

Ascending Scales

*A short guide on the suitability of vehicles for 28mm WWII wargaming
by Barry Hilton*

Introduction

Wargaming can be a costly hobby. You start collecting one range then find you can't get every figure or vehicle you need and so delve into other ranges to fill the gaps. Then you find that those ranges don't exactly match, resolve to get rid of the lot and start again only this time planning it properly! Well, that's my experience anyway, sound familiar?

My most recent, vexing and expensive conundrum involved sourcing vehicles to complement my expanding horde of 28mm WWII figures. Actually my first problem arose pre-vehicles. Of the figure ranges available in so called 28mm scale, many are not compatible. At the two ends of the size spectrum we have 'Little' such as **West Wind's Berlin or Bust** and 'Large' in the shape of **Chiltern Miniatures WWII** range. In between, in no particular order are **Artizan, Crusader, Foundry, Battle Honours, Bolt Action Miniatures, Black Tree Design** and several others whom I've probably missed. So that is the first choice, which figure range(s) to use? Up until fairly recently there were very few vehicles with which to support the infantry. That has all changed posing the gamer a further perplexing choice.

Scales

I am often asked where I get my vehicles, what matches with what and so forth. So, here is a short and very personal guide to what's available. My comments are of course based on my own tastes which I'm certain will not suit everyone.

Let's start with scale. There is a bewildering array of scales now available within the approximate band width of 28 mm figures. These range from 1/43rd utilized by **Corgi** for certain vehicles such as light weight wheeled trucks, staff cars and jeeps (why do they do that?) through to 1/60th, the scale used by **Force of Arms, Amazon Miniatures, Foundry** and **West Wind**. In between there is 1/56th the new (and true, if Tony Ashcroft is to be believed) scale to match 28mm used by **NZWM**, 1/50th used by **Corgi** for their pre painted die-cast/plastic vehicles, 1/48th the plastic kit scale used by the likes of **Frog-Fuman, Tamiya** and by **Amazon, Crusader Armor, Solido, Verem, Black Tree Design, Battle Honours, AllFronts Armor & Gasoline**. Some of the vehicles available in 1/48th are clearly nearer 1/45th.

I (and others I'm sure) am extremely frustrated by this lack of homogeneity. Commercially I don't understand it. There are enough internet user groups out there with hobbyists talking endlessly about nothing more interesting than painting flesh tones, so why don't the manufacturer's get talking about standardization? Metrification worked didn't it? (well maybe everywhere else but the UK and the US). I'm pretty certain that some standardization would assist sales not stymie them. The net result is, unless you want some unrealistic contrasts in your collection you'll need to plump for one of the above. 1/60th is not compatible with 1/48th. You may get away with 1/56th but anything bigger will look strange. A good benchmark is the **Foundry Kübelwagen**. Put it beside the die cast **Corgi** 1/50th or the **Black Tree Design** metal kit (more of them later) of the same vehicle and you'll see what I mean. Although this is a fine little model and the Kübel was a diminutive vehicle, the seats and interior space look far too small to accommodate four men and their equipment. I personally believe 1/60th vehicles to be undersized compared with the standard 28mm figure (**West Wind** excluded). I don't know about 1/56th because I've not gotten my hands on any of the **NZWM** kit yet. For my collection I chose a combination of 1/48th and 1/50th because the range of available models seemed widest and the proportion relative to my figures (**Foundry, Black Tree, Artizan & Crusader**) appears to my eye the most pleasing. There, I've said it and no doubt will be vilified for ever more.

Quality and availability

Let's move on to quality next. Having made the scale choice myself I must admit to some pangs of anxiety. John Bruce's **Force of Arms** offerings are of the highest standard and wide ranging in scope with a breath taking selection of artillery pieces. I have only one piece from this range in my collection and this is unavailable from any other manufacturer. Being a gun the scale thing is less of a problem than a wheeled or tracked vehicle for some strange reason. It's the sIG 150mm, quite superb. All other pieces I've seen are high on detail and accuracy and just what you would expect from John. The new range from **NZWM** does look very good. Growing in scope, customer centric and covering many early war vehicles not available anywhere else. I am sorely tempted to have a go with this stuff, oops STOP! mixing scales again. A small piece of advice from the wise, don't join their user group unless you are prepared for upward of thirty e mails per day relating to what one might describe as minutiae and wargamer's fantasy wish fulfillment. It took me four weeks and numerous requests to unsubscribe and I doubt whether I will join another user group this century.

