RT Volume 43, No. 4 Winter 2021

Cover Comment: ***Gary Barling did his usual fine job on the Wingnut Wings 1:32 Bristol Fighter, but with a sad twist at the end. The build article starts on page 14.***

Page 3

Editorial

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The IPMS/USA Nats

The follow-up and commentary that I've seen indicates that the IPMS/USA 2021 National Convention in Las Vegas was a great success, despite the COVID precautions they needed to have in place. While it was definitely a US-centric event, and lots of our American friends made the trip, it appears that even a few people from outside the US managed to make the voyage to Sin City. I haven't heard of any COVID-related issues springing up amongst the attendees, so that's a very good thing. After missing two years of the US Nats I'm looking forward to attending the show in 2022 in Omaha. Hope to see you there!

Your ***RT*** article? Here's how it works...

I've had a couple of writers contact me to ask when their article is going to appear in ***RT***, which is a fair question. The short version of the story is that what I have to do for each issue is a juggling act that takes into account: a. have at least one Canadian subject in each issue; b. balance out each issue with a mix of aircraft, armour, and all the other subjects like ships, cars, figures, space, etc., to make up an issue that pleases more readers than it PO's. For me it's a jigsaw puzzle of sorting out how to fit in the various page counts and achieve the right balance. I'm now trying to use up the 'oldest' articles first, but it's always a challenge to try and get it right for most of you each time around.

Future IPMS Canada decal sheets

The free decal sheets that we're able to provide to members is one of those things that seems to please most folks. One question that comes up is to ask if we could put the actual issue of ***RT*** right on the decal sheet itself. That seems easy enough in theory but it's a bit tougher to pull off in the real world. The decal order has to go in to the printer several months before we want to mail them out with a given ***RT***, and then the content for those ***RT***s is still being planned out, and I'd guess that about 50% of the sheets have gone into the issue we'd planned them to go in. So it's just not a good idea to be that precise, but we'll try to leave a space on the sheet where you just Sharpie in the volume and issue. Hope the meets with your approval.

Related to this, we'd love to have more members' input on the subjects on our sheets, BUT that input comes with a price. First, the subject has to be something that's readily available in kit form in the mainstream scale(s). The viable ideas that do come in often fizzle out when we go back to the person and ask them to supply references and details that our hard-working art team can use to work up the decal artwork. Plus there would need to be material to support the decals, in the form of modelling details, equipment notes, etc; basically a short article to go in ***RT***. I've done this for a number of our decal sheets so I know it can be a big ask, but it's also something that I really think is required to provide a complete package to your fellow members. We can support your ideas with editing and things like the artwork you saw in ***RT*** 43-2 and other issues.

RT in 2022

Moving forward, with the guarded blessing of our national Treasurer, we're now planning on ***RT*** staying at 40 pages and with the improved gloss cover stock that we tried out at the beginning of this volume year. We trust that this will meet with your approval.

Building a CC-177 Globemaster III

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C-17 History

Responding to a 1980 U.S. Air Force request for a new heavy-haul transport, McDonnell Douglas was chosen to build the new design, beginning in 1981. The result was an aircraft that exceeded its specifications; it incorporated the ability to land on just 3,000 feet of under-developed and marginal runways at best. It weighed in at 277,000 pounds and had a maximum take-off weight of 585,000 pounds. Pratt & Whitney's four turbo-fan engines each developed 40,500 pounds of thrust.

The Project

I became involved with the build of the C-17 Globemaster III, designated in the Royal Canadian Air Force (RCAF) as the CC-177, when a friend of mine asked me to build the Revell 1:144 C-17 scale kit, #04044, using DrawDecals #CC-177, in the RCAF 429 Squadron's 75th Anniversary markings. The model is considerably larger, even in 1:144 scale, than what I was accustomed to building so I had to be very careful so it wouldn't become a "work-light banger" on my bench. Nevertheless, during the build it did manage to come in contact with the metal shade a few times although no damage was done to the model.

The kit provides both cargo flooring and sidewall detailed inserts along with the option to have the crew entry door open and boarding steps in place as well as a rear cargo door open so the interior structure can be visible. I elected to button up the model and save myself some work.

The Build

Most modellers have run into a kit build that fights them all the way and much to my chagrin, this one turned out to be exactly that.

My first encounter was warped fuselage halves which gave me fits but I persevered and finally got the fuselage "tamed." In **Fig. 1**, the warping can be seen with the right fuselage side wall insert not fitting well inside the right fuselage half. Also visible is one of the complex strut and landing gear bays that ultimately didn't fit well into the fuselage. At that point, I was planning to paint the cockpit and seats and use the clear windshield part so they could be seen, but with DrawDecals (**drawdecal.com**) providing a cockpit window decal, I simplified the model further by gluing and filling the clear windshield in place and subsequently, using the decal. It was essential to use the flooring part in order to use the cockpit and bulkhead for strength and that is visible in **Fig. 2**. Both the main and nose landing gear assemblies can be seen in the photo. The fuselage wall inserts have been glued in place in **Fig. 3** and the cockpit is glued to the flooring insert with the nose wheel bay and strut ready to be added below the cockpit floor. I added the landing gear bays to the fuselage after I painted the model. A good amount of buckshot was glued to the back of the cockpit bulkhead and I left the crew entry door off as a hedge, just in case I needed to put more weight into the nose. As it turned out, I flattened some lead fishing sinkers later on, inserting and gluing them through the open crew entry door hole because my earlier weighting efforts proved to be shy of what was needed to make sure it wasn't a tail-sitter. **Fig. 4 and 5** show the fuselage finally glued together and one can see the amount of filling and sanding I had to do. It seemed that nothing wanted to line up correctly. With a coat of Alclad II's Grey primer, **Fig. 6**, all of the filling and sanding was done and I could continue on with the build. Note the presence of both raised and indented panel lines on the fuselage. It would have been better had Revell made all of the panel lines indented rather than providing some of each. At that point, I began assembling the large turbo-fan engines, **Fig. 7**, and again, the judicious use of filler is evident in the photo. I painted the fan inserts with Floquil Engine Black and then dry-brushed the blade edges with Testors enamel Steel. Two vanes would later be added to each side of the engine cowlings and one insert hole is visible on the side of the middle engine in the photo. When I removed the wing halves from their sprue connection points, they were also warped but Tamiya Extra Thin Cement took care of the warping and I was able to glue them to the fuselage, **Fig. 8**. Again, a lot of putty was needed to blend the wings to the fuselage and a subsequent coat of the grey primer is shown in the photo.

After gluing on the horizontal tailplanes, and filling those seams (nothing seemed to fit right, which made me think I had gotten a problem-child kit), the model was ready for paint.

The Revell instructions showed a diagram of the landing gear legs and wheel positioning and I hope I got their layout right. I was not able to see just how the wheels sat in that configuration in any of the landing gear photos I found on the Internet so I am banking on the fact that the Revell instructions were right. Viewing the layout of the main gear wheels just didn't look right to me but having no reference, I followed the kit instructions to the letter and one can see the end result with that rather strange configuration. Internet reference photos show the main wheels somewhat different than the instructions indicated so perhaps there was some movement, fore and aft, with their positions being what they were.

Painting

The Air Mobility Command (AMC) Gray, FS #36173 colour is seen having been applied in **Fig. 9**. I've also masked and sprayed the Alclad II Aluminum natural metal wing leading edge sections in the photo, and in **Fig. 10** one can see the lower flap areas having also been painted with the same metal shade. I used True North's AMC Gray enamel paint for the model as that company was the only one I could find who made the unique colour.

