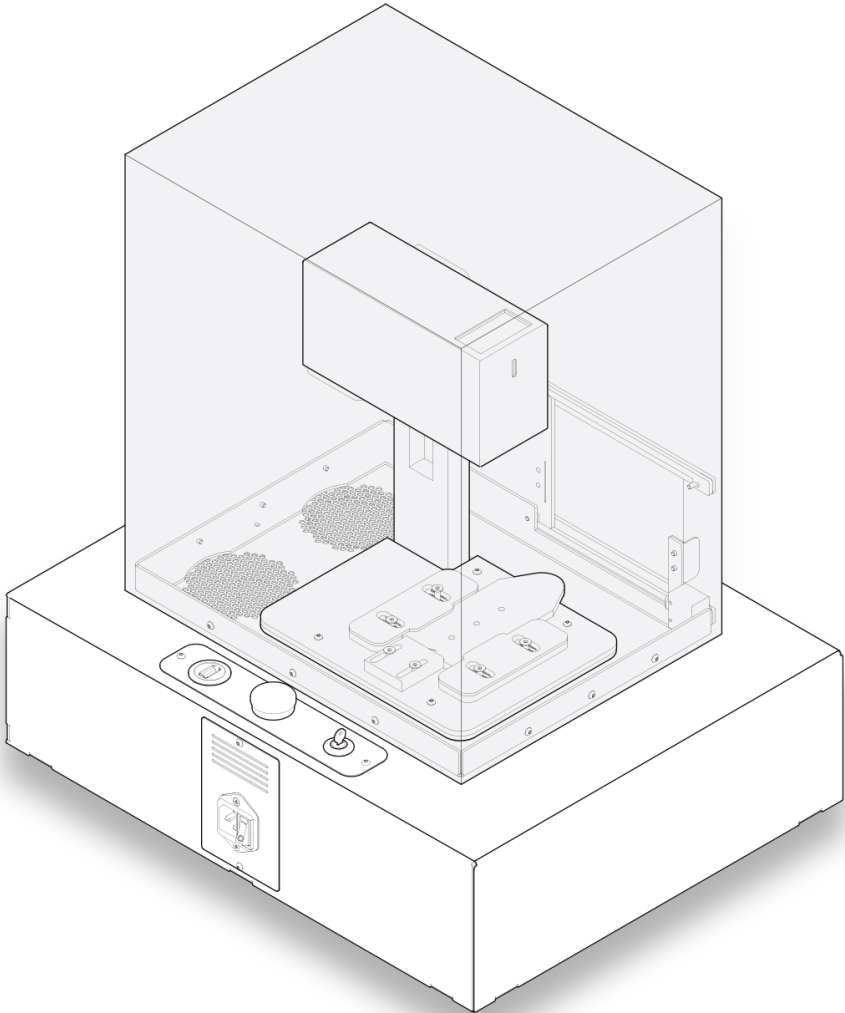


# EXR-B

## ENGRAVING STATION MANUAL



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[exrobotsitc.com](http://exrobotsitc.com)

**EXR-B Engraving Station**

**V.1/24**

**EXROBOTS INTEGRACIÓN TECNOLÓGICA CREATIVA S.L.**

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**Technical Changes:**

Technical specifications are subject to change without notice.

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# 1. Introduction

Thank you for purchasing the EXROBOTS ITC EXR-B Engraving Station. Your EXR-B is a compact engraving system designed for ease of operation, enabling you to engrave products safely, quickly, and accurately with high resolution.

## 2. How to use this owner's manual

To safely perform engravings and fully utilize the engraving station's potential, achieving the best results, it is essential to read the manual and follow the engraving processes as described in this document.

**Before beginning any work on the engraving station, read this manual completely and carefully. Keep the manual for further consultation close to the engraving station.**

### 2.1. Storage of the Manual

This manual is an integral part of the engraving station and must therefore be kept in the direct vicinity of the engraving station and be always accessible.

### 2.2. Additional Manuals

The engraving station is equipped with an L2 laser head and a Tab A9 tablet. Both the L2 laser head and the A9 tablet come with their own user manuals, where specific information about these devices should be consulted. These additional manuals are included as appendices in the current EXR-B Engraving Station Manual.

The **L2 laser head (Laserpecker 2)** and the **Tab A9 tablet (Samsung SM-X110)** have already been installed and calibrated during the integration process of the laser engraving station. Therefore, it is advised to adhere to this manual and refer to the specific manuals of the laser engraving head and the tablet for detailed information on the topics addressed.

Additional Manuals:

- L2 laser head (Laserpecker 2): **Operation Manual of Laserpecker 2**  
Provides detailed instructions on the operation and maintenance of the L2 laser head.
- Tab A9 tablet (Samsung SM-X110): **SM X11X\_X21X\_UM\_EU\_UU\_Eng\_Rev.1.0\_231214**

Contains important information on the setup, use, and care of the A9 tablet.

## 3. Technical Support

We offer online technical support for this product. If you encounter any issues with the EXR-B Engraving Station, please do not hesitate to contact us. Technical support is available from Madrid, Spain, between the hours of 9 a.m. and 6 p.m. CET (UTC + 1).

### Technical Support Online:

*exrobotsitc.com*

### Email:

*support@exrobotsitc.com*

### Phone:

+34 627 682 065

What to do prior to contacting Technical Support:

1. Have the engraving station serial number available.
2. Have time to work on engraving station. Many issues will require troubleshooting.
3. Disconnect the engraving station from power, wait for 10 minutes, then reconnect it.
4. Perform a thorough cleaning of the engraving station.

The engraving station serial number can be found on the Certification Identification Label. This label is located on the side of the engraving station's cabinet, close to the power cord input.

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Model: **EXR-B Laser Engraving Station**

Manufacture date: **05/2024**

Input: **100-240V~AC, 50-60Hz.**

Rated power: **120W**

Serial number: **24000X**





## 4. Safety

The engraving station is built at the time of its development and production according to applicable, established technical specifications and is safe to operate.

The general guidelines and directions listed within this manual may differ according to region or country.

Therefore, always observe the directives as well as the regulations of the institutions for statutory accident insurance association applicable to you. The operator is responsible for fulfilling all safety requirements, as Exrobots Integración Tecnológica Creativa S.L. has no influence on the proper use of the engraving station.

Make sure to inform yourself about the official regulations for your business location in accordance with the applicable local legal regulations (on accident prevention regulations or employee protection).

### 4.1. Intended use

The engraving station must be operated, maintained, and repaired only by trained personnel familiar with the designated field of use and the dangers of the engraving station.

The intended use of this engraving station also includes that all personnel involved in installation, set-up, operation maintenance and repair of the engraving station must have read and understood the **Owner's Manual** and in particular the "**Safety**" section and comply with the instructions.

