

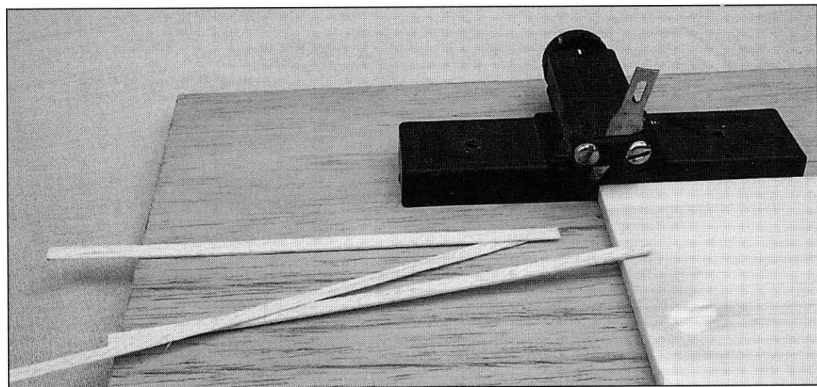
Australian style structures in 1:48 scale

Story by John Hunter • Photography by Grant McAdam

Having attended several model railroad exhibitions and admiring the magnificent structures displayed by people such as Grant McAdam and Laurie Green, I decided to attempt to build a modest structure in 1:48 scale. My first attempts left a bit to be desired and getting used to a change of scale initially posed some problems in getting 1:48 proportions down pat. It was only when I discovered a copy of *Narrow Gauge Downunder* that I came across the excellent drawings of Phillip Shapter. This simply opened up a whole new world to me. I decided to contact Phillip and order some plans that duly arrived in the mail. I received a host of different structures drawn to 1:48 scale and among them was Phillip's 1907 milk bar which I found irresistible. It had all the attributes that I was looking for; character, size, weatherboard sides and it definitely typified the classic Australian style. It also allowed me the modelling licence (that I believe is important) to add my own interpretation of what the building would have looked like at a place in time or in a particular scene that I wanted to create. As I wanted to build the structure to its correct dimensions, the amount of high quality timber required would be quite substantial and costly so I decided to cut my own scale sized timber rather than purchasing commercial items.

FRAMING THE WALLS

The weather boards, studs, bearers, flooring, fascia boards and all other timber required was cut from balsa wood using a simple balsa cutting tool (see picture). These tools have been around for many years and are most often the favoured tool used by radio controlled aircraft enthusiasts. It is surprising how small the blade can be adjusted to accurately produce scale timber. By using the appropriate thickness sized balsa and cutting with the grain, the result can be thin enough to see through the finished piece.



With most of the timber cut, I mounted the plans onto a piece of mdf (multiple density fibre) board attaching each corner with masking tape. As the plans were already drawn to scale I proceeded to cut and lay the studs at scale 18inch intervals starting with a top and bottom plate, working directly over the plan as my template. Then both ends using a small amount of aliphatic resin PVA glue to hold the frame in place at each corner. Then I placed noggins and constructed window openings where indicated on the plan. This stage takes no time at all to complete as long the plan is drawn accurately and perfectly square. The result is a frame that you see

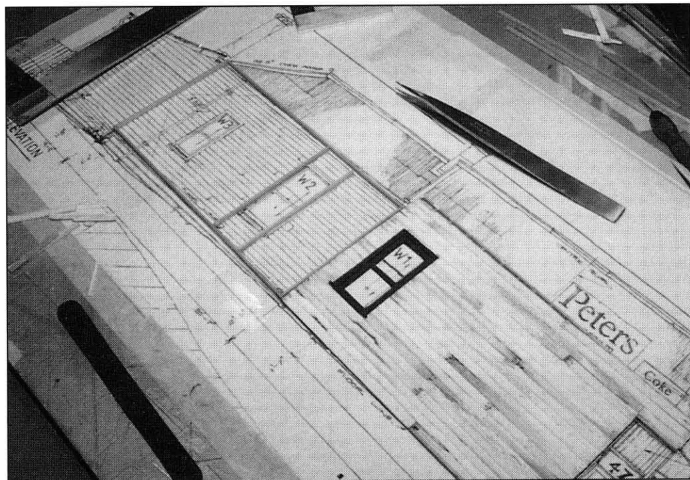
ABOVE This balsa wood cutter is the author's favoured tool for stripping individual boards from the edge of sheet balsa. The blade holder is adjustable for varying the thickness of cut.

