

## RT Volume 39, No. 1 Spring 2017 article text

Editorial	3
National Director	4
Chapter and Member Liaison	4
HMAS SYDNEY, a 1/700 Leander class cruiser, Gary Barling	5
A 1/48 Golden Centennaires Canadair Tutor, Frank Cuden	13
CF-105 Avro Arrow in 1/48 scale, Part 1, Richard Clairoux	22
Diorama in a Box - a WWI Trench Scene, Barry Maddin	29
Cartoons, Dave Fletcher	3

Cover Comment: *Regular RT contributor Frank Cuden, started with the Belcher Bits 1/48 resin kit of the Canadair CL-41 Tutor, added some aftermarket goodies and some scratchbuilt items to produce a lovely rendition of the RCAF's 1967 Golden Centennaires aerial demonstration team's aircraft. See page 13 for the full build article.*

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### Page 3

## Editorial

Steve Sauvé, C#0323 [RT@ipmscanada.com](mailto:RT@ipmscanada.com)

I asked a question in the last issue about the large multi-part articles in RT and we received only a few replies through our various media contact points. Only one person expressed serious dissatisfaction but most did not have a problem with them. Thanks to those people who took the time to write. Believe me, it's nice to hear from you.

### The bookies take a beating...

My own modelling is far from speedy, but in 2016 I managed to finish a 1/48 Mustang Mk. III, using our own IPMS Canada's free decals and resin cowl louvres from a few years back to produce an RCAF machine from 441 Sqn.

It's a good (and rare) feeling for me to crank one out. For 2017 I'm aiming for two Mk. V Spitfires I have on the go; if I got those done then I'd look at a Spitfire Mk.XVI before year-end, but, given my track record, that is dreaming in Technicolor. Call it realistic goals vs. dreamy idealism.

At the IPMS Ottawa 'Poststrike' (the cherished after-meeting meeting at a local watering hole) I gave credit to a few guys for their encouragement and suggestions during the build. This especially went to former Exec member Randy Lutz for helping me to get past the dreaded 'cock(pit)-block' (I particularly hate and fear cockpit detail painting). Randy credited his ideas back to former RT Editor Sid Arnold, so it is interesting to see how the techniques move from modeller to modeller. Join a club if you can, folks. If you can't, think about how you can connect with modellers in your local area. We can all learn from each other.

### Stone Soup? Styrene Stew?

Between our webpage, Facebook page, beaveRTales and RT there is an ongoing opportunity for you to help contribute to IPMS Canada. There has been a trend towards large in-depth modelling articles in RT, mainly because this is what you wonderful guys and gals are submitting to me for publication. Don't feel intimidated by that.

As the National Director touches upon in his column, there is always room for shorter articles, anywhere from a half to two-pages, which could potentially go in RT, but would also fit in BT and our other media outlets. Don't be deterred by the big articles you see - you can pitch in with your hints and tips, technique discussions on any topic for which you have some interest and expertise. We had a bit of a revelation and would really like to get people sending in their basic building tips and techniques so that we can share and make them available to our members and through our various media outlets.

### Contacting IPMS Canada

We are always happy to hear from you, but please ensure you are directing your email to the correct address. I have updated our contact info on page 36 to help guide you in getting your communications to us as directly as possible. And now, back to the workbench and those Spitfires...

## Dave Fletcher cartoon

During the recent US election, the Editor's outrage was ignited when he found out that our branch journal's popular name, RT, in use since the mid-1960's, had been appropriated by RT, the Russian international television network funded by the Russian government. They've been using this logo since 2005 and our staff cartoonist, Dave Fletcher, managed to tie this outrage into some of the allegations that are said to have come into play during the election...

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## Page 4

### National Director

**Bob Migliardi, C#0490 [box626@ipmscanada.com](mailto:box626@ipmscanada.com)**

A while ago we decided to query past members who, for whatever reason, had decided not to renew their membership. We wanted to know why... and what could we have done differently to entice them. As you might expect, a number said that they had simply forgotten. They figured that they'd renew tomorrow or next week, or whenever, and it just fell through the cracks. (Note to selves... when you receive your renewal notice, renew promptly.)

A few said that they couldn't afford the membership fee any longer. That's understandable in certain cases, though a look at the numbers shows that fees for IPMS Canada are essentially the same as for domestic IPMS/USA and IPMS (UK) memberships.

There were a couple comments bemoaning the fact that the material provided in RT (and beaverTales) seemed to be more geared toward the experienced modeller, at times leaving those new to the hobby a bit bewildered by the advanced techniques and presumption of know-how and skills. Fair enough. To this end we have decided to actively solicit and present more 'beginner' material in RT's sister publication, beaverTales. We'll try to include more basic building articles, and more "how-to" material. If any readers have hints-n-tips, or some good basic building techniques that you'd like to share, please email us so we can pass them along. IPMS Canada cannot just exist as an 'old boys club'. We owe it to the younger modellers and those new to the hobby to help them along and share what we have learned over the years.

One or two expired members raised a more controversial issue – that of a digital version of RT. I must admit this prospect has always made me uneasy. While beaverTales is sent out in digital format, it is more of a newsy, fun, member-oriented missive. RT is hard-core modelling material. If members pass along copies of beaverTales to their modelling friends it's no big deal. But I'm not sure I would want digital copies of RT circulated among those who couldn't bother to actually join IPMS Canada. In our survey one ex-member admitted that the reason he didn't renew was that he could read his friend's copy of RT. To me this is tantamount to living off the legitimate members who support IPMS with their dues and contributions of material.

I'm told that if RT were distributed in PDF format, it would not be possible to prevent the files from being copied... at least easily or inexpensively. One approach might be to go the way of the CAHS, who offer their members the choice of being mailed a physical magazine, or being emailed a PDF file – with membership dues reflecting their preference. We would just have to realize that some inconsiderate people would copy the RT and circulate it to their non-IPMS member friends.

This is not something that we are actively considering at this time. But... it would be worthwhile to get your input on the possibility. Let us know what you think about it.

## Chapter & Member Liaison

**Kerry Traynor, C#4083 [CML@ipmscanada.com](mailto:CML@ipmscanada.com)**

Sometimes, writing this column is hard. I want to be topical, maybe get a chuckle or two and, perhaps, pass on some useful information. The real writing usually does not start until I receive at least one email from the editor indicating impatience. This creates 'atmosphere' for writing and gets the creative juices flowing. But not today... I got nothing. Must be this cold I've been fighting, for like, days. These Man Colds, I tell ya.

So in place of the thought-provoking and innovative article I can't seem to write, here are some housekeeping items that have come to mind of late.

The arrival of the new year is usually when chapters conduct their membership renewal. I would ask the chapter leadership and its IPMS Canada members ensure awareness in club members that the chapter and IPMS Canada are two separate entities. Although related, they require membership in each of them. Your efforts in this matter would be greatly appreciated, as we need your help in this aspect of our marketing.

I realize that I have been lax in communicating with the chapters in the last number of months and I am hoping to be better at this in the 2017. If I could ask if chapters, or members, could drop me a line and let me know how things are going, that would be great. Even a simple 'everything is awesome!' would be fine.

By the time you read this, spring will be upon us, and that means the model show season will be cranking up. Now for some parts of the country, digging out from all the snow they are getting will be a tough task, but spending a day at a model show makes the effort worth it! For those chapters who have a show scheduled for this year, please drop me a line and I will get the event up on our IPMS Canada website calendar.

