

Here is some information that I've developed for getting started. It will eventually evolve into an FAQ document, but it provides some basics.

EDUCATION:

There are hundreds of airbrushing videos on YouTube. Like all topics, peruse with care. Many have excellent skills. Some provide bad information. I have lots of resource information on-line under the Education tab on my website. I have reviewed all of the sources and find it all to be quality material.

This book is an excellent resource. My daughter bought it for me and it is really well put together. Lots of information, however. Do not get overwhelmed when reading it.

All About Techniques in Airbrush (All About Techniques Series) Hardcover – November 17, 2005 by Parramon's Editorial Team (Author)
https://www.amazon.com/gp/product/0764155091/ref=oh_aui_search_detailpage?ie=UTF8&psc=1

HOOK-UP AND BASIC OPERATION:

Watch the video. Most of this information is on-line and linked to my website too (top-left column in education). Although basic, it will jump start you rather quickly. All of the drills like dots, lines, strokes, etc. that they do on there, I do every day before I airbrush.

Hook-up:

1. Open up the airbrush holder and clamp it on the front of the table/bench.
2. Lay down some cardboard to protect the surface.
3. Get a roll of paper towels handy for cleaning, etc.
4. Open the airbrush. Use as assembled to start.
5. Open the G-MAC. Remove the small piece (this is an AD-9 adapter) and thread it on the airbrush. Hand tight.
6. Open the hose. Thread the G-MAC valve onto one end of the hose. Hand tight. The AD-9 is a quick-connect on the G-MAC. It snaps together. To separate, pull down on the G-MAC sleeve. It is spring-loaded.
7. Open the compressor. There is a hose in the box. Keep it or toss it. It is kind of cheap. Thread the other end of the hose on the compressor. Hand tight.
8. Plug in the compressor and turn it on. The compressor should run for about 5 seconds then shut off. It is an on-demand compressor.
 - a. If it keeps running, check to see if the water trap valve is open. Rotate it until the compressor shuts off.
 - b. If it still keeps running, check all threaded joints and listen for leaks. Tighten threads by hand. No wrenches required.
9. If you got the "no compressor" kit,
 - a. Mount the L bracket on the front of the airbrush holder with supplied screws
 - b. Screw in the AD5 adapter on the Outlet side of the regulator.
 - c. Screw in the AD12 adapter on the inlet side of the regulator
 - d. Screw in the gauge on the front of the regulator

- e. Remove the large black plastic nut from the top of the regulator
- f. Insert the regulator from the bottom, through the L bracket.
- g. Thread the black plastic nut on top to secure the regulator to the holder.
- h. Get an industrial style hose bib and screw it into the AD12 connector. Your compressor air hose will attach to this.



i.
10. I recommend you get a few small plastic bottles from a local beauty supply store.

- a. https://www.amazon.com/Boston-Round-Plastic-Bottle-Yorker/dp/B010GYUP68/ref=sr_1_20?ie=UTF8&qid=1526338711&sr=8-20&keywords=boston+round+plastic++bottle



- b.
- c. https://www.amazon.com/gp/product/B01G82SJRY/ref=oh_aui_search_detailpage?ie=UTF8&psc=1



d.

- e. https://www.amazon.com/gp/product/B01EIGX5XU/ref=oh_aui_search_detailpage?ie=UTF8&psc=1



