

JBC

www.jbctools.com



INSTRUCTION MANUAL

B·IRON NANO

Battery-Powered Nano Soldering Station

This manual corresponds to the following references:

BIN-5A* - with Portable Display

BIN-5QA* - without Portable Display

** Depending on customer requirements, various power cords are available, suitable for:*

120V - N. America / Taiwan

230V - India / Europe / United Kingdom

Packing List

The following items are included:



H2465
Right-Side Charging-Holder
for B-IRON Handles

BCB

Charging-Base with RightSide Charging-Holder
already assembled 1 unit

Charging-Base for
B·IRON



C115 Cartridge 1 unit
Ref. C115101 (tip \varnothing 0.1 mm)



B-NANO Nano Handle for B-IRON 1 unit
Ref. BN-A
Includes Nano Handle + B1596

Brass Wool for B·IRON Charging-Base 1 unit
Ref. CL0300
Already assembled in the charging base.

B·IRON Display Holder 5" to 7" 1 unit
Ref. 0030723
Includes fixing knob.

USB Cable **
(USB A to Micro USB) 1 unit
Ref. 0028092

Safety Cap + OB5000 Sealing
B1510 Grip +



Plug +
fitters.



** Not included in ref. BIN-5QA.



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



Power Cord *	1 unit	Portable Display 7" for B-IRON **	1 unit
Ref. 0027380 120V - N. America / Taiwan		unit Ref. PDS-B	
0027381 230V - India			
0027382 230V - Europe			
0027378 230V - United Kingdom			
		Quick Start Guide	1 unit
		Manual	1 unit
		Ref. 0033719	

* One power cord included according to customer requirements.

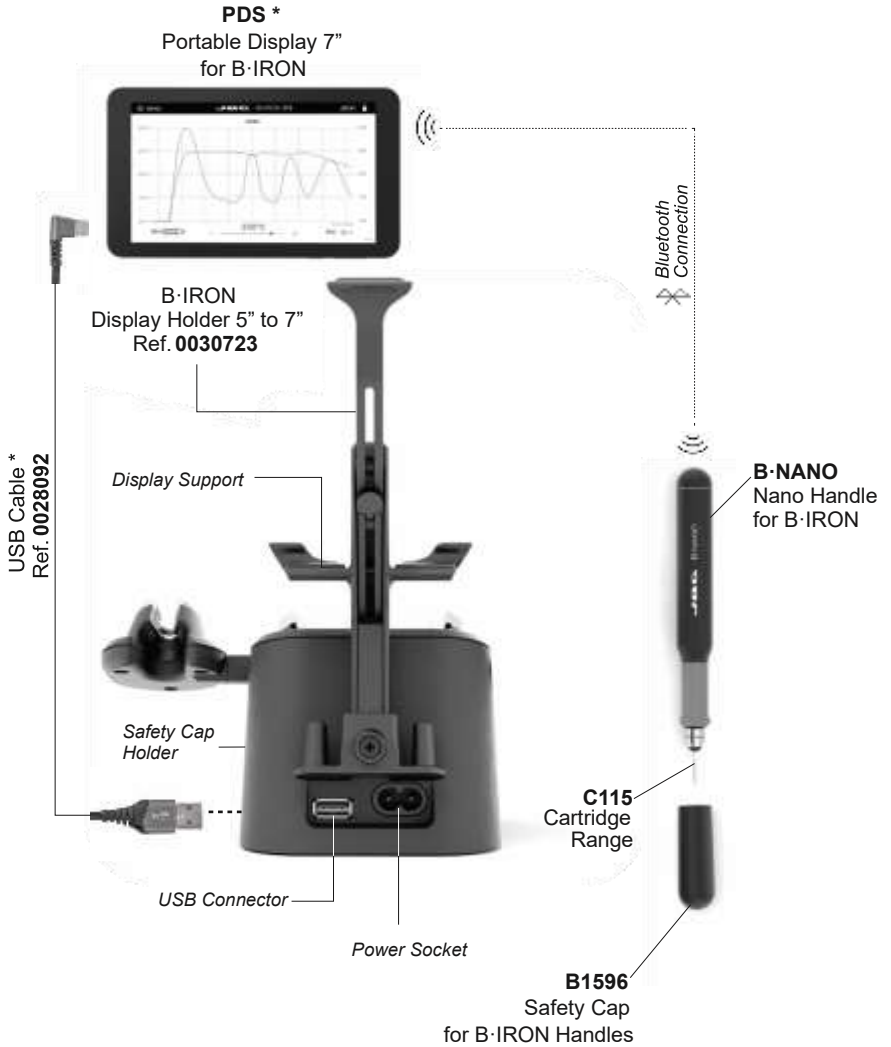


Features and Connections



* Not included in ref. BIN-5QA

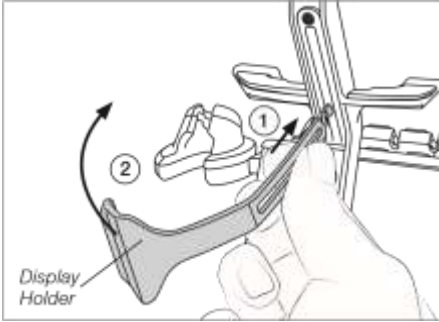
Features and Connections



* Not included in ref. BIN-5QA

Station Setup

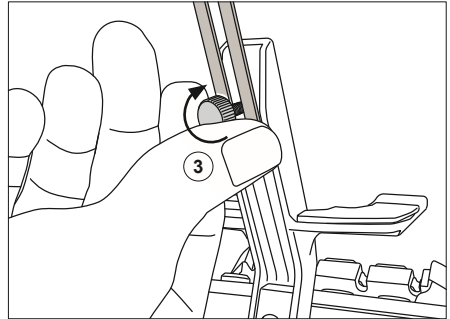
1. Display Holder Assembling



Insert the thin end of the display holder into the upper area of the rear rail of the charging base (1). Then carefully rotate the display holder 90 degrees (2) until it stands vertical.

