



Feature Article

Academy

F/A-18D Hornet

1:32 scale

by
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(April 2016)

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A note from Geoff...

I am so pleased to welcome Toby to the team - I've long-admired his work and, like me, he has a keen interest in big modern jets! Sure we both like other things too, but there's nothing like a big 1:32 jet kit to get you in the mood for modelling :) (...he says, having just got stuck into the two-seat AFV Club [Academy] F-16B Viper in RNoAF markings).

Here's a sneak peek of Toby's completed Academy F/A-18D Hornet in those striking markings of VMFA (AW) 242 "Bats" - some tidy weathering on show here and Toby will explain all below - here's his story...



A little bit of background...

The F/A-18D is a two seat variant of the F/A-18 Hornet initially built by McDonnell Douglas and later by Boeing, used by the United States Marine Corps. The rear seat is used by the Weapons Systems Operator or a Forward Air

Controller and has no flight controls. The D versions have seen combat over the last 20 years from Bosnia, through both Gulf Wars and also throughout Operation Enduring Freedom.

The Academy kit...

The kit itself comprises just short of 900 parts, including rubber tyres, clear parts, screws, cast metal landing struts and basic styrene parts on 20 separate sprues. With this also comes a 40 page instruction booklet and two decal sheets, for three different USMC aircraft (one sheet is 35cm X 25cm!!). There are multiple options for flaps and wings as well as rudder, elevators, exhausts and even the nose cone. This is something which should be available in the scale, and it is pleasing to say that on the whole it is done very well. What is a surprise is that there is no photo etch at all. There are a few parts that would have benefitted from some etched metal, but that would only be a minor quibble.



The number of stores provided with the kit is mind boggling. The list is as follows:

- AIM-9L/M - Can be configured as live or inert
- AIM-7F/M Sparrow
- AIM-120 AMRAAM
- GBU-31 JDAM
- GBU-10 Paveway II
- GBU-24 Paveway III
- Mk.82 500lb bomb with or without fuse extender or retarder
- AGM-65E Maverick
- AGM-88 HARM

- AGM-84D / 84E SLAM
- AN/ASQ-173 LDT/SCAM pod
- AN/AAR-50 TINS pod
- FLIR
- 3 x 330gallon fuel tanks.

All the above are provided with the correct launch racks and/or rails. My only complaints with the stores are that no GBU-12 is provided, despite this being the most common weapon carried by this variant, and no Litening pod being offered. For the aircraft I wanted to depict I was forced to obtain these items from the Academy F-16i Sufa kit. For the amount of money spent on this kit, I would have expected both of these items to have been provided. Bearing in mind that these are already provided in other 1:32 scale Academy kits, surely that option could have been included.

The decal sheet offers two different USMC aircraft from VMFA (AW) 242 “Bats” and a further one from VMFA (AW) 225 “Vikings”. All are within the last 5 years. The smaller decal sheet covers the stores and offers additional decals to correct any errors. Bearing in mind that there is no way all of the stores can be attached to one aircraft, there is both a good quantity of parts for the spares box along with their accompanying decals. All of which is a positive in my book, and does allow me to forgive the lack of the Litening and GBU-12.

Although this is not the particular squadron that is depicted in the decals, this is the weapons load that my Hornet will have. There is a huge amount of dirt and grime under the aircraft as well.



On with construction...

Construction itself begins with the cockpit tub. I replaced the kit ejection seats with Quickboost SJU-17 parts as they offer far better detail than styrene can provide. These were painted Gunze black with the seat cushions picked out a an amalgamation of different olive greens. The ejection handles were painted as well as parts such as oxygen cylinders, straps and buckles. Both seats were then given a gloss coat, stencils added, before a wash and a light dry brushing to highlight any areas that may have been subject to wear. The seats slotted perfectly into the kit pit and just required a small amount of CA glue, when the time came, to secure them.



Returning to the main tub, it was built up as per the instructions. I felt satisfied that there was a sufficient level of detail that no replacement was required. The tub was painted in Gunze black again, but tinted

with a small amount of grey to give it a slightly different hue from the seats.