IPMS Canada is always looking for ideas for special projects; particularly when it comes to decals. So if you are out one night at the chapter meeting, or at the local having a pint with the modelling friends (not with the significant other, it does not go over well. Trust me on this one....), toss around some ideas and send them along to me. As we are IPMS Canada, the topics should be 'Canadian' in some form. If you have access to research material, even better! As always, credit will be given where credit is due.

Take care,

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## Page 5

# HMAS SYDNEY a Leander class cruiser in 1/700 scale

## BACKGROUND

His Majesty's Australian Ship (HMAS) Sydney was one of three modified British Leander-class light cruisers operated by the Royal Australian Navy (RAN). The cruiser was purchased by the Australian government and launched in 1934.

At the start of World War II she was assigned to convoy escort and patrol duties in Australian waters. In May 1940, Sydney joined the British Mediterranean Fleet for an eight-month deployment, during which she sank two Italian warships, participated in multiple shore bombardments, and provided support to the Malta Convoys, while receiving minimal damage and no casualties. On her return to Australia in February 1941, Sydney was refitted, repainted, and then resumed convoy escort and patrol duties in home waters.

On 19 November 1941, Sydney was involved in a mutually destructive engagement with the German auxiliary cruiser Kormoran, and was lost with all 645 hands aboard. The Kormoran also sank in the engagement, but most of her crew were eventually rescued. HMAS Sydney was the pride of the Australian fleet, and the whole nation keenly felt her loss.

## THE KIT

The NNT Modell + Buch HMAS Sydney is a very cleanly cast model, with no defects, no damage and excellent detail. (Fig. 1)

Starting with the deck, the steel forecandle decking really jumps out in its detail. It is a crosshatched deck that looks very nice. The grid pattern is lightly scribed, rather than raised, but at 1/700 scale it presents a very detailed and pleasing appearance. Accentuating this detail are the capstans, set of bollards, set of cleats and hawse found on this metal deck. The different textures of the grid deck, smooth fixtures and indentation of the anchor hawses promote a lot of ngordinarily clean castings that are defect-free. The castings range from excellent to good. The design of the ship with its numerous platforms and support structures are well executed by NNT in both resin and photoetch. Aftermarket railings are required as, as is the case with many kits of this scale, railings are not included. Other aftermarket items were used in the build as discussed below.

## CONSTRUCTION

## General Comments:

The build was rather complex, even for a model that is just 9 ½ inches long. Sub-assemblies, parts cleanup, detail painting, aftermarket detail parts...all combine to sharpen the senses and increase the requirement for perhaps more forethought than that needed with a simpler project. In the beginning, I had little working knowledge of resin kits and virtually no knowledge at all of some of the techniques used in this build. I estimate that up to thirty per cent of the time spent on Sydney was devoted to reading about and practising various techniques before actually using the technique on the model. I used a "bow to stern, deck to mast tops, centreline to hull sides" project plan, which met most of my needs. You can use a different method, of course. All I caution you about is not to get too far ahead such that already-attached parts have to be removed to position something forgotten or missed!

## Hull and Resin Parts

We'll start with the hull. First, give it and the other resin pieces a good wash in warm water and a little dishwashing soap, but keep them on their resin wafers and sprues until you're ready to paint, assemble and fit onto the model. Then let them dry off. Drill out the scuttles (portholes) with a 0.6 mm drill. No need to drill them too deep, just enough to increase the amount of shadow in them. If you have any fine resin particles remaining in the drilled-out hole, don't worry about digging it out. Just remove the drill bit, reverse it end-for-end in the chuck and push the particles down into the hole, like tamping tobacco into a pipe (Fig. 2). This also ensures that the scuttle edges are clean and sharp. Your hull is now ready for everything that you'll be doing to it!

The basic hull is the largest part in the kit, and it accepts every other part to make up the finished model. Accordingly, with the hull washed and dried, I started its painting. This sets the tone for the overall build: alternate steps of cleaning, preparing, assembling, painting and fitting of parts and sub-assemblies to the hull. My first painting task was the wooden decking of Sydney. I applied a thin coat of Tamiya XF-57 Buff over the deck, not masking off any other hull area. Then, using a fine brush, I applied slightly lighter and darker paint to various other deck planks. The colours are very close, and represent the individuality of the planks.

Then came the first 'tedious' task: masking the deck in preparation for painting both the steel forecastle and two-colour disruptive pattern onto the vertical sides of the hull and upper structures. I managed this by using thin strips of Tamiya Tape to mask around the bases of the upper structures, then applying Humbrol Maskol to cover the rest of the deck area. (Fig. 3) Once I completed this stage, I applied the lighter of the two-colour pattern over the entire hull.

Now a word about the two-colour pattern, as the colours used here will be used over the entire model: hull, boats, bridge, turrets, funnels, platforms...you get the idea! I used Humbrol paints because there is a paint mixing colour chart in 'Canada's Flowers' (see references, below) that uses these paints. So here's what I used:

AP507A, Dark Grey: Humbrol #27 Sea Grey (steel forecastle and upper decks, e.g., the bridge, funnel decks, catapult)  
AP507C, Light Grey: a mix of 10 drops of Humbrol #33 Matt Black into a full tinlet of Humbrol #34 Matt White (This is the Light Grey in the two-part disruptive scheme)  
AP507B Medium Grey: [Pay Attention!] a 50/50 mix of Humbrol #27 Sea Grey and the colour you got when you mixed AP507C, Light Grey. This resultant mix is the darker of the two in the two-colour disruptive pattern.

Now for the second stage of masking: the steel forecastle and various upper decks as noted above (Dark Grey); and the disruptive pattern (Medium Grey) (Fig. 4). Keep in mind that you'll be using these colours over and over again as you deal with the other structures and parts.

With the basic disruptive pattern in place, I airbrushed a thin coat of Future Floor Finish over the hull. Then came a technique that I learned from the David Griffith book: I mixed up a thin oil wash (something in the order of 18 parts oils thinner to 1 part of black paint) and then lightly streaked it down the sides of the vertical surfaces. You barely want to see it, but it adds a noticeable new dimension to the model. Follow that wash with another very thin rust-coloured wash, applied to specific areas such as the anchor areas. This gives yet another level of depth to the overall paint scheme (Fig. 5).

The remainder of the main resin parts (bridge, funnels, platforms and so on) are dealt with in the same way: remove from resin sprues, clean up, apply the disruptive pattern, paint smaller details (tops of funnels, bridge windows, etc.) and fit to the model. I used a PVA glue, Weldbond, to do most of the gluing on HMAS Sydney. When painting the various ship's boats, torpedo tubes and other smaller items, note their final position and paint them according to the surrounding disruptive pattern colour. Note that the portside torpedo tube assembly is painted half Light Grey and half Medium Grey, while the starboard item is mainly Light Grey with only one end of the assembly in Medium Grey. Details, details! The tiny Vickers quad 0.50" MG's are a dark gun metal colour.

## Anchor Chains

I now fitted the first scratchbuilt item (two of them, actually) to the hull: another tip from the Griffith book. The PE fret provided lengths of anchor chain, but they were (as is all PE) flat. Anchor chains are certainly not flat. So how do you make a believable anchor chain in 1/700 scale? Simply put, you braid it much like your daughter, wife or girlfriend braids her hair, except that you'll be using fine copper wire. I tapped a small nail into a bit of wood, tied together three strands of wire, and put some weights on the end of each (I used small bags holding a few fishing weights): these keep the tension on the three wires. And then we braid them tightly together! (Fig. 6) And here is the result as mounted on the steel forecastle (Fig. 7). Each of the 'chains' is only a couple of inches long, so it doesn't take too long to braid them. After painting, CA glue one end into the forward anchor hole, then bring the chain back and around its bollard, then cut the chain to size and fit the other end into its drilled-out and slightly deepened anchor hole.

