Bare-metal

S I O FROME

By Matthew Usher

Modeling the "donated" MiG-15 test flown by Chuck Yeager

he Korean War marked a major turning point in the history of air warfare. Propeller-driven fighters inched their way out of the picture and jet-powered fighters met head-to-head for the first time in major aerial combat.

Flown by Russian pilots, MiG-15s appeared over North Korea in late 1950. Armed with one 37mm and two 23mm cannons, the swept-wing MiG easily bested piston-driven aircraft and quickly proved superior to the Air Force's first jets, the F-80 and F-84. Even as the new F-86 Sabre entered and slowly re-established air superiority, the mysterious MiG-15 still posed plenty of questions. What, exactly, was the sleek Soviet aircraft capable of?

The Air Force got its chance on Sept. 21, 1953, when a defecting North Korean pilot made a surprise landing in a MiG-15 at Kimpo Air Base near Seoul. The aircraft – the first flyable example in Western hands – was taken to Okinawa where it was secretly evaluated by test pilots Tom Collins and Chuck Yeager.

After "wringing out" the enemy fighter, both pilots determined that compared to the F-86, the MiG had better high-altitude capability, a better rate of climb, better armament, and longer range. However, they also discovered it wasn't a stable gun platform and had a tendency to roll at high speeds due to its flexing wings and ineffective ailerons. It had crude instrumentation, and with its heavy controls, it took a strong hand to fly. While at first it may have seemed an equal match to the F-86, the mysterious MiG-15 turned out to be a more primitive fighter. Thanks to Yeager and Collins' hands-on evaluation, Air Force fighter pilots were able to exploit the enemy aircraft's weaknesses, and by the end of the conflict, the MiG suffered a 10-to-1 loss ratio.

The model

Recently I re-read my dog-eared, wellworn copy of *Yeager*. After finishing the chapter on the "donated" North Korean MiG, I decided it was a good time to add a model of it to my Korean War collection. Tamiya's 1/48 scale MiG-15bis kit (No. 61043) was a perfect candidate for the project. Released a little more than 10 years ago, it's nicely detailed and would really shine with a natural-metal finish.



Matthew painted the kit's two-piece ejection seat with Tamiya acrylics then applied an artist's-oil wash. Photoetched-metal belts from Eduard were the final addition.

I started construction with the cockpit. After painting the two-piece ejection seat with acrylics, I deepened its details with a dark wash of artist's oil paint. I let it dry overnight, then installed a set of photoetched-metal belts from an Eduard



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Designed for Trumpeter's MiG kits, the Eduard instrument panel required a little trimming before it would fit in the Tamiya cockpit. Matthew applied Microscale Micro Kristal Klear to each gauge face using a fine-point paintbrush.



The white Kristal Klear becomes transparent as it dries, and does a good job of simulating the glass face over each instrument.



Although the kit fits together nicely, Matthew filled minor gaps (like this one forward of the cockpit) with gap-filling super glue.



Metallic paints really make surface imperfections (like sanding scratches) stand out. Matthew used 2,000-grit wet-or-dry sandpaper to smooth seams and imperfections. It's available in the paint section of auto-parts stores.



A triple-grit polishing stick is ideal for sanding and polishing seams before painting the model.

detail set (No. FE-232), 1.

The Eduard set also includes parts to detail the rest of the cockpit tub, including a multipiece instrument panel. Instead of sandwiching the set's clear film between the photoetched panels, I glued them together and added a dot of Microscale Micro Kristal Klear to each gauge face using a fine-point "liner" paintbrush, **2**. I thinned the glue with a few drops of water before applying it to help it flow onto the panel. Kristal Klear dries clear (usually overnight) and does a nice job of simulating the glass face of each gauge, **3**.

Preparation

The trick to applying a smooth naturalmetal finish is making sure the model's as smooth as possible before you paint. Metallic finishes are thin and unforgiving - any scratches or surface imperfections will be easy to spot.

After I installed the cockpit and started to assemble the fuselage, I made an extra effort to line up the parts as exactly as possible before the glue dried, so I wouldn't have major seams to fill. Even as careful as I was, I still had a few gaps here and there, which I filled with gap-filling super glue, **4**.

With most of my models, I don't use sandpaper finer than 400-grit, but since I wanted the MiG to be as smooth as possible, I bought some extra-fine 2,000-grit wet-or-dry sandpaper, **5**. It's available in auto-parts stores in the paint section. I also used a three-grit polishing stick from Squadron, **6**.

The model includes a complete Klimov VK-1 jet engine, and the tail section of the fuselage can be snapped on and off to display it. After a little debate, I decided against detailing the engine and glued the tail in place. The fine sandpaper helped blend the parts of the multipiece fuselage and hide the tail seam.

Paint

To make the fuselage easier to hold while I airbrushed, I wrapped a 5/16" hardwood dowel with masking tape until it fit snugly inside the engine's exhaust, **7**.

