

AFV 128

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JOE”



László Gaál re-creates famous newsreal footage

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SEASONS GREETINGS
TO ALL OUR READERS

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At the end of December of 1944, the Germans launched their last major offensive on the western front, named: Wacht am Rhein. On december 19th, SS-Obersturmbannführer Joachim Peiper's forces began their attack on Stoumont at 7:30am. Tanks from the 1st SS Panzer Regiment and a company of paratroopers (probably of the 3rd Fallschirmjäger Division) led the assault through dense fog. After 3 hours heavy fights between the attacking Panthers, grenadiers and defending anti-tank guns and Shermans, the Germans had overwhelmed the Americans and effectively captured the village. The soldiers took a little rest after the battle, but they hadn't any idea what was waiting for them on the other side of Stoumont...

"HELLO... JOE..."



László Gaál builds a beautiful vignette direct from newsreel footage



OLD NEWS

I have long wanted to make a vignette featuring German paratroopers. I wanted to choose a scene that would be interesting and eye-catching enough to capture the atmosphere of the theatre of war on a small scale. When I came across a well-known German newsreel footage captured by the Americans during the war, I suddenly knew...BANG, that's it. Luckily it is available in good quality on YouTube, entitled: DIE DEUTSCHE WOCHENSCHAU, NO. 2, 1945. Showing heavy fighting in and around Stoumont. German propaganda news reel shows many prisoners of war taken during the battle and the quasi-celebration. There was one scene that really caught my attention, German paratroopers and SS panzergrenadiers standing around a captured Jeep, and one of them holding a telephone receiver to his ear. The commentary says that the lines are still live as they occupied the place so quickly and were able to make contact with the Americans. What could a German soldier say to an American on the field telephone?...Hello Joe!

WONDERFUL WILLYS

The model was built from the good old Tamiya kit 219. There are a lot of new Jeep models on the market, but strangely, this kit is still an option for modellers of any ability with its easy buildability and simplicity. As the original vehicle in the video was missing the windscreen, tarp

holder bars and tools, I have omitted them. I added a few details to the basic model with some minor home improvements. The most important addition, however, was the radio, which fortunately is available (Minor 1/35 SCR-510/620 U.S. WWII radio AVM35023). It's a highly detailed 3D printed radio with photoetched parts.

After construction, the entire model was given black primer coat. This gives the necessary pre-shading for the base colour, for which I used AK Real Colors 023 Olive Drab. Then I applied a coat of RC024 Olive Drab Faded, which I then sprayed on only in the areas where light would catch the surface of the vehicle. I then added a couple of drops of RC060 Dark Yellow to RC024 to make the colour even lighter, I then sprayed in patches to give depth to the model. Before I applied the decals, the whole model was given a glossy coat of varnish RC052 for better adhesion. Unfortunately, the Tamiya decals are very thick, so you have to try to cut around the film as much as possible. If applied, the decal area needs to be re-varnished thickly in several layers to reduce the 'step'.

FOREST FILTH

Before weathering, I sprayed the whole model with RC051 clear. Next was the pinwash with MIG P220 Dark Wash. When this phase was also completely dry, I applied a thin coat of Vallejo 70.520 matt

varnish to the whole model. In my experience, the next step, dry varnishing, is more effective on a matt surface. For this method I used different Humbrol paints in 2-3 phases. I painted the chips with Vallejo paints. On the original vehicles, besides the seats on the bodywork, it is often observed that the arches wear to an almost shiny metallic colour. To imitate this, I traced it with a very soft graphite pencil. To add excitement to the solid green surfaces, in addition to the wear, you can paint oil stains, splatter, grease marks, or simply add life to the surface with countless dirt spots. In the Ardennes at this time, it was not yet snowing, but rather muddy. Therefore, the entire underside of the vehicle was covered in a layer of mud, especially where the wheels would throw it around. It's worth checking out images of reenactor's Jeeps at this time of year to see how weathering works in real life. I applied the mud in layers, giving it texture and volume. I built up the fresh mud by using a combination of AK terrains products (AK8016,8017,8018). Around these patches I applied a lighter, dried mud (MIG-1701).

Here and there you can sprinkle the mud with darker colours or dry brush the higher parts, imitating the drying process. The inside floor of the vehicle can also be soiled in the same way. Finally, I splashed diluted mud and dried dirt on the vehicle with a long-hair brush. Inside the jeep, I placed a few items left behind during the rapid retreat that might be of interest to German soldiers. These included a crate of Coke, some boxes of food supplies, tinned food, a map, documents and LIFE and YANK magazines. Many small details can add a spectacular touch to our models, whatever the theatre of war or period they depict. I tend to put a lot of effort into these, because the more interesting the detail, the more time the viewer can spend studying the model. We should try to make these details as varied as possible, contrasting them with the basic colour of the vehicle and the environment too. Everyone will be delighted to discover them.





"HELLO...JOE..."

In the original news footage we can see the vehicle surrounded by paratroopers and panzergrenadiers, so I wanted to show figures from both groups in the vignette. The phoning Fallshirmjäger is an Alpine figure 35248, extensively modified.

The other two I scraped together from Dragon's kit 6373, with lots of sculpting and resin heads added. Importantly, the figures will only really be part of the scene if they are connected to something in the vignette. In this case, the paratrooper in the middle is holding the seat with his left arm, and one of the grenadiers is leaning on the spare tire. The soldier with the greatcoat is from my spares box, the other SS is Alpine 35245 slightly modified. I painted the figures with the new AK 3G acrylics: the faces with AK11621, the Splittermuster camo with AK11624 and the Pea Dot pattern with AK11623. The fieldgrey trousers and greatcoat were done with AK3140. These are very high quality paints, easy to use and dry to a completely matt finish...highly recommended. When outfitting the paratroopers I took into account in several cases that they are Luftwaffe personnel so for example the bread bag was a bluish grey colour, the Y-belts were also made of a more brown leather. The weapons are Dragon Gen2.



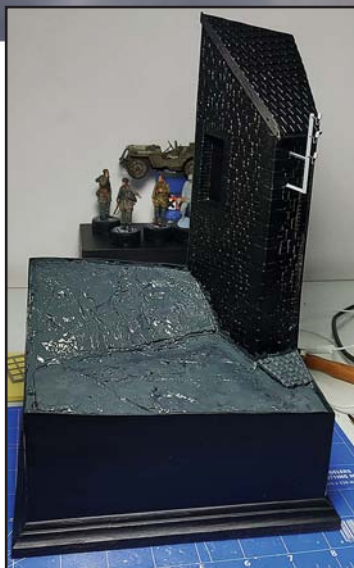
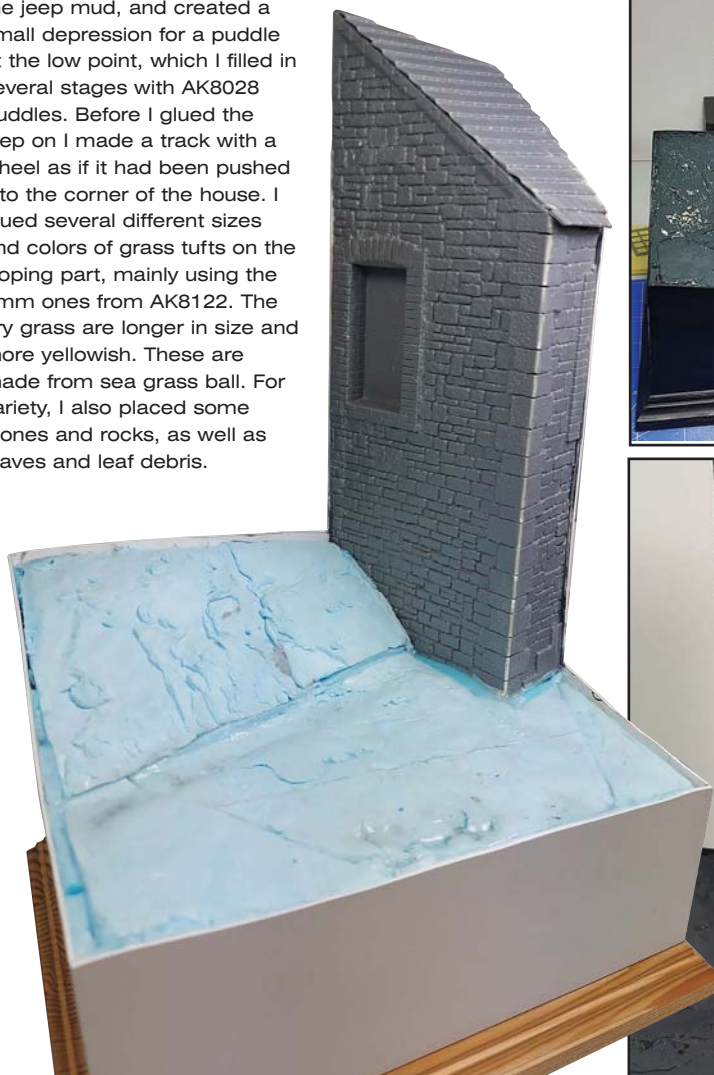
GROUND

Based on the original shot, you can see that the ground behind the jeep rises steeply and there is a building behind it. I tried to condense these two facts into a vignette.

I carved the base from polyfoam, making sure that the ground was never perfectly horizontal.



I built up the soil with the 3 types of AK mud mentioned in the jeep mud, and created a small depression for a puddle at the low point, which I filled in several stages with AK8028 Puddles. Before I glued the jeep on I made a track with a wheel as if it had been pushed into the corner of the house. I glued several different sizes and colors of grass tufts on the sloping part, mainly using the 4mm ones from AK8122. The dry grass are longer in size and more yellowish. These are made from sea grass ball. For variety, I also placed some stones and rocks, as well as leaves and leaf debris.



To edge the vignette I placed a barbed wire fence using a fantastic life-like product from Z63 Modelling Accessories. The building is from the Miniart 35515 Ardennes Building kit. It's not easy to work with thin plastic sheets, but with a little extra work and perseverance you can get a nice result. The house was also painted with Vallejo paint. I used about 5 or 6 different stone colours from grey to beige to paint the walls. The roof was painted with 3-4 shades of grey. The monotony can be eliminated with a little moss (AK8038) or bird droppings. The eaves were made of

thin bended aluminium sheet and the edge of the roof was sealed with thin balsa wood boards. The pigeon is from the Miniart 38036 kit. I downloaded the advertising signs from the internet in high resolution and printed them on a thicker sheet. I stained the scuffs and varnished the whole thing to a glossy finish as if it were an enamel sign. As these are civilian things you can use as eye-catching colours as possible here. I scattered documents on the floor, an empty box that had been driven through, and a Miniart Panzerfaust and a Jerry-can next to the wall.

The bottom of the vignette is made of wood, the sides are cut from polystyrene and sprayed in matt black. The large black surface needs something bright and shiny. The metal nameplate also seemed like a good solution for my previous vignette (Der letzte Akt - AFV Modeller 114), which was a copy of a German dog-tag. I had the inscriptions engraved on it, which I ran in black paint. I fixed it with double-sided adhesive tape.



Thanks to...

I would like to thank Aron Vrbovszki, Imre Kovács, Roger Hurkmans, Roel Geutjens, Lester Plaskitt and everyone who followed the project on Facebook and helped with constructive comments.



Hello Joe!

Stoumont, Ardennes
Belgium, 19 December 1944



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In the early 1970's the West German Bundeswehr placed design requirements for a new variant of light armoured vehicle that could be easily deployed by CH-53G helicopter in the field. Several manufacturers offered prototypes with a fully tracked vehicle chosen as the desired design. As the development of the vehicle continued throughout the 70's it was specified that machine cannon (MK) and TOW anti-tank launcher versions would be the preferred weapon system layouts. Porsche initially won the design contest however due to various reasons the project was stalled until 1985 when Porsche was awarded the contract of the Wiesel's final design. The contract to manufacture the Wiesel commenced in 1988, with Krupp MaK chosen to build 210 of the Wiesel 1 TOW and 133 Wiesel 1 MK versions.

The Wiesel 1 TOW has a crew of three, is powered by a 2-litre 5-cylinder VW Turbo-Diesel with an ZF automatic transmission and due to being manufactured with lightweight steel alloy still has only a gross weight of 3 tonnes which enables two Wiesel of either versions to be carried by a single CH-53G. A top speed of 80kp/h can be reached on-road, with 60kp/h achievable off-road. The reliable Raytheon TOW anti-tank launcher system is used by NATO armies worldwide as well as copied versions also widely used. A total of 7 TOW wire-guided missiles are carried by the Wiesel. The Wiesel TOW is also fitted with a thermal sighting device that enables the vehicle to be day & night capable. The long serving MG-3 machine gun was retrofitted after the Wiesel entered service to provide some extra armament for the crew.

