

*Acrylic Urethane contains Isocyanates that are hazardous to your respiratory system. For those using this paint, choosing a fresh air system is a very important matter. For complete no worry protection this SAS Safety Corp # 9800-18 one-man-hood system is the ultimate.*

# shootout

## AT THE RESTO RANCH

By Jeff Lilly

**W**hile growing up in my father's body shop I would sit outside the spray booth and watch him lay down paint with a master's hand. He made it seem so easy with each movement — and pull of the trigger — exhibiting precise accuracy. I often wondered if I'd ever be that good? His favorite spray gun was a 1958 Devilbiss JGA conventional-style gun. Over the years it was used to spray every kind of paint imaginable, including Nitro-Cellulose lacquer, alkyd enamel, Duco and acrylic lacquer, Imron, acrylic enamels, candies, metal flakes, pearls, lace paint, webbing and urethanes.

But that was then and this is now. Current regulations make the '90s a completely different ball game. Paint types and guns are changing

with every breath we take. And with so many different guns on the market, it's tough to make a decision which one to buy. It helps to know what they do and how well they do it. Here's a bit of history.

Conventional style spray guns use a lot of air pressure (45-60psi) and they atomize the paint into very small droplets that tend to blow past and bounce off the object being painted. This equates to a low transfer rate where roughly 25-35% of the paint actually adheres to the surface being painted. Even though the small amount of paint that does make it to the surface is very tight and smooth, this adds up to a great deal of wasted paint.

High Volume Low Pressure, or HVLP as it's commonly referred to, is the legal future of

spray-gun technology, and when used with urethanes, produces a much higher transfer rate of 55-85%. It doesn't take a genius to realize the savings potential here.

For example, two gallons of urethane averages \$300. A conventional gun would waste about 70% of that. This equals \$210 worth of wasted paint. On the other hand, an HVLP gun may only spray 20% — roughly \$60 — worth of paint on the ground. No one would throw money like that into the air. Therefore, whether you're a beginner or a veteran auto painter using the conventional system, HVLP and urethane are the present and future of automotive painting.

Using HVLP, you will tend to get a bit more texture because it puts down more paint per

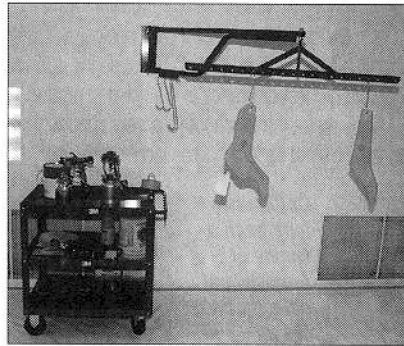
### WHAT'S WHAT IN SPRAY GUNS, PAINT EQUIPMENT AND THEIR USAGE



## PRE PAINTING EQUIPMENT



*During spray sessions it's advisable to wear a full body suit for dust-free paint jobs, and even more important, to keep the Isocyanates from making skin contact. Shoot Suit offers a disposable body suit which features a hood, shoe covers and tack rag pocket. It's also recommended to wear rubber gloves and, at the very minimum, a good charcoal mask rated for the paint being sprayed should be worn if you cannot afford a fresh air system*



*Shop Help offers this trick cart (part #83-0376) which works great for mixing paint prior to spraying. It keeps you from going in and out of your paint area during coats to refill the gun, which also helps to keep the dust down to a minimum. They also offer a Paint Boom (#83-0330-001) for spraying small parts. It swings back smoothly against the wall when not in use.*

## PROPER GUN ADJUSTMENT

When it comes to dialing in your new spray gun, in most cases, the correct adjustment of the fan/pattern size is half-way between the wide open and fully closed positions. The adjustment knob is usually the top one on the gun. To adjust, simply turn the knob clockwise until it's fully closed then open counter-clockwise and adjust the fan accordingly.

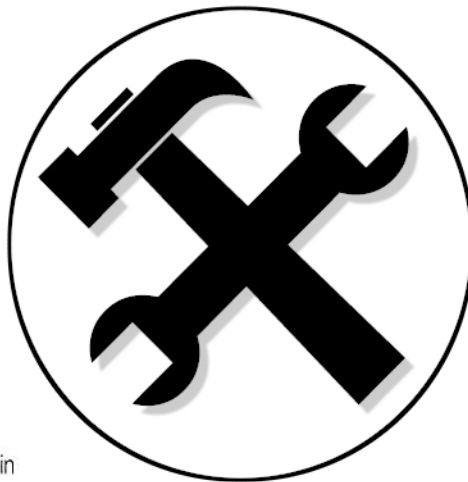
If you are painting an item that is three-inches wide it makes no sense having the fan 12-inches wide and waste paint. Adjust the gun to four-inches wide or about one-inch wider than the surface. The fluid control knob is usually the second (lower) knob on the back of the gun. This knob moves the needle in and out of the seat and controls how much fluid can escape the gun. Moving the needle or turning the knob counter-clockwise lets more material out and turning clockwise reduces the amount of fluid coming from the gun. This should be adjusted to complement your personal distance and the speed with which you move your arm. This way when you have it adjusted you will be pulling back on the trigger the same distance every time.

coat, but with a minimal amount of color sanding the surface will buff out like glass.

