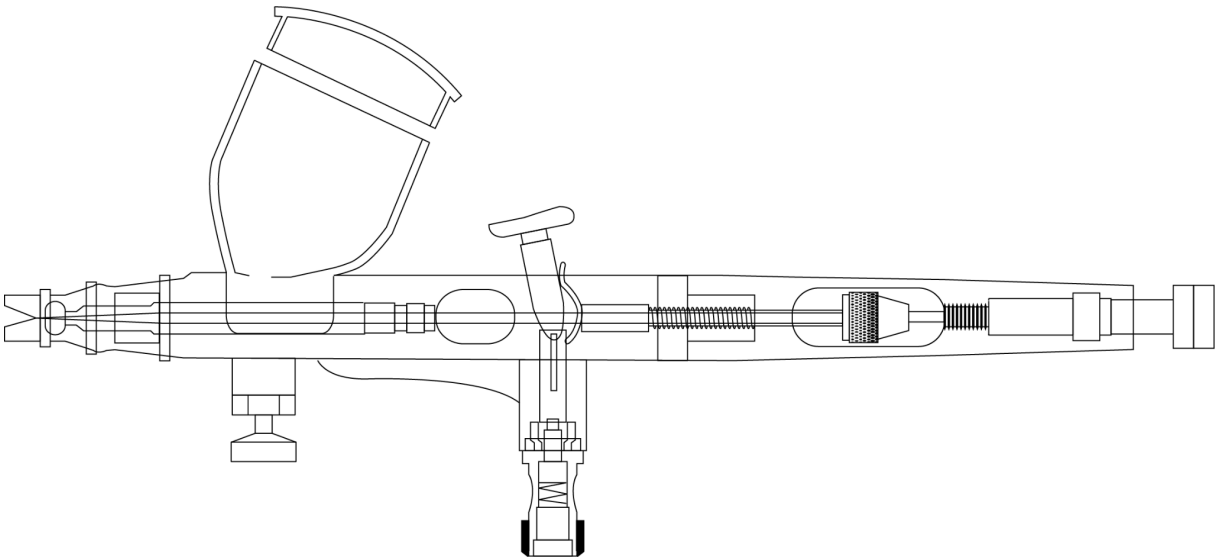




Airbrush AW-3 Series

AW-303,305

Instruction Manual



Thank you very much for purchasing an airbrush from the AW-3 Series.

To ensure safe and proper use of this product, please read this instruction manual carefully and make sure you fully understand the operating procedures before use. Please keep this manual in a safe place for future reference.



Safety Warning

An airbrush is a tool designed specifically for spray painting. Do not use it for any other purpose. Always ensure proper ventilation when spraying paint. Never use the airbrush in environments where infants or pets are present.

Safety Precautions

- When using solvent-based paints, keep the airbrush away from fire or any ignition sources.
- The needle tip is extremely sharp and dangerous; handle it with great care.
- Do not allow children to use the airbrush without adult supervision.
- Never use the airbrush in environments where infants or pets are present.
- The airbrush is a precision instrument; avoid dropping it or subjecting it to strong impacts.
- Always wear a protective mask while painting and use the airbrush in a well-ventilated area.

We cannot accept any responsibility or liability for malfunctions, accidents, or damages resulting from improper use of this product.

If you notice any irregularities during operation, stop using the airbrush immediately.

Warranty and Support

This product includes a 90-day warranty from the date of purchase, covering initial defects.

For any warranty-related inquiries, please contact us via **Amazon Buyer-Seller Messaging** or by email.

Our Airbrush Support Team will respond promptly and courteously.

Contact:

- **Amazon Buyer-Seller Messaging**
- **Email: support**
- **support**
- **support@airbrush.works**

Airbrushworks Support Team

For customers in the United States, our support team is available through the following channels:

- **Amazon Buyer-Seller Messaging** (recommended)
- **Troubleshooting Website:** <https://airbrush.works/top/instructions/troubleshooting/>
- **Email:** info@airbrush.works

Our knowledgeable support staff will provide quick and reliable assistance for any questions regarding the product. Please feel free to reach out if you need help.

Cases Not Covered by Warranty

- Damage caused by customer mishandling
- Natural wear of consumable parts
- Use that contradicts the instructions in this manual

- Failure to perform appropriate maintenance

Warranty coverage may change in cases of natural disasters or other exceptional circumstances.

Before Assuming a Malfunction

Before concluding that the airbrush is defective, please check the troubleshooting section.

In many cases, the airbrush is not actually broken—issues are often caused by incorrect adjustment or insufficient understanding of proper usage.

We strongly recommend reading this manual carefully and operating the airbrush correctly before seeking support.

Troubleshooting Website

<https://airbrush.works/top/instructions/troubleshooting/>

Notes Before Use

Residual Test Fluid

Every unit is spray-tested before shipment. As a result, a small amount of test fluid may remain inside the body of the airbrush. This is normal and does not indicate a defect.

Paint Leakage Due to Needle Adjustment

Before shipping, every airbrush is adjusted so that the needle is set at the *optimal position*. This “optimal position” means the point where paint almost—but not quite—comes out. In this state, the airbrush is easiest to operate.

