

A detailed LEGO Star Wars scene featuring the Death Star in the background and a Rebel fleet in the foreground. The Death Star is a large, grey, spherical structure with a prominent red laser eye. The Rebel fleet consists of several smaller, dark grey and blue ships, including the Millennium Falcon, flying towards the Death Star. The scene is set against a backdrop of a hazy, orange-tinted sky, suggesting a sunset or sunrise. The overall composition is dynamic and captures a key moment from the Star Wars saga.

# irregular

Lockdown Special 2020 magazine

Painting Tutorials

Urban Basing

Dueling Giants  
Introducing Airbushing

Scratch Building

British Camo  
Alien Landscapes

Plus Reviews, and much, much more





Cover Art; (Adobe Stock.com)

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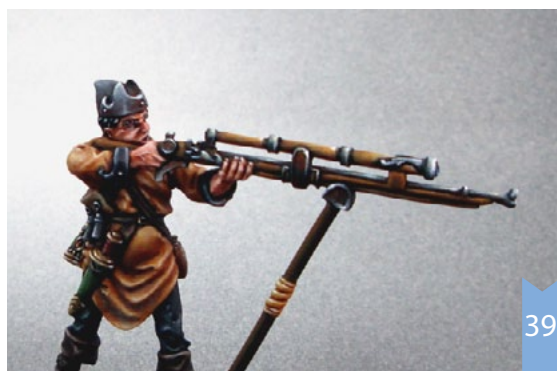
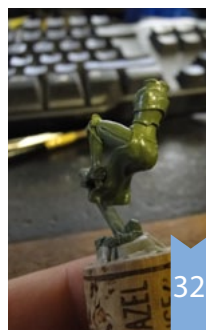
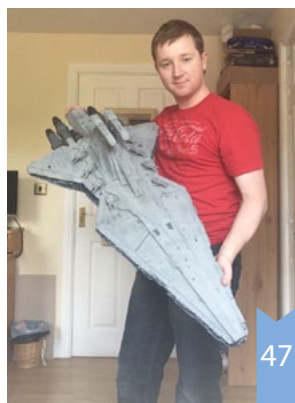
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# Lockdown Special 2020

# Editorial

**Jason Hubbard**

Well it's been an interesting and devastating start to the year, here in the UK, we started the year leaving the EU, then a new virus exploded in China. By February things started to look bad in China, but also cases of the illness started showing up in Europe. Now no matter where you are in the world reading this you're most likely living in a lockdown or under strict restrictions. The likely hood is you're in the same situation as myself, stuck at home, either working or finding yourself unfortunately without employment. All of this has had a big affect on our hobby and the industry that supplies that hobby.

Convention and shows have either been cancelled or at best postponed to a later day. Companies have shut due to the restrictions in place and shops that don't sell essentials such as food and medicene. So we find our selves with plenty of time on our hands to do some hobbying, either painting the back log of miniatures you have in your collection, building much need terrain for future games when things start returning to some form of normality, or you may have embarked on playing solo games or games via the internet.

With this in miond we at Irregular have decided to put together a Lockdown Special, featuring all the tutorials and articles about painting and modelling all in one special edition of the magazine. We've also included some new tutorials and articles as well, as long as news about which companies are offering digital products for free includi ng solo rules.

So with that in mind enjoy our collection of turorials and articlesto help keep you busy whilst stuck at home.

Remeber to stay home, wash your hands and stay safe. We'll be back later in the year with another issue, and hopefully things will back to some degree of normality.

Well that's all folks.....see you next time, and stay safe.

Jason





# Ed's Challenge

Jason Hubbard



It's been an interesting and unusual start to the year, at one point there were fears that the US would go to war with Iran. Then we in the UK finally left the EU for good or worse. Then there were reports coming out of China in early January of a new disease, a influenza type virus. Then within a couple of weeks things started to look grim over in Wuhan, China. We started to see images of packed hospitals and people wearing masks. Then they started to put entire cities in complete lockdown, and then an entire province. It was suddenly a serious issue especially when cases started to crop up in Europe and the Middle East. Fast forward to April, and the UK is in lockdown with nearly 30 thousand cases and rising, the US has over 200 thousand cases. Italy and Spain are really bad, and it's become very worrying for a lot of people.

This means I'm not stuck at home; my work wouldn't allow me to work from home, but I had to leave work because the schools closed which meant I was on childcare duties. This has meant I needed to find something to keep myself occupied, what else other than painting and catching upon hobby projects. This has meant my painting productivity has increased.



## Bolt Action

I've managed to get quite a lot finished, this includes a unit of communist Chinese, a squad of US infantry, a Puma and some Brits for my LRDG/SAS force for North Africa. I also found the time to sort through my painted items for Bolt Action just to work out what I've painted, what's built and unpainted and I need to purchase in the future to complete each of the armies. The Germans don't require any armour units, as I have a Puma, Panzer III and a Stug built and part painted. I've decided I need to pick either a PAK 40 or 30 or a mortar unit. I also plan to get some Fallschirmjäger

just to bulk the infantry out.

For the British I'll need a few more infantry soldiers, but what I really need are a couple of LRDG vehicles. I already have a Bren gun carrier, and an unpainted anti-tank unit. This particular army isn't planned to be a large force, though at a future date I may add units of the eighth army to bulk it out.



I've started painting a US force, so far this consists of some infantry squads, this army really needs quite a bit more investment than the other armies. I'm planning to pick up a Sherman and a Greyhound at some point, and possibly a jeep for HQ. I'll also need to purchase mortar unit and either anti-tank or heavy machine gun units.



My final army are the Chinese, which I finished my first infantry unit recently, it will need another unit of infantry along with support probably HMG and mortar. I don't need any tank units as I've already have a painted T-34 and a light tank in the form of a T-26. I'm toying with the idea of picking up an armoured car probably a German Sd.Kfz. 231 as China had several during WW2.



## Lord of the Rings

I've managed to get quite a few items painted for this project which include a squad of Gondor infantry. I also managed to finish several characters and a few odds and sods, one of which is my first Gondor Cavalry soldier.

## Test of Honour

I've finally managed to finish some Samurai for this game. I've also have some archers that are nearly finished as well. I painted three Samurai from Perry Miniatures, these have a rough paint job, it's not my best work but it'll do for the tabletop. I also managed to complete two Bushido miniatures I plan to use; one is a fully armoured warrior and the other is a female samurai. I quite enjoyed painting both of these miniatures, they're well sculpted with very little to no mould lines.



## SPQR/Mortal Gods

This project didn't get started until I was stuck at home on lockdown. So far, I've managed to paint a Centurion and build a whole bunch of Romans and Greek infantry. I've built two units of Romans, one by Warlord and the other unit is by Victrix. Now I prefer the Victrix Romans as they're a nicer sculpt, but the metals from Warlord are superb.





Apart from building the Romans I also started building some of the Greek Hoplites, and all of the slingers. Along with these I based some of the Celtic archers as well from the SPQR starter box. I decided to pick up some command units for my Greeks. In the Mortal Gods starter box, there is enough for two small warbands, so for one I've picked Macedonian Royal Guard Command from Warlord. There are three in the box which includes a commander, musician and standard bearer, they made with the new plastic resin which means they are slightly rubbery to touch, but it also means that you can reshape arms with the use of hot water. There is a little flash on each of the three models but no mould lines that I can currently see, but they may show up once I under coat the models.



## Fantasy Army

I've finally returned to this project after a rather long, I've managed to finish a unit of men at arms, a couple of militia fighters and a female priest. I still have quite a few models built and unpainted in a draw, so I'm hoping to get some more finished over the next couple of weeks.



The men at arms are Perry Miniatures plastic medieval infantry. The priest is an old Games workshop Sister of Sigmar. I've had her for quite some time and decided I could use her within the fantasy army, she painted up very quickly by keeping the colour scheme quite simple. Armed with two warhammers and I plan to make her a hero level character.



## Team Yankee

I've not really done much with this project, for the Chinese army I've started building the T-55 tanks, though as yet they've not been undercoated or painted yet. I have decided to start a British army, based around 4th Armoured Brigade, which was the brigade my old army unit was apart of. I've decided to this army by



building a M109 self-propelled gun battery, just like the one I served in. So far, I've built and painted one M109 and a command vehicle.



## Warcry

I've made a start on painting the Sigmar and Chaos miniatures I have. I decided to do some experiments painting washes, inks and contrast paints over metallic colours. Some of them work really well whereas others like Contrast Ultramarine blue really is quite poor over metal paint.



Yet Contrast Blood Angels Red works really well, it gives it an almost metallic red finish. I found that some metallic paint worked better than others, such as GW Chainmail Silver and P3 Cold steel. Though if you have Mithril Silver, and old GW colour that works best.

It's been a busy few weeks hobby wise and by the next issue I'll have started on the terrain projects, hopefully built all the tanks for Team Yankee, along with painted all the infantry for the Flames of War armies, and maybe the SPQR/Mortal Gods minis.





# THE APPLICATION OF PAINT

DAVID HEATHFIELD

This tutorial concerns the application of paint and does not deal in depth with colour theory. There are many articles available on the subject and it would take a whole book to explain the use of colour.

Before we begin a quick word on preparation. All mould lines and flash should be removed, this can be done with a scalpel, file, wire wool or sand paper. The last two in that list can also be used to smooth off larger areas that will require smooth blends such as cloaks and large metal surfaces.

Undercoating is a personal preference but the choice you make can affect the end result. A black undercoat lends itself to clean lines and a sharp contrast - often described as the 'Eavy Metal style' - but will leave you with slightly dulled colours. A white undercoat gives more vibrant colours and a generally smoother finish but is tricky to master. A grey undercoat will give somewhere in between the two, it is easy to cover, gives a smooth finish and has the advantage of giving more natural looking colours and being easier to view while painting.

## Stage 1



For the purposes of this tutorial I have undercoated the miniature a very light grey (Tamiya light grey) which will show the colours and techniques better than a darker undercoat.

## Stage 2



After spraying the model with several light coats I painted the difficult to reach areas of his leather clothing. This was done before attaching him to the base as these areas became unreachable with a brush. The miniature was pinned with a long piece of paperclip which goes right through the base in order to create a sturdy join between the model and all the elements of the base.

## Stage 3



Now you can begin applying colour. There are several things you need to know about how the paints work before applying it. Acrylic paints, such as the ones used for miniature painting, are a suspension of pigment in several other liquids that help give each paint its own qualities. These qualities vary from paint to paint and so it is useless giving you a description of how thin your paints should be as each one will vary. Instead I will show you the quality you are looking for when applying said paint.

Here the paint is too thin, it is not adhering to the surface of the miniature and is breaking up.

#### Stage 4



This next image shows paint that has been applied either too thick or without proper mixing on the pallet. Once a layer like this is applied you will never regain a smooth surface to paint on and the end result will be affected.

So the paint should go on smooth and evenly and be slightly transparent. It is also important not to overload your brush or you will end up with large areas of pooled paint which will fill details and affect the following layers.

These layers should be repeated until a homogeneous finish has been achieved. Each layer needs to be painted in a different direction to the last with large clean strokes. This is very important as when you make a brush stroke the paint is laid down in a certain way.

The paint is generally pushed along in the direction of the stroke which as we will see later can be made to work in our favour. At the end of the stroke the brush leaves behind a larger amount of paint than at the start. Therefore if we keep the brush strokes in the same direction we will end up with a large deposit of paint at the point where the stroke ends. This will quickly build up and leave an ugly clump and stroke mark.

It is also important as you are crisscrossing the strokes which fills the gaps left by the last stroke and creates an even, solid mesh of pigment across the surface of the model.

#### Stage 5

Here is a step by step of 4 layers applied to the skin using this technique.



Next we begin adding light and dark areas to the model to give it contrast and volume. I usually work by adding some shade then highlights then further shade before adding the final highlights and glazes. This allows me to see how much contrast is needed at each step without going to dark straight away and having to balance this with very bright highlights.



## Stage 6



Here I begin with a very careful shade. I am trying to avoid using too dark a colour as I want to create a blend by using the transparent quality of the thinned paint. Here is the paint on my palette.

The palette I use is a wet palette which some people believe is a bit of an extravagance but is in fact a necessity and will improve your technique and painting times tremendously.

Now you want to use those brush strokes to create a blend. Begin with the brush at a point where you want the blend to begin and move it toward the area you want to be darkest. This will create a natural blend from the light to the dark area and can be further facilitated by stretching the edge of the paint with a clean moist brush before it dries or applying the previous colour very thinly to the edge of the blend once dry to help disguise the edges of the two colours.

Then another layer is added starting slightly further down into the shaded area with a darker colour paint using the same technique and finally I add some purple to the mix to create a recessive area and begin adding some tone to the skin.



## Stage 7



For the next part I have moved to an area of the model that is easier to demonstrate the steps on. It concerns the highlighting of the model. After deciding where to place your highlights (usually opposite the shaded areas) you must begin to highlight in the same manner that we applied shade. By this I mean in several stages using thin coats and using brush strokes to move the pigment towards the lightest areas.

Here you can see the application of highlights on the beard. This was first treated as per the last two steps with several coats of grey and several applications of brown tending toward the darker areas.

The whiskers were then lightened back up to a light grey with two applications treating the area with global lighting (all raised areas are highlighted) the white was applied again in two thin layers tending towards where the light source was coming from.

## Stage 8



Now that you have highlighted and shaded an area it may look a little bland. This is because in real life light shows up slightly different tones and colours that may be reflected from lower layers (veins under the skin), be reflected from another object (metals reflecting light) or may simply be stains or discrepancies on the surface.

To display these effects on the miniature we use glazes. The use of these glazes is twofold. First they can help to further disguise blends and smooth the surface. Secondly they can be used to break up large areas of colour and create areas of interest that draw the eye to certain areas when viewing the model.

On my Dwarf the mask was one such area that needed treatment. I used glazes of red and purple to help facilitate blends and break up the surface of the leather. These were concentrated in certain areas particularly the purple which is a recessive colour and so was confined to the shaded areas. Secondly I used a pale blue around the eyes to give the effect of the light reflecting from the metal onto the leather and also to draw the eye of the viewer towards the details of the eye.

The image below shows the consistency of the paints on my pallet but it must also be noted that only a very small amount is needed on the brush else you will end up with paint gathering in recessed areas of the model. It is better to apply these glazes in several layers and the point of them is that they remain transparent and simply tint the colour below.



## Stage 9



These images show the model before glazing then with the first layer of red applied to the cheeks and finally worked with the complete array of colours. These areas were neaten up on the final piece.



## Metallics and Wood

Now to demonstrate these techniques applied to a few different surfaces. It was requested that I demonstrate metallics and wood.

When working on metal areas you have a choice between using metallic paints and painting non-metallic metals (NMM). In this tutorial I will demonstrate the latter technique. I find it much nicer to look at presentation-wise, that it ties the model together better and I know that I spent hours wondering at the amazing work of other artists when trying to learn this technique. It will also help you become a better painter as you have no choice but to get the blends perfect!

I will show you a simple area of metal that requires not too much blending back and forth, and is easy to place reflections on.

Stage 1



The surface was given a coat of a steel grey colour before receiving several washes of black concentrating on the area in shadow. In this case that was the underside of the steel handle but metal reflects light differently and some research into this can produce surprising results.

The metal was then returned to the original steel colour. At this point it is important to mention that contrast is of particular importance when painting metal surfaces.

Stage 2



The highlights should be very stark and sudden and confined to a small area. This is not to say they should not be well blended in fact the opposite is true but almost all metals should end with a stark spot or streak of white.

To this end I now use the grey colour and add white to it highlighting the surface with thin layers of much lighter grey to create a quick but smooth blend concentrating on a small zone. To finish spots of white are applied and a quick glaze of off white used to blend these in



### Stage 3



The light points on the tubes were painted with less watered paint. This is usual for very fine details as getting a perfect blend is less important than keeping the area neat. Below is my pallet with the three colours used for this process and another shot of them mixed while blending between layers.

### Stage 4



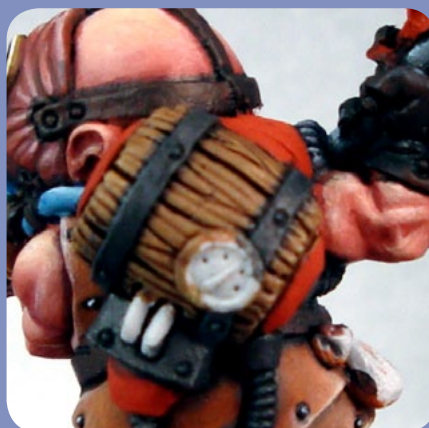
Metals can also be glazed; this is usually done to give the effect of rust and dirt but can also be used to show the effects of heat or other elements on a metal surface. Below is a rusty metal axe that has been aged using oil paints and pigment powders.

### Stage 5



This is a very simple way of painting metals and there are lots more techniques that can be found by looking at metallic surfaces, other miniatures and even classical painters who often use a technique called Sky Earth NMM. I encourage you to go and find these and try them yourself as your painting and knowledge of the subject will increase tremendously.

### Stage 6



Next is wood. I tend to keep my wood bright and vibrant as with the rest of the model and make a feature of it rather than paint it drab colours. I begin with a coat of a flat dusty brown colour and follow this up with several washes of thinned dark chestnut ink. To make this I mix a chestnut ink with a brown ink and water it down slightly. This is then applied as a wash with the brush slightly overloaded so that the colour runs into the recessed detail of the wood. Obviously you can concentrate this more to the darker areas with each passage of ink.



Then I washed the metals surrounding the wood with thin black allowing some to leak into the recessed of wood near to the metals. This creates yet more contrast easily.

The wood is then returned to the original brown before being given several coats of pale beige. Once dry I return to my ink wash and apply an even thinner coat to homogenise the area and tint the colour of the wood slightly. Then final highlights are added using the beige colour with a small amount of off white mixed in. These highlights are restricted to smaller areas.



## Stage 7



Wood can be glazed with all sorts of colours that occur naturally due to fungi plants and minerals that end up on the wood. Most commonly I use green, purple and red. The picture below shows another handle painted in a similar fashion and treated with some glazes.

## Stage 8

Now it is time to paint the details. The reasons I leave these until last because they are often the highest areas and so be difficult to paint around while painting other surfaces. For this reason I don't worry to much if they get some paint on them up to this point. Also I can now use these details to balance out the other colours.

As a general rule I tend to choose two or three colours for the model, then each area may have one or two complementary or contrasting colours in. I can use these colours initially to manipulate the mood of the model, so that it is dark and cold, or bright and warm, etc. I can also use contrasting glazes in these areas to break them up a bit. Once this is done however I may find that one side of the model looks a bit too red or too warm.

I paint the details to counteract this and balance the whole miniature.

Colour theory can help with this to a point but if you haven't got a feel for colour you had better develop one or your miniatures will end up a mish-mash of paint.

So here he is, complete with a nice scenic base ready to join the armies of Tir-Na-Bor or to simply sit on my desktop and get dusty.

Till next time, happy painting.





# COLOUR THEORY

JASON HUBBARD



Colour theory is a complicated topic, but once understood it will help improve your artwork, miniature painting and graphic design. This article will touch on the subject and will give you a good grasp of the basics on the subject.

## How Do We Create Colour

All colours are created from a combination of primary colours. Primary colours can't be created by mixing other colours.

## Secondary Colours

Secondary colours are created by mixing primary colours together.

Red + Yellow = Orange

Red + Blue = Purple

Blue + Yellow = Green

## Tertiary Colours

Mix primary colours with neighbouring secondary colours, there are six tertiary colours, two from each primary colour. Colours are generally placed into a spectrum known as a colour wheel.

## Complimentary Colours

These are colours that are opposite each other on the colour wheel. These will create a high level of contrast when used in combination. For instance purple makes a good shade colour for yellow.

## Split Complimentary Colours

This uses a variation of complementary colours, using a colour and two adjacent colours. Using the colours left and right of the complementary colour, this will provide high contrast without the strong pull of the complimentary scheme. This particular style is harder to balance and get right, its normally best to work on the principle of one warm colour and two cold colours.

## Hot Colours

Red is generally considered a hot colour, and it is normally associated with fire and danger. They are colours that attract attention, which are aggressive and strong.



COOL



WARM



BRIGHT

## Cold Colours

Blue tones are considered to be cold, as they remind us of winter, when it is icy and snowing. When you place hot and cold together they vibrate.

## Warm Colours

Colours that contain red are warm colours, such as orange and yellow. These are comfortable and remind us of Autumn.



DARK



SATURATED



DESATURATED

## Cool Colours

Blue is the basic tone of cool, though you can add yellow to create green which is a naturally cool colour which gives a sense of relaxation and being refreshed.

## Light Colours

Light colours have a lot of white and are generally called pastels. They have a sense of transparency and the more light the colour is, then the smaller the combination of colours they can be used with.



PRIMARY



SQUARE



COMPLEMENTARY

## Dark Colours

We associate dark colours as those mixed with black, they are associated with Autumn and winter. When combined with light colours, they can give a sense of drama.

## Bright Colours

A bright colour is measured by the amount of pure colour. Bright colours will attract attention, which is why they're used in graphic design a lot for advertising.

This article only touches on the basics of colour theory, but hopefully this will act as a jumping off point and help improve your painting skills.

# MEANINGS



LOVE, BLOOD, FIRE, ENERGY, STRONG, INTENSE.



POWER, WEALTH, AMBITION, NOBLE, ROYALTY.



SEA, TRUST, SKY, STABILITY, TRANQUIL, DEPTH.



FRESHNESS, NATURE, MONEY, GROWTH, SAFETY.



ENERGY, SUNSHINE, BRIGHT, CHEERFUL, JOY.



WARM, HAPPINESS, SUCCESS, AUTUMN, CREATIVE.



# Constructing the Giants

Nigel Carman won Silver at Games Day UK 2009 in the duel category with his Duelling Giants entry. He also kept a WIP thread for the project on the Platoon Britannica forum, providing a record of how this incredible piece came together.

## The idea

For this duel I wanted to push the limits of what could be achieved on a 50mm base. I love comics, and the dynamics in them and wanted to convey that look in 3D. I have also found that using a 50mm base can help create a tight, focused scene, without limiting your options for models.

I really wanted to push the size of the minis - and the fighting giants idea was born. I worked this seed of an idea over in my mind until I could see a way to achieve it. Looking at wrestling images online made me re-think a wrestling style duel as the modelling would be a nightmare and more importantly, too much of the giants would be covered up. It took a lot of head scratching before I changed my searches to rugby and American Football. This gave me the idea of having one giant leaping at the other and balancing it all on one anchor point.

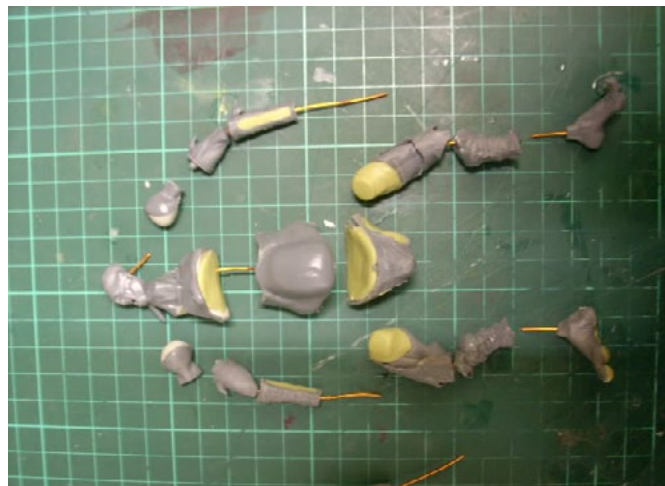




## Making the marionettes

When I attempt to change the positions of plastic models, I always try to turn the basic model into marionettes that I can pose in any way I want. This was the approach I used on the giants.

Cutting the model up was more problematic than I originally imagined - much of the cutting was done by drilling many small holes through the parts that I wanted to separate, then using a quick swipe of a knife to finish separating the components. Once all the parts were cut up, I used a mixture of Green Stuff and Milliput to fill in the ends, so I would have something to drill and thread my wire armature into. I now had an articulated model to start work with and pose. Both models were threaded up with this method so I could get some dynamism into the poses.



