

● **“Working with Acrylic Paints -
Advantages and Disadvantages”** ●

By Kurt Van Dahm

Kurt gave us the straight scoop on how to get started using acrylic paints and how to properly apply them with an air brush system.

Acrylic paints have several advantages over other types of paint, such as enamel or lacquer, which make them the paint of choice for modelers:

- No smell or harmful fumes
- Water clean up
- No thinning required
- No special ventilation or special paint booth required

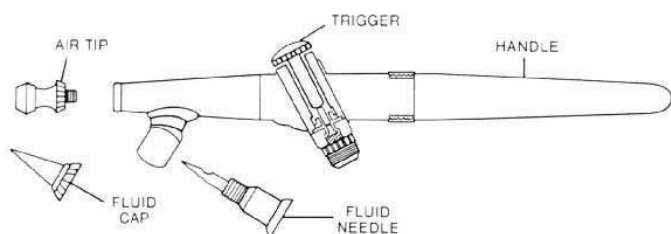
Of course, acrylic paints can be applied with a brush. However, for larger jobs or areas (an entire hull) an air brush will speed up the work and give a very uniform result.

There are three basic types of air brush systems that we need to be familiar with, several types of air delivery

systems to choose from and some basic maintenance guidelines to follow.

The most basic system (and one that's probably most useful to the average modeler) is the *Single Action, External-Mix*

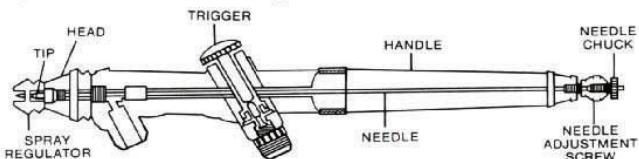
SINGLE-ACTION, EXTERNAL-MIX



nal Mix type. With this gear, the paint and air are mixed outside the air brush tool. It is easy to clean but does not allow changing the spray pattern while painting (has to be adjusted before starting up). The trigger simply allows paint to be drawn into the air flow by vacuum action.

A similar system, the Single Action, Internal Mix type, mixes paint and air inside the air brush device.

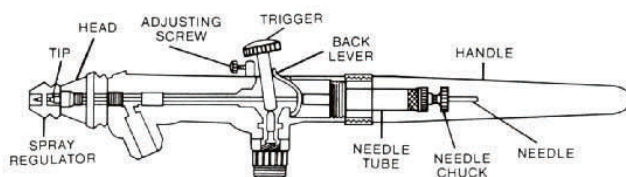
SINGLE-ACTION, INTERNAL-MIX



You can see from the illustration that the fluid needle is located within the body of the air brush handle as opposed to being external to the handle. Paint flow is, therefore, adjustable in this type as opposed to fixed.

The ultimate unit with maximum flexibility and control is the *Double Action, Internal Mix* type. This allows you to control both the flow of paint and air to better define the spray pattern as you work.

DOUBLE-ACTION, INTERNAL-MIX



Which type of unit you pick will depend upon the type of work you plan to do and how often you plan to do it. Obviously, the Double-Action unit would give you more flexibility but may have a longer learning curve before you become proficient with it - and its cost is higher.

Air delivery systems can range all the way from canned air through bottled air tanks to electric air compressors. Air tanks and air compressors have the added cost of a pressure regulator but their operating costs would wind up being much lower than canned air, if you use them a lot.

If you just want a quick set up for a small job (a one-shot), then you can find good air brush sets in most hobby shops with all the parts in one box - i.e. air brush, tubing, canned air, nozzle, etc.

At right is the Badger Model 350-7 which uses a high quality air brush (Single-Action, External Mix) for around \$100 and comes with some paints and accessories.



