

*Scale Colour for Modellers on blog.quintoapp.com *FREE* shipping on qualifying offers.*

This article aims at offering my view about this kit construction, adding some improvements I considered necessary so as to make a worthy scale model. By Gary Wickham Advanced techniques: This model was started before Tamiya announced their kit, and I have to admit that during this build I did consider scrapping it more than once. In the end, I am very glad I did not. Despite the challenges and limitations of this kit, I am very happy and proud of the end result. Even, many are on service today in some third world countries, and until a few years ago, in Europe, they were seeing action in the former Yugoslavia. Among all the versions developed, this accomplished by the Egyptian, is the one that seems more attractive to me. It was not a tank in the strict meaning of the word since it served as tank killer, however, in the pictures of that period, they can be seen as infantry support tanks. From that moment on, my affair with which, I think is the best scale car kit ever produced, began. And here my comment: To my knowledge, the Z was an improved copy of the Honda CBFour and, as it was common to Japanese manufacturers, each new model included several versions in order to cover the requirements of the Japanese police. I sent an E-mail to him and he kindly sent me pictures and larger resolution scale drawings. No matter how, the only way to have it, is to get down to work, and I did so. In , I decided to build all the versions, at least the available kits. At that moment I realized that to speak about the Sherman, you have to know a lot about it, and that is almost impossible to build all the versions. Anyway, I went on reading and learning about Shermans, mainly the Israeli versions, just to check the little I know and the great many variants that are nearly impossible to list. It was at a modelers meeting when he received a homage and the joke consisted of letting him know the arduous remodeling and restoration work he would have with this rusted Mustang. I took advantage of my work and presented it in a contest that took place in Campinas city. I will have to make another rusted model for me. As is my custom. This is not an article for you to copy exactly what I did, but it may give you ideas of how to or get the basic things you need to build two versions of the M

Chapter 2 : Scale World, kit instructions and paint charts

Book Description: This book investigates the formations of masculinity in Hungarian cinema after the fall of communism and explores some of the cultural phenomena of the years following the regime change.

Practical requirements[edit] Practical concerns include the cost to construct the model, available test facilities to condition and observe the model, the availability of certain materials, and even who will build it. Practical requirements are often very diverse depending on the purpose of the scale model and they all must be considered to have a successful scale model experience. As an example, perhaps an aerospace company needs to test a new wing shape. In this case, concessions must be made for practical reasons to the similitude requirements. An example of this from fluid dynamics is flow of a liquid in a horizontal pipe. For this flow configuration, however, no surface tension is involved, so the Weber number is inappropriate. Also, compression of the fluid is not applicable, so the Mach number can be disregarded. Finally, gravity is not responsible for the flow, so the Froude number can also be disregarded. This leaves the modeler with only the Reynolds number to worry about in terms of equating its values for the scale model and the prototype. True models are difficult to realize in reality due to the many possible quantities the modeler must consider. As a result, modelers identify the important dimensionless quantities and construct a scale model that satisfies these. Important dimensionless quantities are called first-order dimensional requirements. A model that satisfies first-order similarity is called an adequate model. Finally, for scale models that fail to satisfy one or more of the first-order requirements, the name distorted model is given. Some of the specific uses of scale models by specific fields are explained below in the examples.

Structural scale model[edit] Although structural engineering has been a field of study for thousands of years and many of the great problems have been solved using analytical and numerical techniques, many problems are still too complicated to understand in an analytical manner or the current numerical techniques lack real world confirmation. When this is the case, for example a complicated reinforced concrete beam-column-slab interaction problem, scale models can be constructed observing the requirements of similitude to study the problem. It can impart six degrees of freedom on structural scale models. These quantities can be broadly grouped into three categories: A good reference for considering scales for a structural scale model under static loading conditions in the elastic regime is presented in Table 2. A practical introduction to scale model design and testing is discussed in the paper "Pseudodynamic Testing of Scaled Models". Many airlines use model aircraft as advertisement items