I used Blu Tack on all the joints for stability whilst I tried out various positions for the look I was after, before finally settling on one. As this was the very early stages of development I had plenty of time to refine and edit the models until I was happy. Green Stuff was used to fix the joints into position, as I find a solid model is easiest to work with - even though I know that later on I will break some of these joints to reposition parts to get the final look.





## Refinement

The first thing I felt needed changing was the identical nature of the giants. I lopped off the belly of the bottom giant so I could replace it with a new shape, differentiating the two models.

A few months was then spent working with modelling putty, whilst I tried to add a sense of movement into the muscles of the giants. While working on the muscles, I also tried to create the effect of weight. I generally use a mixture of putties - Green Stuff for the bulk of the body work and a mix of Magic Sculpt and Milliput for the top finish.

It's very important to be your own worst critic - and I'd been so intent on sculpting and tweaking the giants, I was unaware how wrong the bottom giant was looking. The early stages of mistakes were setting in. By not checking the piece from every angle I missed how bad it looked from above - the body was too long and the right shoulder was very wrong.



## Fixing mistakes

This is the point where you need to be brave and realise that if you aren't willing to do what's needed to fix the piece, then you are cutting down your chances of winning. So out came the saw...

The length of the stomach was shortened by 5mm before I tackled the shoulder. It may seem like drastic action to take but in reality these changes are very easy to make and they are really, really worth it.







Various other tweaks were made after this, including:

- Shortening a leg that was too long
- Redoing the back and shoulders of the upper giant
- Chopping half of the face off the top giant and replacing it with part of another head from the giant sprue
- Removing and repositioning the bottom giant's head
- Adding straps around the arms to add interest
- Changing the trousers on the bottom model to make them clearly different to the top giant.



## Preparation

With all the sculpting finished, I gave the models a sanding with fine wet and dry, starting with 600 grit and working up to 1200. After this I used fine wire wool as I find it gives a brilliant smooth finish, and it very easy to work around bends and tight corners. A quick wash in soapy water ensured the surface was clean for the spray primer. I like using a white primer as I find it easier to start painting with a mid tone and then going up and down with highlights and shadows. So now I was ready to paint.



you were to honestly stand in front of a mirror naked and study your skin you would see it has so many colours and nuance to it. Some of this is because of what lies underneath, some is wear and tear, and some is reflection from the surroundings. A lot of skin has got a mottled appearance to it which is very hard to show in painting, but I tried by adding thin washes/juices/glazes in certain places. I also wanted a sunburned look for the top giant's shoulders, head and back.







## Repairs

The painting had been going pretty well, and I was really pleased with my work on the skin - and then I dropped one of the giants.

I managed to break the hair, hand, goat, feet and club off as well as cracking both arms. This meant I had to cut back the cracks and pump in some glue, fill over it and smooth down before repainting - trying to match the skin tones.

The repairs set me back by at least a day and the finish was not as smooth as it had been previously. The repair on the arm was pretty poor - so I decided to cover it up with a scar.



My enthusiasm for the project really dropped at this point. I didn't like the anatomy I had sculpted on the top giant and so decided to chop off one hand and add a knuckle duster to it. I also added a trussed up cow from the giant sprue, which I felt added some movement to the overall piece, and covered up some areas I thought were a bit dodgy.

I took the piece to a friend to get his opinion and advice for finishing it, and whilst on the bus discovered the magnets holding the base to the plinth were not strong enough when I heard the model crash inside the box it was travelling in. This caused one of the wrists to snap and I was beginning to feel the project was doomed. However, meeting my friend Rob Cardis had helped motivate me to get it finished.





## Base

You may have noticed the base in the photos changing, this is because I changed my mind part way through.

I am a firm believer in adding comedy or light relief into my models and this piece was no exception. The cow on the giant sprue moored at me and I named her Daisy. The plan was to have the cow looking up as a shadow falls across it, suddenly realising it was about to be squashed. I also wanted to add a cowpat to the base.

I started by assembling the cow model and then cutting off it's legs. The position of the neck and head was at the perfect angle, but the legs were not, so I made four new ones from wire and Green Stuff to get the positioning correct. I researched pictures of cows online and it quickly became apparent that the model I had was very short in the body. I could have left it alone, but I'm very fussy, so out came the saw. A quick chop and some Green Stuff extended the cow to a more realistic length.



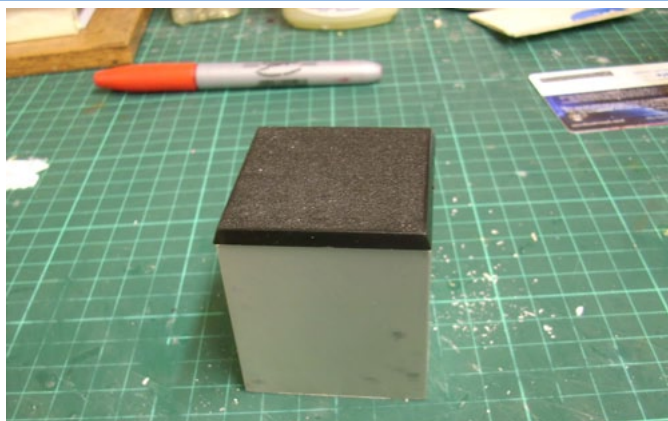
With the basics of the cow set, it was a simple task to follow the research photos and tidy up my Green Stuff. I went for a more realistic looking cow to help the whole concept and belief that giants are huge. A believable cow gives your vision and brain a recognisable scale.

The rest of the base was a bit of a challenge, as I wanted the giants to be anchored by one point as well as in a dynamic and precarious pose - but I also wanted it to look balanced. The arm of the lower giant was constantly repositioned in the early stages to ensure the weight balance was as even as possible. The aim was to have the whole piece balanced enough to sit on a standard 50mm base without tipping over. It took a lot of fiddling to achieve this - a lot!

The base was constructed from Fimo and baked to get the basic shape. The high bank achieves 3 things: it gives the pin holding it all up something to be glued into, it adds depth to the base, it gave me room to lift the giants up high enough for the cow to be under them, but not squashed - yet! The fence was constructed from balsa wood glued together, simple but hopefully effective.







I added magnets to the plinth and the bottom of the plastic base so that the models could be removed from the plinth.

### A change of plan

The cow caused a lot of debate on the forum where I was posting my work in progress, and it was my friend Rob Cardiss who spelled it out for me. The cow stood out too much on the base as a third figure in the scene, and the rules for the Duel category state that there should be only 2 models. Although there are numerous examples of winning duels from around the world with scene enhancing extras on them, the UK Golden Demon competition is known to be strict on this issue and I didn't want to risk all the effort I was putting in to this model to be overlooked for a prize because of a cow. It was a tough decision to make, but the cow had to go.



I really wanted to keep the comedy element to the piece which lead me to the idea of an outhouse. It was a simple job to make it using balsa wood, plastic card and some Milliput, I then added some slabs leading to it as well as some grass.

Not wanting to forget Daisy altogether, I made some posters to attach to the outhouse looking for a lost cow!



# THE AIR BRUSHING WORLD IS IT FOR YOU

HUGO OF Khiban Painting Studio



Right now airbrushing is a hot topic in the miniature wargaming world. Most of the professional painters and big contest winners in the modelling scene rely on the wonderful tool that is the airbrush. We want to find out if it's worth the investment.

First of all, we have to take a look at what kind of miniature painter you are. You have to decide what traits define you. Considerations may be different if you have 'New Army Syndrome,' or if you are aspiring to become a commission painter. Many people strive to win a big painting contest. There are many personal considerations when buying an airbrush.

Whatever goals you have will determine whether you buy an airbrush. If you are the type of painter that is happy with one army and doesn't really paint many models in a year, then I would be honest and tell you that investing in an airbrush isn't really for you. Of course, if money isn't a problem, then you might not mind having your airbrush gather more dust than it sprays paint.

On the contrary, if you see yourself as more a part of the other categories I've mentioned above, you should consider an airbrush. Yes, particularly 'Mr. New Army Syndrome' who has more models than he can ever hope to paint. Even you out there that wants to risk it all in a big contest and have the best possible results. In my opinion you should think about investing in an airbrush.

Buying an airbrush is an investment. Getting started in the mysterious world of airbrushing isn't cheap. It can also be a bit confusing.

With that in mind, let's try to clear up that confusion and make things easier. Following is the basic list of things you'll need to get started:

- Compressor
- Airbrush
- Hose
- Respirator or paint mask
- Airbrush cleaner

These are the very basics of what you will need to get started. Most likely you'll need to purchase other items that will make it easier for you to get started. Here's some optional gear you might consider picking up:

- Airbrush stand
- One or two water traps
- Spray booth
- Airbrushing paints
- Latex gloves

Let's look at these items in a little more depth. The basic airbrushing kit will consist first and foremost of a compressor. The compressor will deliver air to your airbrush which makes it invaluable. There are many types of compressors. The two main types are diaphragm compressors and piston compressors.

Diaphragm compressors are rather small in size; they don't deliver a lot of pressure. They can run for a long time without overheating. They are normally favoured by people who paint nails or do cake decorating since they are very portable.

The second type is the piston-driven compressor. These are more suited to the modeller's needs since they can deliver higher pressure and can be cheaper. The piston compressor type is available in many variants. There are oil-lubricated compressors as well as oil-less compressors. Some come with an air tank and others without it. Making a decision is easy though, as the oil-less requires no maintenance and is the way to go. The second thing to



look for is that the compressor has a tank. Without a tank, the compressor will overheat after 30 to 60 minutes of use. Therefore, the real solution is to go with a piston-type compressor with at least a three litre air tank. This will allow you to be able to use your airbrush for a longer period of time without having to stop to let your compressor cool down.

The airbrush itself can also be pretty confusing. There are so many options out there, it can be challenging for a newcomer. Airbrushes come in single-action, double-action, side-feed, and gravity-feed. They also range from very cheap to extremely expensive.

First let's look at a single-action airbrush. Single action means that the action of the trigger will require only one push for the airbrush to spray paint. This type is not very precise. It is mostly for people that want to use an airbrush to apply a base coat or primer.

Conversely, double-action is the type you want to buy. The trigger has two actions. If you press it down air will come out, and the more you press the more air that will come out. Then, if at the same time you pull the trigger back you will start mixing paint with the air that's already spraying. This will allow you to have really good control of the paint. It also gives you the opportunity to do more detailed work when you are comfortable with the tool.

Now let's look at where the paint cup will be. A siphon or side-cup-feed airbrush is a type of spray gun that will have the paint cup either on the side or under the gun. They tend to use more air pressure. They are more aimed towards people that need to spray heavy amounts of paint or that have to spray upside down. They can be used upside down since the paint cup is closed and sealed. For a modeller these types aren't really the best, but they will definitely spray well enough to get the job done since the only difference is in the cup and feed system and not in the needle or nozzle.

However, as a modeller you should look more at a gravity-fed brush airbrush. This type uses gravity to put paint from the cup into the airbrush. It runs using less pressure and will run with just a drop of paint; the other types will require a large amount of paint. Let's face it, in the modelling world we will sometimes only paint a small thing with barely any paint needed.

Lastly let's compare cheap and expensive airbrushes. That's the question everyone has been asking about. Airbrushes are like anything else, if you buy an airbrush you'll get what you pay for. The prices for an airbrush are starting at about \$5 on eBay and go up to \$400. You should spend as much as you're comfortable with, as prices follow a fairly linear scale with quality.

Let's take a moment and look at airbrush size. Airbrushes come in different sizes. Normally sizes are 0.15mm, 0.2mm, 0.3mm, 0.4mm, 0.5mm and 0.6mm. The most standard size is 0.2mm or 0.3mm. If you have to choose only one

I would recommend the 0.3mm. It will give you the best flexibility for modelling applications. It is fairly easy to use as with a 0.3mm needle and nozzle size you'll be able to do base-coating of a single miniature or vehicles. It will also be possible to use the airbrush for detailing. This size will give you the ability to have flexibility. Cheaper airbrushes normally are only one size, meaning that you won't be able to buy an extra needle and nozzle of a different size and put it on the airbrush. Higher-end airbrushes will have interchangeable needles and nozzles which means that you can have one airbrush but still get two or three different size options. Personally, I use two airbrushes, the Harder and Steenbeck Infinity with sizes 0.15mm, 0.2mm and 0.4mm and the Harder and Steenbeck Evolution with sizes 0.2mm, 0.3mm, and 0.4mm.

Apart from your compressor and airbrush you'll need two more things. You'll need a hose, which is simple to procure and install. Most airbrush kits on the market do have a hose included. It might be good to get a braided hose if the kit you purchased has one of the spiral-style cords. The second thing you'll need is a respirator or a mask that is made to protect you when spraying the paint. A particulate dust mask won't cut it. Even if you think that spraying acrylic paint is safe since they are non-toxic you are mistaken. When spraying with an airbrush the paint will be flying everywhere in extremely fine particles which then will go directly into your lungs. This isn't toxic per se but it's still bad for your health. So, please get a respirator that will filter those harmful particles. I suggest a respirator with a NIOSH-approved filter that is categorised to protect against paint particles. I personally use a 3M Series 6000 respirator with the 3M 6001 filters.

Another accessory you might want to consider is a moisture trap. Having one or two of these traps will prevent you from having water and moisture mixing with the air from the compressor. There are two types of traps. One that is placed near the compressor and one that can be attached to the gun. Both work fine, and even better in a combination.

Now you have the information you need to buy your first airbrush kit. There are many shops on the web and also modelling shops that sell airbrushes. Where you shop of course all depends on the budget you allocate yourself for your kit.

My first suggestion is if you want to go with a kit that's cheaper, then go with a kit that has a no-name airbrush in it but still has a good compressor with an air tank. This way you have a nice compressor and tank, and can upgrade to a nicer gun when the time comes. You will also still have the older, cheaper airbrush to use for utilitarian applications. Conversely, if you buy a cheap compressor, then once you get the need to upgrade to higher end equipment you'll need to upgrade everything.

If you don't mind spending a little bit more, then getting a branded entry-line airbrush like an Harder and Steenbeck



Ultra or an Iwata Eclipse with a good compressor will actually have you set correctly for a long time. This way you can go a while without feeling like you need to upgrade your airbrush.

Lastly, if you want to go all-out and get a very good quality airbrush in your kit right off the bat. This option isn't really a good one if you are just starting out, since you might not like airbrushing at all or might not use your airbrush much and you'll end up losing a lot of money. If you did have airbrushing experience in the past and for some reason don't have any equipment anymore, this option might be good.

In conclusion, airbrushing is an extremely invaluable skill. If you want more information on airbrushes and airbrushing there is tonnes of information and tutorials available on the web, particularly on YouTube.

You could also visit my YouTube channel where I have a pretty good collection of airbrushing videos. I have videos targeting all ranges of skill. You can find me at <http://youtube.com/ichibanpainting>.

Thank you for taking the time to read this article and I really hope I did shed a little bit of light on the world of airbrushing.





# CLONE TROOPERS IN 15MM

## A PAINTING GUIDE

DAVE BARKER



I must start this by saying thanks to my pal, lestyn, my friends' six year old son who is a big Clone Wars fan!

He has persuaded his Dad to convert and make him some 15mm Clone Troopers for his Star Wars games, along with a number of other Star Wars races at the same scale. When my kids saw them, I immediately received a request to make some for them too. They currently love all things tiny such as 15mm minis - and who can blame them! So, here I present how I created Clone Troopers for my kids too.

When starting a project of this kind it is important to find the right base models for the conversion. I had a helping hand here as I could just ask lestyn's Dad what he had used and why. So, our Clone Troopers are based on Arc Fleet Recon Troopers from Critical Mass Games. I knew I'd want quite a few, so I just bought an ARC Fleet Recon Platoon, as it contains 43 x 15mm miniatures for just £14.99.

These minis, when you look at the painted examples on the website, don't look much like Clone Troopers - in fact, Master Chief comes to mind more quickly than Star Wars! However, they do have the advantage of being sci-fi soldiers in plated armour with a nice, flat faceplate that allows us to add some detail with paint.

A lot of detail is not seen on a 15mm miniature that is four feet away on the tabletop in the middle of a game, so a general similarity is all we need for our clones.

### Step 1

Once the minis arrived, I quickly got to work. The casts were pretty good, they required very little effort to clean them up, just a bit of flash needed removing. A couple of the miniatures had suffered some minor mould slip which was quickly cleaned up with a needle file.

I decided to use 15mm circular bases for these miniatures as I like a base width that is approximately the same as the height of the miniature. Also, the kids will be gaming with them as individual troops. My friend had used plastic 15mm slotta bases for his Clone Troopers, but I found these to be too tall for my tastes. So instead, I went with 2mm deep lasercut plywood bases. Either of these bond to metal minis nicely with superglue.

### Step 2

I then primed the miniatures with an undercoat of white. If I had used my brain for a minute instead of getting all excited about working on a Star Wars project then I could have combined steps 2 and 3 by using a grey primer. Oh well, maybe next time I'll save myself some effort!



However, I did explicitly choose not to use a black under-coat. This is because the main colour of the Clone Troopers armour is white which is often difficult to paint directly over black. I also wanted to control exactly where black appears on the miniatures. I'll explain this later. I happened to use Citadel Skull White spray primer, but any white is just fine.

### Step 3

Next, I painted their armour grey - Citadel Codex Grey to be exact, but any mid-grey should do the job well. Why grey? Well, a Clone Trooper's armour is white and shiny, reflecting a lot of light. Since we can't paint anything lighter than pure white, we need the 'shadow' areas of the white armour to be a 'darker' white and if you bend your mind a



bit, grey can be considered to be a 'dark white'. Yeah, I know that is a bit odd, but it works. Jump to the photo at the end if you don't believe me!

Why not black? Well, a Clone Trooper's armour shows their black body gloves in places and their guns are black. I wanted this to be in contrast to the white (even the 'dark white' parts) of their armour. But we'll get to black in step 5.

No, really, why not black? Some people are quite serious about the base colours they like to paint on. All I can say is that if it works for you - use black. I can't stop you!

### Step 4

Now we get to the main colour - white (again!). At this step, I used a heavy drybrush of white - Citadel Skull White for me this time, but any pure white will make for good clone armour, the whiter the better!

Whilst a heavy drybrush is needed at this stage so that the grey is only left in the corners and recesses, be careful not to end up just painting the miniatures white again - we had that effect at the end of step 2!

Also, pay special attention to ensure that the shoulder armour and any other obvious large armour plates are painted fully white on their outer surface. When the miniatures are finished, people's eyes will be drawn to flat surfaces like these and we want these to look properly white and not streaky to get the best armour effect.



### Step 5

Finally, the armour is at last starting to actually look like white armour! But now it's time for the black highlights as well as the 'paint conversion' on the helmet. The black on the helmets is what, for me, really makes these miniatures into Clone Troopers.

The first and easiest black parts are the weapons. I considered adding a grey highlight to these as an extra step, but once they were done I didn't feel that they needed it.

Looking at reference photos of Clone Troopers on the internet, you can see that under the white armour plates, a Clone wears a black body glove that peaks out around the armour. There is no way I was going to pick out lots of tiny bits of black on a 15mm miniature, but I wanted to give an impression of it, so I chose to just pick out certain areas where they are most visible on the miniatures i.e. the backs of the knees, the inside of the elbows, the palms of their hands and around the sides of their shoulder plates.



Finally, there is the detail on the faceplate. It is perhaps not particularly accurate detail, but I feel it gives a good impression and converts that flat faceplate of the ARC Recon Trooper miniature into a Clone Trooper. Using my thinnest 10/0 sable brush and with a steady hand as I could manage, I simply painted a flat, thin line all the way across the top of the faceplate, quite a short downward stroke in the centre, over where the nose might be, then two diagonal lines going down and outwards from the bottom of the 'nose', at more-or-less 45 degrees.

For real Star Wars devotees - this faceplate is based on the





Phase I Battle Armour worn by the first Clone Troopers. You might also have noticed that Clone Troopers' fingers are usually the black of their body glove and not white since their fingers are not armoured. However, this just didn't work against the black of the gun, so with the knowledge that it isn't accurate, my Clones have white fingers so that you can see their hands on their guns!

### Step 6

The final step is not for all of the miniatures, just for those holding a rank higher than Trooper. The Wookieepedia (<http://starwars.wikia.com/>) entry on Clone Troopers (<http://starwars.wikia.com/wiki/>

Clone\_trooper) gives some good information about the colours worn by Clone officers.

Since there were just fifteen Clones in this first batch that I painted, I chose to add yellow (Commander) stripes to one of the miniatures and olive green (Sergeant) stripes to two of them. These stripes run from the top of their shoulder armour down the outside of their arms to the backs of

their hands. There is also a stripe of the same colour that runs from the back of and over the ridge on top of the helmet and down the centre of their faces.

### Step 7

As with any miniature, the Clones are only complete when their bases are finished. I filled in the irregular gaps between their wooden and pre-cast bases with DIY filler, painted over this, carefully avoiding their feet with a dark brown (Citadel Scorched Brown is my preferred colour) and then used PVA glue to add a green flock. I let my girls do this bit as they love doing the messy parts of miniatures!

### End Result

I hope you're as impressed with the end result as my kids are, they are for them to play with after all and with suitable supervision so that I get to play, too, of course!

And as my kids pointed out to me this evening before bed "We could pretend the just white ones are Stormtroopers as well if we want, can't we Daddy?" Which, of course, we will do so just as soon as I've painted something for them to fight!



# SCULPTING ROBES IN GREENSTUFF

RICHARD SWEET

During this article, I'll be showing you how to add a loin cloth to a Games Workshop Sister of Battle - this is just an example, but the techniques will help you sculpt robes and cloth over many surfaces.

Stage 1



At this stage I lay out a rough base for the sister's loin cloth, so that I'll have a solid base to work with and can shape it when I come to sculpting it without having to do it separately. I deliberately haven't sculpted anything around the top of her thighs - there's little point as this will be hidden by cloth.



Stage 2



Once the base layer has completely dried, I begin to work on the top part of the loin cloth first. I start by adding two thin lines of green stuff to the outer most parts that fall across the thighs and push the material inwards, going over them repeatedly to make sure the material is thin and both the lines and edges are smooth.

Stage 3



Due to the way the loin cloth is being pushed together there will be a few natural raised areas in the center of it, both folds at the top and the bottom. I add two small blobs of green stuff at the very top and very bottom and push the material into shape, once again making sure I smooth out the joins between the green stuff by rubbing over them with a metal pick.



#### Stage 4



At this stage I move on to the rear of her loincloth, as with the top part I create a base layer to apply the detail layer over the top of. I let it dry completely and cut away any parts that are too thick.



#### Stage 5



As with the front loincloth I start in the same way, two thin lines of green stuff down each side of the cloth and then push the material in, towards each other, while constantly checking both the consistency of the lines at the edges and the texture.



#### Stage 6



I add another layer of green stuff down the center, making it slightly thicker at the top and the bottom - this will allow me more flexibility with the folds and shapes

This is the final layer for the loincloth on this side, I had a look at some stock photos and some miniatures to get more of an idea of how the loincloth might be shaped by the wind and the motion of kicking off the metal girder. From these references I then add some additional folds making sure they are more pronounced towards the bottom of the cloth where it has most of its flexibility and movement.



#### A few Do's & Don't's

One thing I would always advise with sculpting is to mix very small amounts at a time, you never know how long you could be working on one area. It could well take much longer than you think and by the time you're finished the rest of the green stuff could be too hard to stick to the green.

Don't get carried away with the amount of green stuff you need for an area. Typically I only ever apply half of what I think I need to the model, even on larger areas like robes and cloth - if you add too much, you end up having to remove a lot of it as well as ruining what you've already done.

Don't be afraid to spend a lot of time on one area even if it's not particularly detailed - if something about it doesn't feel right to you when you leave it then it never will feel right.

Don't be afraid to try new styles to sculpt the same thing. A lot of sculpting is about problem solving, as you look at something you need to sculpt and your mind begins to think of different ways to make the same object.