- f.
- g. I use 4 oz bottles typically. One for water, one for denatured alcohol, and one for the Grex cleaner, although you can use the cleaner right out of the bottle provided.
11. Get a Solo plastic cup or a paper cup. Loosely wad a couple of paper towels and stuff them in. This is your “cleaning station”.
- a. You can buy a commercial one too.
- b. https://www.amazon.com/Naturebelle-Airbrush-Cleaning-Holder-Nozzle/dp/B01D41W04U/ref=sr_1_1_sspa?s=arts-crafts&ie=UTF8&qid=1526338950&sr=1-1-spons&keywords=airbrush+cleaning+jar&psc=1
12. Snap off the paint cup lid from the airbrush (they snap on – not threaded). Squirt a little water into the brush. Try out the brush.
- a. The brush is dual action.
1. If you have the Tritium pistol grip, there are two springs in the trigger. Pull back on the soft spring and you only get air. When you engage the stiff spring, you get fluid.
 2. If you have the Genesis pencil grip, you hold the brush like a pencil with your pointer finger on top of the trigger. Push down on the trigger to activate the airflow. Then when you pull back, you get fluid. **ALWAYS: DOWN FOR AIR FIRST, THEN BACK FOR PAINT. Turn off the airbrush in reverse: forward to discontinue the paint, then up/release to shut off the air.**
- b. Spray into the air or against some paper to get the feel of the brush.
- c. Spray out the remaining water.
13. Open a bottle of paint.
- a. MAKE SURE THE LID IS CLOSE, then shake vigorously. Trust me – I have lots of experience violating this one.

- b. If opening for the first time, unscrew the lid and pry out the bottle plug. Throw it away.
- c. Replace the lid.
- d. Open the lid and add FIVE (5) drops of paint to the color cup.

NOTE: Joe's Paint Rules:

1. **Only use five drops at a time. A little goes a long way.**
2. **NEVER pour paint from the airbrush back into the bottle. NEVER. This is how you contaminate the paint with other colors or bits of dried acrylic that will clog the airbrush.**
3. **If you have left-over paint in the airbrush when done with a color, pour it and spray it out into the cleaning cup.**
4. **If you practice #1, you will rarely have an issue with #2 or #3.**
5. **You will eventually learn how much paint to add to the color cup for a given application, but start with five drops.**

13. Spray on scrap paper. I personally use watercolor paper from Michael's or Amazon.

- a. https://www.amazon.com/Canson-Watercolor-Textured-Charcoal-Acrylic/dp/B0049UXGD0/ref=sr_1_5?s=arts-crafts&ie=UTF8&qid=1526339693&sr=1-5&keywords=watercolor+paper

14. Do your drills.

15. When you run out of paint, add FIVE (5) more drops.

16. After purging the airbrush of the first color, rinse with water and spray it out into the cleaning cup.

17. Add the next color and spray away.

CLEANING:

The use of solvent-based products in an airbrush:

Most high-end airbrushes have Teflon seals. This means that they can be used with any solvent. I know that professional-level airbrushes like Grex, Iwata, and Harder and Steenbeck all use Teflon seals. Even the hobby-grade brushes like Paasche and Badger use Teflon seals (PTFE). These seals are all approved for use with any solvent – even lacquer thinner, alcohol, mineral spirits, etc. What this means is that alcohol-based dyes and MEK based dyes (methyl ethyl ketone – the really nasty stuff) are all OK for use in these airbrushes. I personally have been spraying alcohol and MEK based dyes for about 15 years and the airbrushes are still working just fine. I also regularly spray lacquer with my airbrushes with no ill effects.

Having said that, some low-end, cheap brushes, or older brushes may have rubber seals/bearings in them. If they have rubber, the solvents can destroy the rubber over time. If you use lacquer thinner on rubber, the seals will last for about 1 day. But even the Harbor Freight and Master junk airbrushes say they have PTFE seals for the wet/dry bearing seal.

The only fluid you should not use on an airbrush is anything with ammonia in it, like window cleaner. You will see some YouTube videos where the content provider uses window cleaner. Ammonia will damage/stain brass and chrome parts. Grex has a video on this and I put the link below.

Back-flushing to clean and clear, or mix paint in an airbrush:

Back-flushing the airbrush by holding your finger over the tip of the airbrush is a tried and true method to unplug an airbrush from dried bits of paint in the nozzle of the airbrush, and as a method to stir the paint in the cup when mixing two colors or mixing paint with another liquid like airbrush additives. The standard air path is for that the airbrush mixes paint and air inside the nozzle cover of the airbrush. When the air escapes through the orifice of the nozzle cover, the paint is atomized into a fine mist and sprays forward. When you plug the nozzle orifice with your finger, the air finds an alternate path to escape back through the paint channel: past the needle and up into the cup or down into the bottle. This is why the liquid bubbles when you backflush. This is the path of least resistance.

