

JBC

www.jbctools.com

INSTRUCTION MANUAL



CDN

High-Precision Soldering Station

This manual corresponds to the following references:

CDN-9QF (100V)

CDN-1QF (120V)

CDN-2QF (230V)

Packing List

The following items are included:



CDN Control Unit1 unit



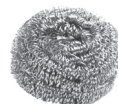
Nano Handle 1 unit
Ref. NT115-A



Sponge 1 unit
Ref. S0354



Metal Brush 1 unit
Ref. CL6220



Brass Wool 1 unit
Ref. CL6210



Tool Holder for CDN1 unit
Ref. 0030511



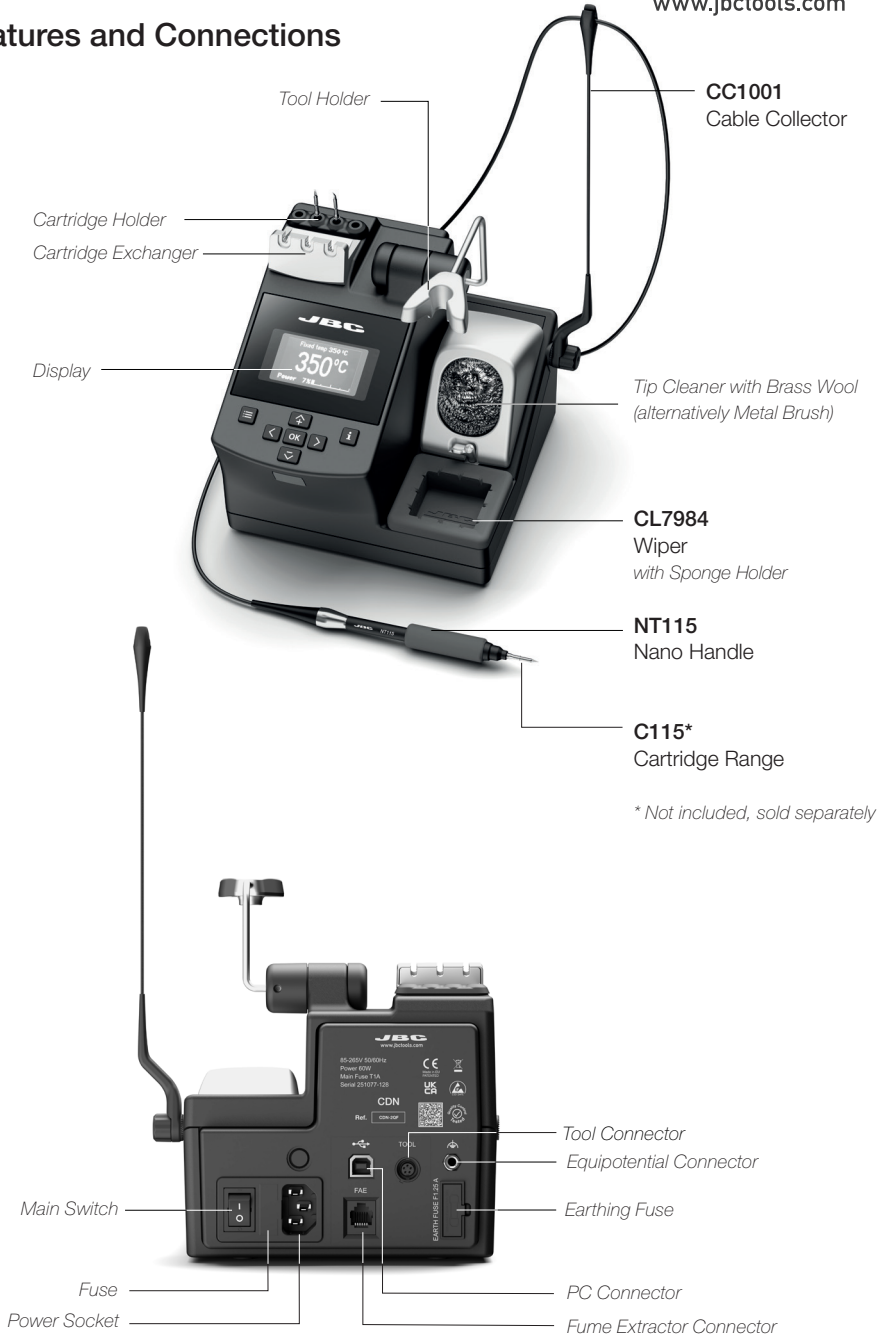
Power Cord 1 unit
Ref. 0024092 (100V)
0023715 (120V)
0023714 (230V)