Markings

I've begun adding the decals in **Fig. 11** and even with their application, I had difficulty moving the decals to their correct locations once they were on the surface of the model – not all of them mind you, however the majority of them either wanted to fold over onto themselves or became stubborn and difficult to locate correctly once they came off of the backing paper. I flooded each location with Micro Set and that helped me to move them a bit but for the most part, it was a struggle getting them positioned in the right places. Revell's kit decals provided all of the thin black walkway lines but given the narrow indented wing walk panel lines, I decided to use a soft pencil to highlight them instead of using those walkway outline decals. My reasoning was that given the decal's thinness, there was the possibility of them not seating properly and therefore not appearing perfectly straight once they were inside those indented panel lines. I did use them for the upper fuselage walkway outlines and they are visible in the photo. I used Revell's drawings to place them correctly and there weren't indented lines for those decals as they were applied to a flat surface on top of the fuselage. Note the effectiveness of the cockpit window decal that I used. Given the problems I had positioning the decals, I saved the vertical tail 75th anniversary marking for last and the first one I applied behaved quite well when I placed it on the vertical tail. I was able to slightly move it to its correct position. The next day, I applied, or tried to apply the second one and once it was in place after my coaxing it into position, it began to bubble. I used a warm damp soft cloth to press the bubbles down but then, more would appear. As a last resort, I made a couple of slits with a very sharp single-edge razor blade and applied Solvaset but the bubbling just increased so seeing what was happening, I removed the decal and was able to secure a replacement sheet. When it arrived, I had no problem applying the second placard to the right side of the tail. Obviously, with the first try, the decal modelling gods were angry but their demeanor greatly improved with the "second coming" of the replacement decal sheet. **Fig. 12** shows the successful first placard in place.

Final bits

Up until that point, the model looked like a very big glider but now it was time to add those massive Pratt & Whitney power plants, **Fig. 12**. The pylons for the number 2 and 3 engines were different than the pylons for the number 1 and 4 engines *(the engines on aircraft are numbered from left to right as seen by someone seated in the cockpit)* so it was easy to get them in the right locations. I began with the number 2 and 3 engines, as seen in the photo. Some minor filling and sanding on the pylon seams was necessary and I touched up those filled seams by hand-brushing the filled areas with the grey paint. The process was repeated for the number 1 and 4 engines. The True North paint did not leave brush marks when it dried so hand-painting the seams saved me some masking and spraying. The engines were masked and sprayed before installation. I used Alclad II's Aluminum for the forward intake rings and I hand-brushed Tamiya's acrylic Silver on the exhaust cones. When they were dry, I painted the centre ring on the cones using Testors Steel which provided some contrast. With ScaleMaster grey decal striping cut to the correct length and width, they were placed between the back of the intake rings and the faces of the turbo fans.. That gave me a perfectly straight line aft of the Aluminum intake rings. The grey striping inside the cowling can be seen in the closeup photo on this page.

Conclusion

Perhaps I had the "Perfect Storm" of modelling with both the kit and the decals but the model turned out OK. All in all, this was a difficult build due to some parts being warped or being misfits along with the decal problems I had, but in the end, I won the "war." Perhaps I created my own problems but I did everything "by the book." At least the end result looks the part.

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 six grandchildren complete the circle.

A ‘Sockellafette’ pedestal mount
(for a 8.8cm Flak Gun in 1:72)

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BACKGROUND
One of my favourite modelling subjects is the iconic German 8.8cm Flak 18/36/37 series developed between the two World Wars. At the time it entered service, it was arguably the premier high altitude anti-aircraft gun in the world. Though primarily designed for anti-aircraft use, its promise as an anti-tank gun and bunker buster was appreciated early in its development, resulting in various dedicated towed and self-propelled versions being produced.

I have built three 88s previously. For my fourth build, I wanted to make a version different from what comes in the box. After some thought, I settled on building a gun that was statically emplaced on a pedestal mount (Sockellafette). Thus the primary focus of this article is to detail the process I followed in scratch building a new mount.

THE KIT
This kit is produced by Revell Germany (03174). It is by far the best representation of the famous 88 in 1:72 scale and I have built three of these kits previously. While my previous builds required extensive detailing, this one was much closer to out-of-the-box.

Outside of the changes needed to make a pedestal, I decided to add a modicum of visual interest with a scratch built wood box to cover the recuperator on top of the barrel. This was done by some gun crews to provide splinter protection for this damage-sensitive part.

THE BUILD
Construction of the pedestal and gun assemblies were done in parallel.

The gun was built pretty much out of the box. My only change was the addition of a set of data cables running from the pair of round Lampenempfänger 18 data transmission units mounted on the left side of the gun to the control unit near the equilibrators. Instructions were followed for the most part, except I delayed adding the control wheels until the very end to prevent them from being damaged as I added other pieces. The gun progressed smoothly and without much ado, outside of the usual seam cleanup and the odd sink mark to fill. Overall, the fit of the parts was excellent as experienced during my previous builds. The upper seam on the recuperator was not addressed since it was going to be covered by the wood box. Really, why do the extra work when it won’t be seen?

As the gun was being assembled I started on the pedestal mount. This consisted of three assemblies - the upper half which comes from the kit, a round spacer that I sourced from my spares box, and a scratch built lower half containing eight triangular braces. Initially my plan was to cut a base for this lower section from plastic sheet, but then I realized I could just cut the needed piece from the kit’s carriage, which I had to retrieve from the spares box (the area outlined in red on **Fig. 1**). I have no idea of the exact height of the braces, so I just guesstimated. I settled on Evergreen strip (.10” wide x .02” thick).

The first plastic piece was cut the full length of the diagonal. This was to be the eventual anchor for next diagonal and subsequent shorter braces. It was marked at its centre.

With my digital calipers the spacer's diameter was determined, then halved. The caliper was adjusted accordingly so I could mark two end points along the top of the diagonal out from its centre. I then made an angled cut from each pencil mark to the nearest lower corner, removing a triangular piece of plastic (indicated by the green areas in **Fig. 2**).

To get a usable brace I actually had to cut a few more pieces until the top edge met up with the spacer's circumference. Turns out the thickness of a pencil mark, and to which side of it you cut, decidedly affects the resultant slope. Happy with the result, I used it to cut another set of three braces. This left me with four plastic strips with which to make eight braces.

Taking one strip, it was glued in place along the penciled diagonal and adjusted until vertical (the yellow line on **Fig. 1**, labelled θ). A second brace was halved at its centre point. Following a few trial fits against diagonal θ, some trimming was performed to compensate for diagonal θ's thickness and the two pieces were glued to the base (the green lines on **Fig. 1**, labelled ω). Now I had a pair of diagonals in place, forming a cross. A quick test showed the two diagonals' tops matched up properly with the spacer's circumference.

Well, this was progressing well.

Pushing onward, the two remaining plastic pieces were also halved, to make four shorter braces. Each half-piece was shortened to an appropriate length, and glued in equidistant inside the spaces between diagonals θ and ω (white lines, labelled ε in **Fig. 1**). Now I had a base with eight braces composed of two long diagonals plus four shorter braces. As a sanity check, another trial fit with the spacer on top of the lower mount was performed. Yikes, something wasn't right! The ends of the newly-added shorter braces (ε) didn't meet up with the spacer's circumference. Then it dawned on me. I had made a slight miscalculation. These braces need a steeper slope to match up with the spacer's circumference because they were shorter lengthwise. I promptly removed the offending braces, let the glue dry, and sanded the scars smooth in preparation for a new set of short braces.

To get a proper slope on the shorter braces I used a similar approach done for the long diagonals. Two pieces of plastic strip long enough to span from side to side were cut, then the middle was found and marked. Being paranoid at this point I re-measured the spacer's diameter, halved it and marked the top edge out from the centre mark and made the angle cuts to the lower corners, again removing a small triangle of plastic (green areas in **Fig. 2**). As you can see in **Fig. 3**, the angle is much steeper when compared with those in **Fig. 2**. Again I had to repeat this process until I got an acceptable test fit. With one good brace, a second was cut using the first brace as a template. Both braces were cut in half and adjusted for length. One of the short pieces was glued in place and the spacer placed on top to verify that the top edge met at the spacer's circumference. Satisfied, I trimmed and glued the remaining three short pieces to the lower base. Finally, things were proceeding as planned. The final result can be seen in **Fig. 4** (arrows: yellow - θ, one piece, green - diagonal ω, two pieces, white - four short pieces/braces, ε).