Amazon curiously offers a limited number of vehicles in both 1/60th and 1/48th. These are high definition resin moulded pieces. Detail is very good but quality is variable. There are too many blow holes and a lot of 'clag' (my word) around the bogies. This wastes what are otherwise excellent models. The resin is rather brittle so be careful when filing, scraping and sanding. You can disguise the claggy areas by covering in PVA/water mix and dusting with sand to simulate mud and dirt build up. If you have one, use a mini drill to remove the solid resin between the wheels, this makes a big difference. Paul at **Amazon** has been threatening to re-do the tank guns in metal for a long time but as yet, no sign. The resin ones are far too brittle particularly on the 1/60th kits of which I had three before selling them. I am not conversant with the technical challenges of moulding in resin but 'blowholes' or 'pitting' appears to be a universal problem as does 'bubbling' which is a kind of reverse-pitting where the model grows lots of little surface skin tags! **Amazon** also does a nice range of metal support/AT guns. My only criticism here is the size of the Soviet 57mm. It is almost half the size of the **Black Tree** equivalent in the same scale. On a very positive note I have four of their 1/48th Panzer IIIs which with a little work look outstanding on the table.

The other resin manufacturers worthy of note are **WestWind Productions**, **CrusaderArmor** of California, **AllFrontsArmor** of Texas and **Gasoline**. The **WestWind** models concentrate on late war Western Front and are nice if also susceptible to brittleness, pitting and bubbling. As they are 1/60th I now have only two M3s deployed as Soviet command vehicles. **CrusaderArmor** has a high quality, simple to assemble and reasonably detailed range. They do not travel well as those I received testify. The resin is particularly brittle and the moulding can be of variable quality with paper thin sections which need rebuilding. They have a most curious wheel arrangement on the German tanks which also requires serious remedial work. All of the previously stated activities for resin models such as drilling out 'solids' between wheels applies to these models. I can say that the StuGBs and KV1c that I own are first class chunky models with real presence. I know that **Black Tree** had some imported **CrusaderArmor** in stock a few months back so UK punters might want to check this out.

AllFronts Armor has the largest range of all and a glance at the written list is mouth watering. I would advise a visit to their website before purchasing. If you know what to expect then the prices are very reasonable. Alas, not my cup of decaf. Generally speaking, American manufacturers are not easy to deal with outside the US. Many will not ship overseas or even transact on the net if your delivery address is not part of the Union. Their loss I suspect. Fortunately I have family over there so my tactic was; get them to order, pay and receive and then re direct. **CrusaderArmor** were very slow with my delivery which took over two months (that was to a US shipping address). Finally, **Gasoline**. These are French I think. They are exquisitely detailed but very pricey. The range is reasonably broad and refreshingly unconventional. I saw a painted Char B1 on sale in a model shop in Arromanches for £120.00 equivalent. They are available on the net and through

Parabellum of Birmingham (nice and helpful guys). If you want to buy in bulk then cancel your summer holidays for the next five years and spend it on **Gasoline** models, it may be worth it.

Now on to the metal manufacturers. **Battle Honours** no longer make or sell their vehicles. They did have a reasonably good range of late war stuff but alas over-use of the moulds has resulted in continued deterioration. My understanding is that they will not reappear in the future and the moulds will be laid to rest with honours on the other side of the Atlantic. Metal kits require a lot of work if they are to look anything other than thrown together. Straight from the packaging they can look very poor indeed. Whatever glue you use needs to be strong. Two part epoxy is probably better than superglue. There may be a need to fill liberally with body putty or milliput equivalent. Detail is usually much lower than a resin kit and nowhere near plastic injection-moulding levels. Flash can also be a significant annoyance. Although some of my metal stuff is amongst the best I have, it is solely because of the amount of work put in. If you see any **Battle Honours** kit on a Bring and Buy my advice would be, take it. It was too pricey at retail rates but the second hand market is much more realistic.

Black Tree Design produces several interesting vehicles however these are perhaps the most frustrating offerings of all. They are capable of looking good but they are not for the faint hearted. Most of the bodies are five or more parts. They do not fit together remotely well. There are no assembly instructions. They require large amounts of filing, shaping, bending and filler. It took me over twelve hours to complete an Sdkfz222 (mis-listed as a 221). If you are not a modeller then beware. Metal does not flow well into large or deep mould cavities so there can be many casting defects such as incomplete parts, short flow, pitting, flash and brittleness. Sounding a bit anal there I know but I'm actually a metallurgist by profession! In their defence, I must say that the **Black Tree** guys have always been really helpful when it came to replacement parts and good results can be achieved if adequate time is taken.