This practice is totally safe for the airbrush. The liquid and air will always go to the path of least resistance. This path is either up through the cup or down into the bottle. Both the bottles and the gravity cup lids have small vent holes in them to prevent a vapor lock. On a gravity cup, if the lid is in place, the air/paint mixture will blow out through the hole in the lid. I have even had the lid blow off the airbrush when the hole is plugged with dried paint. (That was a mess). In no instance were the seals into the “dry/back” end of the airbrush ever penetrated by the paint.

I back-flush by brushes every time I clean them at the end of the day. I also regularly back-flush the brushes to mix two colors together. The bubbly action stirs the two colors together. Binh Pho taught me that. I also add different paint additives to my paints and I backflush to mix them in the cup as well.

When these two scenarios fail:

I can think of one condition that would cause problems with liquids in the airbrush. If the seals/bearings are worn, the needle may not make a tight seal between the “wet/front” end of the airbrush and the “dry/back” end of the brush. If this situation develops, ANY liquid could penetrate back into the dry end of the brush and run down into the air valve. If you have the perfect storm of a plugged vent hole, plus back-flushing pressure, plus worn seals, then maybe some liquid can get down into the air valve section of the brush. On the dry end of many airbrushes, the most seals are rubber – not PTFE/Teflon. Paint will certainly muck up the air valve and it is difficult to clean. Some solvents can damage the rubber if it comes into contact with these seals. However, in all likelihood, you will never have harsh solvents get into the airbrush in these locations.

What NOT to do:

I have seen some YouTubers actually soak their airbrushes in solvents. This is wrong, wrong, wrong and it will damage the rubber. You should never have to soak an airbrush to clean it – ever. If, in a rare case where paint or other fluids get to the back of the airbrush, cleaning can be done with the solvents, but do not soak the parts in the solvents. Momentary contact with the solvents during cleaning will not permanently damage the seals. Soaking likely will. As an example, I bought a used Tritium airbrush that had paint everywhere. It was a mess. I

completely disassembled it including the trigger mechanism and the air valve. I cleaned each piece with denatured alcohol, pipe cleaners and Q-Tips. For the rubber pieces, they were wiped only. For the all-metal pieces, or pieces with PTFE, they soaked in an alcohol bath for several minutes. This airbrush works just fine more than a year later with no issues.

Maintenance/cleaning protocol for the end of a painting session:

Here is the maintenance/cleaning protocol I follow most of the time. As I work with each part, I always inspect for damage.

1. Spray the remaining fluid from the brush and/or pour it out. I never pour color back into bottles (dyes or paints) because colors can be contaminated with other colors, or with dried bits of paint. I just waste the remaining liquid and vow to use less in the cup the next time.
2. I flush the brush with whatever solvent the fluid used. For acrylic paint, I flush with water. For dyes, it is usually alcohol. For lacquer, it is lacquer thinner. I also back-flush with that solvent and dump the content out. The back-flush is to dislodge any dried bits of liquid. You don't want to try to blow them back through the nozzle and replug the tip.
3. I put more solvent in the color cup and use a cheap paintbrush to scrub the inside of the cup and down into the paint chamber under the cup. I jam the brush down around the need to dislodge any dried liquid, and dump this out.
4. More solvent, more back-flushing, and then dump it out.
5. I switch to denatured alcohol and repeat step #4 a couple more times.
6. I drop the cup lid into a small cup full of denatured alcohol.
7. I remove the cup (for Grex) and drop it in the denatured alcohol.
8. I remove the needle cover from the tip of the brush and drop it in this bath.
9. I remove the handle and set it aside.
10. I loosen the needle chuck and pull the needle. I set it on a paper towel.
11. I remove the nozzle with the included wrench and drop the nozzle into the bath.
12. Once the needle is removed, I do not pour any liquids into the paint chamber. With the needle removed, the seal to the "dry" end is broken and liquids can flow backwards.
13. I dip a pipe cleaner into alcohol. I twist the end into the airbrush through the nose and continue to advance it until I see it emerge in the paint chamber. Then I back it out.