## Directional Highlighting Painting Guide

Edward Nicholson

This guide is fairly in depth, but is by no means perfect. I'm not the best painter in the world, so rather than being a full on educational piece, this guide is more of a record of me attempting to paint a miniature using a technique that I'm still trying to get my head around. Hopefully, it will give you some ideas, and possibly inspire you to give the technique a try yourself.

The guide itself is meant as an accompaniment to the Speed Painting Skeletons guide on page 45 and I will be painting another Heroquest skeleton, but I will restrict myself to only using directional highlighting. I didn't have any other skeleton miniatures to go to town on a full blown character guide, so thought I'd take a look at a painting technique instead.

Directional Highlighting basically means that I will be highlighting the miniature from a certain direction, in this case I opted for a "light source" situated above left of the mini. I've attempted to paint the miniature as though it is being lit from above on it's left side and in shadow down the right hand side. Also I tried painting on areas of shadow from the scythe and the skeletons appendages if they intersect the light before other parts of the mini.



I decided to make this article hand in hand with the Speed Painting article to highlight the differences in approach and end result...even though the miniature used in each article is basically identical. I would point out that all paints are from Games Workshop, for ease of use and reference. Anyway, enough babble! To the guide!





The first step was to undercoat the mini with Bleached Bone.

Then it was given a wash of Gryphon Sepia. Followed by a wash of Devlan Mud. This shades the undercoat before even looking at which angle the light is supposed to be coming in from. I kept adding washes of Devlan Mud to areas such as under the hips and ribs until they were dark.



Next I needed to start adding in shade on the side of the mini opposite our imaginary light source. To this end I broke out the Badab Black and washed any areas I thought would be in shadow. Namely the undersides of the legs, under the right arm, the right side of the face - anywhere that would not be likely to be illuminated. Something like this.



Now at this point the mini looks a bit of a mess. The next step is to carefully layer on some Graveyard Earth over the raised areas of the mini...leaving your shading in place. This may seem a little counter intuitive but it allows for smooth blending up to the final highlight colours. I gave the handle of the scythe a coat of Graveyard Earth too.



Next some Bleached Bone was added into the Graveyard Earth, at a 1/1 ratio or thereabouts, and another layer was applied. At this point I was only painting the areas that catch light, however if you need to go and correct the shaded areas, then make sure to keep the paint thin and gradually layer paint over the area. I'd also point out that the right side of the ribs, right side of the mini and anywhere else in shade stops receiving highlights from here on in.



The rest of the mini should be looking something like this. Next some more Bleached Bone was added into the previous mix and this was layered on in another even smaller layer, concentrating on the "lit" areas.



Another bit of Bleached Bone was added into the mix and another highlight layer added.

Then a layer of pure Bleached Bone was added on.

At this point, the mini was given a wash of Devlan Mud thinned with a little water, applied over the whole mini. This helps to bind the previous layers together and will allow you to add the final highlights with a minimum of fuss.



This shot is to show the shadow from the scythe. The effect is fairly easy to do, you can use washes or layering (or a combination of both). Just make sure that you don't paint over it in subsequent layers.



After the wash has dried you should re-apply Bleached Bone to the areas that will receive the most prominent highlights. I added highlights to the top of the skull, top and bottom parts of the minis right arm (making sure to leave the shadow cast by the skull alone), the right side of the ribs and down the left leg and across the knuckles of the left hand.



Now at this point it's a good idea to take a look at your mini from the direction you've imagined the light to be coming from. This is to check that you have the highlights in the correct places and also to ensure you place the final highlights on the areas that catch most light. (It's a good idea to do this regularly while you are painting).



The next step was to mix a 1:1 mix of Bleached Bone and Skull White. This was applied to areas that are receiving the most intense light, which are usually the areas closest to your light source - but not always, so keep this in mind.



The final step of highlighting is simply to add in some more Skull White to your mix and highlight again in very fine highlights.



That's the hard part done, now it's onto the scythe. For the purposes of this guide, I have only done the weapon very quickly (after all it's hardly the most inspiring thing ever).

The blade was base-coated with Boltgun Metal.



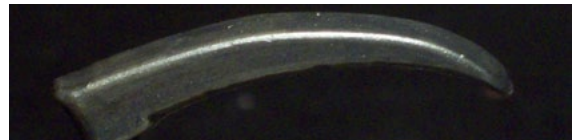
It was then highlighted with Chainmail - remember to keep the direction of the light source in mind when highlighting.



The blade was then washed with Devlan Mud.



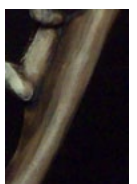
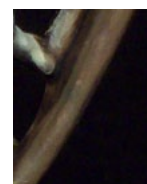
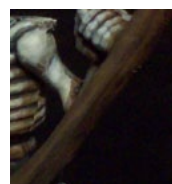
Chainmail was then used to re-establish the highlights.



A fine highlight of Mithril Silver was added to the areas reflecting the most light.



The last section deals with the handle the scythe blade is attached to. It's just a plain piece of plastic on this mini, and I haven't tried painting anything like wood-grain on it. Instead I've tried to capture the form of it instead - after all, this whole guide is geared towards helping you enhance the "form" of your miniatures.



The first thing is to give the entire staff a wash of Devlan Mud (which I forgot to take a photo of - D'oh!!)

Next give the underside of the staff a wash of Badab Black. It is also worth washing any other areas that you think will be in shade.



Next reapply a layer of Graveyard Earth as a highlight.

Then add a bit of Bleached Bone into your Graveyard Earth and apply it as an even thinner highlight. You can go much further than this, but it is all I am doing for the purposes of this guide - it should give you an idea of what you need to do.

Then base the mini as you see fit - I just went with a black base to show you the technique at it's fullest.





# CLOTHING AND ZENITHAL LIGHTING

DAVIND HEATHFIELD



When most painters paint they generally use an imaginary overhead light source, such as the sun. We call this the zenithal light source and it shines downwards equally all over the model whichever way it is turned. This is the most common way of deciding where highlights and shades are placed.

To get an idea of where the light should be placed you can hold the miniature under a light source such as a lamp.

This reveals the areas in light and the areas in shadow. One thing important thing to note, especially where clothing is concerned, is the effect that creases have on light.

The creases cause a sudden change from light to dark which we must simulate when painting the model. Creases at the top of the shirt, however, do not go as dark as creases at the bottom and it is this that separates a well-painted model from an uninformed, amateur-painted model.



You must fight the temptation to shade every crease to the same level, as in real life this is simply not how the light reacts with the cloth. The same can almost be said for highlights which tend to be stronger at the top - although this is not always true as some folds stand out far enough to catch the light and this rule can be bent slightly to draw attention to details and other areas.

So using the techniques from the first section I base the model, shade, highlight and finally glaze some blue/green into the bottom of the clothing to simulate dust and break up the surface. Note how sharper creases and folds are highlighted quickly and with more contrast than large smooth areas.

Stage 1



The basecoat is on and I begin to shade by adding a darker colour to the mix.

Stage 2



Now I return to the original colours and begin to smooth the blends.



Stage 3



The original colour has a lighter shade added to it and is gradually made brighter. The first two highlights are very close to the original colour with the final two, shown in the last picture, being suddenly lighter to convey the contrast around the creased areas. Never the less, these areas are still carefully blended.

Stage 4



Now I add the glazes to break up the area.

## Stage 5



Although these glazes can simulate dirt and light some material shows signs of damage and wear - most notably with old leather. This too can also be simulated on the miniature.





# TUTORIAL

## PAINTING BRITISH WW2 CAMO

STOESSI'S HEROES



### British Army Parachute Regiment Camo

1) Started off with a base of Green Brown (MC879) and Green Ochre (MC914). Mixed in Khaki (MC988) for lights and English Uniform (MC921) for shadows (and some Black for rough darklining):

Same stage as previous picture.

Nothing has to be perfect at this point. Just a general placement of light and shadow:



2) Starting on the camo, I used Reflective Green (MC890) and Bronze Green (MC897) for painting the green patches:

Painted them first with heavily thinned paint putting many small streaks next to each other. Then went on to less dilution to carefully intensify the patches with more, veeery thin lines:

3) Using the same technique for adding brown patches: Flat Brown (MC984) and Mahagony Brown (MC846):

4) Created a very thin mix of the browns and greens used so far and added a tiny bit of black.

Using this to intensify shadows overall on the jacket:

5) Painted more lights with Buff (MC976) and more shadows with dark brownish tones. Also started mixing in Yellow Ink and glazed over light and mid-tone areas with a yellowish-brownish-light tone.

Doing this only in some areas in order to make the whole camo look more interesting with a few warm-colored parts now. Using Blue Ink and previous dark brown tones, I am doing the same for some of the shadow areas:

6) With Flat Brown, Mahagoni Brown, English Uniform and Buff I already have everything on my palette that I need to get the face started. I mixed the above colors together, so that I had a nice reddish dark brown.

I thinned this down quite a bit and put on two layers into all shadow and mid-tone areas. Then I mixed a very light color with Buff and Flat Brown and blocked in the lights on forehead, nose, cheekbones, etc.:





7) Well, after the last picture I kind of got lost while painting and forgot to take more pictures of the face painting process. As you can see, some magic happened along the way. I used Flat Brown, Mahogany Brown, Buff and White to paint the general lights and shadows of the face.

Then I used Yellow, Red and Blue Ink to add different tones to the face. Usually I go back and forth a bit between building out lights and shadows, glazing some areas with different colors and then going adding mid-tones and lights, etc....:

8) Painted the beret with Red (MC947), Dark Red, (MC946), Flat Brown (MC984) and Black. I also blocked in the dark-grey base color for his hair.

I love this moment when you paint a miniature and the face starts popping out really nicely as you put on color in the areas around it.

9) To paint the insignia on the beret, I painted the whole insignia black. Following a simple method for painting golden insignia from Ruben Torregrosa, I chose Golden Brown (MC877) as a base color.

For lights I simply added white and for the shadows I used Flat Brown (MC984):

10) Next, I moved on to working on the trousers. I started by intensifying the shadow areas with English Uniform. I also started mixing Blue Ink in to get darker shadows in a cold tone. I then started building out the lights using Green Ochre (MC914) mixed with white.

Pure Green Ochre to help balance out the mid-tones. I also painted a few semi-transparent layers of red in some of the mid-tone and light areas. This did a few tricks at the same time: It introduced yet another color tone to break monotony AND it contrasts really nicely with the cold shadows that I painted previously:

11) Painted the anklets with Green Grey (MC886), Iraqui Sand (MC819) and Dark Sand (MC847) (in that order working towards lighter areas).

Then used English Uniform (MC921) for shadows.

For the boots, I simply thinned down black very heavily and before the thin mix can dry on the miniature, I swipe the boot caps with my finger. Then I do a few more passes with the thin black paint, but only on the sides and at the back. In the lighter front part of each boot, I place a few irregular small dots in a light color



(whatever is on the palette at that point).

I have to admit that I absolutely hate painting feet. No one ever looks at feet... well, maybe some people do, but that is not the point. The point is that I just hate painting feet!

12) Painted the webbing incl. some of the small bags, etc. with a base of Green Grey (MC886). Applied a controlled wash with Russian Green (MC894) and then built up mid-tones and highlights with Green Grey and another very light pastel green color (MC971):

13) Blocked out the pistol and Sten gun with black and painted the leather strap of the sten with German Camo Black Brown (MC822). Painted highlights with the same pastel green color that I used for the webbing highlights (MC971), added in highlight dots and tiny scratches with Bone White.

Finally used Blue Ink and the brown base color in a mix and well diluted to glaze in shadows where I wanted the strap to look darker:

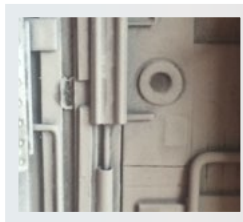
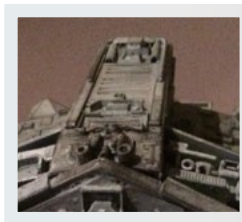
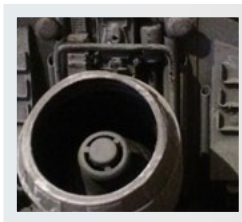
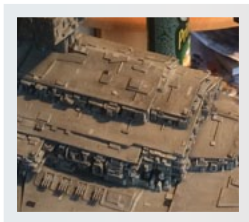
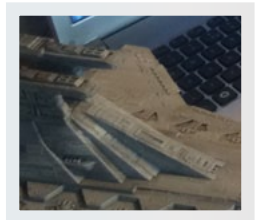
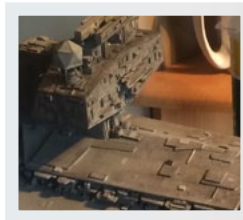
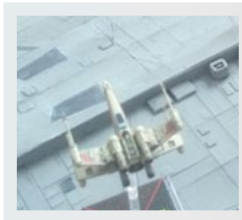
14) Painted the Pistol and the Sten Gun with Black and Bonewhite first. Starting from a dark grey – almost black base – and building up highlight by mixing more and more Bonewhite into the mix. Finally added Silver Metallic dots and lines in some places. Also used Black with random Greens and Browns mixed in (whatever is on the palette) to do darklining on the whole miniature:

15) For the base, I mixed together some of the brown, green and yellow tones that I still had on my palette and created a base where I blended all of them wet-in-wet. Next, I dry-brushed with Bonewhite and a bit of Golden Brown. Once that was all dry, I used thinned-down wood glue on parts of the base and sprinkled on my "homegrown" grass-and-stuff mix (contains different sizes and colors of grass, flock and old tobacco). After that, I also glued on a couple of grass tufts from MiniNatur.

Finally, I applied a few washes with very thinned down browns and greens and finished it up by putting on some brown dry pigments, which I rubbed into some parts of the base and over the boots:







## STAR WARS X-WING MINIATURES GAME

### STAR DESTROYER SCRATCH BUILD – IMPERIAL CLASS

*Alex Garbett*

"Sir, Rebel Ships are coming into our sector..." – "Good....Our first catch of the Day!"

Ever since Star Wars X-Wing Miniatures Game burst onto the tabletop in 2012 I have been dreaming of epic dog-fights between Tie Fighters and Rebel ships weaving in and around large Capital ships engaged in a duel to the death.



From wave to wave and new releases we have seen iconic ships produced for the X-wing. We have been given the chance to field the fantastic Millennium Falcon, Tie Interceptors and A-Wings through to ships from the Expanded Universe like E-wings and Tie Defenders.

We have also seen the release of two large Rebel Ships for the game – The Tantive IV and the GR-75 Rebel Transport, and while these huge and awesome models add a larger presence to the table top many players and myself included are yearning, longing and desiring something of equal measure for the Imperial Forces.....but with nothing available I decided I would change this and show my true loyalty to the Empire!

#### The designing and Planning

Over the course of several weeks worth of planning, checking stats, brainstorming numbers and sizes, along with a good amount of plotting, scheming and finally doodling ideas on paper I organised my thoughts together to plan a large ship Scratch Build for the X-Wing.

I could make an Imperial ship and it HAD to be something along the lines of a Star Destroyer or dagger type ship but which type and what size and scale?

I consulted several websites for details and sizes on various Imperial ships with the Star Wars Official Canon. These Included full size Imperial Class Star Destroyers

to Interdictor Class Cruisers – basically anything wedge shaped and Grey which looked cool!



Scale was always going to be a difficult issue and while the fighters (1/270) and epic ships (1/450) are set It was never going to be possible to get an Imperial Star Destroyer to anything less than 1/2000 Scale.

Based on this I ditched the idea of scale in favour of making a piece which would be a large enough to eclipse other models on the table (and the size of the table in the standard 3x3ft X-wing Games) but that would be not too large as to make it too big to store a final finished model of around three to four feet long (36-48 Inches) by approx. one foot wide (12 Inches).

Due to this real world scaling It made sense to construct the main dagger shaped hull and build out from there adding superstructure and details as I went while referencing the in movie ship designs and design features (Bridge Tower, Engine location etc.)

## Detailing The Model

To Ensure I had that Star Wars look and feel along with making the designs look close enough to the Films, Games and various TV series I began asked a simple question:

'what makes a Star Destroyer look..... well like a Star Destroyer?'

The ship had to feature the Bridge and Engines but it needed more – plus I'm a stickler for details – which meant the Shield Generators needed building, I would need extensive hull lines and details as the model would be around 4ft long,

Most importantly though was the axial trench which runs between the top and bottom hull and the level of detail I would need for this. I wracked my brains for a

few days when in a sort of enlightened moment at work I spotted some old circuit boards from a Server being disposed. While it wasn't the boards so to speak which grabbed it was shapes of the various components, memory modules and processors on the boards.

Seeing these set me down the route of looking for these small pre-made/manufactured components, parts and using their shapes to build out the center trench.

I very well couldn't afford to buy IT hardware and strip down servers for parts – it would be cost prohibitive no matter how good a look. Brooding for a few more days It was my father who gave me the idea of fuses to use as I mentioned I was after small squares, tubes, blocks and other various shapes to bulk out the central Trench on the Star Destroyer.

With his idea illuminating my mind I set down the route of looking into electrical parts and pieces to use for their shapes and size. Buzz words became for me, Resistors, Diodes, Transistors.

I realised I would need a lot of parts considering how big I was going to build the Star Destroyer so sitting down at my computer I put into the eBay Keyword Search: Transistor, Radio Spares, Resistors and was amazed at the results and shapes of the parts in front of me

Following the revelation and new direction I did a weeks worth of looking through for various bulk auctions, job lots and bargain buys or anything else which looked cool that I could get my hands on for cheap on eBay. I told myself "I'm sure these things are made ten a penny!" and after another few days looking I chose my auctions and 'buy it now' listing, made the payments made then waited the inevitable three weeks for the parts to arrive from China and across the world to me.

## Gathering Materials

Now I had the components I needed on the way next came gathering extra parts and pieces which I could use to bulk these further out.

You need an eye for seeing shapes and parts when Scratch Building, to take an item and see a hundred uses for it....what to anyone else a bottle top, broken plug socket, an old lamp shade or junk to others became the nuts and bolts for this Scratch Build.

To add to my growing pile of materials I took trip to the local D.I.Y, Hardware and Electrical Store helped me find further interesting shapes, parts and 'stuff' to bring home for under £20 followed by a raiding of the attic at home for other bits and items I could use.

I put everything into a single box and below is a rough list of what I had assembled together:



Brass Rod

Paper Clips

Cocktail Stick

Lamp Fittings (those bits that hang from the ceiling)

Small Rubber and Plastic piping

Water Bottle click tops

Plastic Studs (The kind you use to cover screws when building furniture)

Electronic Chocolate Blocks of all shapes and sizes  
Various sized and thickness Cable Ties

Fuses of all shapes and sizes

Diodes

Resistors

Different shaped Transistors

Metal Washes

Various MDF bases

A large quantity of parts and spares from my Bitz Box

An old Revell 1/1200 Model Kit of the Bismarck

Blank D20 dice (shield generators)

Spartan Games Firestorm parts

White Stationery Stickers

It took several trips to Hobbycraft (Large Hobby High street Store here in the UK) to find a suitable card stock from which to build the hull from. I chose to go with thick Brown card for the base structure and slightly thinner White card to adding the outer Hull. These sheets were the largest I could buy at A1 and I believe I spent over £50 on card stock.

With this large box off parts, cardboard shoved behind my desk and models to be in front of me I was somewhat daunted by the size of what I was trying to make but at the same time excited and thrilled for the journey I was about to go on!.

Thus I had to begin somewhere so I finished the working week in the office, chilled at home with a Cider while I organised my thoughts on a Friday evening. I did some prep work and decided I would begin Saturday morning.

## Visualising & Construction – Main Hull

I had loaded the previous night various images and plans of Star Destroyers onto a memory stick and viewed these via my Xbox 360 on the large TV in my room to give me a visual indication of a final size and size of what I would be aiming for. Seeing the rough size on the 40" screen helped me with gauging the size I was looking for along with being able to actually take a ruler and measure the image on the screen too!

Then with the images on screen I placed the card on the cutting mat on the floor (Safety First!) and began the process of cutting out the top and bottom Hull dagger sections. As the largest sections of the ship it was key to get these as close to each other as possible. Once both pieces (Top and Bottom Hull Dagger Triangles) had been removed and cut out I started to consider the Docking Bays underneath the Star Destroyer.

The main Docking Bay size was a tricky compromise. While I wished it to be big enough to take the Epic Scale Tantive I knew that this was completely out of the question so chose to make the Dock and Hanger in proportion to the rest of the ship therefore ensuring a better model and setting the scale for the smaller front Docking Bay.



The construction of the Docking Bay was a simple 5 sided cube for the larger and smaller. Built separately and angled so it would sit flat within the Hull.

I added various parts and details inside with smaller sections of card which I got from a old Space Marine Tactical Box. Careful to make the parts I added actually look like they fitted in with both the design and function I continued to add extra detail and sections building up the raised the detail on the card finally topping off with some larger parts and some of the Cranes from the Bismarck kit.

Happy with the look, form and function of the parts I then undercoated the Docking Bays Black separately figuring it would be tricky to paint inside once assembled and it was not going to be easy to get a brush into all the areas I had made.

Leaving the Docking Bays to dry outside I took the bottom Hull and scored the main axial line down the centre fold taking care to score and not cut through the thick card. Measuring just smaller than actual size I cut the areas out for the Docking Bays and once dry I glued both Bays into the inside of the bottom Hull giving the first real indication of the shape of the Destroyers triangular wedge using a good dollop of Super Glue.

As the Glue dried I set about making the Triangular support spars and beams inside the Hull which added a huge amount of strength.

It was a process of repeating this for the top Hull section without the Docking Bay though, again adding the spars for strength and rigidity.

Setting the two halves of the ship aside I started to work on the central trench which runs up and down each side to the Engines at the back. This consisted of cutting two large strips the length of the longest sides of the Destroyer with a small section for the front of ship.

I then set about using all the Diodes, Transistors, Resistors and various other parts to bulk out this central section. The process for this was to assemble two or three Resistors to a Fuse, then putting a Diode near by and building out and working this into another section of parts and pieces already glued in place.

With the Trench built it came time to add this to the lower Hull again using a good amount of Super Glue.

The important thing here was to ensure everything lined up (I'm a stickler for this) but once happy and that the Hull and Trench were correct I added further bracing internally to give it extra strength I went about the task of gluing the top to the bottom Hull – again taking care to ensure lines and angles were correct with the central line of top and bottom coming to the same point with a final dollop of Super Glue to ensure it was solid.

Now the top and bottom were a single piece I did have a wee run around my room and checked the scale against the Tantive IV and Rebel Transport. Happy with this I continued to build.







## Construction – Main Hull Lower Surface

With the dagger Hull box now complete came the process of adding the layers onto the Hull surface. The process for this was to build up layers of card and detail working to a final top surface which would have panel lines and then further additional detail raised upon.

I approached this with adding small extensions of the Hull outwards with the thin White card and working back to just the edge of the Brown Card. Finally the main top sheet which was cut from a Single A1 Sheet then scored down the middle and glued into place on the top and bottom (Having had the Docking Bays cut out).

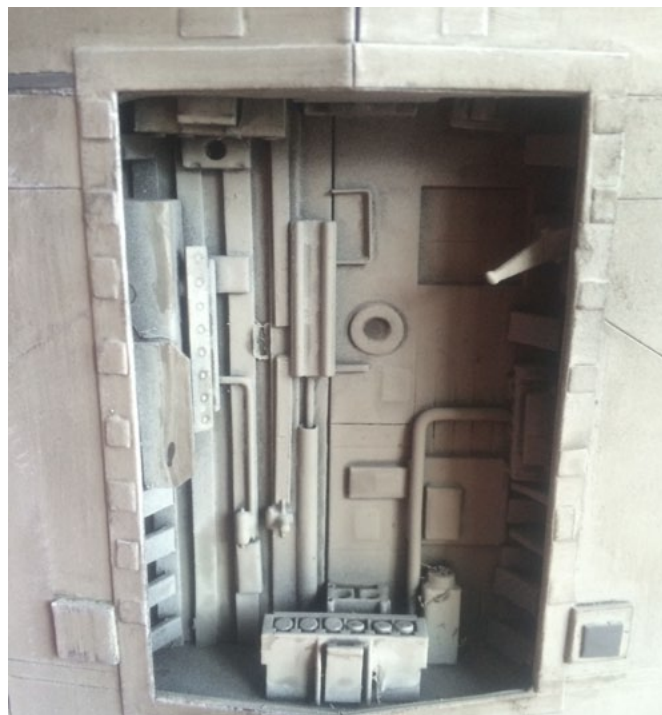
The first slip up happened here in that I'd forgotten to add the ventral (Bottom) largest Shield Generator. As it's

a giant dome underneath the Star Destroyer to the rear I considered using a Polystyrene Ball for the easiest but went with a Wooden sphere – the kind you find on the first run of Stairs.