Dangers can be caused by the engraving station if the engraving station:

- Is operated by unqualified personnel.
- The personnel have not been trained.
- The engraving station is used improperly or not as intended, or if the engraving station is used for other intended purposes.

This chapter provides an overview of all important safety aspects that are necessary for optimum protection of users and safe and trouble-free operation of the engraving station. Other chapters of this manual contain specific safety notes for the avoidance and prevention of hazards.

## **4.2- Improper use**

Use of the engraving station for any purposes other than those intended or described in the present manual is regarded as improper and therefore prohibited. Exrobots Integración Tecnológica Creativa S.L. will not accept any liability for damage caused by improper use. The operator is solely liable for all damages caused by improper use.

Non-observance of the operation, maintenance and service instructions described within this manual absolves Exrobots Integración Tecnológica Creativa S.L. from any liability in case of a defect.

## **4.3- Residual risk**

Even if all safety regulations are observed, a residual risk remains when operating the engraving station.

## **4.4- Engraving station**

The EXR-B Engraving Station includes additional safety measures beyond those of the laser head itself, promoting that laser engraving operations are carried out safely and preventing accidental contact with the laser.

To initiate the laser head, activation of a keyed safety switch is required. This measure guarantees that operation is limited exclusively to authorized operator responsible for managing the laser station, thereby preventing unauthorized activation of the equipment.

To facilitate and expedite the deactivation of the laser head in the event of malfunction, the engraving station features an emergency shutdown button. This button will remain illuminated as long as the station is connected to the power and the keyed power button has been activated.

The L2 laser's output is completely enclosed within a protective housing. This enclosure, an orange transparent cover, securely surrounds the laser head and includes magnetic safety interlocks that automatically deactivate the laser if the access door is opened during operation. The access doors, equipped with magnetic interlocks, are designed to be opened without the need of tools.

To ensure a precise and safe engraving process, a switch sensor is included that detects the correct placement of the template on the engraving base.

To minimize odors during the laser engraving process, the engraving station is equipped

with an air filtration system, featuring a replaceable activated carbon filter located inside the cabinet and accessible via an access panel.

The cabinet access panel is not interlocked and requires a tool for opening or removal.

Access panel should always be installed when the laser not is operating. Never operate the laser system with the access panel removed.

**DO NOT** disassemble the engraving station or remove any of its protective housing or covers while the unit is plugged in.

**DO NOT** attempt to force open the door interlocks.

**DO NOT** place flammable materials or materials with total or diffuse reflective properties inside the protective housing.

**CAUTION:** Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

It is strictly prohibited to alter, refit, or modify the engraving station in any way without the express consent of the manufacturer.

Likewise, it is strictly prohibited to remove, bridge, or bypass any safety devices. Operating conditions and connection and setup values stated in the data sheet must be always complied with.

Operation of the system is permitted only with original parts and accessories by the manufacturer. Use of third-party parts affects engraving station safety.

## 4.5- Operating modes

### Normal operation

For normal operation the following conditions must be met:

- Intended use of the engraving station (see chapter "Intended use").
- Operation of the engraving station only by trained personnel.
- Full functional and mounted safety devices.
- Engraving station must be in technically flawless condition.
- Processing of permissible products and materials.

Maintenance and service are not included.

### Service operation

For service operation the following conditions must be met:

**Service activities may be carried out only by authorized, trained service technicians.** If the side panel as well as the cover get removed and safety devices get bypassed, it can lead to direct and indirect scattered radiation. The service operation is therefore declared as laser class 4 and proper precautions need to be taken (see "Laser Safety").

#### 4.6- Engraving Station Safety

The **EXR-B Engraving Station** has the **CE marking** and complies with the **RoHS Directive**.

The EXR-B Engraving Station complies with the following electrical safety and EMC regulations and standards: **EN 55032:2015 + AC:2016 + A1:2019 + EN 55035:2017 + A11:2020 + EN 61000-3-2:2019 + A1:2021, EN 61000-3-3:2013+ A1:2019 + EN 62233:2008 + AC:2008 + EN 62368-1:2014 + AC:2015 + A11:2017 + RoHS 2011/65/UE + 2015/863/UE.**

#### 4.7- Electrical Safety

The AC input power to the EXR-B Engraving Station is potentially lethal and is fully contained within the cabinet.

Electrical Specifications: AC 100-240V, 50-60Hz, 1.6A Max.

**DO NOT** open the engraving station's access panel while the engraving station is plugged in. Opening a panel may expose the operator to the unit's AC input power.

**DO NOT** make or break any electrical connections to the system while the unit is turned on.

**DO NOT** operate the engraving station during overload or voltage instability. It's strictly prohibited. Otherwise, there will be a dangerous risk of electric shock.

#### Label

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Model: **EXR-B Laser Engraving Station**  
Manufacture date: **05/2024**  
Input: **100-240V~AC, 50-60Hz.**  
Rated power: **120W**  
Serial number: **24000X**

**RoHS** 

## Symbol

### Warning Current



This symbol warns of potentially dangerous situations related to the electric voltage. Failure to observe the safety instructions leads to risk of serious injury or death. Particular care should be taken during maintenance and repair work.

## 4.8- Laser Safety

**Please consult the Operation Manual of Laserpecker 2 for detailed information on L2 Laser Safety. Please, carefully read the “Use Safety Guide”, “Precautions”, “Disclaimer” and “Warning” sections.**

### Key Safety Features of the L2 Laser head:

- The L2 laser head has the CE marking and complies with the RoHS Directive.
- The L2 laser head has the following Safety Certifications: IEC 60825-1 (Laser Level I safety specification), CE, ROHS, FCC, FDA, CDRH registration IEC 60825-1 (Laser Level IV), NCC, KC, UKCA, TELEC.
- The L2 laser head has the following safety features: Remote Control enabled with the Tab A9 tablet, Key Control enabled with the software in the Tab A9 tablet, Laser Emission Warning and Startup Delay, Beam Stop or Attenuator, Controls, Protective Eyewear, Labels and Documentation.

**DO NOT** operate the L2 Laser Head without any of its protecting housings or covers.

**DO NOT** attempt to remove the L2 Laser Head or exclude the problem by yourself, regardless of the scenario.

**DO NOT** move the engraving station while the laser is in operation.

**DO NOT** view directly into the laser beam of the L2 Laser Head.

**DO NOT** expose any body part or animal to the working L2 Laser Head. The working L2 Laser

Head will emit laser. The beam is at risk of burns to the human skin. The damage is extremely serious for the eye parts of the human body or animal. In addition, the screen damage to mobile phones and Pads is also extremely serious. The proper use and maintenance of this product are very important for the safe operation of this product. Please strictly follow the instructions L2 Operation Manual for the operation and maintenance.

