Photo 1. Decal layout for an MFA Piranha fast electric boat. The trim lines, arrows and racing numbers were all produced using Microsoft Word. The insignia and other images (including a comic Piranha!) were found on the internet.

DIY Decals

By ARMANDO LONI

The diverse and colourful range of liveries employed by our offshore racing colleagues has long impressed me. In addition to facilitating easy identification at a distance, such marking schemes are representative of individual taste and imagination. This can be extended to models produced from mass-produced kits. If like me, you want your models to be different, uniqueness can be achieved through a combination of alternative paint and marking schemes. Scratch building is perhaps the ultimate way of being individual when it comes to model making, and some modellers will therefore always have a requirement to

produce accurate markings to the scale of choice. Whilst paint schemes are relatively easy to change, preparing custom markings presents an interesting challenge.

Vinyl and rub-down decals

A range of aftermarket products, such as Trimline from Model Technics and graphics, numbers and letters from BECC Flags are available to the modeller. These tend to be of the self-adhesive, vinyl-type. With a layer comprising both the vinyl and adhesive backing, these have an inherent thickness and can stand proud of the model surface. Although ideal for 'stand-off' models and acceptable in some of the medium

to larger scales, they do not really convey that 'painted-on' look and are less realistic for smaller scale models. The ranges available are many and varied, but more unusual markings can only be catered for by custom designs and whilst there are companies that offer this service, such one-off products can be expensive. Transfers of the rub-down type are much thinner and a range of font styles and sizes are available from the likes of Letraset, but again these are limited in terms of specific designs, particularly when it comes to graphics.

Waterslide decals

Those of us who apprenticed in plastic models are familiar with the use of waterslide decals. These are applied to the model by first soaking the decal in water, then positioning it on the model and sliding it off the backing paper onto the model surface and allowing to dry. Over the years, several specialist manufacturers have come into the marketplace which cater for the plastic kit scene. A visit to the Microscale Industries website gives a good indication as to the range of decals that can be procured commercially. Getting the correct decal in the correct scale can however prove to be difficult, especially for maritime models in scales not catered for by the mainstream manufacturers. Whilst aftermarket products undoubtedly satisfy 'standard' markings, custom waterslide decal schemes require a different approach.

Decal paper

A few years ago, a fellow club member introduced me to a product called Decal Paper, available from the Crafty Computer Paper Company. Decal Paper looks just like normal photocopy/printer paper but is slightly thicker and glossy on one side. It consists of a sacrificial backing paper (typically A4 in size) with an extremely thin decal film formed on one side (the glossy side). The images or graphics required are transferred to the decal paper and removed and applied to the model in the same way as waterslide decals. In order to prepare and print out custom decals, all that is required is a personal computer or laptop with standard word processing and/or suitable drawing, painting and imaging software, plus of course a colour printer. Two different types of paper are available, one for laser printers and one for inkjet printers. The former is best, as the laser ink is waterproof and higher resolutions can be attained. If using the inkjet printer, the printed decal paper must be sealed by spraying with a waterproof varnish. The system has been used successfully by many in the modelling fraternity and some offshore powerboat racing competitors have had their work displayed on the Crafty Computer Paper Company website. A search of the online auction website eBay will also list other suppliers and manufacturers of suitable decal paper.