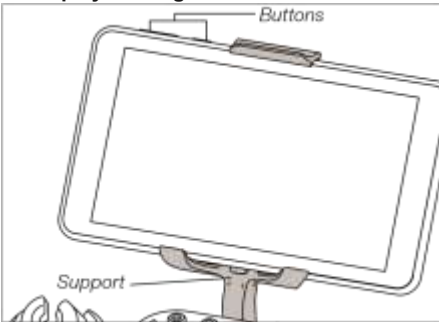
Once the display holder is at the right height, tighten the fixing knob completely to fix the display in place.

2. Display Holder Setting



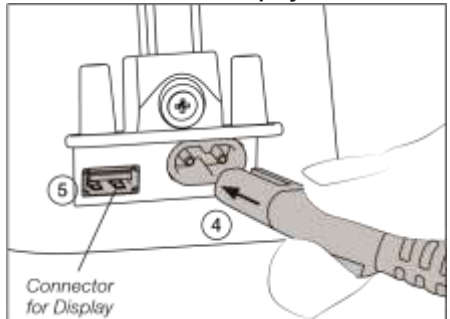
Insert the fixing knob (3) and tighten it just enough so that it stays in place but the display holder can be moved.

3. Display Placing



Place the display on the support with its buttons facing upwards and adjust the height of the display holder.

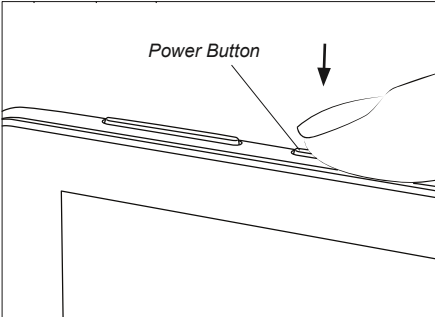
4. Base Connection / Display Connection



Connect the charging base to the mains (4).

If needed, the display can be connected to the USB port (5) with the provided USB cable to keep it charging while working.

5. Turning on the Portable Display



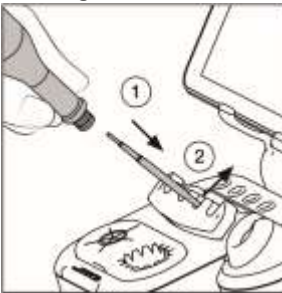
Turn on the display by holding down the power button for a while and then open the B·IRON app*:



* **Note:** The app can also be downloaded to your own devices. To know how, see section "Installing and Updating the B·IRON App".

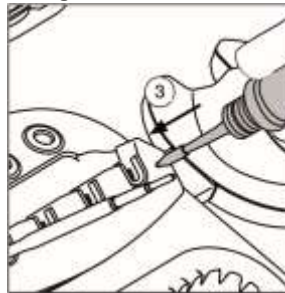
6. Cartridge Insertion and Charging

Inserting



Place the tool over a cartridge and press the tool down to insert the cartridge (1). To release the tool with the cartridge from the extractor, lift the tool upward (2).

Fixing



Make sure that the cartridge is appropriately inserted* into the tool by gently pressing the tip against the holes on the sides of the cartridge exchanger (3).

***Important:** Cartridges must Ca mu be inserted up to the second up to the mark for ring

Charging



Place the tool in the charging holder (4) to charge it. A beep will sound to confirm that the tool is properly placed and charging. The sound can be turned up, down or off using the buttons on the display.

 **Note:** Charge the tool

for a proper connection.a
proper conn cti .



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

For more information on how to change cartridges and the use of the cartridge exchanger, see section "Cartridge Exchanger and Cartridge Holder".

Tool Connection

Note: The supplied handle is already connected.

Make sure that the charging base is connected to the mains.

Scanning a new tool:

Place the tool in the charging holder to turn it on. The light 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 on the display, select it to be connected (7) and start working with it. **Locate Tool** (Search Function):

When in doubt of which tool corresponds to the tool's name, use the Locate Tool 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 select "Menu" (9) and tap on "Disconnect" to disconnect it from the device.

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



Status Lightband

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

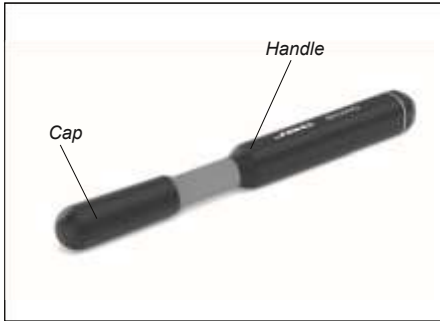


Status Lightband Detail

Safety Cap

Thanks to their safety cap, B·IRON handles can be transported safely, even with the cartridge inserted.

