

# How To Master **Airbrush Painting Techniques**



*JoAnn Bortles*

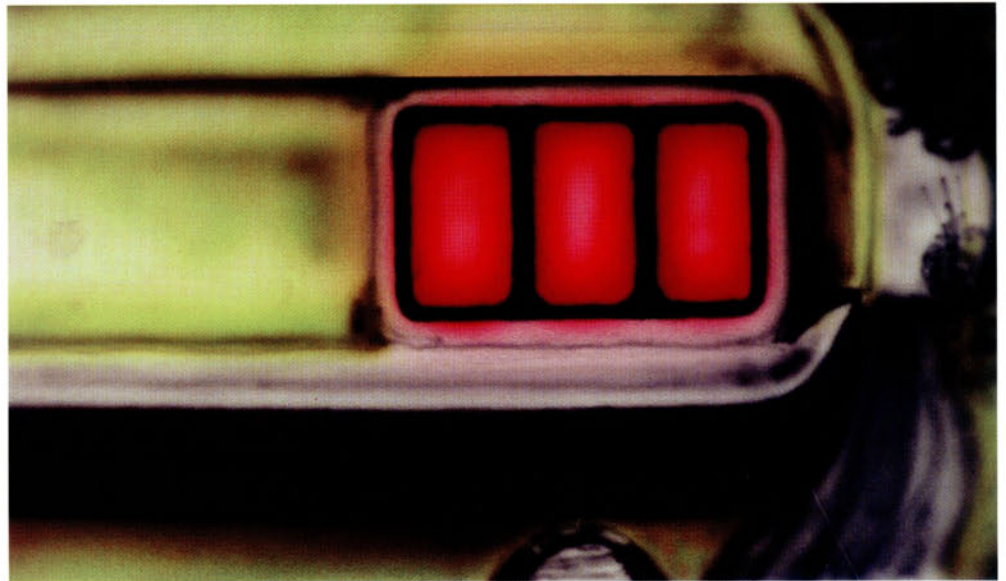
**MOTORBOOKS**

Aircraft Technical Books, LLC  
<http://www.actechbooks.com>

# CONTENTS

	<b>Acknowledgments</b> .....	<b>6</b>
	<b>Foreword</b> .....	<b>6</b>
	<b>Introduction</b> .....	<b>7</b>
CHAPTER 1:	<b>The Basic Equipment</b> .....	<b>10</b>
CHAPTER 2:	<b>The Basic Tools and Supplies</b> .....	<b>24</b>
CHAPTER 3:	<b>Airbrush Theory and Preparation</b> .....	<b>40</b>
CHAPTER 4:	<b>The Basic Movements: Learning to Use Your Airbrush</b> .....	<b>48</b>
CHAPTER 5:	<b>Using Frisket Film and Other Tricks</b> .....	<b>58</b>
CHAPTER 6:	<b>Metal Surface Texture Effects</b> .....	<b>65</b>
CHAPTER 7:	<b>Working with Stencil Layers</b> .....	<b>80</b>
CHAPTER 8:	<b>Airbrushing a Wolf</b> .....	<b>87</b>
CHAPTER 9:	<b>Creating a Vector Drawing and Using a Plotter</b> .....	<b>100</b>
CHAPTER 10:	<b>Using Complex Stencils: Airbrushing on a Guitar</b> .....	<b>112</b>
CHAPTER 11:	<b>Using Liquid Frisket or Spray Mask</b> .....	<b>132</b>
CHAPTER 12:	<b>Airbrushing an Eagle</b> .....	<b>143</b>
CHAPTER 13:	<b>Painting Skin Tone and the Human Face</b> .....	<b>152</b>
CHAPTER 14:	<b>Troubleshooting and Care of Your Airbrush</b> .....	<b>183</b>
	<b>Appendix: Airbrush Resources</b> .....	<b>189</b>
	<b>Index</b> .....	<b>190</b>

*View from the rear of a 1970  
Mustang heading down the road,  
1978.*



they were amazed by the rawness yet fire present in that artwork. Looking through all the older artwork, I was reminded of how I felt about art way back then, when I was young and full of hope. I painted and drew things that I lived for: my friends, my cars, my dreams. Back then I did not worry about painting things that were commercially viable. I painted for the love of it, not for the money.

