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RT Random Thoughts

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RT Random Thoughts

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Cover Comment: *Evan Jones of Guelph, Ontario tore apart an old build of a Tamiya kit and rebuilt it into a Brabham BT42 racer sporting a Canadian Formula 1 scheme. See page 5 for the details.*

Future Articles...

Here are some articles that are coming down the RT pipeline. If you have something that might fit in with related topic to make it a theme, please contact the Editor. Heck, if you've got something on any modelling topic, get in touch!

1/72 Corvette, 1/72 T2V Seastar, 1/48 CF-5A, 1/72 RCAF NA-64 'Jeep', V-2 Rocket, 1/72 CT-134, RCAF HWE Hurricanes, 1/35 Sherman, 1/35 Bailey Bridge, 1/48 Lancaster, 1/144 CP-140, 1/72 CF-

Building an Iconic Canadian Grand Prix Race Car in 1:12 scale

by Evan Jones
C#3372
Guelph, Ontario

Background

Egbert 'Eppie' Wietzes is a well-known Canadian race car driver who had success in the 1960's and 1970's. He was born in the Netherlands and became a naturalized Canadian citizen. He drove various Formula One (F1) and other race cars, mostly in Canada. On September 22, 1974, he drove a Brabham BT42 at Mosport in Bowmanville, Ontario that was decked out in a unique 'Team Canada' livery. Alcohol sponsorship of F1 race cars was not allowed at the time, but Labatt's helped the team and in return the number '**50**' which decorated the car was a not-so-subtle endorsement of one of their main beer brands. Although he retired after only 33 laps with engine problems, the car has always been an iconic example of Canada's F1 history.

The Model

Japanese-based **Studio 27** is the only manufacturer to produce a Brabham BT42 in 1:20 scale, complete with the Team Canada livery. It is a multimedia kit and appears to need some minor changes to reproduce the car driven by Eppie. **Tamiya** produced a 1:12 scale kit of the Brabham BT44B in 1975 and I had built this model in the late '70's when it was first released. (It was re-released in 2010 with a new photoetch fret and Cartograph decals). The model I built back then was definitely showing its age:

- ◊ None of the moulding seams were removed
- ◊ Many of the suspension pieces were not painted and brushes were used on the other parts that were painted
- ◊ Tube glue was used throughout

◊ My idea of a clear coating was to brush paint Varathane gloss for furniture on the body. Over time, the yellowing of the Varathane has not added to the beauty of the model, which wasn't great to begin with.

The model definitely needed a face-lift, and what better way than to convert it into the 'Team Canada' version.

The car Eppie drove was actually a BT42, which was the predecessor to the BT44B that was the basis of the **Tamiya** kit. Based on as many photos as I could find on the Internet, there are a number of changes that would be needed to reproduce something like the Team Canada car:

◊ rear wing is mounted lower, has different side plates and no secondary wing surface

◊ rear suspension had some link bars in polished or chrome metal (although there is a lack of rear suspension photos of this car)

◊ engine scoop has a larger opening and different side profile

◊ front suspension has tubular 'A' arms and the shock is mounted completely outside the body

◊ front air dam has some differences, including no NACA duct near the driver and no taper towards the front

◊ Team Canada livery and sponsor decals (including Eppies 'autograph')

All of these modifications are pretty straightforward, except for removing the taper on the front air dam. This looked quite daunting and I didn't attempt it for this build.

After disassembling the existing model as best as I could and stripping off the paint, the rebuild and modifications began.

Rear wing

Two-part epoxy putty was used to fill in the gap between the two wing surfaces, followed by sanding and **Tamiya** putty for the touch-ups, as shown **Photos 1 and 2**. New, more rounded, end plates were made


1


2

from 0.25 mm sheet styrene. **Photo 3** shows the new plate as compared to the old plate. The reference photos seemed


3

to show a mounting system of metal tubes, which differed from the plates in the **Tamiya** kit. Some 2 mm styrene rod and some styrene strip was used to design a mounting system of seven pieces in total, shown in **Photo 4**. The mounting was made by squeezing the end of the rod with a flat pair of pliers, drilling a 1 mm diameter hole for the pin then shaping the end with a sanding stick. The mounting points on the wing were made of sheet styrene. The same transmission mounting locations were used and 1 mm styrene rod pinned all the pieces together.


4

Engine scoop

A few thick pieces of styrene sheet were used to establish the new profile of the scoop. Thinner sheets were used to lower the front lip of the scoop. This was following with two applications of epoxy putty, some **Tamiya** putty and a lot of sanding and shaping in


5


5a

between. **Photos 5 and 6** show some of the intermediate progress steps. During final dry assembly, it became apparent that the roll bar would interfere with the lowered front of the scoop. Luckily this was caught in time and was easy to

fix by shortening the bottom of the roll bar by about 2 mm.

Front suspension

The holes in the bodywork for the BT44B inner mounted shocks were filled in with sheet styrene. **Photos 7 and 8** show the before and after progress, respectively.

The existing upper and lower 'A' arms were cut into pieces and new ones assembled by adding 2 mm diameter styrene rod. **Photo 9** shows one of the lower 'A' arms completed, in comparison with original part. **Photo 10** shows the same for the upper 'A' arm. A new mounting plate for the upper 'A' arm was built up from sheet styrene. The anti-roll bar connecting links and steering arms links from the original kit were reused for the new suspension.

Rear suspension

The rear suspension links were removed with a bit of damage in the process. This was quite straightforward as the suspension links in the older **Tamiya** F1 kits were a snap-like assembly, which allowed the suspension to work. The moulding seams on all the linkages and the joint on the rear uprights were all cleaned up and prepped for the same paint as the front suspension.

It looked like the rear oil cooler was mounted above the transmission in the airstream. A pair of mounting arms were added to the cooler to accommodate the new location.

Front air dam and bodywork

After disassembling the front air dam (with a bit of damage in the process), the holes and NACA duct were filled in with styrene rod and sheet and the process of puttying, sanding, puttying, etc. was done. Progress on this part is shown in **Photos 11, 12 and 13**.

The only other bodywork that was changed was the cockpit cover. There is a bulge on the right side that allows for the driver to operate the gear shift. This was hollowed out on the underside and blended into the bodywork on the outside. The rest of the car was re-built following the **Tamiya** instructions and most of the original, stiff, shiny black vinyl tubing was re-used for the plumbing. The only additional detail was flexible tubing for the front brake lines and thin red wiring and connectors for the rear brake lines.

Marking and Painting

The markings on the car were essentially white with red stripes on the back half, red maple leaves from the Canada flag on the front nose, Team Canada lettering (white on the rear wing and red on other locations) and various sponsor decals. The logos, flags and lettering were custom printed decals that were prepared on my computer and printed on a colour laser printer. The colour of the decals didn't match the painted red, but was close enough.

The difficult part was that the Team Canada wording and Goodyear logo on the rear wing as they were both in white. The Goodyear decals were sourced from my stash. The Team Canada lettering was done with **Letraset** rub-on lettering, transferred first onto clear decal film.

To lay out the stripes, a side view photo of the car was printed out at an enlarged size. The proportional width of the stripes were then measured and

transferred to the body parts. Many centimetres of **Tamiya** masking tape were then used to mask the areas. The before and after shots of the stripes are shown in **Photos 14 and 15**.

Zero paints provided the white paint, which was airbrushed and went on flat (it's a basecoat/ clearcoat product). The red was **Tamiya Bright Red (TS-49)** which was decanted from the can and airbrushed. These paints were clearcoated with **Dupont Acrylic Clear A-7480S** which you can get from **NAPA auto parts stores**. This is a new product for me and worked out well. It was decanted and airbrushed and in spots went on with a dull sheen, however, it polishes up nicely.

The new front suspension and rear suspension linkages were airbrushed with **Alclad II Polished Aluminum**, which I find more a bit more forgiving than the chrome paint.

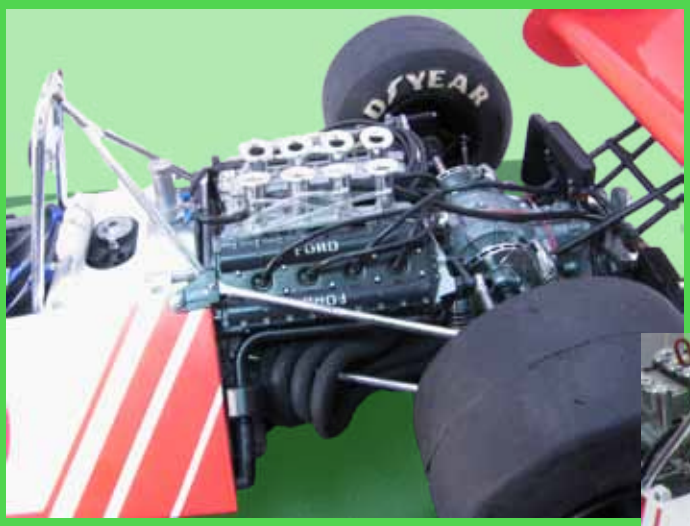
The interior cockpit was airbrushed with **Alclad Aluminum**, along with some other chassis and engine pieces. **Tamiya Semi-gloss Black** provided the paint for the other, other pieces (rear radiators, wing mount, etc.)

Assembly

I find all car model kit instructions do not provide the most efficient sequence for building. My technique for building cars is to go through the instructions, assemble the major components, then paint the parts as much as possible in one step. The final assembly is then done following the instructions. At one point you will have all the major components, which can be laid out as shown in **Photo 16**. **Photo 17** shows the model partway through the final assembly.