Dan Moore realises the beauty of one-sixteenth scale





KLEINE KETTEN

Takom's Waffenträger
Wiesel 1A1 TOW

1:16

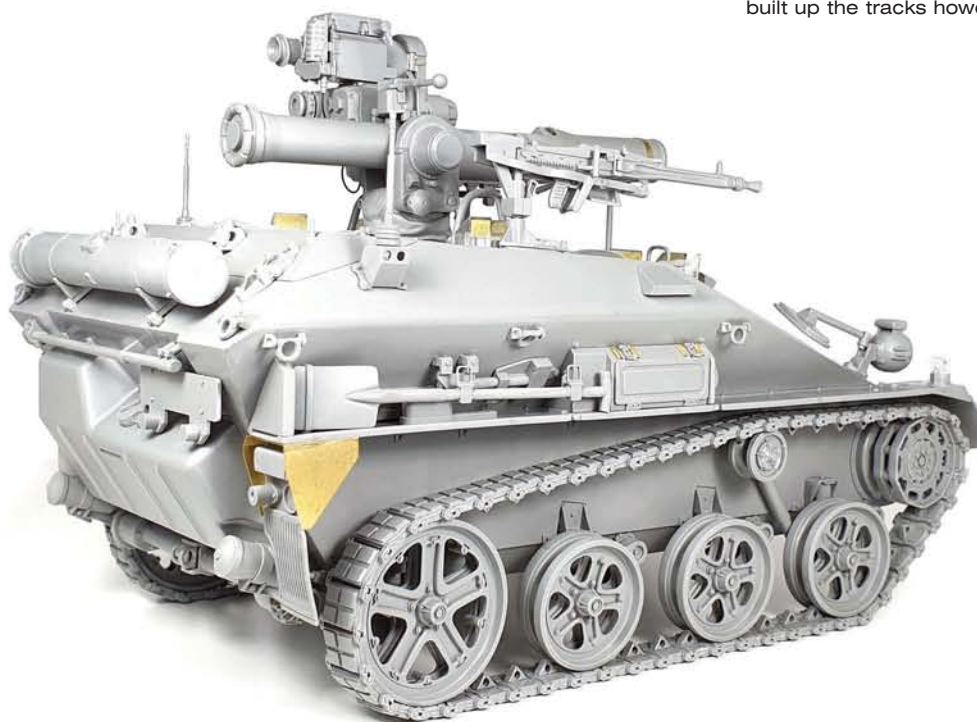
Takom's new big(ish) Wiesel

I must admit when Takom announced a kit of the Wiesel 1A1 TOW in 1/16 I didn't expect to be building one, but after some research it was clear it would make a great little project in the bigger scale due to its quite diminutive size in real life. The rather stout box contains 11 sprues nicely moulded in a light grey plastic (6 of these being tracks and the wheels/suspension units and one being a crew figure) with one clear sprue for lenses and periscopes. The hull is divided into two halves as standard, and a small fret of P.E. for the exhaust/cooling shrouds and a few other minor details. The kit supplied decals are very nice and well printed but are a tad thick. The instructions are quite clear and easy to follow with some nice colour profiles featured to offer several finishes. All up it makes for a very non-daunting build with relatively low parts count barring the individual tracks which are always a chore to build.

Onto the build – a few notes to consider

The buildup of the Wiesel is relatively straightforward and can be completed quite quickly. Steps 1-3 involves the construction of the lower hull and suspension. Take some time to ensure the torsion arms (E32) are located correctly as the fixed mounting point location is a little vague. Also, follow the Takom instructions as suggested – I tried to fit the front arms (E31) in after the fact and found that they were no longer possible to slide in!

Steps 4-7 involve the buildup of the roadwheels and track assemblies. The wheels themselves require a little cleanup around the edge to remove flashing etc. Once completed the wheels can be popped on & off with ease to assist the painting process. The individual track assemblies as usual require some time to clean up & assemble correctly. Pay close attention to the track instructions as the track pivot pins (F2) must be orientated a certain way. Once built up the tracks however look the part and are quite robust.



TOW launcher with wiring added

Tools refined; clamps thinned



Steps 8-17 are all related to building up the upper hull. At this stage I skipped to Step 11 and added the limited upper hull interior as I wanted to join the upper and lower hull before adding on all the fragile upper hull detail. Joining the two hull halves requires a little care, starting with gluing from the rear. The join line on the hull sides needs careful sanding afterwards to simulate the smooth seamless transition as per the real vehicle, this is where I would recommend Tankograd's excellent publication on the Wiesel 1 to assist in getting the appearance correct. A few hull weld seams were added from stretched sprue where required which on the actual vehicle are quite smooth as you would expect from the modern manufacturing process.



TOW launcher barrel after much filing/sanding

TOW missile tube modification. Note missile just visible



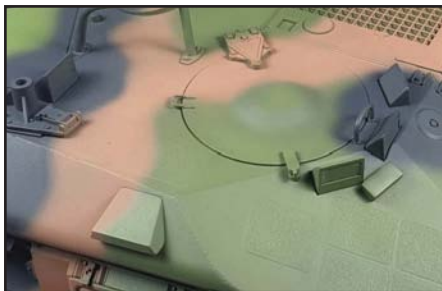
Finished Wiesel building stage. It can be broken down for ease of painting

The two main side fenders (A12 & A13) are VERY tight into the hull sides, as they "click" into place. Most of the hull detailing is quite nice, with only the onboard tools mounting points on the front of the sloped upper hull front being quite poor. These were filled and the tools placed on the hull front as per reference images jammed through the crew access grab handle. The finer details such as the tool clamps on the hull side were thinned for better appearance and the tools themselves reworked with some engraved woodgrain on the handles with a pick stolen from Takom's Panzer 1B kit added. The etched exhaust & cooling screens fold up easily enough and can be held in place with just a touch of cyano. Steps 18-19 involve the buildup of the TOW missile launcher system which is basically a standalone sub-assembly all by itself. The actual launcher itself is very well detailed, however the launcher "barrel" is far too thick compared to the actual weapon. A round rat's tail file was used to remove most of the excess

plastic, with wet & dry paper wrapped around a paintbrush handle used to smooth out & finish the inside of the barrel. Care must also be taken to remove the external join line, which after a few attempts I was satisfied with. If the launcher is to be depicted in a loaded condition Takom gives the modeller a missile tube to slot into the launcher, however this is shown with the end cap on. I ended up sawing off the endcap and scratching up the tube end out of leftover P.E, with the missile head fitted internally in the tube made from an old 1/35 Nebelwerfer rocket & headlight I had in the parts bin. Just a little wiring is required, and the launcher can be painted & fitted after the rest of the vehicle is finished. Step 20 shows the assembly of the single figure included with the kit, which builds up quite nicely. In this instance I wasn't brave enough to attempt the Bundeswehr Flecktarn camo on the uniform, a job for another day!



NATO Green laid on as a basecoat



Basic camo applied. A tighter demarcation was required after this stage



AK's NATO paints set

Priming & Painting

Most of the kit supplied options show Wiesel's in the familiar 3-tone NATO camo favored by the Bundeswehr forces, with just the one vehicle in desert camo. One of the schemes shown in the Takom profiles depicts a Wiesel attached to the International Security Assistance Force (ISAF) operating in Afghanistan in 2011. As this has a nice large green ISAF logo on the front it makes for an interesting detail.

Just for something different I decided to use AK's "New Formula" acrylics for the 3-tone scheme rather than the usual reliable Tamiya acrylics. In hindsight I should've probably primed the build first as the rather soft acrylic paint wore off on edges easily. The

AK acrylics were mixed with AK thinner and sprayed easily enough, however I found as per usual with this style of acrylic paint it's very hard to get a tight demarcation on camouflage schemes. Some worms of Blu-Tac were rolled out & used to tighten up the edges of the camo segments. The paintwork was sealed in with floor polish, decals applied and resealed with floor polish prior to weathering commencing. Various details were touched in with brush applied Vallejo acrylics with the roadwheel rubber sections sprayed with Vallejo's Dark Rubber. The TOW launcher received a few different shades of khaki and green acrylic tones to stand apart from the vehicle itself as seems to be apparent on reference pics.

Weathering the Wiesel

Weathering commenced with an all over pin wash of Burnt Umber oils mixed with odorless thinners to pop any surface detail. Mig AMMO's Europe Earth and Dark Earth were used for the lower hull & tracks weathering, fixed with AMMO pigment fixer. Some of the mix was flicked here & there onto the rear and sides for added affect. Where dust areas were required on the upper hull a mix of Abteilung Light Mud oils and thinners were used as a localized dust wash, along with more of the pigments used on the lower hull. AK's Ultra Matte Varnish was applied sparingly over the build, with just a hint of

Decals sealed in prior to weathering



Details picked out with Vallejo acrylics





Finishing Details

The front mirrored headlight reflectors were picked out using a chrome Molotow pen. The taillight and side flasher lenses were painted using Tamiya clear shades and then weathered to blend in. The onboard tools were painted with Vallejo acrylics and received weathering with thinned oils. The rather well detailed MG3 received a coat of Tamiya semi-gloss black and was metalized using ground lead pencil. As a final little detail a few 1/16 generic padlocks were scratched up & added as per reference pics – even in a war zone you need to lock things away!



KLEINE KETTEN

Final Thoughts

Takom's 1/16 Wiesel is exceptionally good value for money and a must have for Bundeswehr fans. With the MK variant now also available you could build both and have plenty of room spare on the model shelf. Highly Recommended





GRIZZLY END

Stu.Pz.IV 'Brummbär' Abt.219,
Czechoslovakia 1945





Tamiya's Late 'Grizzly' modelled by Mark Neville





The brutish side-profile of the Sturmpanzer IV showing off the 'Late' production features of simplified upper hull, StuG III cupola and steel rimmed road wheels the most



If there wasn't photographs of vehicles wearing this camo scheme it would probably be considered most unlikely!

In reality it was probably quite effective on a vehicle with such a tall profile.

More kits than time...

Spoilt for choice. My family must get sick of me mumbling these words; whether it be the hundreds of TV channels, mobile phones and games consoles, takeaway food...oh, and beer...we are in consumer overload. If the Mrs and myself do get time (eventually) to collapse and watch TV we seem to spend more time pondering and scrolling through what to watch than actually watching. I feel the same about our hobby. The sheer number of kits released seems never ending with the quality of many superseding previous versions with more and more obscure subjects available we can find it a little overwhelming to pick that next project with the ability to shop online all over the World, all day every day. If most of us stopped buying kits this very day it would be safe to say we would all need to live into our 120s to finish them all.

This brings me to the 'new' Tamiya Sd.Kfz.166 Sturmpanzer IV Brummbär Späte Production. It's not really 'new' any more, it was when we received our sample test-shot grey kit from The Hobby Company and keen though I was to get started on the kit being a fan of the later versions the kit depicts, other commitments and shiny things kept taking precedence, although a typically Tamiya quick-build it kept going back in the box. Every now and again I got a little nudge to continue the build, we are indeed very fortunate here at AFV to be sent samples of all things armour modelling related and where we can it's good to put them to use

(either ourselves or contributors). This included the DEF Model mantlet and gun, Eduard schürzen in photoetch and we also started to stock the range of superb T-Rex 3D printed resin detail sets. The final nudge was the release of the Panzerwrecks book on Combat History of Sturmpanzer Abt. 217, an excellent reference and feast of photographs of the Brummbär, a name coined by Allied intelligence which seems to translate as 'grouch' or 'grizzly' presumably a bear reference?). German troops nicknamed the infantry support vehicle 'Stupa', a contraction of 'Sturmpanzer'.

As with most Tamiya releases this kit has been much talked and written about over the few years since it's release, Tamiya just keep doing their own thing and let other manufacturers fight over the tit-for-tat new releases. Tamiya always produce quality, easy building kits with perfect fit. Some finer details are simplified in the sacrifice of a simplicity which has always been the case, in fact this kit could be 20 plus years old as it's only really their figures which have changed for the better over the last few decades. In short, this kit is exactly what you would expect; want to build it from the box? Fine, have fun with the zimmerit or go for a disc-pattern came scheme, the Brummbär is an interesting project whichever way you tackle it.