Plastic kits offer the best detail. They take a fair amount of time to build but they are aimed at modellers not wargamers. **Frog-Fuman** produced a wonderful range which seems to have re emerged over the last few months. I understood them to be out of production so I think someone is hoarding pallets and dripping them onto the market. They can currently be had from Parabellum and North Star (Nick seemed to have a fair few at Triples last year). The rarer ones can be a touch pricey but they are very good value. I recommend using other decals as the ones supplied with the kits can be a little insipid colour-wise. Plastic kits also have the benefit of being light to carry. Disadvantages include assembly time (although I enjoyed it, probably because of the second chance to use that polystyrene cement which I sniffed at school), brittleness of certain small parts and flash. My advice again would be snap 'em up if you come across them. **Tamiya** also do the odd kit in 1/48th such as a Kettenkrad.

And so to the die casts. **Corgi's** 1/50th range is fantastic value. These are relatively high detail pre painted models. A wargames equivalent of Latte `to go'. It is difficult to fault what you get for your money. The RRP for these vehicles is high but they generally go for less than 50% of this. A canny Aberdonian friend of mine (no names no pack drill, eh Kevin?) managed to pick some up for £9.00 in their boxes in a shop in the West Marches (of England not Aberdeen). The range is expanding and the D-Day commemorative models contain an outstanding Cromwell. I have repainted all of mine purely out of choice.

A couple of tips if you want to try this for yourself. Heat the model over a warm radiator this will soften the tracks enough for them to be slipped off easily (they are rubber). This will make the painting much more straightforward. If the vehicle is a one colour job such as Russian Green, don't repaint the base colour but simply dry brush in a lighter shade of the existing colour and then wash down in inks. The drybrushing will give the inks something to 'key' on. Give a final dry brush in a highlight colour after this. The Korean War *Forgotten Heroes* range is where I got my Soviet T34/85s. These are superb models. Fill the die casting line around the turret with Italeri model putty or similar and sand down. File off the mould lines on the fuel tanks and paint out the Korean ID numbers. Dry brush up two green highlights, wash down in a brown/yellow ink and then highlight with a final dry brush. Apply new decals, dry brush or airbrush mud and dust and Robert is your father's brother. It is almost a shame to base these vehicles but doing so will protect your paintwork if you've invested the time.

Solido/Verem, I've never found out whether this is one company or two. I do know that they are French. At first glance, they can appear somewhat toyish but don't be fooled by the packaging. The range is pretty wide although I have never been able to find a definitive list. The pieces are a combination of plastic and metal and I guess can be used straight from the box. I prefer to paint mine from scratch as the plastic base colours are a little like the polythene moulded efforts offered by Airfix in the 1960s and the decals used are pretty naff. The painting process is straightforward. In my experience, no need to prime, simply start from the base colour you intend for the vehicle. I always dry brush up from the darkest colour but some vehicle painters use a mid colour and wash down in darker shades. A distinctive feature of **Solido/Verem** models is their extremely chunky, shiny metal tracks. Perhaps a touch out of scale but easily 'disguised'. The idler wheels on these models are spring loaded so the tracks can be removed without bother. Take them off before painting and put them aside. I paint the tracks in a red brown mix before replacing them. Paint the vehicles and slip the tracks back just before the final dusting/weathering process. As a final touch, lightly dry brush the tracks and sharp corners of the vehicle in a silver or gunmetal colour. As my vehicles are all mounted on 80 thou plasticard, I superglue all moveable suspension and traction parts before attaching to the base. I also suggest that you turn the models upside down and drip super glue through the bottom of the tracks onto the bogies. This will ensure that when you base, the weight of lifting (when moving around your table) is not placed solely on a tenuous join between small track sections and the vehicle's base mount. A fair bit of detail is moulded into these vehicles such as headlights, hausers and tools. A little care can bring all of that detail up. There is much to be said for **Solido/Verem** not least the price. Anyone fortunate enough to holiday in France will find that most models are no more than £12.00 there. In the UK they can be anything up to £20.00 and in Spain recently I saw one at 39 Euro. In the interests of balance I must point out a few negatives but in context, these are minor issues. On some of the larger models the drive wheels are overlarge and out of alignment with the rest of the suspension. This I suspect is purely to accommodate those 'chunky tracks'. The muzzle of the Tiger's gun looks like the sink plunger attached to the front of a Dalek and occasionally the two die cast halves of some vehicles are not well joined. This final imperfection can be handled with glue and filler. I own perhaps twenty five **Solido/Verem** pieces in various shapes and forms and thoroughly recommend them on the basis of choice, quality and value for money.

