

*Wi*PRIME COLLECTIONS

II

PAINTING AND  
MODELLING ONE



# WiPRIME COLLECTIONS II: PAINTING AND MODELLING ONE

## EDITORIAL

The amount of hobby content that's been published in the pages of *Wargames Illustrated* over the years is, frankly, staggering. In my search for articles, I picked out enough to fill PDFs many times over (hence this being part one in a series of Painting and Modelling Collections) and have done much head scratching about what to show and where. Ultimately, I opted for a mix of authors and themes - a veritable smorgasbord of hobby delights for you to feast on.

This Collection features frequent *Wi* contributors such as Dave Taylor, James Morris, and Mike Peters, alongside painting legends like the venerable Kev Dallimore, one-off contributors with something cool to share, and (do your best to restrain your excitement), the first hobby article that I wrote for *Wargames Illustrated*.

What's the same throughout these pieces is the passion for painting, modelling, converting, and building that's on display. Even if the figures aren't for your period the techniques are transferable.

I hope this, and the subsequent hobby Collections, will be inspiring reference whenever you need a shove in the right direction before starting your next project.

Until next time, may all your airbrushes be clean, and your Nuln Oils upright!

James Griffiths  
Project Manager





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# CONVERTING A LATE ROMAN CAVALRYMAN

An extract from *Kevin Dallimore's Painting & Modelling Guide Masterclass*.

I suppose the first question to answer is: why do I still feel the need to convert models when surely someone, somewhere makes the models I am after? Well surprisingly not in this case. I wanted to create a unit of guard cavalry (or *Bucellarii*) as employed by the great Byzantine general Belisarius, during his wars on behalf of the Emperor Justinian. They date from the very beginning of the Byzantine period and incredibly nobody produces them!

I should explain my love for Byzantines. They were the subject of my first "proper" army that my Dad and I painted when I was around 14 years old. Many years later Byzantines would also be the last big army I painted, as I no longer paint or game with large scale forces. I have, however, retained a fascination and nostalgia for those Eastern Late Romans.

Lack of available models is not the only reason for converting though; I also wanted a unit that, while appearing uniform overall, allowed each trooper to be a little different to his comrades. That is one of the real joys of conversions; they allow you to create completely unique models. Fortunately my chosen subject looks similar to the late Roman cavalry of the Western half of the Empire, which Foundry do in fact make, so I decided to use those as the basis for my distinctive unit of Byzantine guardsmen.

## SELECTION OF MODELS

These were not going to be major conversions; just a head swap here, an arm there and the addition of some extra items. So I looked for models that not only were the right style, but were also easy to alter and remove parts from. The final choice of which cavalrymen to use was not too difficult as there were only a couple of really suitable models available. The model holding the lance up is the one I decided to concentrate on as the basis for most of the troopers. He has both a head and arm that are relatively easy to remove without causing major damage to the rest of the model (so long as you are careful). This meant I would not have to do too much making good and restoration on the models and



could concentrate on adding the bits I wanted. I also used the similar bowman in the unit, but he required more work. Finally I had to find some other donor models to provide me with a selection of different heads and useful arms (these all came from the Late Roman or Arthurian ranges, both infantry and cavalry). The horses are the Late Roman variety, which only needed a few extra details to turn them into fully Byzantine ones.

*Right: The essential tools for this kind of work are; top to bottom, home made sculpting tool (a pin attached to an old paint brush haft), scalpel, various small sculpting tools.*

*Below: The figures before being cleaned up.*

## TOOLS YOU WILL NEED

The essential tools for this kind of work are: scalpel, file, side cutter, various small sculpting tools, plus a mini-drill and drill bits and a fine razor saw to do the cutting up.





## CONVERTING A LATE ROMAN CAVALRYMAN

**WHAT ARE YOU GOING TO DO?**

Now I had all the models and equipment it was time to decide how to create the conversions. It is worth taking some time to consider this, so that you don't waste too many models in the cutting up process! Byzantine cavalrymen generally looked a bit "fancier" than their Western counterparts, so I thought I would add a cloak plus some tufts of feathers as a rank distinction for the unit's elite status. That took care of the additions, but it still left me with the basic problem that I was creating a unit all based on just one type of model.

As I wanted this unit to be quite varied I decided I would need to move some head and arm positions. That way each trooper would look individual, even though they were all based on the same model. This also meant I would have to be very careful when cutting bits off, making sure I did not damage items that I wanted to reuse - like arms and heads - which is why I had also chosen the other donor models to provide a stockpile of extra appendages. The raised arm position could clearly be changed to a lowered or partially lowered position, and the head could be made to look the other way. These would both be fairly simple jobs, not requiring any advanced sculpting ability.

**CLEANING THEM UP**

Before cutting up any of the models I cleaned them in the usual way, chopping off big bits of flash with the side cutters. The next job was to make sure the lance fitted properly, so I closed up the open right hand and then drilled out the fist with a drill-bit to match the size of the lance (in this case a steel pin). The clean up was then finished off with a scalpel to remove larger casting lines and then the fine file to get it all nice and smooth. This is the same basic procedure that I use for all models I am going to paint.



*(Top to Bottom) A: Before cutting up any of the models clean them in the usual way, chopping off big bits of flash with the side cutters.*

*B: To make sure his lance fits properly, close up the open right hand and then drill out the fist with a drill-bit to match the size of the lance - a close fit is essential if you want the lance to remain attached to the rider permanently.*

*C: Larger casting lines were removed with a scalpel, the blade is carefully scraped across the mould line, gently paring away the metal.*

*D: The clean up was then finished off with a fine file to get it all smooth, this is a fine 'rat-tail' file.*



## CUTTING THEM UP

When I was cleaning up the models I realised that if I was to remove heads and arms with the side cutters I ran the risk of damaging the rest of the model that I wanted to use. Side cutters' jaws are quite crude and I needed a more precise and less destructive way of removing heads. I chose a razor saw, which has very fine teeth in its cutting blade and so destroys the minimum amount of metal when it cuts. I would not advise using a circular saw blade in the mini drill even to do really fine cutting work, as these can be dangerous. They jam very easily and then tend to jump about unpredictably and are not recommended unless you are very near an A&E department!

I took off the right arm first as this allowed better access to the head, which was sliced off next. So now I had a headless torso with an amputated arm. If I was careful in removing the bits, I should be able to stick those same bits back in new positions. Easy... well not quite.

## STICKING THEM BACK TOGETHER

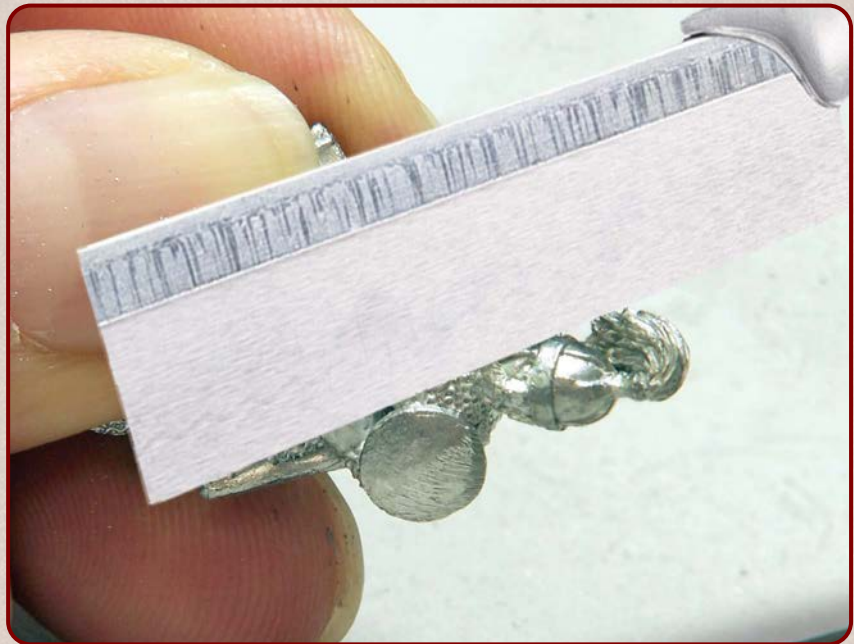
I am obsessed with my models being around long after I am gone. During their (hopefully) long lives I fully expect them to be handled by people with less, erm, er, experience at handling models than me. Therefore I wanted to make sure these conversions really stuck (bad pun intended). The only sure way to achieve this was to "pin" all the joints when putting the heads and arms back in place. This involved drilling holes in all the component parts and gluing steel pins in the joints. The added advantage of this is that you can swivel the arm or head around on the pin before gluing to get the best and most convincing position. The holes for the pins were drilled with the same size drill-bit as the one used for the lance fitting. In fact the "pins" I used were the off-cut (otherwise wasted) ends of the lances themselves! I was careful to make sure the holes, and therefore the pins, didn't interfere with each other.

## PINNING JOINTS

Pinning joints may seem tedious, but it is good practice on models that start out life as components to give them greater strength and longer life.

The "pins" were the off-cut (otherwise wasted) ends of the lances themselves!

*Right: The hole drilled into the body to receive a steel pin. Be extremely careful if you are hand holding the model while drilling.*



*Top: I chose a razor saw, which has very fine teeth in its cutting blade and so destroys the minimum amount of metal when it cuts. I would not advise using a circular saw blade in the mini drill even to do really fine cutting work, as these can be very dangerous.*

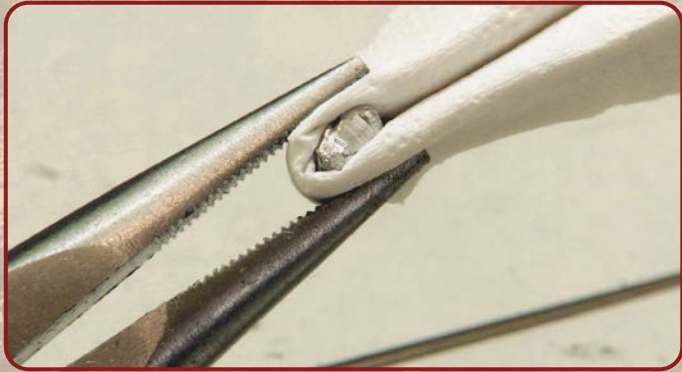
*Above: The right arm was removed first as this allowed better access to the head.*





## DRILLING

Holding a very small item, such as a model's head or even a body, while you drill it can be very tricky. The metal gets hot when you drill due to friction, and it is difficult to hold the object tight enough to prevent the torque from the drill spinning the whole thing around and probably breaking your expensive drill bit (or drilling into your fingers)! The best way to hold these small components is in the jaws of a pair of long nose pliers. Wrap the component in tissue first to protect it from any damage the pliers' jaws might cause. When drilling, especially small items, don't try to drill the hole to the final depth you want all in one go. If you do you will probably



fail and the drill-bit will get clogged with metal, jam and most likely snap, possibly in the hole you were trying to make, rendering it useless. You may have to throw the whole component away and start again. Drill in surges, almost dabbing at it. Drill little amounts at a time, removing the drill bit from the hole and cleaning off some of the swarf (shavings of metal) from the drill-bit as you go. This should avoid expensive breakages and much swearing!!! Be very careful when drilling, drill away from your fingers and hold the components to be drilled in pliers if you can.

## GLUING

As the pins were a very close fit to the holes (with no gap filling required) superglue was ideal for securing them. Take the usual precautions with superglue (like having a de-bonder or solvent like Acetone on hand to un-stick yourself!). Superglue accelerator can prove useful here to get a quick fix in place. I glued the pins into the body first and then cut the pins to size to fit the holes in the components. The arms and heads were then stuck back onto the body in the new positions.

## THE OTHER MODEL

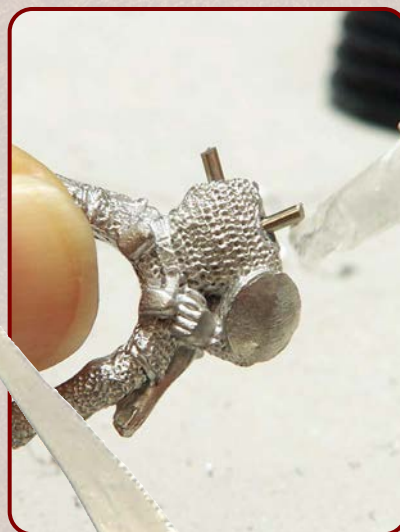
The other model has a head and arm taken from a different model. (He is still a Late Roman, but with a different right arm and helmet, to the model shown earlier.) All the components were attached in the same way as before.

## LANCES

I then made lances for the cavalymen. These were steel wire, hammered flat at one end, ground down to give a point, cut to length, and the cut end also ground to give a round butt end. Lastly I added pennants to the lances, made from aluminium foil, folded round the pole and secured with superglue. The whole lance was then stuck in place with superglue. Again superglue was ideal here as the components were all very tight fitting.

## MOUNTED

Normally I would paint the cavalryman separately from his horse, but as I wanted to do some additions that were attached to both horse and rider I decided it would be easier to stick him in place and paint them together as a whole when the conversion was finished. I do find painting horse and rider separately much easier and only do it this other way in exceptional circumstances.



*Below left: Superglue is used to glue the pins into the body first, and then the pins are cut to size to fit the holes that have been drilled in the components.*

*Below right: The head and arm stuck back in their new positions.*

*Cut out figure: The steel wire lances for the cavalymen, hammered flat at one end, ground down to give a point, cut to length, and the cut end also ground to give a round butt end, were all secured with superglue. The pennants are made from aluminium foil, folded round the pole and secured with superglue, the pennant will be folded to make it look like it is blowing in the breeze before painting.*





## GREENSTUFF

I decided to make my additions in Greenstuff two part epoxy sculpting putty. With my limited abilities on the sculpting front, I find Greenstuff the easiest product to use for this sort of job. When mixing the putty, make sure all the yellow is mixed in with the blue, and don't mix up too large an amount as it does go off quite quickly and you will waste it. If you warm the Greenstuff up slightly it becomes more elastic and easier to work. (Note: to keep unmixed Greenstuff "fresh" store it in the fridge, then warm it up to work with.)

## ADDITIONS

With Greenstuff in hand I began to apply my chosen additions to the models. Starting with the cloak, I put a very un-shapely blob of Greenstuff in approximately the right place and worked it very roughly into a cloak shape with the larger sculpting tool. Then I worked on the rough putty, smoothing it out and making folds and gathers in a hopefully convincing kind of way with the smaller sculpting tool (it is a good idea to look at other models and see how real sculptors do this and copy their work!). You can see that the cloak drapes down to lay on the horse's back, this is why I attached the rider to the horse before adding any extras.

Once I was happy with the cloak I moved on to other areas. I realised there was an unsightly gap at the arm/shoulder junction. Fortunately this was just where I had decided to add some tassels and they covered the gap nicely. I also added a cloak fastener at the neck and filled in the gap under the armpit with Greenstuff, using the finest sculpting tool to vaguely impress some "chainmail" detail under the arm.

Feather tassels and eye protectors were added to the horse for a more exotic Byzantine appearance. I shied away from doing any body alterations on the horse, just filling any slight gaps between the rider's legs and the saddle.



*Above: The rider stuck in place on horseback. I do find painting horse and rider separately much easier and only do it this other way in exceptional circumstances.*

*Right: Greenstuff two part epoxy sculpting putty.*

*When mixing the putty, make sure all the yellow is mixed in with the blue to make green!*



*Right: A blob of Greenstuff in approximately the right place was worked very roughly into a cloak shape with the larger sculpting tool.*

*Far right. The rough putty blob, worked on with the smaller sculpting tool, smoothed out and made into convincing folds and gathers of the cloak.*





## THE OTHER MODEL

I have done similar work on the other model, firstly adding a sausage of Greenstuff and then turning this into a cloak, then making the horse more fancy and “Byzantine”.

## BOTH MODELS

When all the additions were done I left them to dry overnight before painting. Actually I couldn't resist going back and fiddling with the conversions, smoothing a bit here and trimming off a bit there!

*Top right: Tassels which cover the unsightly arm/shoulder junction gap nicely. Cloak fastener added at the neck.*

*Right: Feather tassels and eye protectors were added to the horse for a more exotic appearance. Eye protectors are a tiny blob of greenstuff, with pinholes as detail.*

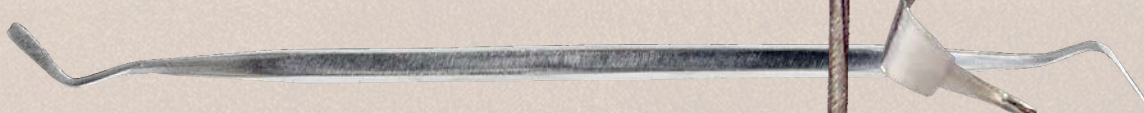
*Below Left: A sausage of Greenstuff added.*

*Below Centre: The sausage of putty worked on with the smaller sculpting tool, into convincing folds and gathers.*

*Below Right: The front of the cloak showing the fastener, and also his shoulder tassels again successfully disguising the join!*







Above: Fine quality sculpting tool.



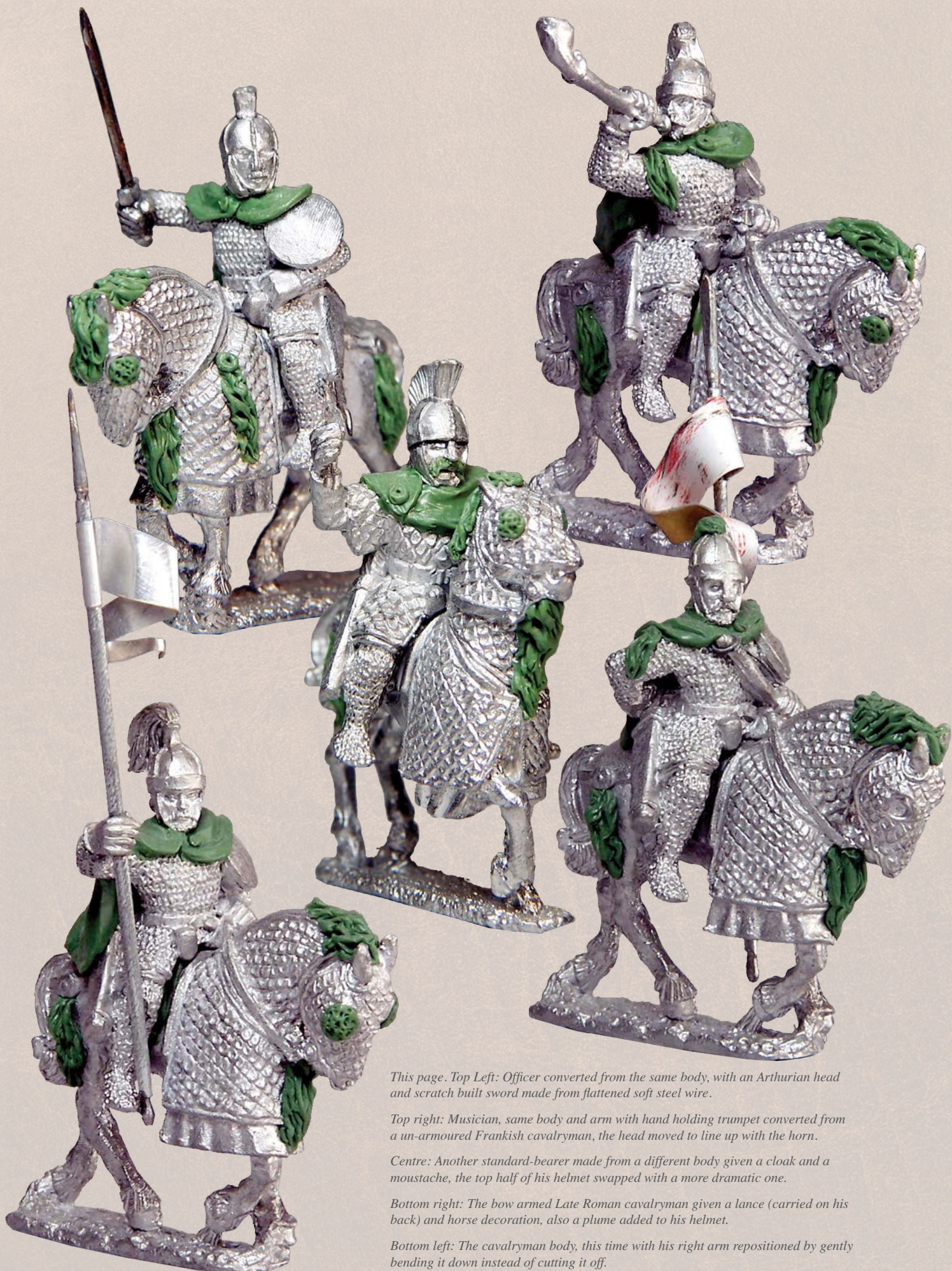
**FINALLY**

Hopefully this will inspire you to have a go at conversions. They are great fun and you end up with a truly unique model. Who knows, you may eventually go on to sculpt the things from scratch!

*This and following page. Some of the rest of the unit converted but, as yet, unpainted. I hope you will agree they make an interesting and unusual unit. Bottom left. The late Roman Cavalryman left not cut up but with Greenstuff parts added. Notice lance pennant made from an aluminium tomato puree tube. Bottom right. Standard bearer converted from the bow-armed Late Roman cavalryman model, with a standard made from an Early Imperial Roman Vexillum with Greenstuff "tassels" added!*







*This page. Top Left: Officer converted from the same body, with an Arthurian head and scratch built sword made from flattened soft steel wire.*

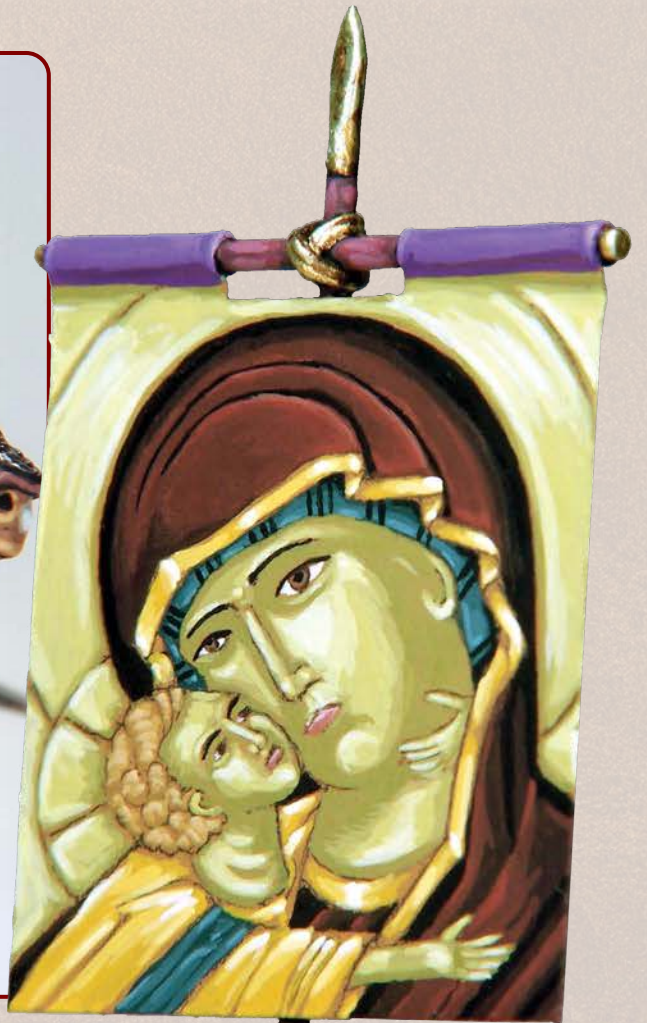
*Top right: Musician, same body and arm with hand holding trumpet converted from a un-armoured Frankish cavalryman, the head moved to line up with the horn.*

*Centre: Another standard-bearer made from a different body given a cloak and a moustache, the top half of his helmet swapped with a more dramatic one.*

*Bottom right: The bow armed Late Roman cavalryman given a lance (carried on his back) and horse decoration, also a plume added to his helmet.*

*Bottom left: The cavalryman body, this time with his right arm repositioned by gently bending it down instead of cutting it off.*





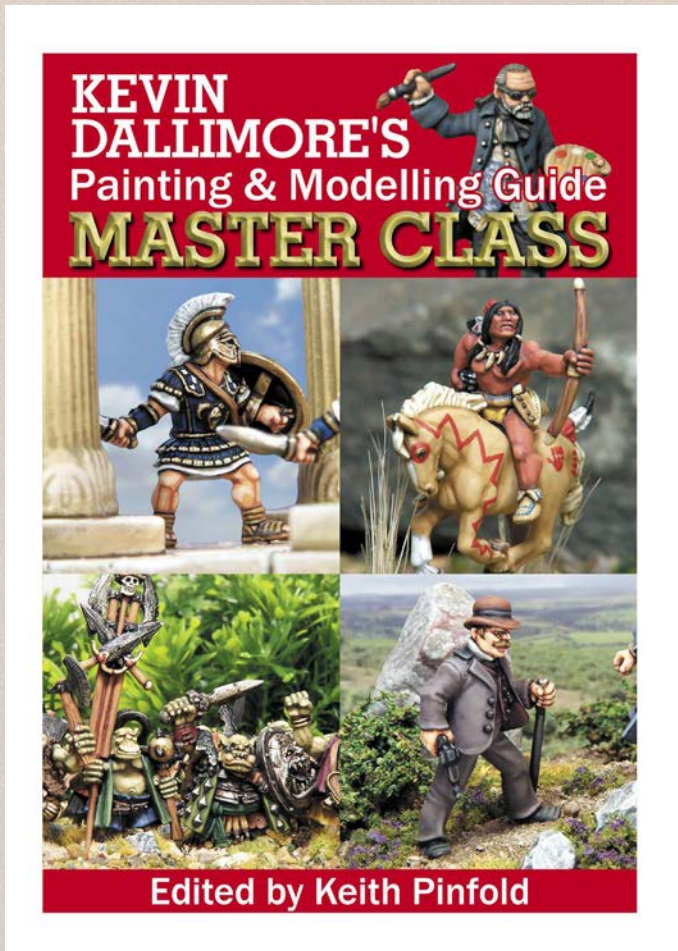
*This page above and below: The same converted cavalymen finished and painted. Right. With a hand painted Icon as his general's standard!*





# Kevin Dallimore's Painting & Modelling Guide

# MASTER CLASS



Everything you ever wanted to know about painting miniatures and models to a professional standard is contained in this 308 page book.

Kevin Dallimore and over twenty five other renowned and respected painters and modellers reveal the techniques they use to give their miniatures and models that great professional finish; techniques such as varnishing, dry brushing, non metallic metal, shading, highlighting, blending, textured leather and the use of diluted washes are all discussed in depth, together with many modelling ideas too; ideas for doing conversions, creating dioramas, making and painting scenery, vehicles and many more. All of the processes described in the many different articles are fully detailed and coupled with photographs of each important stage.

Initially, Kevin goes quickly through the all important basics before clearly detailing all of the advanced techniques that he and his fellow painters use to produce great looking models. There then follow many articles where guest painters and modellers share their thoughts and ideas on particular techniques when painting historical, fantasy and sci-fi models: Old West, Napoleonic, Ancients, Romans, Swashbucklers, WW2, Goblins, Orcs, Beastmen, Trolls, Judge Dredd and lots more. By copying the methods and techniques in this book and with a little determination and practice, everyone will be able to produce painted miniatures and models to a standard that previously they had only dreamed of.







## HOW TO...

*The Toad, kingpin of the Docklands' crime rings, awaits a "delivery" outside one of his warehouses.*

# ADD DEPTH TO YOUR MDF BUILDINGS

By Dave Taylor, from [davetaylorminiatures.blogspot.com](http://davetaylorminiatures.blogspot.com)

I've been planning out a steampunk/Victorian London gaming table for quite a while now, getting an idea of the kind of environment I want to play my games of *Infamy: Welcome To The Big Smoke* in. Urban environments require a lot of terrain and, thanks to the proliferation of great terrain companies out there churning out excellent laser-cut MDF buildings, creating a packed board is more possible than ever.

I decided to start my collection with the great centerpiece from 4Ground - the Warehouse from their *Whitechapel to Baker Street* range. I picked up my (incredibly weighty) box at my local gaming store during a recent Oldhammer event. While chatting with the guys who were throwing down with some *Rogue Trader* and *Warhammer 3rd Edition*, the topic of laser-cut MDF terrain came up. In particular, the impression that when assembled it had a certain "flatness" to it was raised, that it still looked "like laser-cut MDF". One of the veterans, Rusty, actually challenged me to make the warehouse not look like laser-cut MDF, and so the idea for this article was born.

I started to think about what it was that we, as wargamers, looked for in our miniatures and the battlefields they fight over. Once the thoughts of how terrain impacts the game via game mechanics are put aside, we are left to consider the aesthetic nature of the things we do.

In my opinion, depth is the thing we look for most in our miniatures. As we shrink representations of the human form down from a 1:1 scale towards 54mm, 28mm and even 15mm "scales", we see an increasing exaggeration of depth in things like the folds of clothing and the major lines on faces. We've come to expect a certain level of "character" that comes from this exaggerated depth.

Minatures that might have realistically scaled features might be considered "flat" and "bland". I feel that it's the same thing with terrain too, and with buildings in particular. However, as building terrain can be much more time-consuming than painting our soldiers, most of us are willing to overlook this for the sake of getting our games up and running.

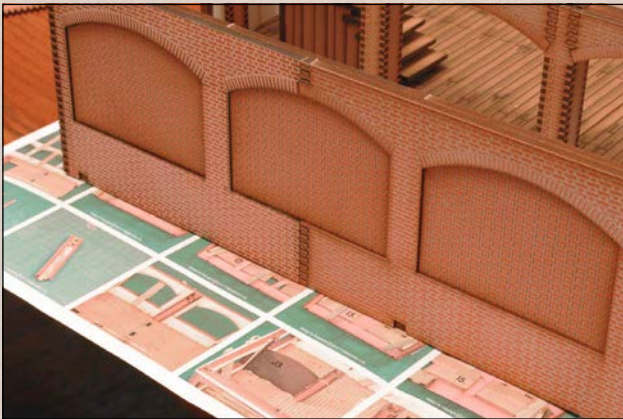
So, my mission was set. Look at how "depth" was already represented on this excellent building (layering, texture, tonal variation, and detailing), find ways to enhance these elements, and look at ways to reduce the impact of elements that broke the illusion of a tiny warehouse built from tiny red bricks.

