

Taking the “Pain” out of Painting

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Outline

- Facilities and materials
- Methods
 - Spray painting, airbrushing, brief on brush painting
- Process

Disclaimer

- This is based off personal experience
 - What may work for me may not work for you
 - What may work for you may not work for me
- TEST, TEST, TEST

A Quick Survey

Raise your hand if...

You have painted something

You have used a spray can

You have used an airbrush

Safety

- When spraying lacquer paints and spray paints indoors, mask and proper ventilation is essential



Paint Booth

- Cheap, folding booths – good enough for most applications, HO and N ~\$120
- Paasche offer larger, more expensive ones for heavier use and larger models, O and up
- Many plans online on how to build your own
- There is a cheaper option... OUTDOORS!



Tools

- Tamiya paint stand ~\$25
- Cheap paint stand with alligator clips ~\$10
 - Small parts, car bodies
- Lazy Susan ~\$15
 - Great for larger models



Spray Paint v. Airbrush v. Handbrushing

- Spray
 - Priming, large areas
- Airbrush
 - Medium areas, specific colors
- Handbrushing
 - Difficult and small areas, specific colors

| | Spray Paint | Airbrushing | Handbrushing |
|------------|-------------|-------------|--------------|
| Priming | X | X | |
| Detail | | X | X |
| Weathering | | X | X |

Pros and Cons

| | Spray Paint | Airbrushing | Handpainting |
|------------------|-------------|--------------|----------------|
| Variety | Good | Great | Great |
| Cost | High | High initial | Low |
| Ease | Very Easy | Practice | Very Easy |
| Setup | Little | Lots | Little to none |
| Margin for Error | Least | Some | Lots |
| Cleaning | Least | Lots | Some |

Spray Painting



Priming

- Needed for best paint adhesion on bare plastic
- Recommend dedicated hobby primers, but all-in-one hardware store paints have their uses
- If painting a single color, hardware store paint works!
- For many layers and detailed models, stick to finer primer



Color Coat

•Tamiya

- Pros
 - Goes on very smooth
 - Finer tip vs hardware store brands
 - Plays well with other paints
 - Some poor reactions with mixing Rustoleum and Krylon
- Cons
 - Limited colors
 - Expensive



Top Coats – Spray Cans

- Decals lay best on gloss finish
- Final top coats seal decals and weathering
- Make sure can is warm and shaken well!
- Tamiya TS-13 Gloss Clear
- Tamiya TS-80 Flat Clear or Testors Dullcote



Spray can recommendations

- Tamiya TS line
- Tamiya TS-33 – “Dull Red” – red oxide, great for boxcars
- Krylon Satin Black – Clean Steam Locomotive
- Various flat reds and red oxides available
 - Great for box cars



Miscellaneous Spray Painting Tips

- Run under warm water
 - Most spray cans spray better after warming
- Shake well
- Light coats before heavier coats
- Some tips are interchangeable

Spray Paint Examples



SCL U36B - Die Cast O Scale
Tamiya White Primer, TS-49 Bright Red, TS-55 Dark Blue



5MRR RS-3 - MTH O Gauge
Tamiya Grey Primer, TS-14 Blue, TS-15 Black, TS-47 Chrome Yellow, Chimney brush painted

Spray Paint Examples



USAF Bicentennial -
Rich Yoder O Scale
Brass Baldwin S12
Tamiya TS-14 Black,
TS-15 Blue, handrails
brush painted

Spray Paint Examples



American Freedom Train
T&P 610 Sunset 3rd Rail
O Scale
Krylon Satin Black,
Tamiya White Primer,
Brush painted details,
decals

Airbrushing



Airbrushes

- Gaahleri GHAD-39 ~\$45
 - Great beginner, budget option
- Iwata Eclipse ~\$180
 - As nice an airbrush you'll likely need