I decided to use aluminum SnJ Spray Metal to finish the fuselage. This enamelbased airbrush-only paint dries quickly and produces a realistic metallic finish, but best of all, it's extremely durable. It doesn't pick up fingerprints, and even standard masking tape won't damage it.

The metallic particles in SnJ settle



To make the finished fuselage easy to hold and maneuver during painting, Matthew wrapped a hardwood dowel with masking tape and inserted it in the engine exhaust.



The metallic particles in SnJ Spray Metal settle quickly – this requires a slightly different airbrushing technique.



SnJ can sometimes clog a gravity-feed airbrush, so Matthew applied the paint with a siphon-feed one. As he painted, he swirled the paint in the bottle to keep the particles suspended.



After stuffing the cockpit opening full of tissue paper, Matthew airbrushed the entire fuselage with aluminum SnJ spray metal, then allowed it to dry for a day or so.



SnJ is very durable after it dries. Matthew masked the landing-gear and flap bays with standard masking tape and airbrushed them Tamiya light blue (XF-23). The tape had no effect on the SnJ.

quickly, **8**, even when the paint's loaded in an airbrush. I've found that it's easiest to apply using a siphon-feed airbrush, **9**. SnJ is thin, and the color builds up slowly, so it must be applied in several thin coats. With a siphon-feed airbrush, I can swirl the paint bottle between passes and keep the metallic particles suspended as I paint.

I stuffed the cockpit with tissue and gave the MiG an overall coat of SnJ, **10**. When it was dry, I examined the model and found a couple of sanding scratches I missed before I painted. Using the 2,000grit sandpaper, I sanded them out, then covered them with another coat of SnJ.

When I was satisfied with the overall finish, I masked around the landing-gear and flap bays and airbrushed them Tamiya light blue (XF-23), **11**.

To break up the monochromatic aluminum finish, I masked around a few of the MiG's panels and airbrushed them using Testor Model Master aluminum non-buffing Metalizer, **12**. I used my references as a guide.

More aluminum? Yes. There's always a little bit of color variation among the panels on natural-metal aircraft, and the aluminum Metalizer is a little bit shinier than the SnJ, **13**. The difference between the aluminum panels is subtle and varies depending on your viewing angle of the model. To finish things off, I masked and airbrushed the wingwalks flat black, **14**.

Detail parts

At this point, I was ready to install the MiG's flaps, landing gear, ejection seat, and its other small detail parts. After installing the landing gear, I removed the model from the hardwood dowel. To keep from accidentally damaging the delicate Metalizer-covered panels as I handled the model, I wore a white-cotton glove on one hand, **15**. Car modelers use these to keep fingerprints off their models, and they're especially handy with metallic finishes.

Markings

The "donated" MiG wore a variety of markings while it was tested by the Air Force. My model represents the aircraft as it appeared during evaluation at Kadena Air Base on Okinawa in 1953. The decals are from a Cutting Edge Modelworks sheet (No. CED48015). The decal sheet was a limited edition and is no longer in production, but the markings are basic enough you could easily re-create them with a set of Air Force stencils and national insignias.

After carefully trimming the excess carrier film from the decals, I applied them directly over the metallic paint. A little Microscale Micro Sol helped tighten them down, **16**.

Canopy

Instead of masking and painting the can-



To break up the MiG's all-aluminum finish, Matthew masked the model and airbrushed panels using Testor Model Master aluminum non-buffing Metalizer.



The difference in the finish between the panels is subtle but gives the model a more realistic appearance. Matthew made sure the highlighted panels were the same on both sides of the aircraft to give things a balanced look.



Matthew airbrushed the MiG's wingwalks using flat-black enamel.



A white-cotton glove keeps Matthew's fingers from marring the delicate Metalizer-covered panels. Gloves like these are available in camera shops.

opy, I covered its framework with chrome Bare-Metal Foil – this adds another slightly different shade of aluminum to the natural-metal look of the model. I covered the framework a section at a time using thin strips of foil, and trimmed it with a brand-new No. 11 hobby-knife blade. When I was satisfied with all the foil, I rubbed it down with a cotton swab and installed the canopy on the model with thinned Micro Kristal Klear.

That's it! The MiG covers a lot of bases in my collection – it's an easily recognizable Russian aircraft from the height of the Cold War, but it's also one with an interesting connection to Chuck Yeager and a turning point in modern aerial combat. What more could you ask for? **FSM**



Matthew applied the decals directly over the metallic paint and used Microscale Micro Sol to tighten them down.



A defecting North Korean Air Force pilot gave the U.S. Air Force's best test pilots – including Chuck Yeager – their first chance to test-fly the stateof-the-art MiG-15.

SOURCES

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Stars and bars on a MiG? Matthew's unusually marked MiG-15 never fails to turn heads.