My initial thoughts included finding:

- ways to cover the "cut ends/edges" of the MDF sheets.
- creative ways to cover the places where certain panels joined each other.
- ways to enhance the "setting".



**CONSTRUCTION - OUT OF THE BOX**



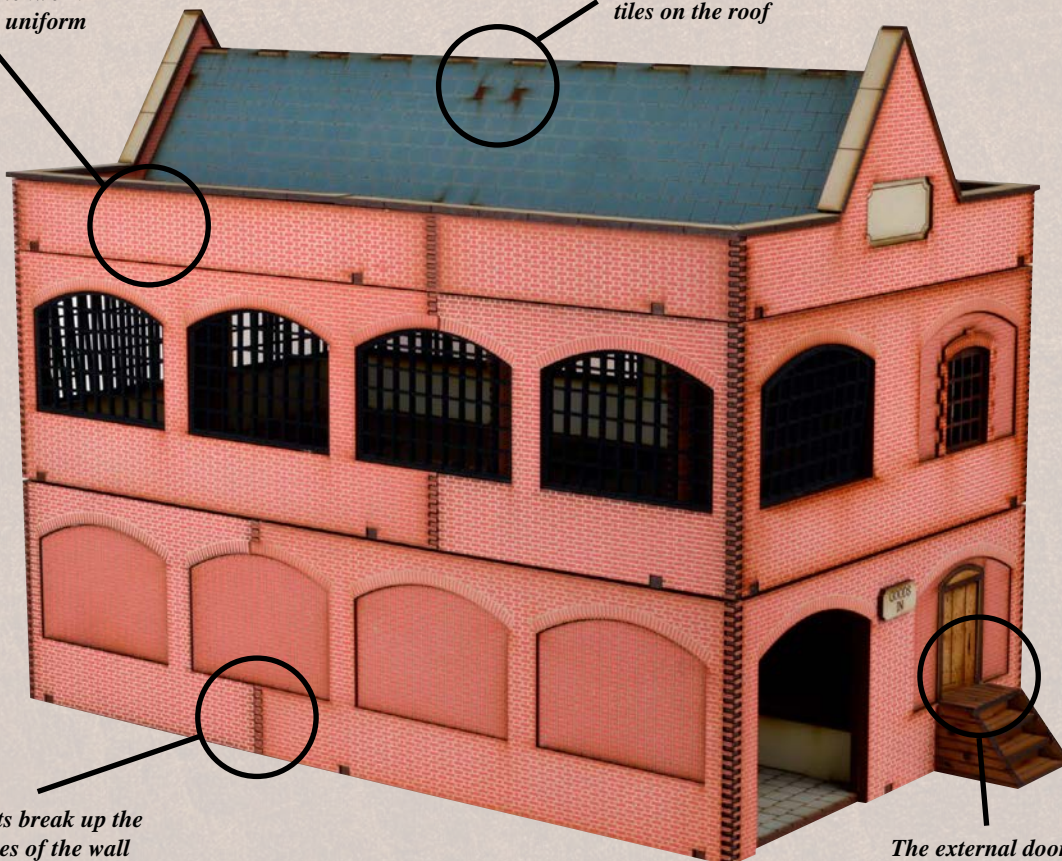
Right from the start I could tell I was working with quality craftsmanship. The HUGE stack of laser-cut sheets were well arranged in the box, and the three pages of instructions laid out the construction in a very sensible manner. Because 4Ground paint their MDF sheets before running them under their lasers, each element could be quite easily located, and there was rarely an issue with something being turned around the wrong way.

As I completed the warehouse build, I sat back and thought, "This would look great on my table!" But I had a mission, I looked for the areas I needed to tackle. The interlocking edges of brick panels would be first on the list, and although the walls are already well-textured with that great brickwork, they were incredibly uniform. Too uniform for me to leave alone.

**THE "BASIC" (AND TOTALLY IMPRESSIVE) WAREHOUSE**

*Areas of brickwork appear too uniform*

*Tabs sticking through tiles on the roof*

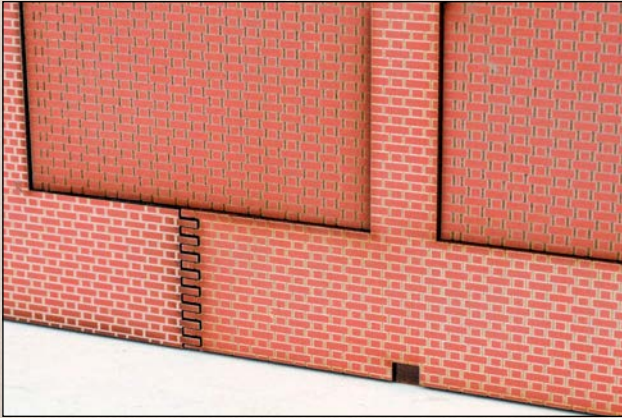


*Panel joints break up the smooth lines of the wall*

*The external doors and stairs look like fresh-cut timber*

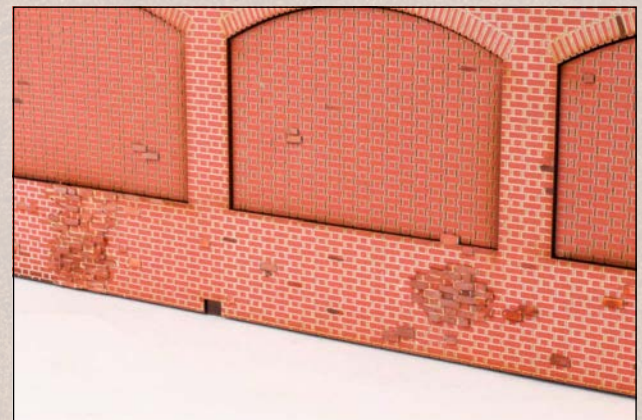
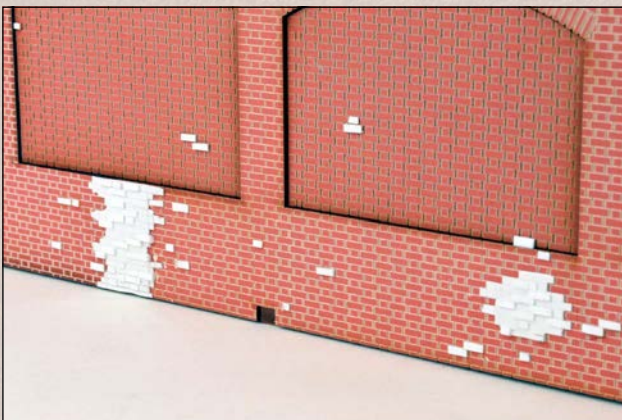
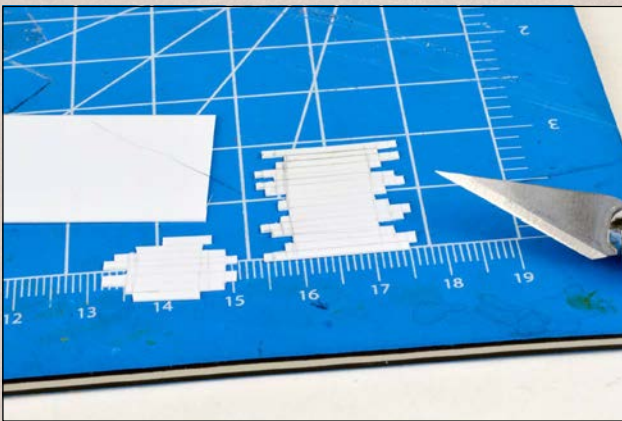


## ADDING DEPTH TO THE TEXTURED WALLS



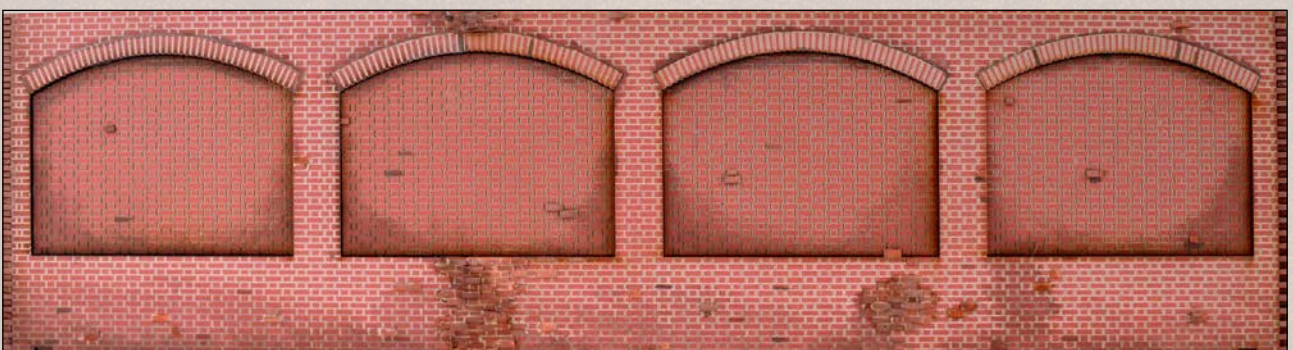
As you can see in the photo to the left, there's a great texture to the walls, a very regular brick pattern. Now, while I'm certain that every era has had its master masons and bricklayers, I felt that the regularity wasn't helping the apparent depth of the model. Additionally, the burn marks along the edges of each panel created a somewhat jarring seam. I decided to try covering the seams with a thin piece of plasticard cut to a more irregular shape, representing an area of slightly shoddy workmanship (perhaps done just before knock-off time on Friday afternoon), or settling (creating a bit of a bulge in the wall).

I also cut up a lot of individual bricks, sliced from two strips of plasticard (each the width of a brick in the wall) of different thicknesses. As the 4Ground warehouse features a pattern of alternating brick and half-brick, I cut a lot of my bricks in half.

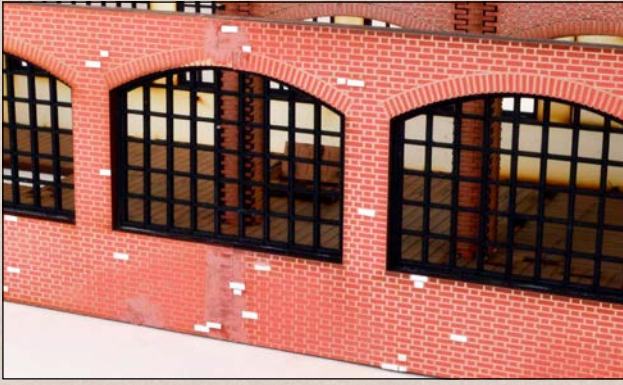


I then glued these to the walls in a fairly random pattern, looking for ways to increase the texture of the wall, and therefore increase the "depth". Clusters of bricks around the joints seemed a good way to go, and I also added another random "bulge" in order to draw the eye away from the joint areas. Once they were stuck on, some of the bricks felt like they stuck out a bit too far, so I carefully trimmed them down with a sharp knife.

The next step was to paint the freshly-added bricks. As I didn't want to repaint the whole wall of bricks and mortar, I just picked out each one. The brick color on the building was very close to Vallejo Model Color Red Leather, so I started there and added in some white to get some lighter bricks. In order to add a little more visual depth, I also painted some thinned washes into the corners of the bricked-in windows, and above the arches.







I thought I'd try something a little different to disguise the wall breaks on the upper floor and roof sections. Instead of adding the thin layer of plasticard, I filled in the gaps with a car body filler (I used Bondo Spot & Glazing Putty). Small bricks were

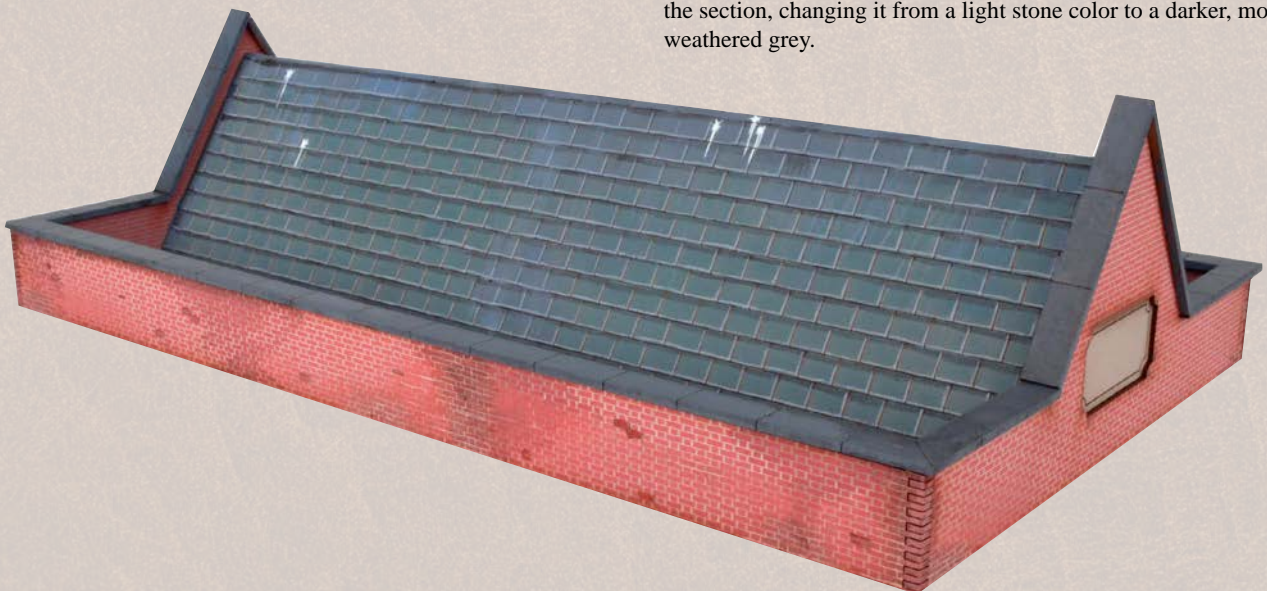
still scattered randomly around the walls after I had sanded down the dried putty. I then went on to paint the new bricks and the covered joint, adding thinned washes to represent dripping corrosion, pollution, and pigeon droppings.

## RESURFACING THE ROOF



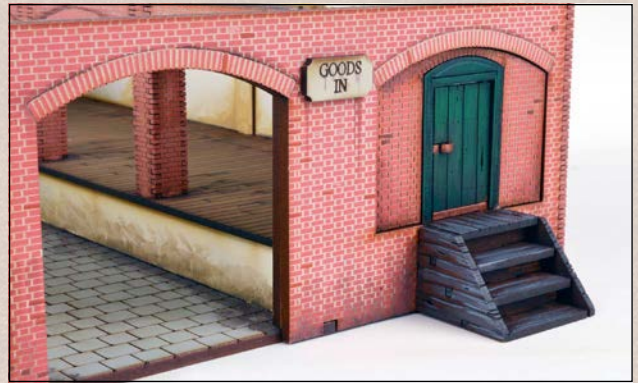
At the same time as I used the filler on the sides of the roof section, I filled in the gaps around the joints and tabs on the roof panels. These tabs and so on are there to increase rigidity in the final model, ensuring your building won't split apart at the first sign of use, but they do break up the smooth lines of the tiles. Once the filler was dry, I filed it down smooth. This, of course, did mean that a few of the burn lines that define the tile edges were filled in. I wasn't too worried as I'd always intended to repaint areas of the roof to give it a little more variation.

Once the new base colors were down on the roof (using Vallejo Sombre Grey and a few other greys from the Vallejo range), I highlighted the lower edges of each tile and then ran a thinned brown wash "underneath" each row of tiles in order to enhance the impression of layered tiles. I also repainted the "trim" around the section, changing it from a light stone color to a darker, more weathered grey.





## DETAILS AND WEATHERING

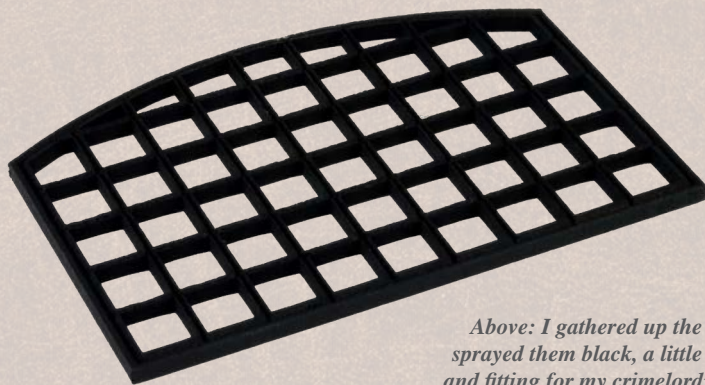


The next step was the rest of the detailing and weathering. On the short ends of the warehouse I painted various bricks with slightly different shades of brick red to see how adding "texture" through the use of tone would work. I also started on covering up some of the other burn marks or end tabs, this time with paint. It took a couple of layers on the tabs underneath the loading dock, but in the end I think the weathered scuffing

works well to hide the tabs. Thinned brown washes were the order of the day to add some more depth around the arches and at the bottom of the ledge either side of the small doorway. I repainted the door a nice, distinctive green and exaggerated some wood grain on it. I gave the stairs a very weathered look by starting with a dark brown and highlighting up by adding in lighter greys.



*I didn't have to look too far for inspiration when it came to weathering my warehouse. This photo is looking out the dining room window of my 100-year old row house.*

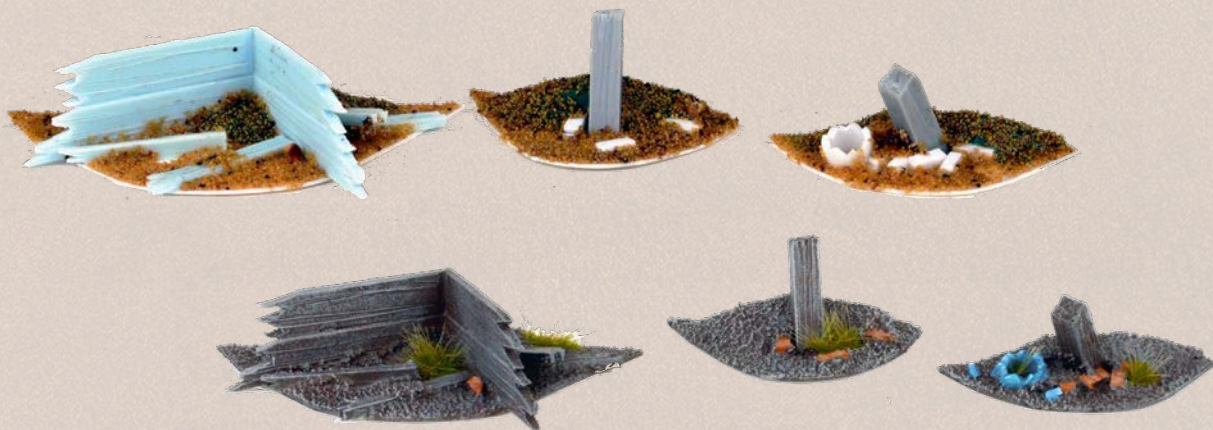


*Above: I gathered up the windows and sprayed them black, a little more sinister and fitting for my crimelord's warehouse.*

*Below: I got these wooden crates from Dragon Forge Design, just perfect for fleshing out the environment inside and outside the warehouse.*







Finally, I decided to make a few small things that I could put around the outside of the warehouse to cover up the small tabs I hadn't painted over. After a quick poll of my gaming friends, it seemed the bulk of things that might be found in the streets of Victorian London would be essentially useless items: broken and

rotting wooden crates, broken gin bottles, broken bricks and so on. I cobbled a few small pieces together from various scraps of plasticard and painted them up, ready for them to anchor the warehouse in its new (yet to be constructed) grungy surroundings.

## THE "ENHANCED" WAREHOUSE



### OUR THANKS TO...

- 4Ground - [4ground.co.uk](http://4ground.co.uk)
- Infamy Miniatures - [infamyminiatures.com](http://infamyminiatures.com)
- Dragon Forge Design - [dragonforge.com](http://dragonforge.com)

Some might feel this was a bit of a waste of time, all that work on a perfectly great building. Possibly so, but I feel the result was definitely worth it, and the journey to reach it equally so.

And now? On to some tenements and slums!





# BUILDING OLD WORLDS

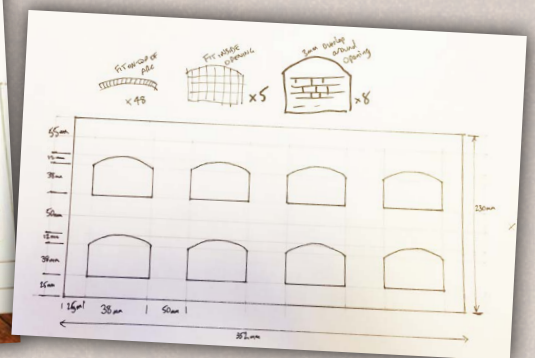
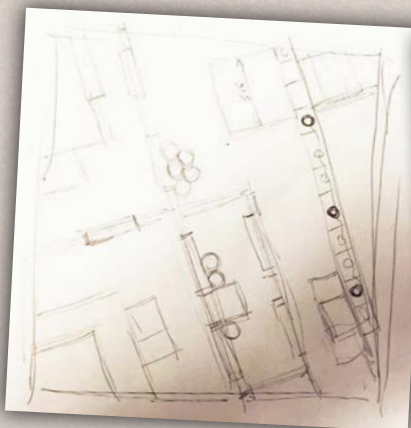
One of the things that has always interested Dave Taylor is the idea of bringing a world to life, be it an alien planet, a war-torn backwater of the real world, or the gritty underbelly of a steampunk city.

*Dave:* Over the last couple of years I've been lucky enough to work with James Griffiths, the owner and visionary behind the world of Infamy Miniatures. Most of the things I've worked on have been

design and layout related, but this year James commissioned me to flex my terrain building muscles a bit and create a cool demonstration/display table to use at Salute 2016 (and most-likely other shows) to showcase *Infamy: Welcome to the Big Smoke*.

I've been sketching out a few ideas for my own *Infamy* table, so I was excited to put some of them into practice on this project. Like most projects, the first step is brainstorming ideas with the client

and then refining those ideas through sketches. I sent the first sketch (below left) and discussed the refinements with James. I was then able to create a scale drawing of the plan (below center) and send that off to Alex Landing at Ironheart Artisans for some custom laser-cutting work. Although there are numerous commercially available options for things like the flagstone and brick textures, experience has taught me that typically custom elements can make all the difference in the final piece, such as the custom arches and brickwork detail sketched out in the image below right.







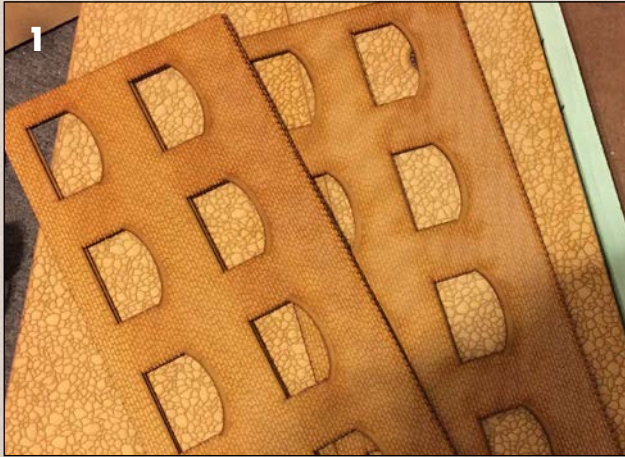
*Above: The finished table, sans the scatter terrain.*

*Below: Docklands kingpin, The Toad, keeps an eye on his ill-gotten goods.*





## Assembling the Backbone of the table



1. My first shipment from Ironheart included the walls and the flagstone flooring. I glued the flooring down to two 1" thick sheets of insulation foam, trimmed the foam, and then glued it to the table base I had already constructed.

2. I glued the brick wall sections to either side of a 1/4" (6mm) thick piece of craft foam to give the warehouse walls some bulk. I cut out sections to create the entry arches and glued on the various brickwork and window details.

3. To be completely sure the finished walls would stay on the table, I drilled in some bamboo skewers. The wall was then pushed down onto the skewers to create guide holes. You might also note that I glued some balsa wood strips to the interiors of the archways, both to cover the exposed craft foam and to act as the kinds of buffers you may have seen in Victorian warehouses to protect the bricks from bulky goods.

4. With the main wall in place, I wanted to make sure that the portico I was yet to build would be attached to the right place, so I added some more bamboo skewer pieces to the exterior of the warehouse, ready to be pushed into the foam of the portico walls.

5. The portico is temporarily in place as I check the overall look. Note the exposed foam in the MDF "sandwich", later to be covered by more balsa wood strips.

6. Once the table had reached this stage, I was able to get a good idea of how I wanted to progress. I placed another order with Alex to get the final flat piece for the roof, and the signage for the front of the warehouse. You can also see that I've started on the upper-level walkways inside the warehouse, and that I had some fun playing around with the boxes, crates, and sacks of "imported goods".





## Step-by-Step brickwork



1. I began by painting the bricks with a variety of spray primers. I used a dark brown and then lightly dusted the wall with patches of brick red and orange primers.

2. Once the paint was dry, I created a mixture of white glue (PVA), a lightweight spackle (polyfilla), and some water. I was looking for a thin paste consistency.

3. I used a spatula to spread the thin paste over the brick texture, making sure I pushed it into as many of the crevices as I could.

4. This will leave a film on the top surface of the bricks, so before it dried I wiped the film off carefully with a damp paper towel. I let the mixture dry fully and marveled at the results!



## The Crane



When James and I first discussed the table, the subject of cranes arose. One of the informing pieces of art (shown at the start of this article) had loads of them. I spoke with Alex at Ironheart Artisans about creating a crane that would look like many of those still dotted along the banks of the Thames. Alex is a fiend for detail and ended up spending loads of time researching dockside cranes of all stripes (including those to the left) in order to create this excellent centerpiece model. Not only does the crane look fantastic, it is also easy to assemble and you can find plenty of perches for your models.

This superb laser-cut MDF kit is available from [www.ironheartartisans.com](http://www.ironheartartisans.com)



## Step-by-Step Dock and River



1. I wrapped some branches (found in my local park and dried out) with string to simulate rope-wrapped pylons.

2. I then built a dock from a sheet of thick, textured plasticard, with bass wood strips underneath to act as joists.

3. Even when you are measuring carefully, I recommend multiple test fittings

4. The surface of the water was textured with some wood filler.

5. After the water, pylons, and wall were painted with a mid-brown, I drybrushed the wall with a couple of shades of grey.

6. Over the top of the brown, I painted a dark blue/green, thinned in places to allow the brown to show through. The pylons were painted grey and the rope a standard hemp color.

7. The dock was painted in a weathered grey, and I finished off the water with a layer of gloss varnish.



## The Roofs



1. I wanted to create copper roofs, both to capture that steampunk feel and add some new textures to the piece. The first roof created was the portico roof. I glued thin strips of styrene to a sheet of plasticard.

2. The angled structures (on top of the flat roof panel) were created by building the appropriately shaped boxes from plasticard and cladding the tops in a textured plasticard.

3. The front section of each of the angled structures were clad in popsicle sticks

4. The textured plasticard was painted in a dark copper/bronze color, and some verde gris was added with thinned green paint.







### Step-by-step Flagstones Above

1. I sprayed the textured flagstone base with grey and brown spray primers and picked out individual stones to add variety.
2. After spraying a varnish on the flagstones and letting it dry, I brushed on an “oil wash”, a mixture of black and brown oil paints and thinners.
3. It was very important to let the oil wash dry thoroughly. I waited 24 hours before moving on to the next step.
4. I used thinners to dampen a paper towel and then carefully wiped the oil wash off the surface of the flagstones. This took a few passes, but that gave me some good control to achieve the look you I was after.

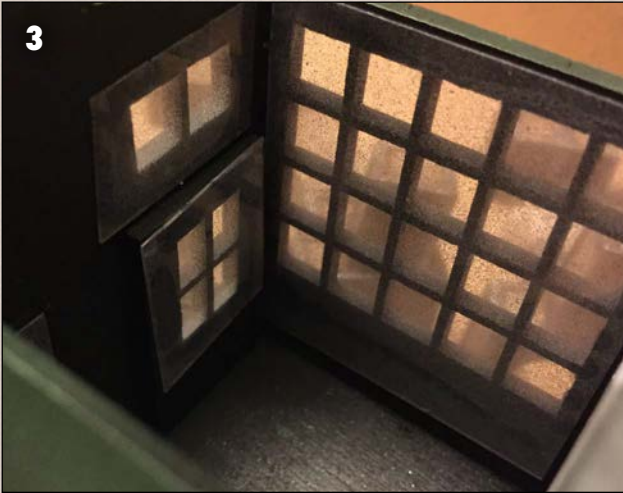


### The Warehoused Goods Below

1. One of the most important things to have on a dockside/warehouse table are the goods recently off-loaded by the enormous Ironheart crane. These have been left loose so they can be moved around on the tabletop as needed.
2. These are the loose terrain pieces sent to Infamy with the table. The resin sacks, bales, barrels, and tea chests are from Ainsty Castings (via Recreational Conflict in the US). The wooden carts and giant spools are laser-cut MDF from Ironheart Artisans. The “wooden” crates are resin from Dragon Forge Design, and those canvas covered crates are scratch-built from insulation foam and paper towels soaked in white glue (PVA).



# The Details



1. The crane looked great, and needed very little extra detailing. When it was all assembled (before I glued it) I could see some of the interior workings, so I decided to add some dusty glass to the interior before gluing it all together.

2. To create the impression of dusty, smoke-covered glass, I lightly dusted one side of a sheet of thin, clear plastic. Blister packs are perfect for this kind of thing.

