

USER MANUAL

IMPORTANT: Read Before Using

SketchPro™ Lighted Engraving Polishing Tool



Before operating your engraving tool, please review the following user manual carefully to ensure safe and efficient use.

Contact Information

Customer Service: support@Calavive.com

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SAFETY WARNINGS AND PRECAUTIONS

Your safety is our top priority. Please read and follow all instructions before using SketchPro™ Lighted Cordless Engraving Pen. Misuse may result in injury, equipment damage, or voiding of your warranty. User is responsible to follow all listed instructions and take all recommended precautions.

Work Area Safety

- Keep your workspace clean: Ensure the area is well-lit and free of clutter. A clean workspace helps reduce the risk of accidents.
- Avoid working in explosive environments: Do not use the tool near flammable liquids, gases, or dust as sparks can ignite them.
- Keep children and bystanders away: Always be mindful of your surroundings to avoid accidents.

Electrical Safety

- Use only the recommended power adapter: A 5V 2A adapter is required to prevent damage and ensure safe operation.
- Avoid using the tool in an area saturated by water. Do not immerse the tool in water, this will cause damage.

Personal Safety

- Stay alert: Focus on your work and avoid distractions. Never use the tool if you are tired or under the influence of substances.
- Wear personal protective equipment (PPE): Always wear safety goggles to protect your eyes, and consider using a dust mask, gloves, and non-slip shoes when necessary.
- Ensure proper grip: Keep a firm grip on the tool, especially during startup, to prevent twisting or loss of control.
- Proper clothing: Avoid loose clothing, strands of hair in the way

or jewelry that could get caught in moving parts.

Power Tool Use and Care

- Use the correct tool for the task: Do not force the tool. Using the right tool for the job will improve safety and efficiency.
- Inspect before use: Ensure the tool and accessories are in good condition. Damaged tools should be repaired before use.
- Turn off when adjusting: Always turn off the tool before making adjustments or changing accessories.

Service and Maintenance

- Do not attempt repairs: If the tool malfunctions, have it serviced by a qualified repair professional to ensure it remains safe to use.
- Keep tools clean: Regularly clean and maintain the tool to prevent malfunction or safety issues.

TOOL OPERATION AND FUNCTIONALITY

Unbox the Tool: Remove SketchPro™ Lighted Cordless Engraving Pen and accessories from the box.

CHARGE SketchPro™

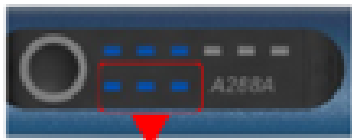
1. Charge the Tool: Plug in the included USB-C charging cable and charge for 1-2 hours before first use.
2. SketchPro™ stored battery energy is about 50% when it leaves the factory. The tool

needs to be fully charged before first use.

3. Please use a standard TYPE-C USB charger or computer USB to charge SketchPro™.
4. After fully charged, the three indicator lights of SketchPro™ are on after pressing the “power on” buttons.

POWER DISPLAY and USE

- a. 1 light = 30% charged
- b. 2 lights = 31%- 70%
- c. 3 lights = 71%-100% charged.



Power Indicator Light

SPEED SETTINGS and USE

- a. Pressing the power button cycles through the power/each speed.
- b. SketchPro™ has 3 speeds and the tool power button is used to cycle through increases from 1 to 2 to 3 speeds, or revolutions per millisecond (RPM).
- c. SketchPro™ speeds are 5,000, 10,000 and 18,000 RPM.
- d. Press the power button one more time to turn the unit OFF.

OPENING THE PLASTIC CASE(S):

Twist the jagged/triangle edges of the case away from one another. The case will open. Pull hard.

How to Assemble SketchPro™

When not in use, fully charge SketchPro™ and charge SketchPro™ once every six months.

INSTALL THE BITS

- a. INSTALL the bit, keeping hands AWAY from the power-ON button. That is, do not touch the power button during INSTALL of the accessories.
- b. Put the bit into the open, top part of the cylinder, known as the **chuck** or **collet**. Install the accessory COMPLETELY, pushing IN until the accessory cannot move. The chuck depth is 25mm, you will need to push the accessory 25 mm into the device.
- c. Follow the SAME safety precaution to keep hands AWAY/do not touch the power-ON button during INSTALL of the accessories.