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 handle and/or power off
Blue blinking	Locate Tool function activated



When the cap is placed onto the handle, the cartridge stops heating, data transfer is cut off and the handle is disconnected from the station.

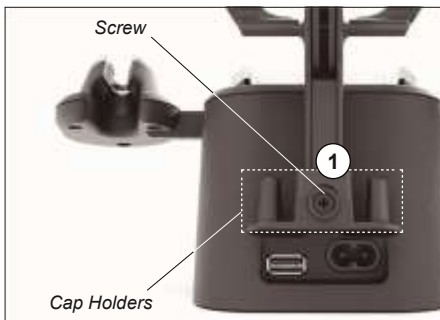
If the cap is removed before 60 minutes, the tool reconnects and heats up immediately. After 60 minutes with the cap on and without any movement, the handle turns off completely and it is necessary to reactivate it:



To reactivate and turn on the handle, the cap must be removed and the handle inserted in the charging holder so that the station recognizes the handle.

Important: After use, it is recommended to leave the tool in the charging holder until the next use so that it is ready and fully charged. The function of the cap is to allow safe transport, not storage.

Cap Holder



While the handle is in use, the cap can be stored on the cap holder located on the back of the charging base. There is space for two caps.

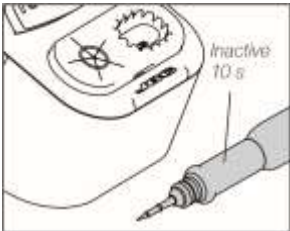
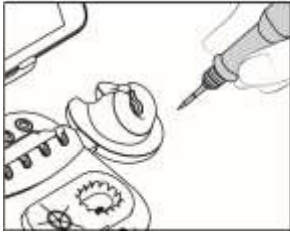
If desired, the cap holder can be detached by removing the screw (1).

Operation

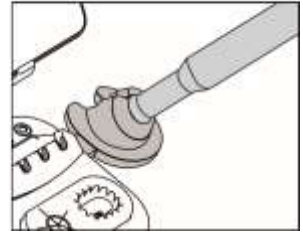
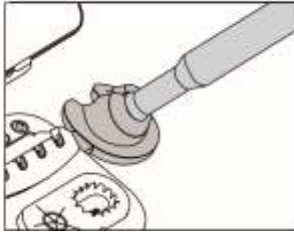
JBC's Most Efficient Soldering System

This revolutionary technology recovers tip temperature extremely quickly. This allows the user to work at a lower temperature.

Work



Charge Mode



When the tool is lifted from the tool holder, the tip of the assembled cartridge heats up to the selected working temperature.

If the tool has been inactive for a longer period of time (at least 5 minutes), it automatically turns off. While the tool remains in the tool holder, it charges and the tip gradually cools down to room temperature.

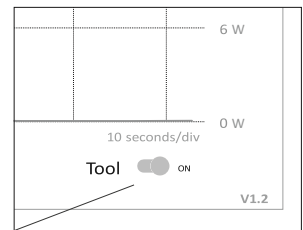
After automatically turning off, put the tool back in the tool holder. If Sleep Mode is activated (see section "Settings"), upon placing the tool in its holder, besides charging it enters Sleep Mode. The tip temperature drops down and remains at Sleep temperature.

Hibernation Mode

When the tool is away from the tool holder and remains inactive (no movement for at least 5 minutes), it automatically turns off. After 10 seconds, it goes into Hibernation Mode and the tip temperature gradually cools down to room temperature.

Automatic Turn Off

Turning the Tool Back On



holder to turn it on again.

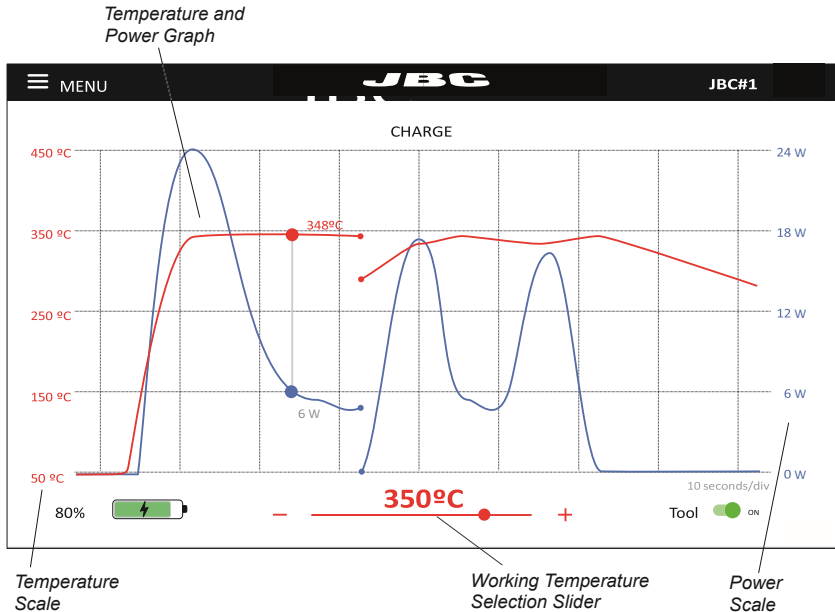
Note: The tool can also be switched off/on manually. Tap the *Tool* power switch on the display (bottom right) to switch it off/ on (if the

tool is turned off, it will remain connected up to 5 minutes to the station but will not heat up the cartridge).

