

## Ambition AB-Soldier520-JS5981-1

# Ambition Soldier Pro 520 Wireless Rotary Tattoo Pen Machine

Model: AB-Soldier520-JS5981-1

### INTRODUCTION

This manual provides comprehensive instructions for the safe and effective use of your Ambition Soldier Pro 520 Wireless Rotary Tattoo Pen Machine. Please read this manual thoroughly before operating the device to ensure optimal performance and longevity.

### SAFETY INFORMATION

- For external use only.
- Keep away from naked flame.
- Always ensure proper sterilization of all equipment before use.
- This device is intended for professional use by trained tattoo artists.
- Do not disassemble or modify the machine, as this may void the warranty and pose safety risks.

### PACKAGE CONTENTS

Upon opening your Ambition Soldier Pro 520 package, verify that all the following items are included:

- 1 x Cordless Tattoo Machine
- 1 x RCA Adapter
- 1 x Extra Battery
- 1 x Extra 32mm Grip
- 1 x RCA Cable
- 1 x Charging Cable (Type-C)
- 1 x Accessory Pouch
- 1 x Hard-shell Zippered Case

### PRODUCT FEATURES

The Ambition Soldier Pro 520 is engineered for precision and performance, offering a range of features designed for professional tattoo artists:

- **Dual Grip & Balanced Design:** Crafted from high-quality aluminum alloy, includes a 42mm original grip (309g) and an extra 32mm grip (242g). Both grips feature balanced weight distribution to reduce hand fatigue during extended sessions.
- **Unparalleled Performance:** Equipped with an ultra-high torque 520g.cm coreless motor, providing strong, stable, and smooth performance with minimal noise and vibration. Suitable for fine lines and solid shading.
- **Adjustable Stroke Control:** Features a 2.2–4.2mm adjustable stroke with six gear positions, allowing precise tuning for various tattooing techniques including lining, shading, and coloring.
- **Super Long Battery Life with HD Display:** A 2400mAh battery offers 7–8 hours of continuous operation on a full charge. The Type-C fast charging port recharges the battery in 2–3 hours. The high-definition screen displays voltage, hertz, battery level, working time, and billing function.
- **Two Start Modes:** Includes J-Jump start and S-Standard modes for different needle types.
- **Universal Compatibility:** Compatible with most cartridge needles on the market and Ambition Mars-U P1 disposable grips, promoting hygiene and reducing setup time.

## SETUP INSTRUCTIONS

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### 1. Attaching the Grip

Select your preferred grip (42mm or 32mm). Align the grip with the machine body and twist clockwise until securely fastened. Ensure it is tight enough to prevent movement during operation.



Image: The Ambition Soldier Pro 520 machine shown with both the 42mm heavy grip and the 32mm light grip, highlighting the dual grip options for user comfort and stability.

## 2. Inserting/Removing the Battery

To insert the battery, align the battery pack with the machine's battery compartment and push firmly until it clicks into place. To remove, gently pull the battery pack away from the machine.

## 3. Attaching Cartridge Needles

Insert the desired cartridge needle into the machine's needle port. Twist slightly to secure it. The machine is compatible with most cartridge needles and Ambition Mars-U P1 disposable grips.

# PERFECTLY COMPATIBLE WITH MARS-U P1 DISPOSABLE GRIPS



Reduces Setup Flow  
Provides Better Comfort  
Ensures Superior Hygiene

Image: The Ambition Soldier Pro 520 machine with a Mars-U P1 disposable grip attached, demonstrating its compatibility and ease of use for hygienic practices.

## OPERATING INSTRUCTIONS

### 1. Power On/Off

Press and hold the power button for a few seconds to turn the machine on or off. The HD display will illuminate upon activation.

### 2. Adjusting Voltage

Once powered on, use the '+' and '-' buttons to adjust the output voltage. Each press adjusts the voltage by 0.1V. The current voltage is displayed on the screen.

### 3. Switching Startup Modes

Quickly double-click the power button to switch between startup modes. 'S' indicates Standard mode, and 'J' indicates Jump Start mode. Select the appropriate mode for your needle type.

### 4. Adjusting Stroke Length

Rotate the adjustable ring on the machine body to select your desired stroke length, ranging from 2.2mm to



4.2mm. There are six distinct settings for precise control.