Manual* 1 unit
Ref. 0030782

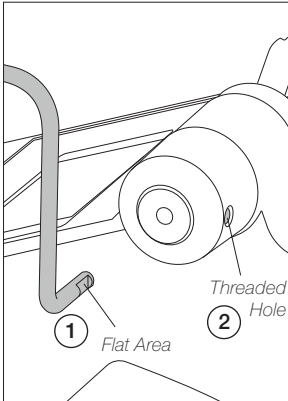
**manuals in other languages available
at www.jbctools.com*

Features and Connections



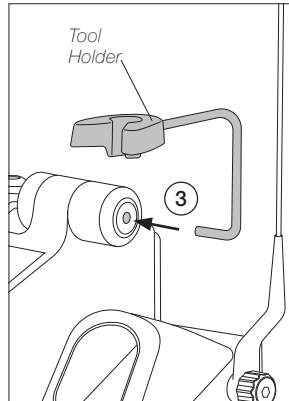
Tool Holder Assembly

View from the side



To assemble the tool holder, the flat area on the tool holder bar (1) must align with the threaded hole (2) on the back of the station.

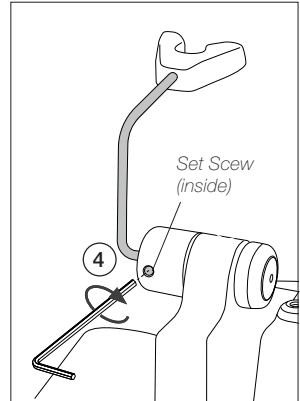
View from the front



Insert the tool holder bar into the slot on the station (3).

Note: The tool holder must be inserted in vertical position and as far as it will go.

View from the back

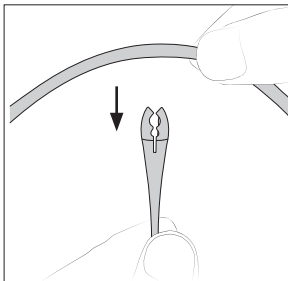


Finally tighten the set screw (4) (already assembled inside) to fix the tool holder in place.

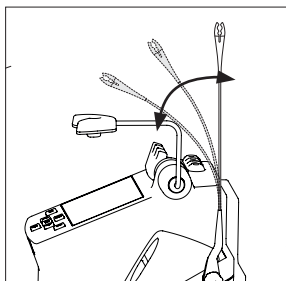
To replace the tool holder proceed in reverse order.

Adjustable Cable Collector (CC1001)

The adjustable cable collector keeps the cable away from the work area and prevents the weight of the cable from disturbing the operator while soldering.



Insert the cable into the cable collector clip. Do not leave the cable longer than necessary to reach the work area freely.



The cable collector is flexible. It accompanies and adapts to the movements during the soldering process.

Tip Cleaner

Select the option to suit your needs and improve the thermal transfer of the tip.

Splashguard

Ref. 0031053

Prevents the splashing of solder particles when brass wool or inox wool is used as cleaning option.

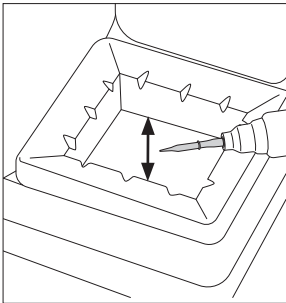
S0354 Sponge

The softest cleaning method to eliminate excess solder from the cartridge tip.

CL7984 Wiper

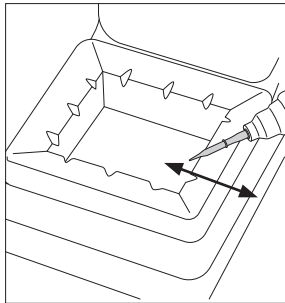
A temperature-resistant receptacle for removing excess solder by gently tapping or wiping.

CL7984 Wiper



Tapping:

Tap gently to remove excess solder.



Wiping:

Use the slots to remove the remaining particles.

CL6210

Brass Wool

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



Optional to use:

CL6220

Metal Brush

For in-depth cleaning of general purpose cartridges, tweezers cartridges and desoldering tips.