Tool Power Switch

Workscreen

The workscreen shows a graph of the tip temperature and power supplied to the tip updated in real time. It allows modifying the tool working temperature, checking the battery status and turning the tool in use on and off.



Graph and Automatic Data Display

The graphs of temperature and supplied power start automatically as soon as the tool is lifted from the charging base.

The graph display can be paused while working by tapping the screen on the graph area. While the automatic display is on hold, the temperature/power values can be checked at a certain point of the graph by tapping on the desired position on the display screen.

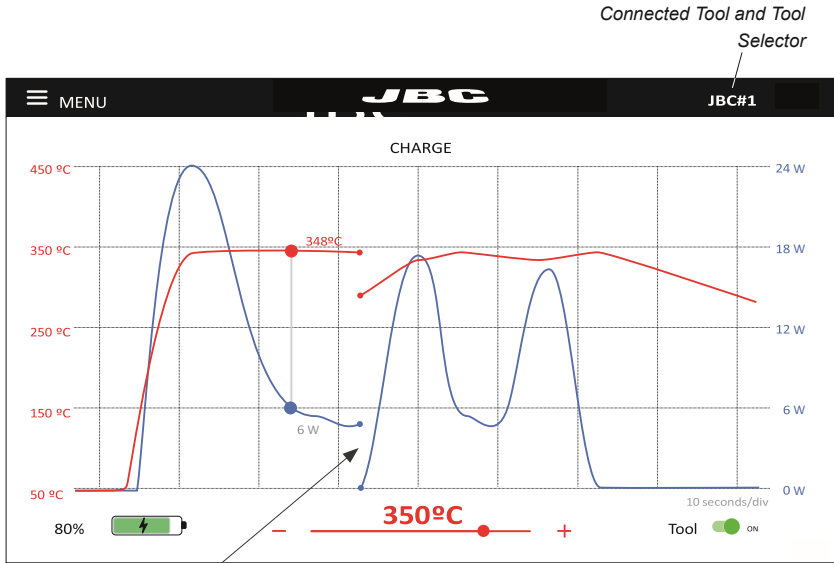
Note: Pausing the automatic display by tapping on the screen does not stop the tool from heating up, and the tip will remain at the selected working temperature. The graph display automatically continues after 5 seconds.

The graph can be moved to the left and right by swiping the touch screen sideways with one finger.

Working Temperature Modification

The working temperature can be modified using the slider below the graph ($\pm 5^\circ\text{C}$ / $\pm 10^\circ\text{F}$).

Workscreen



Stopping Data Display

When the tool is placed in the charging holder or when it enters Hibernation Mode, the data display stops.

The display starts again automatically when the tool is lifted from the tool holder and the graph is automatically displayed again at the point where the previous display stopped, leaving a small gap on the graph between the last registered value and the new starting point.

Working with Two Tools

When working with two tools, to switch between the two graphs, tap on the tool selector (upper-right corner of the display) and select the desired tool from the drop-down menu.

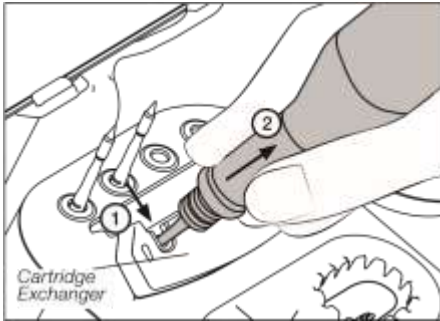
It is also possible to alternate both graphs by simply lifting one tool or the other from the tool holder. The display will automatically show the graph and information of the tool in use.

Note: All menu items are explained in detail starting at section “Menu”.

Cartridge Exchanger

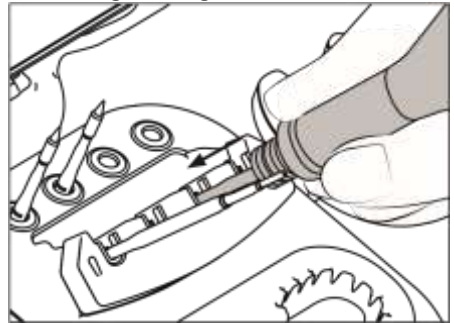
The cartridge exchanger saves time and allows changing cartridges safely without switching the tool off.

1. Removing Cartridges

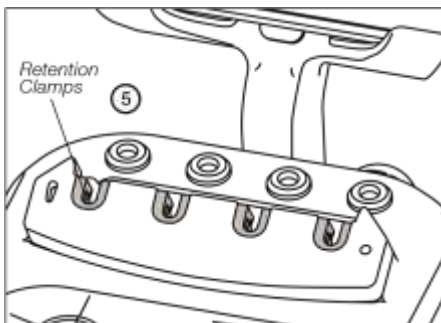


Place the cartridge over one of the slots of the cartridge exchanger and press down (1) until you hear a click. Then pull the handle out (2) to remove the cartridge.

2. Inserting Cartridges



Place the handle over a cartridge and press the handle down to insert the cartridge.



