



THE WEATHERING MAGAZINE



Spring



Summer



Autumn



Winter

four SEASONS



Rodrigo Hernández Chacón

ENCYCLOPEDIA

OF FIGURES

modelling techniques



The volume 1 of the Encyclopedia of Figures is dedicated to learning the basic elements that each miniature painter works with: light, colour, form, and texture. This book is a definitive guide to understanding *the secrets of illuminating a figure, combining colours, highlighting shapes, and enhancing textures* in a practical and easy way.

A group of excellent painters from various countries have been selected for their mastery of the subjects developed in this book and have focused on the educational aspects to make the secrets of visual language understandable through spectacular images and revealing and entertaining step-by-step processes.

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4 SEASONS

Welcome to the latest and perhaps most unique issue of your favourite magazine, where you will witness a modelling experiment involving the work of four authors on one model. Four independent creators, four unique styles, and four different approaches conveying four seasons shown on the same subject, the Pz.Kpfw. IV Ausf. G from Border Model. With this brand-new perspective, we show you the differences resulting from specific atmospheric conditions typical of different seasons. This perspective will teach you how to recognize and interpret the accompanying effects used to imply the environment of your subject. Each factor dramatically impacts the model's appearance and the world class contributors of The Weathering Magazine demonstrate how to accurately apply these seasonally unique effects on any vehicle you choose. One version, one shape - several different external environmental aspects that create unique details and a completely different result on the same foundation. The assumption that this concept would produce a unique learning experience was correct, and the outcome of our modelers' work clearly shows how properly selected means of expression, including tools, colours, and products affect the final result. It is also a very interesting lesson for the many enthusiasts of a specific vehicle and those collecting miniatures of a given vehicle type - many of you have friends with vast collections of several dozen Panthers or Shermans. Apart from minor differences resulting from the production versions recognizable to the experts, to the untrained observer 20 Tigers painted and depicted in the same way will be very monotonous. However, when considering the potential of the four seasons, you can easily make countless variations on versions of your favourite AFV or any other modelling subject. We will help you make educated choices and teach you how to use the appropriate products and modelling techniques for each seasonal element including when and where to use washable paint, how to use chipping fluid, pigments, oils, and an wide range of enamel effects.

4 seasons is also a great topic for many other modelling aspects when viewed as a starting point in developing a visual concept. Winter is a time of great contrasts between heavy and near black mud and white snow, worn winter camouflages covered with rust blooms, frost, and icicles hanging from vehicles. Spring welcomes brighter colours and warm tones contrasting the remnants of winter camouflage painted on vehicles many eventful months earlier. All environmental aspects begin to dry, the mud is not as intense and wet anymore as the drier season of spring approaches and nature comes to life, while the colours and textures are gradually changing. For the sun-drenched summer months, subjects typically appear faded by contrasting layers of dust or dried cracked mud. Depending on the month, the greenery and foliage is either lush, sunburnt, or dehydrated and void of colour. Autumn provides each modeler with a wide spectrum of effects typical of the season such as condensed moisture on surfaces, wet mud, withered grass, and leaves in a cornucopia of vibrant colours soon to be subdued as the terrain falls into hibernation and ultimately winter's icy grip. A chill is in the air...

Sergiusz Pęczek



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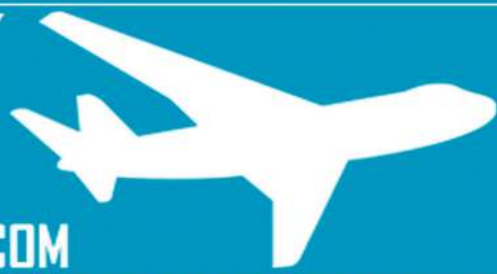
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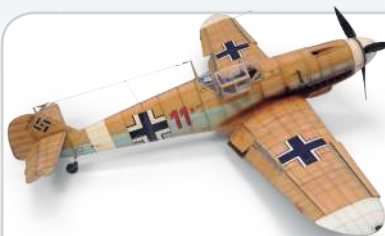
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Spring

VIBRANT IV



Konrad Dzik

Spring is my favourite season, this is the season when the living world blooms into green, and the temperature entices everything and everyone to thrive. That's why I decided to depict this Panzer IV in a vivid spring setting with seasonally accurate scenery. When considering specific examples of how nature affects a vehicle in this time of year, my thoughts go mostly to dirt and some dry mud with only limited damp tones. The earth effects were to be light and this example would not be caked in tons of wet mud. When working on a vehicle set in spring such as this, I focus more attention on the lightening of colours, chipping, and rust tones, as these effects are more visible and catch the viewer's eye.



1

The model was assembled straight out of the box without any additional parts or sets. The Border miniatures kit provides plenty of tiny details and fit so well that I didn't have to use any putty.



2

To prime the miniature, I used a mix of Tamiya Flat Black and Flat Brown. The mix holds well to the surface and is an excellent shade for future chipping. Once the paint was dry, I applied two layers of A.MIG-2010 Scratches Effects.





Border
MODEL

Kit: Pz. Kpfw. IV Ausf. G
1/35



▲
3

For the base colour, I used mix of Tamiya Dark Yellow II and White in 1:1 ratio. The paint was thinned with water which facilitates the chipping process to follow.



▲
4

By adding more white to the mix, I was able to apply some colour modulation to add a bit of life to the miniature.



5

Next using different types of brushes soaked in water and an airbrush needle, I created a few scratches and chips. It's important to wet the surface and allow it to loosen before scrubbing it too hard. If water doesn't work you can always use some cleaner or thinner, but when using these you must be more careful.



6

One more time I airbrushed two layers of A.MIG-2010 Scratches Effects and let it dry to the touch before applying the camouflage. I start with the green patches using Tamiya Flat Green mixed with Deck Tan.



7



8



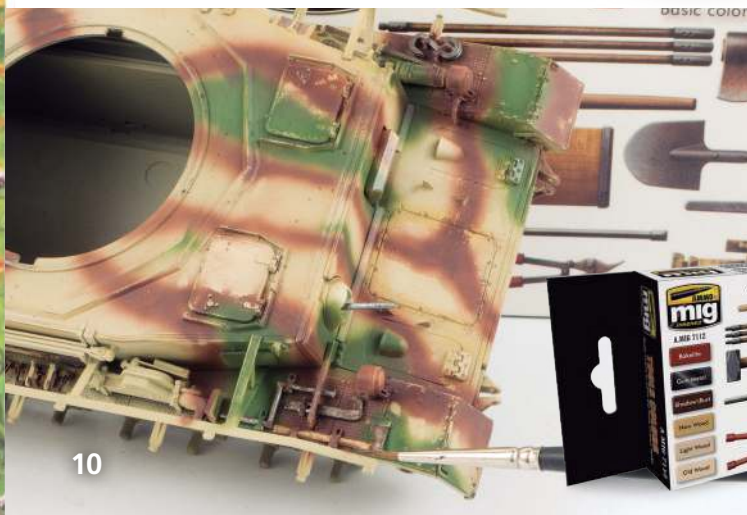
9

7 The next step was to apply the brown tones. Here I worked with a mix of Tamiya Linoleum Deck Tan mixed with Deck Tan and Hull Red. The patches were painted with heavily diluted paint so the overspray was minimal.

8 The scratches and chipping were applied just as before, using brushes and an airbrush needle to affect the top colour to reveal the surface below. Once the effect was done I secured the model with a layer of clear varnish.

9 To apply decals Decal Set and Fix A.MIG-2029 and 2030 were used to help the markings conform to the bolts and surface details. Set was applied under the decal, then it was put in its place and once dry, I applied Fix and allow the decal to conform and dry.

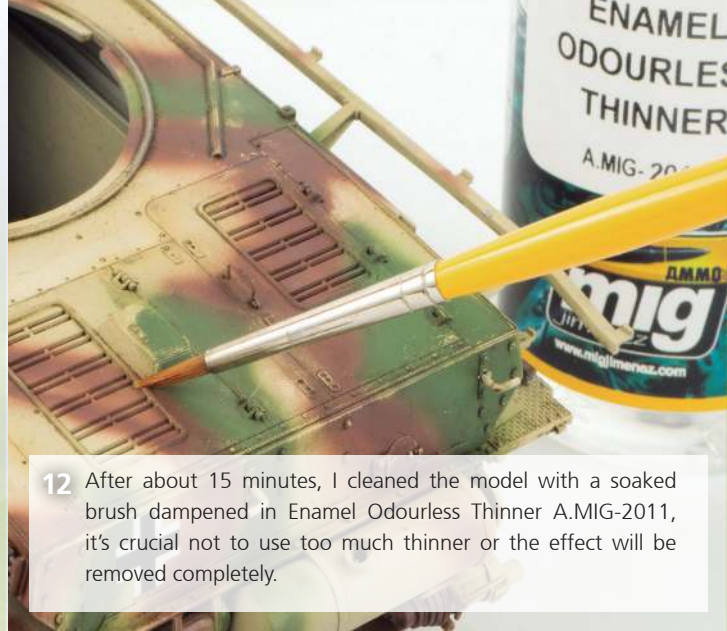
10 To paint the hand tools on the fenders, I used the A.MIG-7112 Tool Color set. Wooden parts were first painted with Old Wood, then using different shades of brown I added a wood grain texture to it, for me it's easiest to work with heavy diluted paints. Metal parts were painted with Polished Steel and once dry I applied a Dark Rust wash over them.



10



11 I used A.MIG-1000 Brown Wash for German Dark Yellow to apply the pin wash over the whole miniature in and around all details and groves.



12 After about 15 minutes, I cleaned the model with a soaked brush dampened in Enamel Odourless Thinner A.MIG-2011, it's crucial not to use too much thinner or the effect will be removed completely.



13

Using Oilbrushers I applied colourful dots over the camouflage patches to filter all of them and add an older more worn look to the surfaces.

14

Next they were blended with a bit of Enamel Odourless Thinner A.MIG-2011. I used a tapping motion trying not to spread the paint over the colour patches.



15 Also using Oilbrushers I contour hatches by applying some Starship Bay Sludge A.MIG-3532 on the edges and then blend the colour.



16 I started painting exhaust with Dark Rust A.MIG-0041 which serves as a base.



17 Next using heavily diluted Old Rust A.MIG-0042, I added some dark spots over the whole exhaust.



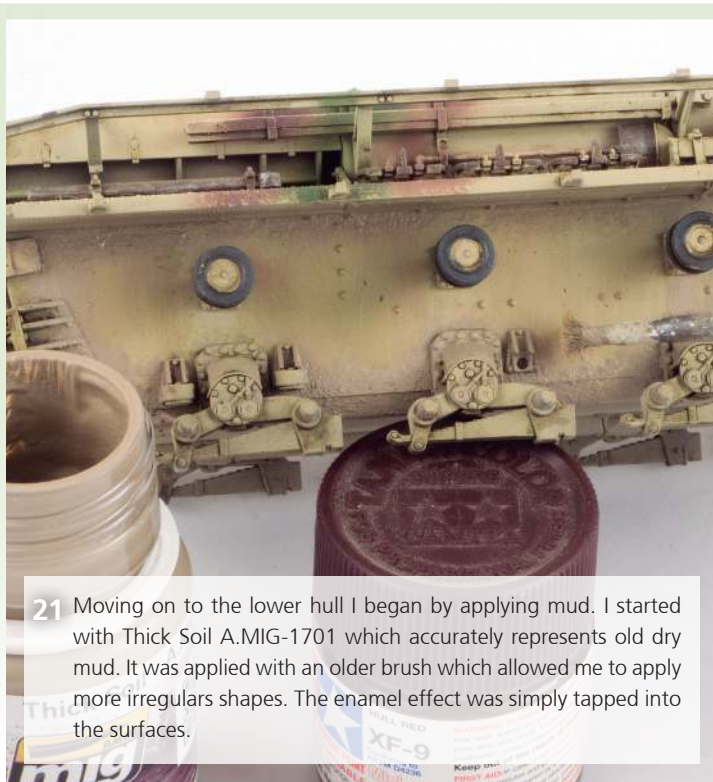
18 Using Medium Rust A.MIG-0040 I speckled the paint from the brush using toothpick, this flicks many tiny spots of newer rust tones.



