



Mask Cutting 101 for Modelling

SILHOUETTE CAMEO 3

Stencil Cutters – Basics

- ▶ Cost
 - ▶ Low cost : \$299.99 (beware of lower prices)
 - ▶ Don't need “high cutting force” for model applications
- ▶ **Precision of cuts**
- ▶ Software & File Formats
 - ▶ Native PC app vs web-based app
 - ▶ Ability to import various file formats
 - ▶ Ability to draw complex shapes

Stencil Cutters

Less Important for Modelling

- ▶ Pre-defined shapes
 - ▶ Both offer “free” libraries and paid “libraries”
- ▶ Ability to cut thick materials (cutting force)
- ▶ Speed
- ▶ Mobile device and wireless support
- ▶ Beware of WWW Ratings and Recommendations

Stencil Cutters

- ▶ Two major players – primary market scrapbooking / crafts

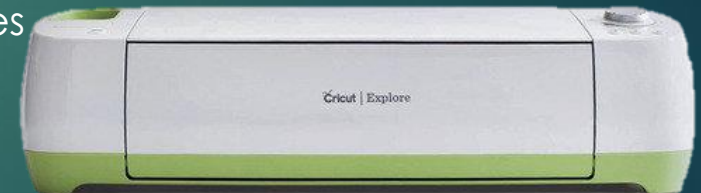
- ▶ Silhouette Cameo 4

- ▶ More flexible software
- ▶ Blades turn into cuts
- ▶ Available in Pink!



- ▶ Cricut Explore 3

- ▶ Blades turn into cuts
- ▶ Software is Web-based!
- ▶ Software is aimed at “pre-canned” images



- ▶ Cost

- ▶ ~ \$299 craft stores – no coupons allowed :(
- ▶ ~ \$299 online

Stencil Cutters



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CUTTING SIZE

SILHOUETTE CAMEO 4 CRICUT EXPLORE 3

- ▶ 11.5" wide x 10' long
 - ▶ Cutting matt is 12" x 12"
 - ▶ Dual blade holder
 - ▶ Rollers can be adjusted to cut various size media WITHOUT cutting matt.
 - ▶ Mat-less cutting (not so useful for model masks)
 - ▶ Touch screen
 - ▶ Faster cut (but may not matter)
- ▶ 13" wide x 12' long
 - ▶ Dual blade holder
 - ▶ Limited custom design capability

Software

CAMEO 4

- ▶ Silhouette Studio 4.x
 - ▶ Actual design software
 - ▶ Basic (free download)
 - ▶ Designer (paid)
- ▶ Will be more familiar to users already familiar with Photoshop, Paintshop, etc
- ▶ File formats
 - ▶ JPG, TIFF, BMP, PNG, etc
 - ▶ AutoCAD (.dxf)
 - ▶ SVG – PAID version (\$50)

CRICUT EXPLORE AIR 3

- ▶ Cricut Design Space (online)
 - ▶ Very basic design functions
 - ▶ Designs from advanced programs like Photoshop and Illustrator can be uploaded
- ▶ File formats
 - ▶ JPG, TIFF, BMP, PNG, etc
 - ▶ AutoCAD (.dxf)
 - ▶ SVG

What does all this mean for modelling use?

- ▶ Not much practical difference as far as hardware
 - ▶ Both cut masking material well
 - ▶ Both can do fine details
 - ▶ Both are relatively fast
- ▶ Software can be an issue on Cricut
 - ▶ Only option is web-based which may be limiting
 - ▶ Mobile apps may not be user friendly for custom artwork

Getting Started

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Cutting Mat

- ▶ Usually supplied with the mask cutter
- ▶ Low tack plastic sheet used to keep cut material in place during cut
- ▶ Technically not needed for materials with a backing paper such as masking materials
- ▶ I use the cutting mat for all cuts:
 - ▶ increase precision and reduces cuts into backing
 - ▶ Allows me to use “scraps” for small masks