However, because this setting is extremely fine, even slight environmental changes such as temperature can cause the needle position to shift. This may result in paint leakage, even with a brand-new unit.

Needle adjustment is an essential maintenance task that every user must perform.

Therefore, paint leakage that can be resolved by needle adjustment is not covered under the 90-day warranty, even on new products.

Disassembly of the Nozzle During Cleaning

Do not disassemble the nozzle every time you clean the airbrush after use.

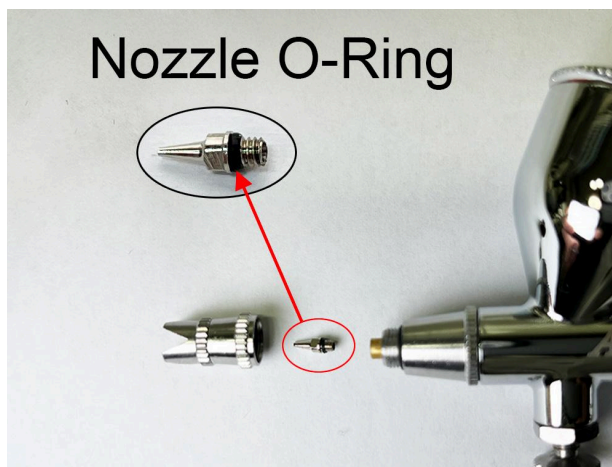
The nozzle area is factory-adjusted to the optimal state before shipment.

If you disassemble it, readjustment will be required.

In addition, the nozzle O-ring is a consumable part.

If you disassemble the nozzle for cleaning every time, the O-ring may become damaged, causing air to backflow into the paint cup.

Only disassemble the nozzle when a malfunction occurs—such as clogging inside the nozzle—or during periodic overhauls.



Any malfunction caused by disassembling the nozzle is not covered under warranty. If a problem occurs, do not disassemble the nozzle. Please contact the Airbrushworks Support Team immediately.

If nozzle disassembly is absolutely necessary, please refer to the guide below. Review it carefully and proceed only after you fully understand the procedure.

Nozzle Disassembly

Please read and understand the following three points before you begin.

Airbrush AW-303,305

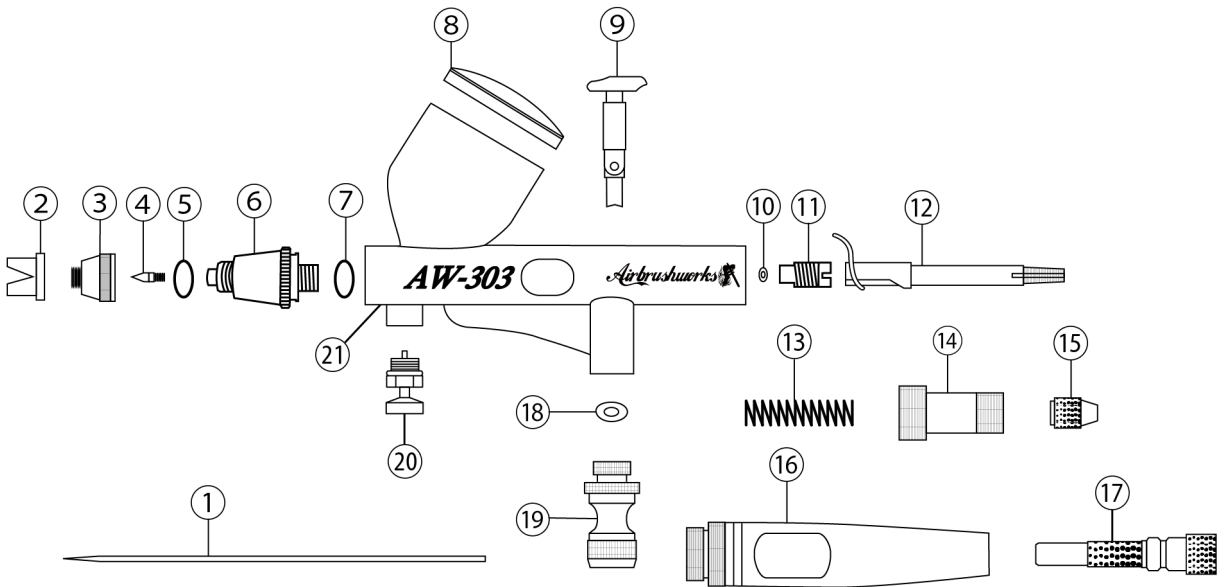
The AW-3 Series is an airbrush designed with a focus on precision detailing, offering two nozzle sizes—0.3 mm and 0.5 mm—for a wide range of applications. This allows artists to handle everything from fine detail work to broad coverage. Equipped with an air control valve, it enables delicate airflow adjustments directly at your fingertips.