Lets talk a bit about paint; lacquer can still be purchased in some states, but there's little doubt that it will soon be phased out everywhere. Lacquer is normally thinned down or reduced up to 250% with thinner to make it spray more easily. This adds up to a lot of solvent evaporating into the air during curing. This is one reason the EPA is pushing to abolish its use. Also, lacquer fades and requires rebuffing every 1-2 years and after 5-8 years, the paint is usually too thin to rebuff.

Urethane is the heart of today's paint technology and it's a superior product for longevity and appearance. Once you become familiar with urethane's characteristics it lays out very smooth and today's spray guns are actually engineered to spray it.

There are many different urethane paint



brands. If you are not an experienced painter ask questions. Go to larger body shops and ask questions as to what the characteristics are of the paint brand you are interested in. As an example: What hardener and reducer in what temperature range? Is it sensitive to

solvent reaction if recoated too soon or longer than the manufacturer recommends? How easy does it color sand and polish out?

Many of the larger paint companies have bulletins on these questions, so, if possible, get all the bulletins you can for reference.

Most urethanes are to be recoated in 5-15 minutes, this will depend on outside temperature and hardener used.

As a rule of thumb, check the time when you start each coat and try to restart when the required time has elapsed.

Temperature changes will dramatically affect the cure rate, as well. An effective technique to see when it's time to recoat is to lightly drag your finger across a painted area on the masking tape. If it's sticky, but doesn't come off on your glove/finger, it's time to shoot it with another coat.

If you're using a new brand of paint shoot a test panel to get familiar with its characteristics first before spraying the whole car.

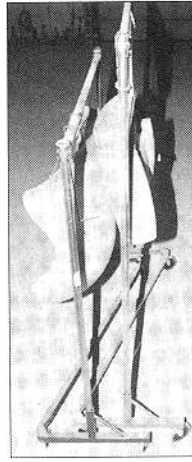


## SHOOTOUT

*Aqua Tec makes a water based sprayable plastic protection coating to help keep overspray off of areas you don't want painted. The coating peels off easily from chassis, door jambs, body panels, etc., and if you have a spray booth it will help keep the walls nice. When you're finished, it simply peels off or washes away all the paint overspray.*



*Hanging parts to be painted provides for superior spray quality. Mobility is important for moving items out into the sun for curing or around the shop. With the Astex Z101 and Z164 (shown) hangers you can have your cake and eat it too; the Z-shaped base allows easy storage when not used.*



*Whether you're a professional or hobbyist the Spraybox (available in three different sizes, and four colors) will keep you're painting materials clean, organized and within reach.*

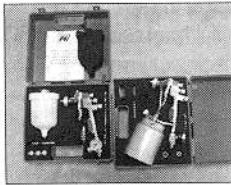
## CHOOSING THE RIGHT SPRAY GUN

Buying a spray gun is an important decision. You should ask yourself a few questions such as how much you afford (or want) to spend? Remember, you already have a lot of money invested in your occupation/project so skimping here

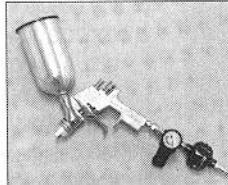
at the spray gun stage is not a wise choice. Purchase the best gun you can because the gun will make the biggest difference in the finished product.

Applying urethane smoothly is very important because it is not as forgiving as lacquer. You will

want to experiment. We've found that 1.4 nozzles are good for base-coat metallics separation, 1.5 nozzles for straight single-stage paint or clears and 2.0 for high-build primers. Following are a rundown of some of the guns on the market.