Airbrushes

- GSI Creos PS-290 ~\$115
 - Larger needle, great for varnishes and larger models
- Harbor Freight Spray Gun ~\$15
 - For larger scales
 - Requires heavier-duty compressor



Siphon Fed Option

- Paasche Siphon Fed Airbrush ~\$60
 - Good for large areas and jobs
 - Can be harder to clean
- Bottles around \$20 for 10 pack



Compressors

- Many options at many price points
- Most important features are adjustable pressure regulator and moisture trap



Other Items

- Combination water filter and pressure regulator ~\$30
 - Included with some compressors
- Quick release kit ~\$10
 - Makes switching and cleaning airbrushes quick and easy
- Hoses ~\$10



All-in-one kits

- Many options online for all-in-ones with cheap compressors
- Great for practice and figuring out if airbrushing is for you



Types of Airbrush paint

| Type | Pros | Cons | Examples |
|-------------------------|---|---|---|
| Acrylic (Water-based) | Low odor, mostly non-toxic, clean and thin with water | Weaker adhesion, finicky thinning | Vallejo Model Air, Polly Scale, Most craft paints |
| Acrylic (Alcohol-based) | Fast drying | Odor | Tamiya Acrylic, Mr. Hobby Aqueous |
| Acrylic (Solvent) | Fast drying, smooth finish | Odor, finicky thinning | Tru-Color |
| Lacquer | Fast drying, smooth finish, durable | Strong odor, can damage plastic or decals | Tamiya Lacquer, Mr. Hobby |
| Enamel | Hard, glossy finish | Strong odor, long cure time | Model Master, Floquil |

Some Personal Recommendations

- Tamiya Acrylic Nato Black, Flat Earth, Buff
 - Great weathering colors for track and rolling stock
- Tamiya Lacquer Dull Red
 - Pennsylvania Railroad rolling stock red
- Mr. Hobby
 - Many options, similar to Tamiya
- Polly Scale
 - Great railroad matches, harder to find and expensive



Airbrush Primers

- VMS No-Peel
- Mr. Hobby 1500



Top Coats – Airbrushed

- Gloss
 - Tamiya X-22 (alcohol acrylic) or LP-9 (lacquer)
 - Heard good things about Mr. Hobby Clear
- Flat
 - Tamiya X-86 or LP-23
 - VMS Satin & Ultra Matt
 - From world of military modelers
 - Requires .4mm airbrush and above



VMS Satin Varnish,
before vs after



Thinning

- For alcohol based paints (Tamiya “Acrylics” – X-20A or Mr. Color Leveling Thinner)
- For lacquers – Mr. Color Leveling Thinner
- For acrylics – X-20A or distilled water
- Results vary! Test, test, test!
- Paint/Thinner Ratio varies from 1:1 to 1:2 to 1:3, depending on application



Thinning

| Paint | X-20A | Leveling Thinner | Distilled Water |
|------------------------|-------|------------------|-----------------|
| Tamiya "Acrylic" | X | X | |
| Mr Hobby Aqueous | X | X | |
| Tamiya Lacquer | X | X | |
| Mr Hobby Lacquer | X | X | |
| Polly Scale | X | | X |
| Acrylics (Water Based) | | | X |

Mixing

- Clean and reuse glass paint bottles
- Plastic Shot Glasses
- Pipettes
- Toothpicks, stirrers



What about PSI?

- Start out around 15-20 PSI
- Lower PSI (15-20 PSI)
 - Thinner paint, fine lines, details, smaller needles
- Higher PSI (20-30+)
 - Thicker paint, base coats, full color coats, larger needles
- TEST, TEST, TEST!