Back when many of these early paintings were done I worked many various jobs: truck driver, airport services, welder, machine operator, bartender, even at a fast food joint. Note that artist is not listed. I did not become a full-time artist until much later in life, although I had tried several times. But art is not an easy gig. It takes real discipline, and for many artists, myself included, discipline is not one of our strong points. We are dreamers, and if we have a week of no clock punching, it is all too easy to get lost in the beauty that inspires us to paint. I would spend a morning, down at the Connecticut River, soaking up the wonder of its timeless atmosphere, and then sit down to paint, rather than spend the morning and afternoon painting and working.

Being a full-time artist is much more than painting. It is dealing with customers, paying bills, scheduling work, typing quotes, answering the phone and emails, running errands, scrambling when things go wrong, cleaning, grunt work. Most of the time the art business is the cold, harsh reality of real business, rather than that idealistic world we see in our paintings.

And so like many artists, I got farther and farther away from the factors that were present in my earlier artwork. I now had to paint what customers wanted. I had forgotten those passions that drove me to paint Mustang picture after Mustang picture years before. Yes, I was very into early Mustangs.

Driving fast and spending time with friends was what I lived for 30 years ago and my artwork reflected that. And along the road over those years, I have gotten farther and farther away from painting my passions, although, along the way, those passions did change. Yet my paintings now do not reflect my passions much of the time. And herein lies the problem.

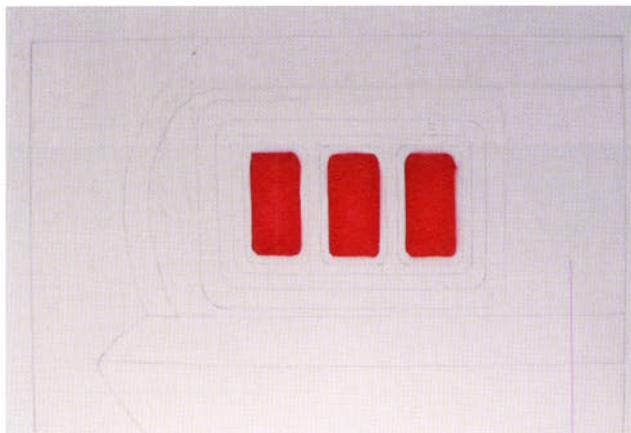
Most airbrush books deal only with the technical end of airbrushing. They don't address the psychological problems we deal with. Being an artist is stressful enough. But being an airbrush artist is far worse, because in addition to handling the problem of artistic stress, there is a huge mechanical factor involved due to all the problems that crop up whenever any kind of machinery (airbrushes, compressors, computers, etc.) is used. So in this book, I try to include ideas to deal with the emotional problems of airbrushing as well as the tech end.

So for new artists, I want you to look at the crudeness and roughness of my early work and compare it to how refined and polished my artwork has become. It was a long, long journey from the shaky lines on those Mustang paintings to the sharp ones in the Stevie Ray Vaughan bike tank. I didn't pop out of the box painting straight smooth lines. It is so easy to get discouraged, as you are not only dealing with learning a new craft; you are also learning how to deal with all the equipment problems that crop up.

