



this 'people's car,' or 'volkswagen,' became a sensation. During its 57 years in production the VW Beetle sold an incredible 21.5 million units, shaping European car design in the process.

The other small car to have a huge influence on European design came about thanks to a technological genius by the name of Alec Issigonis. His tiny car for BMC had the engine positioned sideways (or transversely) at the front and the wheels pushed right to the corners. He even put the seams on the outside, all of which created extra space inside for the driver and passengers. The car was aptly named the Mini.

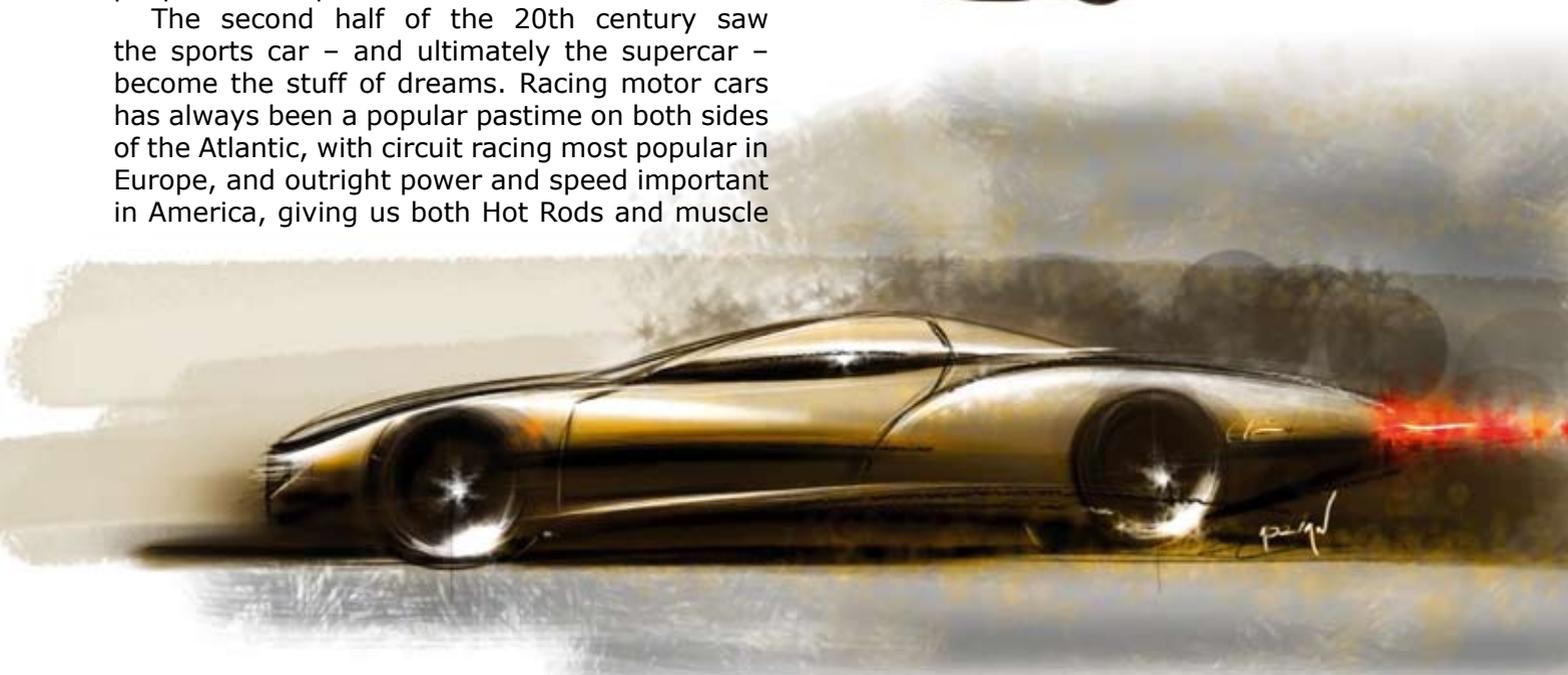
Most modern cars now have transverse engines, and this simple design has helped designers shape the cars of today, making the humble, classless Mini a design classic. To quote Issigonis: "I feel so very proud that so many people have copied me."