I took the hacksaw and gently sawed it first in half and then sawed the Hull angle into the wood. I must admit it wasn't a perfect cut...but having spend money on this I worked it into the Hull with further Super Glue, Poly Filler and some Muscle.

Once the Glue and Poly Filler had dried I had to patch up the mess but this worked to my advantage adding a large detailed (which was painstaking to cut out) to the central spine of the lower Hull.

With putting extra work into the lower Hull I decided upon continuing to work this side of the Star Destroyer. I again consulted my pictures, the films and more along



with actual shots of the filming models to get a precise idea of what I was trying to replicate.

The majority of this work included surface detailing and panel line scoring. There were mistakes made but in the nature of the detail I was trying to replicate I would put stickers or other pieces of card on top to hide this and in doing do add further surface texture to the model.

I added some additional superstructure on each side. These were 5 sides constructs cut to fit and angle correctly on the lower Hull. I intended to use these also as use for a stand or base (having not figured this out at the time of building)

Lastly I dig into the bits and parts and added some brass rod as final detailing ending these in sections of raised Hull plating and armour.

## Construction – Main Hull Upper Surface

Gently placing the lower Hull now all glued face down I went about the same process for detailing up the top Hull. I extended the sides very much as the bottom and added the top layer of White card once the build was complete

As we all know the top Hull of the Star Destroyer features extensive superstructure all the way up to the Tower and Bridge. I began the process of building this using some of the various spare card I'd been saving and with a solid base it was a simple case of gluing down successive layers and levels working my way up to the top base of the Bridge Tower.

For the detailing I followed my lessons on the trench and applied this to the sides of the superstructure working

sections of Transistors, Diodes and Fuses into each other and the occasional model kit piece.

The Turrets on the side were brought as spare parts from Spartan Games Firestorm and these were built onto raised sections on the aft of the main Hull.

## Construction – The Tower

Like the other super structure I built this mainly by eye and hand utilizing spare cardboard and matching the size against my stock photos of Star Destroyers.

It was a simple case of making the sides, Copying this for the other side and then adding the front and back paneling. As I wasn't scoring Hull lines into the Tower I went about adding additional detail onto to the surface, I used a few metal washes and took special note on making the garbage dump area as in The Empire Strikes Back when the Millennium Falcon detached from the Star Destroyer pursued by Boba Fett on the way to Cloud City and Besbin.

## Construction – Bridge

The iconic Star Destroyer Bridge started off with a close examination of photos and pictures I had found previously to understand the true shape of the Bridge. I chose to build it from the front backwards and the first piece cut was the front face. Next I measured and cut the top of the Bridge followed by the sides and bottom leaving the rear free to connect to the Tower section.

Before I glued the Bridge into place though I set about making all the additional super structure, domes, raised detail and Shield Generators. I spent approximately 3 hours adding surface details to the Bridge using all manner of parts again digging deep into the bits box and using various lengths of brass rod and electronic components.

The trickiest part though was making the Shield Generators. In the films they have a specific shape but the closest I could find to this at home were some blank D20 Dice. I chose to mount these on a series of metal screw washers to a height I was happy with and glued the D20 Dice into place adjusting for the slope of the top of the Bridge.

Happy with the results I could have left them alone but I decided on adding further details and small metal sections to the bottom and sides of the Shield Generators. This was quite a fiddly process and I lost my patients several times but after 90 minutes of trying and holding them in place they were all glued.

## Construction – Engines

One of the last areas I built were the giant engines located on the back of the Star Destroyer. I placed a large piece of card and score this bending the card inwards to give the correct shape to build into.

Next from the side edge of the card I added brass rods, Screw covers, Resistors, Paper clips and large symmetrical Spruce frame in working this detail in towards the





middle where the engines would be mounted topping these off with Squeeze Bottle tops as a base from the Engines to come out from.

Not happy I had enough detail I did another course of adding extra parts and components onto the rear of the model while consulting pictures of the Star Destroyer Studio Model used in the movies

Now finally happy with the detailing, piping and other parts assembled into the Engine housing on the Star Destroyer I went looking for Engine Exhaust Nozzles. I found these in the form of ceiling lamp fittings (The parts which hold the bulb and circuitry together before the power cable exits and goes up to the ceiling) With three of these which worked out at a couple of pounds each I added some additional card detailing in the form of armour plates and then used PVA glue via dabbing dots to add those last final touches.

### Painting

I had never painted something so large before (well bar walls at home) so I knew my painting techniques would break down over a large area without an airbrush which I did consider getting but I wanted to try using a paint brush none the less.

After an expensive trip to WH Smith (My local store stocks Humbrol Spray Cans) I came home and took out the Destroyer to the back yard to begin undercoating the ship.



First coat was simply black all over to initially hide the card and various coloured components but also like the painting style of the smaller ships which heavily use Washes to bring out the detail I wanted to replicate this on a large scale. It was my hope too that all the panel lines and detail id put into the model would be pulled out in the end.

It took approx. 4 spray cans to cover the Destroyer in Black and once dry I applied the Grey spray. I went with a couple of different Greys (Army Painter, Humbrol and something id found in the Garage id forgot I had). Mixing the sprays and sometimes using two cans at once I covered the model front to back in Grey Spray, often having to re-go over areas where the black was showing through.

After the first grey coat had dried I then went with a final dusting of a Light Grey on top focusing on certain areas and key points of the model to bring out the shape and depth more than having a giant Grey mass

I will add that after spraying I ran into challenges on the Destroyer in that some of the spray paint had a strange effect on the coatings of the various transistors casings (polymers and solvent type chemical reaction I'm guessing) - effectively semi melting the outer surface of parts and remaining sticky and not drying ...even after 3 months.

For a fix I had to whip out the standard codex grey GW paint and cover these in the hopes of sealing the top layer or in areas where the melt area was too large I added further details in the form of card and other parts on top to disguise it and cover up the problems.

Now the ship was all Grey with Black in the recesses it was time to apply the Black Wash. I went and brought a large tub of Black Army Shader (Had to wait for a second as the first exploded in the post...not good and very messy!)

This application of wash while I have much experience in washes with was a giant gamble on such a large area, but feeling bold I and after I made the model level by propping it up so I was painting on to a flat horizontal surface I started to covered the surface of the ship.

### What came next was a major battle!

I was trying to apply the wash, prevent it from pooling and messing up the grey main coat, keep the surface wet so the washes would flow into the recesses while trying to prevent warpage of the cardboard

This was extremely challenging and the model in essence became a wet canvas for around 45 minutes while I struggled to move the wash and keep it flowing. About half way through I realised I needed some help so ran

and grabbed the Hair Dryer and in one handing moving paint around with a tank brush I had the Hairdryer going in the other trying to dry the paint but not blow the heavy wash out of the recesses and detail i'd spent so long building

Another hour later, feeling drained and weary I had finished doing a single large surface. Pooped and tired It was time for a Cuppa Tea and some food.

I resumed painting and washing then did the other side later on that afternoon. Again rotating the model so I was painting on a flat surface and learning what I had from earlier that morning I changed the way I applied the wash. I did this sections by section based on the panel lines in the hull rather than a huge area in one go which allowed me to control the wash easier and made a more organised approach than the chaos before.

With one side one it was then simply a process of repeating the wash application technique on the other.

Next came dry brushing the detail and hard highlights to the leading edges. I simply took a selection of Grey paints and added some Skull white and took my time dry brushing and highlighting raised edges and surfaces.

I chose to also add some battle damage, scuffs and blackened lines on the model to give it a more rough look. This was a mix of slight dry brushing and painting flat colour on the model.

One thing I noted is that due to the models size I didn't have to go to extremes on the highlights due to the natural light casting shadows and doing the work for me.

## Finishing Off – Acrylic Stand

To Finish off the model I needed a stand – but what kind. I bounced around this idea for over a week in a whole host of shapes and materials. In the end I wanted to keep the stand in line with what the X-wing fighters and Epic Ships had which was a clear Transparent Base and Flight Rod.

A Flight Rod was out of the question and I didn't want to start putting holes in the hull so I came on the idea of using an Acrylic Display Stand – the sort of thing you would find in a shop.

Again I went to Ebay for this and came across one which was 20cm x 20cm x 20cm which after some measuring seemed the right choice to go for height wise as it would sit above other ships on the table (If any were silly enough to challenge a Star Destroyer Close up) but that it was tall enough to move ships beneath and giving a spectacle when gaming.

Once it arrived I had to cut down the sides so the base would match the contours of the Star Destroyer which involved the Saw again. With the sides cut though it was a simple case of placing the Destroyer on the base and it was finally done!

As a dual function too and discovered when gaming the base of the Acrylic stand became a sort of safe deployment area for Tie Fighters which we use when launching. The Fighters would be placed on the Star Destroyer base and then move off onto the Table to hunt down those pesky Rebels!

I will add that after spraying I ran into challenges on the Destroyer in that some of the spray paint had a strange effect on the coatings of the various transistors casings (polymers and solvent type chemical reaction I'm guessing) - effectively semi melting the outer surface of parts and remaining sticky and not drying ...even after 3 months.

For a fix I had to whip out the standard codex grey GW paint and cover these In the hopes of sealing the top layer or in areas where the melt are was too large I added further details in the form of card and other parts on top to disguise it and cover up the problems.

Now the ship was all Grey with Black in the recesses it was time to apply the Black Wash. I went and brought a large tub of Black Army Shader (Had to wait for a second as the first exploded in the post...not good and very messy!)

This application of wash while I have much experience in washes with was a giant gamble on such a large area, but feeling bold I and after I made the model level by propping it up so I was painting on to a flat horizontal surface I started to covered the surface of the ship.





## Final Thoughts

### What Would I do differently

Im very happy with the model let alone seeing the project through to completion. We all start so many projects and i'm bad at not finishing them but with this Star Destroyer im really pleased I saw it through to a finished model.

I'd certainly love to make one bigger! (Which I did in the form of the Star Wars Episode 3 Venator Class)

On the negative side trying to store a 4ft Model is a totally different experience and challenge than store gaming tables of boards. It's a slightly off putting factor in making large models/terrain pieces.

In gaming we have used the Destroyer 6 times, sometimes as a static backdrop, other times with basic rules but we have never played too seriously with the model always opting to have fun unleashing waves of fighters, blasting entire Rebel Transports away each turn and so forth.

As its so big the model breaks the rule system and game mechanics on a 3x3ft table but the rules mechanics for X-wing aren't really fit for 6x6ft or bigger. (One of the house rules we use is a double movement in favour of shooting



by doubling that ships dial movement so models can get around the table quicker)

Thanks again  
Alex



# NON-HUMAN SKIN

PATRICK HOPPER

When approaching any new miniature, I always make sure that I take the time to prepare the miniature for painting. I won't over-elaborate or go into too much detail on this process, as it is pretty much the same as most people's. I file down all mould lines, pin the joints together, wash and scrub the bare metal of the miniature, and use Milliput to cover the places where the parts mate together. Once that process is complete I will prime the model, usually with a white spray paint.

The miniature I will be painting for this tutorial is "Boss Mesaan (B)" by Hasslefree Miniatures.



When approaching this model I asked myself what type of mood did I want to convey on the finished miniature? I am only painting the torso and upper arms for this tutorial, but I went with a green color scheme because I wanted to make the finished miniature a play off of the "little green men from mars" theme - seeing as how large he is I am planning on calling the finished model "The Not So Little Man From Mars". I also went with this scheme because can be easily converted over to any kind of orc or goblin for a quick and easy green-skin paint job. The lower arms I plan to be covered in gore and the lower legs covered in red dust from the terrain, so I left these objects untouched. I also did not paint the scabs/scars on the skin as I am really unsure what direction I want to take these at the moment. Now, let us get to the painting itself.

From the primed model I started with a basecoat of Citadel's Ork-Hide Shade Foundation paint. Once I got good coverage on the model I took a liberal wash of Thraka Green and washed it over the basecoat to help darken the shadowed areas.



Once the wash was dry, I started to work toward where I wanted my highlights. I did this by adding one part Knarloc Green to three parts Ork-Hide Shade and thinning it to layering consistency - it should look like green fat free milk.



At this point I cover most of the skin, leaving only the areas in deepest shade untouched. I add a few layers of this leaving a tiny bit of the previous layer showing each time.





Once this is dry I start a new highlight, with a mix of 2 parts Knarloc Green to 1 part Ork-Hide Shade. I start working toward areas that will be hit by more light, and using layering I build this color up over a few layers, with a tiny part of each previous layer showing each time. This is where you will really begin to see the color starting to get lighter.



Now I will be working with only pure Knarloc Green, working my way even higher toward the areas that will be hit by the light source. I continue to build the color up over a few layers, leaving a tiny portion of the previous layers visible each time. You should now start seeing the transition from your shadow to your highlight.



For the final highlight I add Reaper Master Series Aged Bone paint to Knarloc Green in a mixture of 1 part Aged Bone to 2 parts Knarloc Green - Aged Bone can easily be substituted for Games Workshop's Bleached Bone paint. I take this mix and work even more toward the highest areas that the light source would hit. I tend to apply this layer a little thicker hitting only the upper highlights.

Once the final layer is done I take a glaze of Knarloc Green and lightly brush it over the model to help smooth out and tie the blends together. There you have it, the skin is finished.



You could highlight further depending on the light source and environment you are trying to create, but I believe this is an easy way to accomplish a decent green skin for your non-human miniatures.





# Speed Painting Skeletons

Edward Nicholson

So, you've been out and bought a whole shed load of skeletons for your latest Tomb Kings army or current D&D campaign. You've gone and got a game lined up and then realised you have to paint all those skellies in a few days! Never fear, many of us have done it - and will probably do it again, too! This guide will help you paint that mountain of boney plastic right up, and still have time to spare.

Now don't get me wrong, these models won't be winning you any awards. They will, however, look perfectly acceptable for your gaming nights. You should soon easily be able to paint up a batch of ten skellies in no time!

So, here we have three skeletons. These ones are from Heroquest and are particularly dull as skeletons go, but no matter - they'll soon be ready for action!

The first step is to undercoat your models with Chaos Black. You can use a spray or brush, whichever you prefer. Once they're undercoated with a nice even coat of black you can head straight to the first step.



This picture shows the initial step, a quick overbrush of Calthan Brown. For those of you who are unfamiliar with the term "overbrush", this is similar to drybrushing but you use more paint on your brush. Simply load the brush with paint and wipe some away, but leave a fair bit on your brush (it should be damp still). Then draw the side of your brush over the mini as you would when drybrushing. You don't need to be too careful at this stage, just vigor

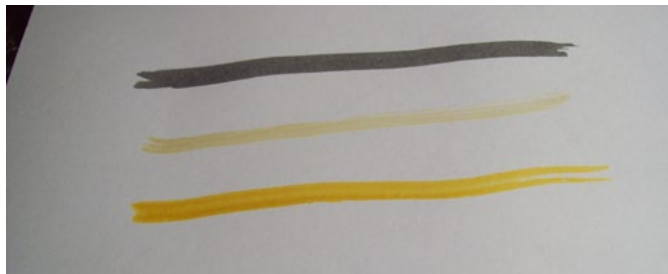
This picture shows the initial step, a quick overbrush of Calthan Brown. For those of you who are unfamiliar with the term "overbrush", this is similar to drybrushing but you use more paint on your brush. Simply load the brush with paint and wipe some away, but leave a fair bit on your brush (it should be damp still).

Then draw the side of your brush over the mini as you would when drybrushing. You don't need to be too careful at this stage, just vigorously apply the overbrush. While overbrushing, try and draw your brush from the top of the mini to the bottom whenever possible as this helps simulate a light source above your mini. Don't worry if it gets in the recesses, a later step will help tidy this up. Make sure to do the entire model, including clothing and shields if it has them. It doesn't matter if the paintwork is patchy, in fact you WANT it to be patchy as it will help with the final look of the mini.





It's worth noting that I was using fairly thin paint throughout this guide, in a state I like to describe as "silky". By that I mean I add enough water into the paint so that my brush glides through it nice and easily. If you draw your brush along a piece of card or paper then you should get a nice even coat of colour across your brush stroke. Like this:



The next step is to do the same thing, but use Graveyard Earth this time. All you're doing here is getting pigment on to the raised areas, in preparation for when you finally get to putting Bleached Bone on. Bleached Bone doesn't take very well over black so this helps prep the surface for the bone, and will also provide shading for the later steps.



Next we repeat the overbrush again, but this time use a yellow-brown. I used Sulphur Desert Yellow (an older GW paint), but any mustardy sort of colour will work just as well. Just overbrush the skeleton at this point, leaving the weapon and any clothing or armour alone.



Now we use Bleached Bone and again overbrush the skeleton. As with the previous layers, your paint should still be quite thin. If you do it right then the details of the skeleton gradually acquire some pigment from each overbrush, but is translucent enough (and patchy enough) to leave some of the previous layers showing

through. You can keep overbrushing Bleached Bone on until you are happy with the shade, I like my rank and file skellies to be a dirty, bedraggled lot so I just did one coat on two of the skeletons - the one on the left of the picture received two coats, to show the difference.



Next add in a little white to your bone and repeat the overbrush, making sure to draw the brush from top to bottom whenever possible. Use this mix sparingly. You just want to gently overbrush here, so you only catch the tips of the details.



At this point it's a good idea to go and work on any other areas of the mini before continuing. If your skellie has weapons and armour then give them an overbrush of Boltgun Metal. If there are any clothes on it then give them an overbrush of your chosen colour. It's often a good idea to use dull muddy colours like Scab Red or Kommando Khaki. If you want to add extra definition to the clothing then add a little Bleached Bone into your chosen colour and overbrush the area again. Once every part of the mini is overbrushed in it's particular colour you're ready for the next step.



At this point give the entire model a wash with Devlan Mud and then wait for it to dry.



Once the Devlan Mud has dried then you want to take some more Bleached Bone, but this time keep the paint a little thicker and drybrush it on rather than overbrushing. Again make sure to drybrush in downward strokes. Simply apply as much Bleached Bone as suits your tastes, though be careful not to overdo it or you'll obscure your previous paintwork.



The last thing to do is to apply a final drybrush of Bolt-gun Metal to any weapons and armour. Again, less is usually more. If there's any wood involved on the model, just like the scythe handles on these ones, then just give them a wash of Badab Black to darken them down and dirty them up. If you need to you can apply a light drybrush to any clothing, using it's original base colour, to bring out the colour.





# PAINTING BRITISH COLONIAL INFANTRY

DAVE BARKER



Over the last few years I've managed to find quite a quick painting style that produces miniatures that look good on the tabletop - good enough that I've been asked to write this article, anyway. I won't be winning any painting competitions with my tabletop painting style, but I hope that some of the ideas provide food for thought in your tabletop painting!

The basic premise I use when painting miniatures destined for the tabletop is to use two shades of each colour for most of the model. This is because for the vast majority of time that anyone is looking at them, they will be doing so from at least four feet away! However, to make the miniatures look a little better when they do get picked up and inspected closely, I put a little more effort into the parts of the model that people do actually look at closely.

The five miniatures that I've painted for this article were painted in a total of less than five hours, excluding drying time, so hopefully at this rate you should be able to turn out nice looking tabletop miniatures quite quickly. You have got at least one more squad of miniatures to paint whilst these are drying, right?

I was asked me to paint some Colonial British for this tutorial by The Editors, but they left the choice of models up to me. I settled on the Wargames Factory Colonial British plastics, not because I particularly like them – rather, they are perhaps some of the worst Colonial Brits on the market (sorry Wargames Factory guys, but it is true) – but because they are the kind of cheap miniature we're often tempted to pick up for an army on a whim, but that then sit on the shelf still in their box for ages (sometimes even years) before they ever see any paint.



## Step 1 : Assembly

The first thing to do is to assemble the miniatures. These particular Colonial British do have the benefit of having lots of options for assembly. When I'm painting for the tabletop, I don't have any truck with the painting partially assembled miniatures idea: that just means you're painting bits that will never be seen!

Don't forget to wash plastic sprues before assembly to remove the release agent - the substance that manufacturers use to make the plastic come out of the molds easily. The sprue I chose was particularly greasy, but soap, water and an old toothbrush easily sorted that out and before long I had five assembled models.



## Step 2 : Undercoat

It is never worth skipping this step to save time as it will only make your miniatures more likely to have their paint chip off as you're playing your games with them.

In this case, I've chosen a white undercoat. I'm not one of the undercoat fanatics who insist you can only paint over a certain colour and I don't have a particular preference for white or black - or, for that matter, even grey or brown. I've chosen white for these Colonial British because most of the model will end up being bright colours - either white or red - and I find it easier to get a bright finish when starting from a white base.



## Step 3 : Skin

Faces are something that the eye looks to be right on a miniature, so the skin, especially the faces, on these figures will be the only parts to which I will apply more than two colours. I use the Games Workshop (GW) paint colours here because they work nicely together for white skin and being premixed speed up the painting!

The skin I painted first with GW Dark Flesh. Then I applied two successive highlights of GW Dark Flesh and then GW Elf Flesh, each time leaving a little more of the previous colours showing. You should only need to use the GW Elf Flesh in very small amounts on the highest highlights.



## Step 4 : Eyes

This is the one step that I do consider completely optional, but it isn't something to fear. A little practice and you rapidly improve - and if you make a mistake, you can always re-do step 3 (skin) to patch up any mistakes or excess paint. However, if you can get eyes looking good, then your miniatures immediately look so much better!



When painting eyes, I always start by picking out the whole eye socket with GW Scorched Brown. This makes the eye slightly bigger than needed and slightly out of scale, but it is like stage make-up - from a distance it actually looks right. I then pick out the eyeballs themselves with a very light grey, leaving a line of dark brown visible all of the way around. In this case I used the old Citadel colour Ash Waste Grey. This is difficult to obtain now as it is no longer made, but GW Bleached Bone is a good alternative. Finally I picked out the centre of the eyes with a small dot of black.



## Step 5 : Hair

When the hair on a miniature is just around the back of the head, especially when it is mostly covered by a helmet, then this doesn't matter too much. But these chaps have plenty of facial hair, so it requires a bit more attention!

I chose three different hair colours for these five chaps. Each of which was created with a base colour and a highlight colour:

Black hair: Black base, Mid-grey highlight

Brown hair: Scorched Brown base, Bestial Brown highlight

Blond hair: Bestial Brown base, Coat d'Arms Desert Sand



If you don't have any Coat d'Arms paint, then GW Desert Yellow is a similar colour to Coat d'Arms Desert Sand.

### Step 6 : Block Colours

Now that these miniatures have good looking faces, the rest of the miniatures are composed of much simpler colours.

Trousers and boots: Black  
Coats: GW Red Gore  
Helmets: GW Desert Yellow



GW Desert Yellow might seem like a slightly odd choice for the helmets on the face of it, but it will make the white helmets look slightly different to their straps and packs, which will also be white.

After the base colours for these areas, I applied the high-light colours, to the raised parts, leaving a fair amount of the base colours showing.

Trousers: Revell Lufthansa Blue  
Coats: GW Blood Red



If you don't have any Revell colours, Lufthansa Blue is very similar to GW Midnight Blue.

I didn't highlight their helmets at this stage because I have a bad habit of holding a miniature by the head when I'm painting it. I shouldn't do this, but knowing that I do, I left the highlighting until later in the process!

I didn't add a highlight to their boots at all, to give them a different look to their trousers. Besides, who ever looks how the boots of a miniature are painted?

### Step 7 : A Little Detail

These Colonial Brits have white rifle straps and pouches, so I've picked these out together with the lace around the facing colours on their cuffs and epaulets with Codex Grey

If I was being picky, I perhaps should have painted their expense pouch in black (highlighted with blue, as per the trousers in the last step). However, I didn't do this as I was looking to paint these miniatures up quickly, not perfectly. I also didn't add the red stripe down the outside of the trouser legs either.