Final Thoughts

Although produced during the mid-1970's, the **Tamiya** kit holds up well against some of the more-modern products. It was rewarding to take a model I have never been happy with, apply my improved painting and construction skills and turn it into a representative of an iconic Canadian race car.



Evan Jones is a mechanical engineer working in the building energy performance industry. He was born, raised and still lives in Guelph ON and is a member of the Grand Valley Model Car Club. His primary model interests are motorcycles, cars and sci-fi, with occasional forays into other subjects. He initiated and still helps organize the annual Model Motorcycle Display at the Motorcycle Supershow event each January at the International Centre in Toronto. His website is eajonesgue.com/scalemodels.

‘FLYING RAZOR’

by Gary Barling
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The Aircraft

The Fokker E.V was a German parasol monoplane fighter aircraft designed by Reinhold Platz and built by Fokker-Flugzeugwerke. The E.V was the last Fokker design to become operational with the Luftstreitkraft, entering service in the last months of World War One (WW I). After several fatal accidents due to wing failures, the aircraft was modified and designated the Fokker D.VIII. Dubbed “The Flying Razor” by Allied pilots, the D.VIII had the distinction of scoring the last aerial victory of the war.

The Memorial Build

Dan-San Abbott (‘DSA’) was born August 10, 1923, in Canton, China. His father, Lt. Col Harry W. Abbott, worked with the South China Air Service. His name, ‘Dan-San’ was given to him by Doctor Sun Yat-Sen, the Chinese President. Returning to the USA in the mid-1920’s, DSA completed his high school education, and then served in the Second World War as a medic, in parachute infantry, and in Air Transport Command in the China-Burma-India theatre. Subsequently he served in the Korean War with the 144th Fighter Wing.

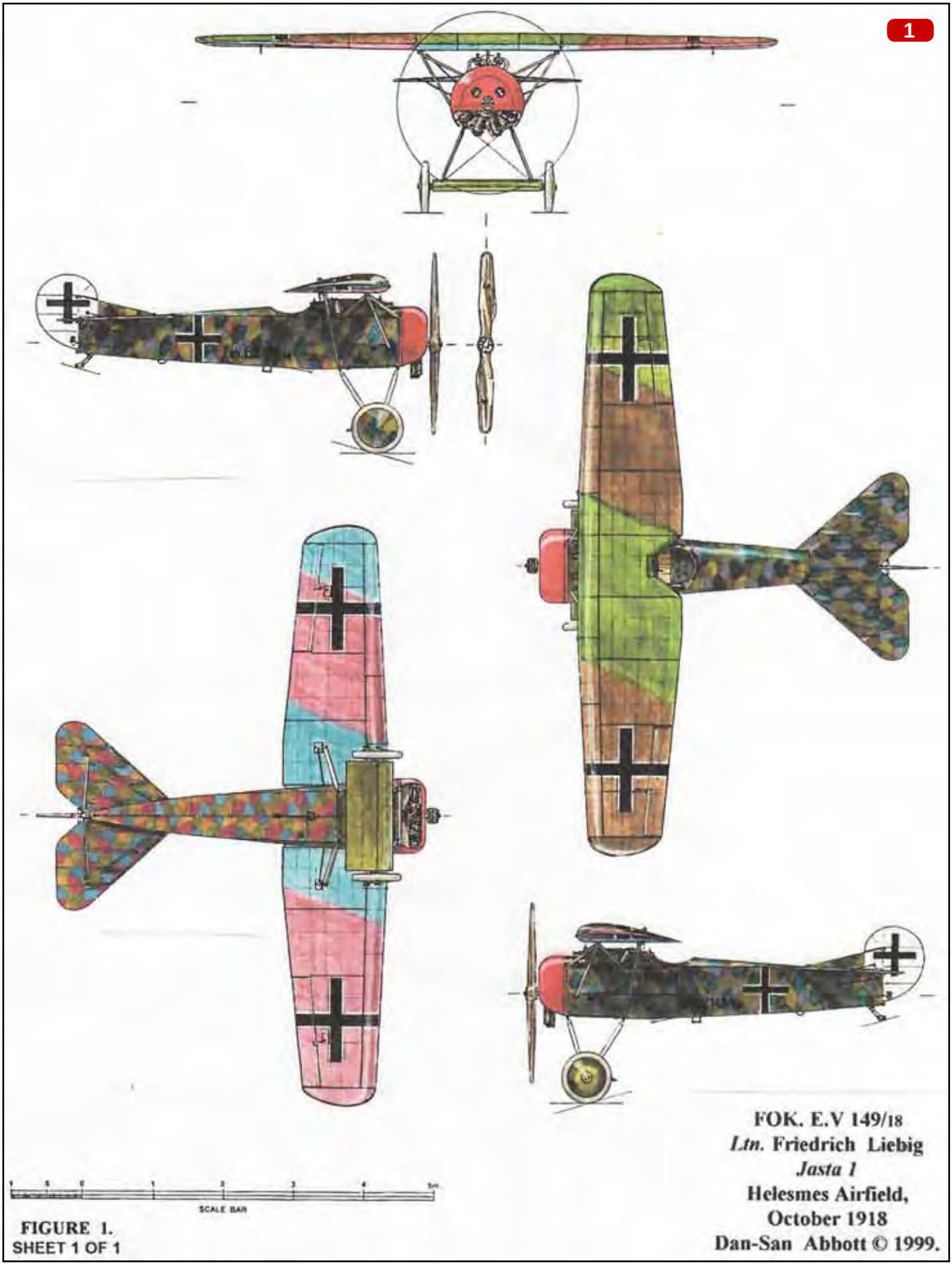
After the war DSA returned to the Security Parachute Company as the Vice President of Engineering, where he designed the drag parachute for the B-52, and various parachute elements used in the NASA Mercury, Gemini and Apollo programs.

Dan-San retired in 1988 when he turned 65, and was able to spend much of his time developing his lifelong interest in WW I aviation, particularly the history and development of the German Air Force. Dan-San published many articles and co-authored, with Rick Duiven, the definitive book on the origins of German air-to-ground support, ‘Schlachtflieger’. He posted thousands of comments and threads on the website, “The Aerodrome”, and was commonly accepted as a key source of information regarding First World War German Air Force markings and camouflage.

DSA passed away in early 2011. As a tribute to his exceptional support to modellers of First World War German aircraft, a number of Aerodrome ‘forumites’ decided to select one of DSA’s three-view drawings and to build a model of the depicted aircraft. Several “memorial builds” of various aircraft and scales resulted, of which this is one. My choice was the Fokker E.V flown by Ltn. Friedrich Liebig in October, 1918 (**Photo 1**).

The Kit

I used the Eduard 1/48 scale ProfiPack Fokker E.V for this build (**Photo 2**). This is regarded as a very good kit overall, a description that I certainly support: well-moulded parts, extensive photo-etch fret, very good decals (including ‘cookie cutter’ lozenge decals) and clear



FOK. E.V 149/18
Ltn. Friedrich Liebig
Jasta 1
Helesmes Airfield,
October 1918
Dan-San Abbott © 1999.

SCALE BAR

FIGURE 1.
SHEET 1 OF 1

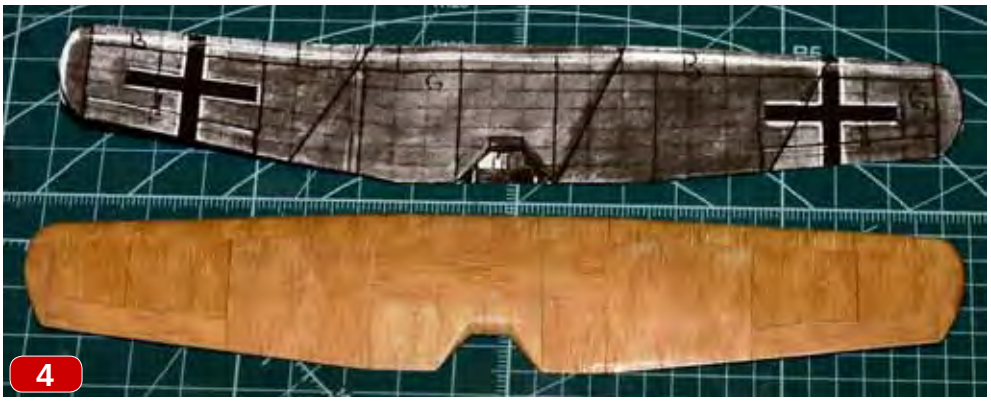
instructions. It was a pleasure to build this kit.