## Gun Turrets

Master Models provides a set of 6" Mark XXII gun barrels which I used to replace the kit's resin items. This is a pretty straightforward modification: simply drill a hole in the face of the turret, slip the brass barrel into place and fix with a small dab of thin CA glue (Fig. 8).

You will see, however, what happens to a ham-fisted modeller like me on the second turret from the right: broke the tiny drill bit off, had to surgically remove the embedded part (in doing so messed up the turret top) and so had to do a 'fill and sand' exercise. However, as the muzzle of a 6-inch gun in 1/700 scale is eight one-thousandths of an inch in diameter, I was most pleased to use the Master barrels rather than try to drill the kit items out myself! (Fig. 9)

## Masts

The masts are made from brass rod. The forward mast is a one-piece item while the rear one requires joining two lengths of rod. I tried my hand at soldering, with less than adequate results, so I fell back to gluing the two parts of the rear mast with 5-minute epoxy. Both the forward mast and the top portion of the rear mast required a tapering of the brass. I accomplished this by first roughly filing the parts to a gentle taper and then finishing up with medium and fine sandpaper. (Fig. 10)

For the various yardarms I used both PE parts taken from the Gold Medal Models PE fret and smaller lengths of brass rod. I filed a small groove into the masts at the correct locations and then glued the yardarms into place. The small groove provides a more solid attachment. The kit included a resin crow's-nest, and it was attached to the top of the mainmast with the usual 5-minute epoxy.

The kit instruction sheet provides accurate diagrams for measuring the length of the masts. However, the lengths indicated are the lengths of the masts above the surface of the decking. An additional 10-15 mm should be added to the bottom of the masts. This provides sufficient strength when the mast is embedded into a mounting hole drilled in the decking.

## The Walrus

The Supermarine Walrus was a British single-engine amphibious biplane reconnaissance aircraft designed by R. J. Mitchell and first flown in 1933. It was operated by the Fleet Air Arm (FAA) and also served with the Royal Air Force (RAF), Royal Australian Air Force (RAAF), Royal New Zealand Navy (RNZN) and Royal New Zealand Air Force (RNZAF). It was the first British squadron-service aircraft to incorporate a fully retractable main undercarriage, completely enclosed crew accommodation, and an all-metal fuselage in one airframe. (Wikipedia)

This is a very small aircraft kit! It comes in three resin pieces and three PE parts (cross-braced outer struts and propeller). Decals are also included, and are well-printed. Construction is fairly simple: attach the rear fuselage to the forward fuselage/lower wing part, and then join the upper wing to the lower by means of the outer strut assemblies. Fit the propeller to the rear of the engine (it was a pusher), and you're at the end of the parts selection.

I painted by brush throughout, as the wingspan of the Wally is only three-quarters of an inch, well beyond my skill with an airbrush! Upper surfaces received a standard disruptive pattern of Dark Grey and Extra Dark Sea Grey. Sky Type 'S' covered the lower surfaces. I represented the cockpit area in gloss black. Actually, I did airbrush the propeller, come to think of it (not difficult, of course: Tamiya NATO Black with yellow prop tips!).

The first problem is that there are no engine supports for the engine: it just hangs under the wing. The solution is simple: four lengths of thin rod, painted Sky, and placed in the right locations. Problem solved. But the second problem is a bit more challenging: the Walrus is externally rigged, and the lack of rigging will be pretty obvious. Accordingly, thin sprue crosspieces were fitted fore and aft to either side of the fuselage, joining the wings. (Fig. 11)

The crane, winch and catapult are all PE parts that require folding. I used my tried and true 'Hold n' Fold', which has yet to let me down. No problems occurred in the construction or painting of these structures. When in place, the Walrus took its place on the catapult. (Fig. 12)

## **The Anti-Aircraft Gun Deck**

A gun deck virtually surrounds the rear funnel and carries four 4" anti-aircraft guns, two to a side. A fairly large item, it comes on a wafer of resin with several other pieces. The first bit of work on this structure is to remove all of the shields around each of the gun positions. These were, in fact, railings, in some cases covered with canvas dodgers. With the shields deleted, the deck can be removed from the wafer by gently sanding on a flat piece of sandpaper.

Wood decking covered the areas around each of the gun positions in order to give better footing for the gun crews. I used Tamiya XF-57 Buff and a bit of pigment to represent these areas. The remainder of the deck was in Dark Grey. Once painted, and with work completed on the basic hull, I fitted the gun deck to the hull.

Niko offers a set of 102 mm/4" guns in resin, along with some PE railings and a baseplate that is not required. These are extremely well represented pieces and add much to the overall model. Once painted (two in Light Grey, two in Medium Grey) I fitted them to the gun deck platform. (Fig. 13)

## **Base/Water**

At about this time, I found that the model was becoming more and more difficult to handle as I fitted more and more parts. Again, I went to the Griffith book for ideas, and again I got one: it was time to fit the model to its base. By doing so, I was able to move and position the model with more ease and less threat to the model itself.

The base I used came from EMA Models in England. They offer a very good selection of bases in various dimensions in plain, grassed and filled versions. Mine was filled, in that the recessed upper surface was "filled" with a section of fibreboard that brought the display surface up to and flush with the surrounding trim. For the 9.5 inch, 25 cm model, I chose a base measuring five inches by 12.5 inches (12.7cm x 31.75 cm) outside measurements.

Now, to continue with the "base" subject, I will touch on the key element of the base: the water. Here is what I used in order of usage, again discussed in the Griffith book: thick grade, rough-textured watercolour paper (Fig. 14); acrylic modelling paste (Fig. 15); inexpensive acrylic paint; gloss acrylic gel medium (Fig. 15); and standard acrylic model paint (in my case, Tamiya).

I cut a piece of the watercolour paper to the shape of the base's fibreboard insert by simply tracing around the insert while it was on the paper. Before gluing the paper into place, I placed the model on the paper, traced out the shape of the hull, and cut away the traced outline. Then I glued the paper onto the fibreboard, the fibreboard onto the base, and the model onto the fibreboard. I used Weldbond glue again for this gluing series. Then the whole assembly was put aside to dry completely.

The first layer of modelling paste is applied to begin building up the basic shape of the water and waves. After drying for at least 24 hours, a second, finer, layer goes into place. This layer can be softened with a moist brush. Do not build up the modelling paste too much: in 1/700 scale, a 15-foot wave would be only 1/4" high. Again, let the paste dry for at least 24 hours.

With the paste dry, we start to apply the paint. My base colour is a tube of medium blue acrylic paint. I applied this colour over the entire paste surface. Without having to wait for it to dry, I then mixed some white into a dollop of medium blue and applied it around the model's hull and areas that would represent and highlight tops of waves over the whole of the base. Next step: mix in a little black to another dollop of medium blue and apply it into the troughs between the waves to add a three-dimensional effect. Give this work a few hours to cure and dry.

Now we can apply the gloss acrylic gel medium to the 'water'. This will set fairly quickly, so we work in only a couple of square inches at a time. Essentially, apply about a one or two millimeter coat of the medium with a palette knife, then use a brush to add a ripple texture to the surface. A palette knife laid on the wet gel medium at the stern of the model and pulled sharply upwards will form the wake of the ship.