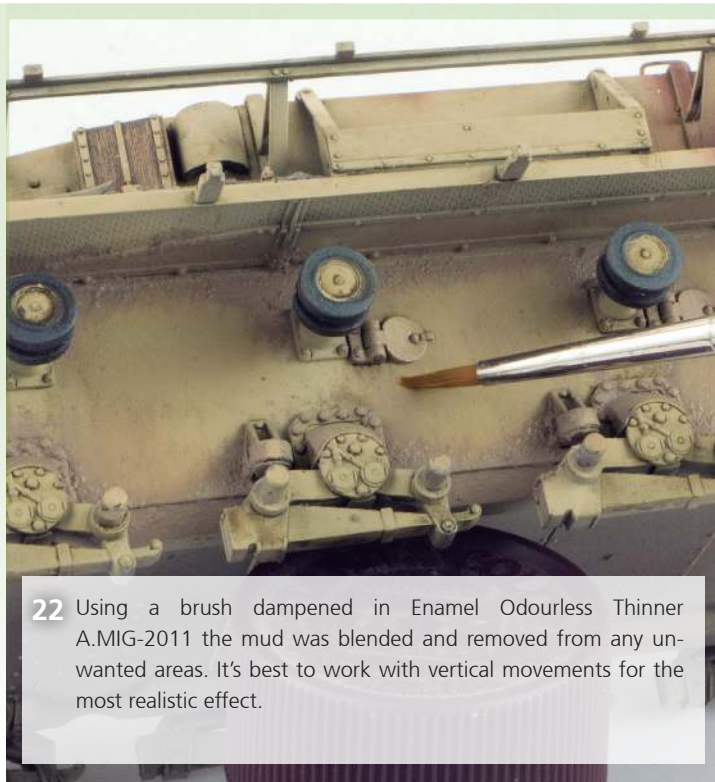
19 Using Oilbrusher colours Dust and Buff A.MIG-3516 and 3517 I add some dust to the surfaces. On the vertical surfaces I painted lines and on the horizontal the colour was applied as spots.



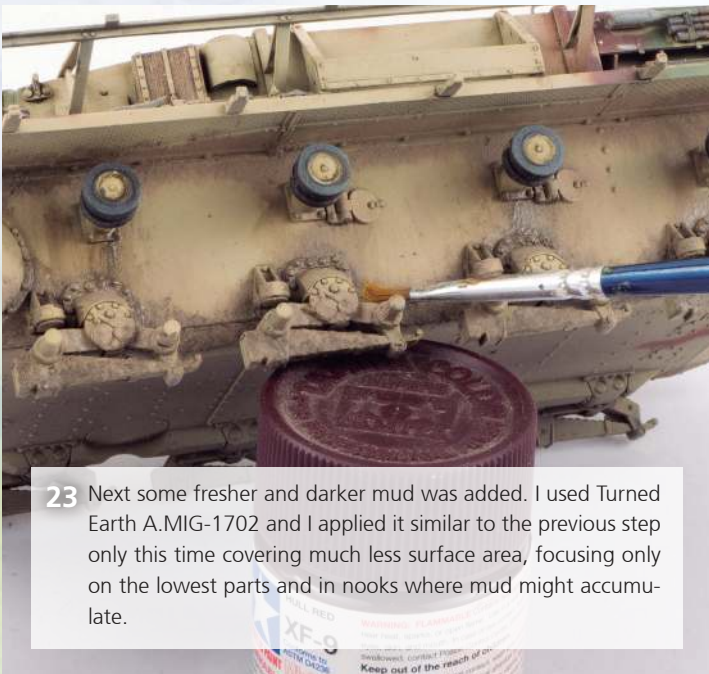
20 Next the oils were blended with the use of Enamel Odourless Thinner A.MIG-2011. On the verticals surfaces I used a saw brush and up and down movements to create the effect of rainmarks. On the horizontal surfaces I simply tap the paint on the surface.



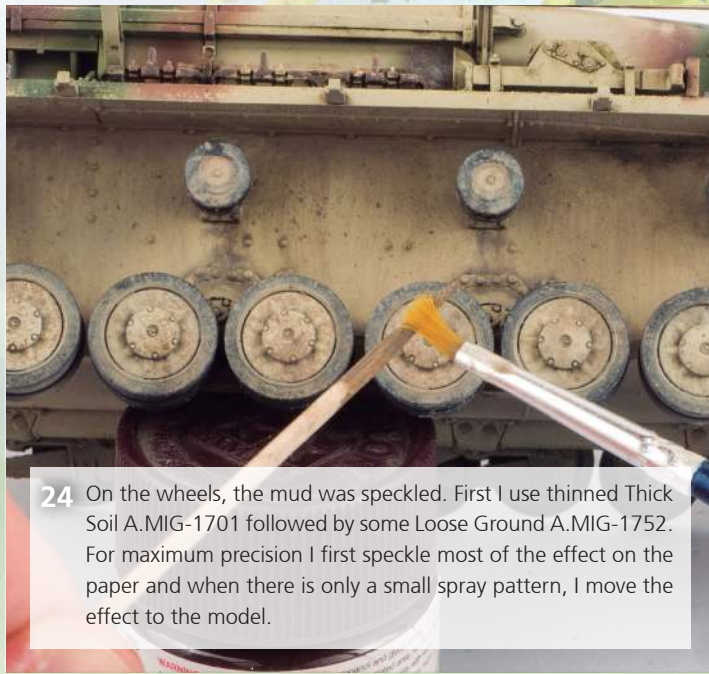
21 Moving on to the lower hull I began by applying mud. I started with Thick Soil A.MIG-1701 which accurately represents old dry mud. It was applied with an older brush which allowed me to apply more irregular shapes. The enamel effect was simply tapped into the surfaces.



22 Using a brush dampened in Enamel Odourless Thinner A.MIG-2011 the mud was blended and removed from any unwanted areas. It's best to work with vertical movements for the most realistic effect.



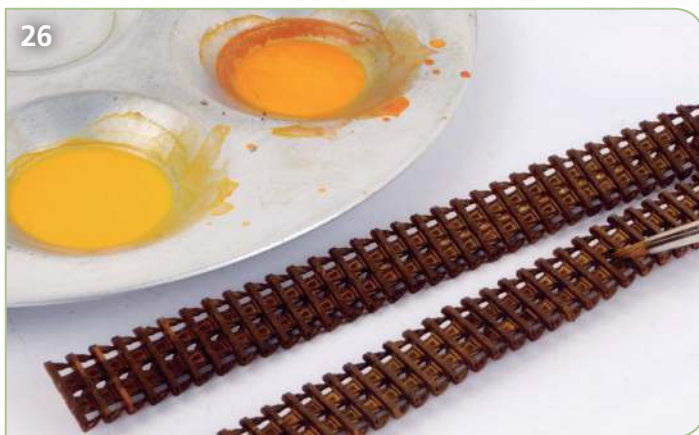
23 Next some fresher and darker mud was added. I used Turned Earth A.MIG-1702 and I applied it similar to the previous step only this time covering much less surface area, focusing only on the lowest parts and in nooks where mud might accumulate.



24 On the wheels, the mud was speckled. First I use thinned Thick Soil A.MIG-1701 followed by some Loose Ground A.MIG-1752. For maximum precision I first speckle most of the effect on the paper and when there is only a small spray pattern, I move the effect to the model.



25



26



27

25 I began painting the tracks by airbrushing Tamiya Hull Red as a base.

26 I don't like to work with enamels on the plastic tracks as they are very fragile. Instead I use diluted acrylic paint washes which add more rust tones as well. Here I used Medium and Fresh Rust A.MIG-0040 and 0039.

27 To add a dusty look, I diluted some Thick Soil A.MIG-1701 to the consistency of a wash and applied the effect over the whole track run.

28 The polished metal surface of the raised cleats were treated with Polished Steel A.MIG-0192.

29 On the inner face of tracks, I used Black pigment A.MIG-3001 to imitate residue from the wheels.



28



29



30

Once the tracks were glued to the tank, I rubbed some Gun Metal pigment A.MIG-3009 on the edges of the tracks using a rubber tipped brush.



31

Pigments were also applied on the fenders and tracks, here I used European Earth A.MIG-3004 and Dark Earth A.MIG-3007. They were flicked from the soft brush and secured in place with Pigment Fixer A.MIG-3000.





32

A bit of European Earth A.MIG-3004 pigment was used on the hull in some nooks to imitate the earth that tends to accumulate in such a place.



For the finishing touch I applied some Fresh Engine Oil A.MIG-1408 over the engine deck and next to hatches, this specific effect works best when applied in many thin layers. I also speckled it over the places in contact with oil and fluids.



34 The schurzen was painted and weathered in the same way as the rest of the model for a consistent finish and fixed in place to complete the model.

Summer

HOT AND HEAVY



Kreangkrai
Paojinda

This project is driven by the critical and interesting influence that is seasonal weather. The focus is to observe and understand how each of the seasons bring unique effects such as cold frozen water and earth of winter, wet soggy mud or dry dirt in fall and spring, and summer typically brings dust effects and the dry ground common in the summer months. Each season brings characteristics which allow you to present and recreate any model with specific painting and weathering methods for a distinguishing range of seasonal effects. Tanks and other vehicles always receive effects from traversing various terrain conditions and through seasonal weather, reference pictures are critically important to gathering accurate details about a vehicle's surroundings and provide clues which indicate unique weather conditions. A host of methods, effects, and products are shown here to teach you how to recreate realism and authentic summer effects on your next model.



The assembly was straightforward, and began with the perfect fit of the upper and lower hull. The kit's link-and-length tracks are very easy to build, here you can see the idler wheels, drive sprocket, road wheels, and track links dry fitted before for the painting stage.



The turret assembly. The armour pieces all have ejector pin marks on them which were removed by sanding before assembly. For the metal smoke dischargers I used the A.MIG-8013 Slow Dry professional CA glue recommended for all resin and metal parts.



Kit: Pz. Kpfw. IV Ausf. G
1/35



I decided to add several detail items from the Polish manufacturer EUREKA-XXL including item ER-3505 Towing Cable for Pz.Kpfw.IV, and A-3528 German 75mm anti-tank HEAT ammunition which comes with aluminium shells, turned brass cases, and photo-etched and resin parts for wooden boxes. These are some of the best on the market and I highly recommend them.



Here you can see the finished build, the Border Models moulding is great and most of the details are very well done. I also created a little damage on the front mudguard and the PE Schürzen side armour. Staying true to the subject of the Panzer and crew in Summer battle, I chose the figures from Alpine Miniatures [ALP-35101] 1/35 Panzer Crew Summer Set.