Cleaning Materials

- Depending on paint – lacquer thinner, isopropyl alcohol, even water
 - Airbrush Cleaner – expensive, but effective
- Airbrush cleaning pot ~\$15-20
 - May come with cleaning needles
- Paper towels, microfiber cloths



Recommended Cleaners by Paint

| Paint | Lacquer Thinner | Rubbing Alcohol | Tamiya Cleaner | Water |
|------------------------|-----------------|-----------------|----------------|-------|
| Tamiya "Acrylic" | X | X | X | |
| Mr Hobby Aqueous | X | X | X | |
| Tamiya Lacquer | X | | X | |
| Mr Hobby Lacquer | X | | X | |
| Polly Scale | X | X | X | |
| Acrylics (Water Based) | X | X | X | X |

Cleaning Process

- Dump excess paint out
- Spray cleaner through airbrush into pot until spray is clear
- Wipe excess off airbrush cup, sides, tip
- If stuck, or very dirty, disassemble and clean needle

Airbrushed Examples



ATSF Bicentennial SD40-2 – Ajin O Scale
Tamiya Lacquer White, Acrylic Flat Blue and Flat Red,
Tamiya Lacquer Silver for pilot
Brush painted handrails



PRR FM H10-44 – Walthers HO Scale
Thinned Tamiya Flat White for faded roof, mixed
Tamiya Flat Earth and NATO Black + Weathering
powder

Airbrushed Examples



V&O Hopper – Weaver O Scale
Tamiya Grey Primer, Tamiya LP-X Black, VMS Satin Varnish,
Tamiya XF Earth Brown + NATO Black weathering



Monon Hopper – Weaver O Scale
Tamiya Grey Primer, Tru-Color Freight Car Red, VMS
Satin Varnish, Tamiya XF Earth Brown + NATO Black
weathering

Airbrushed Examples



EJ&E 668
Bicentennial
Lionel O Gauge
Tamiya White Primer,
Tamiya LP Gloss
White, Pure Red,
Pure Blue, Tamiya
Gloss

Handbrushing Paint

- Anything!
- Model Color, craft paints, Polly Scale, etc. etc. etc.
- Clean brush



Ok... now what?

Steps

- Prep
- Prime
- Mask
- Paint
- Gloss
- Decals
- Seal

Prep!

- Wash the model
- Strip, if needed
 - 91-99% Isopropyl alcohol for plastic and most applications
 - Lacquer Thinner or spray strip for tough paint metal and brass
- Wash again
 - Toothbrush and soapy water
- Wipe with microfiber, can spray air from airbrush to dry



Painting

- Smooth movements, side to side
- Start off to one side, move across model, stop after model
- Light coats, avoid paint pooling up

Priming



Masking

- FrogTape – less tacky than regular painter's tape
- Tamiya 10mm





Time saved with prep for spray cans is often lost with masking.



Left is overspray from Tamiya can, below is overspray from airbrush.





Longest step - waiting

- Time between coats vary between paint type
 - Lacquers, especially airbrushed, dry very quickly
 - Multiple coats of same color spray paint within 24 hours
- Rule of thumb for different colors and paints – 24 hours
 - Waiting a day is always less time than starting over!
 - Some topcoats can require even longer!
- Key to a great paint job is patience!

Recommended Retailers

- HobbyTown, Hamilton Hobbies, The Hobby Shop (Dayton)
 - Tamiya paints, Vallejo, Tools
- Michigan Toy Soldier
 - VMS paints, Mr. Hobby paints, other airbrush paints
- Spraygunner.com
 - Airbrushes, airbrush tools and parts
- Hobby Lobby
- Harbor Freight, Home Depot, Lowes
- Amazon, eBay

Recommended YouTube Channels

- Boomer Diorama
 - Model railroad specific, many great tutorials
- Night Shift
 - Military modeler, interesting techniques
- Plasm0
 - Aircraft and military modeler, great weathering tips
- Barbatos Rex
 - Car and Gundam modeler, great airbrush and tool reviews

Roundtable

- Saturday, April 25th, 2-4PM
- Limited spots available
- Demonstration of some topics covered today.
- Bring a car you want to paint or weather!
- Bring a paint you'd like to try out!

Questions?