As with most WWII German armour the deeper you dig into reference the more confusing things get! Tamiya's original Brummbär kit of the 1970s was an 'Early' version, this Spate (late) version features the main differences between the two, the most obvious being the simplified (square-sided) upper hull structure, kugelblende MG mount (above driver's position), modified driver's visor, new cupola (as per the StuG III), deleted loader's large hatch and redesigned rear hatch. Roadwheels on the later models featured a mix of steel and regular rubber tyre rims and return rollers were the steel type. The kit doesn't offer some of the features of the very last vehicles such as extended front hull plates, three return roller mounts and the large exhaust tubes. As the Sturmpanzer IVs were remanufactured on various Panzer IV chassis in various factories if highly detailed accuracy is key to your project pick your unit or vehicle and be prepared for some

research to establish the finer details. I had originally picked a factory disc pattern Abt.217 vehicle in the Ardennes but that all stopped after seeing a colour plate and period images of an abandoned Stu.Pz.IV of Abt.219 in an absolute bobby-dazzler hard edged four colour scheme abandoned on Czech territory at the very end of the war in May 1945 (AFV Photo Album No.2 published by Canfora). Ten Sturmpanzer IVs were delivered to the unit in March with none operational by the end of the war, the photographs actually show a very last production vehicle but the text mentions remnants of earlier production vehicles also found.

This then became the basis of my little vignette. A broken-down vehicle of that unit abandoned and subsequently stripped of anything useful and gradually sinking into the earth.



Being sat abandoned for a while I've introduced some brighter orange rust to the exhaust muffler. The tread-plate cover presumably is to aid crew access to load ammunition into the rear hatches.



Talking Tamiya



Reference images show lifting hooks to be welded as well as bolted.

Even if you're not a fan of photoetch, there's no denying schürzen rails and plates are best in brass. Eduard do a set designed for this Tamiya kit (Ref.36 364) which is user friendly. I didn't use the main hull mounting brackets favouring thinning down the kit parts for a good plastic-to-plastic weld. Etched bolt detail was added and the mudguard brackets were substantially thinned also. Some more prominent nuts were added to the front skirts.

A part-used Panzer IV ET Model detail set was raided for mud guard and tool stowage parts.

ET Model have recently released a number of 3D printed detail sets to their range; set P35 208 gives a great selection of headlights and tail lights with ultra fine detail.

Lower hull and running gear date from the mid 1990s Panzer IV kits (and the later Jagdpanzer) with detail looking somewhat clumpy in places compared to more modern tooling. Bolt detail was added to the bump-stops.



The armour schürzen hang as per the originals which means you can pop them on and off at will while painting and weathering.

Tamiya missed the fire extinguisher, luckily T-Rex include bare frames in their 3D printed detail set TR35020 helping with my stripped / abandoned look planned.

Many newer Tamiya kits include the blessing of link-and-length plastic track, unfortunately rubber bands supplied here just won't cut it for many modellers. Keen to test the 3D individual link sets by T-Rex I'm happy to say these are the best tracks I've assembled (we're so impressed we decided to stock the range in our webshop).



Rear hull detail is good but maybe not up to modern tooling standards, or indeed as good as the Dragon kits of Panzer IV based vehicles. Note the tiny welds on the exhaust supports.

Spare wheel carriers were left empty to add to the abandoned appearance.

With the tracks being so nicely detailed I decided to show one side removed along with the T-Rex disassembled sprocket wheel (which does 'show-up' the kit part unfortunately). The tracks come ready de-sprued and are simply pinned together with the push-fit detailed track pins. At last, probably everything you could wish for in a track set!





A good coat of the Mr. Surfer always does wonders to show detail at it's best and gives a solid overall colour to work on, especially useful when a model has a mix of materials involved.

Even if you don't want to stretch to photoetch it would be worth cutting new armour skirts from thin plastic card as the kit parts are far too chunky; in reality the schürzen was only 5mm thick, designed to detonate charges before hitting the main structure of the vehicle.
Period images often show the panels missing and miss-

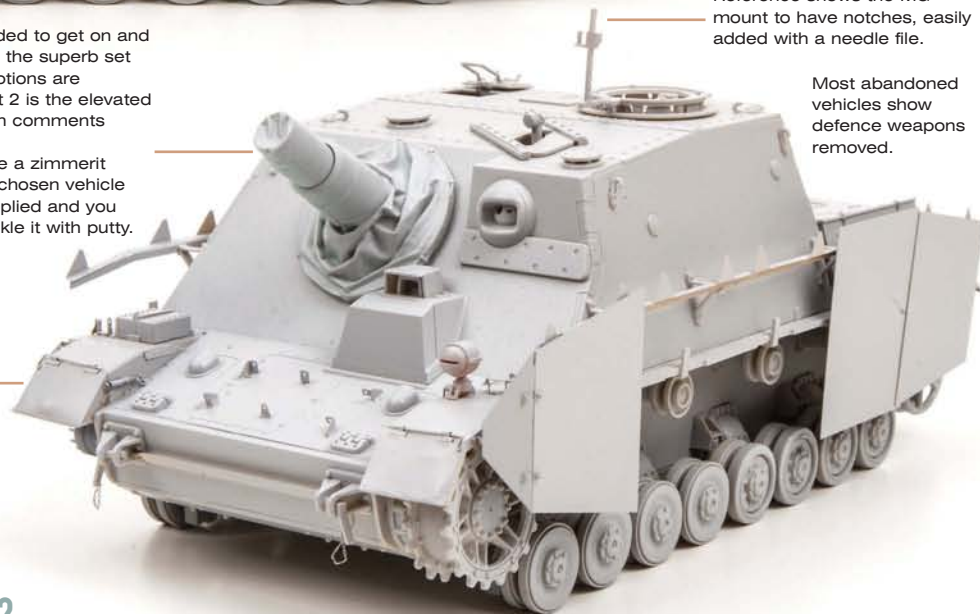
Reference shows the MG mount to have notches, easily added with a needle file.

Most abandoned vehicles show defence weapons removed.



The nudge I needed to get on and finish this kit was the superb set from DEF. Two options are available, this set 2 is the elevated barrel (no childish comments please...) DEF also produce a zimmerit decal set if your chosen vehicle has the paste applied and you don't want to tackle it with putty.

The ET Model sets contain tiny springs (which allow the front and rear flaps to be retained in a folded-up configuration on the real vehicle) The flaps and fittings are from photoetch which you can't beat for adding a little damage.



Better Late than Neville?

So if you want a really detailed Brummbär is the Tamiya kit the best starting point? Well if you want to build a late vehicle you'd have to say definitely yes. There's plenty of choice for an earlier vehicle with some beautiful kits from Dragon which need no aftermarket additions and a nice new tooled Academy kit (reboxed also by Airfix surprisingly) and even the nice Tristar kit (now boxed by Hobby Boss) which is again, an early version and very nicely done. The only other choice in 1:35 is the old Shanghai Dragon kit (Sturmpanzer IV 'Brummbär' Late, Sd.Kfz. 166 Dragon, No. 6081) which isn't part of their excellent new generation Panzer IV based kits range, not anywhere near as nice as this Tamiya offering. Unless you're just starting out with armour modelling you'll

probably at least want to replace the tracks; the style of track is correct with details like the indents on the solid guide-horns and the oblong cut-outs on the raised tread, but unfortunately the soft vinyl has poor definition. Some old-school thinning-out of certain parts and replacing the schürzen with plastic card will result in a little more finesse if you don't want to stretch your budget to photoetch and other add-ons. Zimmerit anti-magnetic paste is another addition to consider depending on your chosen vehicle, nothing beats a well applied putty coating but Eduard produce a photoetched set and DEF produce a water-slide decal style which is the best option.

Ditch The Disc

The real fun starts with the camo colours. Although not a huge amount of Sturmpanzer IVs were built there's a great choice of paint finishes to choose from. As my initial choice of the 'Disc Pattern' camo was going to require multiple masking sessions I decided on a lacquer based paint to give good 'bite'. MRP is very popular with aircraft modellers and sprays beautifully although we felt the RAL 7028 Dunkelgelb was a little dark so added some white to give a tough base colour.





Vallejo 'Mud and Grass' and 'Heavy Mud' were liberally applied to the lower hull.

Brush With Danger

After studying the colour profile and photographs of the vehicle in question my opinion is that the unit's Brummbärs were brush painted in the factory. Four colours are certainly visible and the contrasts in the black and white photographs make sense referring to the artist's colour render. Really though, I just thought it looked cool. I seriously could not work out how I could mask and airbrush this pattern and resorted to how it was probably applied in reality, by brush.

I went deliberately bright and light knowing weathering would tone things down considerably. The colours are AK acrylics from their figure range which are designed for brushing with high pigment and good coverage. The red brown is '3073 Leather' (perhaps this was exposed primer?) and the brighter green is '3024 Light Green Dots' from a Waffen SS set. The darker green was mixed.



I had in mind a darker, damp finish to the model abandoned during the Spring thaw and the peaty soil of the local area. The lower hull was given a good going over with a couple of convenient Vallejo Environment products; 'Mud and Grass' is a mix with the appearance of sods of earth and vegetation and 'Heavy Mud' has a colour and texture of exactly that. Both dry very stable and hard due to their acrylic base. Mixing an acrylic colour to match a dried version of the mud I gave an overall filter / wash which toned down the base colours with some splashes and speckles thrown in for some variety.

The next step really starts to give life and depth, dark washes made with Burnt Umber and Lamp Black oil paints and enamel thinner were flooded around details working on one section at a time including the mud and dirt.

After allowing the washes to completely dry I went for some oil paint shading to harmonise the camo colours and add some modulation across the flat, larger panels. The oil paint gives great control here, applied neat in small amounts it can be blended with a short-haired square brush with an almost scrubbing motion.



Here you can see the subtle shift of shade by blending the oil paint. Along with the other various weathering layers the brushed appearance of the camo becomes less and less and the damper, darker mood is more apparent.

The rear of the shürzen was left in dunkelgelb, maybe bare red-primer would have been more logical?





Applying a little logic, some heavy scrapes and scuffs were added to the skirts; easily done with a cocktail stick when the surface was damp with thinners from filters applied in vertical streaks. A build-up of mud and dirt (both damp and dry) thrown up by the tracks found it's way onto the lower areas of the skirts.

The extra weight of the mobile pill-box must have added tremendous strain to the Panzer IV chassis. Steel rimmed roadwheels were used on later conversions due to tyre damage from the howitzer recoil.

Tamiya still use the soft poly-caps which allow the wheels to pop on and off as you need making life easier for painting in this case. The inner faces of all the rims was done in primer red with the track contact ideas given a whizz around with a soft pencil.

Some primer is also exposed around the teeth of the drive sprocket and some bare polished metal caused by track contact, again an 8B pencil is ideal.



Damper, darker mud and light dry mud add interest to the road-wheels, not forgetting the back surfaces of course and the internal areas of the drive sprocket. Final dark washes again highlight details.

The tracks were painted and weathered with acrylic based paint. With some delicate detail and fine track pins I didn't want to risk any melting or distortion with lacquer based product. Dark red-brown with a touch of silver added gave the raw base colour over which were dusted a few earth tones and a few rust speckles. Contact areas again got a rub with the soft pencil. The earth tones and heavy deposits from the groundwork would be added later when working on the base.



I started to lay colour down on the gun cover using Lifecolor acrylics which brush really well and have a dead matt finish. I've gone for a contrasting dark colour as can be seen in war-time images. Other than the canvass cover there is little detail painting involved due to the stripped state of the vehicle. Paint damage was kept minimal due to the relatively short lifespan of the Sturmpanzer. Some exposed primer was applied by some delicate sponging followed by some scratches, scuffs and polished edges with a soft 8B pencil again.

Some of the sharp edges of components were highlighted with lighter tones just gently touching the edges with the side of the brush.

The initial toy-like appearance of the bright base colours had now taken on a more realistic and weathered finish. Any further work would now need to be done with the vehicle sat in it's environment...time for some groundwork...



Ace of Base



While at the World Model Expo I picked up a couple of these excellent quality bases from bucomodelbase.com. They differ from the usual bases on offer as they are a machined frame construction with a support for the foam insert provided. The foam can be carved (a cobbled street or road) or added to as I've done here to create the raised road. All of the messy work can be done onto the foam platform and be dropped into the frame when finished.

Very neat and very lightweight, an excellent idea at a reasonable

A light shaping with some decorator's filler was followed by an initial coat of texture with AK's Diorama range 'Dry Earth' texture with some dried fine grass mixed in for good measure.

As I wanted to emphasize the awkward abandoned state of the Sturmpanzer I decided to place it at an angle off the edge of a road with a classic elevated layout avoiding the vehicle being perpendicular to the edges of the frame.

Sinking Feeling

One thing I had to bear (no pun intended...) in mind with my groundwork was the soft pre-summer ground and the weight of these armoured beasts. I had to build the earth around the running gear, even more so than an active vehicle, the Brummbar would start to sink into the soft ground. This is important also with the timeline of my little vignette with the civilians returning to their home through the destruction and waste of war. Footage from current news unfortunately inspired this idea with the same tragic scenes in Eastern Europe almost eighty years later.