Mask Making Materials

- ▶ Vinyl – Silhouette or Cricut brand from craft stores
 - ▶ Tends to be thick but Cricut has some thin vinyl
- ▶ Masking film – art store or online
 - ▶ Specialized films better suited to masking
 - ▶ “hobby” masking films (may be available in bulk cheaper)
 - ▶ **Oramask 810 is best for models** (not 810S, not 813)
- ▶ Frisket film – art store
 - ▶ Very thin – better for painting
 - ▶ Clear – can be hard to see and position
- ▶ Kabuki tape sheets – e.g. Tamiya Masking Sheet
 - ▶ Thin – excellent for masking and contours
 - ▶ Can rip or lift on very fine detail cuts

Tools & Supplies

- ▶ Tools
 - ▶ #11 blade
 - ▶ Fine tip tweezers
 - ▶ Burnishing tool, toothpicks (or fingernails)
- ▶ Other supplies or consumables
 - ▶ Transfer film
 - ▶ Liquid mask

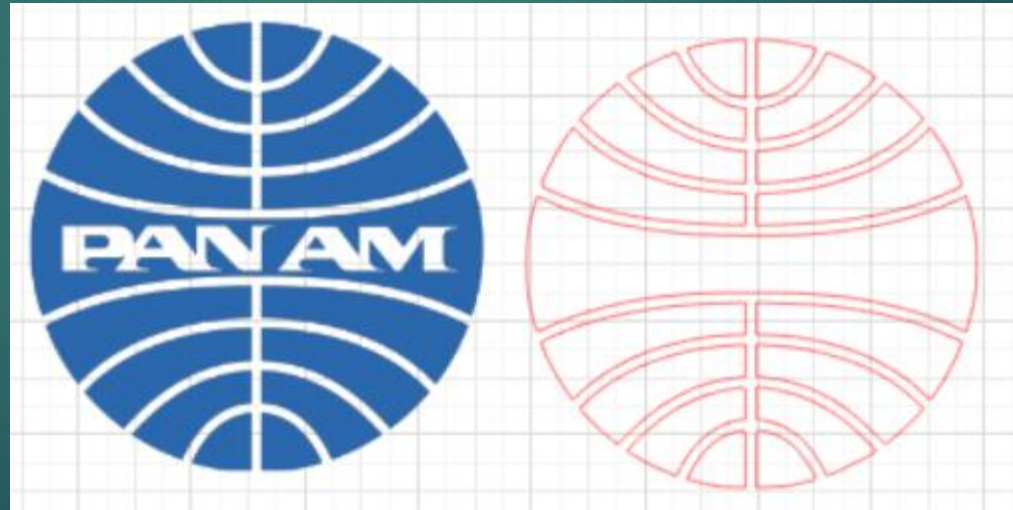
Transfer Film

- ▶ Makes putting complex masks onto model easy
- ▶ Has grid to help align masks during application
- ▶ Low tack
- ▶ Apply to cut mask after “weeding”
- ▶ Remove paper backing from mask
- ▶ Apply to model
- ▶ Slowly remove transfer film peeling at a sharp angle
- ▶ These days I end up using Frisket film as transfer film.

Drawing & Cutting a Mask

Tracing on Silhouette

- ▶ Import Artwork
- ▶ Select Trace tool
- ▶ Select area to trace
- ▶ Select trace method