Lastly, we use a gloss white acrylic paint. A thinned layer along the lighter blue around the hull gives the impression of bubbles and foam. Squiggles of paint highlight the tops of waves and the turbulence of the wake. With this step complete and the paint and gel medium dry, your water is finished! (Fig. 16)

## Railings

I used the railings from the Gold Medal Models PE set number 700-1, "Naval Ship." This set provides all sorts of detailed parts, such as the yards for the masts (see above). I attached the railings by sections, first fitting into place with small bits of Tamiya tape, then running some thinned PVA glue along the lower edge of the railings. NNT has thoughtfully designed a small ledge along the hull top for attaching the railings, which makes their fitting so much easier. To manoeuvre around curves and bends, the railings can be shaped around dowlings, then fitted into place and glued. (Fig. 17)

## Rigging

The rigging for HMAS Sydney consisted of several types: thin black sprue, very thin speaker wire, and Uni-thread Caenis black nylon filament. I used the sprue for short lengths that took advantage of its relative rigidity in short lengths. The speaker wire is actually thin threads of wire spun together to make the actual speaker wire. This requires some unravelling, but the wires hold their rigidity in longer lengths than the sprue and are more consistent in their diameter. Uni-Thread Caenis is a very thin filament designed for tying fishing flies. It's only 0.05 mm in diameter, a very suitable material for 1/700 scale ships.

Morskie Profile small-volume references include a detailed volume of HMAS Sydney: photos, diagrams, English and Polish text – just about all I needed for detailing and finishing. The rigging diagrams coupled with the photographs helped immensely with the rigging of the model.

The black sprue and speaker wire dealt with the shorter lengths of rigging (Fig. 18). The Caenis thread handled the longer lengths such as the radio antennas (Fig. 19). As well, the Caenis came in very handy to represent the radio antenna 'downlinks' leading into the structure at the base of the rear mast. I had to attach these wires to the lower attachment point before linking them to the horizontal antennas. To do so, I built a rough and ready jig from bits of wood and popsicle sticks that bridged the whole hull. Then I drew each of the vertical links upwards, bringing them into gentle contact with the horizontal antennas, and then lightly taping them to the jig crosspiece. A touch of thin CA glue made the bond. Once solid, I trimmed the excess off and the downlinks were done (Fig. 20).

## Final Details

I added a few more details to round out the project. The jack staffs (bow and stern) are simple lengths of thin plastic rod fitted into a small drilled hole and topped with a small dot of white glue. Each was painted light grey with the small white glue "knob" at the top touched with a bit of gold-coloured paint. I added two rangefinders, one on either side of the bridge. Again, small lengths of plastic rod glued to form the characteristic "T" shape and painted light grey. The naval ensign came from the Gold Medal Models decal sheet 700-350-1D, "International Flag Decals."

## CONCLUSION

This was a very interesting build that, for me, generated a very steep learning curve. As I wrote above, I probably spent thirty per cent of my time reading about and practising various techniques necessary for a successful project. Success was confirmed at CapCon 2015 in Ottawa, where HMAS Sydney won first prize in her category.

## REFERENCES

- ◆ Backer, Stephen, <http://www.steelnavy.com/NNTSydney.htm> (Detailed review of the NNT 1/700 Scale HMAS Sydney).
- ◆ Brzezinski, Slawomir, *The Australian Light Cruiser HMAS Sydney*, Wydawniczo-Handlowa, Wyszkiow, Poland, 2004. (Morski Profile)
- ◆ Griffith, David, *Ship Models from Kits: Basic and Advanced Techniques for Small Scales*, Seaforth Publishing, Barnsley, South Yorkshire, UK, 2009.
- ◆ Lynch, Thomas G., *Canada's Flowers: History of the Corvettes of Canada, 1939-1945*, Nimbus Publishing Ltd., Halifax, Nova Scotia, 1981.

## RESOURCES

- ◆ Gold Medal Models PE: <http://www.goldmm.com/>
- ◆ GMM decal sheet (flags): as above
- ◆ Niko (4" guns): <http://www.nikomodel.pl/index.php/en/>
- ◆ Master main armament: [www.master-model.pl](http://www.master-model.pl)
- ◆ Uni-Thread Caenis rigging thread: <http://www.resinshipyard.com/pages/accessories.html>
- ◆ EMA Model Bases: <http://www.ema-heritage.com/>

## SPECIAL THANKS

- ◆ David Peterson, ACTSMS Canberra, Australia, for his kind assistance and support during this build.
- ◆ Stephen Backer, [www.steelnavy.net](http://www.steelnavy.net), for giving permission to use material from his review of the NNT HMAS Sydney kit.

## DEDICATION

The building of this model is dedicated to the memory of the 645 crew members of HMAS Sydney who lost their lives in battle with the German auxiliary cruiser Kormoran (HSK-8), on November 19th, 1941.

Mr. David Peterson, who assisted most generously during this project, lost two uncles on HMAS Sydney during her final engagement. Accordingly, a further dedication is made to the memory of:

- ◆ Leading Seaman Frederick William Norman
- ◆ Able Seaman Charles George James Norman

## About the author:

**Gary Barling was born and raised in the Toronto area and subsequently served 40 years in the Canadian Army, and has been semi-retired since 2004. Modelling since 1955, His main area of interest is aircraft, with strong minors in armour and ships. Gary's been a member of IPMS Canada since 1965 and retired from active service on the National Executive in December 2013. He maintains triple citizenship in the Ottawa Valley Plastic Modellers (Petawawa), IPMS Ottawa and IPMS Farnborough in England.**

Page 13

## A 'Golden' Airshow Tutor

by Frank Cuden

IPMS Canada C3476

IPMS/USA 4311

IPMS (UK) X55047

Albert Lea, MN, USAAI Magnus, C#4579

When I first saw Mr. Wayne Hui's most excellent build of the **Hobbycraft 1/48 CT-114 Tutor** (*see RT Vol. 29, No. 6. Ed.*), I immediately wanted to try my own hand at turning out a decent rendering of the aircraft. Some years ago Mr. Hui designed and had produced a resin aftermarket set for the model and marketed it through the now defunct '**Uncle Bill's**' Hobby shop label (Calgary, AB). My search for the resin set, which included flaps, cockpit, speed brakes, instrument panel and seats, came up empty. On a lark, I contacted a fellow modeller and he had both 1/48 **Hobbycraft** plastic kit and **Belcher Bits**' all-resin kit and was willing to part with one of them. I wanted something different so after intense price negotiations had ended, I opted for the **Belcher Bits** kit as an acceptable personal challenge. Could I build it and make it look good?

As Mr. Hui had covered the standard CAF military trainer version with his build, I further opted to use the 1967 **RCAF Golden Centennaires** air display scheme, which was included on the **Belcher Bits** decal sheet.

**The build starts...**



My modelling compatriot mentioned that the **Quickboost 1/48 A-37 ejections seats (QB 48 628)** were quite close to the Tutor seats and, with a little modification, could be made to look the part. So with a little tweaking here and there, I thought I might be able to come up with something passable while adding scratch-built additions to the cockpit.