The second half of the 20th century saw the sports car – and ultimately the supercar – become the stuff of dreams. Racing motor cars has always been a popular pastime on both sides of the Atlantic, with circuit racing most popular in Europe, and outright power and speed important in America, giving us both Hot Rods and muscle

cars. Suddenly, everyone aspired to own a Corvette, a Mustang, a Ferrari or a Porsche.

Some cars were so beautiful that more than one designer would lay claim to a certain design, such as the Lamborghini Miura. Some have even appeared in art galleries, like the Jaguar E-type which appeared in the New York Museum of Modern Art. These fabulous machines would cause people to stop and stare; teenage boys stuck posters of Countachs and Testarossas on their bedroom walls.

Where will car designers take us in the 21st century? We need to be more aware of our environment, find new methods of propelling our vehicles, save space within the car, but still create an attractive package. The challenges have never been greater for the car designer, but that is what designers thrive on. Cars can come in all shapes and sizes; the only limitations are our imaginations. The posters of Countachs and Testarossas have been replaced by ones of Veyrons and Enzos: perhaps, one day, these will be replaced by posters of *your* car designs ...



OTHER USEFUL TOOLS

In addition to the methods, materials and equipment mentioned so far, there are a number of other tools that are handy to have in your art box.

- ruler for straight lines
- pencil sharpener
- thin paintbrush for adding highlight spots
- white acrylic paint or gouache
- a set of curves or French curves
- circle templates
- ellipse guides
- talcum powder – handy to mix with chalk pastel dust to soften it
- a sharp artist's knife and cutting mat for cutting out drawings to paste onto a background
- Spray mount adhesive
- fixative, for securing pastel artwork to paper

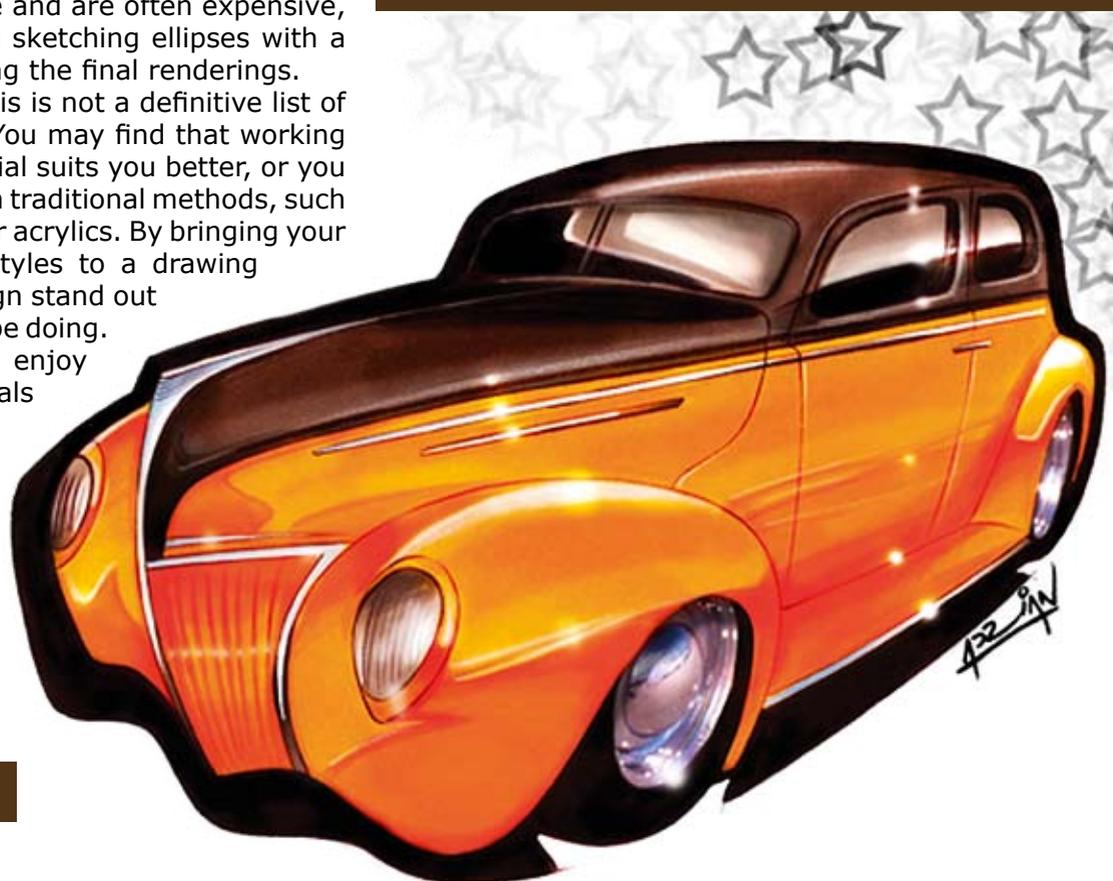
Most of these materials should be easily sourced from your local stationers or art store, though some may be slightly more difficult to get hold of. For example, a full set of ellipse guides may not be readily available and are often expensive, so it's worth practising sketching ellipses with a steady hand when doing the final renderings.

