool, as it may cause damage or malfunction.

- Do not disconnect your device when it is in file transfer mode.

- Do not use the portable display in places where wireless communications are restricted.

Specifications

B.TWEEZERS K
Nano Tweezer Expansion Kit for B.IRON
Ref.: **BP-KA**

B.TWEEZERS Nano Tweezers

- Peak Power (tool):	15 W
- Battery:	Li-Ion 7.4 V / 180 mAh
- Charge Time:	45 minutes
- Selectable Temperature:	200 - 450 °C / 390 - 840 °F
- Idle Temp. Stability (still air):	±1.5 °C / ±3 °F
- Temp. Accuracy:	±3 % (Using reference cartridge)
- Connectivity:	Bluetooth Low Energy (BLE)
- Ambient Operating Temp.:	10 - 50 °C / 50 - 122 °F
- Meets:	ANSI/ESD S20.20-2021
- Tool Weight (no cap):	57 g / 0.07 lb

B.TWEEZERS K

- Total Net Weight:	155 g / 0.34 lb
- Total Package Dimensions/Weight: (L x W x H)	245 x 185 x 45 mm / 289 g 9.65 x 7.28 x 1.77 in / 0.64 lb

Complies with CE standards.
ESD safe (to comply with ESD requirements, see page 4).

Warranty
JBC's 2 year warranty covers this equipment against all manufacturing defects, including the replacement of defective parts and labor.
Warranty does not cover product wear or misuse.
In order for the warranty to be valid, equipment must be returned, postage paid, to the dealer where it was purchased.

This product should not be thrown in the garbage.
In accordance with the European directive 2012/19/EU, electronic equipment at the end of its life must be collected and returned to an authorized recycling facility.

www.jbctools.com

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