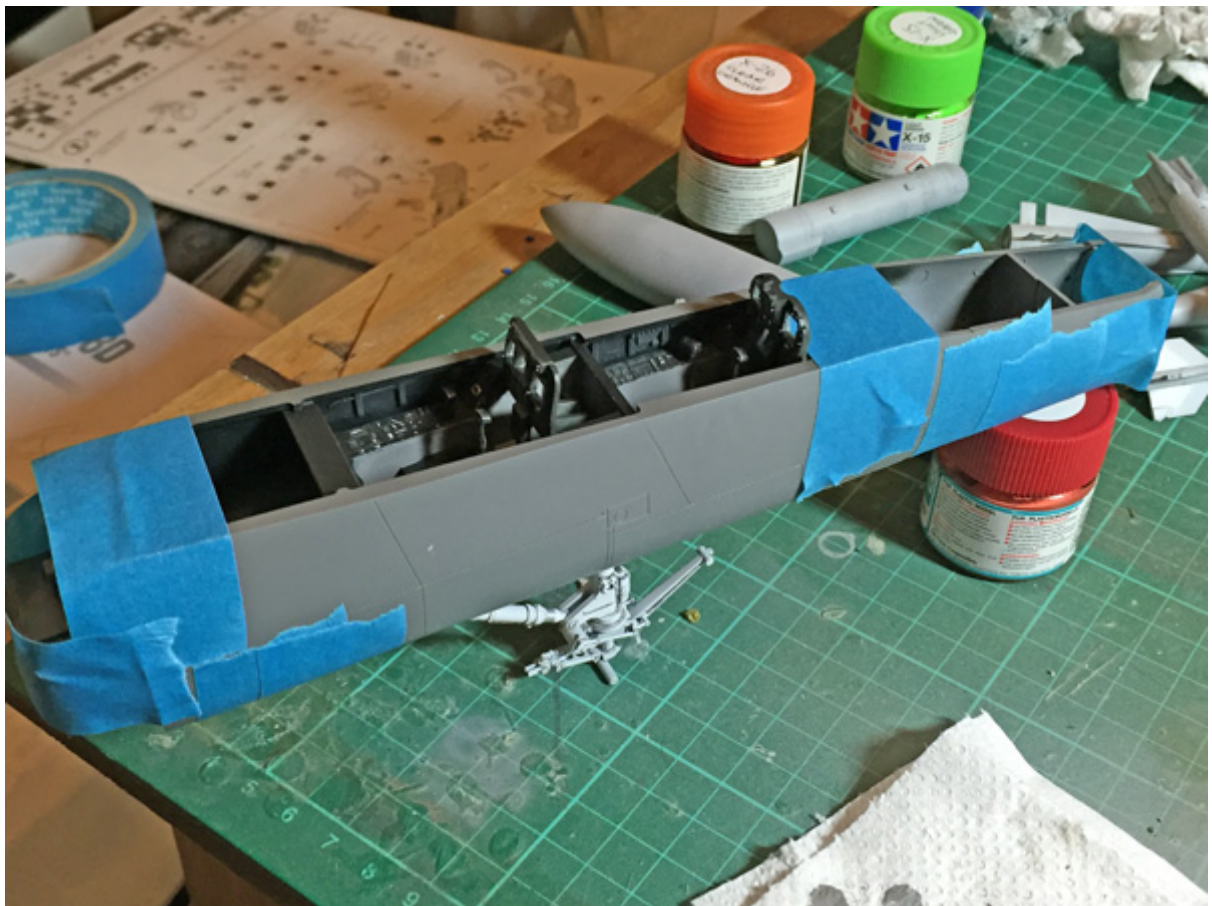
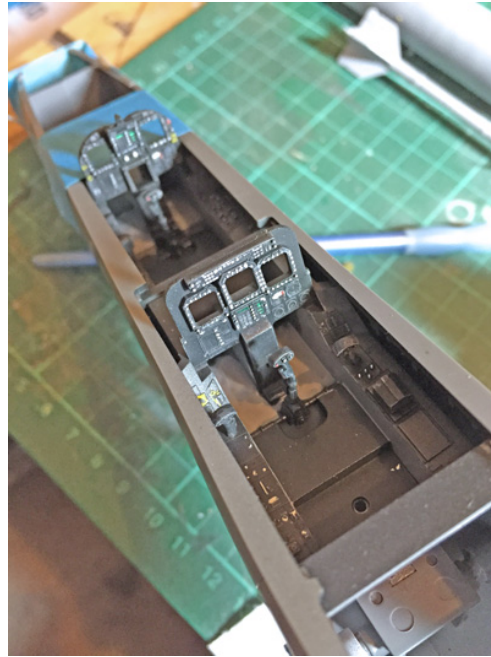
A note on references...