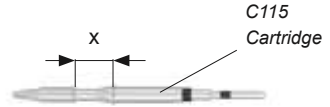
Cartridge Retention

Cartridges are held in place inside the cartridge exchanger thanks to the retention clamps (5), with the advantage that the cartridges do not fall into the exchanger and the cartridge tips are therefore protected.

The cartridge exchanger of B-IRON stations works with C210 and C115 Cartridges.

C115 Cartridge Retention Area

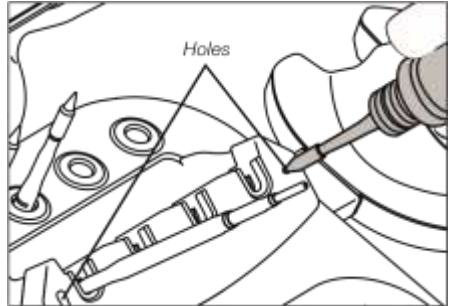
The holding area of C115 Cartridges is delimited by the two rings at the cartridge shaft (x).



3. Fixing Cartridges

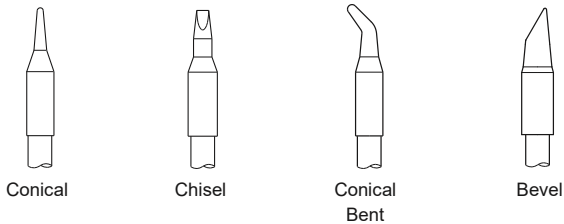
Depending on the shape of the tip, use the holes on the sides of the cartridge exchanger to properly adjust the cartridge.

Important: Push the cartridge in until it stops, making sure that it is firmly assembled*.



Compatible Cartridges

B·NANO works with C115 Cartridges. Find the model that best suits your soldering needs on www.jbctools.com

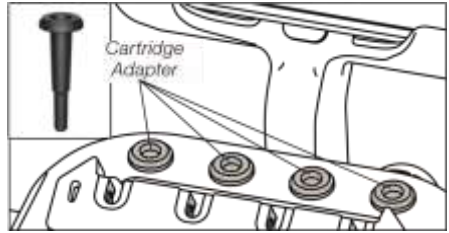
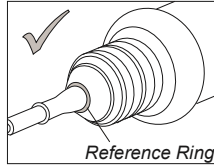
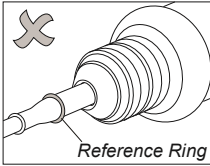


Inserting C115 Cartridges

Push the cartridges inside the handle until the reference ring rests against the sealing plug.

C115 Cartridge Adapter (B0643)

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.



Tip Cleaner

Select the option that best suits your needs and improve the tip thermal transfer.

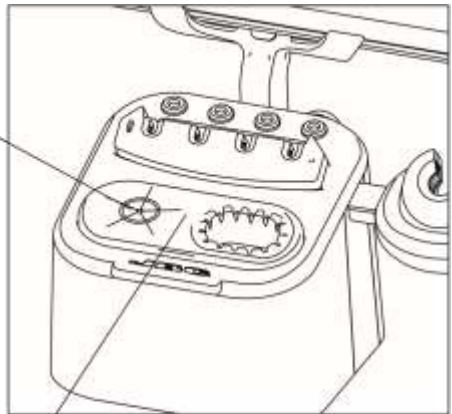


CL0300 Brass Wool for B·IRON Charging-Base

Very effective cleaning method. Leaves a small layer of solder on the tip, preventing oxidation between cleaning and rewetting.



Wiper for B·IRON Charging-Base



CL0301

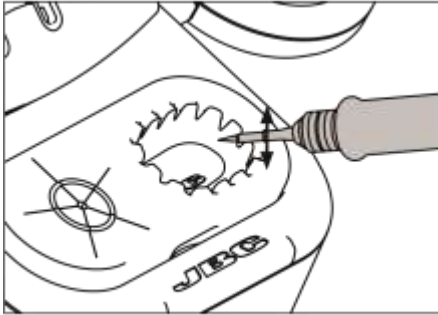
CL0301 includes an antisplash area that prevents solder particles from splashing onto the working area, keeping the workplace clean.

It also includes a temperature-resistant wiper for removing excess solder by gently tapping or wiping

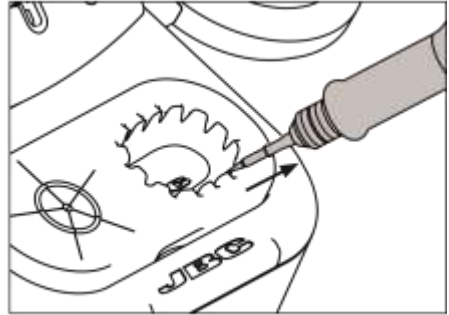
the cartridge tip on it.

Wiper *If the tip is very dirty, JBC recommends cleaning it first with the wiper to remove excess solder and*

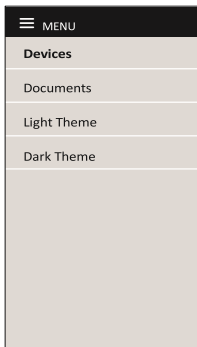
then with the brass wool.

Tapping

Tap gently to remove excess solder.

Wiping

Use the slots to remove remaining particles.

Menu**Menu - No Tools Connected****Menu - Tool Connected**

Before any tool is connected to the station or Once at least one tool has been linked, the after the last tool has been disconnected, the menu expands and shows more options. menu offers these options.