We begin with **Photo 1**. The first operation I performed on the kit was to grind out the upper solid resin upper nose part to create a cavity to hold nose weight because there just wasn't any room elsewhere to ensure that I wouldn't have a tail-sitter. Using my Dremel tool, I was able to create a sufficient cavity in the solid resin to hold enough buckshot to keep the model from sitting on its tail. The two **Quickboost** seats were just set in place to see how they fit. Note the different positioning of both the seat belts and oxygen hoses – a nice individual touch that **Quickboost** provided.

Some preliminary cockpit work is shown in **Photo 2**. I began with some rear bulkhead scratch-building, as evidenced in the photo as I used different sizes and thicknesses of plastic strip and sheet. Courtesy of photos of Mr. Hui's aftermarket set I determined that the quilted soundproofing panels adorned the cockpit sidewalls and so I set about making them using 0.010" plastic sheeting, cut to shape, Using a TIG welding rod and a straightedge, I scribed in the 'quilting'.

**Photo 3** shows the small diameter wiring additions I made to the rear bulkhead along with the canopy breaker structure behind the head rests. Using plastic rod and sheet plastic, I fashioned rudder pedals and support structure under and behind the resin instrument panel. Using the same materials, I made a couple of foot pads as well. The small 'T'-handle was a prominent feature I saw in cockpit photos. Photos indicated the forward cockpit coaming was covered with canvas and that can be seen in the photo - more about that later. The etched brass cockpit sills came from the now out-of-production **Reheat "Aircraft Canopy Details" set, #RH049**.

With some paint in the cockpit, **Photo 4**, things came to life. The two small throttle handles came in the **Belcher Bits** kit, and I cobbled together a couple of control columns and made the hydraulic canopy ram from plastic rod. Relatively new on the market at the time, I used **Airscale "Cockpit Placard Decals", #AS48 PLA**, to add some visual elements to the cockpit and instrument panel. Little items like those add detail and interest to any model aircraft cockpit.

In **Photo 5**, I began gluing the major kit components together using thin super glue and accelerator. The photo shows some of the breakdown of the kit parts and in **Photo 6** they are all glued in place and the seams have received a coat of **Squadron White Putty**. It began looking like a CT-114 Tutor. I used **Alclad II Gray Primer** to overcoat the seams and while I was at it, I sprayed the entire airframe to later receive the colour coats.

I was able to find some good photos of the aerial display smoke generator pipes that were attached to the two centreline eco-friendly oil tanks. I included **Photo 7** to give the reader some idea of how that all came together. Starting with the kit resin, are of course, the gear legs that have been installed, the two centreline pylons that would hold the smoke oil tanks and the aft under-fuselage fairing that contained the 'plumbing' detail. The oil was discharged out of two portals directly behind, and in the path of, the hot jet exhaust, thereby generating the familiar air show smoke. I used florist's wire to make the 'piping' that extended under the fuselage from the inside of the pylons back to their connections in that fairing. Plastic sheet, cut to size and bent to shape, acted as securing supports for the piping.

The kit came with two vacuformed one-piece windscreens and canopies. However, I wanted to show the model with the clamshell canopy opened, and so some cutting was necessary. Using a thin strip of masking tape as a guide, **Photo 8**, I used scissors to carefully separate the windscreen from the canopy.

Two types of clear nose cones were also provided and I would later remove the appropriate one from its backing sheet, or so I thought at the time.

**Photo 9** shows the added detail for the oil outlet system in the rear under-fuselage fairing. A little plastic rod and thin flexible solder, along with some patience, did the job. I was fortunate to find a nice photo of that detail on the Internet site, [airliners.net](http://airliners.net).

## Painting

At this point I was ready to start spraying the model. **Photo 10** is my first attempt at matching the deep blue underside colour of the aircraft. Unfortunately, I missed a bit with the colour being too light so it was back to mixing paint. Adding some **Testors Model Master Black** to the previous mix, **Photo 11**, nailed the blue colour and then I went after the elusive top colour.

The plan was to add some **Alclad II Aluminum** shade to **Alclad II's 'Gold'**, and the first experiment is shown in **Photo 12**, followed by **Photo 13** which shows a slightly different hue or shade.

Quite unexpectedly, different light sources revealed different shades of 'gold'. **Photo 12** leans toward a copper tone while **Photo 13** is more of the colour I wanted to match the real aircraft's finish.

Placing the model under fluorescent lighting gave it the gold look I wanted while having the model sitting under incandescent lighting leaned toward a copper colour - strange happenings, indeed. Both photos are more on the darker side, as that gave the best lighting to show the different colours under different light sources. **Photo 14** reflects the true colour of gold and **Photo 15** shows the copper tone, while **Photo 16** is the colour that best matches the aircraft finish. Obviously, different lighting conditions changed the colour, and **Photo 17** really shows the copper influence.

## Decals

Changing hues be damned, I began the task of decaling the model in **Photo 18**. To be safe, I sectioned the fuselage cheat line into three strips and began soaking and placing the strips on the model. **Photos 19 and 20** show the results. While not being a complex set of decals, what was provided in the kit made the model come alive.

## More Details

I used **Alclad II's Aluminum** shade for the flying surface leading edges, masking and then airbrushing them. I also replicated the black 'patches' on the wing leading edges, using black decal striping, cut to size and shape. Those are visible in **Photos 20 and 21**.

Online photos revealed a small box with a wire leading from it and down into the cockpit coaming, **Photos 22 and 23**. As the coaming was canvas-covered, I used Kleenex tissue to duplicate that detail which added texture. Laying the tissue on the coaming, I coated it with thinned white glue and let it dry and then trimmed it to fit, gently removing the excess. Obviously, the thinned glue also cemented the tissue in place. I painted it a very dark grey, **Floquil's Grimy Black**, to be exact.

Also visible in **Photo 22** is the taxi light plus an amber light at the bottom of the nose cone and I confess that I don't know its purpose. The amber 'light' came from **MV Products Realistic Light Lenses, #LS 18**. Two different styles of clear nose caps are provided in the kit and in **Photo 24**, I am using a thin saw blade to remove the clear cap from its backing. Of course, for this particular aircraft, I cut out the WRONG one! I later cut out the correct one, and glued it in place toward the end of the build.

A thin piece of plastic was added to the inside centre canopy frame, **Photo 25**. A couple of small plastic pieces added detail to the centre strip when painted, along with canopy locking hooks on the lower canopy frames. Using 0.020" plastic rod, I bent the rod by holding it against the 75-watt work light on my workbench and formed them as is seen in the photo. I then cut the formed pieces on an angle using a single-edge razor blade, and glued them to the frames, three per side. They show up well in **Photo 30**. Photos of the real aircraft revealed the unique canopy 'ears' that raised and lowered the canopy in conjunction with the canopy opening and closing ram. It was a challenge to come up with a way to replicate those two items and so I set about making them from plastic sheeting. Each one had a 'dog leg' that was evidently formed when the canopy was raised. The 'ears' would slide back a bit and then bend as the canopy opened. They can be seen in **Photos 32 and 33**. Note also the different 'colours' of the upper surfaces in each photo. I added a smaller piece of plastic to the canopy frame underside to brace them as I would show the canopy opened, refer once again to **Photo 25**. It went much easier than I had thought with the first and foremost necessity being bending both 'ears' to the same angle. Using additional plastic, I added four rear-view mirrors to the inside front edge of the canopy frame, painting the forward sides black with the 'mirrors' painted **Testors Model Master Chrome Silver**. The mirror positions were gleaned from reference photos. The gold hue of the paint shows up as being correct and shown in **Photo 26**.