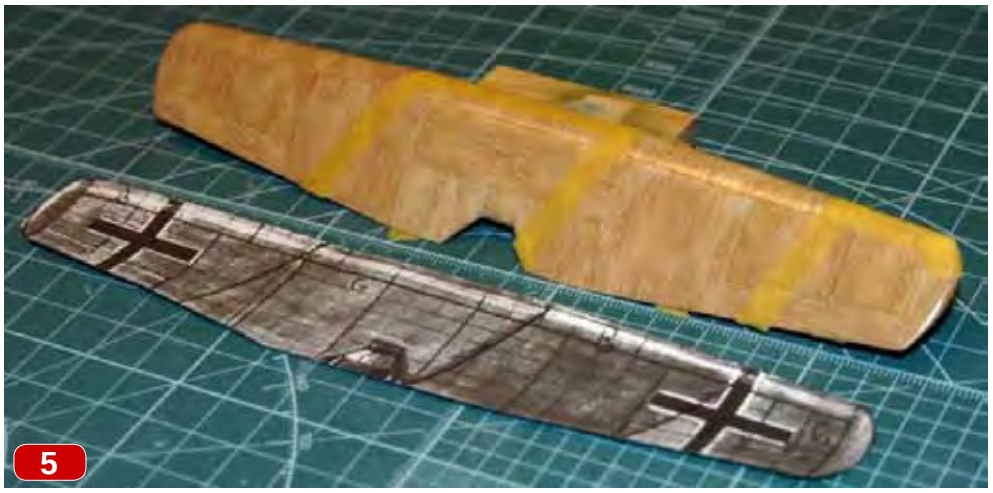
I built this model as a series of sub-components due to the requirements to do extensive decalling and painting throughout the construction process. Accordingly, I'll discuss the overall completion of each component.

Wing

This was the most interesting part of this interesting build. During the late 1990's, DSA identified the fact that Fokker E.V wings had been 'streaked' with at least four colours, two on the upper surface and two on the lower, with several options as to how many streaked sections appeared on the respective surfaces. Further, the streaking was applied in very thin coats, to the extent that the plywood grain of the wing could be seen through the stain. The Liebig wing as drawn by DSA displayed four stained sections on each surface and was, for me, a very interesting challenge. I addressed this challenge in two phases: first, replicate the plywood grain itself; and then apply the required streaking.

First, I looked at the plywood grain. I had purchased a sheet of **Spada** wood grain decals for an earlier build, and these provided the look I wanted. First, I airbrushed the wing surfaces with a light tan (**Tamiya XF-59**), and then applied a coat of **Future** to seal the paint and provide a smooth surface for the decals. I measured the length and width of individual wing panels and then cut sections of decal film that were slightly larger than the panels (well-presented by **Eduard** using fine engraved lines). The decal sections were slipped into place over the designated panel, and were then trimmed by running a new X-Acto blade along the engraved lines on all four sides. I applied the decal sections chordwise, as I found that the grain on most of the panels ran from leading edge to trailing edge. As far as I know, the only sections that ran 'widthwise' were in the centre of the wing. The ailerons also ran widthwise. **Photos 3 and 4** show the upper wing in both 'started' and 'complete' decalling stages.





I then approached the staining question. DSA identified four stains used on these wings: **Mocha Brown** and **Green** for the upper surfaces, and **Blue** and **Pink** for the undersurfaces. He also discovered that the company that provided the stains in 1918 was still in business and that it still produced the stains used in 1918. With this information and with colour swatches, it was fairly easy to identify the required colour mixes.

In general, I planned to airbrush a very thin, translucent coat of **Xtracolor** enamel in each of the colour sectors of the wing, and then thinly streak the area with a slightly darker acrylic. The idea was to get enough colour onto the wing, and yet allow the grain to show through. Each colour area had to be masked

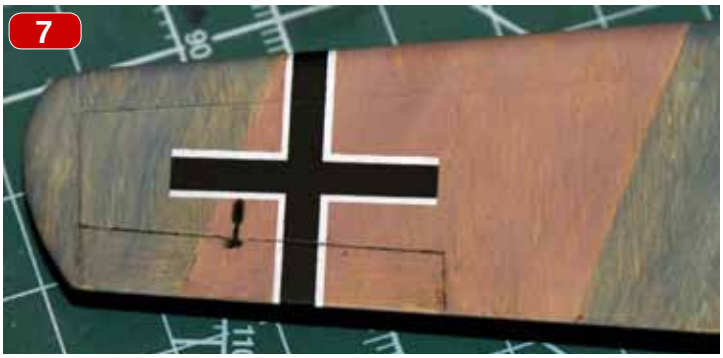
off completely, as any overlap would show up noticeably due to the thin coats applied.

So there I was, thinking about how I would go about the 'staining' step in detail. Totally out of character, the 'not too shabby' idea of doing two stains at the same time, one on the upper surface and one on the lower, took root. I figured that I'd have to do two colours that did not join along the leading edge. The end result was a masking plan that allowed me to do it. Accordingly, I laid down a thin coat of **Future** as an additional adhesive when I applied the decal sections. I also brushed out a thin coat of **Future** over the wing woodgrain decals. With all of the preparatory work done, I masked off the initial areas to be painted, (**Photo 5**), using photocopies of the DSA profile enlarged to 1/48 scale. There is a slight discrepancy in the DSA profile: the upper and lower surface drawings have a couple of colour sections that do not meet exactly at their corners along the leading edge, but the head-on view does. I'm going with the head-on view as I think that that is the way it should be.

I first applied the **mocha brown**, airbrushed on lightly with **Xtracolor** enamel (**Photo 6**). No problems occurred with the woodgrain decals, as the 7:1 mix of thinner and paint dried almost on contact.

After undercoating both the **mocha brown** and **azure blue**, as discussed above, I applied the streaking to both surfaces using mixes of **Tamiya** acrylics. I then got lazy, and decided to experiment with doing the streaking directly onto the 'plywood' surface. I tried this with the **true green** and the **azin violet**, and the results appear to be all right. Truth be told, I really got lazy and applied the green and violet without doing any masking, much as the original wings were stained, and experienced no major problem. The woodgrain shows through the lower surface colours better than the upper surfaces (**Photo 7**), probably because the lower colours are lighter.

For the undersurface, I started with a light blue and white mix, and a red and white mix. Once I had a mix that, to me, approximated the colours shown in the DSA profile, I thinned the paint with lacquer thinner to a ratio of about three parts thinner to one part paint. By this time, the **Spada** wood decals on the wing had been glossed with **Future/Kleer** for protection. I then applied the streaking with a flat brush using very light pressure and quick strokes, as I did not want to damage the Future coat. I did this two or three times, very lightly, building up the streaking until it was acceptable to me: mostly being able to see the wood grain through the paint, but having more opaque areas in a few locations (**Photo 8**).



I then glossed the surface for decalling. With decals applied, I glossed them and then airbrushed **Hannant's Acrylic Flat Varnish** to provide the required matte surface.

The panel lines were done with **Flory Weathering Wash** (**Photo 9**), a new item for me that I purchased at an **IPMS (UK) National Convention** in Telford, England. Easy to use, and a good result.

Lozenge Decals

I used **Microsculpt** decals, lovely colours and they work beautifully with the **MicroSol/Set** setting system. My paper templates are simply the kit decals photocopied, then cut out and taped lightly over the loz decal sheet. Then the pattern is 'traced' with a new knife blade and applied as per normal. The kit decals are close, but the individual lozenges are a bit too big, and the undersurface lozenge is a bit too light and bright. Close, but the **Microsculpt** offerings are better in my humble opinion: good colours, thin, easy to work with. But, being thin, they need a little extra TLC.

Fuselage

The engine and cowling assembly fitted together very well, with the rest of the construction of this component following suit **(Photo 10)**. As noted earlier, the lozenge pattern decals were cut using photocopied templates of the kit decals. They fitted into place very well. Note that the undersurface has a seam down the entire length of the fuselage, so the lozenges will not match up along that seam **(Photo 11).** I made two templates for the underside, cutting the kit-provided decal along the seam and then using the two resulting pieces to cut the **Microsculpt** underside decal. The 'seal' is a 1/48 PE 'stitchin' item from **Part**, a Polish manufacturer. It was fitted using thin PE. The only homemade item on the fuselage was the serial

number, set up using a Fokker font and printed on clear decal film with my inkjet printer.

Tail Assembly

The only cautionary note for this assembly is that the lozenge is joined fore and aft along the centre of the horizontal stabilizer, and is conveniently hidden by the vertical stabilizer. Note also that the elevators were covered separately from the stabilizer and then attached, so the lozenges do not match along the two edges.

Undercarriage

Having freehanded the painting of the tires, I cut a circle of lozenge decal to replicate the fabric wheel cover. Before soaking the decal, I cut a straight line from hub to outside edge. This allowed the decal to settle nicely into place over the slightly raised centre of the moulded wheel covering.

Details

Propeller. I had one remaining hand-carved propeller made by Martin Digmayer of the Czech Republic. I couldn't think of a better use for it than to fit it to this memorial build. **Photo 12** shows the propeller in detail affixed to the model.

Armament. I had recently found the beautifully made Master photo etch and laser-cut weaponry produced by Master of Poland, and decided to use their Maxim 08/15 machine guns for this build. The parts consist of a laser-cut cooling jacket, two end caps, a barrel and a muzzle extension. These fit onto the receiver of the kit plastic machine gun from which the barrel and cooling jacket have been removed. Assembly of the parts is straightforward, the only aspect requiring some precision is the alignment of the end caps such that the barrel fitting holes are lined up accurately. I used small amounts of Future to join the various parts, as none of them would be subject to stress and the Future allowed time to confirm part alignment. Once assembled, a hole is drilled into the front of the plastic receiver and the assembly is fitted in place using CA glue. I was going to use **Blacken-It**, but fell back on a thinned matt black (**Xtracolor Tyre Black**), and the spraying of the gun jackets went really well. I had thought that the interior of the jackets would not get much paint (hence the Blacken-It idea) but in the event the painting was fine (**Photo 13**).

Rigging. The only rigging required for this build is for the control surfaces and the undercarriage bracing. The short lengths required allowed me to use simple black stretched sprue attached with thinned white glue. An 'oldie but goodie' method, I started to use it as far back as the 1970's, and it still has its uses.