Fonts

- ▶ Lots of free fonts online

- ▶ USAF
- ▶ Boeing



BOEING



USAF

- ▶ Paid fonts

- ▶ Look for Royalty free

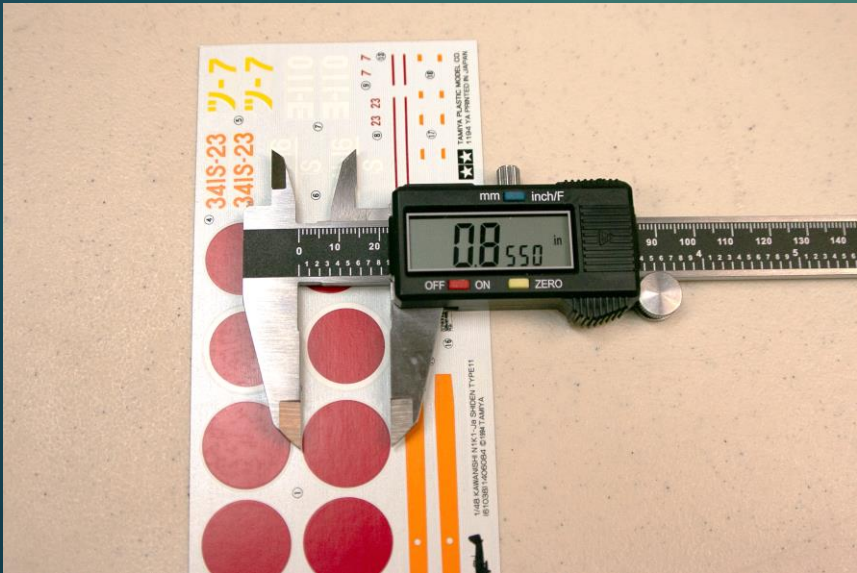
- ▶ Find fonts from photos using websites like :
<https://www.fontsquirl.com/matcherator>