I made the pitot tube from a length of **Minimeca Stainless Steel** tubing, with the thinner section being telescoping plastic rod. I hand-painted the 'barber pole' red stripe after first spraying the tube with **Testors Model Master White**. I made the rotating beacon, just behind the canopy, from clear red stretched sprue. I rubbed it on a piece of old blue jean material which polished it well. A coat of **Tamiya Clear Acrylic** made it shine even more. **Photos 32 and 33** show the canopy 'ears' with their unique dog-leg bends. Earlier, I had applied two short strips of black decal to the inside of the small paneled areas just to show some depth underneath the tabs. The ram, opening and closing the canopy, was made from plastic tubing and rod. **Photo 36** shows it well and it added further strength to the opened canopy. Although not completely visible, the clear nose cone is in place. I hand-painted the black edge of the nose cone, a small detail clearly visible in my reference photos.

## Conclusion

I'd like to thank the Editor for sending me a plethora of Golden Centennaires aircraft photos as reference shots (*a few are included with this article. Ed.*). Using those and a copy of Mr. Hui's Tutor build article gave me good references for my project. As modellers, we should all help each other, and that was true in this case. This was a fun build and I'm thankful for the help I received. Thank you, ladies and gentlemen, and good modelling to you all!

### About the author:

With the completion of his first model in the early 1950's, Frank Cuden has continued in the hobby over the years. 1/48, 1/72 and 1/144 are his scales of choice and he enjoys adding extra detail to each kit. He also enjoys e-correspondence with modellers world-wide, and enjoys improving his writing skills with each article he writes. Since retirement in 1999, he's enjoyed modelling at will, and becoming more fun as time goes by. Wife Marilyn, three children and five grandchildren complete the circle.

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Page 22

## Building a Canadian Dream in 1/48 scale The CF-105 Avro Arrow (Part 1)

By Richard Clairoux  
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### Background

#### Introduction

The Avro Arrow remains a Canadian aerospace icon decades after its cancellation. For some, it would have been the best interceptor ever. For others, it was a great achievement in Canadian engineering. The sudden termination of the program on Black Friday, February 20th 1959 shocked the nation. There is still much controversy over the Arrow cancellation and in particular the subsequent destruction of the prototypes.

With its futuristic lines the Arrow remains a favourite among aircraft enthusiasts: it looked so much ahead of its time! Hobbycraft Canada released its first version of the Arrow in 1/48 scale in the 1990's. This version lacked details and had shape issues. The re-tooled kit HC1659 corrected the most noticeable shape errors and slightly improved the level of detail. This kit was my starting point for the project but it was a difficult build and is not on par with your modern 'Tamigawa' kits in terms of fit and details.

My Arrow project became reality with the release of the North Star NSE 48-001 resin cockpit set. At about the same time, MasterCasters also issued two resin detail sets (MST 48002 and 48003) providing improved landing gears/bays/doors, air inlets and exhaust nozzles. The icing on the cake was the 2013 release of Canuck Models decal sheet WVD48003. Now I had all I needed to start a high-standard Arrow build!

Early on, I decided that I would make the third prototype, RL-203, which was the only Arrow with the Red Ensign flag on the tail. It would be represented as seen during the winter of 1958-59, with fluorescent red day-glo panels and the long exhaust nozzles. Documentation came from a study of Avro Arrow books published over the years. The excellent Arrowheads 'Blue' book was the main source for technical drawings (it is a must for the re-scribing effort). The various books written by Peter Zurring and Marc-André Valiquette were very helpful for overall and detail photos. Finally, several visits were made to the Canada Aviation and Space Museum in Ottawa to see the nose of RL-206 and the wingtips of RL-203. This greatly helped the nose gear bay detailing effort and confirmed the fluorescent red colour applicable to my Arrow.

I did not know it at the time but my Arrow build would last five years! There were so many corrections required that the assembly took a lot of time and effort... For the sake of this article, I will follow the standard modelling article sequence - starting with the cockpit ... but in reality, pretty much all kit areas progressed in parallel!

## **The Cockpit**

The North Star resin cockpit set is a major improvement compared to the Hobbycraft cockpit (Photo 1). The instrument panels and side consoles are very well rendered and correspond to the documentation available. Actually, the Arrow prototypes had different instruments installed over time and the North Star set captures all the important details. The set provides photo-etched parts to represent the fuselage stiffeners next to the side consoles. These proved difficult to install and they were replaced by thin Evergreen styrene strips (Photo 2). The insulation fabric was represented by panels cut from a brick-pattern sheet used in model railroad dioramas. The bulkheads behind the seats were detailed with Evergreen 'L-shaped' stiffeners and copper wires of different gauges. The observer's windscreen had to be widened by a build-up of plastic strips to match the canopy external shape.

The cockpit interior was airbrushed neutral grey while the instruments and side consoles were painted flat black (Photo 3). Dials and buttons were painted light grey, red and yellow, using a fine brush or a needle tip as required. A dark wash was applied to bring out the details (Photo 4). I personally create my own wash using black artist oil paint diluted with Pebeo mineral spirit. By varying the paint pigments and thinner quantities in a mixer plate, it is possible to achieve the desired finish. Testors Dullcote was applied by spray can to seal everything. The resin cockpit set was glued with cyanoacrylate (CA) on top of the nose gear bay and fitted well within the two fuselage halves (Photo 5).

## **Ejection Seats**

The North Star resin ejection seats have excellent surface details and nice photo-etched straps and buckles. However, they required the addition of a head cushion (styrene carved to shape), thicker side cushions (putty sanded to shape), new back rails and rocket cylinder (Evergreen strips and tubing) (Photo 6). The headrest and seat pan ejection rings were made with copper wires. The seat sides were painted flat black while the seat cushions have different shades of brown (Photo 7). The shoulder straps are desert tan, the seat pan straps are light blue and all buckles are silver. The oxygen bottle is light green with a silver strap, and the ejection rings are standard yellow and black. Seat edges and details were accentuated using light grey and brown pigments. Good reference pictures of an original Arrow Martin-Baker seat on sale were found on eBay!

## **The Cockpit Canopy**

Using plastic strips & rods and copper wires the resin clamshell cockpit doors were detailed with internal stiffeners, contour gasket seal, door locking mechanism and heating cables (Photo 8). The acetate windows provided in the set were glued in place using MicroScale Kristal Klear. The clamshell doors were painted and weathered using the same technique as for the cockpit interior (Photo 9).

## Pitot Tube

A new nose boom pitot tube was made from scratch. It consists of two concentric brass tubes (K&S Engineering 3/64" and 1/16") and the change in diameter occurs 1/2" from the tip (Photo 10). A support structure was built inside the nose cone to ensure proper boom alignment. Small pitch and yaw vanes were created using thin brass plates and rods. The smooth transition at the nose junction was made by building up layers of plastic strips and CA glue as gap filler which were then sanded to shape. The boom was painted silver and white per photos. A 2 mm wide strip of chrome Bare Metal foil was used to seal the joint at the nose junction.

## Nose Bay and Nose Gear

The MasterCasters nose gear bay set includes nice structural stiffeners but is missing important details. First, flight control wheels were added by modifying aircraft wheels from the spares box (Photo 11).

The corresponding control cables were represented with piano wires. Then, electronic boxes were made-up using plastic strips and cockpit consoles from the spares box (Photo 12).

The yellow cooling ducts are old 1/24 scale Chevrolet Corvette exhausts! Wire harnesses and small actuators were also added-on. The nose gear bay was painted white with light green control wheels and ducts, tan wire harnesses, black electronic boxes followed by a dark wash (Photo 13).