ABOVE RIGHT Buildings are constructed directly over a set of drawings with each wall framed and sheathed as sub-assemblies prior to final assembly.

in the early stages of prototype construction. Once the first wall was ready for weather boards, I simply repeated this process for the other walls.

LAYING THE BOARDS

Each weatherboard is individually cut and painted, in this case I used white. The paint was a ceiling white I recently used in my home and the thickness proved an advantage when



each board was sanded prior to being laid. I found that because the balsa is so soft and after being cut so thin, I needed a solid base to sand, otherwise the balsa would sand away with very little effort. The paint also gave the boards a bit of stiffness which also proved to be an advantage during sanding, providing stability to the structure. The tool used to sand each board was a foam sanding block available from any hardware store. These blocks are great to handle and some have two grades of coarseness. I use a combination of fine and medium. Once the paint is dry, I placed the boards on a flat surface and holding on to the end, drag the sanding block along each piece. The more sanding, the more paint will come off. It is advisable to always use a mask when sanding as the dust can be hazardous. You must sand with the grain and always sand in one direction. Reversing your action will only result in the balsa folding and causing a breakage.

Once the boards are sanded to your liking, weather each one before laying it onto the frame. At this point, I use a pair of tweezers and chip away some of the edges of some of the the boards. This simulates rot and other damage such as splitting. I also do the same to the ends simulating nail holes and splitting.

I usually stain with black shoe dye on lower boards to simulate rot, and brown on the upper boards but the choice is yours. Use a small brush to apply the dye to the ends of each board and to some of the edges, but not all. Also, it is worth mentioning that if My information is correct, weather boards very rarely exceeded twenty foot in length so this is the maximum length I make mine. This also helps with sanding and using the balsa cutting tool. The boards should be cut to different lengths during laying to show joints and if possible, make the boards finish on a stud. It is also a good idea to lay the occasional board slightly crooked to simulate a board dropping or, leave out a board to reveal the stud wall. Using the milk bar as an example, a missing board reveals a plumbing pipe in the wall cavity.

Each board was cut as a scaled 8" wide piece of balsa. This width - once laid board over board - leaves 6" of exposed

weather board with the 2" overlapped by the board above, adding strength to the wall structure.

A knowledge of how real windows are constructed will help in order to complete the model window sashes. There are plenty of real windows that can be studied for reference. The common double-hung style makes a good prototype to be copied and if you are using one of Phillip's plans, he not only gives you the style of window used but also how the basic window is constructed. There are some very nice commercial window castings available if you chose not to make your own but if you have gone this far, why not have a go at making your own? Once constructed and painted in your choice of colour, cut a piece of clear sheet to size and attach on the inside of the window with white glue or a suitable clear drying adhesive. With the walls now constructed and windows glazed, it is time to construct the floor.

FLOOR CONSTRUCTION

I started by measuring the outside perimeter of the walls not forgetting to include the thickness of the studs on the end walls. Then I cut a piece of ply or thick card about 25mm larger than the floor area, as a base. I drew the actual floor size onto the base, then on each corner I drilled a hole large enough to take a scaled piece of timber the size of the stumps. I use 6" diameter stumps but this may vary depending on the size of the structure. The stumps were cut using the balsa cutting tool and grain was added with a wire brush and weather was applied with diluted shoe dye. Once I had cut all the stumps the same size, I drew a grid onto the base dividing the overall floor plan into even squares placing a stump at every intersection, approximately five to six feet apart. Again, this is where a good plan is essential as it will show the distance between each stump.