Specifications

Operating Method	Double Action
Nozzle Diameter	AW-303 0.3mm AW-305 0.5mm
Cup Capacity	7cc
Minimum Pressure	0.1Mpa
Optimal Pressure	0.2Mpa
Maximum Working Pressure	0.4Mpa
Minimum Line Width	AW-302 0.2mm AW-303 0.3mm AW-305 0.5mm

Exploded View of Airbrush AW-3 Series



1	Needle	11	Needle Packing Screw
2	Needle Cap	12	Needle Guide
3	Nozzle Cap	13	Needle Spring
4	Nozzle(with O-Ring)	14	Spring Guide
5	Nozzle Cap O-Ring	15	Needle Nut
6	Nozzle Base	16	Tail Cap
7	Nozzle Base O-Ring	17	Needle Adjuster
8	Paint Cup Lit	18	Trigger Button O-Ring
9	Trigger Button	19	Air Valve Assembly
10	Needle Packing	20	Air Control Valve
		21	Airbrush Body

Preparing the Airbrush Before Use

1. Choosing the Compressor

A compressor is essential for operating an airbrush.

For optimal performance with the AW-3 Series, a compressor with an air output of **at least 8 L/min**, and preferably **15 L/min or higher**, is recommended.

Rechargeable compressors can be used for light spraying applications, but a **stationary (plug-in) compressor** is recommended to fully utilize the AW-3's performance.

2. Setting the Air Pressure

The **optimal operating pressure** for the AW-3 Series is **0.2 MPa**, though for basic spraying, it can operate at a minimum of **0.1 MPa**.

Since the AW-3 is equipped with a **built-in air control valve**, which allows fine air adjustment at hand, it is recommended to set the compressor pressure **slightly higher than usual**.

The higher pressure can then be finely adjusted using the air valve for **precise and stable airbrush control**.

The maximum operating pressure is 0.4 MPa.

Using the airbrush continuously at pressures higher than this may cause damage to the air valve packing.

Always operate the airbrush at a pressure below 0.4 MPa.

3. Paint Selection and Adjustment

The AW-3 Series uses **Teflon seals**, allowing safe use with **solvent-based paints**.

However, due to its **fine nozzle design**, **high-viscosity paints** are not suitable. It is strongly recommended to **thin thicker paints** with the appropriate **reducer or thinner** to achieve the proper consistency.

The AW-3 Series is engineered for **precision and fine detailing**, so the use of **hardened paints** such as **primers (surfacers)** or **topcoats** is **not recommended**. These paints can clog or damage internal components, reducing overall performance.

For such applications, we recommend the **AW-2 Series**, which is optimized for broader “painting” work.

With the AW-3, you can achieve **delicate, detailed artwork** that showcases your full creative potential.

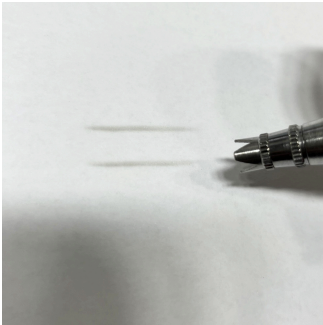
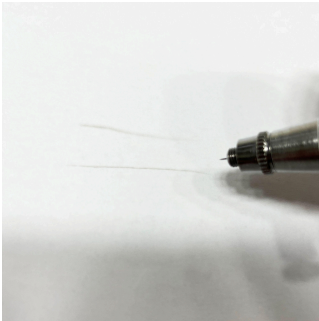
4. Handling the Needle Cap

The AW-3 Series comes standard with a **crown-type needle cap**, designed to **vent airflow outward** and **reduce paint buildup inside the cap**.

However, to **maximize the airbrush’s performance**, it is recommended to **remove the cap** during fine detail work.

You will notice a **clear improvement in precision and responsiveness** when painting small details without the cap.

Removing the crown cap allows for **tighter control and sharper lines**, expanding your ability to create refined, professional-quality results.

With Cap Attached	Without Cap
	



5. How to Open the Cup Lid

The paint cup lid is pre-adjusted at the factory to have the proper tightness.

If the lid comes off too easily, paint may spill and damage your work, so it is intentionally set to be slightly firm.

If the lid feels tight, do not pull it straight upward.

Instead, hook your fingernail under the edge (as shown in the image) and gently lift it open.

Pulling Upward	Hooking with Fingernail
	

If the lid is too tight to open even after trying the above method, or if it is too loose and comes off easily, it is considered a defect.

Please contact the **Airbrushworks Support Team** for warranty service.

Airbrush Operation

Function Check

Before using the airbrush, perform a **function test**.

Spray a **low-viscosity liquid** such as thinner or water to confirm that the airbrush is operating correctly.

Operation Method

The AW-3 Series uses a **double-action system**,

which means it requires two separate actions:

one to release **air** and another to release **paint**.

These two actions are performed as follows:

Trigger Operation

Press down → Air is released



Press down and pull back
→ Paint is released



1. First, release only the air.



Press the trigger to release air.

For beginners or those unfamiliar with using an airbrush, it is recommended to keep the trigger pressed down continuously during operation.

This ensures that air is constantly flowing from the airbrush.

If paint is also coming out at this stage, it is not a malfunction — the needle simply needs to be adjusted.

See “Needle Adjustment” on page 26 for details.

2. Pull back to release paint.

While holding the trigger down, pull it back to release paint.

The amount of paint sprayed can be controlled by how far you pull back the trigger while continuing to press it down.