The execution of the groundwork was quick and simple, I feel the important thing is to gather the right materials. For the grass I've

used products from the Joefix range (both tufts and matting) and natural mosses to represent foliage and ferns all 'planted' in the earth textured paste before it dried (the same 'Heavy Mud' from Vallejo used on the model). Washes and highlighting of the earth and grass helped bring out the textures and harmonise the colours. In contrast the metallised road was textured with Vallejo 'Urban Soil' and coloured with damp and dry areas. The road leading to our AFV Modeller HQ (and the countryside) was used as a reference with a few 'phone photos providing something to work to. It's always good to gather some internet reference if you're looking to create nature unfamiliar to your part of the World.



Homeward Bound



I've wanted to find a use for these lovely figures from Stalingrad for some time now. Talented sculptor Alex Zelenkov has a wide range of civilian WWII period refugees and I felt this couple fitted my scene with the woman's expression quite contented as they return to their village after the war machines fall silent.

Again, I'll make my excuses for rushing figure painting. Inexcusable really but with well sculpted figures painting is made easy starting with a coat of black and some white 'directional light' from above. This creates a good basis for shadows and highlights with the colours laid down in thin layers of acrylics. I do feel sometimes civilian figures of the WWII period are depicted in very brightly coloured clothing not apparent in colour photographs of the time. I deliberately kept tones muted on these rural villagers.



I think abandoned or knocked-out vehicles always look better with groundwork to give some context. The groundwork took no more than 4-5 hours to complete and the figures less than that. More importantly it was fun and presents the end of this Grizzly quite nicely. Tamiya's late Brummbär is widely available and reasonably priced to allow a few upgrades within a reasonable budget.



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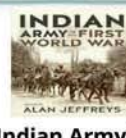
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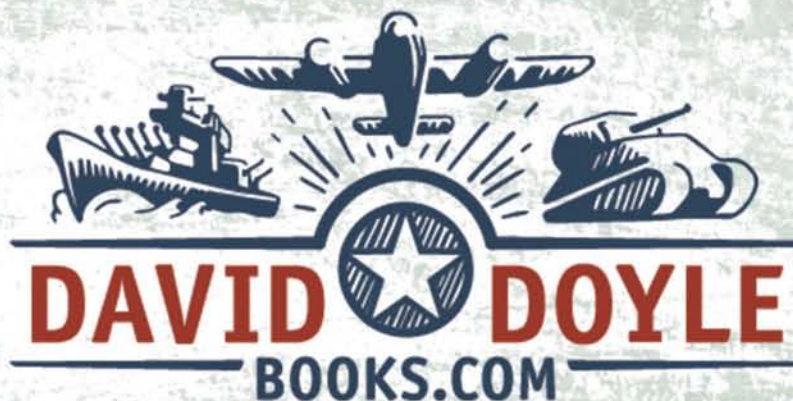
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GETS TO GRIPS WITH 3D DESIGN AND PRINTING TO
IMPROVE MENG'S NEW 1:72 TYPE 15

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The ZTQ-15 (aka Type 15) is a Chinese light tank that replaced the older Type 62 in 2018. It was officially showcased during a 2019 parade, sporting a modern multi-colour digital camouflage scheme. The vehicle is designed to complement heavier main battle tanks by being both more agile and able to operate more effectively at higher altitudes. It does this via the presence of oxygen generators connected to the engine system to combat the thinner, reduced oxygen atmosphere found higher up.

The tank is fitted with a 105mm main gun and a remotely operated weapon station consisting of a 12.7mm heavy machine gun and an automatic grenade launcher. The base armour package consists of composite armour with an additional small coverage of reactive armour. An enhanced heavier package is also available with an increased coverage of reactive armour on the hull front and turret.

Meng is well-known as a manufacturer of high-quality kits covering various genres and scales. They have a good line of 1:35th scale armour, and this is their first release in 1:72nd scale. It's touted as a simple build kit, with a small number of parts, even for 72nd scale. Much of the detail is excellent, but there are 2 weak areas in the kit. The turret stowage basket slats are much too thick and there are too few of them. The other (and probably the worse issue of the two) is the track – it has no inner face detail at all, not even demarcations between the links.

To add to this, the guide horns on the diagonal runs up to the idler and sprocket point vertically, rather than at 90 degrees to each of the track links. This is probably a side effect of making the track in fewer parts for ease of assembly but isn't acceptable on a kit these days. Not long after this release, a Leopard 2 was announced, and it was good to see they'd taken on feedback via social media posts. The tracks look much better on this release so it's very welcome and I hopefully look forward to more 1:72 releases.

1:72

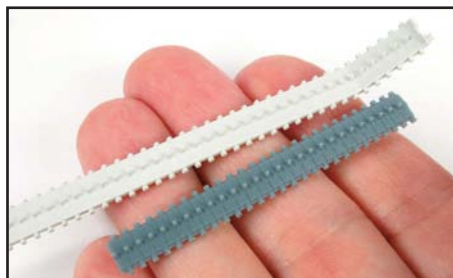


It seems the last few years has seen an ever-increasing use of 3D printing within scale modelling as consumer level printers have both dropped in price and increased in capability. I've always been a big fan of scratch-building and improving kit detail, and not wanted to miss out I started learning 3D CAD with a view to buying a printer. I downloaded the free personal licence version of Fusion 360 which seems to be a common and popular industry standard design package. I searched YouTube for some beginner videos and took it from there. A little later I bought a Phrozen Sonic Mini 8K printer as a pre-order, thereby getting it at a very good price and giving me a bit more time to get up to speed with both design and printing theory. It seems this was the first of the more affordable 8K resolution printers. In a way I treated the software / printer combo as another scratch-building tool and used this model as a test bed for a variety of

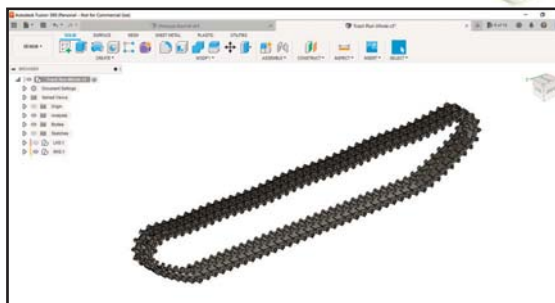
moderately complex parts and designs.

The lower hull and wheels are nicely detailed but are let down by the tracks as mentioned earlier. This was the perfect situation I thought for 3D printing some improvements. I spent a while designing a set of tracks, a single printed piece per side, to fit the model. This was certainly a challenge and I started by designing a single link using the dimensions of the kit part but with detail taken from photos after a Google search. I then printed out a short section of several links to see how it would fit the model. After that I completed the full run, which took a few iterations to give a snug fit around the kit's running gear. Having single piece runs per side made construction simpler and meant I could leave them separate for painting.

SCRATCH-PRINTING



The Kit tracks lack interior detail and the guide horns on the diagonal sections (up to the idlers and sprockets) are disappointingly set vertically rather than at an angle.

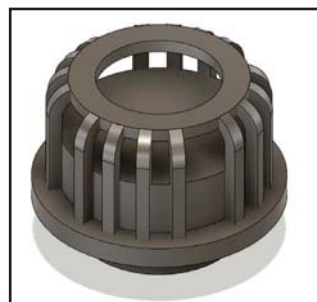


I designed a new set of tracks in a 3D CAD program, Fusion 360. It took several iterations and test prints to get them just right for the kit, especially around the sprocket. The 3D printed tracks, done as a single piece per side that just slide onto the running gear. This allowed me to paint them separately from the rest of the model.

The upper hull is impressively detailed. The main change I made here was around the auxiliary 200L fuel drums at the rear. The kit parts lack detail at the top of each drum and have an overly thick rim. I created some new ones, along with the mounts, that were simple drop-in replacements for the kit parts. The kit also lacks the hose piping that connects the drums to each other and the hull. To be fair the real vehicle can sometimes be seen without these too, but I decided to make life a bit harder for myself (!) and designed these as a separate piece. After much trial and error, I got something I was happy with and super glued the hoses to the barrels and hull. I noticed the mudguards were smooth and lacked detail, so again from photos I created some replacements and after printing them I cut the parts from the hull to accept the new ones.

The turret is very nicely represented in most areas, the only real weakness being the stowage baskets. The slats are

considerably overscale which has led to a reduction in the number present – 2 fewer rows than there should be. Of course, in 1/72 it's to be expected that they would most likely be thicker than they should, but I've seen other kits where similar items are much better. So back to Fusion 360! I made an initial design that fixed the issue but decided to also make versions with stowage straps present on each side. There was also some perforated detail inside the baskets that is missing on the kit that I added. I also designed a few smaller detail parts to improve the kit ones – the aerial mounts and a small cage that fits over the circular roof ventilator. The remotely operated weapon station benefitted from a bit of work. The hinged mount for the grenade launcher is a solid lump so I opened that out with a scalpel and cleaned it up with sanding sticks. I added a couple of small bits, again designed by CAD and 3D printed (a small box-like sensor alongside the machine gun and a tiny strip of ammo rounds).



Located on top of the turret is a ventilator housing with a small protective cage over it. Unsurprisingly the kit piece was solid (and moulded directly to the turret) so I set about designing a replacement. The new ventilator cage can be seen here. Although tiny, I find small details like this can really help add a bit extra to a model.



There is a protective cover over the commander's sight that can be left on or off, I decided to leave it fitted on this model with a view to building a second at some point with it not fitted. The only other small improvements I made to the turret were to drill out the centrally mounted lifting lug at the front top of the turret, and to add a couple of wire grab handles to the turret sides.

I've uploaded all the 3D STL files for this model to the Cults3D online marketplace. They are all provided for personal use – some for free such as the turret baskets, others like the tracks for a small fee:

<https://cults3d.com/en/users/alexjamesclark/creations>

As with the tracks, it took several test print iterations to get everything to fit the model and sit right, but I feel it was worth the effort. I replaced the kit supplied un-ditching log with a section of plastic rod. I scribed the grain pattern by dragging the tip of a scalpel along the length, up and down.



I designed some new rear mounted fuel barrels, complete with mounts that just slotted straight into the kit's rear hull. Often the real drums can be seen connected to each other and the hull top with a hose pipe system. This isn't provided in the kit, so I felt would be a nice addition to give the model some uniqueness.



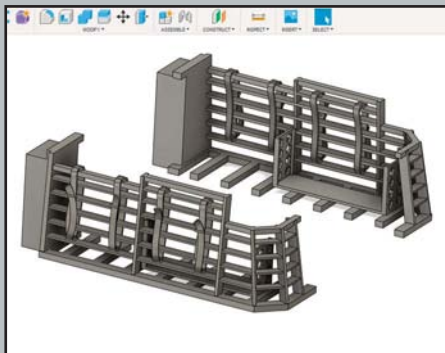
The kit drum parts lack any end detail and have an overscale rim. Being split into 2 horizontal parts would also make clean up tricky to complete without damaging the detail that runs around the circumference.



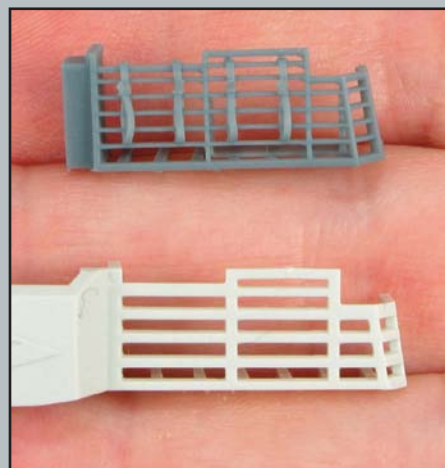
The front mudguards are simplified with no detail at all. I designed new ones, with the missing bolt detail and thin rubberised strip along the bottom that are missing from the kit pieces.



The kit mudguards are slightly too narrow to accommodate the overly thick side skirts. I'd designed the new versions with the correct width, so then thinned the side skirts accordingly.



After the tracks, the other big let-down in the kit is the design of the turret side stowage baskets. The slats on these are way over-scale, far more than I would expect even allowing for the small scale of the model. A result of this is that there are fewer slats than there should be.



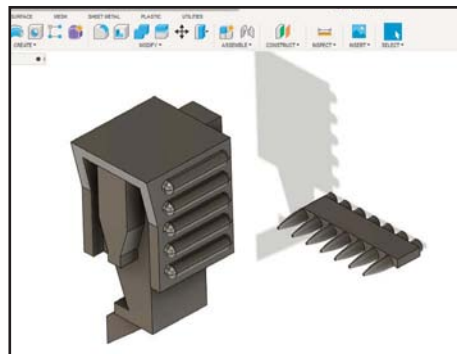
A comparison with the kit parts shows how simplified and overscale they are.