Conclusion

I very much enjoyed this build. The kit was good, the decals excellent and the PE parts quite well made. I am happy with the wing streaking and the overall effect of the lozenge colour scheme. Many thanks to my friends at the Great War in the Air website for their encouragement and support during this build!

Number 67, Leatherhead, Surrey, England, 1966.

♦ D-S Abbot, Fokker E.V Wing Camouflage, WW I Aero, The Journal of the Early Aeroplane, February 2010.

Aftermarket Items

♦ Part of Poland - brass stitching and machine guns

♦ Microsculpt decals - www.microsculpt.com/

♦ Spada Decals

References

♦ D-S Abbot, WW I German Unit, Personal and Aircraft Markings, Volume One (DVD), Privately Produced, undated.

♦ Lamberton, W. M., Fighter Aircraft of the 1914-1918 War, Harleyford Publications, Letchworth, England, 1962.

♦ Bruce, J. M. The Fokker D.VIII, Profile Publications

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.

"Blue Skies, Dan-San. This one's for you."

1/72 Conversion: DC-3 to a Basler BT-67

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*(**Editor's note**: As noted in **RT 36/3**, Barry's BT-67 won the IPMS Canada 'Best Canadian Subject' award at the IPMS/USA 2014 National Convention in Hampton, VA. He graciously agreed to share details of this conversion project with IPMS Canada's members.*

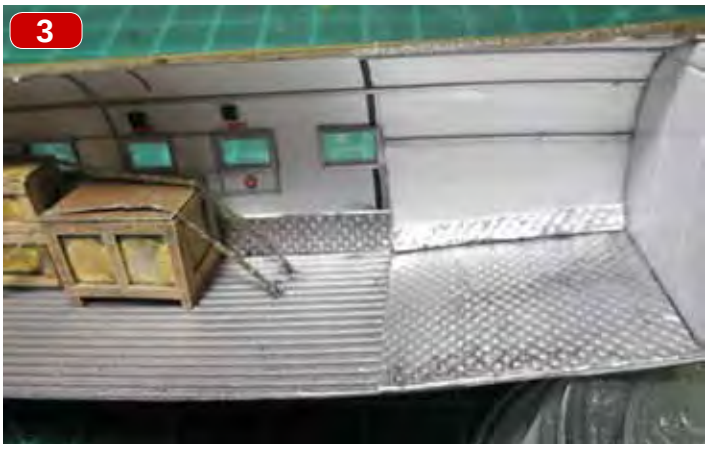
The DC-3 has always been a fantastic, hardworking, reliable flying machine, but, in today's world, it's old and slow. **Basler Turbo Conversions** can fix that for you. Located in Oshkosh, Wisconsin, they fix "old" by completely refurbishing / rebuilding / redesigning the airframe. They fix "slow" by hanging **Pratt & Whitney Canada PT-6** turbines on the engine mounts. The old DC-3 emerges as a new, 'zero time' Basler BT-67. This particular BT-67 belongs to Kenn Borek Air of Calgary and is one of several aircraft from that company used by the US Antarctic Program which coordinates research and the operational support for research in Antarctica.

In 1/72 scale, this conversion starts with an **Italeri C-47** and resin parts from **Modellwolf** of Germany (**modellwolf.de**). The resin consists of: a fuselage extension, new wing tips, engines, prop blades, and spinners. The fuselage extension is a 40" 'stretch' just forward of the wing and is necessary to maintain the aircraft's weight and balance since the turbine engines are much lighter than the original piston engines. (**Photo 1**) The **Modellwolf** instructions are very clear about where to cut the **Italeri** kit so that there should be no problems with this step. This is also where I took the opportunity to fill in an errant panel line which bisects the crew entry door from top to bottom.

Before installing the fuselage windows, I painted the main cabin white and added structural details using 0.010" x 0.040" strips of plastic and bits of decal to match photo references. (**Photo 2**) After that's done, the windows can go in. Thank you **Italeri** for providing some of the best-fitting transparencies I've ever dealt with.

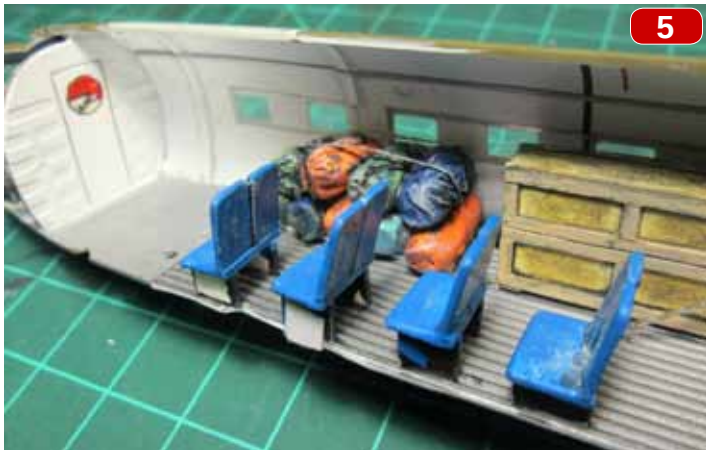
At top, the fuselage extension plug installed. Below is the fuselage interior with some structure added and painted.

(**Photo 3**) I replaced the kit floor with grooved sheet material from the **Evergreen Models** line (**evergreenscalemodels.com**), except for the area just inside the doors. Here I used smooth 0.020" card covered with embossed aluminum foil. The patterned plastic piece that I used for the embossing came from my granddaughter **Kimi**'s fashion design kit. (*hey…whatever works, right?*) The grooved flooring is painted **Model Master Non-Buffing Aluminum** but the foil just has a dirtying black wash on it.



The seats and crates are made from plastic card and the duffle bags are from a **Milliput** type epoxy putty. (**Photo 4**) Tie-down straps are foil strips. I thought about building a little snowmobile to go in there but decided it was just too much work.

Up front, I modified the cockpit bulkheads to represent a BT-67's and added various details like placards, hydraulic pump handles, junction boxes and an updated instrument panel. Also, I made oversize cutouts in the roof to accommodate the new overhead window. (**Photo 5 and 6**) The clear piece that goes in here should be made oversize so that superglue can be used to seal the edges and

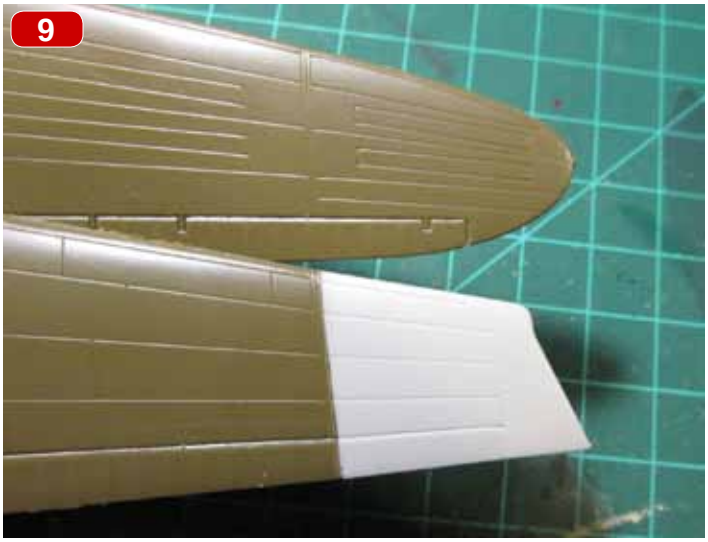


smoothed out. After masking and painting, then the edges of the actual window will be neatly defined just by where the paint stops.

After gluing the fuselage together, it was time to alter the nose cone. I found a good profile shot of the BT-67 nose online, and after scaling it to 1/72 using my printer, I traced the profile outline onto 0.030" card and glued it onto the nose. (**Photo 7**) Originally, I was going to do one in the horizontal plane too, but decided against it. That was a mistake. I filled out the shape with **Green Stuff** putty and ended up with a flat-

sided nose cone. It took a lot of fettling to sort it out. (**Photo 8**) Next time: use guides in both vertical and horizontal planes.

Now the wings can be added and modified with new engines and wing tips. Once again, the instructions are very clear on where to cut, and the



parts fit perfectly. The only problem here is that **Italeri** has fabric detail moulded onto the ailerons but the resin piece does not. (**Photo 9**) My solution was to sand off all the fabric detail and use thin strips of masking tape to simulate ribs. To be consistent, I did the same thing to the rudder. This particular airplane has metal skinned elevators, so I sanded them smooth and pressed in a pattern of rivets using a pin.

I put out a few extra dollars and bought an **Eduard Canopy Mask** set. The fit was perfect and it sure saved a lot of time. Highly recommended. To determine the red/white dividing line, I made a copy of the decal stripe and taped it onto the model. The red is **Tamiya X-7 Red Enamel** brought to me from Japan by a friend. The white and black are **Model Master**, and the polished spinners are **Alclad Polished Aluminum**. The decals are from **Draw Decals** (**drawdecal.com**), and are excellent. One caution though: the inks are a little stiff unless warmed. They should be soaked off the backing in hot water and, if necessary, pressed onto the model using a cloth dampened with hot water. Once conformed to the model they will hold that position and not try to flatten out again as they dry.