Optional to use:

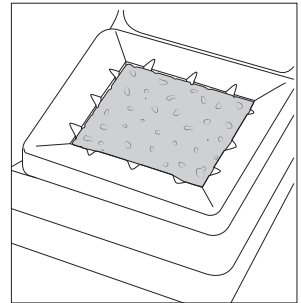
CL6205

Inox Wool*

Stronger cleaning method than brass wool.



S0354 Sponge

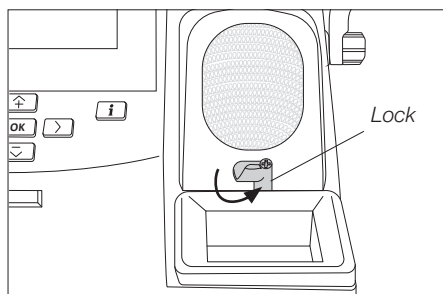


The softest cleaning method. Keep the sponge damp with distilled water when working to avoid tip wear.

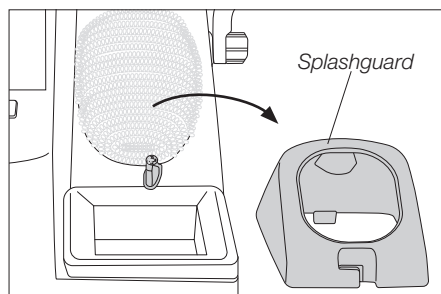
* Not included, sold separately.

Wool/Brush Replacement

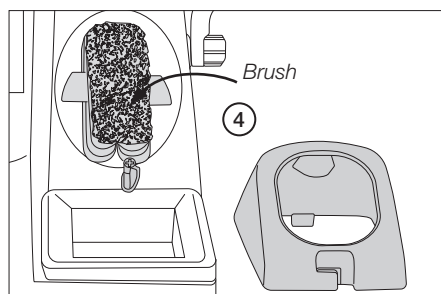
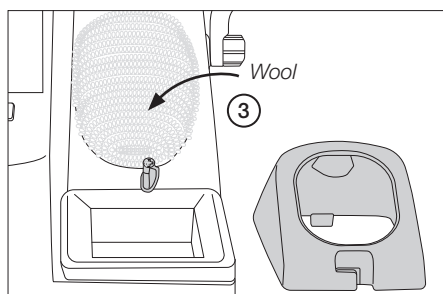
1. Unlock the splashguard.



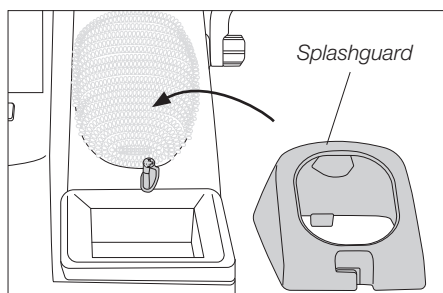
2. Lift off the splashguard.



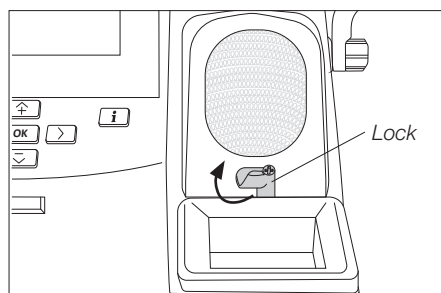
3. Depending on the component used, replace the brass wool (3) or the cleaning brush (4) for a new one.



4. Put the Splashguard back in place.



5. Lock the Splashguard.



Changing Soft Foam Grips

Soft foam grips for NT115 Nano Handles ensure better manual control of the handle and greater comfort when working.

Soft Foam Grips are available in 3 different colors:

N8662 *green*

Ref. 0018662 (incl. 4x grips)

N3308 *blue*

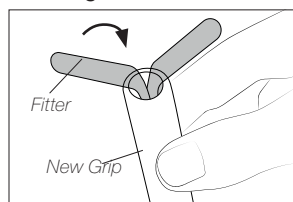
Ref. 0023308 (incl. 4x grips)

N3309 *black*

Ref. 0023309 (incl. 4x grips)

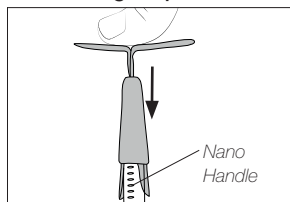
Replace the grips easily using the included fitters as shown in the following pictures.