Work

Takes the user to the workscreen (see section “Workscreen”).

Settings

The B·IRON app offers an intuitive user interface, which provides quick access to several station parameters.



Settings

Parameter	Description
Tool ID	Allows modifying the tool identifier.
Lock parameters	Allows locking the parameters of the station using a four-digit code. The default code is 0105, but a new code can be set by simply entering some other four digits of choice when locking the parameters.
Sleep Mode / Sleep temperature	Set Sleep Mode on/off. The tip temperature drops only to the selected Sleep temperature when placed on the tool holder.
Hibernation delay	Set Hibernation delay from 5 to 15 sec. The countdown starts when the tool remains inactive (no movement).
Minimum temperature	Select the minimum temperature that can be set for Work Mode.
Maximum temperature	Select the maximum temperature that can be set for Work Mode.
Temperature units	Allows changing the units of temperature measurement between degrees Celsius and degrees Fahrenheit.



Counters

The Counters section allows the user to consult data and counts on charges, Work Mode periods, Sleep Mode periods, errors... The data can be consulted either by time periods or by number of times a certain event has occurred.

Update

Allows updating the firmware of the soldering station. To know more about the updating process, see section "Updating the Firmware".

Locate Tool

Tool light blinks in blue color for five seconds.

Documents

User manuals related to the station or to the tools can be consulted in this section or on JBC's website: www.jbctools.com

Light/Dark Theme

Allows the user to switch between dark and light display modes.

Disconnect

Disconnect the tool in use. If only one tool is connected, after disconnecting it, the app returns to the device list display.

B-IRON App Installation and Updating

JBC portable display (Android)

Installing

The B-IRON app is already installed on the portable display.

Updating

- Go to "www.jbctools.com/software" and download the app installer



- Connect the JBC display via cable to PC and copy the downloaded file to the internal shared storage.
- Execute installer in the display.

User’s smartphone or tablet (Android/iOS)

Note: Internet connection is required to download the app.

Installing or updating

- Go to the App Store or Play Store (depending on your operating system).
- Search for “JBC B.IRON” on the search bar.
- Tap on the app and then on Obtain / Install / Update.



B-IRON Tool Firmware Updating

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

Tool updating through JBC display (Android)

Note: The display must be connected via USB cable to a PC with internet connection.

1. On your PC, go to “<https://www.jbctools.com/software.html>.” Tap on “Station Firmware Update”, then tap on the latest version displayed for B-IRON to download the update zip file.



2. On the JBC display, check if there is a folder in the internal storage named “Internal shared storage\Android\data\es.infinitysource.jbc_soldering.JBCBiron\files”. If it does not exist, create it.
3. Unzip and copy the update files from the PC to JBC’s display into the above-mentioned folder.

4. Access the B-IRON app and select the tool you want to update. Then tap on “Menu” and select

“Update”.

5.1. If an update file with a newer version (1) than the one already installed is displayed, tap “Update” (2) to start the update. Once the update is completed, “Tool updated” (3) will be displayed.



5.2. If “No new version available” is displayed (4), no update is possible nor required.



B-IRON Tool Firmware Updating

Tool updating through user’s smartphone or tablet (Android/iOS)

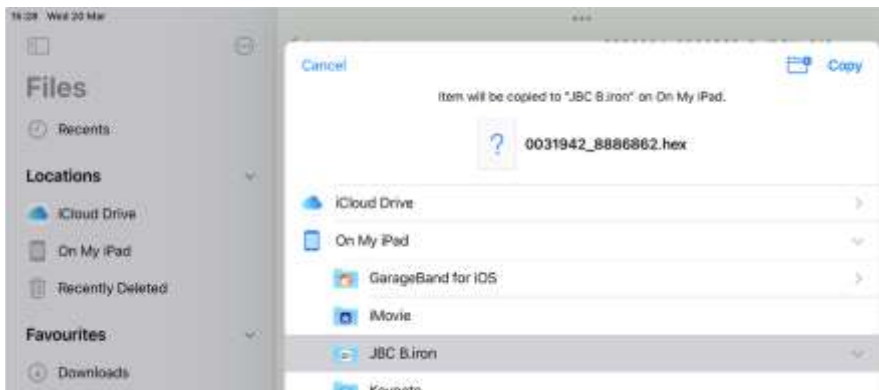
Note: Your device must be connected to the internet.

1. On your device, go to “<https://www.jbctools.com/software.html>.” and tap on “Station Firmware Update”, then tap on the latest version displayed for the B-IRON to download the update zip file.

2. Go to the internal file storage of your device and extract the update files from the zip folder.

3.1. For Android devices, copy the update files into the folder:
“Internal shared storage\Android\data\com.jbctools.jbciron\files”.

3.2. For iOS devices, copy the update files into the B-IRON app folder:



Complete the update by following steps 4 and 5 from the previous section.