The MasterCasters resin nose gear strut is nicely done but was improved with the addition of electrical wiring, stiffener rings and the ground-servicing electric box (Photo 14). The torque link from the basic kit was used but lightening holes were drilled open. The resin forward and aft doors are great replacements for the Hobbycraft parts, but their thin edges are very fragile and plastic strip doublers were needed. Note that the aft door forward edge was changed to get the proper `bent-up` angle. For some reason, the Arrow nose gear strut is painted light grey while the main gear struts are silver. Resin wheels were painted silver with matt black tires.

## The Main Fuselage

The Hobbycraft fuselage required new internal stiffeners as its skin flexed too much for my liking! Plastic bulkheads and support tubes were glued-in and strips were added on the horizontal joint to facilitate assembly (Photo 15). This improved the fit of the bottom and top halves but much liquid glue was required. However, this did not prevent getting a large 1/16" step between the fuselage halves on the right side, which was shaved off using a razor blade (Photo 16)!

The excessive sanding that was needed resulted in very thin forward fuselage walls, so much so that two sections had to be replaced with new panels (Photo 17). The kit fuselage sides had no panel lines at all! They were added using my BareMetal scribing tool and old reliable TriMaster pattern plates.

The bottom fuselage panels were generally acceptable but the multiple holes underneath the missile bay were missing. On the prototypes, this bay was used to store flight test recording equipment which required a myriad of small cooling inlets. These were represented by 1/32" drilled holes using the pattern from Arrow underside photos (Photo 18). The kit air brakes missed the six rows of lightening holes so I decided to make new air brakes from scratch (Photo 19). First, the holes were drilled through a thick plastic strip. Then, the thin air brake contour panel was attached to the thicker strip: this ensured that all holes had the same depth. Five rows of stiffeners were added in the air brake bays. Finally, two large wedge-shaped outlets were again made from scratch and glued to the underside next to the engine access panels (Photo 20).

## The Engine Inlets

The two-part engine inlets from the kit were replaced with single-piece resin parts from the MasterCasters set (Photo 21). They offer thin inlet lips and the Boundary-Layer Control (BLC) system holes. However, the BLC hole pattern had to be corrected as follows: unnecessary holes were marked with a pencil and then filled with CA glue, which was carefully sanded to get a smooth surface. The BLC outlet under each inlet was created by removing a cubic section of resin and

replacing it with plastic strips to create the outlet walls. Adjustment of the inlets to the nose and main fuselage was difficult. The thickness of the inlet side supports was adjusted with thin strips to properly align the inlets in front view. Vertically, the inlets were aligned with the top fuselage (Photo 22) but this created a significant step at the bottom fuselage joint... this was eliminated with much sanding, plastic strips, CA glue and some French-Canadian swearing (Photo 23)!

(en.wikipedia.org/wiki/Quebec\_French\_profanity)

New curved ducting all the way to the engines would require a significant effort therefore I decided to scratch-build inlet covers. I wanted to finish this kit someday! The cover perimeter was penciled on a plastic sheet using the resin inlet as a pattern. Stiffener plates and locking bars were added-on using close-up photos as a reference. The inlet covers were painted Tamiya Red X-7.

## Cockpit Correction

At this point, I determined that the front cockpit dash provided by North Star was incorrect and I made it longer by adding triangular panels cut from Evergreen strips. The dash now follows the pointy windscreen and stiffeners were added on (Photo 22). The central divider strip was typical to the Arrow and the contemporary Convair F-106 Delta Dart to improve pilot forward vision.

The spine above the wings had no panel lines at all! Therefore I scribed the six access panels with their own small latches. Each panel latch has a corresponding access panel on the wing upper surface. The cockpit air conditioning outlet was drilled out and the inside painted flat black.

## The Engine Exhausts

The engine exhaust nozzles were next. MasterCasters provided nice replacement resin parts (Photo 24).

The kit's fuselage bulges ahead of the nozzles lack about 0.5" in length (Photo 25). First, the longer perimeter was cut to shape on a plastic sheet and glued around the original bulge. Then, the transition to the existing bulges was made-up by adding layers of plastic strips one over the other. Finally, the new bulges were sanded to shape, with CA glue filling-in the gaps to get a smooth surface.

Unfortunately, the fit between the exhaust nozzles and the rear fuselage was very poor. The nozzles were aligned with the top fuselage, creating 1/16" gaps underneath! Nothing is easy with this kit... The gaps were filled with thin plastic strips & CA glue and after much sanding, an acceptable joint was obtained (Photo 26). The nozzle-fuselage junction line had to be re-scribed and Dymo tape was a saviour to achieve a straight contour line. The small triangular panels at the wing joint had to be removed and plastic strip replacements glued-in to get the proper alignment with the wing trailing edge (Photo 27). The tailcone between the nozzles had to be modified as well: the pointy shape is inaccurate as it applies to the shorter nozzles fitted early on. A blunt shape with a horizontal outlet is required. After much thinking on how to achieve this, the correct shape was obtained by carefully sculpting the tailcone to shape with a brand-new X-Acto blade. Small holes were then drilled in-line to represent the outlet. As for the air inlets, exhaust nozzle covers were scratch-built using the same technique and red painted. Top and bottom cover handles were made from copper wire bent to shape.

**PART 2** of the Avro Arrow build will be presented in the next RT. It will cover the remaining assembly details, painting, weathering and decals.

## About the author

Richard Clairoux has been building aircraft models since boyhood with 1/48 scale fighter jets as a preference. He works in the aerospace industry as an aircraft performance engineer in Bombardier's Flight Sciences Department. He learns new tricks and gets good tips at his monthly IPMS Montréal meetings. He enjoys travelling to Canadian and American modelling shows with his fellow modelling buddies. He lives in Laval, Québec with his wife and two daughters.

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## A Diorama in a Box

By Barry Maddin  
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With a number of 100 year commemorative events taking place covering the First World War (WW I) there has been an influx of WW I subjects produced by model manufacturers. This trend has provided a wide range of new subjects for the discriminating model builder from early tanks and vehicles to figure sets. **Master Box** has made a fine contribution with a complete WW I British trench scene.

### The Kit

**Master Box** Ltd has released their item **MB35114 “British Infantry before the Attack WW I Era”** which is actually a diorama in a box (**Fig. 1**). The kit consists of trench walls with a short segment of ground to the front and rear, duck board trench floor, wall reinforcement logs, two benches and a scaling ladder. There are also five figures, two officers and three soldiers who are depicted getting ready to go over the top. The trench components and figures are cast in light grey styrene without flash and very light mould lines. The figure details are well rendered with nice sharp facial features. The weapons and personal kit is provided on a dark tan sprue from **ICM**, a Ukrainian company. The **ICM** sprue is very well moulded and provides a number of extras to add to the trench scene such as shovels, an axe and gas alarm. The instructions, which are very simple to follow, are printed on the back of the box (**Fig. 2**).

### The Build

The wood revetment on the trench walls is very well cast but I wanted to enhance the appearance of the wood. I re-scribed the gaps between the boards with the back edge of a # 11 blade in my scalpel handle and then glued the wall segments to the parapet section (**Fig. 3**).

The trench floors consist of duck boards with a narrow and wide strip of ground visible. I re-scribed the duck boards (**Fig. 4**) and then glued the two floor lengths together (**Fig. 5**). I then glued the back wall to the floor and glued the wall reinforcement logs into place (**Fig. 6**) and then glued the front wall and logs to the floor.