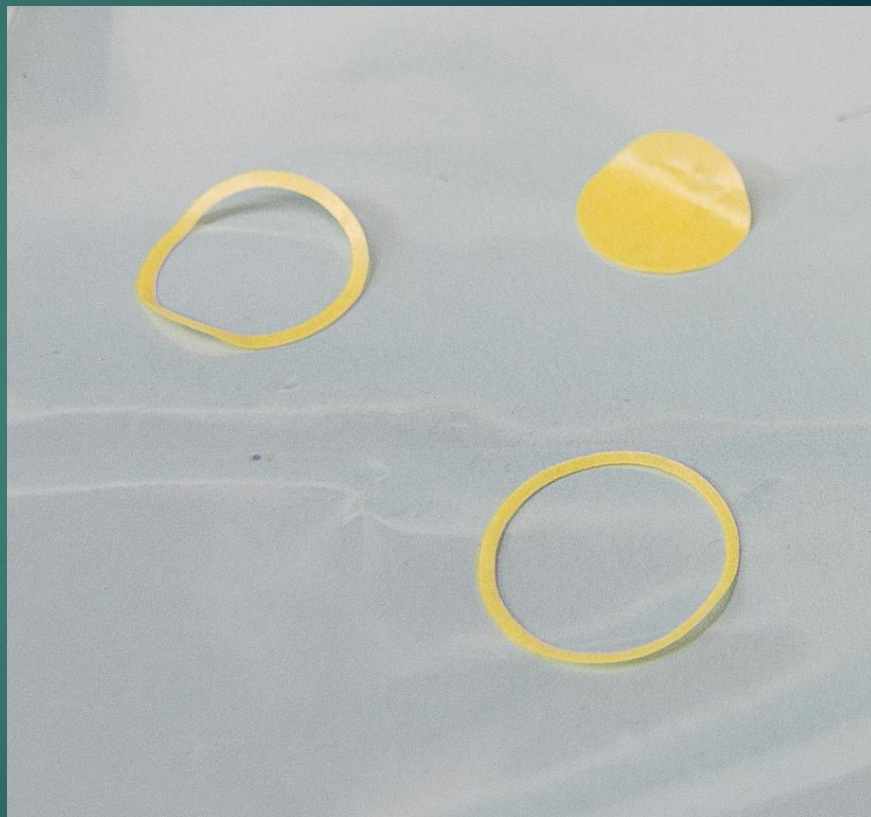
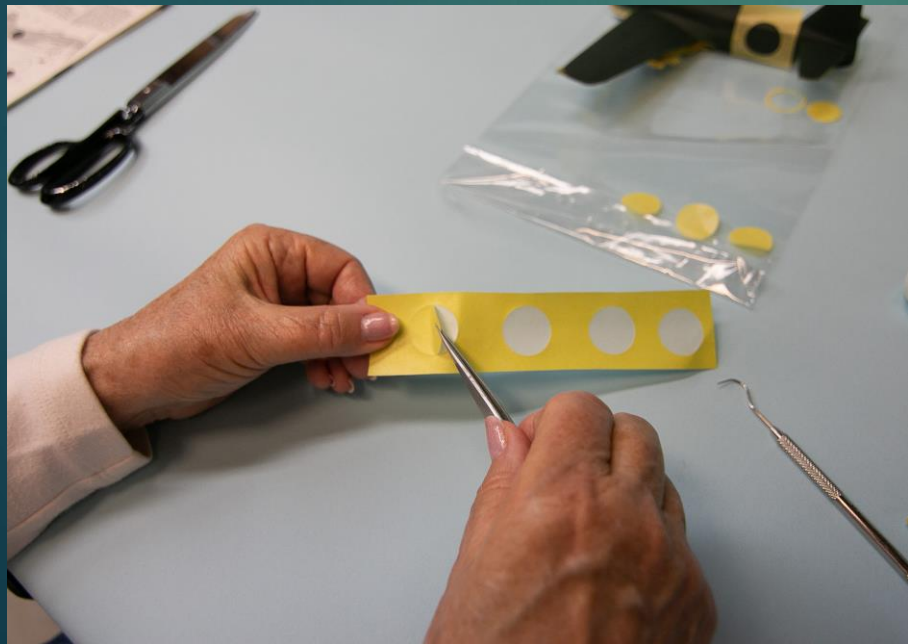
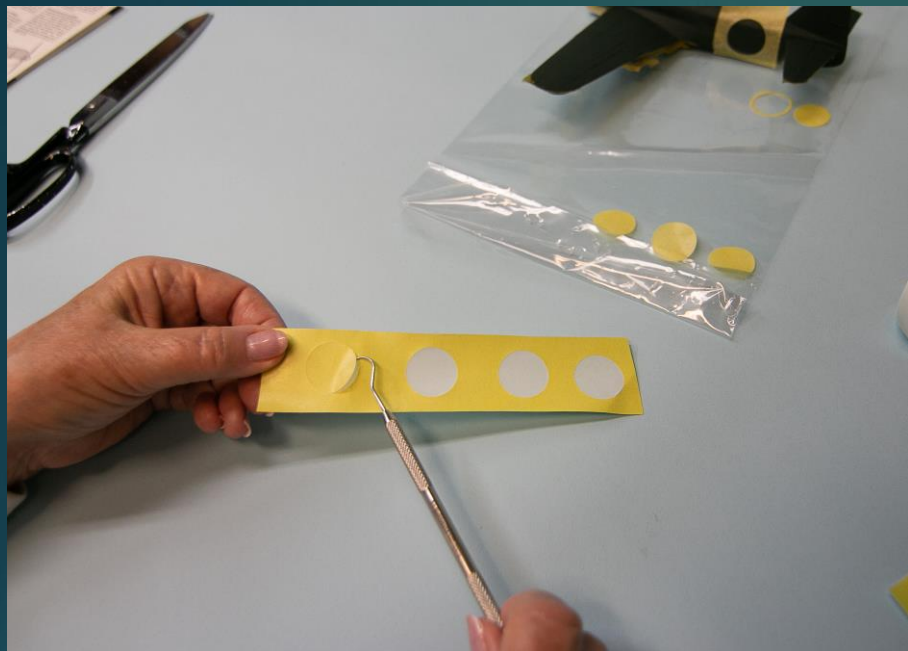
Applying a Mask

Basic Steps

- ▶ Draw the artwork
- ▶ Merge shapes to prepare for cutting
- ▶ Setup Cut
- ▶ Load vinyl and start cut
- ▶ “Weed” the stencil
- ▶ Lay transfer vinyl over mask
- ▶ Remove paper backing
- ▶ Position and press in place
- ▶ Remove transfer vinyl
- ▶ Paint
- ▶ Remove mask