For experienced artists who may read this book, use it to rediscover the passion that you may have misplaced along the way. Go through your old artwork, even the stuff you did as a teen or child. For every airbrush artist that is successful, there are many more who have given up. Their love for the craft extinguished by bad experiences that smothered what used to drive them to paint. For example, as I write



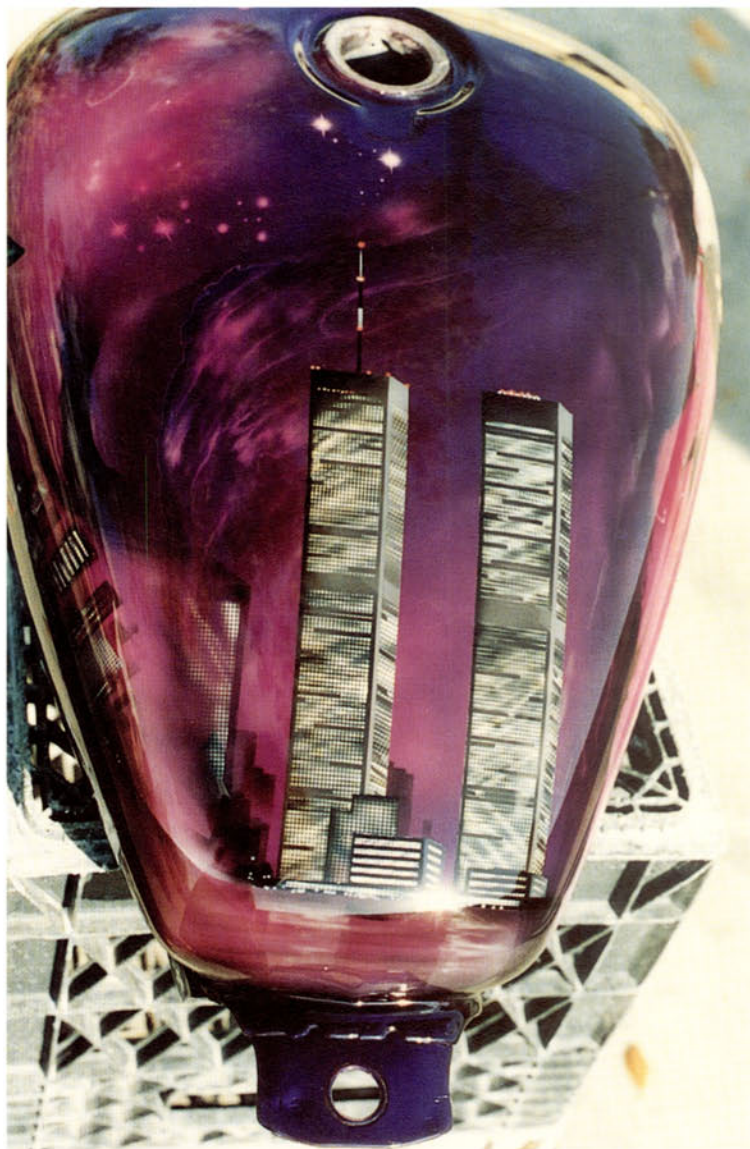
*Painted in 1978, this is a gearshifter from a 1970 Mustang—my earliest attempt at metal-effect. Compare this to what you see in Chapter 6. My metal technique has come a long way indeed.*



*Painted in 1979. One of my favorite paintings, but no one else seems to get it or like it. It's a very fine pencil drawing, but I airbrushed the taillights lit up in red. It never mattered that no one liked it. I painted it for me and I still love it.*

this, it is Sunday. I was enjoying a quiet morning of reflection and then the studio phone rang. It went to voice email, but it still took away the peaceful ambiance of where my mind had been. Reality barging in. This is the downfall that kills the passions we felt as young artists.

I think about that young 18-year-old girl, sitting on the floor in that nasty room in NYC, creating artwork fueled by passions she was completely unaware of. Only recently did I become reacquainted with that young artist I used to be. Maybe this time, I won't lose her. Maybe the trip I took in writing this book will not only help other artists, but will help me redirect my journey. The artist that reaches a point and says, "that's it, I'm here," is missing out on the best part.



*World Trade Center mural on Suzuki tank done in 1996. Paint was airbrushed through screen mesh to create the windows.*

They are stuck on the road. Art is a journey that begins at birth and ends at death. Do I want to know what lies ahead in my journey? No. And neither should you, because that is what fuels the passion and keeps it alive. Take the time to enjoy the journey. Unplug the phone for at least one day each week. Unplug from the world at large and live in your art. Go to those places that only your art can take you. And if your airbrush or other equipment breaks down along the way, take a deep breath and hope that you thought ahead to have a good spare packed in the trunk. It's a rollercoaster ride. Know that there will be lows along with the highs and plan accordingly. Don't get lost like I did.