Model aircraft are divided into two main groups: Static model aircraft[edit] Static model aircraft are commonly built using plastic, but wood, metal, card and paper can also be used. Models are sold painted and assembled, painted but not assembled snap-fit , or unpainted and not assembled. The most popular types of aircraft to model are commercial airliners and military aircraft. Aircraft can be modeled in many "scales". The scale notation is the size of the model compared to the real, full-size aircraft called the "prototype". Sometimes the scale notation is not used; it is simply stated: Popular scales are, in order of size, 1: Some European models are available at more metric scales such as 1: The highest quality models are made from injection-molded plastic or cast resin. Models made from Vacuum formed plastic are generally for the more skilled builder. More inexpensive models are made from heavy paper or card stock. Ready-made die-cast metal models are also very popular. As well as the traditional scales, die-cast models are available in 1: These scales are usually reserved for civil airliners. Static aircraft scale modeling falls broadly into three categories: Scratch-builders tend to be the top echelon in terms of skill and craftsmanship. They tend to be the most discerning when it comes to accuracy and detail and they spend far more time on far fewer models than a kit assembler. OOB Out of box and modified. Out of Box refers to the act of assembling a kit only from what is contained in the box supplied, whereas a Modifier employs after-market products such as alternative decals, photo-etched metal detail parts, and cast resin detail or conversion parts to enhance or change the model in some way. Collectors are concerned purely with the issue of theme, and are not really interested in personal construction as such. Aircraft modelers often fall into more than one category, as fancy takes them. This theme stems from the idea of modeling German secret projects that never saw the light of day due to the close of World War II. This

concept has been extended to include British, Russian, and US experimental projects that never made it into production. Flying model aircraft[edit] Flying model aircraft are of two types: Aerodynamic models may be constructed for use in a wind tunnel or in free flight. Small-scale piloted aircraft are even constructed to test some aspect of a proposed full-size design, but these are not considered as models even though they may be accurate to scale. Recreational models are often made to resemble some real type. However the aerodynamic requirements of a small model are different from those of a full-size craft, so flying models are seldom fully accurate to scale. Most flying model aircraft can be placed in one of three groups: Flying models can be built from scratch or from kits. Some kits take many hours to put together and some kits are almost ready to fly or ready to fly. Plan-relief With elements similar to miniature wargaming , building models and architectural models , a plan-relief is a means of geographical representation in relief as a scale model for military use, to visualise building projects on fortifications or campaigns involving fortifications. Building model Model building for an HO scale railroad Most hobbyists who build models of buildings do so as part of a diorama to enhance their other models, such as a model railroad or model war machines. Standard scales have not emerged in this hobby. Model railroaders use railroad scales for their buildings: Lego builders use miniland scale 1: Model buildings are commonly made from plastic, foam, balsa wood or paper. Card models are published in the form of a book, and some models are manufactured like 3-D puzzles. Professionally, building models are used by architects and salesmen. Architectural model Architecture firms usually employ model makers or contract model making firms to make models of projects to sell their designs to builders and investors. These models are traditionally hand-made, but advances in technology have turned the industry into a very high tech process than can involve Class IV laser cutters , five-axis CNC machines as well as rapid prototyping or 3D printing. Typical scales are 1: House portrait models[edit] Main article: Model house Typically found in 1: Sometimes this kind of model is commissioned to mark a special date like an anniversary or the completion of the architecture, or these models might be used by salesmen selling homes in a new neighborhood. Model buses and trucks[edit] Main article: Model commercial vehicle Typically found in 1: Corgi also makes some 1: Trucks are also found as diecast models in 1: Recently some manufacturers have appeared in 1: Model car Although the British scale for 0 gauge was first used for model cars made of rectilinear and circular parts, it was the origin of the European scale for cast or injection moulded model cars. In America, a series of cars was developed from at first cast metal and later styrene models "promos" offered at new-car dealerships to drum up interest. Monogram later switched to this scale after the firm was purchased by Revell. Some cars are also made in 1: The smaller scales are usually die-cast cars and not the in the class as model cars. Except in rare occasions, Johnny Lightning and Ertl-made die-cast cars were sold as kits for buyers to assemble. Model cars are also used in car design. Model construction vehicles[edit] A model construction vehicle or engineering vehicle is a scale model or die-cast toy that represents a construction vehicle such as a bulldozer , excavator , crane , concrete pump , backhoe , etc. Construction vehicle models are almost always made in 1: In the US they are commonly sold as promotional models for new construction equipment, commissioned by the manufacturer of the prototype real-world equipment. The major manufacturers in Germany are Conrad and NZG, with some competition from Chinese firms that have been entering the market.