For beginners, it's recommended to keep the trigger pressed down and focus only on the pulling motion — this makes it easier to control the paint flow smoothly and precisely.



Advice from Our Airbrush Training Experience

Based on over 20 years of airbrush teaching experience,

we've found that many beginners struggle to coordinate the two actions — pressing for air and pulling for paint — simultaneously.

For this reason, we recommend keeping the air continuously flowing and focusing solely on controlling the paint release. This approach has helped many students achieve smoother and more consistent airbrush control.

When using an airbrush, always start the airflow before applying paint and stop the airflow last when finishing.

Following this sequence prevents unwanted paint mist from scattering at the end of your work.

The mistake of blowing unwanted paint mist



Please perform this operation using water or thinner.

If any issues occur, refer to the troubleshooting section.

How to Mix Paint

When using paint with the Airbrush AW-3 Series, please follow the steps below:

Using Thinner:

If the paint requires thinning, pour the thinner into the airbrush cup first, then add the paint.

This order helps the paint mix evenly and prevents thick paint from accumulating at the nozzle tip.

Using Ready-to-Use Paint:

If thinning is not required, pour the paint directly into the airbrush cup.

Mixing the Paint:

In a typical airbrush, paint can be mixed by covering the needle cap tip to create backflow.

However, since the AW-3 features a *crown-type needle cap*, air escapes through the openings even when the tip is covered.

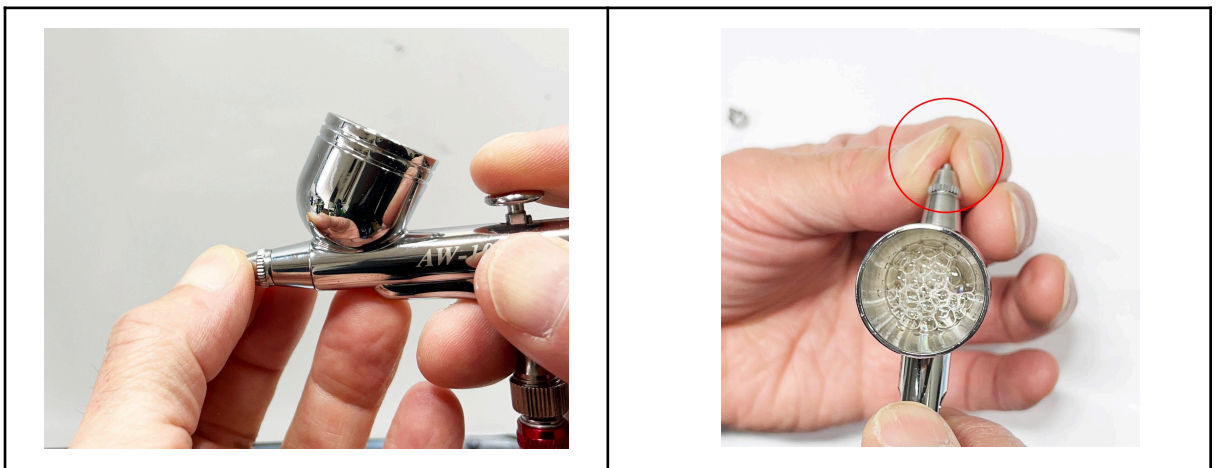
Therefore, if you wish to mix the paint by backflow while keeping the cap on, slightly loosen the nozzle cap by a few turns.



As shown in the image, backflowing the air to mix the paint will evenly blend it within about 20 to 30 seconds.

When the needle cap is removed

After removing the nozzle cap, gently pinch the tip of the airbrush with your fingers as shown in the image to create backflow and mix the paint.



If backflow doesn't occur smoothly, try pinching the tip with a soft cloth or wiping rag.

This creates a better seal at the nozzle and helps the air flow backward more effectively.

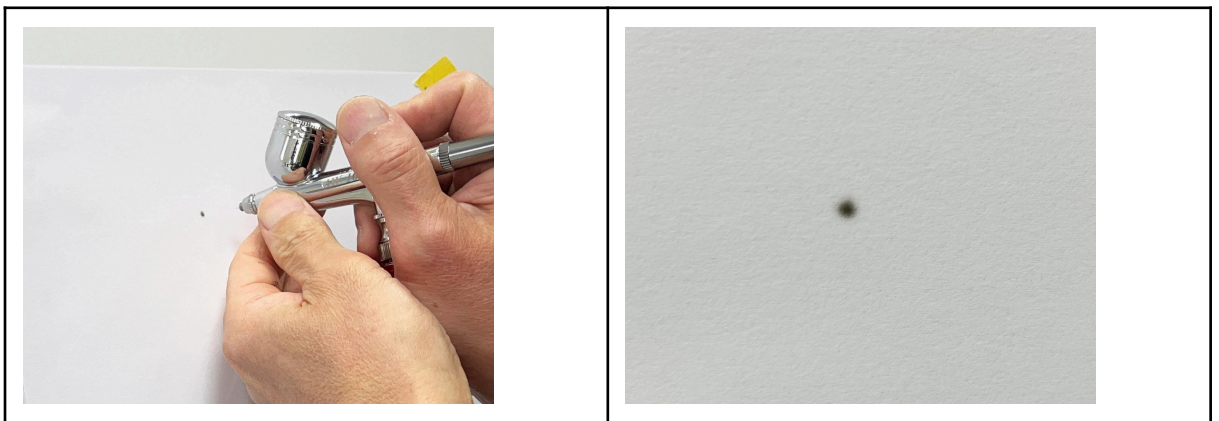
How to Use the Airbrush

This airbrush uses a **double-action** system — press the trigger to release air, and pull it back while pressing to spray paint.