Once all the stumps were in place I made the frame to which the floor boards are attached. The floor boards were cut individually using the balsa cutter, this time cutting each board from a scale 6" piece of balsa. The length is not important as I wanted the boards to be randomly laid onto the floor joists and bearers which were also cut using the balsa cutter. 6" x 2" bearers and 4" x 2" joists. I find it easier to cut a heap of flooring and lay the floor unweathered and once the floor is dry, I give it a coat of brown leather shoe dry and methylated spirits which gives an even staining effect. Once dry, this method of staining is very effective and convincing. I also like to simulate the nail holes in each board. I use a track pin placed into a pin vice and simply push the pin into the floor at each joint. If you are really keen, this can be done at every point that a joist would be under the flooring. Another good method for simulating nail holes is to use a fine line felt pen.

Once the flooring was completed, the walls were placed on top of the whole assembly, squaring them up along the way. With walls up and standing, it is now time to proceed to the roof.

ROOF CONSTRUCTION

Several methods can be adopted when constructing the roof but the simplest is to cut a piece of 2mm thick card, large enough to cover the whole roof. Don't forget to take the pitch of roof into account when measuring it out. Once the size is determined, trim the card down the middle to get the centre

of the roof.

Pieces of corrugated iron (available from VR Models in various sizes and scales) makes a perfect roof covering. I lay the roof out, overlapping each sheet by one corrugation, starting at the bottom and working across the card. Once the first row has been laid, repeat the process on the second row overlapping the sheet below. It pays to use sheets that will be either as long as the roof pitch or half of the length of the pitch because this will look better when the roof is finished and weathered (if you choose to weather).

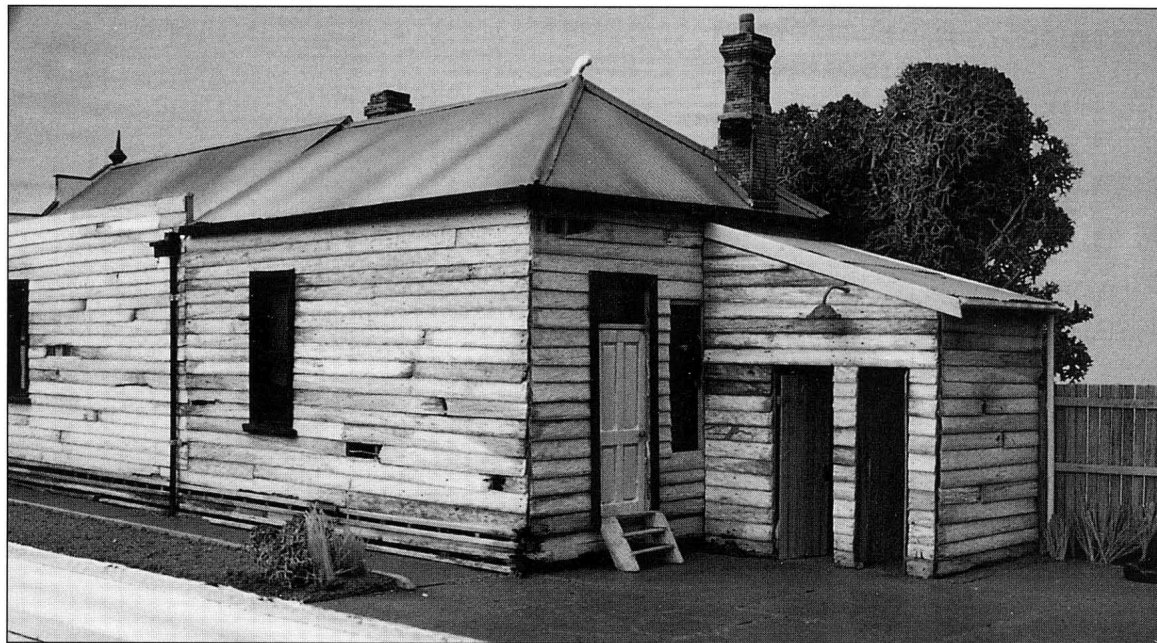
I recommend a rubber based contact adhesive to attach the iron to the card or to itself but an alternate method is to prime the corrugated iron with any primer that is suitable for aluminium, then the iron will stick just as well with white wood-working glue. Both methods work well.