## Laser classification

The laser safety class indicates the risk potential from accessible laser radiation. The Laserpecker 2 laser source is a Class 4 laser source according to its specifications (IEC 60825-1) and identified as such. Please consult the Operation Manual of Laserpecker 2.

Exposure to laser radiation of Class 4 can cause injury to the eyes and skin.

- The skin and eyes must not be exposed to direct or reflected or scattered radiation.
- Wear suitable laser safety protection glasses.
- When dealing with Class 4 Class laser engraving stations, it is necessary to appoint a trained laser safety officer to evaluate potential hazards and to ensure that appropriate control measures are implemented.

It is the responsibility of the operator to comply with the national official and statutory regulations for the operation of a class 4 laser source.

## Warning Laser



This symbol warns of potentially dangerous situations related to the laser beam. Failure to observe the safety instructions leads to risk of serious injury.

***Please consult the Operation Manual of Laserpecker 2 for detailed information.***

## 4.9. Tab A9 tablet Safety

**Please consult the Tab A9 tablet Operation Manual SM X11X\_X21X\_UM\_EU\_UU\_Eng\_Rev.1.0\_231214 for detailed information on Tab A9 tablet Safety.**

## 4.10. Areas of responsibility

### Responsibilities of the operating company

The operator has the following responsibilities:

- In addition to the safety notes and instructions stated in this manual, consider and observe the local accident prevention regulations and general safety regulations that

- apply at the operation site of the engraving station.
- It is the responsibility of the operator to comply with the national official and statutory regulations for the operation of a class 4 laser source of class 4.
- A CO2 fire extinguisher must always be at hand, as the laser beam can ignite flammable materials.
- All personnel involved in installation, set-up and operation of the engraving station must have read and understood this manual, and particularly the "Safety" section. The personnel must be trained and informed about all the functions, potential dangers and safety issues of the engraving station on a yearly basis.
- The user is recommended to prepare company internal instructions considering the occupational qualifications of the personnel employed in each case, and the receipt of the instruction/this manual or the participation in the introduction/training should in each case be acknowledged in writing.
- Keep the manual in the immediate vicinity of the engraving station so that it is always accessible to all persons working on or with the engraving station.
- Provide appropriate personal protection equipment.
- The operator is responsible for the safety-related state of the engraving station.
- Do not store any flammable materials in the working area or in the immediate vicinity of the device. Particularly, residues of processed materials must be removed to prevent any fire hazard.
- The operator must ensure cleanliness and accessibility at and around the engraving station by corresponding instructions and controls.

**ENSURE that service activities may be carried out only by authorized, trained service technicians.** If the side panel as well as the cover get removed and safety devices get bypassed, it can lead to direct and indirect scattered radiation.

### **Responsibilities of the operating personnel**

The operating personnel has the following responsibilities:

- It is the duty of the operating personnel to check the engraving station before start of work for externally visible damage and defects, and to immediately report any changes that appear (including behavior during operation) that may affect the safety of the engraving station. It must be made sure that the engraving station is operated only in perfect condition.
- Always wear the personal protective equipment.
- The engraving station must not be left unattended while it is operating (supervised operation).
- Switch off the engraving station described herein at the main switch for periods of non-use.
- Operate the engraving station described here only with the template with the product

in position.

- Stop this engraving station immediately in case of failure.
- No working methods are permitted that affect the safety of persons or of the engraving station.
- Always keep clean the engraving station and its components.

**ENSURE** to follow the normal operation mode conditions.

#### 4.11. Requirements for operating and service personnel

The requirements for the operating and service personnel are:

- The personnel must have read and understood this manual, and particularly the “Safety” section.
- The personnel must not be under the influence of drugs, alcohol or reactivity affecting medication when working on or with the engraving station.
- The personnel must be familiar with using the CO2 fire extinguisher.
- The personnel must be trained in order to be qualified to operate the engraving station. If the personnel lack the necessary knowledge for working on or with the engraving station, they must first be trained.

#### 4.12. Engraving station identifications

The warning and information labels are attached to the device at those points which could be a source of danger before commissioning or during operation. Therefore, pay special attention to the information on the labels.



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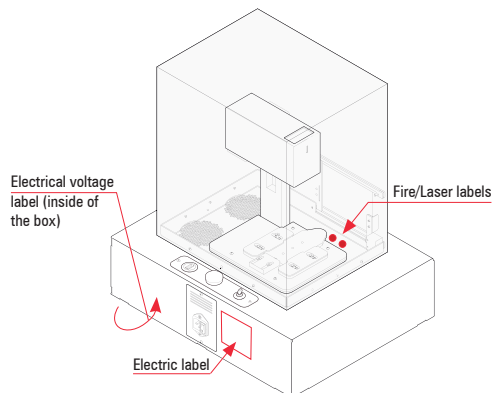
Model: **EXR-B Laser Engraving Station**

Manufacture date: **05/2024**

Input: **100-240V~ AC , 50-60Hz.**

Rated power: **120W**

Serial number: **24000X**





## 4.13. Safety devices and technical protective measures

Safety and protection devices that are not installed or are not fully functional can lead to bodily injury and material damage.

- Do not remove, modify or deactivate the interlock safety switches or protective covers on the engraving station. Safety and protection devices must be fully functional at all times.
- In case of assumed or presumed damage of safety devices, disconnect the engraving station from the mains.
- Damaged safety and protection devices need to be replaced by a technician immediately.

### Technical protective measures:

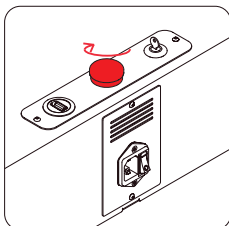
- **Main switch:** Pressing the main switch on the side of the engraving station to disconnect the engraving station from the mains power supply.
- **Key switch:** Turning the key switch counterclockwise powers off the laser source and electric system. Through the key switch, operation by non-authorized personnel can be prevented.
- **Emergency stop button:** When pressing an Emergency stop button, the electric circuit immediately shuts off. The laser beam is interrupted, and all movements are stopped.

### The function of the Emergency stop button is:

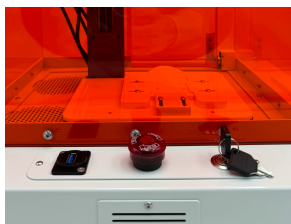
- Firstly: To prevent any risks to the operating personnel.
- Secondly: To avoid any damage to/destruction of the engraving station/material.

### Emergency stop button acknowledge

1. Turn the Emergency stop button clockwise to unlock it.
2. Reboot the laser system.



Emergency stop button



Emergency stop button

- **Interlock safety switches:** Interlock safety switch requires the acrylic door to be closed and the correct placement of the template on the engraving base. If the safety devices are opened or not present, the laser cannot be operated.
- **Acrylic protective housing:** This enclosure, an orange transparent cover, securely surrounds the laser head.