As explained earlier, keep the air flowing continuously by holding down the trigger, and control the paint amount by pulling and releasing it slightly.

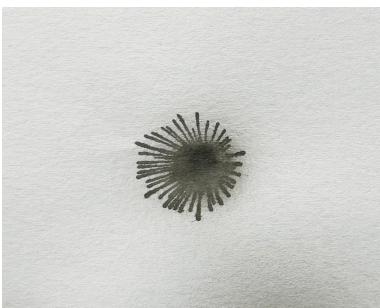
Bring the airbrush close to the surface and gently pull the trigger to create small dots.

(Image shown uses model AW-1.)



By bringing the airbrush close to the surface, you can create small, precise dots.

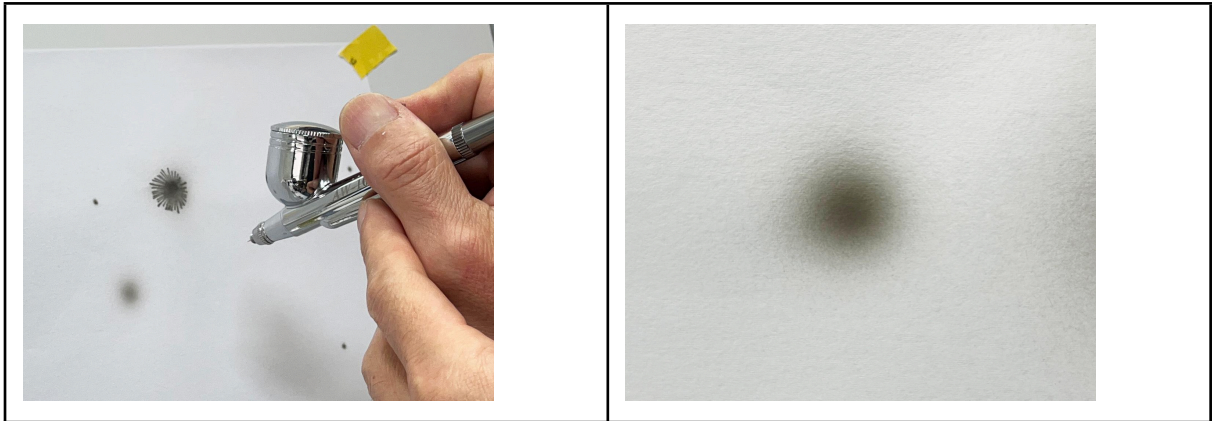
Next, while keeping the same distance, pull the trigger further back to release more paint.



This will cause the paint to spread and create a pattern that looks like a burst of fireworks.

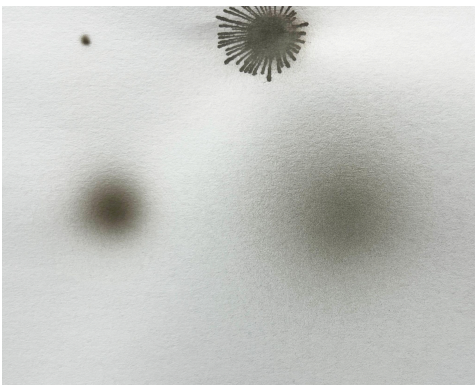
This happens because new paint lands on the surface before the previous layer has dried, causing the paint to flow and slide across the surface.

This time, move the airbrush farther away from the surface and pull the trigger back only slightly.



You'll notice that the dots become larger than before.

