

## Card Modelling Hints and Tips

### Basic Tools Needed:

Those of you who are already scale modellers but have not assembled paper models before will be happy to know that there is considerable “cross-over” of both tools and skills. It is possible to assemble these models with only a scissors and a bottle of white glue, but I highly recommend the following tools and supplies in addition:

1. An X-Acto knife or similar very sharp craft knife or scalpel.
2. A cutting mat (use one of the “self-healing” mats sold at craft supply stores)
3. Small needle-nosed pliers
4. Various sizes of metal binder clips, clothes pins, or small clamps
5. A mounted pin or a cocktail stick(s) for applying glue.
6. Felt-tip markers, inks or water-colour paints. This is for colouring edges.
7. Glue. I use white PVA glue but others recommend cyano-acrylate (superglue) and several other types.
8. Scissors
9. A steel ruler – possibly two – a small 15cm one for small jobs and a longer 30cm one for longer cuts/scores.
10. “Dead” Ball Point Pen (no more ink) for scoring. This is a personal choice some people prefer other methods, such as a knife with a blunt blade.
11. Tweezers – straight and angled.



My personal kit also includes a box of steel pins and a special tool for cutting arcs and circles (12)

Most of the above items can be obtained from a good craft supply store like Hobbycraft, or by mail order.

### Paper/Card selection:

In the US and most other places, this craft is known as “paper modelling”, while in the UK we generally call them “card models”. Either way, the materials are the same. I consider that “paper” is the stuff from 60 gsm (grams per square metre\*) up to 100 gsm. Anything heavier than that, I would call “card”, and if it’s really heavy, I’d call that “board” – as in picture-framing mounting

board (which is often useful for forming stiff bases under models).

I use 160-180 gsm card for most parts of the models, and 200-220 gsm card for parts that I want to remain stiff, like large walls. The principle is this – if a part is intended to curve or form some complex shape, use thinner card (160 gsm) but if it's going to stay flat, use thicker card (200 gsm). I usually put a printing recommendation on the model pages. Use good quality card / paper in your printer. If you have a colour inkjet printer, use the special paper so the colours and details of your model look good. Print to high quality – usually selecting “photo” and “plain paper” in the printer settings.

\*These designations are used in the UK and the rest of Europe . The US and other parts of the world may use different units for paper weights.

### **Cutting tips:**

- First of all, the part should be separated from the rest of the sheet by cutting roughly around it with scissors. Don't attempt to cut on the lines at this stage. Once the part is separated, you can work on it without fear of damaging other parts. Usually, it's best to do the scoring and folding before proceeding to the fine cutting. Especially with small parts and narrow tabs, it's easier to fold them neatly while there is still waste paper around the part.
- Once the part has been scored and folded, lay it flat again and cut to the outline. There are three methods of cutting: scissors, knife, and chisel. Scissors are used for most curves, as it's very difficult to cut curves freehand with a knife. For sharp curves, it's easier to first make a cut about 3 mm outside the outline, then cut on the outline. With only a thin strip on the waste side, the waste paper doesn't push against the scissors, and it's easier to guide them.
- A knife guided by a straight edge is used for straight cuts. Unless the line is very short, it is very difficult to make an accurate straight cut with scissors. Use a steel straight edge, line it up with the cut, and draw the knife along the edge. Don't try to cut through in one go – make a light pass first so that you have a groove for the blade to follow on the next cutting pass. Needless to say, the guiding steel rule **MUST** be held absolutely still throughout.
- Chisel cuts can be made with the tip of a knife, or with small chisel blades you often see in craft-knife sets. These cuts are useful for curves and areas too small to get into with scissors. Use the chisel or knife tip to 'nibble' your way around the outline. Chisel cuts are also useful as 'stop cuts', when you have a straight cuts that intersect at an interior angle. Small chisel cuts made before cutting the line make it possible to feel when to stop cutting. This is useful with both knife and scissor cuts.
- The printed cutting lines have some width, of course, and this introduces some limit on how precisely the cut can be made. If the outlines are thick, I usually find it's best to try to split the line with the cut.

### **Folding:**

There are two types of fold –

Mountain folds – fold “away” from the printed side. Score this type of fold from the printed side and fold “downwards”.

Valley folds – fold “towards” the printed side. Score from the other side. The way to do

this is to make small holes with a pin or the end of your knife blade outside the part, in line with the fold line, then turn over the sheet and “join up” the holes with a score line.

### Procedural Details:

A few things you can do to make your models look really good when finished.

- Always dry fit (no glue) pieces before you glue them. It helps to know exactly where and how pieces will fit together so you don't run into any surprises.
- To get crisp folds, use a steel straight edge as a kind of “press break” to support and apply even pressure along the score line.
- Laminating or doubling card stock. I often find that a card model may sag or warp if the card is not thick enough, so it is sometimes advisable to increase the thickness by laminating a part to another (sometimes thicker) piece of scrap card. I save cereal packets for just this purpose! The laminating is best done using a spray adhesive such as those sold for mounting photographs etc. Not cheap, but very useful. Remember that you will get a very sticky over-spray, so it's often best to do this out-doors, or at least in a place protected by large sheets of newspaper. You'll get sticky fingers too, if you hold the part with your bare hands, so use some long tweezers to hold it if you can. (Just laying it on the ground/table to spray it is risky as you can easily blow the parts away!) Laminating is also sometimes advised for small parts like window-bottoms that stand out in relief on the face of a model. In this case, laminate the parts BEFORE cutting them out.
- Finish the edges of your model. A printer can't print on the edge of the paper, so this edge will show white on a model that may be dark green or blue. Use some coloured pencils or pens or paints to colour the exposed edges, usually before gluing the parts together but sometimes afterwards. Where a scored fold is going to expose white paper, colour this also.
- Moisture, whether in the atmosphere or in glue and paint, is bad for your card model. After finishing a model, seal it with several light, thin coats of artist's matt medium or clear flat spray.