Getting started

Personal designs are prepared and laid out using standard computer software packages or by scanning. The Internet can provide access to a multitude of non-copyright images, photographs and graphics. Images can be edited using image and/or photo software and 'cut and pasted' into a Microsoft (MS) Word document. Lettering and numbers can be chosen from the different font types available in MS Word and applications such as Clipart and Autoshapes can provide additional graphics. With a bit of trial and error, everything can be re-sized according to the scale required. The design is then printed out as a document on the decal paper, **Photo 1**. As it so happens, I don't have personal access to a colour laser printer, so I use the local high street print shops. All you have to do is to take
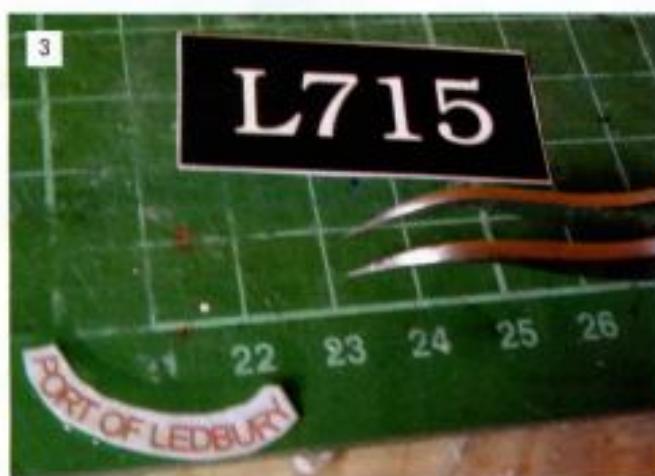
Photo 2. Part layout for a fishing boat and Vietnam river patrol boat.

Photo 3. The decals are separated from the printed decal paper by careful cutting.

Photo 4. Soaking the decal in water softens the adhesive.

Photo 5. The decal is positioned on the model surface and slid-off the backing paper.

Photo 6. Decals have been gently pressed to remove residual solution and air bubbles and allowed to dry.

the file to them on either a memory stick or a CD, together with the decal paper, and they will print it out for about 50p per sheet. Tell them to print it onto the glossy surface of the paper and they will usually first run a test using normal printer paper. The special decal paper itself retails at around £1.50 per sheet when purchased in bulk. It therefore makes good sense to plan ahead and incorporate markings for a number of different boats on a single sheet as in **Photo 2**. Alternatively, if only a small area of the decal paper is used, cut the area not required (either before or after printing) and stick it on to normal paper with Spray Mount adhesive for future use.

Applying the decals

After printing, the decals are cut out as close to the printed image as possible, **Photo 3**, and immersed in water for about one minute, **Photo 4**. This partially releases the decal film from the backing paper. The decal is then positioned onto the surface of the painted model and 'slid off' the backing paper as in **Photo 5**. Excess water, adhesive and air bubbles are then removed by gently pressing down onto the painted surface with a cloth, **Photo 6**, although care must be taken with this step as the decal film is very thin and fragile. That essentially is it, but there are some further permutations worth bearing in mind.

Varieties of decal paper

Each type of decal paper is available in two forms, namely clear and white. It is important to remember that colour printers do not use white ink, so any white areas on an image will show up as clear when printed on a non-white background. If the required image has any white areas, it is therefore important to print on white decal paper. The subsequent decal would of course require very precise cutting out in order to avoid white outer edges. Alternatively, and this is the method I always use, the transparent decal paper can be used in combination with white-coloured Microscale Trim Film, which is a waterslide decal film. As

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Photo 7. Products available from Microscale Industries which enhance and improve decal application.

Photo 8. Custom paint job and decals for the MFA Piranha.

Photo 9. High resolution non-copyright images can be copied from the internet and these are for a Vietnam era river patrol boat. The period-style 'pin-up' posters and river maps were found on the internet and re-sized for 1:24 scale.

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Even a compass dial can be made as a decal using domestic computer software and the internet.

Useful websites

Model Technics: www.modeltechnics.com
BECC Flags: www.becc.co.uk
Letraset: www.letraset.com
Microscale Industries: www.microscale.com
Crafty Computer Paper Company: www.craftycomputerpaper.co.uk
Hannants: www.hannants.co.uk

it so happens, a full range of other solid colours are also available from a number of retailers including Hannants, **Photo 7**.