# CHAPTER 1

## THE BASIC EQUIPMENT

**A**irbrushes work on a very simple principle. Compressed air is driven through a hose and into a tool that holds a pressure valve. The valve opens and closes, which draws paint material up through another valve, then into a nozzle where the paint mixes with the air and is propelled forward. Varying the elements of this equation determines just how the air/paint mixture is controlled.

The two main factors that affect controlling the mixture are the makeup of the airbrush and the thickness of the paint. For thicker paint, more air pressure is required for optimum atomization, or the conversion of fluid paint into a fine spray or mist. Higher air pressures (40–100 psi) will spray a finer paint pattern than lower air pressures (10–40 psi).

First off, let's go over the different types of airbrushes, from the simplest to the most complex. Airbrushes are divided up into two groups: external-mix and internal-mix.

### EXTERNAL-MIX AIRBRUSHES

With this kind of airbrush, the paint and air are combined beyond the tip of the nozzle and outside of the airbrush. The paint is controlled by turning the round-knurled edge around the tip: turn forward to release more paint by opening the gap, and turn backward to close up the gap between the tip (the cone-shaped part) and the tapered needle valve, which is stationary. The tip basically fits over the tapered needle valve.



*An external-mix airbrush, the Paasche HS#1 single-action.*





Above left: *The Richpen 013G, a single-action, internal-mix airbrush.* Above right: *A few different brands of dual-action airbrushes that I use and recommend, from left to right: Iwata Eclipse, SATAgraph 3, and Richpen 213C.*

This is a siphon-feed airbrush, which means it picks up the paint from a bottle mounted below the airbrush. The bottle's cap has a hose that fits inside a hole on the end of the needle valve. The air is controlled by pushing down on the trigger.

External-mix airbrushes are usually single-action models. Many beginners start with an airbrush like this because it is very inexpensive (less than \$50). My first airbrush was an external-mix model.

### SINGLE-ACTION INTERNAL-MIX AIRBRUSHES

Single-action means just that—there is only one element controlled by the trigger. The trigger is pushed down to release air. The external-mix airbrush keeps the paint outside of the airbrush body, but the internal-mix airbrush runs the paint inside the airbrush body. The tapered needle runs through the center of the airbrush body, through a hole in the trigger stem, and it seats into a tip that is precisely contoured to fit the end of the needle. This creates a valve that the paint flows through. The opening between the needle and tip is controlled at the rear of the airbrush by loosening a lock knob that the end of the needle passes through, adjusting the needle and then tightening the lock knob. Move the lock knob forward for a finer flow, or backward for a thicker flow.

Like the external-mix airbrush, the paint is still fed into the airbrush with a bottle, but now the hose fits into an inlet that projects from the airbrush body. The paint flows up into a paint chamber that is inside the airbrush, where it flows along the needle and through the tip. It mixes with the air in the tip and is atomized. The air is directed

through passages in the airbrush body and into the airbrush's head. The head holds the tip in its center so that the airflow surrounds the tip.

Many new airbrushers start with a single-action airbrush because only one movement is needed to operate the airbrush. Less airbrush experience is needed to paint with a single-action brush. They also work well for repetitive use, such as for assembly line work. For situations that require less fine detail, such as taxidermy, handicrafts, and model painting, a single-action internal-mix airbrush can be ideal.

When you are considering what airbrush to buy, use common sense. You will want to think through many factors such as: How serious are you about airbrushing? Is this something you are merely curious about, or have you wanted to learn to airbrush for a while? Is this an artwork technique that you'll be sticking with? What kind of budget do you have to work with? Keep in mind, you'll be needing more equipment than just the airbrush. You'll need an air source (most likely an air compressor), hoses, the regulator, a fan or ventilation system to remove the paint fumes, and, of course, the paint. The costs do add up, so it is best to put some thought into the exact goals you have for airbrushing. Also, remember that it's very easy to upgrade your airbrush after you've become more experienced. You'll learn which airbrush works best for your purposes. The air system you choose will work with any airbrush, so don't be afraid to start with a less expensive airbrush and upgrade later. That way, you will have two airbrushes!