- 5 The primer and base colours were applied with various AMMO Acrylic paints beginning with the hull and turret using A.MIG-2026 Brown Oxide primer mixed with A.MIG-0014 RAL 8012 Rotbraun to mimic the German red oxide. This foundation was followed by a series of rust and dark steel tones on the second layers, and One Shot Black for the metal barrel. Once the paints were fully dry, I applied a layer of A.MIG-2011 Heavy Chipping Effects.



- 6 The contact areas with the tracks on the idler wheels and drive sprocket were painted with A.MIG-0192 Polished Metal which serves as a foundation for chipping and scratching in the next step.
- 7 Once the chipping fluid was dry, I applied A.MIG-010 RAL 7028 Dunkelgelb Mid War, with successive highlight tones created by mixing in white acrylic. Once the Dunkelgelb was dry I sprayed a little chipping fluid on the top of surface.
- 8 Finally it was time for the camouflage which I airbrushed freehand using A.MIG-0002 acrylic colour RAL 6003 Olivgrun OPT.2 and A.MIG-0015 RAL 8017 Schokobraun.



9

The next step is to activate the chipping fluid by moistening the area with water and then gently scrubbing the surface using several different tools. For the large areas like the Schürzen side armour, I used a small pieces of Scotch-Brite scouring pad to create the scratches.



10

A close-up of the smaller areas and edges, I used Brass Toothpicks to recreate small scratches and wear on the surface. The different layers of colours under the layers of chipping.



11

Once the step of chipping and scratches was done, I began painting the tools and details with a fine brush including all wood handles, metal parts, and rubber road wheels all using the all-inclusive A.MIG-7179 WWII German Tool Colors set which includes the 12 colours required for any vehicle.



12

Once the brush work was complete, the markings and decals were applied. The step was painless and yielded excellent results with Ultra Decal-Fix & Decal-Set. Once the decals had dried, I used the airbrush to seal the decals with a layer of Glossy Lucky Varnish A.MIG-2053.



13

I started the weathering with the oil paint dot technique, using different shades of Oilbrushers and Streakingbrusher to create faded tones. For the highlights, I used Streaking dust, Medium Soil, and Olive Green - I always use these tones for general fading. For shaded areas I used Rust and Starship Filth, by applying small dots on the surface and then blended them with Enamel Odourless Thinner.



14

Again the oil dot filter shown being applied to the Schürzen side armour. The picture shows a before and after effect, I quickly blend the surface with soft brush using downward motion, leaving subtle traces of dust and rust on the surface.



15 To create a heavier layer of dust on the lower hull areas, I adding more layers of Dust and Buff coloured Oilbrushers.



16 Once the oil fading effects were dry, I continued the weathering with pin washes using A.MIG-1000 Brown Wash for German Dark Yellow mixed with light coloured filters to create different shades.



17 Time for adding the realistic impression of dry mud effects, I applied mud splashes textures on the lower hull and side armour with A.MIG-1750 Dry Earth and A.MIG-1751 Dry Steppe textured enamel.

18 In the following step I blended some areas using a soft brush moistened in enamel thinner to soften the effect in some areas and make additional streaking marks in others.

19 In order to accurately recreate a very dry summer environment, I used A.MIG-1750 Dry Earth diluted with Odourless Thinner and sprayed it around the lower areas to accurately replicate soft dust effects on the areas closest to the ground.



20 A mixture of A.MIG-1750 Dry Earth enamel mud mixed with Light Dust and Russian Earth pigments were used to create a heavy dry mud texture on the suspension units.



21

Again the heavy dry mud accumulations were added on the front hull, in this section I diluted the mixture more with enamel thinner and applied with a brush.



22

When the mud texture was fully dry I proceeded to blend the surface with a dry soft brush for a more realistically soft and nuanced effect.



23 Pigments were added around the top of the hull and turret where the tank crew would climb onto the vehicle.



24 The contrast around details was reinforced after the pigments were applied with dark brown washes focused on the edges of turret and top of the hull.



25 Fresh oil leaks on the rear engine deck were carefully painting with a fine brush to keep the effect in scale.



26 Convincingly representing tracks in a dry summer began with various acrylic rust tones. I also painted the rubber bands of the road wheels at this stage using a brush.

27 Dry Earth and Dry Steppe were both used to create the dry mud and textured splashes on the wheels.

28 I easily removed the excess mud from the rubber contact surface using enamel thinner.

29 Then I applied a polished aspect to the contact surface of the tracks on both sides using A.MIG-192 Polished Metal acrylics along with A.MIG-3021 Polished Metal pigment. The combination creates a highly realistic depiction of polished metal.

30 Final polished surfaces were added using a silver pencil applied on the raised surfaces of each link's exterior face.



The muffler was first airbrushed with acrylic rust tones followed by sponge chipping with darker rust tones.

I then splashed on the light rust enamel A.MIG-1004 around the exhaust which creates a textured and pitted effect and once again applied splashes of Dry Earth texture on the lower area.



33

I assembled all running gear and glued it in place at this point, while also adding some wet effects and mechanical fluid stains on top of exhaust with fine brush.



34

These wheels were covered with the remains of dry earth, to add some contrast and variation, I randomly added subtle washes and staining around the bolts and hubs.



35

To realistically depict a tank in the field, I again carefully added more layers of pigments on the lower hull using a small brush.



36

I used a Brass Toothpick to gently scratch the layer of dry mud on the Schürzen side armour, these small and subtle effects radically improve the models finish.



37 The accessories were painted with acrylic colours and finished with enamel washes.



38



39



40

38 Following the reference photo of a Panzer IV on the Eastern Front in Summer, I determined that the crew used tree branches for camouflage on their tank which is a very interesting detail to represent on my Panzer IV. The home-made tree branches were made from copper wire and a Miniature Leaf Punch in combination with small real dry branches collected outdoors, and painted with various acrylic green shades.

39 Camouflage the Panzer! The branches were hanging from above the side armour, I began by tying the wire the support rail on both sides.

40 I then reinstalled the side armour plates and tied the wire with the tree branches, each carefully glued while following the reference photo.



41

The Alpine Miniatures figures tank commander and officer were painted with a range of AMMO acrylics, I used a wet pallet and paint retarder which makes acrylic paint dry slower enabling a smoother finish.

42

Once I had sprayed A.MIG-0089 Matt Varnish clearcoat for the 100% flat finishes, I considered the figures finished.





Autumn

WILTED WEATHERING



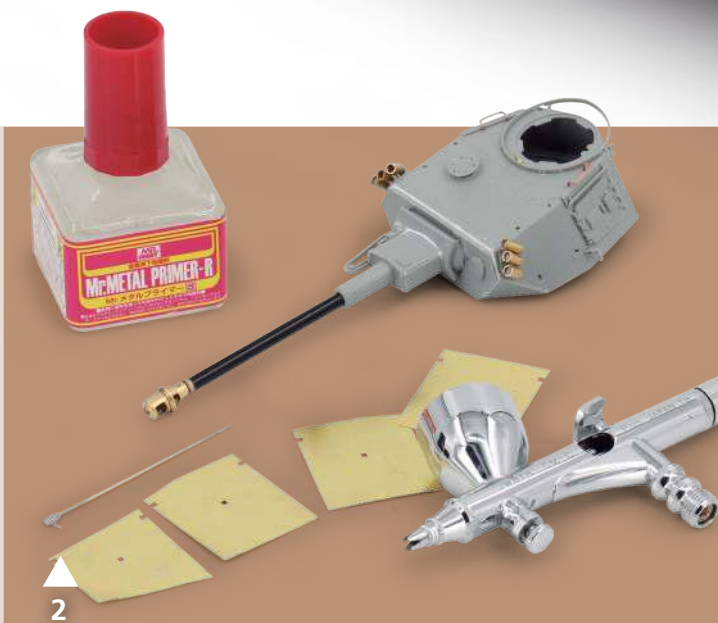
Jia Sheng Wu

The autumn setting was created to imply and show that the third Reich was gradually beginning to decline and fall, with this Panzer IV tank traversing a path full of weeds. With the commander looking helplessly at his map and the autumn setting reflected in his deep expression. This example was depicted in a common trichromatic camouflage and weighed down and up armoured with additional tracks. The wooden edges of the base were painted to give this model a unique and distinguishing presentation.



▲
1

In this example of a vehicle in Autumn, I made the PzKpfw IV from BORDER Models which is the first kit from this young company. The kit doesn't have too many parts and is very easy to assemble. I used thick type slow-setting CA glue and thin cement for the assembly.



▲
2

To ensure proper adhesion of the base colours, it is a good idea to apply the metal primer coat by Mr. Hobby to all metal components.



▲
3

Then apply a grey primer coat for the whole vehicle. The primer can be diluted with AMMO Acrylic Thinner A.MIG-2000 airbrushed in several thin and transparent layers to make the surface perfect.



▲
4

After allowing the primer to dry for 24 hours, I added some light rust and old rust colour onto the exhaust pipe followed by Scratches Effects A.MIG-2010.



5



6



7



8



9



10

- 5 I mixed a custom colour consisting of 70% dark yellow, 25% flat white, and 5% flat yellow from Tamiya as the main colour of the vehicle and thinned the blend using acrylic thinner X20A.
- 6 Once the acrylic coat had dried, I began to add some chipping effects onto the exhaust pipe. The paint is moistened was first dampened with water to dissolve the chipping fluid below. This allows for removal of the topcoat in some areas by gently rubbing or scratching the surface to reveal the rust tones underneath.
- 7 The next step was to apply the camouflage colour. I mixed 65% NATO brown and 35% desert yellow by Tamiya for the Rotbraun pattern. The chipping effect was added in the same way as the exhaust using A.MIG-2010 Scratches Effects
- 8 Once the Rotbraun had dried, the Scratches Effects were again applied onto the entire model. Then the camouflage green was applied from a mixture of 70% cockpit green, 25% NATO green, and lightened with 25% flat white. The chipping process is exactly the same as with previous steps.
- 9 It's a good idea to airbrush a satin varnish to protect the paints, and the resulting smooth surface makes the weathering effects easier to apply, blend, and clean.
- 10 To enhance the details of the vehicle such as recessed panel lines and raised rivets A.MIG-1005 Dark Brown Wash For Green Vehicles was applied.



11

Once dry to the touch, the excess wash and tide marks were cleaned up with a fine brush slightly moistened in Enamel Odourless Thinner.



12

Once the effects had dried, I applied some Oilbrusher dots over the camouflage in several tones to create discolouration.



13

Simply blend the oils into the surface using downward strokes of a brush dampened with enamel thinner to create discolouration and a faded effect.



14

The chipping has to be painted using a fine-pointed brush by dabbing the tip onto the surface to create small dots and lines which requires some patience and care.



15

I also used a dark brown colour to add the second layer of rusty chipping.



16

Here you can see the overall effect after the chipping was applied.



17 I mixed some A.MIG-3002 Light Dust, A.MIG- 3007 Dark Earth, and A.MIG-3004 Europe Earth. This mixture was spread onto the desired horizontal areas where dust accumulates easily on the real vehicle.

18 These surfaces were then dampened with the Enamel Odourless Thinner.

19 Any unwanted pigments can easily be removed with a cotton swab. The contrast can be seen between areas with more pigments while other surfaces have less.

20 For the dust effects on the Schürzen vertical surfaces, A.MIG-1404 North Africa Dust and A.MIG-1401 Light Dust was added on the skirts as random dots. The most realistic appearance is achieved by applying the effect focused on the lower areas.

21 Just a few minutes later, a brush dampened with Enamel Odourless Thinner was used to soften and blend the dots. Brushing them downwards softly creates natural looking streaking effects.