The printed baskets fitted to the model. In fact, these are a slightly earlier version I'd designed that lacked the stowage straps. I later replaced it with the final design, including straps, before painting.



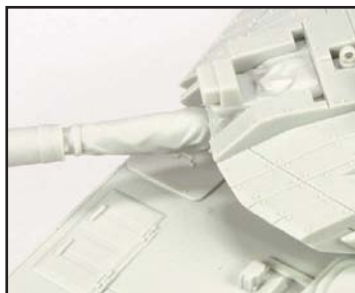
The kit aerial mount is a little soft on detail, not surprising given its tiny size, so I designed a new one.



Some real examples feature a small box (possibly a sensor) fitted to the remotely controlled machine gun. The kit doesn't provide this, so I designed one from scratch, along with a small section of ammo belt.



The sensor box and ammo belt printed and fitted to the gun.



The kit barrel includes a nicely represented canvas / flexible cover.



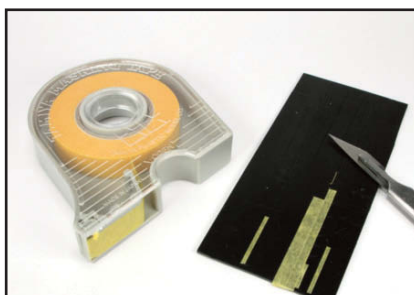
The outer wheels and tracks are test fitted at this point and will be glued after the model is fully painted.

The kit is mostly very well detailed. It's also crisply moulded and is just let down by the tracks and stowage basket. Another positive of the kit is the engineering and fit – all the parts attach perfectly out of the box.

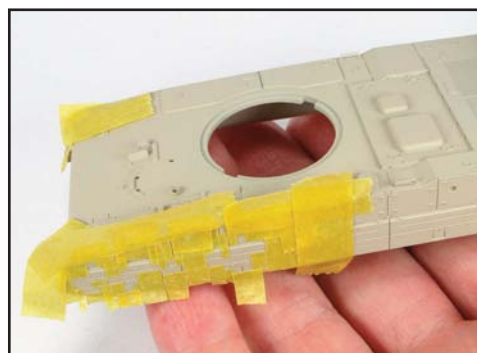
PAINTING PIXELS



After priming the model with AK Grey Fine Primer and Surface Filler, I applied a base coat of Tamiya Buff and White in a 1:2 ratio, thinned with Mr Levelling Thinner (MLT).



To prepare for the masking, I cut thin strips of Tamiya masking tape. These were a mix of single, double, and triple pixel widths.



I masked around the areas that would be light brown next. I did consider the alternative approach, i.e., painting the model overall light brown, then masking the interior of the areas to remain that colour. In some respects, this might have been easier, but I preferred to start with the lightest and predominant colour. I masked a few sections at a time and painted them, removed the masks to check the result and moved to the next sections.

The brown was a mix of Tamiya Flat Earth and White, in equal parts.

Once the brown sections were all done, I moved to the green (which thankfully had considerably fewer areas!). For this I mixed Tamiya Nato Green and Buff in equal parts.

With the main colours done, I mixed up a concentrated Dark Earth enamel wash. I applied this to a section of the model at a time.





With a clean brush and thinner, I removed the excess wash. As I did this, I worked it into the surface in random patterns, breaking up the base colours a bit to give a slightly grimy, shaded appearance.

I left more of the dark wash around the details and deeper recesses, such as those on the engine deck.



I put the model to one side for 24 hours to let the wash fully cure. I then lightly airbrushed a greyish-brown mix over the lower hull, allowing it to drift up the sides slightly. I sparingly sprayed this over the horizontal areas too, removing it from raised details with a clean brush dipped in thinner.



I had several options for colour scheme: plain green, 3-colour sprayed camo and a few variations on the hard-edged digital pixel pattern. The kit only references one of the pixel schemes, but this was the one I liked the most so went it – a mix of desert colours. I primed all the parts with AK Grey Fine Surface and Primer and sprayed the camo with my own mixes of Tamiya acrylics thinned with MLT (Mr Levelling lacquer primer). By far the most time-consuming part was all the masking required for the pixel pattern. A challenge to my sanity it seemed but one I was glad I took on. I weathered it with various enamel and oil-based paints and

weathering products. The accompanying step-by-step photos give more detail on this, but note I usually revisit one or two steps again to strengthen and build up certain effects until I'm happy with them. Once the model was painted, I finished assembling the remaining parts, such as the outer wheels and tracks, and added a couple of aerials from sections of rigid Nickel rod from Albion Alloys. A few photos I had showed some tanks fitted with different coloured flags when training, so I thought added a red one cut from thin kitchen foil would add a little splash of colour.



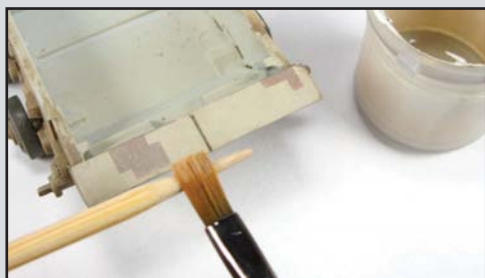
I painted the tracks with AMMO Chipping acrylic. This is a nice deep, reddish brown, and I followed this with a light overspray of Dark Earth enamel. As soon as touch dry, I removed it from the highlights and edges with a clean, brush dipped in thinner.



I enhanced the dark brown shadows by applying small amounts of enamel with a fine brush. I then blended this in with a flat brush and thinner. This complemented the earlier wash that was done with the same colour, strengthening the effect in certain places and allowing a more controlled refinement of it.



I applied AK Dark Brown Wash as a pin wash around the smaller details, focussing especially on the deeper recesses where shadows would be at their strongest.



I spattered the pale greyish-brown dust enamel mix I'd created earlier around the lower hull and some of the horizontal areas. Keeping this dilute gives some nice slightly translucent effects and helps blend and tone down the camouflage colours a bit more.



I brush painted the periscopes with Vallejo Metallic 'Mecha' Blue.



Reference photos show little in the way of chipping and rust, so I very sparingly created some wear and tear around the crew areas.

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I used a lighter version of the base sand to pick out some highlights with a small brush. This helps give the small details a bit of a 'push', especially for a smaller scale model.



I liberally applied a couple of different shades of modelling pigment to the tracks and lower hull, followed by flicking pigment fixer over the top to increase their durability.



I dry-brushed dark red-brown enamel over the track highlights to restore some contrast with the paler dust / mud colours.



I applied a final very dark pin-wash to the areas of deepest shadow.

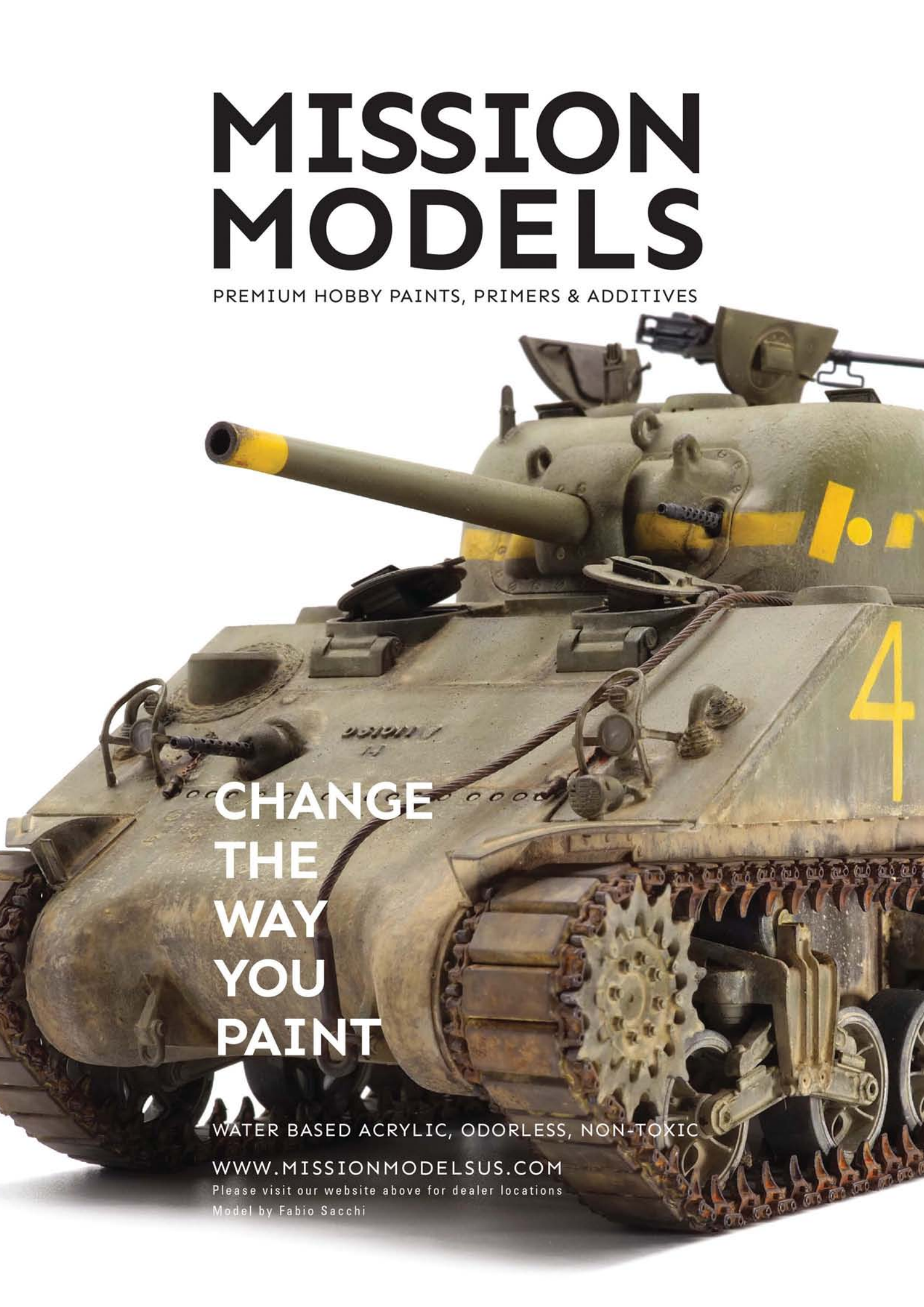


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BATTLE BUS

Lukasz Orczyc-Musialek
Gives Takom's Chariot
the treatment

MERKAVA 2D



The Merkava family of tanks enjoys constant recognition amongst modellers and manufacturers. I'm no exception and also find the IDF Chariots interesting vehicles and in my time I have built almost all the basic versions. Even with single colour painting, you can notice that modellers around the world are able to build appropriate contrasts and effects to make models of this vehicle look interesting. Undoubtedly, their silhouette is quite unique and stands out from other modern combat vehicles, as does the size of this vehicle. I had the opportunity to see the Merkava in the museum in Lesany near Prague and, frankly, it made a huge impression on me.

But going back to this model, in my opinion, the best way to make the miniature even more attractive is to add aftermarket detail. With all of the improvements in place the 'raw' model takes on a whole new look, I must admit that for a moment I considered leaving it unpainted but I gave up on this idea when I had the inspiration to create a little scene...

Further details on the construction of this model are available on my Youtube channel - COLDEMONSpl.



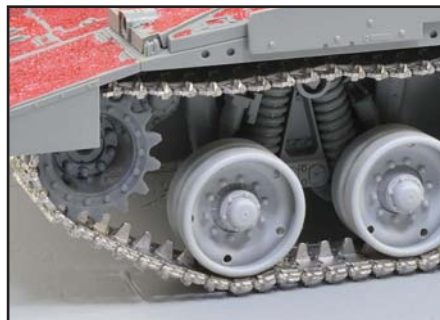
The Takom kit is pretty good but needs some tweaking if it's to be very accurately detailed.



I improved the wheels, or more precisely, I destroyed them a little! First, the rubber tyres have been significantly damaged, just like on the real vehicles. Secondly, I also put a steel-rimmed wheel on the model that adds a completely new look. Of course, you have to slightly modify the suspension, the wheels need touch the ground, and more precisely the tracks.



The rear part of the hull was uncovered because I did not mount baskets on it choosing to fit an aftermarket tow device.



The plastic tracks in the kit were replaced with metal ones from Masterclub. It is worth considering this step because metal ones look much better than plastic ones.