Inserting Fitters



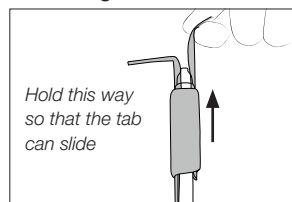
Insert the fitters into the new grip.

Assembling Grip



Push the grip with the fitters onto the nano handle.

Removing Fitters



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

Compatible Cartridges

Nano Handle **NT115** works with **C115** cartridges. Find the model that best suits your soldering needs at www.jbctools.com



Conical



Conical bent



Chisel



Bevel



Knife



Blade



Spoon

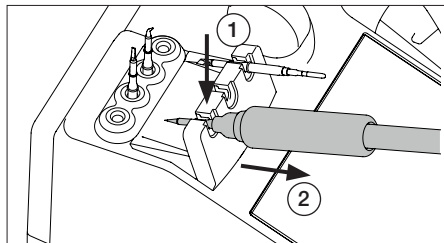


Conformal Coating Removal

Cartridge Exchanger

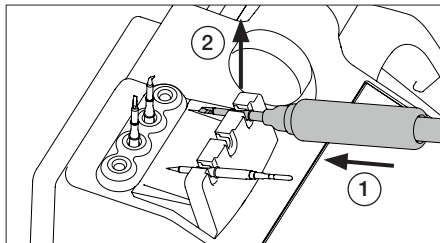
Save time and change cartridges safely without having to switch the station off.

Removing

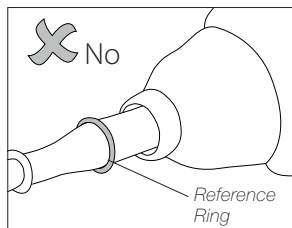


Place the cartridge over one of the slots of the cartridge exchanger and press down (1) until you hear a click. Then pull the handle (2) to release the cartridge from it.

Inserting

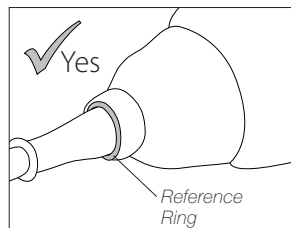


Place the handpiece on top of the new cartridge and press down slightly until the cartridge reference ring* rests against the handle (1). Remove the handpiece with its cartridge from the extractor with an upward movement (2).



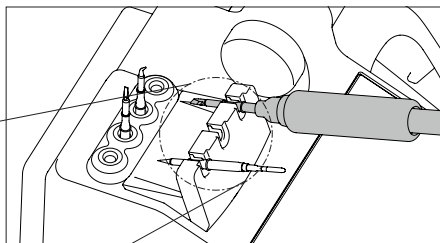
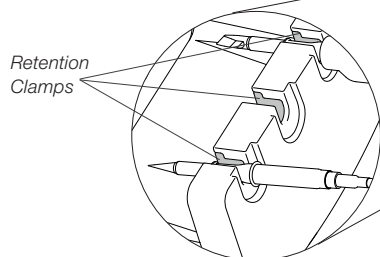
*Important

It is essential to insert the cartridges up to the reference ring for a proper connection.



Cartridge Retention

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

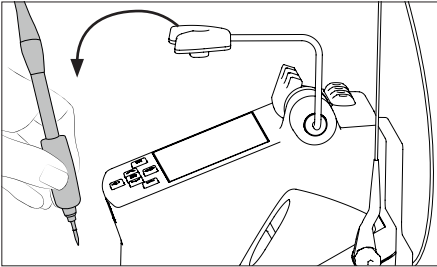


Operation

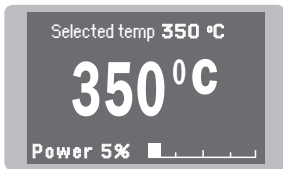
JBC's Most Efficient Soldering System

This revolutionary technology is able to recover tip temperature extremely quickly. This allows the user to work at a lower temperature. As a result, tip life increases by 5.

Work Mode



When the tool is lifted from the stand the tip will heat up to the selected temperature.



