ARROWMAX AM-230312

AM ARROWMAX Electric Engraving Pen User Manual

Model: AM-230312 | Brand: ARROWMAX

1. INTRODUCTION AND OVERVIEW

The ARROWMAX Electric Engraving Pen (Model AM-230312) is a versatile, cordless rotary tool designed for fine work such as engraving, sanding, grinding, polishing, and carving on various materials including metal, wood, glass, and plastic. It features a high-performance hollow-core motor, an OLED display for status, and magnetic charging for convenience. This manual provides essential information for safe and effective operation, maintenance, and troubleshooting.

Figure 1: ARROWMAX Electric Engraving Pen and accessories.

2. PACKAGE CONTENTS

Verify that all items are present in the package:

- 1 x ARROWMAX Electric Engraving Pen
- 30 x Engraving Bits
- 12 x Polishing Bits
- 1 x Storage Bag
- 1 x User Manual
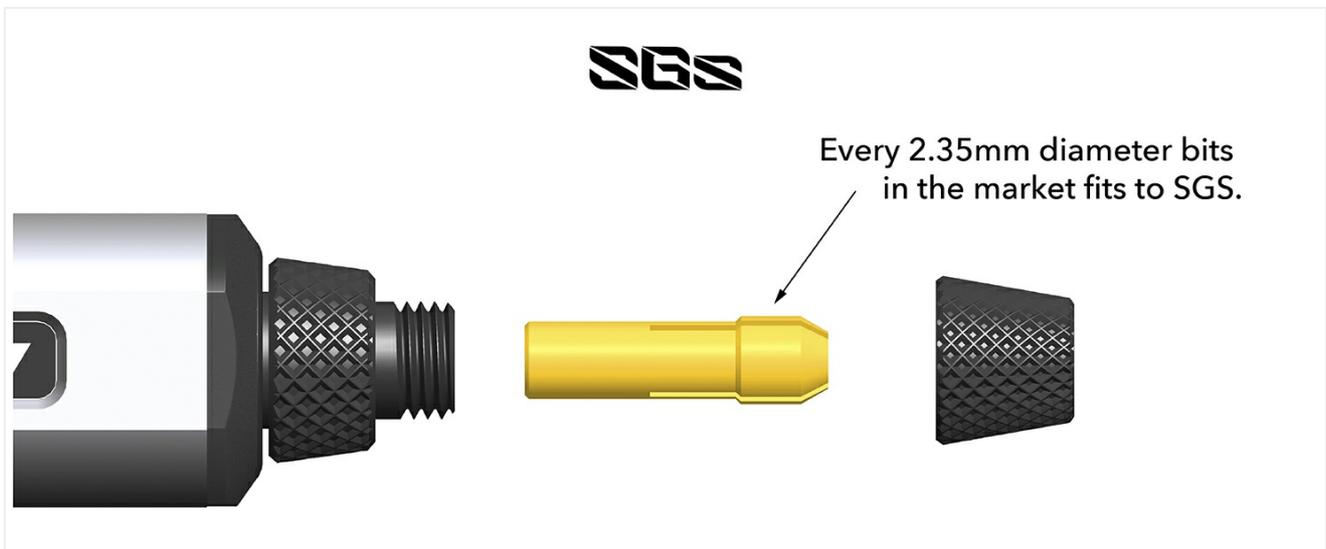- 1 x USB Charging Cable (Magnetic)

Figure 2: Complete set of included components.

3. PRODUCT FEATURES

The ARROWMAX Electric Engraving Pen is equipped with several features designed for precision and ease of use:

- **Hollow-Core Motor:** Provides 3 times the torque of a regular motor for enhanced precision.
- **OLED Display:** Shows battery status, selected mode, and rotation direction.
- **Magnetic Charging:** Convenient and secure charging directly in the storage case.
- **Adjustable Speed:** Four RPM modes (15000, 20000, 25000, 30000 RPM) for various tasks.
- **Bidirectional Rotation:** Easily switch between forward and reverse rotation.
- **Aluminum Alloy Body:** Durable and ergonomic design for comfortable handling.
- **Quick-Change Chuck:** Allows for easy bit changes without additional tools.

Magnetic Charging Port

Easier to charge your SGS.

Power Button

Start/close engraving pen, control positive and negative rotation.

Status Display

Displaying the battery status, selected mode and rotate direction.

Gear Adjustment Button

Select the engraving gear.

Aluminium Alloy Body

CNC–Aluminium, adopts a square shape with a circular arc surface, giving you better control.