22 I added some A.MIG-3001 Black and A.MIG-3006 Light Rust pigments onto the exhaust pipe, then used a dry and clean brush to blend them.





23

24



25

23 To make some different streaking effects on the turret, I chose to apply the A.MIG-1205 Streaking Grime for Winter Vehicles. First, I painted vertical lines onto the desired area. It doesn't matter if they are a little rough at this point.

24 The effect was then softened with a dry clean brush using parallel vertical motions similar to those used for the Schürzen.

25 Here you can see the excellent result of this simple step.



26

The next touch of realism was to add the mud effects on the lower part of the hull. Dark Earth A.MIG-3007, Light Dust A.MIG-3002, and Europe Earth A.MIG-3004 pigments are perfect for this job. These colours were spread on the hull and more was added around the suspension.



27

Next, the surface was moistened with Pigment Fixer A.MIG-3000 to attach the pigments firmly in place. Do not apply too much at once, this will flood the surface and relocate the pigments. A few drops gently and carefully placed is all that is needed to soak the pigments and fix them in place.



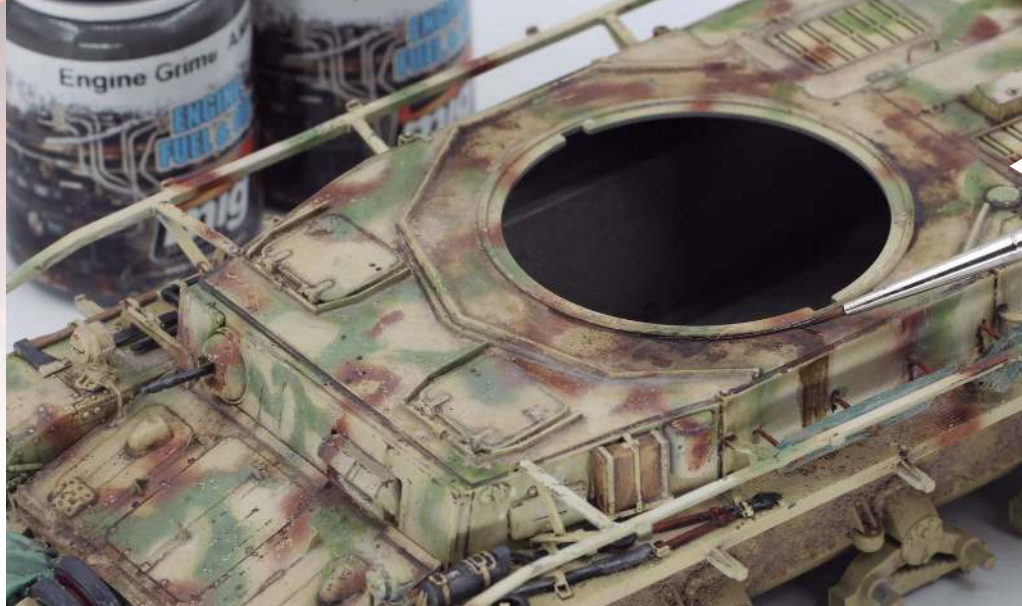
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If you want to make some dirt and mud accumulations around corners, simply mix the three kinds of pigments with the Damp Earth A.MIG-1406 enamel Nature Effects and apply the mixture to the surface with a brush.



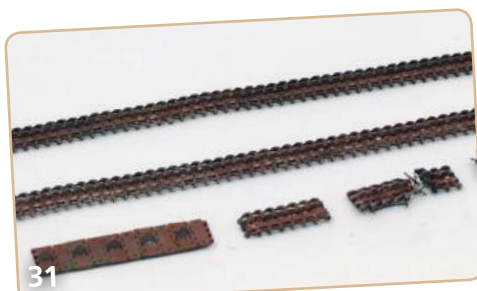
29

A.MIG-1406 Damp Earth effects can also be used with A.MIG-1408 Fresh Engine Oil to represent the fresh mud and oil soaked soil.



30

You can add some fresh wet stains such as oil and fuel effects with the enamel Fresh Engine Oil effects. Simply mix it 50/50 with Thinner and place small dots to achieve an irregular look. You can also add several layers if it is necessary.



31

At this stage I blackened the metal tracks with the Burnishing Fluid A.MIG-2020. The tracks were placed into a plastic cup and the fluid added to cover all surfaces. After 15 minutes, take the tracks out and clean them with water and a brush for an excellent base surface.



32

I airbrushed the tracks with semi-gloss black because the colour was too brown for my taste.



33

The next step was to add a wash using the highly effective Track Wash A.MIG-1002. Any excess wash can easily be removed once the effect has dried slightly.



34



35

34 Once again using the colours Dark Earth, Light Dust and Europe Earth for consistently Autumn colours, spread the pigment onto the surface irregularly and fix the effect in place with Pigments Fixer.

35 Rub the exposed strip of inner track face exposed to direct contact with the road wheels using a sponge dipped into A.MIG-3021 Polished Metal pigment.



36

Adding strategically placed leaves will add a high level of realism to vehicle's set in the fall when fallen leaves are everywhere.

BASE



- 1 I cut the blue foam board to make a platform by using a knife to carve out the rough shape of the platform first, and then slowly sculpted it.
- 2 The outside edge of the platform was wrapped in 0.1mm board.



- 3 A layer of white latex was applied, and the DAS brand clay used to cover the surface which allows the track prints to be pressed into the surface.



- 4 A.MIG-2103 - Turned Earth Ground was the perfect colour and realistic texture for this diorama. It accurately depicts the texture of real mud and creates a striking base. Care was taken to avoid covering the tracks prints.



- 5 The grass by AMMO and MININATUR is quite easy to use. Just apply some white glue on the surface and place the grass matt.

- 6 Finally, individual leaves from AMMO were selectively placed to create the convincing final touch of realism.







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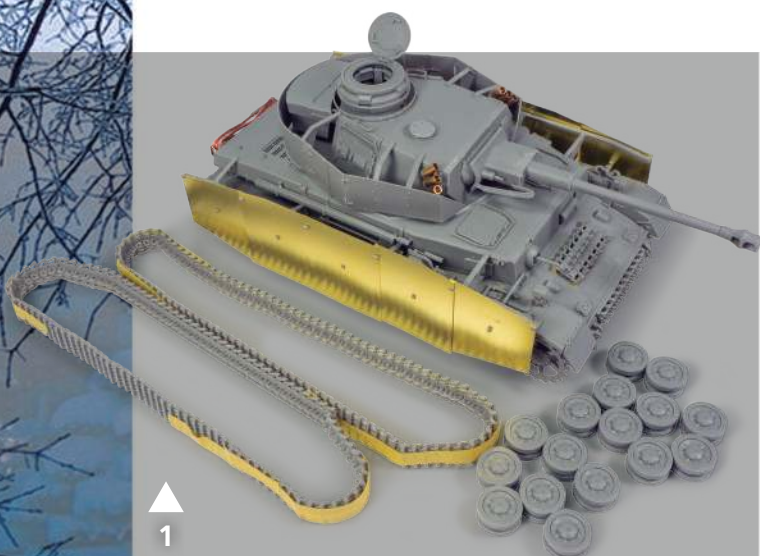
COLD SNAP



Łukasz Kapelski

When deployed to a combat zone, vehicle crews often have to deal with changing weather conditions. Depending on the time of year or the area in which the

fighting is taking place, the crew typically chooses the appropriate camouflage. Most often modellers replicate irregular patches in green and brown or vehicles painted in only one colour which is often green or a sand tone. In winter, vehicles are often painted white to blend in with the surroundings as much as possible. The white paint was typically applied over the existing camouflage and was deliberately not very durable so that it could easily be removed when the weather conditions changed. Many photographs from the battlefield reveal vehicles with partially washed out and removed white paint which creates quite a unique and powerful impression, one such image inspired me to recreate this vehicle.



1



2

This initial version of the Kpfw.IV ausf.G tank model from the Chinese manufacturer Border Model in 1:35 scale is an excellent addition to the modelling market. The impressive box contains everything necessary to make a faithful replica of the vehicle including photoetched accessories, a metal barrel, and a mask to make one of the proposed camouflage which is an unusual and welcomed addition. The fit of the model is simply superb, and the high level of detail meets all expectations and presented no problems. However, you must carefully follow the instructions as they are written only in Chinese.

I started the painting process with A.MIG-2023 One Shot Primer applied with an airbrush. It is worth the effort to divide the model into components which makes painting easier.



Kit: Pz. Kpfw. IV Ausf. G
1/35



▲
3

When the primer dried, a base colour of A.MIG-010 Dunkelgelb Mid-War was applied to the entire vehicle. I decided not to add any brightening or modulation, as they would not be visible after the steps to follow.



▲
4

The camouflage began with Olivgrün Option 2 RAL 6003. This irregular pattern was painted on the hull and Schürzen using A.MIG-002



5 The second camouflage colour was dark brown patches of Schokobraun RAL 8017 painted with A.MIG-0015 acrylic colour.

6 Using rusty shades from the A.MIG-7106 Rust Effects Colors acrylic set, an authentic imitation of rust was applied using a brush and a sponge. The brighter rust tones were mixed with water and thinned out considerably and applied in wet on wet layers.

7 The same technique was used to apply authentic rust to the spare links on the hull.



8



9



10

8 To apply the dynamic effects of a worn-out winter camouflage, Scratches Effects A.MIG-2010 were airbrushed onto the model and after it dried to the touch, the unique acrylic Washable White Camo A.MIG-0024 was mixed with A.MIG-2016 Transparator to slightly increase the transparency of the paint. From underneath the white, you can see piercing spots of the camouflage applied beforehand. Tactical numbers and crosses were protected with a mask to prevent them from being painted over.

9 Immediately after applying the paint, I started to remove it using a stiff brush with short bristles. It is very important not to allow the paint to dry too long, as it is more difficult to remove and will not produce the same quality effect once it has dried completely.

10 A toothpick was used to make scratches and minor abrasions. I soaked the surfaces of the model with water and rubbed specific areas individually with a brush for every element of the model.



11 With patients, the realistic effect of partially washed away, partially scraped off white paint was easily produced.



12 Before the next stage I protected the surface of the model with the acrylic Glossy Lucky Varnish A.MIG-2057 which was allowed to dry over night before applying a detail wash of Brown Wash For German Dark Yellow A.MIG-1000 which I applied around all the bulges, details, and recesses using a brush.

13 When the effect had dried to the touch, I removed the excess of the wash with an ear swab moistened in enamel thinner.



14 Using appropriate colours from the WWII German Tool Colors A.MIG-7179 set and a 0 thickness brush, all the tools attached to the fenders were painted.

15 The next step was to paint the chipping and paint damage resulting from intensive wear using A.MIG- A.MIG-8601 sable brush 2/0 thick and A.MIG-044 Chipping color. This paint is of the most accurate colour and using the correct brush is critically important. I applied small amounts of paint to imitate small paint chips and small scratches in places where damage tends to occur such as around access hatches, on protruding elements of armour, and the exposed edges.

16 In select areas, nuance and realistic randomness was added with the technique of painting scrapes and wear with a sponge held carefully using tweezers.





