

**2. Masking.** I avoided dealing with multi colour paint schemes earlier as I do not think it is the place to start, but as there are some quite elaborate liveries around it is something that you will have to deal with sooner or later. A cab that, say, has a white roof and black mudguards can probably be tackled by spraying the main colour and then handpainting the roof and mudguards in enamels using a good quality brush and a steady hand. You could also spray paint these areas by masking. If you are going to mask always start with the lightest colour, say, white for the roof. When you are absolutely sure that the first colour paint is dry place masking tape around the roof gutter and on the roof surface until you are sure it is completely protected. Sometimes it is necessary to cut special shapes with a sharp knife. Ensure the edges of the tape are pushed down before spraying. Spray light coats of the next colour and allow to dry before removing the masking. With experience, quite complex colour schemes can be created by masking. The tape to use for this is not actually masking tape, but *Sellotape Drafting Tape* which has a low tack adhesive, you should be able to obtain this from good stationer.

**3. Airbrushing.** If you are going to build a lot of kits it could be worth buying an airbrush. There are some advantages to this system, not least that it is quite possible to use it indoors. It also allows you to mix colours and to control carefully the amount of paint you put on. The advice is as for any other tool you buy, go for the best you can afford, read the instructions carefully and practice on something that does not matter first.

**4. Conversions.** Even with the wide range of models available in 1:50 scale the time will come when you want to make a model of something that is not quite standard - a longer or shorter chassis, a different body etc. This is probably the stage where you need to invest in more tools and I would suggest the following: A razor saw; A wider selection of files, coarse and fine; A miniature electric drill. Milliput is the greatest aid to conversion, it sticks so well to metal and can be drilled, filed and sanded easily. Plastic card is also useful to build up sections, it can be bonded to metal with super glue or Milliput. Once you start the possibilities need only be limited by your imagination!

I hope that, if you have not built a white metal kit before, this leaflet will encourage you to have a go. If there is anything you think I have not covered please let me know and I will do my best to help. Any of your own tips and advice can be included in a future issue of this guide. Particular thanks to *Ashley Coghill* for his valuable assistance in the preparation of this guide.

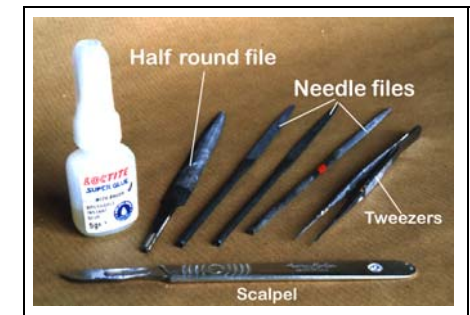
### SUPPLIERS

Your local model shop may be able to supply most of the tools and materials mentioned. Car aerosol paints can be found in **Halfords**. Soldering supplies may be found in a model railway shop or you could contact: **Alec Tiranti Ltd., 70 High Street, Theale, Reading, Berks. RG7 5AR Tel:0118 930 2775** - this is also a source for milliput, files and other items.

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## Guide to White Metal Modelling

by Geoff Moorhouse



**What is White Metal anyway?** - White metal is basically a tin/lead alloy with various other elements added depending on the type of casting required. It has a low melting point and is 'soft' to work with. Some types of white metal can be brittle whereas others are flexible, smaller parts are often cast in a 'high tin' metal which allows some bending.

**Why White Metal?** - The costs for producing a white metal kit are relatively low compared with other means of casting such as pressure die-castings, (as used by Corgi etc.), or injection moulding, (used for plastic kits). It is therefore a means of producing models that would not normally be considered by larger manufacturers and thus you will find that a much wider range is available in white metal than elsewhere.

**Do I really want to build a kit anyway?.....** When white metal kits first appeared there were very few truck models of any sort around, whereas today there is much more choice for the collector. If you have the time and ability to build a kit you will have the chance to place something very individual in your collection that is almost certainly more accurate and detailed than a ready made die cast. If you are looking for a particular truck, a metal kit may be the only choice as big manufacturers tend only to make the most popular vehicles.

It may be that, after considering all this, you do not feel entirely confident to tackle a kit. Here are two suggestions: Either start with the simplest kit and take your time, (the advantage of white metal is that if you do make a mess you can easily pull it all apart, clean it off and start again.), or, as I did many years ago, have a go at converting some ready made models i.e. by adding extra detail, changing wheels and so on - you will soon get the confidence to try something more complicated.

**1:50 Scale is brilliant! .....** If you have always built 1:24 scale plastic kits you may disagree, but many people do find it to be the ideal scale for truck modelling: 1) because it is a good size to include plenty of detail without the need for a second home to store your collection. 2) It is the scale that fits with many ranges of die cast models such as Tekno, Conrad, Corgi etc.

**Do I need special tools and equipment to build the kits?.....** You do need some tools to tackle a white metal kit, but most people will have something suitable around the house. My basic list would be: **A craft knife**, for trimming any 'flash'. **A coarse half**

**round file**, for cleaning off any excess material or joint lines. A **half round needle file**, for finer work. **Emery paper** for rubbing down filler and paint. A **pair of tweezers**, for placing smaller items. **Blu Tack** is a useful assembly aid for holding parts while glue sets.