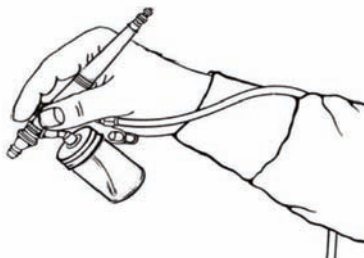
Since one can of compressed air can cost around \$9 or \$10 each, you can see how frequent use may dictate the purchase of a compressor. The example pictured here, \$119.99 on the Model Expo web site, is a 1/5HP unit with filter and regulator and operates in excess of 50PSI - compatible with most air-brushes. (Catalog #AS182).



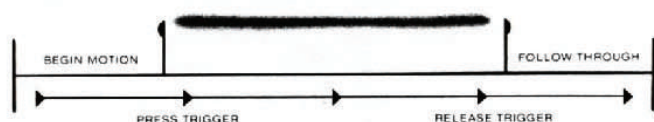
Kurt gave us some info on the “Badger Modelflex Acrylic Paints” and stressed the fact that they have a very fine grain (1 micron pigment size). This will relate to a finer looking, less grainy finish, so be mindful of the pigment size when looking for paints. Also, unlike most acrylic paints which must be thinned considerably, another bonus of the “Modelflex” paints is that they do not need to be thinned for airbrushing, according to Kurt.

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Use of the air brush is like handling a writing pen, as shown here. Drape the tubing over your arm, so it won't interfere with the paint spray. Develop a consistent sweep of the air brush to eliminate over spraying at the start and finish of a run. Try not to over-paint on any one pass, otherwise the paint may run. That means, don't get too close but not too far away, either, as that will result in a grainy look. See the chart, below.



CORRECT HAND MOVEMENT: Airbrush a straight and consistent spray pattern:



Keep a steady movement with no hesitations.

Thin coats are the best and, when painting light colors, it is advisable to first lay down a primer coat of light grey. This will cut down the number of coats required to cover over the base wood.

It is possible with acrylic paints to cover over enamel or lacquer layers and you can paint enamel and some lacquers over acrylic paint, as well. Test it first.

Another technique that Kurt detailed was how to properly mask color separations—a very critical subject on the hull, for sure. Kurt likes to use “3M Fine Line” masking tape because it doesn't leave any residual adhesive deposits on the work and prevents “bleed under” better than other masking tapes. Not recommended is using common paper based painter's masking tape, as that has rough edges that will let paint seep under and its adhesive will leave traces. To further prevent “bleed under”, Kurt applies a layer of the color being masked over the masking tape (thus sealing the edge) and then applies the second color. Removal of the masking tape as soon as possible after drying is critical.

To clean up your air brush, Kurt recommends the following formula: 2 oz. clear ammonia, 5 oz. “Spic & Span” liquid, 1 gal. hot water. Spray this mix through your air brush into a paper towel at the end of the day or between colors until it comes out clear. There are also some pre-mixed commercial airbrush cleaning products available, if you are not into mixing your own.

Our thanks to Kurt for his fine presentation and for permitting us to use his illustrations for this article. Editor

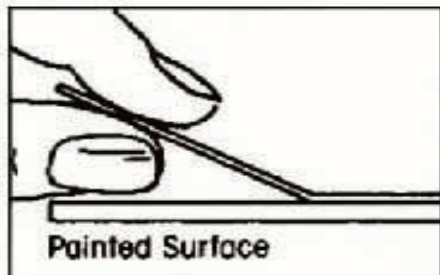
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Note: Illustration of spray painting products in this article do not constitute an endorsement by the Midwest Model Shipwrights or its officers.

Airbrush contact: www.badgerpaints.com

Model Expo contact: www.modelexpo.com

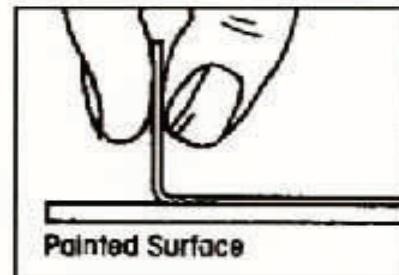
MASKING



WRONG



RIGHT



WRONG