3. I then carefully measured all of the window areas and cut the plastic so that it was a little larger. Once I had them all cut, I used some superglue to fix them in place with the dusty (painted) side facing out.



1. To enhance the “lived in” look of the table, I wanted to add some old posters to the walls. It was pretty easy to find a lot of Victorian period posters online, and then shrink them down before printing them out. I also created a couple of custom posters to keep the link to the world of the Big Smoke strong.

2. To fix the posters to the walls, I slathered the backs with white glue (PVA) and positioned them. Once they were dry, I painted over the fronts with another layer of white glue and pushed the damp paper into the spaces between the bricks.

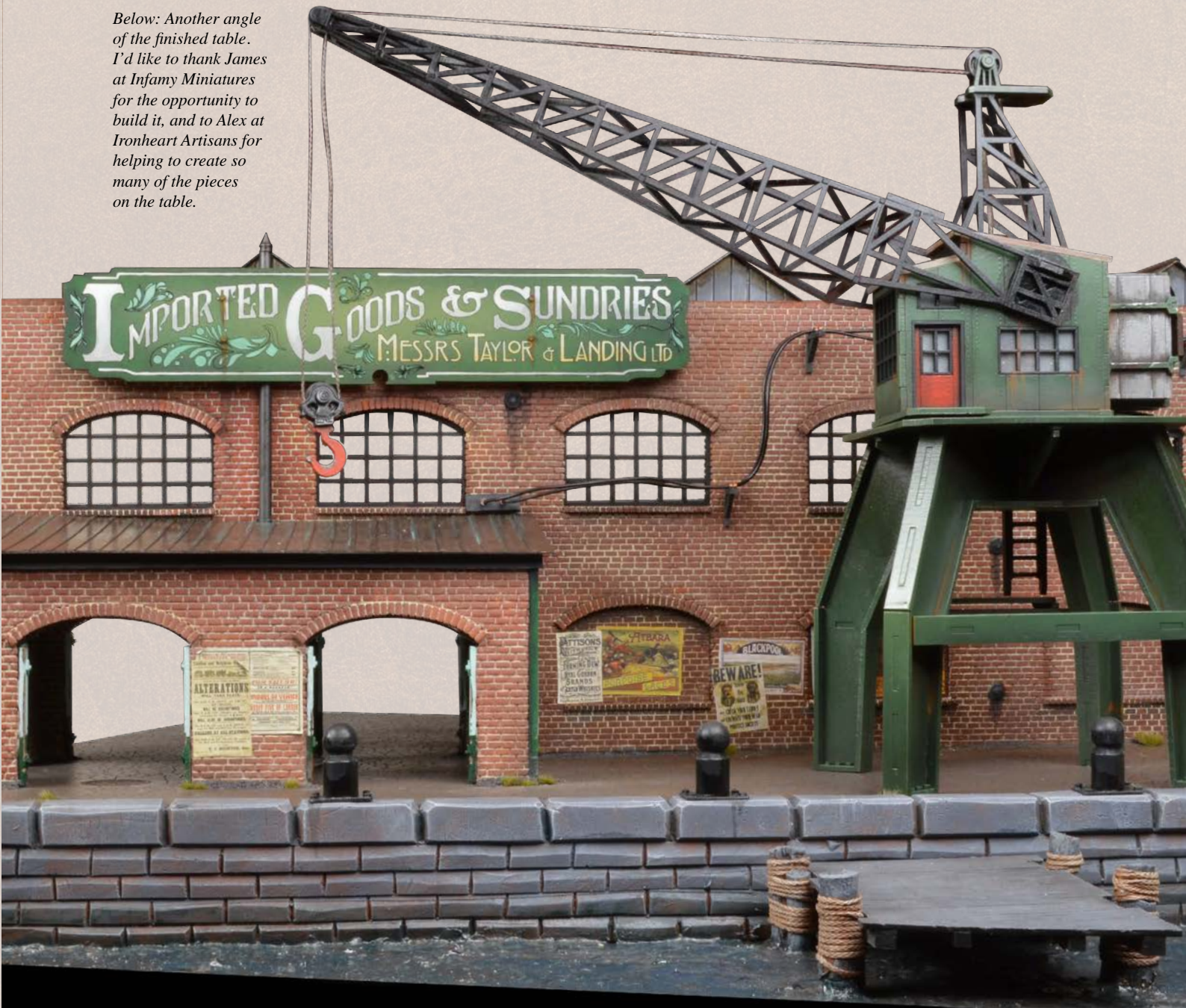
3. One method I used to enhance the impression that this building has been there for a while was to layer some of the posters directly over others, obscuring the details of earlier advertisements.





Some other details are smaller and tucked away, like the fire in the drum under the portico (above left). I imagine that this is where dockhands would warm themselves before or after unloading a ship, or where The Toad would deliver his final instructions to his gang of ne'er-do-wells. One of my favorite details is the big and bold warehouse sign (above right) bolted to the wall above the portico. Using some great Victorian design ideas and flourishes, my friend Alex Landing (of Ironheart Artisans) designed and laser-cut the sign and sent it along with the crane. I started by airbrushing the base green and then successively lighter greens in the center. The rest of the details were then carefully hand-painted.

*Below: Another angle of the finished table. I'd like to thank James at Infamy Miniatures for the opportunity to build it, and to Alex at Ironheart Artisans for helping to create so many of the pieces on the table.*





# Giants IN Miniature



## CHAMBERLAIN BROTHERS

The latest release in the Wargames Illustrated Giants in Miniature range is a set of two figures representing brothers Joshua and Thomas Chamberlain. They found fame initially at the Battle of Gettysburg in 1863, then again in 1993 as stars of the Ron Maxwell movie about the battle.

Painter Ben Macintyre show us how to get the Chamberlains battle-ready.

Start out by removing any mould lines or flash, and priming your miniatures. Prepping your miniatures is a very important step as it will help make the painting process much smoother and more enjoyable.

I've used Vallejo paints for these miniatures but you can use any brand of paint. Just make sure that you are thinning the paints properly before you apply them and that you use an

appropriately sized brush. I generally work with a size 1 brush for most things, however there are elements that will require a smaller brush such as a size 0 or 00.

First up we need to block in all of the base colours, using the darkest version of each colour to be used on the miniatures.

These form the shadow colour for each area and they give us the starting point for giving the paint job a 3D appearance.



# PAINTING GUIDE



All paints used are by Vallejo.

Left: Joshua  
Right: Thomas



**1** It's best to start with the areas closest to the centre of the miniatures and to the "skin". This will make it easier to keep the colours neat and help prevent any slips.

1. Dark Sea Blue and VMA Blue (2:1 mix)  
(Tunic)
2. Luftwaffe Uniform  
(Trousers)
3. Nato Black  
(Boots and webbing)
4. Tinny Tin  
(Gold)
5. Dark Fleshtone (Gamecolour)  
(Skin)
6. Chocolate Brown and Black (1:1 mix)  
(Hair)
7. Dark Prussian Blue  
(Flag)
8. Gunmetal Grey  
(Swords)



**2** Next up is to start adding more depth and contrast to the different areas with a layer of highlighting. We want to pick out the areas and edges that catch the most light. Focus on applying these colours to the upper edges of cloth folds, the edges of belts, and on the cutting edge of their swords.

1. Dark Sea Blue and VMA Blue (1:1 mix)  
(Tunic)
2. Luftwaffe Uniform and Pale Blue Grey (2:1 mix)  
(Trousers)
3. Gold  
(Gold)
4. Brown Sand  
(Skin)
5. Chocolate Brown  
(Hair)
6. Blue  
(Flag)
7. Oily Steel  
(Swords)





**3** Next up we will do another layer of highlights to continue to push the contrast of each colour, and focus on bringing out all of the details of the sculpts.

The brighter the colours get the smaller area they should cover, so it's best to apply them with a smaller size 0 or 00 brush.

1. Dark Sea Blue, VMA Blue, Luftwaffe Uniform (1:1:1 mix)  
*(Tunic)*
2. Dark Blue Grey  
*(Trousers)*
3. Nato Black and Pale Blue Grey (1:2 mix)  
*(Boots and webbing)*
4. Gold and Silver (1:1 mix)  
*(Gold)*
5. Dark Fleshtone (Gamecolour)  
*(Skin)*
6. Chocolate Brown and Khaki (1:1)  
*(Hair)*
7. Ultramarine Blue  
*(Flag)*
8. Silver  
*(Swords)*



**4** Now we want to do one final layer of highlights for the miniature, really pushing those colours in the areas that the light will catch the most. We can also use this stage to really focus they eye on certain areas of the miniatures such as the face, and the sword blades.

The highlights at this stage are pretty small so you might want to switch to a size 00 or even 000 brush for this bit.

1. Luftwaffe Uniform  
*(Tunic)*
2. Dark Blue Grey and Ivory (2:1 mix)  
*(Trousers)*
3. Pale Blue Grey  
*(Boots and webbing)*
4. Silver  
*(Gold)*
5. Light Flesh  
*(Skin)*
6. Chocolate Brown and Khaki (1:2)  
*(Hair)*
7. Chrome  
*(Swords)*



## FLAG

For the furled flag I decided to go with the Stars and Stripes as it's such an iconic image.

The first step is to block out each area in our base colour. We already have the blue in place from our previous steps so we don't need to do anything to that.

- Pale Blue Grey  
(This will need two coats)  
(White)
- Red  
(Red)
- Heavy Ochre  
(Yellow)



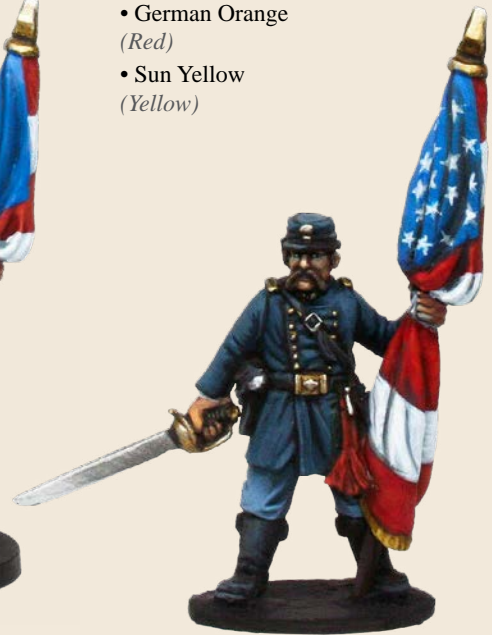
These were then highlighted in the same way as the miniatures.

- White (applied in 2-3 successive coats)  
(White)
- Vermillion  
(Red)
- Gold Yellow  
(Yellow)



Finally, there were given a sharp highlight on the very uppermost areas.

- White mixed with a small amount of Matt Varnish for coverage  
(White)
- German Orange  
(Red)
- Sun Yellow  
(Yellow)



The last stage is to paint on the stars. I used the same colours as for the white stripes, and lightly mapped the whole pattern out before highlighting them. It's best to use a small size 00 for this as they are quite fiddly.

Once the flag is done, we can go back and add some depth to the shadows and recessed areas of the miniatures. Take a small brush (a size 0 or 00 will be fine) and apply the basecoat colours from Step 1 into the deepest recesses and areas where two colours meet.

This technique helps increase the contrast of the miniatures and helps all of the details to "pop", especially at a distance when used in a game. If you want to really push the contrast between different areas you can use Vallejo Nato Black instead.

At this stage I also like to paint in the eyes on the miniatures. This can be a bit tricky but take your time and make sure you use a small brush like a Size 00 with a good point to the bristles.

All that is left to do is to apply a protective coat of varnish to the miniatures (I like to use the Vallejo Satin range) and then base them for your chosen game.





## JOSHUA LAWRENCE CHAMBERLAIN

After volunteering to serve in the Union Army, Joshua Lawrence Chamberlain was appointed Lieutenant Colonel of a newly raised regiment from his home state, the 20th Maine.

Though present at Antietam, Chamberlain and his regiment saw their first trial by fire in one of the doomed assaults on Marye's Heights at Fredericksburg but missed a chance to be involved at the Battle of Chancellorsville due to an outbreak of smallpox. By Gettysburg Chamberlain had been promoted to command of the regiment.

On 2 July 1863, the 20th Maine was posted on the extreme left of the Federal line at Little Round Top - just in time to face Confederate General John B. Hood's attack on the Union flank. Exhausted after repulsing repeated assaults, the 20th Maine, out of ammunition, executed a bayonet charge, dislodging their attackers and securing General Meade's embattled left. Though the exact origin of the charge is still the subject of debate, Congress awarded Chamberlain the Medal of Honor for "conspicuous gallantry."



Shortly after Gettysburg, Chamberlain was given command of a brigade in the Fifth Corps and would retain it until the end of the war. Chamberlain would be wounded six times, most grievously at Petersburg in June 1864. Believing this wound to be mortal, Congress promoted Chamberlain to the rank of Brigadier General. However he survived the wound and returned to the front in time to play a pivotal role in the Appomattox Campaign. On 12 April 1865, Brigadier General Chamberlain received the Confederate surrender of arms. Rising to the occasion, the general ordered his men to salute their vanquished foes.

After the war, Chamberlain returned to Maine, where he served four terms as the state's Governor. Prolific and prosaic throughout his life, Chamberlain spent his twilight years writing and speaking about the war. His memoir of the Appomattox Campaign, *The Passing of the Armies* was published after his death in 1914.

*Left: Joshua as played by Jeff Daniels in the 1993 movie Gettysburg.*

## THOMAS DAVEE CHAMBERLAIN

Thomas fought with the 20th Maine throughout the war, ending it with the rank of Lieutenant Colonel. Thomas's star didn't rise to the heights of his elder brother's, and after 1864 he was plagued by alcoholism, but he has since been immortalised in book and film as the energetic, youthful sidekick of Joshua.

*Below: Thomas as played by C. Thomas Howell in Gettysburg.*



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GiM40



**The Warrior Queen**  
(Rani Lakshmi Bai)  
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**Prince Louis**  
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**Custer**  
GiM45



**Admiral Sir Sidney Smith**  
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**'JT'**  
(The Survivorist)  
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**Van Helsing**  
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**Dante**  
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**Sir John Hawkwood**  
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**Harry Hotspur**  
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**Otto von Bismarck**  
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**Makhno & Schuss**  
GiM67



**Lieutenant Winters**  
GiM68



**Flash Harry**  
GiM70



**Sgt. John M. Stryker**  
GiM71



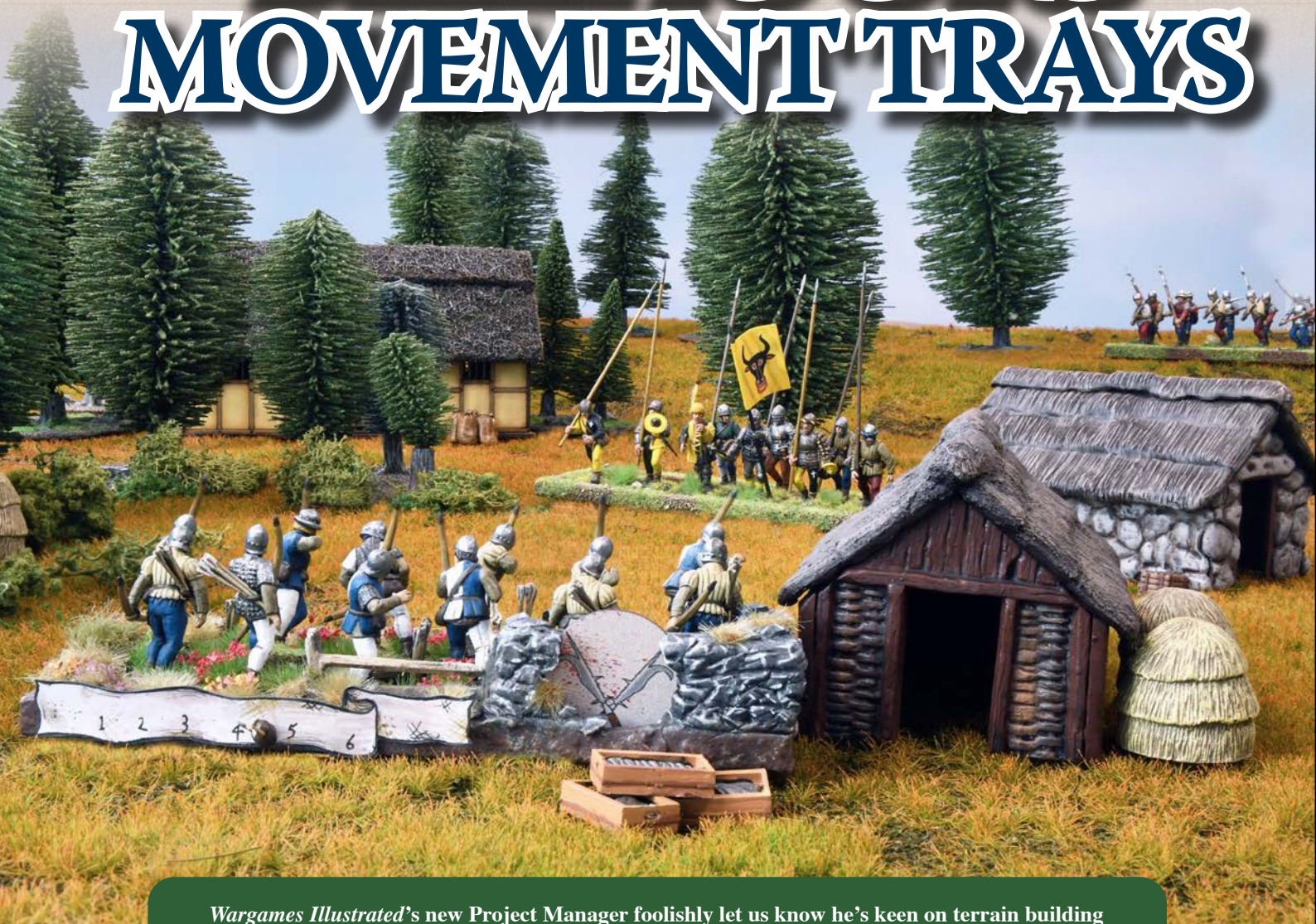
**Fidel Castro & Che Guevara**  
GiM72



**Great Darcy of the Pale**  
GiM73



# HOW TO .. MAKE BILLHOOKS MOVEMENT TRAYS



*Wargames Illustrated's* new Project Manager foolishly let us know he's keen on terrain building and miniature painting. Expect to see more of James's hobby projects as we chain him to the desk and force ... ahem ... ask him nicely to share his knowledge in future issues!

The release of *Never Mind the Billhooks* presented me with the opportunity to build some new movement trays; after reading the rules I wanted to implement a way to keep order tokens and arrow supplies easily recorded on the tray itself.

This sort of tidiness is not essential in a game of *Billhooks*, what with the small number of models on each side, but I see it as a way to make the army stand out. The ideas here are transferable to other game systems and projects, they could even be worked into pre-made movement trays.

Before we get ahead of ourselves and talk about some of the fancy details, how do you make a really basic movement tray?

## I CAN JUST BUY TRAYS, RIGHT?

Well, yes! The humble movement tray is one of those gaming essentials that's easy to take for granted these days, with a plethora of pre-made MDF and plastic options available.

I do enjoy the personal touch in making my own movement trays (and adding details so they are eye-catching and make my army stand out) but I've done my best to include advice in this article that's transferable to other hobby projects you might take on.



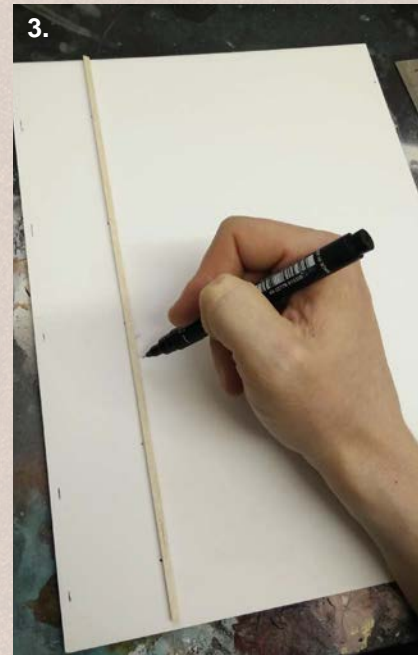
## MAKING BASIC BILLHOOKS MOVEMENT TRAYS

### A. MEASURING

It's vital to get your trays to the correct size. I'm making infantry trays for *Billhooks* - two ranks of six models, each model on a 20mm base - that's a 40mm by 120mm total space required. Add

the width of the 5mm balsawood batons to those measurements, plus a little extra give (so you don't have to cram your models into the space) and it's 53mm by 133mm. Mark your sheet (or sheets) of plasticard with the tray base dimensions.

I measure up along the balsawood (1) then measure 40mm (plus another 3mm "give") from that (2) before adding the other side's baton to finish (3).



### B. CUTTING PLASTICARD

The carpentry proverb "measure twice, cut once" is a well-known maxim. Bastardise it whenever you cut plasticard - "measure twice, score a few times, then snap it!" Trying to carve through a 2mm sheet of plasticard in one go is folly, no matter how fresh your blade is.

Gently score, several times, along the edge of a metal ruler. Follow that score line with a little more pressure, until there is a defined channel in the plasticard (4), then you should be able to apply a little pressure and snap it cleanly along the score line (5).



### C. BATON UP THE EDGES!

With the bases cut to size it's time to add the baton 'frame' to it. The balsawood edges are more forgiving to cut.

Make each length a little longer than it needs to be - it's easy to trim it down, far more difficult to make it grow longer! (6) and starting with a long edge, begin to glue around (7).

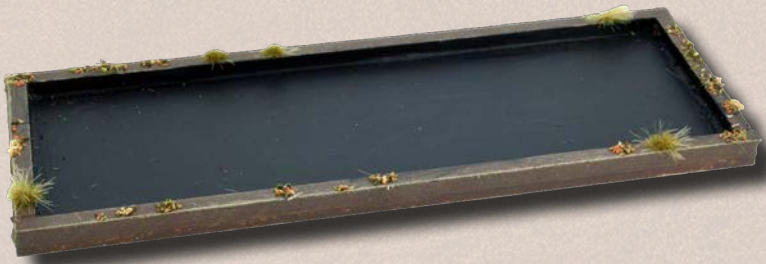
It's worth placing the tray at a 90-degree angle on a smooth surface when gluing, to get the balsawood snug with the edge. Repeat with the other sides, trimming any excess (8).





## D. FINISHING TOUCHES

I stopped the build of one of my basic movement trays here, then applied very basic paint and a few tiny tufts of grass. This created a tray that draws no attention but still supported the models.



10.



11.



12.



My second basic tray was textured by painting a mix of PVA glue and fine sand onto the edges and top, taking care to avoid the inside area (9).



Again, this was painted (a flat brown then lighter drybrushes) (10 and 11) and had grass tufts added (12).

And that's it! Now you're ready to bring some added flair to your trays!

## SUPPLIES

The easiest way (without resorting to laser cutters and woodworking fun) to make a stable movement tray is with the following:

- 2mm plasticard sheets (for the bases).
- 5mm balsawood batons (for the raised edges).
- A pen or pencil (for marking out dimensions).
- A metal ruler or set square (for measuring non-wobbly lines).
- A sharp scalpel or Stanley knife (for cutting non-wobbly lines).
- Some glue for sticking the bits together (not pictured) - I opt for superglue but PVA works, albeit slower.
- Sand mix - if you plan on adding texture.

In this image you'll also see some of the extras used for my more advanced movement trays:

- Foamcore board - for tapered raised edges.
- Green stuff modelling putty - to add sculpted detail.
- Thin card - to make a name plate.
- Small rocks - for further detailing and texture work.
- A cork - used as a texture roller on sculpted detail.





## MAKING INTERMEDIATE BILLHOOKS MOVEMENT TRAYS

I've applied much the same approach to the initial build of this tray as the basic one, but I've used foamcore board instead of balsawood for the edges. Because it comes as a sheet it's necessary to cut the board into strips that will edge the tray.

I made these 10 mm wide, larger than the balsawood batons, so adjusted the overall size of the plasticard base accordingly. This makes for a slightly larger movement tray - any opponent who is fussy about that is too much of a pedant to have fun playing *Billhooks* anyway so I wasn't too worried about it. (See 'The Rule of Cool'.)

### THE RULE OF COOL

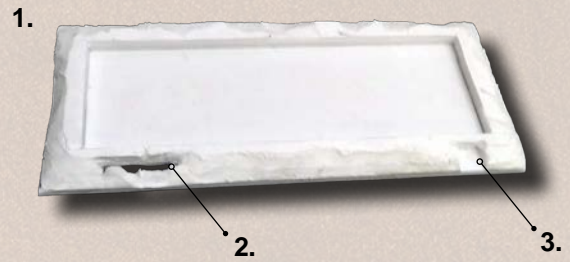
"The limit of the Willing Suspension of Disbelief for a given element is directly proportional to its awesomeness."

In short - let slight inaccuracies, inconveniences, and levels of pedantry go if they bring new benefits to the game that make the players happy. It's a maxim that has gradually permeated gaming, particularly RPGs like *Dungeons & Dragons* and various tabletop fantasy games but, for somewhat obvious reasons is not quite as prevalent in historical wargaming.

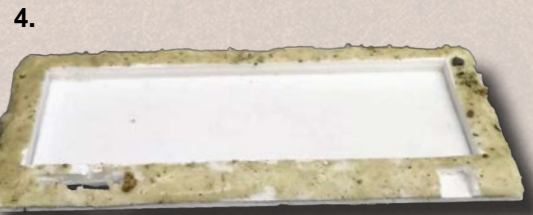
We certainly don't expect you to suddenly jet Henry V into the air, swooping over your lovingly crafted Agincourt recreation, impressing his lucky few with his rocket pack! But in a game like *Billhooks*, which has fun mechanics and a quick play style, the Rule of Cool seems extremely apt.

The benefit of foamcore is that it can be carved and filed down easily, so I was able to:

1. Add a taper to the edges, gradually cutting the angle in with a knife before using a file and wet and dry paper to add some smoothing and rounding. This gives a more natural, less severe look to the tray.
2. Carve a slot to support the order counter issued to the unit. I went through the plasticard base too, adding extra depth, but if you do the same be extremely careful. Carve the gap gradually and incrementally - you don't want to slip and take a gouge out of the tray edge or yourself by applying too much pressure!



3. Carve a space to fit a micro dice representing the shots the archers have. Because foam core has a card top and bottom, with foam between, you can achieve clean sharp cuts and ease out any remaining material gradually.
4. When it was built the tray had texture applied (but not to the spaces for the dice and counter) before being painted with simple dry-brushing techniques and textured with a mix of the many different grass and flower tufts that are available.





## MAKING ADVANCED BILLHOOKS MOVEMENT TRAYS

Some might say that this is overkill ... They might be right, but I can seldom resist the chance to bring more atmosphere to an army. I've made the tray slightly whimsical in its look, to suit the less intensely accurate playstyle of *Never Mind the Billhooks*.

My idea here was to implement the trackers into the tray even more organically, so the order counter slots into a wall and the arrow count is recorded via an arrow embedded in a scroll design.



### THE DRYSTONE WALL

The edges of the base are foam core again, but the frame only goes as far as the wall I built. This is made around a wall foundation of 2mm plasticard layers. By buffering different pieces against each other I created a gap that a counter can sit in (with enough sticking out at the top to be easy to grab and swap).



The inner plasticard wall had the drystone effect sculpted over it:

1. Apply a covering of modelling putty (I used Green Stuff) over the whole area.
2. Carve horizontal lines into this with a metal ruler, knife, or sculpting tool. Keep the tool damp and it will not stick to the putty.
3. Begin to carve rough lines at diagonals to the horizontal lines, starting to add the structure of a drystone wall (reference images can be used here).
4. Refine those rough lines by adding more form or depth to some areas and adding a few stone shapes on top. (You can glue small stones on too.)
5. Roll an actual stone over the sculpted surface to add a slight texture to the wall.

I also trimmed down some balsawood, making a basic fence butted against the wall to add more visual interest. Because the edges of this tray are not textured I put a layer of putty around, to cover any gaps in the foamcore board, then rolled a cork over to give a slightly disrupted texture.





## OTHER IDEAS

There are so many other ways to elevate the humble movement tray. You could embed dials into the base itself; magnetise a skull or sword (as I did with the arrow) to track damage; a model in the unit could be converted as a scribe, holding some kind of chit that details relevant information; for more modern conflicts you could add magnetised explosions or flak to indicate a unit's taking fire. This can even work with skirmish units – there's nothing stopping you fixing magnets in the bases of your *Bolt Action* unit commanders so you can add pinning elements to them directly (perhaps using the existing Pinned Markers Warlord Games produce, see right).

I'm just starting work on a large project, depicting the French army at Agincourt, so the next movement trays I make will be anything but whimsical. The plan is to create mini dioramas of dead, dying and terrified men, sinking in the mire, splashed with mud and blood, which I will make a part of each of unit's movement tray. Making these Billhooks trays has me wondering how I can add a magnetic element to the Agincourt scenes so they act as both practical and atmospheric devices.



## THE MAGNETIC ARROW TRACKER

I've started to use rare earth magnets quite a bit in my hobby projects. They come in all sizes and are especially useful if you want to have swappable weapon options on your models. This is easier on larger kits but with strong magnets available at mere millimetres across it can work on rank and file too.

1. Here, however, I've hidden a row of six magnets behind the name plate with another fixed to an arrow I made from a thin plasticard rod and some paper cut to shape for flights. It's important to always check the way you're fixing your magnets – you don't want to get them in place and find half are repelling and the other half are attracting!

1.



2. The name plate is made from a piece of card, placed in front of the magnets to hide them. I drew the simple layout and added arrow supply marks with a technical pen, ensuring the marks lined up with the magnet placement.

2.



3. Once done I made the plate more rigid with layers of varnish (you can do this on banners, scrolls, or plaques for display plinths too) then fixed it to the tray to hide the magnets. It creates a little gimmick that is practical and looks rather cool too. Now I just need to decide on a unit name.