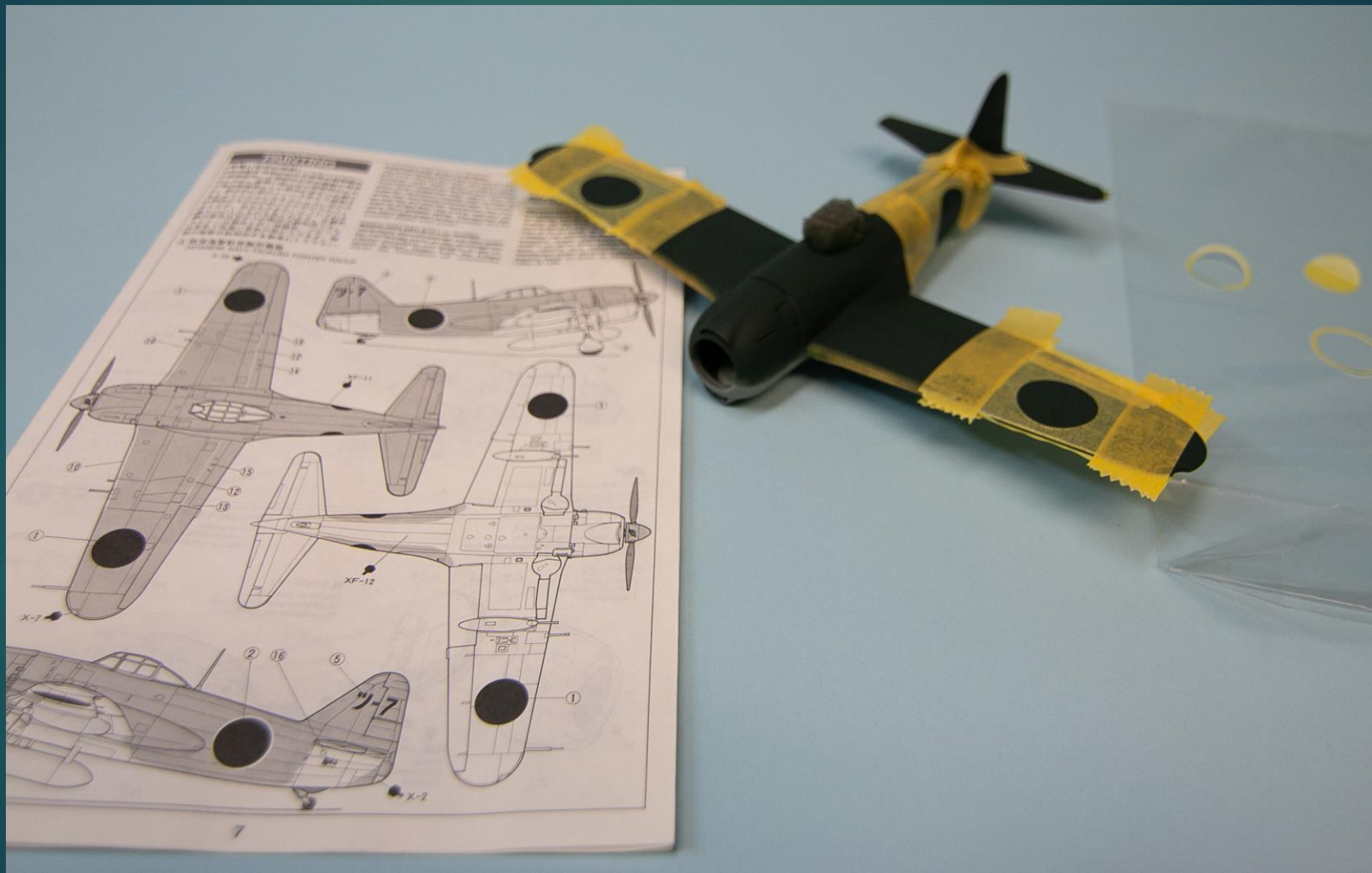








