

[Manuals.plus](#) /

› [Badger Air-Brush Co.](#) /

› Badger Air-Brush Co 105-2XR Patriot Arrow Fine Gravity Airbrush Instruction Manual

Badger Air-Brush Co. 105-2XR

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1. PRODUCT OVERVIEW

The Badger 105-2XR Patriot Arrow is a dual-action, internal mix, gravity-feed airbrush designed for precision and versatility. It features a permanently mounted 1/8 ounce color cup, making it ideal for detailed work where smaller amounts of paint are required. The airbrush utilizes a single 0.5mm needle/nozzle configuration, capable of spraying a wide range of materials.

Its streamlined body design ensures a clear sightline during use, and its balanced weight provides comfort for extended periods. Constructed from stainless steel, the Patriot Arrow is both durable and easy to clean.



Figure 1: Badger 105-2XR Patriot Arrow Airbrush with protective cap and cup lid.

Key Features:

- **Dual-Action Control:** Provides independent control over air and paint flow for precise application.
- **Gravity Feed:** Ensures efficient paint flow from the top-mounted cup.
- **Single 0.5mm Needle/Nozzle:** Versatile for fine detail and broader coverage with various mediums.

- **Easy Maintenance:** Features a self-centering nozzle and easy-access needle removal system for simplified cleaning.
- **Durable Construction:** Made with stainless steel for longevity and chemical resistance.

2. SETUP

2.1 Unpacking and Inspection

Carefully remove the airbrush and its accessories from the packaging. Inspect all components for any signs of damage. Ensure the needle, nozzle, and cup are securely in place.

2.2 Connecting to an Air Source

Connect the airbrush to a regulated air compressor using an appropriate air hose. The airbrush typically uses a standard fitting, but adapters may be required depending on your air hose. Ensure all connections are secure to prevent air leaks.

2.3 Preparing Paint

Proper paint consistency is crucial for optimal airbrush performance. Most paints, including acrylics, enamels, and lacquers, will need to be thinned to a milk-like consistency. Always follow the paint manufacturer's recommendations for thinning ratios and appropriate thinners. Strain your paint through a fine mesh filter to remove any particles that could clog the airbrush.

2.4 Filling the Color Cup

Pour the prepared paint into the 1/8 ounce gravity-feed color cup. The small cup size is designed for detail work and efficient paint usage. Avoid overfilling to prevent spills.



Figure 2: Close-up view of the airbrush's nozzle and gravity-feed cup.

3. OPERATING INSTRUCTIONS

3.1 Dual-Action Trigger Control

The Patriot Arrow features a dual-action trigger for precise control:

- **Push Down:** Pushing the trigger straight down releases air.
- **Pull Back:** While holding the trigger down, pulling it back controls the amount of paint released.

Practice this motion to achieve smooth transitions between air and paint flow.

3.2 Adjusting Air Pressure

Start with a lower air pressure (e.g., 15-20 PSI) and adjust as needed for your specific paint and desired spray pattern. Higher viscosity paints may require higher pressure. Always test your spray on a scrap surface before applying to your project.

3.3 Spraying Techniques

- **Fine Lines:** Move the airbrush closer to the surface and pull the trigger back minimally for a thin stream of paint.
- **Broad Coverage:** Move the airbrush further from the surface and pull the trigger back further for a wider spray pattern.
- **Consistent Strokes:** Maintain a consistent distance and speed while moving the airbrush to ensure even coverage.



Figure 3: Rear view of the airbrush, showing the needle chuck for easy needle removal.

4. MAINTENANCE

Regular cleaning is essential for maintaining the performance and longevity of your airbrush. The Patriot Arrow is designed for easy maintenance.

4.1 Cleaning After Each Use

1. Empty any remaining paint from the color cup.
2. Add a small amount of appropriate cleaner (e.g., airbrush cleaner, thinner, or water for acrylics) to the cup.
3. Back-flush the airbrush by covering the nozzle with your finger or a cap and pushing down on the trigger to allow air to bubble back into the cup, cleaning the internal passages.
4. Spray the cleaner through the airbrush until it runs clear.
5. For a more thorough clean, especially when changing colors or after extended use, remove the needle by loosening the needle chuck at the rear of the airbrush. Carefully pull the needle straight back.
6. Wipe the needle clean with a cloth dampened with cleaner.
7. If necessary, remove the nozzle cap and nozzle for cleaning. The self-centering nozzle design simplifies reassembly.
8. Reassemble all parts carefully, ensuring the needle is fully seated without excessive force.