- https://www.amazon.com/gp/product/B015YVS75Y/ref=oh_aui_search_detail_page?ie=UTF8&psc=1

14. Rinse the tip and repeat a couple more times.
15. I bend the pipe cleaner and stick the folded section into the paint chamber from the top. I twist it around to clean the cup threads and this also usually gets paint off the wet side of the seal.
16. I then wet the other end of the pipe cleaner with alcohol and enter through the nose one more time. When all clear, I'm done.
17. I grab a round wooden toothpick and "sharpen" it with an X-Acto knife.
18. I carefully twist the pointy end into the nozzle to clean out any residual paint from inside the nozzle. I usually repeat three or four times.

19. I use one of those GUM plastic toothpicks with the little green hairs to clean out the nozzle. They are tiny and reach in easily.
20. I then inspect the nozzle by holding it up to a bright light to verify that I can see a pin-point of light coming through the nozzle orifice.
21. I replace the nozzle on the airbrush and snug it tight with the wrench – not too much torque because the threads are tiny and can easily be stripped.
22. I wipe the needle with a paper towel wetted with alcohol. I pull the needle through my fingertips – never push. Pushing can cause bleeding and bent needles. ☺
23. If I feel a snag, I'll straighten the needle by stropping it on a piece of leather or cardboard. In more extreme situations, I'll use a diamond hone.
 - NOTE: I have a lighted jeweler's loupe that I use to inspect the end of the needle and the end of the nozzle. \$4 on Amazon.
 - https://www.amazon.com/gp/product/B0052G7EX8/ref=oh_aui_search_detailpage?ie=UTF8&psc=1
24. I usually wipe a little airbrush lube on the needle and reinsert it into the airbrush. I hand-tight the needle chuck after the needle is seated.
 - NOTE: When the needle passes through the seals/bearing between the wet end and the dry end, you should be able to feel the increase in pressure required to push the need through. If the needle slides through with no change in pressure, you might have a worn seal and it needs to be replaced. Minimally, you should feel just the tiniest change in pressure.
25. Wipe the nozzle cover with alcohol and reinstall. I usually retract the needle when doing this to avoid the potential of bending the tip.
26. Wipe the needle cover with alcohol and reinstall. I usually use the pipe cleaner to wipe out the inside of the needle cover.
27. Wipe the color cup and reinstall.
28. Wipe the lid and reinstall.
29. Wipe the handle and reinstall.
30. Wipe down the entire brush with denatured alcohol to make a final cleaning.

This whole process takes me a maximum of 15 minutes. Usually less than 10 minutes. Grex has very good videos too. The two people in the videos are friends of mine. Raymond is the owner of the company and Bryant is the main customer-facing airbrush guy for Grex. They are the guys that got me going when I bought this business from David Nittmann.

- <https://www.youtube.com/watch?v=liRMIV0ldsk&t=38s>
- <https://www.youtube.com/watch?v=XvUIE2OTfI8>
- https://www.youtube.com/watch?v=n_8_h-op24
- <https://www.youtube.com/watch?v=FJ33ggNbtt8&t=1s>
- <https://www.youtube.com/watch?v=YPtSyyC4v4k&t=98s>
- <https://www.youtube.com/watch?v=DYw434wAoxM>

I'll answer your next question at this point. Why the heck did Joe go so over-the-top in all of this explanation? Well, once I started writing, I realized that I want to put this information on my website, so a detailed explanation was in order.

I hope this information is useful to you. I really look forward to seeing your pieces.

Take care,
Joe Fleming
Airbrushing Wood