Chapter 3 : Scale Modelling Magazine - Modeler Site

Scale color is the result of altering the manufactured model paints to achieve on the painted model the effect that atmospheric perspective has on the prototype. Generally, scale color is achieved most easily, and very effectively, by adding white to the model paint. How much white paint is the question.

Kris in Painting 8 Comments 51, Views From above to below in 20 easy steps!!! Introduction This article will provide general advice about the order to apply the various layers of paint and other finishing layers that are commonly used. It applies to models that have a realistic non-gloss finish including military vehicles, aircraft, ships and some science fiction subjects. The painting of a glossy finish such as used on automotive models follows a quite different path. Background Gone are the days when applying a single layer of monotone paint was considered a good finish in the modelling world. Covering a model with paint in colours that match the original subject may produce a finish that is technically accurate, but it will not produce a realistic looking finish. Over the decades, the modelling community has developed a wide range of painting and finishing techniques that have made the best models works of art with a real wow factor. It has been discovered that the best results are achieved by applying many translucent layers of paint and other mediums which build up into a finish that has depth and interest. Part of this process is attempting to mimic how light and shadows fall on the original subject and part of it is adding the wear, tear and weathering that any real life object receives from day to day. A final element is pure art – adding colour, shading and texture which looks great and emphasises the characteristics of the subject being modelled. These developments can be confusing, especially to the beginner. Not only are there many different techniques to learn, but which ones should be applied on any particular model and in what order. This article attempts to answer the last question. Sequence of Painting The following is a suggested sequence to achieve a good result on most models. Not every step is needed in every case – in fact it would be rare to carry out every step on a model. Furthermore, depending on the results, it may sometimes be necessary to go back and repeat some steps. It is worth noting that relatively recently a new form of painting known as colour modulation has been developed. Essentially, this consists of deciding where the main light source the sun is in relation to the model and shading the model accordingly. Since the sun is generally high up in the sky the upper surfaces of the model would be painted with a lighter shade than the sides which in turn would be a lighter shade than the under surfaces. In fact, the colour on the sides may be gently graduated from light to dark to add interest. The colour modulation technique can produce spectacular results and bring to life a model painted in a monotone colour such as olive drab. When using this technique some of the stages below such as pre-shading and post-shading would not apply. Wash all parts Getting a good dust and grease-free surface is essential, particularly when using acrylics. Then check the surface for defects, seam lines etc. Pre-Shading This is optional, but most models will benefit from pre-shading. The primer coat may make this step unnecessary if it is the right colour. To simulate paint peeling, put splotches of dry salt or Marmite between two base coats. The top coat will wash away where the salt is placed leaving irregular patches of the undercoat showing through. Base Colour Apply with airbrush if at all possible. Several thin layers are best, but take care not to totally obscure any pre-shading. With camouflage paint schemes, spray the base colour and highlighting for each colour before moving to the next. Alternatively, airbrush a darker shade of paint into recesses and along panel lines to simulate shadows. Post-shading is very easily overdone, so use very thin paint very sparingly and build it up in layers. Too little is much better than too much. You will need a good airbrush and some skill to post shade successfully. It protects the work so far from the next stages and allows you to come back to this stage if something subsequently does not work well. Filters Optional, but becoming increasingly popular, particularly now that ready made filters are available. A filter is a very thin transparent paint layer that subtly alters the colour of the base layer and helps to blend in the colours on camouflage schemes. Detail Painting This may be the best time to brush paint tools on vehicles and similar tiny items. Some items may be left to the decal stage depending on whether you want them to be affected by the washes or not. Washes These may be wide area or limited area pin washes. It is easy to overdo this and darken a model. An alternative to putting a glossy layer under the