How to install bits

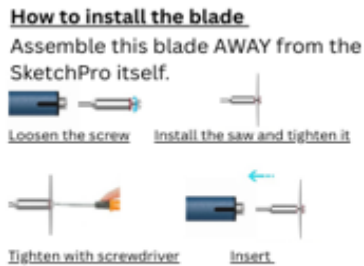


SPECIAL NOTE about installing the saw accessory:

1. Assemble this accessory AWAY from the pen itself. Do NOT ATTEMPT to assemble the saw blade accessory while the blade holder is in the pen.
2. UNSCREW the end of the saw blade holder, place the saw blade across/within the holder, screw the top of the blade holder onto the saw blade tightly.
3. Carefully insert the assembled saw blade and holder into the grinding head as noted above, careful to ONLY touch the power ON button when safe to do so.

How to install the blade:

Assemble the blade **AWAY** from the SketchPro™ itself.



REMOVE an ACCESSORY

To remove an accessory, pull out **HARD**, and keep hands **AWAY** from power button during this action.

APPROPRIATE USE

- HOLD the tool steady when in use.
- Choose a slimmer accessory for a lighter material (example: choose the pointy accessory for engraving plastic, however choose the accessory with the bulb at the end of a medium size accessory for glass.
- Experiment with different accessories and different angles on various surfaces (wood, plastic, etc.)
- Try Included stencils as a guide.
- During the nail buffing process, use a low speed and gentle touch. Take care or request a helper to buff the main body of the nail. Be gentle on the nail bed. Don't over-buff nails which can make them thin and fragile.

SPECIAL NOTES

- During use, the load display will display the load status at any time according to the use situation
- When the load is too large (overload), the overload display light will light up for 2

seconds and the overload system will shut down for protection.

- If you wish to continue using, press the power button again to start SketchPro™.

How to Replace the Bit

1. Turn off the pen: Press the power button to turn the pen off before replacing the bit. This ensures that you won't accidentally start the tool while changing the bit.
2. Insert the new bit: Select the appropriate bit for your project, insert it into the tool's collet, and ensure it is securely in place.

Tip: Always double-check that the bit is firmly inserted before turning the pen on.

3. Turn on the Tool: Press the power button to turn the pen on, then select the desired speed using the gear adjustment button.
4. Use the Tool: Hold the pen like a pencil, and carefully guide the tool over the workpiece. Adjust the speed as needed.

OPERATING SPEEDS

The engraving pen offers adjustable speeds to suit various tasks:

- Speed 3: Fastest - 18,000 RPM The highest speed and is great for tough materials like soft metal, glass, and hard plastics. Use it when you need to make fast, deep cuts. **Example:** Engraving aluminum metal surface will work best at this speed.
- Speed 2: Medium - 10,000 RPM Ideal for general work like sanding, polishing, or engraving on softer materials. This is the speed to use for most projects. **Example:** Sanding wood or engraving on plastic. Manicure/pedicure work.

- Speed 1: Slowest - 5,000 RPM Use the slowest speed for delicate tasks like fine detailing or when working with soft materials that can be damaged by higher speeds. **Example:** Carving intricate designs into soft wood or working on jewelry. Manicure/pedicure work.

BATTERY CARE AND CHARGING

- Use only the recommended charger: Use a 5V 2A adapter to charge the tool.
- Charging Environment: Charge the tool in a dry place at room temperature, ideally between 32°F (0°C) and 113°F (45°C).
- Avoid overcharging: Do not leave the tool plugged in after it has fully charged to avoid overheating.
- Battery Disposal: When disposing of the battery, cover the terminals with insulating tape to prevent short-circuiting.

MAINTENANCE AND CARE

- Regular Cleaning: Clean the tool with a damp cloth to remove dust and debris after each use. Never clean it while charging.
- Storage: Store the tool in a safe, dry location, preferably in its original box or with the protective cap on to prevent damage.

ACCESSORIES AND USAGE

This engraving pen can be used with a variety of accessories, including:

- Emery Coated Bits: Etching into materials like wood and plastic, may work on glass and softer metal like aluminum.
- Polishing Attachments: Used for giving a smooth finish to your work. May be used for nail care, manicures, pedicures.



SYMBOLS EXPLAINED

Your tool may feature the following symbols, which are important for safety and operation:

- V: Voltage (measured in volts).
- A: Current (measured in amperes).
- Hz: Frequency (measured in hertz).
- W: Power (measured in watts).
- Kg: Weight (measured in kilograms).
- Min: Time (measured in minutes).
- .../min: Rotational speed (measured in revolutions per minute).