Now I could move on to adding anchoring bolts. The lower base has a pair between each brace, for a total of sixteen. Several 1 mm washers were punched from thin plastic sheet and glued to the base. Nuts of 0.6 mm were also punched from thin plastic sheet and one glued on top of each washer. Another set of eight, 1 mm bolt heads were added to the underside of the spacer directly beneath the moulded on nuts on the upper side of the top half of the mount (**Fig. 5**). (I know! - bolt heads and nuts aren't round, but at this scale round disks look quite convincing.) The three pedestal sections were glued together. The final result can be seen in **Fig. 6**. The gun was mounted on top to ensure everything looked proper before everything set.

While the glue dried I worked on the recuperator's protective box. Using my calipers, the recuperator on the gun was measured to obtain the length for the box's sides and top. Pieces of plastic strip were cut using my JL hobby saw and mitre box. Notches were cut at the point the walls would touch the recuperator's front and rear mounting braces.

Next the box width was determined and another section of plastic strip was cut, and then the walls and front panel were glued together. Once dry, the notches were adjusted since they were slightly too narrow. Placing the box over the recuperator revealed a forward slope and some side-to-side wobbliness. Small lengths of square plastic rod were added inside the box to level it and brace it on the sides. **Fig. 7**

Happy with the box and pedestal mount, it was time to make the large, underlying base. This was accomplished with Evergreen styrene strips and bits of plastic I've harvested from other sources. The step directly under the gun's pedestal was cut from thick plastic salvaged from a damaged Christmas tree stand. The wood area is made up of two layers. The bottom layer is a square of 3.5” cut from a sheet of styrene. Random lengths and widths of plastic strip were laid on top and scratched with a hobby knife tip to represent wood grain. A spot 2” square was left open in the middle to receive another piece of plastic sheet. This piece, and the piece of Christmas tree stand, replicate the concrete pad and pedestal.

PAINTING

With all the sub-assemblies completed, it was time to paint. All paints used come from the Testors Model Master enamel range. First everything received a primer coat of Light Grey (2038). A pre-shade of Raw Umber(2006) was sprayed along edges and in crevasses. A light coat of German Panzer Schwarzgrau (2094) was airbrushed on the gun and pedestal. A little Flat White (1768) was added to the Panzer Schwarzgrau and sections were resprayed to lighten the camouflage some. The recuperator cover and wood portions of the base received an assortment of brown shades - Wood, RAF Middle Stone (2052), Raw Umber and RAF Dark Earth (2054). The concrete area was replicated with random applications

of Camouflage Grey (1733), Light Grey and Panzer Schwarzgrau. Then everything received a spray of Testors Glosscote directly from the can.

WEATHERING

I wanted the gun to be relatively clean so weathering was kept to a minimum. A thin filter of black (1749) was added to highlight the wood joints and grain. An AK Interactive weathering pencil (Smoke) was applied with an 18/0 paint brush to add shadow to bolts, crevasses and the like. A light spray of Afrika Dunkelgrau '42 (2103) replicated some dirt effect on the lower part of the pedestal and parts of the base.

FINAL ASSEMBLY

At last, the sub-assemblies could be brought together. The gun was glued to its pedestal, that assembly then glued to the base and the wood box to the recuperator. Two thin strips of plastic were brush painted a wood colour, cut to length and then glued under the recuperator spanning the gap between the sides of the wood box cover.

SET DRESSING

A set of four resin ammo boxes from AGN Modelworks (72104) were added to the base for some visual interest. One box comes cast open, so it was used to reveal a pair of ready rounds. A final coat of Golden brand Hard MSA Varnish with UVLS (Matte) thinned with lacquer thinner dulled any glossiness and completed the build.

Conclusion

So, there you have it. Another 88 gun for my collection, and a fairly straightforward conversion as well. Only my goof-up with the short braces provided the only stumbling block.

About the author:

Al Magnus was born in Regina where he has spent the majority of his life. His modelling got started during his pre-teen years, followed by about a 20-year hiatus. Returning to the hobby in the mid-1990s he joined the Regina Scale Modellers soon afterward. Al exclusively builds to 1/72 scale and his primary interest is armour, with some dabbling in aircraft, sea vessels and rockets/missiles. He retired in 2009 after 29 years as a public servant. Al and his wife Janice have been married for over 35 years and they have a son and daughter.

Bristol F.2b Fighter in 1:32

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Background

The Bristol F.2 Fighter was a British two-seat biplane fighter and reconnaissance aircraft of the First World War developed by the Bristol Aeroplane Company. It is often simply called the Bristol Fighter or popularly, the 'Brisfit' or 'Biff'. It was built as one of the responses (the other being the R.E.8) to a Royal Flying Corps (RFC) specification for a reconnaissance and artillery-spotting aircraft. Particular emphasis was placed on the aircraft being able to defend itself. Having overcome a disastrous start to its career, the F.2B's robust design allowed the pilots to fly it as if it were a fighter, using the front Vickers 0.303" machine gun as the main weapon and having the observers defend against attack from the rear. This approach was quite successful, and the Bristol never looked back. It remained in military service into the 1930s, and surplus aircraft were popular in civil aviation.

Captain Andrew Edward McKeever DSO, MC & Bar, DFC (21 August 1894 – 25 December 1919) came from Listowel, Ontario, and was a Canadian World War I two-seater flying ace (**Lead Photo 1**). He flew with 11 Squadron, Royal Flying Corps and achieved 31 victories. He thus became the highest scoring two seater fighter pilot in the Royal Flying Corps and Royal Air Force during the First World War. McKeever would score all 31 of his victories while flying the Bristol Fighter. All but two of those triumphs were over German Albatros D.V fighters. Seven different gunners/observers shared his victories. One of these, Lieutenant Leslie Powell, became an ace in his own right, with 19 successes, 18 of which were in tandem with McKeever.

The Kit

This is the Wingnut Wings kit of the Bristol F.2B Fighter (Kit Number 32004), and is the first injection molded model of this airplane to appear in 1:32 scale (**Lead Photo 2**). It was released in April 2009 and sold out in September 2018, although it may still be found on eBay or other internet venues. It includes Cartograf decals for five aircraft (but does ***not*** include Captain McKeever's aircraft), 174 high-quality injection moulded parts, optional bombs and open or closed radiator grills, early and late undercarriage and 14 photo-etched metal detail parts. The instruction booklet is a reference on the 'Biff' in its own right, even including full rigging diagrams. There are five variants (A – E) of the Bristol offered in the kit, with options for two- or four-bladed propellers, two versions of the undercarriage and differing colour finishes. Research into the various serial numbers makes it pretty clear that, for building the McKeever Bristol, Variant 'A' is the one to use.

The kit, like the others in the Wingnut Wings catalogue, is designed for modellers with little experience with First World War models. And, fortunately, Pheon Decals offers a sheet of decals for this kit, which includes the markings for McKeever's Bristol Fighter.

Fuselage

The build began with the cockpit and observer's stations. The only scratch-building was done to the control column as the kit item appears to be a post-war version (**Fig. 1**). I also doctored the outside rear of the seat in order to clear the openings in lattice-woven chair sides. The WNW website shows the use of a craft knife to carve the plastic away from the outside rear of the seat, and then finish up by sanding. I employed the same concept, but I used various sanding sticks, and no craft knife, to get rid of excess plastic: coarse stick, then medium, then fine. **Fig. 2** shows both stations assembled into the unit that will be fitted between the fuselage halves. It's a somewhat finicky, detailed structure but it looks the part once completed. Next, the fuselage is together as per the instructions (**Fig. 3**).

Some modellers have fitted the cockpit interior to one side of the fuselage, and then attached the other side. I used the recommended method of fitting the structure inside the fuselage from the underside because I feared damage to the interior during the filling and sanding process. I needed a bit of filler around the fuselage/floor joint seam, but they were small and were easily filled with thinned white glue. Sanding the rear of the fuselage was a bit of a nuisance because of the four PE parts jutting out of the structure.