decals is to soak the decal in gloss varnish e. Dry Brushing If you plan to do any dry brushing this is probably the best time. Protective Layer Yes, another protective layer. This has two possible purposes. One is to seal in the decals before any serious weathering is done, so you may wish to restrict this to a thin layer over the decals. Weathering Stages At this point your model will look like it has just come out of the factory and if that is what you want then you have finished. However, almost all models benefit from some wear and tear to give additional realism. Chips Paint chips, rust chips, scratches etc applied with a very tiny brush or even a cocktail stick. This is a stage that can fit in several places and you may wish to add further chipping and scratching later. This layer should be very transparent. Heavy Dirt and Dust This stage mainly applies to vehicles. If you want to slap it on really thick mix with resin or varnish. Light Dirt and Dust Apply dry pigments or ground pastels in addition to the previous stage or instead of it depending on the degree of weathering and muck you are replicating. Detail Wear and Tear This includes oil and fuel stains, rain streaks, boot marks and any other signs of usage that the vehicle would have recently suffered and should appear on top of all other weathering. You may wish to consider giving the model another very light dust layer with thinned paint from an airbrush to tie everything together. This must be very light at this stage to avoid soaking or removing any of the dry pigments. Your model is complete and looking great. The temptation is to give it a coat of matt, gloss or semi-gloss varnish to protect it. Unfortunately, doing this is likely to impair the look of the model. If you have dry pigments on the model then any varnish will blend them together and may make them completely invisible. Furthermore, part of the interest in the model is the different sheens on different parts of the model which will all become uniform under a coat of varnish. If you really do feel the need to protect your model, then keep it to a minimum. Consider using varnishes with different sheens to add interest to the model. In our friendly step-by-step video guide we cover topics like: We respect your email privacy Signing you up!

Chapter 4 : Scale model - Wikipedia

A guide to scale colour models in all their varieties. The book covers early aircraft, World War I aero colour tables, small scale vehicles, AFVs, aero camouflage, model ships, custom spraying decals, airbrushing and a trouble-shooting chart.