3.





# "I SEE A VIETNAM I WANT TO PAINT"

## USMC VIETNAM PAINTING GUIDE (HUE 1968)



Want to paint great looking Vietnam era US Marines? Keith Ainslie details his approach on a couple of Empress Miniatures USMC.

### IT'S ALL SO GREEN, MAN!

These minis are very green! Their uniform is green, the webbing and kit is mostly green, sometimes weapons are green. In fact, it's a fair bet that if you can't identify a detail on a Vietnam era Marine then painting it green is the safe option!

This is something of a blessing - a quick basecoat and dip is an effective way to get a lot of figures on the table quickly. You probably don't even need to worry too much about the specific green if you take this approach. However, the relatively low model count for most games, the individualism of the USMC, and the quality of models available across many ranges, makes taking things a step or two further well worth the extra effort.



# US MARINE AND IT BLACK GREEN!"

## GENERAL PAINTING APPROACHES




There is quite a variety of greens on any single Marine. You can see this in original photos and various reference publications (I highly recommend the *Europa Militaria Vietnam: US Uniforms* and the *H&C Militaria Guide 'US Forces in Vietnam'*). On miniatures I find it useful to 'push' the contrasts between the greens even further than our reference might suggest.

A slightly blue-green cast on the uniform, contrasted against a more olive-green flak vest, works well to define the areas of the model. Using black or very dark browns around these areas can further delineate the different items of clothing, webbing, etc.

This can be challenging but, whether you paint from a black undercoat and leave this showing between colours, or take the time to outline things later, it is certainly worth the extra effort.

Vallejo German Camo Black Brown is a great colour for this sort of work. For a higher contrast on the tabletop any pure black is effective. Consider thinning these paints by mixing in a little water and some drops of flow improver. This will give the paints more 'movability' and they will act like a thick, controllable ink. Capillary action will cause them to follow the recesses - physics does a lot of the work for you.

### LINING

-  Vallejo German Camo Black Brown
-  Pure Black
-  Flow improver





## 'ACCURATE' UNIFORMS

This guide is not intended to be the ultimate reference point for the uniforms and equipment of the USMC during the conflict. It should, however, help you get an authentic looking force on the tabletop without too much fuss. Just applying the base colours discussed here, followed by a wash, will make for a respectable looking army that is ready to start gaming in this fascinating period. How far you decide to go beyond that is entirely up to you.

I've used the Wargames Foundry Storm Green triad of paints. Storm Green has a slightly bluer hue and the Light and Shade associated with it enhance the punchy contrast.

A really good way to age a uniform (FNG to Veteran status) is by upping the ratio of highlight colours. I've used more Storm Green Light to highlight the base on the M60 gunner, so he looks like he's been on tour for a while. If the uniform was darker, with less prominent highlights, then it would have a newer fresher appearance. On the M60 gunner I've even added additional Vallejo Ivory to the Foundry Storm Green Light, taking things one step further on the very edges of sleeves, pockets and edges. This gives him a worn-in look.

### STANDARD UNIFORMS

-  Wargames Foundry Storm Green
-  Wargames Foundry Storm Green Shade
-  Wargames Foundry Storm Green Light
-  Vallejo Ivory

## ALTERNATIVE UNIFORM HUES

You might prefer a more Olive hue; for this I would recommend Vallejo Brown Violet (which is actually a green/brown) for a base colour, Vallejo Russian Uniform for the mid-tone and Vallejo Russian Uniform with increasing amounts of Vallejo Desert Yellow for the highlight (up to around a 50:50 mix for that older look).

### ALTERNATIVE UNIFORMS

-  Vallejo Brown Violet
-  Vallejo Russian Uniform
-  Vallejo Desert Yellow



## 1. WEBBING, WATER BOTTLES & FLAK JACKETS

I've grouped these together because the palette used on them can be the same. Variety and interest will come from how far you highlight each component and what colours you use. In reality the colours are extremely similar to each other, but items wear at different rates. Varied materials (cotton versus plastic, for example) also weather differently. For all of these items the base colours are the same and the variety comes in the layered highlight colours.

### UNIVERSAL BASE COLOURS

I've applied a base coat of Vallejo Russian Uniform, followed by a careful all-over application of Games Workshop's Agrax Earthshade. This creates a good layer of shadow and grime and works well to show where the highlights and shadows should be. Next I re-apply Russian Uniform to most of the vest and straps, leaving the deeper Agrax-shaded areas.

#### UNIVERSAL BASE COLOURS



Vallejo Russian Uniform



Citadel Shade Agrax Earthshade

Onward to highlighting; I recommend several colours to mix with Russian Uniform for this and variety will help us to achieve a nice range of tones. My 'go-to' is Vallejo Ivory, usually in increments up to around a 50:50 mix.

Vallejo Desert Yellow works well for a more saturated, colourful look, which is particularly good on smaller, thinner items, such as gas-mask bag straps. Vallejo Iraqi Sand is somewhere between the Ivory and Yellow tone; particularly good for older, worn canvas items such as flak vests. Vallejo Panzer Aces Afrika Korps Highlight is another good option and, again, provides a subtle but different effect.

#### HIGHLIGHT COLOURS TO MIX WITH THE BASE



Vallejo Ivory



Vallejo Iraqi Sand



Vallejo Desert Yellow



Vallejo Panzer Aces Afrika Korps Highlight

Note that these highlights should, in the main, still be green – don't mix your highlight colour to include too much of the lighter shade. Unless your intent is to show extreme bleaching and age the highlight colour shouldn't go on neat and un-mixed.

## 2. HELMET COVERS

#### HELMET COVERS

Over a base of Light Storm Green (from the Foundry triad) highlight with Vallejo Ivory. Patches of Vallejo Cam Olive Green, Olive Grey and Panzer Aces Afrika Korps Highlight make up the camouflage colours.

Double-checking reference material is recommended here to get the right kind of camo placement and spread.



Foundry Light Storm Green



Vallejo Ivory



Vallejo Cam. Olive Green



Vallejo Olive Grey



Vallejo Panzer Aces Afrika Korps Highlight



### 3. BOOTS

These start with a Vallejo German Camo Black Brown base, highlighted with a small amount of Saddle Brown. Cam Olive Green canvas inserts are added on each side. A good wash with Vallejo English Uniform or Flat Brown can represent mud and dirt.

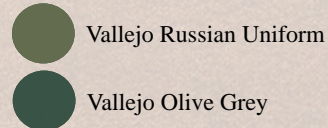
#### BOOTS



### 4. WEATHERPROOF JACKETS AND PANTS

Start with a base of Vallejo Cam Olive Green and highlight with Vallejo Russian Uniform. Typically try to keep these darker and distinct from the flak vests and webbing.

#### WEATHERPROOF JACKETS



- 1a: Webbing
- 1b: Water Bottle
- 1c: Flak Jacket
- 2: Helmet Cover
- 3: Boots
- 4a: Weatherproof Jacket
- 4b: Pants
- 5: Weapon
- 6: Dirt and Mud





## 5. WEAPONS

Vallejo Cam Olive Green is a good base for anything that should be green (LAW rockets etc.). For rifles and support weapons I recommend keeping things a dark gunmetal colour. I tend to mix this to taste from Vallejo Air Chrome and Vallejo Black, followed by a wash of Games Workshop Nuln Oil.

A bit of chipping with brighter highlights (Vallejo Silver) is appropriate on larger weapons such as the M60 (most of us have a preferred way to paint these already). Bear in mind the M16 and M60 had black plastic components so check your references for these.

### WEAPONS

-  Vallejo Air Chrome
-  Vallejo Black
-  Vallejo Cam. Olive Green
-  Citadel Shade Nuln Oil
-  Vallejo Silver

## 6. DIRT AND MUD

Any amount of time browsing original images from the conflict shows just how muddy Marines could get. How far you go with this is entirely down to personal taste. I would recommend Saddle Brown, Flat Brown and Orange Brown - all from the Vallejo range - as possible options for mud and dust. The terrain in Vietnam can range between the famous 'red mud' to a lighter dust. I've tried to show two options here and, as before, consulting references is key.

### DIRT AND MUD

-  Vallejo Saddle Brown
-  Vallejo Flat Brown
-  Vallejo Orange Brown

## BOOTS MADE FOR (JUNGLE) WALKING

The War in Vietnam saw major evolution of the U.S. forces' tactics, weaponry and equipment. Even the most basic of soldiers' equipment, the boot, improved because of the experiences brought about by the war.

Given the conditions in the jungles of Vietnam, standard black leather boots just couldn't cope with the damp and humidity. U.S. troops were initially issued with the same boots worn during the Second World War - the M-1945 Tropical Combat Boot. Once the Marines and Army were deployed en masse, from 1965 onwards, the M-1966 jungle boot was adopted.

Developed by Natick Laboratories and experts in the shoe industry, the leather parts were reduced to the toe and the heel, with cotton canvas duck and nylon being used for the upper parts and the neck of the boot. A composition rubber sole was vulcanized to the toe and heel, with water drainage points added to the canvas in the form of screened eyelets. These were designed to help when drying the inside of the boots. The insoles of the boots were made from fused layers of plastic and issued with the boot to ease the need once again for excessive drying time.

The boots were further updated in May 1966. The use of Viet Cong punji stake traps had seen a major increase in foot injuries amongst U.S. troops. To try and prevent these, a stainless-steel plate was put inside the boot's sole.

Later still, nylon replaced the cotton duck canvas; several other improvements were made to aid the infantryman, including the Panama mud-clearing system on the outsole and further reinforcement with nylon-based webbing on the uppers. However, as is typical of military forces the world over, the earlier boot continued to be issued ... well, there were plenty in the stores!





## THE THREE-COLOUR DALLIMORE METHOD AND PAINT SYSTEM

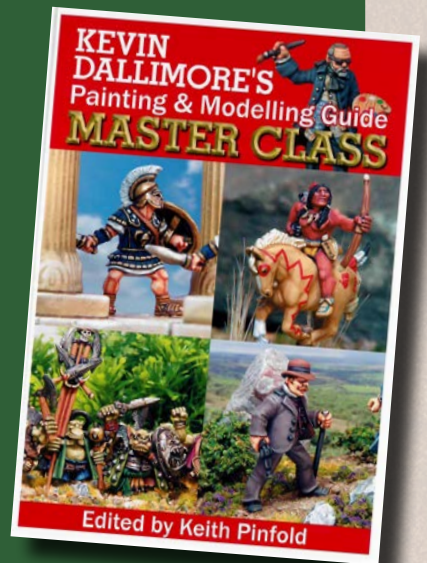


Painting maestro Kev Dallimore achieves his results by building up in layers, from dark to light, in order to achieve a realistic three-dimensional shaded effect without the need for blending. He covers this approach, along with so much more painting advice, in his *Painting & Modelling Guide Master Class* from Foundry.

After consulting with Brushmaster Kev, the Foundry paint system was designed, directly tied to his method. It gives you, the painter, the tools you need to apply the three-colour method by offering a 'triad' of paints in a set - a main colour, partnered with the shade and highlight colour.

Other companies may have introduced their own variants on this concept, but Foundry was pretty much the first and has the widest range ready to go right now. The three layers of colour give real depth and subtlety to Kev's work and by copying this style, you'll be able to try painting the 'Dallimore Way'. Practice makes perfect, of course, and through experience I've worked other paint brands into my own methods. Not that I'm saying I'm perfect! But keep at it and you'll get results that start to really stand out on the tabletop.

To see the true potential of the method, look at the amazing models Kev has painted while working with companies such as North Star and Crooked Dice Design Studio, or check his whole collection online at [werelords.com](http://werelords.com).



### "I WAS A PFC ON A FOOT PATROL ..."

I hope you've found this article useful. The figures from Empress Miniatures are great, but of course, I'm a bit biased as I'm a part of the Empress 'family'! The same approach will work for any US Marine figures you may want to add to your collection.

Remember that you can use a variety of different shades to display experience/time in Vietnam; both US and 'Free World' forces would have uniforms and equipment from a number of sources as part of their issued gear (and as a result of private purchases).

The part of the war that you're depicting the figures from will also change your painting approach. The US Marines were directly involved in the war from 1965 onwards, with 3,500 being deployed to defend the Da Nang airbase at China Beach. Bear in mind that the US Marines would often 'make do' with older equipment than the US Army. They were encouraged to seek out 'used' equipment and dress in a more individualistic style than the typical Airmobile, Mechanised and US Army infantry.

Whatever you decide to do, this is a chance to field such a huge variety of figures and painting styles to represent just one aspect of the War in Vietnam (and Empress is a great first stop for one of the largest new ranges, but like I say, I may be a little biased!)



# PAINTING MATILDA



Barry Evans got his hands on a 28mm resin Matilda 'Boss' Battle Tank from Victoria Miniatures; here he shows us how he went about painting it with both airbrush and brush techniques.

I really like the Victoria Miniatures Matilda "Boss" Battle Tank and was delighted to be asked to paint this for Victoria herself in an urban camo style. I wanted to create an effect of the tank being on campaign with a little weathering.

## THE BUILD

I had a few things to consider when constructing the tank. Should I separate the side panels and side tank tracks from the main body, to ease painting, or glue everything together and paint as a whole tank? I decided to construct the parts and paint as a complete tank, including the fuel tank, exhaust, and spare track. I would recommend beginners leave some parts separate to help with their painting. Dry fitting is also recommended, to see

how things fit together, eliminating any potential mistakes you may make by gluing immediately.

The tank comes with four turret cannon options:

- Tank Slayer Cannon
- Battle Cannon
- Nuclear Fire Cannon
- Twin Auto-Cannon

The hull bolter gun was painted separately, to help aid the direction of the airbrush work and I decided to paint all the turret options separately keeping the same camo style as the hull and main turret housing.

The commander's main MG and hatch was also kept apart to be painted separately.

Once built I started with a grey primer (Halfords own brand) and covered all the areas of the tank and additional parts, ready for the base layer colour.

## KEY TO THE PAINTS

VMA = Vallejo Model Air

ABT = Abteilung 502 (oils)

Mig = Mig Productions Weathering Powder

MS = Micro Sol

VM = Vallejo Model

AP = Army Painter

Note: All VMA paints were slightly thinned down with flow improver.



**BUILDING THE BASIC VOLUMES WITH THE AIRBRUSH**

The method I used for this tank was panel highlighting. After the primer had dried for around 30 minutes (though longer is better - I was eager to get going), I set about creating the basic paint volumes using my airbrush.

The application for this method of airbrush painting is to paint each panel independently building up the highlights stage by stage. The best way to describe this process is to imagine a square area (the panel) upon which the first highlight layer is applied to cover all the area. The second highlight is applied to cover a reduced area within that area (leaving a small amount of the previous layer visible). This is then repeated with each subsequent layer until the final highlight is applied.

**PAINTING THE BASIC VOLUMES**

1) I apply the first layer of paint with my airbrush, covering the whole tank and additional parts with a base colour of VMA Grey (047).

2) The first highlight is in VMA Neutral Grey (051) and airbrushed onto all panels, leaving a small part of the previous colour in place.

3) The second highlight is in VMA Light Grey (050) and once again I airbrushed it onto the panels, leaving a small part of the previous colour in place.

The final highlight represents more of a natural light fall, generally hitting just the high parts. It is a mixture of 80% VMA Light Grey (050) and 20% VMA Insignia White (279), and I apply it to all of the panels, leaving part of the previous colour in place.

**USING A DECAL SOFTENER**

The best method to apply decals is to use a gloss or satin varnish as a base. Micro Set is used to place the decal into place. When the decal has dried to the touch Micro Sol is applied to aid the fixing into place. The final task is to apply another coat of varnish to bring the sheen of the surface and the decal together.

**AIRBRUSHING TANKS AND OTHER VEHICLES - THE BASICS**

- Think about how light will hit the vehicle and the technique you wish to apply to attain this, e.g. Panel, Zenithal, Spot etc.
- One of the best practices one can apply when airbrushing is to apply masking or shields to areas of the tank. This will help you to control the area that the paint is applied to (thus avoiding overspray onto unwanted areas). This can be done with masking tape or a piece of card.
- Check your paint consistency is (rule of thumb) the thickness of skimmed milk.
- Think about the angle of the airbrush before you spray.
- Do a test spray on a piece of paper before applying it to the miniature.
- Wait for the area you have just sprayed to dry before applying another highlight.
- Use a pictorial resource and refer to it during your airbrush work.
- Change the direction you are holding the tank to assist in directional spray of your airbrush.
- Apply a key line around the panels using a darker colour than the base colour - this will help define the panels, accentuating the shadows.



#### ADDING CAMOUFLAGE AND DEPTH

4) I decided to airbrush the tank with an urban camo pattern with shades of grey and an off-white highlight. Next I needed to decide if that camo would have a soft edge or a hard edge finish to the outline. You can apply the camo by masking the area to be airbrushed (hard edge) or airbrush it freehand without a mask to obtain a softer edge. I decided that I would go for the soft edge look, using the freehand method.

5) Camo strips are sprayed lightly with the airbrush, in this case VMA Anthracite Grey (052).

6) Before moving to the next stages, it's important to apply a coat of varnish. This will not only protect the painting you've done but it will also aid the application of a good surface for any decals or the use of enamel/oil-based paints. A coat of protective satin or gloss varnish covers the tank and its parts.

Once the varnish has dried, I apply decals - see the 'Using a decal softener' on the previous page.

4



5

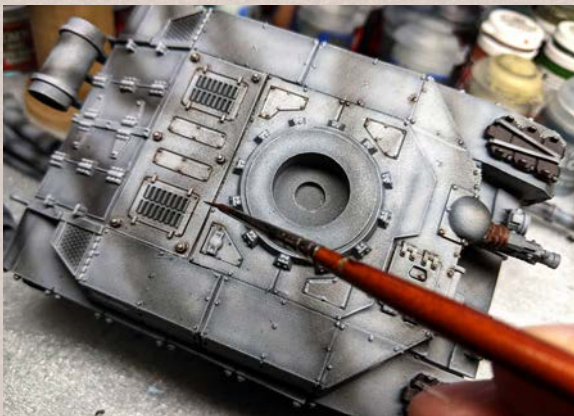


#### BRINGING DEFINITION

Once the decals are dry, I apply another coat of satin varnish to protect the painting I've done. It will also protect the surface for any further use of enamel/oil-based paints. If the surface is not protected any additional application of enamel-based paint would start to dissolve the previous layers.

7) and 8) After the varnish is dry, I apply a shadow line with a paint brush around every panel, nut, and bolt using a 1:1 mixture of ABT 004 Bitume and ABT 080 Brown wash - this outlines the contours and recesses of all parts. The varnish application on the surface also produces a capillary action when the shadow line mixture meets the surface of the model. Any excess is wiped off with a sponge.

7



8



9) The tank's tracks are painted with a base coat of VM German C. Black Brown (822) and lightly drybrushed with VMA GunGrey (072). The gun barrel tips and rear radiators are painted with AP Weapon Bronze before a few washes of AP Strong Tone are applied.

9





## FINAL FLOURISHES

10) Extreme highlights are applied to the highest parts of the tank including all nuts and bolts. This is done with VMA Insignia White (279). One could simply dry brush over the raised parts or highlight each area individually, but I highlight each area separately and edge highlight using the side of the brush.

The turret gun was then base coated with VMC Black and a second highlight applied with a mixture of 95% VMC Black (950) 5% VMC Black Grey. The gun stock base was painted with VMC Chocolate Brown (872) followed by a highlight of 20% VMC Cavalry Brown and 80% VMC Chocolate Brown (872).

11) I then use a mixture of Mig Rubble Dust Weathering powder and ABT 080 Brown wash and drybrush this into the recesses and toward the edges (refer to your reference picture as to the placement of any weathering effects).

12). Weathering, streaking, grime, and rust is applied with ABT oils and Vallejo pigment. The colours used are Burnt Umber, Bitume and Ocher. These are mixed with turps and applied to the tank. The streaking is created by a downward motion of the brush.

I used Mig Rubble Dust Weathering powder to create dirt and dust, applying it with a paint brush. Any rust was applied by brush with Vallejo Burnt Sienna pigment mixes and some Matt Varnish.

13) A final AK Ultra Varnish Matte was sprayed over the tank and additional parts to lock everything down and give some protection to the camo. This is especially important when using weathering powders, unless you want your fingers to be dusted with brown every time you pick up your model when gaming.

11



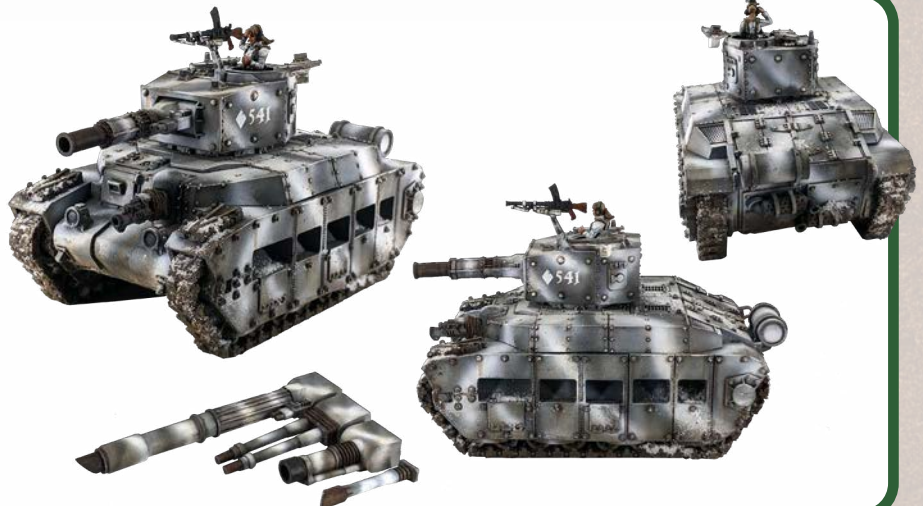
13



## WEATHERING MATILDA

If you wish to take things further, the urban camo pattern can easily be adapted to a winter camo one by adding a final camo stripe of VMA Insignia White 71.279 to all the areas of the tank and armaments. A final highlight of VMA White 71.001 white is then sprayed onto the Insignia White stripe, leaving some of the previous colour showing at the edges.

Be careful not to spray onto any decals. To complete things apply a coat of protective matt varnish to seal and protect the tank.





# INTRODUCTION TO AIRBRUSHING

Wi's in-house painter uses an airbrush in most of his work; he reckons you should have a go too. Here Marc tells you how to get started.



If you are reading this article, you are probably here because you're contemplating having a go at airbrushing, but have not yet convinced yourself to take the plunge into what can be a slightly intimidating area of painting. Hopefully this article will convince you to dive in with the help of the various buoyancy aids I'll provide!

## WHAT'S AHEAD?

I put this guide together because I believe most miniature painters will benefit from having an airbrush (and the skills required to use it) in their hobby kit. I have tried to provide the guide that I wish existed when I first began airbrushing.

It is not about advanced skills, those can come later, this guide aims to provide a solid foundation that:

- Debunks some of the myths surrounding airbrushing.
- Examines the kit required.
- Introduces techniques and practice exercises.
- Addresses troubleshooting and cleaning.

By the end of this series of articles, you will be endowed with the knowledge required to start blitzing through your miniatures with a new painting tool.

## WHY AIRBRUSH AND IS IT WORTH IT?

I must admit that it took me a while to get behind the idea of airbrushing my miniatures. Much like many of my friends and

other hobbyists, I previously thought that airbrushing would be a challenging new technique that might not be worth the effort to learn. It could be costly, only suited to specialist tasks ... and perhaps it wasn't even 'real painting' at all.

I've been using an airbrush for over five years now; I'm going to get straight to the point: these misconceptions could not be further from the truth! Since taking up airbrushing I have:

- Painted more miniatures than I ever could with just rattle cans and brushes, thus shrinking my pile of grey shame.
- Spent far less money on airbrushing kit than I have on new miniatures and paints.
- Seen a marked improvement in my finished display and army level pieces [getting the job as our in-house painter over 300 other applicants, no less! - Ed]
- Reduced the amount of time that I spend painting single miniatures and armies, thus having more time to paint extra figures and play games.

If that last point doesn't convince you then I don't know what will!

Ultimately, airbrushing can be a cost and time effective way to get through the projects clogging your workbench. The airbrush itself is a tool as valid as a standard paint brush, and the process of using it is no more challenging than learning brush painting techniques.



## TAKING THE LEAP: WHAT YOU NEED

Probably the biggest hurdle to cross when getting started is working out what new kit is required. Buying an airbrushing setup is obviously more costly than getting a paint brush, but most of the kit is very durable and will last you for years. I still use my original airbrush compressor at home; with care, your starting airbrush can also last you for years, by which time you might be ready to invest in something a little fancier anyway!

### KIT CONSIDERATIONS

Are you going to paint tanks, infantry, terrain, or a mix of everything? Do you have a 'money is no object' budget or would you like a cheap starter setup to dip your toe? These are questions that each hobbyist will answer differently and will somewhat determine what initial set up to get.

### Is high-quality kit the best start?

A high-quality airbrush and associated equipment will produce better results, and if you know you are going to be doing a lot of airbrushing going forward and you have the cash, then don't hesitate to splash it, but you can certainly begin your airbrushing journey without a big financial outlay.



### DEBUNKING AIRBRUSHING MYTHS – IT'S EXPENSIVE

There is a higher financial point of entry with airbrushing than brush painting, but let's be honest, miniature collecting is not a cheap hobby! Consider an airbrush an investment towards the future wellbeing of every army you own. Getting an airbrushing starter set might mean you delay the purchase of your next army by a few months, but it will make it more likely you paint that army fully when you do buy it.

Airbrushing will save you money in the long run. You will not need to invest in painting basics like rattlecans for priming, and you will save plenty of time. Your time is the most valuable commodity of all!

## BUNDLE IT UP!

As you progress, you may choose to buy airbrushes that fulfil specific niche roles, and perhaps upgrade the brush or compressor that you own, but this is certainly not an initial requirement. For the sake of this guide, we'll make a simple suggestion; get a starter bundle that costs around £110 (\$150 US). These 'all in one' sets are available from various sources online and tend to be aimed at cake decorators, makeup artists, and so on. While they aren't specialist sets for miniature painting, they are perfectly capable of doing the job if you ensure the bundle includes some specific elements/features:

### The airbrush (1)

Miniature painters generally use dual-action gravity fed airbrushes as these give effective control over the quantity of paint released (I discuss the importance of these in the next section). Many bundles will have other kinds of airbrushes included, and while these are usable for specific tasks, you should ensure that you are getting at least one dual-action gravity fed airbrush and treat anything else as a bonus.

### The compressor (2)

There are many kinds of compressors - the key rule is to get one with a tank (3). This tank stores air and without it the compressor will need to run the whole time you are painting (4 is what a tankless compressor looks like and should be avoided). This makes a lot of noise, may result in overheating during long painting sessions, and can result in varying pressure, which makes for less paint control.



### Moisture Trap (5)

Most compressors come with their own moisture trap into which the hose is attached. Make sure your bundle has one. Moisture is in the air, and there is very little that we can do about that. When it builds up in the compressor and airbrush, it can cause the airbrush to spit and behave in a way which produces poor results. A moisture trap removes the problem if you remember to release the trapped moisture in it from time to time. This is done by pressing the metal plunger at the bottom of the trap.

### Extras

Any bundle worth its salt will include a hose to connect the airbrush and compressor. There will usually also be some cleaning kit included. This is stuff you'll need, but it is easy to purchase or upgrade, so don't get too hung up on these additional elements. I'll talk about the rest of the kit you'll want in future sections.



## THE BASICS, PRACTICE EXERCISES, AND TROUBLESHOOTING

You have your kit, you've carefully read through the instruction manuals [of course you have - Ed], and you're eager to get some paint into your airbrush ... but woah there, let's get into the basics first.

### HOW TO HOLD AN AIRBRUSH

Precise angles and placement of digits may vary, but as you can see from the picture, the airbrush rests on your middle finger, just ahead of the trigger mechanism. The trigger is controlled by the index finger, and your thumb is used to stabilise the airbrush.



### CONTROLLING THE COMPRESSOR'S AIRFLOW

Air pressure is the basis of the airbrushing process. Pressurised air enters the airbrush from the compressor via a hose and is controlled by a pressure gauge; it is used to push paint through the front of the airbrush, out from the tip, and at your miniature (air flow is shown as a blue line in the image above, paint flow as a green line).

Controlling this air pressure is one of the three essential elements of airbrushing along with paint density and trigger control. Use too much pressure and the paint will pool, split, and make a right old mess on your figure. Too little pressure will not carry the paint pigment properly, resulting in the airbrush spitting and, once again, making a right old mess!

This begs the question: what is the optimum air pressure? The rather unhelpful answer is that there isn't a precise figure; it is dependent on a whole host of factors, especially the type of paint you are using and its pigment density.

Having said that, it's never good to use high pressure as it reduces your overall control. I recommend starting at approximately 20 PSI, then you can assess whether you need to raise or lower the pressure. You should never need to go above 30 PSI, but if you find that you do in order to get a good spray, you're probably using paint that's too dense!

### PRACTICE EXERCISES

The following exercises are all done on paper, but they will help you to develop the necessary airbrush skills that you will need once you start to spray your miniatures. It's tempting to skip these basics and 'get on with actually painting a mini', but when you begin learning the quality of practice is genuinely more important than time spent airbrushing figures. Put in some effort on paper and it'll shine through in your miniature paint jobs.

Treat this like a gym session and put in the reps. With each repeat you should attempt to reduce the size of your resulting paint sprays on the paper! I still return to these practices today to keep my trigger finger ready!

**TOP TIP** - If you're of an organisational mindset, you can keep the sprayed results from these practice exercises for each of your paints in a binder, with the name sprayed at the top of each sheet - a permanent reference to check!