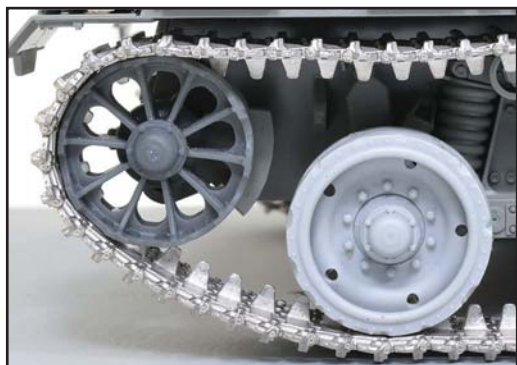


The surface of the tank was upgraded with an anti-slip coating. To prepare it, I used AK Interactive 'grit' from their anti-slip set and acrylic paint. I painted a section of the model with a mixture of contrasting red acrylic paint and Pigment Cement and sprinkled with the grit which results in a realistic anti-slip coating. It is worth checking which surfaces should be covered with anti-slip paste. Once prepared, it will be troublesome to remove.



At the front of the vehicle I installed a battering ram, which, like the tow, is produced by Quick Wheel. It can be built in a folded and unfolded version, all depending on your needs.

The entire finished model looks very impressive. All the extras do a great job and it was a pity to paint the upgraded model covered in all of it's 'jewelry.'



The idler wheel is a resin upgrade product from BitsKrieg.



The metal-resin barrel from the Magic Model is a model in it's own right and you need to spend some time on it, but once placed it enriches the model.

I masked the periscope lenses before I started painting the model. Previously, I covered their reverse surface with silver paint.

Noteworthy are the turned antenna rods, which are tipped with a special ball which is visible in photos of real vehicles, but appears very rarely on finished models.



Note all the additional elements that have appeared near the basket on the turret. The 'droid' is from Legend, and besides that, I added some elements to the Quick Wheels antennas and a self-made tarpaulin. I also installed an Eureka XXL tow rope and plates for painting vehicle markings.

The all-resin tow bar is manufactured by Quick Wheels in consultation with Desert Eagle Publication. The level of detail is stunning. The metal shackle is from RB Model and the handles are from a piece of wire.



The model is disassembled and ready to start painting. All elements that are not permanently glued to the model will be put on wooden sticks for easier handling during painting and weathering.

The entire model was cleaned with Model Degreaser to get rid of the impurities added during the construction. The product evaporates very quickly, so the model is ready for further work a few minutes after cleaning. Before applying any paint I first covered all metal parts with Mr Metal Primer.



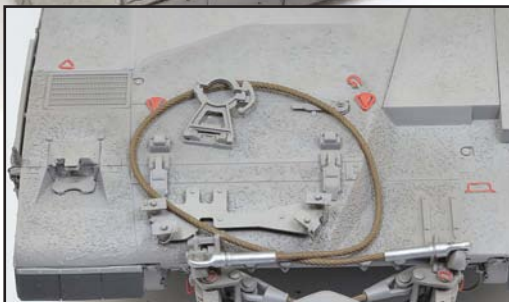
The whole model was covered with a grey undercoat from Ak Interactive.

The base colour is Quartz Grey from Hataka.



Two panels on both sides were painted with a different, older colour, also used in IDF. Thanks to this, I added a bit of variation in the uniform appearance of the entire body of the model.

Side skirts have been enhanced by painting markings and rubber skirts in the lower part.



The entire barrel covered with paint still looks very good despite the fact that you can no longer see the different elements.

Red details do not appear on every vehicle in service today, but on the model they are an interesting detail of the surface. Apart from that, the tow rope has also been painted in a shade of brown-green and aluminium.



In photos of real vehicles, I noticed some interesting details that I copied onto my model. The colourful elements that significantly enliven the appearance of the entire model attracted my attention.



The wheels painted and detailed before weathering.

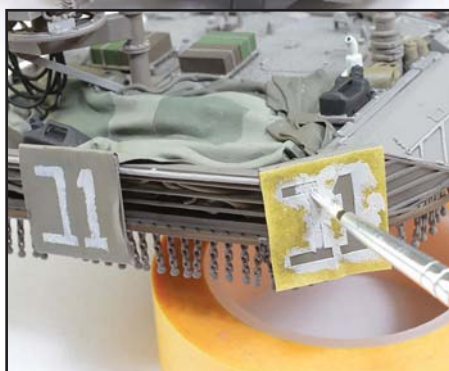


The droid is an interesting addition, although it is not easy to find good photos showing the places where the wires are mounted.

The entire model is prepared for weathering. Importantly, some details have been painted with a lighter shade of the base colour to make them even more visible.



The kit machine guns looks pretty good, in reference photos I'd observed white bands added which I've replicated although not sure of their use or meaning?!



Steel wheels are usually polished by contact with the tracks. The easiest way to achieve this effect is to polish the surface with a soft pencil and then with a silicone tip.



I painted all unpolished surfaces with a mixture of weathering paints. Thanks to this, they have a dirty filter that perfectly simulates dust.

I started painting the markings on the turret. I used templates from masking tape for this. Thanks to this, the markings look as if they were painted by hand, with irregularities. I painted the other markings in a similar way. The smallest ones, on the front and rear fenders, were hand-painted without any templates. Similarly, the bands on the main gun.

The wheels were also treated with weathering paints and also with a mixture of pigments. I applied them in different amounts and places additionally enriching some wheels with lubrication leaks.



A little rust here and there was prepared with oil paints. I tried not to exaggerate this effect, but it is worth paying attention to the photos of vehicles in service as there's a surprising amount of corrosion to be seen on certain elements.



Scratches can also be seen in photos of Merkavas in the field, especially on the side surfaces.



Some protruding parts were polished with a pencil and a silicone tip. This is the next step in building contrast on the model.



Again, I used a mix of weathering paint on the upper hull to apply some dust to the places least frequented by the crew. Also thanks to these paints I can build a contrast on the model. Note the nut and bolt used as a handle and fixing method for the turret.



Without neglecting the least visible parts of the model, I weathered the chassis and the bottom of the hull, the dried-up mud is perfect for this task.



The sides of the hull as well as the horizontal surfaces are dusted with pigment.



Stains, dirt and spills add more realism to the model. It is worth using photos of vehicles and analysing their appearance and size.







It was now time to create the groundwork. The irregular shape adds interest with the pavement and road section coming from Macone Models. Cast in resin they are easy to cut accurately and take paint without problem.



The Israeli bus stop is also manufactured by Macone and is a complete resin model. It has an interesting and unique shape. The Hebrew text is an interesting touch.



On the bus stop I added some old newspapers and graffiti which are decals from AK Interactive.



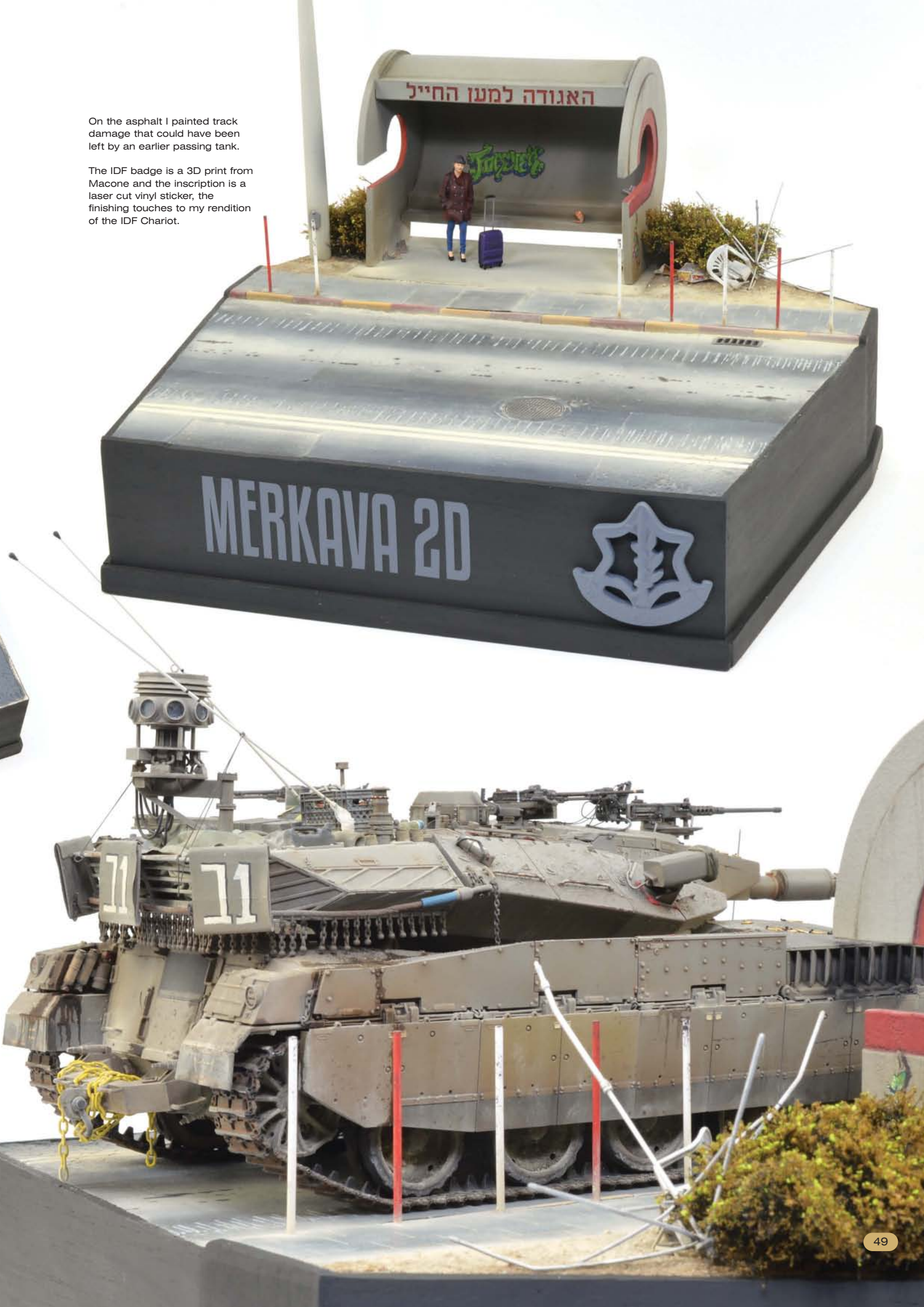
The resin figure is a 3D scanned and printed piece from Reed Oak painted with acrylics as is her suitcase.



The dilapidated chair and garden umbrella are from a Miniart set, and the vegetation from the Bear Scale Modelling. The metal posts are plastic profiles.

On the asphalt I painted track damage that could have been left by an earlier passing tank.

The IDF badge is a 3D print from Macone and the inscription is a laser cut vinyl sticker, the finishing touches to my rendition of the IDF Chariot.