**IN CASE OF SAFETY DEVICE MALFUNCTION** following measures must be carried out:

1. Press the emergency stop button.
2. Disconnect the engraving station from the mains.
3. Contact our Technical Support.

#### 4.14. Fire Warning

Your Engraving Station uses a high intensity beam of light that can generate extremely high temperatures when it encounters the material being engraved, marked or cut. Some materials are extremely flammable and can easily ignite and burst into open flame setting the engraving station afire. This open flame is very dangerous and has the potential to destroy not only the engraving station, but the building in which it is housed.

Please read the following warnings and recommendations and always follow them closely:

- **Stay with the laser.** Never operate the engraving station while unattended.
- **Keep the area clear.** Clean around the engraving station and keep the area free of clutter, combustible materials, explosives, or volatile solvents such as acetone, alcohol, or gasoline.
- **Be prepared with a fire extinguisher.** Always keep a properly maintained and inspected CO2 fire extinguisher on hand.
- **Never do vector cutting.** Many materials have the potential to suddenly burst into flames when cut with a laser. Your engraving station base is not set up for vector cutting, despite the L2 laser head could.
- **Keep the engraving station clean.** A buildup of engraving residue and debris is dangerous and can create a fire hazard. Keep your engraving station and L2 laser head clean and free of debris.
- **Gases, fumes and dust.** Depending on the materials being processed and the

parameters selected, laser processing may generate gases, fumes, aerosols or dust. Depending on the material, such by-products may be toxic. In individual cases, the reaction products may be electrically conductive dusts. If these enter electric systems, short-circuiting with personal injury and property damage may occur.

The operator is responsible of ensuring the air quality and compliance with the relevant guidelines in order to protect persons and the environment.

The operator must also ensure that gases, fumes or dust do not settle on the processing lens. Any dirt accumulating on the processing lens can lead to loss of performance, poor processing results and damage to the device.

## **4.15. In case of emergency**

### **In case of malfunction**

- In case of unusual operating states, press the Emergency stop button, if available, and switch off the laser device.
- When appropriate disconnect the engraving station from the mains.
- Inform laser safety officer and supervisor.
- Follow the Operating manual.
- Have repair work performed by EXrobots ITC service technicians only.
- In case of fire: Use only CO2 fire extinguisher to quench the fire, insofar as this is possible without endangering yourself.
- Contact our Technical Support.

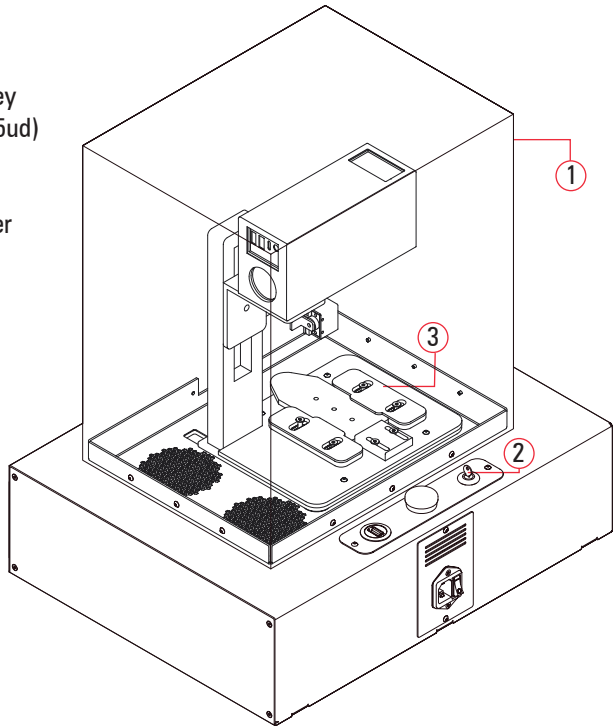
### **In case of accident, First Aid**

- If due to laser irradiation eye injury has occurred (upon exceedance of the maximum allowable irradiation rate), the accident victim must immediately be presented to an ophthalmologist.
- Assumption of eye injury is justified whenever laser irradiation has occurred, and the maximum allowable irradiation rate may have been exceeded.
- First aider must pay attention to self-protection.
- Power off the device.
- Remove injured person from the danger zone and provide First Aid.
- Call the emergency services.

## 5. List of product accessories

### Product accessories

1. Engraving Station
2. Engraving Station Key
3. Product templates (5ud)
4. Power cord
5. Tab A9 tablet
6. Tab A9 tablet charger



The “List of product accessories” detailed in the Operation Manual of Laserpecker 2. may differ from those outlined in the current EXR-B Engraving Station Manual.

### Additional accessories

1. Calibration template
2. Air filter replacement
3. Safety protection glasses
4. Wrench M3 & M4
5. Gloves
6. Mask
7. USB cable

## 6. Getting started

Setting up your EXR-B Engraving Station is easy to do. The following information will help you understand the entire system and how it works. Everything that you need is inside the EXR- B Engraving Station flight case.

Follow these steps to set up your EXR-B Engraving Station:

1. Chose where to locate the EXR-B Engraving Station.
2. Unpack the EXR-B Engraving Station.
3. Charge the Tab A9 tablet.
4. Connect the electrical power of the EXR-B Engraving Station.
5. Start the EXR-B Engraving Station.
6. Start the Tab A9 tablet.
7. Start the L2 APP and connect the Tab A9 tablet to the EXR-B Engraving Station – L2 Laser Head.
8. Verify the calibration.
9. Turn off the Tab A9 tablet.
10. Turn off the EXR-B Engraving Station.

### 6.1. Chose where to locate the EXR-B Engraving Station

Please install the EXR-B Engraving Station in a secure indoor area, shielded from direct sunlight, wind, and rain. The working environment must be kept well ventilated.

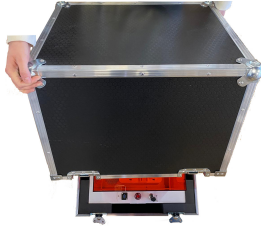
It is critical that the setup is performed on a solid and stable support (such as a pedestal, table, or specialized stand) on a flat surface that does not impart any movement or vibration to the station.

Keep the ventilation grills clear.

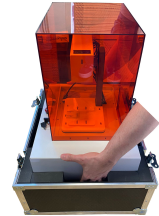
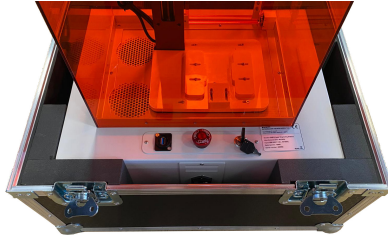
It is strictly forbidden to operate the equipment near appliances that produce strong electromagnetic interference, as this may cause electromagnetic interference. When the laser source is activated, a laser will be emitted at the speed of light. Users must avoid direct exposure to the laser beam.