Initially I would suggest using 'Super-Glue', (the new bottle with a brush in the cap is particularly good), or 5-minute epoxy glue for assembly, soldering is also possible - more about this later. A filler may be useful and I would thoroughly recommend '**Milliput**' **Superfine white** for which I have no doubt you will find many other uses. Most kinds of paint can be used: Humbrol for hand painting or airbrushing. Car Aerosol Sprays can also be used or whatever you prefer.

***So what do I do with this box of bits?.....*** The first thing is to ***carefully*** empty all the parts out and check them against the parts list and instruction diagram. Once you are familiar with the parts and where they fit you can start to do a 'dry run', fitting the parts together without glue - this will quickly highlight any cleaning up that is needed.

**Assembly** - The general rule throughout should be **TAKE YOUR TIME**. It is usually possible to assemble some parts before painting, whatever type of glue chosen, use the minimum amount. Blu Tack may come in useful here to hold a part in place while the glue sets. Once the subassemblies are complete it is time to check for any filling required. Blend a little 'Milliput' together with your fingers and apply to gaps etc. with knife blade, gentle warmth can be used to speed setting time. When set rub down with emery paper or a file.

**Painting** - A good paint finish can make or break the end result. Careful preparation and patience are essential here. The first step is to make sure that the castings are clean, this is best done by gently scrubbing in warm soapy water, (with an old toothbrush, perhaps?), rinsing and then leaving to dry. Whatever type of paint you choose you decide to use, an undercoat will help the final finish. Use matt white for bright colours, (Red, Yellow etc.), grey for darker colours, (Green, Blue etc.). Several light coats are better than one thick one, allowing time to dry between each coat. The undercoat will tend to highlight any badly prepared areas that might need additional filling or rubbing down, so get to work with soap and wet emery if needed, making sure you rinse and dry again, of course. If you are applying the final coat by brush, practice your technique on something else first, work quickly, use the best quality brush you can afford. You probably will not be able to coat all the casting in one go, so finish your coat at a natural edge where a join will not show. Clean your brush thoroughly in brush cleaner/white spirit. If you are using a quality enamel, such as Humbrol, one coat may be enough in this case. Spray painting will generally give the best results, if you are relatively new to kit building I suggest that you use car aerosol sprays, you will find that there is a good range of colours and each can will probably cover several models. You will need a special area for spraying - a spray booth can be made from an old cardboard box. These sprays must be used out of doors or in a garage, shed or similar because of fumes, (read instructions on the can). It is also necessary to have a method of keeping the castings off the base of the box, some people suspend parts by cotton from a bar or they can be stood on old spray can lids etc. Parts like a chassis must be painted in two goes, be sure that one side is fully dry before turning to coat the other side. Several light coats are once again recommended.

A tip: place the spray can in some warm water before use. Do not be disheartened if it all goes wrong, this happens to even the most experienced of us and is all part of the learning process - if necessary dip all metal parts in thinners or paint stripper and start again!

Final assembly - When you are happy with the paint finish you can continue with assembly, but with more care, perhaps. Cab interiors can be hand painted with a suitable Humbrol enamel and then you must consider fitting the window moulding. This is a point for special care. One piece window mouldings are fairly straightforward, it is just a case of careful trimming with a sharp pair of scissors and fixing. **DO NOT USE SUPER GLUE FOR FIXING WINDOWS**. Use a general purpose glue or contact adhesive perhaps. Moulded windscreens and windows cut from flat sheet need particular care and patience, my current recommendation on these is to fix using a good quality PVA glue, (such as wood glue), this is water soluble and dries clear. Place the window in position and hold it there with Blu Tack, carefully brush some PVA glue around the edges and then find something else to do for a while. If you do go wrong with the windows, the manufacturer will normally supply a replacement.

You should now be ready to put all the painted bits together, if you using super glue be particularly careful and use the smallest amount. It is probably helpful to clean the paint off mating areas before gluing. When fitting tyres to wheels it may be helpful to soften them in hot water. If you want the wheels to turn particular care in fitting them onto the axle rods is needed - a small; drop of glue on the end of the axle rod should suffice, ensure that the wheels run fairly true before the glue sets.

Final detailing such as indicators, sidelights, wipers etc. can be picked out using a fine brush and enamels paints. If you have transfers to fit these should be dipped in water for a few seconds and left briefly. Use a soft paint brush to slide the transfer off the backing paper onto the model and to guide into the correct position - now dry with a tissue, check position and leave to dry. Transfers, (Decals), can be protected with clear varnish if require

***More advanced stuff.....1. Soldering.*** If you can master the art of soldering it is by far the quickest, neatest and strongest method of assembly, if you get it wrong a very precious kit can be written off! What you need to get started is a good quality soldering iron, this should be either a very low wattage, I recommend 15watt for most light assembly, or a variable power iron that will also tackle heavy sections. A stand incorporating a sponge for wiping the iron tip is useful. Only use very low melting point solder together with liquid flux, (see last page for suppliers). Initially practice on some scrap material, scrape clean the two surfaces to be soldered and apply a little flux with a plastic handled paintbrush, clean the tip of the hot iron on the wet sponge and pick up a little solder on the end of your iron. Apply the iron to the joint and hold there until the castings heat up sufficiently to allow the solder to run into the joint, allow to set and wash away any excess flux, (it is corrosive). The mistake most people make is to use a too powerful iron which put too much heat into the casting and melts it, by using a low power iron and low melting point solder you should never reach the melting point of the white metal. A 25watt iron will cope with thicker castings.