MERKAVA 2D

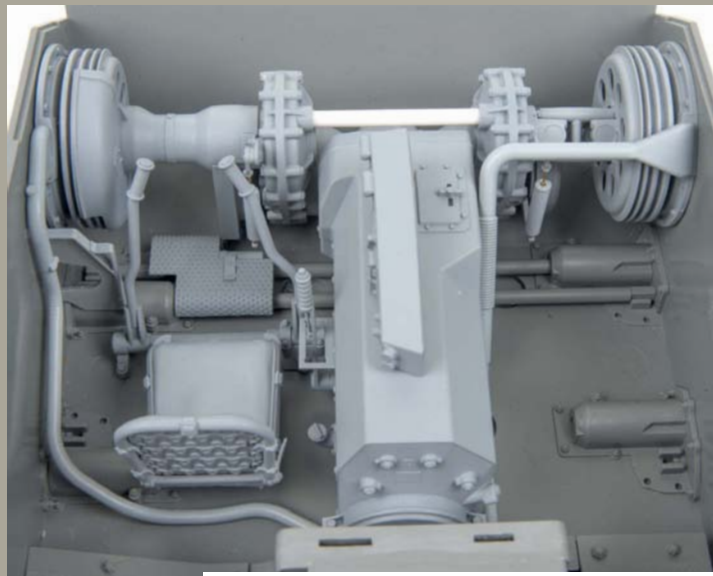
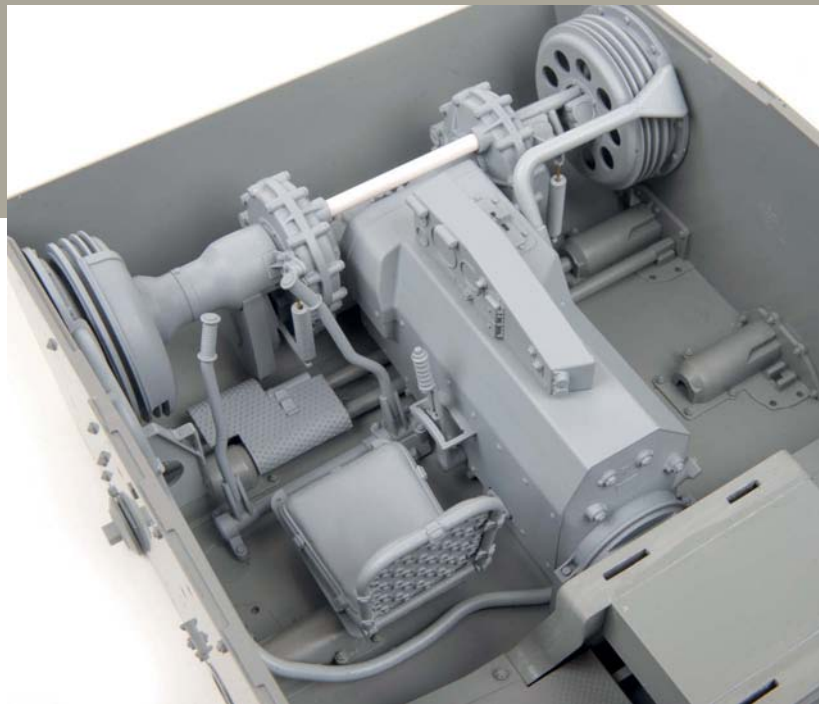
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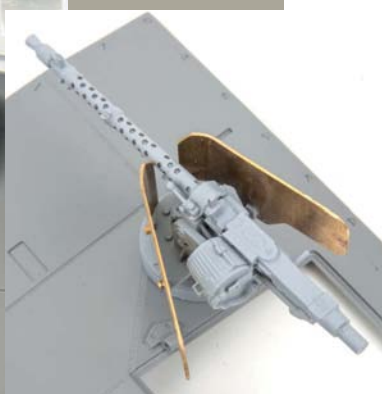
1:16 STUG III



NEW Driver's Compartment set
This upgrade provides the bow elements missing from the interior of the DAS WERK kit.

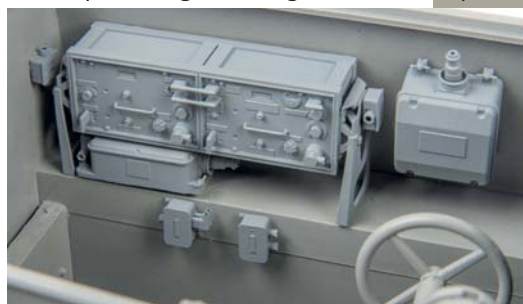


NEW StuG Commander
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Stowed MP40 Mounted just inside the hatches you can add these visible details now with this highly detailed MP40 clipped into its stowage rack.

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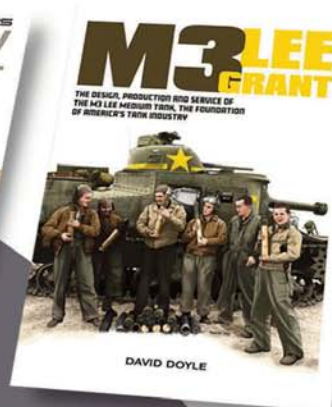


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breathes new life into the
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BRDM

with AT-5 "Konkurs"

2

The BRDM-2 is a fully amphibious armoured reconnaissance vehicle designed and built in Russia in the early 1960s. BRDM stands for Bronirovannaya Razvedyvatel'no-Dosornaya Maschina (= armoured reconnaissance patrol vehicle). The development and continuation is based on the earlier built BRDM-1. In this second version of the armoured reconnaissance vehicle, a number of things have been improved in contrast to the previous version. This includes: increased mobility, heavier armament and an NBC protection system. The vehicle is also characterised by a strong armour plating and thus offers protection against splinters and hand-held weapon projectiles up to 7.62mm. From the mid-1960s until well into the 1990s, it served in a wide variety of armies around the world. The wheeled vehicle made its first public appearance in 1966 at a parade in Russia. The German Democratic Republic army also used the vehicle in its ranks. Over the years, there have been many different versions of the BRDM-2. For example, the armoured reconnaissance vehicle was used as a mobile anti-aircraft platform or as a tank destroyer with various guided weapons. It was also used as a self-propelled anti-aircraft gun, as a command vehicle or as an NBC reconnaissance variant.





The Iraqi land forces had also been using USSR material for many years. I became aware of the armoured reconnaissance vehicle through a documentary on television. My interest in building this modern wheeled vehicle was aroused by a visit to an exhibition in May 2011, when modelling friends were discussing a group build. The decision to participate was quickly made. I discovered the kit in the Verlinden range.

At that time 3 different versions were produced; I decided to build the tank fighter version with the AT-5 "Konkurs", in 1:35 scale. The resin kit came with countless add-on parts and a heavy cast upper/lower hull, plus etched parts. I decided to build a BRDM-2 as used by the Iraqi Army in 1990 during the second Gulf War. My planned scheme was to paint the vehicle in a sandy yellow camouflage, using the zenithal light. As I was not yet familiar with this kind of painting, it became a curious adventure. I also wanted to present the BRDM-2 on a small vignette with at least 2 figures. This scene should take place at the beginning of the second Gulf War offensive in the Iraqi outback and show the tense situation!

Chassis

As already mentioned at the beginning, this is a somewhat older resin kit from Verlinden. I was aware from the beginning that I had to take a different approach than with a conventional plastic kit. It was important to plan in advance how and where all the parts would be placed and any dry fitting would have to be done using Blue Tack. For later attachment and gluing, I used superglue to put the parts in their desired positions. When assembling, I started with the tyres as well as the two wheel axes for the 4 retractable auxiliary wheels. These are driven by chains and give the vehicle excellent oversteer capability and extra traction, which was essential when leaving water hazards. The wheels were freed from the sprue and set down in no time, so they could later be placed excellently on the lower hull. A hand saw and a mini circular saw

were used to remove the tyres and expose the wheel wells. Visible air pockets on the lower hull were filled with Tamiya filler.

The splashboard was a bit more difficult to build. Since the original resin part could not be used, I rebuilt it with plastic sheet. After extensive research, I made a drawing to be able to produce the part to scale. It took a bit of patience and concentration to rebuild it. Besides the wall itself, countless rivets had to be punched out of plastic sheet and glued in place. The two lifting rods, which I made with the help of copper wire, form the final part.

Also at the air intakes, the maintenance hatches as well as around the vehicle plastic rivets and bolts had to be made using a punch & die set. In addition to the plastic rivets, I also attached handles made of copper wire, for which I used detailed and clear original pictures of the vehicle. Now that all the minor work on the chassis was finished, I started on the welding seams.

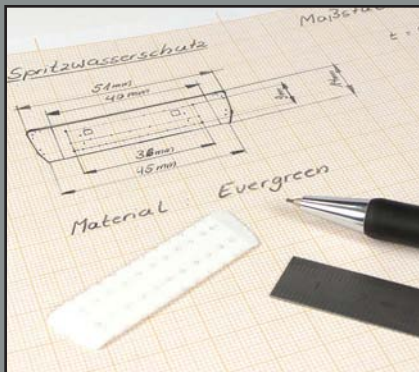
In order to represent weld seams on a model, there are various techniques. I decided to make the weld beads using Magic Sculp. After rolling out a thin layer and applying it to the tank, I pressed the weld beads into the still soft Magic Sculp with a syringe needle. It was a very time-consuming job, but it is definitely worth it and enhances the model considerably.

Next, I created the steel surface on the upper hull of the vehicle. To create a realistic looking steel structure on a vehicle, it was necessary to take a few things into account. To create an irregular surface, I used a mini-milling machine.

To do this, I let the cutter "dance" over the surface without applying much pressure; this creates impressions of varying depths. With the help of Tamiya Putty, diluted with a little plastic glue, I dabbed on the actual structure with an old brush. After the putty had a few hours to dry, I then worked on the surface with fine sandpaper.



he easiest way to remove the sprues from the wheels is to use a small saw and file. You can avoid confusion by marking the parts so it will find its correct place again later.



The surge board is sketched to scale according to the available references, then built up with plastic card and better detailed.



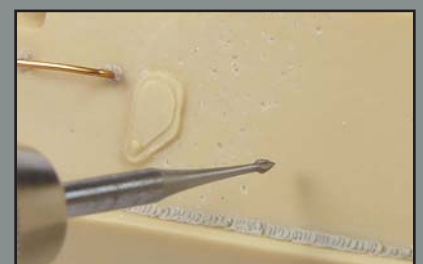
The weld seams can be made easy with Magic Sculp. The still soft material is applied in thin rolled lengths to the appropriate places and textured with a tube.



Missing screw heads are made with a useful Punch & Die set.



The photo-etched hatch covers and protective brackets are included in the kit.

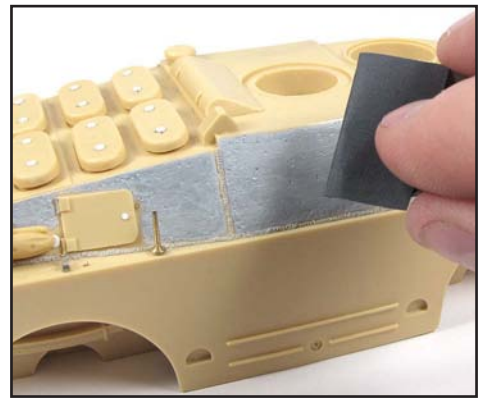


There are a variety of ways to represent rolling structures on a model. The best known is probably the use of putty. It can be used on plastic as well as on resin. When you push a small cutter against the surface, you get these irregularities. To keep control of the tool, it is best to work at low speed.

Next the focus was on the attachments. Besides the antenna base made of turned brass and the etched parts for the protective grids of the headlights, a tow rope from Eureka and a self-made storage box made of plastic profiles were attached to the BRDM-2. The final parts were the leaf springs, parts of the brake system and the wheel suspension. Unfortunately, Verlinden only made this into on the rear part of the vehicle. So I had to add the parts in on the front area from different plastic profiles.



If you mix the putty measures with plastic glue, you get a thin liquid mass which can be applied with a brush.



After drying, the surface can be sanded down again with fine sandpaper to achieve the desired texture.



The result is an uneven and fine texture that looks like a heavy steel plate after painting.



Missing handles are replaced with bent wire.



Strangely, the kit does not have a front suspension. Using the rear springs as a template, they are scratch build and additionally the brake lines are added using copper wire.

Painting

Now the BRDM-2 was ready for painting. To paint the vehicle in the right base colour, I again used some reference pictures from the internet.

The most important base is literally the primer. As always with my models, I used Mr. Surfacer 1200, slightly diluted with the appropriate thinner. Now any imperfections could be discovered and repaired.

After the model had a night to dry, I pre-shaded all corners and edges. For the pre-shading I used a mixture of Tamiya XF-10 Flat Brown and XF-1 Flat Black.

The following base coat was applied thinly in several layers. The desert yellow base was sprayed with Tamiya XF-59 Desert Yellow. To counteract the monotony I added a few drops of Tamiya XF-57 Buff to the base colour. Furthermore, Tamiya XF-2 Flat White was added to the lightened colour tone. The colour was sprayed with the airbrush from the front left with the aim to make the model lighter towards the top. Then individual areas and details on the BRDM -2 were given further shades.



The model is made of metal and plastic parts. Therefore a primer is recommended as a base layer before applying paint. Here diluted Mr. Surfacer 1200 was applied with the airbrush.



A mixture of Tamiya brown and black is used for pre-shading. All joints and details are sprayed with it.



XF-59 Desert Yellow is used as base colour, mixed with some drops of XF-57 Buff.

BRDM2

For this purpose, colours of the Vallejo Model Colour brand were used, which were applied with Windsor & Newton series 7 brushes. The next step was to spray on a thin layer of Tamiya X-22 Clear to protect the painted model and to create a base for Archer's Dry Decals. I kept strictly to my reference pictures, which showed a vehicle of the 5th Iraqi Corps of the 1st Mechanised Division. Now that all the markings were applied, the model could be sealed with a thin coat of Tamiya X-22 Clear and Tamiya X-21 in a 4:1 mix ratio.

Before I could get started with the weathering, a few details around the vehicle had to be painted. I started with the towing devices, which were painted on the vehicle with a mixture of Vallejo Model Color 909 Vermillion and 817 Scarlet. These red colour spots are very striking for vehicles from the Middle East and always catch the eye of the viewer.