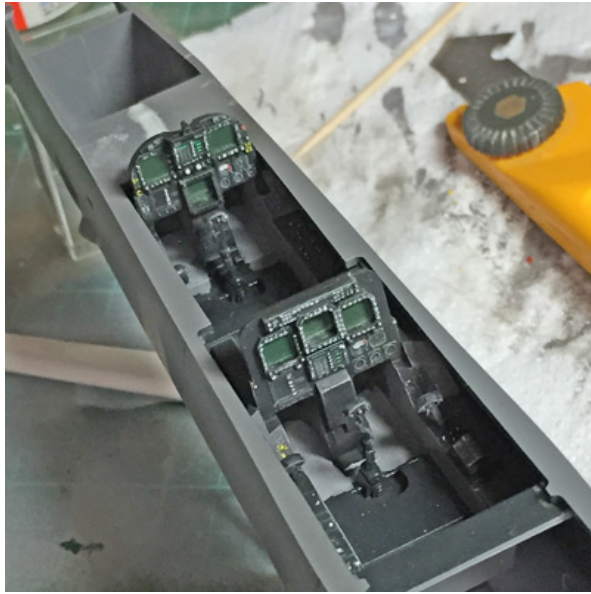
In order to accurately paint all the buttons and switches the correct colours I referred heavily to the photos in the Reid Air Publications book "The Modern Hornet Guide: The Boeing F/A-18 A/B/C/D Exposed". I would highly

recommend this book as not only does it include some superbly detailed photos, but it is also very well written with some excellent information.

In order to paint the switches and buttons the relevant colours, each was picked out with some Lifecolor white as a primer/basecoat. This would then allow the colour on top to be more vibrant. A 5/0 brush was used to carefully touch a small amount of colour onto each button or switch. Any mistakes could be quickly removed with water or Lifecolor thinner, as it didn't harm the Gunze paint underneath.







The centre consoles were painted in another slightly different black hue, this time using Tamiya paint, and all the switches and buttons were picked out in the same way as before. Each console has three MFD (Multi-Functional Display) screens. These were kept separate and painted with Tamiya gloss green, heavily thinned down and applied in ultimate thin coats, building it up slowly to prevent spidering and too much paint landing. Once dry these were glued in using Deluxe Models Glue 'n' Glaze as it dries without any visible residue. All the parts were then attached to the tub and it was test fitted into the fuselage with no issues.





Front landing gear...

With the front fuselage in place I was able to start work on the front landing gear and bay, as you cannot fit it afterwards. It is quite a simple drop in, but I painted the bay prior to gluing in the gear. Gloss white was sprayed over a 50/50 mix of Mr Surfacer 1500 and Mr Levelling Thinner. This gave a nice shadowed effect when the white was added.



Once the White was dry the detailed parts were picked out with a brush in various metallic colours as well as reds and blues. This was all then glossed prior to a dirty wash being added. Once this had been removed with a thinner damp brush an opaque thinned down wash consisting of the above mix, plus some grime and oil, was flicked on with a paintbrush to give the impression of being flicked up by the wheels.



Pylons...

At this stage I decided that I would begin work on the underwing pylons. I had read in the Reid Publications book on building the F/A-18 Hornet of a different way of attaching the stores to the pylons and then the pylons to the aircraft. Each of the attachment pins were removed, but marked, and a rectangle of plastic strip was glued in prior to gluing together each half. A hole was then drilled into this strip and a small piece of brass rod was glued into it. You can see the unglued pylons on the bench with a fully glued one with brass rod fitted in the top right corner.

The fuel tank was also fitted with small diameter brass rod in order to attach it to its pylon, and the pylon itself also included a slightly larger brass rod on its lower part to accept the fuel tank. The remaining pylons now required some attachment points on the aircraft. Inside the wing, small strips of plasticard were used to build up to a sufficient depth. Holes were then drilled into these strips and brass rod slightly larger than that in the top part of the pylons was then inserted into each wing with any excess cut off. This

would then allow the pylons to remain detached until the end, preventing any breakages. The theory behind this was that the pylons should just slot into the holes in the wing, however, I found that it wasn't a perfect fit. When the time came to fit the pylons I added a tiny amount of CA glue inside each of the larger diameter brass rod in the wings and then simply slid the pylons onto them. The glue dried instantly and everything was solid, and certainly less likely to be damaged.



Nose options...

With the front fuselage screwed together and the cockpit tub secured and painted, construction moved to the front of the aircraft and the nose cone. I had decided to build mine completely closed, but there is an option of building it open. Part of me now wishes that I'd gone with open. This was one area where there were some fit issues, that required a fair amount of puttying, filing and sanding as



well as the ubiquitous re-scribing. Some damage was caused in the sanding process which resulted in what I think is an exhaust outlet on the nose cone being sanded right through. The recessed parts just suddenly became holes!! There

wasn't much I could do at this point as the nose was glued in. So after re-scribing it all looked reasonable, but not perfect.