#### Practice exercise one - lines, dots, noughts and crosses, and more

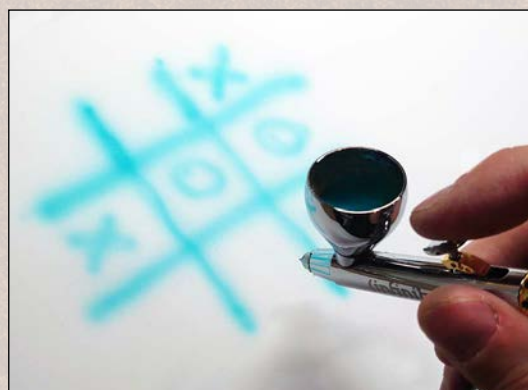
*Exercise* - Paint progressively smaller dots and lines, beginning with the airbrush at about 15cm from the paper.

Find a trigger position that feels comfortable, then spray a dot and line. Progressively move the airbrush closer to the paper and repeat the exercise. As you get closer, you'll notice that the line and dot will start to look overly heavy or thick with paint if you maintain the same trigger position. Trails of paint may even spread outwards making a splatter if you don't reduce your trigger pressure and back pull. The closer you get to the paper, the more refined and light your pull and pressure will need to be. Find the 'sweet spot' with your trigger as you make thinner and more refined lines and dots. Once you have this locked in, it's time to play yourself at noughts and crosses, combining the skills. Airbrush the grid then play out the game!

*Result* - The more you repeat this practice, the more you will develop trigger control and aim.

*Taking it further* - As you develop more control, try writing your name, then sentences, and finally even doodle sketches.

Doing the same exercise with different paints from your collection will teach you about their individual properties. The same distances and trigger actions can produce different results on a paint-by-paint basis because of their varying consistency and pigment density. By practicing on paper, you'll notice variation across brands, paint types, certain colours, and more. Practice exercise two is on page 34.





## HANDLING THE PRESSURE

- When do I need more pressure?

If the paint is spitting or struggling to come through at 20 PSI, you may need more pressure, but it is more likely your paint needs to be thinner, or the pigment within is too large for your airbrush (the latter is more likely in high quality airbrushes with particularly slim needles made for fine-detail work).

- When do I need less pressure?

If the paint is coming out so quickly that it is splitting and pooling on your target faster than you are able to move it around safely and with control, consider lowering the pressure, but it is more likely you have over-thinned your paint.

My top tip is to always practice on a piece of paper before bringing the airbrush to the miniature.



Above: Project Manager James used Darkstar Molten Metal paints on these Hoplite shields as they have fine pigments and flow through the airbrush smoothly.



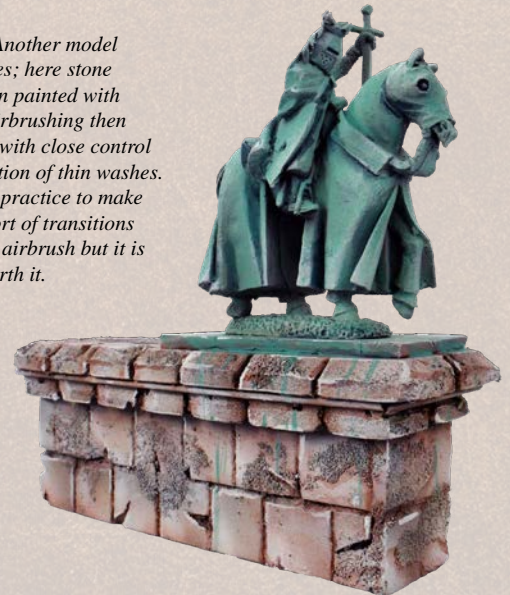
Check out W405 to see the simple process Marc used to paint this Jagdtiger. Airbrushing is the foundation, and details come through weathering application.

### DEBUNKING AIRBRUSHING MYTHS – IT NEEDS A WHOLE NEW SELECTION OF PAINTS

Just because there are specialist 'Air' ranges doesn't mean you can use only them. Most of your current paints will work well through an airbrush if correctly thinned. However, some paints (metallics in particular) have quite large flakes/pigments, which can quickly clog up your airbrush, and you may want to invest in some specialist offerings as time goes on.

When you begin airbrushing, I recommend buying at least one specialist airbrush paint and a white artist's ink. These offer a visceral example of how things should be; they'll show you how thin paint and ink consistency can be for airbrushing, and will allow you to practice using the airbrush without having to worry about paint thinning at the start of your journey. When you want to use another colour, use a non-air paint from your collection and thin it using the air paint as a guide.

Right: Another model by James; here stone has been painted with basic airbrushing then shaded with close control application of thin washes. It takes practice to make these sort of transitions with an airbrush but it is well worth it.



### THE TRIPLE TRIANGLES OF TIGHT TECHNIQUE

I could fill a whole book with airbrush techniques and still not fit everything into it. This is a starter guide though, so I am going to share what I think you really need to understand to get off to a great start in airbrushing, and that begins with cones. Allow me to explain.

#### How paint sprays from the airbrush

To understand why cones are such a core foundation of airbrushing it is first important to know that airbrushes release paint as particles that project from the airbrush tip in a broadening cone. The way that an airbrush releases these particles (and the resulting cones) depends on two factors:

- The amount of air pressure you release through the airbrush by pressing the trigger.
- The quantity of paint being fired.

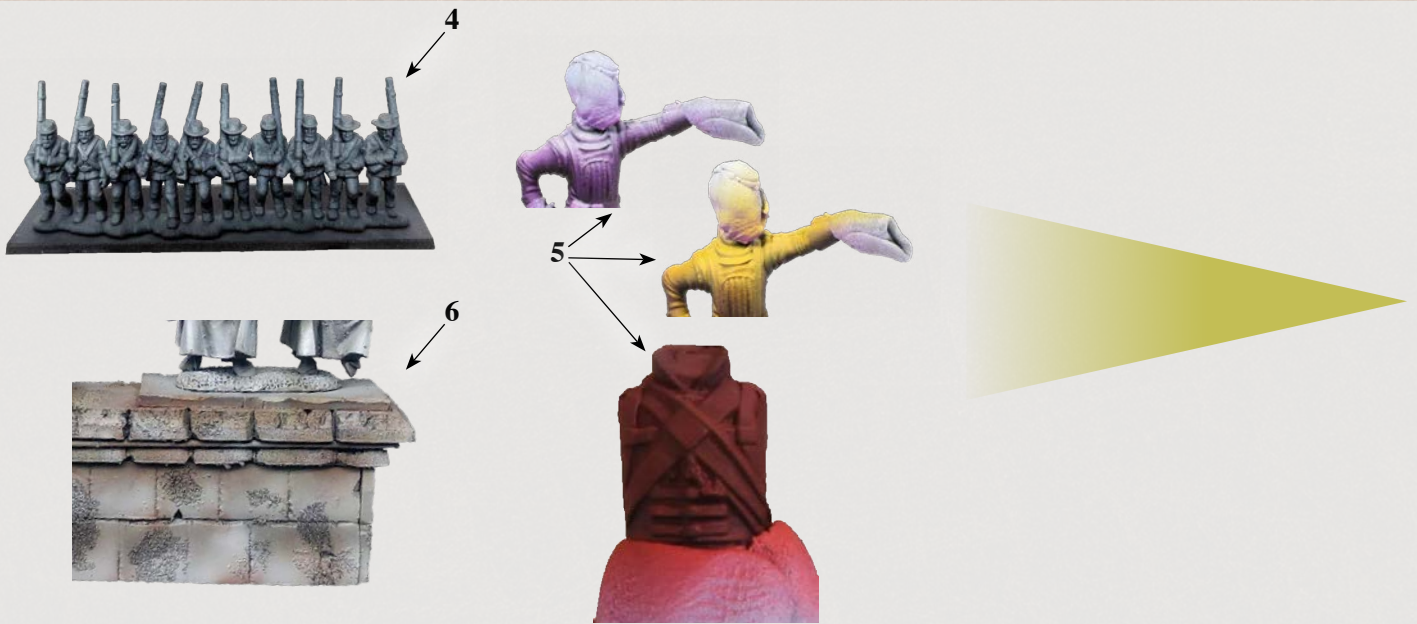
Pressure released and paint quantity are controlled via a dual action airbrush, and it is the action of controlling both at once from which dual action airbrushes take their name. A dual action airbrush allows the user to control the amount of paint and the pressure with just one trigger (see over-page for examples). How does it work?

- Pressure - a downwards action on the trigger releases pressure; the more it is depressed, the more pressure is released.
- Paint flow - a backwards action pulls back the needle within the airbrush, opening the nozzle and enabling paint to pass. The further the needle is pulled back, the larger the cone of paint that is projected.

The key to using a gravity fed dual action airbrush is trigger control. How much you pull the trigger back and press it down determines the shape of the cone of paint pigment released. The shape of cone you create will have different applications. Modulating the size and intensity of the cone of paint you spray is the key to using your airbrush for many figure painting applications.



THE HOLY TRINITY OF CONES





## TROUBLESHOOTING

If your airbrush spits paint, this can indicate that paint is pooling on the tip of the airbrush needle. Give the end of the airbrush needle a clean. This needle build up can happen during extended airbrush sessions or in hot weather too. Regularly give the needle tip a wipe and consider using a paint retarder medium to slow down drying time if it is a consistent problem.



### A large cone

This is the easy one as it takes a heavy depression (for more air pressure) and a far back pull (for more pigment release) of the trigger. This is ideal for priming (1), applying zenithal highlights (see page 95) from above (2), base coating over those highlights with colours (3), and painting specific areas on larger miniatures and terrain.

When using this cone, it's often best to hold the figure further away from the airbrush so that it is hit by more of the cone's breadth. The closer you move the figure to the cone, the more focused the spray will be on a smaller area.



### A medium cone

Created by a lighter pull back and less pressure on the trigger, this less broad and less intense cone gives you more control of how much paint goes on the figure. You can add a zenithal highlight to 13.5mm Epic ACW figures (4), or smooth colour transitions over 28mm figures (5). You can even start to sketch in further details and build volume on flat surfaces (6).

Because you are only 'going part way' on the two actions, you'll need to train your trigger finger to find a sweet spot here. Some more expensive airbrushes come with limiters for your trigger pull, which can help with that.

The closer to the tip of the airbrush you hold the figure, the more control and paint focus you'll have by reducing the amount of spray width hitting the model. Some of the areas of models (5) here are masked with Blu-Tack to ensure they don't get hit.



### A fine cone

This is the cone used for painting small elements, such as a specific area of 13.5mm figures (7) or dots of light and other tiny details (8), and to highlight points as dots of light on 28mm figures (9). It is the most challenging of the three cones to produce consistency as your back pull and pressure must both be very light. Many experienced airbrushers use a technique called feathering to make this cone easier to achieve. They 'feather' the needle with a repeated 'on/off' press and pull to make a very light and easy to control modulating cone. But that's a technique for another time!

## WHAT IS A ZENITHAL HIGHLIGHT?

Zenithal highlighting is frequently mentioned in airbrushing guides, including many of the ones we run in *Wi*. Don't be put off by the strange name, it's a simple technique that has striking results.

It is a way to apply a highlight (the illusion of light accentuating parts of a figure) from a fixed point - a zenith. In our case that zenith is the airbrush itself.

The simplest way to apply a zenithal highlight is to take a black primed figure and then spray it with grey or white. Instead of targeting it from all over, your goal is to only spray it from one angle - usually above but this can be varied for different light effects.

As you apply a soft, controlled spray of light paint to the figure from one angle it will only 'dust' the top details, leaving dark primer visible in the recesses. The more you layer this spray the more you'll define the high points.



Above: The different spreads of the cones shown side by side.





Left: These Konflikt '47 figures were painted with little more than the basic techniques used in these practice exercises.

Marc applied a zenithal highlight, also known as preshading, to them with white over black. He then airbrushed purple from below, followed by khaki from above. This defined the volumes of the figures.

All that remained was to pick out some edges and weapons with a bristle brush, apply some weathering techniques, and base them.

## Practice exercise two - around the world

*Exercise* - Draw three circles on a piece of paper. Your mission is to use blending and shading effects with the airbrush to create layers of paint that make the circles look more like spheres.

Circle one - apply a mid to dark toned paint in thin layers around the lower curve of the circle, gradually layering the paint to add more depth and pigment the closer to the edge you get. Don't worry too much about staying within the lines here.

Circle two - fill in the circle with the same base colour, trying to stay within the lines (also do this on circle three at the same time). Change to a lighter paint at a consistency as thin as you think you can comfortably control. Apply this paint in layers to a 'highlight point' on the top half of the circle while gradually reducing the size (using the 'dots' skills practiced in exercise one) to make a sphere effect.

Circle three - combine the two previous practices by edging the top curve of the circle with graduating lighter tone, then add a circular spot highlight. Change to a pure white and add a final refined spot and edge highlights.

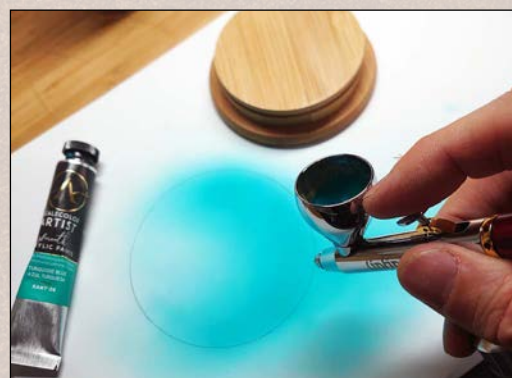
*Result* - This practice reinforces the ability to create soft and smooth blends and gives some understanding of how to enhance volume on surfaces.

*Taking it further* - Consider repeating the exercise with a lower compressor pressure to see how low the PSI can go while demonstrating good spray and control.

These 'spheres' you have created could become planets if you add details with the brush control you develop in exercise one. Once you learn about masking, you'll be able to do even more with such 'planets' and could progress to painting space backgrounds for miniature photos or even gaming boards for space combat games like *A Billion Suns*.



Above: Starting to develop the tone around the underside of circle one.



Above: Layering more controlled spray to deepen the tone and further the transitions on circle one.

Once you have full control of the trigger, you can make beautiful transitions, such as these on the wing of a Games Workshop Greater Demon.



## TROUBLESHOOTING

Listen to the sound of the paint being released from the airbrush. It should sound smooth, not scratchy. If it is scratchy, your pressure may be too low and/or your paint too thick.

## DEBUNKING AIRBRUSHING MYTHS - IT'S CHEATING

This is one that I used to be guilty of. I would spend hours (if not days) blending miniatures to produce a smooth finish with a paintbrush, because I thought people using an airbrush to produce smooth blends in seconds were cheating.

This could not be further from the truth. Like all skills, becoming proficient with an airbrush takes time and plenty of practice. It is another tool in the miniature artist's arsenal, and one which I am now very pleased to possess.



## YOU'VE GOT TO KEEP IT CLEAN!

Cleaning is perhaps the main stumbling block people encounter when airbrushing. The fun of painting with an airbrush quickly overcomes any misgivings or nervousness; the chore of cleaning it is no fun, but it is vital. If you don't keep your airbrush clean it will quickly become less effective and problems will rapidly escalate.

Have no fear, here's our complete cleaning guide for the different stages in your airbrushing and a basic shopping list for cleaning products!

### WHILE PAINTING

Keeping your needle tip clean will ensure smooth paint flow. Use a water-damp cloth when you see paint build up and pull it away from the needle. For more stubborn clogs on your needle, you can replace the water with airbrush cleaner or use a toothbrush to apply it with a little more abrasion (don't use anything that is truly abrasive though!). If you use airbrush cleaner, be sure to not spray onto the figure immediately after; let the cleaner spray off the tip before you direct paint back onto your figure.

If paint starts to dry in your paint cup, it's worth pulling any loose rings and flakes up and out of the cup with a damp cloth or Q-tip. If these work their way into your airbrush, they will create clogs.

### IN-BETWEEN PAINTS (1)

You don't need to thoroughly clean your airbrush in between every paint application; simply submerge the front of your airbrush in a large pot of water and then activate it. This pulls water through the system, cleaning out any excess paint. This approach is quick and saves using chemicals.



**TOP TIP** - Take care when cleaning your airbrush nozzle, the metal is thin and if you apply too much pressure to it you can distort or tear it, which will make accurate airbrushing impossible.

### AN UNEXPECTED INTERRUPTION (2)

If you are in a rush after finishing painting, you can simply leave your airbrush submerged in water to stop paint from drying. This is not recommended for long periods of time but can be a good way to deal with being called from your painting unexpectedly. It's a better option than leaving paint in the airbrush to dry!



**TOP TIP** - Some cleaning fluids will degrade the seals in your airbrush, so be cautious when using them. Isopropyl alcohol will not damage the rubber seals, so it is ideal for giving your airbrush a fully dunked bath!

### SHOPPING LIST - CLEANING ESSENTIALS

- Biodegradable cotton buds - as with cocktail sticks, they are incredibly useful for removing stubborn bits of dried paint.
- Cleaning pot - these enable you to run cleaning fluid through your airbrush and trap the spray in an easy to clean sealed glass jar without letting unpleasant fumes into the air.
- Airbrush cleaner - as with thinner, several manufacturers sell liquids designed specifically to clean airbrushes. There are liquid and foaming types; both can be used for a thorough clean.
- Large jar/mug - essential for cleaning your airbrush. I will talk more about this later.
- Toothbrush - another tool for cleaning.
- 99.9% Isopropyl alcohol - this is my go-to cleaning product. Additionally, it is a fantastic acrylic paint solvent, and when mixed with water (approximately 40% isopropyl alcohol, 60% water) it is an excellent acrylic paint thinner. Be careful when handling and storing this as it is flammable and toxic.

### A MORE SERIOUS CLEAN (3)

Sometimes you may need to give your airbrush a more serious clean, usually at the end of a session or if you are transitioning from a very dark colour to a very light one. This is where airbrush cleaners (and/or 99.9% isopropyl alcohol) come in handy.

- 1) Run water through the airbrush to clean out the paint.
- 2) Rest the airbrush in the cleaning pot, add a few drops of cleaning fluid in the paint cup, then pull and depress the trigger. This will draw cleaning fluid through the system.
- 3) Remove the airbrush from the cleaning pot and add a little more cleaning fluid. Before you pull and depress the trigger, cover the tip with a cloth. This will cause the airbrush to 'reverse' as the air cannot escape through the tip. The air will instead escape through the cup, bubbling up. This is called backwashing and it will loosen up any gunk higher in your airbrush.
- 4) Use a Q-tip to wipe out any debris in the cup.
- 5) Finish off by running water through the airbrush again to clean out any remaining cleaning fluid.



**TOP TIP** - To quickly flush the airbrush, you can increase the pressure in your compressor. This may also 'force through' more stubborn paint blockages.



## A PROPER JOB! (4)

It's worth doing a thorough clean every so often. Take apart your airbrush and leave it to soak in 99% isopropyl alcohol. I often leave my airbrush overnight. Once it has soaked, I use my brush cleaners, cocktail sticks, and cotton buds to remove every speck of paint that may remain.



## TROUBLESHOOTING

Bubbling in the airbrush's paint cup generally indicates that there is a blockage in the system and that the airbrush needs a thorough clean. Before doing this, however, ensure all the seals at the front of the airbrush are tight. Any slight loss in pressure here will also result in bubbling.

## SHOPPING LIST - PAINTING ESSENTIALS

- Mixing palette - I recommend a metal palette as this will be inert and robust. All paints should be mixed and thinned before they go into your airbrush. This way you know the consistency and your airbrush will not get clogged.
- Airbrush thinner - You can buy bespoke airbrush thinners, which are often needed to thin acrylic paints sufficiently so that they do not clog your airbrush. It is also possible to thin with water, but this is typically not as effective.
- Water dispenser - this will make it easier to add drops of water to thin your paint. I use a large, old paint bottle.
- Masking materials - Blu-tac, masking tape, cling-film. Products like these work wonders.

## SHOPPING LIST - DEEP CLEANING

- Cleaning Brushes - pipe cleaners designed to clean the inside of the airbrush. They come in a variety of sizes.
- Nozzle cleaner/needle - used to clear out any paint built up in the nozzle of your airbrush.
- Cocktail sticks - fantastic for poking around and picking off stubborn bits of paint whilst being soft enough to not damage the surface of your airbrush.
- Airbrush lubricant - used to lubricate the trigger and needle. This should be applied after a deep clean to keep everything working smoothly.



Lighter tones on the top of this 15mm Konflikt '47 figure make it look very realistic. To see how Marc airbrushed and weathered it, head to our YouTube page: [youtube.com/c/WargamesIllustrated](https://www.youtube.com/c/WargamesIllustrated)



See how Marc took his airbrushing further on page 78 of this issue where he paints Victrix's mounted Persians!

## TROUBLESHOOTING

If your airbrush does have an issue and you can't resolve it, the internet is your friend. There are many YouTube videos showing how to troubleshoot problems; if all else fails, there are websites that offer airbrush servicing and sell spare parts so that you do not need to replace the whole airbrush.



These Perry Miniatures British Napoleonic were speed painted with an airbrush, a systematic painting approach, and final brushwork. We'll show you more next issue!

## SHOPPING LIST - HEALTH AND SAFETY

It is essential that you protect yourself while airbrushing. Most miniature paint is non-toxic, but that doesn't mean you want to be inhaling atomised paint while you enjoy your hobby.

- Dust mask - this really is a must buy. I recommend a FFP2 or better. It will protect your lungs, without which you'll struggle to paint miniatures!
- Gloves - protect your hand from overspray and, more importantly, from the more toxic cleaning products you'll be using that can aggravate skin.
- Extractor fan and booth - certainly not essential, but very helpful. Not only will this protect your lungs, it will also protect the room in which you airbrush from becoming dusty with paint particles.



# HAMMERHEAD 2024 PAINTING COMPETITION

HISTORICAL SINGLE MINIATURE



*The Battle of  
Britain by  
Ruben Lopez*



*Major Erwin König  
by Aaron Vayro*



**SALUTE 2020**

**THE BATTLE  
OF BRITAIN**



# MAKING THE MEDITERRANEAN



**James Morris shares how he added realistic coastal detail to his El Cid gaming set-up.**

For the Partizan show at the end of 2021, I'd decided to put on a large El Cid battle with my gaming compadres. Having settled on refighting the Battle of Bairen - a 1097 clash between El Cid and the Almoravids that was fought on the eastern coast of Spain - I needed some Mediterranean coastline to act as the focal point of the game. A few years back, I'd sold off all my terrain boards in favour of cloths, so I now required a 'drop on' terrain piece to represent the water.

I wanted something shiny to contrast with the grainy look of the terrain cloth. I had already made plenty of water features in the past by painting and varnishing very smooth wood (such as MDF), but in this case I was worried about warping, which would ruin the effect.

## ACRYLIC AFTERNOONS

Fortuitously, I had some 4mm thick clear acrylic sheet in the loft. I had bought this from a local plastics merchant when my kids were tiny to act as a safety barrier at my house - cut to size, they conveniently blocked off the gaps in between the (rather

wide) Edwardian banisters on the landing. With my children now being big enough not to fall through the banisters, I decided to recycle some of the acrylic sheet into the coastline of the Costa Blanca!

Having roughed out the outline of the sea with a marker pen, I then cut a curving coastline with the finest blade of my electric jigsaw bevelled at a slight angle. As the sea section was destined to be over one metre long, I opted to have a join between two pieces to make the finished terrain piece easier to transport and store - this was achieved by simply butting up two (factory-cut) edges of the acrylic against each other at right angles.



## WORKING BACKWARDS

The key idea was to paint the sea onto the underside of the sheet so that the thickness of the acrylic, when viewed from the other side, would create the illusion of depth but retain a reflective top surface. I did a small test piece to practice the technique and work out a logical order before getting stuck into the main project, which was carried out in the garden over a couple of sunny days.

Planning the painting stages was vital as everything needed to be done in reverse, so I spent some time studying photos of the area using Google Earth and holiday snaps. I began by dotting brown spots in some places to represent rocks under the water, which was followed by patches of sandy paint for the shallowest patches of water on the edge of the beach. After

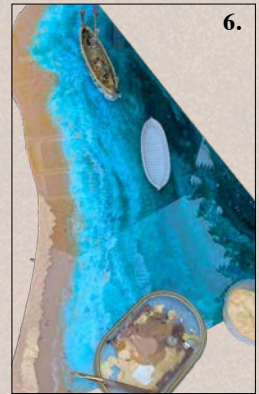
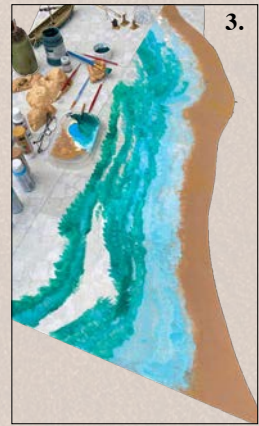


this, some white was stippled on to represent the crests of the waves. With these complete, multiple layers of blue-green were then added to develop the depth: lighter towards the shallows of the beach and darker as deeper water was reached further from the coast. Everything was painted with a mixture of craft acrylics, although the main weapon in my armoury was Daler-Rowney's excellent Phthalo Green, which has a translucent quality and gives superb depth when applied in layers.

With the painting done, I could flip the sheet over and see the result of my efforts.

**BEACH READY**

I added a layer of very fine chinchilla sand and clean cat litter - to represent rocks - to make the beach. This was applied with wood glue before basecoating and drybrushing it in the appropriate sandy colour to match my cloth. My sand stuck well enough, but if I was worried about adhesion, I could have sanded the acrylic first to get a more secure bond.



**OUR DAY IN THE SUN**

With the terrain now complete, everything was ready for the Partizan show. Despite the hordes of figures on the table, the main talking points of the day were the colourful Mediterranean coastline and the Almoravid boats that spent the day peppering El Cid's men with arrows. The acrylic sheet was perfect for an easy-to-transport, drop-on piece of terrain, and a far more practical proposition than creating the whole table from sculpted boards. Although this is the first time that I have used acrylic for this purpose, it certainly won't be the last. I can see rivers, bogs, and swamps working well with this technique, but first I have plans for more coastline to add to my collection. Alaska will most certainly require a different palette to the Costa Blanca!

If you'd like to see more about the El Cid game and my other hobby and terrain-building activities, please check out my blog: [mogsymakes.net](http://mogsymakes.net)



**SURFING THE COSTA BLANCA**

The finishing touch was to create textured surf at the crests of the waves, which involved mixing a paste of wood glue, white paint, and Woodland Scenics snow flock. Again, while looking at reference images of the area, this paste was applied to the waves with a spatula and an old brush to create the illusion of movement and add some additional three-dimensionality to the sea.





# “WITH MAN’S BLOOD PAINT THE GROUND GULES!”

Mike Peters adds unique character to his award-winning *Never Mind the Billhooks* army with some custom morale markers.

With the publication of *Billhooks Deluxe* imminent [November 2022! - Ed], I have been reviewing the troops. While I have a near complete force, able to represent either Lancaster or the House of York, one thing that I am seriously deficient in, and something that every Billhooker needs, is markers to indicate when a company must test its morale at the end of the turn.

It was time to remedy this situation, and a quick visit to Perry Miniatures’ website led to the purchase of WR32 ‘Wars of the Roses dead and wounded’ and AO31 and 32 ‘Agincourt wounded’ and ‘wounded Men at Arms’. These codes provided me with more than enough figures to get started building some expressive, storytelling morale markers. The Agincourt boys lend a slightly anachronistic element, but I doubt it will be too obvious when they are face down in the mud!

*Below: Mike visited Wi Tower with his glorious Never Mind the Billhooks armies so that we could take photos of his fine figures on the tabletop. We’re saving the full showcase of his magnificent work for a future issue but here’s a little preview!*





### 1. LORD SHINER

The Knight has lost vambrace and pauldron from his left arm; the points hang loose, and blood is seeping through his arming doublet. This is the first time I have used Citadel's Blood for the Blood God Technical paint, and I think the lesson learned is that less is more!

I like the pose and animation of this pair and can imagine that the retainer is trying to encourage his Lord: "Not far now, mate, soon get a steak on that eye!"

1



### 2. FACE DOWN AND OUT!

Finished in a surcoat of Murrey; painted with Citadel's Khorne Red mixed with Foundry Terracotta.

2



### 3. SCRAP METAL

I used Army Painter Gun Metal for my armour, washed with a mix of Citadel Nuln Oil and Agrax Earthshade, then highlighted with Plate Metal and a final delicate highlight of Shining Steel.

The soil is Vallejo Flat Earth, washed with Agrax Earthshade, and highlighted with progressively lighter mixes of Khaki Grey. A few stones are picked out in bone and light grey to add variety, and things are finished off with vegetation from Gamers Grass.

3





#### 4. "YOU'LL HAVE SOMEONE'S EYE OUT!"

I am calling this guy Harold. He wears a typical livery for the time, Argent and Azure - white and blue - particoloured in pale; he's probably Somerset's man. The blue is a woody, cheap dye, mixed from Citadel's The Fang and lightened with Fenrisian and Russ Grey, then washed and glazed with blue ink. I never use pure white; this was a built up from Citadel Administratum Grey to Army Painter Golem Grey.

The arrow is an addition, cut from the plentiful supply of arrows that come with the plastic Perry Miniatures Infantry sets.

4



#### 5. FALLEN ON HIS BLADE?

This guy is wearing the typical linen jack of the time. For this, I use a range of different 'bone' paints from various companies as well as various light browns, yellow browns, and cork colours. They all get a wash of Sepia and various glazes to try and introduce variety and create stains, making for a realistic final look.

The weapon is a spare from Claymore Castings.

5



#### 6. "OVER HERE... OH!"

The white and red livery here is suitable for the Yorkist Walter Devereux, the Lancastrian Henry Holland, or at the local level might be used by William Berkely. I have four companies in this livery, so the same livery is featured on multiple markers.

6



#### 7. THE PIN CUSHION

I got a bit carried away with the arrows on this one, but I think he gets the point!

7



#### 8. "I TOLD YOU TO WEAR YOUR HELMET"

This is the only figure I have in the murrey and blue livery of Sir William Hastings.

8



#### 9. A BIG BLOODY CHOPPER!

The white and red livery again! Maybe someone told this guy the poleaxe was sharp enough to shave with and he tried to find out.