### Step 8 : Facing Colour

The facing colour indicates to which regiment your Colonial British miniatures belong. Since I want my miniatures to belong to the 24th Regiment of Foot, whose soldiers fought at Isandlwana and Rorke's Drift, I need their facing colour to be green, GW Snot Green to be specific.

Other facing colours I might have chosen include black for the 58th Foot; gold for the 88th or 90th Foot; or red for the 33rd Foot - the Duke of Wellington's Regiment.

### Step 9 : White

This next step completes most of the detail on the miniatures, with the exception of their rifles, by adding the white highlight to their rifle straps, pouches and their helmets leaving a little of the base colour showing in each case.



### Step 10 : Canteens, Rifles and other detail

Their canteens, which are strapped to their waist at the back of the model and parts of their rifles are made of wood. I painted these with GW Scorched Brown and highlighted them with GW Bestial Brown.



However, this is not it for the rifles, as they also have metal components. The metal components I picked out with black and highlighted with Boltgun Metal. Since all five of these miniatures have bayonets fixed to the end of their rifles, I added a small amount of Mithril Silver to the sharp edge of the bayonet to make it stand out a little more.

The only bit of painting left now is an optional little bit of detail on their uniforms – the buttons and the clasps on their rifle straps. These I picked out with black and highlighted with GW Burnished Gold.

#### Step 11 : Bases

I finished off the bases in a simple manner, although this seemed to take as long as painting the rest of the miniatures because of all the time spent waiting for stuff to dry!

I first smoothed out the gaps and raised areas on the bases with household filler then after this had dried I glued fine sand to the bases with PVA glue. Again, after

waiting for the sand to dry I first painted it with GW Scorched Brown before drybrushing with GW Bestial Brown then with GW Desert Yellow.

The last step was to glue small patches of green static grass and a slightly taller and more brown patches of the pre-glued variety of model grass. Both of these were glued in place with PVA glue.

#### Step 12 : Varnishing

The final step, that really shouldn't be skipped if you're going to be using your miniature to play games, is to varnish your miniatures. This is important because it helps protect your paintwork from wear and tear as they're moved about during games.

Although the subject of varnishing is almost worth a whole article to itself, I usually use a strong gloss varnish first, to give a strong protection to the miniature and when this is thoroughly dry I follow it with one or more layers of matte varnish in order to remove the shininess that the gloss varnish gives.





# One Thick Coat To Contrast or not to Contrast

Contrast Paints- Games Workshop

Jason Hubbard and Alex Garbett





Recently Games Workshop released the next generation paint, marketed as the magical coloured liquid that would eliminate all your painting woes. This product was well marketed all over the web and it was pretty hard to escape news of the paints. The idea behind these new paints to help make painting miniatures a lot easier and quicker, the hope being to dispel all those grey unpainted armies out there in hobby land.

So, with all this hallabaloo going on, I decided that I'd try and get my hands on some to test. The paints were being showcased at events such as UK Games Expo and local Warhammer stores. So, it was pretty easy to get an opportunity to use them.

My first impression was the paint seemed to be a thicker version of the wash paints, now these paints will only work on either a white, grey or silver undercoat, they do not work on black. Also, it should be noted that they don't really work in an air brush either. My first attempt at using them was at my local store, I used them on some fantasy miniatures, and I tried to use them as GW recommends, one thick coat. I did this on one of my miniatures and left it to dry, whilst this was drying, I decided to see if I could mix a contrast paint with a wash. It works well mixed with a wash, but it will lose some of its thickness. This does mean it means that by losing some of this thickness it does affect the consistency and will affect the end result slightly.

The miniature painted with one thick coat did eventually dry and I wasn't impressed with the end result, this may be because I need more practice to get the desired look, or it just doesn't do what GW say it does.

This will require more time with the paint before I say either way. What I did learn whilst using the paint, is that it doesn't work very well on flat surfaces, where it worked really well was on miniatures with lots of places for the paint to pool just like a wash does. This would explain why most of the models being showcased are organics such as plague walkers. The next





time I used the paint was at the York Games Workshop store, whilst on a trip to the city. This time I painted a Sigmarine, and I decided not to slap on one thick coat but brushed it on sparingly and making sure to push the paint into folds and crevices just like I do when using DIP, because basically this is coloured DIP in my opinion. This worked much better than just slapping it on, its fine to slap it on a marine or when covering a large surface area but when trying to use several colours its best to paint it delicately otherwise you're having to touch up the mini with undercoat paint.

I liked the paint, but I don't think it's the magical solution its being portrayed to be by Games Workshop, it will be a great way for those who don't enjoy the process of painting to quickly get some colour on to their miniatures. As for those who considered themselves painters or just enjoy the art of painting miniatures to game with then I think these will just be another useful tool in the paint box. I plan to use them on my numerous board game miniatures rather than on my war gaming warbands. I'm hoping to paint more of my board game miniatures and hopefully this will prove to be a quick way of getting done. This will put a major dent into the grey arWhat I would like to do as a small business is branch out more and do more talks and workshops along with making new stuff. Funnily enough when I was at school we were asked, 'What do you want to be doing in 10-years-time?' I kid you not I said, 'I want to start my own small shop that helps people make knick-knacks, arms and stuff'. It was mad

that I said this all those years ago and it is now what I am doing.

Jason Hubbard



The Games Workshop Juggernaut has been rolling on continually for the last few years with new releases each month, so many in fact it has become hard to keep up or even keep track of them, Of all the new releases though none have caused as much storm as the new Citadel Contrast paints.

I have been in the hobby for 23 years now and tried all kinds of paints with different ranges of Enamel and Acrylic (along with some testing with oils which we won't talk about!) and nothing has really come along in that time which has been pitched or promised to revolutionise painting or be a game changer like the Citadel Contrast.

Historically Games Workshop has pushed new paint ranges to us hobbyists and of these the two which stick to mind most was the introduction of the Foun-



dation Paint range and Foundation Washes. These foundations paints (of which I still have some) were very much the initial road map for the following range we have today from Games Workshop with the Base, Layer and Wash etc which very much works....however Contrast is a bit of a strange one to me in that it doesn't sit within these ranges but more a veering off course and a work around as opposed to a complementary paint to with the existing ranges.

On the build up to the contrast paints being released we saw several big scale demonstrations at Games Workshops Open day but also at the UK Games Expo where tables and prime undercoated miniatures were out in force. I wasn't able to make the open day but did at the UK Games Expo and had my first chance to play with some of the paints.



After selecting a Primaris Space Marine and Nurgle Pox Walker a started applying on the paint to with those now famous words 'one thick coat' in my head to what I would say are mixed results.

Paint coverage and flow was very good with the pots and batches of contrast paints I used but after several applications I was starting to view the contrast paints more as a thicker wash than a new method of painting, certainly for how I chose to personally paint.

I was keen to get some of the medium to try put there were only a few pots around and sadly I wasn't able to try it on the day but having finished my two minis and letting them dry I started to form in my head possible uses for me vs the overall goal of the contrast paints,



which to me is a method of applying colour to the many grey armies out there and for beginners and people not confident in painting or perhaps without the time to reach a half way point of no longer grey and almost an entry level basic table top standard.

Looking back and on reflection the contrast paints worked well on models with a lot of surface detail (like the Pox Walker) but on others with larger flat areas I felt the painting system just didn't work (Primaris Marine), however I do feel I need more time to play with the medium and contrast paints to close off a few final ideals in my head on how to manipulate the new paints.

Overall I am impressed with the contrast paints, however they do have their limitations but as someone who has been painting for years and has Air, Base, Layer, Foundation, washes, inks and more types of paint in my collection I'm seeing these as another tool set which I can call upon and slot in as part of the overall process of painting models and achieving the desired effect I'm looking for instead of them as the end result in a single stroke of the brush.

Alex





# HOBBY TUTORIAL

## Gore Workshop

*Jonathon Shaw*



### Step 1

First of all you'll need a prepped base. This can be can either be fantasy or Sci-fi/modern, In this case I've made a simple fantasy base with



### Step 2

Next I've added some small stone, which will become standing stones. This base will be used as an objective marker in fantasy and historical games.

### Step 3

The next step is to paint the base and stones, yep we're going to paint stones to look like stones. The easiest way to do this is black or dark gray under coat and dry brush with a lighter gray colour.



### Step 4

Once your base has dried, the next step is to make up the gore. Squeeze some UHU or similar glue on to a small tray or up turned base.

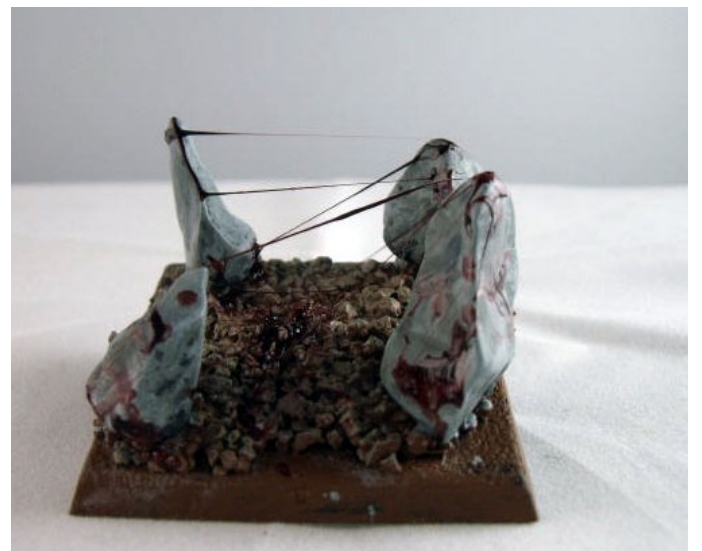


## Step 5

Now you will need to add some colour, for this Tamiya clear colours work best, for blood use red, and possibly a little purple. Mix the paint and glue together to create a sticky goo.

## Step 7

Do this as many times as you want. You can also just add large patches on to the floor or other areas of the base to give a bloody and gory effect.  
Finished Example



## Step 6

Now you have a a gooey substance, use a cocktail or match stick to place the gore on to the base. If you want strands, you will need to dab the glue onto the area and then carefully drag the strand across to the desired area.







# PAINTING GHOULS

*Philip West*

Ghouls can be an interesting addition to any miniatures collection. In addition to their obvious Fantasy setting uses, they also make good sci-fi mutants or sub-humans.

The challenge I encountered when it came time to paint my Ghouls was that I wanted them to look distinct from units such as my zombies, but still wanted them to look, well, ghoulish.

A couple of my Ghouls are Games Workshop figures but the majority of the models that you will see in the accompanying photographs are by Andy Foster of Heresy Miniatures. If you are looking for some nice ghouls I suggest you visit his website - <http://www.heresy-miniatures.com/undead.htm>. Andy is a real stickler for getting the anatomy of his figures right, and sculpts every rib and every tooth. That makes painting these figures really easy using the following technique.

## Drybrushing

Drybrushing plays a big part in the following routine. I've read many articles on drybrushing in the past and all of them have missed out the most important bit, which is to use a suitable brush. Games Workshop sells a rather



nice large flat brush and this is ideal for learning to drybrush effectively. They also sell a bullet ended drybrush that is useful once you have learnt the technique, but if you can only afford to buy one brush for now buy the flat one first. Wargames Foundry sells a useful

small drybrush which is worth acquiring once you get the hang of drybrushing.

To drybrush, dip the tips of the bristles in the paint and wipe most of the paint off on the rim of the pot. Then wipe most of the rest of the paint off on a tissue. Now apply to the model, using a very light touch, like you are dusting. Drybrushing sounds like it is a waste of paint, but once you master it it can actually be very economical.

## Painting the Ghouls

Undercoat your ghouls in black and then base coat them with Vallejo Intermediate Blue. Intermediate blue, to my eyes, is a grey colour with a hint of blue to it.

Next, give your models a wash of GW Graveyard Earth. I actually forgot to do the Graveyard Earth stage for one of my figures and have to admit it still looks pretty good, but that may be due to its hunched pose creating lots of shadow.

Once the Graveyard Earth wash is dry, dry-brush the figure with Vallejo Pale Greyblue. Clean your brush and give it time to dry. You can use other light greys for this stage, but Vallejo Pale Greyblue is a pretty useful colour to have in your collection. It is also good for adding shaded areas to cold white painted objects.

Next step is to drybrush the figure with GW Elf Flesh. This serves as highlighting so most of your strokes here should be downward to catch the upper parts.

Now that the drybrushing is done you can start painting the other parts. Paint the eye sockets with Tamiya Nato Black, which despite the name is actually a very dark grey. Tamiya Nato Black is another colour that is worth adding to your paint collection. True black is quite rare in nature so Nato Black is good for painting things like fur or clothing that is called black but is not really black. If you do paint something true black Nato Black is good for adding highlights.

While the Nato Black in the eye sockets is drying paint the inside of the mouth with GW Scab Red.

Next, use a fine brush or a sharpened cocktail stick to paint the eyes white. Don't worry if you make these areas a bit too big since you can paint a little more Nato Black on later. Once you are happy with this you can trim down the edges of the Nato Black areas with the colours you used for the Ghoul's skin tones.

The next step is to paint the Ghoul's teeth. My colour of choice for this is MP Pale Flesh which is actually a sort of cream colour. Lightly brush the teeth with paint, but don't worry about going over the edges, since this will be fixed in the next bit.

Once the teeth are dry, wet your brush and run a little Chestnut Ink over the teeth and inside of the mouth. Have a tissue handy to take off some of the ink if you apply a little too much. You'll see that the ink runs into the gaps between the teeth and defines them. You can highlight the teeth again once the ink is dry, but I liked the look of the reddish teeth.

Next stage is the claws. GW fluff has it that Ghoul claws drip with poisonous black slime so I painted these with Tamiya Smoke, which is a sort of black varnish.

## Clothing and Accessories

That's pretty much the basic Ghoul painted. Most Ghouls have some clothing. This is likely to be dirty and ragged but there is no reason that the original garments weren't brightly coloured. Choose colours that contrast well with the Ghoul's skin tone.

Some Ghoul figures tend to have weapons or body parts. Blades are best painted with GW Boltgun Metal or MP Chainmail. Ghoul weapons are likely to be on the rusty side. There are various ways to paint rusty weapons, but one of the quickest is to brush the surface with GW Tin Bitz.



Bones tend to figure in the Ghoul armoury too, and you have to decide whether these bones are fresh or old. Old bone is best painted with GW Bleached Bone or GW Bleached Bone over GW Bestial Brown. Try giving the bone a wash of Brown Ink, Yellow Ink and Water mixed in the ratio 2:2:1, then highlight with Bleached Bone and/or MP Pale Flesh. Fresher bone has a pinkish cast to it so a colour such as Foundry's Nipple Pink can prove useful here.

You can't really have Ghouls without a little blood and gore. Hearts, livers and kidneys are best painted Scab Red. Intestines look better as a flesh tone. Add a little runny Tamiya Clear Red (aka TCR) to produce a blood effect.

The final stage is to Black Ink your figures. The Black Ink wash has various effects and is useful to add shadow and definition to your figures, making them look just a little more realistic.



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I use a couple of mils of water and a brush full of MP Black Ink. Add a tiny sliver of soap to reduce the surface tension. Brush your Ink/Water mix on a white surface to judge if the colour is right and if so brush all over your figures.

This colour scheme may see applications other than Ghouls. The Vampires in the Judge Dredd vs Judge Death video game look a lot like my Ghouls, and this skin tone might be useful for other Vampires, Alien creatures or Dark Elves.

You can see my full collection of painted Ghouls and other figures at [cheddarmongers](http://cheddarmongers.com).

# PAINTING 1/72 INFANTRY DIP TUTORIAL

JASON HUBBARD



I thought I'd write a short article on how I paint 1/72 plastic miniatures - you probably played with this scale as kids, especially Airfix kits. If you've ever painted them, then the main drawback is paint chipping off them really easily, especially the rubbery plastic ones. I have a technique or two - well, one, in fact - that will prevent that from happening.

For starters, the only additional item you'll need from your usual painting kit is either a tin of Army Painter Dip or gloss varnish. It doesn't matter if it's a tin of dip or varnish, as either will work.

The first thing to do is undercoat the miniatures - once this has dried, you will need to apply a coat of varnish or dip, whichever you have decided to use. Note - when using dip I would recommend using a brush on technique, as it is quite gloopy and if you get too much dip on this scale of miniature, you'll end up losing a lot of the detail. You will need to give the tin a good shake.







I have found it better to use the dip which has collected on the lid, rather than dipping the brush straight into the pot, as it is a lot less messy this way.

The next stage once the dip or varnish has dried is to base paint the miniatures, remember to use a thin coat of paint. as detail is easy to lose with thick coat. Once this has been completed then I would apply another coat of varnish/dip to the figures. This will seal the basecoat - and, for those of you who have applied dip, it will at the same time shade the models. It isn't really necessary to paint several layers of shade on figures of this scale or smaller.



Now you will have a base coated figure, and those who have used dip will also have a shaded figure. This is the reason I use dip on gaming models, as I get a shade and varnish in one go. It saves time, especially if you've got a large army to paint.



Next we will paint in the highlights - you don't need to go overboard at this stage, in the same way you would with a 28mm figure. Once this is done, you can add a further coat of gloss or dip. I personally go straight to a coat of matt varnish.

And that, folks, is a quick and simple guide to painting 1/72 scale miniatures, and thanks to the multiple layers of dip or varnish you won't get paint chips. In addition, the extra coats of dip/varnish give strength to those 1/72 figures which are made from a rubbery plastic, making them less bendy when touched.



# Constructing Urban Bases

Johnathon Shaw

## Construction

### Step 1

Sections of plasticard are cut into irregular shapes and glued to the base. You can use either plain or textured plasticard for this, but if you use textured make sure it is thick enough to resist the glue deforming it. This will be the contact point for your model, so it is worth checking to ensure there will be enough room for the model's feet.



### Step 2

Now to start adding interesting detail to the bases. A regular feature of my bases is brick rubble, which I make by cutting slate model bricks to scale using a sharp modelling knife - I can normally get 4 base-sized bricks out of one model brick, and if one should disintegrate while being cut down, the bits can always go in my mid-grade grit tub. The bricks I use are from the [Minaco on eBay](#), specifically the 1/24th miniature grey bricks, with 250 currently going for £4.99.



### Step 3

For some variety, you can replace some of the bricks with wire mesh. I normally do this on around one in five bases. Crumple the mesh down so that it looks damaged, then when you add more elements to the base build it up around the mesh. Any fine-grade mesh will work for this - the material I use was available from [Dark Art Miniatures](#) or the older GW



## Basing kits.

### Step 4

Pieces from the [Gale Force 9 Concrete Rubble Mix](#)- can be used as large bits of ruin. The finer bits from the tub can also go into your mid-sized grit mix, to add further variety.





### Step 5

Sections of styrene rod can be used to represent elements of the metal reinforcement that most buildings use. Plastruct's 1/4" (6.4mm) styrene I beam fits nicely with 28mm scale figures. As with the wire mesh, I wouldn't use this on every base, but it adds yet more options to your basing scheme.



### Step 6

Once you're happy with the various detail elements on your base, fill any gaps with PVA glue and your mid-grade grit. If you've been adding bits of brick, and the smaller bits of plaster, this should give a nice mix of textures.



### Step 7

Once the grit has dried, add PVA glue and fine sand to fill any remaining gaps.

## Painting

### Step 1

Undercoat the bases black - I do this by hand, but you can spray them if you so wish.

If you spray the bases, be sure to go back with some thinned black paint and make sure there is an even coverage.



### Step 2

Basecoat the various elements of the base. I've used three shades on the concrete and bricks, while only two shades on the metal.

Concrete - GW Codex Grey

Bricks - Wargames Foundry Conker Brown A

Metal - GW Boltgun Metal





### Step 3

A lighter second coat on the concrete and bricks.

Concrete - GW Fortress Grey

Bricks - Wargames Foundry Brick Red A



### Step 5

Was the entire base with GW's Devlan Mud wash, then highlight the bricks and metals.

Bricks - Mix of Wargames Foundry

Brick A & Tan C

Metal - GW Boltgun Metal

### Step 4

Third layer on the concrete, using Wargames Foundry Arctic Grey B.





# FLORA BASING

BRETT JOHNSON

Using real mosses and plants on your bases is a great way to add interest to your miniatures.

Before you start you'll need to prepare your plant material to make sure they last - Brett Johnson from WAMP explains how easy this is.

Tools and Materials needed for preparation:

Plants

Glycerin

Absorbent paper (ie kitchen roll)

Water

Small container

This technique can be used on any type of plant but the results can vary. Generally the more 'woody' the plant is, the better. Normally once you cut a plant it will begin to dry out, losing its water which in turn destroys the structure.

This process solves the problem by replacing the lost water with glycerin which acts like an embalming fluid and retains the plants structure.

I recommend you do this in advance of when you need the plants. I do batches every now and then and keep them in my bits box - some have been stored for well over a year and are still as good as new. Some plants won't take well to the process, and you'll see within 48 hours if it's failed.

Stage 1



Collect some plants! I like to use mosses as they scale well and you can just pull them from the rock but try anything, small herbs like thyme can be good. For this tutorial I just popped in the garden and grabbed some moss - it took me about 1 minute and I was able to find a good variety.

Stage 2



For this stage you need some Glycerin. It is available over the counter from most chemists, as it's often used as a children's medicine, and also found in some supermarkets. It isn't harmful and you don't need a bio-hazard suit to handle it. It's also pretty cheap, the bottle pictured was about £1.20 and lasts for ages. You will also need a small container and some water.

You need to mix 1 part Glycerin to 10 parts water in the container. Give it a good stir so it's properly mixed. Next take your plants and dip them into the mixture, make sure they are well covered then remove and place on some kitchen roll or newspaper. This will soak up the excess.

Some plants you may want to turn over after an hour to soak both sides. Then simply leave to dry (overnight if possible). After 24 - 48 hours any plants that didn't succeed the process will have wilted so you should discard them; the rest you are free to use.

### Stage 3



Now that your plants are prepared you can use them on the bases of your miniatures.

You can take this a step further though, and use certain mosses to create miniature flowers,

Tools and Materials needed for preparation:

PVA glue

Cocktail stick

Moss with fronds

Coloured flock

Some mosses have fronds that like miniature reeds, and these are great for making simple flowers. Glue the moss to your base using PVA or super glue.



### Stage 4



Using a cocktail stick, carefully apply PVA glue to a single frond - you don't need a lot of glue, so don't overload it.

### Stage 5



Dip the glue covered 'flower' into the coloured flock to create flower blossoms.

Using different coloured flocks will add a bit of variety and a splash of colour to any base.







## Moulding & Casting Your Own Miniatures

Jason Mcdaniel

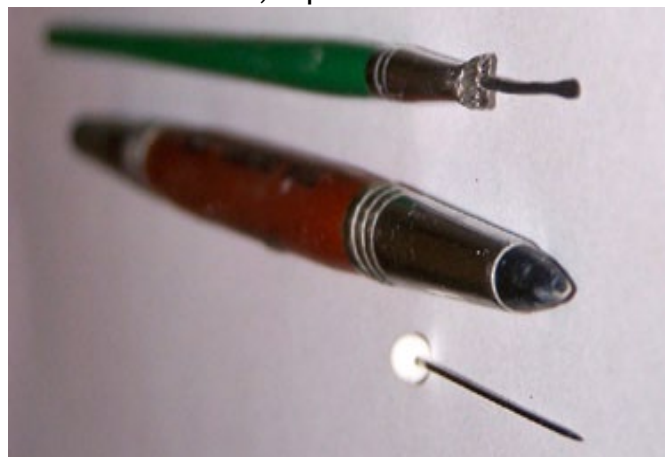
Hi readers, Jason here. In this article I'm going to describe the process involved in manufacturing my "McZombie" miniature, which I made for a Dungeons & Dragons game I was running and found I needed several zombies for. I'll discuss sculpting a little, but I'll focus mainly on making a mould of the green and casting it in resin. But first, let me tell you a little bit about myself. I'm actually fairly new to miniatures but I've been sculpting, moulding, and fabricating full scale animatronics and props for over 20 years. Okay, enough about me, let's get to the good stuff.