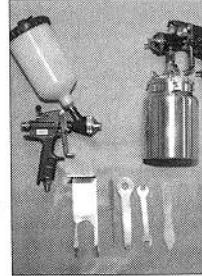
*Marson Corporation offers the Walcom Geo guns. These well-made guns have a good feel and are machined extremely well. But most importantly, they lay down a very nice spray pattern. They come in a nice storage box with a complete kit for maintenance. Pictured are the FX92 GEO Gravity and FZ 92SP/HP suction feed.*



*Sharpes Platinum series HVLP gun sprays beautifully and has a precise adjustment knob system and features a Green Zone air regulator, large capacity aluminum cup with a push on lid and a nylon see through cup, wrench, hang hook etc. The gun is offered with a 1.1 to 1.7 nozzle depending on what paints/primers you will be spraying. It runs on 7.5 CFM at 50 psi.*

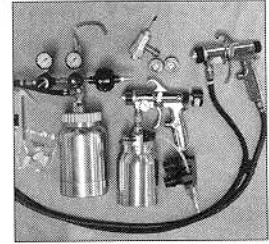
*Optima has long been a choice of professional painters and the new 800 and 801 are fine examples of the latest in German engineering.*

*The spray pattern breaks up the material to a very fine atomization and they are user friendly guns — offering features that are simple to adjust and work with such as the shifter ball air control knob for fast air pressure adjustment. The 800 gravity gun comes standard with a 1.5 nozzle and the 801 suction feed has a 2.2 mm set which is ideal for water borne and Hi-build urethane primers, including thicker viscosity paints.*



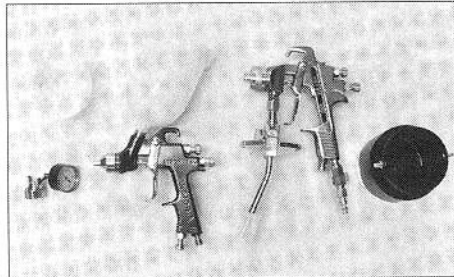
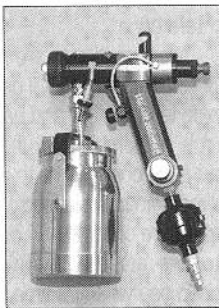
*Mattson's IQ-2Q systems and I Q B are everything you need for use with all viscosity*

*paints and primers. They come with three separate color quick-remove air caps for use with all materials. They change out extremely fast and Mattson supplies a video to make it easy to learn the changeovers and maintenance of these guns. They spray very precise and offer the ability to have many guns in one. If you spray frames or large items, or you don't like to fill up the paint cup any more that you have, then Mattson's pressure pot two-quart capacity cup could do the trick.*



*The Lex-Aire gun sprays a clean line with virtually no overspray from the side pattern. It features a unique Pneumatic*

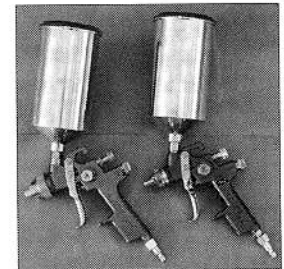
*Trigger system for consistent and effortless spray control. It's also machined from aircraft quality aluminum alloy and has an air cap that will allow spraying of all paints, clears, base coats and primers.*



*The SATA NR 95 gravity feed paint gun and corresponding MC-8 Polyester filler gun are on the cutting edge of auto painting technology and the results are quite exceptional. Made in Germany from top-notch materials, these precision instruments offer a plethora of features to help even a novice painter produce a quality paint job.*

*COPCA's Aerometal 2002 HVLP suction feed gun and Victoria 92 gravity version are well balanced units which*

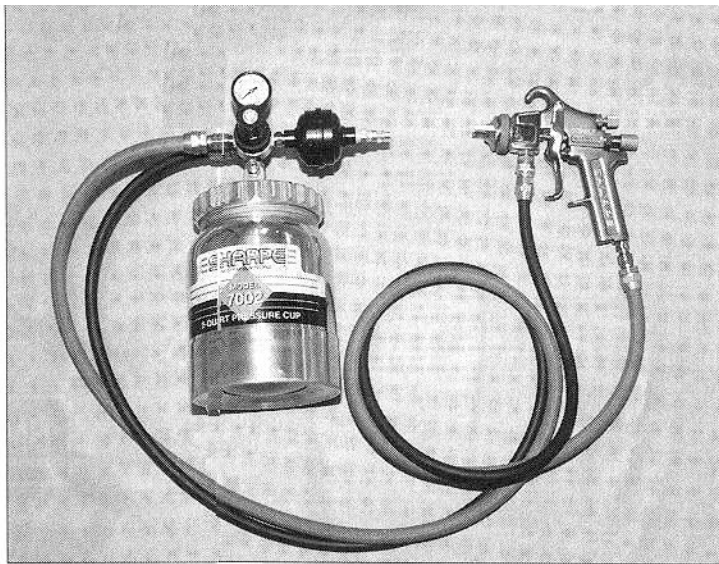
*feature a Teflon cup on the suction feed, stainless steel internals, anodized bodies for quick clean up and are available with a full range of tip sizes and a built-in air regulator. Each gun comes with a maintenance kit which includes lubricant, brush, wrenches, seals etc. These guns also can double as a primer/paint gun.*