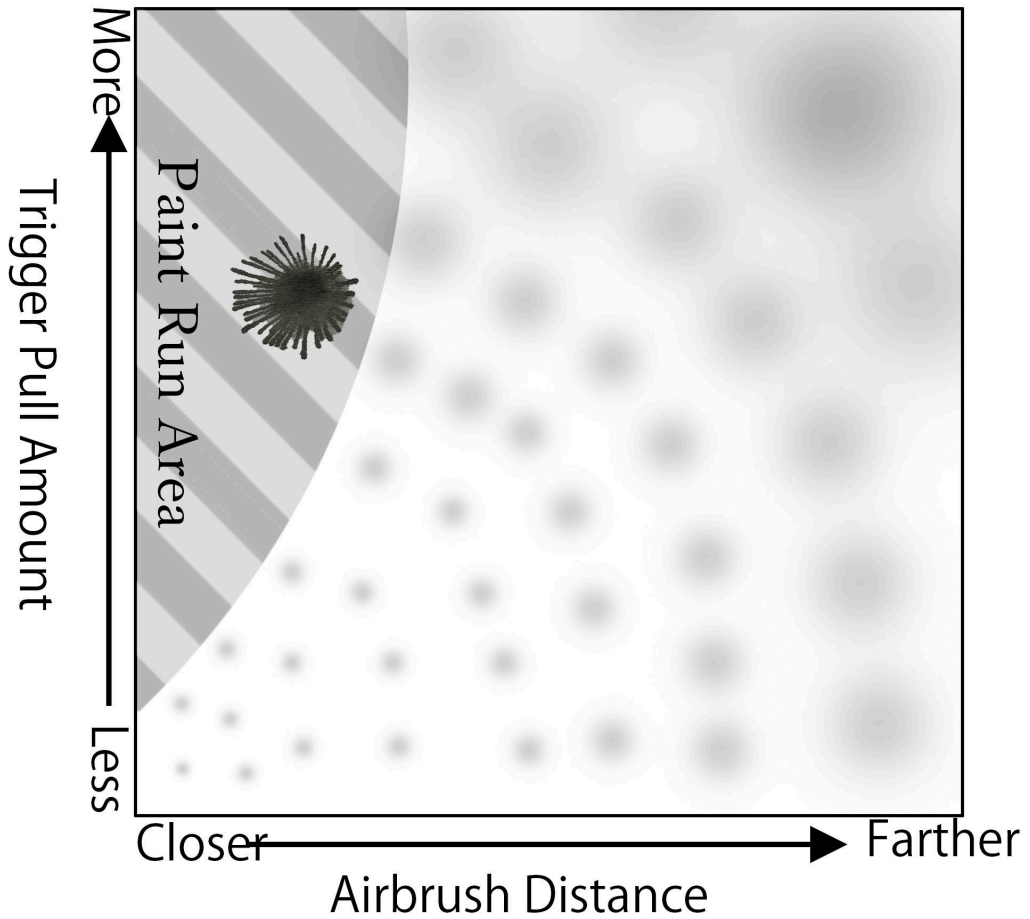
Now, at the same distance, pull the trigger back further to release more paint.



This will produce dots several times larger than the previous ones.

The spray pattern of an airbrush changes depending on the distance from the surface and how far you pull back the trigger.

Airbrush Spray Pattern Size



The spray pattern of an airbrush is determined by both the **distance from the surface** and **how far you pull back the trigger**.

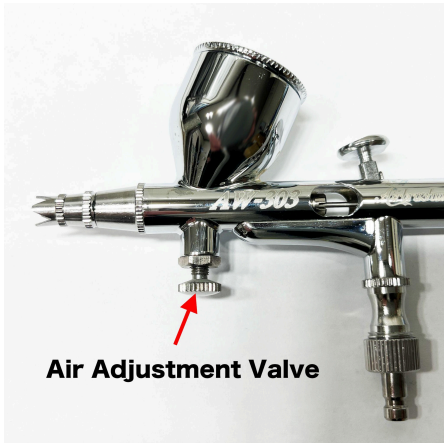
Pulling the trigger back more increases the spray width more effectively than simply moving the airbrush farther away.

However, if you pull the trigger too far while spraying at a short distance, the paint will start to run.

Practice balancing the distance and trigger pull to achieve smooth, even coverage within the ideal range.

Also note that **paint viscosity affects performance**, so be sure to adjust it properly using thinner when needed.

How to Use the Air Adjustment Valve



The AW-3 Series is equipped with a built-in **air adjustment valve**, allowing you to fine-tune the airflow while painting.

This feature enables precise control of air pressure during operation, helping you achieve a variety of painting effects without stopping your work.

Each airbrush model has an optimal air pressure setting — for the AW-3 Series, it is

0.2 MPa.

Using the airbrush at this pressure allows it to perform at its best, so the valve should generally remain fully open under standard conditions.

However, different painting situations may require different pressures.

For fine detailing or soft shading, lower pressure than 0.2 MPa is ideal, while for broader coverage or faster drying, higher pressure may be preferred.

The AW-3's adjustable valve lets you make these fine adjustments instantly, giving you full control over airflow and allowing you to adapt seamlessly to various painting techniques beyond the standard 0.2 MPa setting.

When to Reduce Airflow

When working on fine details or delicate shading, reducing the airflow allows for more precise control.

Lowering the air pressure makes it easier to perform detailed and subtle work.

When to Increase Airflow

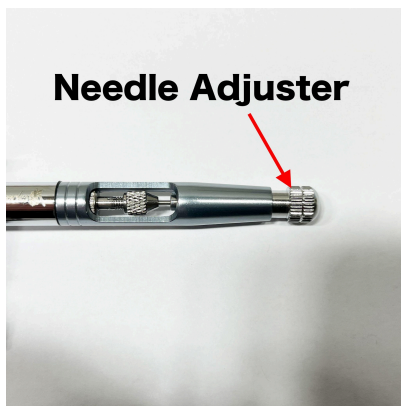
When painting large areas or when faster drying is required, increasing the airflow is effective.

Higher air pressure allows you to cover wider surfaces quickly and evenly.

How to Use the Needle Adjuster

The needle adjuster is a feature that helps maintain a consistent paint flow.

By adjusting it, you can control the maximum amount of paint released when the trigger is pulled all the way back.