17



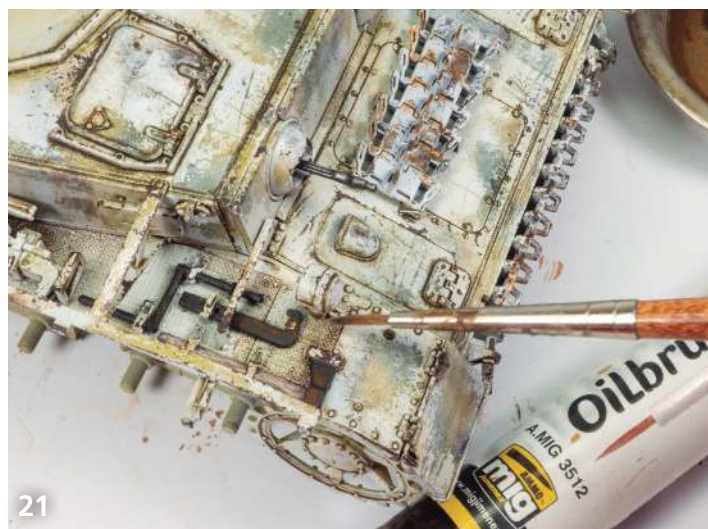
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19



20



21



22

17 In some places, small amounts of A.MIG-1004 Light Rust Wash was added with a thin brush. The intense colour of the paint imitated fresh orange rust, the effect was focused on some spare tracks or metal parts of tools.

18 I decided not to put all the Schürzen on the tank. Using Tamiya tape, the overlapping seam was masked and damage applied to the shield's edge in the strip where they overlap.

19 Some areas of white camouflage were painted with a mixture of Washable White and Transparator and distressed using water and a brush. This treatment allowed me to emphasize the contrasts of white colour and abrasion.

20 On the side shields I painted some transparent vertical staining.

21 With the help of A.MIG-3512 Dark Brown Oilbrusher delicate shadows and dirt were painted around hatches, on mudguards, and recessed areas.

22 On the Schürzen I decided to add a few patches of dirt, for this purpose I used the same colour of Oilbrusher.



23 The effect was blended with a brush dampened in enamel thinner.



24

Now I could start to get the hull and turret dirty. First, I reached for the A.MIG-1755 Wet Ground realistically textured enamel effect. The splashed effect was created by blowing paint from the brush with the help of an airbrush. This effect was limited to the lower areas of the hull and running gear.



25

The splashes were blended downward with a vertical motion using a brush humid with enamel thinner. Using this simple method, the effect can be streaked, blended, or removed.



26

To make clusters of dense mud around the suspension and on the lower surfaces of the hull, I prepared a mixture of A.MIG-1755 Wet Ground, plaster, earth sifted through a fine sieve, and a bit of A.MIG-2015 Wet Effects. The paste was applied in an irregular way using a brush.



27

Once the entire effect has dried slightly, the mud texture was enhanced using a stiff brush. To break the monotony of colour, I added some A.MIG-1752 Loose Ground mixed with plaster to select areas.



28

The tracks were divided into sections for easy assembly, then painted dark brown by applying Dark Tracks A.MIG-0035 with an airbrush.



29



30



31

29 An acrylic rusty wash was applied to the tracks sections, the colour was made by mixing and thinning A.MIG-040 Medium Rust and A.MIG-041-Old Rust.

30 I painted the edges of the tracks in contact with the ground, the drive wheel teeth, and the edges in contact with the tracks with A.MIG-045 Gun Metal and A.MIG-191 Steel metallic acrylic colour.

31 After applying mud to the wheels, they were treated with A.MIG-2015 Wet Effects to obtain an authentic scale moisture effect.



32

Select areas of the hull were treated to the same effect to ensure consistency.



33

Here you can see the final effect of wet mud before applying snow.

Snow is essential to give the miniature a truly real winter look. I reached for the perfect Games Workshop product called Valhallan Blizzard for this task.

The small jar contains a white paste which is applied directly to the desired spots. After drying, the product accurately imitates accumulations of snow. The product was applied with a brush onto the tracks and wheels of the vehicle.

34





35

I applied large amounts of mud on the tank and around the tank tracks. To obtain splashes of wet snow, small amounts were applied by flicking the product from a brush using a toothpick.



36

Small accumulations of snow were also placed on specific areas around the turret and upper hull where they would logically accumulate.



37

After the wheels and tracks have been mounted, the snow effect can be added where necessary.



38

Small amounts were also applied to the side Schürzen, again by flicking it from a brush using a toothpick to create small splashes.



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**PANZER
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Summer

UNLUCKY JULY

BF 109 F-4/TROP



Ricardo Rivas

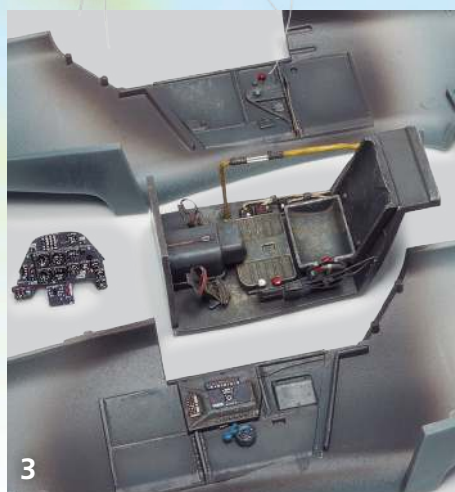
The BF109 F4 with DB 601E engine joined the fray in North Africa in the summer of 1941 with tropical modification. In the summer of 1942, the aerial combat was very intense due to heavy Luftwaffe losses the previous June. On the 4th of July, exactly one year after his arrival in Africa, the ace Lt. Friedrich Körner from JG.27 was shoot down by a Hurricane MK IIc. flown by the combat ace Lt. Lawrence Waugh from No 1 Squadron S.A.A.F. Fortunately, Lt. Korner's life was saved by his parachute, but he was capture by allied forces. He was released from a Canadian prison camp in 1947. In this article I will show you how to paint his plane from this memorable day.





1 First, I applied a coat of One Shot Primer - White A.MIG-2022 followed by a layer of RLM 66 Schwartzgrau A.MIG-0218. I waited for the paint to dry well before highlighting the RLM 66 colour by adding 30% RAL 9001 Cremeweiss A.MIG-0017 to the mixture. To improve the cockpit details, I added the wiring with very thin copper wire to simulate all the electric lines.

2 To weather the cockpit, I began with the darker tones and then tones and then the lighter. First I used PLW Deep Gray A.MIG-1602; after letting this colour dry well, the dust effects were applied using North Africa Dust A.MIG-1404. You can also apply some aluminium chipping with the sponge in specific places where paint tends to peel off.



Once all the elements of the cockpit and associated photo-etched parts of the Eduard kit had been installed, the photo-etched parts were weathered to provide a more realistic appearance as well as tie them in with the rest of the cockpit. I applied PLW Deep Gray A.MIG-1602 and once it was dry, a light dusting was added with PLW Ochre for Sand Camo A.MIG-1622.



Aftermarket seatbelts were added, also from Eduard (Cat. No.49093 Bf 109G seatbelts FABRIC 1/48) and treated to the same weathering process as the rest of the cockpit, applying PLW Deep Gray A.MIG-1602 and PLW Ochre for Sand Camo A.MIG-1622.



5

The entire model was next primed with One Shot Primer - White A.MIG-2022 straight from the bottle.



Next, the propeller blades were painted using RLM 70 Schwartzgrün A.MIG-0232. Once dry, I applied a lighter tone with the sponge technique to depict wear and tear. In this case Green Slate (RLM 02) A.MIG-0217 was used. I then added more sponge chipping effects with Matt Aluminum colour A.MIG-0194.



Some scratches were added with a silver pencil from Prismacolor (ref. 753 Silver).



8

Finally, some dust was added using North Africa Dust A.MIG-1404 enamel. It is important to paint the dust effects following the direction of the air flow.



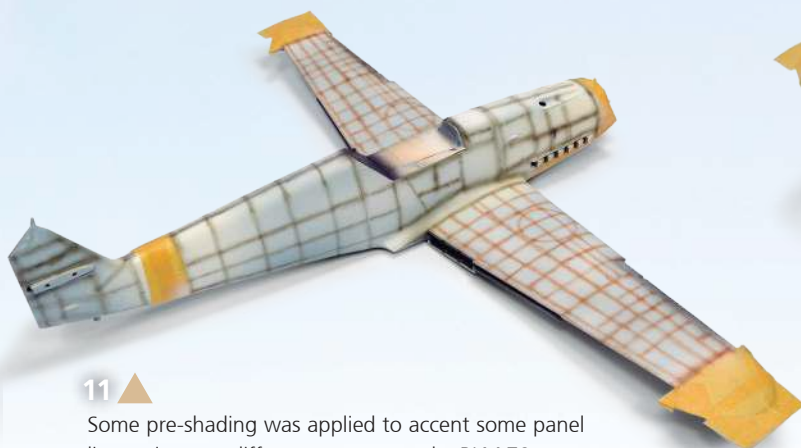
9 ▲

For the interior areas I used Green Slate (RLM 02) A.MIG-0217. The white sections of the colour scheme were also painted at this stage using Satin White A.MIG-0047.



10 ▶

The areas that require masking were hidden away using Tamiya masking tape before proceeding to airbrush Gold Yellow (RLM 04 Gelb) A.MIG-0125. I then added some highlights free hand by mixing the previous colour with RAL 9001 Cremeweiss A.MIG-0017.



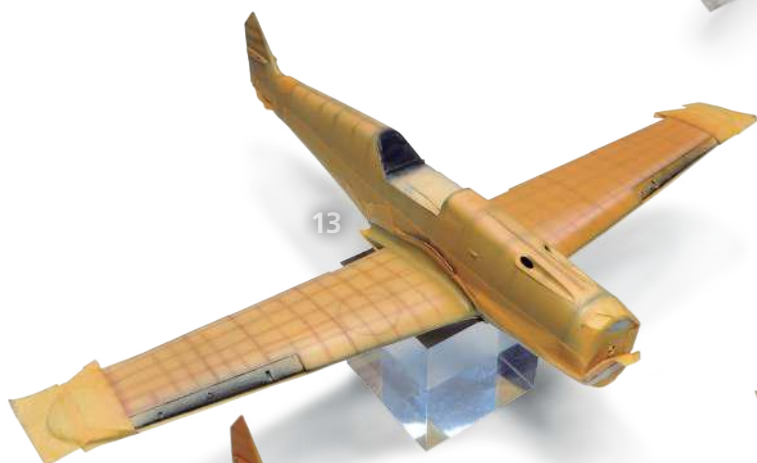
11 ▲

Some pre-shading was applied to accent some panel lines using two different tones: over the RLM 79 areas Medium Brown A.MIG-0070, while on the blue RLM 78 and zones of both colours I used Green Slate (RLM 02) A.MIG-0217.



12 ▲

I then applied very thin coats of RLM 78 Hellblau A.MIG-0247 in a mixture of at least 10/1 Acrylic Thinner A.MIG-2000 to paint ratio.



13 ▲



14 ▲

13 Here you can see the difference between one layer and the several required for a deeper and more accurate finish. I recommend waiting 2 hours drying time between each layer.

14 The highlights were enhanced with a mixture of 70% RLM 79 Sandgelb A.MIG-0222 + 30% New Wood A.MIG-0037, diluted to a ratio of at least 8 parts thinner per 1 paint ratio. The highlights were applied one panel at a time free hand using the airbrush.



15 ▲

15 I also added some highlights to the blue areas mixing the RLM 78 colour with a small amount of Satin White A.MIG-0047.