Conclusion

This was a very satisfying project. The conversion parts were well made and fit great, and I love having an upgraded DC-3 on my shelf. I think that having the cargo doors open adds a lot to the look of the model, but if you want to skip the whole interior detailing thing, know that **Italeri**'s doors fit perfectly when closed. The final touches were to scratch build the boarding and step ladders and to add the antennae on top of the fuselage. The antenna array varies widely over time in number, type, and location. Just find a photo and replicate what you see.

References

My references consisted entirely of pictures taken from the internet.

Products

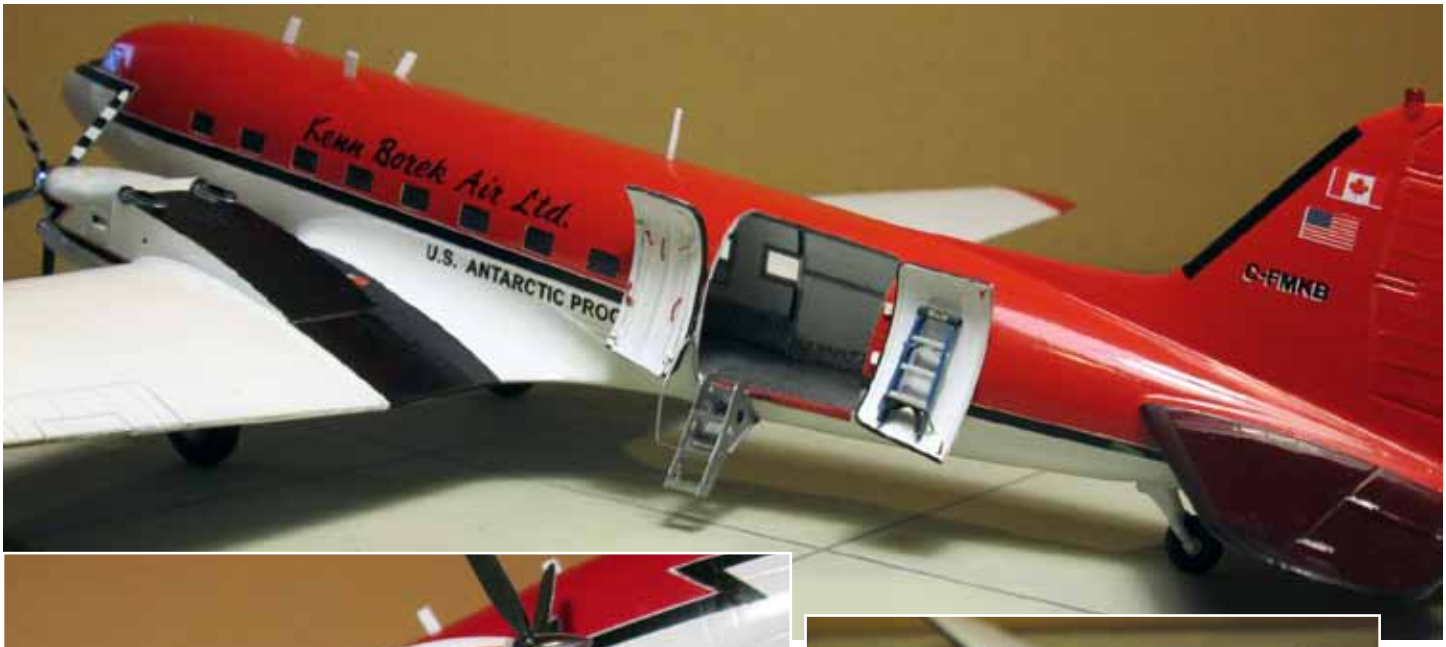
◊ Resin conversion set: modellwolf.de

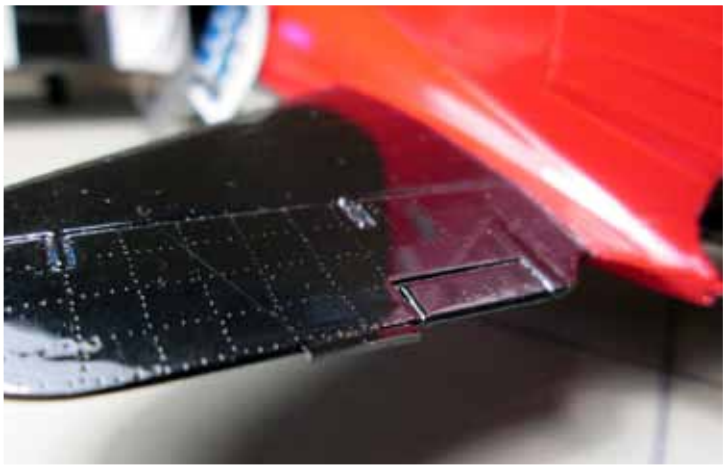
◊ Decals: drawdecal.com

A hand-crafted ladder for the rear cargo door

Just about ready for the paint booth ...

... and ready for the showroom floor





About the author:
Barry Webb is a retired laboratory microbiogist and lives in Culver City, California, with his wife, Shirley. He builds 1/72 aircraft exclusively and has a collection of around 465 completed kits. Barry's home club is IPMS Ontario California, but he also regularly attends meetings of the Pasadena Modelers Society.

A 1/72 Royal Flying Corps S.E.5a

by Andy Bannister,
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Introduction

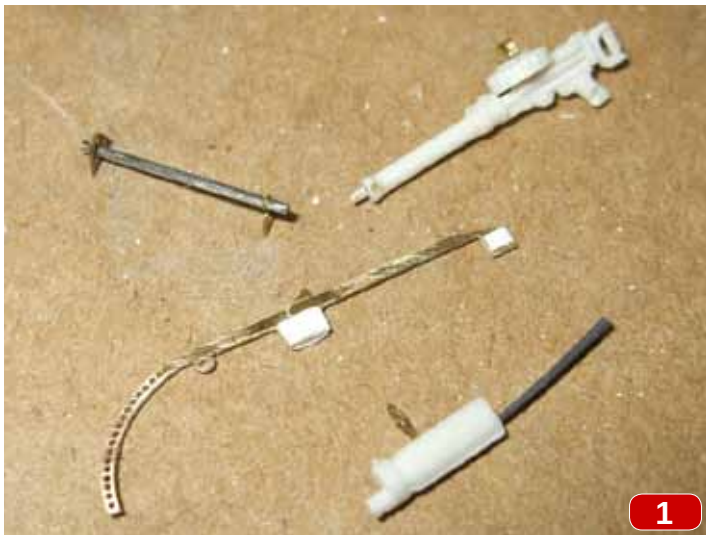
Roden's kits have a reputation for being difficult to assemble and after the joy of battling their LaGG 3 I can't say I totally disagree with that. Fortunately the S.E.5a, though not a cake walk by any means, actually went together fairly easily. As easily as you can expect from a biplane anyway. Nonetheless, they are a big improvement in terms of detail and moulding finesse over the original small line up of WWI planes from **Revell** and if you're a fan of the era and the scale as I am, **Roden's** kits are well worth the effort.

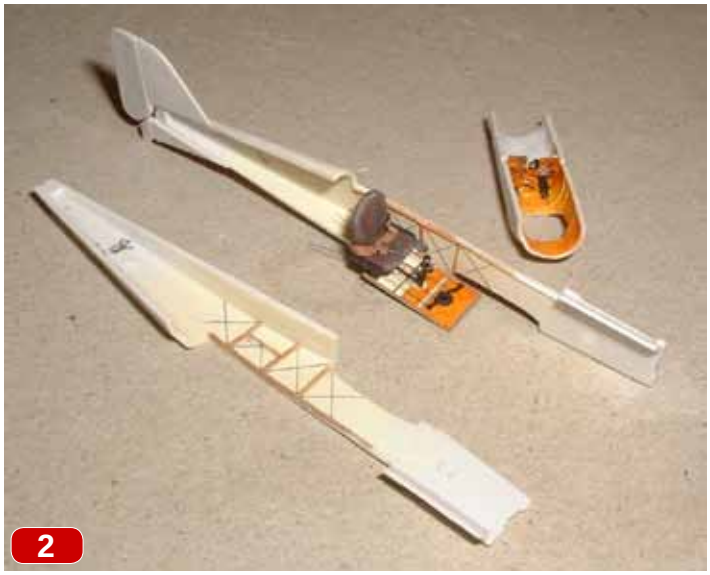
There were some fit problems and these mainly stemmed from the fact that several versions could be built from different releases of the same basic kit. Most of the changes involved different cockpit coamings and it was this part in particular that needed a lot of care to fit properly. The moulding quality is generally very good however; the thin flying surfaces with sharp trailing edges, delicate struts and nice thin fuselage halves being worthy of note.