By tightening the needle adjuster, you can limit the paint flow, making it ideal for tasks that require a consistent output — such as drawing fine lines.

This feature is especially useful for beginners, as it allows for more controlled and precise operation.

However, one of the main advantages of an airbrush is the flexibility to adjust paint flow in real time through trigger control.

When the needle adjuster is used to restrict paint output, this flexibility becomes limited.

Therefore, once you become comfortable with airbrush operation, it is recommended to set the needle adjuster to the fully open position and control the paint flow freely with the trigger.

This allows you to take full advantage of the airbrush's capabilities and perform a wider range of painting techniques.

Tail Cap Position Adjustment

The tail cap is designed with an opening that exposes the needle lock screw.

Depending on the shape of the user's hand, a finger may slip into this opening, making the airbrush feel uncomfortable to hold.

If this occurs, try the following adjustment methods:



By rotating the tail cap up or down, you can change its position to prevent your finger from pressing into the opening.

This simple adjustment allows for a more comfortable grip and smoother control.

Set the tail cap so that your fingers rest naturally — this will provide greater stability and precision during painting.

Airbrush Maintenance Method

Because an airbrush is a precision instrument, it requires careful cleaning after each use and regular disassembly for maintenance.

Cleaning After Use

When Using Water-Based Paints



After using water-based paints, clean the airbrush by rinsing it thoroughly with tap water or by immersing it in a container of clean water.



Reverse flush the airbrush until the water runs clear. However, reverse flow alone only moves air inside the nozzle, so alternate between spraying and backflushing to achieve a more thorough internal cleaning.

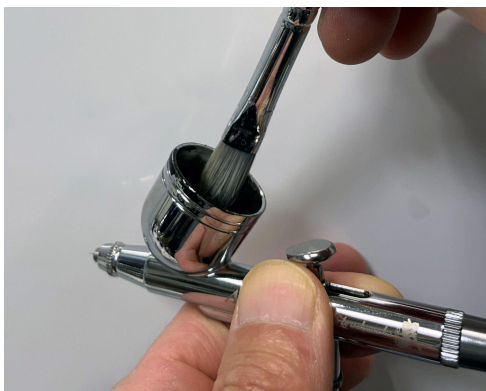


For areas where paint has dried or hardened, use cleaning solution and a firm brush (a flat pig-hair brush is recommended) to gently dissolve and remove the residue. This method helps keep the internal components of your airbrush clean and in optimal condition.

For Solvent-Based Paints



Pour a small amount of thinner or cleaning solution into the airbrush cup. Alternate between spraying and backflushing until the cleaning fluid runs clear, ensuring the inside of the airbrush is completely clean.



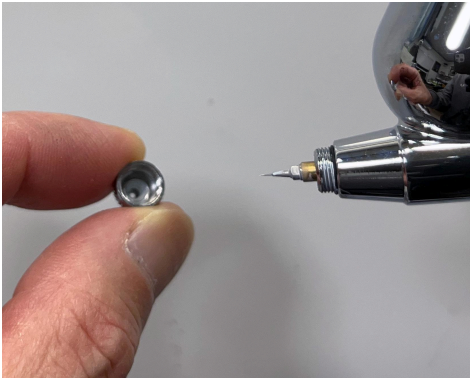
Use a cloth or a firm brush to clean any paint residue from the exterior surfaces of the airbrush.



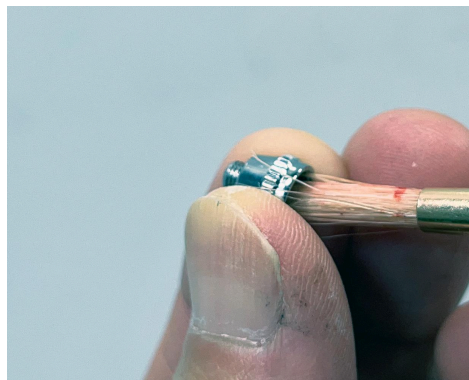
Finally, pour a small amount of thinner or cleaning solution into the airbrush again and backflush once more. If the liquid remains clear, it indicates that the inside of the airbrush has been thoroughly cleaned.

Cleaning Around the Nozzle

After each use—whether with water-based or solvent-based paints—always clean around the nozzle area.



Remove the nozzle cap and check the tip. If you see any paint residue like in the image, cleaning is required.



Clean the area using a brush or a soft cloth

The inside of the nozzle cap is a crucial passage for airflow in the airbrush.

If dirt accumulates, it can affect performance and cause irregular operation.

If your airbrush is not working properly, try cleaning the inside of the nozzle cap first.

This simple maintenance step often resolves most issues.

Regular Maintenance

Regular maintenance involves performing a complete disassembly (overhaul) of the airbrush.

Due to its structure, prolonged use may cause the needle packing to loosen, allowing paint to leak into the tail area. When this occurs, one of the first symptoms is that the air does not stop flowing even after releasing the trigger.

If you continue to use the airbrush in this state, it can lead to a series of secondary problems. Therefore, when you notice that the air does not stop, we recommend performing a full overhaul immediately.

For this process, we recommend using our **“Airbrush Maintenance All-in-One Kit”**, which contains all the necessary tools and materials for disassembly and cleaning.