Over a period of a few days I made a few advances on the fuselage. First, I sprayed the external firewall with Krylon Gloss Black and then applied a thin coat of Alclad 2 Duralumin. This was followed by a coat of Xtracolor Medium Sea Grey (a close match for Battleship Grey) sprayed onto the forward cowling. I filled and sanded a shallow step on the fuselage

underside between the “floor” of the cockpit and the lower fuselage surface. Finally, I tweaked the Xtracolor RFC Green with touches of Light Tan, Sand, White and Dark Earth (see **Paint and Markings** for details) to give it a slight brownish tinge and then sprayed this mix onto the fuselage (**Fig. 4**).

Engine

Wingnut Wings engines are pretty good straight out of the box, but it is fairly easy to add extra details. One feature that is not included is the electrical wiring harness for the spark plugs, and it’s not difficult to add. I simply drilled a hole into each cylinder where the spark plug was placed, then super-glued a length of thin copper wire into the hole (**Fig. 5**).

I also drilled holes into the circumference of the two distributors (one on each cylinder bank). Then it was a case of running each wire back between the cylinder banks to the distributors, trim off the excess wire, and fitting the end into the distributor hole. **Fig. 6** shows the result. I used Alclad 2 paints and Xtracolor Black to finish the engine.

Extended Exhausts

Several references show that Captain McKeever’s ‘Biff’ carried exhaust pipes that extended down and to the fuselage rear on both sides. Unfortunately, the kit only provides one set of exhaust pipes, and they are the short version (Part D16). A number of scratch-built solutions are provided in various build logs on the internet: heating, gently bending and stretching various types of plastic piping is usually the method of choice. I, however, am less than dexterous when it comes to scratch-building. Fortunately, a friend came to my rescue. He had purchased a Post-War Bristol Fighter (Kit 32060) from Wingnut Wings (at the time of writing, this kit is still available), and it had two types of exhaust pipes. One of them was just what I needed…almost. It extended down to the middle of the fuselage and then bent straight back along the fuselage side. My friend (a retired Master Gunnery Sergeant in the US Marine Corps, no less: Thanks, Mark!) sent this set of pipes to me. I was able to very gently warm the pipes and straighten them out so that their downward extension tracked to just below the observer’s position (**Fig. 7**).

Tail Assembly

I fitted both the upper and lower vertical fins to the fuselage, and then painted them. Subsequently I painted the horizontal stabilizer as well, upper and lower colours, and then I fitted it to the fuselage. Pay attention: d*on’t* do it this way! I found that the portion of the horizontal stab that fits into the rear slot in the fuselage doesn’t fit all that well (**Fig. 8**).

I had to file out the opening and sand down the centre stab area to get it to fit. As well, the two “pins” on the stab that fit into the fuselage were difficult to place, with resultant damage to my paint job: I had to force them down into their respective openings (**Fig. 9**).

I recommend that you fit the horizontal stab before you paint either the stab or fuselage: this won’t damage the plastic, and you’ll save time painting. Apply the CDL to the underside, mask that off, then do the PC10 (Protective Coating 10, a khaki green shade). Also, be wary of the diagram in Step 10 regarding the fitting of the elevators. The unwary might get them on ‘inside out’. Refer to any of the colour drawings at the back of the instruction booklet to be sure of just how the elevators fit.

With the rigging on the tail area complete we can start on the upper wing. I’m trying the EZ Line route (see below), and finding a few challenges and a few newish techniques for using this material. (**Fig. 10 and 10A**)

Paint and Markings

I used Xtracolor paints for the majority of the colour requirements. The undersurfaces received a coat of RFC Clear Doped Linen (CDL) while the upper surfaces received a mix of colours to replicate PC 10. I added the following colours to a little-used tinlet of RFC Green: 10 drops of White, 25 or so drops each of BS250 RAF Dark Earth, FS13531 Sand, and FS10219 Tan. Once thoroughly mixed it looked close to what I would expect PC10 to be during the fall of 1917 – somewhat more brown than green. For airbrushing, I mixed the paint with lacquer thinner at a ratio of 1:1 and sprayed it at a pressure of 12-16 psi.

The decals came from the Pheon Models sheet **32005 -Bristol F2B Fighter Aces Vol 1**. The sheet features roundels, rudder striping, and individual markings for seven Bristol Fighters. The subject aircraft are:

- ‘P’ D7939, Lt Victor Groom (8 victories), 2Lt Ernest Hardcastle (12 victories), 20 Sqn
- ‘K’ B.1307, Lt David Weston (13 victories), Lt Walter Nobel (12 victories), 20 Sqn
- **‘7’ A7288, Capt Andrew McKeever (31 victories), 2Lt Leslie Powell (19 victories), 11 Sqn**
- ‘6’ C-4846, 2Lt Donald Beard (8 victories), Sgt. HW Scarnell, 11 Sqn
- ‘F’ B1162, Sgt Ernest Elton (16 victories)/Lt Roland Critchley (7 victories), 22 Sqn
- ‘B’ C-4633, Lt William Swayze (6 victories), 2Lt Thomas Elliot (11 victories), 62 Sqn
- ‘N’ C-4810, Capt George Bulmer (10 victories), 2Lt Percy Williams (7 victories), 22 Sqn

This line of decals is excellent in terms of registration, colour, and usage. A detailed description of each subject is included in booklet format as well as guidelines for using the decals. See a complete review of this decal sheet by Mr. James Fahey at **hyperscale.com/2009/reviews/decals/pheon32005reviewjf_1.htm**

Wings

I used Chartpak Graphic Tape (available at various suppliers such as Amazon and Staples) to help emphasize the rib tapes. The 1.5 mm width fitted the rib tapes perfectly. 1.0 mm Jammydog tape was used on the aileron rib tape**s** (**Fig. 11, upper**).

The wing painting schedule was as follows: first, the wing was painted with my slightly-altered PC10. When dry (two days' wait with Xtracolor), I applied the Graphic Tape along all rib tapes. Next I applied a few thin passes over the tapes with a dark mix of black and mid-brown: "Dark Earth" in the Xtracolor line. Then the tape came off and a thin overspray of the PC10 tied it all together. I also sprayed a bit of thinned and slightly lightened PC10 *between* the tapes to add a bit of depth (**Fig. 11, lower**).

With the lower wing and undercarriage already fitted (a slightly complex phase as the lower wing attaches to the fuselage with small struts – no direct contact between wing and fuselage) and the upper wing painted and decalled, it was time to fit the upper wing in place. With twelve interplane and cabane struts to fit into the wing, this task looked to be interesting, exciting, and challenging. I took the task in stages, first fitting the wing to the cabane struts with a resultant slight misalignment in evidence. However, as I fitted the interplane struts into place the misalignment sorted itself out nicely with the leading edges of both wings lining up very nicely indeed. Glue drying time confirmed that the wing was nicely attached (**Fig. 12**).

Propeller

I used a hand-carved propeller from The Micro Group, purchased some years ago. The Micro Group provided accurate hand-carved propellers in 1:48 and 1:32 scale. I have two other MC propellers for eventual use. Although it is still possible to call up reviews of these propellers, the two that I found were dated 2013/14. An email to their advertised address has not, as yet, been answered. Regrettably, other than these older reviews and the few samples that I have, I've no other evidence of their continued existence. (**Fig. 13**)

Rigging

I used EZ Line (Fine) elastic to do the rigging. First, I fitted the aileron control cable from either side of the fuselage to its anchor point outboard on the upper surface of the lower wing (see the rigging diagram at page 19 of the instruction booklet). Then, one by one, I cut slightly longer lengths than the distance between any two anchor points. With the model inverted, I then glued one end of each line to its anchor point on the underside of the upper wing using a small dot of medium cyanoacrylate (CA) glue. With all of the lines attached and the model placed upright, each of the lines was cut to a length slightly shorter than the distance to its second anchor point. With a dot of gap-filling CA at the second anchor point, tweezers were used to place the end of the line into the CA, followed by a small drop of accelerator. The CA quickly took hold and the now-slightly stretched rigging line was firmly in place (**Fig. 14**). I worked outwards from the fuselage to the wingtips to ensure that one line did not obstruct the fitting of another.