An alternative roof material is corrugated card which is available from most good art supply stores. The corrugations in this case are more suited to 1:48 and the material is available in rolls. Again, use white glue to fix the card to the roof base.

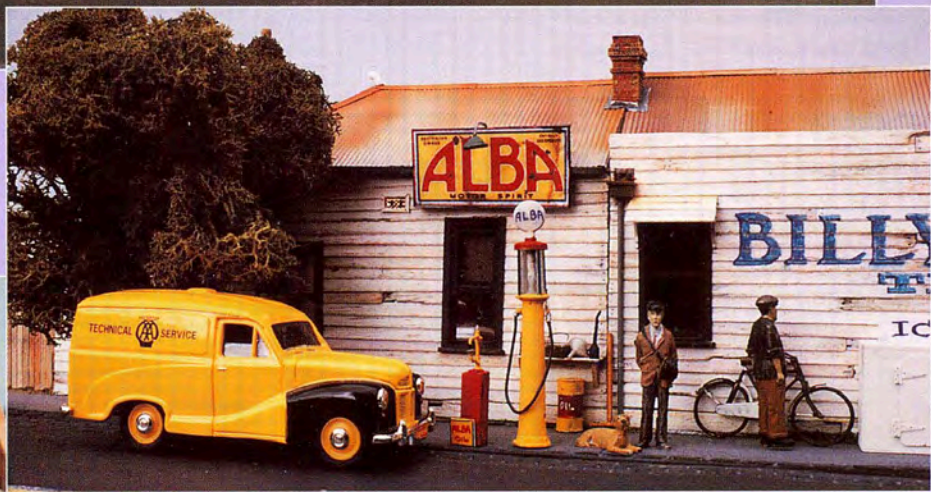
Ridge capping was made by cutting strips of foil from coffee tin seals. Once cut to about 12 scale foot lengths, bend the strips over a piece of brass rod. This is done by placing the rod onto a flat surface and placing the strips of foil over the rod, then with the tweezer points, each side of the rod is moulded to provide the shape that forms the ridge cap. Once the ridge is made simply place it over the centre peak of the roof. I like to put two impressions at each intersection where the ridge caps meet which is done using the same method as the nail holes explained earlier.

Once the roof was made and glued to the walls, the spouts were added, the chimneys were put in place and detailing the building was completed. The detailing is important not only to give the structure apparent life, but to create the atmosphere that you wish to portray. This stage can make or break the overall look of the building so care must be taken in placement, construction, painting and weathering of all the detail parts used. Some of my methods for landscaping and setting the structures will be covered in a future article but for now, I hope the methods and techniques outlined here will encourage you to scratchbuild a structure for your layout or diorama. —

More photographs of the author's structures appear on the following pages.