4.2 Deep Cleaning

Periodically, a deeper clean may be required. This involves disassembling the airbrush further and soaking components in an appropriate cleaner. Refer to the manufacturer's detailed cleaning guide for full disassembly instructions.

4.3 Storage

Always store your airbrush clean and dry. The Badger 105-2XR Patriot Arrow often comes with a padded case for safe storage, protecting it from dust and damage.

5. TROUBLESHOOTING

Below are common issues and their potential solutions:

Problem	Possible Cause	Solution
No paint flow	Clogged nozzle/needle, paint too thick, needle not pulled back	Clean nozzle/needle, thin paint, pull trigger back further
Inconsistent spray / Spattering	Paint too thin/thick, air pressure too low/high, partially clogged nozzle, bent needle tip	Adjust paint consistency, adjust air pressure, clean nozzle, inspect/replace needle
Air bubbles in paint cup	Loose nozzle, damaged nozzle, dried paint in nozzle	Tighten nozzle, replace damaged nozzle, clean nozzle thoroughly
Air leaks	Loose connections, damaged O-rings	Check all connections, replace O-rings if damaged

6. SPECIFICATIONS

- **Model Number:** 105-2XR
- **Type:** Dual Action, Internal Mix, Gravity Feed
- **Needle/Nozzle Size:** 0.5 mm (Fine)
- **Color Cup Capacity:** 1/8 ounce (permanently mounted)
- **Construction Material:** Stainless Steel
- **Product Dimensions:** 6.25 x 4.25 x 2.25 inches
- **Item Weight:** 0.125 ounces
- **Recommended Applications:** General detail work, hobby painting, arts, crafts.

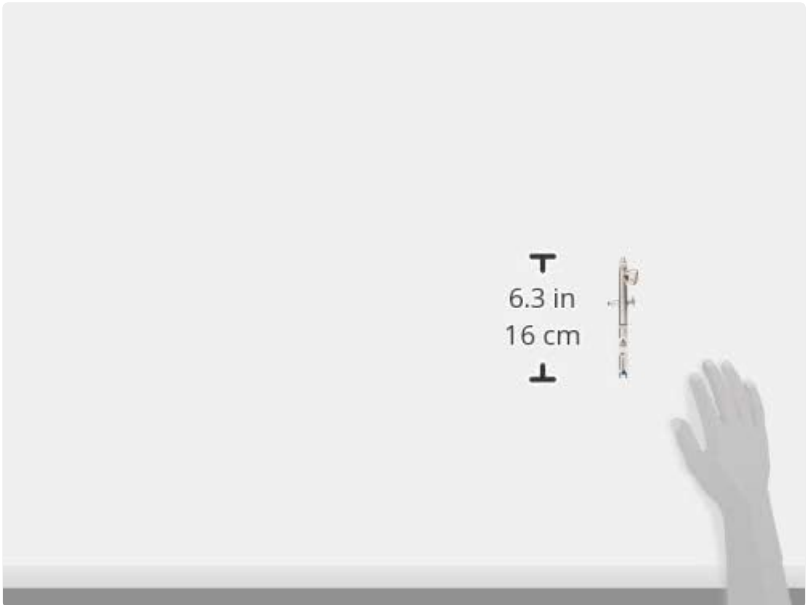


Figure 4: Approximate dimensions of the Badger 105-2XR airbrush.

7. OFFICIAL PRODUCT VIDEO

Video 1: Ron Marsh, Host of Ron's Trains N Things, introduces the Badger 105 Patriot Airbrush, highlighting its dual-action control, fine needle for detail work, comfortable balance, and stainless steel construction. He discusses its suitability for hobbyists, artists, and crafters, and its use in model railroading for painting, weathering, and scenery work.

8. WARRANTY AND SUPPORT

For detailed warranty information, technical support, or to purchase replacement parts, please refer to the official Badger Air-Brush Co. website or contact their customer service directly. Keep your purchase receipt as proof of purchase.

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