16

A gloss coat was applied over the entire model using Alclad II Aqua Gloss Clear ALC600 A.MIG-8212. The varnish layer must be thoroughly dry before you can continue with applying the decals. For this task I have used AMMO's decal solutions: Ultra Decal - Set A.MIG-2029 and Ultra Decal - Fix A.MIG-2030.



17

Next I added about 3 sand-coloured filters to blend the decals into the camouflage, allowing each to dry properly for 24 hours between each application. For this effect, I have used Winsor & Newton Naples yellow and ochre oil colours; the dilution rate of the filters is at least 30/1 Enamel Odourless Thinner A.MIG-2019 to oil paint.

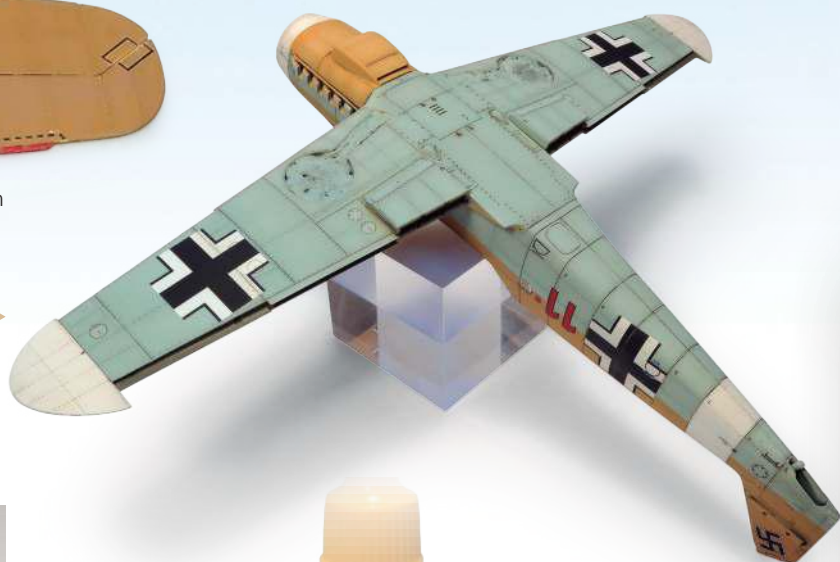


18

In this picture, you can see the application of a wash with PLW Deep Gray A.MIG-1602.

19

On the lower surfaces, I used washes of PLW Tan Grey A.MIG-1610 which is an ideal lighter tone for the RLM 78 blue colour.



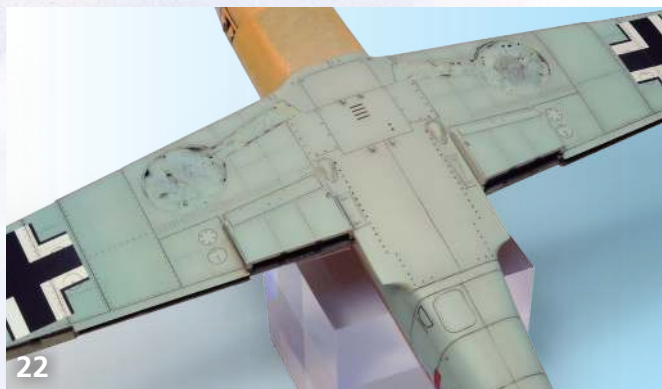
20

Dark washes are hardly noticeable on black surfaces so I use a light tone instead, in this case PLW Light Grey A.MIG-1600.



21

The model was set aside to dry well and then a coat of Matt Lucky Varnish A.MIG-2051 was applied.



22 I added the first tone over a very large area, but not to the entire lower surface. I used highly diluted FS 33531 Middlestone A.MIG-0200 in a 20/1 Acrylic Thinner A.MIG-2000 to paint ratio.



23 Next, I applied FS 30219 Tan A.MIG-0202 mixed with FS 33531 Middlestone A.MIG-0200, but without completely covering the previous layer. Each successive layer will gradually occupy less and less space, focusing the decreases in colour value towards the centre of each panel.



24 Next, I used pure FS 30219 Tan A.MIG-0202, highly diluted and again without entirely covering the previous step.



25 With the dust effects now limited to quite small areas, I applied a 50/50 mixture of FS 30219 Tan A.MIG-0202 and Dark Tracks A.MIG-0035. The last touch was added to the centre using highly thinned Dark Tracks A.MIG-0035.



26 The first indication of staining was applied over the matt surface. In this case, I used Light Dust A.MIG-3002 pigment. Apply it over the full extension of the stain, the subsequent steps will be applied to an increasingly reduced area.



27 Next the pigment North Africa Dust A.MIG-3003 was applied inside the previous application to obtain a deeper and more realistic effect.



28 I continued by adding Vietnam Earth A.MIG-3022 to an even smaller zone. The good thing about using pigments for this effect is that they can easily be removed with water if a mistake is made.



29 The pigment Track Rust A.MIG-3008 was applied next while reducing the application area towards the centre of the stain. It is essential to use a brush with very little pigment left: shake it off well before adding the pigment to the surface.

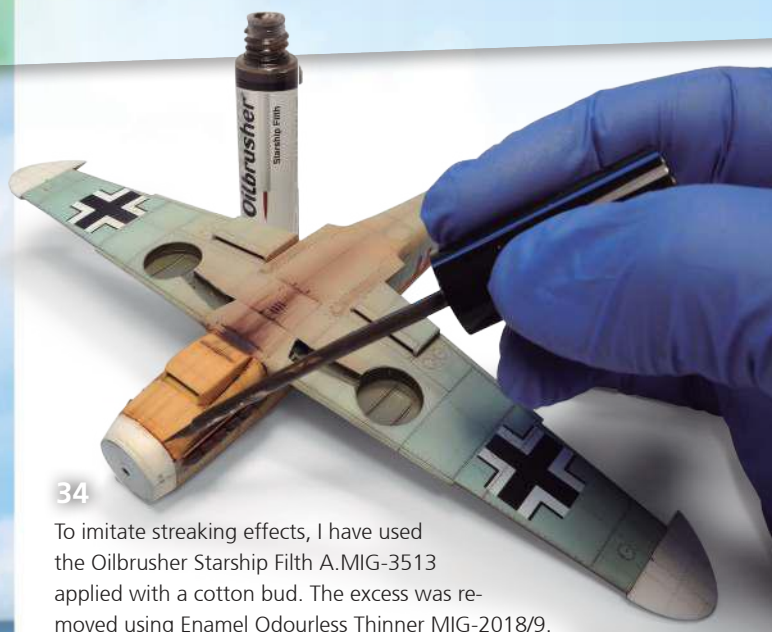


30 The last pigment tone is Black A.MIG-3001. Be careful when using black, it is very intense and you could easily overdo the effect.

31 The final effects are a few spots simulating burnt oil staining. For this, I applied Oilbrusher Black A.MIG-3500 on a few areas and then blended the effect with Enamel Odourless Thinner A.MIG-2018/9.

32 The exhausts themselves received an acrylic base coat of Dark Tracks A.MIG-0035.

33 Wait until the previous effects have dried thoroughly, and then proceed to apply more pigment. Starting with the second exhaust pipe, I added Black A.MIG-3001. The second exhaust pipe was treated differently, since it did not have another exhaust outlet in front to collect soot staining. Here I applied Metal Slag A.MIG-3020 pigment to create a burnt metal look.



34 To imitate streaking effects, I have used the Oilbrusher Starship Filth A.MIG-3513 applied with a cotton bud. The excess was removed using Enamel Odourless Thinner MIG-2018/9.



35 I began weathering the landing gear wells using the PLW Tan Grey A.MIG-1610. The enamel was left to dry to the touch which takes about 5 minutes, and the excess removed with Enamel Odourless Thinner MIG-2018/9. The radiator air intake was painted with a brush and Matt Aluminum A.MIG-0194 acrylic. Once dry, I applied a wash over it using PLW Deep Grey A.MIG-1602.



36 This was followed by a small amount of chipping damage with Matt Aluminum A.MIG-0194 and the sponge technique.



37 I used watercolour pencils to create more fading and dirt effects, and aluminum colour to depict the abrasion of the desert sand on the paintjob.



38

The spinner receives a wash with a mixture of PLW Ochre for Sand Camo A.MIG-1622 and a little PLW Tan Grey A.MIG-1610.

The dust effects on the wells of the landing gear were recreated using North Africa Dust A.MIG-1404. A small quantity was also applied to the lower area.

39



40

The highlights are best accentuated again using Streakingbrusher Streaking Dust A.MIG-1258 mixed with W&N Naples yellow oil colour.



41

Then some high-quality Faber-Castell watercolour pencils (No. 183, 275, 186, and 108) were used to obtain slight and subtle discoloration



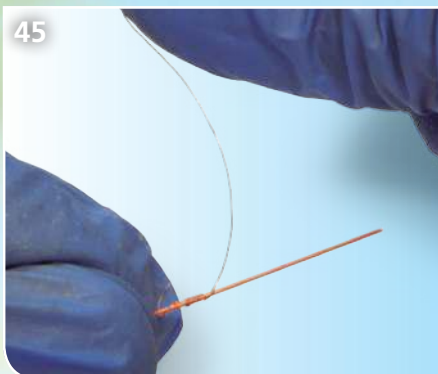
42

As soon as the previous step was finished, the effects were sealed in with a layer of Matt Lucky Varnish A.MIG-2051.



43 I used North Africa Dust A.MIG-1404 to add dust effects to the wheels and other parts of the landing gear. This enamel effect was left for about 5-8 minutes until dry to the touch.

44 Next, I used a Sniper Brush to clean off the excess by lightly moistened the tip with Enamel Odourless Thinner A.MIG-2018



45 Extremely fine copper wire was used to make the antenna mounting springs. First, I took a piece of thicker copper wire and then proceed to coil the finer wire around it as many times as was necessary to create the correct length.

46 When you have the desired size, clamp the spring before extracting the thicker gauge wire very carefully, so as not to deform it. Once the core has been taken out, you can trim the springs to size and have them ready to be glued in position.





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Autumn



Kreangkrai
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FALL'S FURY

In this issue of TWM I'll show you the Armoured Trooper VOTOMS, a military science fiction Mecha anime series. The Votoms is my favourite robot from Manga and was a joy to work with this subject. The design is realistic and the size is close to that of an AFV vehicle. It was interesting and challenging to represent some heavy weathering effects on an anime and manga subject. The model depicts use during a ground battle in autumn with a lot of mud and wet leaves which will be very interesting in terms of painting and weathering.





1

This is the Fatty Ground Custom snap-fit model kit from Armored Trooper VOTOMS OVA, a straight forward out of box build with every step clearly defined for an easy assembly process. Some of the parts need sanding such as the gatling gun and the rocket launcher on the backpack unit. I also customized the pilot using epoxy putty to sculpt the new uniform.



2

I airbrushed the primer coat with A.MIG-2026 One Shot Brown Oxide. Once the primer was fully dry, I sprayed A.MIG-2011 Heavy Chipping Effects fluid and then the various base colours were applied using AMMO acrylic paints. The main body colours I selected were A.MIG-0010 RAL7028 Dunkelgelb mixed A.MIG-0012 RAL 7028 Dunkelgelb AUS '44 DG III for the original OVA. In order to depict the impression of field repairs to the Votoms, I painted the left arm with rust and bare steel, while other parts were depicted in red oxide primer.



3 The head unit, left arm, and shield were painted with both light and darker rust tones alternating with layers of Heavy Chipping Effect followed by a top layer of bare steel mixed from AMMO's acrylic metal and panzer grey colours. By both the red oxide primer and bare steel components, I was able to represent factory replacements and field repairs just like real military vehicles.