Water Colour Acrylic Vallejo have a novel approach in that their huge range of acrylic paints and additives come in eyedropper plastic bottles that make it very easy to dispense. They are easy and safe to use, permanent, quick drying, low odour and are suitable for brush and airbrush. Currently, they are probably the most popular type of paint used in scale modelling. Since acrylics can be thinned and equipment cleaned with alcohol or water they are very user friendly. However, care is needed because they can dry very quickly and when dried are difficult to remove – airbrushes should be flushed with thinner every few minutes of use with acrylics. Most manufacturers produce thinners for use with their own ranges and to be absolutely safe you should stick with these. Water and alcohol will act as a thinner with most paint ranges, but will not always give such good results and it is not always possible to mix acrylic paints from different manufacturers. Traditional acrylic paints for artists come in tubes similar to oil and water colour paints. These are not as good for modelling as acrylic paints specifically produced for modellers. Acrylic paints have been available for a very long time, but traditionally were used by artists for painting pictures. Acrylics came as a thick paste in tubes which was either applied with a palette knife, or thinned with water for use by brush. When specific ranges were introduced for modellers in small pots, their low odour and low toxicity were emphasised rather than any of their other qualities. This is a pity because although acrylics are very different to enamels, they are every bit as good which is why they are used so widely today. However, it has taken a long time to squash the image of acrylics being for children. The one application where acrylics do not do well is where different colours need to be blended seamlessly, such as is often the case with figure painting. Some figure painters will use acrylics for the clothing, but stick with oils and enamels to paint the face. Whatever type of paint you are using you should wear a good respirator when airbrushing. A wide range of additives are available for acrylics to make them more or less glossy, transparent glaze and slow drying time. Modelling Enamels Modelling enamels traditionally come in small tins but lately some brands have been produced in jars. Modelling enamels have an oil binder and spirit based liquid white spirit or turpentine. Modelling enamels are really thinned down oil paints and can generally be mixed successfully with oil paints. Modelling enamels were the first type of paint to be specifically produced for modellers. They were generally offered for sale in small metal tins and the introduction of colours made to exactly match military aircraft and vehicles was revolutionary and welcomed with open arms by modellers worldwide. Today, enamels are widely available from many manufacturers in a huge range of colours matched only by the ranges of acrylics available. Like acrylics they cover well and produce a durable finish. They are not as user friendly as acrylics because they have to be thinned with spirits that are inflammable, toxic and smell bad, but this disadvantage should not be over emphasised. Providing the room is well ventilated there should not normally be a problem. Enamels have the advantage that they are slower drying and even after they have become touch dry they can be softened again and removed with spirits which makes them less stressful when used in airbrushes. I will not express any opinion as to whether acrylics or enamels are best because to favour either one would lead to me deeply offending a large part of the modelling community. Suffice it to say that I use both regularly and would hate to be without either. Gouache Gouache sometimes called Poster paint is a water based paint similar to water colours see below. It differs from water colours in having a coarser pigment and an additional inert white pigment such as chalk added. It has no practical use for modellers and is included here for completeness. Lacquers cellulose Care is needed with this term as it is often used to describe any sort of glossy protective coating, for example furniture is often described as having a lacquered finish. Sometimes a paint may be described as a lacquer when in fact it is an acrylic or enamel based gloss varnish. For modelling purposes, a lacquer is distinguished from other paints by the solvent used which is cellulose. This makes it very different from other types of paint and gives it the following characteristics: Highly toxic and very strong smelling! Fast drying; Very flammable; Hard, durable, shiny finish although some flat lacquers are available. Cellulose