Conversions

There is a gentleman somewhere in the South of England who undertakes some wonderful conversions on **Solido/Verem** models. I obtained all of mine through Julian Edwards of Chiltern Miniatures. I have a Brummbar, two JagdPanzer IVs (one of which is the high profile interim design), two JagdPz35/47mm an SU122 and a T34/85. The work quality is very high indeed and repainted, they look most imposing. I apologize for the cloak and dagger description of the artisan but I don't know his name! If you are interested, Julian may be able to help. The conversions approximately double (and in some cases triple) the cost of the vehicle but for a 'special' I think most gamers would pay. I have also noticed that another guy in Southern England is selling unusual **Solido/Verem** specials on e-bay occasionally. These seem to go for prices in excess of £30 but are perhaps rare.

Painting

I am not a vehicle modeller. My techniques are rough and probably heretical. This is due to my impatience and the necessity of producing large numbers in a short time. I have offered some tips in the text so far and I think should leave it there for now. I have bought an airbrush but am never at home long enough to learn how to use it and so for now will stick to my large brush and wash techniques.

Applying decals

Decals can make or break a vehicle. Your paint job can be wasted by a shiny transfer whose edges catch the light. I was shown a great method for getting that 'painted on' look by Julian Edwards and it is really simple. Paint a thin layer of gloss varnish over the area in which you wish to apply the decal. When dry, apply the decal using a suitable alcohol based solution or water. When dry, coat thinly is 'microsol' which is a softening solution which gently melts the decal. When dry apply a thin coat of matt varnish by brush over the area. Repeat this step if there is still a slight sheen after the first coat. Finally, drybrush/weather the area and perhaps apply a final spray coat of matt varnish. Looks good doesn't it?

Aerials/Antennae

In most cases except the **Corgi** (good quality wire) and the **Solido/Verem** (poor quality polythene) you'll need to make your own aerials. My suggestion is, make the mount out of a piece of sprue plastic. Cut a suitable aerial from a long outdoor brush which has synthetic bristles (yes my shed is full of follicly? challenged cleaning tools). Drill a small hole with a mini drill and secure the aerial with superglue. Paint and 'crop' to the right size. A flexible aerial will take a few knocks, a brittle one presents the same headache that faces all gamers when transporting figures equipped with pikes and long spears!

Conclusion

I hope this article answers most of the questions. As with most aspects of the hobby it is down to personal taste and choices. Roll 'em!

Comari-table 28mm figures with 28mm vehicles

Key: H = Highly Compatible, A = Acceptable, X = Not compatible

Vehicles	Figures							
	WestWind	Crusader	Artizan	Foundry	Black Tree	BAM	Battle Honours	Chiltern
Westwind	H	X	X	A	A	?	A	X
Amazon 1/60th	H	X	X	A	A	H?	A	X
NZWM	H	?	?	?	?	H	?	X
Force of Arms	H	?	?	?	?	H?	?	X
CrusaderArmor	A	H	H	H	H	?	A	A
AllFronts	?	?	?	?	?	?	?	?
Solido/Verem	A	H	H	H	H	?	H	A
Corgi	A	H	H	H	H	?	H	A?
Black Tree	A	H	H	H	H	?	H	A?
Gasoline	?	?	?	?	?	?	?	A
Fuman	A	H	H	H	H	?	H	A
Battle Honours	A	H	H	H	H	?	H	A?
Amazon 1/48th	A	H	H	H	H	?	H	A

Comari-table 28mm vehicles with 28mm vehicles

Key: H = Highly Compatible, A = Acceptable, X = Not compatible

Vehicles	Vehicles												
	WW	Am 60	NZ	FoA	Cru	AF	SoV	Cor	BT	Gas	Fum	BH	Am 48
Westwind	H	H	H	H	X	?	X	X	X	X	X	X	X
Amazon 1/60th	H	H	H	H	X	?	X	X	X	X	X	X	X
NZWM	H	H	H	H	X	?	X	X	X	X	X	X	X
Force of Arms	H	H	H	H	X	?	X	X	X	X	X	X	X
CrusaderArmor	X	X	X	X	H	?	A	A	A	?	H	H	H
AllFronts	?	?	?	?	?	H	?	?	?	?	?	?	?
Solido/Verem	X	X	X	X	A	?	H	H	H	?	A	A	A
Corgi	X	X	X	X	A	?	H	H	H	?	A	A	A
Black Tree	X	X	X	X	A	?	H	H	H	?	A	A	A
Gasoline	X	X	X	X	?	?	?	?	?	H	?	?	?
Fuman	X	X	X	X	H	?	A	A	A	?	H	H	H
Battle Honours	X	X	X	X	A	?	A	A	A	?	H	H	H
Amazon 1/48th	X	X	X	X	H	?	A	A	A	?	H	H	H