Bear in mind that this is not a definitive list of what you should use. You may find that working with a particular material suits you better, or you may enjoy working with traditional methods, such as watercolour paints or acrylics. By bringing your own techniques and styles to a drawing you can make the design stand out from what others may be doing.

The main thing is to enjoy using your materials and having fun when creating designs.

This drawing of a Hot Rod used a lot of the equipment mentioned. It was initially drawn using an automatic pencil, and then the main blocks of colour were added using warm grey and orange markers. The white highlight areas on the bonnet and roof were added with a white pencil, and the reflections on the main bodywork of the car were drawn using orange and scarlet colouring pencils. The details were filled in using various shades of cool grey marker. A black marker completed this stage of the drawing by putting reflections on the glass area, outlining the edges of the drawing to make the orange stand out, and filling in the areas of the tyres.

The drawing was then scanned and opened up in Photoshop, where the wheels were cut and pasted in from a photograph, the white highlights were added with the Vivid Light blending mode to make the car look really shiny, and the star background added. It is a good example of how using a variety of tools can create a really vibrant and eye-catching drawing.



I often do quick sketch designs and artist impressions of how a car may look once it comes back from the body shop, and this green Mitsubishi is an example of one of these projects. The car's owner, Amy, decided she wanted a change of colour for the new season, and asked me to come up with a few ideas to help with her

decision. One of my first ideas was to paint the car white, in keeping with the popular trend of clean design, but retaining some of the green so that it would still be recognizable as the same car: an evolution in colour, you could call it. Produced in Photoshop, this low angle drawing highlighted where the new green paintwork would go.



The other choice of colour in this project was black, in an effort to make the car appear more evil and stealthy, but again I wanted to retain a certain amount of green. This quick Photoshop 'Chop' – essentially a modification of an original photograph, which can be a very quick way of working out a colour change or slight alteration – was produced to show how it would look in black. This technique is used a lot in the modification business and can be approached in a number

of ways. In fact, I could probably write a whole book solely on Chopping!

One interesting feature in this picture is the Mitsubishi badge duplicated in the paintwork at the rear of the car. I used a photograph of the logo and then, making a pattern of this in Photoshop, wrapped the rear of the car in it. I think it is extremely effective in giving the car a racing feel.





This rear view of the F1 car above is probably one of the most difficult drawings I've ever done, as the surfaces change direction in a number of ways because of the creases and folds. When attempting a drawing with this level of difficulty, it's important to get your initial sketches right before proceeding, otherwise no matter how well you render the design it will look wrong.

The drawing below is probably my favourite of the three F1 designs in this chapter. It shows a lot of dynamism, it's highly detailed at the front, and yet quite sketchy at the back, giving an impression of distance. The complete drawing took around two days, working freehand with an electronic pen and graphics tablet in Photoshop.



As a fan of the cars produced in the Maranello factory in northern Italy, I often seem to find myself drawing Ferraris. This idea for a new small Ferrari has been influenced by many Ferrari features of the past.



Taking the small Ferrari idea further, I ended up with this design. Most of the time designers start off with very extreme concept cars and tone them down for production. With these Ferrari designs I took the opposite approach.