The white Trim Film is used as a backing for the decal formed on the transparent film. This white film is cut to the same size as the decal (or slightly larger) and applied to the model surface first. When dry, the printed decal is applied over the white film and any excess at the edges can be trimmed by scoring with a sharp scalpel blade or craft knife. A greater depth of colour is achieved when printing on the white decal paper or by backing the printed transparent decal in this way. Generally it is best to use clear paper on a light painted surface or white paper on dark surfaces. Trim Film itself, can offer the modeller some degree of flexibility when creating decals. I have created various types of flag decals by careful cutting of red, blue and white Trim Film, placing successive pieces on top of each other. Clear Trim Film (and the solid colours) can also be written on or painted and once coated with Microscale Liquid Decal Film (a brush-on

product), the markings become sealed to the Trim Film and it can be applied to the model in the usual way.

Surface adhesion

How well the decals adhere to the model depends on two factors. Firstly, the cleanliness of the model surface and secondly, perhaps more importantly, the paint type used.

Matt paint or matt varnish provides a rough finish. Decals will not adhere well to this as air bubbles can be trapped between the rough paint surface and decal, resulting in the well-known 'silvering' effect where the outer edges of the decal film are visible. Plastic modellers go to great lengths to avoid this, with the aim of minimising any surrounding (transparent) edges of the decal on the model. The best way is to apply the decals to a smooth, non-porous gloss surface that is either paint or a clear varnish. Decal conformity (that 'painted-on' look) can be improved by using the Microscale system, involving 'Microset' and 'Microsol' solutions which are also known as 'Superset' and 'Supersol', **Photo 7**. The former facilitates a clean surface on the model and the latter acts to soften the decal film and facilitate coverage over irregular surfaces such as rivets, panel lines or hull plating. These products are optional and are normally only used for some decals supplied with plastic model kits, the quality of which can be somewhat varied, depending on manufacturer. The decal film from Decal Paper is generally superior.

Once the decal has completely dried, usually after a couple of hours, the surface is washed to clean off any adhesive residue. At this stage, it is best to seal the decals to the model surface by applying a topcoat of varnish which acts both to protect the decal from water, which may ultimately lift the decal back off again, and potential damage. It will also help to blend the decal into the surrounding paintwork as in **Photo 8**. Boat models are normally finished off with a couple of coats of varnish, anyway. Often gloss first, then additional gloss, satin or matt, depending on the type of boat being modelled.

Conclusion

The resolution achievable with Decal Paper depends on the software and printer setup, and can be quite high as in **Photo 9**. With a bit of imagination, one can also use homemade decals to create instrument panels, compass dials and other types of equipment and signs. So there we are then, If you have a need for a custom marking scheme, try making your own! ●

Het aanbrengen van decals (transfers) die met lauwwarm water worden losgeweekt van hun drager, kunnen een model maken of breken. Hier laat MBM een veilige en vlugge manier zien om kleine decals aan te brengen, zonder de angst dat de draagfilm door glinstering zichtbaar blijft! (Note: In Nederland is Johnsons Klear (Future) verkrijgbaar als: 'Pledge Parket Plus' bij de supermarkt.
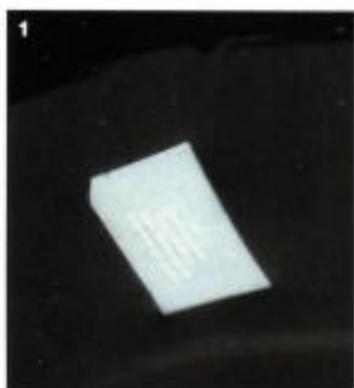
1-Week de decal in lauwwarmwater tot hij van de drager kan worden afgegleden. Deze decal werd verkozen als voorbeeld, omdat deze veel dragerfilm heeft rondom de tekst en daardoor veel glinstering kan veroorzaken.


2-Breng 'Johnson's Klear' aan op de gebieden waar de decal moet komen. Voor kleine gebieden is een penseel goed geschikt. Bij veel grotere gebieden is de airbrush beter.