The sculpt for this guy was pretty straight forward. He's a pissed off zombie that I wanted to be able to cast in one piece. I started with an armature made from paper-clips stuck into a cork. I sculpted the figure in pieces with a 2 part putty called Aves Apoxie Sculpt. With each piece I left a small bit of wire sticking out. After each piece was cured, I drilled out holes in the torso, then attached and blended the head and arms. My favourite sculpting tools to use so far are T-pins, a wooden skewer that I shaped to a point on one end, a silicone tipped shaper tool, a double ended wire loop sculpting tool, and a knife/spatula I made. I made the knife/spatula by hammering one end of a steel wire flat, shaping it with a Dremel rotary tool, then gluing and crimping it into the handle of an old paint

brush I had lying around. Okay, so with a little smoothing with water and tweaking here and there the sculpt is done. Let's move on, shall we?

The first thing I need to say about moulding and casting is please be very careful when working with any kind of chemical. Check the product data sheets and MSDS (material safety data sheets) for any known hazards and safety gear needed when working with the chemicals. You may need to use gloves, a respirator, and goggles when working with certain chemicals. Safety talk done, moving on.

I decided that I want to make a two part silicone mould of the green - just to clarify, the green is a reference to the original sculpt. I used a tin cured, 2 part silicone from





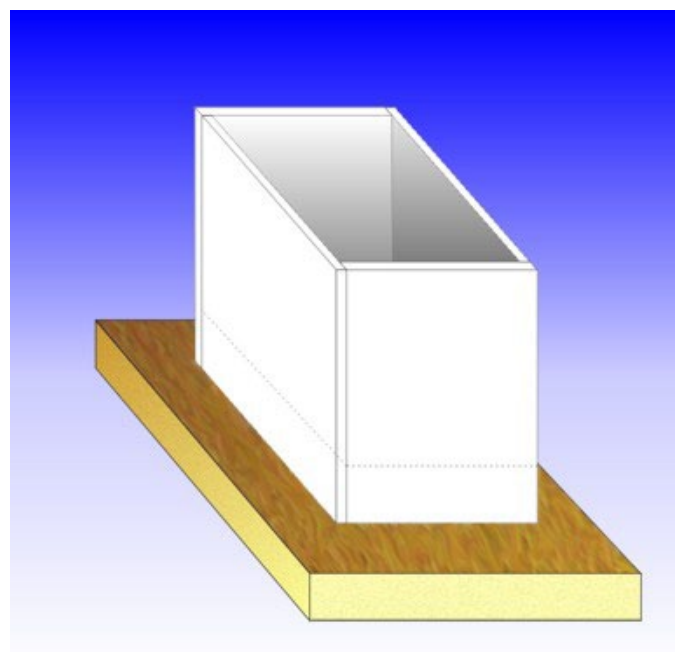
Smooth-On, but almost any moulding silicone should do. After picking out my silicone and making sure that I have all my materials ready I cut a base board to make my mould on. You'll want something with a fairly smooth surface and only slightly bigger than the size of your finished mould. I made the mould about 3.8cm bigger than my zombie all the way around. I laid a bit of a non-sulphur based clay called Klean Klay down on the base board and pressed the zombie down into it slightly.

If you use clay with sulphur in it you will have to make sure it is completely sealed with a lacquer before pouring silicone on it or the silicone will not cure properly. I continued to work clay around the figure using sculpting tools until only the front half of the figure was exposed with a very clean edge all the way around it. For a sturdy mould that will last you many castings it is important to get the clay to meet the sculpt at a perpendicular, 90 degree angle all the way around. Otherwise, you will have very thin spots of silicone around your seams that will start to tear away and won't line up very well during castings.

Next I formed a box wall around the sculpt and clay using plasticard hot glued together and to the base board. You can use almost any kind of plastic, foam core, heavy card stock, or any kind of board that will not flex too easily for this. If you're going to be putting your mould into a vacuum chamber as I did, you will need to make sure that your plasticard box will fit into the chamber at



this point and make it 2.5 times taller than you want this half of your mould to be. This is because the vacuum will cause the silicone to bubble up a little over 2 times its volume and you'll have a mess otherwise. I put a piece of tape on the inside of each wall joint to seal it. Once the walls were built, I reached in to extend the clay out to the walls and build up a funnel shaped clay spru coming off the bottom of the figure.





Using a wire loop sculpting tool, I carved a “ditch” into the clay all the way around the figure, except for the sprue, about 8mm away from it. I also used the end of a pen cap to poke several pits into the clay. The “ditch” and pits act as keys or registration marks to make sure the 2 halves of the mould will line up. Alright, we should be ready for the next part, pouring the silicone for the front half of the mould.

Now, if you are using a vacuum chamber, this next part is pretty quick and easy. I estimated how much silicone I would need, mixed it according to the directions, and poured it into the mould box, covering the figure by a little more than 2.5cm.

Next, I placed the mould box into the vacuum chamber, put the lid on, turned on the vacuum, and opened the valve. Once the chamber reaches full suction (approx. 29 inches mercury on the gauge), the silicone should bubble up, the bubbles will mostly pop, and the silicone will go back down. After the silicone went back down, I closed the valve, turned off the vacuum pump, and then slowly opened the valve. Once the air pressure was restored in the chamber, I removed the lid, removed the mould, and let it sit over night for the silicone to cure completely. The reason for the vacuum process is to get all of the air out of the mould to prevent little balls of resin from showing up all over your finished casting of the figure. If you don't have access to a vacuum chamber and pump then I would suggest getting a small brush and brushing the first layer of silicone onto the figure and clay, working into all of the detail.

Next, pour the silicone into the mould box by holding your cup up high so that a very thin stream of silicone pours down into the mould and try to get it to hit the lowest spot on the clay instead of the surface of the figure. Once you have all of the silicone you want in the mould box, you'll want to vibrate it somehow. You can put a vibrating electric sander with no sandpaper on it under the mould box or just tap it onto a table many times, very quickly. These techniques should

get most of the air out of the silicone. Another tip is to make sure that you don't do anything to accelerate the curing of the silicone. Don't use extra catalyst and don't heat it. At this point side 1 is complete.

Time for some demolition. Being careful not to remove the figure from the front half of the silicone mould, I tore apart the plasticard walls, flipped the mould over, and removed the clay, with the exception of the pour sprue. Next, I took a small, stiff brush and some isopropyl alcohol and cleaned the remaining clay residue off of the mould and exposed back half of the figure. Then, I proceeded to build up the clay pour sprue on the back side of the mould. When doing a 2 part (or 3 or 4 part) silicone mould you have to coat the exposed silicone of the first half with a mould release so that the second half won't stick to it.

I brushed 3 coats of a liquid wax based mould release called Challenge 90 onto the silicone - you shouldn't coat the figure itself. Any mould release for releasing silicone from silicone will work. I let each coat dry for at least a half hour before applying the next. Once the mould release was completely dry I placed the mould back onto the base board and hot glued plasticard walls around it the same as before. You might need to carefully work a little bit of clay around the edge of the mould where the silicone meets the plasticard with a sculpting tool to seal it.

Next, I poured the back half of the silicone mould the same way that I did the front. I let the silicone cure overnight. You may have to let your silicone cure longer; just follow the directions for a full cure.

Finally, I tore the walls off, opened the mould, removed the figure, and cleaned the silicone with a brush and alcohol. The 2 part mould is complete and ready for casting.

For casting small, detailed parts out of resin, I highly recommend getting a pressure pot. You should be able to pick up a used painter's pressure pot pretty cheap. You'll have to take out the pipe in the centre and add a cap

and a shut-off valve, but that will be fairly easy and inexpensive. Make sure that the pot you use is rated higher than 60 psi, which is the pressure you will need for casting resin, and that it has an emergency pressure release valve.

After picking out the resin I would be using - SmoothCast 300, which is a 2 part urethane quick curing resin from Smooth-On - I put the 2 halves of the mould together and put a few rubber bands around it to hold it together. I mixed the resin according to the directions and poured it into the spru hole in the top of the mould. Now I had to work quickly here because this resin sets up in about 7-8 minutes. I filled the mould up about 3/4 full, covered the pour hole with another piece of cured silicone I had laying around, turned and twisted the mould all around, filled it the rest of the way, and tapped it several times on the table. All that was to make sure no air bubbles got caught in the mould.



Finally, I put the mould into the pressure pot, closed and tightened the lid, plugged in an air hose, and opened the valve and adjusted the regulator on the pot to get 60 psi.

Then I let the piece cure for about 15 minutes before slowly letting out the air pressure. I opened the pot, pulled out the mould and carefully opened it up. Success! I now had a finished resin casting with no air bubbles. All that is left to do is cut off the resin from the pour sprue and trim the thin bit of resin around the seam line on the figure.

A final note - even when using a pressure pot, you may still get air bubbles in your casting if there are any sections of the interior of your mould which are higher than the area in which the resin will enter those sections and there are no seams there. One example on my zombie is the chin. My first cast had a large air bubble in the chin. If this occurs, try the methods that I used above (rotating, vibrating, etc.).



If you still get air bubbles you may need to use a very sharp knife and cut a very thin trench out of the silicone leading up to the pouring end of your mould from the trouble spot. This will allow the air to escape but you will have to trim the extra resin off of the finished casting.

Anyway, I hope this has helped you get on your way to moulding and casting your very own miniatures. And remember - enjoy the art.



# TERRAIN IN HISTORY

JASON HUBBARD



This article series intends to give terrain makers an over view of historic settlement types. This first one looks at the Pre-Roman period, some of which may have been reused post Roman, such as Iron Age Hill-forts.

## Neolithic Settlement

There is little evidence for early Neolithic settlement in this country, with the exception of sites like Skare Brae in Scotland. It is considered that most settlements were probably scattered isolated farms, which consisted of rectangular houses built from timber with thatched roofs. Both Fengate, Ballygally in Northern Ireland and Haldon in Devon are good examples of this type. These houses have two occupation levels, which are separated by a sterile level, which leads to the suggestion that they were used as seasonal dwellings.

Evidence no longer survives from this period, because the materials used in the construction of buildings have eroded away, leaving only post holes, rubbish and grain pits as the only evidence of their existence.

In the Orkney's flagstones were used as building materials, sites such as Skare Brae and Ringop. Both of these sites appear to be villages, with most of the houses between 4-6 metres square. The roofs were probably turf with timber supports, these types of building are most likely to be uncommon during the Neolithic period as similar sites have yet to be found more widespread across the country. The most likely settlement sites in the UK are considered by most to be Causeway enclosures, most commonly found in Southern England.

## Causeway Enclosure

Causeway enclosures are earthwork monuments that were built in the first half of the fourth millennium and were in use for around 1000 years. These sites are considered to some of the earliest monumental sites of the Neolithic period. They are considered to be in the most part Neolithic, but there are no specific dates for their use, so it is possible that they were still in use in the Bronze age and later.



The size of these enclosures vary in size ranging from 3 acres in Widebury, Wiltshire to 20 acres at Windmill

hill also in Wiltshire. They consist of open hilltop platforms surrounded by a circuit of ditches and embankments. The ditches are not continuous all the way round. they are intercepted with causeways randomly placed, acting as land bridges. The ditches are about 10 feet wide and usually around 5 feet deep. Though were there is more than one ditch then the ditches get deeper the further they go out from the inner ditch.

A variety of interpretations have been put forward for the explanation and use of these sites ranging from settlement sites through to defensive ones. Items found at these sites have suggested that they were possibly gathering points. the reason for this is that the items discovered during excavations have indicated that they originated from different parts of the country. Which has given form to the theory that they may have been used for markets and festivals.

my opinion is that they were multi functional sites that had a defensive capacity. If the site was used for a length of period, it would require the need to be defendable. A small group of causeways have shown signs of warfare. These sites have a more continuous ditch and are placed on top of a hilltop or spur. "Organized warfare was not new; it had been practiced for a millennia in pre-historic times", Arthur Ferrill 1985.

At Cairn Brae in Cornwall, which has a substantial hand built wall of boulders. At the base the width is 2 metres and enclosures a site of about 2 acres. There is also evidence that the buildings were burnt out and

over 3000 arrowheads have been found at the base of the wall. This would indicate a battle of some considerable scale, which would also suggest that conflict of

any scale was not usual. At Crichley Hill, there is also a stone wall and ditch. There is evidence of the wall being defended with the use of a timber palisade.

We have to assume that if these causeway enclosures were used as a settlement sites, as I believe, then we should then consider that they were most likely defensible, but is it a defensible position. The causeways would look like to the attackers as an easy route into the settlement, but these causeways could be easily held by a small group of defenders. "Prehistoric armies were capable of practising warfare in a highly sophisticated fashion. In fact men can be organized effectively for war in groups of less than 500." Arthur Ferrill, 1985.

We have to remember that the attackers if given the choice between charging across ditches and then scrambling up a bank or smashing through a handful of defenders on a causeway, then any sensible attacker will take the easy option, it would also be the most direct and quickest route into the settlement. "Inside every army is a crowd struggling to get out and the strongest fear with which every commander lives, stronger than the fear of defeat is that his army reverts to a crowd" John Keegan, 1993.

Yet the causeway could be defended from three sides, the front of the causeway and the side of the bank. As we already know Neolithic used missile weapons. If you have missile weapons being used from three sides then you effectively get a triangulation of fire. This would also be in a confined area of



space, which would only allow the attackers at the front to bear arms against the defending fighters. This in effect would create a killing ground on the causeways, the defenders could also release people from other causeways to flank the attackers from the rear as well. "The bow more than doubled the range of the spear, and since the arrow was smaller and easier to carry, it was possible to deliver a much greater volume of fire against the enemy. When Neolithic man took position in a line and fired on command, he unleashed a powerful barrage of arrows." Arthur Ferrill, 1985.

## Bronze Age Settlement

Most of the housing in the Bronze age consisted of crude huts within a an area of ground, which was hollowed out. The walls would have been made out of a variety of materials, such as stone, or daub and wattle. Other huts were constructed with large upright timbers forming an inner circle covered with thatch roof resting on uprights and sloping down to the outer wall.

Upland area where the land and grazing was at a premium homesteads are often built on hillsides to maximise the land use. These are often called unenclosed platform settlements and were constructed by

digging out a niche into the hillside, with the earth and stone removed and used to construct a platform. The hut circle would then be constructed on to the platform.

In the Bronze age a more settled economy appears to have become the norm, due to the evidence of more huts and enclosure sites. Belle Tout in Sussex has two enclosures, which have evidence of several built structures. In Southern England there is evidence, which is associated Deverul Pottery, of settlements, which are enclosed rectangular banks and ditches surrounding circular huts.

On Dartmoor there are enclosures known as Pounds, which consist of stone walls, which enclose a series of huts. these would have been thatched with a ring of inner posts, with stone outer walls. Where there are no entrances it is believed that these sites were for defence, though not against human but animal predators.

Through Archaeological evidence, it suggests that on some sites the walls were built after the huts. None of the sites are exactly the same, for instance some sites consist of an enclosed settlement with several huts inside, whereas others consist hut circles with and without the the enclosing walls. Whereas others



ROUNDHOUSE BY ARCANE SCENERY ([HTTP://ARCANESCENERYANDMODELS.CO.UK/](http://arcanesceneryandmodels.co.uk/))

consist of scattered enclosed walls with 1 or 2 huts inside and several free-standing huts outside the walls. this suggests that most of these sites have expanded over a period of time.

In the later part of the Bronze age we start to see the emergence of mini hill forts. these were made up of a large hut, which was surrounded by a large bank and inner and outer ditches. there is a strong growing belief that Hill Forts were in use before the Iron Age. These sites would have possibly consisted of palisades and ditches, surrounding huts and pits, similar to sites like Mam Tor in Derbyshire.

### Highdown Hill

Excavation in 1959 of the Iron Age hill fort revealed remnants of a late Bronze Age huts, 2 hearths and cooking pits. one hut seemed to be built on the side of another, with a range of post-holes and 2 different floor levels. Thus, suggesting long term use of the site. All of the pottery finds were dated to the late Bronze Age and were from 2 different huts.

The hill fort is believed to have been built during the first invasions and is considered that was after the Bronze age settlement was destroyed. Though it is possible that the Bronze age settlers destroyed the site and built the Hill Fort to protect what they already had. As the site shows there is no evidence of it being destroyed by violent means. It is possible they developed their own existing settlement because of the social changes happening around them. There is now a belief that hillfort weren't military sites but fortified settlements, such as a village or town



### Crannogs

Another type of settlement particular to this period is the Crannog. these are settlements built upon a lake, built by driving wooden timbers into the lake bed with a wooden platform placed on top, this provided a base for the housing. Most of these sites were placed on natural outcrops close to the lake-shore.

Wooden causeways or log boats have have linked them to the shore, some of these have been found preserved on the lake bed. The design does suggest a defensive purpose, but the problem with this is, that a planned attack may be deterred initially, but if the attacker decided to lay siege on the bank. The they could wait out the defender into starvation and surrender. So it would indicate that this design of settlement was probably for prestige and status rather than defence.

### Henges & Stone Circles

These are not settlements but are considerable monumental constructions that are vitally important to this period of history. Henge monuments began life in the early Neolithic period and were used continually right through the Bronze age. These types of monuments are unique to the UK and cannot be found anywhere else in the world. The term henge denotes various ceremonial sites. Henge's span the transition from the neolithic right through to the early Bronze Age. Most of the earliest sites are generally found in the north and Central England, sites such Arbor Low, in Derbyshire.

Most are circular or near circular in plan and can range from 9 metres through to 200 in diameter. They are generally defined by a bank and ditch and an internal ditch as well. the ditches can sometimes be around 2-4 metres deep, though Avebury has a far greater ditch, with an estimated depth of around 15-20 metres. Most henge's have at least one entrance and were considered a development on from the causeway enclosure, but this is not the case, as causeway enclosures are not found outside of south Central England.

The smaller sites tend to be more circular in structure with one entrance; whereas larger sites tend to have more than one. Generally the site entrances are not placed on a nationally common alignment, but tend to be more regionally based. There are two types of Henge, these are denoted by the number of entrances they have. A class 1 henge has only one entrance, whereas a class two will have 2 or more entrances.

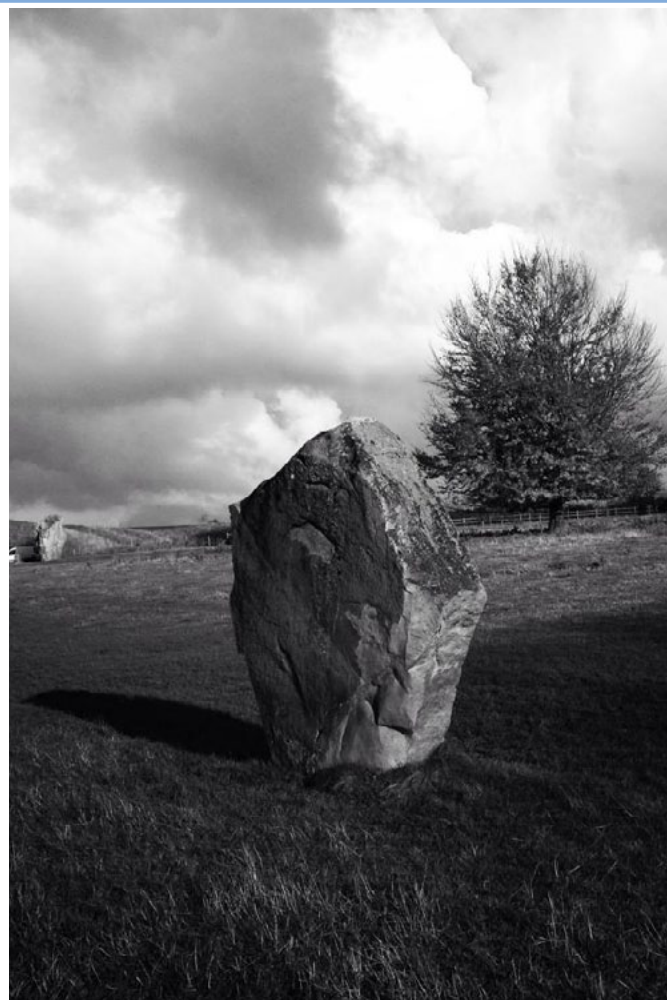


In some henge's stone circles occur, though timber posts have been found in a large proportion of excavated sites. Other features have included circles of pits, central stones, cairns or burials as well as stone or timber entrance posts. Some henge's such as Durrington Walls and Woodhenge are believed to have contained timber buildings which some believe were temples.

Stonehenge's are a later development on from the typical bank and ditch henge. Stones were added as part of a later development to a site. It is considered by most that stones were introduced in the early to middle Bronze Age. Dating evidence suggests that class 1 henge were built from around the 4th millennium through to the 3rd. Whereas class 2 henge began around the middle of the 3rd millennium through to the 2nd.

Towards the end of the Bronze Age, there appeared another type of structure, the stone circle. These were constructed in Ireland and in Britain, and were constructed in large numbers, but are mainly concentrated in two small areas. The first in the Sperrin mountains of the counties Londonderry and Tyrone in Ireland, whilst the second is in the mountains of the counties Cork and Kerry in Eire.

Although both are circles of stone, they are distinctive from one another. The Ulster group are



larger, but more irregular and composed of smaller stone. frequently, a row of stones is set at a tangent to the circle.

### Additional Reading

- Ferrill, Arthur; *The Origins of War: From the Stone Age to Alexander the Great* Thames & Hudson, 1985
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- Pearson, Michael Parker; *Bronze Age Britain*, B.T. Batsford Ltd; New Ed edition, 2005
- Scarre, Christopher; *The Megalithic Monuments of Britain and Ireland*, Thames & Hudson Ltd, 2007
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# DARK RUINED TOWER

ALEX GARBETT

*Alex Garbett*



I got my hands on two of the Games Workshop Dreadstone Blight ruined tower kits some time ago and after letting my imagination run wild I built a taller version than the one supplied in the box along with a few extra parts I bought from ebay. This game me a really nice big ruined tower but that left me with a base and a couple of wall pieces left over.

A shame to waste these I spent a while arranging the two walls and extra little pieces I had around the nice base which is supplied in the kit. I was sorta happy with the arrangement but something felt missing. I left the kit for a few months and then after going through my bits box I cam across the obelisk from another kit, which I'd half painted.

Simply placing it in the middle of the tower set my imagination racing. I saw I dark evil energy or spirit infecting the obelisk and this in turn has spread across the brickwork of the tower decaying the stone so overtime its dark energy can escape again into the world

I started simply with spraying the kit in black and once dry I started layering greens to achieve the effect I wanted. Using dark colours to light and having less and on the brush almost to a dry brush for the final highlight.

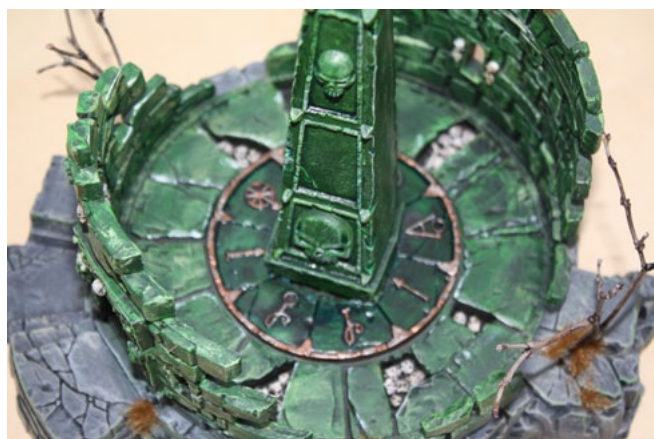
The metals were painting with browns first then adding gold on top and weathering down with washes and slight highlights of silver.



With the kit painted I added a new twigs from outside I painted grey and washed then added some brown flock grass to cracks, which upped the detail an extra notch.