There were also some fit issues with the rear panels between the wing root and the exhausts. This also required a substantial amount of puttying, filing, sanding and re-scribing. Even now I'm not too happy with both areas that I re-scribed.

The Hornet is BIG in this scale!

The wings, LERX panels and vertical stabilisers were added next, with only a tiny amount of putty required where the LERX met the fuselage and wing panels. At last the kit had the shape of a Hornet, and she was big!! At this point I had decided to have the wing tips raised simply due to spatial issues where the Hornet was to live. This involved some careful cutting and sanding prior to the addition of the hinge that the wing tips are glued onto. I would urge caution when cutting,

as there is literally no going back if you remove too much. In addition, pay particular attention to the instructions when adding the hinges, because if you don't, your wing tips will look funny. I don't think I got mine right and had to glue them slightly off the hinge in order for them to sit right. What I would also add is to add the two small pieces that butt up against the folded wing tips, once they are glued in. I added mine first and had some issues trying to get the wing to sit right up against them. I do like to make life hard for myself.

Intakes - some more fit issues here...

The only other place where fit issues were abundant was the intakes. These were painted first, but you have to attach them to some simplified engines, which did not happen quite as the instructions envisaged. After a heroic battle I was eventually successful and the intakes were glued. The only downside was that the fit wasn't perfect. Out came the putty, sanding sticks and a good hour later, the scribing tool. By this time I was on my third lot of scribing and was getting better. The intakes are so much better than the two other re-scribed areas.

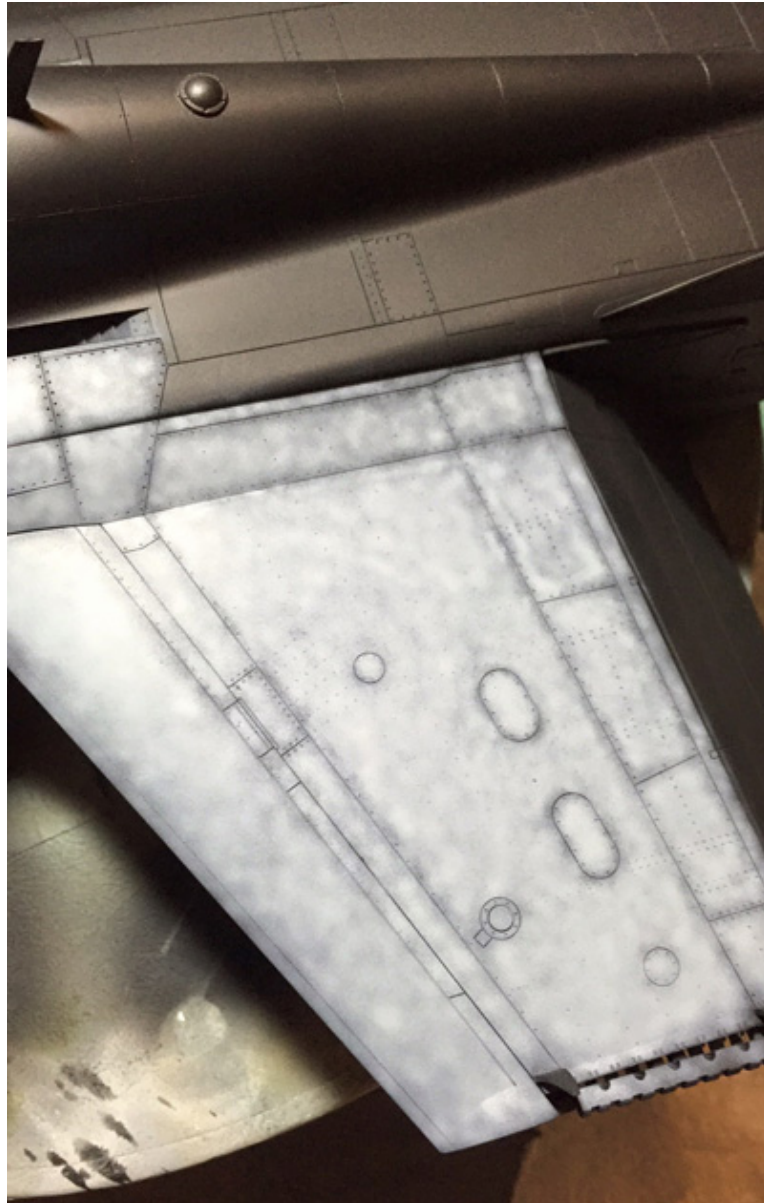
There are a few sensors and other small pieces that need to be added, but that is essentially the construction phase completed.