9



#### 10. ALL THE WAY THROUGH

I don't know if this would hurt more going in or being pulled out. The application of blood here has been kept to a minimum, and in a strange way, I think that adds to the realism and makes it look more painful.

10



#### 11. "IT JUST SLIPPED THROUGH HIS FINGERS, SIR!"

This figure was slightly miscast and had no fingers on its left hand, but I saw it as an opportunity rather than a problem. His severed digits are made from 0.8 mm plast-rod, sanded into tapers.

11



We'll have more from Mike in next month's *Never Mind the Billhooks Deluxe* themed issue!



# BILLHOOKS

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# WARGAMER'S SQUINT

## A CONVERSION CHALLENGE

*Wargames Illustrated* approached Mark Hargreaves of [over-open-sights.blogspot.com](http://over-open-sights.blogspot.com) fame and asked his advice. Well, OK, we co-opted him into writing an article, using his 'magic'.

The email landed in the inbox with a dull thud. It was heavy with flattery and kind words and these always do the trick. "Could you take the Warlord WW2 Commonwealth sprue from the February issue of WI and make those figures look like Tommies from the mid 1930s suitable for gaming on the North West Frontier?"

"Yes," I said.

### AND AWAY WE GO!

**Fig 1.** The raw material. This conversion will require the removal of the two P37 pouches on the front of the figure and replacing them with some P08 greenstuff pouches, the removal of some detail of the shirt and carving away the ankle gaiters and replacing them with puttees.



**Fig 2.** A sharp scalpel is needed for this job. Gently carve away the pouches. Rather than hack them off in one go I take them off a thin layer at a time. This is why a sharp blade is necessary.

**Fig 3.** Now gently use the blade to shave off the detail of the pockets on the shirt. The khaki flannel shirt worn at this time did not have pockets or a collar, so I the scraped off the collar with the scalpel blade.

**Fig 4.** This conversion needs to use a different head to those on the sprue so drilling out the neck for the head is necessary.

**Fig 5.** The neatly drilled hole needs to be then carved into a "bowl" to take the head.







**Fig 6.** The basic kit needed for the greenstuff work. The two balls of greenstuff will be used to replace the P37 pouches with P08 pouches.

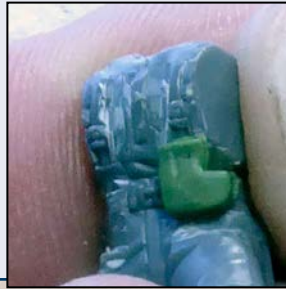


**Fig 7.** Place the first ball of greenstuff over the area that used to hold the P37 pouch.



**Fig 9.** Now do the same on the other side.

**Fig 8.** Flatten it out a little and shape it into an "L" shape.



**Fig 10.** Use the scalpel blade to press in lines to form five pouches on each side. That is it. No other detail needed. We are not attempting to sculpt here. Squint at this and they look like P08 pouches!



**Fig 11.** Puttees. Carve away the gaiters.



**Fig 12.** Place a roll of greenstuff around the lower leg.



**Fig 13.** Spread the greenstuff out to the top of the socks and the top of the boots. Then take the scalpel blade and make a couple of lines that go right around each leg. Now squint ... Puttees!



**Fig 14.** A look at the figure with all necessary greenstuff work completed. Let this cure for at least twelve hours before going any further.



**Fig 15.** Pop on a Woodbine Designs head wearing a Wolseley helmet and your chosen set of arms, squint again and this chap looks like a Tommy in India in the '30s.

**Fig 16.** Find some Indian heads from the Warlord WW2 British 8th Army sprue, carve off the shirt detail and replace the pouches and you also get Indian Sepoys from the same period. These chaps wore short ankle puttees so all that need to be done there is to carve off the buckle and straps on the gaiters.





**Fig 17.** In the interests of balance there are other sets of plastic WW2 infantry that can be the basis for this simple conversion. This chap is from the Perry Miniatures WW2 Desert Rats sprue. Perry produce a metal sun helmet that is spot on for the India pattern "Bombay Bowler". The sun helmet on the Warlord Commonwealth sprue is, I believe, the late 1930s South African sun helmet that does not look quite right for this earlier period to my eyes, even with a Wargamer's Squint.



**Fig 18.** With a squint the Bren gun will pass for a Vickers-Berthier Light machine gun and some spare Warlord P37 pouches from the Commonwealth sprue will pass nicely for the leather pouches used to carry the magazines.



**Fig 19.** Two of these pouches will be needed. One on the chest and one on the back.



**Figs 20,21 and 22.** A little greenstuff is needed to create the leather strap that goes around the chest and back to secure these magazine pouches.



## BRUSHES AND MAGNIFYING GLASSES

Now to paint them. All paints used are Vallejo Model Colour acrylic paints unless stated otherwise.

Tommy Atkins. The helmet was painted with Iraqi Sand, washed with a Sepia wash, over painted with Iraqi Sand then highlighted with a 50-50 mix of Iraqi Sand and Pale Sand. The shirt is Green Brown highlighted up with Green Brown with added Pale Sand.

Khaki Drill shorts are a base of Khaki Grey highlighted up with Khaki Grey with added Beige. Puttees are US Field Drab with highlights of a 50-50 mix of US Field Drab and Pale Sand. Socks are any dark grey paint you have to hand with the ribbing picked out in a lighter shade. Webbing is Vallejo Game Colour Khaki with the highlight being that with some Pale Sand added to it.

Another Tommy following the same paint scheme as above.

Note the tin buttons on the shirt and the brass studs on the P08 pouches. Details that are simple to paint on.



The Indian Sepoy follows the same paint scheme with the exception of the grey flannel shirt that was issued to Indian troops. This grey is the Foundry Quagmire triad.

The Perry Vickers-Berthier Light Machine Gunner. Again, the same basic paint scheme. The leather is Flat Brown with highlights of Mahogany Brown.



A cheap and relatively simple way of building a skirmish force for the North West Frontier in the 1930s.

Carry on, WI (and other interested parties) ... your turn.

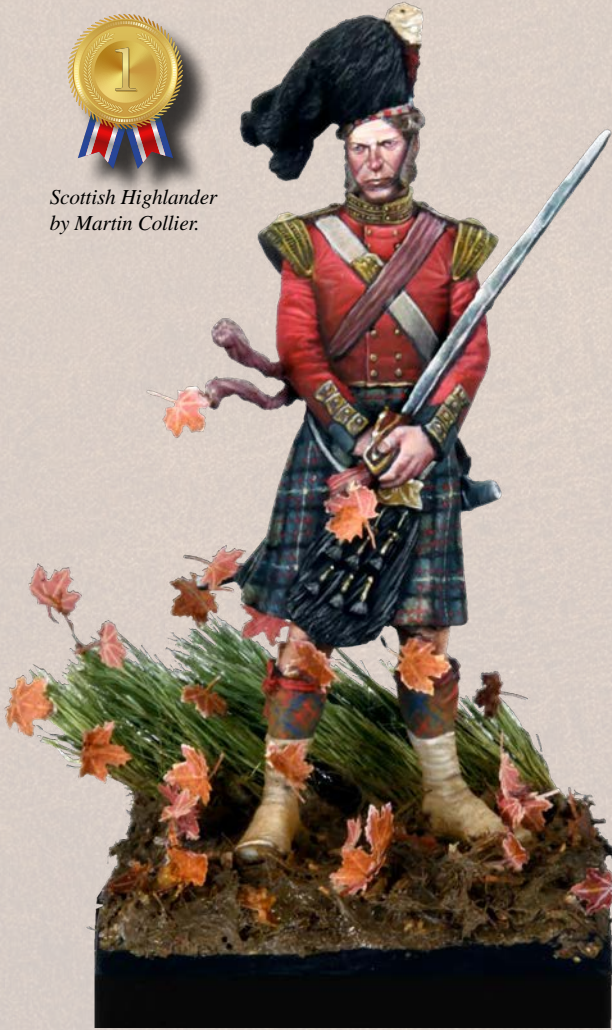


# HAMMERHEAD 2022 PAINTING COMPETITION

HISTORICAL SINGLE MINIATURE



*Scottish Highlander*  
by Martin Collier.



*10mm Saracen*  
by Fet Milner.



*Infamous JT Photographer*  
by Aaron Vayro.





Ace painter Ben Macintyre shows us how he painted the man who led the French invasion of England in 1215; The latest release in the Giants in Miniature range.

Start by cleaning, removing any mould lines, and priming your miniature. Prepping your miniature correctly will help make the painting process smoother and more enjoyable.

I like to paint a mounted miniature separately from its mount as it makes them easier to handle, so I fix them separately to either corks or old paint pots.

For this particular figure I have used Vallejo paint. Whatever paints you are using make sure that you are thinning the paints properly before you apply them and that you use an appropriately sized brush. I generally work with a size 1 brush, however there are elements, such as the fleur de lys, that will require switching to a 00.

# PAINTING PRINCE LOUIS



To start with we want to lay down the main colour for Louis and his horse, in this case the French Royal Blue of the caparison, surcoat and standard.

The aim is to create a solid covering of blue, with areas of shadow and light to act as a backdrop for all of the gold fleur de lys.

I've started with a layer of Vallejo Model Air Blue, followed by a highlight layer of Vallejo French Blue. I have applied these with an airbrush as I like the effect of a smooth gradient between the colours. However you can also drybrush the layers to pick out the raised surface details, or paint them on in layers as you would do for most areas. All of these techniques work well and it's down to personal preference.



Now we have the blue all blocked in, we can go back to the other details of the miniature and fill those in with the darkest shade of the appropriate colour.

- Chainmail and helmet - Vallejo Gunmetal Grey
- Saddle and other leatherwork - Vallejo Chocolate Brown
- Horse and scabbard - Vallejo German Grey
- Gold details - Vallejo Tinny Tin

At this stage I've also added an edge highlight to the extreme cloth folds and edges of the blue, using Vallejo Sky Blue.







Next up is to start adding more depth and contrast with a layer of highlighting. In the same way that I used the Sky Blue, I want to pick out the areas and edges that catch the most light. Focus on applying these colours to the upper edges of cloth folds, the ends and edges of straps, and the sharpest edges of his helmet and chainmail.

- Chainmail and helmet - Vallejo Chainmail Silver
- Leatherwork - Vallejo English Uniform
- Horse and scabbard - Vallejo Dark Blue Grey
- Gold details - Vallejo Brassy Brass

At this point you could add further layers of highlights if you want. The brighter the colours get the smaller the area they should cover, so it's best to apply them with a smaller size 0 or 00 brush.

The next step is to start mapping out the fleur de lys pattern. I find it best to start at the top of the model and work downwards to keep the pattern even.

Matt Parkes has done a fantastic tutorial on how to paint fleur de lys which appears in the *Wargames Illustrated Paints* 'Bookazine'. That section is copied below for reference

## PAINTING FLEUR DE LYS BY MATT PARKES

Ever present on French (and other) medieval heraldry is the fleur de lys, which I was keen to use by way of a 'painting heraldry' example. After looking through the usual Osprey books and Google Images, I found this coat of arms, a royal blue background with gold/yellow fleur de lys and a red cross overlaying everything. When painting any sort of pattern, there are a few things that can really help you. Break down any complicated bits into easier smaller stages; they won't seem so daunting.



As you can see from the photos (right), I paint construction lines which are then "built on" in small stages.



Once you have done all of the fleur de lys, you can go back to the model and just touch up any accidental slips or areas that may need neatening up.

At this point I decided to add a bit of extra detail/colour to the 'crown' on Louis' helmet – painting it gold using Vallejo Brassy Brass.

After that all that remains is to glue the separate painted components together and base your Louis VIII to match your chosen game system and battlefield.



# BUILDING ANTIETAM



Earlier this year we spotted a rather marvellous Battle of Antietam demo game presented by the South London Warlords at the Colours Wargames Show in Newbury, the sort of table we figured *WI* readers would like to learn more about, so we prodded game organiser Des Darkin (pictured above), who prodded table maker and owner Andy Thomlinson to spill the beans on the construction of this great looking board.

A recent introduction to the new *Fire and Fury Brigade* rules written by Richard Hasenauer, reignited my longstanding interest in the American Civil War and after a handful of games, I was motivated by what could be achieved by using fewer figures to represent substantial forces, introducing the possibility of fighting the larger battles of the war. Combining this new found inspiration with my enjoyment of terrain making, I contemplated the ambitious project of making the terrain for Gettysburg.

By coincidence, or possibly cunning, it was at this same moment that South London Warlords stalwart, Des Darkin, enthusiastically invited me to join him to put on the northern sector of the Battle of Antietam, 1862 as a demonstration game on behalf of the Warlords at Colours 2019.

Although up to that point I had previously made only a couple of minor pieces of modular terrain, I had thoroughly enjoyed the experience and was keen to try my hand at something more challenging. Before I realised it, Project Gettysburg had become Project Antietam and I suddenly had a valuable opportunity to experiment.

I have always believed that the key to success in an undertaking of this nature is setting and understanding clear objectives. Of equal importance is research combined with good preparation and planning, calling to mind that old military adage, that time spent on a recce is seldom wasted. My objective was to balance playability with aesthetics and more importantly, to be able to transport everything to the venue in my car!

Using the scenario map from author Richard Hasenauer's book as a starting point, I scouted maps, historical pictures and seasonal photos of the topography of the Antietam terrain. I quickly concluded that the author's scenario book, with the exception of a handful of minor differences, already considered scale and playability and all that was really left for me to do was develop the aesthetics.

I should point out that I don't consider my work to be innovative or imaginative, much of it having been tried and tested by other modellers over many years, and The hobby has introduced me to a circle of extremely talented friends from whom I am able to learn, discuss ideas with and consult.

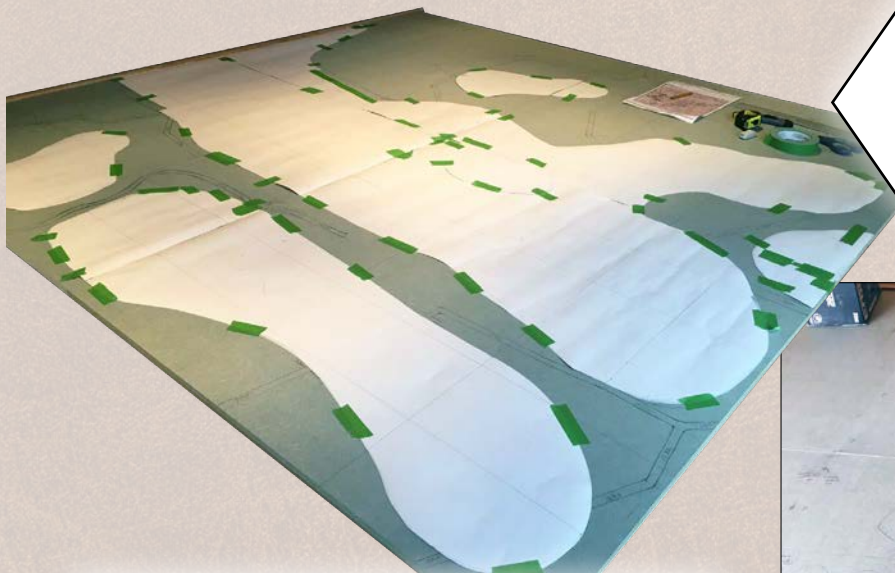


**MATERIALS USED IN THE CONSTRUCTION**

- Base: 15mm moisture resistant MDF cut into four 3' x 3' squares
- Side panels: 6mm MDF
- Wooden batten
- Panel pins
- Wood glue
- PVA glue, both School and Craft
- 6mm Doweling
- Roll of lining paper from any large brand store to make templates.
- Styrofoam sheets 25mm and 15mm deep. My advice here is to spend the money and buy the best material otherwise it will cost more to rectify any mistakes that may occur when using less expensive products.
- Paint for groundwork: Dulux Rich Praline 2 and County Cream Matt Emulsions, Acrylic Raw Umber, Sandtex Ivory Stone.



I hope you enjoy the following step-by-step guide on how I created the layout and possibly even feel inspired to have a go at something similar yourself.



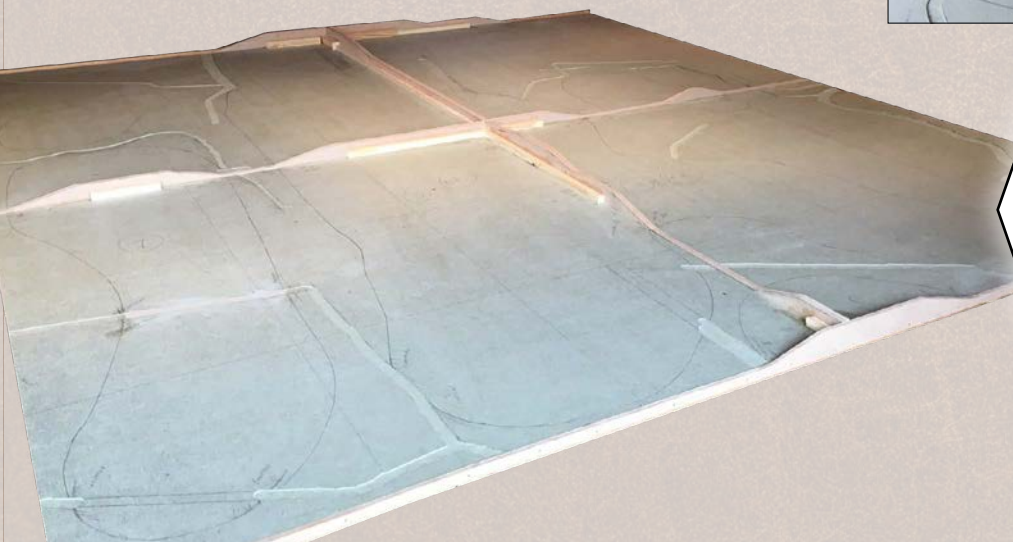
1. I began by drawing grid lines onto my base board as a guide to help transpose the detail from the map, settling on 6" x 6" squares. I then made templates for the raised areas and drew in the tracks and watercourses.

2. After removing the templates, I used a hand router to cut the main roads, tracks, watercourses and middle bridge into the MDF base board. If attempting this yourself, try to retain control and avoid routing areas to be covered by the Styrofoam as I did! Fortunately, this was very easily rectified later with some filler. I then cut all roads and tracks to a depth of 1mm and watercourses to 3mm.



3. The next step was to cut the 6mm MDF 'side panels', contoured to height and shape.

It is important to remember that where two side panels come together, cut them back to back to achieve a good fit when joining the terrain boards. These were then fixed with wood glue and panel pins. I reinforced the panels with lengths of wooden batten to provide strength to the structure, although with hindsight, this was probably over engineering.

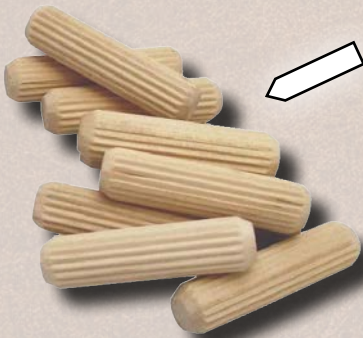
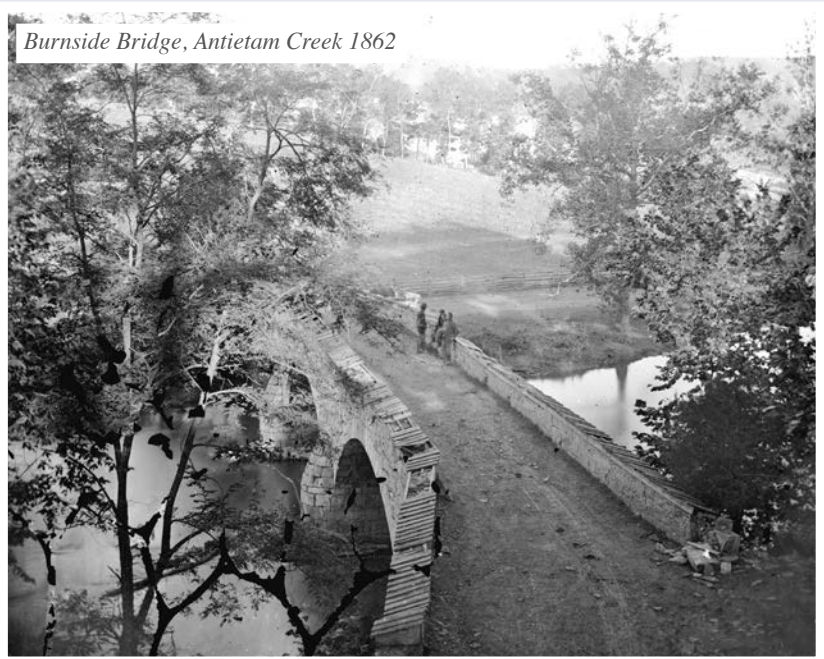




## AMERICA'S BLOODIEST DAY

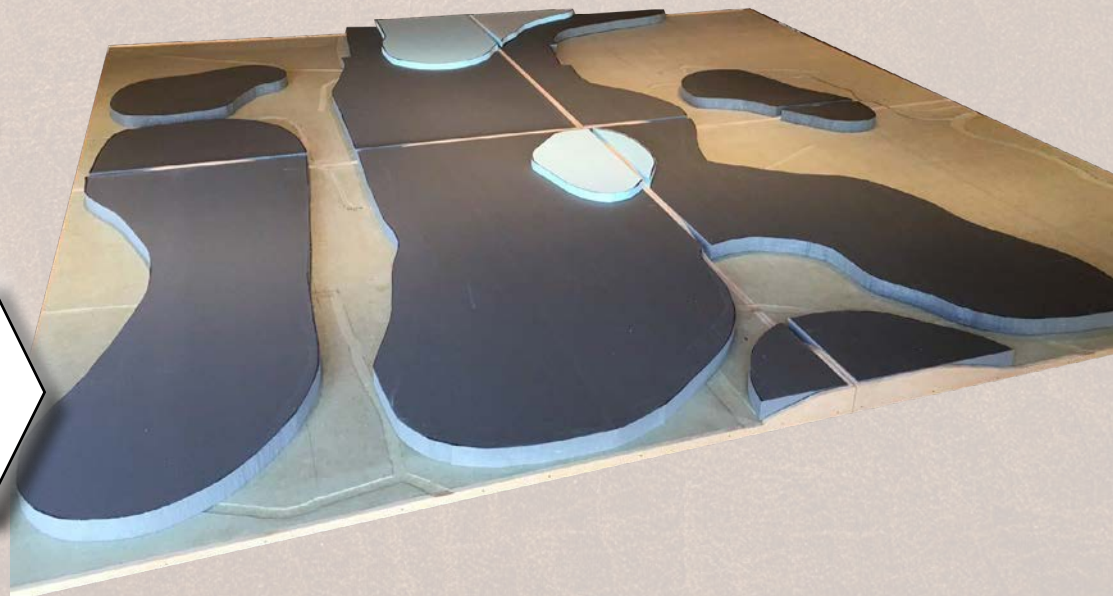
The Battle of Antietam is one of a handful of American Civil War battles which bridge the gap between history and folklore. In an effort to take the war to the North, General Lee led his Army of Northern Virginia beyond Washington and through Maryland, confronting the ever cautious Union commander George McClellan near Sharpsburg on 17 September 1862.

Forty-one thousand Rebs and 87,000 Yanks fought across ground wargamers would recognise as stereotypically ACW, with corn fields, sunken lanes and rolling farmland, plus several unique and now iconic features like the Dunker Church and Burnside's Bridge. The result of the loss of nearly 22,000 lives on both sides was a tactical draw, but a strategic success for the North which led to Lincoln issuing the Emancipation Proclamation, threatening to abolish slavery in all areas loyal to the Confederacy. Antietam became the moment when the war between the states became a battle for freedom.



4. After a couple of days drying, I set about drilling the holes in each panel to fit the dowel joints, essential to lock the terrain boards together. As this would need to be taken apart during later stages of construction to allow manoeuvre of the boards, I did not glue the dowels in place.

5. Using the templates, I marked out the high ground on the Styrofoam sheets and cut to size. These were then secured in place with PVA Craft Glue and left to dry for a few days.

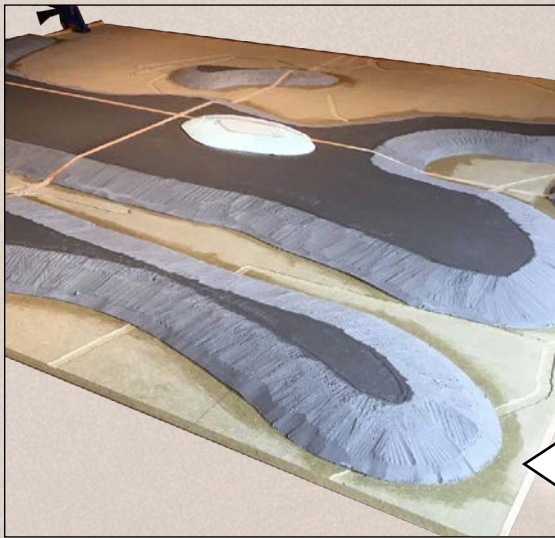


## FIGURES AND TOKENS

Most of the 15mm figures used for the game at Colours were Old Glory or Lancashire Games, all from Des Darkin's collection. One thing that particularly stood out was the groups innovative *Fire and Fury* specific 'figure tokens' which were created by Martin Gane to show: Disorder, Low Ammunition and Silenced Batteries. As seen in the photo left.





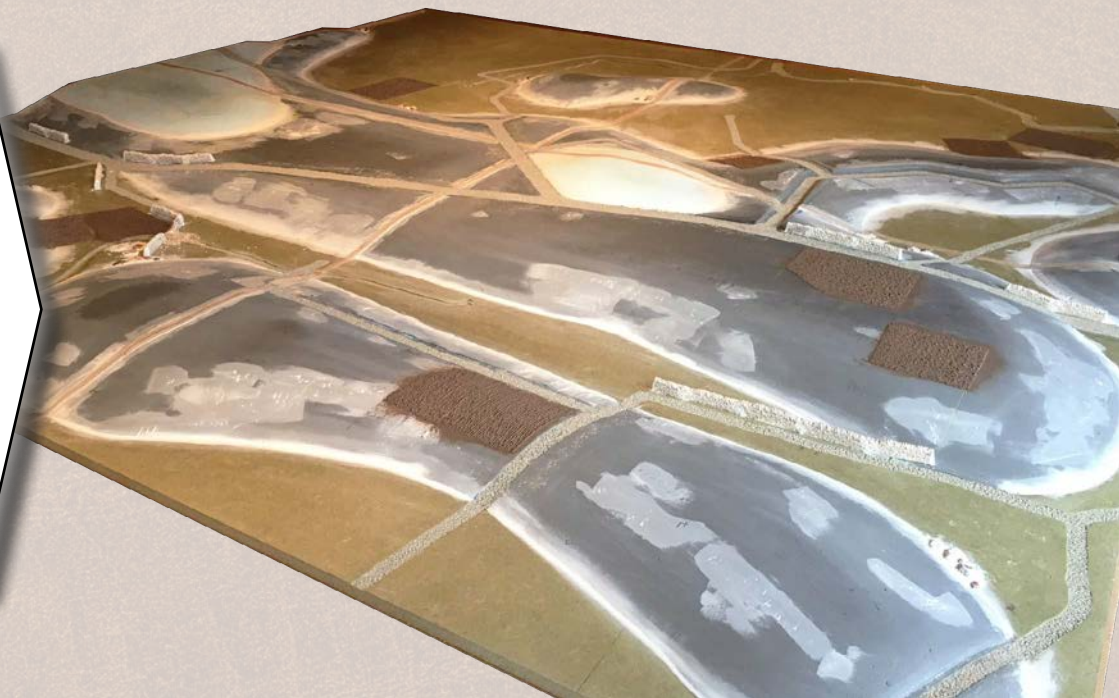


6. After cutting the required gradient, I sanded the Styrofoam with fine sandpaper. Roads and tracks were added using a router and a sharp knife, sanding further to remove any square edges.

During this process, it is easy to sand the top edge of the MDF and improve your chances of a good join.



7. Next, I filled any holes caused by sanding the edge of the Styrofoam where it joins the baseboard. I used a mixture of Polyfilla, decorators caulk and craft PVA, applied with a filling knife and wiped with a damp sponge to avoid further sanding. My lungs certainly appreciated the respite here - I can't emphasise enough the importance of a good protective face mask when sanding large areas like this. When dry, avoiding watercourses, I applied two coats of PVA glue to the entire surface, allowing time to dry between coats.



8. Using a filling knife, I filled all tracks and roads with a mixture of PVA and chinchilla bath dust which I purchased at my local pet shop. On reflection, kiln dried sand may have been a better option, as it is finer.

Antietam has a number of rocky areas, some of these covering the ground over which the major action took place. Consequently, I avoided placing such geographical features on parts of the terrain likely to be occupied by large number of figures and settled instead for siting them elsewhere on the layout as representational of the general topography.

Walls and bridges were now glued in place with PVA.

To create the ploughed fields for the site, I used a mix of Polyfilla, caulk, sand, PVA and the base paint; colour Rich Praline 2 Matt Emulsion. I spread this on with a filling knife and drew through the mix with a serrated tool I made from a window cleaners' squeegee, cutting a crocodile teeth pattern in the rubber head (seen right).





9. I used a grey acrylic spray primer to prime all watercourses, walls and rocks.

Next, avoiding roads, tracks, ploughed fields and watercourses, I covered the ground with a mix of emulsion paint, Polyfilla, sand, caulk and PVA. The mixture should be creamy, with more sand added if a coarser texture is required. I used the intended base colour (Rich Praline 2) in the mix, as pigmenting the mixture this way removes the potential of white spots appearing should the model become worn or chipped.



10. All rocks and all stonework were now painted.

The importance of painting the groundwork thoroughly in advance of applying the flock cannot be overstated, preventing patches of uncovered groundwork detracting from the overall visual effect as the flock is eroded through wear and tear. Further flock can of course be easily added at a later date.