All in all i'm happy with the quick paint job, it seems to work effectively and makes a nice centrepiece for games

Enjoy



# COUPLE OF BASIC CHARACTER BASES

ROB CARDISS

I'm going to do 2 basic character bases one for 40K one for fantasy both on standard bases 30mm for the 40K and 25mm for the fantasy..

These two are primarily designed for making characters stand out a bit on the tabletop and are in a style I usually do my ebay and commission pieces...

first off a few tools and materials...

There are literally thousands of things you can use to add detail to bases and I have boxes and bags of stuff all over the place that I have generally bought found scrounged and saved as I go along ..

For this article I am looking at simple structure and therefore the materials are minimal..

next super glue.. I favour zap a gap but any will do. To the right of that are putties.. the two pictured are milliput and green stuff..



## Tools

Starting at the left .. an old brush.. any brush will do but make sure it's not your favourite windsor and newton. base making knackers brushes a whole heap quicker than painting and they come in useful for all sorts of tasks.

Clippers.. These are my older Xuron clippers.. I have a new pair for modelling these have been demoted to base building as they don't have the cleanest edge in the world anymore and can be used for some of the heavier duty work basemaking entails.

Pin vice; standard hand held hobby drill this one is citadel I think . I have around 6 with different sized bits in . the most common bit i use is a 2mm HSS carbide bit . keep your bits sharp and clean at all times a lot safer and easier that way trust me..

Needle file; again I have loads but if I only had to have one it would be one like pictured with a flat and a curved edge.

Colour shaper; my preferred weapon for manipulating



Starting at the back left I have vallejo Grey pumice.... This is from a range of texture materials by Vallejo and is possibly one of my favourite base building tools .. a single tub can last for literally hundreds of bases and it is used on just about every base I build to add texture and fill gaps and is so much easier than mixing up materials or building in layers .. I use the grey has it is middle of the range texture wise and gives a nice finish on it's own when dry.



putty . I have several tips in several sizes and of different densities.. this is a size 0

Ball stylus sculpting tool; this is basically a wooden handle with two different thickness metal ends each which is tipped with a ball and are great for adding texture making eye sockets and the like.

at the back are brass paper clips that I use for most of my pinning and wire effect needs..

These are the bare basic tools that will handle most basic base making ..I also often use my craft knives flat sculpting tool sandpaper and many more but will cover them when they come up.

For now the only other thing you will need is your base. I try where I can to use flat bases such as the ones in plastic regiment sets but slotta bases are fine and just need the hole filling .. a little sellotape does the job fine..or putty your choice.



#### Step 1

Right so lets get started .. first off I mix up my putty . milliput on it's own usually but in this instance I have added some green stuff as I was working on something else at the same time .

make sure when mixing you get rid of any trace of streaks and have a nice even colour throughout I then take a lump of the putty apply a dab of superglue to my base and mould the putty into a rough cone shape like so just using my fingers.

Leave a gap around the edge to allow for texture being added while still wet I place in my main structure pieces . In the case of the fantasy one this is a piece of slate . The piece I have selected has enough interest on the face with a nice flat top area for attaching my model. I start by placing in my largest pieces to form the main structure and then add a couple of smaller pieces for interest. to get the smaller pieces of slate I just use my clippers to break the edges of larger pieces. you may want to use a little superglue on the rock piece s for added strength. while

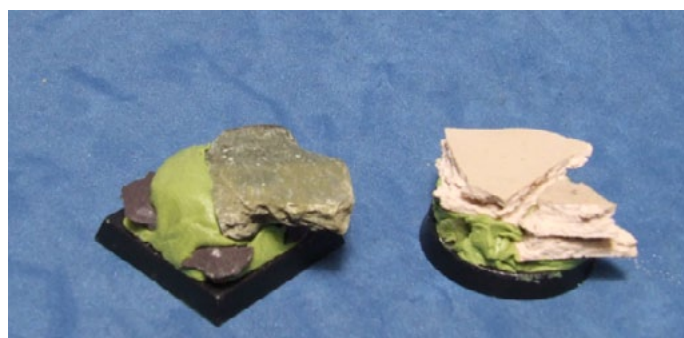
the putty is soft you can play with placings to set the right grounding for your model.. as a general rule you will be looking for a nice flat area to pin your model onto but if in doubt trim the tab of your models feet and use it for placing. as the 40K base is a different setting I have used some fimo pieces that I often use for concrete structure detailed below.



#### Step 2

Concrete pieces are very easy to make using fimo. I have several pieces lying around and occasionally make a new batch when doing any fimo work.

The basic principle is to roll out the fimo fold it on itself roll it again lightly and repeat .. do this 5 or 6 times I also put a sprinkling of sand in there to add to the concrete texture. I then oven bake the flattened piece and when I need it break off the rough shapes I need. The folds form irregularities and pockets of air that when broken into give an easy and effective concrete effect like so.



Heres a couple of alternative views to show the rough placing I have gone for.





#### Step 4

We're not going crazy here it's always worth noting with any basing that the aim is to add to the models appearance not overpower or distract from it and often less is more. as long as what is there makes some kind of sense..

Next I offer up the models to check that the foot spacing is ok and i have enough area to attach the models securely.



#### The 40K one first.

Relatively straightforward just a little fiddling with the smaller piece on the left as we look at it to ensure the feet have a level setting. this is placed to the side to set at this stage.

The fantasy one is a little trickier...:



#### Step 5

Often when I am using slate as my base structure I like to build up a part of the slate effect with putty .. There are two reasons for this..

First up pinning into slate really takes it's toll on drill bits and often the pin itself is tricky to get a solid anchor without clearing all the dust out of the drilled hole.

Secondly and perhaps more importantly is I simply do not have time to search for exactly the right shaped piece of slate for every model I do. More often than not I find myself sculpting the full slate now but whether sculpting the full the full slate or just filling in the following method is both easy and effective..



#### Step 6

In this case this is the chaos chappy holding the high elf in his hand so I wanted to have the elf hanging off the edge of the rock after deciding the position I place a piece of putty under the back foot roughly the size of the rock I want. Next I take a piece of slate with a nicely textured side and after wetting it use it to shape the putty. I use a kind of rocking and slicing motion only moving the stone side-ways like so..



The texture from the stone does all the work for me and creates a stone effect that blends nicely into the existing stonework. I use the flat surface of the stone to add texture to the upper surface of the putty and I'm left with an effect like this..



### Step 7

One last thing I do to both bases before leaving them aside to dry is to use the ball stylus or any tool to hand really to add rough texture to the putty .. no design function just to provide a rough surface for the next stage.



### Step 8

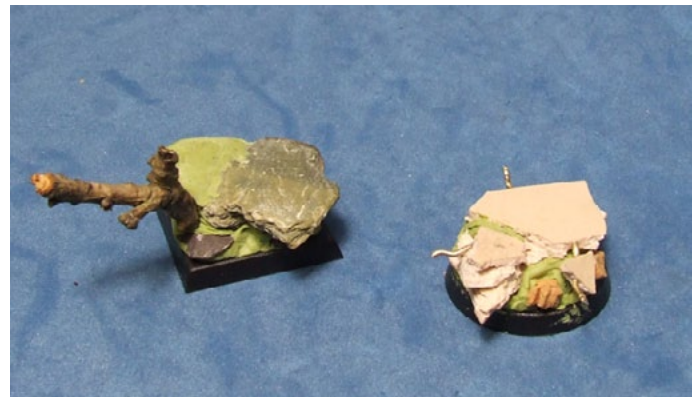
Okay almost there ...

I've decided here to put a couple of extra details on the base for a touch of additional character ..

On the fantasy base I am using a small twig.. Not looking to replicate a full tree or similar just give a little indication as to setting..

When I have chosen the piece I want and where it is going I drill a hole for the pin in the wood as far as I can go and also in the relevant point on the base.

For the concrete I have added in a little bit of extra detail using paperclip wire clipped short and twisted using clip-pers to sell the effect of reinforcement bars. this is emphasised further by taking a small piece of the concrete effect fimo and drilling a hole right through before gluing in the wire to give the effect that this is a small piece holding onto the wire as the concrete is broken up.



Now all the structure is in place the final stages are to fill and texture the base .

Enter vallejo grey pumice .. my favourite basing material . It paints on using an old brush and fills all the gaps nicely with a textured filler . this can be manipulated with the brush to provide interest in the forms of dips and lumps .

As can be seen now I take this layer up to the edge of the bases. hence leaving the gap originally .. it is best to keep the bottom of the base clean . while applying the paste it does have a tendency to go all over the place don't worry too much just make sure to uncover any covered details with clean water and the brush before the next stage . don't be afraid to bury pieces slightly this all adds to a more natural looking finish.



### Step 9

The last thing I now do is add some sand to the still wet paste . This isn't absolutely necessary but I find just a light sprinkling of sand will do a great job of adding variety to the texture and an overall more natural look. just lightly sprinkle and leave to dry overnight . What sand you use is entirely up to you I have several different grades types and mixes all have their uses. just make sure the sand is dry before you use it. In case you were wondering this is red desert sand lifted straight out of my lizards vivarium...

When the base is dry and the excess blown off a final check round the edges to remove stray material from the edges and you can spray your bases for painting.

I use black followed by grey spray for most of my bases but this is entirely your own choice of course...



Here are the bases ready for paint.

So there you have it .. as I say nice and simple starting point for your bases.. nothing groundbreaking but enough to hopefully get you started.

be great to get your thoughts on this article ..There will be a separate article covering painting and finishing bases soon .. have fun and would love to see any bases you produce.

Cheers for now.





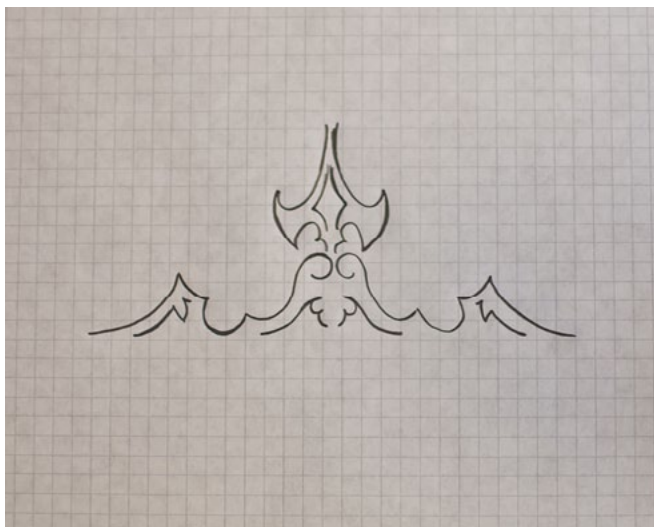
# FREEHAND ORNAMENTAL DESIGN

DANIEL LIETER

I have posted this in my blog, but wanted to bring you my freehand step by step on this platform too.

Let's get started!

First, i try to imagine, what the freehand should look in the end. Is it a tribal/floral design (like in this case) or is it a whole picture? I drew my design on paper before starting on the mini.



## Step 2

Next comes the (for me) most difficult step. I have to paint the lines with the base color (i wanted to achieve a golden Ornament) of the design. Take your time, but don't be afraid, if it does not look perfect. You can correct any mistakes later.

Basecolor in this case was snakebite leather with a little tip of bestial brown.



## Step 3

From now on the absolute fun begins, as it is not difficult from this stage on. Simply paint the first highlight on the lines. Place the highlights near the prominent parts of the cloak. First highlight here was snakebite leather with a tip of bleached bone.



#### Step 4

Next step: enhance highlights. Here with more bleached bone into the previous mix.



#### Step 5

Again: MORE highlights, even MORE bleached bone also shaded the lines in the cloaks recesses with a mixture of snakebite leather and dark flesh. Not too dark, just to define the lines more.



We come close to the end, now i corrected and sharpened the ornament by painting thinned chaos black as an (barely visibly) outline. This is the step where you can correct any errors, if your underground is not too complicated or irregular in color.



#### Step 7

And as a final step: some extreme highlights with pure skull white. And this is it, the ornament is ready.

I hope you liked this little SbS, comments (and maybe followers on my blog) are welcome





# WARGAMES TERRAIN AND BUILDINGS - NORTH AFRICA & THE MIDDLE EAST

*Author: Tony Harwood*

*Publisher: Pen and Sword*

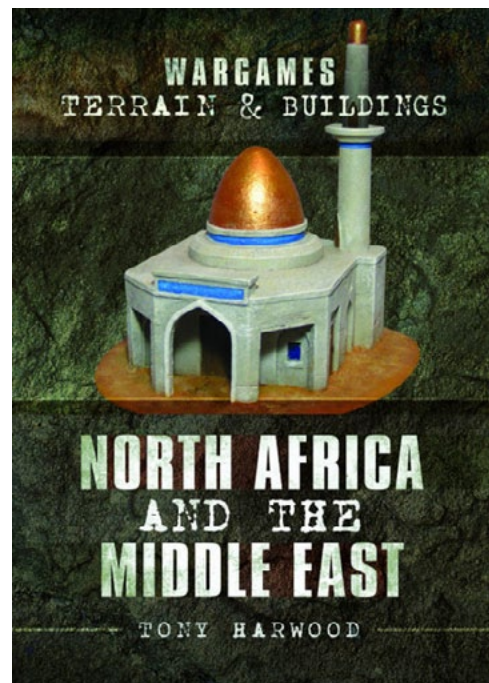
REVIEW BY JASON HUBBARD

This is the second book by Tony, his first book took in the popular Napoleonic gaming period. This time he's opted to cover the African and Middle East, both of whom have seen many conflicts and skirmishes down the centuries.

So, whether you plan to game the Roman Legions battling the Parthian Empire, the Crusades, recreating skirmishes in African continent or running a campaign in the WW2 Desert theatre. This book is definitely one you should probably have on your bookshelf.

As with the last book, this is again a paperback, it has around 150 packed pages of content. The author takes you through each project step by step with very clear easy to read instructions and equally clear photographs. The projects have been designed to give you a good range of scenic pieces of terrain to fill a battlefield.

I liked his last book; it was well written and easy to follow. This time he hasn't offered a range of projects in differing scales, but all of the projects in this book are presented in 28mm, part from two which are in 15mm. Though the author states that all of the projects can be re-sized to other scales, though I suspect the 15mm Gun boat will be an absolutely huge project to build in 28mm.

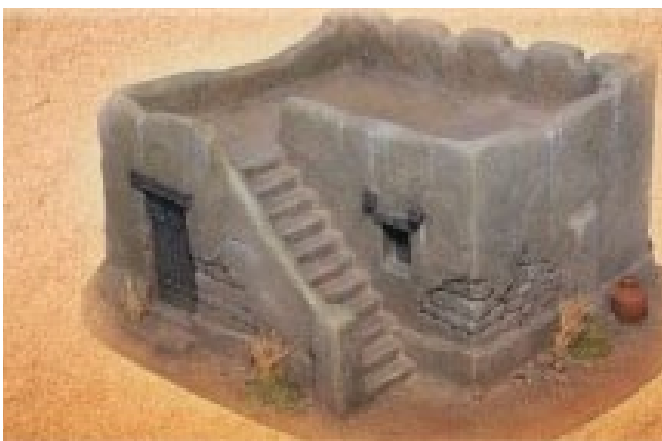


This is one of the books that most war-gamers who like building their own terrain from scratch should have this gem on their bookshelf.

This is one of the reasons why I like this book and Tony's previous edition, because in this age of great MDF kits the art of scratch building terrain seems to be losing its appeal and with it the skills required to build scenic pieces for the tabletop.

I'm tempted to have a go at building a 15mm gunboat, though I'm not sure what I'll do with it, once I've built it. Yet it does look like a fun project to get my teeth into.

This book will appeal to both the beginner and the more advanced hobbyist as there's plenty to offer both in this book.



# Creating Alien Landscapes

Vet Sgt



One of the best things about playing a science fiction-based miniatures game is the creative freedom you get when making terrain! The good news is that creating terrain is actually very easy to do when your imagination is the only restriction. Knowing this, we decided to experiment with ways to make good-looking alien flora as cheaply as possible. One of the techniques we came up with was reshaping everyday plastic objects with heat. We settled with a gooey transparent-green theme, but this could just as easily be done with differently colored or opaque materials.

## How-to

The material that will be used to make these plants is plastic. It is important to understand that the plastic must become pliable for many of these methods to work, which means heating them. Don't try to melt the plastic. Soft enough to bend without breaking is all you

need. You should take care to not go beyond that. If you have ever made the mistake of trying to stir a hot beverage with a cheap plastic spoon and had it go all "droopy" then you know exactly what to shoot for. Using a stove to heat your plastic is usually the best way, but even a simple candle will work. For our oven: 400°F for a few minutes worked well for most plastics. It isn't an exact science though, so be sure to keep a close eye until you find the right settings for your needs. A Pyrex dish is the best surface to heat the plastic if you are using a stove, since it won't stick and pops off easily enough. The heating surface will be significantly hotter than the plastic you are heating, so always use an oven mitt and spatula to pick up the plastic.

You will need to shape a lot of the plastic, which we do by hand. You should use a pair of thin leather gloves while doing this. Never tightly hold anything hot. If you work quickly and keep both the plastic and your hands moving,



only a small amount of heat will transfer to your hands. If an uncomfortable amount of heat reaches your hands through the gloves: you are doing something wrong! The time between when it is almost too hot to touch and when it is too cool to work with is narrow, so you have to work fast. You should try this a few times with a small amount of plastic to get the hang of it before you try doing it in mass.

## Utensils

### Forks

Let's start with something easy to work with: the fork. Break off the tines, stick the pointy end of the tines into a plastic bead for support, apply a little heat, and you now have your first utensil plant! This is one of the simplest plants to make, and is good to experiment with before trying others. Use a very low heat on these since you only want to get them warm enough to cause them to stick together and droop a little. The leaves can be easily bent while the plastic is still warm and soft for a more natural look.



A second method that works well with forks is to keep the tines together and just break off the handle. Warm them up enough to be able to fold the opposite sides together and form a squid shape. If you want a taller plant, leave the handle attached and roll it into a more rounded shape.

### Spoons

Spoons look like they are meant to hold something, so we like to mix in beads with some of these. You can heat the beads with the spoon or put them in after, depending on what look you want.

Here we heated up the spoon heads, used several of them to form a 'bowl' and put the stuck-together beads in separately.



### Knives

These were simple plants, made using knives and extra handles with the same basic techniques.

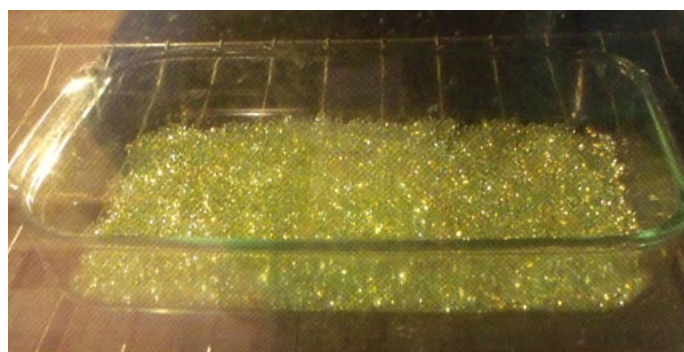


## Other Materials

### Pebbles

Pebbles make for great foliage clumps. If you can't find decorative plastic pebbles, small beads can work well too. Just like the utensil plants, we made these with heat. Once the plastic is hot enough to become spongy and stick together, start peeling it off in chunks.

We made the foliage clumps by mixing two shades of green and one of yellow. The trick with this is to get some plastic that is shaded close enough to blend, but still be noticeably different.





If you want to use them as-is try rolling them into cigars or other shapes.



They work great as tree tops. Try using them in combination with some utensil handles.



## Beads

Some beads have a rounded organic shape already, but even the very angular ones work great after they have been heated a little and lose the sharp edges.



The easiest way to use plastic beads is to clump them up and apply heat until they shrink just a little, sticking together. If you do this on top of rocks it makes a very convincing looking fungi or moss plant.



Many beads are designed to stack on top of themselves, making it easy to create tall/thin plants. Heating them may help some stacks look more natural. If you want to do something really tall (like a tree trunk), use a small piece of wire as an armature to keep it from falling over.



A different round bead or a smaller size of the same bead works nicely to finish off stacks.

If you happen to have any unused flying stand posts lying around, they can make stems to raise the beads up off the ground, especially when heated to get more organic shapes.





# The Art & Making of Fantasy Miniatures

Author; Jamie Kendall  
Publisher; Pen & Sword

Jason Hubbard



This is a lavish coffee table book for miniature soldiers, it's superbly illustrated throughout with exquisitely painted miniatures.

It's a hardback book of 238 pages in full colour. This really is a showcase for some of the best miniature sculptors and painters in the industry. The book shows the process from a piece of conceptual art to the finished miniature. What makes this book out standing are the 1000 plus images, which included artwork, figures in progress and finished painted miniatures lavishly illustrated throughout. The book is split into eleven main chapters, each focusing on a different figure manufacturer.

The book features miniatures from games and companies such as Aradia Miniatures, Alkemy (Alchemist Miniatures), Avatars of War, Godslayer (Megalith

Games), Guild Ball (Steamforged Games), Relicblade (Metal King Studio), WARMACHINE and HORDES (Privateer Press), RUMBLESAM (TTCCombat), Drakerys (Don't Panic Games), Kings of War (Mantic Games) and Freeblades (DGS Games).

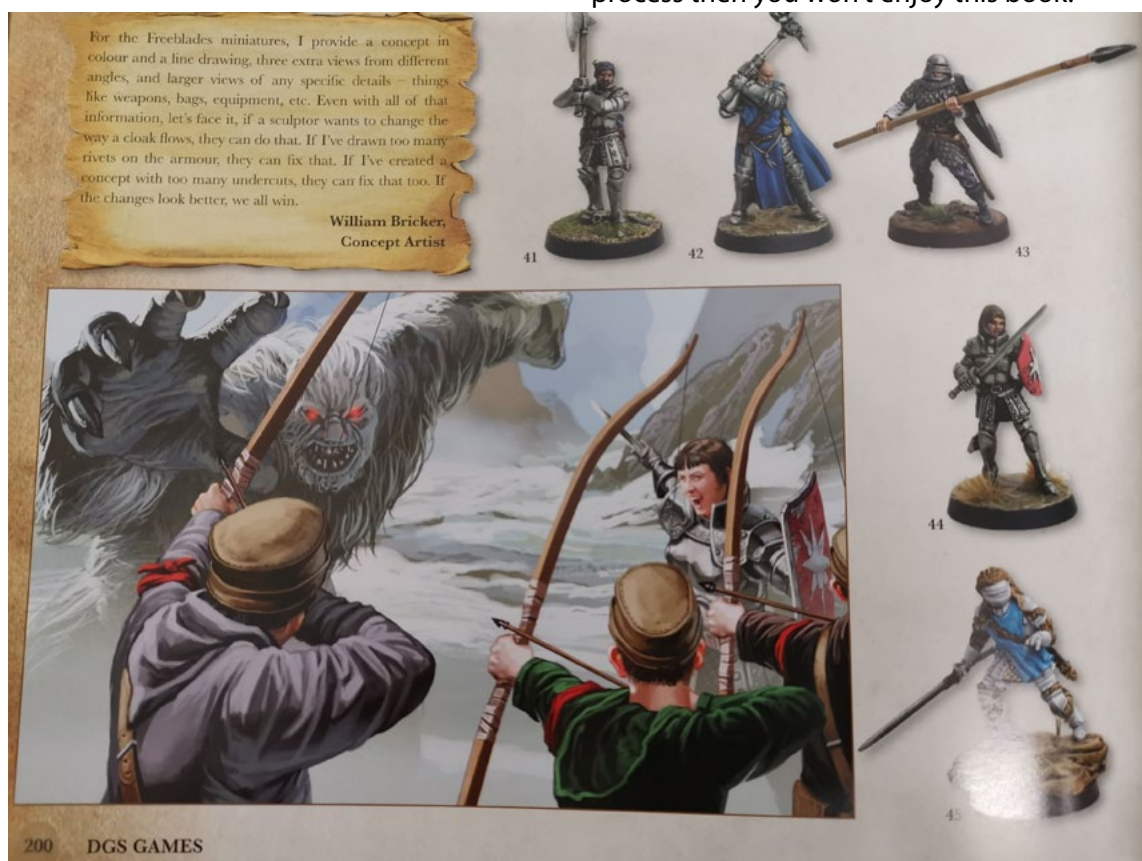




This isn't a step by step approach to designing and making a miniature, it really is a coffee table book. I really liked this book because as a hobbyist there aren't

many books like this, though as a graphic designer I have plenty of these books showcasing design, fonts and creativity. So, for me to find a similar book about painted miniatures was quite refreshing. I found it an excellent read, looking at the painted miniatures by some of the best in industry, painting skills I can only aspire to.