Painting up next...

With that done I masked the aircraft and prepared all the parts for painting. This included all the weapons and stores as well as the canopy frame and ladder.



My intention with the painting was to give a dirty and grimy impression prior to any weathering. To do this the entire aircraft was under-coated in Mr Surfacer 1500 which was cut 50/50 with Mr Levelling thinner. This is sprayed in several light coats, building up the paint slowly. Once finished I gave it a quick rub over with some Micromesh and prepared to get some grey paint down.



This was my first foray with Mr Paint paints, although I had seen them used on the Internet with stunning results. They are essentially a lacquer based paint, similar to Gunze and Tamiya, except the pigment seems extremely fine and they are already pre-thinned so you can spray straight from the bottle. I loaded my airbrush up with a small amount and with the tip removed, began creating a marble-type effect on the wing, building the look up very slowly. What I did find surprising was the fact that I was only using a tiny amount of paint. My first

attempt wasn't quite there and required a small overspray of the base colour to bring it all together as you can see from the two photos. With the overspray at the end it unifies all the marbling but still provides that subtle mottled effect.



Painting continued with the entire fuselage covered. There is a line that marks the upper colour from the underneath colour; this was only masked when I applied the second colour. I left the vertical stabilisers black to facilitate the huge decals that would later go on them.





I considered using the kit decals for the walkways, but almost immediately decided against it. They looked too perfect and would stand out from the dirty, grimy mottled effect. I therefore used some Mr Paint black along with a fair amount of Tamiya tape to create the walkways. It is one of the areas of this aircraft that I'm happiest with.





The stores is painted in the same way as the rest of the aircraft, building up a mottled effect with different colours. The JDAM requires some precise masking as do the AIM-9's, spraying most of the colours onto them. The exhaust nozzles were painted with various shades of Alclad metallic paints, and test fitted for the photos.





Decals...

Following a gloss coat, the decals were then added. At first they appeared to go on well, using Micro Sol and Set. The stars and bars are very nice and looked really good on the wings. The squadron marking when dried showed some silvering. I was able to resolve some of that but not all. The biggest headache was the vertical stabiliser decals. Four massive brightly coloured decals, which did not want to go down, conform to any bumps and just did not fit properly. It took me several hours to get them to sit down with large amounts of Micro Sol and Set and then Mr Mark Softer and Setter. Eventually I just had to call it a day and wave the white flag!





With the decals on I painted and added the wheels. The kit rubber tyres, whilst an excellent idea, did not like paint at all. No matter how I tried to seal them they would leave a mark everywhere the aircraft was put down, or would just stick. In the end I removed the tires and used the kits alternative styrene ones. Whilst less effective in look, they were much better in terms of the aircraft becoming glued in one location!! (Note from Geoff: check out your [SMN Techniques Bank](#) - there are a couple of HD video demos on working with kit rubber-vinyl tyres like Toby is using here)



I had a small accident with one of the squadron markings when I was touching up the cockpit. Having masked it (used the wrong tape which was too sticky) I ripped the decal in three different places. Unfortunately I did not realise this straight away and it was only after I'd scrunched the masking tape up and thrown it in the bin that I discovered my faux pas. Three hours of carefully searching through the scrunched up ball of tape, then carefully removing the decal with a new Xacto blade, followed by re-attaching it to the kit, she was good as new again. I only lightly weathered the aircraft with some oils and streaking grime effects as it was the CAG bird and wouldn't have been allowed to get too dirty!! With a final matt coat applied, the stores were attached and she was almost ready to go.

Canopy...

The cockpit canopy was the last part to be attached. I had initially intended to have the canopy fully up to expose the detailed cockpit. However the means by which it attaches (2 tabs at the end of the canopy) and what it attaches into meant that it was too flimsy an attachment to hold for any length of time. To be fair I think if anyone had sneezed within ½ mile it would have broken!! So I glued it partially open, which has been queried as to whether or not I was aware that it

wasn't glued down!! If I was to do it again I would consider pinning the canopy wide open with some brass wire to give it strength.



Fully completed now, I really enjoyed the build, despite its problems. It was my first foray into 1:32 and I'm happy to say that it won't be my last. Would I build one again.....Definitely!!

Toby K.