4 To create some details of the flame cut metal and polished metal effects, I rubbed the tip of a silver pencil on the edges of the surface.

5 To add an interesting detail to the leg unit, I painted the knee cap guard in a red oxide primer using Rotbraun A.MIG-0014 RAL 8012 applied over Heavy Chipping Effects to create the small scratches and wear on the surface. This process was repeated on various parts of the model.

6 Once the chipping and scratches were applied, I airbrushed the acrylic water-based Satin Varnish in preparation for the decals. Once the decals had fully dried, I again seal the model with Satin Varnish to prepare the model for weathering.

7 The weathering began with light filters using enamel A.MIG-1510 Tan for 3 Tone Camo and A.MIG-1508 Green for Grey. Both were applied to the surface highlight areas. For the darker tones required for the deep panel lines and details, I mixed A.MIG -1000 Brown Wash for German Dark Yellow with the same 2 filter colours.





8

Once the chipping and scratches effects were applied, I began weathering the legs with a layers of dirt and light mud tones. First I applied A.MIG-1403 Earth and A.MIG-1750 Dry Earth Enamel Splashed Soil product, both enable a host of realistic texture effects of light mud that cover various surfaces of the leg. Once the enamel was fully dry, I spraying the model with Satin Varnish to seal the effects.



9

Then using Oilbrusher colours, I created a base layer of darker mud tones with A.MIG-1251 Cold Dirty Grey and A.MIG-1257 Warm Dirty Grey Streaking, this is the foundation for the wet mud to be applied in the next step.



10

The oil colours were blended with enamel thinner and a soft brush.

11

I again added more Streakingbrusher with A.MIG-1250 Medium Brown by randomly applying it to areas and blending the effect with brush.



12

I splashed a full range of the various fresh mud tones, both the light and dark mud were combined in this step.



13

Before the layers of splashes had fully dried, I carefully blending them with enamel thinner to create some streaked mud staining effects.



14

With this foundation in place, I created the heavy mud textured accumulations. The photo shows the natural elements I mixed with the realistically textured Heavy Mud products and pigment Russian Earth. The dry tea leaves and small miniature leaves were a perfect addition to this autumn mud weathering subject.



15

I like to use a toothpick when adding the mud to the model, this tool is easy to control and stronger than a brush. I added the accumulations little by little to thicken and build up the effect while adding the dry leaves to random areas.



16

For the top of leg unit, the textured mud was added in less quantity and in a different pattern to create a more realistic and natural appearance.



17

Heavy mud texture was added to the foot and wheel units and the effect removed from the steel wheel's contact surfaces.



18

Next A.MIG-2015 Wet Effects was applied with a fine tipped brush to create the appearance of dampness from mud streaks and grime.

19

Here you can see before and after the autumn mud weathering effects. I proceeded to use the same products, techniques, and patients to continue on the right leg unit.





20



21

20 After the previous mud texture had dried, I began to create fresh oil leaks and stains with the enamel effect A.MIG-1408 Fresh Engine Oil. The lower body surfaces received applications from wet oil leaks, I carefully used a fine brush to accurately depict this effect.

21 Here you can finally see the combined result of the layered effects on the lower unit including fresh mud streaking, vertically drained oil leaks, damp earth splashes, mud accumulations, and steel wheels covered with muddy ground effects.



22

The next stage was to address the top of body and arms unit, for consistency the same products must be applied. I randomly applied the mud splashes onto the right arm and side of body, then let the mud fully dry overnight.



23

To create fresh and wet mud streaks dripping from the shoulder, I used enamel Earth both by itself and also mixed Fresh Engine Oil to create areas of darker effects.



24

For the backpack unit, I applied A.MIG-1004 Light Rust Wash to recreate some brighter rust staining and streaking.



25

The dry leaves were added on the top of body's horizontal plate, I use A.MIG-2012 Sand and Gravel Glue adhesive to fix the leaves which is easy to use and the results are matt surface with no need for a clear coat.

26

I added the U-Hook on the waist units including the sculpted steel weld line with epoxy putty. Once it was fully cured, I painting with the smoke effects using an airbrush and A.MIG-0046 Matt Black and then I carefully painted the weld bead with a brush using A.MIG-0195 Silver.



27

At this point the VOTOMS - B-ATM-03 FATTY GROUND is close to finished. In this final weathering stage I shifted focus to the cockpit interior, adding some dry mud enamel on the cockpit floor and smaller wet mud effects from the pilot's boots.



28

The pilot was painted with various acrylic paints from AMMO of Mig Jimenez. I painting the figure's tactical gear with Multicam pattern pants and a green jacket up top, and finished by adding some dry mud on the footwear. The head set gear and radio was scratch built with epoxy and copper wire.



29

Finally the pilot was glued in the seat and the small details carefully painted as the final step.









AMMO by Mig Jiménez enters the ranking of the 1000 European Companies with the highest economic growth

Thanks to your confidence, today we are proud to announce that AMMO by Mig Jiménez has become part of the ranking of: 1000 Europe's Fastest Growing Companies 2019. A list of the 1,000 European companies that have achieved the highest percentage of growth between 2014 and 2017. Of the 26 million companies active in Europe, only 158,000 are deemed to be companies with high economic growth, while AMMO by Mig Jiménez has been ranked 711 in this prestigious ranking.

Therefore, we reinforce our commitment to continue working every day.



See the whole news at:



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Winter

VICTOR III ICEBOUND

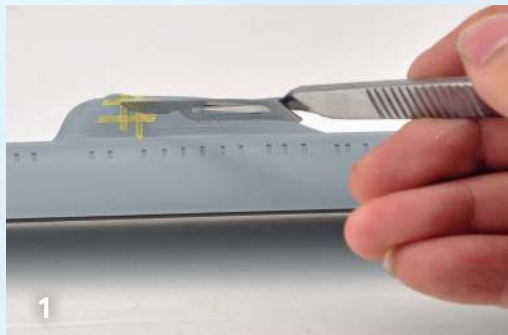


Mike Zhu

Among the large and complex nuclear submarine families of the Soviet Union, the Victor-class attack nuclear submarine may not be the most well-known sea unit. It does not have an all-titanium pressure-resistant outer hull or the unparalleled underwater speed of an Alpha-class submarine. Nor is it capable of the maximum depth of nearly 600 meters of the Sierra class submarine, or the super-quiet power of the Akula-class. It does not boast the missile weapon system of the Oscar-class, but it was the Victor-class attack nuclear submarine that brought highly effective anti-submarine capabilities to the Soviet Red Navy submarine force for the first time. In the competition with US Navy during Cold War, it also made great strides forward. Its construction promoted the advancement of Soviet submarine industrial technology and ushered in the great development of Soviet nuclear submarines. The Victor-class submarine is a generation of nuclear submarines that have been perfected by the Soviet Union.

In the recent Hollywood blockbuster "Hunter Killer", the US and Russian submarines staged a wonderful battle scene under the ice of the Barents Sea in the Arctic Circle, which is beyond that of ordinary narrative. The attacking nuclear submarine sailing in the icy depths of the sea exudes a distinctive charm, which deeply attracts me and stimulated the desire to create, so I immediately started making this icebound scene.





Since the outer shell of the Victor submarine is not titanium alloy, there are some depressions on the surface of the outer hull. In order to simulate this effect, the concave areas were first covered with masking tape, and then the curved blade was used to hollow out the depressions. Then the resulting effect was sanded with fine grade abrasives.



The plastic parts at the top of the conning tower were replaced with copper rods and photo etched details.



Then A.MIG-2002 Gray Primer was used to spray the entire hull and left to dry overnight.



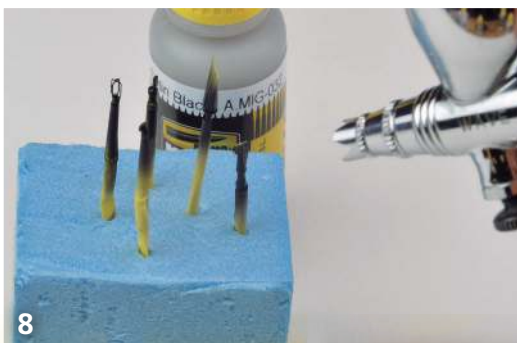
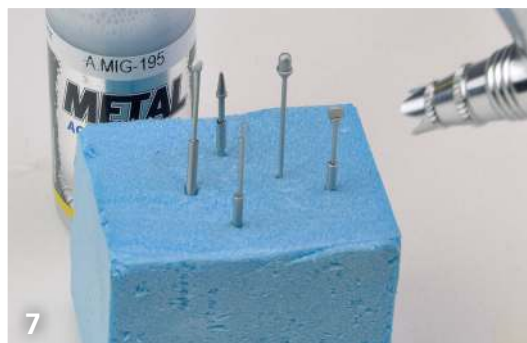
The base colour of the hull was sprayed with A.MIG-0032 Satin Black +15% of A.MIG-0047 Satin White.



Once it was completely dry, more satin white was added to the base colour of the hull and the mixture used to apply highlights and fading to the surface of the hull.



According to the reference photo, the water flood ports are painted in red oxide primer, so all ports were painted with acrylic mix of 50% A.MIG-0049 Red, 35% A.MIG-0920 Red Primer Base, and 15% A.MIG-048 Yellow.



7 Antennas and periscopes were first sprayed with the colour A.MIG-0195 Silver.

8 Then these elements were partially masked and painted using A.MIG-0032 Satin Black.



9

After the main colours were applied and had dried completely, the weathering stage could begin. First, I used the sponge technique to make a mottled effect on the hull by mixing a lighter version of the hull shade and applied the mixture in an irregular pattern.



- 10 To make the hull colour more diverse and nuanced, I applied the oil dots technique using black and white oil paint by first applying random dots of oil.
- 11 Then the dots of colour were blended using vertical motions with a flat brush dampened with enamel thinner.
- 12 Once completely dried, I diluted the dark brown oil paint to the consistency of a wash and applied it onto the hull details to create more contrast and make the overall tone slightly warmer.
- 13 Then I switched to black oil paint and applied a wash to recessed details.
- 14 Black was also used to emphasize the panel lines to strengthen the contrast.





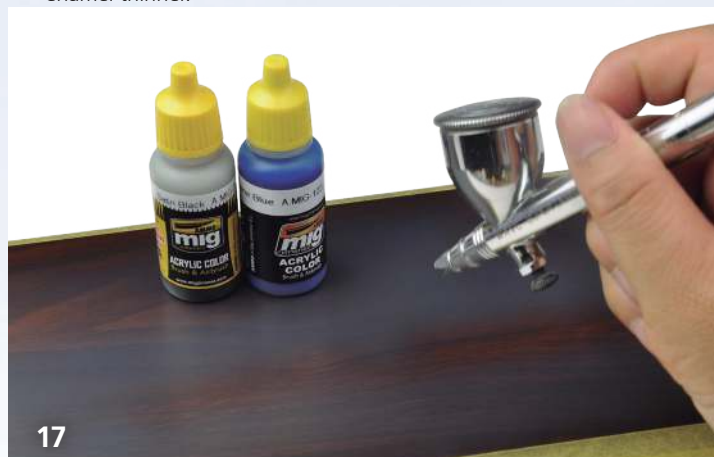
15

All rusty and greenish streaks were applied with enamel colours A.MIG-1203 Streaking Grime and A.MIG-1205 Streaking Grime for Winter Vehicles, and blended with clean brush dampened with enamel thinner.