Conclusion

As with virtually all Wingnut Wings subjects, this build results in a very accurate model straight from the box. The modeller can augment the build with various details, both aftermarket and scratch-built. I thoroughly enjoyed the project even though several other "real time" events and activities precluded a timely completion.

References

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- ☐ Bruce, J. M., The Bristol Fighter, Arms and Armour Press, London, UK, 1985
- ☐ L. A. Rogers, Bristol Fighter, Albatros Productions, Ltd., Berkhamsted, UK, 2005

Aftermarket Items

- ☐ EZ Line
- ☐ Micro Group Propeller
- ☐ Chartpack Tape
- ☐ Jammydog Tape
- ☐ Pheon Decals Sheet Number 32005

Special Thanks
To Richard Alexander, for his kind permission to use the box-art image for the Wingnut Wings Bristol Fighter, Kit Number 32004.

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.

CH-47A Chinook

Barry Maddin
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History

The CH-47 is an American twin-engine, tandem rotor heavy-lift helicopter. The all-weather CH-47A Chinook was designed and produced by Boeing Vertol in the early 1960s with its primary roles being troop movement, artillery placement and battlefield resupply. It had a wide loading ramp at the rear of the fuselage and ventral cargo hooks to haul slung loads externally. It was powered initially by Lycoming T55-L-5 engines rated at 2,200 horsepower (1,640 kW) but then replaced by the T55-L-7 rated at 2,650 hp (1,980 kW) engines or T55-L-7C engines rated at 2,850 hp (2,130 kW).

The U.S. Army selected the Chinook as its standard heavy-lift transport helicopter and the initial delivery was in August 1962. A total of 349 CH-47A's were built. The CH-47A had a maximum gross weight of 33,000 lb (15,000 kg) allowing for a maximum payload of approximately 10,000 lb (4,500 kg) and a total of 349 were built. The 1st Cavalry Division took their organic Chinook battalion with them when they arrived in Vietnam in 1965.

The Kit

The Trumpeter CH-47A Chinook # 05104 in 1:35 scale is one big aircraft kit (**Fig. 1**). Upon opening the box you find a very well-packaged kit with 312 parts. The kit is moulded in light grey styrene, with the windows and nose cone in clear plastic and a fret of photo etch is provided for the engine screens and vents. The two halves of the fuselage are secured in separate boxes (**Fig. 2**) with the clear nose cone, rubber tires, white metal landing gear and 13 styrene sprues safely packaged below them (**Fig. 3**).

The Build

The first thing I did was to treat all the clear parts with a coat of Future Floor Finish and then placed them in a sealed plastic box to keep them dust-free. Future fills in any micro scratches and leaves the clear parts sparkling bright; it also help protect the parts while handling them during assembly.

The main instrument panel is also moulded in clear plastic. I carefully brush-painted the panel around the instruments with Vallejo 950 Black and then picked out lights and switches based on pictures I found online. The kit provides an acetate film with the instrument faces printed on it, which I glued onto the back of the instrument panel (**Fig. 4**).

I moved on to assemble the cockpit area. Because the back of the instrument panel is visible through the nose windows I used pieces of plastic card and wires to "gizmo out" the back of the panel (**Fig. 5**).

I painted the cockpit deck with Vallejo 869 Basalt Grey and the instrument panel coaming with Vallejo 888 Olive Grey. The other two control panels were painted Vallejo 950 Black, with the lights and switches picked out in the same manner as the main instrument panel. The handles on the cyclic and collective controls were painted Vallejo 862 Black Grey. The fire extinguisher was painted Vallejo 957 Flat Red and Vallejo 864 Natural Steel. I painted the area where the instrument panel would be mounted in Vallejo 997 Silver so that the instrument dials would show up better. I then glued the instrument panel into place using Gator Glue (**Fig. 6**). I painted the crew seat frames with Vallejo 869 Basalt Grey and the seat cushions in Panzer Aces 314 Canvas.

Figures

I had purchased the Trumpeter Vietnam Chinook Helicopter Crew, item # 00417, for use with the model. The figures are nicely detailed but the co-pilot figure's nose was deformed and, as one reviewer noted, he looks like "Voldemort" from the Harry Potter movies. To help hide the nose problem I painted a pair of goggles and glued them onto the co-pilot's face. I drilled holes in the helmets and added a microphone and headset lead to each one. I painted the crew uniforms in Vallejo 893 US Dark Green with their flight vests painted in Panzer Aces 318 US Army Tank Crew.

Their flight helmets were painted Vallejo 850 Medium Olive and I applied the decals of the 1st Cav Division flashes to both and added a Captain's rank on the pilot's and an American flag to the co-pilot's helmets.

Holding the figures in place on the seats I drilled a hole through the base of the seat cushion and into the bottoms of the figures. I then glued a brass pin into the bottom of the figures and, pushing the pins through the holes in the seats, I glued the figures onto the seats (**Fig. 7**).

The kit comes with a set of photo-etch seat belts designed to lay upon empty seats so I had to lengthen portions of them with plastic strip in order for them to fit around the crew figures. Once the seat belts were glued into position I painted them Vallejo 886 Green Grey, with the belt buckles painted Vallejo 862 Black Grey before gluing the seated crew into place in the cockpit.

Back to the interior details…

I then assembled the bulkhead located behind the cockpit. The bulkhead has a couple of power panels which based on photos has a number of leads coming out of them. I drilled out the small terminals at the base of the panels with a # 78 (0.016") drill bit and glued in place 32-gauge wires (**Fig. 8**). I then drilled corresponding holes in the bulkhead and glued the panels in place (**Fig. 9**).

On the left side of the bulkhead are electronic component trays which I assembled and added wires to. I then painted the shelves Vallejo 869 Basalt Grey with the electronic boxes painted Vallejo 888 Olive Grey (**Fig. 10**). I painted the bulkhead Vallejo 869 Basalt Grey, added a fire extinguisher and the trays and detailed painted the front of the electronic boxes and the paratroopers' warning light panel. I added a power cable to the port side electrical box on the front side of the bulkhead and painted the electronic boxes with Vallejo 862 Black Grey and detailed painted the switches and fuses. Based on reference pictures I then painted the cargo deck with the Basalt Grey and added two yellow and red strips using Vallejo 953 Flat Yellow and Vallejo 957 Flat Red. I dry brushed the deck with Vallejo 864 Natural Steel and gave it a wash with Real Brown Acrylic craft paint (**Fig. 11**). I then glued the bulkhead assembly in place (**Fig. 12 & 13**).

I next tackled the two tail ends of the fuselage. The inside surface of both tails are marred with several large square ejector pin marks which I filled in with my mix of Squadron Green putty and liquid glue (**Fig. 14**).

The tail ends of the interior cabin are bare and would be visible with the ramp lowered so I decided to add some interest to them. Using hard-to-find reference pictures of the ramp area for the CH-47A I started with making ramp wall guards. With measurements and angles taken I marked and cut out two guards from 0.020" plastic sheet and used a hole punch to knock out the lightening holes in each guard (**Fig. 15**).

On the port side I added a couple of power panels, additional ribs, a hydraulic ram and accumulator for the ramp, a first aid box and the ramp wall guard all tied together with wires and cables and the rear paratroopers' warning light panel (**Fig. 16**). On the starboard side I added a maintenance panel, additional ribs, a hydraulic ram and accumulator for the ramp, a hydraulic manifold and back up hydraulic hand pump for the ramp with associated wires and cables (**Fig. 17**).

I then primed the areas with Krylon Grey primer. On the real Chinooks, because the inside surfaces could be seen when the ramp was down, they were painted camouflage green, so I painted the inside surface with Vallejo 895 Gunship Green. I painted the maintenance, power panels and hydraulic components Vallejo 869 Basalt Grey and then detail painted the maintenance panel. I picked out the cables and lines with Vallejo 841 Andrea Blue for the ramp hydraulic lines and Vallejo 865 Oily Steel for the hydraulic manifold lines. The power lines were painted Vallejo 862 Black Grey and Vallejo 999 Copper (**Figs. 18 & 19**).