Tool Settings:
· *Operating Temp.*

Change Work temperature from 90 to 450 °C:

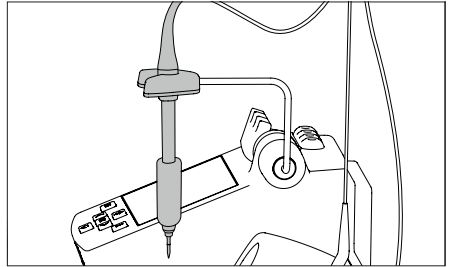
⬆ or ⬇ steps of ± 5 °C / °F
⬅ or ➡ steps of ± 50 °C / °F

Tool Settings:
· *Temp. Levels*

Press , select *Tool Settings* and activate the *Temp. Levels* option. Change Temperature:

⬆ or ⬇ steps of ± 5 °C / °F.

Hibernation Mode



When the tool is restored to the tool holder, the station automatically enters in hibernation mode.



Tool Settings:
· *Hibernation*

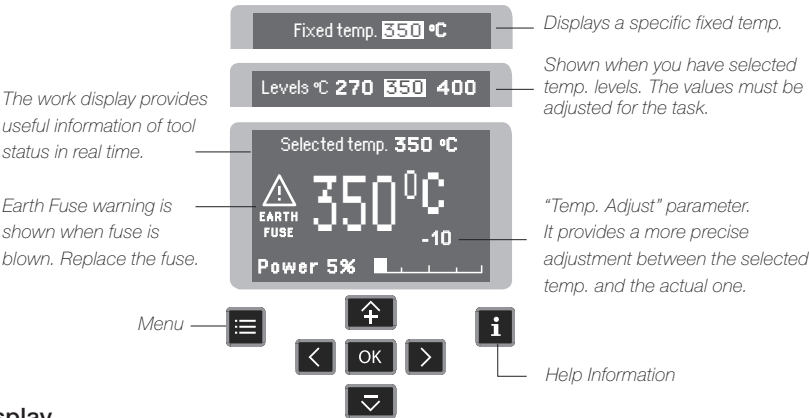
Change Hibernation delay from 0 to 60 min or no Hibernation.

Note: If desired, the station also allows to define the sleep temperature.

By default the station automatically changes from work mode to hibernation mode when the tool is placed back in the tool holder.

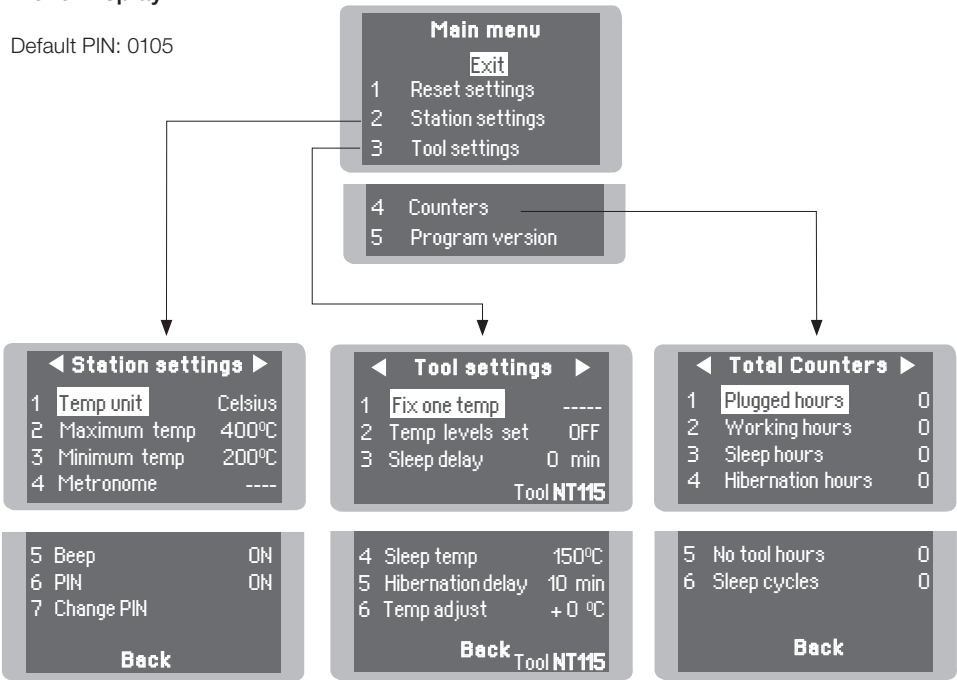
Control Process

Work Display



Menu Display

Default PIN: 0105



Troubleshooting

Station troubleshooting available on the product page at www.jbctools.com

Parameters

Be careful when using these parameters as they may reduce the tip life if not used properly. Please follow the recommended guidelines:

Station Settings

Parameter Description	Recommendations	Warnings
Temperature Unit Celsius (°C) or Fahrenheit (°F)	N/a	N/a
Maximum Temperature Set the maximum temperature to work with. Default max. temp is 400 °C (750 °F). This is considered high enough to work with most lead-free applications.	The station temperature range is 90-450 °C (190-840 °F). Change the temperature limits when working with less common applications such as low / high melting point soldering (HMP) or plastics (e. g. riveting).	 In most cases, working with temperatures over 400 °C (750 °F) can damage the PCB and its components. Even in short time periods of tip contact with the soldering joint, the flux may not work properly and could seriously reduce tip life. If the solder joint requires more power (e.g. multilayered or high dissipation boards), JBC strongly recommends using other aids like preheaters.
Minimum Temperature Set the minimum temperature to work with. Default min. temp. is 200 °C (392 °F). This is considered to be a proper starting point for leaded applications.		
Metronome This activates a beep sound. Frequencies vary from 1 to 50 seconds.	Useful for setting a work rate in repetitive jobs. The beep lets you know the length of time the tip must be in contact with the soldering joint.	N/a
Beep Enable/disable the beep sound of the keypad.	N/a	N/a
Pin Enable/disable pin prompt.	N/a	N/a
Change Pin Change the default security PIN number (0105).	The PIN must be entered every time a parameter is changed.	N/a

Tool Settings

Parameter	Description	Recommendations	Warnings
Fix One Temperature	Fix a value within the temperature range of the station (90-450 °C/190-840 °F).	Ideal for soldering more than one component at a specific temperature. The station will reject any attempt to change the temperature.	N/a
Temperature Levels Set	Similar to “Fix one temp” parameter. In this case, the user can set up to 3 values for different power requirements.	This allows a quick change between 3 different temperatures. Set them according to the allowed values for your soldering applications.	N/a
Sleep Delay	Set the time that the tool will remain at the selected temperature when in the stand before entering Sleep mode. The tip temperature will then drop to the Sleep temperature.	Because our tools reach the working temperature from the default Sleep mode in only a few seconds, this parameter is preset to 0 min. Once the tool is returned to the stand, the temperature will automatically drop to Sleep temperature, extending tip life and avoiding oxidation. Retinning the tip before placing the tool in the stand will protect the tip and extend its life.	 Setting these parameters to higher values will unnecessarily accelerate oxidation and shorten tip life especially when working with temperatures up to 450 °C / 840 °F.
Sleep Temperature	This is the set temperature the tip reaches when returned to the stand.	Sleep temperatures are set to achieve a balance between preventing oxidation and reaching the working temperature in a few seconds.	

Tool Settings

Parameter	Description	Recommendations	Warnings
Hibernation Delay	Set the time the tool will remain at Sleep Temperature before entering in Hibernation Mode. At this time, the power supply is cut off and the tip remains at room temperature.	This function completely protects the tip from oxidation during long periods of inactivity while the tool is in the stand. Retinning the tip before placing the tool in the stand also helps prevent oxidation and extends the life of the tip.	 Increasing the default value will accelerate oxidation and shorten the tip life.
Temp Adjustment	It provides a more precise adjustment between the selected temperature and the actual one.	Set values within $\pm 50\text{ }^{\circ}\text{C}$ / $\pm 90\text{ }^{\circ}\text{F}$ to achieve zero error. JBC strongly recommends the use of TID-A or TIA-A Thermometers to obtain precise readings.	 When the user changes the cartridge type, the parameter should be reset to $0\text{ }^{\circ}\text{C}/\text{F}$ or to the value needed for this cartridge. E.g. If a correction of $+20\text{ }^{\circ}\text{C}$ / $+36\text{ }^{\circ}\text{F}$ is set for a thick cartridge and then the user changes to a thinner one without resetting the temperature adjustment, he would be working at a higher temperature than needed for this thinner cartridge, which does not need any temperature adjustment.

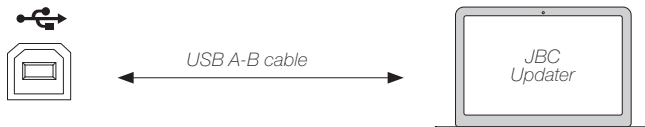
USB Connector

Download the latest software from our website to improve your soldering station.