Avoiding watercourses, I painted all the groundwork and side panels with Rich Praline 2 matt emulsion. I personally prefer the subtler effect of this rather than black for the outside edge and the area where the boards join. After allowing this to dry, I then washed with Raw Umber. After leaving this to dry, I then dry-brushed with County Cream, adding a final dry brushed highlight of Sandtex Ivory Stone along the roads and tracks.

I was now able to paint the watercourses with Woodland Scenics Olive Drab, leaving for a few days to dry.

11. To create the effect of the water, I pulled the boards apart and poured Woodland Scenics Realistic Water into all watercourses, making sure the model was flat and the open ends sealed. I used Frog Tape for this, with a little PVA glue applied to the base edge before the tape is attached, then left to dry to provide a good seal. It is advisable to create the water effect before you flock, otherwise the flock will absorb the resin.







12. Some of the early research I did on the battlefield revealed that seasonally, cornfields in Antietam are golden brown with patches of green, earthy brown and buff. I decided to recreate this using rubber backed doormats from Homebase, which were cheap and seemed to perfectly suit the scale of the figures used. I cut these to shape and placed to one side until ready to work on them further to add more realism.

The characteristic piled rail fencing found on the battlefield was crafted using strips of wood purchased from 4D Model Shop in London. I cut these to length and trimmed the edges to create an uneven effect. These were then glued in place with PVA and when dry, painted and washed.

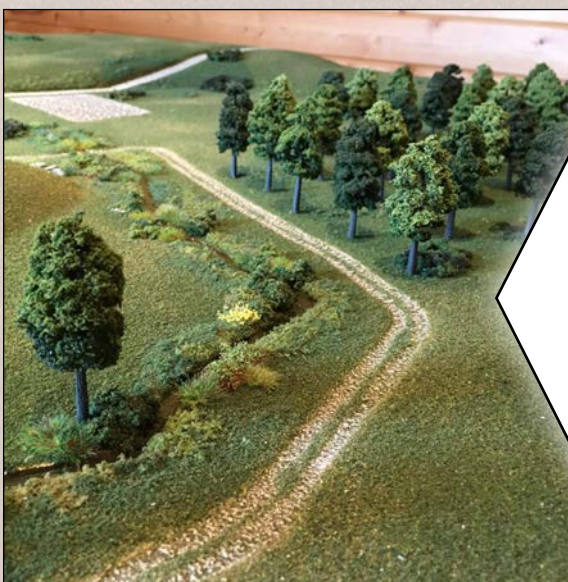
13. For this next phase I decided to use the extensive range of flock available from Woodland Scenics (WS). Not only do the Company provide an excellent product, they also produce a useful guide book and videos to assist the modeller in their use.

Before applying the flock, I covered key features such as tracks, walls and watercourses with Frog Tape and paper. I then mixed together water and PVA in a spray bottle, ensuring the PVA was diluted enough to allow it to produce a fine spray through the spray head. I sprayed one board at a time, covered evenly with WS Green Blend. When dry, I tipped the boards to tap off any excess.

At this point you can begin to be creative with further shades of flock to create a more realistic blended effect to the grassed areas. Spraying on the PVA solution, I worked from light tones to dark, allowing time to dry between each application. For this phase,

I used WS Fine Turf Light Grass sparingly on both high and low ground, followed by Burnt Grass, Green Grass and a very small amount of Weed in selected areas. I then used Dark Green along river banks and to mark wooded areas. I allowed this to dry thoroughly before sealing with more PVA solution, as spraying on top of an already wet area will risk washing away the flock already applied.

I left this to dry again before further dressing the terrain by adding different tones of WS Coarse Turf and Brush, together with grass tufts from various suppliers.



14. With all the major groundwork in place, it was now time to add the wooded areas. Cost was the overriding factor when determining what product to use for my trees, as I estimated that I required around 200 of them! EBay is very useful here, offering a wide range of suitable budget items. Although these can initially be rather unsightly, they are easily improved with a green oxide spray paint, before being spray glued and flocked. I used three different tones of coarse flock from 4D Models; Light, Mid and Dark Green, using Spray Mount Glue to apply it. Finally, I applied a mid-grey wash over the trunks.

The trees I used were cast with a male union and were easily inserted into the MDF base after drilling. To secure these into the areas of Styrofoam, it was necessary to first remove this part and then drill into the trunk before gluing and inserting a pin with the head removed.



15. The process of creating the cornfields, 16 separate pieces in all, can only be described as tedious and torturous! These were cut by hand using a sharp extending Stanley knife and nail scissors. I retained some of the cut lengths to glue and sprinkle on trimmed areas to represent trampled corn. I then painted any areas of black rubber that were visible, including edges, with Rich Praline 2 and washed with Raw Umber.

After leaving this to dry, using Humbrol enamels I dry brushed small patches of Grass Green (80) along the sides, applying a further dry brush to the edges and top with Brown Yellow (94), then Linen (74), lastly Linen (74) + White (34). Finally, I applied a mix of the flock previously used to the painted rubber edge. This helped to disguise the join when placed on the terrain boards.



All that remained now was to put all the elements together by adding the modular terrain features and cornfields to the layout, together with buildings from Timecast and Pendraken. Although we were using 15mm figures, Des and I decided on 10mm scale buildings to reduce the footprint. We also considered adding further fences and creating additional fields, but mindful of one of my objectives and the number of units that would be engaged on the table, we decided against this in the end which seemed to work, although others may disagree. Sometimes less is more.



Above: Bloody Lane.  
Right: The Dunker Church.



I hope you have enjoyed seeing how our Antietam table came together. It was both a pain and pleasure to work on, but I hope you will agree the finished piece doesn't look too bad. It's certainly great to play on.

## WATCH ON YOU TUBE

Tune in to the *Wargames Illustrated* YouTube channel and search for 'Colours 2019' to see a video of all the best games from this year's show, including footage of the Antietam game and an interview with the man running the game - Des Darkin.

**THE BEST  
GAMES FROM  
COLOURS 2019**



# HAMMERHEAD 2023 PAINTING COMPETITION

OPEN



*Scuba Steve  
by Martin Collier.*



*Tau Vignette  
by Thomas Moore.*



*Feeding Chickens  
by Fet Milner.*







# ALLIED ARMOUR-STOWAGE SPECIAL!

**Captain Kitbash presents some thoughts and guidelines on taking your tabletop tank kits to the next level. It's all in the details...**

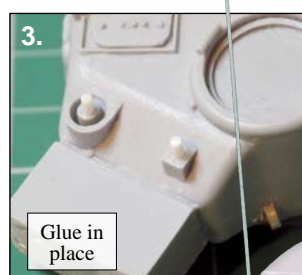
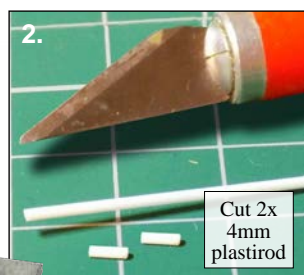
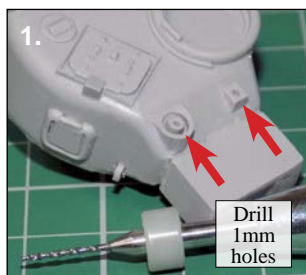
The Sherman tank and its derivatives formed the armoured backbone of the Allied war effort, with production of the M4 Sherman alone reaching almost 50,000 vehicles. The principal virtue of the Sherman was its ease of manufacture which enabled the United

States to produce such a prodigious number. While the M4 Sherman tank in its various models and variants was the most numerous, the M4's chassis was used as a basis to produce a number of self-propelled guns, tank destroyers and recovery vehicles. Now, you could be forgiven for thinking that with such a prolific production run the Sherman tanks that were present on the battlefields of World War Two would have displayed a very uniform appearance. However, this wasn't the case. While the factory

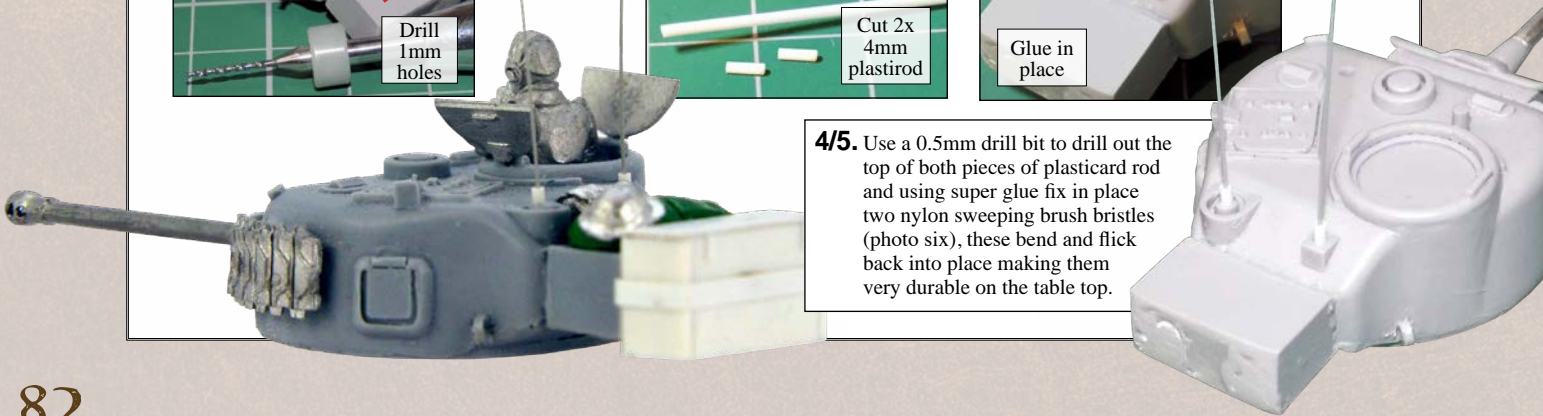
finished vehicles were identical, once they reached units on the front line they took on a character and appearance all of their own. In this month's article, I've used Warlord Games' plastic M4 Sherman, resin Sherman Firefly, and recently released plastic M10 to show you a number of techniques that can be applied to a variety of Allied armour including workshop and field modifications, improvised armour, and realistic stowage.

## RADIO AERIALS

The first thing I usually do when adding detail to a vehicle is to ensure it has a realistic looking aerial; not only does it add a little realism to the model but it also draws the eye towards it as the aerial tends to protrude above the level of most scenery and figures on the gaming table.



4/5. Use a 0.5mm drill bit to drill out the top of both pieces of plasticard rod and using super glue fix in place two nylon sweeping brush bristles (photo six), these bend and flick back into place making them very durable on the table top.



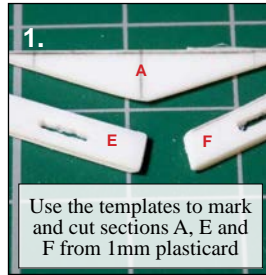
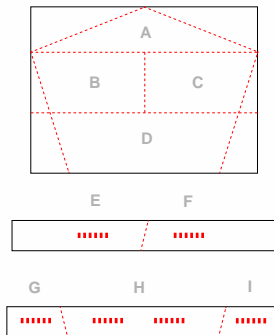


## WORKSHOP AND FIELD MODIFICATIONS

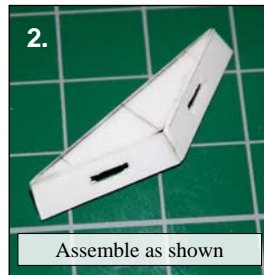
### THE M10 ARMoured ROOF

The M10 tank destroyer was one of the most popular tank destroyers used by the Allies, designed to adhere to US doctrine that enemy tanks should be engaged by manoeuvrable tank destroyers rather than by US tanks. It was relatively lightly armoured and its main weapon, the 3-inch gun, was housed in an open turret. One drawback of this was that it left the crew vulnerable to shell splinters from mortar and artillery fire, a situation that many units remedied by adding an armoured roof.

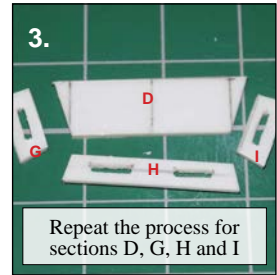
#### Roof Templates (at 100% scale)



1. Use the templates to mark and cut sections A, E and F from 1mm plasticard



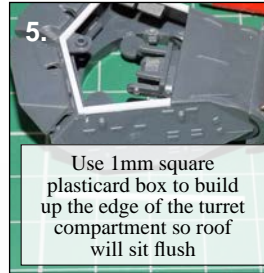
2. Assemble as shown



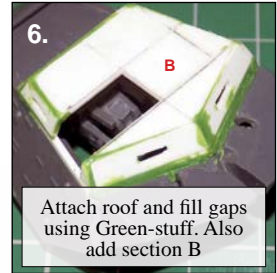
3. Repeat the process for sections D, G, H and I



4. Assemble as shown

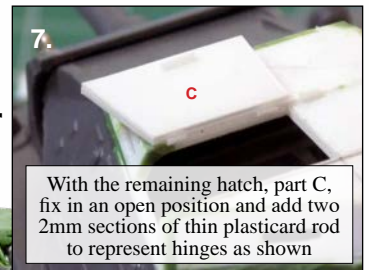


5. Use 1mm square plasticard box to build up the edge of the turret compartment so roof will sit flush



6. Attach roof and fill gaps using Green-stuff. Also add section B

Go to the website to download all the templates used in this article  
[WWW.WARGAMESILLUSTRATED.NET](http://WWW.WARGAMESILLUSTRATED.NET)

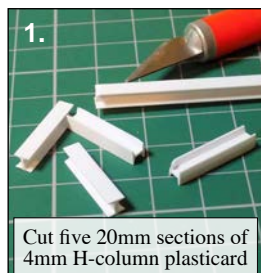


7. With the remaining hatch, part C, fix in an open position and add two 2mm sections of thin plasticard rod to represent hinges as shown

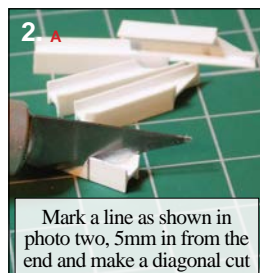


### THE CULIN HEDGEROW CUTTER

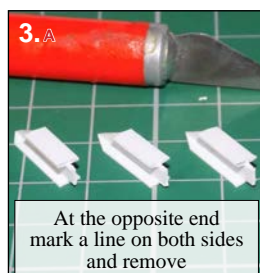
The Culin Hedgerow Cutter was invented by American Sgt Curtis Grubb Culin during the Normandy campaign; it was created to allow Allied tanks to cut through the bocage field boundaries without the tank riding up onto the bocage and exposing its underside to enemy fire. Warlord Games already produce a lovely example of the Culin Cutter. However, based upon the fact that these were fabricated on a unit-by-unit basis with multiple designs, I felt people would welcome a guide to producing an alternative style.



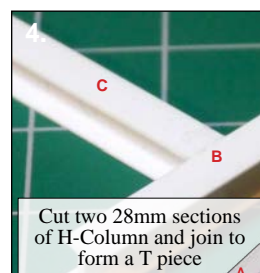
1. Cut five 20mm sections of 4mm H-column plasticard



2. Mark a line as shown in photo two, 5mm in from the end and make a diagonal cut

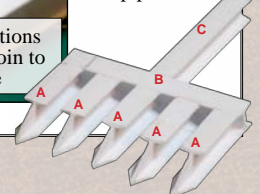


3. At the opposite end mark a line on both sides and remove



4. Cut two 28mm sections of H-Column and join to form a T piece

5. Glue the prongs into place on the T shaped section, and reinforce the underside of the cutter with some scrap plasticard



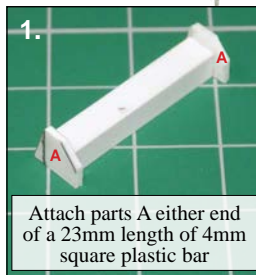
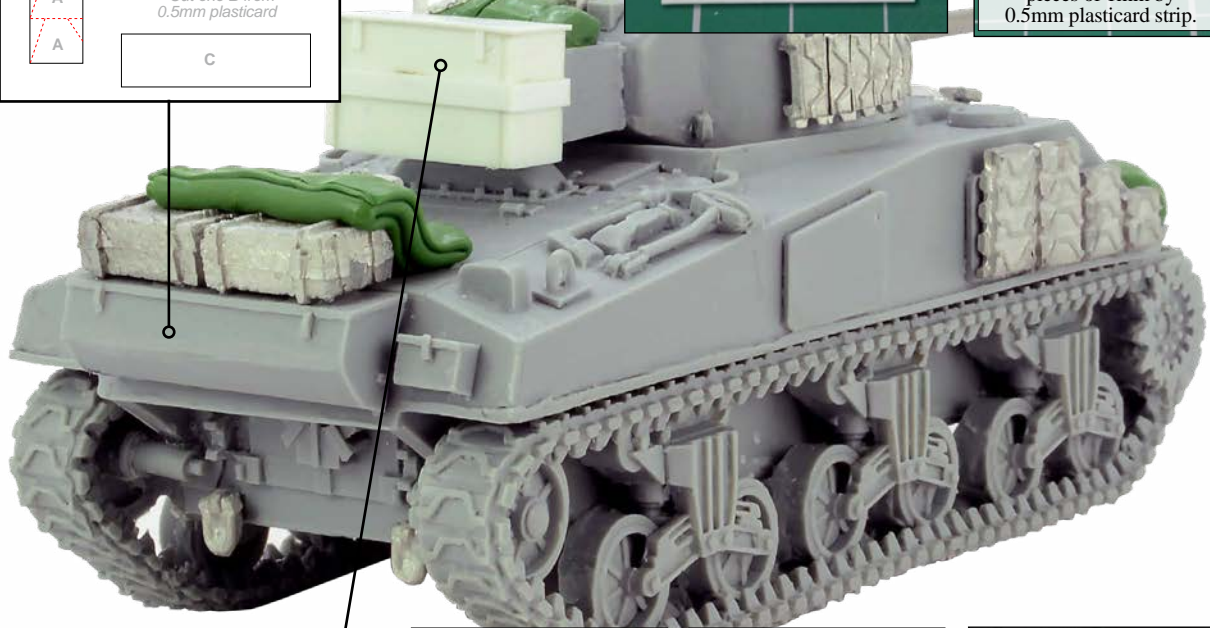
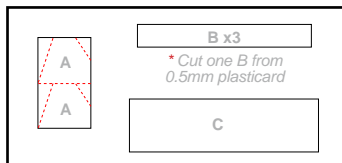


## WORKSHOP AND FIELD MODIFICATIONS

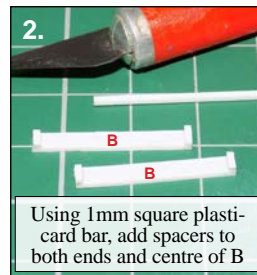
### BRITISH SHERMAN REAR & TURRET STOWAGE BINS

One common modification that set British Sherman tanks apart from their US counterparts was the addition of stowage boxes to the rear of the turret and hull. These stowage boxes appeared on British tanks with such regularity that they are a great way to alter the silhouette of the Warlord Plastic Sherman M4 to differentiate it from the same model used in an American Army.

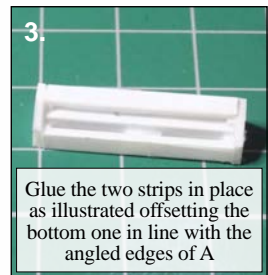
#### Rear stowage bin templates (at 100% scale)



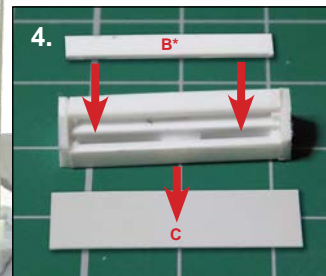
1. Attach parts A either end of a 23mm length of 4mm square plastic bar



2. Using 1mm square plasticard bar, add spacers to both ends and centre of B



3. Glue the two strips in place as illustrated offsetting the bottom one in line with the angled edges of A

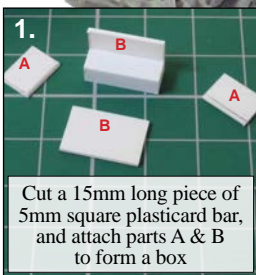
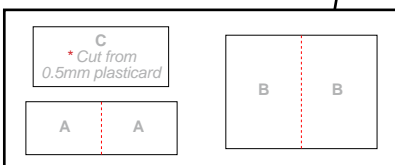


4. Attach strip B\* to the sides and strip C to the bottom



5. Fill any gaps with green stuff. To represent the lid fasteners add two 2mm pieces of 1mm by 0.5mm plasticard strip.

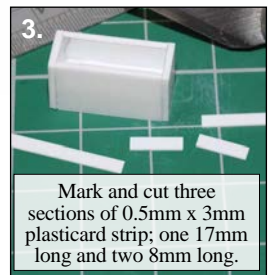
#### Turret stowage bin templates (at 100% scale)



1. Cut a 15mm long piece of 5mm square plasticard bar, and attach parts A & B to form a box



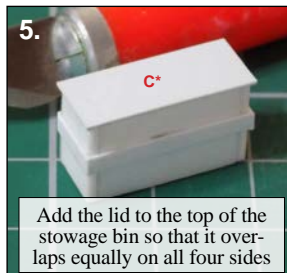
2. Once the glue has set sand the box to ensure all the joints are level



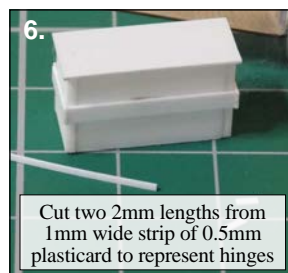
3. Mark and cut three sections of 0.5mm x 3mm plasticard strip; one 17mm long and two 8mm long.



4. Fix the strips in place around the centre of the box using poly cement



5. Add the lid to the top of the stowage bin so that it overlaps equally on all four sides



6. Cut two 2mm lengths from 1mm wide strip of 0.5mm plasticard to represent hinges



7. Glue them to the rear of the box and fix the turret bin to the rear of the Sherman Firefly

Next we'll look at creating improvised armour using sandbags and spare tracks, more on stowage and stowage racks and how to give your armour that 'lived in' look.

The following two methods of improvised armour to be described are ideal for those who intend to model a late war themed army to represent crews who have been fighting their way from the beaches of Normandy, through the occupied Low Countries, and onto German soil. Again not only does this add character but gives a way of differentiating between veteran and green crews on the tabletop.



## SURVIVAL AND A 'HOME AWAY FROM HOME'

During World War Two, members of armoured vehicle crews spent almost all their time in or around their vehicles. Consequently, these became not only a weapon of war but also their home. Tank crews on the front line added 'morale boosting' armour and found ever more inventive ways to store their issue and other kit on the exterior of their vehicle. I've continued to use Warlord Games' plastic M4 Sherman, resin Sherman Firefly, and the plastic M10 to show you a number of techniques that can be applied to a variety of Allied and Axis armour, focussing this time on improvised armour and realistic stowage.

### IMPROVISED ARMOUR

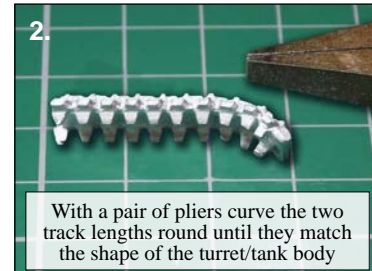
While Allied tank production far outstripped that of the Axis powers the armour of the Sherman and its derivatives never came close to offering the level of defence provided by the German 'big cats.' Many Allied tank crews attempted to remedy this by "enhancing" the armour of their vehicles by adding improvised armour; this came in a variety of guises including the addition of sandbags and the use of spare track. Unfortunately, all evidence seems to indicate that other than bolstering the crew's morale, this armour had little effect other than increasing the weight of the vehicles and their fuel consumption!

### SPARE TRACK ARMOUR

One of the most readily available materials used by Allied servicemen to create improvised armour was spare lengths of track. This practice was widespread across all Allied nations with photos of US, British, Polish, and Commonwealth vehicles demonstrating the widespread nature of this field modification; in fact, the crews of some vehicles took it to such an extreme that they used spare tracks from other models of tank with Churchill tank tracks being a particular favourite amongst British and Commonwealth forces. I have used Warlord Games' Sherman track sections from their British Stowage Pack (WGB-ACC-003) as it provides a good source of 28mm scale M4 Sherman Track.

### SANDBAG ARMOUR

The simplest way to add extra armour was to add sandbags to the points that were perceived as being vulnerable. Overall this appears to be predominantly, but not exclusively, seen in photos of US vehicles with some American crews going as far as to construct frames to hold sand bags in place over the whole vehicle (something I intend to look at in a later article). Please note that if you intend to add sandbag armour to a vehicle it may be worth adding heavier items of stowage such as spare wheels first as sand bags would have been added on top of these; the same is true of the front stowage racks added to many Shermans which in some cases were used to support the sandbags.





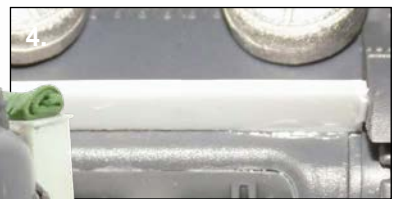
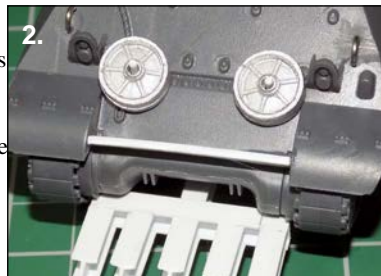
## STOWAGE

Without a doubt the best way to add individual character to an armoured vehicle is to add stowage to it. In the field the tank became the crew's home, with the crew eating, sleeping, and - thanks to the escape hatch in the floor of the Sherman - even going to the toilet! Each crew member would have an array of personal items which had to be stored somewhere (usually on the outside of the tank) along with items needed for the upkeep of the tank such as spare wheels and jerry cans of water and fuel. Each tank quickly became festooned with stowage.

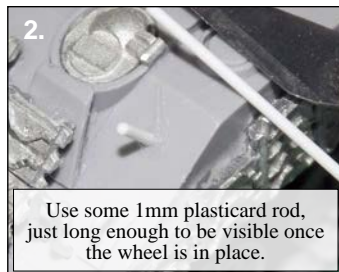
### FRONT STOWAGE RACK

One part of the Sherman's design that was quickly seized upon by crews from all Allied nationalities was the possibility of creating a rudimentary stowage rack at the front of the vehicle by adding a piece of wood or metal between the front mud guards.

1. Cut a piece of 1mm plasticard slightly taller than the height of the mud guards and the same length as the gap between the mud guards, this varies from model to model so you'll need to measure this.
2. Using poly cement fix the plasticard in place as shown.
3. Cut two 3mm lengths of 0.5mm plasticard rod
4. Fix the two pieces of rod to the lower edges, where the stowage rack meets the mud guards to represent brackets that were welded in place to hold up the rack.



Drill a 1mm hole at the point where you wish to mount the spare wheel



Use some 1mm plasticard rod, just long enough to be visible once the wheel is in place.



Add a little superglue to the protruding rod and place the spare wheel on top of it

### SPARE ROAD WHEELS

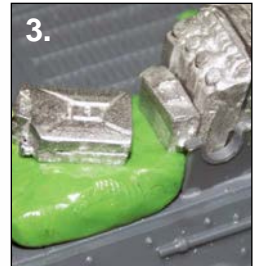
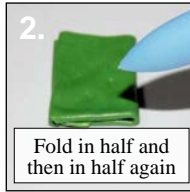
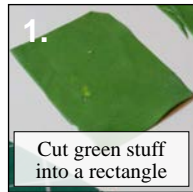
One popular item of stowage carried by the majority of crews were spare road wheels, these spare wheels along with spare track lengths allowed the crew to undertake minor repairs to maintain their mobility in the case of mine damage or shedding a track due to rough terrain. Some units even made it mandatory for their crews to carry spare wheels, with the British Guards going as far as dictating that these should be stowed on the upper right hand corner of the front glacis which is where I have chosen to model mine. I have again used Warlord Games' Sherman Stowage Pack (WGB-ACC-003) as the source for the spare wheels used here.

This method can be used for any Allied armoured vehicle and can be used multiple times on the same vehicle for those that would carry multiple spares such as the M10 tank destroyer where this was a common sight.



## TARPS, ROLLS, CRATES AND JERRY CANS

A great way to achieve a realistic battle weary look for any fighting vehicle is to have it covered in stowage, however it is important to ensure that the stowage looks organic and that it sits naturally. Nothing spoils a model more than stowage that appears to levitate in mid-air, whereas naturally sagging canvas, draped bed rolls hugging the lines of the hull, and heavy boxes pressing into a folded tarp all add to the character of the model.



OR



The beauty of the above methods is that they are universally applicable and can be used to model vehicles for any force from World War Two and are equally applicable to Modern and Sci-Fi vehicles. Once you've personalised your vehicles with a suitable array of stowage the only thing left is the addition of crew figures. It is worth noting that tanks were only buttoned up (had all their hatches closed) during combat and even then tank commanders would emerge from their turrets periodically to get a better view of the terrain they were fighting over.

## CONCLUSION

So there you have it, a veritable variety of modelling techniques with which to personalise and customise your Allied armour. Remember that the modifications and additions I have described here are the tip of the iceberg. I'd suggest you scour the internet for photos, raid your local library for reference material, and visit museums to

see these beasts in the flesh and use what you see to make your models truly individual. I hope this article inspires a few of you to create armies recreating Patton's charge across France, XXX Corps' advance towards Arnhem, or Monty's dash to Northern Germany to secure Denmark. In the meantime, if you have any questions or requests, don't hesitate to get in touch via the WI office. Keep building!







# MAKING SIMPLE GAMING BOARDS FOR FROSTGRAVE

For the *Wargames Illustrated* Frostgrave Day held at *WIHQ* in January, we needed to construct some small, simple and effective terrain boards. This article tells you how we did it and how you can too.

In typical wargamer project style once we had embarked on the operation one thing led to another and we began making other 'Frosty' features for our boards, so we have included some of these details later in this article. However, before we get to that bit, here's how to go about putting the boards together.