16

The final effects painted at this stage were salt streaks applied with white oil paint.



17

I started making the diorama base by masking the milled wooden sides with masking tape before painting the top surface in blue.



18

I used a mixture of several acrylic colours and focused on painting the edge of the base where ice was to be replicated.



19

Then I used the cut bottom of the hull to mark the shape of the ship on the foam base.



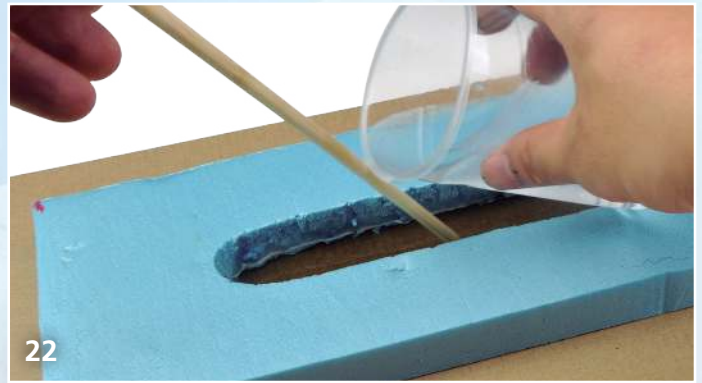
20

Using a sharp hobby knife, the area to be carved out as displaced by the submarine's hull was removed.





To ensure proper adhesion of the base colours, it is a good idea to apply the metal primer coat by Mr. Hobby to all metal components.



The paraffin liquid was poured over a wooden stick used for a controlled pour.



In order to get the colour of the layers to appear more diverse, it can be poured in multiple layers which also creates the illusion of depth.



The transparent blue can be sprayed on the paraffin once poured and cured.



The colour of the ice layer after multiple applications are superimposed appears very natural. After removing from the foam, the material for the cracked ice was ready.



The same method was used to make the ice layer around the submarine.



Do not forget about the layers of clear blue between the layers of paraffin.



At this point, the ice layer was ready for the submarine to be placed.



29 To simulate the churning seawater within the slushy broken ice, epoxy resin mixed with clear blue acrylic was used.



30 First the epoxy resin was gently poured into the submarine's position.



31 Then the model was placed into the "water".



32 The next step was to make the crushed ice that surrounds the submarine once it has surfaced. First, the whole piece of ice that was previously made needed to be broken into large chunks using a hammer.



Then a knife was used around the ice block to cut out the shape as needed.



34 The individual pieces were then naturally placed around the submarine to simulate the sensation of the ship floating above the crushed ice layer.



35 The ice was then covered with a snow - first apply the A.MIG.2205 Clear Water evenly on the ice layer.



36 And then sprinkle the artificial snow on the previously applied static water gel.



37

Try to preserve the naturally drifting and irregular appearance of snow blown by the wind.



38

After drying, epoxy resin was applied to the intersection of ice and crushed ice which made the transition between the two elements appear convincingly natural.



39

After mixing the snow powder with A.MIG-2015 Wet Effects an ice slag effect was applied to the submarine conning tower.



40

Then A.MIG-2015 was used to make subtle and convincing water streaking which enhanced the overall realism.

41

To finish the diorama I had to add a few more details. Thanks to my friends, I received beautiful 3D printed polar bears. After painting, they add movement to the diorama and reinforce the frigid environment.



42 Several resin crew figures were added which brings the submarine to life.





IN THE NEXT ISSUE...

By Sergiusz Pęczek



GREEN

What colour comes to your mind in the context of military equipment and uniforms? Green right?!? This obvious association functions as the stereotype among civilians that everything in the military is green which has some truth. Green in its pure form as well as its more or less olive or grey varieties has been the most popular camouflage colour employed and encountered on the battlefield for decades. Despite the widespread use of multi-coloured camouflage patterns, uniform green was and will be the quintessence of colour employed to blind enemy eyes to observing equipment, soldiers, and weapons. In the next issue of TWM we will explore several classically green subjects as well as more or less exotic model kits each with a complete tutorial on the subject of applying both dark and light green as well as working with weathering effects over this ever present and tricky to work with base and camouflage colour!



SOLUTION BOX

The new WWII German Late Solution Box 04 is the latest addition to the Solution Box family. This exclusive AMMO product offers a complete painting and weathering system used to complete the entire finishing process on your models. Beginning with the application of the primer coat and camouflage colours, each weathering effect including filters, washes, streaking, chipped paint, dust & dirt, to the last details such as mud stains and oil & fuel stains.

This innovative set contains everything you need except the model! A great idea for novice modellers who are just beginning to dabble in the hobby or for those more experienced who want to have a straightforward resource with everything they require in one box without having to select and source each product one by one. **SOLUTION BOX WWII GERMAN LATE** offers you everything required to paint and weather your models of the German field vehicles during the late stage of WWII.



*Everything you need
in one BOX*



*Solution Book guide
included*



SOLUTION BOOK 04 will allow you to follow each step in a simple and intuitive way without texts by using a simple set of icons that will provide you with precise instructions at a glance for every step.

We have chosen Kingtiger Henschel turret from **AMMO** at 1/35 scale as the example to show all the required steps, you must keep in mind that the same processes can be applied in the same manner and in the same order for any WWII German late war vehicle, no matter if it is a truck, halftrack or armoured vehicle.

Now simply choose your favourite model and start painting it right now!



- | | |
|--|--------------------------------------|
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| A.MIG-0002 OLIVGRÜN OPT.2 | A.MIG-3013 RUBBLE |
| A.MIG-0011 DUNKELGELB AUS '44 DG I | A.MIG-3021 POLISHED METAL |
| A.MIG-0015 SCHOKOBRAUN | A.MIG-3510 OILBRUSHER RUST |
| A.MIG-0036 OLD WOOD | A.MIG-3512 OILBRUSHER DARK BROWN |
| A.MIG-0044 CHIPPING | A.MIG-3516 OILBRUSHER DUST |
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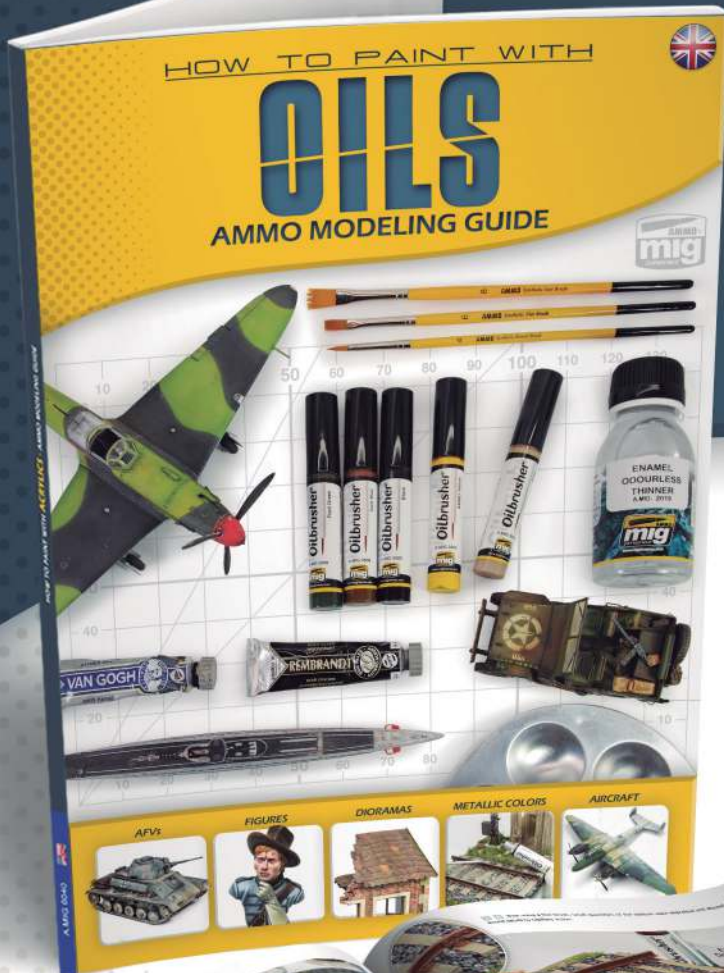


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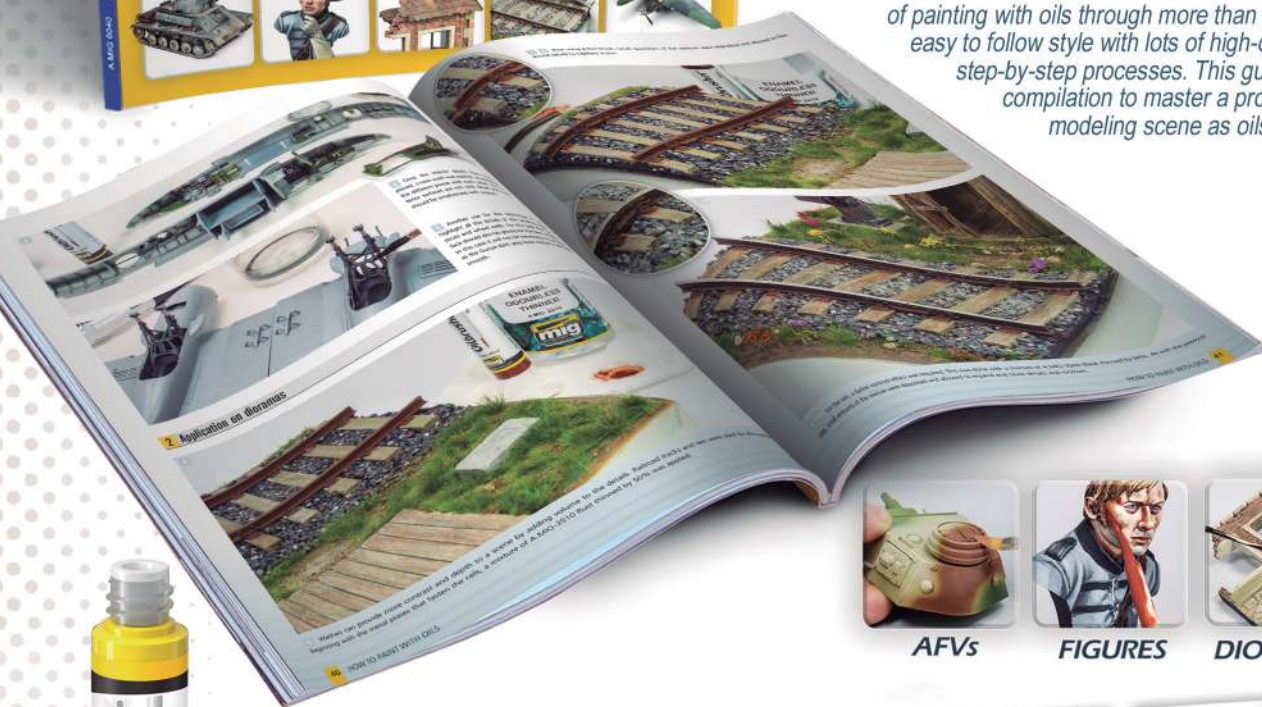
AMMO MODELING GUIDE



- All types of models ranging from tanks and aircraft to figures and dioramas
- High-quality photos and step-by-step processes
- More than 100 pages
- This book is available in English, Spanish and French

In this book, we will show you a huge variety of effects that you can accurately reproduce with oils in general and oilbrushes in particular.

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