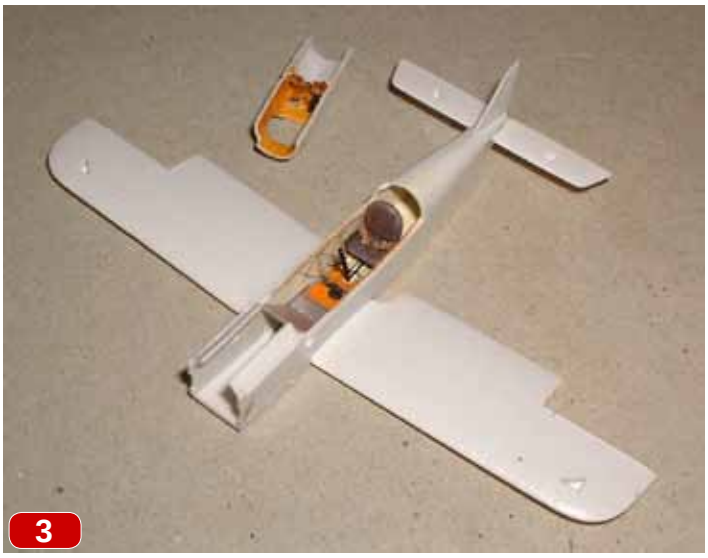
Construction

I used an old **Eduard** photo etched set for the cockpit and Lewis mounting. Despite being designed for the **Revell** kit, it fit the **Roden S.E.** without any trouble. I did have to modify the p/e Lewis mount a bit by cutting off the perforated rail at the rear and re-mounting it at the proper angle, but this would have been necessary regardless of which kit it was used on. I also added 0.010" styrene sheet to either side of the vertical mounts to beef them up a bit, these were then sanded to a streamlined shape before installing the mounting. **(Photo 1)**

The internal fuselage framing was created from 0.010" x 0.020" plastic strip. This was painted a dark tan and lightly overcoated with **Gunze Clear Orange** along with the heelboards, inside of the coaming, instrument panel and various other sundry bits and pieces that were varnished wood on the real subject. Fabric areas were done in **Xtracolour Linen** and metal parts were **Humbrol Coal Black**. Internal bracing wires and control cables are stretched sprue. Seat belts were fashioned from lead foil



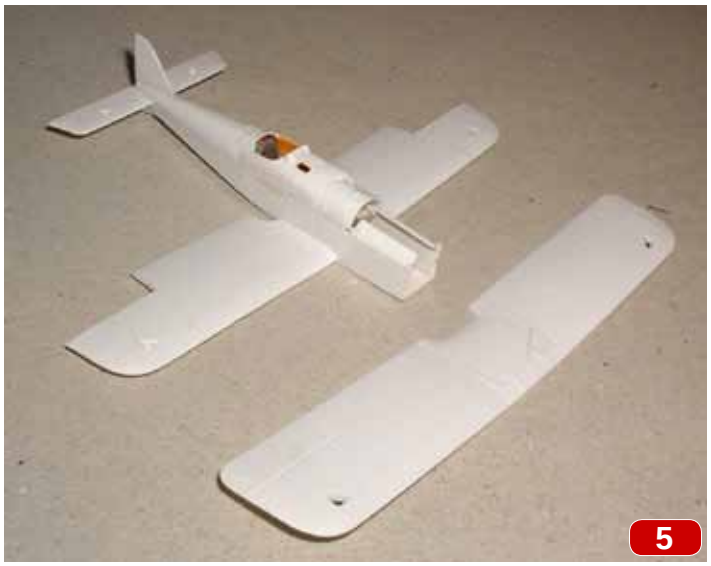


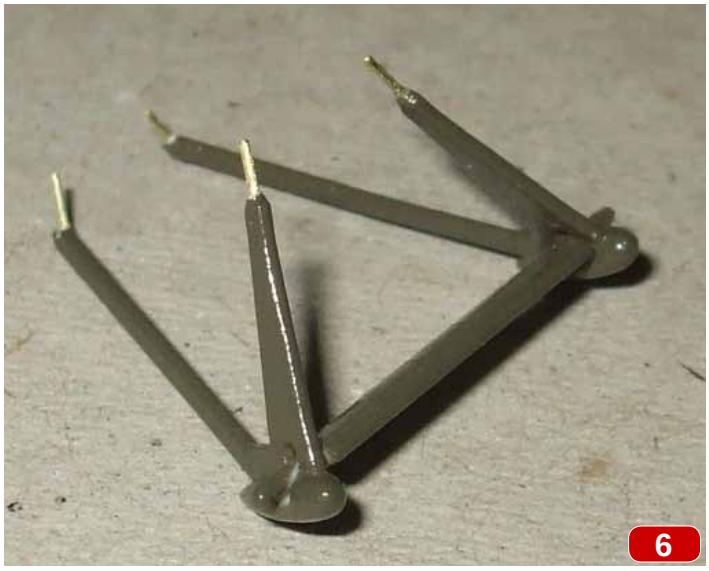


with fine wire buckles, the belts being finished in **Humbrol Leather** with the seat painted to resemble a darker leather. **(Photo 2)** As with most WWI aircraft, the interior is fairly simple so it wasn't long before the fuselage sides could be joined and the bottom wing added. **(Photo 3)**

Pulley inspection panels in the wings & stabiliser are represented by black and white decals in the kit. A nice thought, but they look rubbish nonetheless. I drilled straight through these areas on the plastic parts and then cut and filed them to the correct triangular shape. The bottoms (or top in the case of the top wing) were covered by 0.005" sheet and faired in with **Mr. Surfacer**. The clear covers are from decal film and the pulleys themselves punched from 0.015" sheet using a **Historex** punch and die set. These inspection panels are pretty prominent features on the real aircraft so are worth spending a bit of time on. **(Photo 4)**

All control surfaces were separated, cleaned up and set aside for later. All holes for rigging were drilled with a #81 bit before progressing any further. This was much easier to do before assembly and will result in far less cursing when





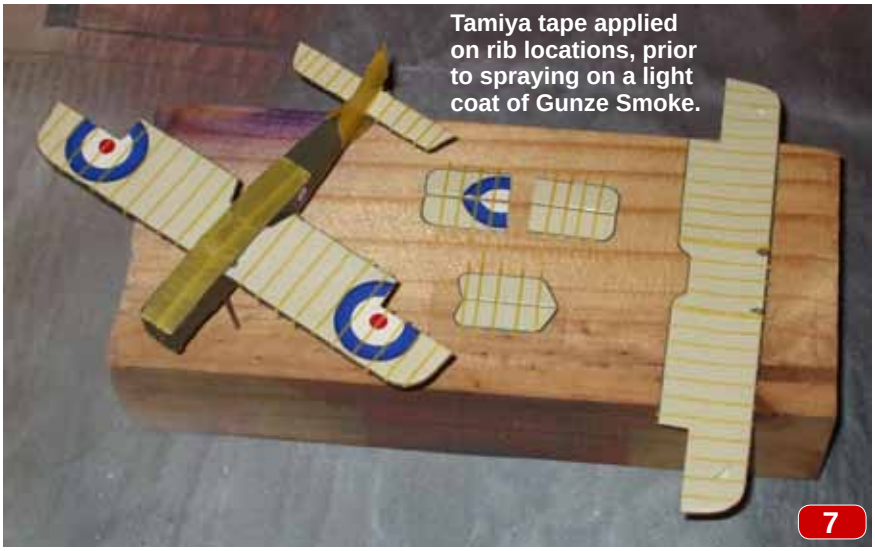
the parts inevitably break off if you try to drill holes in them after everything is glued in place. **(Photo 5)** The cockpit coaming, horizontal stabiliser, fin, tail skid and cabane struts were then glued to the fuselage and the landing gear was assembled ready for **PC-10** paint along with the rest of the airframe. Brass rod was inserted in holes drilled in the top of the gear legs to provide a more positive join and they were attached during final assembly. **(Photo 6)** The only major gaps needing a bit of filler were along the fuselage bottom where the centre section of the wings joined and the aforementioned cockpit coaming. I used **Mr. Surfacer 1000** for this, care being needed to avoid destroying the detail along the fuselage and coaming.

Painting and Decalling

As is customary with any biplane I build, as much painting and decalling as possible takes place before the top wing is put on for fairly obvious reasons. In keeping with my penchant for Canadian subjects, I had intended to model an aircraft flown by a Canadian pilot. I also wanted an S.E. with a headrest on as I think it looks much better. As it turned out, these two criteria were at odds with each other as it seemed just about every Canadian pilot had the headrest removed from his aircraft! Perhaps flying sans headrest was part of the secret of their success. Eventually I settled on **No. 1 Squadron's C'1106**, a widely shared aircraft flown by Lt. D. Knight of the USAS, Capt. C. C. Clark and on occasion by **Canadian Lt. C. B. Henderson**. It had a headrest and I had the markings for it on an **Americal Gryphon** sheet, though these were not without problems.