Accessories

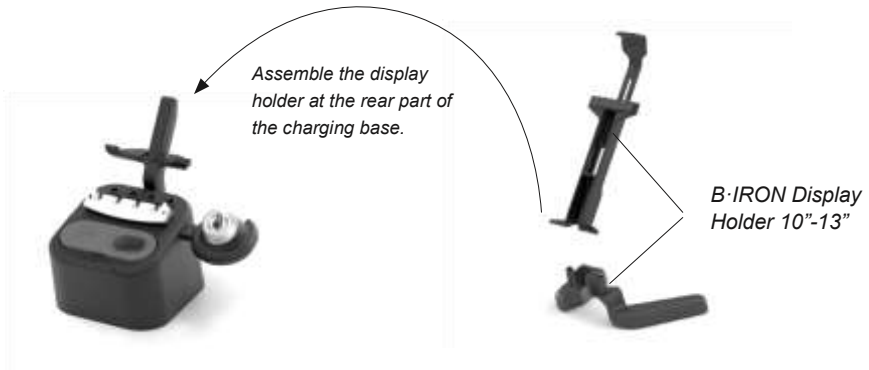
B·IRON soldering stations can be accessorized with some additional components specifically designed for them.

For more information on the entire B·IRON product range that goes beyond the information on this manual, please visit www.jbctools.com.

Display Holder

B·IRON Display Holder 10"-13"
Ref. **0031246**

In addition to the display holder supplied with the B·IRON station, JBC offers a holder for tablet sizes between 10" to 13".



Soldering Tools for B·IRON Stations

In addition to the tool provided with the purchased station, JBC offers the following tool:

B·100*

Light Handle for B·IRON

Perfect for applications in laboratories and/or performing individual soldering jobs.

Its technical performance has enabled a comfortable and lightweight design.

B·100 works with C210 Cartridges and performs up to 100 SMD soldering joints per charge.

Note: The charging holder on the B·IRON NANO station is fully compatible with B·100.

B·500*

Handle for B·IRON

Perfect for continuous and intensive work.

Its technical performance has enabled more autonomy than the B·100.

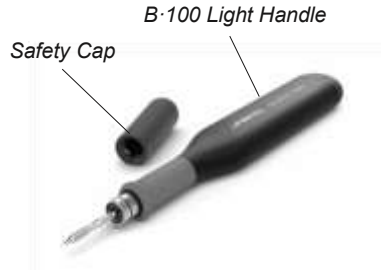
Note: The charging holder on the B·IRON NANO station is fully compatible with B·500.

B·IRON Expansion Kits

B·NANO K*

Nano Handle Expansion Kit for B·IRON

This kit allows expanding a B·IRON single station with an additional B·NANO handle.



** Cartridge not included. Handle comes with a safety cap. To charge the tools, a B·IRON charging base or station is needed.*



B·100 K*

Charging Holder

Light Handle Expansion Kit for B-IRON

This kit allows expanding a B-IRON single station with an additional B-100 handle.



B-500 K*

Handle Expansion Kit for B-IRON

This kit allows expanding a B-IRON single station with an additional B-500 handle.

* Cartridge not included. Handle comes with a safety cap. To charge the tools, a B-IRON station is needed.



Replacing Brass Wool

1. Lifting



Lift the wiper by using the recess on the edge.

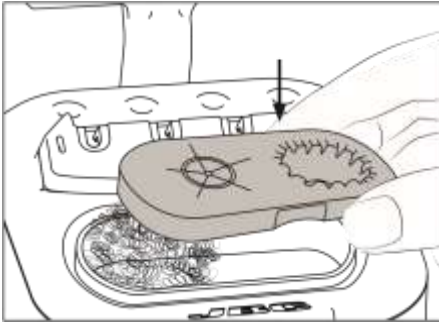
2. Replacing



Remove the wiper and replace the brass wool with a new one.

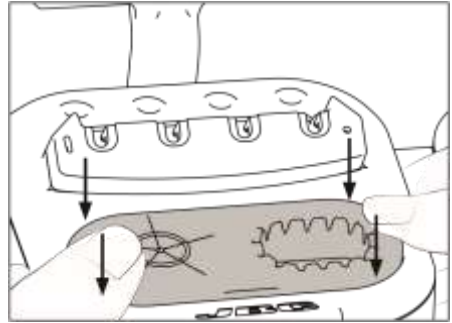
3. Reassembling

4. Pressing on

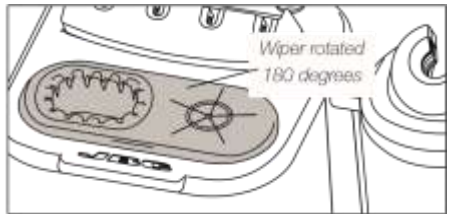
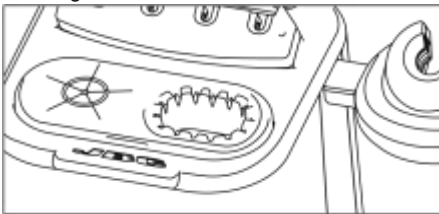


Assemble the new wiper onto the charging base. Make sure that the brass wool is on the far left and that there is space for the wiper on the right.

Note: The brass wool and the wiper positions can be reversed by rotating the antispash membrane 180 degrees.

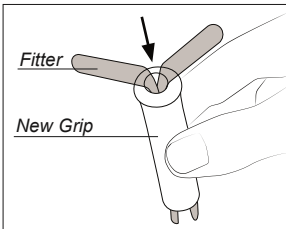


Press the wiper down at the 4 corners until you feel it click into place. Make sure that the wiper membrane is inserted correctly all the way around.