## 6.2. Unpack the EXR-B Engraving Station

Unpack the station.



Unpack the station



How to hold it

Perform a visual inspection and verify that the engraving station is in perfect condition and the L2 laser head is intact.

Please keep the packaging in good condition and store it in a safe place, as it will be needed to repack the station should it need to be transported to a new location or sent for maintenance operations.

## 6.3. Charge the Tab A9 tablet

Please charge the battery before its initial use or if it has not been used for extended periods. Connect the USB cable to the USB power adapter and plug the cable into the device's multipurpose jack to charge the battery. After fully charging, disconnect the charger from the device.

**ENSURE** you use the original Tab A9 tablet charger provided.

**DO NOT** use the USB output of the EXR-B Engraving Station for charging the Tab A9 tablet.

**Please consult the Tab A9 tablet Operation Manual for detailed information on Tab A9 tablet battery and charging.**

## 6.4. Connect the electrical power of the EXR-B Engraving Station

Please use the power cord provided with the EXR-B Engraving Station. This power cord is appropriate for the EXR-B Engraving Station.

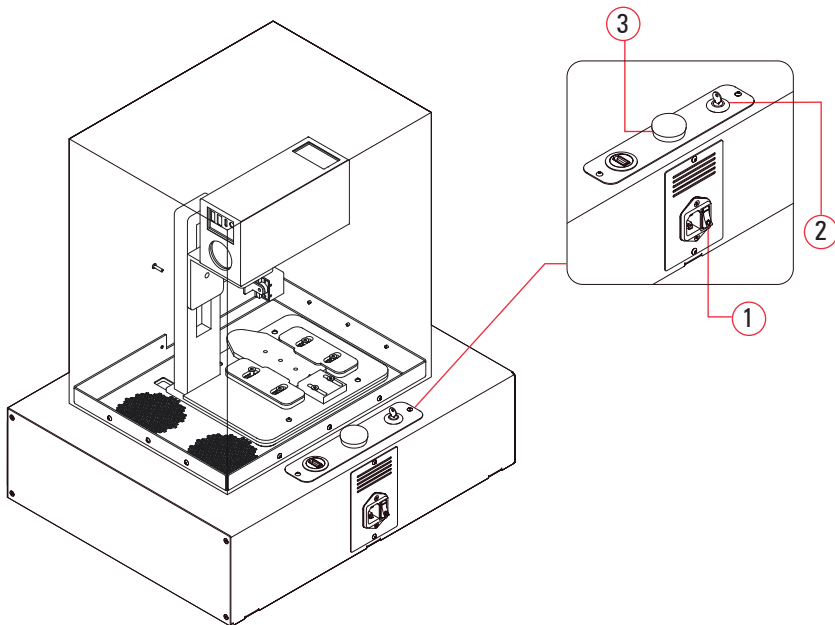
The EXR-B Engraving Station electrical specifications are AC 100-240V, 50-60Hz, 120W.

## 6.5. Start the EXR-B Engraving Station

The EXR-B Engraving Station should only be operated by authorized personnel who have received the training to operate the engraving station and are in possession of the activation key.

To turn on the engraving station, follow these steps:

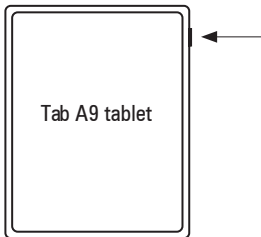
1. Turn on the button located next to the power cord input.
2. Engage the safety switch with the key. The emergency shutdown button should light up in red, indicating that the station is powered on.
3. Verify that the emergency shutdown button hasn't been accidentally activated during the unpacking or installation process. To perform this check, twist the emergency stop in the indicated direction to reset the station.



## 6.6. Start the Tab A9 tablet

The EXR-B Engraving Station should only be operated by authorized personnel who have received the training to operate the engraving station and are in possession of the activation APP key code.

To turn on the device, proceed as follows: Press and hold the side button for a few seconds to turn on the device.



Please consult the Tab A9 tablet Operation Manual for detailed information on how to turn on the Tab A9 tablet.

## 6.7. Start the L2 APP

To start the L2 APP, follow these steps:

1. Ensure Bluetooth is enabled on the tablet.
2. Ensure Wi-Fi is disabled on the tablet.
3. Click on the Laserpecker APP icon.
4. Click on "Find my device."
5. The Laserpecker APP will indicate that the Laserpecker2 laser head has been successfully connected. The L2 laser head will emit a confirmation sound, and the light indicator on the top will turn solid blue.

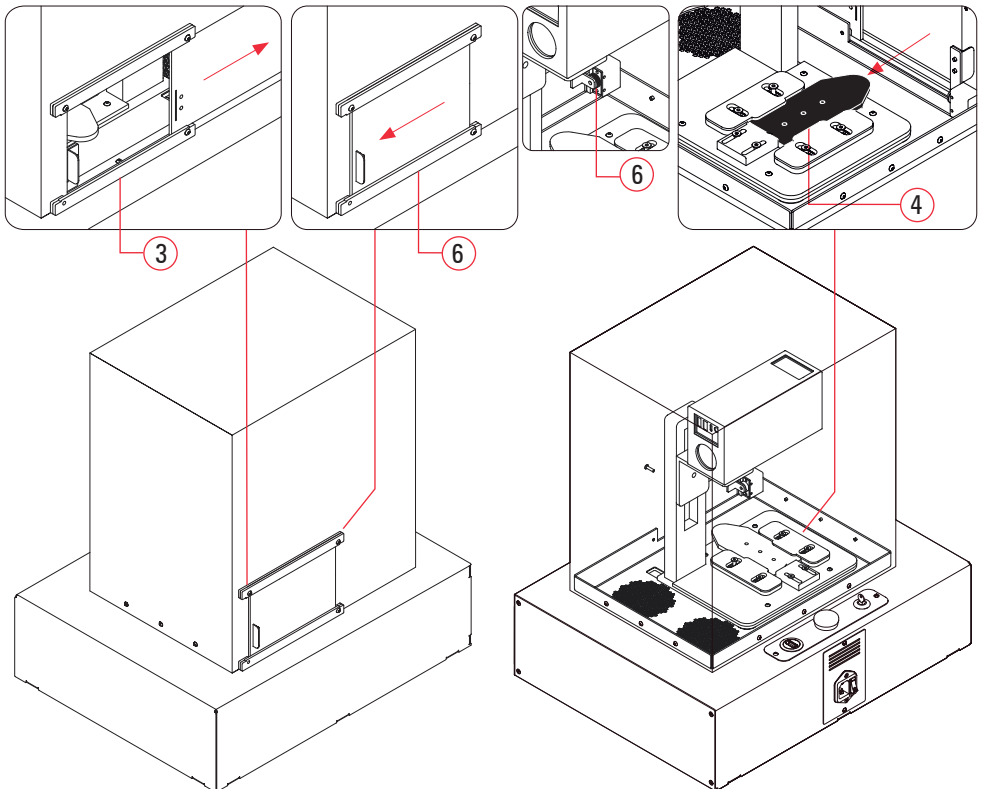
## 6.8. Verify the calibration

To verify the calibration, follow these steps:

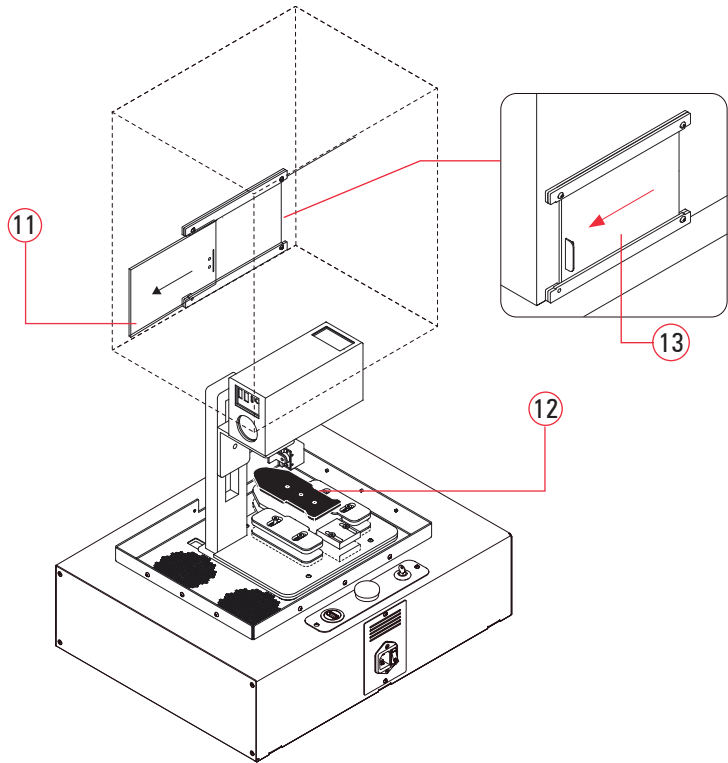
1. Before starting any laser operation, please make sure to take all the safety protection measures, such as: Verify that the protective cover is in place, in perfect condition and the space inside is empty and clean. Ensure that the laser optics are clean.



2. Ensure the L2 laser head is not engaged in any Preview or Engraving operation.
3. Open the engraving station door located on the side of the protective housing by sliding it open.
4. Place the calibration template on the base, sliding it in until the end of the template contacts the base's end and activates the position sensor switch.
5. Confirm the calibration template is correctly positioned on the base.
6. Close the door by sliding it until fully closed, ensuring the magnetic interlock sensor contacts the door's end plate.
7. Wear the safety goggles during first use.
8. Initiate the calibration preview in the LaserPecker APP. If there is any unexpected or unusual event occurring, press the emergency shutdown button and contact the technical support service.
9. Exit the preview in the Laserpecker APP.
10. Ensure the L2 laser head is not engaged in any Preview or Engraving operation.
11. Open the engraving station door by sliding it open.



12. Remove the calibration template from the base and protective housing.
13. Close the door by sliding it until fully closed, ensuring the magnetic interlock sensor contacts the door's end plate.



**Please consult the Tab A9 tablet Operation Manual for detailed information on Tab A9 tablet Bluetooth and Wi-Fi enabling and disabling.**

**Please consult the L2 Operation Manual for detailed information on L2 Laser Head Bluetooth connection.**

### **6.9. Turn off the Tab A9 tablet.**

If you do not wish to proceed with product engraving at this time, you may turn off the tablet. Please turn off the device when it is not in use.

To turn off the device, follow these steps:

1. Press and hold the side button.
2. Tap Power off.

**Please consult the Tab A9 tablet Operation Manual for detailed information on how to turn off the Tab A9 tablet.**

## **6.10. Turn off the EXR-B Engraving Station.**

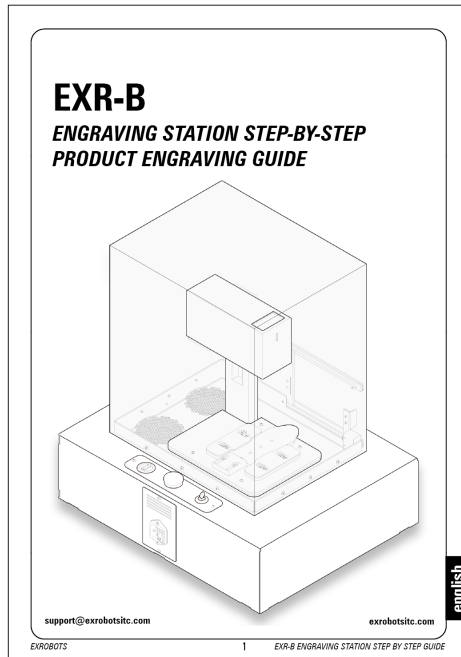
If you do not wish to proceed with product engraving at this time, you may turn off the engraving station. Please turn off the engraving station when it is not in use.

To turn off the engraving station, proceed as follows: Deactivate the safety switch with the key, remove the key, and store it in a secure location. The red light on the **emergency off button should extinguish after approximately 30 seconds**, signaling that the station is powered off.

## 7. Engraving products

The EXR-B Engraving Station has been custom-designed for the personalization of specific products. Your EXR-B Engraving Station should only be used to customize these products, following the specific instructions for each product as outlined in the Step-by-Step Product Engraving Guide.

**Please refer to the EXR-B Engraving Station Step-by-Step Product Engraving Guide.**



**DO NOT** engrave any materials that are not included in the **Step-by-Step Product Engraving Guide**. The products in this guide have been tested and are safe to engrave following the **Step-by-Step Product Engraving Guide** instructions.

**ENSURE** that the emissions resulting from laser exposure to the laser engraving do not release any toxic or harmful gas and meet the local laws and regulations. Always carefully consider before engraving whether the material is suitable for laser operation.