Detailed instructions for overhauling your airbrush are available at the link below, along with information about the Maintenance Kit.

Airbrush Maintenance All-in-One Kit



Needle Adjustment Method

Needle adjustment is an essential maintenance task that every user should perform.

Although each unit is factory-adjusted to its optimal position before shipping, slight environmental changes—such as temperature variations—can cause the needle position to shift.

Therefore, periodic readjustment by the user is necessary to maintain optimal performance.



Remove the tail cap and slightly loosen the needle chucking nut.

It only needs to be loosened gently—do not remove it completely.



While releasing air, gently push the needle forward until the paint flow completely stops.

The position where the paint *just barely stops leaking* provides the best control and ease of use.

If paint continues to flow, push the needle slightly further in. The AW Series uses a durable brass nozzle, so it will not deform even with moderate pressure. A nozzle that initially leaks can often be

finely adjusted to achieve excellent performance with proper tuning.

If paint continues to leak even after adjustment, the issue may be covered under warranty **only in cases of initial defects**.

Please contact our support team for assistance.

However, if the airbrush has already been used with paint, the leakage is likely caused by debris or dried paint inside the nozzle, and **such cases are not covered by the warranty**.



How to Adjust the Spring Guide

The **spring guide** is used to adjust the trigger tension when pulling back the airbrush button. Tightening the spring guide makes the trigger stiffer, while loosening it makes it lighter. Adjust it to suit your personal preference.

However, excessive adjustment may cause operational issues — please follow the cautions below:

- **If tightened too much:** the trigger cannot be pulled back fully, and paint flow will decrease.
- **If loosened too much:** the needle may not return properly, causing continuous paint flow.

Therefore, it is important to keep the spring guide adjusted to a proper balance for smooth and reliable operation.

Spring Guide Fully Tightened	Properly Adjusted Spring Guide
<div>Over-tightened</div>  <p>Spring Guide</p>	<div>Proper Tightness</div>  <p>Spring Guide</p>

Needle and Nozzle Replacement

The needle and nozzle are consumable parts and must be replaced when worn out.

If the needle becomes bent



If the needle becomes bent, it can be temporarily straightened using tweezers or similar tools. However, this is only a short-term fix— even a slight bend will prevent the airbrush from producing fine lines, so replacement is recommended.

The needle tip is extremely sharp and can bend even with slight contact. Always insert it carefully into the body, and handle it with great caution to avoid injury or damage.

Nozzle Replacement

The AW Series nozzles are made of copper, offering several times the strength of standard brass nozzles. However, nozzles are consumable parts. If the airbrush is dropped and the nozzle becomes deformed, or if the tip becomes worn or cracked, replacement is necessary.

When to Replace the Nozzle:

- The airbrush has been dropped, causing nozzle deformation.
- The nozzle tip is cracked or worn.

If your airbrush is not performing properly, replacing the nozzle often resolves the issue. We recommend keeping several spare nozzles on hand for quick replacement.

Nozzle Replacement Procedure



To remove the nozzle, use the supplied wrench and turn it **counterclockwise**.

⚠ Turning it **clockwise** may easily break the nozzle, so please handle it with care.



Tighten the nozzle by hand until it seats (finger-tight).

From that point, use the wrench to turn it only a tiny amount—just a slight nudge (on the order of microns).

Do not overtighten; excessive torque can easily break the nozzle.

If the nozzle breaks

If the nozzle breaks, please refer to the following guide:

[How to Remove a Broken Nozzle](#)

The AW Series nozzles come equipped with an O-ring, so **no nozzle sealant is required** under normal conditions.

Using Nozzle Sealant

Frequent removal and installation of the nozzle may cause damage to the O-ring. Since the nozzle O-ring is not sold separately, you can either replace the entire nozzle or apply nozzle sealant.

Nozzle sealant is included in our **Airbrush Maintenance All-in-One Kit**.

For proper application instructions, please refer to the following guide:

[How to Apply Nozzle Sealant](#)

Nozzle Center Adjustment

When replacing the nozzle, the alignment between the nozzle and nozzle cap may shift. Therefore, center position adjustment is required.



You can adjust the alignment using pliers or other tools, but the process is much easier with the **Nozzle Centering Tool** included in the **Airbrush Maintenance Kit**.

For detailed instructions, please refer to the “Nozzle Centering Guide” page linked below.

[Nozzle Centering](#)

Troubleshooting

If you experience any issues while operating your airbrush, please refer to the troubleshooting guidelines below.

These solutions are based on over 20 years of experience from our Airbrushworks School and thousands of customer inquiries.

This guide provides effective solutions for nearly all common airbrush problems, helping you resolve issues quickly and confidently.

[Airbrush Troubleshooting](#)

Airbrushworks

Airbrushworks is an airbrush brand founded by professional airbrush artist **Chuuta**.

Designed from the perspective of an experienced user, each product is engineered for intuitive handling and precision.

Our mission is to expand the possibilities of airbrush artistry by delivering tools that are both easy to use and highly expressive.

Airbrushworks	Airbrush Online School
AW Series Store	Airbrush After Parts

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