Chuck

Changing the bit easily without using any other tools.

Figure 3: Key features of the ARROWMAX Engraving Pen.

Adjustable Speed

1 — **15000** RPM Low

2 — **20000** RPM Medium

3 — **25000** RPM High

4 — **30000** RPM Maxium

Figure 4: Adjustable speed settings.

Red corundum	Sesame	Cowhide	Rubber	Silicone	Wool
Rough grinding	Medium grinding	Accurate grinding	Rough polishing	Pink 180# Yellow 800# polishing	Mirror polishing

Figure 5: OLED display indicators.

4. Setup

1. **Initial Charge:** Before first use, fully charge the engraving pen. Connect the magnetic USB charging cable to the pen's magnetic charging port and a suitable USB power source (e.g., computer USB port, USB wall adapter). The OLED display will indicate charging status. A full charge takes approximately 90 minutes and provides up to 120 minutes of uninterrupted work.

2. **Selecting a Bit:** Choose the appropriate engraving or polishing bit for your task. The kit includes 30 engraving bits and 12 polishing bits suitable for various materials and applications.

3. **Inserting a Bit:**

   - Unscrew the chuck at the tip of the pen counter-clockwise.
   - Insert the desired bit into the collet. Ensure the bit is fully seated.
   - Tighten the chuck clockwise until the bit is securely held. Ensure it is tightened firmly to prevent the bit from dislodging during operation.
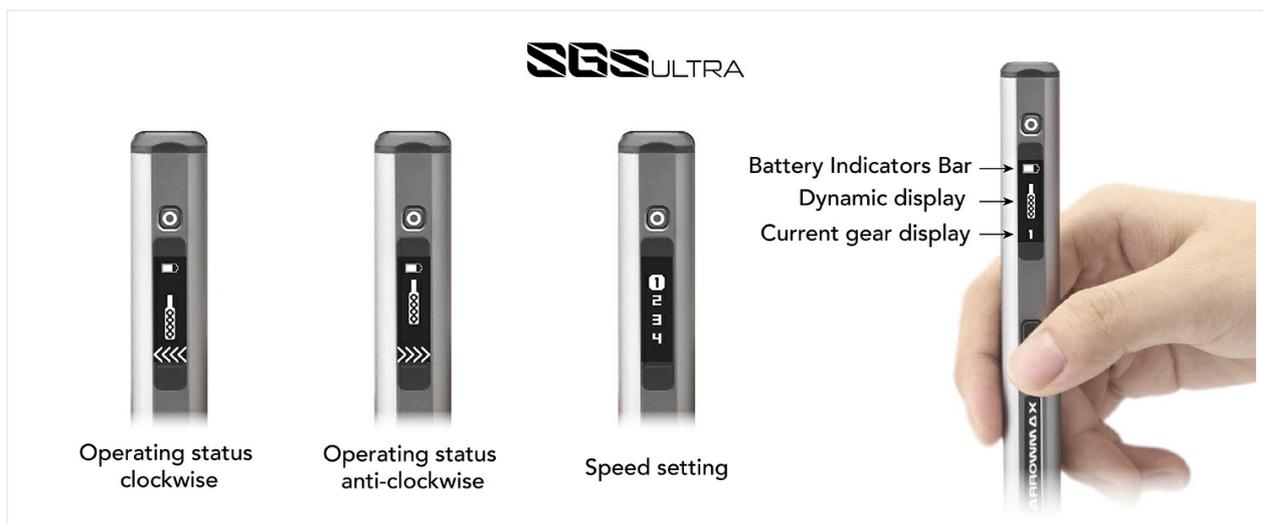

Figure 6: Inserting a bit into the chuck.

5. OPERATING INSTRUCTIONS

1. **Power On/Off and Rotation Direction:**

   - Press the Power button (marked with a circle and vertical line) to turn the pen on. The OLED display will activate.
   - Press the Power button again to switch between clockwise and anti-clockwise rotation. The display will show the current direction.
   - To turn off the pen, press and hold the Power button for a few seconds.

2. **Adjusting Speed:**

   - Press the Gear Adjustment button (marked with a 'G' or gear icon) to cycle through the four available RPM modes (15000, 20000, 25000, 30000 RPM).
   - Select the appropriate speed based on the material and task. Lower speeds are suitable for delicate work, while higher speeds are for more aggressive material removal.

