Vince Pitelka, 2016

## Using the Gravity-Feed HVLP Spraygun

This spraygun is a gravity-feed HVLP model. HVLP stands for "high-volume-low-pressure," and such guns give a higher transfer rate with less wasted overspray. A small port in the lid allows air in as you are spraying, but this also means that you cannot lay the gun down on its side while you are using it. There are hooks installed inside side the spraybooth specifically for hanging up this spraygun in a vertical position.

### Adjustments

For all kinds of spraying there is no reason to change any settings on the spraygun except for the side knob that regulates the shape of the spray pattern (see below). You should be able to get the results you wish simply by adjusting that knob along with the PSI air pressure on the wall-mounted regulator. Normally we keep the wall regulator at about 40 PSI, and that works fine for most spraying needs. Significantly lowering the pressure on the wall-mounted regulator causes the glaze to spatter, which may be desirable at times. Do not change the setting on the step-down regulator attached to the spraygun.

The knob on the side of the body controls the spray pattern. When the valve is open (knob unscrewed partway or all the way) air (not spray media) is admitted to small ports inside the "wings" on the sprayhead, shaping the spray into a fan-pattern that gives the most efficient spray coverage. If the valve is closed (knob screwed in) you get a round spray pattern similar to a normal aerosol can of spraypaint. We generally keep the gun set up to give a fan spray-pattern.

# Filling the Gun - Thickness of Spray Media

This spraygun can handle any ceramic media from thin oxide washes to normal-consistency glazes. If a glaze is on the thick side, dip out a cup of glaze and thin only the glaze in the cup with a bit of water. Glazes often contain small lumps that are not a problem when dipping, pouring, or brushing, but will clog the gun, so always screen the glaze as you pour it into the reservoir using one of the small finemesh kitchen sieves in the drawers by the sink.

To fill the gun, remove the screw-on lid and use one of the small measuring pitchers to pour in the glaze through a small kitchen sieve. The reservoir can be filled as full as you wish – there is no reason to leave an air space at the top. Remember that once filled and the lid is screwed on securely, you cannot lay the unit down on its side.

# Spraying Ceramic Media

As we have it set up, this gun is equipped with a standard air chuck. Grip the hose just below the chuck with your second, third, and forth fingers against your palm, and then pull the spring-loaded chuck

collar back with your thumb and first finger, push the chuck onto the spraygun connector, and release the collar. Reverse that procedure when disconnecting the air chuck, but be sure to push the hose towards the machine while you are pulling back on the spring-loaded collar.

Turn on the air pressure, check to see that the wall regulator is set at about 40 PSI, and turn on the switch for the light and exhaust fan. Hold the spray nozzle 6" to 8" from the ceramic surface, aiming towards open space just off one edge of the piece to be sprayed, pull the trigger all the way as you start moving your hand, fan the spray across the piece, and release the trigger completely. If you train yourself to do this it will soon become second nature, and it saves a lot of glaze and gives a far more even coat as compared to keeping the trigger depressed constantly.

Move your hand slowly enough to deposit a visibly wet area on the surface of the piece, but not so slow as to cause the deposited "puddle" of glaze to run badly. After making one pass, move upwards or downwards a few inches and make the next pass, partially overlapping the previous one.

A properly-applied spray-coat of glaze should have an appearance very similar to a dipped or poured coat. If your spray coat has a powdery and/or "sandpaper" appearance, you are either moving the gun too fast or holding it too far from the surface. Such a spray-coat can cause serious problems, as it impedes the ability of the glaze materials to melt and flow together as the firing reaches maturity, and sometimes the glaze will come out of the firing with a rough, sandpaper-like surface.

You are familiar with the appearance/thickness of a proper dipped or poured coating of glaze. A sprayed coat should have some dimensional thickness. Examine the surface of the sprayed piece to ensure that the glaze coating has the same appearance overall. You can get a good sense of this just by observing the way the glaze coating "softens" the edges and details that were visible before spraying the glaze. If you see those details softened in one area, and sharply visible in another, obviously you need to spray more glaze in the latter area.

If you are in doubt about how much you have sprayed overall, scratch a short line with a needle tool in order to gauge the thickness. If the coating is too thin, spray on more glaze. If it is thick enough, rub the dry glaze coating with your fingertip to fill the scratched line.

### Cleaning the Spraygun

There is a simple, no-nonsense method for cleaning this gun that is far more effective than spraying clean water through it under air pressure, which creates no turbulence in the interior passages and leaves all settled glaze materials in place. When you are done spraying, remove the lid and pour the remaining glaze back in the appropriate bucket. Take the gun over to the sink and rinse off the outside, using a sponge or brush where necessary. Rinse out the reservoir, fill the reservoir half-way with clean water, screw on the lid, hold the gun upside down so that the spray orifice and the bleed hole in the reservoir lid are at about the same level, pull the trigger, and shake the gun back and forth in-line with

the length of the gun. You will see that each time, water squirts out of each port alternately. This provides far more internal turbulence and does a much better job of cleaning the gun, and is much easier than hooking it up to compressed air. Empty the reservoir, re-fill half-way with clean water, and repeat once.