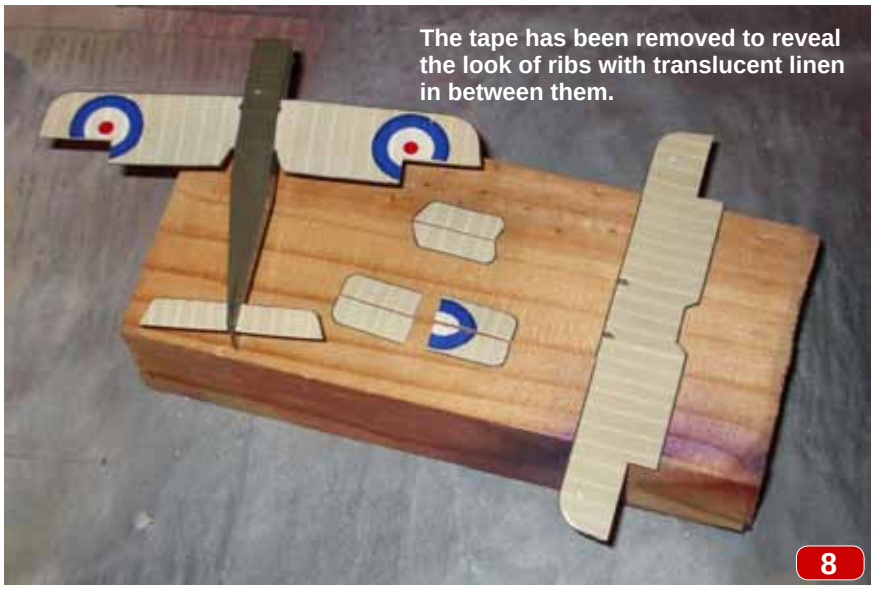
My **PC-10** colour is a 50/50 mix of **Xtracolour Olive Drab** and **US Army Helo Olive** with a splash of brown thrown in. The bottoms of wing & stabiliser were done in **Xtracolour Linen**. The rib tapes were masked using thin strips of **Tamiya** tape and then the undersurfaces were oversprayed with a light coat of **Gunze Smoke**. **(Photos 7 & 8)** Exhausts are **Testors Metalizer Burnt Metal**, drybrushed with brown, rust and black paint. The Lewis and Vickers guns are **Gunmetal**, unsurprisingly, from the **Humbrol Metalcote** range. Of all the gunmetal paints I have tried I find the **Metalcote** produces the nicest finish and polishes to a very realistic sheen, but it must be airbrushed as it will quickly coat a paintbrush with nasty little clumps of dried paint if you try to brush it on. The Vickers gun was added before the top wing went on, the Lewis during final assembly.

Americal Gryphon, unfortunately no longer with us, was somewhat of a mixed blessing for WWI modellers. At a time when just about everyone else ignored the Great War completely, **AG** had an extensive and well researched catalogue of decals with subjects from almost all the major combatants involved. Many of the sheets covered entire squadrons and the instruction booklets that accompanied some of the larger sets were worth the price of admission alone. Sadly, the quality of the decals themselves was not always on par with that of the research. Of the many sheets I have in my possession, almost all of them suffer from poor register and varying degrees of fuzziness, inconsistent printing or incorrectly sized markings. The No. 1 Sqn sheet was no exception, the white fuselage codes and serial numbers being printed too large, making most of them unusable. Part of my reasoning for choosing this particular aircraft therefore, in addition to the criteria previously mentioned, was that the fuselage code '**Y**' could be easily trimmed to size. There was nothing I could do about the serial on the fin but this isn't really noticeable, unless you compare it to a picture of the real aircraft. The white outlines on the roundels were out of register (a common and annoying problem on the many different sheets of British roundels I have from various manufacturers) so I substituted some from **Pegasus**.



Tamiya tape applied on rib locations, prior to spraying on a light coat of Gunze Smoke.

7



The tape has been removed to reveal the look of ribs with translucent linen in between them.

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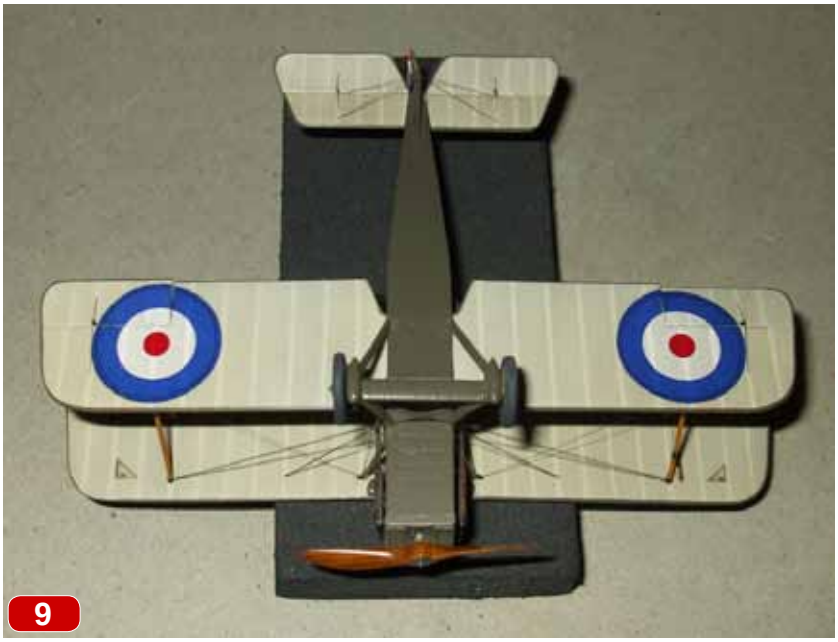


These too were not without problems however, being very brittle and translucent, though they were at least in register and sharply printed. I used some generic white backing circles from **Fantasy Printshop** underneath the roundels which fixed the translucency issue and the fractured decals were touched up with **Humbrol Red** and **Xtracolour Roundel Blue** which I also used on the edges of the rudder stripes.

Final Steps

With the paint and decals complete, a couple of coats of semi-gloss clear were sprayed on, this being a 50/50 mix of **Gunze Clear Flat and Clear Gloss**. Interplane struts were painted in a similar manner to the internal wood parts with the metal fittings in **Humbrol Coal Black**. The holes in the wings were drilled slightly deeper to remove the paint and create a stronger bond. The upper wing was then glued to the cabane struts with tiny drops of tube cement placed with the tip of a toothpick. This was left to dry overnight then the interplane struts were glued in place. This was a surprisingly drama-free operation, everything lined up as it should despite there being eight separate and rather fiddly struts to deal with.

Rigging seems to be the bane of many a modeller but it's one stage I actually quite enjoy, at least when it all goes well. Stretched sprue has always been my preferred rigging medium for 1/72 scale, it's plentiful, easily made to the required diameter and tightens up nicely with a bit of heat from an incense stick, the latter having the added benefit of a favourable comment from my wife, a refreshing change from the usual *"that stuff you're using smells to high heaven!"*. Rigging the S.E. was no more trouble than most biplanes, the major challenge being the closely spaced double flying wires. For these I glued the ends of two pieces of stretched sprue to either side of another short length of the same, repeating this for the other end of the flying wires. The single small pieces were glued into the holes in the wings and fuselage and once dry both wires were simultaneously tightened with heat. This took a couple of attempts but was much easier than trying to maintain the correct spacing while locating each wire individually in a single hole (two holes would have placed the wires too far apart). All other rigging was single-strand and followed the normal process of measuring with dividers, cutting the stretched sprue slightly oversize, gluing each end into pre-drilled holes with cyanoacrylate and then tightening with heat. **(Photos 9 & 10)**

Ailerons, rudder and elevators were glued on at offset angles to match the placement of the stick and rudder bar. Control horns are cut from tiny triangles of .005" plastic sheet which were then glued into small grooves I had scribed in the control surfaces. Control cables are stretched sprue once again.

The propeller was carved from two pieces of 1/16" plywood laminated together. The prop was stained with a thin wash of medium brown, given a light sand once dry to bring out the grain and remove any fuzz and then given a light coat of **Gunze Clear Orange** followed by two coats of **Gunze Clear**. A boss from an **Extratech** photo etched set finished off the prop nicely.

The Aldis sight is stainless tubing with the mountings from the **Eduard** set. A small handle fashioned from some left-over p/e fret was added to the Lewis drum and the gun was then super glued to the upper wing mounting. The cable from the cockpit to the gun trigger was added from stretched sprue. Pitot tubes are from fine copper wire. Tyres were painted in a dark grey with **PC-10** hubs and then the wheels were glued on and the S.E.5a was off to join the other Great War types in the display cabinet.

Conclusion

While I wouldn't perhaps recommend a **Roden** kit as a first biplane, they can be assembled without too much difficulty by someone who has a bit of prior experience in two-winged wonders and I will certainly be building many more of their Great War aircraft.

References:

- RAF S.E.5a by J M Bruce, Albatros Productions 1989
- RAF S.E.5a Windsock Datafile Special by J M Bruce, Albatros Productions 1993
- The Royal Flying Corps in World War One by R. L. Rimell, Arms and Armour Press 1985

Born in Blackpool, England in 1965, Andy, at the tender age of 15 months, dragged his family off to the wilds of Canada, where he spent the next 30+ years, eventually settling in the Vancouver area. He moved back to England in 1997 and resides near Bolton, Lancashire with his wife, Cathy, and their many cats. Employed as a manager for a pharmaceutical manufacturing company, Andy also runs his own online hobby shop, thunderbirdmodels.co.uk, and produces a line of decals of Canadian civil aircraft. He holds a private pilot's license and is in constant turmoil between buying another model or adding an hour to his log book. Modelling since the age of 5 he will build damn near anything, though he has a soft spot for WWI & inter-war biplanes.

ARCHER 17 PDR. SPAT*

Converting Fujimi's 1/76 Valentine into a Cdn Army Archer 17 pdr. *Self-Propelled Anti-Tank Gun

By Ron Bell
IPMS/USA #12907,
Eddie Rickenbacker Chapter,
Columbus OH USA

The Vehicle

Almost as soon as the British encountered the German 88 mm anti-tank gun, they started working on something that would have comparable hitting power. In 1941 work started on the 17 pdr. anti-tank gun and it was approved for production in mid 1942. This was the towed version of the gun, which was large and quite heavy. Almost immediately, a search started for a suitable self-propelled mount. There were no British tanks that could accommodate the large weapon without extensive modification. This spurred the development of the Challenger, a heavily modified Cromwell, and the Firefly, an American Sherman with a customized turret. While both 'did the job', so to speak, neither was an optimum solution. The Challenger was tall, top heavy and awkward, and the Sherman turret was cramped and its armour not up to late-war standards.