Key Features

- Chuck: The chuck is the part of the tool that holds the bit in place while you work. The construction helps ensure that the bits stay firmly in place, providing a secure and stable grip. This means you don't have to worry about the bit slipping or moving while you use the pen.

- **Electroplating Alloy Body:** The body of the engraving pen is made from a durable, alloy material that has been coated with a thin layer of metal through a process called electroplating. This gives the pen a smooth, shiny surface and makes it resistant to rust and wear, meaning it will last longer.
- **Power Button:** The power button is used to turn the pen on and off. Press HARD on the right-hand side of the power button to cycle through the power levels. The speed increases from 1 to 2 to 3 speeds. Also, press the right-hand side of the power button to turn the unit OFF.
- **Gear Adjustment Button:** This button lets you change the speed of the engraving pen. By adjusting the speed, you can control how fast the tool spins, which can affect the type of work you are doing. For example, high speeds are great for engraving metal, while lower speeds are better for more detailed work on softer materials like wood. See above about how to cycle through each gear.
- **Display:** The display shows important information, such as the speed setting and battery level. It will also show a warning symbol if there is an issue with the tool, like overheating or battery problems.
- **USB-C Charging Port:** The pen charges quickly using the USB-C cable provided. USB-C is a modern, reversible charging port that ensures a fast and stable charging process, making it easy to keep your tool powered up and ready to use.

How to Assemble the SketchPro™ Engraving Tool

1. Open the box and take out the engraving tool and accessories. Make sure you have all the parts before you begin. You should see the pen, USB-C charging cable, bits, and any accessories.
2. Charge the pen: Connect the included USB-C cable to the pen and a 5V, 2A power adapter (the one used for charging most phones or devices). Important: Charge the pen for at least 8 hours before using it for the first time. This ensures the battery is fully charged and ready for your projects.
3. Choose your bit: Pick the bit based on the project you're working on.
4. Insert the bit: Gently insert the bit into the collet (the part that holds the bit). Push the bit in completely, the holder is 25 mm deep.
5. Turn on the pen: Press the power button once to turn it on. The display will show you the current speed setting and the battery level.
6. Adjust the speed: Use the gear adjustment button to set the speed you need. For instance, if you're engraving fine details, use a slower speed. For cutting or sanding, a higher speed may be better.

Safety Tip: Always make sure the pen is turned off before changing the bit. Never change the bit while the pen is running to avoid injury or damage.

Using the SketchPro™ Engraving Tool

1. Hold it like a pencil: Grip the pen comfortably between your thumb and forefinger, just like holding a pencil. This

gives you better control over the tool, especially for detailed work.

- Example: If you're engraving a name on a piece of wood, holding it like a pencil allows for more precision.
- 2. Turn it on: Press the power button once to turn the tool on.
- 3. Adjust the speed: Press the button again to change the speed. A higher speed is useful for tougher materials, while a lower speed is great for delicate tasks.
- Example: For rough cuts on wood, use the highest speed. For detailed engraving on glass, use a lower speed.
- 4. Practice first: Test the tool on scrap material before starting your project. This helps you get a feel for the tool and ensures you're using the right speed and bit for the material.
- Tip: If you're working with a new material (like glass), practice on a small piece first to see how the tool performs.
- 5. Use light pressure: When using the tool, don't push too hard. The tool does the work by spinning the bit, so let it touch the material gently and guide it without forcing it.
- Example: If you're engraving a design, gently guide the pen along the outline without pressing down hard. This helps create cleaner lines. Try the enclosed stencils.



Summary: Using the SketchPro™ Engraving Pen

1. Hold it like a pencil: Grip the pen between your thumb and forefinger for better control.
2. Turn it on: Press the power button once to start.
3. Adjust the speed: Press the button again to change the speed.
4. Practice first: Test the tool on scrap material to get comfortable.
5. Use light pressure: Let the tool do the work—don't push too hard.
6. Test First: Try different bits on scrap material to find the best fit for your project.

Battery and Display Information

- Battery Indicator: The display shows the battery level.
- Overload Protection: If the pen turns off during use, let it cool down before using it again.

Materials to Avoid

Hard Metals (e.g., Hardened Steel): Emery tools can struggle with harder metals, as they will wear down quickly and may not produce precise engravings.