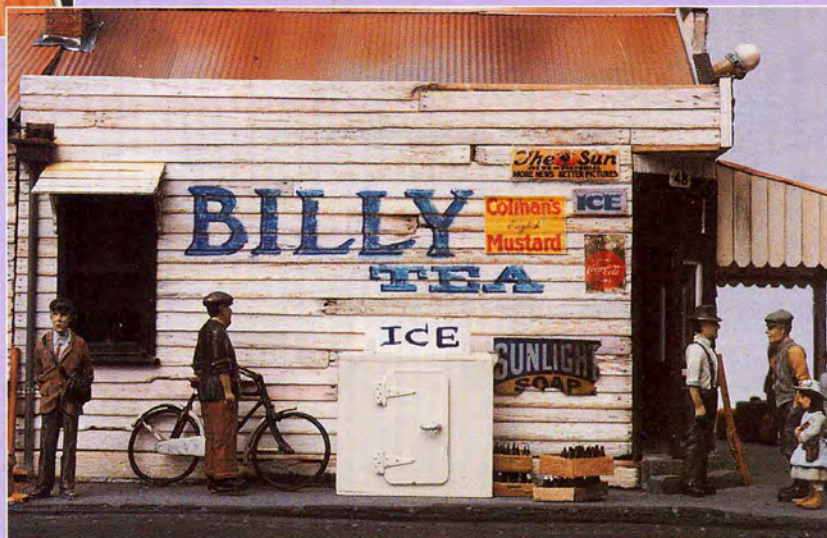


ABOVE The rear of the milk bar has a few more missing or rotted boards but is still in basically good condition. Note the planking along the base of the structure - a very typical Australian feature designed to hide the stumps but also to allow air to circulate under the building. The diorama is still waiting more detailing in this view. A few drums, crates and other logical items will complete the rear of the structure. Note the variance of finish from board to board and the well accentuated joints and nail holes.



FOUR VIEWS THIS PAGE These views of the corner milkbar give some idea of the level of detail the author has incorporated into this, and every model he builds. Note the colourful period signage, the figures arranged in natural pose, the use of outdoor items such as the ice freezer, four crates of bottles, the bicycle, petrol pump and oil drums etc., all combining to give an atmosphere and period to the scene. The weatherboard siding was all cut from a single sheet of balsa wood and painted with ordinary white ceiling paint after which every board was treated individually with further detailing such as 'rotted' ends, nail holes and the occasional board missing which reveals the framework behind. Note also the downpipes, two styles of finial on the roof peaks and the imitation ice cream mounted above the front verandah. This structure has complete interior detail. The Austin A40 van is from British Manufacturer, Vanguards, the figures are from The Model Company of New Zealand and are painted suitable colours to further depict the era being modelled. This model is set on a base of canite and mdf board.

The Milkbar model is based on drawings from Phillip Shapter which are available for purchase. See Phillip's drawings elsewhere in this issue for ordering information.





The models on this page were built by John using similar methods and materials to those outlined in the article.

ABOVE The Fisher Machinery Company features tractor and farm machinery repair facilities and was adapted from Phil Shapter's Blacksmith Shop drawings from NGD Issue #11.

ABOVE RIGHT The J. A. Hawkin Car and Truck Repair module was based on Phillip Shapter drawings from NGD Issue #2 which is unfortunately out of print.

RIGHT Drawings for the freelance freight shed appeared in NGD Issue #4, also out of print.

BELOW The M. A. Walsh General store and Garage complex feature brick sheeting, corrugated iron and stripwood construction. Note the neat scratchbuilt (cast resin) fuel pump, finials on the General Store and the white-metal Austin vehicle.

BELOW RIGHT This small farmhouse is a faithful reproduction which was based on a couple of photographs by Phil Shapter which appeared in the 'Random Selection' section of NGD Issue #12. The author 'guestimated' the dimensions based on the front doorway.



LEFT The Commercial Hotel is the quintessential corner pub building which can be found in country towns the length and breadth of Australia. The two storey structure features a myriad of detail - upstairs and down - inside and out. Note the asphalt pavement complete with white painted corner stones, the upstairs balustrade, the detailed and weathered roof and the colourful signs downstairs and on the adjoining board fence. As with all the author's structure dioramas, appropriate figures placed in logical poses and positions, and the period vehicles, combine to set the atmosphere as well as the time period. Signs came from a wide variety of sources but the hotel name on the corner was hand painted. This building sits at the corner of Station and Hunter Streets.

Other than the figures, vehicles and the occasional detail, all these structures were built entirely from scratch. The author is currently planning a small modular layout that will of course feature these and other structures.