3. **Usage Tips:**

   - Always wear appropriate safety glasses to protect your eyes from debris.
   - Hold the pen firmly but comfortably. The ergonomic design allows for precise control.
   - Apply light and consistent pressure. Excessive force can damage the bit, the material, or the tool.
   - For engraving, use a steady hand and guide the bit smoothly along your desired path.

- For polishing, use the appropriate polishing bits and compounds, moving the tool in small, circular motions.
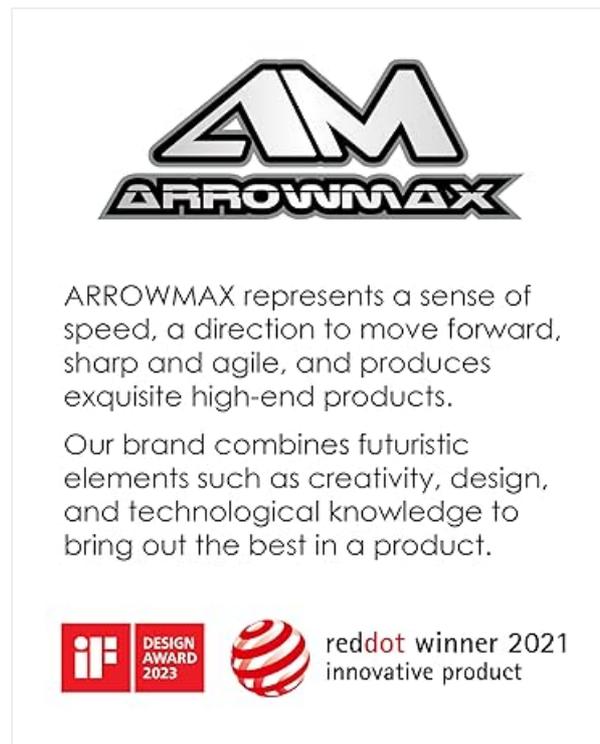- Practice on scrap materials before working on your final project.

Figure 7: Engraving a 3D printed object.

Figure 8: Polishing a metal piece.

Figure 9: Sanding or carving wood.

Video 1: Demonstration of the ARROWMAX SGS ULTRA engraving pen rotary tool in various applications, including engraving and polishing different materials.

6. Maintenance

- **Cleaning:** After each use, wipe down the engraving pen with a soft, dry cloth to remove dust and debris. For stubborn residue, a slightly damp cloth can be used, ensuring no moisture enters the internal components.
- **Bit Care:** Clean bits regularly. Use a small brush to remove accumulated material. Store bits in their designated slots within the aluminum case to prevent damage and loss.
- **Storage:** Store the engraving pen and all accessories in the provided aluminum case in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Battery Care:** To prolong battery life, avoid fully discharging the battery frequently. Charge the pen when the battery indicator is low. If storing for an extended period, charge the battery to about 50% every few months.

7. Troubleshooting

Problem	Possible Cause	Solution
Pen does not turn on.	Low battery.	Charge the pen using the provided USB cable.
Bit is loose or falls out during operation.	Chuck not tightened sufficiently.	Ensure the chuck is tightened firmly after inserting the bit.
Reduced performance or unusual noise.	Bit is dull or damaged; debris in chuck/motor.	Replace the bit. Clean the chuck area. If problem persists, contact support.
Pen does not charge.	Cable or power source issue; magnetic connection not secure.	Check USB cable and power source. Ensure magnetic connector is properly aligned and connected.

8. Specifications

Feature	Detail
Brand	ARROWMAX
Model Number	AM-230312
Voltage	5 Volts
Power Source	Battery Powered
Battery Type	1 Lithium Polymer battery (included)
Maximum Rotational Speed	30000 RPM
Minimum Speed	10000 RPM
Chuck Size	2.35mm diameter bits (compatible with standard bits)
Item Weight	12.7 ounces
Dimensions	8.78 x 7.95 x 1.14 inches (Package)

Feature	Detail
Included Components	1 engraving pen, 30 engraving bits, 12 polish bits, 1 storage bag, 1 manual, 1 USB charging cable

9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please refer to the contact details provided on the product packaging or the official ARROWMAX website. Keep your purchase receipt as proof of purchase for any warranty claims.

Manufacturer: Freemax Technology Company Limited (IMPORT)

Contact information (from product box image):

- Address: Flat C, 2/F, Infotech Centre, 21 Hung To Road, Kwun Tong, Hong Kong

- Tel: +852 3590 9790

- Email: hello@arrowmax-rc.com

Figure 10: Product packaging with manufacturer details.