Image: A close-up of the Ambition Soldier Pro 520's adjustable stroke mechanism, showing the markings for 2.2mm to 4.2mm stroke lengths.

## 5. Charging the Device

Connect the provided Type-C charging cable to the machine's charging port and to a compatible 5V/2A adapter. The HD display will show the charging status. Avoid completely draining the battery before recharging to prolong battery life.

# EASY TO CONTROL POWER LASTS ALL DAY

Battery Capacity  
**2400mAh**

Battery Life  
**7-8Hours**

Charger time  
**2-3Hours**



Note: The battery life is the test result obtained by our company using 05RM needles at 8V voltage.



Charging input : Recommend use the original charging cable, Use 5V/2A charging adapter  
Please do not completely drain the battery before charging, as this can damage the battery

Image: The Ambition Soldier Pro 520's display showing battery capacity and charging time, with a note on recommended charging input.

## MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your tattoo machine.

- **Cleaning:** After each use, wipe down the exterior of the machine with a suitable disinfectant wipe. Do not immerse the machine in liquids.
- **Sterilization:** Ensure all parts that come into contact with skin or ink (e.g., grips, needle cartridges) are properly sterilized or disposed of according to professional hygiene standards.
- **Storage:** Store the machine in its hard-shell zippered case in a dry, cool place away from direct sunlight and extreme temperatures.
- **Battery Care:** To maximize battery life, avoid overcharging or completely discharging the battery. Recharge when the battery level is low.

## TROUBLESHOOTING

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Machine does not turn on	Low battery; Power button not pressed correctly	Charge the battery; Press and hold the power button firmly.
Inconsistent power/stalling	Low battery; Faulty needle cartridge; Motor issue	Recharge battery; Replace needle cartridge; Contact support if issue persists.
Stroke adjustment not working	Adjustment ring stuck or damaged	Ensure no debris is obstructing the ring; Do not force adjustment. Contact support if damaged.
Display not working	Battery issue; Internal fault	Ensure battery is charged and properly inserted. Contact support.

SPECIFICATIONS



The image shows the Ambition Soldier Pro 520 tattoo machine, a black and gold device with a digital display. The display shows 100% battery, TIME 00:00, 183 Hz, \$ 01.0, 001.0, MODE J, VOLTAGE 12.0 v, and the AMBITION logo. The machine has a gold-colored adjustment ring with markings 1.6, 2.0, 3.4, and 3.6. The handle is black with a textured grip and the AMBITION logo.



**SOLDIER PRO 520**  
HIGH TORQUE CUSTOM CORELESS MOTOR TATTOO MACHINE

Weight	309g/242g
Size	158*42/32mm
Motor	22*30mm
Motor Speed	12V/9200rpm
Torque	520g.cm
Adjustable Stroke	2.2-4.2mm
Voltage	1-12V
Battery Capacity	2400mAh
Usage Time	7-8Hours
Charging Time	3Hours
Vibration value	0.8m/s <sup>2</sup>
Decibels	50-52dB

Image: A visual representation of the Ambition Soldier Pro 520 machine alongside a table detailing its key specifications.

Feature	Detail
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Feature	Detail
Weight (42mm grip)	309g
Weight (32mm grip)	242g
Size	158*42/32mm
Motor	22*30mm Coreless Motor
Motor Speed	12V/9200rpm
Torque	520g.cm
Adjustable Stroke	2.2-4.2mm (6 options)
Voltage Range	1-12V
Battery Capacity	2400mAh
Usage Time	7-8 Hours (on full charge)
Charging Time	2-3 Hours (Type-C fast charging)
Vibration Value	0.8m/s <sup>2</sup>
Decibels	50-52dB
Product Dimensions	5.9 x 3 x 2.3 inches
Item Model Number	AB-Soldier520-JS5981-1
UPC	810174734812

## OFFICIAL PRODUCT VIDEO

Your browser does not support the video tag.

Video: An official product video demonstrating the features and operation of the Ambition Soldier Pro 520 Tattoo Gun.

## WARRANTY AND SUPPORT

The Ambition Soldier Pro 520 Wireless Rotary Tattoo Pen Machine comes with **a1-year warranty**. For any repair resolutions, technical assistance, or warranty claims, please contact Ambition official support. Ensure you have your model number (AB-Soldier520-JS5981-1) and proof of purchase available when contacting support.

For further information or assistance, please visit the [Ambition Store](#).