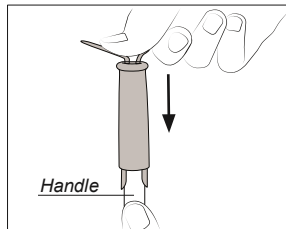
Replacing B1510 Grips (Soft Foam)

Inserting Fitters



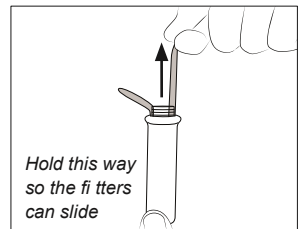
Insert the fitters into the new grip.

Assembling Grips



Push the grip with the fitters onto the handle.

Removing Fitters



To remove the fitters, hold the grip and pull the fitters out. Use pliers if necessary.

Replacing Sealing Plugs

The sealing plug prevents undesirable flux vapors or particles from entering the handle. Its usage is highly recommended for intensive applications when soldering is exposed to FOD environments or for applications where the soldering iron works close to a vertical position.

Note: Choose between the two available sealing plug references depending on your handle model.

⚠ Before replacing the sealing plug, disconnect the handle from the station and make sure the

device is not hot.

Handle	Sealing Plug
B-100	OB4000
B-500	
B-NANO	OB5000

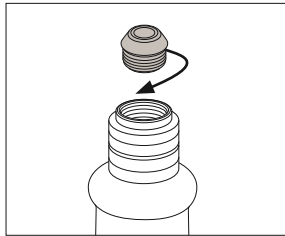
OB5000 has a thread for attaching the plug to the handle.

To replace it, unscrew the plug, replace it with a new one and screw it in until fixed.

OB5000 for B-NANO Handles

⚠ For B115 handles, the use of the OB5000 sealing plug is mandatory.

Without the use of the sealing plug, the cartridges cannot be properly inserted.

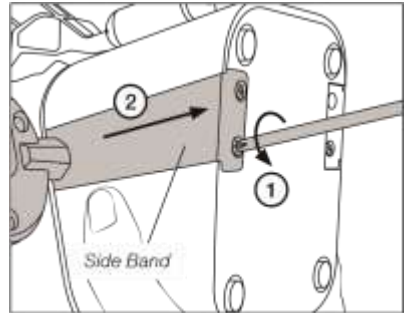


Charging Holder Disassembly and Replacement

Disassembling the Charging Holder

Loosen the screws (1) at the bottom of the charging base.

Hold the charging holder with your hand in place, to prevent it from falling down, and pull the side band down (2).

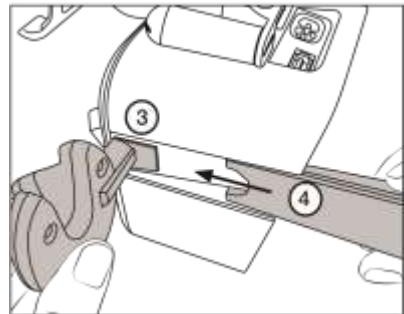


Replacing the Charging Holder

To install a new charging holder, insert it into the top of the side rail (3).

Then push the side band back into place (4) until the side band holds it firmly in place.

Finally tighten the screws at the base.



Maintenance

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 *Clean the contact surfaces regularly* solder joint. *to ensure that the*



tool gets charged

- Do not use liquids such as alcohol, thinner or *correctly* benzene to clean the portable display.
- Repairs should only be performed by a JBC authorized technical service.

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.

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.

Specifications

B·IRON NANO

Battery-Powered Nano Soldering Station

Ref. **BIN-5A** - with Portable Display

Ref. **BIN-5QA** - without Portable Display

Charging Base

- Input: 100 V - 240 V 50/60 Hz
- Nominal Power: 40 W
- Tool Output: 12 V / 1000 mA
- USB Output: 5 V / 1000 mA

B·NANO Nano Handle

- Peak Power (Tool): 24 W
- Battery: Li-Ion 7.4 V / 750 mAh
- Charge Time: 30 minutes
- Selectable Temperature: 100 - 450 °C / 210 - 840 °F
- Idle Temp. Stability (still air): ± 1.5 °C / ± 3 °F
- Temp. Accuracy: ± 3 % (using reference cartridge)
- Connections: Bluetooth Low Energy (BLE)
- Ambient Operating Temp.: 10 - 50 °C / 50 - 122 °F
- Tool Weight: 30 g / 0.07 lb

Portable Display 7"

- Display Dimensions: 7" / 7 in

Ref. **BIN-5A** with Portable Display:

- Total Net Weight: 1.94 kg / 4.28 lb
- Total Package Dimensions/Weight:
(L x W x H) 265 x 223 x 160 mm / 2.52 kg
10.43 x 8.78 x 6.30 in / 5.55 lb

Ref. **BIN-5QA** without Portable Display:

- Total Net Weight: 1.49 kg / 3.37 lb
- Total Package Dimensions/Weight:
(L x W x H) 225 x 223 x 160 mm / 2.03 kg
8.86 x 8.78 x 6.30 in / 4.54 lb

Complies with CE standards.

Not grounded device. No ESD discharge feature.



Warranty

JBC's 2 year warranty covers this equipment against all manufacturing defects, including the replacement of defective parts and labour.

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.

Get 1 extra year JBC warranty by registering here: <https://www.jbctools.com/productregistration/> within 30 days of purchase.

If you register, you will receive e-mail notifications about new software updates for your registered product.



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.



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