JBC Updater

www.jbctools.com/software.html

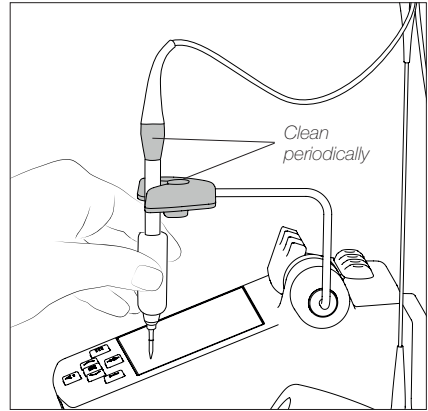
Update the station software via USB connection:



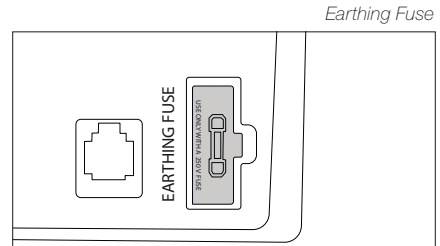
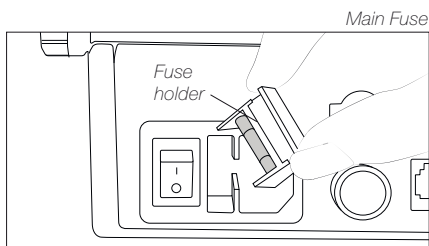
Maintenance

Before carrying out maintenance, always switch the device off and disconnect it from the mains. Allow the equipment to cool down.

- Clean the station display with a glass cleaner or a damp cloth.
- 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 the tool holder are clean so that the station can detect the tool's status.
- Maintain the tip surface clean and tinned before storage to avoid tip oxidation. Rusty and dirty surfaces reduce heat transfer to the solder joint.
- Periodically check all cables.
- Replace any defective or damaged pieces. Only use original JBC spare parts.
- Repairs should only be performed by a JBC authorized technical service.



- When this warning appears on the main display, earthing fuse must be replaced.
- Replace a blown fuse as follows (applies to both the earthing fuse and the main fuse):
 1. Pull off the fuse holder and remove the fuse. If necessary, use a tool to lever it off.
 2. Insert the new fuse into the fuse holder and return it to the station.



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. Be sure that it is properly grounded before use. When unplugging it, hold the plug, not the wire.
- Do not work on electrically live parts.
- The tool should be placed in the stand when not in use in order to activate the sleep mode. The soldering tip or nozzle, the metal part of the tool and the stand may still be hot even when the station is turned off. Handle with care, including when adjusting the stand position.
- Do not leave the appliance unattended when it is on.
- Do not cover the ventilation grills. Heat can cause inflammable products to ignite.
- 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 people 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.

Notes

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Notes

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Specifications

CDN

High-Precision Soldering Station

Ref. **CDN-9QF** 100 V 50/60 Hz. Input fuse: T1A. Output: 8.5 V.

Ref. **CDN-1QF** 120 V 50/60 Hz. Input fuse: T1A. Output: 8.5 V.

Ref. **CDN-2QF** 230 V 50/60 Hz. Input fuse: T1A. Output: 8.5 V.

- Nominal Power: 60 W
- Peak Power (Tool): 25 W
- Selectable Temperature: 90 - 450 °C / 190 - 840 °F
- Idle Temp. Stability (still air): ± 1.5 °C / ± 3 °F (Meets and exceeds IPC J-STD-001)
- Temp. Accuracy: ± 3 % (Using reference cartridge)
- Temp. Adjustment: ± 50 °C / ± 90 °F (Through station menu settings)
- Tip to Ground Voltage/Resistance: Meets and exceed
ANSI/ESD S20.20-2014 IPC J-STD-001F
- Earthing Fuse: F 1.25A
- Connections: USB connector to PC
FAE connector to Fume Extractor
- Ambient Operating Temp: 10 - 50 °C / 50 - 122 °F
- Control Unit Dimensions: 170 x 176 x 145 mm
(L x W x H) 6.69 x 6.93 x 5.71 in
- Total Net Weight: 2.7 kg / 5.95 lb
- Total Package Dimensions / Weight: 234 x 234 x 258 mm / 3.27 kg
(L x W x H) 9.57 x 9.57 x 10.12 in / 7.21 lb

Complies with CE standards

ESD safe



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.



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