Although you can build a nice diorama straight out of the box I wanted to enhance the build. Using **0.030” sheet styrene** I made a bottom to set the trench on and covered the front, back and right side ends of the trench assembly. With **0.010” sheet** I then traced the shape and cut out covers for the two openings on the left side. To further add to the scene I cut a wood dowel and etched it with the edge of the saw blade to resemble a rough hewn timber. I glued it in place at the end of the trench which I plan to drape a canvas sheet over to blank off the trench.

I also decided to add barbed wire to the trench although I know that the wire was generally placed further out from the parapet. Using a simple jig (**Fig. 7**) I made the wire pickets using 24-gauge florist’s wire (**Fig. 8**) and then made the barb wire from 32-gauge steel wire.

**WARNING:** scale barbed wire can inflict injuries on clumsy fingers. I drilled holes in the parapet on the outside of the moulded sandbags and glued the pickets in place and strung the wire through the pickets leaving a gap which the soldiers would have cut to pass through the wire for the attack (**Fig. 9**).

I then added fine sand to the earth areas by sprinkling the sand into a layer of white glue with coarser sand on the parapet outside the sandbags (**Fig. 10 & 11**).

I cut a sheet of tissue paper to size and glued it to the wooden dowel at the end of the trench and brushed on a mix of white glue and water and glued on two additional dowels giving the impression of a dugout (**Fig. 12**).

## Painting

I then taped a hacksaw blade to the bottom of the assembly to facilitate handling and I airbrushed the whole assembly a base coat of **Tamiya XF-64 Red Brown (Fig. 13)**. When the base coat was dry I painted the sandbags and canvas sheet **Panzer Aces 314 Canvas** and dry brushed them with **Vallejo 886 Green Gray** and **Vallejo 988 Khaki**. I then dry brushed all the wood surfaces with **Vallejo 879 Green Brown (Fig. 14)**. I next built the benches, re-scribing the top boards (**Fig. 15**) and the scaling ladder and then painted them **Vallejo 872 Chocolate Brown** and dry brushed them **Vallejo 875 Beige Brown**.

## The Figures

As mentioned before the figures are very well moulded with sharp facial features and nice body details. The fit was very good with only one figure needing a little putty at a shoulder joint. With the figures assembled I undercut the collars, pocket flaps and bottoms of the tunics with the back edge of my # 11 blade for more detail and then glued on all their equipment. To facilitate handling I drilled out the heel and in one case a knee of each figure and inserted a steel pin so I could hold them with my hemostats. The figures were then primed with **Krylon Primer Gray** and when dry I painted the flesh areas with a base coat of **Vallejo 815 Basic Skin Tone**. I then painted all the flesh tones with oil paints. I decided to paint the officers first and started with their shirts which I painted **Vallejo 873 US Field Drab**. I next painted their leather boots and belts in **Vallejo 871 Leather Brown** with their pistol holsters and the captain's spur straps on his boots painted in **Vallejo 818 Red Brown**. The Officers' uniforms were painted **Vallejo 921 English Uniform** and dry brushed with **Vallejo 825 German Cam Pale Brown**. Their gas mask bags were done in **Vallejo 879 Green Brown** and dry brushed with **Vallejo 976 Buff**. The senior officer is a captain who is counting down the seconds before he signals the attack and I picked out his watch strap and cane with **Vallejo 871 Leather Brown**. His peaked hat was painted the same as his uniform with the hat badge, uniform buttons and belt buckle painted with **Vallejo 801 Brass**. His cuff rank was detailed with **Vallejo 917 Beige (Fig. 16, 17 & 18)**. The other officer is a second-lieutenant waiting for the signal to accompany his men over the top and was painted the same as the captain except his helmet was painted **Vallejo 887 Brown Violet** and his whistle painted with **Vallejo 864 Natural Steel (Figs. 19, 20 & 21)**.

The men come in various poses ready to launch the attack and I painted their backpacks and webbing in **Vallejo 880 Khaki Gray** with their gas mask bags, shovel bags and putties painted **Vallejo 879 Green Brown**. Their ammo pouches were done with **Vallejo 988 Khaki** and their boots with **Vallejo 871 Leather Brown**. All their gear was dry brushed with Vallejo 976 Buff. The men's uniforms were painted **Vallejo 983 Flat Earth** and dry brushed with **Vallejo 825 German Cam Pale Brown**. I added slings to their rifles and paint them with **Vallejo 880 Khaki Gray**. The rifles were painted with **Vallejo 862 Black Gray** and **Vallejo 846 Mahogany Brown**. The bayonets were painted **Vallejo 846 Mahogany Brown** and **865 Oily Steel**. As with the second-lieutenant their helmets were painted in **Vallejo 887 Brown Violet (Figs. 22, 23 & 24)**.

## Finishing

Before adding the figures to the trench scene I applied **MIG Pigment P028 Europe Dust** to all the earth areas and between the openings in the floor boards and on the bottom of the canvas sheet at the trench end. I then gave the wood areas a wash using **Vallejo Game Colour 203 Umber Wash**. I tried out a new **Vallejo** product from their **Environment Series - 821 Rust Texture** which I applied to the barb wire and pickets. It's applied with a paintbrush and renders a very flat dark rust finish. I was happy with the results and look forward to trying it on other items. To add additional detail I painted up a couple of shovels, an axe, wire cutter, French Army helmet, wood crate and boards. I added a lantern, a couple of Mills bombs (handgrenades) and a bayonet to the top of the wooden crate (**Fig. 25**). I painted up a gas alarm which I glued to one of the benches along with a bucket. I glued the wire cutter by the gap in the wire and glued the figure crawling into the gap into place. When I was building the figures I had positioned their limbs using the ladder and benches, Blu-Tacked in place, to ensure they would fit correctly which now paid off. I didn't position all the figures as



shown on in the instructions and chose to have the captain standing by the dugout curtain ready to signal the attack. Everyone fit in the narrow confines of the trench scene and I applied more **MIG pigment** to the figures' boots and putties and to the duck boards (**Figs. 26 & 27**).

To make handling the scene easier I mounted the trench assembly on a small wooden plaque I had stained with mahogany stain (**Fig. 28**).

## Conclusion

I really enjoyed this little project and had considered embedding the trench assembly in closed-cell styrofoam to extend the scene. But I think the kit as is makes into a nice diorama and closing off the openings gives the scene a nice finished look. I know that in reality the average trench was a horror of mud and water. British trenches were rarely as well-constructed as the kit represents, however the kit allows you to make an interesting WW I diorama. The moulded on triangular unit markings on the shoulders of the figures represent the triangle of the British 29<sup>th</sup> Division but you could fashion insignia for any division or regiment. Overall this was a great little kit and a pleasure to build.

## References

- Ospreys - The British Army 1914 – 1918
- [www.firstworldwar.com](http://www.firstworldwar.com)

Barry retired from the CF in 2009 after a 37-year career as a Navy Stoker, an Army Vehicle Technician, and finally as an Army EME officer. In 2009 he and his wife moved to Truro NS from Ottawa where they built their retirement home, including a hobby workshop, which is strictly off limits to the cats. Barry started building models before he could spell 'plastic' and currently builds mostly 1/35 WW II armour and military vehicles, although he does dabble in other areas. He is a member of AMPS and has been a member of IPMS Canada since 2000.

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## Page 36

### National Executive

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