## 8. Product specifications

- Size: 434.10 x 353.10 x 473.60 mm.
- Weight: 8,7kg.
- Appearance: Lacquered matte finish steel, orange clear acrylic, vinyl logos and plastic templates.
- Materials: Metal and plastic.
- Engraving head: Laserpecker 2 5w Blue diode laser with double lens galvanometric technology. Up to 600mm/s speed and 0.05mm laser spot. Fixed and pre-calibrated.
- Laser source: 450nm NICHIA.
- Laser source output power: 5.000mW
- Touchscreen control interface: Tab A9 tablet with engraving Android 6.0+ App, product presets and system configured and calibrated.
- Connection: Bluetooth and USB connections.
- Document transmission: Bluetooth 5.0.
- APP operating system: Support iOS 9.0+Android 6.0+MacOS 10+Windows 10+
- Document formats: BMP/ JPG/ PNG/ SVG/ G-code.
- Safety equipment:
  - Main switch.
  - Key switch.
  - Emergency stop button.
  - Interlock safety switches.
  - Acrylic protective housing.
  - Air filtering system.
- **Safety certifications:**

**EXR-B Engraving Station:** CE & RoHS + EN 55032:2015 + AC:2016 + A1:2019 + EN 55035:2017 + A11:2020 + EN 61000-3-2:2019 + A1:2021, EN 61000-3-3:2013 + A1:2019 + EN 62233:2008 + AC:2008 + EN 62368-1:2014 + AC:2015 + A11:2017 + RoHS 2011/65/UE + 2015/863/UE.

**Laser head:** IEC 60825-1 (Laser Level I safety specification), CE, ROHS, FCC, FDA, CDRH registration IEC 60825-1 (Laser Level IV), NCC, KC, UKCA, TELEC.

- Power: 120W.
- Power input: AC (100-240V, 50-60Hz) / DC (12V, 5A)
- Noise level: 60dB.
- Operating temperature range: 0°C - 40°C.

- **Operating humidity range:** 5% ~ 80% (non-zero frost).
- **Template set.** Calibrated templates for the products described in the Step-by-Step Product Engraving Guide.
- **Packaging:** Durable Flight Case

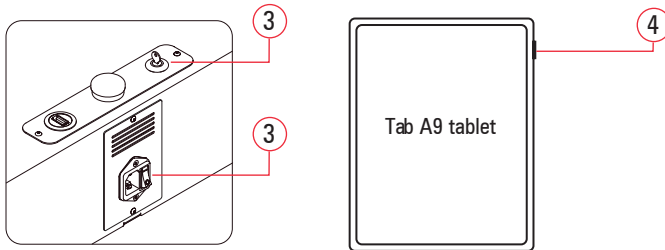
# 9. Maintenance

The engraving station requires minimal and straightforward maintenance. To maintain optimal condition and ensure its efficient and lasting operation, please adhere to the following steps:

1. Keep the engraving station clean. To clean the engraving station's exterior, use a dry cloth for the metal cabinet and a glass cleaning cloth for the protective housing. Keeping the interior of the protective housing clean is essential. Inside the protective enclosure, use a dry cloth. For cleaning the laser lens at the bottom of the L2 laser head, only use a lens cleaning microfiber cloth, applying very gentle pressure.
2. Keep the ventilation grills clean and clear.
3. Turn off the engraving station at the end of each engraving day and turn it on at the start of the next. Keeping the engraving station off when not in use will help extend the life of the laser.

**ENSURE to turn off the engraving station at least once every 24 hours.**

4. Turn off the tablet at the end of each engraving day and turn it on at the start of the next. Keeping the tablet off when not in use will aid in prolonging the lifespan of the device.



## Improper maintenance can cause serious injury or damage

Maintenance may be carried out only by authorized, trained personnel who are familiar with the operation of the engraving station and in strict observance of all safety notes.

## Danger of electrical shock

Work on electrical fittings may be carried out only by qualified personnel and in strict observance of the safety notes. Before any maintenance work takes place, disconnect the engraving station from the mains voltage and make sure the system is de-energized.

## Maintenance in service operation mode

For service operation the following conditions must be met:

- **Service activities may be carried out only by authorized, trained service technicians.** If the side panel as well as the cover get removed and safety devices get bypassed, it can lead to direct and indirect scattered radiation. The service operation is therefore declared as laser class 4 and proper precautions need to be taken (see "Laser Safety").
- **Air filter replacement.** The optimal time for filter replacement depends on the usage of the engraving station. Generally, this procedure should be done every six months. Please, contact support to replace the activated carbon air filter.



# 10. Troubleshooting

This chapter should enable the maintenance personnel to identify and resolve operational faults based on error messages and symptoms.

<b>Problem</b>	<b>Possible cause</b>	<b>Remedy</b>
The engraving station won't start.	Power button, keyed safety switch or emergency stop button are not engaged.	Check that the power button, keyed safety switch and emergency stop button are on. See chapters 6.4, 6.5 & 4.13.
The engraving station won't connect to the tablet APP.	Bluetooth connection problem.	Verify that the Bluetooth is enabled in the tablet. If it's on, turn it off, close the APP, power off the engraving station, wait 30s, enable Bluetooth in the tablet, start the engraving station, start the APP and connect. See chapters 6.6, 6.7 & 4.9.
The engraving station won't engrave and the APP displays an error.	Template position or door not closed.	Check that the template is in the correct position and the door is completely closed. See chapters 7 & 4.13.
Too low or too high engraving depth.	Incorrect laser presets selected.	Verify that the presets selected match the product being engraved. See chapter 7.
Too low engraving depth or blurred engraving.	Dirty optics.	Turn off the engraving station. Clean the optics. See chapters 9, 4.10, 4.11, 4.12 & 4.13.

Blurred engraving.	Vibration.	Check the position and stability of the engraving station. Remember that the engraving station can't be moved while engraving. See chapter 6.1.
The engraving result is patchy.	Incorrect resolution.	Check that the resolution selected is at least 2K. See chapter 7.
The preview or the engraving are outside the product's perimeter.	Incorrect position of the design in the APP.	Check that the design's is in the center of the device canvas and hasn't been moved in the APP. See chapter 7.
The preview or the engraving are not in the correct position on the device.	Incorrect template or product.	Check that template and the product are correct. See chapter 7.
The preview of the engraving is not visible.	The engraving station is receiving too much light.	Check that the engraving station ins not receiving too much light, particularly sun light. See chapter 6.1.
The emergency stop button red light won't turn off after turning the engraving station off with the keyed safety switch.	The emergency stop button red light stays approximately 30 seconds on after turning the engraving station off.	Wait until the red light goes off to verify that the engraving station is off. See chapter 6.12.
Connection frequently interrupted.	Electromagnetic emissions.	Make sure that the engraving station is connected correctly, and the current is stable. Remember that the cable lengths should not be exceeded. See chapter 6.4.

Slow and interrupted operation.	The engraving station and/or the tablet haven't been turned off for a long time.	Turn off the engraving station, turn off the tablet, wait 60s, start the tablet, start the engraving. See chapters 6.6, 6.7, 4.9 and 9.
Other faults.		Contact Technical Support. See chapter 3.

# 11. Upgrading and Optional Features

For the implementation of any upgrades, installation of optional features, or expansion of the product catalog, it is crucial to contact technical support to schedule and prepare for these options.

**DO NOT** carry out any software or firmware updates on any of the laser engraving station's components without prior consultation with technical support.

# 12. Transport

## Delivery state

Unless otherwise agreed, the engraving station is delivered in a Flight Case that contains the engraving station and additional accessories. Transport the engraving station only in its original packaging.