*This is a cutaway view of a gravity-feed double-action airbrush, an Iwata HP-C. The red represents the paint. It flows from the color cup into a paint passage in the airbrush body, passes around the needle valve, and then flows into the tip. Note the chuck assembly behind the trigger; the chuck holds the needle valve. When the trigger is pulled back, the spring around the chuck gets compressed and maintains pressure on the needle so it can "spring" back when the trigger is released. The end of the airbrush or handle is actually a removable cover with a tailpiece that unscrews to allow access to the chuck assembly and needle valve. Air pressure comes up from beneath the airbrush and through a hose that connects an inlet on the bottom. The spring in the lower part of the airbrush keeps the pressure on the up and down movement of the trigger, which controls the air. The air passes into passages that allow the air to flow around the tip, where it meets up with the paint just beyond the end of the tip. Illustration courtesy of Iwata Media*

## DUAL-ACTION INTERNAL-MIX AIRBRUSHES

The trigger for a dual-action internal-mix airbrush has two functions. Not only does it control the air, the trigger also controls the paint flow. When the trigger is pushed down, the air valve opens and allows air into the air passages. Pulling the trigger back draws the paint material into the airbrush. The artist can separately control both the air and paint flows, based on the amount of pressure placed downward on the trigger and how far back the trigger is moved. These airbrushes allow the artist to continually adjust the amount of paint flowing through the airbrush with the slightest finger movements on the trigger.

Experienced artists can make countless adjustments in paint flow or spray patterns as they are working. The movements of the trigger are so slight, it would be hard for someone watching to even notice.

The first action is pushing the trigger down to release the air. The paint will not come out until the trigger is pulled back. The second action is pulling the trigger back to start the paint flow, while still holding the trigger down. The paint combines with the air, and as the trigger is pulled farther back, more paint can mix with the air and flow out.

This "push down and pull back" technique takes some getting used to. Its difficulty level is the reason many people don't recommend dual-action airbrushes for beginners. To learn the technique requires patience and practice, plus it can be very discouraging for new airbrushers because it is very hard to get good results immediately. Whereas with the single-action



*This is a gravity-feed airbrush, sometimes called a top-feed. These are very popular for automotive airbrushing. The SATAgraph 3 is pictured here. This is the most popular style of dual-action airbrush.*



*This side-feed airbrush is a big favorite of fine artists for super realistic airbrushing. The Iwata HP-B Plus is pictured.*



*This is a siphon-feed airbrush, also known as a bottom- or bottle-feed. T-shirt airbrushers tend to prefer this airbrush because they use a wide variety of colors at once, and the bottle-feed makes it possible to quickly and easily change colors using one airbrush. Pictured is an Iwata Eclipse HP-BS.*

airbrushes, immediate results are easier to get, as not as much trigger control is needed. Professional artists prefer to use dual-action airbrushes. With enough practice and use, movements that seemed complex will become second nature.

### **PAINT FEED STYLES**

There are three different ways that paint gets fed into an airbrush: Top- or gravity-feed, side-feed, and siphon- or bottom-feed. Each kind has its advantages. Siphon-feed airbrushes use a capped bottle that is attached to an outlet on

the underside of the airbrush body. The cap, which screws on the bottle, has a fitting that a hose slides over. The paint flows from the bottle up through the hose, through the fitting, and into the airbrush. The big advantage is that multiple bottles can be used, so the artist can easily change colors. Many different colors can be used with one airbrush, which is the reason a siphon-feed airbrush is a good, economical choice for new airbrushers. Most external-mix and single-action airbrushes are siphon-feed. The nozzle sizes on siphon-feeds range from 0.1 to 0.5 mm. A