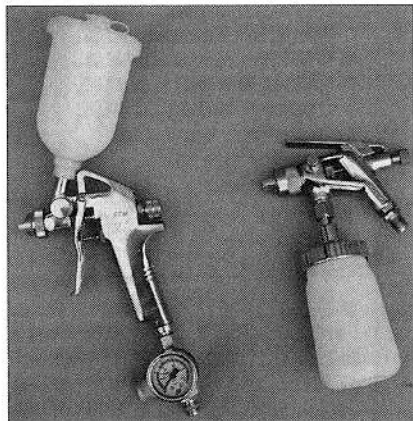


## SHOOTOUT

Pressure Pot sprayers don't have some of the inherent problems that a typical spray gun does. Sharpes' 975 HVLV unit is an excellent choice along with the aforementioned Mattson. Both hold enough paint to get spray a whole car body without stopping. Refill time for a standard quart cup gun averages 3-5 minutes, which can leave dry spots if you don't know where to leave off. The gun is separate from the paint container, making it lighter and less fatiguing during long spray sessions. The cup-less gun can get into tighter places and spray side ways with no paint spitting. There are a few inconveniences, however. For example, with the pot system there's more clean up with a six-foot hose, and, of course, there's also more residue left in the pot.



## GUN CLEAN UP AND MAINTENANCE

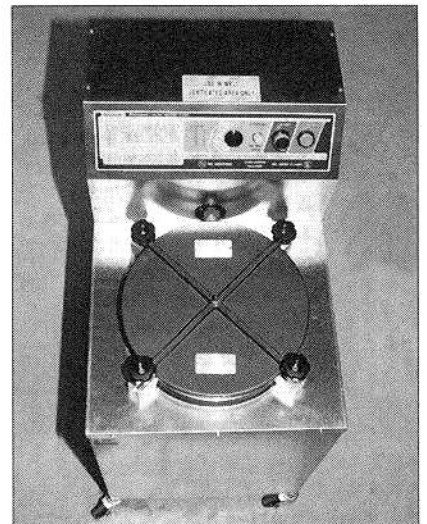


Touch-up guns are specialty guns which can be used in conjunction with the full size guns to spray areas such as undersides of rocker panels, door Jamb, engine compartments, wheels, steering wheels, small hanging parts and, of course, touch-up work. They are small and can get into confined spaces and are pretty efficient in paint consumption. Shown here are quality guns from Marsons (Walcom STM HVLV unit) and Sharpes (D-5-55). Adjusting the gun for top performance is critical. Every person has a different style. How much speed you move your arm with and the distance you hold the gun from the surface will determine the amount of paint that needs to be released from the gun. Always experiment on a test panel first. Be consistent with speed and distance, then when you change the amount of material coming from the gun you will be able to monitor if the change was too much, too little or just right.



For long life and optimum performance you need to clean a gun immediately after each use. Knowing how easy a gun is to maintain and clean after each spray session is important, too. Urethane contains hardeners and will ruin a gun if you do not clean it quickly after use. Some guns get a lot of overspray on the outside cap during use and some do not, you need to be aware of this so you can clean the air cap during each coat, if needed. Along with paint, high build urethane primers "set up" or dry fast and will build up on the walls of the tube in a suction feed gun and inside the head assembly of gravity guns. A spray gun washer is the most thorough and efficient way to clean a gun completely inside and out. If you are a professional painter then a gun washer will pay for itself quickly in long gun life as well as performance. Herkules Products offers a quality gun cleaner called the model GWR. After clean-up it's important to lube the needle and shafts with gun lubricant in front and behind of the trigger for smooth operation. One-to-two drops is usually all that's needed.

## SHOOTOUT



One of the most nagging problem with the whole painting process is deciding what to do with the solvents used for cleaning your equipment. If you live in California (or other states where the EPA has a stronghold), the decision is a simple one: don't pour it on the ground or keep purchasing more and store it until you have a toxic waste sight. Lenan Corporation has designed the RECYCLIT SR 80 to handle all of these problems. In fact, it will recycle many solvents that contain a maximum 25% paint or primer including thinners, reducers, xylene, toluene, acetone, MEK, trichlorethane and so on. Using a solvent recycler will not only save you money normally spent buying new solvent, but it will save the costs involved with disposing of the used product. In fact, some companies that charge for disposal, end up taking it back, running it through their recycler and selling it back to the paint stores who sell it to you again.

## S O U R C E S

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