I know that the real thing is far more complicated but adding these few details make it look better than a bare wall.

Cabin heater

I then built the personnel heater. Using strips of tape I wrapped the exhaust pipe of the heater simulating the insulation wrap found on the real thing. I painted the heater in Vallejo 869 Basalt Grey with the air intake hose in Vallejo 950 Black and the ignition chamber in Vallejo 894 Natural Steel. The insulation wrap was painted Vallejo 997 Silver (**Fig. 20**). I then cut out the etch screens for the tail and used "Blacken It" to well, blacken the brass (**Fig. 21**). This eliminates the shiny brass look you can get if you scratch the part after painting. I used a jeweler's mandrel to form the curvature needed for the screens to fit properly and then glued the screens into place. After dry fitting the ends to the main fuselage several times I glued the ends on using lots of clamps. The ends fit well but the main body had some flex and I wanted as small a gap as I could get. With the glue dry I ran fine beads of my filler mix along the gap where needed and not wanting to destroy the fine detail on the skin of the aircraft carefully sanded the joint. With the body together you can really see how large the model is (**Fig. 22**).

Engines

The engines were next on the hit list. They went together well with just a little cleanup on the smaller components. Because of the screens on the engine covers I wanted to have something to see other than a bare engine. Photos of the engines

show a very complex arrangement of hoses and lines that I wouldn't care to duplicate in full detail. So I planned out a simplified layout that would be seen through the screens. I drilled various holes and used 0.020" and 0.030" lead wire to represent fuel lines and such. I also used fine copper wire to run fuel lines to the combustion chamber. I then painted the engines Vallejo 863 Gunmetal Grey with the surface components painted Vallejo 864 Natural Steel. I painted the lines with Vallejo 865 Oily Steel and Vallejo 999 Copper. I painted the inside of the exhaust with Vallejo 862 Black Grey and the outside with a mix of Vallejo 801 Brass and Vallejo 998 Bronze. I then gave both sides a heavy wash of Vallejo 800 Gunmetal Blue to simulate the discolouration of the metal from the hot exhaust (**Fig. 23**).

Landing gear

The landing gear is cast in white metal and required some work with my jeweler's file to eliminate the cast on part numbers and knock out marks. Overall they are very well cast with nice detail (**Fig. 24**).

I installed the plastic torque arms to the front landing gear and based on reference pictures added the brake lines to the front and aft assemblies and hydraulic lines to the aft ones. The wheel assemblies are three piece styrene hubs with vinyl tires that fit nicely on the hubs. The front and aft vinyl tires are different with the front tires having six treads and the aft tires having five. Leaving off the hubs I masked the mounting plugs and the areas where the hubs fit and primed the landing gear with Krylon Grey primer. I then painted the landing gear and wheel hubs with Vallejo 895 Gunship Green with the brake lines picked out with Vallejo 864 Natural Steel and the hydraulic lines on the aft gear with Vallejo 841 Andrea Blue. I installed the tires and the landing gear was done (**Fig. 25**). On the CH-47A's the earlier builds had rear wheels with two tires each which were later changed to the single tire wheel configuration. There is some discussion online that this double wheel was only on the test models but lots of photographic evidence shows many of the "A's" in Vietnam had duel rear wheels.

Rotor assembly

I then tackled the rotor assemblies. The rotors are moulded with a downward droop that you would find with the rotors in a static position. If you wanted to model the kit in a flight configuration you would have to straighten the blades.

The rotor hubs go together easily and the instructions indicate you should paint the lower portion of the hub in silver. However when the rotor assembly is installed on the helicopter nothing below the rotor head fairing is visible with only the pitch links protruding above the fairing which were black in the reference pictures I found. Not following the instructions I glued the pitch links to the pitch control levers on the lower half of the rotor hub which is simpler than trying to mount the entire rotor assembly on the links. I then assembled the link end of the blades and installed the blade drag dampers. Using a # 77 (0.018") drill bit I drilled out holes on each blade, one on the blade side of the mounting knuckle and one on the rotor head side of the knuckle on the top and bottom of the blade assembly. I then installed oil lines using 0.015" lead wire into the holes. I glued the blades to the lower half of the rotor hub and then glued the upper half of the rotor hub in place. A little filler was needed to eliminate small gaps particularly at the pitch change control levers and with some careful sanding the rotors were ready to paint. I primed the rotors with Krylon Grey primer and with Vallejo 953 Flat Yellow I painted the blade tips. I masked off the blade tips and then painted the assembly with Krylon Gloss Black. When dry I airbrushed Tamiya TS-80 Matt Coat on the rotors. The rotors are as wide as the fuselage is long (**Fig. 26**). I then painted the oil lines with Vallejo 862 Black Grey and painted colour code strips on each blade assembly (**Fig. 27**).

Fuselage

Before gluing the fuselage halves together I masked off the tail section of the fuselage halves and painted the interior walls and roof panel Tamiya XF-80 Royal Light Grey. I then masked off the window openings on the inside and painted the outside of the fuselage around the windows with 70% Tamiya XF-58 Olive Drab mixed with 30% Tamiya XF-62 Olive Green to get good coverage around the windows. I then glued the window glass into place and glued the roof panel onto the starboard half of the fuselage and fitted and glued the floor and cabin assembly to the same side. With a little fiddling I was able to fit the port side of the fuselage into place and starting with the bottom of the fuselage I glued the haves together. Having read a couple of reviews that spoke of having gaps when the fuselage was together I figured if I was going to have any gaps it would be better on the top where the drive shaft cover would hide most of them. I worked slowly allowing the capillary action of the glue to run along the seam. I used bar clamps to help hold the halves together carefully applying light pressure because it was easy to distort the joint. The only area I had problems with was on the top area between the rotor towers. The top wanted to bulge upward and I had to keep a downward pressure on the seam to have the top lay and glue flat. There were minor gaps on the top but they were covered up by the drive shaft cover as planned. With the fuselage together I set the rotors in place to get a better idea of the size of the completed Chinook (**Fig. 28**).

I cleaned up the edges of the clear nose cone and masked off the panels with Tamiya tape. I laid the tape over the panels and pressed the tape into the frame sides with the curved edge of a wooden cuticle tool and with a fresh # 11 scalpel blade cut the tape along the frame edges. Being an armour modeller I haven't had a lot of practice working on canopy frames but I think I got it right (**Fig. 29**).

Back to the cockpit…

In a real Chinook on either side of the cockpit beneath the rudder pedals there are four master brake cylinders. They are visible in the chin bubble area and are attached to each of the pilot and co-pilot pedals. Because the area is visible I decided to make the brake cylinders complete with hydraulic lines. I measured and cut 0.060" evergreen rod for the main cylinders and 0.030" rod for the actuating rods. I drilled out a hole in the top of the main cylinders to insert the actuating rods and glued them in place. I then drilled three holes in each of the main cylinders with a # 78 (0.016") drill bit for the hydraulic lines. I then drilled six holes on each side of the nose wall where the hydraulic lines would run to the brake transfer valves. I glued lengths of fine copper wire in the holes in the main cylinders and then glued the main cylinders to a 0.060" hex rod cross shaft. I cut four lengths of 0.080" hex rod and drilled holes at the ends to fit the cross shaft into. With the cross shaft mounted in the hex rod I positioned the shaft under the pilot and co-pilot's pedals and glued the ends of the hex rod to the lower bulkhead with the tops of the actuating rods glued to the rudder pedal bracket. The hydraulic lines were fed into the nose wall and glued in place. I painted the main cylinders, cross shaft and cross shaft mounts with Vallejo 888 Olive Grey and the actuating rods Vallejo 865 Oily Steel with the hydraulic lines painted Vallejo 841 Andrea Blue (**Fig. 30**). On the Chinook the four wheels of the forward and aft landing gear were equipped with self adjusting disk brakes. Both forward and aft brakes could be applied and the brake pressure maintained by depressing the pedals. Hydraulic pressure was supplied by the utility hydraulic system with the left side landing gear wheel brakes operated independently from the right side. Pressing either the pilots or co-pilot's left pedal to depress the left master cylinder will operate the left side wheel brakes. Pressing either right side pedal to depress the right master cylinder will operate the right side wheel brakes. With the interior of the crew cabin finished (**Fig. 31**) I glued the front canopy in place using Gator Glue.

diorama setting

After installing the landing gear I decided that I wanted to portray a maintenance activity for the finished display so on the starboard side I left the access hatch to the fuel system piping between the forward and main fuel tanks off. Using Evergreen 0.060" rod and punched out discs along with 0.030" lead wire I built a facsimile of the fuel system piping between the two fuel tanks. I painted the interior of the hatch Vallejo 895 Gunship Green and the fuel piping Vallejo 865 Oily Steel. I added a power cable to the inside of the hatch for the starboard marker light and painted it Vallejo 950 Black and glued the hatch in the open position (**Fig. 32**).