## Risk of injury

There is risk of injury from falling parts during transport, loading and unloading of the engraving station. Follow this safety notes:

- Always move the engraving station with utmost care and attention.
- Transport the engraving station only in its original packaging.
- Take the engraving station center of gravity into account when transporting it (minimize the risk of tipping over).
- Observe the packaging symbols (e.g. transport the engraving station only in upright position).
- Take measures to prevent the engraving station from slipping sideways, tipping or falling over.
- Transport the engraving station as carefully as possible to prevent damage.
- Avoid vibrations.
- When transporting the engraving station overseas, the device must be packaged airtight and protected against corrosion.
- When transporting outdoors, transport only in vehicles with roof or sufficient weather protection.
- Protect the engraving station against transportation damage using straps, inserts and leave sufficient gaps to other transported items.
- Do not place any other loads or items on the engraving station or engraving station components.

## 13. Disclaimer

Thank you for choosing the EXR-B Engraving Station. The contents of this document are crucial for your safety, as well as your legal rights and responsibilities. Please read this text attentively before utilizing the product to guarantee its proper setup and operation. Ignoring the instructions and warnings provided in this document could lead to injuries to you and those nearby, or cause damage to the EXR-B Engraving Station and surrounding objects.

By operating this product, you acknowledge that you have read, understood, and accepted all terms and conditions of this disclaimer. You assume full responsibility for the product's use and any resulting outcomes. You pledge to use the product exclusively for legitimate purposes and consent to abide by this agreement, as well as any related regulations, policies, and guidelines issued by the manufacturer. Exrobots Integración Tecnológica Creativa S.L. bears no responsibility for any harm, injuries, or legal issues stemming from either direct or indirect product usage. It is imperative that all safety instructions included in this document are followed meticulously.

## 14. Warranty Terms and Liability

Warranty Statement: Exrobots Integración Tecnológica Creativa S.L. (hereinafter referred to as EXROBOTS ITC) warrants to the original purchaser of EXR-B Engraving Station that the product will be free from defects in material or workmanship when purchased, and under proper, normal use within one (1) year from the original date of purchase.

EXROBOTS ITC will replace or, repair the defective part(s). EXROBOTS ITC will be responsible solely for the cost of repairs, including parts and labor, which are made at an authorized EXROBOTS ITC facility. All other costs for replacement or repair, including, but not limited to, packaging and shipping both to and from EXROBOTS ITC, shall be paid by the owner. A charge may be required by EXROBOTS ITC to insure the return of replacement and repair parts. This warranty excludes any damage from abuse (including, without limitation, incorrect voltages, power surges, fires, improper or insufficient ventilation "natural disaster" or other situations out of the control of EXROBOTS ITC), failure to operate in accordance with instructions provided in the EXR- B Engraving Station Manual for the EXROBOTS ITC model EXR-B Engraving Station, including specific safety and operational warnings contained therein, cosmetic damage sustained in use, and damage caused by unauthorized modifications of any equipment. All warranties to original purchasers are non-transferable. The registered owner must initiate warranty claims within the warranty period.

THE ABOVE AND FOREGOING IS THE ONLY WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED; INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, THAT ARE MADE BY EXROBOTS ITC ON MODEL EXROBOTS ITC. ANY WARRANTIES IMPLIED BY LAW ARE HEREBY EXPRESSLY DISCLAIMED.

No oral or written information or advice given by EXROBOTS ITC, its dealers, its distributors, agents, officers, or employees shall create a warranty or in any way increase the scope of this warranty. Neither EXROBOTS ITC nor anyone else who has been involved in the creation, production, or delivery of the EXROBOTS ITC EXR-B Engraving Station shall be liable for any direct, indirect, consequential, or incidental damages, including but not limited to damages for loss of business profits, business interruption, loss of business information, adverse health impacts, fire, and the like, arising out of the use or inability to use these products.

EXROBOTS ITC provides no warranties whatsoever on any software used in connection with EXR-B Engraving Station.

All information, illustrations, tables, specifications, and diagrams contained in this operating manual have been carefully compiled according to the current state of technology. No liability is accepted regarding errors, missing information and any resulting damage or consequential loss.

Strict compliance with the safety procedures described in this operating manual and extreme caution when using the equipment are essential for avoiding and reducing the possibility of personal injury or damage to the equipment. The manufacturer shall not be liable for any damage and or faults resulting from nonobservance of instructions in this manual.

Nonobservance of the operation, maintenance and service instructions described within this manual absolves EXROBOTS ITC from any liability in case of a defect.

Furthermore, EXROBOTS ITC shall accept no liability whatsoever for damage caused using nonoriginal parts and accessories.

Additionally, EXROBOTS ITC shall not be held responsible for any personal injury or property damage, of an indirect or specific nature, consequential loss, loss of commercial profits, interruption to business, or loss of commercial information resulting from use of the equipment described in this manual.

EXROBOTS ITC reserves the right to update any of the information, illustrations, tables, specifications, and diagrams contained in this operating manual regarding technical developments at any time without notice.



## 15. Copyright

The copyright of this manual is the right of the hardware involved in the product, which belongs to EXROBOTS ITC. EXROBOTS ITC is the registered trademark of EXROBOTS INTEGRACIÓN TECNOLÓGICA CREATIVA S.L. The contents of this manual shall not be rewritten or forwarded in any form or for any purpose without the written permission of EXROBOTS ITC.

## 16. Disposal

### **Do not dispose of the engraving station with domestic waste!**

Electronic devices must be disposed of according to the regional directives on electronic and electric waste disposal. In case of further questions, please ask your supplier.

Use suitable tools if you must disassemble the engraving station. All parts need to be sorted into the individual material types and be disposed of according to the regional directives on electronic and electric waste disposal.



# 17. Appendix – Additional Manuals

## Additional Manuals:

1. L2 laser head (Laserpecker 2): Operation Manual of Laserpecker 2. Provides detailed instructions on the operation and maintenance of the L2 laser head.
2. Tab A9 tablet (Samsung SM-X110): SMX11X\_X21X\_UM\_EU\_UU\_Eng\_Rev.1.0\_231214. Contains important information on the setup, use, and care of the A9 tablet.



### Operation Manual of Laserpecker2



**Important note:** Distance from laser outlet to surface of engraved object must be 110mm. Pull down L-shaped ranging rod to measure the height, ensure bottom edge of ranging rod contact engraved surface.

L2 laser head (Laserpecker 2)

SAMSUNG

## USER MANUAL

SM-X110  
SM-X115  
SM-X117  
SM-X210  
SM-X216B  
SM-X218B

English, 12/2023, Rev.1.0

[www.samsung.com](http://www.samsung.com)

Tab A9 tablet | Samsung SM-X110