The exhaust was also treated with rust colour. For this I used the colours from the "Rust and Dust Set" by Lifecolor. You can choose from all the important colours that contribute to a realistic appearance. However, you should take your time to ensure that the result looks realistic. I dabbed on the soot marks of the muffler using black pigments.

Then I painted the infrared lamps and the target optics with Vallejo Model Colour Glossy Black 861. The headlights were painted with an additional layer of glossy Tamiya X-22 Clear.

Weathering

The silk matt layer not only serves to protect the finished paintjob, but also as a basis for further weathering effects. Washes and filters flow much better on a silk matt surface.

First, the sandy yellow paint was made more interesting with an orange filter. I always use Humbrol H 82 Matt Orange, diluted with White Spirit from Windsor & Newton. The filter had to be applied very thinly and sometimes in several layers to get the desired result. The enamel colour now needs some time to dry thoroughly - in order to continue with the pin-washing afterwards. I applied this pin wash with Dark Wash from MIG to create the necessary depth effects and shades on the vehicle.

While the wash was drying on the BRDM-2, I started to paint the tyres. These were previously painted with the sand-coloured base colour and lightened.

The rubber tyres were painted with a mixture of Vallejo Model Colour 951 Flat Black and Flat Flesh 955 and then weathered with



According to the zenithal painting the upper part of the model is painted with a lighter mixture of the base colour.



For some contrast, several details are painted in different colour shades. For this purpose, appropriate Vallejo colours are hand painted.



The dry decals are applied on a layer of X-22. To do this, they were first cut out and then carefully rubbed on the surface of the model.



A silk matt surface is the best basis for the subsequent weathering. The paint is mixed from one part Tamiya X-21 to four parts Tamiya X-22.



The deep red colour for the tow hooks is mixed from Vallejo 817 Scarlet and 909 Vermillion and painted by hand.



The infrared headlights are first painted with Vallejo 861 Glossy Black and then covered with a layer of X-22.



The somewhat strong contrast is softened with a filter of Humbrol 82 Matt Orange.



For a little more depth in the otherwise quite monotonous sand-coloured surface, a pin-wash with Dark Wash from Mig Productions is applied.



For a used look the tyres are painted with a dark grey colour consisting of Vallejo 950 Black and 955 Flat Flesh.



The first dust layers are sprayed on with the airbrush. Diluted XF-52 Flat Earth from Tamiya with a drop of X-22 is used to achieve this.



Gunze Chrome Silver, covered with a layer of X-27 Clear Red, gives the tail lights a realistic look.



The exhaust is painted with the Rust and Dust set from Lifecolors. The soot is represented with Black Smoke pigments from Mig Productions.



Several filters with different oil colours add nuances to the base colour and imitate dust deposits.



In order for the paint damage to look realistic, it must differ in shape, colour and size.



Dry mud and sand in the wheel arches is represented with a sand-oil paint mixture. This is applied by dabbing in the mixture with a brush.



Grease and oil residue is best applied with Oil and Grease Stain-Mixture from Mig Productions.



The PSP rails from Pro Art Models are also painted with Lifecolor Rust and Dust Set.

Next I took care of painting and weathering the lower hull. First I sprayed a first thin layer of dust and dirt with the airbrush. For this colour I used Tamiya XF-52 Flat Earth, mixed with a few drops of Tamiya X-22 Clear. This again gives us a silky matt surface, which makes it easier to continue working with oil paints. After a short drying time, I started to create the different dust effects on the vehicle. These were applied with oil paints of Abt.502 Buff, White, Shadow Brown as well as Sin Industries Brown and achieve very nice effects that come very close to the appearance in a desert-like environment. I diluted all colours with White Spirit, which were then worked into the model using a wide brush.

After I had applied the dust layer to the vehicle, dried mud still had to be depicted on the wheel bays. For this purpose a mixture of fine sand and oil colours of Abt.502 Buff and Mussini Yellow was used. Using an old brush, the mixture was dabbed on the vehicle and very nice and realistic mud accumulations were created.

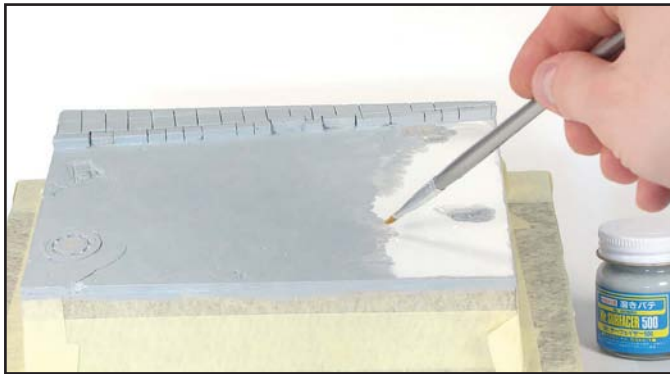
Some paint damage had to be applied to the vehicle. With a pointed brush - I usually use size 10/0 - fine paint chips were painted on logic areas where the paint gets exposed to wear and tear. I started with the light layers to resemble light damaged paint surface. For this I used a mixture of very light colours like Vallejo

Model Color 837 Pale Sand and 918 Ivory. Areas that were more used and stressed had to be rendered with a darker, rustier shade. Here I used the colour 822 German Camouflage Black Brown from Vallejo Model Color.

Finally, I applied oil stains to the vehicle using Oil and Grease Stain Mixture from MIG. This mixture was also applied to the wheel hubs for another more realistic effect. In addition, light rust and gradient marks were applied around the armoured scout car with oil paint.

Accessories

It was time to take care of the stowage and accessories on the vehicle. It was important for me to show an uncontrolled display of equipment. The "chaos" situation for the Iraqi troops was clearly visible in many revealing reference photos. So it was also the order of the day that some troop modifications had to be made to the vehicles. This included the storage box on the upper hull, which showed a deformed and aging end cover. Some accessories, like the spare canisters, were glued to the rear of the BRDM-2 using white glue. Then I attached the tension belts from ProArt Models and painted them afterwards. A very nice detail, which should not be missing on a modern vehicle. The final part was the PSP plates from ProArt Models as well as a RPG -7 from Tank fixed on the model.



The walkway is made of a foam board. The individual slabs and kerbs are engraved with a scalpel.

The road is simple plasterboard. After the pavement has been fixed, everything is primed with Surfacer 500.



After the primer has dried, colour comes into play. Acrylic paints from Tamiya are used for this.



For the base, filters and washes with diluted colours from Vallejo are used. They dry very quickly and you can apply the next layers immediately.



The terrain strip next to the road is made of fine sieved bonsai earth, which was sieved on diluted white glue. The concrete barriers have already been integrated.



With products from Mininatur and Woodland Scenics the vegetation is represented. Even though only a little of it is used here, this can make the scenery look much more realistic.

The Base

When planning and designing the landscape, I considered three important levels, consisting of pavement, road and sandy area. As a background to give the whole scene a bit more height, I decided to build a street lamp. Since the base area is relatively small, all the components of the vignette had to be precisely adapted.

The base plate was made from an old picture frame that I bought at a local hardware store. For the border of the base, balsa wood strips were used. The base was an approx. 3mm thick plasterboard, into which I glued various accessories such as manhole covers and cobblestones.

After drying, I sprayed the asphalt surface. It is important here to create different shades with different colours. This gives an additional visual depth to the landscape. The pavement and the curb stones were painted with different shades of Vallejo Model Colour. Afterwards, various acrylic colours from Vallejo are used to add contrast to the base colour. The colours are applied very diluted, similar to applying a filter.

Another depth effect was created with an intensive washing. I formed the base for the sand section first with putty and later with a mixture of water, white glue and finely sieved bonsai earth ground. The concrete barriers come from the MAiM range and are worked into the sand section after painting.

I designed the vegetation with the help of various products from MiniNatur as well as Woodland Scenics. I also used tufts of grass, which I made from the bristles of a paintbrush.

Many other small parts and details - such as beer cans, rubbish bags, water bottles, canisters and boxes - complete the landscape design.



The final look of a dusty road is achieved by gradually misting dust colours with the airbrush.





The figures

I didn't have to search long for my two Iraqi soldiers, I found them quite quickly at MIG Productions and Verlinden. One of the two figures actually represents a tank commander of the Russian army. But since the Iraqi army has many pieces of equipment and uniforms of the "Soviets", this figure fits very well into the overall picture. I only removed a few small things like the hands and the AK 47 handgun. I replaced the hands with resin parts from Hornet, because they are much better structured. The standing soldier got a waving flag made of Evergreen and copper foil. Both figures were painted exclusively with acrylic paints from Tamiya and Vallejo.



Conclusion

Even though the resin kit from Verlinden is very old, with the help of a few additions and a little modelling skill a good usable model could still be built of it. Good reference material was essential in this case. My thanks go to Roland Roth, who provided me with additional pictures and information material on the BRDM-2, and to Jörg Ruh and Roel Geutjens for the great support.

For me it was also the first time that I ventured into the modern realms of military modelling. But as you can easily see on some websites, "modern" is currently more popular than ever!





In March this year, we pulled the modelling community together to produce a book to raise money for Humanitarian Aid for Ukraine. We raised over £19,000 for the Disasters Emergency Committee Ukraine Appeal.

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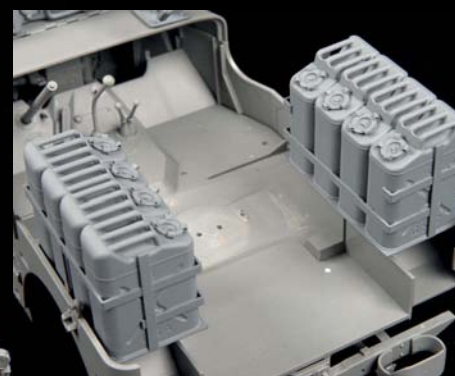
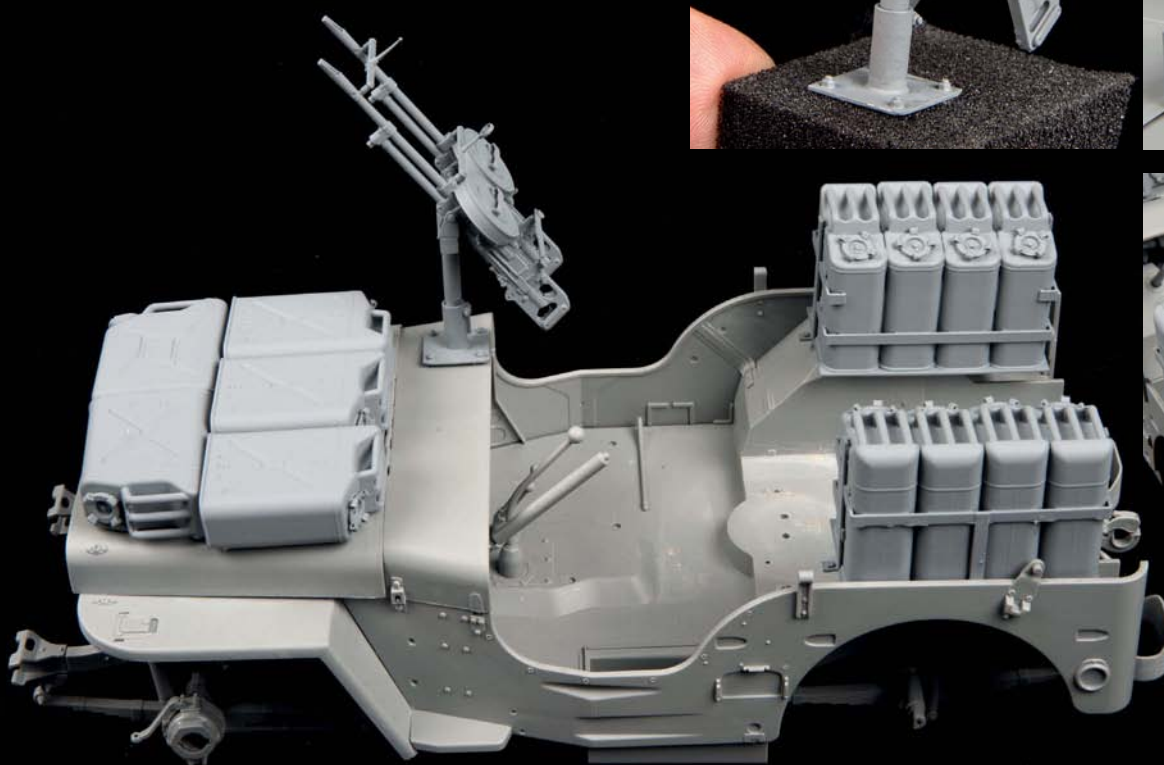
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