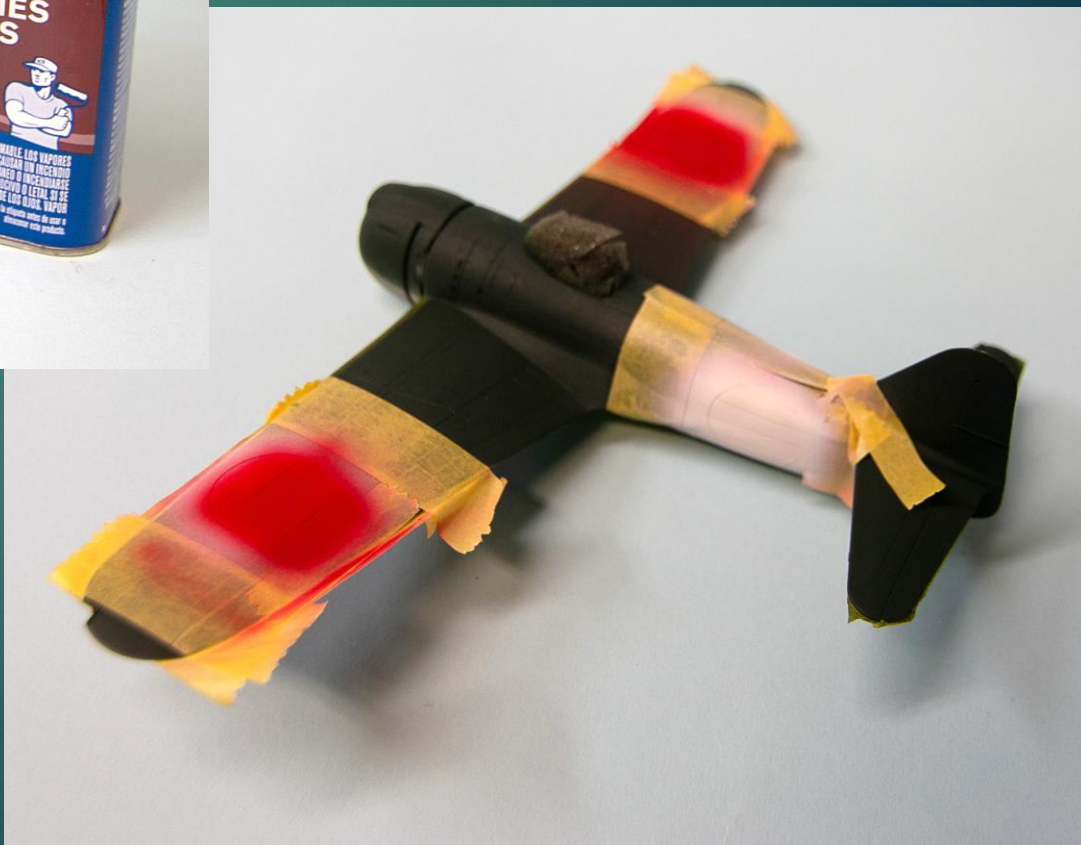


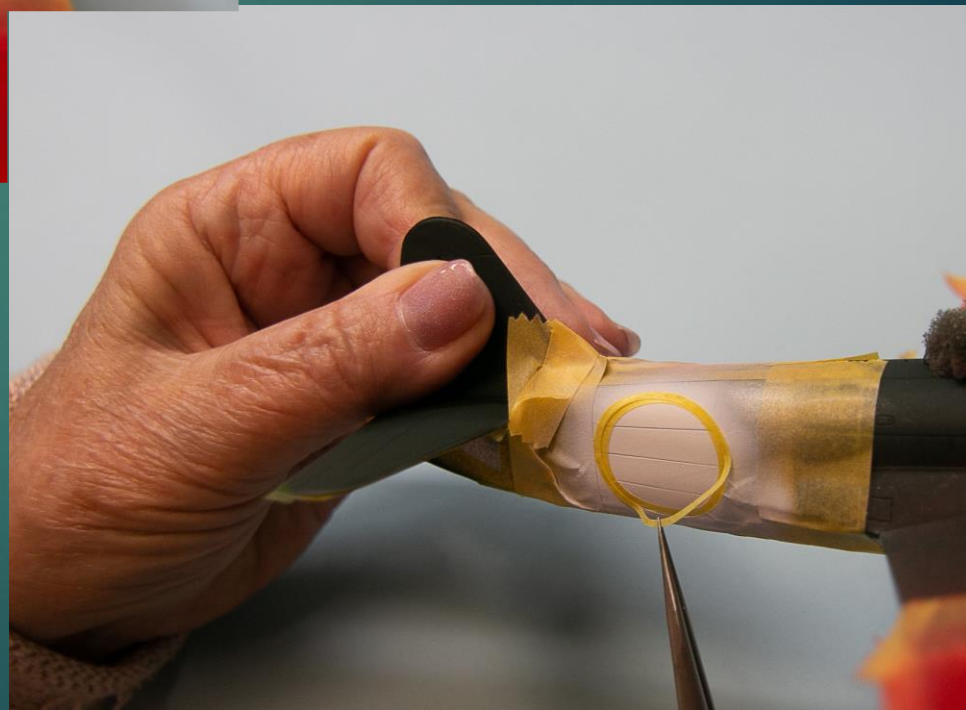