This is definitely one of those books that will appeal to some and be hated by others, mainly because actual content is thin on the ground and in some sections, extremely disappointing. It would make a nice gift for any hobbyist who likes to paint and remember not all gamers like the task of painting. I enjoyed reading the book, it covers some of the best companies producing miniatures today. This is an artbook rather than a guide to the design and production of miniatures, with that in mind you won't be disappointed if you're looking for an in-depth look at the design and sculpting process then you won't enjoy this book.





# CHAOS TREES

PAT OHTA

I wanted to make a new set of chaos trees to place on my swamp board.

These trees were inspired by ones I saw made by Sean P. These versions are very easy to make and will add lots of character to your board.

## Materials Needed:

Hot Glue  
Super Glue  
Rotary Tool  
Hobby Knife  
Hobby Saw  
Hobby Clippers  
Sculpting Tool  
Nylon Wash Cloth  
Action Figures  
Foam Board  
Aves Apoxie Sculpt  
Woodland Scenics Hob-e-Tac  
Woodland Scenics Tree Armatures  
Woodland Scenics Foliage Clusters  
Woodland Scenics Scenic Cement  
Basing Material

### Stage 1



You will need to have a collection of toy action figures. Spooky and evil looking ones will work the best

Start by washing all of the figures in a mild soap solution. This will help to remove any oils on the figure.

Once dry, dismember the entire doll. Use a rotary tool or clippers to break apart the legs, arms, torso and head. You should also remove any capes, bags and other accessories, as these items will not look very good on the tree.

Separate the body parts into trunk and branch piles. Good trunk pieces are torsos and thick legs. Good branch pieces are arms and skinny legs.

### Stage 2



Cut a small base out of foam board

### Stage 3



Pick out a torso piece and glue it onto the base with hot glue. Now you need to start designing the look of the tree. Place various branch parts on the tree, trying different combinations, and figure out what looks best. If any of the figure have joints that move, use CA glue to fix the join in place.



#### Stage 4



Once you decide on the look, use a rotary tool to make a hole for each branch, then hot glue the branches in place.

#### Stage 5



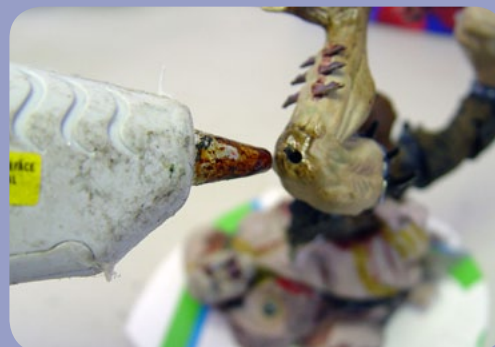
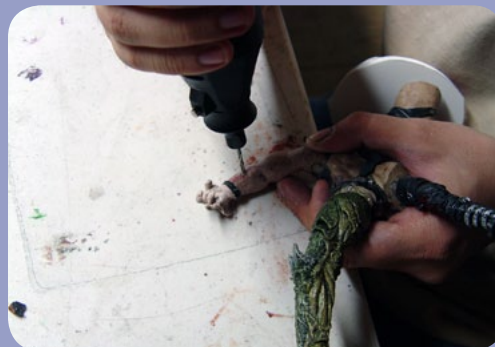
The main part of your tree is now done. To fill out the tree, add smaller branches onto the main branches. Use Woodland Scenic's Tree Armatures. These armatures are made out of K-Resin, a wireless bendable plastic. There are three different types of armatures per pack.

#### Stage 6



Choose an armature and twist the branches on it into a shape that you like. Be sure to spread them out and bend them up or down. I found it best to start from the bottom and twist clockwise, moving some branches up and some down.

#### Stage 7



Add these armatures to your chaos tree. Do this by drilling holes into the trees, then glue the armatures into place.



#### Stage 8

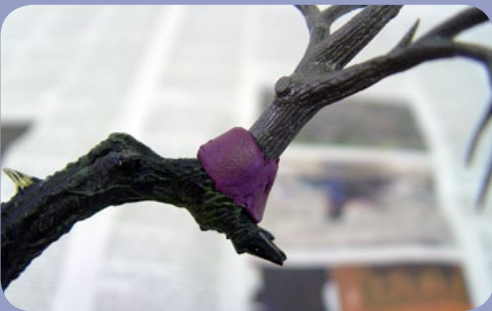


Use Apoxie Sculpt to cover all of the areas where the different parts are joined to each other. This will help blend the parts into each other and make the finished piece look more like a tree



Sculpt bark using a sculpting tool, or add texture to the Apoxie Sculpt by pressing a nylon wash cloth into it.

#### Stage 9



Mix equal portions of Apoxie Sculpt parts A and B. Spread the mixture over the branches. Press it in well so the Apoxie Sculpt adheres to the branches. Spread out the mixture and blend the Apoxie Sculpt with the tree

#### Stage 11



Bevel the edges of the foam core base, and glue rocks onto the base.

#### Stage 10

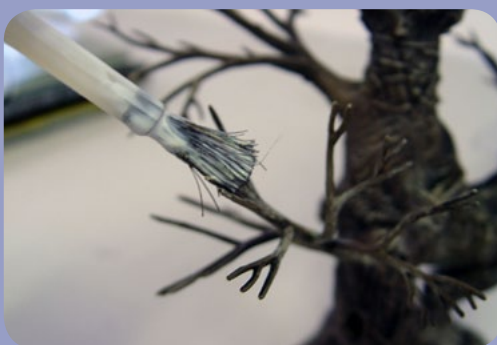


#### Stage 12



When the tree is dry, prime and paint it

### Stage 13



Now it's time to add leaves to the tree. To do this, first add Woodland Scenics Hob-e-Tac glue to the tree armatures. Hob-e-Tac is a fantastic extremely tacky adhesive. Allow the glue to dry for 15 minutes or until clear.

### Stage 14



Next break apart Woodland Scenics Foliage Clusters. The clusters come in several different colours, I used a mixture of light and dark greens.

### Stage 15



Break up the clusters and place them all in a container.

### Stage 16



Dip the tree into the clusters. The clusters will start to stick to the Hob-e-Tac. Roll the tree around to get the best coverage. Use your fingers to press the clusters onto the branches.

When you are done, seal the tree using Woodland Scenics Scenic Cement. Heavily spray the Scenic Cement on the tree. This will be absorbed into the foliage and help it bond to the tree.

Allow the tree to dry overnight.

Now you know how to make some quick and easy chaos trees!



# WARGAMES TERRAIN AND BUILDINGS - THE NAPOLEONIC PERIOD

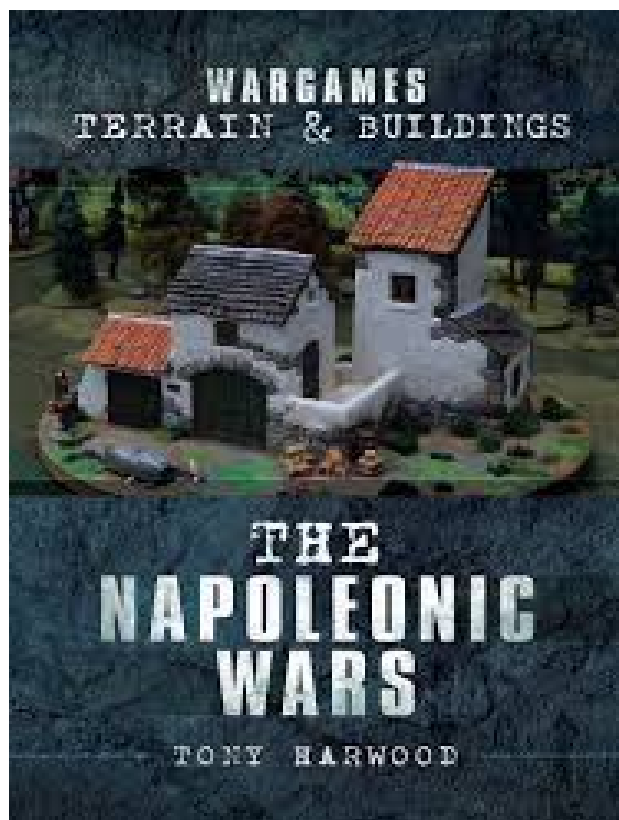
*Author: Tony Harwood*

*Publisher: Pen and Sword*

REVIEW BY JASON HUBBARD

Any miniature wargame is greatly enhanced by realistic and evocative scenery and buildings, but commercial ready-made pieces can be expensive. Building your own can be a cost-effective and very rewarding alternative, another hobby in itself, but it can be hard to know where to start. Wargames Terrain and Buildings is a series of books aimed at giving wargamers the skills, techniques and guidance they need to create their own stunning and practical model buildings.

In this volume, master modeller Tony Harwood shares his years of experience and presents the reader with a wide range of projects for the Napoleonic era. With the aid of step-by-step photographs, he guides the reader through building and finishing each of



these models, which are organized in three sections of increasing complexity and encompass a range of scales and different materials. Nine projects are included but the techniques and skills demonstrated along the way, along with valuable advice on tools, construction materials and paints, can be adapted and applied to a much wider range of structures to grace

your battlefields.

This book is great for one reason and one reason alone, it shows hobbyist how to scratch build scenery for the gaming table. In an age where we are surrounded by MDF and plastic kits it nice to see the old school skills and techniques on how to build terrain in what many would call old skool.



The author covers 9 different buildings in three different scales. The first section features a Russian Windmill in 15mm, A two story French House in 28mm, La Belle Alliance in 20mm. Section 2 features a French Pigeonnier, a Stone Built Well and a Russian Granary. The last section features a small bakery, a Hungarian Chapel and a Diorama.



There are some interesting projects in this book including modifying an MDF kit by Sarrissa, all of the projects utilise corrugated cardboard, balsa wood and green foam. The tutorials are well laid out in an easy to follow step by step with good images. I would say this is more suitable to the experienced hobbyist but the less experienced could easily follow along with the smaller projects such as the well before tackling some of the bigger and more complicated builds.

The one criticism I have for this book is that the buildings don't lend themselves to skirmish games, as they're one-piece buildings.



I would have preferred buildings where you can remove the roof and floors so that you have the ability to play through them. Yet this is a minor criticism, this book teaches the reader some of the skills which are being lost to pre-made plastic and MDF kits. Growing up if I wanted scenery, scratch building was the only way to get any. Also back then finding a book like this was hard, most of the time I had to rely on books aimed at the model railway enthusiast.



This is a good book for those wishing to build their own terrain and not rely on MDF or plastic kits. The skills required for this I feel are being lost in the hobby for the more convenience of purchasing easy to build model kits. So, I'm all for books such as this one that showcase and teach those skills and techniques.



# Painting Wargaming Figures: Early Imperial Romans

Author; Andy Singleton

Publisher; Pen & Sword

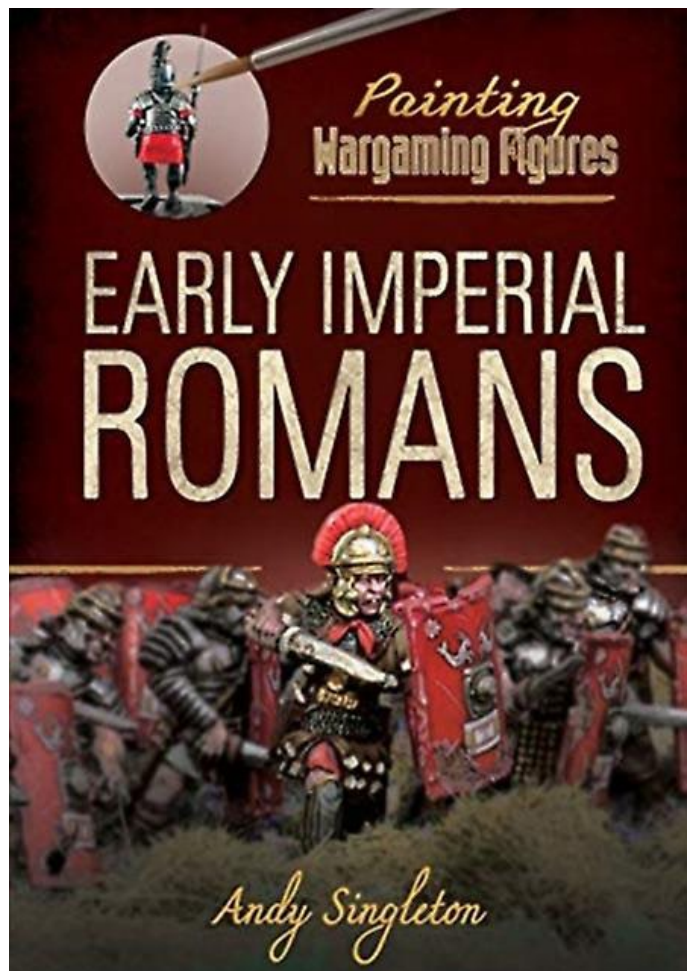
Jason Hubbard

In a previous issue we reviewed the Desert War Painting book by Andy, and we were very impressed by that book. This time Andy has turned his attention to the Roman of antiquity, and again we're impressed with the quality of this book.

It's paperback book at around of 120 pages long and broken down into eight chapters. In each chapter Andy covers painting an aspect of the Roman Legion soldier. He starts off each chapter looking at the historical aspects of the chapter topic. The first chapter of the book introduces you to the hobby of painting small soldiers and what tools you'll need. Chapters include Armor and weapons, Helmets, tunics and crests, cavalry horses, flesh tones and basing. The step by step painting guides come after the historical information.

These step by step guides are easy to follow with large close-up photographs showing you in very close detail. I found the flesh tones and basing chapters very useful as he suggested paint colours I wouldn't normally consider.

At the end of the book there is an appendix which has a very useful list of miniatures in varying scales and terrain manufacturers.



I really enjoyed reading this book and there was plenty of useful tips I gleaned from the painting guides. It's definitely a book for those starting out in painting miniatures, or for those wanting to push basic skills. For those who already have quite advanced skills there isn't much here for them. It's aimed at those who are building and painting a Roman army, and this book will provide some useful quick steps in getting that army painted along with some useful information about the Roman Legionary soldier. I would definitely recommend this book to anyone considering putting an army of Romans together.

# THE DARK AGE OF TANKS

## BRITAINS LOST ARMOUR 1945-1970

*Author: David Lister*

*Publisher: Pen and Sword*

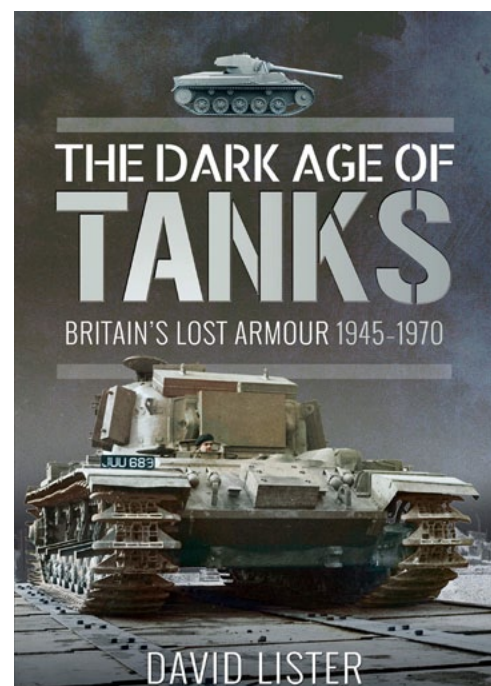
REVIEW BY JASON HUBBARD

In the thirty years after the second world war, the British army entered into a period of intense technological development. Due to the lack of surviving documents during this period is almost a dark age.

This is a handy sized paper back book just shy of 200 pages, it's broken down in to four parts with each part broken down again into separate chapters, totaling 15 altogether.

Each part looks at particular type of armoured vehicle, part 1: Armour of the line looks at the development of the battle tank, Part two concentrates investigates light armour, whilst part three covers infantry armour and the development of the AFV, the final part of the book takes a glimpse at rocket artillery. The majority of the vehicles covered in the book didn't make it past prototype, but they did push the development of those vehicle that did make it past prototype and into service with the British military.

I have to say I really enjoyed this book; it was an interesting eye opener in the development of the UK military armoured vehicles. Some of those prototypes could easily be built by modellers using kits of those vehicles that did make it into service.



Which is why I think this book will appeal to them more than wargamers. It's a great book for anyone interested in military history and the development of tanks used by the British.

Though this may appeal to some gamers, especially those playing Cold War gone hot type games such as Team Yankee, as it's a chance to convert vehicle kits to field unusual tanks or armoured vehicles, especially those being prototyped in the late 60's.

It's well worth a read, it was an enjoyable book, well written and researched that provides a fascinating insight to the types of vehicle designers and the military were considering during this period.



# IMAGES OF WAR

*Publisher; Pen and Sword*

JASON HUBBARD

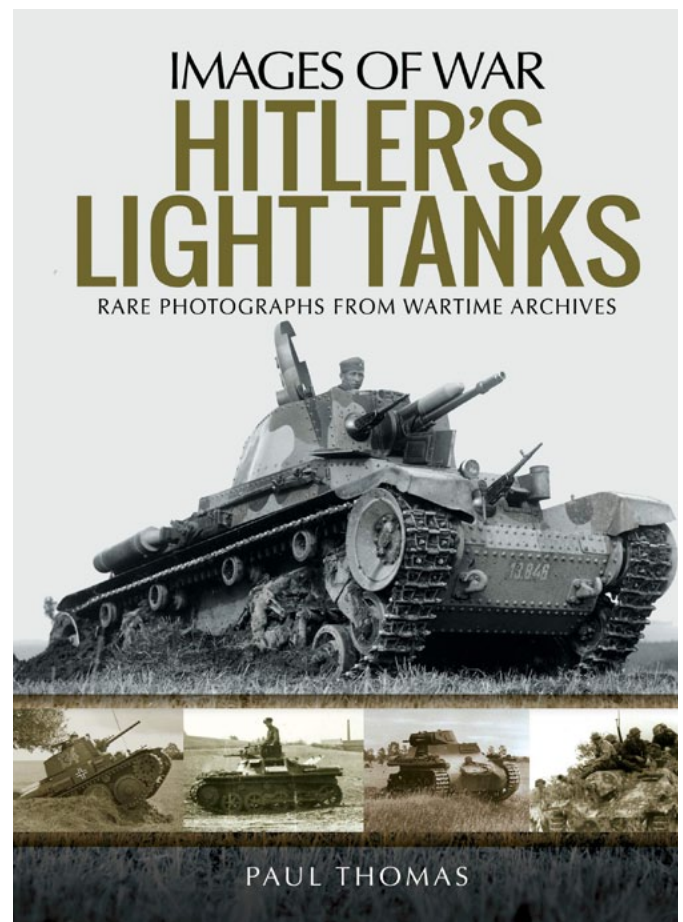
## Hitler's Light Tanks

Publisher: Pen & Sword Author: Paul Thomas

This book covers the complete range of light tanks in use by the German army during WW2. This includes technical specifications, combat use in theatre and variations all of which is lavishly illustrated throughout.

The book is a paperback, with 126 pages and is mostly images taken during the Second World War, all of which are captioned with useful information. What makes this interesting is the fact that many people don't generally pay much attention to the light tanks utilized by the German forces, they tend to gravitate to larger vehicles such as the Panther and Tiger tanks. Yet the light tanks formed the backbone of the Blitzkrieg tactics used by the advancing German army in the early part of the war, especially during the invasions of Poland and France.

The book has been broken down into four chapters covering the Blitzkrieg, Balkans and Eastern front and the final chapter 1943-45. Each chapter has roughly 3-4 pages of very useful information prior to the gallery of images. A lot of the images haven't been published previously or haven't done so in recent years.



As you'd expect from images taken under battlefield conditions that some have been technically taken better compared with others. So, don't be surprised if some are grainy and not as sharp as you'd expect. I found this book to be quite an interesting read. I would say that this book would be of interest to those thinking about building a German army for war-games such as Flames of War. It would also be very useful for modelers considering building a light tank kit.

I've found it very useful for finding some inspiration for my late German army for Flames of War. I decided to add some light tanks to my force after reading this book, it also prompted me to add a light tank to my growing Bolt Action army as well.

So, I'd definitely recommend this book for any gamer who is considering building a German army, whether you're planning an early, mid or late war army. This will be especially relevant for those who have or are building an early or mid-war force.



### Fall of Berlin

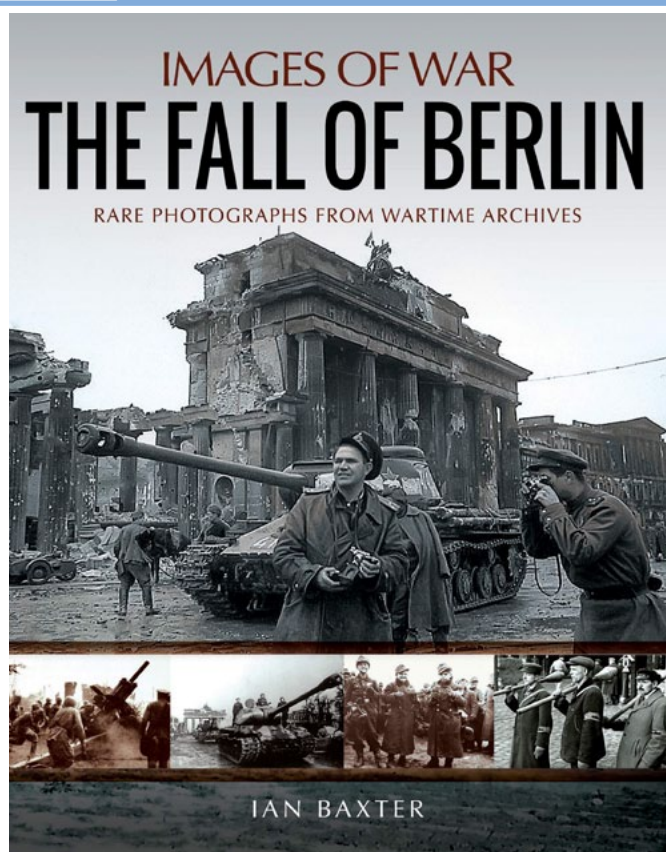
Publisher: Pen & Sword Author: Ian Baxter

Using an excellent range of wartime photographs of both Russian and German armies the author Ian Baxter superbly describes the last attempt by German forces to defend Berlin from assault by Russian army. When the Russian forces closed in on Berlin, they had almost a million soldier and 20,000 tanks at their disposal for their final push towards the German capital.

It turned out to be a costly battle with the Russians loosing 30,000 soldiers. This book captures that assault through the images of house to house fighting, artillery bombardment and the destruction of Berlin. The book as with common of this series of Images of War is a paperback at around 120 pages. It's broken



down into six chapters starting with an informative introduction, others are Vistula-Oder offensive, defence of Oder, battle of Halbe, the battle for Berlin and the final chapter is an order of battle section which includes a full list of units fighting in the battle for Berlin. This final chapter will be especially useful for wargamers looking to re-play this battle on the tabletop. As with all Images of War book it's superbly illustrated



throughout with some unseen images. I found this book very useful for terrain projects, also anyone thinking of building a gaming table to recreate this battle will find a lot of the images in this book a resourceful guide. Likewise, it'll be of great use for any modelers considering building a diorama set in this battle.

For myself I liked the Order of Battle section, as it allowed me to add some useful unit ideas, that I can add to my late war army to allow me to recreate this part of the war. This would allow me to change out my army so I could field it for a Berlin campaign. I would recommend to both war gamers and modelers alike, the information and images will provide a great resource for those with or are considering late war German or Russian armies.







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another issue in the Summer