The alternative of a self-propelled gun, rather than a turreted tank was also explored and various available British chassis were considered and discarded as either too light, not reliable enough or needed for other purposes. The only one left in adequate numbers was the Valentine so the Ministry of Supply asked Vickers to design a self-propelled mount for the 17 pdr. using the Valentine chassis. Work started in 1942 and the pilot vehicle was ready by early 1943.

The Archer was basically an open-topped fighting compartment built onto the hull of the Valentine. Due to the size of the 17 pdr, the gun was mounted facing to the rear, thus providing a good center of gravity for the vehicle and making it a low profile, compact design. Further trials led to only minor changes and the first production Archers rolled off the assembly line in March 1944. Despite the limitation of the rearward-facing gun, the crews liked the weapon. The Valentine chassis was well tested and reliable and the 17 pdr. had hitting power comparable to a Panther or Tiger. It was usually used in ambush mode or from fixed positions, so the rearward-facing mount was less of problem. As a matter of fact, the driver was in the optimal position in the tank, facing away from the gun, so if a hasty withdrawal was called for, he could just pull away.

665 Archers were built and were used in the British and Canadian armies. Interestingly, in the British army they were used by the Royal Artillery, not the armoured regiments. Archers served in the British army to the mid-1950s and were also sold to several other armies after the war.

Vehicle Statistics

Crew - 4
Weight - 40,000 lbs.
Dimensions:
Length - 21 ft. 11 in.
Height - 7 ft. 4 in.
Width - 8 ft. 8 in.
Armour Thickness:
Max - 60 mm
Min - 8 mm
Traverse: 11° right/left
Elevation: +15° to - 8°
Max. Speed: 15 mph

The Model

I have wanted to add an Archer to my collection for a long time, but there are no small scale injection moulded kits and only a couple of resin ones. While at the **IPMS (UK) National Convention**, **Scale Model World**, at Telford, England one year, I found a **Milicast** kit of the Archer. It looked good on display so, even though it was a bit pricey, I bought one. However, upon opening it at home, I found the kit to be full of flash, short shots in casting, bubbles, distortions and two, one-piece suspension/track pieces that were, well, not very nice, shall we say. I decided that doing a conversion would be less work than trying to make something presentable from it, so I decided to use as many of the parts as I could and do the rest from scratch.

There isn't a lot of reference material out there on the Archer. Mostly it's covered in books about the Valentine and only distance exterior photos are used. Fortunately, a long time ago a pen pal of mine in Edmonton, Alberta, **Roy Reid**, had sent me a gold mine of info on this vehicle, including those interior/exterior stowage drawings that are so useful. Without this info, the project would have been dead in the water.

I started with a **Fujimi** Valentine because it is in the same 1/76 scale as the **Milicast** kit versus the **ESCI** offering in 1/72. In reality, the two kits are almost the same size, so probably either can be used, but I thought the way the **Fujimi** kit was configured would make the conversion work somewhat easier.

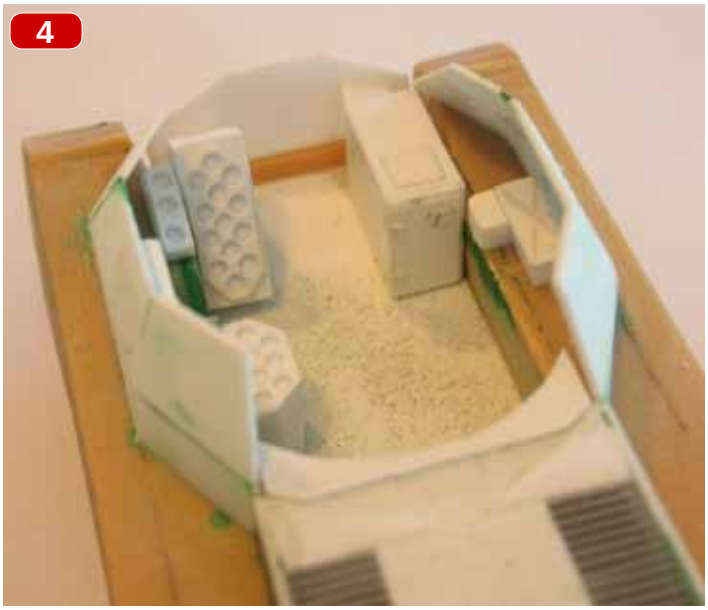
As the lower hull and suspension is the same in the Archer as in the Valentine, this could just be done from the box. The only changes were I left off the front plate. This is because in the Archer this plate is extended upward. In addition, it made installing the fighting compartment floor easier. Also, the sides of the hull were cut down to accommodate the new engine deck and superstructure. As there would be sand skirts/fenders covering the top of the suspension, it would be difficult to paint this area and install the tracks if those were in place. So, I had to paint the lower hull and add the tracks at this point.

(Photo 1) (The **Fujimi** kit's sand skirts were then modified to the configuration used on the Archer and were installed. Some 0.010" plastic rod was added for the strengthening ribs. They were then sanded down a might to flatten them and putty added to eliminate/minimize the undercut of the roundness.

Next I worked on the rear engine deck. This is substantially different from the Valentine and took some scratch building. The changes are substantial, so would be difficult to put into words. You can see in the photos what has been done.

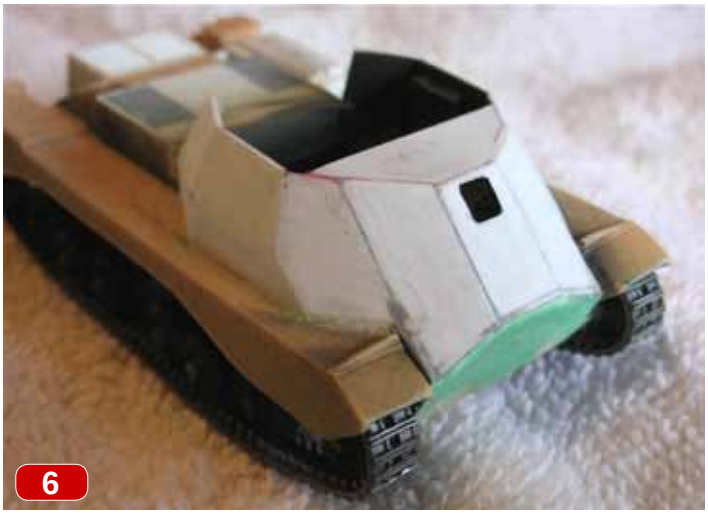
When this was complete, I added the fighting compartment super structure. The plates are not regular in shape and are at varying angles. I took measurements off the **Milicast** kit and transferred them to 0.020" plastic card. After a bit of fiddling, filing and cursing, it all came together. I left the rear (front?) of the compartment open to make adding the interior easier. **(Photo 2)** The interior

bits were either made from scratch, taken from the spares bin or from the **Milicast** kit. Even though an open topped vehicle, there is not a lot of room in there. **(Photos 3 and 4)** The driver's position is way up under the front glacis and is hardly visible in the completed vehicle and because a lot of the interior would be hard to reach with paint when



the compartment was closed up at the front, it had to be painted first. **(Photo 5)** This took a while as all the small

parts needed various details picked out but when done, the last three plates were added to the front to complete the superstructure. **(Photo 6)**



Last but not least were the gun, mount and shield. These were the only main parts of the **Milicast** kit I used. The gun had nice detail at the breech end, but the resin had not covered the metal rod that was the base of the barrel. In addition, the muzzle brake was just a blob. **(Photo 7).** I used built-up super glue on the barrel to correct the resin problem and cut off the muzzle brake, re-worked it and then re-installed it. The gun mount itself wasn't bad, but was a little warped and needed some modification to fit correctly in the **Fujimi** hull.

The gun shield itself was fine. I didn't install the weapon yet as it would make masking and painting difficult.

I then turned to the exterior. Various stowage bins, lights, tow brackets, handles etc. were added until it was all there. **(Photos 8, 9, 10, 12, 12)** When all was in place, I masked the lower hull and suspension with tissue, moistening it to make it stay in place and mould to the shapes it was covering. I did the same with the interior.


10


11

The main colour used was **Testor's Green Drab**. **(Photo 13)** A light coat of gloss was added to seal it and then a black wash placed over it. It was then dry brushed with the original colour, which gives a more realistic, mottled look to the finish, and then with a lighter shade to bring


Ready for the paint booth...
12


... after the Testor's Green Drab base coat has been applied
13

out the detail. The decals were cobbled together from my collection of spares and represent an Archer of the **2nd Anti-Tank Regiment, 2nd Canadian Infantry Division**. The gun, mount and shield were installed and a final coat of **Dullcote** applied. The suspension and lower hull were heavily dusted with pastels and the project was complete.

I know it's not perfect. I see every flaw, but it looks more like an Archer than anything else in my collection and I can now cross this one off my acquisition list.

About the author:
Ron has been gluing plastic together since the mid-50s. With time off for college and the USAF, he got back into the hobby and joined IPMS/USA in 1974. A resident of Columbus, Ohio, Ron has served as his chapter's President, Treasurer, and Newsletter Publisher. He was the Region IV Coordinator for four years, chaired the 1997 National Convention in Columbus, and served many years as the Second Vice President of IPMS/USA. Ron has been an armour modeller for a long time and has taken up "Nostalgia Modelling", where modellers do the best they can out of the box with **old kits from Airfix, Frog, and the like.**