- Hard Ceramics: Emery tools can be used for light engraving on ceramics, but they are not suitable for fine detail work, and you may risk damaging the surface.
- Hard Stone (e.g., Granite, Marble): Emery tools are unsuitable for engraving

into hard stones, as they lack the hardness to effectively carve into these materials.

This emery-coated engraving tool is ideal for softer materials, offering a cost-effective and versatile solution for general engraving tasks. However, this is not appropriate for harder surfaces and may wear out quickly under heavy use. Enjoy this tool!

Maintenance

- Clean with a damp cloth: After using the tool, wipe it down with a slightly damp cloth to remove any dust or debris. Avoid getting the pen wet or using harsh cleaning solutions.
 - Tip: Never clean the tool while it's plugged in or charging to prevent electrical damage.
 - No user-serviceable parts inside: Do not attempt to open the tool yourself. If something is wrong with the tool, contact customer support for help.
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SketchPro™ Engraving Pen - User Manual

Key Features

- Chuck: Ensures a strong hold for bits.
- Electroplating Alloy Body: Durable and sturdy.
- Power Button: Turns the pen on and off.
- Gear Adjustment Button: Lets you adjust the speed.

- Display: Shows important information.
 - USB-C Charging Port: For charging the pen.
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How to Assemble the SketchPro™ Engraving Pen

1. Open the box and take out the engraving pen.
2. Charge the pen: Connect the included USB-C cable to the pen and a power adapter. Charge it for 8 hours before the first use.
3. Choose your bit: Pick the bit that fits your project.
4. Insert the bit: Place the bit into the quick-release collet and push it gently until it clicks into place.
5. Turn on the pen: Press the power button to turn on the pen.
6. Adjust the speed: Use the gear adjustment button to set the right speed for your work.

Safety Tip: Always make sure the pen is turned off before changing the bit.

An emery-covered engraving tool combines the precision of engraving with the durability and abrasiveness of emery material, making it versatile for a variety of tasks. Here are some of the key benefits and uses:

Benefits of an Emery-Covered Engraving Tool:

1. Enhanced Durability: The emery coating on the tool's bit provides extra strength

and abrasion resistance, making it ideal for tougher materials.

2. **Smooth and Efficient Engraving:** The abrasiveness of emery helps the tool etch more efficiently, providing smoother cuts and reducing friction between the tool and the surface.
3. **Versatility:** It can be used for both fine detailing and broader engraving tasks, making it a great all-in-one tool for various projects.
4. **Long-Lasting:** The emery coating enhances the lifespan of the tool, as it can withstand repeated use without quickly dulling or wearing down.
5. **Better Control:** The abrasive nature of emery allows for more controlled, precise markings, especially in intricate designs.

Optimal Surfaces for Emery-Covered Engraving:

- **Metal:** Ideal for etching into metals like aluminum, brass, and stainless steel, providing smooth, detailed results without excessive heat buildup.
- **Glass:** Works well for engraving designs on glass, offering a clean finish without cracking or damaging the surface.
- **Wood:** The emery-covered tool can carve and engrave wood surfaces, creating intricate details while smoothing rough edges.
- **Plastics:** Can be used for detailed work on plastic surfaces, especially when precision is important, such as in model making or crafts.
- **Ceramics:** Suitable for light etching on ceramic materials, especially for decorative pieces or custom designs.

General Uses:

- **Personalized Gifts:** Perfect for engraving custom designs, names, or logos on items like jewelry, glassware, or metal tools.
- **Crafting and Art:** Ideal for artists who want to add textures or details to sculptures, woodwork, or other crafts.
- **Repair and Restoration:** Useful for adding identification marks, serial numbers, or fine detailing during the restoration of vintage items or mechanical parts.
- **Decorative Items:** Can be used for creating patterns, designs, or even intricate artwork on various surfaces like mirrors, metal plates, or trophies.

In summary, an emery-covered engraving tool is a versatile, durable tool that excels in creating fine details on a variety of materials, including metals, glass, wood, and plastic, making it an essential tool for artists, crafters, and professionals alike.

Warranty and Support

Your SketchPro™ Engraving Tool comes with a time-limited warranty. If the tool has any defects, you can contact customer support for assistance.

- **How to contact support:** Email support@Calavive.com with your order number, a description of the issue, and photos or videos showing the problem.