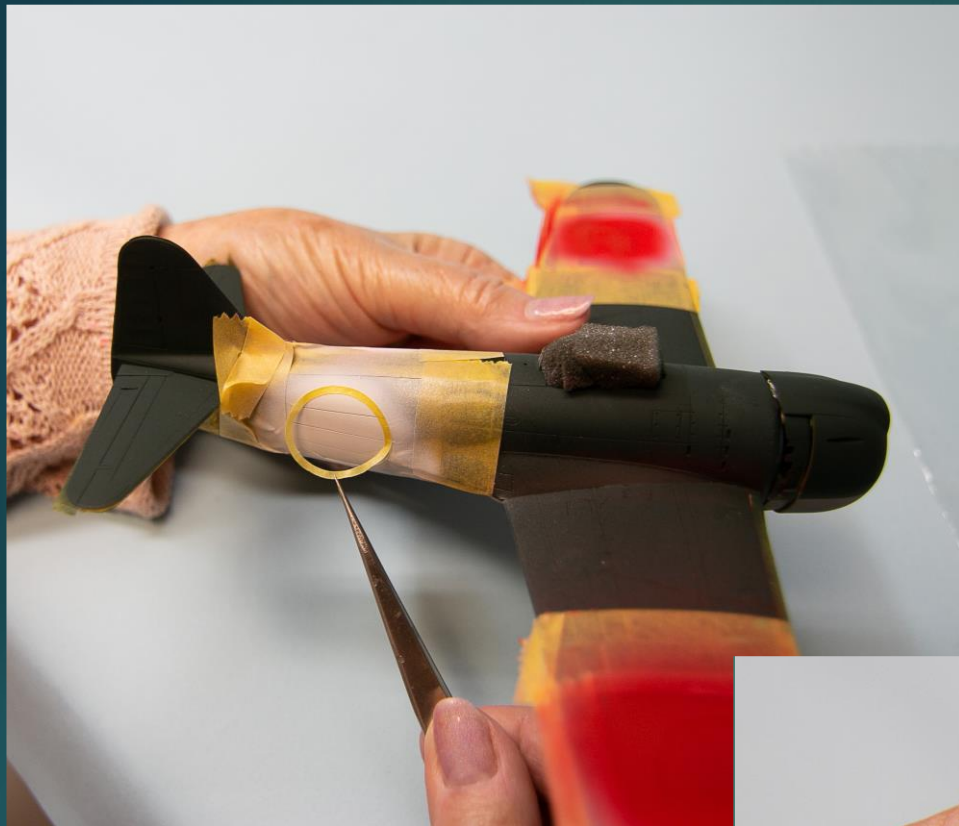