I installed the engines and engine covers and installed the various antennas to the underside of the aircraft. Before I installed the radio antenna stanchions on the port side of the fuselage I cut off the small 'T' protrusions and with a # 78 (0.016") drill bit drilled through each stanchion where the protrusions had been.

Painting and Finish

With everything installed except the ramp and side door step I masked off all the openings, side windows, parts of the engines and landing gear. I then painted the aircraft with my mix of 70% Tamiya XF-58 Olive Drab and 30% Tamiya XF-62 Olive Green (**Fig. 33**). I then painted the outside surface of the ramp and set everything aside to cure for a couple of days. I was able to hold and manoeuvre the Chinook using the holes where the rotors fit but because of the size and not paying attention I succeeded in hitting the side of my spray booth and knocking off the starboard pilot tube. I drilled out the end of the pilot tube and mounting location with a # 69 (0.0292") drill bit and glued a small length of brass wire in the pilot tube and glued the tube back in place. I then carefully painted all the antennas underneath the Chinook with Vallejo 862 Black Grey.

From many of the reference pictures it was apparent that some of the Chinooks in Vietnam had very few markings so I selected the 1st Cav patches from the kit decal sheet and found a Playboy symbol and a Cool Studs Inc decal in my decal stash. I applied the decals by floating them in a pool of Future then pressing them down into the Future and applying more Future over top. This method eliminates any silvering especially with the large 1st Cav Division decals.

I next strung fine copper wire through the holes I had drilled earlier in the antenna stanchions securing them in place with CA glue. I painted the wire and the stanchion ends with Panzer Aces 306 Dark Rubber. I glued the ramp and side door step in place and then gave the Chinook a wash of Burnt Umber acrylic craft paint and worked some MIG 309 African Dirt Pigment into crevices and joints along the body and sprayed the Chinook with Testors Dullcote.

I painted the clearance lights with Vallejo 934 Transparent Red and installed them with Gator Glue and carefully removed the masking tape on the canopy (**Figs. 34, 35 & 36**).

I also rubbed Vallejo Pigments 73115 Iron Oxide and 73116 Carbon Black in the area of the engine exhaust (**Fig. 37**). I then glued the ramp extensions in place and mounted the third crew member on the ramp (**Fig. 38**).

figures and extra touches

Having built the Chinook with the fuel transfer line access hatch open and the fuel piping undergoing a maintenance activity I wanted to pose it on a runway apron with a mechanic, ground guide and a couple of 1st Cav Division troopers waiting on the flight line. For the mechanic I modified a figure from the Dragon Figure kit # 3303 to one kneeling and holding a wrench and built a wheeled CO2 extinguisher from a gas welding kit adding a scratch built nozzle (**Fig. 39**). The Cav troopers are from Verlinden and required just a little cleanup. I did add a coiled wire to the PRC-77 radio handset and connected it to the correct spot on the radio. Thanks to a former life in the Canadian Army my back still remembers lugging one of those around the boonies (**Fig. 40**).

I added an AFV Club 1:35 model of a M38A1 Jeep, which was being phased out of the U.S. Army in favour of the M151 MUTT, but were still used in Vietnam until the end of the conflict. I detailed the engine and posed the hood open as though they too were having mechanical problems (**Fig. 41**). To fill the blank diorama space on the far side of the Chinook I built a sling load of fuel drums. I found diagrams of the medium lifting cargo sling and constructed the sling from Tamiya tape and made lifting rings from brass wire. The ring that hooks onto the Chinook's centre fuselage lifting hook is a web ring which was easily made with thin strips of Tamiya tape. Everything was glued together with Weld Bond adhesive with the sling painted Vallejo 941 Burnt Umber and the fuel drums done in Vallejo 950 Black with chips and wear picked out with a silver pencil (**Fig. 42**).

I wanted a means of identifying the Chinook and found a picture of a crest that my friend Jim made into a decal mounted on a piece of 0.040" plastic card cut to shape. I finished the edge of the crest with a black Sharpie and glued it onto the apron. The crest identifies the Chinook and its location with a nice silhouette of a Chinook in silver. Additionally underneath are renditions of the US National Defense Service Medal Ribbon, the Vietnam Service Medal Ribbon and the Republic of Vietnam Campaign Medal Ribbon with 1960 Device (**Fig. 43**). When it's all put together it makes one big display. I glued everything in place except the Chinook which I prefer to pack separately when taking the display to model shows or club meetings for show-and-tell (**Fig. 44**).

Conclusion

Overall the CH-47A Chinook was a most enjoyable build. The only areas of concern for me was the mating of the fuselage and masking the nose cone which would have been a breeze for aircraft builders but new ground for a simple armour builder like myself. The sheer size of the kit calls out for additional detail particularly in the crew cabin and ramp bulkheads. I had no problems with the instructions and I was happy with the fit of the parts. I liked the scale as there is so much in 1:35 that you can add to the scene even if it is bigger than three armour kits. The CH-47A Chinook would be a great addition to anyone's aircraft or Vietnam-era collection.

References

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- US Army TM-55-1520-240-10 Technical & Operator's Manual for Army CH-47.

About the Author:

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.

Gunpla is Funpla: the RB-79 Ball

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If you have been around the hobby over the past few years, chances are you have noticed those colourful looking Japanese robots that are appearing on the shelves of hobby stores and on contest tables. These Gundam kits are very popular among fans of the media franchise, and in 2019, Bandai celebrated shipping their 500 millionth Gundam model. My local hobby store has a monthly meeting for the Gunpla group and once a month on a Sunday afternoon, the store is packed with people – mostly young people – putting together brightly coloured robots and having fun.

I'm not a fan of anime, and I don't know a lot about the Gundam media franchise. But I do know one thing: big robots are cool.

The subject

The RB-79 Ball is pretty much just a piece of space construction equipment, up-armoured and with a gun slapped on top, then mass-produced and sent off to war. Needless to say, a floating ball with two grabby hands and a gun is significantly outclassed in 'cool factor' by all the humanoid robots in the Gundam universe, so it tended to suffer heavy losses in actual, real-life fictional, combat.

Modellers who are fans of the ball have a number of options. First is the HG twin set, in 1:144 scale which comes with enough parts to build two balls, with options for either one large gun or two small ones. These kits are fairly basic, but are a fun, quick build. If you want something larger and more detailed, there are a few options in the Master Grade universe that generally vary only in details, markings, and the colours the plastic is moulded in. Finally, there is the Haro Ball – a cross between the Haro, a ball-shaped helper robot that is a mascot of the Gundam series and the Ball Gundam. For this build, I went with the Master Grade Ver.Ka, stepping up to the world of Master Grade for the first time.

What's in the box

If you aren't familiar with Bandai kits, you will notice upon opening the box that there are some differences between Bandai and other brands. First, the parts come on multi-coloured sprues, and are designed so that the colour of the sprue corresponds to the colour of the finished product. As such, you technically don't even need to paint them if you are satisfied with the way it looks snapped together.