3-Gebruik je wijsvinger om overtollig water te verwijderen van de achterkant van de decal.

4-Dompel de decal dan onder in een beetje 'Johnsons Klear' en laat het een beetje uitlekken.
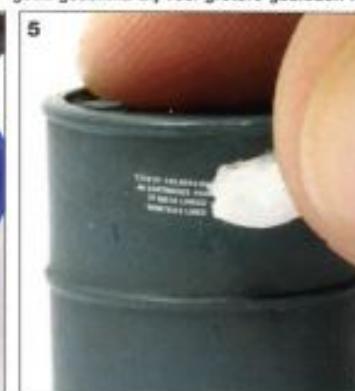
5-Gebruik een zacht stukje doek of keukenrol en druk de decal voorzichtig op zijn plaats. Veeg de overtollige 'Johnson's Klear' (of Parket Plus) weg.

6-Nadat dit is gedroogd, breng je een laagje matte vernis aan. Nu heb je een perfect aangebrachte decal zonder glinstering.

Roest-strepen en plekken

MBM toont een simpele manier om roeststrepen en roestplekken aan te brengen. Abteilung 502 olieverf werd verkozen vanwege hun ultrafijne pigmenten en uitstekende kleurenreeks.

Voorbeeld

1-Allereerst werd een kras aangebracht. Voor de snelheid kies ik voor Vallego Model Color Acryllics. Een ander voordeel is dat zowel olieverf als terpentine ('white spirit') geen invloed hebben op deze acrylverf. De keuze van de kleur van de kras is afhankelijk van de 'oudheid' van de beschadiging. Voor duidelijkheid wordt hier German camouflage black/green gebruikt.

2-De volgende stap houdt in dat je verticale strepen maakt vanaf de kras naar beneden. Voor de individuele krassen is dat in dit geval 'German Ochre' (Duits oker).. Doe de laagst zittende krassen het laatst.
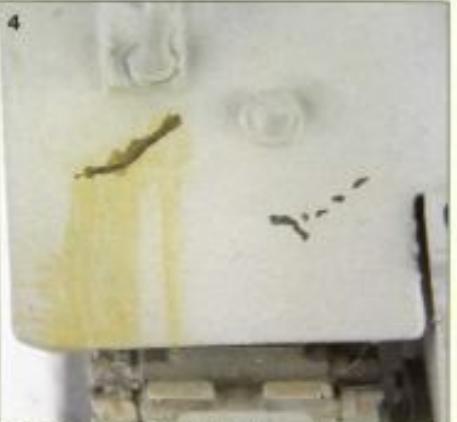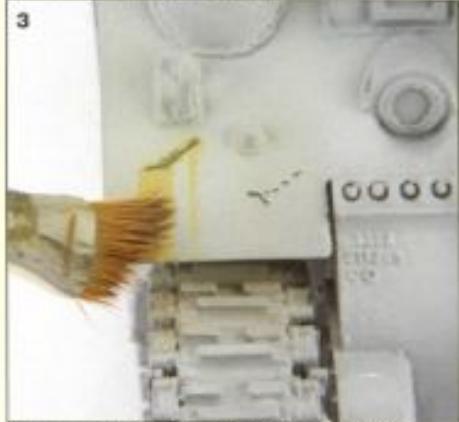
3-De aangebrachte strepen worden nu, gebruik makend van een plat penseel, vermengd en ingewassen. Door dit meerdere keren te doen (of verf aan te brengen) kun je gemakkelijk je kleursterkte bepalen.

4-Hier kunnen we zien dat de oker volledig is vemengd. Het beoogte doel is een subtiele vlek met genoeg overtuigend effect.

5-De laatste stap is om de donkerste kleur aan te brengen (in dit geval een donkerder roest-kleur) vanuit diverse punten van de kras. Doe dit in het midden van de okerkleurige gebieden. Uiteindelijk zal een vermenging met het geheel een overtuigend effect bewerkstelligen.