paints are widely used in the auto industry and when you consider how hard wearing the paint job on a car has to be, you will realise how durable lacquer paints can be. Because lacquers are very fast drying, highly toxic, flammable and very unforgiving they can be a real pain to use. However, they are popular with some modellers. The shiny hard wearing coat is ideal for auto models – particularly radio control which need to survive the real world. Lacquers are also great for realistic metallic finishes and one of the most popular ranges of metallic lacquers is made by Alclad and since full details of how to apply them are on their website I will not repeat them here. Tamiya produce a range of lacquer spray cans and Testors produce some clear lacquer coats under their Model Master range. There is a wierd contradiction with lacquer paints and plastic modelling. Cellulose melts plastic, so you might think that you would not want to get a lacquer paint in direct contact with the plastic surface. However, there are some lacquer based spray primers. Because the lacquer spray is so thin, it dries within seconds before it does any damage to the plastic surface, but it just has enough time to key into the plastic giving it very good grip. Lacquers will almost certainly need to be applied very thin by spray can or airbrush in a very well ventilated area and with a protective mask. Use only cellulose thinners and use them well and often if you value your airbrush. Alcohol, water and acrylic thinners will have no effect on lacquer paints except to make an dreadful mess – you have been warned. If anyone knows of a way to remove dried lacquer paint please let me know. One problem you might find with using lacquer paints is getting hold of them in the first place. Due to their flammability many mail order and Internet shops will not ship them airmail so you might have to find a local source. Personally, I would only use lacquer paints as a last resort, since I want to enjoy my hobby and they are just too unpleasant to work with. However, some modellers swear by them. Lacquers have quite a history and there is a great article about them on Wikipedia. There is also a great article about using Alclad paints at Swannysmodels. Oil Paints Oil paints have many similarities to modelling enamels having an oil binder and spirit solvent. They have been used by artists for many hundreds of years and are normally available from art shops rather than model shops since artists are still their main customers. Oil paints come as a thick paste in metal tubes like toothpaste. Some artists may apply the paint thickly with a palette knife, but modellers will always have to add considerable amounts of thinner to get the paint to a consistency useful for scale modelling. Only a tiny amount of oil paint is mixed with a lot of thinner to make a wash. For modelling purposes, oils are almost exclusively used for brush application – I have never heard of anyone airbrushing oils. They are popular with figure painters because they have a very slow drying time so can be blended giving soft edges. They are also frequently used for detail painting, filters and washes. Oils would not be considered suitable for painting a whole model. Oil paints can seem expensive, but good quality oils are very thick and dense so last a very, very long time. Tempera Similar to water colours see below but the binder is a glutinous material such as egg yolk. It has very limited uses, but I have heard of one modeller using it for weathering and as a wash to show up panel lines. Water Colours This is a selection of water colour tubes. Water Colours use a water-soluble carbohydrate as a binder and water as the liquid. They have been traditionally used by artists for hundreds of years. Water colours can also be obtained in blocks or pans as with this portable artists set. The most important feature of water colours is that they never become permanent. Even when completely dry they can be removed and washed away with water. This apparent disadvantage is what makes some modellers love them. They are of no use for painting the main body of a model, but can be very useful for weathering, or applying a wash to show up surface details or panel lines. Provided the model has been given a protective coat of varnish, the modeller can experiment with the watercolours in the knowledge that if the finished look is not good, then it can be washed away and they can start again. Although water colours are not permanent, they can be sealed in with a coat of varnish when the modeller is satisfied with the result. In this respect water colours are very forgiving. Water colours are sold in two forms. They come as a paste in tubes, like oil paints, but the tubes are often smaller. They are also available in blocks often sold as sets. The blocks are called pans or half-pans depending on their size. These blocks are basically dried paint, but as mentioned above, water colours can always be brought into liquid form again with the addition of water. The pans are very portable so are popular with water colour artists who paint in the field. Modellers will probably find the tubes more easy to use. Mixing Different Paints The following are general guidelines. It would be impossible to test every brand of paint with every other brand, so it is

advisable to do a test before applying any homemade paint mixture to your model. As a very general rule, oil based paints generally mix well with each other, water-based paints may mix but care is needed. Never try to mix any water based paint with any oil based paint. Oil and water do not mix! Enamels mix well with each other, even different brands and all can be thinned with white spirit or turps. The same applies to oil paints. Most enamels also seem to mix well with oil paints. Some acrylics can be thinned with isopropyl alcohol although the only advantage over the proper thinner is that it is cheaper. Acrylics from one brand may mix with those from another, sometimes they will not and will form into lumps.

Chapter 5 : Painting Sequence – Scale Model Guide

A guide to scale colour models in all their varieties. The book covers early aircraft, World War I aero colour tables, small scale vehicles, AFVs, aero camouflage, model ships, custom spraying decals, airbrushing and a trouble-shooting chart. We have over 20, military and history titles in stock.

Chapter 6 : Scale75 Between history and legend

Paints Find a color. Search our database with over colors. Find it by name, product number, paint range.

Chapter 7 : Scale Colour for Modellers by Special Interest Model Books (Paperback,) | eBay

Color Scale Effects in Modeling By Michael Benolkin. As the Cybermodeler Online color reference system continues to grow, I have uncovered a few interesting nuggets that many modelers many not realize.

Chapter 8 : Paint ranges - Paint and colors for scale modelers

The list of paints of. Reference database, color charts and stash management for all the colors from.

Chapter 9 : SCALECOLOR RANGE - Scale75 Between history and legend

Looking at this unpainted Scorpion light tank it is difficult to believe that at one time the painting of models was far from universal. It is the many coats of colour that breath life into a model. Introduction. This article will provide general information about the different types of paint mediums that are commonly used by scale modellers.