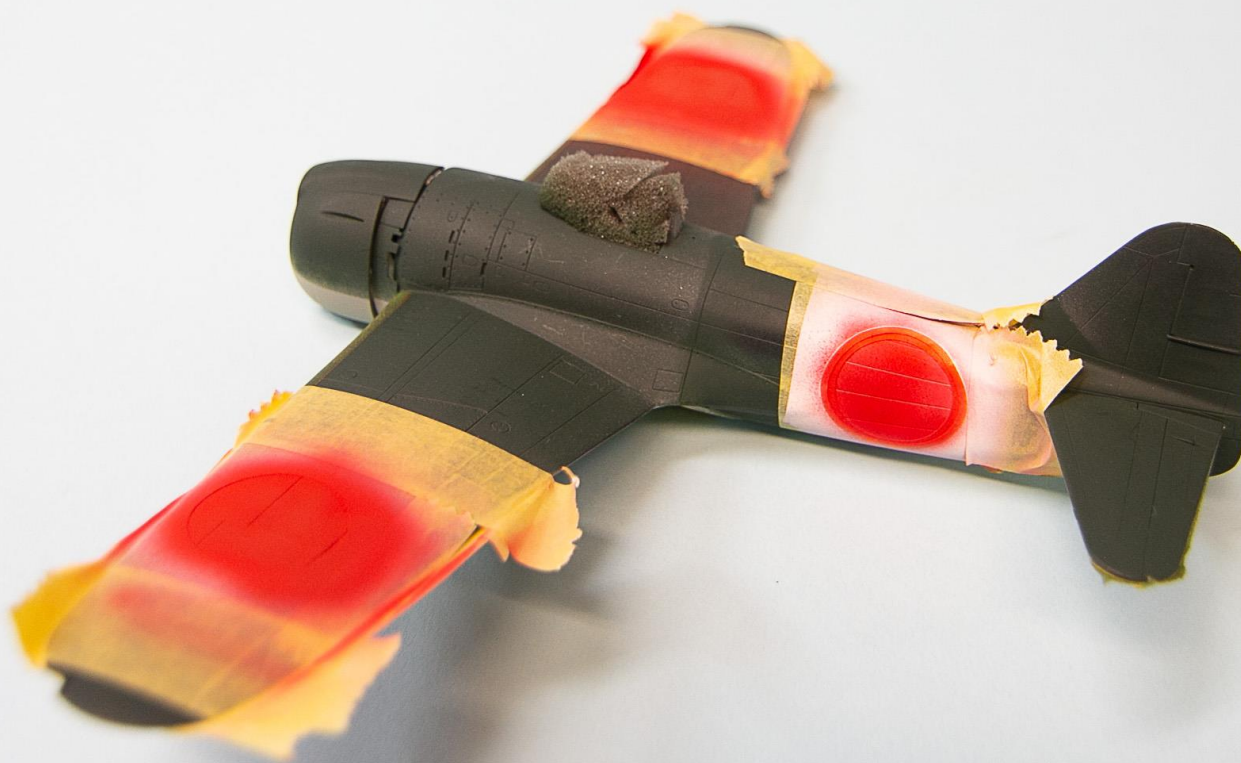














Other uses

- ▶ Make cut around homemade decals
 - ▶ Import decal artwork, select “outline cut”
- ▶ Make paper masks for spraying camouflage
- ▶ Cut very thin plastic for antennas, details, etc

Advanced

- ▶ Use Photoshop or Illustrator to create artwork
 - ▶ Save as SVG
 - ▶ Open in cutter / make software
- ▶ Import separate items in PNG file format
 - ▶ Allows transparent backgrounds
- ▶ Inkscape.com
 - ▶ Free software for creating vector graphics
- ▶ Many Online Tutorials - YouTube

<http://www.designsbymissmandee.com/2016/01/how-to-make-svg-cut-files-for-cricut-silhouette/>

Questions?

▶ Answers 😊