Fit on Bandai kits is impeccable, and they are generally designed in such a way that it is hard to screw up – if a part doesn't go together easily, you are probably putting it together backwards, upside-down, or otherwise the wrong way. This can be a double-edged sword in that while they go together nicely, sometimes it can be difficult to dry-fit parts because it can be hard to take them back apart again to apply the glue. In these cases, you may have to simply take a chance and place your hopes in Japanese engineering rather than doing a test-fit and risk damaging the part when you try to take it apart to apply the glue.

In my opinion, the multi-coloured sprues and effort put into engineering is a stroke of genius on Bandai's part. Yes, I know that real hardcore modellers are able to take an archaic vacuform kit and with enough time and putty, they can put together a show-stopping model. But for the rest of us, a kit that goes together nicely is a joy to build. And the fact that they can be built by children or by people who have little interest in modelling and painting but who like the subject matter makes them a great entry point to the hobby.

This particular kit comes with a six sprues – two for the ball itself, one for the arms, one for the gun, one for the stand, and a small, rubbery sprue containing poly cap parts. These poly caps are special, rubbery fittings for ball joints and other poseable parts. One of the sprues is multi-coloured with three transparent green parts, representing the cockpit windshield and two side windows, while the rest is various shades of white, red, and grey. If you look carefully, you can see on the sprues that it comes with three figures – a seated pilot and two guys standing around. Additionally, there is a small baggie containing two metal rods and a small red wire which are part of the arms. Markings are supplied in the form of a sheet of dry transfers, and a nicely printed instruction book with colour pictures and plenty of Japanese writing completes the kit.

Construction

Construction on Bandai kits is kind of difficult to write about because the kit is so well engineered that it doesn't make for interesting writing. There are no stories of the trials and tribulations that I overcame in putting it together because the kit went together so well that there really weren't any. And, of course, no tales of scratchbuilding or adding tiny aftermarket photo-etch parts to fix historical inaccuracies because it's a Japanese cartoon space ball.

While the instructions are in Japanese, the illustrations are clear and straightforward enough that you don't need to actually read any of the text to figure it out. If you are planning to paint your ball, it is worthwhile to be a little strategic about it though and keep certain sections either in sub-assemblies or just snapped in without glue to start.

I like to think of the main body of this kit as coming in three layers. First is the "Greeble" layer; a roughly ball-shaped construct with all sorts of pseudo-random bits and bobs on top. On top of that goes an internal frame, which comes in two pieces and goes over all the greeblies. Vaguely geodesic, this frame sort of reminded me of that of a Vickers Wellington or the like. Finally, you have the outer skin. Since it is built from the inside out, the building process actually becomes a fun little experience in and of itself as you get to see how the thing might plausibly work as you build. Further, you have the option of easily leaving pieces of the outer skin off to expose the framework and greeblies underneath, should you choose to do so.

I wanted to show off some of these greeblies so I left off the main side plate on the left side. Also, I cut away sections of the top panel and the rear along existing panel lines or contours in order to expose more of the interior detail, including one of the rear engines.

There are a few interesting things happening with the arms. First, the arms are poseable, although the fit is pretty tight, so if you want to assemble now and figure out the exact pose later, it is best to be careful and not put glue where glue should not go. Second, near the wrist joints, there is an interesting part where you take a piece of wire (supplied in the kit) and use that to create some hydraulic hoses. Finally, the aforementioned shiny metal rods are actually part of a piston, so if you want that shiny piston look, you can simply leave these pieces unpainted.

The only other modification I did was to the base. While the scaffolding holding the ball up was useful, I wanted to have the removed armour plating scattered around, and the provided base wasn't large enough for that so I made my own out of a piece of MDF and a piece of sheet styrene. I also countersunk some neodymium magnets into the MDF on the bottom to make transporting the model easier.

Painting the Metallics

With the model mostly assembled, it was time to paint – but before I get into the nitty gritty, I think it is important to explain the method to my madness. I'm primarily a figure painter, so I'm all about light, shadow and contrast. As such, I like to incorporate this into my builds so my models 'pop' from several feet away, and try to use colour theory to pick out effective colour schemes and interesting highlight and shadow colours.

Of course, since this involved some new techniques for me, I decided to use a little Haro model as a paint mule.

So, after priming black, I laid down some metallic paints with the airbrush. I base coated everything with Vallejo Metal Color Gunmetal Grey through the airbrush, which is a dark grey metal, then chose a primary light source from the top left front area of the model and followed up with their Silver sprayed on highlight areas – generally from above and where light would be hitting it. I intended to use their Chrome for a top highlight, but as my VMC Chrome was a little chunky and was clogging my airbrush pretty badly, I improvised by mixing VMC Silver and Scale75 Speed Metal, a nearly white metallic.

With the metal laid down, I decided to start with the red. Using multiple colours of silver did give me some variation in value, but as alluded to above, I wanted more contrast, so I started by reinforcing my shadows with some Daler Rowney FW acrylic artist inks. I wanted cool-coloured shadows, so for the red, I mixed Payne's Grey (a blue-black) and Sap Green to get a dark, desaturated turquoise colour. This was sprayed at the model from below, into the shadowed areas.

Next, I tinted the metal the desired colour using a new product that I have been experimenting with lately. The Badger Metalsmith metallic paint system is an interesting product which consists of a bright silver paint and a few different coloured liquid "ores" which you can theoretically use to mix any metallic colour you want – gunmetal, gold, or even something more exotic like shiny alien purple metal.

However, what I have actually found is that the ores tend to behave a lot like inks, albeit with a glossy finish that looks good when applied as a thin glaze over metallic paints. So, I dropped some Red Ore into my airbrush, thinned it a little, and laid it on in thin coats, slowly building up the colour over the metallics. After a few layers, the colour really started to come through and I had a really nice saturated tint to my metals.

For the main purplish-blue colour, I followed a similar process, only using pure Payne's Grey for the shadow colour and Blue Ore with a couple drops of Red for the coloured glaze.

This sounds like a lot of work, but I think the results speak for themselves. By using two different shades of metal and multiple different inks, I have a whopping four different kinds of contrast in just one main colour alone – I have contrasting values from the light and dark metal, contrasting hue and saturation from the different colours of inks, and contrasting finishes by using both matte and gloss inks. That contrast really makes a model 'pop'.

Everything else

After the metallics were done, I went in with the brush and hand-painted everything that wasn't metallic. I went with coal black as my main colour as that would be a nice contrast to my metallic colours. I did a quick wet- blended basecoat and some dry brushing to get some highlights in, then started picking out all the little greeblies. A red wire here, a grey hose there, a silver grate there, and finish it all off with a quick wash of Army Painter Dark Tone, which is their knockoff of Citadel's Nuln Oil, only they've managed to make it taste worse.

After finishing the paint, it was just a matter of putting together all the sub-assemblies, doing a few touch-ups, and adding a couple finishing touches to the model and the base. Finished with a few hours to spare before **IPMS Ottawa's** prestigious model contest, **CapCon 2019**, it managed to get second in its category – next to another ball built by our local club president.

Conclusion

One of the popular slogans in the Gunpla community is that "Gunpla is freedom." This means that you are free to take a kit and do whatever you want with it, not constrained by anyone else's standards or by any sort of historical or canon colour scheme. Do a smooth, glossy finish like a car model or a beaten, weathered finish like a tank model. And do it in whatever colour you want, and feel free to customize and kitbash to your heart's desire.

These Bandai kits are a great experience, and if you are feeling burned out or frustrated by a build, try picking up a cheap High Grade gundam kit. A nice relaxing build, from a kit that just falls together, where there is no historical accuracy or canon colours to worry about could be just what the doctor ordered.

Gunpla is fun, and at the end of the day, isn't that what our hobby is about?

About the author:

Brian Latour is a federal civil servant originally from Winnipeg who now lives and works in Ottawa. He built model airplanes in his childhood and teenage years, and briefly built 1:1 scale airliners for a living in the mid-2010's. He discovered figure painting in 2015; Brian mainly paints fantasy figures and busts in scales from 25 mm to 1:8, but been expanding into aircraft and Gundam modelling as of late. Brian also writes hobby and gaming content at iceaxeminiatures.wordpress.com/

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