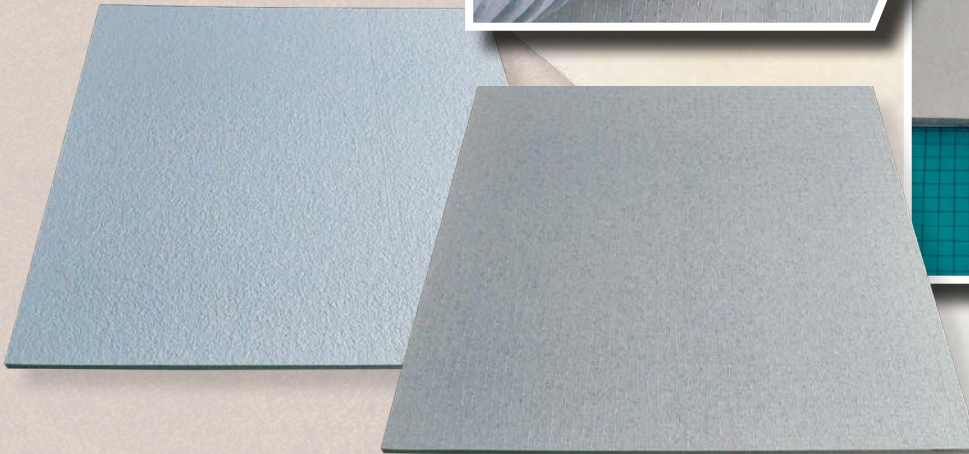
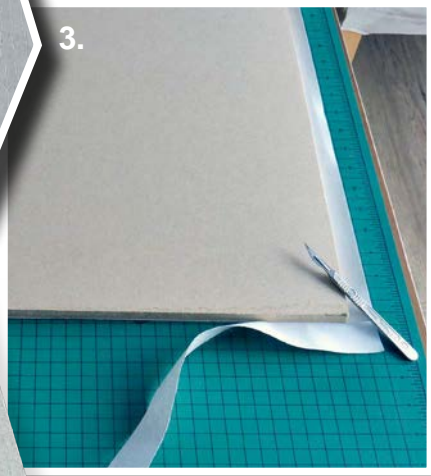
## WALLPAPER METHOD

First things first was to get some 12mm MDF board cut into 2' squares. This thickness of board still suffered slightly with warping, so maybe 15mm would be better. Next up was to find some suitable wallpaper textures. The 'Gold' paper (a) is a thick quality paper with a flagstone pattern. The cheaper 'Wall Doctor' (b) paper has more of a general rocky ground texture. Both are ideal for our Frostgrave terrain.





The obvious choice for sticking the wallpaper to the boards was wallpaper paste. After mixing the paste as per the manufacturer's guidelines, the boards were pasted with a suitable brush (1). With the paper applied a sponge was used to smooth out any air bubbles (2). It is also worth bearing in mind that some papers like the 'Gold' flagstone textured one are patterned, and require lining up for the pattern to continue seamlessly at the join. It is best doing this before pasting the board! Once the paper was applied and the paste was left to dry, the excess paper was trimmed (3). Simple as that, the board is now ready for painting.



## POLYSTYRENE METHOD

The messiest way to achieve a rocky look was done by using a solvent free interior adhesive to stick a square of polystyrene to the board. Once dry it was roughly shaped using a wood saw (1). Varying the direction and angles of the cut only adds to the natural look, so no need to be neat with this. A small piece of advice is to do this over a large dust sheet as it makes clearing up slightly easier!

When the desired look was achieved, a watered down coat of PVA was applied all over (2). This seals the polystyrene allowing paints that have solvents in to be used without melting the polystyrene.





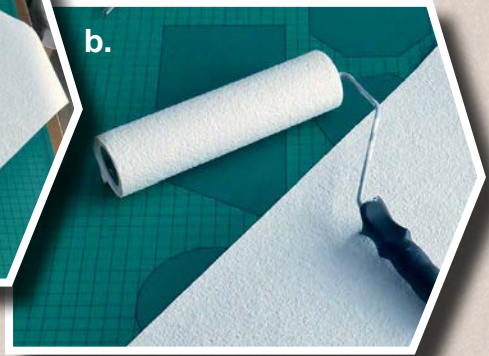
## FILLER METHOD

The final method used was to again to create a rough ground texture, using ready mixed interior wall filler and texturing with a texture roller.

A standard paint roller was used for this, however it was modified using some of the left over wallpaper from a previous board. Cut a suitable length of paper at the same width as the roller (a). Roll this over the roller and secure at one end with double sided tape (b).



## TEXTURE ROLLER



Once the texture roller was ready for use the board was given a thin, even covering of filler (1). Working quickly before the filler starts setting is key, and the finish does not need to be perfect as the texture roller will give the finished look (2).

When using the roller the best results were achieved with moderate pressure and rolling in the same direction across the board. Pressing on too hard resulted in too much filler coming away from the board. The patchiness from the areas that do lift add to the natural look however (3).



Allow the filler to dry and then sand down the sharp points, and then the board is ready for paint (4).





## PAINING

A stone grey, rock like finish was the desired look for the Frostgrave boards. So again experimenting with paint, spray paints and inks is the way to go.

First up the polystyrene and filler boards were given a coat of brushed on interior grey primer, suitable for wood/metal (1).

Next up light dustings of darker grey and satin black spray paints were used (2a/b). This effect works well when spraying from a distance. getting too close and covering the surface isn't the aim here.



Once the look of the sprayed boards is satisfactory, leave to dry. Inks can then be used to darken some random areas (3).

Finally the boards were given a dry brush with white to highlight the raised areas of texture (4). The final boards are shown below. Now all that is left is to wait for winter to take its toll!



## FINISHING TOUCHES



At this stage it was decided to edge the boards using black duct tape. This isn't essential, however it is a simple way of neatening up the edges, for a more aesthetically pleasing finish (left).



## WINTER-ISING THE BOARDS

When it came to decorating the boards to make them look a little more winter like, it was decided to see what winter scenics products were on the market. A little research and *Precision Ice and Snow* were found. They offer a range of high quality winter modelling products. Some of which include the unique frozen ice sheets and varying scales of snow powder, plus much more. Check out their website to find out more about the products available and also indepth winter modelling how to videos.

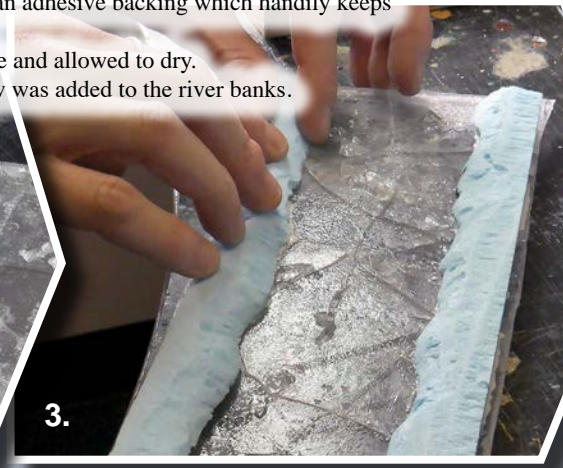
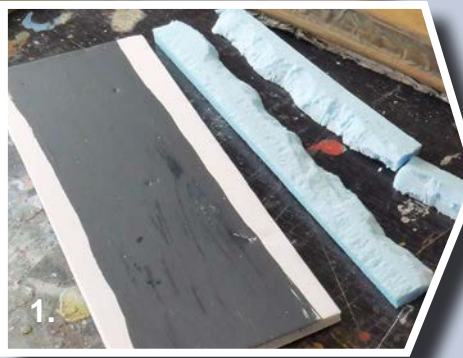
[www.precisioniceandsnow.com](http://www.precisioniceandsnow.com)



## ICE MADE EASY

A quick and simple frozen river section was made using a Krycell ice sheet. This is a unique material available from *Precision Ice and Snow*. The ice sheets are cast in different colours to replicate different coloured water. They can be broken easily and fitted into dioramas to replicate smashed and broken ice. The four types are Algae Green, Peat Brown, Clear water, and Trapped air bubbles.

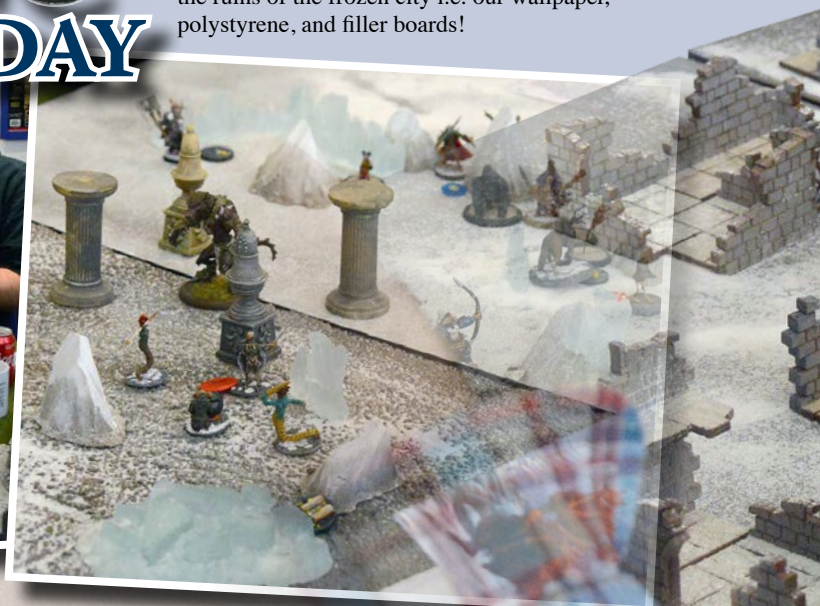
1. A suitably sized base board was painted black to add depth to the final model. Some foam board banks were carved to go either side of the frozen river.
2. The fun part! Smashing the ice sheet with a hammer to give the impression of cracked ice. The sheets also have an adhesive backing which handily keeps everything in place after smashing!
3. Next everything was glued into place and allowed to dry.
4. Finally some of the Krycell fine snow was added to the river banks.



## WARGAMES illustrated FROSTGRAVE DAY

### FROSTGRAVE DAY

Our terrain tiles saw action for the first time at the second annual *Wargames Illustrated Frostgrave Day*, at which 20 brave adventures were welcomed to our Nottingham HQ and did battle across the ruins of the frozen city i.e. our wallpaper, polystyrene, and filler boards!







4.



## MATT PARKES REVIEWS

The Fine Snow was given to expert model maker and author of *WI Paints* Matt Parkes for review.

He used the product on a ready made terrain piece he had laying around. (Shown above).

*"After masking off the base border and model, the application was very easy, using hairspray in thin layers and the snow was sprinkled on using their shaker at a 30 degree angle. What was immediately apparent is that the snow holds its own volume with each layer, that's something I've never seen in a snow product and I have used quite a few over the years. The snow when dry is very fine, with a subtle texture and a cool sparkle."*

**Thoroughly recommended!**







# BASE...? WE HAVE A PROBLEM

**Nick Buxey turns his hand to solving the problem of using the same figures for games with different basing conventions.**

There can be few wargamers that have not noticed the publication of two rulesets in recent times, whether it's their sphere of interest or not. I'm referring to *Congo* and *Death in the Dark Continent*, both focussing on African scenarios for tabletop encounters. Both sets of rules provide for very different games and employ very different mechanisms for play. However, both sets are more than likely to be played with the same figures in 28mm. Wargames Foundry introduced its *Darkest Africa* range a couple of decades ago and still offer a fine range of figures. Nick Eyre's North Star also has a large complementary range of figures, now incorporating Copplestone Castings. These manufacturers' figures are the likeliest ones to be found in the wargames armies of *Darkest Africa* fans. I dare say that there's also a cross-over in figures for gamers using Dan Mersey's *Men Who Would Be King* rules too.

## THE PROBLEM

So, what to do if you want to base your figures for one set of rules but want to use some of them for another set? Problem. If you already possess figures which are based on 25mm discs, or 2p coins

*Above: The component parts for making the bases.*

*I like to spray/prime the pieces first to make things easier later, so the left-hand side shows the various pieces in their natural state - greyboard and steel. The right-hand side shows the same pieces primed with Humbrol enamel 'Dark Earth'.*

*30mm x 60mm and 25mm disc steel bases from 'Products for Wargamers'.*

*Top templates - 30mm x 60mm and 25mm rings - from 'Warbases'.*

*M8 (8.4 x 17.0 x 1.0mm) steel washers from eBay. These take 8mm x 1mm neo-magnets perfectly.*

you can opt for the obvious solution and place your figures in movement trays that accept three figures. However, two figures are OK on movement trays measuring 30mm x 60mm, because they can accommodate them fairly happily. However, for those units which require three figures on a base, the movement tray has to be bigger than the recommended base size for DITDC, reaching a whopping 75-80mm in length. Also, those movement trays are nicely produced and very useful, but look a bit chunky. Now that fact may not bother some wargamers in the least, but it bothers me. That's why I embarked upon the slightly (OK hugely) anally-retentive pursuit of producing more elegant bases that accommodate figures for both sets of rules.

Let me make it clear, this is about my own particular preferences and any perceived 'problem' is mainly down to me! If you feel at this stage of reading this article that you can't be bothered with such hair-splitting, move-on now

to the next article. It would be my hope, though, that what I've done may be useful to some readers and, quite possibly, inspire them to use the methods outlined as a starting point for finding even better ways of accomplishing what I've done. So, if you're still here with me, read on!

## THE SOLUTION

My aim, in a nutshell, then, was to find a way of basing figures that could occupy three to a 30mm x 60mm base for *Death in the Dark Continent* and also be used on 25mm discs for *Congo*. Firstly, what size and shape of base for the individual figure was going to be suitable for accommodating three such figures on a 30mm x 60mm base and then individually on a 25mm base? Chatting with my oracle on all such matters - Martin Murray of 'Warbases' - I discerned that an 18mm disc for individual figures was about as big as I could comfortably go to achieve this. Finding a manufacturer of affordable



1: The 1mm thick greyboard top templates glued onto the steel bases, having first been primed with Humbrol 'Dark Earth' enamel.

2: The 17mm M8 washers and the neo-magnets.

3: The washers with the magnets inserted (the odd colouring is reflection!) They are not glued-in yet: this happens when the figure is glued onto the two pieces.

4 & 5: Texturing the bases.

18mm x 1mm steel discs was not easy and in the end I opted for a size M8 steel washer. These are actually 17mm in diameter and have an 8.4mm hole in the centre. Miraculously, they are able to accommodate an 8mm x 1mm neo-magnet almost perfectly.

So, not for the first time, I presented Martin with a custom order and the poor man dutifully obliged, as he always does. He made me 50 laser-cut 'top templates', cut from 1mm greyboard (1mm MDF is, apparently, pretty awful-looking). Each template had three 17mm holes cut into it. Then he responded to a second request and cut me 50 hollow circles from the same greyboard that were 25mm in external diameter, with an internal diameter of 17mm.

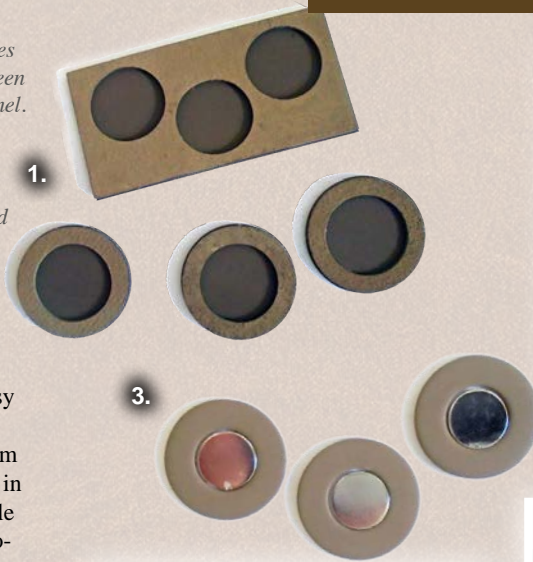
I purchased some steel bases from Products for Wargamers, which are already in their product line: 30mm x 60mm rectangles and 25mm discs. I sourced some 8mm x 1mm neo-magnets via eBay and I was set to go.

I'll illustrate what I've done by providing some photographs, then I can 'work backwards', as it were and explain how I got them done.

When gluing the individual figures onto the washers containing the magnet, be careful to place them on a ceramic, or plate safety-glass surface, as the superglue is sure to seep through and it's much easier to prise the whole thing off one of those surfaces. I usually employ a chisel-headed heavy duty X-Acto blade if required.

At this stage the texturing of the base is the next step if you desire it and I say that because every wargamer has their own idea about what to do with decorating bases. I sometimes use 'Basetex', or 'Brushscape' (which is finer). Sometimes I make my own texture paste from a mixture of chocolate brown masonry paint, PVA and chinchilla sand. Silver sand would probably do, but I like these because they are fine and at this stage I'm only interested in building-up the base surface to hide the cast-on base of the figure.

The one drawback about applying basing texture to the 'cut-out' bases is that it's fiddly! You do not want to end up with excess texture inside the base-slot.



A. The figures on their individual 17mm washer and magnet bases.  
B. The figures slotted onto their 'Congo' 25mm metal disc bases.  
C & D. The figures slotted onto their 'DITDC' 30mm x 60mm base. (My first West India Rgt, conversions for the Ashanti War of 1874).



The same care should be taken if you decide to apply a second layer of sand over the first layer of base texture, as I do. Why do I do that as well? I do it because I like the final texture it gives when dry-brushed.

I've ended up with, for me, the desired result - dual basing that is the correct size recommended for the two games and only about 2mm thickness, so elegant as well.

As I said earlier, what I've done is not necessary for playing the games

mentioned and is very much based on personal preference, but perhaps some of the procedures and materials used may be useful in a different context. There's bound to be at least one other wargamer out there who's wanted to do this as well! (Or, probably, I'm really just a sad old git!).





# CORK TILES, A PASTA MACHINE & MDF IT'S ALL RUINS

**Dave Tuck and by Malc Johnston share an ingenious idea for making 28mm tabletop rubble.**

The doorbell rang.

My wife appeared carrying a heavy box  
*"This had better not be MORE soldiers"*  
 she says accusingly.

*"No, dear it's a pasta machine"* says I.

*"Malc and I are making bricks with it."*

*"Whatever!"* she says shaking her head slowly, as she disappears into the lounge.

And that is precisely what we were doing.

We needed some large piles of rubble for our Chechen and zombies game we intend to put on at Hammerhead next year. Hammerhead is our favourite show, all games are participation, and ours will incorporate tank hunting in an alternative Grozny, whilst outsmarting the zombies! These needed to be large and imposing features, to give cover and break up the line of sight. They can also be used

for any urban World War Two game, or indeed any table that requires rubble.

To make them you will need:

Some 2mm plywood, some 3mm cork tiles, a steel rule, a very sharp knife, a pasta machine, some bits from the bit box and various match-pots and acrylic paints.

The base is cut from 2mm plywood which is painted on both sides to help prevent warping.

Scraps of high density blue foam board are then stuck on randomly, with silicon. Once dry, they are trimmed to shape, and partly covered with Das clay.

The next stage is to rummage through the bits and junk box, and various bits of tubing (from cling-film), corrugated cardboard, bits from an old plastic kit, coffee stirrers, an old car tyre from a charity shop model car and small stone ballast were placed on the base.

## CONSTRUCTING THE BASE





After this, random sections were covered in PVA and sprinkled with sharp sand.

Now for the brick rubble. Firstly, 3mm cork tiles are cut into thin strips, cut them to the width of the pasta machine. Use a steel rule for this to protect your fingers. At the same time cut a piece of wood the same width as the aperture on the machine to protect your fingers when feeding in the cork strips. Next, we set up the pasta machine and place the cork strip in it pushing it through with the wood strip. The result... bricks, lots of them. A huge bag full can be made in about an hour. These cost a fortune when purchased from model railway outlets, so if you can find a cheap pasta machine you will soon get your money back.

Stick these randomly on the base.

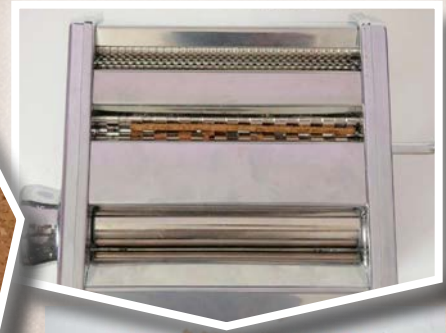
We got the idea for the pasta cutter from a YouTube video. We often look for these, off the wall ideas on the internet, and have never felt time spent looking at the various tutorials is wasted. The idea was originally used for making 1/32nd street bases, we simply adapted it.

Now comes the painting stage. Start by undercoating black. Then use chocolate brown emulsion. This is then highlighted with an orange peach colour, and the parts which are to finish grey are wet painted black on the peach colour as a base coat.

The next stage is to pick out the detail. Dry brush the tyre grey, along with the corrugated iron. This is then highlighted silver and rust. The individual bricks are probably the most important feature. Paint these with a deep brick red and black mix. Then touch up with cavalry brown and neat red. Some of the sandy groundwork was touched up with sand yellow. The final job was to touch up the metal scrap with steel and a black wash.

The completed terrain features look good on the various vinyl battle mats available

## MAKING PASTA... SORRY... BRICKS!



from several manufacturers. They are well worth a look. They will be on display at the show in March 2018, come along for a chat and a game.

## PAINTING





# CONVERTING AND PAINTING A WWII SWEDISH INFANTRYMAN

Looking for something aside from the obvious when it came to a colour scheme for the WWII Winter Germans that are included with this issue of *Wi*, we got talking to ace brush-worker Pete the Wargamer about doing a simple head swap job with one of the figures to convert him from an Axis German to a 'neutral' Swede.



What's the point in that!? I hear you think. Well, in May 1945 Sweden had 60,000 soldiers and more than 6,000 vehicles mustered in the southwestern province of Skåne, they were about to take part in operation *Rädda Danmark* (Free Denmark),

which involved crossing the border and forcing the lingering German forces out of their neighbour's territory. *Rädda Danmark* is the focus of an article in next month's issue of *Wi*, but for now let us spark your interest with this painting guide.

## 1 CONVERSION

Conversion being a rather elaborate term for a simple head-swap. Perhaps surprisingly the standard Swedish helmet of WWII, the M21, was very similar (at least at 28mm scale) to the standard Italian M33. So rather than plumbing for one of the German heads on the Winter German frame, you need to invest in some *Bolt Action* Italian heads for your Swedish soldiers.

When you have a suitable helmeted head on the shoulders of your figure, it's time to move on to painting.



## 2 PRIMING

Before you can start to apply paint to your miniature, it's important to add a primer. This first layer will not only create a uniform colour to work from but it will also allow your acrylic paints to properly adhere to your miniatures surface. This will not only result in a better finish but also a much easier painting process.

The choice of primer colour and application method is often down to personal preference. I prefer to use aerosol or airbrush based primers for ease and speed of application. Additionally, you can also use this step to achieve some zenithal shading, which is a technique to create the illusion of light on your model. It's a very simple effect to achieve and involves priming your model first with a dark, preferably black, primer before spraying a lighter grey or white from directly above your model.

The result is what you can see in the photo. You can see that the upper parts of the model are lighter whereas the lower, more recessed areas, appear darker. Much like a full sized person appears when they're standing outside on a bright day.





# COVER MOUNT FOCUS

All paints used are by Army Painter.

## 3 BASECOATS

Now that we have our primer we can begin our painting by first applying each of the basecoats. This will allow us to block out the areas of colour first and then apply the later washes over several areas at once.

For my basecoats I like to mix my paint with a little water or acrylic medium. These will thin down the mixture, reducing the amount of pigment in each brush stroke and make the paint easier to work. Additionally it allows us to apply thinner coats of paint that will allow that zenithal shading to show through. The result is a more realistic, and less flat looking surface colour.

Another tip for tackling the basecoats is to approach the order that you paint them in by focusing on the harder to reach areas first before moving outwards. This ensures that you don't accidentally overspill onto the parts you've already painted when trying to reach into those more awkward spots.

1. Field Grey  
(Coat)
2. Cultists Robe  
(Helmet)
3. Dirt Spatter  
(Webbing, straps, boots)
4. Castle Grey  
(Gaiters)
5. Kobold Skin  
(Skin)
6. Necromancer Cloak  
(Weapon and metal areas)



## 4 WASHES

Once the base coats have been completed we can then start to boost the shading of the model by making use of some washes. These pigments are suspended in a less viscous medium than your regular paint which allows washes to flow into and then settle within the recesses of your model.

As the wash pools into these dips and begins to dry it will create darker areas representing the shadows on a full scale surface. The result is the illusion that the miniature is more detailed than it actually is.

However, before we start to apply these washes we need to thin them down a little further. Applying your washes straight from the bottle can sometimes darken your base coats too much. So, to remedy this, I'll be mixing in some of the Army Painter Quickshade Mixing Medium in a 1:1 ratio of wash to medium.

The medium is essentially a wash without the pigment which, much like our earlier thinning, will reduce the amount of pigment that you're applying. Once your washes have been thinned you can then apply them across your miniature. Generally speaking, I'd recommend tackling the lighter tones first before working your way to the darker ones.

1. Flesh Wash  
(Skin)
2. Strong Tone  
(Webbing, straps, boots and helmet)
3. Dark Tone  
(Coat, gaiters, weapon and metal areas)





## 5 HIGHLIGHTS

Once your washes have dried we can move onto the highlights. These are a great way to finish off your model as they allow you to further emphasise the details that the washes and zenithal shading started to pick out.

Highlighting involves applying thin lines of a lighter shade so you will need to use a paint that is of a similar hue to your basecoat but lighter. Once you've found a suitable paint, load up a fine tipped brush with just little paint. With this, you can begin to lightly drag the tip along the raised edges and corners of the model.

Concentrate your application to the upper edges of your model, using your zenithal shading as a guideline. The result of applying these lines of lighter paint along those raised areas is an improvement to both depth and definition, achieved by creating contrast between the lighter edges and the darker recesses.

1. Combat Fatigues  
(Coat)
2. Commando Green  
(Helmet)
3. Fur Brown  
(Webbing, straps  
and boots)
4. Stone Golem  
(Gaiters)
5. Corpse Pale  
(Skin)
6. Gun Metal  
(Weapon and metal areas)



## 6 FINISHING TOUCHES

With the painting completed, all that's left to do is those finishing touches. These include a simple basing scheme using a textured paint, followed by a wash to bring out the detail. Once this has been achieved, I'd recommend a coat of a matt effect varnish. This will not only help to seal and protect your paint work, it should also remove any glossiness created by your paints. With this completed, a small grass tuft glued to your base will leave your miniature ready for the battlefield.



Check out Pete the Wargamer on YouTube to see a video tutorial for painting your freebie Winter German Infantry figures as actual Germans.





# WARGAMES illustrated

£6.95

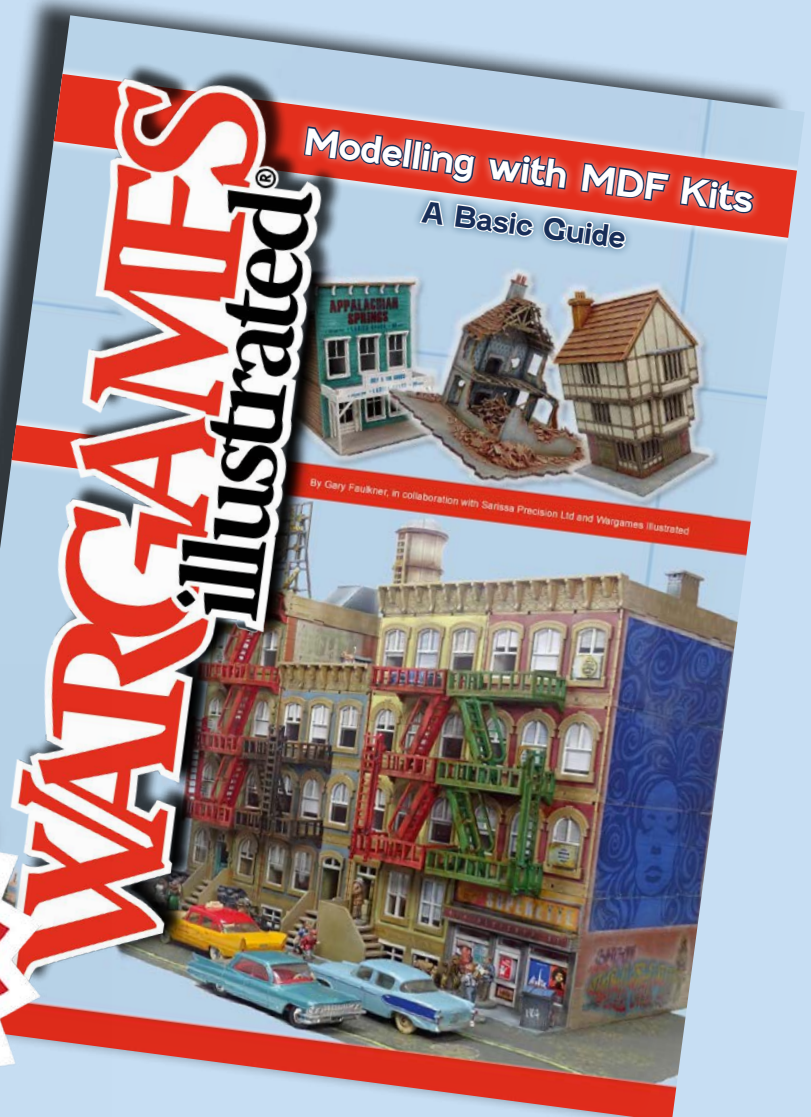
Designer and master modelmaker Gary Faulkner of March Attack and *Wi* bring you a one-stop-shop for modelling and painting MDF model kits.

Available from:

WH Smith

and

[WARGAMESILLUSTRATED.NET](http://WARGAMESILLUSTRATED.NET)





NEXT ISSUE:  
*Wi*PRIME COLLECTIONS

III

PAINTING AND MODELLING  
TWO